MITSUBISHI MATERIALS

FORATURA



MITSUBISHI MATERIALS

CATALOGO GENERALE C010
2025 – 2027

MIRATO, COMPATTO, PRATICO.

L'ampia gamma di prodotti di Mitsubishi Materials appartenenti al brand DIAEDGE è ora disponibile in singoli volumi dedicati alle aree applicative, offrendo agli utilizzatori un accesso rapido e semplice alle specifiche informazioni di prodotto.

Questi i 5 volumi che costituiscono il nuovo Catalogo Generale:

- **TORNITURA**
- **FORATURA**
- **FRESATURA INTEGRALE**
- **FRESATURA AD INSERTI**
- **MPLUS**



SEMPLICITÀ D'USO

MAGGIORE FLESSIBILITÀ

SINGOLI AMBITI APPLICATIVI

Il cofanetto fornito facilita la conservazione e offre spazio sufficiente per tutti i futuri cataloghi, comprese le brochure relative alle novità di prodotto che verranno pubblicate durante l'intero ciclo di vita del catalogo. Ogni nuova brochure di aggiornamento sostituirà integralmente la versione precedente. Per mantenere la collezione sempre aggiornata, si prega quindi di eliminare le versioni precedenti ogni volta che vengono fornite nuove brochure.

DETTAGLI:

- Con questa pubblicazione, tutti i precedenti Cataloghi Generali e cataloghi Nuovi Prodotti perdono la loro validità.
- Il nuovo Catalogo Generale potrà essere ordinato solo come set completo di cinque volumi, con codice **C010I**.

VERSIONE DIGITALE

Per consultare la versione digitale del catalogo, scannerizzare il codice QR o visitare il sito www.mhg-mediastore.net

Visita il sito:
www.mmc-carbide.com

FORATURA



PERFORMANCE - SUPERIAMO GLI STANDARD ATTUALI

Al giorno d'oggi l'industria manifatturiera evolve a ritmi sempre più rapidi,
e Mitsubishi Materials si impegna a restare all'avanguardia sul mercato.

Grazie a un dialogo continuo con partner e clienti, l'azienda propone soluzioni
mirate per ogni esigenza.

Dalla punta MVX ad inserti intercambiabili con profondità di foratura fino a 6xDC, alla MPS1
per foratura profonda, Mitsubishi Materials offre soluzioni specifiche per ogni applicazione.

MITSUBISHI MATERIALS

BETTER. TOGETHER.



2025 – 2027

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DATI TECNICI	P001
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INFORMAZIONI GENERALI	



SPECIFICHE UTENSILI PER FORATURA – CHIAVE DI LETTURA

●Organizzazione della pagina

①In ordine a seconda dell'impiego della punta.

FOTO DEL PRODOTTO

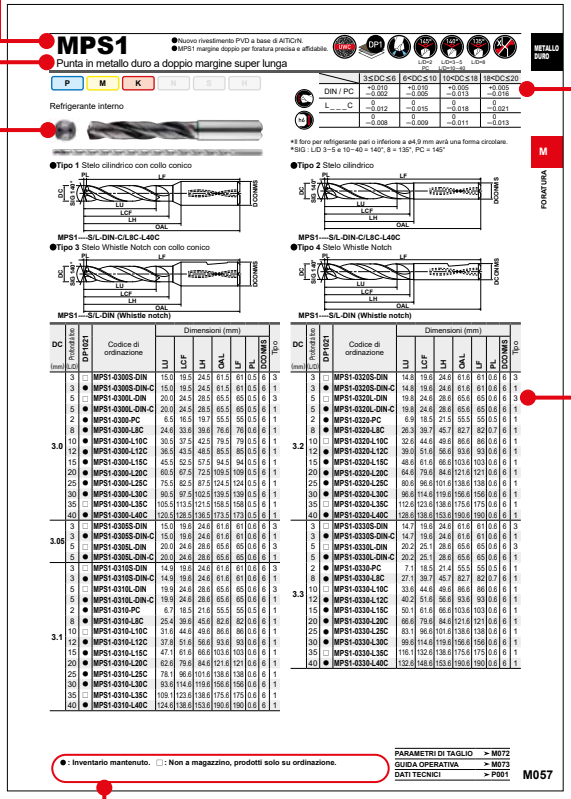
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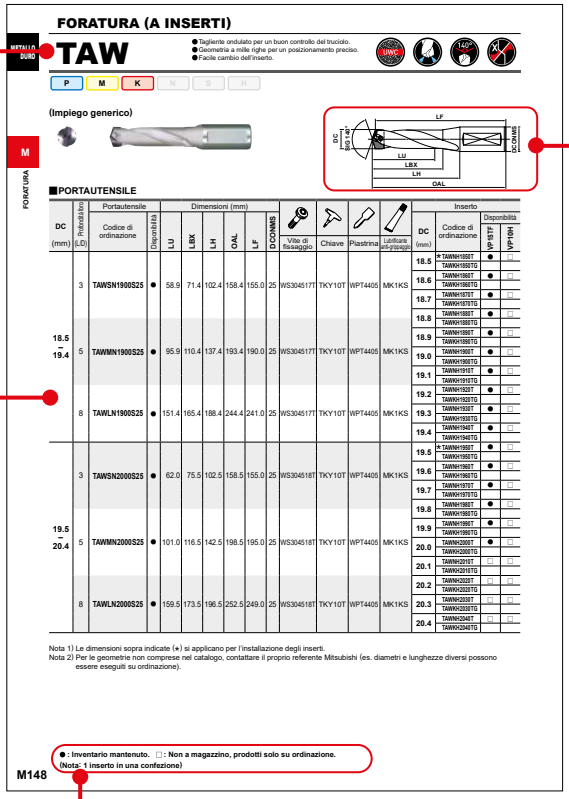
DENOMINAZIONE PRODOTTO

TOLLERANZE DIMENSIONALI

DENOMINAZIONE PRODOTTO

SCHEMA DIMENSIONALE





SPECIFICHE PRODOTTO
Diametri, codici d'ordinazione, disponibilità a magazzino, numero di eliche, dimensioni e parti di ricambio per il prodotto indicato.

LEGENDA DEI SIMBOLI INDICANTI LA DISPONIBILITÀ A MAGAZZINO
Nelle spiegazioni su due pagine si trova nella pagina a sinistra.

FORATURA

IDENTIFICAZIONE CODICE PRODOTTO **M002**
DESCRIZIONI DEI SIMBOLI **M003**
SCHEDA PER LA SCELTA DELLA PUNTA **M004**

TIPO DI PUNTA

METALLO DURO

MSE ..... [Micropunta in metallo duro] **M008**
MSP ..... [Bulini] **M011**
DLE ..... [Punte in metallo duro per centrini e smussi] **M012**
MINI-MFE ..... [Punte in metallo duro a fondo piano] **M018**
NEW **DFAS** ..... [Punte in metallo duro a fondo piano] **M020**
NEW **DVAS** ..... [Serie di punte in metallo duro TRISTAR] **M033**
MINI-DWAE ..... [Per torni automatici a fantina mobile e torni CNC di piccole dimensioni] **M024**
DWAE ..... [Per torni automatici a fantina mobile e torni CNC di piccole dimensioni] **M025**
MINI-MVS ..... [Punta a doppio margine con refrigerante interno] **M049**
MINI-MWS ..... [Punta a margine singolo con refrigerante interno] **M053**
MPS1 ..... [Punta in metallo duro a doppio margine super lunga] **M057**
MICRO-MGS ..... [Micropunta a cannone monotagliente in metallo duro con adduzione interna del refrigerante] **M075**
MMS ..... [Punta in metallo duro per acciaio inossidabile] **M078**
DSAS ..... [Per la lavorazione di leghe resistenti al calore] **M092**
MNS ..... [Punta in metallo duro con 4 fori di raffreddamento per alluminio] **M098**
MAE/MAS ..... [Punta di precisione in metallo duro per alluminio] **M122**
MHS ..... [Punta di precisione in metallo duro per acciaio temprato] **M128**

PER CFRP

MCC ..... [Per macchine CNC / CFRP] **M186**
MCA ..... [Per macchine CNC / CFRP + Al] **M187**
MCT ..... [Per macchine CNC / CFRP + Ti] **M188**
MCW ..... [Per macchine CNC / CFRP e elevata precisione in materiali stratificati] **M189**
MCCH ..... [Per utensili manuali / CFRP] **M190**
MCAH ..... [Per utensili manuali / CFRP + Al] **M191**

A INSERTI INTERCAMBIABILE

STAW ..... [Punta ad inserti di piccolo diametro] **M139**
TAW ..... [Punta ad inserti per foratura generale] **M148**
MVX ..... [Punta ad inserti per elevata stabilità] **M158**
MANICOTTO “JUST FIT” **M170**

PUNTE HSS

PUNTE VIOLET

VAPDS ..... [Punta corta in HSS-Co per acciaio] **M172**
VAPDM ..... [Punta medio-lunga in HSS-Co per acciaio] **M177**
VSD ..... [Punta lunga in HSS per acciaio inossidabile] **M181**
VAPDSCB ..... [Punta in HSS-Co per lamature] **M183**

ALESATORE STANDARD

ALESATORE A TESTINA INTERCAMBIABILE

NEW **RX1S** ..... [Alesatore a testina intercambiabile] **M195**

*Indice per ordine alfabetico

M012 **DLE**
M020 **DFAS**
M092 **DSAS**
M033 **DVAS**
M025 **DWAE**
M170 **JFS (BUSSOLA)**
M122 **MAE**
M122 **MAS**
M187 **MCA**
M191 **MCAH**
M186 **MCC**
M190 **MCCH**
M188 **MCT**
M189 **MCW**
M128 **MHS**
M075 **MICRO-MGS**
M024 **MINI-DWAE**
M018 **MINI-MFE**
M049 **MINI-MVS**
M053 **MINI-MWS**
M078 **MMS**
M098 **MNS**
M057 **MPS1**
M008 **MSE**
M011 **MSP**
M158 **MVX**
M166 **MVX (INSERTI)**
M139 **STAW**
M142 **STAW (INSERTI)**
M148 **TAW**
M153 **TAW (INSERTI)**
M177 **VAPDM**
M172 **VAPDS**
M183 **VAPDSCB**
M181 **VSD**
M195 **RX1S**



IDENTIFICAZIONE CODICE PRODOTTO

CODICE PRODOTTO PER LE PUNTE

MV	S	0300	X	S

Nome prodotto per la punta

DLE : Punte DLE
DFA : Punte DFAS
DSA : Punte DSAS
DWA : Punte DWAE
MPS1 : Punte MPS1
MV : Punte MVS
MW : Punte MWS
MF : Punte MFE
MG : Punte MGS
MA : Punte MAE/MAS
MS : Punte MSE
MM : Punte MMS
MN : Punte MNS
MH : Punte MHS
MC : Punte MC

Tipo di lubrificazione

E : Refrigerante esterno
S : Refrigerante interno

Diametro

Es.
0050 → Ø 0.5
0300 → Ø 3.0

L/D

S : 2D
M : 3D
L : 5D (Tipo MAE / MAS=6D)
L8C : 8D
L10C : 10D
L12C : 12D
L15C : 15D
L20C : 20D
L25C : 25D
L30C : 30D
L40C : 40D
X : 12D
X8DB : 8D
X10DB : 10D
X15DB : 15D
X20DB : 20D
X25DB : 25D
X30DB : 30D

Tipo a stelo

A : Stelo con lo stesso diametro della punta
B : Stelo con diametro fisso
C : Stelo cilindrico
S*** : Diametro dello stelo

* Prodotto disponibile parzialmente.

VA	PD	S	D0050

Nome prodotto per la punta

VA : Punte di precisione rivestite VIOLET (Alto grado, Acciaio rapido)
V : Punte VIOLET

Applicazione

SD : Punta dritta per uso generico
PD : Per lavorazione ad alta precisione

Lunghezza dell'elica

S : Corta
M : Media

Diametro

Es.
D0300 → Ø 3.0
D0050 → Ø 0.5

* Prodotto disponibile parzialmente.

DVA	S	0100	X50	S040

Applicazione

DVA : Uso generico

Refrigerante

S : Refrigerante interno

Diametro

0100 → Ø 1.0mm
0290 → Ø 2.9mm

L/D

X50 : L/D=50
X02 : L/D=2

Diametro stelo

S040 : Diametro dello stelo 4mm

DESCRIZIONI DEI SIMBOLI

Materiale dell'utensile



Carburo ultra-micrograno
Il carburo ultra-micrograno è utilizzato come materiale di substrato.



Lega alto legata in HSS (acciaio super rapido)
Lega alto legata in HSS è usata come materiale di substrato.



Acciaio rapido
Come substrato del materiale è utilizzato acciaio super rapido.

Assottigliamento del nocciolo



Assottigliamento del nocciolo X
Assottigliamento del nocciolo X usato in punta.



Assottigliamento del nocciolo Z
Assottigliamento del nocciolo Z usato in punta.



Assottigliamento del nocciolo XR
Assottigliamento del nocciolo XR usato in punta.



Assottigliamento del nocciolo N
Assottigliamento del nocciolo N usato in punta.

Tolleranza



Tolleranza del diametro della punta



Tolleranza del diametro dello stelo

Foro per refrigerante



Con foro per refrigerante

Materiale da lavorare

Prima raccomandazione

P M K N S H

Non raccomandato

P M K N S H

Rivestimento



Rivestimento MIRACLE
L'originale rivestimento MIRACLE in (Al,Ti)N.



Rivestimento PVD
DP102A è un grado in metallo duro rivestito in PVD, specifico per punte di piccolo diametro, con resistenza all'usura notevolmente migliorata.



Rivestimento PVD
Presenta una straordinaria resistenza all'usura in una vasta gamma di lavorazioni di acciaio, materiali a base di ghisa e leghe di alluminio.



Rivestimento PVD
Metallo duro a grana ultrafine ideale per acciaio inossidabile e un rivestimento PVD con resistenza al calore e proprietà lubrificanti eccezionali.



Rivestimento PVD
DP9020 è altamente resistente sia all'usura sia alla rottura, garantendo una maggiore durata dell'utensile.



Rivestimento VIOLET
Vita utensile incrementata di 2-3 volte rispetto a prodotti con rivestimento TiN.



Rivestimento in diamante CVD
L'esclusiva tecnologia di controllo del cristallo di diamante a micrograni multistrato migliora drasticamente la resistenza all'usura e l'attrito durante il taglio.

Angolo e spigolo vivo



Angolo tra i taglienti
Indica l'angolo di punta.

SCHEDA PER LA SCELTA DELLA PUNTA

Materiale dell'utensile	Gamma	Profondità foro (L/D)	Codice prodotto	Refrigerante	Rivestimento	Materiale da lavorare P – Acciaio al carbonio, Acciaio legato	Materiale da lavorare M – Acciaio inossidabile	Materiale da lavorare K – Ghisa	Materiale da lavorare N – Lega leggera	Materiale da lavorare S – Lega resistente al calore	Materiale da lavorare H – Acciaio temprato	Forma	Numero di pagina – Dimensioni	Numero di pagina – Parametri di taglio
Metallo Duro	Ø 0.1 – Ø 0.99	5 – 12	**MSE**	Esterno	VP	◎	○	◎	○	○		 MSP = fresa pilota per MSE	M008	M009
	Ø 1.0 – Ø 16.0	–	**DLE**	Esterno	DP1 DP1A	◎	◎	◎				 SIG=60°, 90°, 120°, 145°	M012	M016
	Ø 0.75 – Ø 2.95	2	**MINI-MFE**	Esterno	DP1A	◎	◎	◎	○				M018	M019
	Ø 3.0 – Ø 14.0	3	NEW **DFAS**	Interno	DP1A	◎	◎	◎	◎	○			M020	M023
	Ø 1.0 – Ø 2.9	2 – 50	NEW **DVAS**	Interno	DP1	◎	◎	○	○	◎			M033	M037
	Ø 1.0 – Ø 2.9	2,4	**MINI-DWAE**	Esterno	DP1A	◎	◎	◎					M024	M031
	Ø 3.0 – Ø 14.0	2,4	**DWAE**	Esterno	DP1A	◎	◎	◎					M025	M031
	Ø 1.0 – Ø 2.9	2* – 30	**MINI-MVS**	Interno	DP1	◎	◎	○	○	○			M049	M051
	Ø 0.5 – Ø 0.99	1 – 12	**MINI-MWS**	Interno	VP	◎	◎	○	○	○			M053	M055
	Ø 3.0 – Ø 20.0	3 – 40	**MPS1**	Interno	DP1	◎	○	◎				 MPS1-xxxx-PC=fresa pilota per MPS1	M057	M072
	Ø 0.95 – Ø 12.0	1 – 30	**MHS**	Interno	VP	○	○			○	◎		M128	M136
	Ø 3.0 – Ø 20.0	3, 5	**MMS**	Interno	DP7		◎						M078	M090
	Ø 3.0 – Ø 12.0	3, 5	**DSAS**	Interno	DP9					◎			M092	M097
	Ø 0.7 – Ø 3.0	– 80	**MICRO-MGS**	Interno	–	◎	◎	◎	◎				M075	M076

2* = Punta per foro pilota. La tolleranza è +0.014 e la profondità del foro è DCx2.

Materiale dell'utensile	Gamma	Profondità foro (L/D)	Codice prodotto	Refrigerante	Rivestimento	Materiale da lavorare						Forma	Numero di pagina	
						P	M	K	N	S	H		Dimensioni	Parametri di taglio
						Acciaio al carbonio, Acciaio legato	Acciaio inossidabile	Ghisa	Lega leggera	Lega resistente al calore	Acciaio temprato			
Metallo Duro	Ø 3.0 – Ø 16.0	3	**MAE**	Esterno	–			○	◎				**M122**	**M127**
	Ø 3.0 – Ø 16.0	3, 6	**MAS**	Interno	–			○	◎				**M122**	**M127**
	Ø 3.0 – Ø 20.0	3 – 30	**MNS**	Interno	–				◎				**M098**	**M118**
	Ø 4.76 – Ø 11.14	3	**MCC**	Esterno	DD	Per CFRP							**M186**	**M186**
	Ø 6.38 – Ø 9.55	5	**MCA**	Interno	DD	Per CFRP + Al							**M187**	**M187**
	Ø 6.38 – Ø 9.55	5	**MCT**	Interno	–	Per CFRP + Ti							**M188**	**M188**
	Ø 6.38 – Ø 9.55	5	**MCW**	Interno	DD	Per CFRP e elevata precisione in materiali stratificati							**M189**	**M189**
	Ø 2.5 – Ø 9.55	2 – 15	**MCCH**	Esterno	–	Per CFRP							**M190**	Manuale dell' utensile
	Ø 2.5 – Ø 9.55	3 – 15	**MCAH**	Esterno	–	Per CFRP + Al							**M191**	Manuale dell' utensile
Acciaio rapido	Ø 0.5 – Ø 13.0	2 – 3	**VAPDS**	Esterno	V	◎	○	○					**M172**	**M176**
	Ø 0.5 – Ø 32.0	3 – 6	**VAPDM**	Esterno	V	◎	○	○					**M177**	**M180**
	Ø 0.5 – Ø 13.0	3 – 6	**VSD**	Esterno	V	◎	○						**M181**	**M182**
	Ø 2.0 – Ø 32.0	2 – 3	**VAPDSCB**	Esterno	V	◎	○	○	○				**M183**	**M185**
Intercambiabile	Ø 10.0 – Ø 18.4	1.5 – 8	**STAW**	Interno	VP	◎	○	◎					**M139**	**M144**
	Ø 18.5 – Ø 30.4	3 – 8	**TAW**	Interno	VP	◎	○	◎					**M148**	**M155**
	Ø 17.0 – Ø 63.0	2 – 6	**MVX**	Interno	–	◎	○	◎	○		○		**M158**	**M167**

◎ : Prima scelta / ○ : Seconda scelta

SERIE DI PUNTE

Prima scelta

P M K N S H

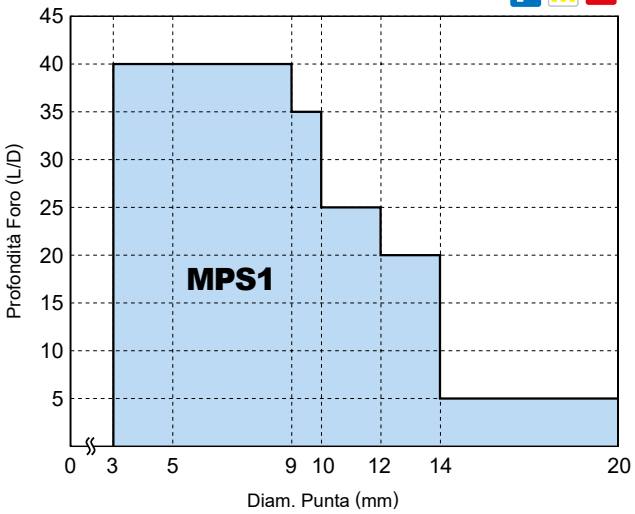
Seconda scelta

P M K N S H

METALLO DURO

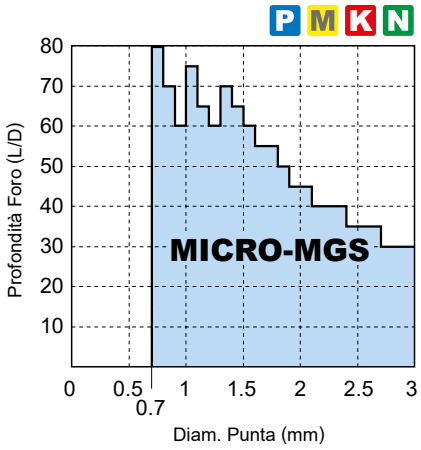
MPS1 (Punta a doppio margine)

P M K



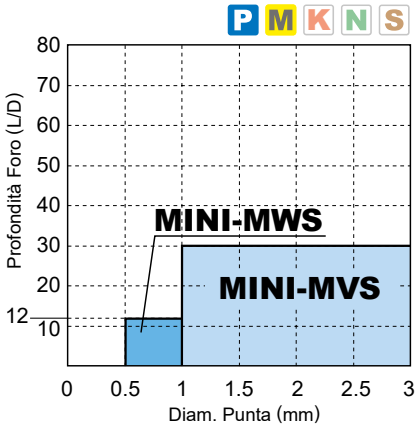
MICRO-MGS

P M K N



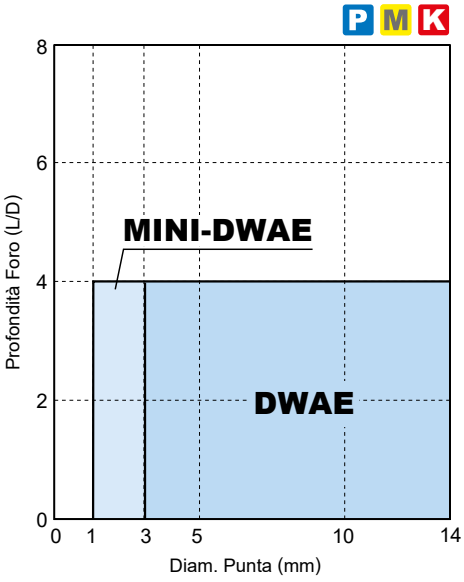
MINI-MVS, MINI-MWS

P M K N S



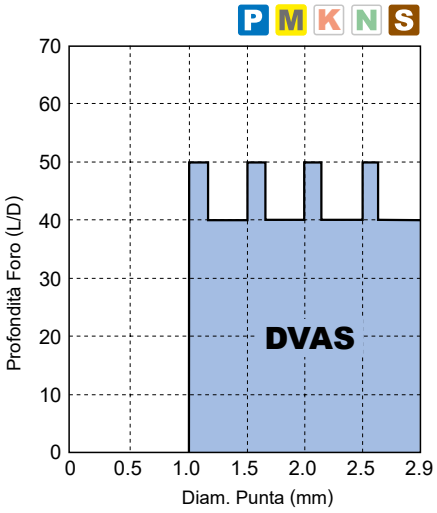
MINI-DWAE, DWAE

P M K



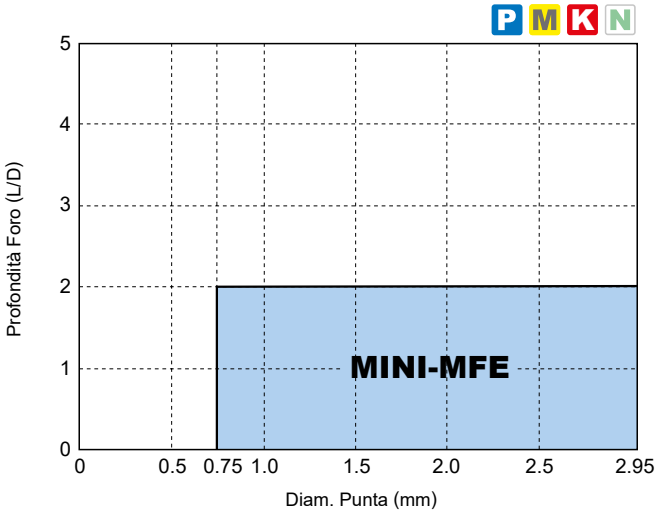
DVAS NEW

P M K N S



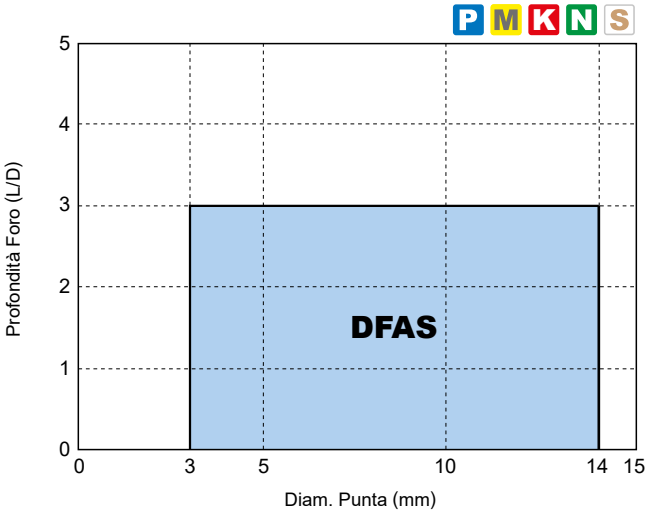
MINI-MFE

P M K N



DFAS

P M K N S



Prima scelta

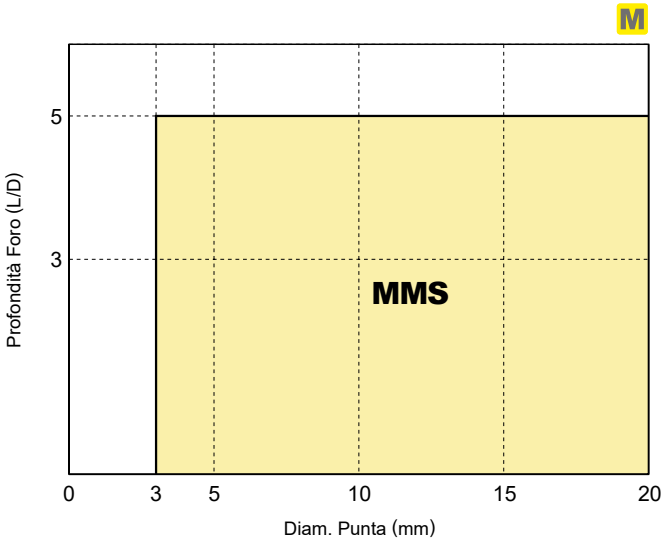
P M K N S H

Seconda scelta

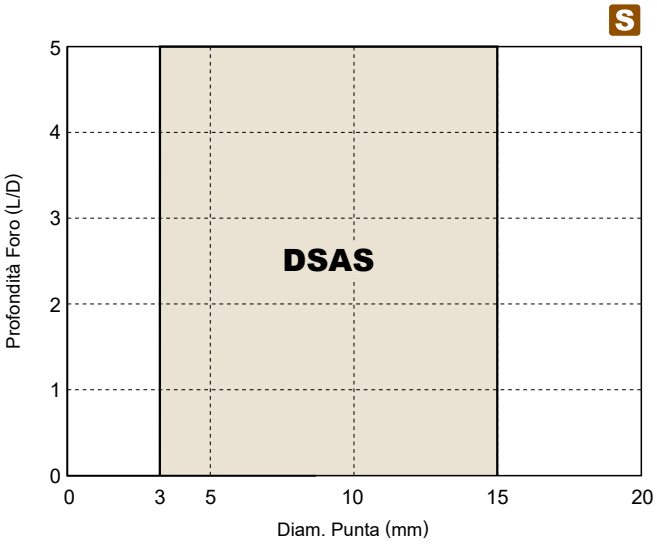
P M K N S H

■METALLO DURO

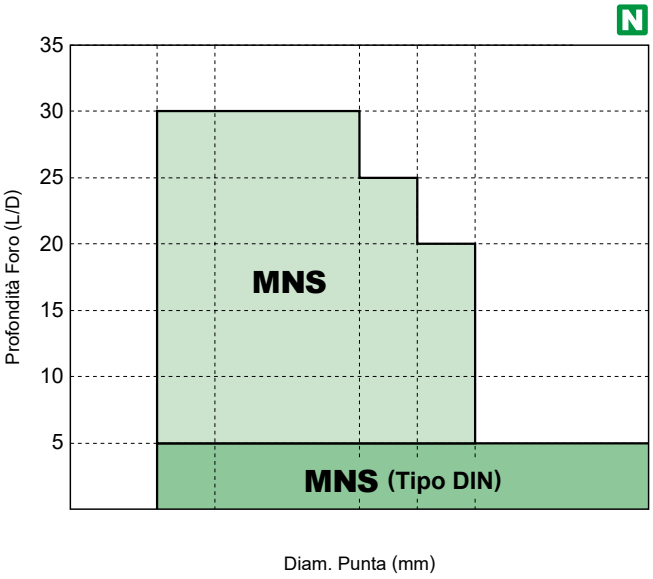
MMS (Per acciaio inossidabile)



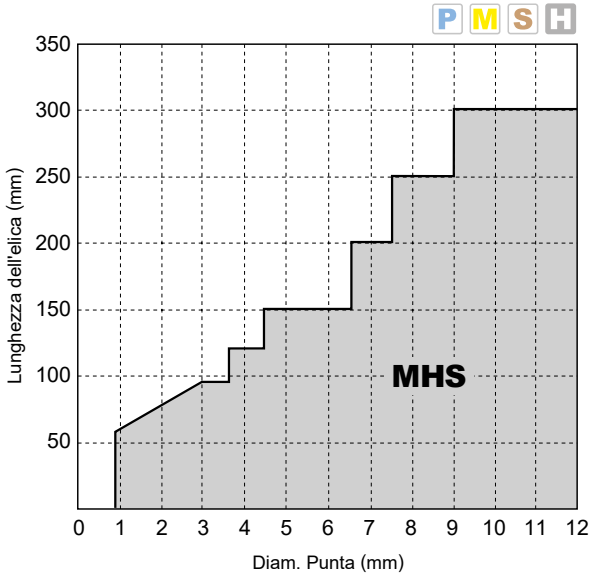
DSAS (Per la lavorazione di leghe resistenti al calore)



MNS (Per la lavorazione di leghe di alluminio)

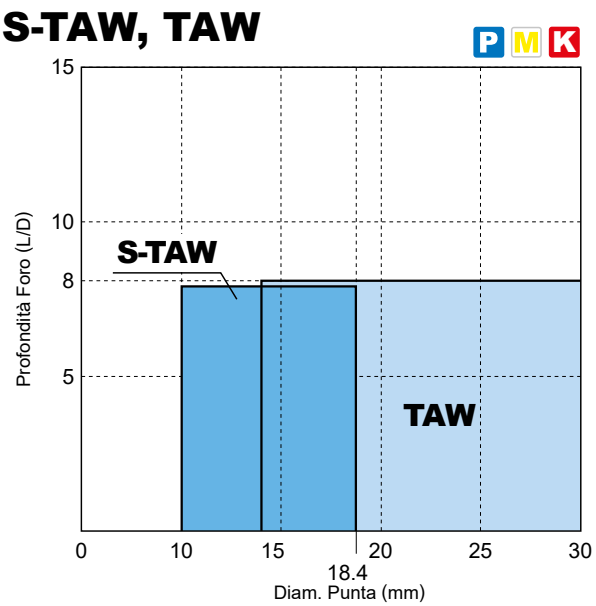


MHS (Per la produzione di stampi)

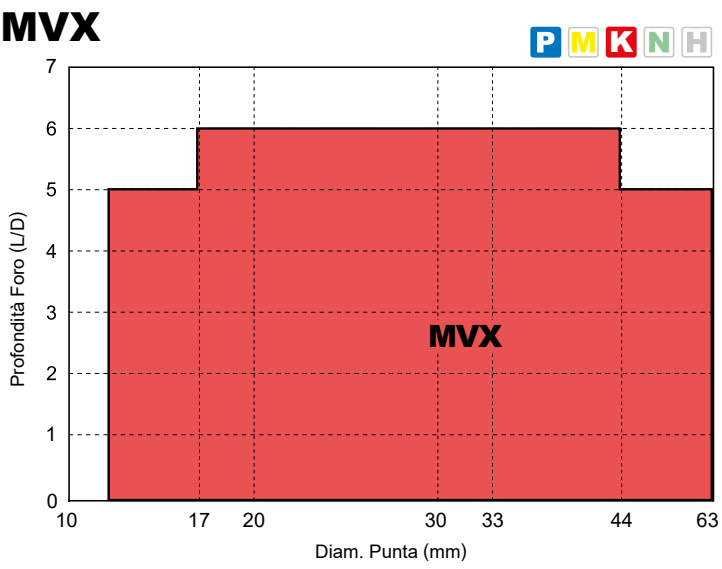


DI TIPO INTERCAMBIABILE

S-TAW, TAW



MVX



FORATURA (METALLO DURO)

MSE

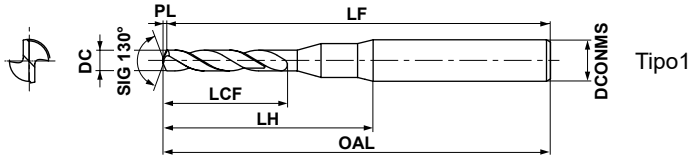
- Ampia scanalatura per impedire l'inceppamento del truciolo.
- Lavorazione stabile, diametri piccoli.

P M K N S H

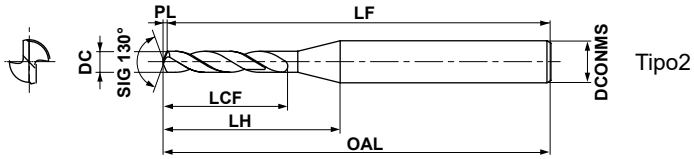
Refrigerante esterno







Tipo1



Tipo2

$0.10 \leq DC \leq 0.99$ $^{0}_{-0.009}$

DCONMS=3 $^{0}_{-0.006}$

- Le punte MSE sono adatte per l'utilizzo con mandrini a calettamento a caldo.

DC (mm)	VP20MF	VP15TF	Codice di ordinazione	Dimensioni (mm) LCF	LH	OAL	LF	PL	DCONMS	Tipo
0.10	●		MSE0010SB	1.2	9.7	38.0	38	0.02	3	1
0.11	●		MSE0011SB	1.2	9.7	38.0	38	0.03	3	1
0.12	●		MSE0012SB	1.4	9.7	38.0	38	0.03	3	1
0.13	●		MSE0013SB	1.4	9.7	38.0	38	0.03	3	1
0.14	●		MSE0014SB	2.0	9.7	38.0	38	0.03	3	1
0.15	●		MSE0015SB	2.0	9.7	38.0	38	0.03	3	1
0.16	●		MSE0016SB	2.0	9.7	38.0	38	0.04	3	1
0.17	●		MSE0017SB	2.0	9.7	38.0	38	0.04	3	1
0.18	●		MSE0018SB	2.0	9.7	38.0	38	0.04	3	1
0.19	●		MSE0019SB	2.0	9.7	38.0	38	0.04	3	1
0.20	●		MSE0020SB	2.6	9.8	38.1	38	0.05	3	1
0.21	●		MSE0021SB	2.6	9.8	38.1	38	0.05	3	1
0.22	●		MSE0022SB	2.6	9.8	38.1	38	0.05	3	1
0.23	●		MSE0023SB	2.6	9.8	38.1	38	0.05	3	1
0.24	●		MSE0024SB	3.1	9.8	38.1	38	0.06	3	1
0.25	●		MSE0025SB	3.1	9.8	38.1	38	0.06	3	1
0.26	●		MSE0026SB	3.1	9.8	38.1	38	0.06	3	1
0.27	●		MSE0027SB	3.1	9.8	38.1	38	0.06	3	1
0.28	●		MSE0028SB	3.1	9.8	38.1	38	0.07	3	1
0.29	●		MSE0029SB	3.1	9.8	38.1	38	0.07	3	1
0.30		●	MSE0030SB	5.1	10.3	38.1	38	0.07	3	2
0.31		●	MSE0031SB	5.1	10.3	38.1	38	0.07	3	2
0.32		●	MSE0032SB	5.1	10.3	38.1	38	0.07	3	2
0.33		●	MSE0033SB	5.1	10.3	38.1	38	0.08	3	2
0.34		●	MSE0034SB	6.1	11.3	38.1	38	0.08	3	2
0.35		●	MSE0035SB	6.1	11.2	38.1	38	0.08	3	2
0.36		●	MSE0036SB	6.1	11.2	38.1	38	0.08	3	2
0.37		●	MSE0037SB	6.1	11.2	38.1	38	0.09	3	2
0.38		●	MSE0038SB	6.1	11.2	38.1	38	0.09	3	2
0.39		●	MSE0039SB	6.1	11.2	38.1	38	0.09	3	2
0.40		●	MSE0040SB	7.1	12.2	38.1	38	0.09	3	2
0.41		●	MSE0041SB	7.1	12.1	38.1	38	0.10	3	2
0.42		●	MSE0042SB	7.1	12.1	38.1	38	0.10	3	2
0.43		●	MSE0043SB	7.1	12.1	38.1	38	0.10	3	2

DC (mm)	VP20MF	VP15TF	Codice di ordinazione	Dimensioni (mm) LCF	LH	OAL	LF	PL	DCONMS	Tipo
0.44		●	MSE0044SB	7.1	12.1	38.1	38	0.10	3	2
0.45		●	MSE0045SB	7.1	12.1	38.1	38	0.10	3	2
0.46		●	MSE0046SB	7.1	12.0	38.1	38	0.11	3	2
0.47		●	MSE0047SB	7.1	12.0	38.1	38	0.11	3	2
0.48		●	MSE0048SB	7.1	12.0	38.1	38	0.11	3	2
0.49		●	MSE0049SB	7.1	12.0	38.1	38	0.11	3	2
0.50		●	MSE0050SB	7.1	12.0	38.1	38	0.12	3	2
0.51		●	MSE0051SB	7.1	11.9	38.1	38	0.12	3	2
0.52		●	MSE0052SB	7.1	11.9	38.1	38	0.12	3	2
0.53		●	MSE0053SB	7.1	11.9	38.1	38	0.12	3	2
0.54		●	MSE0054SB	7.1	11.9	38.1	38	0.13	3	2
0.55		●	MSE0055SB	7.1	11.9	38.1	38	0.13	3	2
0.56		●	MSE0056SB	7.1	11.9	38.1	38	0.13	3	2
0.57		●	MSE0057SB	7.1	11.8	38.1	38	0.13	3	2
0.58		●	MSE0058SB	7.1	11.8	38.1	38	0.14	3	2
0.59		●	MSE0059SB	7.1	11.8	38.1	38	0.14	3	2
0.60		●	MSE0060SB	7.1	11.8	38.1	38	0.14	3	2
0.61		●	MSE0061SB	7.1	11.8	38.1	38	0.14	3	2
0.62		●	MSE0062SB	7.1	11.7	38.1	38	0.14	3	2
0.63		●	MSE0063SB	7.2	11.8	38.2	38	0.15	3	2
0.64		●	MSE0064SB	7.2	11.8	38.2	38	0.15	3	2
0.65		●	MSE0065SB	7.2	11.8	38.2	38	0.15	3	2
0.66		●	MSE0066SB	7.2	11.8	38.2	38	0.15	3	2
0.67		●	MSE0067SB	7.2	11.7	38.2	38	0.16	3	2
0.68		●	MSE0068SB	7.2	11.7	38.2	38	0.16	3	2
0.69		●	MSE0069SB	7.2	11.7	38.2	38	0.16	3	2
0.70		●	MSE0070SB	8.2	12.7	38.2	38	0.16	3	2
0.71		●	MSE0071SB	8.2	12.7	38.2	38	0.17	3	2
0.72		●	MSE0072SB	8.2	12.7	38.2	38	0.17	3	2
0.73		●	MSE0073SB	8.2	12.6	38.2	38	0.17	3	2
0.74		●	MSE0074SB	8.2	12.6	38.2	38	0.17	3	2
0.75		●	MSE0075SB	8.2	12.6	38.2	38	0.17	3	2
0.76		●	MSE0076SB	8.2	12.6	38.2	38	0.18	3	2
0.77		●	MSE0077SB	8.2	12.6	38.2	38	0.18	3	2

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : **Inventario mantenuto.**

DC (mm)	VP20MF	VP15TF	Codice di ordinazione	Dimensioni (mm) LCF	LH	OAL	LF	PL	DCONMS	Tipo
0.78		●	**MSE0078SB**	8.2	12.5	38.2	38	0.18	3	2
0.79		●	**MSE0079SB**	8.2	12.5	38.2	38	0.18	3	2
0.80		●	**MSE0080SB**	10.2	14.5	38.2	38	0.19	3	2
0.81		●	**MSE0081SB**	10.2	14.5	38.2	38	0.19	3	2
0.82		●	**MSE0082SB**	10.2	14.5	38.2	38	0.19	3	2
0.83		●	**MSE0083SB**	10.2	14.5	38.2	38	0.19	3	2
0.84		●	**MSE0084SB**	10.2	14.4	38.2	38	0.20	3	2
0.85		●	**MSE0085SB**	10.2	14.4	38.2	38	0.20	3	2
0.86		●	**MSE0086SB**	10.2	14.4	38.2	38	0.20	3	2
0.87		●	**MSE0087SB**	10.2	14.4	38.2	38	0.20	3	2
0.88		●	**MSE0088SB**	10.2	14.4	38.2	38	0.21	3	2

DC (mm)	VP20MF	VP15TF	Codice di ordinazione	Dimensioni (mm) LCF	LH	OAL	LF	PL	DCONMS	Tipo
0.89		●	**MSE0089SB**	10.2	14.3	38.2	38	0.21	3	2
0.90		●	**MSE0090SB**	10.2	14.3	38.2	38	0.21	3	2
0.91		●	**MSE0091SB**	10.2	14.3	38.2	38	0.21	3	2
0.92		●	**MSE0092SB**	10.2	14.3	38.2	38	0.21	3	2
0.93		●	**MSE0093SB**	10.2	14.3	38.2	38	0.22	3	2
0.94		●	**MSE0094SB**	10.2	14.2	38.2	38	0.22	3	2
0.95		●	**MSE0095SB**	10.2	14.2	38.2	38	0.22	3	2
0.96		●	**MSE0096SB**	10.2	14.2	38.2	38	0.22	3	2
0.97		●	**MSE0097SB**	10.2	14.2	38.2	38	0.23	3	2
0.98		●	**MSE0098SB**	10.2	14.2	38.2	38	0.23	3	2
0.99		●	**MSE0099SB**	10.2	14.2	38.2	38	0.23	3	2

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	P: Acciaio dolce (≤180HB) Ck10					P: Acciaio al carbonio, Acciaio legato (180—280HB) Ck45, 41CrMo4				
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)
0.10	6	20000	0.002 (0.001—0.003)	0.02	40	6	20000	0.002 (0.001—0.003)	0.02	40
0.12	8	20000	0.002 (0.001—0.003)	0.02	40	8	20000	0.002 (0.001—0.003)	0.02	40
0.16	10	20000	0.002 (0.001—0.003)	0.02	40	10	20000	0.002 (0.001—0.003)	0.02	40
0.20	13	20000	0.003 (0.002—0.004)	0.04	60	13	20000	0.003 (0.002—0.004)	0.04	60
0.25	16	20000	0.003 (0.002—0.004)	0.04	60	16	20000	0.003 (0.002—0.004)	0.04	60
0.32	20	20000	0.004 (0.003—0.005)	0.05	80	20	20000	0.004 (0.003—0.005)	0.05	80
0.40	25	20000	0.004 (0.003—0.005)	0.05	80	25	20000	0.004 (0.003—0.005)	0.05	80
0.50	31	20000	0.006 (0.005—0.007)	0.10	120	31	20000	0.006 (0.005—0.007)	0.10	120
0.63	40	20000	0.008 (0.006—0.010)	0.10	160	40	20000	0.008 (0.006—0.010)	0.10	160
0.80	50	20000	0.020 (0.015—0.025)	0.30	400	50	20000	0.015 (0.012—0.018)	0.30	300
0.99	62	20000	0.040 (0.030—0.050)	0.30	800	62	20000	0.020 (0.015—0.025)	0.30	400

Materiale da lavorare	P: Acciaio al carbonio, Acciaio legato (280—350HB) 36CrNiMo4					P: Acciaio pre-temprato (35—45HRC) X36CrMo17				
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)
0.10	6	20000	0.002 (0.001—0.003)	0.02	40	6	20000	0.002 (0.001—0.003)	0.02	40
0.12	8	20000	0.002 (0.001—0.003)	0.02	40	8	20000	0.002 (0.001—0.003)	0.02	40
0.16	10	20000	0.002 (0.001—0.003)	0.02	40	10	20000	0.002 (0.001—0.003)	0.02	40
0.20	13	20000	0.003 (0.002—0.004)	0.04	60	13	20000	0.003 (0.002—0.004)	0.04	60
0.25	16	20000	0.003 (0.002—0.004)	0.04	60	16	20000	0.003 (0.002—0.004)	0.04	60
0.32	20	20000	0.004 (0.003—0.005)	0.05	80	20	20000	0.004 (0.003—0.005)	0.05	80
0.40	25	20000	0.004 (0.003—0.005)	0.05	80	25	20000	0.004 (0.003—0.005)	0.05	80
0.50	31	20000	0.006 (0.005—0.007)	0.10	120	31	20000	0.006 (0.005—0.007)	0.10	120
0.63	40	20000	0.008 (0.006—0.010)	0.10	160	40	20000	0.008 (0.006—0.010)	0.10	160
0.80	50	20000	0.015 (0.012—0.018)	0.30	300	50	20000	0.015 (0.012—0.018)	0.30	300
0.99	62	20000	0.020 (0.015—0.025)	0.30	400	62	20000	0.020 (0.015—0.025)	0.30	400

Nota 1) Per fori fino a Ø 0.3mm, si raccomanda l'uso del bulino MSP.
Nota 2) Modificare i parametri di taglio a seconda della macchina usata e della rigidità del pezzo da lavorare.
Nota 3) Per fori superiori a DCx5, ridurre la distanza sopra indicata.
Nota 4) Per fori praticati nelle condizioni sopra specificate, si raccomanda l'uso di fluidi solubili in acqua (diluiti 20 volte).
Abbassare il numero di giri se si usa del fluido a base di olio o nebbia d'olio.
Nota 5) I materiali indicati con "—" nelle tabelle sopra riportate sono difficili da forare con refrigerante esterno.

FORATURA (METALLO DURO)

MSE

- Ampia scanalatura per impedire l'inceppamento del truciolo.
- Lavorazione stabile, diametri piccoli.

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	M					K				
	Acciaio inossidabile austenitico (≤200HB) X5CrNi1810, X5CrNiMo17-12-2					Ghisa grigia (≤350MPa) GG30				
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)
0.10	6	20000	0.002 (0.001—0.003)	0.02	40	6	20000	0.002 (0.001—0.003)	0.02	40
0.12	8	20000	0.002 (0.001—0.003)	0.02	40	8	20000	0.002 (0.001—0.003)	0.02	40
0.16	10	20000	0.002 (0.001—0.003)	0.02	40	10	20000	0.002 (0.001—0.003)	0.02	40
0.20	11	18000	0.003 (0.002—0.004)	0.04	54	13	20000	0.003 (0.002—0.004)	0.04	60
0.25	14	18000	0.003 (0.002—0.004)	0.04	54	16	20000	0.003 (0.002—0.004)	0.04	60
0.32	15	15000	0.004 (0.003—0.005)	0.05	60	20	20000	0.004 (0.003—0.005)	0.05	80
0.40	19	15000	0.004 (0.003—0.005)	0.05	60	25	20000	0.004 (0.003—0.005)	0.05	80
0.50	16	10000	0.006 (0.005—0.007)	0.10	60	31	20000	0.006 (0.005—0.007)	0.10	120
0.63	20	10000	0.008 (0.006—0.010)	0.10	80	40	20000	0.008 (0.006—0.010)	0.10	160
0.80	15	6000	0.015 (0.012—0.018)	0.20	90	50	20000	0.020 (0.015—0.025)	0.30	400
0.99	19	6000	0.020 (0.015—0.025)	0.20	120	62	20000	0.040 (0.030—0.050)	0.30	800

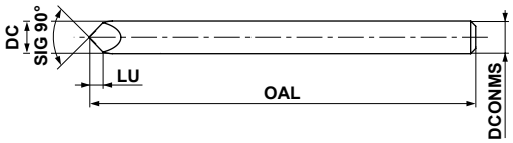
Materiale da lavorare	N					S				
	Lega di alluminio (Si<5%)					Lega resistente al calore Inconel®718				
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Gradino (mm)	Avanzamento della tavola (mm/min)
0.10	6	20000	0.002 (0.001—0.003)	0.05	40	2	7000	0.001 (0.0005—0.001)	0.02	7
0.12	8	20000	0.003 (0.002—0.004)	0.05	60	3	7000	0.001 (0.0005—0.001)	0.02	7
0.16	10	20000	0.004 (0.003—0.005)	0.05	80	4	7000	0.001 (0.0005—0.001)	0.02	7
0.20	13	20000	0.006 (0.005—0.007)	0.10	120	3	5000	0.002 (0.001—0.002)	0.04	10
0.25	16	20000	0.008 (0.006—0.010)	0.10	160	4	5000	0.002 (0.001—0.002)	0.04	10
0.32	20	20000	0.010 (0.008—0.012)	0.30	200	4	4000	0.002 (0.001—0.002)	0.05	8
0.40	25	20000	0.020 (0.015—0.025)	0.30	400	5	4000	0.002 (0.001—0.002)	0.05	8
0.50	31	20000	0.030 (0.025—0.035)	0.50	600	5	3000	0.003 (0.001—0.003)	0.10	9
0.63	40	20000	0.040 (0.035—0.045)	0.50	800	6	3000	0.004 (0.002—0.004)	0.10	12
0.80	50	20000	0.050 (0.045—0.055)	0.80	1000	5	1800	0.006 (0.004—0.006)	0.20	10.8
0.99	62	20000	0.060 (0.055—0.065)	0.80	1200	6	1800	0.010 (0.008—0.010)	0.20	18

Nota 1) Per fori fino a Ø 0.3mm, si raccomanda l'uso del bulino MSP.
Nota 2) Modificare i parametri di taglio a seconda della macchina usata e della rigidità del pezzo da lavorare.
Nota 3) Per fori superiori a DCx5, ridurre la distanza sopra indicata.
Nota 4) Per fori praticati nelle condizioni sopra specificate, si raccomanda l'uso di fluidi solubili in acqua (diluiti 20 volte).
Abbassare il numero di giri se si usa del fluido a base di olio o nebbia d'olio.
Nota 5) I materiali indicati con "—" nelle tabelle sopra riportate sono difficili da forare con refrigerante esterno.

MSP
Bulini

P M K N S H





Codice di ordinazione	Grado	Disponibilità	Dimensioni (mm)				Serie di diametri (mm)
			DC	LU	OAL	DCONMS	
MSP0300SB	**VP15TF**	●	3.0	1.5	38.0	3.0	**0.1—3.0**

PARAMETRI DI TAGLIO CONSIGLIATI

Gamma dei diametri (mm)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.1—3.0	10000	0.0005 (0.00025—0.001)	5

● : Inventario mantenuto.

FORATURA (METALLO DURO)

DLE

Punte per centrinatura

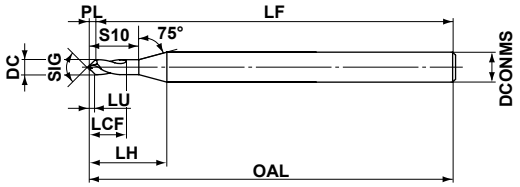
P M K N S H

Refrigerante esterno

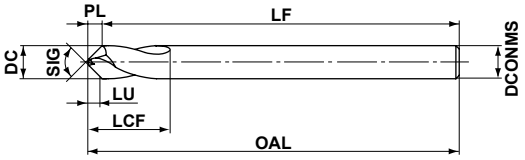
Angolo di cuspide 60° e 90°







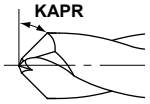
Tipo1



Tipo2

Angolo di cuspide 120° e 145°





h7	DCONMS=3	3<DCONMS≤6	6<DCONMS≤10	10<DCONMS≤16
	0 −0.010	0 −0.012	0 −0.015	0 −0.018

DC (mm)	SIG	DP1020	DP102A	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	S10	OAL	LF	PL	KAPR	DCONMS	Tipo
3.0	60°	●		**DLE0300S030P060**	2.0	9	—	—	45	42.9	2.1	60°	3	2
4.0	60°	●		**DLE0400S040P060**	2.7	12	—	—	50	47.2	2.8	60°	4	2
5.0	60°	●		**DLE0500S050P060**	3.4	14	—	—	60	56.5	3.5	60°	5	2
6.0	60°	●		**DLE0600S060P060**	4.0	15	—	—	66	61.8	4.2	60°	6	2
7.0	60°	●		**DLE0700S070P060**	4.7	18	—	—	74	69.1	4.9	60°	7	2
8.0	60°	●		**DLE0800S080P060**	5.4	20	—	—	74	68.4	5.6	60°	8	2
10.0	60°	●		**DLE1000S100P060**	6.8	24	—	—	84	77.0	7.0	60°	10	2
12.0	60°	●		**DLE1200S120P060**	8.1	28	—	—	95	86.6	8.4	60°	12	2
1.0	90°		●	**DLE0100S030P090**	0.35	2	6.7	3.0	45	44.6	0.4	45°	3	1
1.5	90°		●	**DLE0150S030P090**	0.55	3	7.3	4.5	45	44.4	0.6	45°	3	1
2.0	90°		●	**DLE0200S030P090**	0.8	4	7.9	6.1	45	44.1	0.9	45°	3	1
2.5	90°		●	**DLE0250S030P090**	1.0	5	7.9	7.1	45	43.9	1.1	45°	3	1
3.0	90°	●		**DLE0300S030P090**	1.2	9	—	—	45	43.7	1.3	45°	3	2
4.0	90°	●		**DLE0400S040P090**	1.6	12	—	—	50	48.3	1.7	45°	4	2
5.0	90°	●		**DLE0500S050P090**	2.0	14	—	—	60	57.9	2.1	45°	5	2
6.0	90°	●		**DLE0600S060P090**	2.4	15	—	—	66	63.4	2.6	45°	6	2
7.0	90°	●		**DLE0700S070P090**	2.8	18	—	—	74	71.0	3.0	45°	7	2
8.0	90°	●		**DLE0800S080P090**	3.2	20	—	—	74	70.6	3.4	45°	8	2
10.0	90°	●		**DLE1000S100P090**	4.1	24	—	—	84	79.7	4.3	45°	10	2
12.0	90°	●		**DLE1200S120P090**	4.9	28	—	—	95	89.9	5.1	45°	12	2
16.0	90°	●		**DLE1600S160P090**	6.6	35	—	—	113	106.2	6.8	45°	16	2

Nota 1) A causa della doppia inclinazione della cuspide a circa **DC**/4, l'area centrale non avrà un fondo del foro con angolo di 60° e 90°. Non è inoltre possibile effettuare l'operazione di smussatura in questa parte dei taglienti.

Nota 2) Il diametro del foro di centrinatura deve essere inferiore al diametro della punta **DC**, e la lunghezza utilizzabile **LU** deve essere considerata come linea guida.

● : **Inventario mantenuto.**

DC (mm)	SIG	DP1020	DP102A	Codice di ordinazione	Dimensioni (mm)									Tipo
					LU	LCF	LH	S10	OAL	LF	PL	KAPR	DCONMS	
3.0	120°	●		**DLE0300S030P120**	0.8	9	—	—	45	44.1	0.9	30°	3	2
4.0	120°	●		**DLE0400S040P120**	1.1	12	—	—	50	48.8	1.2	30°	4	2
5.0	120°	●		**DLE0500S050P120**	1.3	14	—	—	60	58.6	1.4	30°	5	2
6.0	120°	●		**DLE0600S060P120**	1.6	15	—	—	66	64.3	1.7	30°	6	2
7.0	120°	●		**DLE0700S070P120**	1.9	18	—	—	74	72.0	2.0	30°	7	2
8.0	120°	●		**DLE0800S080P120**	2.2	20	—	—	74	71.7	2.3	30°	8	2
10.0	120°	●		**DLE1000S100P120**	2.8	24	—	—	84	81.1	2.9	30°	10	2
12.0	120°	●		**DLE1200S120P120**	3.3	28	—	—	95	91.5	3.5	30°	12	2
3.0	145°	●		**DLE0300S030P145**	0.4	9	—	—	45	44.5	0.5	17.5°	3	2
4.0	145°	●		**DLE0400S040P145**	0.5	12	—	—	50	49.4	0.6	17.5°	4	2
5.0	145°	●		**DLE0500S050P145**	0.7	14	—	—	60	59.2	0.8	17.5°	5	2
6.0	145°	●		**DLE0600S060P145**	0.8	15	—	—	66	65.1	0.9	17.5°	6	2
7.0	145°	●		**DLE0700S070P145**	1.0	18	—	—	74	72.9	1.1	17.5°	7	2
8.0	145°	●		**DLE0800S080P145**	1.1	20	—	—	74	72.7	1.3	17.5°	8	2
10.0	145°	●		**DLE1000S100P145**	1.4	24	—	—	84	82.4	1.6	17.5°	10	2
12.0	145°	●		**DLE1200S120P145**	1.7	28	—	—	95	93.1	1.9	17.5°	12	2

Nota 1) Il diametro del foro di centrinatura deve essere inferiore al diametro della punta **DC**, e la lunghezza utilizzabile **LU** deve essere considerata come linea guida.

PARAMETRI DI TAGLIO ➤ **M016**
GUIDA OPERATIVA ➤ **M016**
DATI TECNICI ➤ **P001**

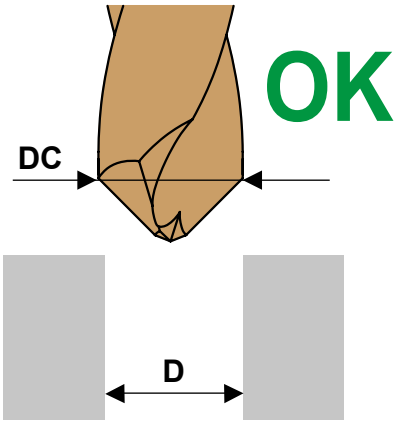
DLE

Punte per centrinatura

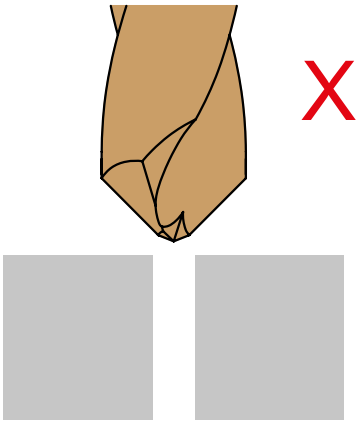
SELEZIONE DEL DIAMETRO DELLA PUNTA

PER OPERAZIONI DI SMUSSO

Prendendo come riferimento il diametro del foro guida **D**, selezionare il diametro della punta (**DC**) entro l'intervallo **D < DC < 2D.**

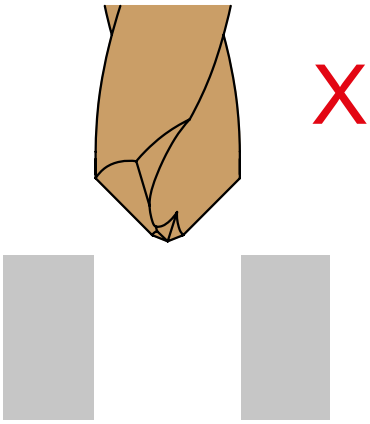


Esempio) Se il diametro **D** del foro guida è pari a 5 mm, il diametro **DC** della punta deve essere maggiore di 6 ma inferiore a 10 mm. Selezionare un **DC** da 6 mm, 7 mm, o 8 mm.



Se DC è uguale o superiore di due volte al diametro del foro (2D):

Se il diametro **DC** della punta è troppo grande rispetto al diametro **D** del foro guida (uguale o superiore a **2D**), non sarà possibile eseguire l'operazione di smusso.

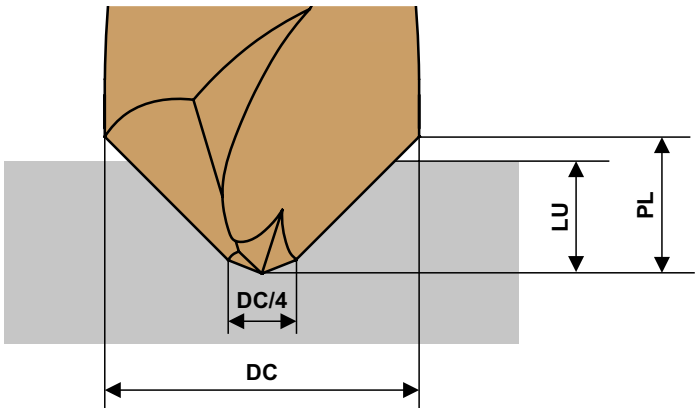


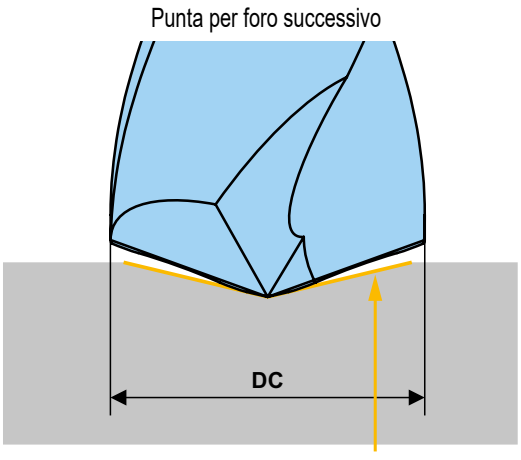
Se il diametro DC della punta è uguale o inferiore a D:

Lo smusso non può essere eseguito se il diametro **DC** è uguale al diametro **D** del foro guida.

PER L'OPERAZIONE DI CENTRINATURA

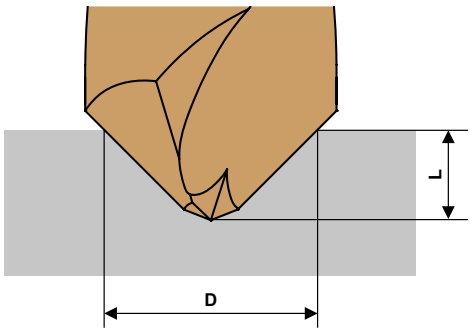
Il diametro di centrinatura deve essere inferiore al diametro della punta **DC** (diametro di lavorazione), e la lunghezza utilizzabile **LU** deve essere considerata come foro guida.
L'area centrale dei fori (circa il 25% del diametro totale), formata dalla doppia inclinazione della cuspide, non avrà i loro rispettivi angoli di 60º e 90º. Non è inoltre possibile effettuare l'operazione di smussatura nelle aree al centro. Selezionare una punta di centrinatura con angolo di cuspide maggiore rispetto alla punta successiva se si desidera ottenere un contatto iniziale sul vertice della cuspide.





Centrinatura con angolo di cuspide 145°

Tabella profondità di foratura (L) per diametro dell'utensile



(mm)

DC	SIG 90°			
	Min.		Max.	
	D	L	D	L
1.0	0.5	0.18	0.8	0.33
1.5	0.8	0.29	1.3	0.54
2.0	1.0	0.35	1.9	0.8
2.5	1.3	0.47	2.4	1.0
3.0	1.5	0.5	2.8	1.2
4.0	2.0	0.7	3.8	1.6
5.0	2.5	0.9	4.7	2.0
6.0	3.0	1.1	5.7	2.4
7.0	3.5	1.2	6.6	2.8
8.0	4.0	1.4	7.6	3.2
10.0	5.0	1.8	9.7	4.1
12.0	6.0	2.1	11.6	4.9
16.0	8.0	2.8	15.5	6.6

(mm)

DC	SIG 60°				SIG 120°				SIG 145°			
	Min.		Max.		Min.		Max.		Min.		Max.	
	D	L	D	L	D	L	D	L	D	L	D	L
3.0	1.5	0.8	2.9	2.0	1.5	0.4	2.8	0.8	1.5	0.2	2.5	0.4
4.0	2.0	1.1	3.9	2.7	2.0	0.6	3.8	1.1	2.0	0.3	3.2	0.5
5.0	2.5	1.3	4.9	3.4	2.5	0.7	4.5	1.3	2.5	0.4	4.4	0.7
6.0	3.0	1.6	5.8	4.0	3.0	0.9	5.5	1.6	3.0	0.5	5.1	0.8
7.0	3.5	1.9	6.8	4.7	3.5	1.0	6.6	1.9	3.5	0.6	6.3	1.0
8.0	4.0	2.1	7.8	5.4	4.0	1.2	7.6	2.2	4.0	0.6	7.0	1.1
10.0	5.0	2.7	9.8	6.8	5.0	1.4	9.7	2.8	5.0	0.8	8.9	1.4
12.0	6.0	3.2	11.6	8.1	6.0	1.7	11.4	3.3	6.0	0.9	10.8	1.7

DLE

Punte per centrinatura

Angolo di cuspide 60°

PARAMETRI DI TAGLIO CONSIGLIATI

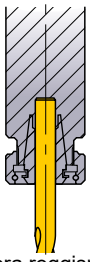
Materiale da lavorare	P					
	Acciaio dolce (≤180HB) DIN C10E ecc.		Acciaio al carbonio, Acciaio legato (180—280HB) DIN Ck45, 41CrMo4 ecc.		Acciaio al carbonio, Acciaio legato (280—350HB) DIN 40CrNiMoA ecc.	
Diam. Punta **DC** (mm)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
3.0	7900	0.05 (0.03—0.07)	6800	0.05 (0.03—0.07)	6300	0.04 (0.02—0.06)
4.0	5900	0.05 (0.03—0.07)	5100	0.05 (0.03—0.07)	4700	0.04 (0.02—0.06)
5.0	5000	0.06 (0.04—0.08)	4400	0.06 (0.04—0.08)	4100	0.05 (0.03—0.07)
6.0	4200	0.06 (0.04—0.08)	3700	0.06 (0.04—0.08)	3400	0.05 (0.03—0.07)
7.0	3600	0.07 (0.04—0.09)	3100	0.07 (0.04—0.09)	2900	0.05 (0.03—0.07)
8.0	3100	0.07 (0.04—0.09)	2700	0.07 (0.04—0.09)	2500	0.05 (0.03—0.07)
10.0	2700	0.08 (0.04—0.10)	2300	0.08 (0.04—0.10)	2200	0.06 (0.03—0.08)
12.0	2200	0.08 (0.04—0.10)	1900	0.08 (0.04—0.10)	1800	0.06 (0.03—0.08)

Materiale da lavorare	M		K			
	Acciaio inossidabile austenitico (≤200HB) DIN X5CrNi189, X5CrNiMo1810 ecc.		Ghisa grigia (≤350MPa) DIN GG30 ecc.		Ghisa sferoidale (≤450MPa) DIN GGG40.3 ecc.	
Diam. Punta **DC** (mm)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
3.0	1500	0.03 (0.01—0.05)	7900	0.05 (0.03—0.07)	5800	0.05 (0.03—0.07)
4.0	1100	0.03 (0.01—0.05)	5900	0.05 (0.03—0.07)	4300	0.05 (0.03—0.07)
5.0	1200	0.04 (0.02—0.06)	5000	0.06 (0.04—0.08)	3800	0.06 (0.04—0.08)
6.0	1000	0.04 (0.02—0.06)	4200	0.06 (0.04—0.08)	3100	0.06 (0.04—0.08)
7.0	900	0.04 (0.02—0.06)	3600	0.07 (0.04—0.09)	2700	0.06 (0.04—0.08)
8.0	790	0.04 (0.02—0.06)	3100	0.07 (0.04—0.09)	2300	0.06 (0.04—0.08)
10.0	630	0.04 (0.02—0.06)	2700	0.08 (0.04—0.10)	1900	0.07 (0.04—0.09)
12.0	530	0.04 (0.02—0.06)	2200	0.08 (0.04—0.10)	1500	0.07 (0.04—0.09)

Nota 1) Utilizzare un utensile più grande (DC) rispetto a quello richiesto per il foro centrale, ma più piccolo di 2 x DC.
Nota 2) Durante la centrinatura su superfici curve o inclinate ridurre la velocità di avanzamento.
Nota 3) Quando si eseguono operazioni di scanalatura a V e smussatura, ridurre le condizioni di taglio.
Nota 4) Se si generano vibrazioni o rumori anomali, ridurre il tempo di sosta o i giri.
Nota 5) Durante la centrinatura, non superare la LU (lunghezza utilizzabile).

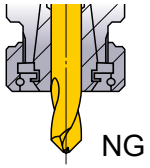
GUIDA OPERATIVA

Mandrino di tenuta



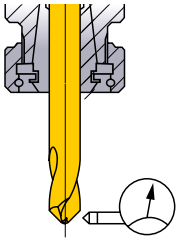
La ghiera reggispinta del mandrino blocca la punta in modo sicuro.

Lunghezza punta



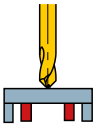
Non bloccare la punta sull'elica.

Tolleranza d'installazione

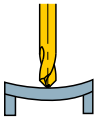


eccentricità ≤ 0.03mm

Pezzi sottili

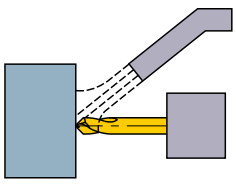


OK
Supporti per il pezzo



X
Se tende a flettere

Metodo refrigerante



Due posizioni di refrigerante, nella zona centrale e alla fine della punta sono l'ideale.

Angoli di cuspide 90°, 120° e 145°

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	P					
	Acciaio dolce (≤180HB) DIN C10E ecc.		Acciaio al carbonio, Acciaio legato (180—280HB) DIN Ck45, 41CrMo4 ecc.		Acciaio al carbonio, Acciaio legato (280—350HB) DIN 40CrNiMoA ecc.	
Diam. Punta **DC** (mm)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	9500	0.02 (0.01—0.03)	6300	0.02 (0.01—0.03)	4700	0.02 (0.01—0.03)
1.5	9500	0.02 (0.01—0.03)	7400	0.02 (0.01—0.03)	6300	0.02 (0.01—0.03)
2.0	9500	0.04 (0.03—0.05)	7900	0.04 (0.03—0.05)	7100	0.04 (0.03—0.05)
2.5	9500	0.04 (0.03—0.05)	8200	0.04 (0.03—0.05)	7600	0.04 (0.03—0.05)
3.0	7900	0.06 (0.04—0.08)	6800	0.06 (0.04—0.08)	6300	0.05 (0.03—0.07)
4.0	5900	0.06 (0.04—0.08)	5100	0.06 (0.04—0.08)	4700	0.05 (0.03—0.07)
5.0	5000	0.07 (0.05—0.09)	4400	0.07 (0.05—0.09)	4100	0.06 (0.04—0.08)
6.0	4200	0.07 (0.05—0.09)	3700	0.07 (0.05—0.09)	3400	0.06 (0.04—0.08)
7.0	3600	0.08 (0.05—0.10)	3100	0.08 (0.05—0.10)	2900	0.06 (0.04—0.08)
8.0	3100	0.08 (0.05—0.10)	2700	0.08 (0.05—0.10)	2500	0.06 (0.04—0.08)
10.0	2700	0.09 (0.05—0.11)	2300	0.09 (0.05—0.11)	2200	0.07 (0.04—0.09)
12.0	2200	0.09 (0.05—0.11)	1900	0.09 (0.05—0.11)	1800	0.07 (0.04—0.09)
16.0	1700	0.12 (0.10—0.14)	1500	0.12 (0.10—0.14)	1400	0.08 (0.06—0.10)

Materiale da lavorare	M		K			
	Acciaio inossidabile austenitico (≤200HB) DIN X5CrNi189, X5CrNiMo1810 ecc.		Ghisa grigia (≤350MPa) DIN GG30 ecc.		Ghisa sferoidale (≤450MPa) DIN GGG40.3 ecc.	
Diam. Punta **DC** (mm)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	6300	0.01 (0.005—0.015)	9500	0.02 (0.01—0.03)	3100	0.02 (0.01—0.03)
1.5	4200	0.01 (0.005—0.015)	9500	0.02 (0.01—0.03)	5300	0.02 (0.01—0.03)
2.0	3100	0.04 (0.03—0.05)	9500	0.04 (0.03—0.05)	6300	0.04 (0.03—0.05)
2.5	2500	0.04 (0.03—0.05)	9500	0.04 (0.03—0.05)	7000	0.04 (0.03—0.05)
3.0	2100	0.04 (0.02—0.06)	7900	0.06 (0.04—0.08)	5800	0.06 (0.04—0.08)
4.0	1600	0.04 (0.02—0.06)	5900	0.06 (0.04—0.08)	4300	0.06 (0.04—0.08)
5.0	1200	0.06 (0.04—0.08)	5000	0.07 (0.05—0.09)	3800	0.07 (0.05—0.09)
6.0	1000	0.06 (0.04—0.08)	4200	0.07 (0.05—0.09)	3100	0.07 (0.05—0.09)
7.0	900	0.06 (0.04—0.08)	3600	0.08 (0.05—0.10)	2700	0.07 (0.05—0.09)
8.0	790	0.06 (0.04—0.08)	3100	0.08 (0.05—0.10)	2300	0.07 (0.05—0.09)
10.0	630	0.06 (0.04—0.08)	2700	0.09 (0.05—0.11)	1900	0.08 (0.05—0.10)
12.0	530	0.06 (0.04—0.08)	2200	0.09 (0.05—0.11)	1500	0.08 (0.05—0.10)
16.0	390	0.08 (0.06—0.10)	1700	0.12 (0.10—0.14)	1100	0.11 (0.09—0.13)

Nota 1) Utilizzare un utensile più grande (DC) rispetto a quello richiesto per il foro centrale, ma più piccolo di 2 x DC.
Nota 2) Durante la centrinatura su superfici curve o inclinate ridurre la velocità di avanzamento.
Nota 3) Quando si eseguono operazioni di scanalatura a V e smussatura, ridurre le condizioni di taglio.
Nota 4) Se si generano vibrazioni o rumori anomali, ridurre il tempo di sosta o i giri.
Nota 5) Durante la centrinatura, non superare la LU (lunghezza utilizzabile).

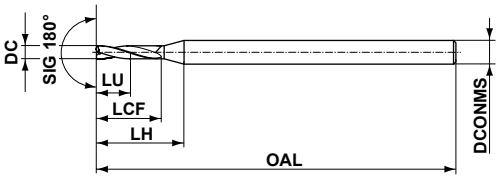
FORATURA (METALLO DURO)

MINI-MFE per Piccolo Diametro

P M K N S H

Refrigerante esterno





Tipo1

0.75≤DC≤2.95	
0 −0.014	
DCONMS=3	DCONMS=4
0 −0.006	0 −0.008

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	DCONMS	Tipo
0.75	2	★	**MFE0075X02S030**	1.5	3.0	7.7	45	3	1
0.80	2	★	**MFE0080X02S030**	1.6	3.2	7.8	45	3	1
0.85	2	★	**MFE0085X02S030**	1.7	3.4	7.9	45	3	1
0.90	2	★	**MFE0090X02S030**	1.8	3.6	8.0	45	3	1
0.95	2	★	**MFE0095X02S030**	1.9	3.8	8.1	45	3	1
1.00	2	★	**MFE0100X02S030**	2.0	4.0	8.2	45	3	1
1.05	2	★	**MFE0105X02S030**	2.1	4.2	8.3	45	3	1
1.10	2	★	**MFE0110X02S030**	2.2	4.4	8.4	45	3	1
1.15	2	★	**MFE0115X02S030**	2.3	4.6	8.6	45	3	1
1.20	2	★	**MFE0120X02S030**	2.4	4.8	8.7	45	3	1
1.25	2	★	**MFE0125X02S030**	2.5	5.0	8.8	45	3	1
1.30	2	★	**MFE0130X02S030**	2.6	5.2	8.9	45	3	1
1.35	2	★	**MFE0135X02S030**	2.7	5.4	9.0	45	3	1
1.40	2	★	**MFE0140X02S030**	2.8	5.6	9.1	45	3	1
1.45	2	★	**MFE0145X02S030**	2.9	5.8	9.2	45	3	1
1.50	2	★	**MFE0150X02S030**	3.0	6.0	9.3	45	3	1
1.55	2	★	**MFE0155X02S030**	3.1	6.2	9.4	45	3	1
1.60	2	★	**MFE0160X02S030**	3.2	6.4	9.5	45	3	1
1.65	2	★	**MFE0165X02S030**	3.3	6.6	9.6	45	3	1
1.70	2	★	**MFE0170X02S030**	3.4	6.8	9.7	45	3	1
1.75	2	★	**MFE0175X02S030**	3.5	7.0	9.8	45	3	1
1.80	2	★	**MFE0180X02S030**	3.6	7.2	9.9	45	3	1
1.85	2	★	**MFE0185X02S030**	3.7	7.4	10.0	45	3	1
1.90	2	★	**MFE0190X02S030**	3.8	7.6	10.2	45	3	1
1.95	2	★	**MFE0195X02S030**	3.9	7.8	10.3	45	3	1
2.00	2	★	**MFE0200X02S040**	4.0	8.0	12.2	50	4	1
2.05	2	★	**MFE0205X02S040**	4.1	8.2	12.3	50	4	1
2.10	2	★	**MFE0210X02S040**	4.2	8.4	12.4	50	4	1
2.15	2	★	**MFE0215X02S040**	4.3	8.6	12.6	50	4	1
2.20	2	★	**MFE0220X02S040**	4.4	8.8	12.7	50	4	1
2.25	2	★	**MFE0225X02S040**	4.5	9.0	12.8	50	4	1
2.30	2	★	**MFE0230X02S040**	4.6	9.2	12.9	50	4	1
2.35	2	★	**MFE0235X02S040**	4.7	9.4	13.0	50	4	1
2.40	2	★	**MFE0240X02S040**	4.8	9.6	13.1	50	4	1
2.45	2	★	**MFE0245X02S040**	4.9	9.8	13.2	50	4	1
2.50	2	★	**MFE0250X02S040**	5.0	10.0	13.3	50	4	1
2.55	2	★	**MFE0255X02S040**	5.1	10.2	13.4	50	4	1
2.60	2	★	**MFE0260X02S040**	5.2	10.4	13.5	50	4	1
2.65	2	★	**MFE0265X02S040**	5.3	10.6	13.6	50	4	1
2.70	2	★	**MFE0270X02S040**	5.4	10.8	13.7	50	4	1
2.75	2	★	**MFE0275X02S040**	5.5	11.0	13.8	50	4	1
2.80	2	★	**MFE0280X02S040**	5.6	11.2	13.9	50	4	1
2.85	2	★	**MFE0285X02S040**	5.7	11.4	14.0	50	4	1
2.90	2	★	**MFE0290X02S040**	5.8	11.6	14.2	50	4	1
2.95	2	★	**MFE0295X02S040**	5.9	11.8	14.3	50	4	1

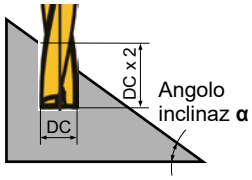
★ : Inventario mantenuto in Giappone.

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		P					
		Acciaio dolce (≤180HB) C10E ecc.		Acciaio al carbonio, Acciaio legato (180—280HB) DIN Ck45, 41CrMo4 ecc.		Acciaio al carbonio, Acciaio legato (280—350HB) DIN 40CrNiMoA ecc.	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)
0.75	**≤2**	23300	0.030 (0.010—0.050)	19000	0.030 (0.010—0.050)	16900	0.030 (0.010—0.050)
1.0	**≤2**	17500	0.030 (0.010—0.050)	14300	0.030 (0.010—0.050)	12700	0.030 (0.010—0.050)
1.5	**≤2**	12200	0.035 (0.015—0.055)	10000	0.035 (0.015—0.055)	8400	0.035 (0.015—0.050)
2.0	**≤2**	9500	0.040 (0.020—0.060)	7900	0.040 (0.020—0.060)	6700	0.040 (0.020—0.060)
2.5	**≤2**	7900	0.050 (0.030—0.070)	6600	0.050 (0.030—0.070)	5700	0.050 (0.030—0.070)
2.95	**≤2**	7900	0.060 (0.040—0.080)	7900	0.060 (0.040—0.080)	6800	0.060 (0.040—0.080)

Materiale da lavorare		M		K			
		Acciaio inossidabile austenitico (≤200HB) DIN X5CrNi189, X5CrNiMo1810 ecc.		Ghisa grigia (≤350MPa) DIN GG30 ecc.		Ghisa sferoidale (≤450MPa) DIN GGG40.3 ecc.	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)
0.75	**≤2**	10600	0.007 (0.003—0.011)	23300	0.030 (0.010—0.050)	16900	0.010 (0.005—0.015)
1.0	**≤2**	7900	0.007 (0.003—0.011)	17500	0.030 (0.010—0.050)	12700	0.010 (0.005—0.015)
1.5	**≤2**	5300	0.010 (0.005—0.015)	12200	0.035 (0.015—0.055)	10000	0.020 (0.010—0.030)
2.0	**≤2**	4700	0.015 (0.010—0.020)	9500	0.040 (0.020—0.060)	8700	0.030 (0.015—0.045)
2.5	**≤2**	3800	0.015 (0.010—0.020)	7900	0.050 (0.030—0.070)	7300	0.045 (0.025—0.065)
2.95	**≤2**	3100	0.020 (0.010—0.030)	7900	0.060 (0.040—0.080)	6800	0.050 (0.040—0.060)

Materiale da lavorare		N	
		Lega di alluminio (Si<5%) AlMg1SiCu, AlZn5.5MgCu ecc.	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)
0.75	**≤2**	42400	0.020 (0.010—0.030)
1.0	**≤2**	31800	0.020 (0.010—0.030)
1.5	**≤2**	21200	0.020 (0.010—0.030)
2.0	**≤2**	17500	0.050 (0.030—0.070)
2.5	**≤2**	14000	0.060 (0.040—0.090)
2.95	**≤2**	11600	0.060 (0.040—0.090)



Nota 1) La profondità di foratura consigliata è DC x 2. Questa deve corrispondere alla distanza dal primo punto di contatto del materiale da lavorare quando si lavora su superfici inclinate. (Fare riferimento alla figura)

Nota 2) La tabella di taglio soprastante si riferisce a foratura su superficie piana.
Per foratura su superfici inclinate, regolare la velocità di avanzamento di conseguenza.
Quando l'angolo di inclinazione α è pari o inferiore a 30°, regolare la velocità di avanzamento al 70% o inferiore.
Quando l'angolo di inclinazione α è pari o superiore a 30°, regolare la velocità di avanzamento al 50% o inferiore.

Nota 3) Questo utensile è adatto solo per la foratura. Non può essere utilizzato per lavorazioni di fresatura o interpolazioni elicoidali.

FORATURA (METALLO DURO)

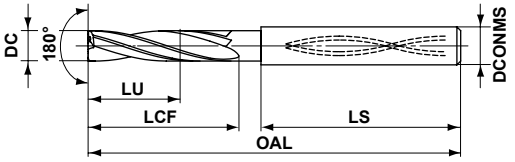
DFAS NEW

Punte in metallo duro a testa piatta

P M K N S H

Refrigerante interno





Tipo1

DC=3	3 < DC≤6	6 < DC≤10	10 < DC≤14
0 −0.014	0 −0.018	0 −0.022	0 −0.027
4 < DCONMS≤6	6 < DCONMS≤10	10 < DCONMS≤14	
0 −0.008	0 −0.009	0 −0.011	

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm) LU	LCF	LS	OAL	DCONMS	Tipo
3.0	3	●	**DFAS0300X03S040**	9.0	14	39.0	55	4	1
3.1	3	★	**DFAS0310X03S040**	9.3	16	37.0	55	4	1
3.2	3	★	**DFAS0320X03S040**	9.6	16	37.0	55	4	1
3.3	3	●	**DFAS0330X03S040**	9.9	16	37.0	55	4	1
3.4	3	★	**DFAS0340X03S040**	10.2	16	37.0	55	4	1
3.5	3	●	**DFAS0350X03S040**	10.5	16	37.0	55	4	1
3.6	3	★	**DFAS0360X03S040**	10.8	18	35.0	55	4	1
3.7	3	★	**DFAS0370X03S040**	11.1	18	35.0	55	4	1
3.8	3	★	**DFAS0380X03S040**	11.4	18	35.0	55	4	1
3.9	3	★	**DFAS0390X03S040**	11.7	18	35.0	55	4	1
4.0	3	●	**DFAS0400X03S040**	12.0	18	35.0	55	4	1
4.1	3	★	**DFAS0410X03S050**	12.3	20	40.0	62	5	1
4.2	3	●	**DFAS0420X03S050**	12.6	20	40.0	62	5	1
4.3	3	★	**DFAS0430X03S050**	12.9	20	40.0	62	5	1
4.4	3	★	**DFAS0440X03S050**	13.2	20	40.0	62	5	1
4.5	3	●	**DFAS0450X03S050**	13.5	20	40.0	62	5	1
4.6	3	★	**DFAS0460X03S050**	13.8	23	37.0	62	5	1
4.7	3	★	**DFAS0470X03S050**	14.1	23	37.0	62	5	1
4.8	3	★	**DFAS0480X03S050**	14.4	23	37.0	62	5	1
4.9	3	★	**DFAS0490X03S050**	14.7	23	37.0	62	5	1
5.0	3	●	**DFAS0500X03S050**	15.0	23	37.0	62	5	1
5.1	3	★	**DFAS0510X03S060**	15.3	25	39.0	66	6	1
5.2	3	★	**DFAS0520X03S060**	15.6	25	39.0	66	6	1
5.3	3	●	**DFAS0530X03S060**	15.9	25	39.0	66	6	1
5.4	3	★	**DFAS0540X03S060**	16.2	25	39.0	66	6	1
5.5	3	●	**DFAS0550X03S060**	16.5	25	39.0	66	6	1
5.6	3	★	**DFAS0560X03S060**	16.8	27	37.0	66	6	1
5.7	3	★	**DFAS0570X03S060**	17.1	27	37.0	66	6	1
5.8	3	★	**DFAS0580X03S060**	17.4	27	37.0	66	6	1
5.9	3	★	**DFAS0590X03S060**	17.7	27	37.0	66	6	1

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

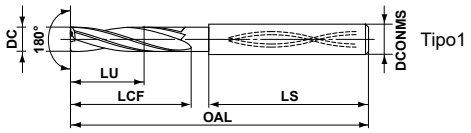
DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm)					Tipo
				LU	LCF	LS	OAL	DCONMS	
6.0	3	●	**DFAS0600X03S060**	18.0	27	37.0	66	6	1
6.1	3	★	**DFAS0610X03S070**	18.3	29	44.0	75	7	1
6.2	3	★	**DFAS0620X03S070**	18.6	29	44.0	75	7	1
6.3	3	★	**DFAS0630X03S070**	18.9	29	44.0	75	7	1
6.4	3	★	**DFAS0640X03S070**	19.2	29	44.0	75	7	1
6.5	3	●	**DFAS0650X03S070**	19.5	29	44.0	75	7	1
6.6	3	★	**DFAS0660X03S070**	19.8	32	41.0	75	7	1
6.7	3	★	**DFAS0670X03S070**	20.1	32	41.0	75	7	1
6.8	3	●	**DFAS0680X03S070**	20.4	32	41.0	75	7	1
6.9	3	★	**DFAS0690X03S070**	20.7	32	41.0	75	7	1
7.0	3	●	**DFAS0700X03S070**	21.0	32	41.0	75	7	1
7.1	3	★	**DFAS0710X03S080**	21.3	34	44.0	80	8	1
7.2	3	★	**DFAS0720X03S080**	21.6	34	44.0	80	8	1
7.3	3	★	**DFAS0730X03S080**	21.9	34	44.0	80	8	1
7.4	3	★	**DFAS0740X03S080**	22.2	34	44.0	80	8	1
7.5	3	●	**DFAS0750X03S080**	22.5	34	44.0	80	8	1
7.6	3	★	**DFAS0760X03S080**	22.8	36	42.0	80	8	1
7.7	3	★	**DFAS0770X03S080**	23.1	36	42.0	80	8	1
7.8	3	★	**DFAS0780X03S080**	23.4	36	42.0	80	8	1
7.9	3	★	**DFAS0790X03S080**	23.7	36	42.0	80	8	1
8.0	3	●	**DFAS0800X03S080**	24.0	36	42.0	80	8	1
8.1	3	★	**DFAS0810X03S090**	24.3	38	45.0	85	9	1
8.2	3	●	**DFAS0820X03S090**	24.6	38	45.0	85	9	1
8.3	3	★	**DFAS0830X03S090**	24.9	38	45.0	85	9	1
8.4	3	★	**DFAS0840X03S090**	25.2	38	45.0	85	9	1
8.5	3	●	**DFAS0850X03S090**	25.5	38	45.0	85	9	1
8.6	3	★	**DFAS0860X03S090**	25.8	41	42.0	85	9	1
8.7	3	★	**DFAS0870X03S090**	26.1	41	42.0	85	9	1
8.8	3	●	**DFAS0880X03S090**	26.4	41	42.0	85	9	1
8.9	3	★	**DFAS0890X03S090**	26.7	41	42.0	85	9	1
9.0	3	●	**DFAS0900X03S090**	27.0	41	42.0	85	9	1
9.1	3	★	**DFAS0910X03S100**	27.3	43	45.0	90	10	1
9.2	3	★	**DFAS0920X03S100**	27.6	43	45.0	90	10	1
9.3	3	★	**DFAS0930X03S100**	27.9	43	45.0	90	10	1
9.4	3	★	**DFAS0940X03S100**	28.2	43	45.0	90	10	1
9.5	3	●	**DFAS0950X03S100**	28.5	43	45.0	90	10	1
9.6	3	★	**DFAS0960X03S100**	28.8	45	43.0	90	10	1
9.7	3	●	**DFAS0970X03S100**	29.1	45	43.0	90	10	1
9.8	3	★	**DFAS0980X03S100**	29.4	45	43.0	90	10	1
9.9	3	★	**DFAS0990X03S100**	29.7	45	43.0	90	10	1

PARAMETRI DI TAGLIO ➢ **M023**
DATI TECNICI ➢ **P001**

FORATURA (METALLO DURO)

DFAS NEW

Punte in metallo duro a testa piatta



Tipo1

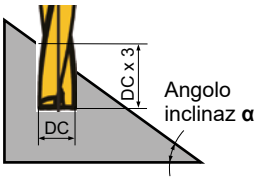
DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm)					Tipo
				LU	LCF	LS	OAL	DCONMS	
10.0	3	●	**DFAS1000X03S100**	30.0	45	43.0	90	10	1
10.1	3	★	**DFAS1010X03S110**	30.3	47	52.0	101	11	1
10.2	3	●	**DFAS1020X03S110**	30.6	47	52.0	101	11	1
10.3	3	★	**DFAS1030X03S110**	30.9	47	52.0	101	11	1
10.4	3	★	**DFAS1040X03S110**	31.2	47	52.0	101	11	1
10.5	3	●	**DFAS1050X03S110**	31.5	47	52.0	101	11	1
10.6	3	★	**DFAS1060X03S110**	31.8	50	49.0	101	11	1
10.7	3	★	**DFAS1070X03S110**	32.1	50	49.0	101	11	1
10.8	3	★	**DFAS1080X03S110**	32.4	50	49.0	101	11	1
10.9	3	★	**DFAS1090X03S110**	32.7	50	49.0	101	11	1
11.0	3	●	**DFAS1100X03S110**	33.0	50	49.0	101	11	1
11.1	3	★	**DFAS1110X03S120**	33.3	52	51.0	105	12	1
11.2	3	★	**DFAS1120X03S120**	33.6	52	51.0	105	12	1
11.3	3	★	**DFAS1130X03S120**	33.9	52	51.0	105	12	1
11.4	3	★	**DFAS1140X03S120**	34.2	52	51.0	105	12	1
11.5	3	●	**DFAS1150X03S120**	34.5	52	51.0	105	12	1
11.6	3	★	**DFAS1160X03S120**	34.8	54	49.0	105	12	1
11.7	3	★	**DFAS1170X03S120**	35.1	54	49.0	105	12	1
11.8	3	★	**DFAS1180X03S120**	35.4	54	49.0	105	12	1
11.9	3	★	**DFAS1190X03S120**	35.7	54	49.0	105	12	1
12.0	3	●	**DFAS1200X03S120**	36.0	54	49.0	105	12	1
12.5	3	★	**DFAS1250X03S130**	37.5	56	52.0	110	13	1
13.0	3	●	**DFAS1300X03S130**	39.0	59	49.0	110	13	1
13.5	3	★	**DFAS1350X03S140**	40.5	61	51.0	114	14	1
14.0	3	●	**DFAS1400X03S140**	42.0	63	49.0	114	14	1

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		P Acciaio dolce, Acciaio al carbonio, Acciaio legato S235JR (1.0038), C10 (1.1121), 42CrMo4 (1.7225), 34CrNiMo6 (1.6582)		M Acciaio inossidabile, Acciaio inossidabile temprato per precipitazione X5CrNi18-10 (1.4301), X5CrNiMo17-12-2 (1.4401), X5CrNiCuNb16-4 (1.4542), X7CrNiAl17-7 (1.4568)		K Ghisa grigia, Ghisa sferoidale GJL-300 (Ghisa grigia), GJS-450-10 (Ghisa sferoidale)	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)
3.0	**≤ 3**	10610	0.07 (0.04—0.10)	3180	0.05 (0.04—0.06)	10610	0.04 (0.02—0.07)
4.0	**≤ 3**	7960	0.08 (0.04—0.11)	2390	0.06 (0.05—0.08)	7960	0.05 (0.03—0.09)
5.0	**≤ 3**	6370	0.10 (0.05—0.14)	1910	0.08 (0.06—0.10)	6370	0.07 (0.03—0.11)
6.0	**≤ 3**	5310	0.12 (0.06—0.17)	1590	0.10 (0.08—0.12)	5310	0.08 (0.04—0.13)
7.0	**≤ 3**	4550	0.13 (0.07—0.20)	1360	0.11 (0.09—0.14)	4550	0.09 (0.05—0.15)
8.0	**≤ 3**	3980	0.16 (0.08—0.23)	1190	0.13 (0.10—0.16)	3980	0.11 (0.05—0.17)
9.0	**≤ 3**	3540	0.17 (0.09—0.26)	1060	0.15 (0.12—0.18)	3540	0.12 (0.06—0.20)
10.0	**≤ 3**	3180	0.20 (0.10—0.29)	950	0.16 (0.13—0.20)	3180	0.13 (0.07—0.22)
11.0	**≤ 3**	2890	0.22 (0.11—0.32)	870	0.18 (0.14—0.22)	2890	0.15 (0.07—0.24)
12.0	**≤ 3**	2650	0.24 (0.12—0.35)	800	0.20 (0.16—0.24)	2650	0.16 (0.08—0.26)
13.0	**≤ 3**	2450	0.26 (0.13—0.39)	730	0.22 (0.17—0.26)	2450	0.17 (0.09—0.28)
14.0	**≤ 3**	2270	0.28 (0.14—0.42)	680	0.23 (0.19—0.28)	2270	0.19 (0.09—0.30)

Materiale da lavorare		N Lega di alluminio AlMg1SiCu, AlZn5.5MgCu		S Lega di titanio Ti-6Al-4V, Ti-5Al-5V-5Mo-3Cr	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	α=0° Avanzamento (min.—max.) (mm/giro)
3.0	**≤ 3**	13790	0.04 (0.02—0.07)	3710	0.03 (0.01—0.05)
4.0	**≤ 3**	10350	0.05 (0.03—0.09)	2790	0.04 (0.01—0.07)
5.0	**≤ 3**	8280	0.07 (0.03—0.11)	2230	0.05 (0.02—0.08)
6.0	**≤ 3**	6900	0.08 (0.04—0.13)	1860	0.06 (0.02—0.10)
7.0	**≤ 3**	5910	0.09 (0.05—0.15)	1590	0.07 (0.02—0.12)
8.0	**≤ 3**	5170	0.11 (0.05—0.17)	1390	0.08 (0.03—0.13)
9.0	**≤ 3**	4600	0.12 (0.06—0.20)	1240	0.09 (0.03—0.15)
10.0	**≤ 3**	4140	0.13 (0.07—0.22)	1110	0.10 (0.03—0.17)
11.0	**≤ 3**	3760	0.15 (0.07—0.24)	1010	0.11 (0.04—0.18)
12.0	**≤ 3**	3450	0.16 (0.08—0.26)	930	0.12 (0.04—0.20)
13.0	**≤ 3**	3180	0.17 (0.09—0.28)	860	0.13 (0.04—0.22)
14.0	**≤ 3**	2960	0.19 (0.09—0.30)	800	0.14 (0.05—0.23)



Nota 1) La profondità di foratura consigliata è DCx3. Questa distanza deve corrispondere alla distanza dal primo punto di contatto del pezzo da lavorare quando si lavora su una superficie inclinata. (Fare riferimento alla figura)

Nota 2) La tabella dati di taglio soprastante si riferisce a foratura su superficie piana.
Per foratura su superfici inclinate, regolare la velocità di avanzamento a seconda dell'angolo di inclinazione.
Quando l'angolo di inclinazione α è pari o inferiore a 30°, ridurre la velocità di avanzamento del 30% o più come linea guida.
Quando l'angolo di inclinazione α è maggiore di 30°, ridurre la velocità di avanzamento del 50% o più come linea guida.

Nota 3) Per la lavorazione su superficie piana di acciaio inossidabile, eseguire un foro pilota con lo stesso diametro o eseguire un invito.

Nota 4) Questo prodotto è un utensile pensato per la foratura. Non può essere utilizzato per lavorazioni di fresatura o interpolazioni elicoidali.

FORATURA (METALLO DURO)

MINI-DWAE

Piccoli diametri

UWC DP1A 135° XR X DC<2.0

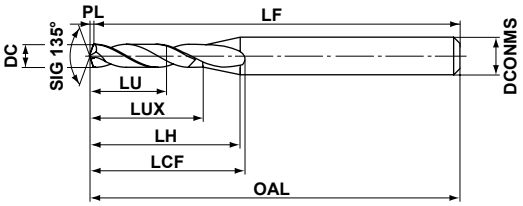
P M K N S H

Refrigerante esterno


DC<2.0


DC≥2.0





Tipo1



DC≤3	
0 −0.014	



DCONMS=3	DCONMS=4
0 −0.006	0 −0.008

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm) LU	LUX	LCF	LH	OAL	LF	PL	DCONMS	Tipo
1.0	2	●	DWAE0100X02S030	2.2	5.0	7.7	8.7	45.0	44.8	0.2	3	1
1.0	4	●	DWAE0100X04S030	4.2	7.0	9.9	10.7	45.0	44.8	0.2	3	1
1.1	2	★	DWAE0110X02S030	2.4	5.4	8.1	8.9	45.0	44.8	0.2	3	1
1.1	4	★	DWAE0110X04S030	4.6	7.6	10.5	11.1	45.0	44.8	0.2	3	1
1.2	2	★	DWAE0120X02S030	2.6	5.8	8.5	9.2	45.0	44.8	0.2	3	1
1.2	4	★	DWAE0120X04S030	5.0	8.2	11.1	11.6	45.0	44.8	0.2	3	1
1.3	2	★	DWAE0130X02S030	2.9	6.3	9.0	9.5	45.0	44.7	0.3	3	1
1.3	4	★	DWAE0130X04S030	5.5	8.9	11.9	12.1	45.0	44.7	0.3	3	1
1.4	2	★	DWAE0140X02S030	3.1	6.7	9.4	9.7	45.0	44.7	0.3	3	1
1.4	4	★	DWAE0140X04S030	5.9	9.5	12.5	12.5	45.0	44.7	0.3	3	1
1.5	2	●	DWAE0150X02S030	3.3	7.1	9.8	9.9	45.0	44.7	0.3	3	1
1.5	4	●	DWAE0150X04S030	6.3	10.1	13.1	12.9	45.0	44.7	0.3	3	1
1.6	2	★	DWAE0160X02S030	3.5	7.5	10.2	10.1	45.0	44.7	0.3	3	1
1.6	4	★	DWAE0160X04S030	6.7	10.7	13.7	13.3	45.0	44.7	0.3	3	1
1.7	2	★	DWAE0170X02S030	3.8	8.0	10.7	10.4	45.0	44.6	0.4	3	1
1.7	4	★	DWAE0170X04S030	7.2	11.4	14.4	13.8	45.0	44.6	0.4	3	1
1.8	2	★	DWAE0180X02S030	4.0	8.4	11.1	10.6	45.0	44.6	0.4	3	1
1.8	4	★	DWAE0180X04S030	7.6	12.0	15.1	14.2	45.0	44.6	0.4	3	1
1.9	2	★	DWAE0190X02S030	4.2	8.8	11.5	10.9	45.0	44.6	0.4	3	1
1.9	4	★	DWAE0190X04S030	8.0	12.6	15.7	14.7	45.0	44.6	0.4	3	1
2.0	2	●	DWAE0200X02S040	4.4	9.2	12.8	12.9	50.0	49.6	0.4	4	1
2.0	4	●	DWAE0200X04S040	8.4	13.2	17.2	16.9	50.0	49.6	0.4	4	1
2.1	2	★	DWAE0210X02S040	4.6	9.6	13.2	13.1	50.0	49.6	0.4	4	1
2.1	4	★	DWAE0210X04S040	8.8	13.8	17.8	17.3	50.0	49.6	0.4	4	1
2.2	2	★	DWAE0220X02S040	4.9	10.1	13.7	13.5	50.0	49.5	0.5	4	1
2.2	4	★	DWAE0220X04S040	9.3	14.5	18.5	17.9	50.0	49.5	0.5	4	1
2.3	2	★	DWAE0230X02S040	5.1	10.5	14.1	13.7	50.0	49.5	0.5	4	1
2.3	4	★	DWAE0230X04S040	9.7	15.1	19.2	18.3	50.0	49.5	0.5	4	1
2.4	2	★	DWAE0240X02S040	5.3	10.9	14.5	13.9	50.0	49.5	0.5	4	1
2.4	4	★	DWAE0240X04S040	10.1	15.7	19.8	18.7	50.0	49.5	0.5	4	1
2.5	2	●	DWAE0250X02S040	5.5	11.3	14.9	14.1	50.0	49.5	0.5	4	1
2.5	4	●	DWAE0250X04S040	10.5	16.3	20.4	19.1	50.0	49.5	0.5	4	1
2.6	2	★	DWAE0260X02S040	5.7	11.7	15.3	14.3	50.0	49.5	0.5	4	1
2.6	4	★	DWAE0260X04S040	10.9	16.9	21.0	19.5	50.0	49.5	0.5	4	1
2.7	2	★	DWAE0270X02S040	6.0	12.2	15.8	14.6	50.0	49.4	0.6	4	1
2.7	4	★	DWAE0270X04S040	11.4	17.6	21.7	20.0	50.0	49.4	0.6	4	1
2.8	2	★	DWAE0280X02S040	6.2	12.6	16.2	14.8	50.0	49.4	0.6	4	1
2.8	4	★	DWAE0280X04S040	11.8	18.2	22.4	20.4	50.0	49.4	0.6	4	1
2.9	2	★	DWAE0290X02S040	6.4	13.0	16.6	15.1	50.0	49.4	0.6	4	1
2.9	4	★	DWAE0290X04S040	12.2	18.8	23.0	20.9	50.0	49.4	0.6	4	1

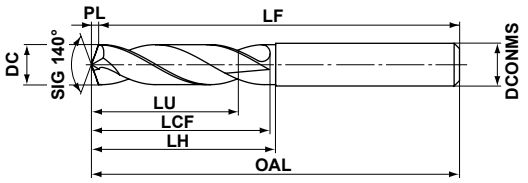
● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DWAE

P M K N S H

Refrigerante esterno





Tipo1

DC=3	3<DC≤6	6<DC≤10	10<DC≤14
0 −0.014	0 −0.018	0 −0.022	0 −0.027
DCONMS=3	3<DCONMS≤6	6<DCONMS≤10	10<DCONMS≤14
0 −0.006	0 −0.008	0 −0.009	0 −0.011

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.0	2	●	**DWAE0300X02S030**	6.5	12.5	14.5	45.5	45	0.5	3	1
3.0	4	●	**DWAE0300X04S030**	12.5	21.5	23.5	55.5	55	0.5	3	1
3.1	2	●	**DWAE0310X02S040**	6.8	12.6	14.6	55.6	55	0.6	4	1
3.1	4	●	**DWAE0310X04S040**	13.0	21.6	23.6	60.6	60	0.6	4	1
3.2	2	●	**DWAE0320X02S040**	7.0	13.6	15.6	55.6	55	0.6	4	1
3.2	4	●	**DWAE0320X04S040**	13.4	22.6	24.6	60.6	60	0.6	4	1
3.3	2	●	**DWAE0330X02S040**	7.2	13.6	15.6	55.6	55	0.6	4	1
3.3	4	●	**DWAE0330X04S040**	13.8	23.6	25.6	60.6	60	0.6	4	1
3.4	2	●	**DWAE0340X02S040**	7.4	13.6	15.6	55.6	55	0.6	4	1
3.4	4	●	**DWAE0340X04S040**	14.2	23.6	25.6	60.6	60	0.6	4	1
3.5	2	●	**DWAE0350X02S040**	7.6	14.6	16.6	55.6	55	0.6	4	1
3.5	4	●	**DWAE0350X04S040**	14.6	24.6	26.6	60.6	60	0.6	4	1
3.6	2	●	**DWAE0360X02S040**	7.9	14.7	16.7	55.7	55	0.7	4	1
3.6	4	●	**DWAE0360X04S040**	15.1	25.7	27.7	60.7	60	0.7	4	1
3.7	2	●	**DWAE0370X02S040**	8.1	14.7	16.7	55.7	55	0.7	4	1
3.7	4	●	**DWAE0370X04S040**	15.5	25.7	27.7	60.7	60	0.7	4	1
3.8	2	●	**DWAE0380X02S040**	8.3	15.7	17.7	55.7	55	0.7	4	1
3.8	4	●	**DWAE0380X04S040**	15.9	26.7	28.7	60.7	60	0.7	4	1
3.9	2	●	**DWAE0390X02S040**	8.5	15.7	17.7	55.7	55	0.7	4	1
3.9	4	●	**DWAE0390X04S040**	16.3	27.7	29.7	60.7	60	0.7	4	1
4.0	2	●	**DWAE0400X02S040**	8.7	15.7	17.7	55.7	55	0.7	4	1
4.0	4	●	**DWAE0400X04S040**	16.7	27.7	29.7	60.7	60	0.7	4	1
4.1	2	●	**DWAE0410X02S050**	8.9	16.7	18.7	62.7	62	0.7	5	1
4.1	4	●	**DWAE0410X04S050**	17.1	28.7	30.7	80.7	80	0.7	5	1
4.2	2	●	**DWAE0420X02S050**	9.2	16.8	18.8	62.8	62	0.8	5	1
4.2	4	●	**DWAE0420X04S050**	17.6	29.8	31.8	80.8	80	0.8	5	1
4.3	2	●	**DWAE0430X02S050**	9.4	17.8	19.8	62.8	62	0.8	5	1
4.3	4	●	**DWAE0430X04S050**	18.0	30.8	32.8	80.8	80	0.8	5	1
4.4	2	●	**DWAE0440X02S050**	9.6	17.8	19.8	62.8	62	0.8	5	1
4.4	4	●	**DWAE0440X04S050**	18.4	30.8	32.8	80.8	80	0.8	5	1

PARAMETRI DI TAGLIO ➤ M031
DATI TECNICI ➤ P001

DWAE

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
4.5	2	●	**DWAE0450X02S050**	9.8	17.8	19.8	62.8	62	0.8	5	1
4.5	4	●	**DWAE0450X04S050**	18.8	31.8	33.8	80.8	80	0.8	5	1
4.6	2	●	**DWAE0460X02S050**	10.0	18.8	20.8	62.8	62	0.8	5	1
4.6	4	●	**DWAE0460X04S050**	19.2	32.8	34.8	80.8	80	0.8	5	1
4.7	2	●	**DWAE0470X02S050**	10.3	18.9	20.9	62.9	62	0.9	5	1
4.7	4	●	**DWAE0470X04S050**	19.7	32.9	34.9	80.9	80	0.9	5	1
4.8	2	●	**DWAE0480X02S050**	10.5	18.9	20.9	62.9	62	0.9	5	1
4.8	4	●	**DWAE0480X04S050**	20.1	33.9	35.9	80.9	80	0.9	5	1
4.9	2	●	**DWAE0490X02S050**	10.7	19.9	21.9	62.9	62	0.9	5	1
4.9	4	●	**DWAE0490X04S050**	20.5	34.9	36.9	80.9	80	0.9	5	1
5.0	2	●	**DWAE0500X02S050**	10.9	19.9	21.9	62.9	62	0.9	5	1
5.0	4	●	**DWAE0500X04S050**	20.9	34.9	36.9	80.9	80	0.9	5	1
5.1	2	★	**DWAE0510X02S060**	11.1	21.9	23.9	66.9	66	0.9	6	1
5.1	4	★	**DWAE0510X04S060**	21.3	35.9	37.9	80.9	80	0.9	6	1
5.2	2	●	**DWAE0520X02S060**	11.3	21.9	23.9	66.9	66	0.9	6	1
5.2	4	●	**DWAE0520X04S060**	21.7	36.9	38.9	80.9	80	0.9	6	1
5.3	2	★	**DWAE0530X02S060**	11.6	22.0	24.0	67.0	66	1.0	6	1
5.3	4	★	**DWAE0530X04S060**	22.2	37.0	39.0	81.0	80	1.0	6	1
5.4	2	●	**DWAE0540X02S060**	11.8	22.0	24.0	67.0	66	1.0	6	1
5.4	4	●	**DWAE0540X04S060**	22.6	38.0	40.0	81.0	80	1.0	6	1
5.5	2	★	**DWAE0550X02S060**	12.0	22.0	24.0	67.0	66	1.0	6	1
5.5	4	★	**DWAE0550X04S060**	23.0	39.0	41.0	81.0	80	1.0	6	1
5.6	2	●	**DWAE0560X02S060**	12.2	24.0	26.0	67.0	66	1.0	6	1
5.6	4	●	**DWAE0560X04S060**	23.4	39.0	41.0	81.0	80	1.0	6	1
5.7	2	★	**DWAE0570X02S060**	12.4	24.0	26.0	67.0	66	1.0	6	1
5.7	4	★	**DWAE0570X04S060**	23.8	39.0	41.0	81.0	80	1.0	6	1
5.8	2	●	**DWAE0580X02S060**	12.7	24.1	26.1	67.1	66	1.1	6	1
5.8	4	●	**DWAE0580X04S060**	24.3	41.1	43.1	81.1	80	1.1	6	1
5.9	2	★	**DWAE0590X02S060**	12.9	24.1	26.1	67.1	66	1.1	6	1
5.9	4	★	**DWAE0590X04S060**	24.7	41.1	43.1	81.1	80	1.1	6	1
6.0	2	●	**DWAE0600X02S060**	13.1	24.1	26.1	67.1	66	1.1	6	1
6.0	4	●	**DWAE0600X04S060**	25.1	42.1	44.1	81.1	80	1.1	6	1
6.1	2	★	**DWAE0610X02S070**	13.3	26.1	28.1	75.1	74	1.1	7	1
6.1	4	★	**DWAE0610X04S070**	25.5	44.1	46.1	84.1	83	1.1	7	1
6.2	2	●	**DWAE0620X02S070**	13.5	26.1	28.1	75.1	74	1.1	7	1
6.2	4	●	**DWAE0620X04S070**	25.9	44.1	46.1	84.1	83	1.1	7	1
6.3	2	★	**DWAE0630X02S070**	13.7	26.1	28.1	75.1	74	1.1	7	1
6.3	4	★	**DWAE0630X04S070**	26.3	44.1	46.1	84.1	83	1.1	7	1
6.4	2	●	**DWAE0640X02S070**	14.0	26.2	28.2	75.2	74	1.2	7	1
6.4	4	●	**DWAE0640X04S070**	26.8	44.2	46.2	84.2	83	1.2	7	1
6.5	2	★	**DWAE0650X02S070**	14.2	26.2	28.2	75.2	74	1.2	7	1
6.5	4	★	**DWAE0650X04S070**	27.2	44.2	46.2	84.2	83	1.2	7	1

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
6.6	2	●	**DWAE0660X02S070**	14.4	28.2	30.2	75.2	74	1.2	7	1
6.6	4	●	**DWAE0660X04S070**	27.6	46.2	48.2	84.2	83	1.2	7	1
6.7	2	★	**DWAE0670X02S070**	14.6	28.2	30.2	75.2	74	1.2	7	1
6.7	4	★	**DWAE0670X04S070**	28.0	46.2	48.2	84.2	83	1.2	7	1
6.8	2	●	**DWAE0680X02S070**	14.8	28.2	30.2	75.2	74	1.2	7	1
6.8	4	●	**DWAE0680X04S070**	28.4	46.2	48.2	84.2	83	1.2	7	1
6.9	2	★	**DWAE0690X02S070**	15.1	28.3	30.3	75.3	74	1.3	7	1
6.9	4	★	**DWAE0690X04S070**	28.9	46.3	48.3	84.3	83	1.3	7	1
7.0	2	●	**DWAE0700X02S070**	15.3	28.3	30.3	75.3	74	1.3	7	1
7.0	4	●	**DWAE0700X04S070**	29.3	46.3	48.3	84.3	83	1.3	7	1
7.1	2	★	**DWAE0710X02S080**	15.5	29.3	31.3	80.3	79	1.3	8	1
7.1	4	★	**DWAE0710X04S080**	29.7	51.3	53.3	91.3	90	1.3	8	1
7.2	2	●	**DWAE0720X02S080**	15.7	29.3	31.3	80.3	79	1.3	8	1
7.2	4	●	**DWAE0720X04S080**	30.1	51.3	53.3	91.3	90	1.3	8	1
7.3	2	★	**DWAE0730X02S080**	15.9	29.3	31.3	80.3	79	1.3	8	1
7.3	4	★	**DWAE0730X04S080**	30.5	51.3	53.3	91.3	90	1.3	8	1
7.4	2	●	**DWAE0740X02S080**	16.1	29.3	31.3	80.3	79	1.3	8	1
7.4	4	●	**DWAE0740X04S080**	30.9	51.3	53.3	91.3	90	1.3	8	1
7.5	2	★	**DWAE0750X02S080**	16.4	29.4	31.4	80.4	79	1.4	8	1
7.5	4	★	**DWAE0750X04S080**	31.4	51.4	53.4	91.4	90	1.4	8	1
7.6	2	●	**DWAE0760X02S080**	16.6	31.4	33.4	80.4	79	1.4	8	1
7.6	4	●	**DWAE0760X04S080**	31.8	53.4	55.4	91.4	90	1.4	8	1
7.7	2	★	**DWAE0770X02S080**	16.8	31.4	33.4	80.4	79	1.4	8	1
7.7	4	★	**DWAE0770X04S080**	32.2	53.4	55.4	91.4	90	1.4	8	1
7.8	2	●	**DWAE0780X02S080**	17.0	31.4	33.4	80.4	79	1.4	8	1
7.8	4	●	**DWAE0780X04S080**	32.6	53.4	55.4	91.4	90	1.4	8	1
7.9	2	★	**DWAE0790X02S080**	17.2	31.4	33.4	80.4	79	1.4	8	1
7.9	4	★	**DWAE0790X04S080**	33.0	53.4	55.4	91.4	90	1.4	8	1
8.0	2	●	**DWAE0800X02S080**	17.5	31.5	33.5	80.5	79	1.5	8	1
8.0	4	●	**DWAE0800X04S080**	33.5	53.5	55.5	91.5	90	1.5	8	1
8.1	2	★	**DWAE0810X02S090**	17.7	33.5	35.5	85.5	84	1.5	9	1
8.1	4	★	**DWAE0810X04S090**	33.9	57.5	59.5	99.5	98	1.5	9	1
8.2	2	●	**DWAE0820X02S090**	17.9	33.5	35.5	85.5	84	1.5	9	1
8.2	4	●	**DWAE0820X04S090**	34.3	57.5	59.5	99.5	98	1.5	9	1
8.3	2	★	**DWAE0830X02S090**	18.1	33.5	35.5	85.5	84	1.5	9	1
8.3	4	★	**DWAE0830X04S090**	34.7	57.5	59.5	99.5	98	1.5	9	1
8.4	2	●	**DWAE0840X02S090**	18.3	33.5	35.5	85.5	84	1.5	9	1
8.4	4	●	**DWAE0840X04S090**	35.1	57.5	59.5	99.5	98	1.5	9	1
8.5	2	★	**DWAE0850X02S090**	18.5	33.5	35.5	85.5	84	1.5	9	1
8.5	4	★	**DWAE0850X04S090**	35.5	57.5	59.5	99.5	98	1.5	9	1
8.6	2	●	**DWAE0860X02S090**	18.8	34.6	36.6	85.6	84	1.6	9	1
8.6	4	●	**DWAE0860X04S090**	36.0	61.6	63.6	99.6	98	1.6	9	1
8.7	2	★	**DWAE0870X02S090**	19.0	34.6	36.6	85.6	84	1.6	9	1
8.7	4	★	**DWAE0870X04S090**	36.4	61.6	63.6	99.6	98	1.6	9	1

PARAMETRI DI TAGLIO ➢ M031
DATI TECNICI ➢ P001

DWAE

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
8.8	2	●	**DWAE0880X02S090**	19.2	34.6	36.6	85.6	84	1.6	9	1
8.8	4	●	**DWAE0880X04S090**	36.8	61.6	63.6	99.6	98	1.6	9	1
8.9	2	★	**DWAE0890X02S090**	19.4	34.6	36.6	85.6	84	1.6	9	1
8.9	4	★	**DWAE0890X04S090**	37.2	61.6	63.6	99.6	98	1.6	9	1
9.0	2	●	**DWAE0900X02S090**	19.6	34.6	36.6	85.6	84	1.6	9	1
9.0	4	●	**DWAE0900X04S090**	37.6	61.6	63.6	99.6	98	1.6	9	1
9.1	2	★	**DWAE0910X02S100**	19.9	36.7	38.7	90.7	89	1.7	10	1
9.1	4	★	**DWAE0910X04S100**	38.1	63.7	65.7	106.7	105	1.7	10	1
9.2	2	●	**DWAE0920X02S100**	20.1	36.7	38.7	90.7	89	1.7	10	1
9.2	4	●	**DWAE0920X04S100**	38.5	63.7	65.7	106.7	105	1.7	10	1
9.3	2	★	**DWAE0930X02S100**	20.3	36.7	38.7	90.7	89	1.7	10	1
9.3	4	★	**DWAE0930X04S100**	38.9	63.7	65.7	106.7	105	1.7	10	1
9.4	2	●	**DWAE0940X02S100**	20.5	36.7	38.7	90.7	89	1.7	10	1
9.4	4	●	**DWAE0940X04S100**	39.3	63.7	65.7	106.7	105	1.7	10	1
9.5	2	★	**DWAE0950X02S100**	20.7	36.7	38.7	90.7	89	1.7	10	1
9.5	4	★	**DWAE0950X04S100**	39.7	63.7	65.7	106.7	105	1.7	10	1
9.6	2	●	**DWAE0960X02S100**	20.9	37.7	39.7	90.7	89	1.7	10	1
9.6	4	●	**DWAE0960X04S100**	40.1	66.7	68.7	106.7	105	1.7	10	1
9.7	2	★	**DWAE0970X02S100**	21.2	37.8	39.8	90.8	89	1.8	10	1
9.7	4	★	**DWAE0970X04S100**	40.6	66.8	68.8	106.8	105	1.8	10	1
9.8	2	●	**DWAE0980X02S100**	21.4	37.8	39.8	90.8	89	1.8	10	1
9.8	4	●	**DWAE0980X04S100**	41.0	66.8	68.8	106.8	105	1.8	10	1
9.9	2	★	**DWAE0990X02S100**	21.6	37.8	39.8	90.8	89	1.8	10	1
9.9	4	★	**DWAE0990X04S100**	41.4	66.8	68.8	106.8	105	1.8	10	1
10.0	2	●	**DWAE1000X02S100**	21.8	37.8	39.8	90.8	89	1.8	10	1
10.0	4	●	**DWAE1000X04S100**	41.8	66.8	68.8	106.8	105	1.8	10	1
10.1	2	●	**DWAE1010X02S110**	22.0	40.8	42.8	101.8	100	1.8	11	1
10.1	4	●	**DWAE1010X04S110**	42.2	71.8	73.8	115.8	114	1.8	11	1
10.2	2	●	**DWAE1020X02S110**	22.3	40.9	42.9	101.9	100	1.9	11	1
10.2	4	●	**DWAE1020X04S110**	42.7	71.9	73.9	115.9	114	1.9	11	1
10.3	2	●	**DWAE1030X02S110**	22.5	40.9	42.9	101.9	100	1.9	11	1
10.3	4	●	**DWAE1030X04S110**	43.1	71.9	73.9	115.9	114	1.9	11	1
10.4	2	●	**DWAE1040X02S110**	22.7	40.9	42.9	101.9	100	1.9	11	1
10.4	4	●	**DWAE1040X04S110**	43.5	71.9	73.9	115.9	114	1.9	11	1
10.5	2	●	**DWAE1050X02S110**	22.9	40.9	42.9	101.9	100	1.9	11	1
10.5	4	●	**DWAE1050X04S110**	43.9	71.9	73.9	115.9	114	1.9	11	1
10.6	2	●	**DWAE1060X02S110**	23.1	41.9	43.9	101.9	100	1.9	11	1
10.6	4	●	**DWAE1060X04S110**	44.3	72.9	74.9	115.9	114	1.9	11	1
10.7	2	●	**DWAE1070X02S110**	23.3	41.9	43.9	101.9	100	1.9	11	1
10.7	4	●	**DWAE1070X04S110**	44.7	72.9	74.9	115.9	114	1.9	11	1
10.8	2	●	**DWAE1080X02S110**	23.6	42.0	44.0	102.0	100	2.0	11	1
10.8	4	●	**DWAE1080X04S110**	45.2	73.0	75.0	116.0	114	2.0	11	1

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
10.9	2	●	**DWAE1090X02S110**	23.8	42.0	44.0	102.0	100	2.0	11	1
10.9	4	●	**DWAE1090X04S110**	45.6	73.0	75.0	116.0	114	2.0	11	1
11.0	2	●	**DWAE1100X02S110**	24.0	42.0	44.0	102.0	100	2.0	11	1
11.0	4	●	**DWAE1100X04S110**	46.0	73.0	75.0	116.0	114	2.0	11	1
11.1	2	●	**DWAE1110X02S120**	24.2	45.0	47.0	102.0	100	2.0	12	1
11.1	4	●	**DWAE1110X04S120**	46.4	77.0	79.0	123.0	121	2.0	12	1
11.2	2	●	**DWAE1120X02S120**	24.4	45.0	47.0	102.0	100	2.0	12	1
11.2	4	●	**DWAE1120X04S120**	46.8	77.0	79.0	123.0	121	2.0	12	1
11.3	2	●	**DWAE1130X02S120**	24.7	45.1	47.1	102.1	100	2.1	12	1
11.3	4	●	**DWAE1130X04S120**	47.3	77.1	79.1	123.1	121	2.1	12	1
11.4	2	●	**DWAE1140X02S120**	24.9	45.1	47.1	102.1	100	2.1	12	1
11.4	4	●	**DWAE1140X04S120**	47.7	77.1	79.1	123.1	121	2.1	12	1
11.5	2	●	**DWAE1150X02S120**	25.1	45.1	47.1	102.1	100	2.1	12	1
11.5	4	●	**DWAE1150X04S120**	48.1	77.1	79.1	123.1	121	2.1	12	1
11.6	2	●	**DWAE1160X02S120**	25.3	47.1	49.1	102.1	100	2.1	12	1
11.6	4	●	**DWAE1160X04S120**	48.5	79.1	81.1	123.1	121	2.1	12	1
11.7	2	●	**DWAE1170X02S120**	25.5	47.1	49.1	102.1	100	2.1	12	1
11.7	4	●	**DWAE1170X04S120**	48.9	79.1	81.1	123.1	121	2.1	12	1
11.8	2	●	**DWAE1180X02S120**	25.7	47.1	49.1	102.1	100	2.1	12	1
11.8	4	●	**DWAE1180X04S120**	49.3	79.1	81.1	123.1	121	2.1	12	1
11.9	2	●	**DWAE1190X02S120**	26.0	47.2	49.2	102.2	100	2.2	12	1
11.9	4	●	**DWAE1190X04S120**	49.8	79.2	81.2	123.2	121	2.2	12	1
12.0	2	●	**DWAE1200X02S120**	26.2	47.2	49.2	102.2	100	2.2	12	1
12.0	4	●	**DWAE1200X04S120**	50.2	79.2	81.2	123.2	121	2.2	12	1
12.1	2	●	**DWAE1210X02S130**	26.4	49.2	51.2	102.2	100	2.2	13	1
12.1	4	●	**DWAE1210X04S130**	50.6	82.2	84.2	139.2	137	2.2	13	1
12.2	2	●	**DWAE1220X02S130**	26.6	49.2	51.2	102.2	100	2.2	13	1
12.2	4	●	**DWAE1220X04S130**	51.0	82.2	84.2	139.2	137	2.2	13	1
12.3	2	●	**DWAE1230X02S130**	26.8	49.2	51.2	102.2	100	2.2	13	1
12.3	4	●	**DWAE1230X04S130**	51.4	82.2	84.2	139.2	137	2.2	13	1
12.4	2	●	**DWAE1240X02S130**	27.1	49.3	51.3	102.3	100	2.3	13	1
12.4	4	●	**DWAE1240X04S130**	51.9	82.3	84.3	139.3	137	2.3	13	1
12.5	2	●	**DWAE1250X02S130**	27.3	49.3	51.3	102.3	100	2.3	13	1
12.5	4	●	**DWAE1250X04S130**	52.3	82.3	84.3	139.3	137	2.3	13	1
12.6	2	●	**DWAE1260X02S130**	27.5	52.3	54.3	102.3	100	2.3	13	1
12.6	4	●	**DWAE1260X04S130**	52.7	84.3	86.3	139.3	137	2.3	13	1
12.7	2	●	**DWAE1270X02S130**	27.7	52.3	54.3	102.3	100	2.3	13	1
12.7	4	●	**DWAE1270X04S130**	53.1	84.3	86.3	139.3	137	2.3	13	1
12.8	2	●	**DWAE1280X02S130**	27.9	52.3	54.3	102.3	100	2.3	13	1
12.8	4	●	**DWAE1280X04S130**	53.5	84.3	86.3	139.3	137	2.3	13	1
12.9	2	●	**DWAE1290X02S130**	28.1	52.3	54.3	102.3	100	2.3	13	1
12.9	4	●	**DWAE1290X04S130**	53.9	84.3	86.3	139.3	137	2.3	13	1

PARAMETRI DI TAGLIO ➢ M031
DATI TECNICI ➢ P001

DWAE

DC (mm)	Profondità foro (L/D)	DP102A	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
13.0	2	●	**DWAE1300X02S130**	28.4	52.4	54.4	102.4	100	2.4	13	1
13.0	4	●	**DWAE1300X04S130**	54.4	84.4	86.4	139.4	137	2.4	13	1
13.1	2	●	**DWAE1310X02S140**	28.6	55.4	57.4	102.4	100	2.4	14	1
13.1	4	●	**DWAE1310X04S140**	54.8	92.4	94.4	149.4	147	2.4	14	1
13.2	2	●	**DWAE1320X02S140**	28.8	55.4	57.4	102.4	100	2.4	14	1
13.2	4	●	**DWAE1320X04S140**	55.2	92.4	94.4	149.4	147	2.4	14	1
13.3	2	●	**DWAE1330X02S140**	29.0	55.4	57.4	102.4	100	2.4	14	1
13.3	4	●	**DWAE1330X04S140**	55.6	92.4	94.4	149.4	147	2.4	14	1
13.4	2	●	**DWAE1340X02S140**	29.2	55.4	57.4	102.4	100	2.4	14	1
13.4	4	●	**DWAE1340X04S140**	56.0	92.4	94.4	149.4	147	2.4	14	1
13.5	2	●	**DWAE1350X02S140**	29.5	55.5	57.5	102.5	100	2.5	14	1
13.5	4	●	**DWAE1350X04S140**	56.5	92.5	94.5	149.5	147	2.5	14	1
13.6	2	●	**DWAE1360X02S140**	29.7	57.5	59.5	102.5	100	2.5	14	1
13.6	4	●	**DWAE1360X04S140**	56.9	97.5	99.5	149.5	147	2.5	14	1
13.7	2	●	**DWAE1370X02S140**	29.9	57.5	59.5	102.5	100	2.5	14	1
13.7	4	●	**DWAE1370X04S140**	57.3	97.5	99.5	149.5	147	2.5	14	1
13.8	2	●	**DWAE1380X02S140**	30.1	57.5	59.5	102.5	100	2.5	14	1
13.8	4	●	**DWAE1380X04S140**	57.7	97.5	99.5	149.5	147	2.5	14	1
13.9	2	●	**DWAE1390X02S140**	30.3	57.5	59.5	102.5	100	2.5	14	1
13.9	4	●	**DWAE1390X04S140**	58.1	97.5	99.5	149.5	147	2.5	14	1
14.0	2	●	**DWAE1400X02S140**	30.5	57.5	59.5	102.5	100	2.5	14	1
14.0	4	●	**DWAE1400X04S140**	58.5	97.5	99.5	149.5	147	2.5	14	1

● : **Inventario mantenuto.**

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	P				P			
	Acciai dolci (≤180 HB) EU S275JR, Ck10,ecc				Acciai al carbonio, acciai legati (180—250 HB) C45, 42CrMo4 ecc			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
1.0	30	9500	0.03 (0.02—0.04)	285	30	9500	0.03 (0.02—0.04)	285
1.5	30	6300	0.05 (0.03—0.06)	315	30	6300	0.05 (0.03—0.06)	315
2.0	55	8700	0.06 (0.04—0.08)	520	55	8700	0.06 (0.04—0.08)	520
2.5	55	7000	0.08 (0.05—0.10)	560	55	7000	0.08 (0.05—0.10)	560
3.0	65	6800	0.09 (0.07—0.11)	610	60	6300	0.09 (0.07—0.11)	565
4.0	70	5500	0.12 (0.09—0.14)	660	65	5100	0.12 (0.09—0.14)	610
5.0	70	4400	0.15 (0.11—0.18)	660	65	4100	0.15 (0.11—0.18)	615
6.0	80	4200	0.18 (0.14—0.21)	755	75	3900	0.18 (0.14—0.21)	700
7.0	80	3600	0.21 (0.16—0.25)	755	75	3400	0.21 (0.16—0.25)	715
8.0	85	3300	0.23 (0.18—0.28)	760	80	3100	0.23 (0.18—0.28)	715
10.0	90	2800	0.27 (0.21—0.32)	755	85	2700	0.27 (0.21—0.32)	730
12.0	95	2500	0.28 (0.22—0.34)	700	90	2300	0.28 (0.22—0.34)	645
14.0	95	2100	0.29 (0.23—0.35)	610	90	2000	0.29 (0.23—0.35)	580

Materiale da lavorare	P				M			
	Acciai al carbonio, acciai legati (280—350 HB) 40CrNiMo ecc				Acciaio inossidabile austenitico (≤200 HB) Acciai inossidabili ferritici e martensitici (>200 HB) X12CrS13, X30Cr13 ecc			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
1.0	25	7900	0.02 (0.01—0.03)	160	30	9500	0.02 (0.01—0.03)	190
1.5	25	5300	0.04 (0.02—0.05)	210	30	6300	0.04 (0.02—0.05)	250
2.0	50	7900	0.05 (0.03—0.07)	395	35	5500	0.04 (0.02—0.06)	220
2.5	50	6300	0.07 (0.04—0.09)	440	35	4400	0.06 (0.03—0.08)	265
3.0	55	5800	0.08 (0.06—0.09)	465	40	4200	0.07 (0.04—0.10)	295
4.0	60	4700	0.11 (0.08—0.13)	515	40	3100	0.08 (0.05—0.10)	250
5.0	60	3800	0.13 (0.10—0.16)	495	40	2500	0.10 (0.05—0.15)	250
6.0	70	3700	0.16 (0.12—0.19)	590	40	2100	0.11 (0.06—0.15)	230
7.0	70	3100	0.18 (0.14—0.22)	560	40	1800	0.12 (0.06—0.18)	215
8.0	75	2900	0.21 (0.16—0.25)	610	40	1500	0.13 (0.06—0.20)	195
10.0	80	2500	0.24 (0.20—0.28)	600	40	1200	0.14 (0.08—0.20)	170
12.0	85	2200	0.25 (0.20—0.30)	550	40	1000	0.18 (0.10—0.25)	180
14.0	85	1900	0.25 (0.20—0.30)	475	40	900	0.18 (0.10—0.25)	160

Nota 1) Le suddette condizioni di taglio si verificano quando si utilizza un refrigerante solubile in acqua. Per gli acciai inossidabili si raccomanda refrigerante non idrosolubile.
Nota 2) Quando si usa un refrigerante non idrosolubile, ridurre la velocità di taglio del 20% per garantire un'idonea lubrificazione.
Nota 3) Controllare le condizioni dei trucioli e, se necessario, effettuare una lavorazione con avanzamento a step. * Lunghezza di riferimento dello step: da 0.2 a 1.0 DC
Nota 4) Regolare le condizioni di taglio in funzione delle condizioni di rigidità di macchina e pezzo da lavorare, geometria della lavorazione ecc.
Nota 5) Si sconsigliano profondità di foratura che eccedano la lunghezza del tagliente (LU).
Nota 6) Serrare la punta in modo che l'eccentricità non superi 0.03 mm.
Nota 7) Non serrare la parte del tagliente della punta.

FORATURA (METALLO DURO)

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	K							
	Ghisa grigia (≤350 MPa) GG30 ecc				Ghisa sferoidale (≤450 MPa) EN-GJS-450-10 ecc			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
1.0	30	9500	0.03 (0.02—0.04)	285	25	7900	0.02 (0.01—0.03)	160
1.5	30	6300	0.05 (0.03—0.06)	315	25	5300	0.04 (0.02—0.05)	210
2.0	55	8700	0.06 (0.04—0.08)	520	50	7900	0.05 (0.03—0.07)	395
2.5	55	7000	0.08 (0.05—0.10)	560	50	6300	0.07 (0.04—0.09)	440
3.0	65	6800	0.09 (0.07—0.11)	610	55	5800	0.09 (0.05—0.12)	520
4.0	70	5500	0.12 (0.09—0.14)	660	60	4700	0.12 (0.07—0.17)	565
5.0	70	4400	0.15 (0.11—0.18)	660	60	3800	0.14 (0.08—0.20)	530
6.0	80	4200	0.18 (0.14—0.21)	755	70	3700	0.15 (0.10—0.20)	555
7.0	80	3600	0.21 (0.16—0.25)	755	70	3100	0.18 (0.12—0.23)	560
8.0	85	3300	0.23 (0.18—0.28)	760	75	2900	0.20 (0.15—0.25)	580
10.0	90	2800	0.27 (0.21—0.32)	755	80	2500	0.23 (0.18—0.28)	575
12.0	95	2500	0.28 (0.22—0.34)	700	85	2200	0.25 (0.20—0.30)	550
14.0	95	2100	0.29 (0.23—0.35)	610	85	1900	0.25 (0.20—0.30)	475

Nota 1) Le suddette condizioni di taglio si verificano quando si utilizza un refrigerante solubile in acqua. Per gli acciai inossidabili si raccomanda refrigerante non idrosolubile.
Nota 2) Quando si usa un refrigerante non idrosolubile, ridurre la velocità di taglio del 20% per garantire un'idonea lubrificazione.
Nota 3) Controllare le condizioni dei trucioli e, se necessario, effettuare una lavorazione con avanzamento a step. * Lunghezza di riferimento dello step: da 0.2 a 1.0 DC
Nota 4) Regolare le condizioni di taglio in funzione delle condizioni di rigidità di macchina e pezzo da lavorare, geometria della lavorazione ecc.
Nota 5) Si sconsigliano profondità di foratura che eccedano la lunghezza del tagliente (LU).
Nota 6) Serrare la punta in modo che l'eccentricità non superi 0.03 mm.
Nota 7) Non serrare la parte del tagliente della punta.

DVAS Punte pilota Mini

Punte TRISTAR

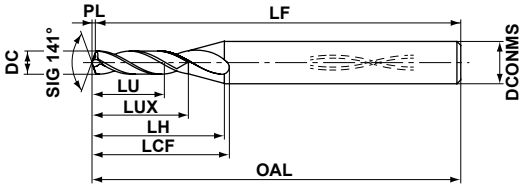
NEW

UWC DP1 141° XR

P M K N S H

Refrigerante interno





Tipo1

DC<3 0.006 −0.004

DCONMS=4 0 −0.008

DC (mm)	Profondità foro (L/D)	DP1120	Codice di ordinazione	Dimensioni (mm) LU	LUX	LCF	LH	OAL	LF	PL	DCONMS	Tipo
1.0	2	●	**DVAS0100X02S040**	2.2	3.2	8.6	8.8	50.0	49.8	0.2	4	1
1.1	2	●	**DVAS0110X02S040**	2.4	3.5	9.0	8.9	50.0	49.8	0.2	4	1
1.2	2	●	**DVAS0120X02S040**	2.6	3.9	9.4	9.0	50.0	49.8	0.2	4	1
1.3	2	●	**DVAS0130X02S040**	2.8	4.2	9.9	9.2	50.0	49.8	0.2	4	1
1.4	2	●	**DVAS0140X02S040**	3.0	4.5	10.3	9.3	50.0	49.8	0.2	4	1
1.5	2	●	**DVAS0150X02S040**	3.3	4.8	10.7	9.4	50.0	49.7	0.3	4	1
1.6	2	●	**DVAS0160X02S040**	3.5	5.1	11.1	9.6	50.0	49.7	0.3	4	1
1.7	2	●	**DVAS0170X02S040**	3.7	5.5	11.6	9.7	50.0	49.7	0.3	4	1
1.8	2	●	**DVAS0180X02S040**	3.9	5.8	12.0	9.8	50.0	49.7	0.3	4	1
1.9	2	●	**DVAS0190X02S040**	4.1	6.1	12.4	10.0	50.0	49.7	0.3	4	1
2.0	2	●	**DVAS0200X02S040**	4.4	6.4	12.9	10.1	50.0	49.6	0.4	4	1
2.1	2	●	**DVAS0210X02S040**	4.6	6.7	13.3	10.2	50.0	49.6	0.4	4	1
2.2	2	●	**DVAS0220X02S040**	4.8	7.0	13.7	10.3	50.0	49.6	0.4	4	1
2.3	2	●	**DVAS0230X02S040**	5.0	7.4	14.1	10.5	55.0	54.6	0.4	4	1
2.4	2	●	**DVAS0240X02S040**	5.2	7.7	14.6	10.6	55.0	54.6	0.4	4	1
2.5	2	●	**DVAS0250X02S040**	5.5	8.0	15.0	10.7	55.0	54.6	0.4	4	1
2.6	2	●	**DVAS0260X02S040**	5.7	8.3	15.4	10.9	55.0	54.5	0.5	4	1
2.7	2	●	**DVAS0270X02S040**	5.9	8.6	15.8	11.0	55.0	54.5	0.5	4	1
2.8	2	●	**DVAS0280X02S040**	6.1	8.9	16.3	11.1	55.0	54.5	0.5	4	1
2.9	2	●	**DVAS0290X02S040**	6.3	9.3	16.7	11.3	55.0	54.5	0.5	4	1

● : Inventario mantenuto.

PARAMETRI DI TAGLIO ➢ M037
GUIDA OPERATIVA ➢ M038
DATI TECNICI ➢ P001

FORATURA (METALLO DURO)

DVAS
Punte TRISTAR

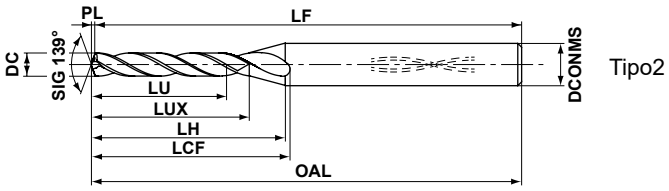
Piccoli diametri

NEW

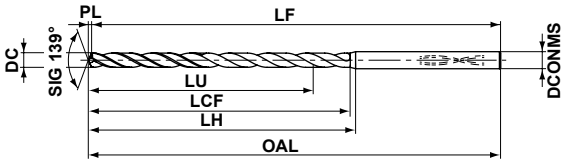
P M K N S H

Refrigerante interno





Tipo2



Tipo3

DC<3 $^{0}_{-0.010}$

DCONMS=4 $^{0}_{-0.008}$

DC (mm)	Profondità foro (L/D)	DP1120	Codice di ordinazione	Dimensioni (mm) LU	LUX	LCF	LH	OAL	LF	PL	DCONMS	Tipo
1.0	7	●	**DVAS0100X07S040**	7.2	8.2	13.6	13.8	55.0	54.8	0.2	4	2
1.0	12	●	**DVAS0100X12S040**	12.2	13.2	18.6	18.8	58.0	57.8	0.2	4	2
1.0	20	●	**DVAS0100X20S040**	20.2	–	23.2	28.8	67.0	66.8	0.2	4	3
1.0	25	●	**DVAS0100X25S040**	25.2	–	28.2	33.8	73.0	72.8	0.2	4	3
1.0	30	●	**DVAS0100X30S040**	30.2	–	33.2	38.8	79.0	78.8	0.2	4	3
1.0	40	●	**DVAS0100X40S040**	40.2	–	43.2	48.8	90.0	89.8	0.2	4	3
1.0	50	●	**DVAS0100X50S040**	50.2	–	53.2	58.8	102.0	101.8	0.2	4	3
1.1	7	●	**DVAS0110X07S040**	7.9	9.1	14.5	14.4	55.0	54.8	0.2	4	2
1.1	12	●	**DVAS0110X12S040**	13.4	14.6	20.0	19.9	58.0	57.8	0.2	4	2
1.1	20	●	**DVAS0110X20S040**	22.2	–	25.5	30.9	67.0	66.8	0.2	4	3
1.1	25	●	**DVAS0110X25S040**	27.7	–	31.0	36.4	73.0	72.8	0.2	4	3
1.1	30	●	**DVAS0110X30S040**	33.2	–	36.5	41.9	79.0	78.8	0.2	4	3
1.1	40	●	**DVAS0110X40S040**	44.2	–	47.5	52.9	90.0	89.8	0.2	4	3
1.2	7	●	**DVAS0120X07S040**	8.6	9.9	15.4	15.0	55.0	54.8	0.2	4	2
1.2	12	●	**DVAS0120X12S040**	14.6	15.9	21.4	21.0	60.0	59.8	0.2	4	2
1.2	20	●	**DVAS0120X20S040**	24.2	–	27.8	33.0	71.0	70.8	0.2	4	3
1.2	25	●	**DVAS0120X25S040**	30.2	–	33.8	39.0	77.0	76.8	0.2	4	3
1.2	30	●	**DVAS0120X30S040**	36.2	–	39.8	45.0	84.0	83.8	0.2	4	3
1.2	40	●	**DVAS0120X40S040**	48.2	–	51.8	57.0	97.0	96.8	0.2	4	3
1.3	7	●	**DVAS0130X07S040**	9.3	10.7	16.4	15.7	55.0	54.8	0.2	4	2
1.3	12	●	**DVAS0130X12S040**	15.8	17.2	22.9	22.2	60.0	59.8	0.2	4	2
1.3	20	●	**DVAS0130X20S040**	26.2	–	30.1	35.2	71.0	70.8	0.2	4	3
1.3	25	●	**DVAS0130X25S040**	32.7	–	36.6	41.7	77.0	76.8	0.2	4	3
1.3	30	●	**DVAS0130X30S040**	39.2	–	43.1	48.2	84.0	83.8	0.2	4	3
1.3	40	●	**DVAS0130X40S040**	52.2	–	56.1	61.2	97.0	96.8	0.2	4	3
1.4	7	●	**DVAS0140X07S040**	10.1	11.5	17.3	16.3	55.0	54.7	0.3	4	2
1.4	12	●	**DVAS0140X12S040**	17.1	18.5	24.3	23.3	63.0	62.7	0.3	4	2
1.4	20	●	**DVAS0140X20S040**	28.3	–	32.5	37.3	75.0	74.7	0.3	4	3
1.4	25	●	**DVAS0140X25S040**	35.3	–	39.5	44.3	82.0	81.7	0.3	4	3
1.4	30	●	**DVAS0140X30S040**	42.3	–	46.5	51.3	90.0	89.7	0.3	4	3
1.4	40	●	**DVAS0140X40S040**	56.3	–	60.5	65.3	105.0	104.7	0.3	4	3
1.5	7	●	**DVAS0150X07S040**	10.8	12.3	18.2	16.9	55.0	54.7	0.3	4	2
1.5	12	●	**DVAS0150X12S040**	18.3	19.8	25.7	24.4	63.0	62.7	0.3	4	2
1.5	20	●	**DVAS0150X20S040**	30.3	–	34.8	39.4	75.0	74.7	0.3	4	3
1.5	25	●	**DVAS0150X25S040**	37.8	–	42.3	46.9	82.0	81.7	0.3	4	3
1.5	30	●	**DVAS0150X30S040**	45.3	–	49.8	54.4	90.0	89.7	0.3	4	3

● : **Inventario mantenuto.**

DC (mm)	Profondità foro (L/D)	DP1120	Codice di ordinazione	Dimensioni (mm)								Tipo
				LU	LUX	LCF	LH	OAL	LF	PL	DCONMS	
1.5	40	●	**DVAS0150X40S040**	60.3	–	64.8	69.4	105.0	104.7	0.3	4	3
1.5	50	●	**DVAS0150X50S040**	75.3	–	79.8	84.4	120.0	119.7	0.3	4	3
1.6	7	●	**DVAS0160X07S040**	11.5	13.1	19.2	17.6	57.0	56.7	0.3	4	2
1.6	12	●	**DVAS0160X12S040**	19.5	21.1	27.2	25.6	66.0	65.7	0.3	4	2
1.6	20	●	**DVAS0160X20S040**	32.3	–	37.1	41.6	79.0	78.7	0.3	4	3
1.6	25	●	**DVAS0160X25S040**	40.3	–	45.1	49.6	88.0	87.7	0.3	4	3
1.6	30	●	**DVAS0160X30S040**	48.3	–	53.1	57.6	99.0	98.7	0.3	4	3
1.6	40	●	**DVAS0160X40S040**	64.3	–	69.1	73.6	113.0	112.7	0.3	4	3
1.7	7	●	**DVAS0170X07S040**	12.2	14.0	20.1	18.2	57.0	56.7	0.3	4	2
1.7	12	●	**DVAS0170X12S040**	20.7	22.5	28.6	26.7	66.0	65.7	0.3	4	2
1.7	20	●	**DVAS0170X20S040**	34.3	–	39.4	43.7	79.0	78.7	0.3	4	3
1.7	25	●	**DVAS0170X25S040**	42.8	–	47.9	52.2	88.0	87.7	0.3	4	3
1.7	30	●	**DVAS0170X30S040**	51.3	–	56.4	60.7	99.0	98.7	0.3	4	3
1.7	40	●	**DVAS0170X40S040**	68.3	–	73.4	77.7	113.0	112.7	0.3	4	3
1.8	7	●	**DVAS0180X07S040**	12.9	14.8	21.0	18.8	59.0	58.7	0.3	4	2
1.8	12	●	**DVAS0180X12S040**	21.9	23.8	30.0	27.8	69.0	68.7	0.3	4	2
1.8	20	●	**DVAS0180X20S040**	36.3	–	41.7	45.8	84.0	83.7	0.3	4	3
1.8	25	●	**DVAS0180X25S040**	45.3	–	50.7	54.8	94.0	93.7	0.3	4	3
1.8	30	●	**DVAS0180X30S040**	54.3	–	59.7	63.8	104.0	103.7	0.3	4	3
1.8	40	●	**DVAS0180X40S040**	72.3	–	77.7	81.8	123.0	122.7	0.3	4	3
1.9	7	●	**DVAS0190X07S040**	13.7	15.6	21.9	19.5	59.0	58.6	0.4	4	2
1.9	12	●	**DVAS0190X12S040**	23.2	25.1	31.4	29.0	69.0	68.6	0.4	4	2
1.9	20	●	**DVAS0190X20S040**	38.4	–	44.1	48.0	84.0	83.6	0.4	4	3
1.9	25	●	**DVAS0190X25S040**	47.9	–	53.6	57.5	94.0	93.6	0.4	4	3
1.9	30	●	**DVAS0190X30S040**	57.4	–	63.1	67.0	104.0	103.6	0.4	4	3
1.9	40	●	**DVAS0190X40S040**	76.4	–	82.1	86.0	123.0	122.6	0.4	4	3
2.0	7	●	**DVAS0200X07S040**	14.4	16.4	22.9	20.1	62.0	61.6	0.4	4	2
2.0	12	●	**DVAS0200X12S040**	24.4	26.4	32.9	30.1	73.0	72.6	0.4	4	2
2.0	20	●	**DVAS0200X20S040**	40.4	–	46.4	50.1	91.0	90.6	0.4	4	3
2.0	25	●	**DVAS0200X25S040**	50.4	–	56.4	60.1	102.0	101.6	0.4	4	3
2.0	30	●	**DVAS0200X30S040**	60.4	–	66.4	70.1	113.0	112.6	0.4	4	3
2.0	40	●	**DVAS0200X40S040**	80.4	–	86.4	90.1	136.0	135.6	0.4	4	3
2.0	50	●	**DVAS0200X50S040**	100.4	–	106.4	110.1	158.0	157.6	0.4	4	3
2.1	7	●	**DVAS0210X07S040**	15.1	17.2	23.8	20.7	62.0	61.6	0.4	4	2
2.1	12	●	**DVAS0210X12S040**	25.6	27.7	34.3	31.2	73.0	72.6	0.4	4	2
2.1	20	●	**DVAS0210X20S040**	42.4	–	48.7	52.2	91.0	90.6	0.4	4	3
2.1	25	●	**DVAS0210X25S040**	52.9	–	59.2	62.7	102.0	101.6	0.4	4	3
2.1	30	●	**DVAS0210X30S040**	63.4	–	69.7	73.2	113.0	112.6	0.4	4	3
2.1	40	●	**DVAS0210X40S040**	84.4	–	90.7	94.2	136.0	135.6	0.4	4	3
2.2	7	●	**DVAS0220X07S040**	15.8	18.1	24.7	21.4	62.0	61.6	0.4	4	2
2.2	12	●	**DVAS0220X12S040**	26.8	29.1	35.7	32.4	73.0	72.6	0.4	4	2
2.2	20	●	**DVAS0220X20S040**	44.4	–	51.0	54.4	91.0	90.6	0.4	4	3
2.2	25	●	**DVAS0220X25S040**	55.4	–	62.0	65.4	102.0	101.6	0.4	4	3
2.2	30	●	**DVAS0220X30S040**	66.4	–	73.0	76.4	113.0	112.6	0.4	4	3
2.2	40	●	**DVAS0220X40S040**	88.4	–	95.0	98.4	136.0	135.6	0.4	4	3
2.3	7	●	**DVAS0230X07S040**	16.5	18.9	25.7	22.0	65.0	64.6	0.4	4	2
2.3	12	●	**DVAS0230X12S040**	28.0	30.4	37.2	33.5	78.0	77.6	0.4	4	2
2.3	20	●	**DVAS0230X20S040**	46.4	–	53.3	56.5	98.0	97.6	0.4	4	3

PARAMETRI DI TAGLIO ➤ M037
GUIDA OPERATIVA ➤ M038
DATI TECNICI ➤ P001

FORATURA (METALLO DURO)

DVAS
Piccoli diametri

NEW

Punte TRISTAR

DC (mm)	Profondità foro (L/D)	DP1120	Codice di ordinazione	Dimensioni (mm)								Tipo
				LU	LUX	LCF	LH	OAL	LF	PL	DCONMS	
2.3	25	●	**DVAS0230X25S040**	57.9	–	64.8	68.0	111.0	110.6	0.4	4	3
2.3	30	●	**DVAS0230X30S040**	69.4	–	76.3	79.5	124.0	123.6	0.4	4	3
2.3	40	●	**DVAS0230X40S040**	92.4	–	99.3	102.5	150.0	149.6	0.4	4	3
2.4	7	●	**DVAS0240X07S040**	17.2	19.7	26.6	22.6	65.0	64.6	0.4	4	2
2.4	12	●	**DVAS0240X12S040**	29.2	31.7	38.6	34.6	78.0	77.6	0.4	4	2
2.4	20	●	**DVAS0240X20S040**	48.4	–	55.6	58.6	98.0	97.6	0.4	4	3
2.4	25	●	**DVAS0240X25S040**	60.4	–	67.6	70.6	111.0	110.6	0.4	4	3
2.4	30	●	**DVAS0240X30S040**	72.4	–	79.6	82.6	124.0	123.6	0.4	4	3
2.4	40	●	**DVAS0240X40S040**	96.4	–	103.6	106.6	150.0	149.6	0.4	4	3
2.5	7	●	**DVAS0250X07S040**	18.0	20.5	27.5	23.3	65.0	64.5	0.5	4	2
2.5	12	●	**DVAS0250X12S040**	30.5	33.0	40.0	35.8	78.0	77.5	0.5	4	2
2.5	20	●	**DVAS0250X20S040**	50.5	–	58.0	60.8	98.0	97.5	0.5	4	3
2.5	25	●	**DVAS0250X25S040**	63.0	–	70.5	73.3	111.0	110.5	0.5	4	3
2.5	30	●	**DVAS0250X30S040**	75.5	–	83.0	85.8	124.0	123.5	0.5	4	3
2.5	40	●	**DVAS0250X40S040**	100.5	–	108.0	110.8	150.0	149.5	0.5	4	3
2.5	50	●	**DVAS0250X50S040**	125.5	–	133.0	135.8	176.0	175.5	0.5	4	3
2.6	7	●	**DVAS0260X07S040**	18.7	21.3	28.4	23.9	65.0	64.5	0.5	4	2
2.6	12	●	**DVAS0260X12S040**	31.7	34.3	41.4	36.9	78.0	77.5	0.5	4	2
2.6	20	●	**DVAS0260X20S040**	52.5	–	60.3	62.9	98.0	97.5	0.5	4	3
2.6	25	●	**DVAS0260X25S040**	65.5	–	73.3	75.9	111.0	110.5	0.5	4	3
2.6	30	●	**DVAS0260X30S040**	78.5	–	86.3	88.9	124.0	123.5	0.5	4	3
2.6	40	●	**DVAS0260X40S040**	104.5	–	112.3	114.9	150.0	149.5	0.5	4	3
2.7	7	●	**DVAS0270X07S040**	19.4	22.2	29.4	24.5	68.0	67.5	0.5	4	2
2.7	12	●	**DVAS0270X12S040**	32.9	35.7	42.9	38.0	83.0	82.5	0.5	4	2
2.7	20	●	**DVAS0270X20S040**	54.5	–	62.6	65.0	107.0	106.5	0.5	4	3
2.7	25	●	**DVAS0270X25S040**	68.0	–	76.1	78.5	122.0	121.5	0.5	4	3
2.7	30	●	**DVAS0270X30S040**	81.5	–	89.6	92.0	137.0	136.5	0.5	4	3
2.7	40	●	**DVAS0270X40S040**	108.5	–	116.6	119.0	167.0	166.5	0.5	4	3
2.8	7	●	**DVAS0280X07S040**	20.1	23.0	30.3	25.2	68.0	67.5	0.5	4	2
2.8	12	●	**DVAS0280X12S040**	34.1	37.0	44.3	39.2	83.0	82.5	0.5	4	2
2.8	20	●	**DVAS0280X20S040**	56.5	–	64.9	67.2	107.0	106.5	0.5	4	3
2.8	25	●	**DVAS0280X25S040**	70.5	–	78.9	81.2	122.0	121.5	0.5	4	3
2.8	30	●	**DVAS0280X30S040**	84.5	–	92.9	95.2	137.0	136.5	0.5	4	3
2.8	40	●	**DVAS0280X40S040**	112.5	–	120.9	123.2	167.0	166.5	0.5	4	3
2.9	7	●	**DVAS0290X07S040**	20.8	23.8	31.2	25.8	68.0	67.5	0.5	4	2
2.9	12	●	**DVAS0290X12S040**	35.3	38.3	45.7	40.3	83.0	82.5	0.5	4	2
2.9	20	●	**DVAS0290X20S040**	58.5	–	67.2	69.3	107.0	106.5	0.5	4	3
2.9	25	●	**DVAS0290X25S040**	73.0	–	81.7	83.8	122.0	121.5	0.5	4	3
2.9	30	●	**DVAS0290X30S040**	87.5	–	96.2	98.3	137.0	136.5	0.5	4	3
2.9	40	●	**DVAS0290X40S040**	116.5	–	125.2	127.3	167.0	166.5	0.5	4	3

● : **Inventario mantenuto.**

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		P			M		
		Acciaio dolce Acciaio al carbonio, Acciaio legato S235JR (1.0038), C10 (1.1121), C45 (1.1191), 42CrMo4 (1.7225) ecc			Acciaio inossidabile austenitico, Acciaio inox ferritico Acciai inossidabili, ferritici e martensitici, Precipitazione che indurisce acciaio inox X12Cr13 (1.4006), X20Cr13 (1.4021)J2, X5CrNi18-10 (1.4301), X5CrNiMo17-12-2 (1.4401), X5CrNiCuNb16-4 (1.4542) ecc		
Diam. Punta **DC** (mm)	**L/D**	Velocità di taglio (min.—max.) (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Velocità di taglio (min.—max.) (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	**2–30**	65 (30—100)	20700	0.035 (0.020—0.050)	60 (20—100)	19100	0.025 (0.010—0.040)
1.0	**40, 50**	65 (30—100)	20700	0.030 (0.020—0.040)	60 (20—100)	19100	0.020 (0.010—0.030)
1.5	**2–30**	65 (30—100)	13800	0.053 (0.030—0.075)	60 (20—100)	12700	0.038 (0.015—0.060)
1.5	**40, 50**	65 (30—100)	13800	0.045 (0.030—0.060)	60 (20—100)	12700	0.030 (0.015—0.045)
2.0	**2–30**	70 (40—100)	11100	0.070 (0.040—0.100)	60 (20—100)	9500	0.050 (0.020—0.080)
2.0	**40, 50**	70 (40—100)	11100	0.060 (0.040—0.080)	60 (20—100)	9500	0.040 (0.020—0.060)
2.5	**2–30**	70 (40—100)	8900	0.088 (0.050—0.125)	60 (20—100)	7600	0.063 (0.025—0.100)
2.5	**40, 50**	70 (40—100)	8900	0.075 (0.050—0.100)	60 (20—100)	7600	0.050 (0.025—0.075)
2.9	**2–30**	70 (40—100)	7700	0.102 (0.058—0.145)	60 (20—100)	6600	0.073 (0.029—0.116)
2.9	**40, 50**	70 (40—100)	7700	0.087 (0.058—0.116)	60 (20—100)	6600	0.058 (0.029—0.087)

Materiale da lavorare		K			N		
		Ghisa grigia Ghisa sferoidale GJL-300 (Ghisa grigia), GJS-450-10 (Ghisa sferoidale) ecc			Lega di alluminio AlMg2.5, AlMg1SiCu, AlZn5.5MgCu		
Diam. Punta **DC** (mm)	**L/D**	Velocità di taglio (min.—max.) (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Velocità di taglio (min.—max.) (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	**2–30**	70 (40—100)	22300	0.035 (0.020—0.050)	140 (100—180)	31800	0.040 (0.020—0.060)
1.0	**40, 50**	70 (40—100)	22300	0.030 (0.020—0.040)	140 (100—180)	31800	0.035 (0.020—0.050)
1.5	**2–30**	70 (40—100)	14900	0.053 (0.030—0.075)	140 (100—180)	21200	0.060 (0.030—0.090)
1.5	**40, 50**	70 (40—100)	14900	0.045 (0.030—0.060)	140 (100—180)	21200	0.053 (0.030—0.075)
2.0	**2–30**	70 (40—100)	11100	0.070 (0.040—0.100)	140 (100—180)	15900	0.080 (0.040—0.120)
2.0	**40, 50**	70 (40—100)	11100	0.060 (0.040—0.080)	140 (100—180)	15900	0.070 (0.040—0.100)
2.5	**2–30**	70 (40—100)	8900	0.088 (0.050—0.125)	140 (100—180)	12700	0.100 (0.050—0.150)
2.5	**40, 50**	70 (40—100)	8900	0.075 (0.050—0.100)	140 (100—180)	12700	0.088 (0.050—0.125)
2.9	**2–30**	70 (40—100)	7700	0.102 (0.058—0.145)	140 (100—180)	11000	0.116 (0.058—0.174)
2.9	**40, 50**	70 (40—100)	7700	0.087 (0.058—0.116)	140 (100—180)	11000	0.102 (0.058—0.145)

Materiale da lavorare		S			S		
		Lega resistente al calore Inconel®718 ecc			Lega di titanio Ti-6Al-4V ecc		
Diam. Punta **DC** (mm)	**L/D**	Velocità di taglio (min.—max.) (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Velocità di taglio (min.—max.) (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	**2–30**	30 (10—50)	9500	0.015 (0.010—0.020)	30 (20—40)	9500	0.020 (0.010—0.030)
1.0	**40, 50**	30 (10—50)	9500	0.015 (0.010—0.020)	30 (20—40)	9500	0.020 (0.010—0.030)
1.5	**2–30**	30 (10—50)	6400	0.023 (0.015—0.030)	30 (20—40)	6400	0.030 (0.015—0.045)
1.5	**40, 50**	30 (10—50)	6400	0.023 (0.015—0.030)	30 (20—40)	6400	0.030 (0.015—0.045)
2.0	**2–30**	30 (10—50)	4800	0.030 (0.020—0.040)	30 (20—40)	4800	0.040 (0.020—0.060)
2.0	**40, 50**	30 (10—50)	4800	0.030 (0.020—0.040)	30 (20—40)	4800	0.040 (0.020—0.060)
2.5	**2–30**	30 (10—50)	3800	0.038 (0.025—0.050)	30 (20—40)	3800	0.050 (0.025—0.075)
2.5	**40, 50**	30 (10—50)	3800	0.038 (0.025—0.050)	30 (20—40)	3800	0.050 (0.025—0.075)
2.9	**2–30**	30 (10—50)	3300	0.044 (0.029—0.058)	30 (20—40)	3300	0.058 (0.029—0.087)
2.9	**40, 50**	30 (10—50)	3300	0.044 (0.029—0.058)	30 (20—40)	3300	0.058 (0.029—0.087)

Materiale da lavorare		S		
		Leghe di cromo-cobalto T7402-2, ASTM F1537, F799 ecc		
Diam. Punta **DC** (mm)	**L/D**	Velocità di taglio (min.—max.) (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	**2–30**	60 (30—90)	19100	0.020 (0.010—0.030)
1.0	**40, 50**	60 (30—90)	19100	0.020 (0.010—0.030)
1.5	**2–30**	60 (30—90)	12700	0.030 (0.015—0.045)
1.5	**40, 50**	60 (30—90)	12700	0.030 (0.015—0.045)
2.0	**2–30**	60 (30—90)	9500	0.040 (0.020—0.060)
2.0	**40, 50**	60 (30—90)	9500	0.040 (0.020—0.060)
2.5	**2–30**	60 (30—90)	7600	0.050 (0.025—0.075)
2.5	**40, 50**	60 (30—90)	7600	0.050 (0.025—0.075)
2.9	**2–30**	60 (30—90)	6600	0.058 (0.029—0.087)
2.9	**40, 50**	60 (30—90)	6600	0.058 (0.029—0.087)

Nota 1) Questa condizione è consigliata solo quando si utilizza il refrigerante interno.
Nota 2) Controllare le condizioni dei trucioli e, se necessario, effettuare una lavorazione con avanzamento a step. * Lunghezza di riferimento dello step: da 0,2 a 1,0 DC
Nota 3) Regolare le condizioni di taglio in funzione delle condizioni di rigidità di macchina e pezzo da lavorare, geometria della lavorazione ecc.
Nota 4) Si sconsigliano profondità di foratura che eccedano la lunghezza del tagliente (LU).
Nota 5) Assicurarsi che l'eccentricità non superi 0,03 mm.
Nota 6) Non serrare la parte del tagliente della punta.

GUIDA OPERATIVA ➤ **M038**
DATI TECNICI ➤ **P001**

FORATURA (METALLO DURO)

DVAS
Piccoli diametri

NEW

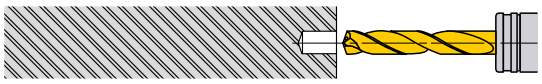
Punte TRISTAR

GUIDA OPERATIVA

■ MANUALE D'USO PER DVAS L/D=2–40

FORATURA PER SUPERFICIE PIANA ● Foratura di un foro cieco

■ 1. Foratura di un foro pilota



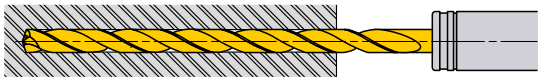
① Utilizzare una punta con un angolo di cuspide maggiore (più piatto) rispetto alla punta super lunga. Usare il tagliente più corto possibile. Una punta DVAS con L/D= 2 può essere impiegata fino a L/D = 3 per la realizzazione di fori pilota.
② Assicurarsi che venga eseguito un foro di alta precisione per la guida.
③ Profondità di foratura: Circa DCx3.
(Regolare la profondità del foro pilota in base alla lunghezza della punta lunga.)

■ 2. Taglio iniziale con punta di tipo lungo



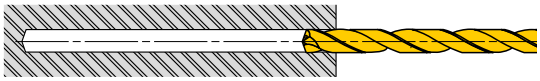
① Inserire la punta nel foro pilota usando una bassa velocità di rotazione.
(velocità del mandrino 500 – 1000 min^{-1}, velocità di avanzamento 1000 – 2000 mm/min)
② Fermare la punta nel foro pilota a 0.5 – 1 mm dal fondo del foro.

■ 3. Foratura in profondità



① Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

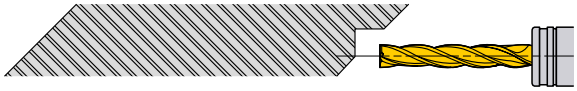
■ 4. Arretramento della punta



① Dopo la foratura, estrarre la punta fino a 0.5 – 1 mm dalla fine del foro pilota e quindi ridurre i giri. (giri circa 500 – 1000 min^{-1})
② Dopodiché, sfilare la punta a una velocità di avanzamento tra 1000 e 2000 mm/min.

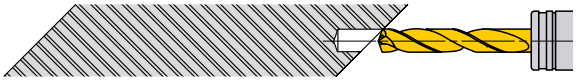
FORATURA INTERROTTA ● Foratura passante con interruzione o su superfici irregolari con piani inclinati.

■ 1. Spianatura



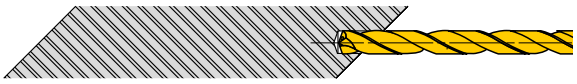
① Eseguire una superficie piana utilizzando una fresa frontale o una fresa per cave in grado di spianare. Realizzare il diametro della spianatura della stessa dimensione del diametro del foro profondo richiesto.

■ 2. Foratura di un foro pilota



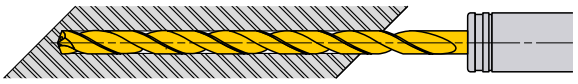
① Utilizzare una punta con un angolo di cuspide maggiore (più piatto) rispetto alla punta super lunga.
Usare il tagliente più corto possibile.
② Assicurarsi che venga praticato un foro di alta precisione per la guida.
③ Profondità di foratura: Circa DCx2.
(Regolare la profondità del foro pilota in base alla lunghezza della punta lunga.)

■ 3. Taglio iniziale con punta di tipo lungo



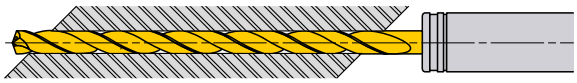
① Inserire la punta del foro pilota usando una bassa velocità di rotazione. (velocità del mandrino 500 – 1000 min^{-1}, velocità di avanzamento 1000 – 2000 mm/min)
② Fermare la punta nel foro pilota a 0.5 – 1 mm dal fondo del foro.

■ 4. Foratura in profondità



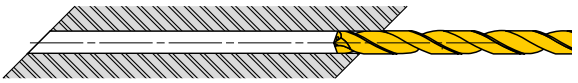
① Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

■ 5. Sfondamento



① Il tagliente potrebbe essere danneggiato in fase di sfondamento.
② Ridurre la velocità di avanzamento al momento dell'uscita dell'utensile sull'inclinato.

■ 6. Ritrazione della punta

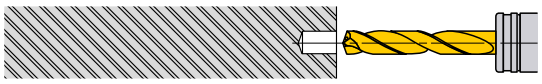


① Dopo lo sfondamento, ridurre la rotazione del mandrino a 500 – 1000 min^{-1}.
② Dopodiché, sfilare la punta a una velocità di avanzamento tra 1000 e 2000 mm/min.

■ MANUALE D'USO PER DVAS L/D=50

FORATURA PER SUPERFICIE PIANA ● Foratura di un foro cieco

■ 1. Foratura di un foro pilota



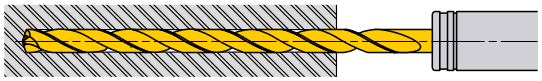
① Utilizzare una punta con un angolo di cuspide maggiore (più piatto) rispetto alla punta super lunga.
Utilizzare una punta DVAS con L/D = 7.
② Assicurarsi che venga praticato un foro di alta precisione per la guida.
③ Profondità di foratura: Circa DCx7.
(Regolare la profondità del foro pilota in base alla lunghezza della punta lunga.)

■ 2. Taglio iniziale con punta di tipo lungo



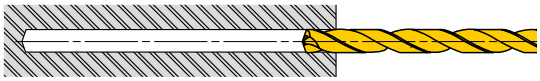
① Inserire la punta del foro pilota usando una bassa velocità di rotazione.
(velocità del mandrino 500 – 1000 min^{-1}, velocità di avanzamento 1000 – 2000 mm/min)
② Fermare la punta nel foro pilota a 0.5 – 1 mm dal fondo del foro.

■ 3. Foratura in profondità



① Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

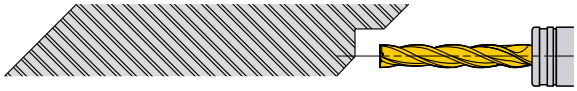
■ 4. Arretramento della punta



① Dopo la foratura, estrarre la punta fino a 0.5 – 1 mm dalla fine del foro pilota e quindi ridurre i giri (giri circa 500 – 1000 min^{-1})
② Dopodiché, sfilare la punta a una velocità di avanzamento tra 1000 e 2000 mm/min.

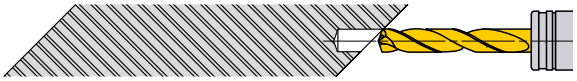
FORATURA INTERROTTA ● Foratura passante con interruzione o su superfici irregolari con piani inclinati.

■ 1. Spianatura



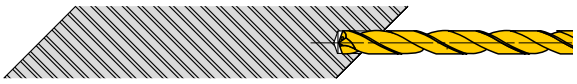
① Eseguire una superficie piana utilizzando una fresa frontale o una fresa per cave in grado di spianare. Realizzare il diametro della spianatura della stessa dimensione del diametro del foro profondo richiesto.

■ 2. Foratura di un foro pilota



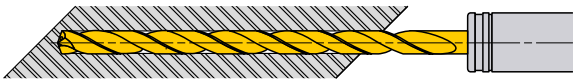
① Utilizzare una punta con un angolo di cuspide maggiore (più piatto) rispetto alla punta super lunga. Utilizzare una punta DVAS con L/D = 7.
② Assicurarsi che venga praticato un foro di alta precisione per la guida.
③ Profondità di foratura: Circa DCx7.
(Regolare la profondità del foro pilota in base alla lunghezza della punta lunga.)

■ 3. Taglio iniziale con punta di tipo lungo



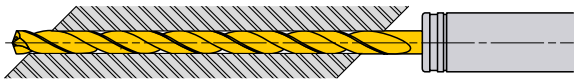
① Inserire la punta del foro pilota usando una bassa velocità di rotazione.
(velocità del mandrino 500 – 1000 min^{-1}, velocità di avanzamento 1000 – 2000 mm/min)
② Fermare la punta nel foro pilota a 0.5 – 1 mm dal fondo del foro.

■ 4. Foratura in profondità



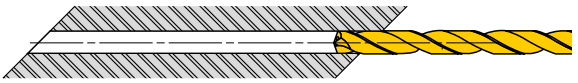
① Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

■ 5. Sfondamento



① Il tagliente potrebbe essere danneggiato in fase di sfondamento.
② Ridurre la velocità di avanzamento al momento dell'uscita dell'utensile sull'inclinato.

■ 6. Ritrazione della punta



① Dopo lo sfondamento, ridurre la rotazione del mandrino a 500 – 1000 min^{-1}.
② Dopodiché, sfilare la punta a una velocità di avanzamento tra 1000 e 2000 mm/min.

FORATURA (METALLO DURO)

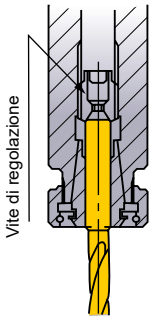
DVAS
Punte TRISTAR

Piccoli diametri

NEW

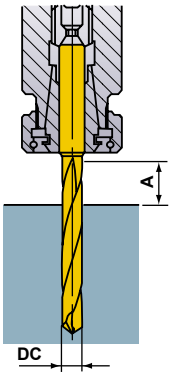
■ GUIDA OPERATIVA

Mandrino di tenuta



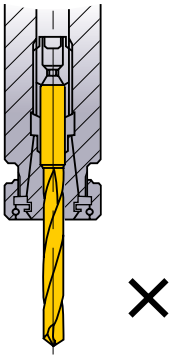
La ghiera reggispinta del mandrino blocca la punta in modo sicuro.

Lunghezza punta



A ≥ DC x 2

Montaggio punta



Non bloccare la punta sull'elica.

Pressione refrigerante

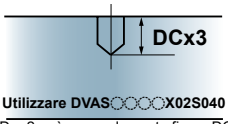
Regolare la pressione del refrigerante in base al tipo e alla concentrazione.

Diam. Punta **DC**	Idrosolubile	Non idrosolubile
DC<2mm	≥ 3MPa	≥ 7MPa
DC<3mm	≥ 2MPa	≥ 5MPa

Punta pilota

Per la foratura profonda, fare riferimento alla figura sottostante.

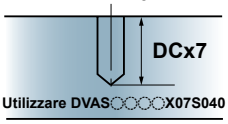
L/D≤40



Utilizzare DVAS○○○○X02S040

*L/D = 2 può essere lavorata fino a DCx3 durante la realizzazione di fori pilota.

L/D>40



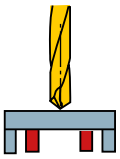
Utilizzare DVAS○○○○X07S040

Utilizzo del refrigerante

Piccoli pezzi di truciolo si incastrano nei fori di lubrorefrigerazione delle punte di piccolo diametro.Utilizzare sempre un filtro a maglia fine come misura preventiva.

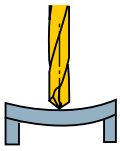
Diam. Punta **DC**	Filtro a maglia fine
DC<2mm	≤ 10μm
DC<3mm	≤ 20μm

Pezzi sottili



Supporti per il pezzo

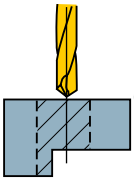
OK



Se tende a flettere

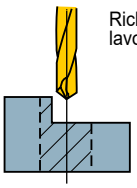
×

Taglio interrotto



OK

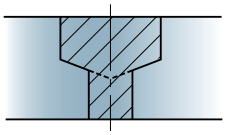
①Ridurre l'avanzamento quando si fora sulla parte con taglio interrotto.



Richiede una precedente lavorazione

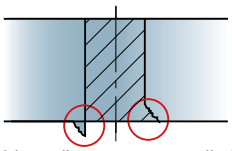
①Praticare un'impronta piana con fresa integrale prima della foratura.

Foratura a gradino



①Dividere in due fasi.
②Forare il diametro maggiore per primo.
*La punta che realizza i due diametri contemporaneamente può essere prodotta su richiesta.

Bave e scheggiature sul pezzo



①Ridurre l'avanzamento di circa il 50% prima dell'uscita della punta dal foro.
②Variare l'angolo della punta.

Suggerimenti per eseguire un foro profondo superiore a L/D = 40

Metodo con pezzo in rotazione: piccoli torni, torni automatici, ecc.

(1) Eseguire la svasatura frontale (si raccomanda l'uso della punta DLE)



(2) Eseguire il foro pilota a una profondità di circa 3D (si raccomanda l'uso della punta DVAS)



(3) Eseguire il foro profondo utilizzando DVAS○○○○X50S040.



Metodo con utensile in rotazione: Centri di lavoro, fresatrici, alesatrici, ecc.

(1) Eseguire il foro pilota a una profondità di circa 3D (si raccomanda l'uso della punta DVAS)



(2) Eseguire il foro pilota più in profondità a circa 7D
Se è necessaria una maggiore stabilità, praticare un foro pilota più profondo di 7D.



(3) Eseguire il foro profondo utilizzando DVAS○○○○X50S040.



Note

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Note

FORATURA (METALLO DURO)

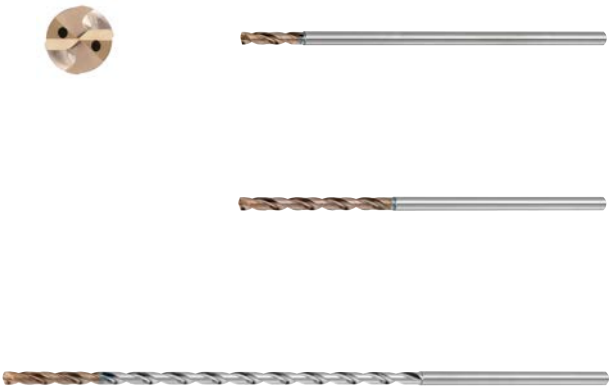
MINI-MVS

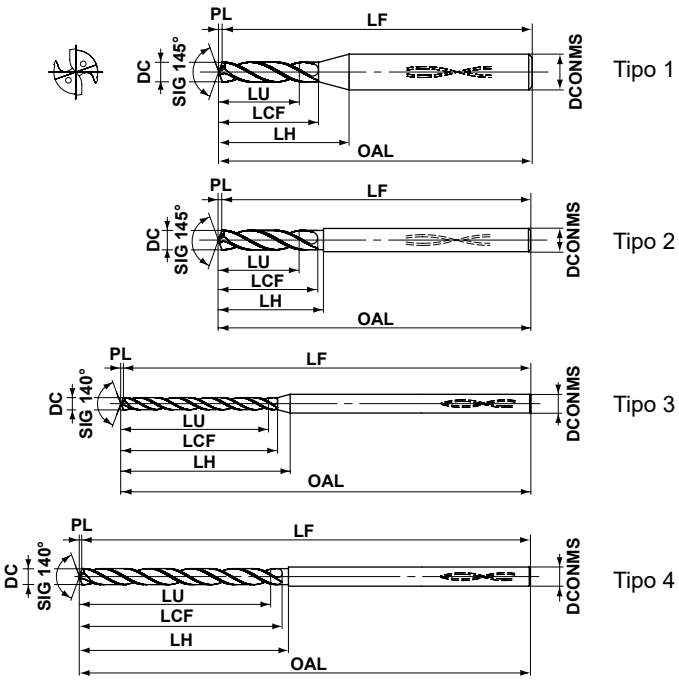
- Tagliente dritto che offre una migliore evacuazione dei trucioli e maggiore robustezza del tagliente.
- Il doppio margine consente livelli ottimali di bilanciatura e precisione nelle punte di più piccolo diametro.



P M K N S H

Refrigerante interno





Codice ordinazione	1≤DC≤2.9
MVS-**X02**- (punta pilota)	+0.014 0
Altri	0 −0.014
Codice ordinazione	DCONMS
MVS	0 −0.006

DC (mm)	Profondità foro (L/D)	DP1020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
1.0	2*	●	MVS0100X02S030	2.2	5.2	8.9	55.2	55	0.2	3	1
	7	●	MVS0100X07S030	7.2	10.2	14.2	55.2	55	0.2	3	3
	12	●	MVS0100X12S030	12.2	15.2	19.2	55.2	55	0.2	3	3
	20	●	MVS0100X20S030	20.2	24.2	28.2	60.2	60	0.2	3	3
	25	●	MVS0100X25S030	25.2	28.2	32.2	66.2	66	0.2	3	3
	30	●	MVS0100X30S030	30.2	33.2	37.2	72.2	72	0.2	3	3
1.1	2*	●	MVS0110X02S030	2.4	5.6	9.1	55.2	55	0.2	3	1
	7	●	MVS0110X07S030	7.9	11.2	15.2	55.2	55	0.2	3	3
	12	●	MVS0110X12S030	13.4	17.2	21.2	55.2	55	0.2	3	3
	20	●	MVS0110X20S030	22.2	25.2	29.2	60.2	60	0.2	3	3
	25	●	MVS0110X25S030	27.7	31.2	34.2	66.2	66	0.2	3	3
	30	●	MVS0110X30S030	33.2	36.2	40.2	72.2	72	0.2	3	3
1.2	2*	●	MVS0120X02S030	2.6	6.2	9.6	55.2	55	0.2	3	1
	7	●	MVS0120X07S030	8.6	12.2	15.2	55.2	55	0.2	3	3
	12	●	MVS0120X12S030	14.6	18.2	21.2	55.2	55	0.2	3	3
	20	●	MVS0120X20S030	24.2	28.2	31.2	60.2	60	0.2	3	3
	25	●	MVS0120X25S030	30.2	34.2	37.2	66.2	66	0.2	3	3
	30	●	MVS0120X30S030	36.2	40.2	43.2	72.2	72	0.2	3	3
1.3	2*	●	MVS0130X02S030	2.8	6.6	9.8	55.2	55	0.2	3	1
	7	●	MVS0130X07S030	9.3	13.2	16.2	55.2	55	0.2	3	3
	12	●	MVS0130X12S030	15.8	20.2	23.2	55.2	55	0.2	3	3
	20	●	MVS0130X20S030	26.2	30.2	33.2	68.2	68	0.2	3	3
	25	●	MVS0130X25S030	32.7	36.2	40.2	74.2	74	0.2	3	3
	30	●	MVS0130X30S030	39.2	43.2	46.2	82.2	82	0.2	3	3

DC (mm)	Profondità foro (L/D)	DP1020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
1.4	2*	●	MVS0140X02S030	3.0	7.2	10.2	55.2	55	0.2	3	1
	7	●	MVS0140X07S030	10.1	14.3	17.3	55.3	55	0.3	3	3
	12	●	MVS0140X12S030	17.1	21.3	24.3	55.3	55	0.3	3	3
	20	●	MVS0140X20S030	28.3	32.3	35.3	68.3	68	0.3	3	3
	25	●	MVS0140X25S030	35.3	39.3	42.3	74.3	74	0.3	3	3
	30	●	MVS0140X30S030	42.3	46.3	49.3	82.3	82	0.3	3	3
1.5	2*	●	MVS0150X02S030	3.2	7.6	10.4	55.2	55	0.2	3	1
	7	●	MVS0150X07S030	10.8	15.3	18.3	55.3	55	0.3	3	3
	12	●	MVS0150X12S030	18.3	23.3	26.3	55.3	55	0.3	3	3
	20	●	MVS0150X20S030	30.3	35.3	37.3	68.3	68	0.3	3	3
	25	●	MVS0150X25S030	37.8	42.3	45.3	74.3	74	0.3	3	3
	30	●	MVS0150X30S030	45.3	50.3	52.3	82.3	82	0.3	3	3
1.6	2*	●	MVS0160X02S030	3.5	8.3	10.9	68.3	68	0.3	3	1
	7	●	MVS0160X07S030	11.5	16.3	19.3	68.3	68	0.3	3	3
	12	●	MVS0160X12S030	19.5	24.3	27.3	68.3	68	0.3	3	3
	20	●	MVS0160X20S030	32.3	37.3	39.3	78.3	78	0.3	3	3
	25	●	MVS0160X25S030	40.3	45.3	47.3	86.3	86	0.3	3	3
	30	●	MVS0160X30S030	48.3	53.3	55.3	95.3	95	0.3	3	3
1.7	2*	●	MVS0170X02S030	3.7	8.7	11.1	68.3	68	0.3	3	1
	7	●	MVS0170X07S030	12.2	17.3	19.3	68.3	68	0.3	3	3
	12	●	MVS0170X12S030	20.7	26.3	28.3	68.3	68	0.3	3	3
	20	●	MVS0170X20S030	34.3	39.3	42.3	78.3	78	0.3	3	3
	25	●	MVS0170X25S030	42.8	48.3	50.3	86.3	86	0.3	3	3
	30	●	MVS0170X30S030	51.3	56.3	59.3	95.3	95	0.3	3	3

2* = Punta per foro pilota. La tolleranza è +0.014 e la profondità del foro è DCx2

● : **Inventario mantenuto.**

PARAMETRI DI TAGLIO ➤ M051
GUIDA OPERATIVA ➤ M052
DATI TECNICI ➤ P001

MINI-MVS

DC (mm)	Profondità foro (L/D)	DP1020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
1.8	2*	●	MVS0180X02S030	3.9	9.3	11.5	68.3	68	0.3	3	1
	7	●	MVS0180X07S030	12.9	18.3	20.3	68.3	68	0.3	3	3
	12	●	MVS0180X12S030	21.9	27.3	29.3	68.3	68	0.3	3	3
	20	●	MVS0180X20S030	36.3	41.3	44.3	84.3	84	0.3	3	3
	25	●	MVS0180X25S030	45.3	50.3	53.3	94.3	94	0.3	3	3
	30	●	MVS0180X30S030	54.3	59.3	62.3	102.3	102	0.3	3	3
1.9	2*	●	MVS0190X02S030	4.1	9.7	11.8	68.3	68	0.3	3	1
	7	●	MVS0190X07S030	13.6	19.3	21.3	68.3	68	0.3	3	3
	12	●	MVS0190X12S030	23.1	29.3	31.3	68.3	68	0.3	3	3
	20	●	MVS0190X20S030	38.3	44.3	46.3	84.3	84	0.3	3	3
	25	●	MVS0190X25S030	47.8	53.3	55.3	94.3	94	0.3	3	3
	30	●	MVS0190X30S030	57.3	63.3	65.3	102.3	102	0.3	3	3
2.0	2*	●	MVS0200X02S030	4.3	10.3	12.2	68.3	68	0.3	3	1
	7	●	MVS0200X07S030	14.4	20.4	22.4	68.4	68	0.4	3	3
	12	●	MVS0200X12S030	24.4	30.4	32.4	68.4	68	0.4	3	3
	20	●	MVS0200X20S030	40.4	46.4	48.4	84.4	84	0.4	3	3
	25	●	MVS0200X25S030	50.4	56.4	58.4	94.4	94	0.4	3	3
	30	●	MVS0200X30S030	60.4	66.4	68.4	102.4	102	0.4	3	3
2.1	2*	●	MVS0210X02S030	4.5	10.7	12.4	74.3	74	0.3	3	1
	7	●	MVS0210X07S030	15.1	21.4	23.4	74.4	74	0.4	3	3
	12	●	MVS0210X12S030	25.6	32.4	34.4	74.4	74	0.4	3	3
	20	●	MVS0210X20S030	42.4	48.4	50.4	94.4	94	0.4	3	3
	25	●	MVS0210X25S030	52.9	59.4	60.4	107.4	107	0.4	3	3
	30	●	MVS0210X30S030	63.4	69.4	71.4	118.4	118	0.4	3	3
2.2	2*	●	MVS0220X02S030	4.7	11.3	12.8	74.3	74	0.3	3	1
	7	●	MVS0220X07S030	15.8	22.4	23.4	74.4	74	0.4	3	3
	12	●	MVS0220X12S030	26.8	33.4	34.4	74.4	74	0.4	3	3
	20	●	MVS0220X20S030	44.4	51.4	52.4	94.4	94	0.4	3	3
	25	●	MVS0220X25S030	55.4	62.4	63.4	107.4	107	0.4	3	3
	30	●	MVS0220X30S030	66.4	73.4	74.4	118.4	118	0.4	3	3
2.3	2*	●	MVS0230X02S030	5.0	11.8	13.1	74.4	74	0.4	3	1
	7	●	MVS0230X07S030	16.5	23.4	24.4	74.4	74	0.4	3	3
	12	●	MVS0230X12S030	28.0	35.4	36.4	74.4	74	0.4	3	3
	20	●	MVS0230X20S030	46.4	53.4	54.4	94.4	94	0.4	3	3
	25	●	MVS0230X25S030	57.9	64.4	66.4	107.4	107	0.4	3	3
	30	●	MVS0230X30S030	69.4	76.4	77.4	118.4	118	0.4	3	3
2.4	2*	●	MVS0240X02S030	5.2	12.4	13.5	74.4	74	0.4	3	1
	7	●	MVS0240X07S030	17.2	24.4	25.4	74.4	74	0.4	3	3
	12	●	MVS0240X12S030	29.2	36.4	37.4	74.4	74	0.4	3	3
	20	●	MVS0240X20S030	48.4	55.4	56.4	94.4	94	0.4	3	3
	25	●	MVS0240X25S030	60.4	67.4	68.4	107.4	107	0.4	3	3
	30	●	MVS0240X30S030	72.4	79.4	80.4	118.4	118	0.4	3	3
2.5	2*	●	MVS0250X02S030	5.4	12.8	13.7	74.4	74	0.4	3	1
	7	●	MVS0250X07S030	18.0	25.5	26.5	74.5	74	0.5	3	3
	12	●	MVS0250X12S030	30.5	38.5	39.5	74.5	74	0.5	3	3
	20	●	MVS0250X20S030	50.5	58.5	59.5	94.5	94	0.5	3	3
	25	●	MVS0250X25S030	63.0	70.5	71.5	107.5	107	0.5	3	3
	30	●	MVS0250X30S030	75.5	83.5	84.5	118.5	118	0.5	3	3

DC (mm)	Profondità foro (L/D)	DP1020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
2.6	2*	●	MVS0260X02S030	5.6	13.4	13.4	81.4	81	0.4	3	2
	7	●	MVS0260X07S030	18.7	26.5	26.5	81.5	81	0.5	3	4
	12	●	MVS0260X12S030	31.7	39.5	39.5	81.5	81	0.5	3	4
	20	●	MVS0260X20S030	52.5	60.5	60.5	103.5	103	0.5	3	4
	25	●	MVS0260X25S030	65.5	73.5	73.5	117.5	117	0.5	3	4
	30	●	MVS0260X30S030	78.5	86.5	86.5	132.5	132	0.5	3	4
2.7	2*	●	MVS0270X02S030	5.8	13.8	13.8	81.4	81	0.4	3	2
	7	●	MVS0270X07S030	19.4	27.5	27.5	81.5	81	0.5	3	4
	12	●	MVS0270X12S030	32.9	41.5	41.5	81.5	81	0.5	3	4
	20	●	MVS0270X20S030	54.5	62.5	62.5	103.5	103	0.5	3	4
	25	●	MVS0270X25S030	68.0	76.5	76.5	117.5	117	0.5	3	4
	30	●	MVS0270X30S030	81.5	89.5	89.5	132.5	132	0.5	3	4
2.8	2*	●	MVS0280X02S030	6.0	14.4	14.4	81.4	81	0.4	3	2
	7	●	MVS0280X07S030	20.1	28.5	28.5	81.5	81	0.5	3	4
	12	●	MVS0280X12S030	34.1	42.5	42.5	81.5	81	0.5	3	4
	20	●	MVS0280X20S030	56.5	64.5	64.5	103.5	103	0.5	3	4
	25	●	MVS0280X25S030	70.5	78.5	78.5	117.5	117	0.5	3	4
	30	●	MVS0280X30S030	84.5	92.5	92.5	132.5	132	0.5	3	4
2.9	2*	●	MVS0290X02S030	6.3	14.9	14.9	81.5	81	0.5	3	2
	7	●	MVS0290X07S030	20.8	29.5	29.5	81.5	81	0.5	3	4
	12	●	MVS0290X12S030	35.3	44.5	44.5	81.5	81	0.5	3	4
	20	●	MVS0290X20S030	58.5	67.5	67.5	103.5	103	0.5	3	4
	25	●	MVS0290X25S030	73.0	81.5	81.5	117.5	117	0.5	3	4
	30	●	MVS0290X30S030	87.5	96.5	96.5	132.5	132	0.5	3	4

2* = Punta per foro pilota. La tolleranza è +0.014 e la profondità del foro è DCx2

● : **Inventario mantenuto.**

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		P					
		Acciaio dolce (≤180HB)		Acciaio al carbonio, Acciaio legato (180—280HB)		Acciaio al carbonio, Acciaio legato (280—350HB)	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	**2*,7DC**	15900	0.04 (0.02—0.05)	15900	0.04 (0.02—0.05)	12700	0.04 (0.02—0.05)
	≥ 12DC	15900	0.02 (0.01—0.03)	12700	0.02 (0.01—0.03)	9500	0.02 (0.01—0.03)
1.5	**2*,7DC**	10600	0.05 (0.03—0.08)	10600	0.05 (0.03—0.08)	8400	0.05 (0.03—0.08)
	≥ 12DC	10600	0.05 (0.02—0.08)	8400	0.05 (0.03—0.08)	6300	0.05 (0.02—0.08)
2.0	**2*,7DC**	7900	0.07 (0.04—0.10)	7900	0.07 (0.04—0.10)	6300	0.07 (0.04—0.10)
	≥ 12DC	7900	0.07 (0.04—0.10)	7900	0.07 (0.04—0.10)	7900	0.07 (0.04—0.10)
2.5	**2*,7DC**	7600	0.09 (0.05—0.13)	7600	0.09 (0.05—0.13)	6300	0.09 (0.05—0.13)
	≥ 12DC	7600	0.09 (0.06—0.13)	6300	0.09 (0.06—0.13)	6300	0.08 (0.05—0.13)

Materiale da lavorare		M		K			
		Acciaio inossidabile austenitico (≤200HB)		Ghisa grigia (≤350MPa)		Ghisa sferoidale (≤450MPa)	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	**2*,7DC**	9500	0.03 (0.02—0.05)	15900	0.04 (0.02—0.05)	12700	0.04 (0.02—0.05)
	≥ 12DC	9500	0.02 (0.01—0.03)	12700	0.02 (0.01—0.03)	9500	0.02 (0.01—0.03)
1.5	**2*,7DC**	6300	0.05 (0.03—0.07)	10600	0.05 (0.03—0.08)	8400	0.05 (0.03—0.08)
	≥ 12DC	6300	0.05 (0.02—0.08)	8400	0.05 (0.03—0.08)	6300	0.05 (0.02—0.08)
2.0	**2*,7DC**	4700	0.06 (0.04—0.08)	7900	0.07 (0.04—0.10)	6300	0.07 (0.04—0.10)
	≥ 12DC	4700	0.07 (0.04—0.10)	7900	0.07 (0.04—0.10)	7900	0.07 (0.04—0.10)
2.5	**2*,7DC**	5000	0.08 (0.05—0.10)	7600	0.09 (0.05—0.13)	6300	0.09 (0.05—0.13)
	≥ 12DC	3800	0.08 (0.05—0.12)	6300	0.09 (0.06—0.13)	6300	0.08 (0.05—0.12)

Materiale da lavorare		N		S	
		Lega di alluminio (Si<5%)		Lega resistente al calore	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
1.0	**2*,7DC**	19000	0.05 (0.03—0.08)	3100	0.02 (0.01—0.03)
	≥ 12DC	15900	0.05 (0.03—0.08)	3100	0.02 (0.01—0.03)
1.5	**2*,7DC**	16900	0.07 (0.05—0.12)	2100	0.03 (0.02—0.04)
	≥ 12DC	14800	0.08 (0.05—0.12)	2100	0.03 (0.02—0.04)
2.0	**2*,7DC**	14300	0.10 (0.06—0.15)	2300	0.04 (0.03—0.05)
	≥ 12DC	12700	0.11 (0.06—0.15)	2300	0.04 (0.03—0.05)
2.5	**2*,7DC**	12700	0.13 (0.08—0.20)	1900	0.05 (0.04—0.06)
	≥ 12DC	11400	0.14 (0.08—0.20)	1900	0.05 (0.04—0.06)

2* = Punta per foro pilota. La profondità di taglio è pari a DCx2.

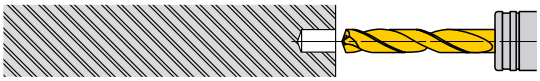
GUIDA OPERATIVA ➤ M052
DATI TECNICI ➤ P001

MINI-MVS

■ MANUALE D'USO PER PUNTA LUNGA DI TIPO MINI-MVS (L/D ≥ 10)

FORATURA PER SUPERFICIE PIANA ● Foratura di un foro cieco

■ 1. Foratura di un foro pilota



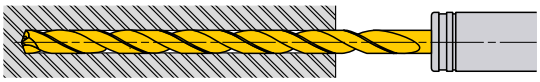
①Utilizzare una punta con un angolo tra i taglienti maggiore (più piatta) rispetto al tipo più lungo. Usare l'elica più corta possibile.
②Assicurarsi che la punta esegua un foro guida ad elevata precisione.
③Profondità di foratura: circa 1DC o superiore.
(Regolare la profondità del foro pilota in base alla lunghezza del tipo più lungo.)

■ 2. Taglio iniziale con punta di tipo lungo



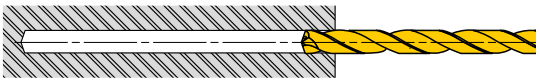
①Inserire la punta lunga nel foro pilota ad un numero di giri ridotto. Giri 1000min^{-1}, avanzamento 0.2mm－0.3mm/giro.
②Fermare la punta lunga a 0.5mm—1mm dal fondo del foro pilota.

■ 3. Foratura in profondità



①Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

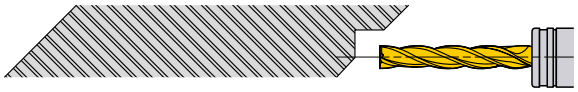
■ 4. Arretramento della punta



①Dopo aver praticato la foratura, ridurre il numero di giri del tagliente fino a circa 0.5mm-1mm dalla fine del foro (giri di circa 1000 min^{-1})
②Arretrare la punta fino al punto di inizio del foro a una velocità di avanzamento pari a 3000mm/min.
③Infine, liberare il foro a una velocità di taglio pari a 20m-30m/min e una velocità di avanzamento pari a 0.2mm-0.3mm/giro.

FORATURA INTERROTTA ● Foratura passante con interruzione o su superfici irregolari con piani inclinati.

■ 1. Spianatura



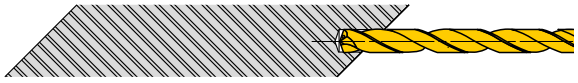
①Eseguire una superficie piana utilizzando una fresa frontale o una fresa per cave in grado di spianare. Realizzare il diametro della spianatura della stessa dimensione del diametro del foro profondo richiesto.

■ 2. Foratura di un foro pilota



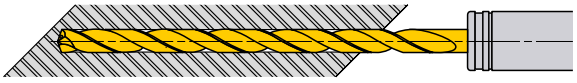
①Utilizzare una punta con un angolo tra i taglienti maggiore (più piatta) rispetto al tipo più lungo. Usare l'elica più corta possibile.
②Assicurare che la guida pratichi un foro a elevata precisione.
③Profondità di foratura: circa 1DC o superiore.
(Regolare la profondità del foro pilota in base alla lunghezza del tipo più lungo.)

■ 3. Taglio iniziale con punta di tipo lungo



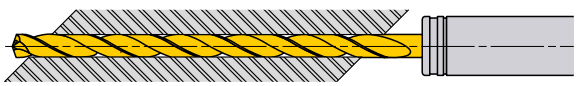
①Inserire la punta lunga nel foro pilota ad un numero di giri ridotto. Giri 1000min^{-1}, avanzamento 0.2mm－0.3mm/giro.
②Fermare la punta lunga a 0.5mm－1mm dal fondo del foro pilota.

■ 4. Foratura in profondità



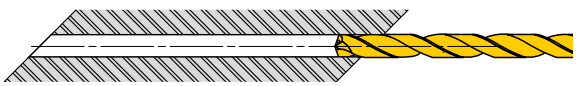
①Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

■ 5. Sfondamento



①Il tagliente potrebbe essere danneggiato in fase di sfondamento.
②Ridurre la velocità di avanzamento al momento dell'uscita dell'utensile sull'inclinato.

■ 6. Ritrazione della punta



①Infine, liberare il foro a una velocità di taglio pari a 20m－30m/min e una velocità di avanzamento pari a 0.2mm－0.3mm/giro.
②Ritrarre la punta dal punto di inizio del foro a una velocità di avanzamento pari a 3000mm/min.

MINI-MWS

- Micropunte con fori di raffreddamento interni per una foratura profonda stabile.
- Per una foratura efficiente ed estremamente precisa, dall'acciaio al carbonio fino a materiali di difficile lavorazione.

UWC | VP | 140° | 135° | X

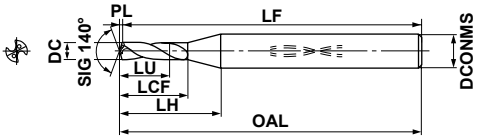
P **M** **K** **N** **S** H

Refrigerante interno

0.5≤DC<1
+0.009
0
h6
0
−0.006

Tipo SB
(Per fori pilota)



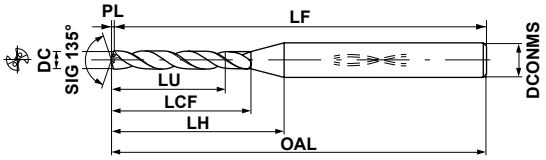


Tipo1

Tipo LB/XB

0.5≤DC<1
0
−0.009
h6
0
−0.006





Tipo2

● Le punte MWS sono adatte per l'utilizzo con mandrini a calettamento a caldo.

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
0.50	1	●	MWS0050SB	0.6	2.6	7.3	47.1	47	0.09	3	1
	5	★	MWS0050LB	2.6	8.1	13.1	47.1	47	0.10	3	2
	12	★	MWS0050XB	6.1	16.1	21.1	47.1	47	0.10	3	2
0.51	1	★	MWS0051SB	0.6	2.7	7.3	47.1	47	0.09	3	1
	5	★	MWS0051LB	2.7	8.1	13.1	47.1	47	0.11	3	2
	12	★	MWS0051XB	6.2	16.1	21.1	47.1	47	0.11	3	2
0.52	1	★	MWS0052SB	0.6	2.7	7.3	47.1	47	0.09	3	1
	5	★	MWS0052LB	2.7	8.1	13.1	47.1	47	0.11	3	2
	12	★	MWS0052XB	6.4	16.1	21.1	47.1	47	0.11	3	2
0.53	1	★	MWS0053SB	0.6	2.7	7.3	47.1	47	0.10	3	1
	5	★	MWS0053LB	2.8	8.1	13.1	47.1	47	0.11	3	2
	12	★	MWS0053XB	6.5	16.1	21.1	47.1	47	0.11	3	2
0.54	1	★	MWS0054SB	0.6	2.7	7.3	47.1	47	0.10	3	1
	5	★	MWS0054LB	2.8	8.1	13.1	47.1	47	0.11	3	2
	12	★	MWS0054XB	6.6	16.1	21.1	47.1	47	0.11	3	2
0.55	1	●	MWS0055SB	0.7	2.7	7.3	47.1	47	0.10	3	1
	5	★	MWS0055LB	2.9	8.1	13.1	47.1	47	0.11	3	2
	12	★	MWS0055XB	6.7	16.1	21.1	47.1	47	0.11	3	2
0.56	1	★	MWS0056SB	0.7	3.0	7.6	47.1	47	0.10	3	1
	5	★	MWS0056LB	2.9	8.1	13.1	47.1	47	0.12	3	2
	12	★	MWS0056XB	6.8	16.1	21.1	47.1	47	0.12	3	2
0.57	1	★	MWS0057SB	0.7	3.0	7.5	47.1	47	0.10	3	1
	5	★	MWS0057LB	3.0	8.1	13.1	47.1	47	0.12	3	2
	12	★	MWS0057XB	7.0	16.1	21.1	47.1	47	0.12	3	2
0.58	1	★	MWS0058SB	0.7	3.0	7.5	47.1	47	0.11	3	1
	5	★	MWS0058LB	3.0	8.1	13.1	47.1	47	0.12	3	2
	12	★	MWS0058XB	7.1	16.1	21.1	47.1	47	0.12	3	2
0.59	1	★	MWS0059SB	0.7	3.0	7.5	47.1	47	0.11	3	1
	5	★	MWS0059LB	3.1	8.1	12.1	47.1	47	0.12	3	2
	12	★	MWS0059XB	7.2	16.1	20.1	47.1	47	0.12	3	2
0.60	1	●	MWS0060SB	0.7	3.0	7.5	47.1	47	0.11	3	1
	5	★	MWS0060LB	3.1	8.1	12.1	47.1	47	0.12	3	2
	12	★	MWS0060XB	7.3	16.1	20.1	47.1	47	0.12	3	2
0.61	1	★	MWS0061SB	0.7	3.2	7.7	47.1	47	0.11	3	1
	5	★	MWS0061LB	3.2	8.1	12.1	47.1	47	0.13	3	2
	12	★	MWS0061XB	7.5	16.1	20.1	47.1	47	0.13	3	2
0.62	1	★	MWS0062SB	0.7	3.2	7.6	47.1	47	0.11	3	1
	5	★	MWS0062LB	3.2	8.1	12.1	47.1	47	0.13	3	2
	12	★	MWS0062XB	7.6	16.1	20.1	47.1	47	0.13	3	2
0.63	1	★	MWS0063SB	0.7	3.2	7.6	47.1	47	0.11	3	1
	5	★	MWS0063LB	3.3	8.1	12.1	47.1	47	0.13	3	2
	12	★	MWS0063XB	7.7	16.1	20.1	47.1	47	0.13	3	2
0.64	1	★	MWS0064SB	0.8	3.2	7.6	47.1	47	0.12	3	1
	5	★	MWS0064LB	3.3	8.1	12.1	47.1	47	0.13	3	2
	12	★	MWS0064XB	7.8	16.1	20.1	47.1	47	0.13	3	2
0.65	1	●	MWS0065SB	0.8	3.2	7.6	47.1	47	0.12	3	1
	5	★	MWS0065LB	3.4	8.1	12.1	47.1	47	0.13	3	2
	12	★	MWS0065XB	7.9	16.1	20.1	47.1	47	0.13	3	2

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

PARAMETRI DI TAGLIO ➤ M055
GUIDA OPERATIVA ➤ M056
DATI TECNICI ➤ P001

MINI-MWS

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	1	★	MWS0066SB	0.8	3.5	7.9	47.1	47	0.12	3	1
0.66	5	★	MWS0066LB	3.4	8.1	12.1	47.1	47	0.14	3	2
	12	★	MWS0066XB	8.1	16.1	20.1	47.1	47	0.14	3	2
	1	★	MWS0067SB	0.8	3.5	7.8	47.1	47	0.12	3	1
0.67	5	★	MWS0067LB	3.5	8.1	12.1	47.1	47	0.14	3	2
	12	★	MWS0067XB	8.2	16.1	20.1	47.1	47	0.14	3	2
	1	★	MWS0068SB	0.8	3.5	7.8	47.1	47	0.12	3	1
0.68	5	★	MWS0068LB	3.5	8.1	12.1	47.1	47	0.14	3	2
	12	★	MWS0068XB	8.3	16.1	20.1	47.1	47	0.14	3	2
	1	★	MWS0069SB	0.8	3.5	7.8	47.1	47	0.13	3	1
0.69	5	★	MWS0069LB	3.6	8.1	12.1	47.1	47	0.14	3	2
	12	★	MWS0069XB	8.4	16.1	20.1	47.1	47	0.14	3	2
	1	●	MWS0070SB	0.8	3.5	7.8	47.1	47	0.13	3	1
0.70	5	★	MWS0070LB	3.6	8.1	12.1	47.1	47	0.14	3	2
	12	★	MWS0070XB	8.5	16.1	20.1	47.1	47	0.14	3	2
	1	★	MWS0071SB	0.8	3.7	8.0	50.1	50	0.13	3	1
0.71	5	★	MWS0071LB	3.7	10.1	14.1	50.1	50	0.15	3	2
	12	★	MWS0071XB	8.7	20.1	24.1	50.1	50	0.15	3	2
	1	★	MWS0072SB	0.9	3.7	8.0	50.1	50	0.13	3	1
0.72	5	★	MWS0072LB	3.8	10.1	14.1	50.1	50	0.15	3	2
	12	★	MWS0072XB	8.8	20.1	24.1	50.1	50	0.15	3	2
	1	★	MWS0073SB	0.9	3.7	7.9	50.1	50	0.13	3	1
0.73	5	★	MWS0073LB	3.8	10.1	14.1	50.1	50	0.15	3	2
	12	★	MWS0073XB	8.9	20.1	24.1	50.1	50	0.15	3	2
	1	★	MWS0074SB	0.9	3.7	7.9	50.1	50	0.13	3	1
0.74	5	★	MWS0074LB	3.9	10.1	14.1	50.1	50	0.15	3	2
	12	★	MWS0074XB	9.0	20.1	24.1	50.1	50	0.15	3	2
	1	●	MWS0075SB	0.9	3.7	7.9	50.1	50	0.14	3	1
0.75	5	★	MWS0075LB	3.9	10.1	14.1	50.1	50	0.16	3	2
	12	★	MWS0075XB	9.2	20.1	24.1	50.1	50	0.16	3	2
	1	★	MWS0076SB	0.9	4.0	8.2	50.1	50	0.14	3	1
0.76	5	★	MWS0076LB	4.0	10.1	14.1	50.1	50	0.16	3	2
	12	★	MWS0076XB	9.3	20.1	24.1	50.1	50	0.16	3	2
	1	★	MWS0077SB	0.9	4.0	8.2	50.1	50	0.14	3	1
0.77	5	★	MWS0077LB	4.0	10.1	14.1	50.1	50	0.16	3	2
	12	★	MWS0077XB	9.4	20.1	24.1	50.1	50	0.16	3	2
	1	★	MWS0078SB	0.9	4.0	8.1	50.1	50	0.14	3	1
0.78	5	★	MWS0078LB	4.1	10.1	14.1	50.1	50	0.16	3	2
	12	★	MWS0078XB	9.5	20.1	24.1	50.1	50	0.16	3	2
	1	★	MWS0079SB	0.9	4.0	8.1	50.1	50	0.14	3	1
0.79	5	★	MWS0079LB	4.1	10.1	14.1	50.1	50	0.16	3	2
	12	★	MWS0079XB	9.6	20.1	24.1	50.1	50	0.16	3	2
	1	●	MWS0080SB	1.0	4.1	8.2	50.2	50	0.15	3	1
0.80	5	★	MWS0080LB	4.2	10.2	14.2	50.2	50	0.17	3	2
	12	★	MWS0080XB	9.8	20.2	24.2	50.2	50	0.17	3	2
	1	★	MWS0081SB	1.0	4.3	8.4	50.2	50	0.15	3	1
0.81	5	★	MWS0081LB	4.2	10.2	14.2	50.2	50	0.17	3	2
	12	★	MWS0081XB	9.9	20.2	24.2	50.2	50	0.17	3	2
	1	★	MWS0082SB	1.0	4.3	8.4	50.2	50	0.15	3	1
0.82	5	★	MWS0082LB	4.3	10.2	14.2	50.2	50	0.17	3	2
	12	★	MWS0082XB	10.0	20.2	24.2	50.2	50	0.17	3	2
	1	★	MWS0083SB	1.0	4.3	8.3	50.2	50	0.15	3	1
0.83	5	★	MWS0083LB	4.3	10.2	14.2	50.2	50	0.17	3	2
	12	★	MWS0083XB	10.1	20.2	24.2	50.2	50	0.17	3	2
	1	★	MWS0084SB	1.0	4.3	8.3	50.2	50	0.15	3	1
0.84	5	★	MWS0084LB	4.4	10.2	14.2	50.2	50	0.17	3	2
	12	★	MWS0084XB	10.3	20.2	24.2	50.2	50	0.17	3	2
	1	●	MWS0085SB	1.0	4.3	8.3	50.2	50	0.15	3	1
0.85	5	★	MWS0085LB	4.4	10.2	14.2	50.2	50	0.18	3	2
	12	★	MWS0085XB	10.4	20.2	24.2	50.2	50	0.18	3	2
	1	★	MWS0086SB	1.0	4.6	8.6	50.2	50	0.16	3	1
0.86	5	★	MWS0086LB	4.5	10.2	14.2	50.2	50	0.18	3	2
	12	★	MWS0086XB	10.5	20.2	24.2	50.2	50	0.18	3	2
	1	★	MWS0087SB	1.0	4.6	8.6	50.2	50	0.16	3	1
0.87	5	★	MWS0087LB	4.5	10.2	14.2	50.2	50	0.18	3	2
	12	★	MWS0087XB	10.6	20.2	24.2	50.2	50	0.18	3	2
	1	★	MWS0088SB	1.0	4.6	8.6	50.2	50	0.16	3	1
0.88	5	★	MWS0088LB	4.6	10.2	14.2	50.2	50	0.18	3	2
	12	★	MWS0088XB	10.7	20.2	24.2	50.2	50	0.18	3	2
	1	★	MWS0089SB	1.1	4.6	8.5	50.2	50	0.16	3	1
0.89	5	★	MWS0089LB	4.6	10.2	14.2	50.2	50	0.18	3	2
	12	★	MWS0089XB	10.9	20.2	24.2	50.2	50	0.18	3	2
	1	●	MWS0090SB	1.1	4.6	8.5	50.2	50	0.16	3	1
0.90	5	★	MWS0090LB	4.7	10.2	14.2	50.2	50	0.19	3	2
	12	★	MWS0090XB	11.0	20.2	24.2	50.2	50	0.19	3	2
	1	★	MWS0091SB	1.1	4.8	8.7	50.2	50	0.17	3	1
0.91	5	★	MWS0091LB	4.7	10.2	14.2	50.2	50	0.19	3	2
	12	★	MWS0091XB	11.1	20.2	24.2	50.2	50	0.19	3	2
	1	★	MWS0092SB	1.1	4.8	8.7	50.2	50	0.17	3	1
0.92	5	★	MWS0092LB	4.8	10.2	14.2	50.2	50	0.19	3	2
	12	★	MWS0092XB	11.2	20.2	24.2	50.2	50	0.19	3	2
	1	★	MWS0093SB	1.1	4.8	8.7	50.2	50	0.17	3	1
0.93	5	★	MWS0093LB	4.8	10.2	14.2	50.2	50	0.19	3	2
	12	★	MWS0093XB	11.4	20.2	24.2	50.2	50	0.19	3	2
	1	★	MWS0094SB	1.1	4.8	8.6	50.2	50	0.17	3	1
0.94	5	★	MWS0094LB	4.9	10.2	14.2	50.2	50	0.19	3	2
	12	★	MWS0094XB	11.5	20.2	24.2	50.2	50	0.19	3	2
	1	●	MWS0095SB	1.1	4.8	8.6	50.2	50	0.17	3	1
0.95	5	★	MWS0095LB	5.0	10.2	14.2	50.2	50	0.20	3	2
	12	★	MWS0095XB	11.6	20.2	24.2	50.2	50	0.20	3	2
	1	★	MWS0096SB	1.1	5.1	8.9	50.2	50	0.17	3	1
0.96	5	★	MWS0096LB	5.0	10.2	14.2	50.2	50	0.20	3	2
	12	★	MWS0096XB	11.7	20.2	24.2	50.2	50	0.20	3	2
	1	★	MWS0097SB	1.2	5.1	8.9	50.2	50	0.18	3	1
0.97	5	★	MWS0097LB	5.1	10.2	14.2	50.2	50	0.20	3	2
	12	★	MWS0097XB	11.8	20.2	24.2	50.2	50	0.20	3	2
	1	★	MWS0098SB	1.2	5.1	8.9	50.2	50	0.18	3	1
0.98	5	★	MWS0098LB	5.1	10.2	14.2	50.2	50	0.20	3	2
	12	★	MWS0098XB	12.0	20.2	24.2	50.2	50	0.20	3	2
	1	★	MWS0099SB	1.2	5.1	8.9	50.2	50	0.18	3	1
0.99	5	★	MWS0099LB	5.2	10.2	14.2	50.2	50	0.21	3	2
	12	★	MWS0099XB	12.1	20.2	24.2	50.2	50	0.21	3	2

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

PARAMETRI DI TAGLIO CONSIGLIATI

■ Punte SB/LB/XB (L/D<10)

Materiale da lavorare	P				P			
	Acciaio dolce (≤180HB) Ck10				Acciaio al carbonio, Acciaio legato (180—280HB) Ck45, 42CrMo4			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.5	40	25400	0.010 (0.005—0.015)	250	40	25400	0.010 (0.005—0.015)	250
0.63	40	20200	0.014 (0.008—0.020)	280	40	20200	0.014 (0.008—0.020)	280
0.8	45	17900	0.028 (0.016—0.040)	500	45	17900	0.028 (0.016—0.040)	500
1.0	50	15900	0.035 (0.020—0.050)	555	50	15900	0.035 (0.020—0.050)	555

Materiale da lavorare	P				M			
	Acciaio al carbonio, Acciaio legato (280—350HB) 36CrNiMo4				Acciaio inossidabile austenitico (≤200HB) X5CrNi1810, X5CrNiMo17-12-2			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.5	30	19000	0.010 (0.005—0.015)	190	20	12700	0.008 (0.005—0.010)	100
0.63	30	15100	0.014 (0.008—0.020)	210	20	10100	0.010 (0.008—0.013)	100
0.8	35	13900	0.028 (0.016—0.040)	385	25	9900	0.020 (0.016—0.026)	195
1.0	40	12700	0.035 (0.020—0.050)	440	30	9500	0.030 (0.020—0.044)	285

Materiale da lavorare	K				K			
	Ghisa grigia (≤350MPa) GG30				Ghisa sferoidale (≤450MPa) GGG45			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.5	40	25400	0.010 (0.005—0.015)	250	30	19000	0.010 (0.005—0.015)	190
0.63	40	20200	0.014 (0.008—0.020)	280	30	15100	0.014 (0.008—0.020)	210
0.8	45	17900	0.028 (0.016—0.040)	500	35	13900	0.028 (0.016—0.040)	385
1.0	50	15900	0.035 (0.020—0.050)	555	40	12700	0.035 (0.020—0.050)	440

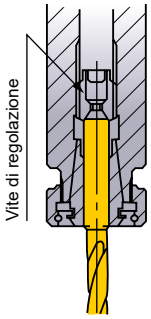
Materiale da lavorare	N				S			
	Lega di alluminio (Si<5%)				Lega resistente al calore Inconel®718			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.5	40	25400	0.014 (0.008—0.020)	355	10	6300	0.006 (0.004—0.008)	35
0.63	40	20200	0.020 (0.012—0.030)	400	10	5000	0.008 (0.007—0.010)	40
0.8	45	17900	0.036 (0.024—0.050)	640	10	3900	0.016 (0.013—0.021)	60
1.0	60	19000	0.050 (0.030—0.075)	950	10	3100	0.020 (0.016—0.027)	60

GUIDA OPERATIVA ➤ M056
DATI TECNICI ➤ P001

MINI-MWS

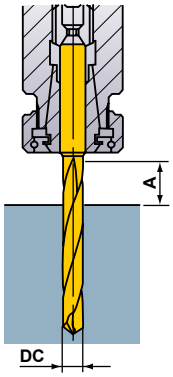
■ GUIDA OPERATIVA

Mandrino di tenuta



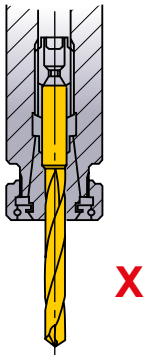
La ghiera reggispinta del mandrino blocca la punta in modo sicuro.

Lunghezza punta



A ≥ DC x 2.0

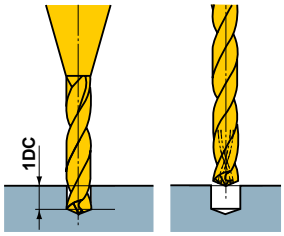
Montaggio punta



X

Non bloccare la punta sull'elica.

Montaggio punta

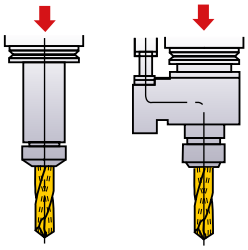


①Per fori pilota, usare punte tipo SB.
②Utilizzare il preforo come guida quando si utilizzano punte con fori di lubrificazione. A seconda delle condizioni di taglio, la foratura ad intermittenza è raccomandata.

Tipo con refrigerante interno

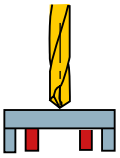
Mandrino con refrigerante interno

Mandrino rotante con refrigerante interno



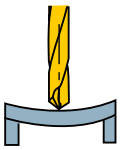
Pressione del refrigerante consigliata: ≥30 bar
È necessaria una pressione min. di 15 bar.

Pezzi sottili



Supporti per il pezzo

OK



Se tende a flettere

X

Utilizzo del refrigerante

1) Piccole particelle di sporco possono ostruire i fori di passaggio olio. Utilizzare sempre un filtro a maglia fine come misura preventiva.

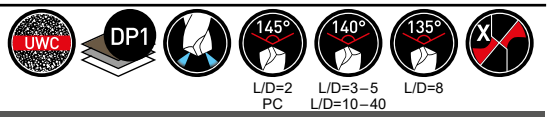
2) Sporcizia e particelle metalliche aderiscono al vecchio refrigerante. Un regolare cambio di refrigerante è raccomandato.

■ NOTE PER L'USO

●Utilizzare un filtro a maglia fine (maglia≤5μm) per prevenire l'ostruzione dei fori passaggio olio.

MPS1

- Nuovo rivestimento PVD a base di AlTiCrN.
- MPS1 margine doppio per foratura precisa e affidabile.



Punta in metallo duro a doppio margine super lunga

P M K N S H

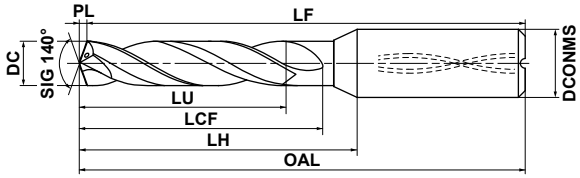
Refrigerante interno



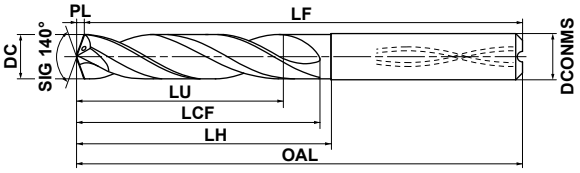
	3≤DC≤6	6<DC≤10	10<DC≤18	18<DC≤20
DIN / PC	+0.010 −0.002	+0.010 −0.005	+0.005 −0.013	+0.005 −0.016
L___C	0 −0.012	0 −0.015	0 −0.018	0 −0.021
h6	0 −0.008	0 −0.009	0 −0.011	0 −0.013

1. I fori delle punte S-DIN (C) e L-DIN (C) e L8C hanno fori rotondi fino a 6 mm DC. I fori delle punte da L10C a L40C hanno fori rotondi fino a DC 4.9 mm.
2. SIG: l/d 3 – 5 e 10 – 40 = 140°, 8 = 135°, PC = 145°

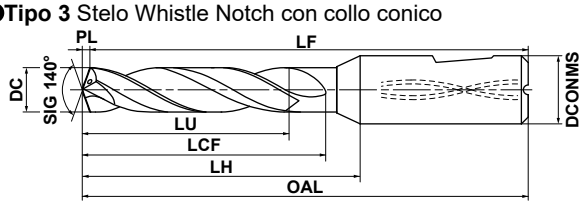
●Tipo 1 Stelo cilindrico con collo conico



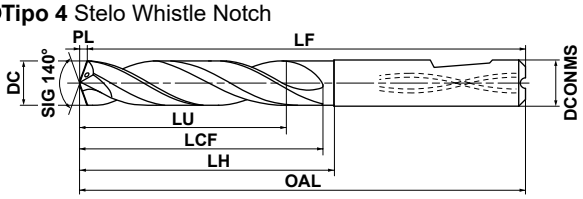
●Tipo 2 Stelo cilindrico



●Tipo 3 Stelo Whistle Notch con collo conico



●Tipo 4 Stelo Whistle Notch



DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.0	3	□	MPS1-0300S-DIN	15.0	19.5	24.5	61.5	61	0.5	6	3
	3	●	MPS1-0300S-DIN-C	15.0	19.5	24.5	61.5	61	0.5	6	1
	5	□	MPS1-0300L-DIN	20.0	24.5	28.5	65.5	65	0.5	6	3
	5	●	MPS1-0300L-DIN-C	20.0	24.5	28.5	65.5	65	0.5	6	1
	2	●	MPS1-0300-PC	6.5	16.5	19.7	55.5	55	0.5	6	1
	8	●	MPS1-0300-L8C	24.6	33.6	39.6	76.6	76	0.6	6	1
	10	●	MPS1-0300-L10C	30.5	37.5	42.5	79.5	79	0.5	6	1
	12	●	MPS1-0300-L12C	36.5	43.5	48.5	85.5	85	0.5	6	1
	15	●	MPS1-0300-L15C	45.5	52.5	57.5	94.5	94	0.5	6	1
	20	●	MPS1-0300-L20C	60.5	67.5	72.5	109.5	109	0.5	6	1
	25	●	MPS1-0300-L25C	75.5	82.5	87.5	124.5	124	0.5	6	1
	30	●	MPS1-0300-L30C	90.5	97.5	102.5	139.5	139	0.5	6	1
	35	□	MPS1-0300-L35C	105.5	113.5	121.5	158.5	158	0.5	6	1
	40	●	MPS1-0300-L40C	120.5	128.5	136.5	173.5	173	0.5	6	1
3.05	3	□	MPS1-0305S-DIN	15.0	19.6	24.6	61.6	61	0.6	6	3
	3	●	MPS1-0305S-DIN-C	15.0	19.6	24.6	61.6	61	0.6	6	1
	5	□	MPS1-0305L-DIN	20.0	24.6	28.6	65.6	65	0.6	6	3
	5	●	MPS1-0305L-DIN-C	20.0	24.6	28.6	65.6	65	0.6	6	1
3.1	3	□	MPS1-0310S-DIN	14.9	19.6	24.6	61.6	61	0.6	6	3
	3	●	MPS1-0310S-DIN-C	14.9	19.6	24.6	61.6	61	0.6	6	1
	5	□	MPS1-0310L-DIN	19.9	24.6	28.6	65.6	65	0.6	6	3
	5	●	MPS1-0310L-DIN-C	19.9	24.6	28.6	65.6	65	0.6	6	1
	2	●	MPS1-0310-PC	6.7	18.5	21.6	55.5	55	0.5	6	1
	8	●	MPS1-0310-L8C	25.4	39.6	45.6	82.6	82	0.6	6	1
	10	□	MPS1-0310-L10C	31.6	44.6	49.6	86.6	86	0.6	6	1
	12	●	MPS1-0310-L12C	37.8	51.6	56.6	93.6	93	0.6	6	1
	15	●	MPS1-0310-L15C	47.1	61.6	66.6	103.6	103	0.6	6	1
	20	●	MPS1-0310-L20C	62.6	79.6	84.6	121.6	121	0.6	6	1
	25	●	MPS1-0310-L25C	78.1	96.6	101.6	138.6	138	0.6	6	1
	30	●	MPS1-0310-L30C	93.6	114.6	119.6	156.6	156	0.6	6	1
	35	□	MPS1-0310-L35C	109.1	123.6	138.6	175.6	175	0.6	6	1
	40	●	MPS1-0310-L40C	124.6	138.6	153.6	190.6	190	0.6	6	1

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.2	3	□	MPS1-0320S-DIN	14.8	19.6	24.6	61.6	61	0.6	6	3
	3	●	MPS1-0320S-DIN-C	14.8	19.6	24.6	61.6	61	0.6	6	1
	5	□	MPS1-0320L-DIN	19.8	24.6	28.6	65.6	65	0.6	6	3
	5	●	MPS1-0320L-DIN-C	19.8	24.6	28.6	65.6	65	0.6	6	1
	2	●	MPS1-0320-PC	6.9	18.5	21.5	55.5	55	0.5	6	1
	8	●	MPS1-0320-L8C	26.3	39.7	45.7	82.7	82	0.7	6	1
	10	□	MPS1-0320-L10C	32.6	44.6	49.6	86.6	86	0.6	6	1
	12	●	MPS1-0320-L12C	39.0	51.6	56.6	93.6	93	0.6	6	1
	15	●	MPS1-0320-L15C	48.6	61.6	66.6	103.6	103	0.6	6	1
	20	●	MPS1-0320-L20C	64.6	79.6	84.6	121.6	121	0.6	6	1
	25	●	MPS1-0320-L25C	80.6	96.6	101.6	138.6	138	0.6	6	1
	30	●	MPS1-0320-L30C	96.6	114.6	119.6	156.6	156	0.6	6	1
	35	□	MPS1-0320-L35C	112.6	123.6	138.6	175.6	175	0.6	6	1
	40	●	MPS1-0320-L40C	128.6	138.6	153.6	190.6	190	0.6	6	1
3.3	3	□	MPS1-0330S-DIN	14.7	19.6	24.6	61.6	61	0.6	6	3
	3	●	MPS1-0330S-DIN-C	14.7	19.6	24.6	61.6	61	0.6	6	1
	5	□	MPS1-0330L-DIN	20.2	25.1	28.6	65.6	65	0.6	6	3
	5	●	MPS1-0330L-DIN-C	20.2	25.1	28.6	65.6	65	0.6	6	1
	2	●	MPS1-0330-PC	7.1	18.5	21.4	55.5	55	0.5	6	1
	8	●	MPS1-0330-L8C	27.1	39.7	45.7	82.7	82	0.7	6	1
	10	□	MPS1-0330-L10C	33.6	44.6	49.6	86.6	86	0.6	6	1
	12	●	MPS1-0330-L12C	40.2	51.6	56.6	93.6	93	0.6	6	1
	15	●	MPS1-0330-L15C	50.1	61.6	66.6	103.6	103	0.6	6	1
	20	●	MPS1-0330-L20C	66.6	79.6	84.6	121.6	121	0.6	6	1
	25	●	MPS1-0330-L25C	83.1	96.6	101.6	138.6	138	0.6	6	1
	30	●	MPS1-0330-L30C	99.6	114.6	119.6	156.6	156	0.6	6	1
	35	□	MPS1-0330-L35C	116.1	132.6	138.6	175.6	175	0.6	6	1
	40	●	MPS1-0330-L40C	132.6	148.6	153.6	190.6	190	0.6	6	1

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

MPS1

Punta in metallo duro a doppio margine super lunga

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.4	3	□	MPS1-0340S-DIN	14.5	19.6	24.6	61.6	61	0.6	6	3
	3	●	MPS1-0340S-DIN-C	14.5	19.6	24.6	61.6	61	0.6	6	1
	5	□	MPS1-0340L-DIN	20.0	25.1	28.6	65.6	65	0.6	6	3
	5	●	MPS1-0340L-DIN-C	20.0	25.1	28.6	65.6	65	0.6	6	1
	2	●	MPS1-0340-PC	7.3	18.5	21.3	55.5	55	0.5	6	1
	8	●	MPS1-0340-L8C	27.9	39.7	45.7	82.7	82	0.7	6	1
	10	□	MPS1-0340-L10C	34.6	44.6	49.6	86.6	86	0.6	6	1
	12	●	MPS1-0340-L12C	41.4	51.6	56.6	93.6	93	0.6	6	1
	15	●	MPS1-0340-L15C	51.6	61.6	66.6	103.6	103	0.6	6	1
	20	●	MPS1-0340-L20C	68.6	79.6	84.6	121.6	121	0.6	6	1
	25	●	MPS1-0340-L25C	85.6	96.6	101.6	138.6	138	0.6	6	1
	30	●	MPS1-0340-L30C	102.6	114.6	119.6	156.6	156	0.6	6	1
	35	□	MPS1-0340-L35C	119.6	132.6	138.6	175.6	175	0.6	6	1
	40	●	MPS1-0340-L40C	136.6	148.6	153.6	190.6	190	0.6	6	1
3.5	3	□	MPS1-0350S-DIN	14.4	19.6	24.6	61.6	61	0.6	6	3
	3	●	MPS1-0350S-DIN-C	14.4	19.6	24.6	61.6	61	0.6	6	1
	5	□	MPS1-0350L-DIN	19.9	25.1	28.6	65.6	65	0.6	6	3
	5	●	MPS1-0350L-DIN-C	19.9	25.1	28.6	65.6	65	0.6	6	1
	2	●	MPS1-0350-PC	7.6	18.6	21.2	55.6	55	0.6	6	1
	8	●	MPS1-0350-L8C	28.7	39.7	45.7	82.7	82	0.7	6	1
	10	□	MPS1-0350-L10C	35.6	44.6	49.6	86.6	86	0.6	6	1
	12	●	MPS1-0350-L12C	42.6	51.6	56.6	93.6	93	0.6	6	1
	15	●	MPS1-0350-L15C	53.1	61.6	66.6	103.6	103	0.6	6	1
	20	●	MPS1-0350-L20C	70.6	79.6	84.6	121.6	121	0.6	6	1
	25	●	MPS1-0350-L25C	88.1	96.6	101.6	138.6	138	0.6	6	1
	30	●	MPS1-0350-L30C	105.6	114.6	119.6	156.6	156	0.6	6	1
	35	□	MPS1-0350-L35C	123.1	132.6	138.6	175.6	175	0.6	6	1
	40	●	MPS1-0350-L40C	140.6	148.6	153.6	190.6	190	0.6	6	1
3.6	3	□	MPS1-0360S-DIN	14.3	19.7	24.7	61.7	61	0.7	6	3
	3	●	MPS1-0360S-DIN-C	14.3	19.7	24.7	61.7	61	0.7	6	1
	5	□	MPS1-0360L-DIN	19.8	25.2	28.7	65.7	65	0.7	6	3
	5	●	MPS1-0360L-DIN-C	19.8	25.2	28.7	65.7	65	0.7	6	1
	2	●	MPS1-0360-PC	7.8	20.6	23.1	55.6	55	0.6	6	1
	8	●	MPS1-0360-L8C	29.5	44.7	50.7	87.7	87	0.7	6	1
	10	□	MPS1-0360-L10C	36.7	50.7	55.7	92.7	92	0.7	6	1
	12	●	MPS1-0360-L12C	43.9	58.7	63.7	100.7	100	0.7	6	1
	15	●	MPS1-0360-L15C	54.7	70.7	75.7	112.7	112	0.7	6	1
	20	●	MPS1-0360-L20C	72.7	90.7	95.7	132.7	132	0.7	6	1
	25	□	MPS1-0360-L25C	90.7	110.7	115.7	152.7	152	0.7	6	1
	30	●	MPS1-0360-L30C	108.7	130.7	135.7	172.7	172	0.7	6	1
	35	□	MPS1-0360-L35C	126.7	143.7	155.7	192.7	192	0.7	6	1
	40	●	MPS1-0360-L40C	144.7	160.7	175.7	212.7	212	0.7	6	1
3.7	3	□	MPS1-0370S-DIN	14.1	19.7	24.7	61.7	61	0.7	6	3
	3	●	MPS1-0370S-DIN-C	14.1	19.7	24.7	61.7	61	0.7	6	1
	5	□	MPS1-0370L-DIN	20.1	25.7	28.7	65.7	65	0.7	6	3
	5	●	MPS1-0370L-DIN-C	20.1	25.7	28.7	65.7	65	0.7	6	1
	2	●	MPS1-0370-PC	8.0	20.6	23.1	55.6	55	0.6	6	1
	8	●	MPS1-0370-L8C	30.4	44.8	50.8	87.8	87	0.8	6	1
	10	□	MPS1-0370-L10C	37.7	50.7	55.7	92.7	92	0.7	6	1
	12	●	MPS1-0370-L12C	45.1	58.7	63.7	100.7	100	0.7	6	1
	15	●	MPS1-0370-L15C	56.2	70.7	75.7	112.7	112	0.7	6	1
	20	●	MPS1-0370-L20C	74.7	90.7	95.7	132.7	132	0.7	6	1
	25	●	MPS1-0370-L25C	93.2	110.7	115.7	152.7	152	0.7	6	1
	30	●	MPS1-0370-L30C	111.7	130.7	135.7	172.7	172	0.7	6	1
	35	□	MPS1-0370-L35C	130.2	143.7	155.7	192.7	192	0.7	6	1
	40	●	MPS1-0370-L40C	148.7	160.7	175.7	212.7	212	0.7	6	1

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.8	3	□	MPS1-0380S-DIN	18.0	23.7	28.7	65.7	65	0.7	6	3
	3	●	MPS1-0380S-DIN-C	18.0	23.7	28.7	65.7	65	0.7	6	1
	5	□	MPS1-0380L-DIN	28.0	33.7	36.7	73.7	73	0.7	6	3
	5	●	MPS1-0380L-DIN-C	28.0	33.7	36.7	73.7	73	0.7	6	1
	2	●	MPS1-0380-PC	8.2	20.6	23.0	55.6	55	0.6	6	1
	8	●	MPS1-0380-L8C	31.2	44.8	50.8	87.8	87	0.8	6	1
	10	□	MPS1-0380-L10C	38.7	50.7	55.7	92.7	92	0.7	6	1
	12	●	MPS1-0380-L12C	46.3	58.7	63.7	100.7	100	0.7	6	1
	15	●	MPS1-0380-L15C	57.7	70.7	75.7	112.7	112	0.7	6	1
	20	●	MPS1-0380-L20C	76.7	90.7	95.7	132.7	132	0.7	6	1
	25	●	MPS1-0380-L25C	95.7	110.7	115.7	152.7	152	0.7	6	1
	30	●	MPS1-0380-L30C	114.7	130.7	135.7	172.7	172	0.7	6	1
	35	□	MPS1-0380-L35C	133.7	150.7	155.7	192.7	192	0.7	6	1
	40	●	MPS1-0380-L40C	152.7	170.7	175.7	212.7	212	0.7	6	1
3.9	3	□	MPS1-0390S-DIN	17.9	23.7	28.7	65.7	65	0.7	6	3
	3	●	MPS1-0390S-DIN-C	17.9	23.7	28.7	65.7	65	0.7	6	1
	5	□	MPS1-0390L-DIN	27.9	33.7	36.7	73.7	73	0.7	6	3
	5	●	MPS1-0390L-DIN-C	27.9	33.7	36.7	73.7	73	0.7	6	1
	2	●	MPS1-0390-PC	8.4	20.6	22.9	55.6	55	0.6	6	1
	8	●	MPS1-0390-L8C	32.0	44.8	50.8	87.8	87	0.8	6	1
	10	□	MPS1-0390-L10C	39.7	50.7	55.7	92.7	92	0.7	6	1
	12	●	MPS1-0390-L12C	47.5	58.7	63.7	100.7	100	0.7	6	1
	15	●	MPS1-0390-L15C	59.2	70.7	75.7	112.7	112	0.7	6	1
	20	●	MPS1-0390-L20C	78.7	90.7	95.7	132.7	132	0.7	6	1
	25	□	MPS1-0390-L25C	98.2	110.7	115.7	152.7	152	0.7	6	1
	30	●	MPS1-0390-L30C	117.7	130.7	135.7	172.7	172	0.7	6	1
	35	□	MPS1-0390-L35C	137.2	150.7	155.7	192.7	192	0.7	6	1
	40	●	MPS1-0390-L40C	156.7	170.7	175.7	212.7	212	0.7	6	1
4.0	3	□	MPS1-0400S-DIN	17.7	23.7	28.7	65.7	65	0.7	6	3
	3	●	MPS1-0400S-DIN-C	17.7	23.7	28.7	65.7	65	0.7	6	1
	5	□	MPS1-0400L-DIN	27.7	33.7	36.7	73.7	73	0.7	6	3
	5	●	MPS1-0400L-DIN-C	27.7	33.7	36.7	73.7	73	0.7	6	1
	2	●	MPS1-0400-PC	8.6	20.6	22.8	55.6	55	0.6	6	1
	8	●	MPS1-0400-L8C	32.8	44.8	50.8	87.8	87	0.8	6	1
	10	●	MPS1-0400-L10C	40.7	50.7	55.7	92.7	92	0.7	6	1
	12	●	MPS1-0400-L12C	48.7	58.7	63.7	100.7	100	0.7	6	1
	15	●	MPS1-0400-L15C	60.7	70.7	75.7	112.7	112	0.7	6	1
	20	●	MPS1-0400-L20C	80.7	90.7	95.7	132.7	132	0.7	6	1
	25	●	MPS1-0400-L25C	100.7	110.7	115.7	152.7	152	0.7	6	1
	30	●	MPS1-0400-L30C	120.7	130.7	135.7	172.7	172	0.7	6	1
	35	□	MPS1-0400-L35C	140.7	150.7	155.7	192.7	192	0.7	6	1
	40	●	MPS1-0400-L40C	160.7	170.7	175.7	212.7	212	0.7	6	1
4.05	3	□	MPS1-0405S-DIN	17.7	23.7	28.7	65.7	65	0.7	6	3
	3	●	MPS1-0405S-DIN-C	17.7	23.7	28.7	65.7	65	0.7	6	1
	5	□	MPS1-0405L-DIN	27.7	33.7	36.7	73.7	73	0.7	6	3
	5	●	MPS1-0405L-DIN-C	27.7	33.7	36.7	73.7	73	0.7	6	1

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
4.1	3	□	MPS1-0410S-DIN	17.6	23.7	28.7	65.7	65	0.7	6	3
	3	●	MPS1-0410S-DIN-C	17.6	23.7	28.7	65.7	65	0.7	6	1
	5	□	MPS1-0410L-DIN	27.6	33.7	36.7	73.7	73	0.7	6	3
	5	●	MPS1-0410L-DIN-C	27.6	33.7	36.7	73.7	73	0.7	6	1
	2	●	MPS1-0410-PC	8.8	22.6	24.7	62.6	62	0.6	6	1
	8	●	MPS1-0410-L8C	33.6	50.8	55.8	92.8	92	0.8	6	1
	10	□	MPS1-0410-L10C	41.7	58.7	62.7	99.7	99	0.7	6	1
	12	●	MPS1-0410-L12C	49.9	67.7	71.7	108.7	108	0.7	6	1
	15	●	MPS1-0410-L15C	62.2	80.7	84.7	121.7	121	0.7	6	1
	20	●	MPS1-0410-L20C	82.7	103.7	107.7	144.7	144	0.7	6	1
	25	●	MPS1-0410-L25C	103.2	125.7	129.7	166.7	166	0.7	6	1
	30	●	MPS1-0410-L30C	123.7	148.7	152.7	189.7	189	0.7	6	1
	35	□	MPS1-0410-L35C	144.2	164.7	174.7	211.7	211	0.7	6	1
	40	●	MPS1-0410-L40C	164.7	184.7	198.7	235.7	235	0.7	6	1
4.2	3	□	MPS1-0420S-DIN	17.5	23.8	28.8	65.8	65	0.8	6	3
	3	●	MPS1-0420S-DIN-C	17.5	23.8	28.8	65.8	65	0.8	6	1
	5	□	MPS1-0420L-DIN	28.0	34.3	36.8	73.8	73	0.8	6	3
	5	●	MPS1-0420L-DIN-C	28.0	34.3	36.8	73.8	73	0.8	6	1
	2	●	MPS1-0420-PC	9.1	22.7	24.6	62.7	62	0.7	6	1
	8	●	MPS1-0420-L8C	34.5	50.9	55.9	92.9	92	0.9	6	1
	10	□	MPS1-0420-L10C	42.8	58.8	62.8	99.8	99	0.8	6	1
	12	●	MPS1-0420-L12C	51.2	67.8	71.8	108.8	108	0.8	6	1
	15	●	MPS1-0420-L15C	63.8	80.8	84.8	121.8	121	0.8	6	1
	20	●	MPS1-0420-L20C	84.8	103.8	107.8	144.8	144	0.8	6	1
	25	●	MPS1-0420-L25C	105.8	125.8	129.8	166.8	166	0.8	6	1
	30	●	MPS1-0420-L30C	126.8	148.8	152.8	189.8	189	0.8	6	1
	35	●	MPS1-0420-L35C	147.8	164.8	174.8	211.8	211	0.8	6	1
	40	●	MPS1-0420-L40C	168.8	184.8	198.8	235.8	235	0.8	6	1
4.3	3	□	MPS1-0430S-DIN	17.3	23.8	28.8	65.8	65	0.8	6	3
	3	●	MPS1-0430S-DIN-C	17.3	23.8	28.8	65.8	65	0.8	6	1
	5	□	MPS1-0430L-DIN	27.8	34.3	36.8	73.8	73	0.8	6	3
	5	●	MPS1-0430L-DIN-C	27.8	34.3	36.8	73.8	73	0.8	6	1
	2	●	MPS1-0430-PC	9.3	22.7	24.5	62.7	62	0.7	6	1
	8	●	MPS1-0430-L8C	35.3	50.9	55.9	92.9	92	0.9	6	1
	10	□	MPS1-0430-L10C	43.8	58.8	62.8	99.8	99	0.8	6	1
	12	●	MPS1-0430-L12C	52.4	67.8	71.8	108.8	108	0.8	6	1
	15	●	MPS1-0430-L15C	65.3	80.8	84.8	121.8	121	0.8	6	1
	20	●	MPS1-0430-L20C	86.8	103.8	107.8	144.8	144	0.8	6	1
	25	●	MPS1-0430-L25C	108.3	125.8	129.8	166.8	166	0.8	6	1
	30	●	MPS1-0430-L30C	129.8	148.8	152.8	189.8	189	0.8	6	1
	35	□	MPS1-0430-L35C	151.3	170.8	174.8	211.8	211	0.8	6	1
	40	●	MPS1-0430-L40C	172.8	194.8	198.8	235.8	235	0.8	6	1
4.4	3	□	MPS1-0440S-DIN	17.2	23.8	28.8	65.8	65	0.8	6	3
	3	●	MPS1-0440S-DIN-C	17.2	23.8	28.8	65.8	65	0.8	6	1
	5	□	MPS1-0440L-DIN	27.7	34.3	36.8	73.8	73	0.8	6	3
	5	●	MPS1-0440L-DIN-C	27.7	34.3	36.8	73.8	73	0.8	6	1
	2	●	MPS1-0440-PC	9.5	22.7	24.4	62.7	62	0.7	6	1
	8	●	MPS1-0440-L8C	36.1	50.9	55.9	92.9	92	0.9	6	1
	10	□	MPS1-0440-L10C	44.8	58.8	62.8	99.8	99	0.8	6	1
	12	●	MPS1-0440-L12C	53.6	67.8	71.8	108.8	108	0.8	6	1
	15	●	MPS1-0440-L15C	66.8	80.8	84.8	121.8	121	0.8	6	1
	20	□	MPS1-0440-L20C	88.8	103.8	107.8	144.8	144	0.8	6	1
	25	□	MPS1-0440-L25C	110.8	125.8	129.8	166.8	166	0.8	6	1
	30	□	MPS1-0440-L30C	132.8	148.8	152.8	189.8	189	0.8	6	1
	35	□	MPS1-0440-L35C	154.8	170.8	174.8	211.8	211	0.8	6	1
	40	●	MPS1-0440-L40C	176.8	194.8	198.8	235.8	235	0.8	6	1

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
4.5	3	□	MPS1-0450S-DIN	17.1	23.8	28.8	65.8	65	0.8	6	3
	3	●	MPS1-0450S-DIN-C	17.1	23.8	28.8	65.8	65	0.8	6	1
	5	□	MPS1-0450L-DIN	27.6	34.3	36.8	73.8	73	0.8	6	3
	5	●	MPS1-0450L-DIN-C	27.6	34.3	36.8	73.8	73	0.8	6	1
	2	●	MPS1-0450-PC	9.7	22.7	24.3	62.7	62	0.7	6	1
	8	●	MPS1-0450-L8C	36.9	50.9	55.9	92.9	92	0.9	6	1
	10	□	MPS1-0450-L10C	45.8	58.8	62.8	99.8	99	0.8	6	1
	12	●	MPS1-0450-L12C	54.8	67.8	71.8	108.8	108	0.8	6	1
	15	●	MPS1-0450-L15C	68.3	80.8	84.8	121.8	121	0.8	6	1
	20	●	MPS1-0450-L20C	90.8	103.8	107.8	144.8	144	0.8	6	1
	25	●	MPS1-0450-L25C	113.3	125.8	129.8	166.8	166	0.8	6	1
	30	●	MPS1-0450-L30C	135.8	148.8	152.8	189.8	189	0.8	6	1
	35	□	MPS1-0450-L35C	158.3	170.8	174.8	211.8	211	0.8	6	1
	40	●	MPS1-0450-L40C	180.8	194.8	198.8	235.8	235	0.8	6	1
4.6	3	□	MPS1-0460S-DIN	16.9	23.8	28.8	65.8	65	0.8	6	4
	3	●	MPS1-0460S-DIN-C	16.9	23.8	28.8	65.8	65	0.8	6	2
	5	□	MPS1-0460L-DIN	28.9	35.8	36.8	73.8	73	0.8	6	4
	5	●	MPS1-0460L-DIN-C	28.9	35.8	36.8	73.8	73	0.8	6	2
	2	●	MPS1-0460-PC	9.9	24.7	27.7	62.7	62	0.7	6	2
	8	●	MPS1-0460-L8C	37.8	56.0	59.0	96.0	95	1.0	6	2
	10	□	MPS1-0460-L10C	46.8	65.8	68.8	105.8	105	0.8	6	2
	12	●	MPS1-0460-L12C	56.0	75.8	78.8	115.8	115	0.8	6	2
	15	●	MPS1-0460-L15C	69.8	90.8	93.8	130.8	130	0.8	6	2
	20	●	MPS1-0460-L20C	92.8	115.8	118.8	155.8	155	0.8	6	2
	25	●	MPS1-0460-L25C	115.8	140.8	143.8	180.8	180	0.8	6	2
	30	●	MPS1-0460-L30C	138.8	165.8	168.8	205.8	205	0.8	6	2
	35	□	MPS1-0460-L35C	161.8	184.8	192.8	229.8	229	0.8	6	2
	40	●	MPS1-0460-L40C	184.8	204.8	217.8	254.8	254	0.8	6	2
4.65	3	□	MPS1-0465S-DIN	16.9	23.8	28.8	65.8	65	0.8	6	4
	3	●	MPS1-0465S-DIN-C	16.9	23.8	28.8	65.8	65	0.8	6	2
	5	□	MPS1-0465L-DIN	28.9	35.8	36.8	73.8	73	0.8	6	4
	5	●	MPS1-0465L-DIN-C	28.9	35.8	36.8	73.8	73	0.8	6	2
4.7	3	□	MPS1-0470S-DIN	16.8	23.9	28.9	65.9	65	0.9	6	4
	3	●	MPS1-0470S-DIN-C	16.8	23.9	28.9	65.9	65	0.9	6	2
	5	□	MPS1-0470L-DIN	28.8	35.9	36.9	73.9	73	0.9	6	4
	5	●	MPS1-0470L-DIN-C	28.8	35.9	36.9	73.9	73	0.9	6	2
	2	●	MPS1-0470-PC	10.1	24.7	27.7	62.7	62	0.7	6	2
	8	●	MPS1-0470-L8C	38.6	56.0	59.0	96.0	95	1.0	6	2
	10	□	MPS1-0470-L10C	47.9	65.9	68.9	105.9	105	0.9	6	2
	12	●	MPS1-0470-L12C	57.3	75.9	78.9	115.9	115	0.9	6	2
	15	●	MPS1-0470-L15C	71.4	90.9	93.9	130.9	130	0.9	6	2
	20	●	MPS1-0470-L20C	94.9	115.9	118.9	155.9	155	0.9	6	2
	25	●	MPS1-0470-L25C	118.4	140.9	143.9	180.9	180	0.9	6	2
	30	●	MPS1-0470-L30C	141.9	165.9	168.9	205.9	205	0.9	6	2
	35	□	MPS1-0470-L35C	165.4	184.9	192.9	229.9	229	0.9	6	2
	40	●	MPS1-0470-L40C	188.9	204.9	217.9	254.9	254	0.9	6	2

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

MPS1

Punta in metallo duro a doppio margine super lunga

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
4.8	3	□	MPS1-0480S-DIN	20.7	27.9	28.9	65.9	65	0.9	6	4
	3	●	MPS1-0480S-DIN-C	20.7	27.9	28.9	65.9	65	0.9	6	2
	5	□	MPS1-0480L-DIN	36.7	43.9	44.9	81.9	81	0.9	6	4
	5	●	MPS1-0480L-DIN-C	36.7	43.9	44.9	81.9	81	0.9	6	2
	2	●	MPS1-0480-PC	10.4	24.8	27.8	62.8	62	0.8	6	2
	8	●	MPS1-0480-L8C	39.4	56.0	59.0	96.0	95	1.0	6	2
	10	□	MPS1-0480-L10C	48.9	65.9	68.9	105.9	105	0.9	6	2
	12	●	MPS1-0480-L12C	58.5	75.9	78.9	115.9	115	0.9	6	2
	15	●	MPS1-0480-L15C	72.9	90.9	93.9	130.9	130	0.9	6	2
	20	●	MPS1-0480-L20C	96.9	115.9	118.9	155.9	155	0.9	6	2
	25	●	MPS1-0480-L25C	120.9	140.9	143.9	180.9	180	0.9	6	2
	30	●	MPS1-0480-L30C	144.9	165.9	168.9	205.9	205	0.9	6	2
	35	□	MPS1-0480-L35C	168.9	190.9	192.9	229.9	229	0.9	6	2
	40	●	MPS1-0480-L40C	192.9	215.9	217.9	254.9	254	0.9	6	2
4.9	3	□	MPS1-0490S-DIN	20.5	27.9	28.9	65.9	65	0.9	6	4
	3	●	MPS1-0490S-DIN-C	20.5	27.9	28.9	65.9	65	0.9	6	2
	5	□	MPS1-0490L-DIN	36.5	43.9	44.9	81.9	81	0.9	6	4
	5	●	MPS1-0490L-DIN-C	36.5	43.9	44.9	81.9	81	0.9	6	2
	2	●	MPS1-0490-PC	10.6	24.8	27.8	62.8	62	0.8	6	2
	8	●	MPS1-0490-L8C	40.2	56.0	59.0	96.0	95	1.0	6	2
	10	□	MPS1-0490-L10C	49.9	65.9	68.9	105.9	105	0.9	6	2
	12	●	MPS1-0490-L12C	59.7	75.9	78.9	115.9	115	0.9	6	2
	15	●	MPS1-0490-L15C	74.4	90.9	93.9	130.9	130	0.9	6	2
	20	□	MPS1-0490-L20C	98.9	115.9	118.9	155.9	155	0.9	6	2
	25	●	MPS1-0490-L25C	123.4	140.9	143.9	180.9	180	0.9	6	2
	30	●	MPS1-0490-L30C	147.9	165.9	168.9	205.9	205	0.9	6	2
	35	□	MPS1-0490-L35C	172.4	190.9	192.9	229.9	229	0.9	6	2
	40	●	MPS1-0490-L40C	196.9	215.9	217.9	254.9	254	0.9	6	2
5.0	3	□	MPS1-0500S-DIN	20.4	27.9	28.9	65.9	65	0.9	6	4
	3	●	MPS1-0500S-DIN-C	20.4	27.9	28.9	65.9	65	0.9	6	2
	5	□	MPS1-0500L-DIN	36.4	43.9	44.9	81.9	81	0.9	6	4
	5	●	MPS1-0500L-DIN-C	36.4	43.9	44.9	81.9	81	0.9	6	2
	2	●	MPS1-0500-PC	10.8	24.8	25.8	62.8	62	0.8	6	2
	8	●	MPS1-0500-L8C	41.0	56.0	59.0	96.0	95	1.0	6	2
	10	●	MPS1-0500-L10C	50.9	65.9	68.9	105.9	105	0.9	6	2
	12	●	MPS1-0500-L12C	60.9	75.9	78.9	115.9	115	0.9	6	2
	15	●	MPS1-0500-L15C	75.9	90.9	93.9	130.9	130	0.9	6	2
	20	●	MPS1-0500-L20C	100.9	115.9	118.9	155.9	155	0.9	6	2
	25	●	MPS1-0500-L25C	125.9	140.9	143.9	180.9	180	0.9	6	2
	30	●	MPS1-0500-L30C	150.9	165.9	168.9	205.9	205	0.9	6	2
	35	□	MPS1-0500-L35C	175.9	190.9	192.9	229.9	229	0.9	6	2
	40	●	MPS1-0500-L40C	200.9	215.9	217.9	254.9	254	0.9	6	2
5.05	3	□	MPS1-0505S-DIN	20.3	27.9	28.9	65.9	65	0.9	6	4
	3	●	MPS1-0505S-DIN-C	20.3	27.9	28.9	65.9	65	0.9	6	2
	5	□	MPS1-0505L-DIN	36.3	43.9	44.9	81.9	81	0.9	6	4
	5	●	MPS1-0505L-DIN-C	36.3	43.9	44.9	81.9	81	0.9	6	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
5.1	3	□	MPS1-0510S-DIN	20.3	27.9	28.9	65.9	65	0.9	6	4
	3	●	MPS1-0510S-DIN-C	20.3	27.9	28.9	65.9	65	0.9	6	2
	5	□	MPS1-0510L-DIN	36.3	43.9	44.9	81.9	81	0.9	6	4
	5	●	MPS1-0510L-DIN-C	36.3	43.9	44.9	81.9	81	0.9	6	2
	2	●	MPS1-0510-PC	11.0	26.8	28.8	66.8	66	0.8	6	2
	8	●	MPS1-0510-L8C	41.9	62.1	65.1	102.1	101	1.1	6	2
	10	□	MPS1-0510-L10C	51.9	72.9	75.9	112.9	112	0.9	6	2
	12	●	MPS1-0510-L12C	62.1	83.9	86.9	123.9	123	0.9	6	2
	15	●	MPS1-0510-L15C	77.4	99.9	102.9	139.9	139	0.9	6	2
	20	●	MPS1-0510-L20C	102.9	127.9	130.9	167.9	167	0.9	6	2
	25	●	MPS1-0510-L25C	128.4	154.9	157.9	194.9	194	0.9	6	2
	30	●	MPS1-0510-L30C	153.9	182.9	185.9	222.9	222	0.9	6	2
	35	□	MPS1-0510-L35C	179.4	203.9	211.9	248.9	248	0.9	6	2
	40	●	MPS1-0510-L40C	204.9	230.9	241.9	278.9	278	0.9	6	2
5.2	3	□	MPS1-0520S-DIN	20.1	27.9	28.9	65.9	65	0.9	6	4
	3	●	MPS1-0520S-DIN-C	20.1	27.9	28.9	65.9	65	0.9	6	2
	5	□	MPS1-0520L-DIN	36.1	43.9	44.9	81.9	81	0.9	6	4
	5	●	MPS1-0520L-DIN-C	36.1	43.9	44.9	81.9	81	0.9	6	2
	2	●	MPS1-0520-PC	11.2	26.8	28.8	66.8	66	0.8	6	2
	8	●	MPS1-0520-L8C	42.7	62.1	65.1	102.1	101	1.1	6	2
	10	□	MPS1-0520-L10C	52.9	72.9	75.9	112.9	112	0.9	6	2
	12	●	MPS1-0520-L12C	63.3	83.9	86.9	123.9	123	0.9	6	2
	15	●	MPS1-0520-L15C	78.9	99.9	102.9	139.9	139	0.9	6	2
	20	●	MPS1-0520-L20C	104.9	127.9	130.9	167.9	167	0.9	6	2
	25	●	MPS1-0520-L25C	130.9	154.9	157.9	194.9	194	0.9	6	2
	30	●	MPS1-0520-L30C	156.9	182.9	185.9	222.9	222	0.9	6	2
	35	□	MPS1-0520-L35C	182.9	203.9	211.9	248.9	248	0.9	6	2
	40	●	MPS1-0520-L40C	208.9	230.9	241.9	278.9	278	0.9	6	2
5.3	3	□	MPS1-0530S-DIN	20.0	28.0	29.0	66.0	65	1.0	6	4
	3	●	MPS1-0530S-DIN-C	20.0	28.0	29.0	66.0	65	1.0	6	2
	5	□	MPS1-0530L-DIN	36.0	44.0	45.0	82.0	81	1.0	6	4
	5	●	MPS1-0530L-DIN-C	36.0	44.0	45.0	82.0	81	1.0	6	2
	2	●	MPS1-0530-PC	11.4	26.8	28.8	66.8	66	0.8	6	2
	8	●	MPS1-0530-L8C	43.5	62.1	65.1	102.1	101	1.1	6	2
	10	□	MPS1-0530-L10C	54.0	73.0	76.0	113.0	112	1.0	6	2
	12	●	MPS1-0530-L12C	64.6	84.0	87.0	124.0	123	1.0	6	2
	15	●	MPS1-0530-L15C	80.5	100.0	103.0	140.0	139	1.0	6	2
	20	□	MPS1-0530-L20C	107.0	128.0	131.0	168.0	167	1.0	6	2
	25	●	MPS1-0530-L25C	133.5	155.0	158.0	195.0	194	1.0	6	2
	30	●	MPS1-0530-L30C	160.0	183.0	186.0	223.0	222	1.0	6	2
	35	□	MPS1-0530-L35C	186.5	210.0	212.0	249.0	248	1.0	6	2
	40	●	MPS1-0530-L40C	213.0	241.0	242.0	279.0	278	1.0	6	2
5.4	3	□	MPS1-0540S-DIN	19.9	28.0	29.0	66.0	65	1.0	6	2
	3	●	MPS1-0540S-DIN-C	19.9	28.0	29.0	66.0	65	1.0	6	4
	5	□	MPS1-0540L-DIN	35.9	44.0	45.0	82.0	81	1.0	6	4
	5	●	MPS1-0540L-DIN-C	35.9	44.0	45.0	82.0	81	1.0	6	2
	2	●	MPS1-0540-PC	11.7	26.9	28.9	66.9	66	0.9	6	2
	8	●	MPS1-0540-L8C	44.3	62.1	65.1	102.1	101	1.1	6	2
	10	□	MPS1-0540-L10C	55.0	73.0	76.0	113.0	112	1.0	6	2
	12	●	MPS1-0540-L12C	65.8	84.0	87.0	124.0	123	1.0	6	2
	15	●	MPS1-0540-L15C	82.0	100.0	103.0	140.0	139	1.0	6	2
	20	●	MPS1-0540-L20C	109.0	128.0	131.0	168.0	167	1.0	6	2
	25	□	MPS1-0540-L25C	136.0	155.0	158.0	195.0	194	1.0	6	2
	30	□	MPS1-0540-L30C	163.0	183.0	186.0	223.0	222	1.0	6	2
	35	□	MPS1-0540-L35C	190.0	210.0	212.0	249.0	248	1.0	6	2
	40	●	MPS1-0540-L40C	217.0	241.0	242.0	279.0	278	1.0	6	2

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
5.5	3	□	MPS1-0550S-DIN	19.8	28.0	29.0	66.0	65	1.0	6	4
	3	●	MPS1-0550S-DIN-C	19.8	28.0	29.0	66.0	65	1.0	6	2
	5	□	MPS1-0550L-DIN	35.8	44.0	45.0	82.0	81	1.0	6	4
	5	●	MPS1-0550L-DIN-C	35.8	44.0	45.0	82.0	81	1.0	6	2
	2	●	MPS1-0550-PC	11.9	26.9	28.9	66.9	66	0.9	6	2
	8	●	MPS1-0550-L8C	45.1	62.1	65.1	102.1	101	1.1	6	2
	10	□	MPS1-0550-L10C	56.0	73.0	76.0	113.0	112	1.0	6	2
	12	●	MPS1-0550-L12C	67.0	84.0	87.0	124.0	123	1.0	6	2
	15	●	MPS1-0550-L15C	83.5	100.0	103.0	140.0	139	1.0	6	2
	20	●	MPS1-0550-L20C	111.0	128.0	131.0	168.0	167	1.0	6	2
	25	●	MPS1-0550-L25C	138.5	155.0	158.0	195.0	194	1.0	6	2
	30	●	MPS1-0550-L30C	166.0	183.0	186.0	223.0	222	1.0	6	2
	35	□	MPS1-0550-L35C	193.5	210.0	212.0	249.0	248	1.0	6	2
	40	●	MPS1-0550-L40C	221.0	241.0	242.0	279.0	278	1.0	6	2
5.55	3	□	MPS1-0555S-DIN	19.7	28.0	29.0	66.0	65	1.0	6	4
	3	●	MPS1-0555S-DIN-C	19.7	28.0	29.0	66.0	65	1.0	6	2
	5	□	MPS1-0555L-DIN	35.7	44.0	45.0	82.0	81	1.0	6	4
	5	●	MPS1-0555L-DIN-C	35.7	44.0	45.0	82.0	81	1.0	6	2
5.6	3	□	MPS1-0560S-DIN	19.6	28.0	29.0	66.0	65	1.0	6	4
	3	●	MPS1-0560S-DIN-C	19.6	28.0	29.0	66.0	65	1.0	6	2
	5	□	MPS1-0560L-DIN	35.6	44.0	45.0	82.0	81	1.0	6	4
	5	●	MPS1-0560L-DIN-C	35.6	44.0	45.0	82.0	81	1.0	6	2
	2	●	MPS1-0560-PC	12.1	28.9	28.9	66.9	66	0.9	6	2
	8	●	MPS1-0560-L8C	46.0	67.2	70.2	107.2	106	1.2	6	2
	10	□	MPS1-0560-L10C	57.0	79.0	82.0	119.0	118	1.0	6	2
	12	●	MPS1-0560-L12C	68.2	91.0	94.0	131.0	130	1.0	6	2
	15	●	MPS1-0560-L15C	85.0	109.0	112.0	149.0	148	1.0	6	2
	20	□	MPS1-0560-L20C	113.0	139.0	142.0	179.0	178	1.0	6	2
	25	□	MPS1-0560-L25C	141.0	169.0	172.0	209.0	208	1.0	6	2
	30	●	MPS1-0560-L30C	169.0	199.0	202.0	239.0	238	1.0	6	2
	35	□	MPS1-0560-L35C	197.0	223.0	231.0	268.0	267	1.0	6	2
	40	●	MPS1-0560-L40C	225.0	251.0	262.0	299.0	298	1.0	6	2
5.7	3	□	MPS1-0570S-DIN	19.5	28.0	29.0	66.0	65	1.0	6	4
	3	●	MPS1-0570S-DIN-C	19.5	28.0	29.0	66.0	65	1.0	6	2
	5	□	MPS1-0570L-DIN	35.5	44.0	45.0	82.0	81	1.0	6	4
	5	●	MPS1-0570L-DIN-C	35.5	44.0	45.0	82.0	81	1.0	6	2
	2	●	MPS1-0570-PC	12.3	28.9	28.9	66.9	66	0.9	6	2
	8	●	MPS1-0570-L8C	46.8	67.2	70.2	107.2	106	1.2	6	2
	10	□	MPS1-0570-L10C	58.0	79.0	82.0	119.0	118	1.0	6	2
	12	●	MPS1-0570-L12C	69.4	91.0	94.0	131.0	130	1.0	6	2
	15	●	MPS1-0570-L15C	86.5	109.0	112.0	149.0	148	1.0	6	2
	20	□	MPS1-0570-L20C	115.0	139.0	142.0	179.0	178	1.0	6	2
	25	●	MPS1-0570-L25C	143.5	169.0	172.0	209.0	208	1.0	6	2
	30	□	MPS1-0570-L30C	172.0	199.0	202.0	239.0	238	1.0	6	2
	35	□	MPS1-0570-L35C	200.5	223.0	231.0	268.0	267	1.0	6	2
	40	●	MPS1-0570-L40C	229.0	251.0	262.0	299.0	298	1.0	6	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
5.8	3	□	MPS1-0580S-DIN	19.4	28.1	29.1	66.1	65	1.1	6	4
	3	●	MPS1-0580S-DIN-C	19.4	28.1	29.1	66.1	65	1.1	6	2
	5	□	MPS1-0580L-DIN	35.4	44.1	45.1	82.1	81	1.1	6	4
	5	●	MPS1-0580L-DIN-C	35.4	44.1	45.1	82.1	81	1.1	6	2
	2	●	MPS1-0580-PC	12.5	28.9	28.9	66.9	66	0.9	6	2
	8	●	MPS1-0580-L8C	47.6	67.2	70.2	107.2	106	1.2	6	2
	10	□	MPS1-0580-L10C	59.1	79.1	82.1	119.1	118	1.1	6	2
	12	●	MPS1-0580-L12C	70.7	91.1	94.1	131.1	130	1.1	6	2
	15	●	MPS1-0580-L15C	88.1	109.1	112.1	149.1	148	1.1	6	2
	20	●	MPS1-0580-L20C	117.1	139.1	142.1	179.1	178	1.1	6	2
	25	□	MPS1-0580-L25C	146.1	169.1	172.1	209.1	208	1.1	6	2
	30	●	MPS1-0580-L30C	175.1	199.1	202.1	239.1	238	1.1	6	2
	35	□	MPS1-0580-L35C	204.1	229.1	231.1	268.1	267	1.1	6	2
	40	●	MPS1-0580-L40C	233.1	261.1	262.1	299.1	298	1.1	6	2
5.9	3	□	MPS1-0590S-DIN	19.2	28.1	29.1	66.1	65	1.1	6	4
	3	●	MPS1-0590S-DIN-C	19.2	28.1	29.1	66.1	65	1.1	6	2
	5	□	MPS1-0590L-DIN	35.2	44.1	45.1	82.1	81	1.1	6	4
	5	●	MPS1-0590L-DIN-C	35.2	44.1	45.1	82.1	81	1.1	6	2
	2	●	MPS1-0590-PC	12.7	28.9	28.9	66.9	66	0.9	6	2
	8	●	MPS1-0590-L8C	48.4	67.2	70.2	107.2	106	1.2	6	2
	10	□	MPS1-0590-L10C	60.1	79.1	82.1	119.1	118	1.1	6	2
	12	●	MPS1-0590-L12C	71.9	91.1	94.1	131.1	130	1.1	6	2
	15	●	MPS1-0590-L15C	89.6	109.1	112.1	149.1	148	1.1	6	2
	20	●	MPS1-0590-L20C	119.1	139.1	142.1	179.1	178	1.1	6	2
	25	●	MPS1-0590-L25C	148.6	169.1	172.1	209.1	208	1.1	6	2
	30	□	MPS1-0590-L30C	178.1	199.1	202.1	239.1	238	1.1	6	2
	35	□	MPS1-0590-L35C	207.6	229.1	231.1	268.1	267	1.1	6	2
	40	●	MPS1-0590-L40C	237.1	261.1	262.1	299.1	298	1.1	6	2
6.0	3	□	MPS1-0600S-DIN	19.1	28.1	29.1	66.1	65	1.1	6	4
	3	●	MPS1-0600S-DIN-C	19.1	28.1	29.1	66.1	65	1.1	6	2
	5	□	MPS1-0600L-DIN	35.1	44.1	45.1	82.1	81	1.1	6	4
	5	●	MPS1-0600L-DIN-C	35.1	44.1	45.1	82.1	81	1.1	6	2
	2	●	MPS1-0600-PC	12.9	28.9	28.9	66.9	66	0.9	6	2
	8	●	MPS1-0600-L8C	49.2	67.2	70.2	107.2	106	1.2	6	2
	10	●	MPS1-0600-L10C	61.1	79.1	82.1	119.1	118	1.1	6	2
	12	●	MPS1-0600-L12C	73.1	91.1	94.1	131.1	130	1.1	6	2
	15	●	MPS1-0600-L15C	91.1	109.1	112.1	149.1	148	1.1	6	2
	20	●	MPS1-0600-L20C	121.1	139.1	142.1	179.1	178	1.1	6	2
	25	●	MPS1-0600-L25C	151.1	169.1	172.1	209.1	208	1.1	6	2
	30	●	MPS1-0600-L30C	181.1	199.1	202.1	239.1	238	1.1	6	2
	35	□	MPS1-0600-L35C	211.1	229.1	231.1	268.1	267	1.1	6	2
	40	●	MPS1-0600-L40C	241.1	261.1	262.1	299.1	298	1.1	6	2
6.05	3	□	MPS1-0605S-DIN	25.0	34.1	42.1	79.1	78	1.1	8	4
	3	●	MPS1-0605S-DIN-C	25.0	34.1	42.1	79.1	78	1.1	8	2
	5	□	MPS1-0605L-DIN	44.0	53.1	54.1	91.1	90	1.1	8	4
	5	●	MPS1-0605L-DIN-C	44.0	53.1	54.1	91.1	90	1.1	8	2

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

MPS1

Punta in metallo duro a doppio margine super lunga

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
6.1	3	□	MPS1-0610S-DIN	25.0	34.1	42.1	79.1	78	1.1	8	4
	3	●	MPS1-0610S-DIN-C	25.0	34.1	42.1	79.1	78	1.1	8	2
	5	□	MPS1-0610L-DIN	44.0	53.1	54.1	91.1	90	1.1	8	4
	5	●	MPS1-0610L-DIN-C	44.0	53.1	54.1	91.1	90	1.1	8	2
	2	●	MPS1-0610-PC	13.2	32.0	35.0	75.0	74	1.0	8	2
	8	●	MPS1-0610-L8C	50.1	73.3	76.3	113.3	112	1.3	8	2
	10	□	MPS1-0610-L10C	62.1	86.1	89.1	126.1	125	1.1	8	2
	12	●	MPS1-0610-L12C	74.3	99.1	102.1	139.1	138	1.1	8	2
	15	●	MPS1-0610-L15C	92.6	118.1	121.1	158.1	157	1.1	8	2
	20	●	MPS1-0610-L20C	123.1	151.1	154.1	191.1	190	1.1	8	2
	25	●	MPS1-0610-L25C	153.6	183.1	186.1	223.1	222	1.1	8	2
	30	●	MPS1-0610-L30C	184.1	216.1	219.1	256.1	255	1.1	8	2
	35	□	MPS1-0610-L35C	214.6	241.1	250.1	287.1	286	1.1	8	2
	40	●	MPS1-0610-L40C	245.1	271.1	284.1	321.1	320	1.1	8	2
6.2	3	□	MPS1-0620S-DIN	24.8	34.1	42.1	79.1	78	1.1	8	4
	3	●	MPS1-0620S-DIN-C	24.8	34.1	42.1	79.1	78	1.1	8	2
	5	□	MPS1-0620L-DIN	43.8	53.1	54.1	91.1	90	1.1	8	4
	5	●	MPS1-0620L-DIN-C	43.8	53.1	54.1	91.1	90	1.1	8	2
	2	●	MPS1-0620-PC	13.4	32.0	35.0	75.0	74	1.0	8	2
	8	●	MPS1-0620-L8C	50.9	73.3	76.3	113.3	112	1.3	8	2
	10	□	MPS1-0620-L10C	63.1	86.1	89.1	126.1	125	1.1	8	2
	12	●	MPS1-0620-L12C	75.5	99.1	102.1	139.1	138	1.1	8	2
	15	●	MPS1-0620-L15C	94.1	118.1	121.1	158.1	157	1.1	8	2
	20	●	MPS1-0620-L20C	125.1	151.1	154.1	191.1	190	1.1	8	2
	25	□	MPS1-0620-L25C	156.1	183.1	186.1	223.1	222	1.1	8	2
	30	●	MPS1-0620-L30C	187.1	216.1	219.1	256.1	255	1.1	8	2
	35	□	MPS1-0620-L35C	218.1	241.1	250.1	287.1	286	1.1	8	2
	40	●	MPS1-0620-L40C	249.1	271.1	284.1	321.1	320	1.1	8	2
6.3	3	□	MPS1-0630S-DIN	24.7	34.1	42.1	79.1	78	1.1	8	4
	3	●	MPS1-0630S-DIN-C	24.7	34.1	42.1	79.1	78	1.1	8	2
	5	□	MPS1-0630L-DIN	43.7	53.1	54.1	91.1	90	1.1	8	4
	5	●	MPS1-0630L-DIN-C	43.7	53.1	54.1	91.1	90	1.1	8	2
	2	●	MPS1-0630-PC	13.6	32.0	35.0	75.0	74	1.0	8	2
	8	●	MPS1-0630-L8C	51.7	73.3	76.3	113.3	112	1.3	8	2
	10	□	MPS1-0630-L10C	64.1	86.1	89.1	126.1	125	1.1	8	2
	12	●	MPS1-0630-L12C	76.7	99.1	102.1	139.1	138	1.1	8	2
	15	●	MPS1-0630-L15C	95.6	118.1	121.1	158.1	157	1.1	8	2
	20	●	MPS1-0630-L20C	127.1	151.1	154.1	191.1	190	1.1	8	2
	25	□	MPS1-0630-L25C	158.6	183.1	186.1	223.1	222	1.1	8	2
	30	●	MPS1-0630-L30C	190.1	216.1	219.1	256.1	255	1.1	8	2
	35	□	MPS1-0630-L35C	221.6	248.1	250.1	287.1	286	1.1	8	2
	40	●	MPS1-0630-L40C	253.1	281.1	284.1	321.1	320	1.1	8	2
6.4	3	□	MPS1-0640S-DIN	24.6	34.2	42.2	79.2	78	1.2	8	4
	3	●	MPS1-0640S-DIN-C	24.6	34.2	42.2	79.2	78	1.2	8	2
	5	□	MPS1-0640L-DIN	43.6	53.2	54.2	91.2	90	1.2	8	4
	5	●	MPS1-0640L-DIN-C	43.6	53.2	54.2	91.2	90	1.2	8	2
	2	●	MPS1-0640-PC	13.8	32.0	35.0	75.0	74	1.0	8	2
	8	●	MPS1-0640-L8C	52.5	73.3	76.3	113.3	112	1.3	8	2
	10	□	MPS1-0640-L10C	65.2	86.2	89.2	126.2	125	1.2	8	2
	12	●	MPS1-0640-L12C	78.0	99.2	102.2	139.2	138	1.2	8	2
	15	●	MPS1-0640-L15C	97.2	118.2	121.2	158.2	157	1.2	8	2
	20	●	MPS1-0640-L20C	129.2	151.2	154.2	191.2	190	1.2	8	2
	25	●	MPS1-0640-L25C	161.2	183.2	186.2	223.2	222	1.2	8	2
	30	●	MPS1-0640-L30C	193.2	216.2	219.2	256.2	255	1.2	8	2
	35	□	MPS1-0640-L35C	225.2	248.2	250.2	287.2	286	1.2	8	2
	40	●	MPS1-0640-L40C	257.2	281.2	284.2	321.2	320	1.2	8	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
6.5	3	□	MPS1-0650S-DIN	24.4	34.2	42.2	79.2	78	1.2	8	4
	3	●	MPS1-0650S-DIN-C	24.4	34.2	42.2	79.2	78	1.2	8	2
	5	□	MPS1-0650L-DIN	43.4	53.2	54.2	91.2	90	1.2	8	4
	5	●	MPS1-0650L-DIN-C	43.4	53.2	54.2	91.2	90	1.2	8	2
	2	●	MPS1-0650-PC	14.0	32.0	35.0	75.0	74	1.0	8	2
	8	●	MPS1-0650-L8C	53.3	73.3	76.3	113.3	112	1.3	8	2
	10	□	MPS1-0650-L10C	66.2	86.2	89.2	126.2	125	1.2	8	2
	12	●	MPS1-0650-L12C	79.2	99.2	102.2	139.2	138	1.2	8	2
	15	●	MPS1-0650-L15C	98.7	118.2	121.2	158.2	157	1.2	8	2
	20	●	MPS1-0650-L20C	131.2	151.2	154.2	191.2	190	1.2	8	2
	25	●	MPS1-0650-L25C	163.7	183.2	186.2	223.2	222	1.2	8	2
	30	●	MPS1-0650-L30C	196.2	216.2	219.2	256.2	255	1.2	8	2
	35	□	MPS1-0650-L35C	228.7	248.2	250.2	287.2	286	1.2	8	2
	40	●	MPS1-0650-L40C	261.2	281.2	284.2	321.2	320	1.2	8	2
6.6	3	□	MPS1-0660S-DIN	24.3	34.2	42.2	79.2	78	1.2	8	4
	3	●	MPS1-0660S-DIN-C	24.3	34.2	42.2	79.2	78	1.2	8	2
	5	□	MPS1-0660L-DIN	43.3	53.2	54.2	91.2	90	1.2	8	4
	5	●	MPS1-0660L-DIN-C	43.3	53.2	54.2	91.2	90	1.2	8	2
	2	●	MPS1-0660-PC	14.2	35.0	37.0	75.0	74	1.0	8	2
	8	●	MPS1-0660-L8C	54.2	78.4	81.4	118.4	117	1.4	8	2
	10	□	MPS1-0660-L10C	67.2	92.2	95.2	132.2	131	1.2	8	2
	12	●	MPS1-0660-L12C	80.4	106.2	109.2	146.2	145	1.2	8	2
	15	●	MPS1-0660-L15C	100.2	127.2	130.2	167.2	166	1.2	8	2
	20	□	MPS1-0660-L20C	133.2	162.2	165.2	202.2	201	1.2	8	2
	25	●	MPS1-0660-L25C	166.2	197.2	200.2	237.2	236	1.2	8	2
	30	●	MPS1-0660-L30C	199.2	232.2	235.2	272.2	271	1.2	8	2
	35	□	MPS1-0660-L35C	232.2	267.2	269.2	306.2	305	1.2	8	2
	40	●	MPS1-0660-L40C	265.2	301.2	304.2	341.2	340	1.2	8	2
6.7	3	□	MPS1-0670S-DIN	24.2	34.2	42.2	79.2	78	1.2	8	4
	3	●	MPS1-0670S-DIN-C	24.2	34.2	42.2	79.2	78	1.2	8	2
	5	□	MPS1-0670L-DIN	43.2	53.2	54.2	91.2	90	1.2	8	4
	5	●	MPS1-0670L-DIN-C	43.2	53.2	54.2	91.2	90	1.2	8	2
	2	●	MPS1-0670-PC	14.5	35.1	37.1	75.1	74	1.1	8	2
	8	●	MPS1-0670-L8C	55.0	78.4	81.4	118.4	117	1.4	8	2
	10	□	MPS1-0670-L10C	68.2	92.2	95.2	132.2	131	1.2	8	2
	12	●	MPS1-0670-L12C	81.6	106.2	109.2	146.2	145	1.2	8	2
	15	●	MPS1-0670-L15C	101.7	127.2	130.2	167.2	166	1.2	8	2
	20	□	MPS1-0670-L20C	135.2	162.2	165.2	202.2	201	1.2	8	2
	25	□	MPS1-0670-L25C	168.7	197.2	200.2	237.2	236	1.2	8	2
	30	●	MPS1-0670-L30C	202.2	232.2	235.2	272.2	271	1.2	8	2
	35	□	MPS1-0670-L35C	235.7	267.2	269.2	306.2	305	1.2	8	2
	40	●	MPS1-0670-L40C	269.2	301.2	304.2	341.2	340	1.2	8	2
6.8	3	□	MPS1-0680S-DIN	24.0	34.2	42.2	79.2	78	1.2	8	4
	3	●	MPS1-0680S-DIN-C	24.0	34.2	42.2	79.2	78	1.2	8	2
	5	□	MPS1-0680L-DIN	43.0	53.2	54.2	91.2	90	1.2	8	4
	5	●	MPS1-0680L-DIN-C	43.0	53.2	54.2	91.2	90	1.2	8	2
	2	●	MPS1-0680-PC	14.7	35.1	37.1	75.1	74	1.1	8	2
	8	●	MPS1-0680-L8C	55.8	78.4	81.4	118.4	117	1.4	8	2
	10	□	MPS1-0680-L10C	69.2	92.2	95.2	132.2	131	1.2	8	2
	12	●	MPS1-0680-L12C	82.8	106.2	109.2	146.2	145	1.2	8	2
	15	●	MPS1-0680-L15C	103.2	127.2	130.2	167.2	166	1.2	8	2
	20	●	MPS1-0680-L20C	137.2	162.2	165.2	202.2	201	1.2	8	2
	25	●	MPS1-0680-L25C	171.2	197.2	200.2	237.2	236	1.2	8	2
	30	●	MPS1-0680-L30C	205.2	232.2	235.2	272.2	271	1.2	8	2
	35	□	MPS1-0680-L35C	239.2	267.2	269.2	306.2	305	1.2	8	2
	40	●	MPS1-0680-L40C	273.2	301.2	304.2	341.2	340	1.2	8	2

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
6.9	3	□	MPS1-0690S-DIN	23.9	34.3	42.3	79.3	78	1.3	8	4
	3	●	MPS1-0690S-DIN-C	23.9	34.3	42.3	79.3	78	1.3	8	2
	5	□	MPS1-0690L-DIN	42.9	53.3	54.3	91.3	90	1.3	8	4
	5	●	MPS1-0690L-DIN-C	42.9	53.3	54.3	91.3	90	1.3	8	2
	2	●	MPS1-0690-PC	14.9	35.1	37.1	75.1	74	1.1	8	2
	8	●	MPS1-0690-L8C	56.6	78.4	81.4	118.4	117	1.4	8	2
	10	□	MPS1-0690-L10C	70.3	92.3	95.3	132.3	131	1.3	8	2
	12	●	MPS1-0690-L12C	84.1	106.3	109.3	146.3	145	1.3	8	2
	15	●	MPS1-0690-L15C	104.8	127.3	130.3	167.3	166	1.3	8	2
	20	●	MPS1-0690-L20C	139.3	162.3	165.3	202.3	201	1.3	8	2
	25	●	MPS1-0690-L25C	173.8	197.3	200.3	237.3	236	1.3	8	2
	30	●	MPS1-0690-L30C	208.3	232.3	235.3	272.3	271	1.3	8	2
	35	□	MPS1-0690-L35C	242.8	267.3	269.3	306.3	305	1.3	8	2
	40	●	MPS1-0690-L40C	277.3	301.3	304.3	341.3	340	1.3	8	2
7.0	3	□	MPS1-0700S-DIN	23.8	34.3	42.3	79.3	78	1.3	8	4
	3	●	MPS1-0700S-DIN-C	23.8	34.3	42.3	79.3	78	1.3	8	2
	5	□	MPS1-0700L-DIN	42.8	53.3	54.3	91.3	90	1.3	8	4
	5	●	MPS1-0700L-DIN-C	42.8	53.3	54.3	91.3	90	1.3	8	2
	2	●	MPS1-0700-PC	15.1	35.1	37.1	75.1	74	1.1	8	2
	8	●	MPS1-0700-L8C	57.4	78.4	81.4	118.4	117	1.4	8	2
	10	●	MPS1-0700-L10C	71.3	92.3	95.3	132.3	131	1.3	8	2
	12	●	MPS1-0700-L12C	85.3	106.3	109.3	146.3	145	1.3	8	2
	15	●	MPS1-0700-L15C	106.3	127.3	130.3	167.3	166	1.3	8	2
	20	●	MPS1-0700-L20C	141.3	162.3	165.3	202.3	201	1.3	8	2
	25	●	MPS1-0700-L25C	176.3	197.3	200.3	237.3	236	1.3	8	2
	30	●	MPS1-0700-L30C	211.3	232.3	235.3	272.3	271	1.3	8	2
	35	□	MPS1-0700-L35C	246.3	267.3	269.3	306.3	305	1.3	8	2
	40	●	MPS1-0700-L40C	281.3	301.3	304.3	341.3	340	1.3	8	2
7.1	3	□	MPS1-0710S-DIN	30.6	41.3	42.3	79.3	78	1.3	8	4
	3	●	MPS1-0710S-DIN-C	30.6	41.3	42.3	79.3	78	1.3	8	2
	5	□	MPS1-0710L-DIN	42.6	53.3	54.3	91.3	90	1.3	8	4
	5	●	MPS1-0710L-DIN-C	42.6	53.3	54.3	91.3	90	1.3	8	2
	2	●	MPS1-0710-PC	15.3	35.1	38.1	80.1	79	1.1	8	2
	8	●	MPS1-0710-L8C	58.3	84.5	87.5	124.5	123	1.5	8	2
	10	□	MPS1-0710-L10C	72.3	99.3	102.3	139.3	138	1.3	8	2
	12	●	MPS1-0710-L12C	86.5	114.3	117.3	154.3	153	1.3	8	2
	15	●	MPS1-0710-L15C	107.8	136.3	139.3	176.3	175	1.3	8	2
	20	●	MPS1-0710-L20C	143.3	174.3	177.3	214.3	213	1.3	8	2
	25	●	MPS1-0710-L25C	178.8	211.3	214.3	251.3	250	1.3	8	2
	30	●	MPS1-0710-L30C	214.3	249.3	252.3	289.3	288	1.3	8	2
	35	□	MPS1-0710-L35C	249.8	286.3	288.3	325.3	324	1.3	8	2
	40	●	MPS1-0710-L40C	285.3	321.3	323.3	360.3	359	1.3	8	2
7.2	3	□	MPS1-0720S-DIN	30.5	41.3	42.3	79.3	78	1.3	8	4
	3	●	MPS1-0720S-DIN-C	30.5	41.3	42.3	79.3	78	1.3	8	2
	5	□	MPS1-0720L-DIN	42.5	53.3	54.3	91.3	90	1.3	8	4
	5	●	MPS1-0720L-DIN-C	42.5	53.3	54.3	91.3	90	1.3	8	2
	2	●	MPS1-0720-PC	15.5	35.1	38.1	80.1	79	1.1	8	2
	8	●	MPS1-0720-L8C	59.1	84.5	87.5	124.5	123	1.5	8	2
	10	□	MPS1-0720-L10C	73.3	99.3	102.3	139.3	138	1.3	8	2
	12	●	MPS1-0720-L12C	87.7	114.3	117.3	154.3	153	1.3	8	2
	15	□	MPS1-0720-L15C	109.3	136.3	139.3	176.3	175	1.3	8	2
	20	□	MPS1-0720-L20C	145.3	174.3	177.3	214.3	213	1.3	8	2
	25	□	MPS1-0720-L25C	181.3	211.3	214.3	251.3	250	1.3	8	2
	30	□	MPS1-0720-L30C	217.3	249.3	252.3	289.3	288	1.3	8	2
	35	□	MPS1-0720-L35C	253.3	286.3	288.3	325.3	324	1.3	8	2
	40	●	MPS1-0720-L40C	289.3	321.3	323.3	360.3	359	1.3	8	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
7.3	3	□	MPS1-0730S-DIN	30.4	41.3	42.3	79.3	78	1.3	8	4
	3	●	MPS1-0730S-DIN-C	30.4	41.3	42.3	79.3	78	1.3	8	2
	5	□	MPS1-0730L-DIN	42.4	53.3	54.3	91.3	90	1.3	8	4
	5	●	MPS1-0730L-DIN-C	42.4	53.3	54.3	91.3	90	1.3	8	2
	2	●	MPS1-0730-PC	15.8	35.2	38.2	80.2	79	1.2	8	2
	8	●	MPS1-0730-L8C	59.9	84.5	87.5	124.5	123	1.5	8	2
	10	□	MPS1-0730-L10C	74.3	99.3	102.3	139.3	138	1.3	8	2
	12	●	MPS1-0730-L12C	88.9	114.3	117.3	154.3	153	1.3	8	2
	15	□	MPS1-0730-L15C	110.8	136.3	139.3	176.3	175	1.3	8	2
	20	□	MPS1-0730-L20C	147.3	174.3	177.3	214.3	213	1.3	8	2
	25	□	MPS1-0730-L25C	183.8	211.3	214.3	251.3	250	1.3	8	2
	30	□	MPS1-0730-L30C	220.3	249.3	252.3	289.3	288	1.3	8	2
	35	□	MPS1-0730-L35C	256.8	286.3	288.3	325.3	324	1.3	8	2
	40	●	MPS1-0730-L40C	293.3	321.3	323.3	360.3	359	1.3	8	2
7.4	3	□	MPS1-0740S-DIN	30.2	41.3	42.3	79.3	78	1.3	8	4
	3	●	MPS1-0740S-DIN-C	30.2	41.3	42.3	79.3	78	1.3	8	2
	5	□	MPS1-0740L-DIN	42.2	53.3	54.3	91.3	90	1.3	8	4
	5	●	MPS1-0740L-DIN-C	42.2	53.3	54.3	91.3	90	1.3	8	2
	2	●	MPS1-0740-PC	16.0	35.2	38.2	80.2	79	1.2	8	2
	8	●	MPS1-0740-L8C	60.7	84.5	87.5	124.5	123	1.5	8	2
	10	□	MPS1-0740-L10C	75.3	99.3	102.3	139.3	138	1.3	8	2
	12	●	MPS1-0740-L12C	90.1	114.3	117.3	154.3	153	1.3	8	2
	15	□	MPS1-0740-L15C	112.3	136.3	139.3	176.3	175	1.3	8	2
	20	□	MPS1-0740-L20C	149.3	174.3	177.3	214.3	213	1.3	8	2
	25	□	MPS1-0740-L25C	186.3	211.3	214.3	251.3	250	1.3	8	2
	30	□	MPS1-0740-L30C	223.3	249.3	252.3	289.3	288	1.3	8	2
	35	□	MPS1-0740-L35C	260.3	286.3	288.3	325.3	324	1.3	8	2
	40	●	MPS1-0740-L40C	297.3	321.3	323.3	360.3	359	1.3	8	2
7.5	3	□	MPS1-0750S-DIN	30.1	41.4	42.4	79.4	78	1.4	8	4
	3	●	MPS1-0750S-DIN-C	30.1	41.4	42.4	79.4	78	1.4	8	2
	5	□	MPS1-0750L-DIN	42.1	53.4	54.4	91.4	90	1.4	8	4
	5	●	MPS1-0750L-DIN-C	42.1	53.4	54.4	91.4	90	1.4	8	2
	2	●	MPS1-0750-PC	16.2	35.2	38.2	80.2	79	1.2	8	2
	8	●	MPS1-0750-L8C	61.6	84.6	87.6	124.6	123	1.6	8	2
	10	□	MPS1-0750-L10C	76.4	99.4	102.4	139.4	138	1.4	8	2
	12	●	MPS1-0750-L12C	91.4	114.4	117.4	154.4	153	1.4	8	2
	15	●	MPS1-0750-L15C	113.9	136.4	139.4	176.4	175	1.4	8	2
	20	●	MPS1-0750-L20C	151.4	174.4	177.4	214.4	213	1.4	8	2
	25	●	MPS1-0750-L25C	188.9	211.4	214.4	251.4	250	1.4	8	2
	30	●	MPS1-0750-L30C	226.4	249.4	252.4	289.4	288	1.4	8	2
	35	□	MPS1-0750-L35C	263.9	286.4	288.4	325.4	324	1.4	8	2
	40	●	MPS1-0750-L40C	301.4	321.4	323.4	360.4	359	1.4	8	2
7.6	3	□	MPS1-0760S-DIN	30.0	41.4	42.4	79.4	78	1.4	8	4
	3	●	MPS1-0760S-DIN-C	30.0	41.4	42.4	79.4	78	1.4	8	2
	5	□	MPS1-0760L-DIN	42.0	53.4	54.4	91.4	90	1.4	8	4
	5	●	MPS1-0760L-DIN-C	42.0	53.4	54.4	91.4	90	1.4	8	2
	2	●	MPS1-0760-PC	16.4	38.2	38.2	80.2	79	1.2	8	2
	8	●	MPS1-0760-L8C	62.4	89.6	92.6	129.6	128	1.6	8	2
	10	□	MPS1-0760-L10C	77.4	105.4	108.4	145.4	144	1.4	8	2
	12	●	MPS1-0760-L12C	92.6	121.4	124.4	161.4	160	1.4	8	2
	15	●	MPS1-0760-L15C	115.4	145.4	148.4	185.4	184	1.4	8	2
	20	□	MPS1-0760-L20C	153.4	185.4	188.4	225.4	224	1.4	8	2
	25	●	MPS1-0760-L25C	191.4	225.4	228.4	265.4	264	1.4	8	2
	30	□	MPS1-0760-L30C	229.4	265.4	268.4	305.4	304	1.4	8	2
	35	□	MPS1-0760-L35C	267.4	305.4	307.4	344.4	343	1.4	8	2
	40	●	MPS1-0760-L40C	305.4	341.4	342.4	379.4	378	1.4	8	2

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

MPS1

Punta in metallo duro a doppio margine super lunga

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
7.7	3	□	MPS1-0770S-DIN	29.9	41.4	42.4	79.4	78	1.4	8	4
	3	●	MPS1-0770S-DIN-C	29.9	41.4	42.4	79.4	78	1.4	8	2
	5	□	MPS1-0770L-DIN	41.9	53.4	54.4	91.4	90	1.4	8	4
	5	●	MPS1-0770L-DIN-C	41.9	53.4	54.4	91.4	90	1.4	8	2
	2	●	MPS1-0770-PC	16.6	38.2	38.2	80.2	79	1.2	8	2
	8	●	MPS1-0770-L8C	63.2	89.6	92.6	129.6	128	1.6	8	2
	10	□	MPS1-0770-L10C	78.4	105.4	108.4	145.4	144	1.4	8	2
	12	●	MPS1-0770-L12C	93.8	121.4	124.4	161.4	160	1.4	8	2
	15	●	MPS1-0770-L15C	116.9	145.4	148.4	185.4	184	1.4	8	2
	20	□	MPS1-0770-L20C	155.4	185.4	188.4	225.4	224	1.4	8	2
	25	●	MPS1-0770-L25C	193.9	225.4	228.4	265.4	264	1.4	8	2
	30	□	MPS1-0770-L30C	232.4	265.4	268.4	305.4	304	1.4	8	2
	35	□	MPS1-0770-L35C	270.9	305.4	307.4	344.4	343	1.4	8	2
	40	●	MPS1-0770-L40C	309.4	341.4	342.4	379.4	378	1.4	8	2
7.8	3	□	MPS1-0780S-DIN	29.7	41.4	42.4	79.4	78	1.4	8	4
	3	●	MPS1-0780S-DIN-C	29.7	41.4	42.4	79.4	78	1.4	8	2
	5	□	MPS1-0780L-DIN	41.7	53.4	54.4	91.4	90	1.4	8	4
	5	●	MPS1-0780L-DIN-C	41.7	53.4	54.4	91.4	90	1.4	8	2
	2	●	MPS1-0780-PC	16.8	38.2	38.2	80.2	79	1.2	8	2
	8	●	MPS1-0780-L8C	64.0	89.6	92.6	129.6	128	1.6	8	2
	10	□	MPS1-0780-L10C	79.4	105.4	108.4	145.4	144	1.4	8	2
	12	●	MPS1-0780-L12C	95.0	121.4	124.4	161.4	160	1.4	8	2
	15	●	MPS1-0780-L15C	118.4	145.4	148.4	185.4	184	1.4	8	2
	20	□	MPS1-0780-L20C	157.4	185.4	188.4	225.4	224	1.4	8	2
	25	□	MPS1-0780-L25C	196.4	225.4	228.4	265.4	264	1.4	8	2
	30	●	MPS1-0780-L30C	235.4	265.4	268.4	305.4	304	1.4	8	2
	35	□	MPS1-0780-L35C	274.4	305.4	307.4	344.4	343	1.4	8	2
	40	●	MPS1-0780-L40C	313.4	341.4	342.4	379.4	378	1.4	8	2
7.9	3	□	MPS1-0790S-DIN	29.6	41.4	42.4	79.4	78	1.4	8	4
	3	●	MPS1-0790S-DIN-C	29.6	41.4	42.4	79.4	78	1.4	8	2
	5	□	MPS1-0790L-DIN	41.6	53.4	54.4	91.4	90	1.4	8	4
	5	●	MPS1-0790L-DIN-C	41.6	53.4	54.4	91.4	90	1.4	8	2
	2	●	MPS1-0790-PC	17.0	38.2	38.2	80.2	79	1.2	8	2
	8	●	MPS1-0790-L8C	64.8	89.6	92.6	129.6	128	1.6	8	2
	10	□	MPS1-0790-L10C	80.4	105.4	108.4	145.4	144	1.4	8	2
	12	●	MPS1-0790-L12C	96.2	121.4	124.4	161.4	160	1.4	8	2
	15	□	MPS1-0790-L15C	119.9	145.4	148.4	185.4	184	1.4	8	2
	20	□	MPS1-0790-L20C	159.4	185.4	188.4	225.4	224	1.4	8	2
	25	●	MPS1-0790-L25C	198.9	225.4	228.4	265.4	264	1.4	8	2
	30	●	MPS1-0790-L30C	238.4	265.4	268.4	305.4	304	1.4	8	2
	35	□	MPS1-0790-L35C	277.9	305.4	307.4	344.4	343	1.4	8	2
	40	●	MPS1-0790-L40C	317.4	341.4	342.4	379.4	378	1.4	8	2
8.0	3	□	MPS1-0800S-DIN	29.5	41.5	42.5	79.5	78	1.5	8	4
	3	●	MPS1-0800S-DIN-C	29.5	41.5	42.5	79.5	78	1.5	8	2
	5	□	MPS1-0800L-DIN	41.5	53.5	54.5	91.5	90	1.5	8	4
	5	●	MPS1-0800L-DIN-C	41.5	53.5	54.5	91.5	90	1.5	8	2
	2	●	MPS1-0800-PC	17.3	38.3	38.3	80.3	79	1.3	8	2
	8	●	MPS1-0800-L8C	65.7	89.7	92.7	129.7	128	1.7	8	2
	10	●	MPS1-0800-L10C	81.5	105.5	108.5	145.5	144	1.5	8	2
	12	●	MPS1-0800-L12C	97.5	121.5	124.5	161.5	160	1.5	8	2
	15	●	MPS1-0800-L15C	121.5	145.5	148.5	185.5	184	1.5	8	2
	20	●	MPS1-0800-L20C	161.5	185.5	188.5	225.5	224	1.5	8	2
	25	●	MPS1-0800-L25C	201.5	225.5	228.5	265.5	264	1.5	8	2
	30	●	MPS1-0800-L30C	241.5	265.5	268.5	305.5	304	1.5	8	2
	35	□	MPS1-0800-L35C	281.5	305.5	307.5	344.5	343	1.5	8	2
	40	●	MPS1-0800-L40C	321.5	341.5	342.5	379.5	378	1.5	8	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.05	3	□	MPS1-0805S-DIN	34.4	46.5	47.5	88.5	87	1.5	10	4
	3	●	MPS1-0805S-DIN-C	34.4	46.5	47.5	88.5	87	1.5	10	2
	5	□	MPS1-0805L-DIN	48.4	60.5	61.5	102.5	101	1.5	10	4
	5	●	MPS1-0805L-DIN-C	48.4	60.5	61.5	102.5	101	1.5	10	2
8.1	3	□	MPS1-0810S-DIN	34.3	46.5	47.5	88.5	87	1.5	10	4
	3	●	MPS1-0810S-DIN-C	34.3	46.5	47.5	88.5	87	1.5	10	2
	5	□	MPS1-0810L-DIN	48.3	60.5	61.5	102.5	101	1.5	10	4
	5	●	MPS1-0810L-DIN-C	48.3	60.5	61.5	102.5	101	1.5	10	2
	2	●	MPS1-0810-PC	17.5	38.3	41.3	85.3	84	1.3	10	2
	8	●	MPS1-0810-L8C	66.5	95.7	98.7	139.7	138	1.7	10	2
	10	□	MPS1-0810-L10C	82.5	112.5	115.5	156.5	155	1.5	10	2
	12	●	MPS1-0810-L12C	98.7	129.5	132.5	173.5	172	1.5	10	2
	15	●	MPS1-0810-L15C	123.0	154.5	157.5	198.5	197	1.5	10	2
	20	●	MPS1-0810-L20C	163.5	197.5	200.5	241.5	240	1.5	10	2
	25	□	MPS1-0810-L25C	204.0	239.5	242.5	283.5	282	1.5	10	2
	30	□	MPS1-0810-L30C	244.5	282.5	284.5	325.5	324	1.5	10	2
	35	□	MPS1-0810-L35C	285.0	324.5	326.5	367.5	366	1.5	10	2
	40	●	MPS1-0810-L40C	325.5	366.5	370.5	411.5	410	1.5	10	2
8.2	3	□	MPS1-0820S-DIN	34.2	46.5	47.5	88.5	87	1.5	10	4
	3	●	MPS1-0820S-DIN-C	34.2	46.5	47.5	88.5	87	1.5	10	2
	5	□	MPS1-0820L-DIN	48.2	60.5	61.5	102.5	101	1.5	10	4
	5	●	MPS1-0820L-DIN-C	48.2	60.5	61.5	102.5	101	1.5	10	2
	2	●	MPS1-0820-PC	17.7	38.3	41.3	85.3	84	1.3	10	2
	8	●	MPS1-0820-L8C	67.3	95.7	98.7	139.7	138	1.7	10	2
	10	□	MPS1-0820-L10C	83.5	112.5	115.5	156.5	155	1.5	10	2
	12	●	MPS1-0820-L12C	99.9	129.5	132.5	173.5	172	1.5	10	2
	15	●	MPS1-0820-L15C	124.5	154.5	157.5	198.5	197	1.5	10	2
	20	●	MPS1-0820-L20C	165.5	197.5	200.5	241.5	240	1.5	10	2
	25	□	MPS1-0820-L25C	206.5	239.5	242.5	283.5	282	1.5	10	2
	30	□	MPS1-0820-L30C	247.5	282.5	284.5	325.5	324	1.5	10	2
	35	□	MPS1-0820-L35C	288.5	324.5	326.5	367.5	366	1.5	10	2
	40	●	MPS1-0820-L40C	329.5	366.5	370.5	411.5	410	1.5	10	2
8.3	3	□	MPS1-0830S-DIN	34.1	46.5	47.5	88.5	87	1.5	10	4
	3	●	MPS1-0830S-DIN-C	34.1	46.5	47.5	88.5	87	1.5	10	2
	5	□	MPS1-0830L-DIN	48.1	60.5	61.5	102.5	101	1.5	10	4
	5	●	MPS1-0830L-DIN-C	48.1	60.5	61.5	102.5	101	1.5	10	2
	2	●	MPS1-0830-PC	17.9	38.3	41.3	85.3	84	1.3	10	2
	8	●	MPS1-0830-L8C	68.1	95.7	98.7	139.7	138	1.7	10	2
	10	□	MPS1-0830-L10C	84.5	112.5	115.5	156.5	155	1.5	10	2
	12	●	MPS1-0830-L12C	101.1	129.5	132.5	173.5	172	1.5	10	2
	15	□	MPS1-0830-L15C	126.0	154.5	157.5	198.5	197	1.5	10	2
	20	□	MPS1-0830-L20C	167.5	197.5	200.5	241.5	240	1.5	10	2
	25	□	MPS1-0830-L25C	209.0	239.5	242.5	283.5	282	1.5	10	2
	30	□	MPS1-0830-L30C	250.5	282.5	284.5	325.5	324	1.5	10	2
	35	□	MPS1-0830-L35C	292.0	324.5	326.5	367.5	366	1.5	10	2
	40	●	MPS1-0830-L40C	333.5	366.5	370.5	411.5	410	1.5	10	2

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.4	3	□	MPS1-0840S-DIN	33.9	46.5	47.5	88.5	87	1.5	10	4
	3	●	MPS1-0840S-DIN-C	33.9	46.5	47.5	88.5	87	1.5	10	2
	5	□	MPS1-0840L-DIN	47.9	60.5	61.5	102.5	101	1.5	10	4
	5	●	MPS1-0840L-DIN-C	47.9	60.5	61.5	102.5	101	1.5	10	2
	2	●	MPS1-0840-PC	18.1	38.3	41.3	85.3	84	1.3	10	2
	8	●	MPS1-0840-L8C	68.9	95.7	98.7	139.7	138	1.7	10	2
	10	□	MPS1-0840-L10C	85.5	112.5	115.5	156.5	155	1.5	10	2
	12	●	MPS1-0840-L12C	102.3	129.5	132.5	173.5	172	1.5	10	2
	15	●	MPS1-0840-L15C	127.5	154.5	157.5	198.5	197	1.5	10	2
	20	□	MPS1-0840-L20C	169.5	197.5	200.5	241.5	240	1.5	10	2
	25	□	MPS1-0840-L25C	211.5	239.5	242.5	283.5	282	1.5	10	2
	30	□	MPS1-0840-L30C	253.5	282.5	284.5	325.5	324	1.5	10	2
	35	□	MPS1-0840-L35C	295.5	324.5	326.5	367.5	366	1.5	10	2
	40	●	MPS1-0840-L40C	337.5	366.5	370.5	411.5	410	1.5	10	2
8.5	3	□	MPS1-0850S-DIN	33.8	46.5	47.5	88.5	87	1.5	10	4
	3	●	MPS1-0850S-DIN-C	33.8	46.5	47.5	88.5	87	1.5	10	2
	5	□	MPS1-0850L-DIN	47.8	60.5	61.5	102.5	101	1.5	10	4
	5	●	MPS1-0850L-DIN-C	47.8	60.5	61.5	102.5	101	1.5	10	2
	2	●	MPS1-0850-PC	18.3	38.3	41.3	85.3	84	1.3	10	2
	8	●	MPS1-0850-L8C	69.8	95.8	98.8	139.8	138	1.8	10	2
	10	□	MPS1-0850-L10C	86.5	112.5	115.5	156.5	155	1.5	10	2
	12	●	MPS1-0850-L12C	103.5	129.5	132.5	173.5	172	1.5	10	2
	15	●	MPS1-0850-L15C	129.0	154.5	157.5	198.5	197	1.5	10	2
	20	●	MPS1-0850-L20C	171.5	197.5	200.5	241.5	240	1.5	10	2
	25	●	MPS1-0850-L25C	214.0	239.5	242.5	283.5	282	1.5	10	2
	30	●	MPS1-0850-L30C	256.5	282.5	284.5	325.5	324	1.5	10	2
	35	□	MPS1-0850-L35C	299.0	324.5	326.5	367.5	366	1.5	10	2
	40	●	MPS1-0850-L40C	341.5	366.5	370.5	411.5	410	1.5	10	2
8.6	3	□	MPS1-0860S-DIN	33.7	46.6	47.6	88.6	87	1.6	10	4
	3	●	MPS1-0860S-DIN-C	33.7	46.6	47.6	88.6	87	1.6	10	2
	5	□	MPS1-0860L-DIN	47.7	60.6	61.6	102.6	101	1.6	10	4
	5	●	MPS1-0860L-DIN-C	47.7	60.6	61.6	102.6	101	1.6	10	2
	2	●	MPS1-0860-PC	18.6	41.4	43.4	85.4	84	1.4	10	2
	8	●	MPS1-0860-L8C	70.6	100.8	103.8	144.8	143	1.8	10	2
	10	□	MPS1-0860-L10C	87.6	118.6	121.6	162.6	161	1.6	10	2
	12	●	MPS1-0860-L12C	104.8	136.6	139.6	180.6	179	1.6	10	2
	15	●	MPS1-0860-L15C	130.6	163.6	166.6	207.6	206	1.6	10	2
	20	□	MPS1-0860-L20C	173.6	208.6	211.6	252.6	251	1.6	10	2
	25	●	MPS1-0860-L25C	216.6	253.6	256.6	297.6	296	1.6	10	2
	30	●	MPS1-0860-L30C	259.6	298.6	300.6	341.6	340	1.6	10	2
	35	□	MPS1-0860-L35C	302.6	343.6	345.6	386.6	385	1.6	10	2
	40	●	MPS1-0860-L40C	345.6	391.6	394.6	435.6	434	1.6	10	2
8.7	3	□	MPS1-0870S-DIN	33.5	46.6	47.6	88.6	87	1.6	10	4
	3	●	MPS1-0870S-DIN-C	33.5	46.6	47.6	88.6	87	1.6	10	2
	5	□	MPS1-0870L-DIN	47.5	60.6	61.6	102.6	101	1.6	10	4
	5	●	MPS1-0870L-DIN-C	47.5	60.6	61.6	102.6	101	1.6	10	2
	2	●	MPS1-0870-PC	18.8	41.4	43.4	85.4	84	1.4	10	2
	8	●	MPS1-0870-L8C	71.4	100.8	103.8	144.8	143	1.8	10	2
	10	□	MPS1-0870-L10C	88.6	118.6	121.6	162.6	161	1.6	10	2
	12	●	MPS1-0870-L12C	106.0	136.6	139.6	180.6	179	1.6	10	2
	15	●	MPS1-0870-L15C	132.1	163.6	166.6	207.6	206	1.6	10	2
	20	□	MPS1-0870-L20C	175.6	208.6	211.6	252.6	251	1.6	10	2
	25	●	MPS1-0870-L25C	219.1	253.6	256.6	297.6	296	1.6	10	2
	30	□	MPS1-0870-L30C	262.6	298.6	300.6	341.6	340	1.6	10	2
	35	□	MPS1-0870-L35C	306.1	343.6	345.6	386.6	385	1.6	10	2
	40	●	MPS1-0870-L40C	349.6	391.6	394.6	435.6	434	1.6	10	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.8	3	□	MPS1-0880S-DIN	33.4	46.6	47.6	88.6	87	1.6	10	4
	3	●	MPS1-0880S-DIN-C	33.4	46.6	47.6	88.6	87	1.6	10	2
	5	□	MPS1-0880L-DIN	47.4	60.6	61.6	102.6	101	1.6	10	4
	5	●	MPS1-0880L-DIN-C	47.4	60.6	61.6	102.6	101	1.6	10	2
	2	●	MPS1-0880-PC	19.0	41.4	43.4	85.4	84	1.4	10	2
	8	●	MPS1-0880-L8C	72.2	100.8	103.8	144.8	143	1.8	10	2
	10	□	MPS1-0880-L10C	89.6	118.6	121.6	162.6	161	1.6	10	2
	12	●	MPS1-0880-L12C	107.2	136.6	139.6	180.6	179	1.6	10	2
	15	●	MPS1-0880-L15C	133.6	163.6	166.6	207.6	206	1.6	10	2
	20	●	MPS1-0880-L20C	177.6	208.6	211.6	252.6	251	1.6	10	2
	25	●	MPS1-0880-L25C	221.6	253.6	256.6	297.6	296	1.6	10	2
	30	●	MPS1-0880-L30C	265.6	298.6	300.6	341.6	340	1.6	10	2
	35	□	MPS1-0880-L35C	309.6	343.6	345.6	386.6	385	1.6	10	2
	40	●	MPS1-0880-L40C	353.6	391.6	394.6	435.6	434	1.6	10	2
8.9	3	□	MPS1-0890S-DIN	33.3	46.6	47.6	88.6	87	1.6	10	4
	3	●	MPS1-0890S-DIN-C	33.3	46.6	47.6	88.6	87	1.6	10	2
	5	□	MPS1-0890L-DIN	47.3	60.6	61.6	102.6	101	1.6	10	4
	5	●	MPS1-0890L-DIN-C	47.3	60.6	61.6	102.6	101	1.6	10	2
	2	●	MPS1-0890-PC	19.2	41.4	43.4	85.4	84	1.4	10	2
	8	●	MPS1-0890-L8C	73.0	100.8	103.8	144.8	143	1.8	10	2
	10	□	MPS1-0890-L10C	90.6	118.6	121.6	162.6	161	1.6	10	2
	12	●	MPS1-0890-L12C	108.4	136.6	139.6	180.6	179	1.6	10	2
	15	□	MPS1-0890-L15C	135.1	163.6	166.6	207.6	206	1.6	10	2
	20	□	MPS1-0890-L20C	179.6	208.6	211.6	252.6	251	1.6	10	2
	25	□	MPS1-0890-L25C	224.1	253.6	256.6	297.6	296	1.6	10	2
	30	□	MPS1-0890-L30C	268.6	298.6	300.6	341.6	340	1.6	10	2
	35	□	MPS1-0890-L35C	313.1	343.6	345.6	386.6	385	1.6	10	2
	40	●	MPS1-0890-L40C	357.6	391.6	394.6	435.6	434	1.6	10	2
9.0	3	□	MPS1-0900S-DIN	33.1	46.6	47.6	88.6	87	1.6	10	4
	3	●	MPS1-0900S-DIN-C	33.1	46.6	47.6	88.6	87	1.6	10	2
	5	□	MPS1-0900L-DIN	47.1	60.6	61.6	102.6	101	1.6	10	4
	5	●	MPS1-0900L-DIN-C	47.1	60.6	61.6	102.6	101	1.6	10	2
	2	●	MPS1-0900-PC	19.4	41.4	43.4	85.4	84	1.4	10	2
	8	●	MPS1-0900-L8C	73.9	100.9	103.9	144.9	143	1.9	10	2
	10	●	MPS1-0900-L10C	91.6	118.6	121.6	162.6	161	1.6	10	2
	12	●	MPS1-0900-L12C	109.6	136.6	139.6	180.6	179	1.6	10	2
	15	●	MPS1-0900-L15C	136.6	163.6	166.6	207.6	206	1.6	10	2
	20	●	MPS1-0900-L20C	181.6	208.6	211.6	252.6	251	1.6	10	2
	25	●	MPS1-0900-L25C	226.6	253.6	256.6	297.6	296	1.6	10	2
	30	●	MPS1-0900-L30C	271.6	298.6	300.6	341.6	340	1.6	10	2
	35	□	MPS1-0900-L35C	316.6	343.6	345.6	386.6	385	1.6	10	2
	40	●	MPS1-0900-L40C	361.6	391.6	394.6	435.6	434	1.6	10	2
9.1	3	□	MPS1-0910S-DIN	33.0	46.7	47.7	88.7	87	1.7	10	4
	3	●	MPS1-0910S-DIN-C	33.0	46.7	47.7	88.7	87	1.7	10	2
	5	□	MPS1-0910L-DIN	47.0	60.7	61.7	102.7	101	1.7	10	4
	5	●	MPS1-0910L-DIN-C	47.0	60.7	61.7	102.7	101	1.7	10	2
	2	●	MPS1-0910-PC	19.6	41.4	44.4	90.4	89	1.4	10	2
	8	●	MPS1-0910-L8C	74.7	106.9	109.9	150.9	149	1.9	10	2
	10	□	MPS1-0910-L10C	92.7	125.7	128.7	169.7	168	1.7	10	2
	12	●	MPS1-0910-L12C	110.9	144.7	147.7	188.7	187	1.7	10	2
	15	●	MPS1-0910-L15C	138.2	172.7	175.7	216.7	215	1.7	10	2
	20	□	MPS1-0910-L20C	183.7	220.7	223.7	264.7	263	1.7	10	2
	25	□	MPS1-0910-L25C	229.2	267.7	270.7	311.7	310	1.7	10	2
	30	●	MPS1-0910-L30C	274.7	315.7	318.7	359.7	358	1.7	10	2
	35	□	MPS1-0910-L35C	320.2	362.7	364.7	405.7	404	1.7	10	2

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

MPS1

Punta in metallo duro a doppio margine super lunga

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
9.2	3	□	MPS1-0920S-DIN	32.9	46.7	47.7	88.7	87	1.7	10	4
	3	●	MPS1-0920S-DIN-C	32.9	46.7	47.7	88.7	87	1.7	10	2
	5	□	MPS1-0920L-DIN	46.9	60.7	61.7	102.7	101	1.7	10	4
	5	●	MPS1-0920L-DIN-C	46.9	60.7	61.7	102.7	101	1.7	10	2
	2	●	MPS1-0920-PC	19.9	41.5	44.5	90.5	89	1.5	10	2
	8	●	MPS1-0920-L8C	75.5	106.9	109.9	150.9	149	1.9	10	2
	10	□	MPS1-0920-L10C	93.7	125.7	128.7	169.7	168	1.7	10	2
	12	●	MPS1-0920-L12C	112.1	144.7	147.7	188.7	187	1.7	10	2
	15	●	MPS1-0920-L15C	139.7	172.7	175.7	216.7	215	1.7	10	2
	20	□	MPS1-0920-L20C	185.7	220.7	223.7	264.7	263	1.7	10	2
	25	□	MPS1-0920-L25C	231.7	267.7	270.7	311.7	310	1.7	10	2
	30	□	MPS1-0920-L30C	277.7	315.7	318.7	359.7	358	1.7	10	2
	35	□	MPS1-0920-L35C	323.7	362.7	364.7	405.7	404	1.7	10	2
9.3	3	□	MPS1-0930S-DIN	32.7	46.7	47.7	88.7	87	1.7	10	4
	3	●	MPS1-0930S-DIN-C	32.7	46.7	47.7	88.7	87	1.7	10	2
	5	□	MPS1-0930L-DIN	46.7	60.7	61.7	102.7	101	1.7	10	4
	5	●	MPS1-0930L-DIN-C	46.7	60.7	61.7	102.7	101	1.7	10	2
	2	●	MPS1-0930-PC	20.1	41.5	44.5	90.5	89	1.5	10	2
	8	●	MPS1-0930-L8C	76.3	106.9	109.9	150.9	149	1.9	10	2
	10	□	MPS1-0930-L10C	94.7	125.7	128.7	169.7	168	1.7	10	2
	12	●	MPS1-0930-L12C	113.3	144.7	147.7	188.7	187	1.7	10	2
	15	□	MPS1-0930-L15C	141.2	172.7	175.7	216.7	215	1.7	10	2
	20	□	MPS1-0930-L20C	187.7	220.7	223.7	264.7	263	1.7	10	2
	25	□	MPS1-0930-L25C	234.2	267.7	270.7	311.7	310	1.7	10	2
	30	□	MPS1-0930-L30C	280.7	315.7	318.7	359.7	358	1.7	10	2
	35	□	MPS1-0930-L35C	327.2	362.7	364.7	405.7	404	1.7	10	2
9.4	3	□	MPS1-0940S-DIN	32.6	46.7	47.7	88.7	87	1.7	10	4
	3	●	MPS1-0940S-DIN-C	32.6	46.7	47.7	88.7	87	1.7	10	2
	5	□	MPS1-0940L-DIN	46.6	60.7	61.7	102.7	101	1.7	10	4
	5	●	MPS1-0940L-DIN-C	46.6	60.7	61.7	102.7	101	1.7	10	2
	2	●	MPS1-0940-PC	20.3	41.5	44.5	90.5	89	1.5	10	2
	8	●	MPS1-0940-L8C	77.1	106.9	109.9	150.9	149	1.9	10	2
	10	□	MPS1-0940-L10C	95.7	125.7	128.7	169.7	168	1.7	10	2
	12	●	MPS1-0940-L12C	114.5	144.7	147.7	188.7	187	1.7	10	2
	15	□	MPS1-0940-L15C	142.7	172.7	175.7	216.7	215	1.7	10	2
	20	□	MPS1-0940-L20C	189.7	220.7	223.7	264.7	263	1.7	10	2
	25	□	MPS1-0940-L25C	236.7	267.7	270.7	311.7	310	1.7	10	2
	30	□	MPS1-0940-L30C	283.7	315.7	318.7	359.7	358	1.7	10	2
	35	□	MPS1-0940-L35C	330.7	362.7	364.7	405.7	404	1.7	10	2
9.5	3	□	MPS1-0950S-DIN	32.5	46.7	47.7	88.7	87	1.7	10	4
	3	●	MPS1-0950S-DIN-C	32.5	46.7	47.7	88.7	87	1.7	10	2
	5	□	MPS1-0950L-DIN	46.5	60.7	61.7	102.7	101	1.7	10	4
	5	●	MPS1-0950L-DIN-C	46.5	60.7	61.7	102.7	101	1.7	10	2
	2	●	MPS1-0950-PC	20.5	41.5	44.5	90.5	89	1.5	10	2
	8	●	MPS1-0950-L8C	78.0	107.0	110.0	151.0	149	2.0	10	2
	10	□	MPS1-0950-L10C	96.7	125.7	128.7	169.7	168	1.7	10	2
	12	●	MPS1-0950-L12C	115.7	144.7	147.7	188.7	187	1.7	10	2
	15	●	MPS1-0950-L15C	144.2	172.7	175.7	216.7	215	1.7	10	2
	20	●	MPS1-0950-L20C	191.7	220.7	223.7	264.7	263	1.7	10	2
	25	●	MPS1-0950-L25C	239.2	267.7	270.7	311.7	310	1.7	10	2
	30	●	MPS1-0950-L30C	286.7	315.7	318.7	359.7	358	1.7	10	2
	35	□	MPS1-0950-L35C	334.2	362.7	364.7	405.7	404	1.7	10	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
9.6	3	□	MPS1-0960S-DIN	32.3	46.7	47.7	88.7	87	1.7	10	4
	3	●	MPS1-0960S-DIN-C	32.3	46.7	47.7	88.7	87	1.7	10	2
	5	□	MPS1-0960L-DIN	46.3	60.7	61.7	102.7	101	1.7	10	4
	5	●	MPS1-0960L-DIN-C	46.3	60.7	61.7	102.7	101	1.7	10	2
	2	●	MPS1-0960-PC	20.7	44.5	44.5	90.5	89	1.5	10	2
	8	●	MPS1-0960-L8C	78.8	112.0	115.0	156.0	154	2.0	10	2
	10	□	MPS1-0960-L10C	97.7	131.7	134.7	175.7	174	1.7	10	2
	12	●	MPS1-0960-L12C	116.9	151.7	154.7	195.7	194	1.7	10	2
	15	●	MPS1-0960-L15C	145.7	181.7	184.7	225.7	224	1.7	10	2
	20	□	MPS1-0960-L20C	193.7	231.7	234.7	275.7	274	1.7	10	2
	25	□	MPS1-0960-L25C	241.7	281.7	284.7	325.7	324	1.7	10	2
	30	□	MPS1-0960-L30C	289.7	331.7	334.7	375.7	374	1.7	10	2
	35	□	MPS1-0960-L35C	337.7	381.7	383.7	424.7	423	1.7	10	2
9.7	3	□	MPS1-0970S-DIN	32.2	46.8	47.8	88.8	87	1.8	10	4
	3	●	MPS1-0970S-DIN-C	32.2	46.8	47.8	88.8	87	1.8	10	2
	5	□	MPS1-0970L-DIN	46.2	60.8	61.8	102.8	101	1.8	10	4
	5	●	MPS1-0970L-DIN-C	46.2	60.8	61.8	102.8	101	1.8	10	2
	2	●	MPS1-0970-PC	20.9	44.5	44.5	90.5	89	1.5	10	2
	8	●	MPS1-0970-L8C	79.6	112.0	115.0	156.0	154	2.0	10	2
	10	□	MPS1-0970-L10C	98.8	131.8	134.8	175.8	174	1.8	10	2
	12	●	MPS1-0970-L12C	118.2	151.8	154.8	195.8	194	1.8	10	2
	15	●	MPS1-0970-L15C	147.3	181.8	184.8	225.8	224	1.8	10	2
	20	□	MPS1-0970-L20C	195.8	231.8	234.8	275.8	274	1.8	10	2
	25	□	MPS1-0970-L25C	244.3	281.8	284.8	325.8	324	1.8	10	2
	30	□	MPS1-0970-L30C	292.8	331.8	334.8	375.8	374	1.8	10	2
	35	□	MPS1-0970-L35C	341.3	381.8	383.8	424.8	423	1.8	10	2
9.8	3	□	MPS1-0980S-DIN	32.1	46.8	47.8	88.8	87	1.8	10	4
	3	●	MPS1-0980S-DIN-C	32.1	46.8	47.8	88.8	87	1.8	10	2
	5	□	MPS1-0980L-DIN	46.1	60.8	61.8	102.8	101	1.8	10	4
	5	●	MPS1-0980L-DIN-C	46.1	60.8	61.8	102.8	101	1.8	10	2
	2	●	MPS1-0980-PC	21.1	44.5	44.5	90.5	89	1.5	10	2
	8	●	MPS1-0980-L8C	80.4	112.0	115.0	156.0	154	2.0	10	2
	10	□	MPS1-0980-L10C	99.8	131.8	134.8	175.8	174	1.8	10	2
	12	●	MPS1-0980-L12C	119.4	151.8	154.8	195.8	194	1.8	10	2
	15	●	MPS1-0980-L15C	148.8	181.8	184.8	225.8	224	1.8	10	2
	20	●	MPS1-0980-L20C	197.8	231.8	234.8	275.8	274	1.8	10	2
	25	□	MPS1-0980-L25C	246.8	281.8	284.8	325.8	324	1.8	10	2
	30	●	MPS1-0980-L30C	295.8	331.8	334.8	375.8	374	1.8	10	2
	35	□	MPS1-0980-L35C	344.8	381.8	383.8	424.8	423	1.8	10	2
9.9	3	□	MPS1-0990S-DIN	32.0	46.8	47.8	88.8	87	1.8	10	4
	3	●	MPS1-0990S-DIN-C	32.0	46.8	47.8	88.8	87	1.8	10	2
	5	□	MPS1-0990L-DIN	46.0	60.8	61.8	102.8	101	1.8	10	4
	5	●	MPS1-0990L-DIN-C	46.0	60.8	61.8	102.8	101	1.8	10	2
	2	●	MPS1-0990-PC	21.4	44.6	44.6	90.6	89	1.6	10	2
	8	●	MPS1-0990-L8C	81.3	112.1	115.1	156.1	154	2.1	10	2
	10	□	MPS1-0990-L10C	100.8	131.8	134.8	175.8	174	1.8	10	2
	12	●	MPS1-0990-L12C	120.6	151.8	154.8	195.8	194	1.8	10	2
	15	●	MPS1-0990-L15C	150.3	181.8	184.8	225.8	224	1.8	10	2
	20	□	MPS1-0990-L20C	199.8	231.8	234.8	275.8	274	1.8	10	2
	25	□	MPS1-0990-L25C	249.3	281.8	284.8	325.8	324	1.8	10	2
	30	□	MPS1-0990-L30C	298.8	331.8	334.8	375.8	374	1.8	10	2
	35	□	MPS1-0990-L35C	348.3	381.8	383.8	424.8	423	1.8	10	2

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MPS1-1000S-DIN	31.8	46.8	47.8	88.8	87	1.8	10	4
	3	●	MPS1-1000S-DIN-C	31.8	46.8	47.8	88.8	87	1.8	10	2
	5	□	MPS1-1000L-DIN	45.8	60.8	61.8	102.8	101	1.8	10	4
	5	●	MPS1-1000L-DIN-C	45.8	60.8	61.8	102.8	101	1.8	10	2
	2	●	MPS1-1000-PC	21.6	44.6	44.6	90.6	89	1.6	10	2
	8	●	MPS1-1000-L8C	82.1	112.1	115.1	156.1	154	2.1	10	2
10.0	10	●	MPS1-1000-L10C	101.8	131.8	134.8	175.8	174	1.8	10	2
	12	●	MPS1-1000-L12C	121.8	151.8	154.8	195.8	194	1.8	10	2
	15	●	MPS1-1000-L15C	151.8	181.8	184.8	225.8	224	1.8	10	2
	20	●	MPS1-1000-L20C	201.8	231.8	234.8	275.8	274	1.8	10	2
	25	●	MPS1-1000-L25C	251.8	281.8	284.8	325.8	324	1.8	10	2
	30	●	MPS1-1000-L30C	301.8	331.8	334.8	375.8	374	1.8	10	2
	35	□	MPS1-1000-L35C	351.8	381.8	383.8	424.8	423	1.8	10	2
	3	□	MPS1-1005S-DIN	39.8	54.8	55.8	101.8	100	1.8	12	4
10.05	3	●	MPS1-1005S-DIN-C	39.8	54.8	55.8	101.8	100	1.8	12	2
	5	□	MPS1-1005L-DIN	55.8	70.8	71.8	117.8	116	1.8	12	4
	5	●	MPS1-1005L-DIN-C	55.8	70.8	71.8	117.8	116	1.8	12	2
	3	□	MPS1-1010S-DIN	39.7	54.8	55.8	101.8	100	1.8	12	4
	3	●	MPS1-1010S-DIN-C	39.7	54.8	55.8	101.8	100	1.8	12	2
	5	□	MPS1-1010L-DIN	55.7	70.8	71.8	117.8	116	1.8	12	4
	5	●	MPS1-1010L-DIN-C	55.7	70.8	71.8	117.8	116	1.8	12	2
	2	●	MPS1-1010-PC	21.8	44.6	47.6	96.6	95	1.6	12	2
10.1	8	●	MPS1-1010-L8C	82.9	118.1	121.1	167.1	165	2.1	12	2
	10	□	MPS1-1010-L10C	102.8	138.8	141.8	187.8	186	1.8	12	2
	12	●	MPS1-1010-L12C	123.0	159.8	162.8	208.8	207	1.8	12	2
	15	●	MPS1-1010-L15C	153.3	190.8	193.8	239.8	238	1.8	12	2
	20	●	MPS1-1010-L20C	203.8	243.8	246.8	292.8	291	1.8	12	2
	25	□	MPS1-1010-L25C	254.3	295.8	298.8	344.8	343	1.8	12	2
	3	□	MPS1-1020S-DIN	39.6	54.9	55.9	101.9	100	1.9	12	4
	3	●	MPS1-1020S-DIN-C	39.6	54.9	55.9	101.9	100	1.9	12	2
	5	□	MPS1-1020L-DIN	55.6	70.9	71.9	117.9	116	1.9	12	4
	5	●	MPS1-1020L-DIN-C	55.6	70.9	71.9	117.9	116	1.9	12	2
	2	●	MPS1-1020-PC	22.0	44.6	47.6	96.6	95	1.6	12	2
10.2	8	●	MPS1-1020-L8C	83.7	118.1	121.1	167.1	165	2.1	12	2
	10	□	MPS1-1020-L10C	103.9	138.9	141.9	187.9	186	1.9	12	2
	12	●	MPS1-1020-L12C	124.3	159.9	162.9	208.9	207	1.9	12	2
	15	●	MPS1-1020-L15C	154.9	190.9	193.9	239.9	238	1.9	12	2
	20	●	MPS1-1020-L20C	205.9	243.9	246.9	292.9	291	1.9	12	2
	25	□	MPS1-1020-L25C	256.9	295.9	298.9	344.9	343	1.9	12	2
	3	□	MPS1-1030S-DIN	39.4	54.9	55.9	101.9	100	1.9	12	4
	3	●	MPS1-1030S-DIN-C	39.4	54.9	55.9	101.9	100	1.9	12	2
	5	□	MPS1-1030L-DIN	55.4	70.9	71.9	117.9	116	1.9	12	4
	5	●	MPS1-1030L-DIN-C	55.4	70.9	71.9	117.9	116	1.9	12	2
	2	●	MPS1-1030-PC	22.2	44.6	47.6	96.6	95	1.6	12	2
10.3	8	●	MPS1-1030-L8C	84.5	118.1	121.1	167.1	165	2.1	12	2
	10	□	MPS1-1030-L10C	104.9	138.9	141.9	187.9	186	1.9	12	2
	12	●	MPS1-1030-L12C	125.5	159.9	162.9	208.9	207	1.9	12	2
	15	□	MPS1-1030-L15C	156.4	190.9	193.9	239.9	238	1.9	12	2
	20	□	MPS1-1030-L20C	207.9	243.9	246.9	292.9	291	1.9	12	2
	25	□	MPS1-1030-L25C	259.4	295.9	298.9	344.9	343	1.9	12	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MPS1-1040S-DIN	39.3	54.9	55.9	101.9	100	1.9	12	4
	3	●	MPS1-1040S-DIN-C	39.3	54.9	55.9	101.9	100	1.9	12	2
	5	□	MPS1-1040L-DIN	55.3	70.9	71.9	117.9	116	1.9	12	4
	5	●	MPS1-1040L-DIN-C	55.3	70.9	71.9	117.9	116	1.9	12	2
	2	●	MPS1-1040-PC	22.4	44.6	47.6	96.6	95	1.6	12	2
10.4	8	●	MPS1-1040-L8C	85.4	118.2	121.2	167.2	165	2.2	12	2
	10	□	MPS1-1040-L10C	105.9	138.9	141.9	187.9	186	1.9	12	2
	12	●	MPS1-1040-L12C	126.7	159.9	162.9	208.9	207	1.9	12	2
	15	□	MPS1-1040-L15C	157.9	190.9	193.9	239.9	238	1.9	12	2
	20	□	MPS1-1040-L20C	209.9	243.9	246.9	292.9	291	1.9	12	2
	25	□	MPS1-1040-L25C	261.9	295.9	298.9	344.9	343	1.9	12	2
	3	□	MPS1-1050S-DIN	39.2	54.9	55.9	101.9	100	1.9	12	4
	3	●	MPS1-1050S-DIN-C	39.2	54.9	55.9	101.9	100	1.9	12	2
	5	□	MPS1-1050L-DIN	55.2	70.9	71.9	117.9	116	1.9	12	4
	5	●	MPS1-1050L-DIN-C	55.2	70.9	71.9	117.9	116	1.9	12	2
	2	●	MPS1-1050-PC	22.7	44.7	47.7	96.7	95	1.7	12	2
10.5	8	●	MPS1-1050-L8C	86.2	118.2	121.2	167.2	165	2.2	12	2
	10	□	MPS1-1050-L10C	106.9	138.9	141.9	187.9	186	1.9	12	2
	12	●	MPS1-1050-L12C	127.9	159.9	162.9	208.9	207	1.9	12	2
	15	●	MPS1-1050-L15C	159.4	190.9	193.9	239.9	238	1.9	12	2
	20	●	MPS1-1050-L20C	211.9	243.9	246.9	292.9	291	1.9	12	2
	25	●	MPS1-1050-L25C	264.4	295.9	298.9	344.9	343	1.9	12	2
	3	□	MPS1-1060S-DIN	39.0	54.9	55.9	101.9	100	1.9	12	4
	3	●	MPS1-1060S-DIN-C	39.0	54.9	55.9	101.9	100	1.9	12	2
	5	□	MPS1-1060L-DIN	55.0	70.9	71.9	117.9	116	1.9	12	4
	5	●	MPS1-1060L-DIN-C	55.0	70.9	71.9	117.9	116	1.9	12	2
	2	□	MPS1-1060-PC	22.9	48.7	49.7	96.7	95	1.7	12	2
10.6	8	●	MPS1-1060-L8C	87.0	123.2	126.2	172.2	170	2.2	12	2
	10	□	MPS1-1060-L10C	107.9	144.9	147.9	193.9	192	1.9	12	2
	12	□	MPS1-1060-L12C	129.1	166.9	169.9	215.9	214	1.9	12	2
	15	□	MPS1-1060-L15C	160.9	199.9	202.9	248.9	247	1.9	12	2
	20	□	MPS1-1060-L20C	213.9	254.9	257.9	303.9	302	1.9	12	2
	25	□	MPS1-1060-L25C	266.9	309.9	312.9	358.9	357	1.9	12	2
	3	□	MPS1-1070S-DIN	38.9	54.9	55.9	101.9	100	1.9	12	4
	3	●	MPS1-1070S-DIN-C	38.9	54.9	55.9	101.9	100	1.9	12	2
	5	□	MPS1-1070L-DIN	54.9	70.9	71.9	117.9	116	1.9	12	4
	5	●	MPS1-1070L-DIN-C	54.9	70.9	71.9	117.9	116	1.9	12	2
	2	●	MPS1-1070-PC	23.1	48.7	49.7	96.7	95	1.7	12	2
10.7	8	●	MPS1-1070-L8C	87.8	123.2	126.2	172.2	170	2.2	12	2
	10	□	MPS1-1070-L10C	108.9	144.9	147.9	193.9	192	1.9	12	2
	12	●	MPS1-1070-L12C	130.3	166.9	169.9	215.9	214	1.9	12	2
	15	□	MPS1-1070-L15C	162.4	199.9	202.9	248.9	247	1.9	12	2
	20	□	MPS1-1070-L20C	215.9	254.9	257.9	303.9	302	1.9	12	2
	25	□	MPS1-1070-L25C	269.4	309.9	312.9	358.9	357	1.9	12	2
	3	□	MPS1-1080S-DIN	38.8	55.0	56.0	102.0	100	2.0	12	4
	3	●	MPS1-1080S-DIN-C	38.8	55.0	56.0	102.0	100	2.0	12	2
	5	□	MPS1-1080L-DIN	54.8	71.0	72.0	118.0	116	2.0	12	4
	5	●	MPS1-1080L-DIN-C	54.8	71.0	72.0	118.0	116	2.0	12	2
	2	●	MPS1-1080-PC	23.3	48.7	49.7	96.7	95	1.7	12	2
10.8	8	●	MPS1-1080-L8C	88.6	123.2	126.2	172.2	170	2.2	12	2
	10	□	MPS1-1080-L10C	110.0	145.0	148.0	194.0	192	2.0	12	2
	12	●	MPS1-1080-L12C	131.6	167.0	170.0	216.0	214	2.0	12	2
	15	□	MPS1-1080-L15C	164.0	200.0	203.0	249.0	247	2.0	12	2
	20	□	MPS1-1080-L20C	218.0	255.0	258.0	304.0	302	2.0	12	2
	25	□	MPS1-1080-L25C	272.0	310.0	313.0	359.0	357	2.0	12	2

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

MPS1

Punta in metallo duro a doppio margine super lunga

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MPS1-1090S-DIN	38.6	55.0	56.0	102.0	100	2.0	12	4
	3	●	MPS1-1090S-DIN-C	38.6	55.0	56.0	102.0	100	2.0	12	2
	5	□	MPS1-1090L-DIN	54.6	71.0	72.0	118.0	116	2.0	12	4
	5	●	MPS1-1090L-DIN-C	54.6	71.0	72.0	118.0	116	2.0	12	2
	2	□	MPS1-1090-PC	23.5	48.7	49.7	96.7	95	1.7	12	2
10.9	8	●	MPS1-1090-L8C	89.5	123.3	126.3	172.3	170	2.3	12	2
	10	□	MPS1-1090-L10C	111.0	145.0	148.0	194.0	192	2.0	12	2
	12	□	MPS1-1090-L12C	132.8	167.0	170.0	216.0	214	2.0	12	2
	15	□	MPS1-1090-L15C	165.5	200.0	203.0	249.0	247	2.0	12	2
	20	□	MPS1-1090-L20C	220.0	255.0	258.0	304.0	302	2.0	12	2
	25	□	MPS1-1090-L25C	274.5	310.0	313.0	359.0	357	2.0	12	2
	3	□	MPS1-1100S-DIN	38.5	55.0	56.0	102.0	100	2.0	12	4
	3	●	MPS1-1100S-DIN-C	38.5	55.0	56.0	102.0	100	2.0	12	2
	5	□	MPS1-1100L-DIN	54.5	71.0	72.0	118.0	116	2.0	12	4
	5	●	MPS1-1100L-DIN-C	54.5	71.0	72.0	118.0	116	2.0	12	2
	2	●	MPS1-1100-PC	23.7	48.7	49.7	96.7	95	1.7	12	2
11.0	8	●	MPS1-1100-L8C	90.3	123.3	126.3	172.3	170	2.3	12	2
	10	□	MPS1-1100-L10C	112.0	145.0	148.0	194.0	192	2.0	12	2
	12	●	MPS1-1100-L12C	134.0	167.0	170.0	216.0	214	2.0	12	2
	15	●	MPS1-1100-L15C	167.0	200.0	203.0	249.0	247	2.0	12	2
	20	●	MPS1-1100-L20C	222.0	255.0	258.0	304.0	302	2.0	12	2
	25	●	MPS1-1100-L25C	277.0	310.0	313.0	359.0	357	2.0	12	2
	3	□	MPS1-1110S-DIN	38.4	55.0	56.0	102.0	100	2.0	12	4
	3	●	MPS1-1110S-DIN-C	38.4	55.0	56.0	102.0	100	2.0	12	2
	5	□	MPS1-1110L-DIN	54.4	71.0	72.0	118.0	116	2.0	12	4
	5	●	MPS1-1110L-DIN-C	54.4	71.0	72.0	118.0	116	2.0	12	2
	2	●	MPS1-1110-PC	23.9	48.7	51.7	96.7	95	1.7	12	2
11.1	8	●	MPS1-1110-L8C	91.1	129.3	132.3	178.3	176	2.3	12	2
	10	□	MPS1-1110-L10C	113.0	152.0	155.0	201.0	199	2.0	12	2
	12	●	MPS1-1110-L12C	135.2	175.0	178.0	224.0	222	2.0	12	2
	15	●	MPS1-1110-L15C	168.5	209.0	212.0	258.0	256	2.0	12	2
	20	□	MPS1-1110-L20C	224.0	267.0	270.0	316.0	314	2.0	12	2
	25	●	MPS1-1110-L25C	279.5	324.0	327.0	373.0	371	2.0	12	2
	3	□	MPS1-1120S-DIN	38.2	55.0	56.0	102.0	100	2.0	12	4
	3	●	MPS1-1120S-DIN-C	38.2	55.0	56.0	102.0	100	2.0	12	2
	5	□	MPS1-1120L-DIN	54.2	71.0	72.0	118.0	116	2.0	12	4
	5	●	MPS1-1120L-DIN-C	54.2	71.0	72.0	118.0	116	2.0	12	2
	2	●	MPS1-1120-PC	24.2	48.8	51.8	96.8	95	1.8	12	2
11.2	8	●	MPS1-1120-L8C	91.9	129.3	132.3	178.3	176	2.3	12	2
	10	□	MPS1-1120-L10C	114.0	152.0	155.0	201.0	199	2.0	12	2
	12	□	MPS1-1120-L12C	136.4	175.0	178.0	224.0	222	2.0	12	2
	15	●	MPS1-1120-L15C	170.0	209.0	212.0	258.0	256	2.0	12	2
	20	□	MPS1-1120-L20C	226.0	267.0	270.0	316.0	314	2.0	12	2
	25	□	MPS1-1120-L25C	282.0	324.0	327.0	373.0	371	2.0	12	2
	3	□	MPS1-1130S-DIN	38.1	55.1	56.1	102.1	100	2.1	12	4
	3	●	MPS1-1130S-DIN-C	38.1	55.1	56.1	102.1	100	2.1	12	2
	5	□	MPS1-1130L-DIN	54.1	71.1	72.1	118.1	116	2.1	12	4
	5	●	MPS1-1130L-DIN-C	54.1	71.1	72.1	118.1	116	2.1	12	2
	2	□	MPS1-1130-PC	24.4	48.8	51.8	96.8	95	1.8	12	2
11.3	8	●	MPS1-1130-L8C	92.7	129.3	132.3	178.3	176	2.3	12	2
	10	□	MPS1-1130-L10C	115.1	152.1	155.1	201.1	199	2.1	12	2
	12	□	MPS1-1130-L12C	137.7	175.1	178.1	224.1	222	2.1	12	2
	15	□	MPS1-1130-L15C	171.6	209.1	212.1	258.1	256	2.1	12	2
	20	□	MPS1-1130-L20C	228.1	267.1	270.1	316.1	314	2.1	12	2
	25	□	MPS1-1130-L25C	284.6	324.1	327.1	373.1	371	2.1	12	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MPS1-1140S-DIN	38.0	55.1	56.1	102.1	100	2.1	12	4
	3	●	MPS1-1140S-DIN-C	38.0	55.1	56.1	102.1	100	2.1	12	2
	5	□	MPS1-1140L-DIN	54.0	71.1	72.1	118.1	116	2.1	12	4
	5	●	MPS1-1140L-DIN-C	54.0	71.1	72.1	118.1	116	2.1	12	2
	2	□	MPS1-1140-PC	24.6	48.8	51.8	96.8	95	1.8	12	2
11.4	8	●	MPS1-1140-L8C	93.6	129.4	132.4	178.4	176	2.4	12	2
	10	□	MPS1-1140-L10C	116.1	152.1	155.1	201.1	199	2.1	12	2
	12	□	MPS1-1140-L12C	138.9	175.1	178.1	224.1	222	2.1	12	2
	15	□	MPS1-1140-L15C	173.1	209.1	212.1	258.1	256	2.1	12	2
	20	□	MPS1-1140-L20C	230.1	267.1	270.1	316.1	314	2.1	12	2
	25	□	MPS1-1140-L25C	287.1	324.1	327.1	373.1	371	2.1	12	2
	3	□	MPS1-1150S-DIN	37.8	55.1	56.1	102.1	100	2.1	12	4
	3	●	MPS1-1150S-DIN-C	37.8	55.1	56.1	102.1	100	2.1	12	2
	5	□	MPS1-1150L-DIN	53.8	71.1	72.1	118.1	116	2.1	12	4
	5	●	MPS1-1150L-DIN-C	53.8	71.1	72.1	118.1	116	2.1	12	2
	2	●	MPS1-1150-PC	24.8	48.8	51.8	96.8	95	1.8	12	2
11.5	8	●	MPS1-1150-L8C	94.4	129.4	132.4	178.4	176	2.4	12	2
	10	□	MPS1-1150-L10C	117.1	152.1	155.1	201.1	199	2.1	12	2
	12	●	MPS1-1150-L12C	140.1	175.1	178.1	224.1	222	2.1	12	2
	15	●	MPS1-1150-L15C	174.6	209.1	212.1	258.1	256	2.1	12	2
	20	●	MPS1-1150-L20C	232.1	267.1	270.1	316.1	314	2.1	12	2
	25	●	MPS1-1150-L25C	289.6	324.1	327.1	373.1	371	2.1	12	2
	3	□	MPS1-1160S-DIN	37.7	55.1	56.1	102.1	100	2.1	12	4
	3	●	MPS1-1160S-DIN-C	37.7	55.1	56.1	102.1	100	2.1	12	2
	5	□	MPS1-1160L-DIN	53.7	71.1	72.1	118.1	116	2.1	12	4
	5	●	MPS1-1160L-DIN-C	53.7	71.1	72.1	118.1	116	2.1	12	2
	2	□	MPS1-1160-PC	25.0	48.8	48.8	96.8	95	1.8	12	2
11.6	8	●	MPS1-1160-L8C	95.2	134.4	137.4	183.4	181	2.4	12	2
	10	□	MPS1-1160-L10C	118.1	158.1	161.1	207.1	205	2.1	12	2
	12	□	MPS1-1160-L12C	141.3	182.1	185.1	231.1	229	2.1	12	2
	15	□	MPS1-1160-L15C	176.1	218.1	221.1	267.1	265	2.1	12	2
	20	□	MPS1-1160-L20C	234.1	278.1	281.1	327.1	325	2.1	12	2
	25	□	MPS1-1160-L25C	292.1	338.1	341.1	387.1	385	2.1	12	2
	3	□	MPS1-1170S-DIN	37.6	55.1	56.1	102.1	100	2.1	12	4
	3	●	MPS1-1170S-DIN-C	37.6	55.1	56.1	102.1	100	2.1	12	2
	5	□	MPS1-1170L-DIN	53.6	71.1	72.1	118.1	116	2.1	12	4
	5	●	MPS1-1170L-DIN-C	53.6	71.1	72.1	118.1	116	2.1	12	2
	2	●	MPS1-1170-PC	25.2	48.8	48.8	96.8	95	1.8	12	2
11.7	8	●	MPS1-1170-L8C	96.0	134.4	137.4	183.4	181	2.4	12	2
	10	□	MPS1-1170-L10C	119.1	158.1	161.1	207.1	205	2.1	12	2
	12	●	MPS1-1170-L12C	142.5	182.1	185.1	231.1	229	2.1	12	2
	15	●	MPS1-1170-L15C	177.6	218.1	221.1	267.1	265	2.1	12	2
	20	□	MPS1-1170-L20C	236.1	278.1	281.1	327.1	325	2.1	12	2
	25	□	MPS1-1170-L25C	294.6	338.1	341.1	387.1	385	2.1	12	2
	3	□	MPS1-1180S-DIN	37.4	55.1	56.1	102.1	100	2.1	12	4
	3	●	MPS1-1180S-DIN-C	37.4	55.1	56.1	102.1	100	2.1	12	2
	5	□	MPS1-1180L-DIN	53.4	71.1	72.1	118.1	116	2.1	12	4
	5	●	MPS1-1180L-DIN-C	53.4	71.1	72.1	118.1	116	2.1	12	2
	2	●	MPS1-1180-PC	25.5	48.9	48.9	96.9	95	1.9	12	2
11.8	8	●	MPS1-1180-L8C	96.8	134.4	137.4	183.4	181	2.4	12	2
	10	□	MPS1-1180-L10C	120.1	158.1	161.1	207.1	205	2.1	12	2
	12	●	MPS1-1180-L12C	143.7	182.1	185.1	231.1	229	2.1	12	2
	15	●	MPS1-1180-L15C	179.1	218.1	221.1	267.1	265	2.1	12	2
	20	□	MPS1-1180-L20C	238.1	278.1	281.1	327.1	325	2.1	12	2
	25	□	MPS1-1180-L25C	297.1	338.1	341.1	387.1	385	2.1	12	2

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
11.9	3	□	MPS1-1190S-DIN	37.3	55.2	56.2	102.2	100	2.2	12	4
	3	●	MPS1-1190S-DIN-C	37.3	55.2	56.2	102.2	100	2.2	12	2
	5	□	MPS1-1190L-DIN	53.3	71.2	72.2	118.2	116	2.2	12	4
	5	●	MPS1-1190L-DIN-C	53.3	71.2	72.2	118.2	116	2.2	12	2
	2	□	MPS1-1190-PC	25.7	48.9	48.9	96.9	95	1.9	12	2
	8	●	MPS1-1190-L8C	97.7	134.5	137.5	183.5	181	2.5	12	2
	10	□	MPS1-1190-L10C	121.2	158.2	161.2	207.2	205	2.2	12	2
	12	□	MPS1-1190-L12C	145.0	182.2	185.2	231.2	229	2.2	12	2
	15	□	MPS1-1190-L15C	180.7	218.2	221.2	267.2	265	2.2	12	2
	20	□	MPS1-1190-L20C	240.2	278.2	281.2	327.2	325	2.2	12	2
	25	□	MPS1-1190-L25C	299.7	338.2	341.2	387.2	385	2.2	12	2
12.0	3	□	MPS1-1200S-DIN	37.2	55.2	56.2	102.2	100	2.2	12	4
	3	●	MPS1-1200S-DIN-C	37.2	55.2	56.2	102.2	100	2.2	12	2
	5	□	MPS1-1200L-DIN	53.2	71.2	72.2	118.2	116	2.2	12	4
	5	●	MPS1-1200L-DIN-C	53.2	71.2	72.2	118.2	116	2.2	12	2
	2	●	MPS1-1200-PC	25.9	48.9	48.9	96.9	95	1.9	12	2
	8	●	MPS1-1200-L8C	98.5	134.5	137.5	183.5	181	2.5	12	2
	10	□	MPS1-1200-L10C	122.2	158.2	161.2	207.2	205	2.2	12	2
	12	●	MPS1-1200-L12C	146.2	182.2	185.2	231.2	229	2.2	12	2
	15	●	MPS1-1200-L15C	182.2	218.2	221.2	267.2	265	2.2	12	2
	20	●	MPS1-1200-L20C	242.2	278.2	281.2	327.2	325	2.2	12	2
	25	●	MPS1-1200-L25C	302.2	338.2	341.2	387.2	385	2.2	12	2
12.05	3	□	MPS1-1205S-DIN	42.1	60.2	61.2	107.2	105	2.2	14	4
	3	●	MPS1-1205S-DIN-C	42.1	60.2	61.2	107.2	105	2.2	14	2
	5	□	MPS1-1205L-DIN	59.1	77.2	78.2	124.2	122	2.2	14	4
	5	●	MPS1-1205L-DIN-C	59.1	77.2	78.2	124.2	122	2.2	14	2
12.1	3	□	MPS1-1210S-DIN	42.1	60.2	61.2	107.2	105	2.2	14	4
	3	●	MPS1-1210S-DIN-C	42.1	60.2	61.2	107.2	105	2.2	14	2
	5	□	MPS1-1210L-DIN	59.1	77.2	78.2	124.2	122	2.2	14	4
	5	●	MPS1-1210L-DIN-C	59.1	77.2	78.2	124.2	122	2.2	14	2
	2	●	MPS1-1210-PC	26.1	52.9	55.9	103.9	102	1.9	14	2
	8	●	MPS1-1210-L8C	99.3	140.5	143.5	189.5	187	2.5	14	2
	10	□	MPS1-1210-L10C	123.2	165.2	168.2	214.2	212	2.2	14	2
	12	●	MPS1-1210-L12C	147.4	190.2	193.2	239.2	237	2.2	14	2
	15	●	MPS1-1210-L15C	183.7	227.2	230.2	276.2	274	2.2	14	2
	20	□	MPS1-1210-L20C	244.2	290.2	293.2	339.2	337	2.2	14	2
12.2	3	□	MPS1-1220S-DIN	41.9	60.2	61.2	107.2	105	2.2	14	4
	3	●	MPS1-1220S-DIN-C	41.9	60.2	61.2	107.2	105	2.2	14	2
	5	□	MPS1-1220L-DIN	58.9	77.2	78.2	124.2	122	2.2	14	4
	5	●	MPS1-1220L-DIN-C	58.9	77.2	78.2	124.2	122	2.2	14	2
	2	●	MPS1-1220-PC	26.3	52.9	55.9	103.9	102	1.9	14	2
	8	●	MPS1-1220-L8C	100.1	140.5	143.5	189.5	187	2.5	14	2
	10	□	MPS1-1220-L10C	124.2	165.2	168.2	214.2	212	2.2	14	2
	12	●	MPS1-1220-L12C	148.6	190.2	193.2	239.2	237	2.2	14	2
	15	●	MPS1-1220-L15C	185.2	227.2	230.2	276.2	274	2.2	14	2
	20	□	MPS1-1220-L20C	246.2	290.2	293.2	339.2	337	2.2	14	2
12.3	3	□	MPS1-1230S-DIN	41.8	60.2	61.2	107.2	105	2.2	14	4
	3	●	MPS1-1230S-DIN-C	41.8	60.2	61.2	107.2	105	2.2	14	2
	5	□	MPS1-1230L-DIN	58.8	77.2	78.2	124.2	122	2.2	14	4
	5	●	MPS1-1230L-DIN-C	58.8	77.2	78.2	124.2	122	2.2	14	2
	2	□	MPS1-1230-PC	26.5	52.9	55.9	103.9	102	1.9	14	2
	8	●	MPS1-1230-L8C	100.9	140.5	143.5	189.5	187	2.5	14	2
	10	□	MPS1-1230-L10C	125.2	165.2	168.2	214.2	212	2.2	14	2
	12	□	MPS1-1230-L12C	149.8	190.2	193.2	239.2	237	2.2	14	2
	15	□	MPS1-1230-L15C	186.7	227.2	230.2	276.2	274	2.2	14	2
	20	□	MPS1-1230-L20C	248.2	290.2	293.2	339.2	337	2.2	14	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
12.4	3	□	MPS1-1240S-DIN	41.7	60.3	61.3	107.3	105	2.3	14	4
	3	●	MPS1-1240S-DIN-C	41.7	60.3	61.3	107.3	105	2.3	14	2
	5	□	MPS1-1240L-DIN	58.7	77.3	78.3	124.3	122	2.3	14	4
	5	●	MPS1-1240L-DIN-C	58.7	77.3	78.3	124.3	122	2.3	14	2
	2	□	MPS1-1240-PC	26.8	53.0	56.0	104.0	102	2.0	14	2
	8	●	MPS1-1240-L8C	101.8	140.6	143.6	189.6	187	2.6	14	2
	10	□	MPS1-1240-L10C	126.3	165.3	168.3	214.3	212	2.3	14	2
	12	□	MPS1-1240-L12C	151.1	190.3	193.3	239.3	237	2.3	14	2
	15	□	MPS1-1240-L15C	188.3	227.3	230.3	276.3	274	2.3	14	2
	20	□	MPS1-1240-L20C	250.3	290.3	293.3	339.3	337	2.3	14	2
12.5	3	□	MPS1-1250S-DIN	41.5	60.3	61.3	107.3	105	2.3	14	4
	3	●	MPS1-1250S-DIN-C	41.5	60.3	61.3	107.3	105	2.3	14	2
	5	□	MPS1-1250L-DIN	58.5	77.3	78.3	124.3	122	2.3	14	4
	5	●	MPS1-1250L-DIN-C	58.5	77.3	78.3	124.3	122	2.3	14	2
	2	●	MPS1-1250-PC	27.0	53.0	56.0	104.0	102	2.0	14	2
	8	●	MPS1-1250-L8C	102.6	140.6	143.6	189.6	187	2.6	14	2
	10	□	MPS1-1250-L10C	127.3	165.3	168.3	214.3	212	2.3	14	2
	12	●	MPS1-1250-L12C	152.3	190.3	193.3	239.3	237	2.3	14	2
	15	●	MPS1-1250-L15C	189.8	227.3	230.3	276.3	274	2.3	14	2
	20	□	MPS1-1250-L20C	252.3	290.3	293.3	339.3	337	2.3	14	2
12.6	3	□	MPS1-1260S-DIN	41.4	60.3	61.3	107.3	105	2.3	14	4
	3	●	MPS1-1260S-DIN-C	41.4	60.3	61.3	107.3	105	2.3	14	2
	5	□	MPS1-1260L-DIN	58.4	77.3	78.3	124.3	122	2.3	14	4
	5	●	MPS1-1260L-DIN-C	58.4	77.3	78.3	124.3	122	2.3	14	2
	2	□	MPS1-1260-PC	27.2	53.0	55.0	104.0	102	2.0	14	2
	8	●	MPS1-1260-L8C	103.4	145.6	148.6	194.6	192	2.6	14	2
	10	□	MPS1-1260-L10C	128.3	171.3	174.3	220.3	218	2.3	14	2
	12	□	MPS1-1260-L12C	153.5	197.3	200.3	246.3	244	2.3	14	2
	15	□	MPS1-1260-L15C	191.3	236.3	239.3	285.3	283	2.3	14	2
	20	□	MPS1-1260-L20C	254.3	301.3	304.3	350.3	348	2.3	14	2
12.7	3	□	MPS1-1270S-DIN	41.3	60.3	61.3	107.3	105	2.3	14	4
	3	●	MPS1-1270S-DIN-C	41.3	60.3	61.3	107.3	105	2.3	14	2
	5	□	MPS1-1270L-DIN	58.3	77.3	78.3	124.3	122	2.3	14	4
	5	●	MPS1-1270L-DIN-C	58.3	77.3	78.3	124.3	122	2.3	14	2
	2	●	MPS1-1270-PC	27.4	53.0	55.0	104.0	102	2.0	14	2
	8	●	MPS1-1270-L8C	104.2	145.6	148.6	194.6	192	2.6	14	2
	10	□	MPS1-1270-L10C	129.3	171.3	174.3	220.3	218	2.3	14	2
	12	●	MPS1-1270-L12C	154.7	197.3	200.3	246.3	244	2.3	14	2
	15	□	MPS1-1270-L15C	192.8	236.3	239.3	285.3	283	2.3	14	2
	20	□	MPS1-1270-L20C	256.3	301.3	304.3	350.3	348	2.3	14	2
12.8	3	□	MPS1-1280S-DIN	41.1	60.3	61.3	107.3	105	2.3	14	4
	3	●	MPS1-1280S-DIN-C	41.1	60.3	61.3	107.3	105	2.3	14	2
	5	□	MPS1-1280L-DIN	58.1	77.3	78.3	124.3	122	2.3	14	4
	5	●	MPS1-1280L-DIN-C	58.1	77.3	78.3	124.3	122	2.3	14	2
	2	●	MPS1-1280-PC	27.6	53.0	55.0	104.0	102	2.0	14	2
	8	●	MPS1-1280-L8C	105.1	145.7	148.7	194.7	192	2.7	14	2
	10	□	MPS1-1280-L10C	130.3	171.3	174.3	220.3	218	2.3	14	2
	12	●	MPS1-1280-L12C	155.9	197.3	200.3	246.3	244	2.3	14	2
	15	□	MPS1-1280-L15C	194.3	236.3	239.3	285.3	283	2.3	14	2
	20	□	MPS1-1280-L20C	258.3	301.3	304.3	350.3	348	2.3	14	2

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

MPS1

Punta in metallo duro a doppio margine super lunga

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
12.9	3	□	MPS1-1290S-DIN	41.0	60.3	61.3	107.3	105	2.3	14	4
	3	●	MPS1-1290S-DIN-C	41.0	60.3	61.3	107.3	105	2.3	14	2
	5	□	MPS1-1290L-DIN	58.0	77.3	78.3	124.3	122	2.3	14	4
	5	●	MPS1-1290L-DIN-C	58.0	77.3	78.3	124.3	122	2.3	14	2
	2	□	MPS1-1290-PC	27.8	53.0	55.0	104.0	102	2.0	14	2
	8	●	MPS1-1290-L8C	105.9	145.7	148.7	194.7	192	2.7	14	2
	10	□	MPS1-1290-L10C	131.3	171.3	174.3	220.3	218	2.3	14	2
	12	□	MPS1-1290-L12C	157.1	197.3	200.3	246.3	244	2.3	14	2
	15	□	MPS1-1290-L15C	195.8	236.3	239.3	285.3	283	2.3	14	2
	20	□	MPS1-1290-L20C	260.3	301.3	304.3	350.3	348	2.3	14	2
13.0	3	□	MPS1-1300S-DIN	40.9	60.4	61.4	107.4	105	2.4	14	4
	3	●	MPS1-1300S-DIN-C	40.9	60.4	61.4	107.4	105	2.4	14	2
	5	□	MPS1-1300L-DIN	57.9	77.4	78.4	124.4	122	2.4	14	4
	5	●	MPS1-1300L-DIN-C	57.9	77.4	78.4	124.4	122	2.4	14	2
	2	●	MPS1-1300-PC	28.0	53.0	55.0	104.0	102	2.0	14	2
	8	●	MPS1-1300-L8C	106.7	145.7	148.7	194.7	192	2.7	14	2
	10	□	MPS1-1300-L10C	132.4	171.4	174.4	220.4	218	2.4	14	2
	12	●	MPS1-1300-L12C	158.4	197.4	200.4	246.4	244	2.4	14	2
	15	●	MPS1-1300-L15C	197.4	236.4	239.4	285.4	283	2.4	14	2
	20	●	MPS1-1300-L20C	262.4	301.4	304.4	350.4	348	2.4	14	2
13.1	3	□	MPS1-1310S-DIN	40.7	60.4	61.4	107.4	105	2.4	14	4
	3	●	MPS1-1310S-DIN-C	40.7	60.4	61.4	107.4	105	2.4	14	2
	5	□	MPS1-1310L-DIN	57.7	77.4	78.4	124.4	122	2.4	14	4
	5	●	MPS1-1310L-DIN-C	57.7	77.4	78.4	124.4	122	2.4	14	2
	2	□	MPS1-1310-PC	28.3	56.1	59.1	109.1	107	2.1	14	2
	8	●	MPS1-1310-L8C	107.5	151.7	154.7	200.7	198	2.7	14	2
	10	□	MPS1-1310-L10C	133.4	178.4	181.4	227.4	225	2.4	14	2
	12	□	MPS1-1310-L12C	159.6	205.4	208.4	254.4	252	2.4	14	2
	15	□	MPS1-1310-L15C	198.9	245.4	248.4	294.4	292	2.4	14	2
	20	□	MPS1-1310-L20C	264.4	313.4	316.4	362.4	360	2.4	14	2
13.2	3	□	MPS1-1320S-DIN	40.6	60.4	61.4	107.4	105	2.4	14	4
	3	●	MPS1-1320S-DIN-C	40.6	60.4	61.4	107.4	105	2.4	14	2
	5	□	MPS1-1320L-DIN	57.6	77.4	78.4	124.4	122	2.4	14	4
	5	●	MPS1-1320L-DIN-C	57.6	77.4	78.4	124.4	122	2.4	14	2
	2	●	MPS1-1320-PC	28.5	56.1	59.1	109.1	107	2.1	14	2
	8	●	MPS1-1320-L8C	108.3	151.7	154.7	200.7	198	2.7	14	2
	10	□	MPS1-1320-L10C	134.4	178.4	181.4	227.4	225	2.4	14	2
	12	●	MPS1-1320-L12C	160.8	205.4	208.4	254.4	252	2.4	14	2
	15	□	MPS1-1320-L15C	200.4	245.4	248.4	294.4	292	2.4	14	2
	20	□	MPS1-1320-L20C	266.4	313.4	316.4	362.4	360	2.4	14	2
13.3	3	□	MPS1-1330S-DIN	40.5	60.4	61.4	107.4	105	2.4	14	4
	3	●	MPS1-1330S-DIN-C	40.5	60.4	61.4	107.4	105	2.4	14	2
	5	□	MPS1-1330L-DIN	57.5	77.4	78.4	124.4	122	2.4	14	4
	5	●	MPS1-1330L-DIN-C	57.5	77.4	78.4	124.4	122	2.4	14	2
	2	□	MPS1-1330-PC	28.7	56.1	59.1	109.1	107	2.1	14	2
	8	●	MPS1-1330-L8C	109.2	151.8	154.8	200.8	198	2.8	14	2
	10	□	MPS1-1330-L10C	135.4	178.4	181.4	227.4	225	2.4	14	2
	12	□	MPS1-1330-L12C	162.0	205.4	208.4	254.4	252	2.4	14	2
	15	□	MPS1-1330-L15C	201.9	245.4	248.4	294.4	292	2.4	14	2
	20	□	MPS1-1330-L20C	268.4	313.4	316.4	362.4	360	2.4	14	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
13.4	3	□	MPS1-1340S-DIN	40.3	60.4	61.4	107.4	105	2.4	14	4
	3	●	MPS1-1340S-DIN-C	40.3	60.4	61.4	107.4	105	2.4	14	2
	5	□	MPS1-1340L-DIN	57.3	77.4	78.4	124.4	122	2.4	14	4
	5	●	MPS1-1340L-DIN-C	57.3	77.4	78.4	124.4	122	2.4	14	2
	2	□	MPS1-1340-PC	28.9	56.1	59.1	109.1	107	2.1	14	2
	8	●	MPS1-1340-L8C	110.0	151.8	154.8	200.8	198	2.8	14	2
	10	□	MPS1-1340-L10C	136.4	178.4	181.4	227.4	225	2.4	14	2
	12	□	MPS1-1340-L12C	163.2	205.4	208.4	254.4	252	2.4	14	2
	15	□	MPS1-1340-L15C	203.4	245.4	248.4	294.4	292	2.4	14	2
	20	□	MPS1-1340-L20C	270.4	313.4	316.4	362.4	360	2.4	14	2
13.5	3	□	MPS1-1350S-DIN	40.2	60.5	61.5	107.5	105	2.5	14	4
	3	●	MPS1-1350S-DIN-C	40.2	60.5	61.5	107.5	105	2.5	14	2
	5	□	MPS1-1350L-DIN	57.2	77.5	78.5	124.5	122	2.5	14	4
	5	●	MPS1-1350L-DIN-C	57.2	77.5	78.5	124.5	122	2.5	14	2
	2	●	MPS1-1350-PC	29.1	56.1	59.1	109.1	107	2.1	14	2
	8	●	MPS1-1350-L8C	110.8	151.8	154.8	200.8	198	2.8	14	2
	10	□	MPS1-1350-L10C	137.5	178.5	181.5	227.5	225	2.5	14	2
	12	●	MPS1-1350-L12C	164.5	205.5	208.5	254.5	252	2.5	14	2
	15	□	MPS1-1350-L15C	205.0	245.5	248.5	294.5	292	2.5	14	2
	20	□	MPS1-1350-L20C	272.5	313.5	316.5	362.5	360	2.5	14	2
13.6	3	□	MPS1-1360S-DIN	40.1	60.5	61.5	107.5	105	2.5	14	4
	3	●	MPS1-1360S-DIN-C	40.1	60.5	61.5	107.5	105	2.5	14	2
	5	□	MPS1-1360L-DIN	57.1	77.5	78.5	124.5	122	2.5	14	4
	5	●	MPS1-1360L-DIN-C	57.1	77.5	78.5	124.5	122	2.5	14	2
	2	□	MPS1-1360-PC	29.3	56.1	56.1	109.1	107	2.1	14	2
	8	●	MPS1-1360-L8C	111.6	156.8	159.8	205.8	203	2.8	14	2
	10	□	MPS1-1360-L10C	138.5	184.5	187.5	233.5	231	2.5	14	2
	12	□	MPS1-1360-L12C	165.7	212.5	215.5	261.5	259	2.5	14	2
	15	□	MPS1-1360-L15C	206.5	254.5	257.5	303.5	301	2.5	14	2
	20	□	MPS1-1360-L20C	274.5	324.5	327.5	373.5	371	2.5	14	2
13.7	3	□	MPS1-1370S-DIN	39.9	60.5	61.5	107.5	105	2.5	14	4
	3	●	MPS1-1370S-DIN-C	39.9	60.5	61.5	107.5	105	2.5	14	2
	5	□	MPS1-1370L-DIN	56.9	77.5	78.5	124.5	122	2.5	14	4
	5	●	MPS1-1370L-DIN-C	56.9	77.5	78.5	124.5	122	2.5	14	2
	2	□	MPS1-1370-PC	29.6	56.2	56.2	109.2	107	2.2	14	2
	8	●	MPS1-1370-L8C	112.4	156.8	159.8	205.8	203	2.8	14	2
	10	□	MPS1-1370-L10C	139.5	184.5	187.5	233.5	231	2.5	14	2
	12	□	MPS1-1370-L12C	166.9	212.5	215.5	261.5	259	2.5	14	2
	15	□	MPS1-1370-L15C	208.0	254.5	257.5	303.5	301	2.5	14	2
	20	□	MPS1-1370-L20C	276.5	324.5	327.5	373.5	371	2.5	14	2
13.8	3	□	MPS1-1380S-DIN	39.8	60.5	61.5	107.5	105	2.5	14	4
	3	●	MPS1-1380S-DIN-C	39.8	60.5	61.5	107.5	105	2.5	14	2
	5	□	MPS1-1380L-DIN	56.8	77.5	78.5	124.5	122	2.5	14	4
	5	●	MPS1-1380L-DIN-C	56.8	77.5	78.5	124.5	122	2.5	14	2
	2	□	MPS1-1380-PC	29.8	56.2	56.2	109.2	107	2.2	14	2
	8	●	MPS1-1380-L8C	113.3	156.9	159.9	205.9	203	2.9	14	2
	10	□	MPS1-1380-L10C	140.5	184.5	187.5	233.5	231	2.5	14	2
	12	□	MPS1-1380-L12C	168.1	212.5	215.5	261.5	259	2.5	14	2
	15	□	MPS1-1380-L15C	209.5	254.5	257.5	303.5	301	2.5	14	2
	20	□	MPS1-1380-L20C	278.5	324.5	327.5	373.5	371	2.5	14	2

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
13.9	3	□	MPS1-1390S-DIN	39.7	60.5	61.5	107.5	105	2.5	14	4
	3	●	MPS1-1390S-DIN-C	39.7	60.5	61.5	107.5	105	2.5	14	2
	5	□	MPS1-1390L-DIN	56.7	77.5	78.5	124.5	122	2.5	14	4
	5	●	MPS1-1390L-DIN-C	56.7	77.5	78.5	124.5	122	2.5	14	2
	2	□	MPS1-1390-PC	30.0	56.2	56.2	109.2	107	2.2	14	2
	8	●	MPS1-1390-L8C	114.1	156.9	159.9	205.9	203	2.9	14	2
	10	□	MPS1-1390-L10C	141.5	184.5	187.5	233.5	231	2.5	14	2
	12	□	MPS1-1390-L12C	169.3	212.5	215.5	261.5	259	2.5	14	2
	15	□	MPS1-1390-L15C	211.0	254.5	257.5	303.5	301	2.5	14	2
	20	□	MPS1-1390-L20C	280.5	324.5	327.5	373.5	371	2.5	14	2
14.0	3	□	MPS1-1400S-DIN	39.5	60.5	61.5	107.5	105	2.5	14	4
	3	●	MPS1-1400S-DIN-C	39.5	60.5	61.5	107.5	105	2.5	14	2
	5	□	MPS1-1400L-DIN	56.5	77.5	78.5	124.5	122	2.5	14	4
	5	●	MPS1-1400L-DIN-C	56.5	77.5	78.5	124.5	122	2.5	14	2
	2	●	MPS1-1400-PC	30.2	56.2	56.2	109.2	107	2.2	14	2
	8	●	MPS1-1400-L8C	114.9	156.9	159.9	205.9	203	2.9	14	2
	10	□	MPS1-1400-L10C	142.5	184.5	187.5	233.5	231	2.5	14	2
	12	●	MPS1-1400-L12C	170.5	212.5	215.5	261.5	259	2.5	14	2
	15	●	MPS1-1400-L15C	212.5	254.5	257.5	303.5	301	2.5	14	2
	20	●	MPS1-1400-L20C	282.5	324.5	327.5	373.5	371	2.5	14	2
14.2	3	□	MPS1-1420S-DIN	43.3	64.6	65.6	114.6	112	2.6	16	4
	3	●	MPS1-1420S-DIN-C	43.3	64.6	65.6	114.6	112	2.6	16	2
	5	□	MPS1-1420L-DIN	61.3	82.6	83.6	132.6	130	2.6	16	4
	5	●	MPS1-1420L-DIN-C	61.3	82.6	83.6	132.6	130	2.6	16	2
14.5	3	□	MPS1-1450S-DIN	42.9	64.6	65.6	114.6	112	2.6	16	4
	3	●	MPS1-1450S-DIN-C	42.9	64.6	65.6	114.6	112	2.6	16	2
	5	□	MPS1-1450L-DIN	60.9	82.6	83.6	132.6	130	2.6	16	4
	5	●	MPS1-1450L-DIN-C	60.9	82.6	83.6	132.6	130	2.6	16	2
15.0	3	□	MPS1-1500S-DIN	42.2	64.7	65.7	114.7	112	2.7	16	4
	3	●	MPS1-1500S-DIN-C	42.2	64.7	65.7	114.7	112	2.7	16	2
	5	□	MPS1-1500L-DIN	60.2	82.7	83.7	132.7	130	2.7	16	4
	5	●	MPS1-1500L-DIN-C	60.2	82.7	83.7	132.7	130	2.7	16	2
15.5	3	□	MPS1-1550S-DIN	41.6	64.8	65.8	114.8	112	2.8	16	4
	3	●	MPS1-1550S-DIN-C	41.6	64.8	65.8	114.8	112	2.8	16	2
	5	□	MPS1-1550L-DIN	59.6	82.8	83.8	132.8	130	2.8	16	4
	5	●	MPS1-1550L-DIN-C	59.6	82.8	83.8	132.8	130	2.8	16	2
16.0	3	□	MPS1-1600S-DIN	40.9	64.9	65.9	114.9	112	2.9	16	4
	3	●	MPS1-1600S-DIN-C	40.9	64.9	65.9	114.9	112	2.9	16	2
	5	□	MPS1-1600L-DIN	58.9	82.9	83.9	132.9	130	2.9	16	4
	5	●	MPS1-1600L-DIN-C	58.9	82.9	83.9	132.9	130	2.9	16	2
16.5	3	□	MPS1-1650S-DIN	48.3	73.0	74.0	123.0	120	3.0	18	4
	3	●	MPS1-1650S-DIN-C	48.3	73.0	74.0	123.0	120	3.0	18	2
	5	□	MPS1-1650L-DIN	68.3	93.0	94.0	143.0	140	3.0	18	4
	5	●	MPS1-1650L-DIN-C	68.3	93.0	94.0	143.0	140	3.0	18	2
17.0	3	□	MPS1-1700S-DIN	47.6	73.1	74.1	123.1	120	3.1	18	4
	3	●	MPS1-1700S-DIN-C	47.6	73.1	74.1	123.1	120	3.1	18	2
	5	□	MPS1-1700L-DIN	67.6	93.1	94.1	143.1	140	3.1	18	4
	5	●	MPS1-1700L-DIN-C	67.6	93.1	94.1	143.1	140	3.1	18	2
17.5	3	□	MPS1-1750S-DIN	46.9	73.2	74.2	123.2	120	3.2	18	4
	3	●	MPS1-1750S-DIN-C	46.9	73.2	74.2	123.2	120	3.2	18	2
	5	□	MPS1-1750L-DIN	66.9	93.2	94.2	143.2	140	3.2	18	4
	5	●	MPS1-1750L-DIN-C	66.9	93.2	94.2	143.2	140	3.2	18	2
18.0	3	□	MPS1-1800S-DIN	46.3	73.3	74.3	123.3	120	3.3	18	4
	3	●	MPS1-1800S-DIN-C	46.3	73.3	74.3	123.3	120	3.3	18	2
	5	□	MPS1-1800L-DIN	66.3	93.3	94.3	143.3	140	3.3	18	4
	5	●	MPS1-1800L-DIN-C	66.3	93.3	94.3	143.3	140	3.3	18	2

DC (mm)	Profondità foro (L/D)	DP1021	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
18.5	3	□	MPS1-1850S-DIN	51.6	79.4	80.4	131.4	128	3.4	20	4
	3	●	MPS1-1850S-DIN-C	51.6	79.4	80.4	131.4	128	3.4	20	2
	5	□	MPS1-1850L-DIN	73.6	101.4	102.4	153.4	150	3.4	20	4
	5	●	MPS1-1850L-DIN-C	73.6	101.4	102.4	153.4	150	3.4	20	2
19.0	3	□	MPS1-1900S-DIN	51.0	79.5	80.5	131.5	128	3.5	20	4
	3	●	MPS1-1900S-DIN-C	51.0	79.5	80.5	131.5	128	3.5	20	2
	5	□	MPS1-1900L-DIN	73.0	101.5	102.5	153.5	150	3.5	20	4
	5	●	MPS1-1900L-DIN-C	73.0	101.5	102.5	153.5	150	3.5	20	2
19.5	3	□	MPS1-1950S-DIN	50.3	79.5	80.5	131.5	128	3.5	20	4
	3	●	MPS1-1950S-DIN-C	50.3	79.5	80.5	131.5	128	3.5	20	2
	5	□	MPS1-1950L-DIN	72.3	101.5	102.5	153.5	150	3.5	20	4
	5	●	MPS1-1950L-DIN-C	72.3	101.5	102.5	153.5	150	3.5	20	2
20.0	3	□	MPS1-2000S-DIN	49.6	79.6	80.6	131.6	128	3.6	20	4
	3	●	MPS1-2000S-DIN-C	49.6	79.6	80.6	131.6	128	3.6	20	2
	5	□	MPS1-2000L-DIN	71.6	101.6	102.6	153.6	150	3.6	20	4
	5	●	MPS1-2000L-DIN-C	71.6	101.6	102.6	153.6	150	3.6	20	2

PARAMETRI DI TAGLIO ➤ M072
GUIDA OPERATIVA ➤ M073
DATI TECNICI ➤ P001

FORATURA (METALLO DURO)

MPS1

Punta in metallo duro a doppio margine super lunga

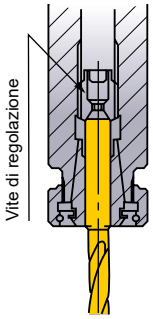
PARAMETRI DI TAGLIO CONSIGLIATI

● PUNTE MPS1 (3xDC – 40xDC)

DC	L x DC		P			M	K		
			Acciaio dolce, Acciaio al carbonio, Acciaio legato			Acciaio inossidabile	Ghisa		
			≤ 180 HB	180–250 HB	280–350 HB		≤ 350 MPa	≤ 450 MPa	≤ 800 MPa
3	3–8	Vc m/min	100 (60–150)	90 (60–140)	80 (50–110)	40 (20–50)	90 (60–100)	80 (50–90)	60 (40–80)
		f mm/giro	0.15 (0.1–0.2)	0.15 (0.1–0.19)	0.12 (0.1–0.14)	0.08 (0.06–0.12)	0.15 (0.1–0.2)	0.12 (0.08–0.16)	0.09 (0.06–0.12)
	10–25	Vc m/min	90 (40–110)	90 (40–110)	80 (40–90)	40 (20–60)	90 (40–110)	90 (40–110)	—
		f mm/giro	0.17 (0.1–0.24)	0.17 (0.1–0.24)	0.15 (0.09–0.22)	0.07 (0.05–0.09)	0.19 (0.11–0.26)	0.17 (0.1–0.24)	—
	30–40	Vc m/min	75 (40–95)	75 (40–85)	65 (40–75)	30 (20–50)	75 (45–95)	30 (20–50)	—
		f mm/giro	0.14 (0.08–0.19)	0.14 (0.08–0.19)	0.15 (0.07–0.18)	0.06 (0.04–0.07)	0.15 (0.09–0.21)	0.14 (0.08–0.19)	—
4	3–8	Vc m/min	120 (70–170)	100 (70–160)	90 (60–120)	40 (30–50)	100 (70–110)	90 (60–100)	70 (50–90)
		f mm/giro	0.19 (0.12–0.25)	0.18 (0.12–0.24)	0.15 (0.12–0.18)	0.09 (0.07–0.13)	0.21 (0.12–0.3)	0.17 (0.1–0.24)	0.13 (0.08–0.18)
	10–25	Vc m/min	90 (40–110)	90 (40–110)	80 (40–90)	40 (20–60)	90 (40–110)	90 (40–110)	—
		f mm/giro	0.2 (0.12–0.3)	0.2 (0.12–0.3)	0.18 (0.11–0.27)	0.08 (0.06–0.1)	0.22(0.13–0.33)	0.2 (0.12–0.3)	—
	30–40	Vc m/min	75 (40–95)	75 (40–85)	65 (40–75)	30 (20–50)	75 (45–95)	30 (20–50)	—
		f mm/giro	0.16 (0.1–0.24)	0.16 (0.1–0.24)	0.18 (0.09–0.22)	0.06 (0.05–0.08)	0.18 (0.1–0.26)	0.16 (0.1–0.24)	—
5	3–8	Vc m/min	130 (80–190)	110 (80–180)	90 (70–140)	40 (30–50)	110 (80–130)	90 (70–120)	70 (60–100)
		f mm/giro	0.23 (0.15–0.3)	0.22 (0.15–0.29)	0.19 (0.15–0.22)	0.11 (0.08–0.16)	0.25 (0.15–0.35)	0.21 (0.14–0.28)	0.17 (0.12–0.22)
	10–25	Vc m/min	90 (40–110)	90 (40–110)	80 (40–90)	40 (20–60)	90 (40–110)	90 (40–110)	—
		f mm/giro	0.25 (0.15–0.35)	0.25 (0.15–0.35)	0.22 (0.14–0.32)	0.1 (0.07–0.12)	0.28 (0.17–0.39)	0.25 (0.15–0.35)	—
	30–40	Vc m/min	75 (40–95)	75 (40–85)	65 (40–75)	30 (20–50)	75 (45–95)	30 (20–50)	—
		f mm/giro	0.2 (0.12–0.28)	0.2 (0.12–0.28)	0.22 (0.11–0.26)	0.08 (0.06–0.1)	0.22 (0.13–0.31)	0.2 (0.12–0.28)	—
6	3–8	Vc m/min	140 (90–210)	120 (90–190)	100 (80–150)	50 (40–70)	120 (90–140)	100 (80–130)	80 (70–110)
		f mm/giro	0.27 (0.18–0.35)	0.26 (0.18–0.33)	0.22 (0.18–0.25)	0.14 (0.11–0.18)	0.29 (0.18–0.4)	0.25 (0.16–0.34)	0.2 (014–0.26)
	10–25	Vc m/min	110 (70–120)	100 (60–110)	90 (40–110)	50 (20–60)	100 (60–110)	100 (60–110)	—
		f mm/giro	0.27 (0.17–0.37)	0.24 (0.15–0.33)	0.24 (0.15–0.33)	0.12 (0.08–0.16)	0.3 (0.19–0.41)	0.27 (0.17–0.37)	—
	30–40	Vc m/min	90 (40–110)	80 (40–90)	75 (40–85)	40 (20–60)	90 (60–110)	40 (30–60)	—
		f mm/giro	0.22 (0.14–0.3)	0.22 (0.14–0.3)	0.24 (0.12–0.26)	0.1 (0.06–0.13)	0.24 (0.15–0.33)	0.22 (0.14–0.3)	—
8	3–8	Vc m/min	160 (100–240)	140 (100–220)	120 (90–170)	50 (40–70)	140 (100–160)	120 (90–150)	100 (80–130)
		f mm/giro	0.3 (0.2–0.4)	0.29 (0.2–0.38)	0.24 (0.2–0.27)	0.15 (0.12–0.2)	0.33 (0.2–0.45)	0.28 (0.18–0.38)	0.23 (0.16–0.3)
	10–25	Vc m/min	110 (70–120)	100 (60–110)	90 (40–110)	50 (20–60)	100 (60–110)	100 (60–110)	—
		f mm/giro	0.3 (0.2–0.4)	0.3 (0.2–0.4)	0.27 (0.18–0.36)	0.14 (0.1–0.17)	0.33 (0.22–0.44)	0.3 (0.2–0.4)	—
	30–40	Vc m/min	90 (40–110)	80 (40–90)	75 (40–85)	40 (20–50)	90 (60–100)	40 (30–60)	—
		f mm/giro	0.24 (0.16–0.32)	0.24 (0.16–0.32)	0.27 (0.14–0.29)	0.11 (0.08–0.14)	0.26 (0.18–0.35)	0.24 (0.16–0.32)	—
10	3–8	Vc m/min	170 (100–250)	150 (100–230)	130 (90–180)	50 (40–70)	150 (100–170)	130 (90–160)	110 (80–140)
		f mm/giro	0.33 (0.2–0.45)	0.32 (0.2–0.43)	0.25 (0.2–0.3)	0.16 (0.12–0.22)	0.35 (0.2–0.5)	0.29 (0.18–0.4)	0.24 (0.16–0.32)
	10–25	Vc m/min	110 (70–120)	100 (60–110)	90 (40–110)	50 (20–60)	100 (60–110)	100 (60–110)	—
		f mm/giro	0.32 (0.22–0.42)	0.32 (0.22–0.42)	0.29 (0.2–0.38)	0.15 (0.12–0.18)	0.35 (0.24–0.46)	0.32 (0.22–0.42)	—
	30–40	Vc m/min	90 (40–110)	80 (40–90)	75 (40–95)	40 (20–50)	90 (60–100)	40 (30–60)	—
		f mm/giro	0.26 (0.18–0.34)	0.26 (0.18–0.34)	0.29 (0.16–0.3)	0.12 (0.1–0.14)	0.28 (0.19–0.37)	0.26 (0.18–0.34)	—
12	3–8	Vc m/min	180 (100–250)	160 (100–230)	140 (90–180)	50 (40–70)	160 (100–170)	140 (90–160)	110 (80–140)
		f mm/giro	0.35 (0.2–0.5)	0.34 (0.2–0.48)	0.27 (0.2–0.34)	0.18 (0.14–0.24)	0.4 (0.2–0.6)	0.31 (0.18–0.44)	0.25 (0.16–0.34)
	10–25	Vc m/min	130 (90–150)	120 (80–140)	100 (60–110)	60 (25–65)	120 (90–140)	120 (90–140)	—
		f mm/giro	0.34 (0.24–0.44)	0.34 (0.24–0.44)	0.3 (0.22–0.4)	0.17 (0.14–0.19)	0.37 (0.26–0.48)	0.34 (0.24–0.44)	—
	30–40	Vc m/min	105 (55–125)	95 (55–105)	80 (40–100)	50 (20–60)	105 (65–115)	50 (40–70)	—
		f mm/giro	0.27 (0.19–0.35)	0.27 (0.19–0.35)	0.3 (0.18–0.32)	0.14 (0.11–0.15)	0.3 (0.21–0.38)	0.27 (0.19–0.35)	—
16	3–8	Vc m/min	180 (100–250)	160 (100–230)	140 (90–180)	50 (40–70)	160 (100–170)	140 (90–160)	110 (80–140)
		f mm/giro	0.38 (0.2–0.55)	0.36 (0.2–0.52)	0.28 (0.2–0.36)	0.19 (0.15–0.26)	0.43 (0.2–0..65)	0.33 (0.18–0.48)	0.27 (0.16–0.38)
	10–25	Vc m/min	130 (90–150)	120 (80–140)	100 (60–110)	60 (25–65)	120 (90–140)	120 (90–140)	—
		f mm/giro	0.36 (0.26–0.46)	0.36 (0.26–0.46)	0.32 (0.23–0.41)	0.17 (0.14–0.19)	0.4 (0.29–0.48)	0.36 (0.26–0.46)	—
20	3–8	Vc m/min	180 (100–250)	160 (100–230)	140 (90–180)	50 (40–70)	160 (100–170)	140 (90–160)	110 (80–140)
		f mm/giro	0.4 (0.2–0.6)	0.39 (0.2–0.57)	0.3 (0.2–0.4)	0.21 (0.16–0.28)	0.45 (0.2–0.7)	0.35 (0.18–0.52)	0.28 (0.16–0.4)

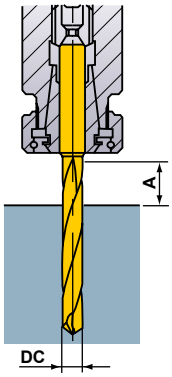
■ MANUALE D'USO PER PUNTA LUNGA DI TIPO MPS1

Mandrino di tenuta



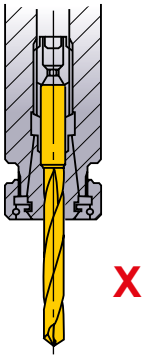
La ghiera reggispinta del mandrino blocca la punta in modo sicuro.

Lunghezza punta



A ≥ DC x 1.5

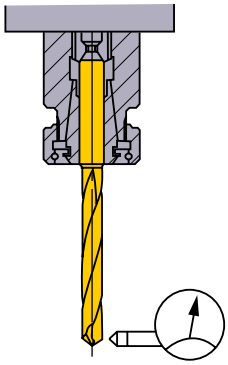
Montaggio punta



X

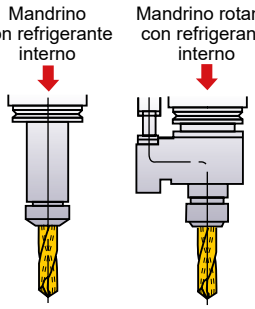
Non bloccare la punta sull'elica.

Tolleranza d'installazione



Eccentricità ≤ 0.03mm

Tipo con refrigerante interno



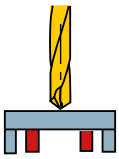
La pressione del refrigerante è circa 5—10 bar
(< Ø5:2—30 bar).

Utilizzo del refrigerante

1) Piccole particelle di sporco possono ostruire i fori di passaggio olio. Utilizzare sempre un filtro a maglia fine come misura preventiva.

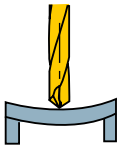
2) Sporcizia e particelle metalliche aderiscono al vecchio refrigerante. Un regolare cambio di refrigerante è raccomandato.

Pezzi sottili



OK

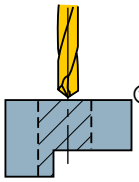
Supporti per il pezzo



X

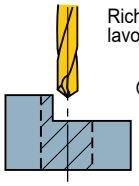
Se tende a flettere

Taglio interrotto



OK

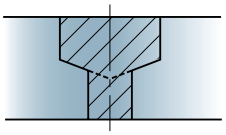
①Ridurre l'avanzamento quando si fora sulla parte con taglio interrotto.



Richiede una precedente lavorazione

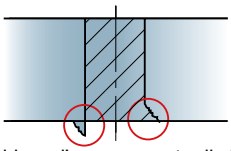
①Praticare un'impronta piana con fresa integrale prima della foratura.

Foratura a gradino



①Dividere in due fasi.
②Forare il diametro maggiore per primo.
*La punta che realizza i due diametri contemporaneamente può essere prodotta su richiesta.

Bave e scheggiature sul pezzo



①Ridurre l'avanzamento di circa il 50% prima dell'uscita della punta dal foro.
②Aggiungere uno smusso a 45°.
③Variare l'angolo della punta.

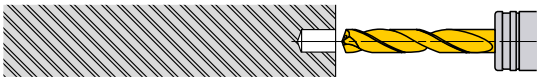
MPS1

Punta in metallo duro a doppio margine super lunga

MODALITÀ DI IMPIEGO DELLE PUNTE SUPER LUNGHE

FORATURA PER SUPERFICIE PIANA ● Foratura di un foro cieco

■ 1. Foratura di un foro pilota



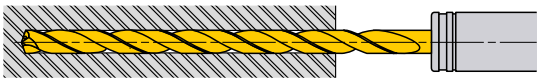
①Utilizzare una punta con un angolo tra i taglienti maggiore (più piatta) rispetto al tipo più lungo. Usare l'elica più corta possibile.
②Assicurarsi che la punta esegua un foro guida ad elevata precisione.
③Profondità di foratura: circa 1DC o superiore.
(Regolare la profondità del foro pilota in base alla lunghezza del tipo più lungo.)

■ 2. Taglio iniziale con punta di tipo lungo



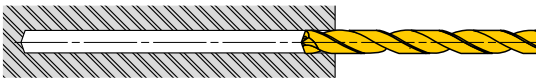
①Inserire la punta lunga nel foro pilota ad un numero di giri ridotto. Giri 1000min^{-1}, avanzamento 0.2mm－0.3mm/giro.
②Fermare la punta lunga a 0.5mm—1mm dal fondo del foro pilota.

■ 3. Foratura in profondità



①Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

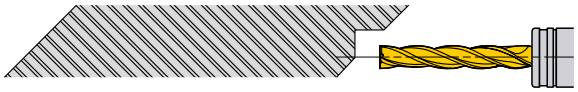
■ 4. Arretramento della punta



①Dopo aver praticato la foratura, ridurre il numero di giri del tagliente fino a circa 0.5mm-1mm dalla fine del foro (giri di circa 1000 min^{-1})
②Arretrare la punta fino al punto di inizio del foro a una velocità di avanzamento pari a 3000mm/min.
③Infine, liberare il foro a una velocità di taglio pari a 20m-30m/min e una velocità di avanzamento pari a 0.2mm-0.3mm/giro.

FORATURA INTERROTTA ● Foratura passante con interruzione o su superfici irregolari con piani inclinati.

■ 1. Spianatura



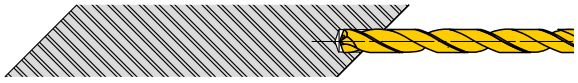
①Eseguire una superficie piana utilizzando una fresa frontale o una fresa per cave in grado di spianare. Realizzare il diametro della spianatura della stessa dimensione del diametro del foro profondo richiesto.

■ 2. Foratura di un foro pilota



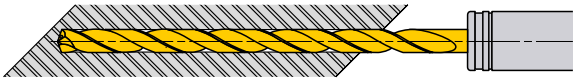
①Utilizzare una punta con un angolo tra i taglienti maggiore (più piatta) rispetto al tipo più lungo. Usare l'elica più corta possibile.
②Assicurare che la guida pratichi un foro a elevata precisione.
③Profondità di foratura: circa 1DC o superiore.
(Regolare la profondità del foro pilota in base alla lunghezza del tipo più lungo.)

■ 3. Taglio iniziale con punta di tipo lungo



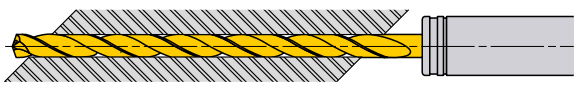
①Inserire la punta lunga nel foro pilota ad un numero di giri ridotto. Giri 1000min^{-1}, avanzamento 0.2mm－0.3mm/giro.
②Fermare la punta lunga a 0.5mm－1mm dal fondo del foro pilota.

■ 4. Foratura in profondità



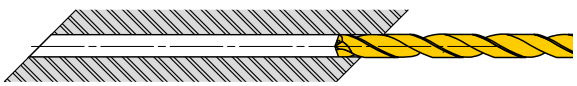
①Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

■ 5. Sfondamento



①Il tagliente potrebbe essere danneggiato in fase di sfondamento.
②Ridurre la velocità di avanzamento al momento dell'uscita dell'utensile sull'inclinato.

■ 6. Ritrazione della punta



①Infine, liberare il foro a una velocità di taglio pari a 20m－30m/min e una velocità di avanzamento pari a 0.2mm－0.3mm/giro.
②Ritrarre la punta dal punto di inizio del foro a una velocità di avanzamento pari a 3000mm/min.

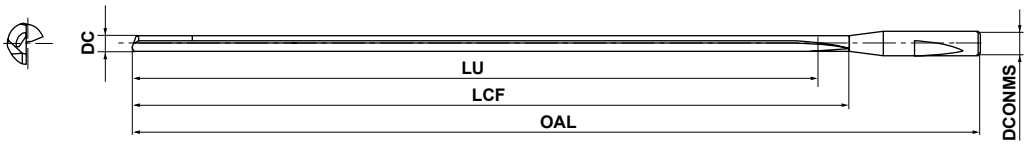
MICRO-MGS

- È possibile una micro foratura profonda.
- L'eccellente precisione di concentricità garantisce una foratura ad elevata precisione.

P | M | K | N | S | H

Refrigerante interno





DC≤3
0
−0.005

● Le punte MGS sono adatte per l'utilizzo con mandrini a calettamento a caldo.

DC (mm)	Profondità foro (L/D)	HTi10	Codice di ordinazione	Dimensioni (mm) LU	LCF	OAL	DCONMS
0.7	50	★	MGS0070L040B	35.0	40	80	3
	80	★	MGS0070L060B	56.0	60	100	3
0.8	45	★	MGS0080L040B	36.0	40	80	3
	70	★	MGS0080L060B	56.0	60	100	3
0.9	40	★	MGS0090L040B	36.0	40	80	3
	60	★	MGS0090L060B	54.0	60	100	3
1.0	35	★	MGS0100L040B	35.0	40	80	3
	55	★	MGS0100L060B	55.0	60	100	3
	75	★	MGS0100L080B	75.0	80	120	3
1.1	30	★	MGS0110L040B	33.0	40	80	3
	50	★	MGS0110L060B	55.0	60	100	3
	65	★	MGS0110L080B	71.5	80	120	3
1.2	30	★	MGS0120L040B	36.0	40	80	3
	45	★	MGS0120L060B	54.0	60	100	3
	60	★	MGS0120L080B	72.0	80	120	3
1.3	40	★	MGS0130L060B	52.0	60	100	3
	55	★	MGS0130L080B	71.5	80	120	3
	70	★	MGS0130L100B	91.0	100	140	3
1.4	35	★	MGS0140L060B	49.0	60	100	3
	50	★	MGS0140L080B	70.0	80	120	3
	65	★	MGS0140L100B	91.0	100	140	3
1.5	35	★	MGS0150L060B	52.5	60	100	3
	50	★	MGS0150L080B	75.0	80	120	3
	60	★	MGS0150L100B	90.0	100	140	3
1.6	30	★	MGS0160L060B	48.0	60	100	3
	45	★	MGS0160L080B	72.0	80	120	3
	55	★	MGS0160L100B	88.0	100	140	3
1.7	30	★	MGS0170L060B	51.0	60	100	3
	40	★	MGS0170L080B	68.0	80	120	3
	55	★	MGS0170L100B	93.5	100	140	3
1.8	30	★	MGS0180L060B	54.0	60	100	3
	40	★	MGS0180L080B	72.0	80	120	3
	50	★	MGS0180L100B	90.0	100	140	3
1.9	25	★	MGS0190L060B	47.5	60	100	3
	35	★	MGS0190L080B	66.5	80	120	3
	45	★	MGS0190L100B	85.5	100	140	3
2.0	25	★	MGS0200L060B	50.0	60	100	3
	35	★	MGS0200L080B	70.0	80	120	3
	45	★	MGS0200L100B	90.0	100	140	3
2.1	35	★	MGS0210L080B	73.5	80	120	3
	40	★	MGS0210L100B	84.0	100	140	3
2.2	30	★	MGS0220L080B	66.0	80	120	3
	40	★	MGS0220L100B	88.0	100	140	3
2.3	30	★	MGS0230L080B	69.0	80	120	3
	40	★	MGS0230L100B	92.0	100	140	3
2.4	30	★	MGS0240L080B	72.0	80	120	3
	35	★	MGS0240L100B	84.0	100	140	3
2.5	25	★	MGS0250L080B	62.5	80	120	3
	35	★	MGS0250L100B	87.5	100	140	3
2.6	25	★	MGS0260L080B	65.0	80	120	3
	35	★	MGS0260L100B	91.0	100	140	3
2.7	25	★	MGS0270L080B	67.5	80	120	3
	30	★	MGS0270L100B	81.0	100	140	3
2.8	25	★	MGS0280L080B	70.0	80	120	3
	30	★	MGS0280L100B	84.0	100	140	3
2.9	20	★	MGS0290L080B	58.0	80	120	3
	30	★	MGS0290L100B	87.0	100	140	3
3.0	20	★	MGS0300L080B	60.0	80	120	3
	30	★	MGS0300L100B	90.0	100	140	3

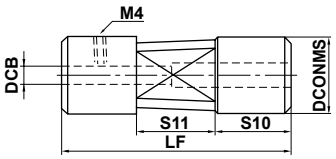
Nota 1) Per informazioni sulle punte rivestite (**VP**, **GP** e **UP** carburo rivestito) contattare il proprio referente Mitsubishi.

★ : **Inventario mantenuto in Giappone.**

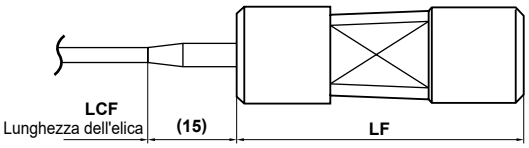
PARAMETRI DI TAGLIO ➢ M076
DATI TECNICI ➢ P001

MICRO-MGS

■ BOCCOLA



■ ASSEMBLATO CON BOCCOLA



Codice di ordinazione	Disponibilità	Dimensioni (mm)					Vite di fermo	Chiave
		DCONMS	DCB	LF	S10	S11		
MGD38	★	12.7	3.0	38.1	12.6	12.7	HSS04004	HKY20F
MGD70	★	12.7	3.0	70.0	25.0	20.0	HSS04004	HKY20F

PARAMETRI DI TAGLIO CONSIGLIATI

	P				P			
Materiale da lavorare	Acciaio dolce (≤180HB) Ck10				Acciaio al carbonio, Acciaio legato (180−280HB) Ck45, 42CrMo4			
Tipo di refrigerante	Olio da taglio non idrosolubile				Olio da taglio non idrosolubile			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.8	50	19800	0.01 (0.005−0.016)	195	40	15900	0.01 (0.005−0.016)	155
1.0	50	15900	0.01 (0.007−0.020)	155	40	12700	0.01 (0.007−0.020)	125
1.2	60	15900	0.015 (0.008−0.024)	235	50	13200	0.015 (0.008−0.024)	195
1.6	60	11900	0.02 (0.011−0.032)	235	50	9900	0.02 (0.011−0.032)	195
2.0	60	9500	0.025 (0.013−0.040)	235	50	7900	0.025 (0.013−0.040)	195
2.5	70	8900	0.03 (0.017−0.050)	265	60	7600	0.03 (0.017−0.050)	225
3.0	70	7400	0.04 (0.020−0.060)	295	60	6300	0.04 (0.020−0.060)	250

	P				M			
Materiale da lavorare	Acciaio al carbonio, Acciaio legato (280−350HB) 36CrNiMo4				Acciaio inossidabile austenitico (≤200HB) X5CrNi1810, X5CrNiMo17-12-2			
Tipo di refrigerante	Olio da taglio non idrosolubile				Olio da taglio non idrosolubile			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.8	30	11900	0.005 (0.004−0.005)	55	30	11900	0.01 (0.005−0.016)	115
1.0	30	9500	0.005 (0.005−0.007)	45	30	9500	0.01 (0.007−0.020)	95
1.2	40	10600	0.005 (0.006−0.008)	50	30	7900	0.015 (0.008−0.024)	115
1.6	40	7900	0.01 (0.008−0.011)	75	40	7900	0.02 (0.011−0.032)	155
2.0	40	6300	0.01 (0.010−0.013)	60	40	6300	0.025 (0.013−0.040)	155
2.5	50	6300	0.015 (0.013−0.017)	90	40	5000	0.03 (0.017−0.050)	150
3.0	50	5300	0.015 (0.015−0.020)	75	40	4200	0.04 (0.020−0.060)	165

	K				K			
Materiale da lavorare	Ghisa grigia (≤350MPa) GG30				Ghisa sferoidale (≤450MPa) GGG45			
Tipo di refrigerante	Olio da taglio non idrosolubile • Olio da taglio idrosolubile				Olio da taglio non idrosolubile • Olio da taglio idrosolubile			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.8	50	19800	0.01 (0.008−0.016)	195	40	15900	0.005 (0.005−0.008)	75
1.0	50	15900	0.015 (0.010−0.020)	235	40	12700	0.005 (0.007−0.010)	60
1.2	60	15900	0.015 (0.012−0.024)	235	50	13200	0.01 (0.008−0.012)	130
1.6	60	11900	0.02 (0.016−0.032)	235	50	9900	0.01 (0.011−0.016)	95
2.0	60	9500	0.03 (0.020−0.040)	285	50	7900	0.015 (0.013−0.020)	115
2.5	70	8900	0.035 (0.025−0.050)	310	60	7600	0.02 (0.017−0.025)	150
3.0	70	7400	0.045 (0.030−0.060)	330	60	6300	0.025 (0.020−0.030)	155

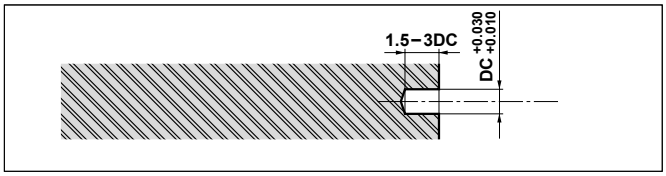
Nota 1) Utilizzare un refrigerante ad alta pressione per ottenere risultati di sicuro successo. (Pressione refrigerante minima=1.000 PSI)
Nota 2) È necessario che il filtro del refrigerante sia inferiore a 5 micron.
Un filtraggio sottile consente di prevenire il bloccaggio dei fori per il passaggio del refrigerante.
Nota 3) È necessario praticare un foro pilota o una guida di riferimento.
★ : Inventario mantenuto in Giappone.

PARAMETRI DI TAGLIO CONSIGLIATI

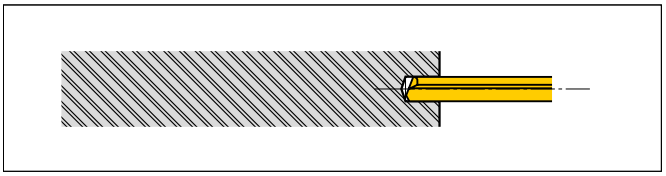
Materiale da lavorare	N							
	Lega di alluminio (Si<5%)				Rame, Lega di rame			
Tipo di refrigerante	Olio da taglio non idrosolubile • Olio da taglio idrosolubile				Olio da taglio non idrosolubile • Olio da taglio idrosolubile			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Avanzamento della tavola (mm/min)
0.8	50	19800	0.01 (0.008—0.016)	195	40	15900	0.01 (0.008—0.016)	155
1.0	60	19000	0.015 (0.010—0.020)	285	50	15900	0.015 (0.010—0.020)	235
1.2	70	18500	0.015 (0.012—0.024)	275	60	15900	0.015 (0.012—0.024)	235
1.6	80	15900	0.02 (0.016—0.032)	315	70	13900	0.02 (0.016—0.032)	275
2.0	90	14300	0.03 (0.020—0.040)	425	80	12700	0.03 (0.020—0.040)	380
2.5	100	12700	0.035 (0.025—0.050)	440	90	11400	0.035 (0.025—0.050)	395
3.0	100	10600	0.045 (0.030—0.060)	475	100	10600	0.045 (0.030—0.060)	475

Nota 1) Utilizzare un refrigerante ad alta pressione per ottenere risultati di sicuro successo. (Pressione refrigerante minima=70 bar)
Nota 2) È necessario che il filtro del refrigerante sia inferiore a 5 micron.
Un filtraggio sottile consente di prevenire il bloccaggio dei fori per il passaggio del refrigerante.
Nota 3) È necessario praticare un foro pilota o una guida di riferimento.

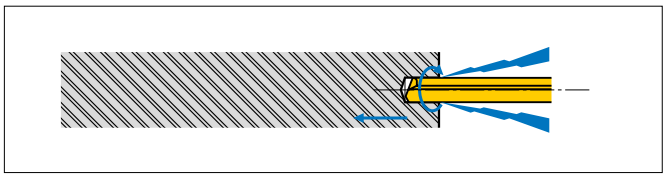
ISTRUZIONI D'USO



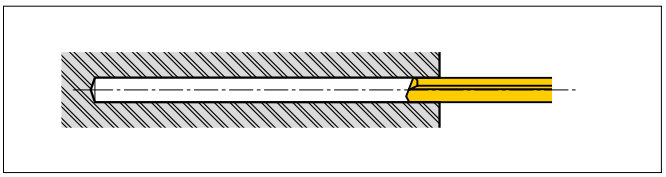
1. Realizzazione del foro pilota.
(Si consiglia l'utilizzo di Mitsubishi Materials MWE o MWS.)



2. Penetrare il foro pilota senza rotazione o con controrotazione inferiore a 300 giri/min.
Arrestare la punta MGS 1-2 mm prima del fondo del foro pilota.



3. Azionare il refrigerante, aumentare la velocità e l'avanzamento fino ai parametri di taglio consigliati, quindi avviare la foratura.



4. Ritornare alla posizione "Pos 2" dopo la foratura, disattivare il refrigerante e interrompere la rotazione della punta.

FORATURA (METALLO DURO)

MMS

- Per la foratura efficiente e ad elevata precisione di acciaio inossidabile.
- I fori trigonali partono da un diametro di 4.60 mm.



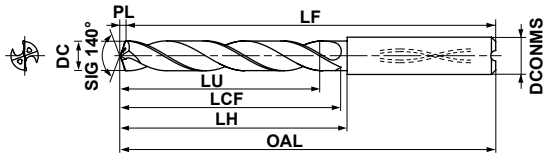
P | **M** | K | N | S | H

Refrigerante interno

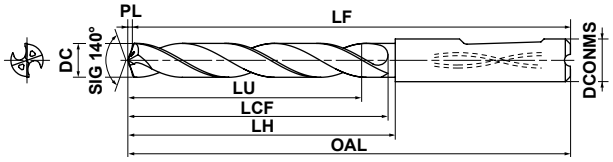


	DC=3	3<DC≤6	6<DC≤10	10<DC≤18	18<DC≤20
Tipo DIN (m7)	+0.012 +0.002	+0.016 +0.004	+0.021 +0.006	+0.025 +0.007	+0.029 +0.008
Altri (h8)	0 −0.014	0 −0.018	0 −0.022	0 −0.027	0 −0.033
		0 −0.008	0 −0.009	0 −0.011	0 −0.013

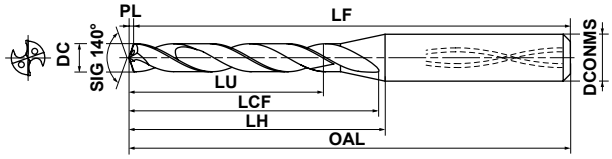
●Tipo 1 Stelo cilindrico



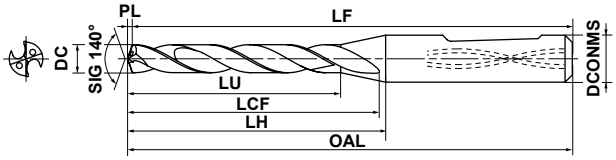
●Tipo 2 Stelo Whistle Notch



●Tipo 3 Stelo cilindrico con collo conico



●Tipo 4 Stelo Whistle Notch con collo conico



DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.0	3	□	MMS0300S-DIN	15.0	19.5	24.5	61.5	61	0.5	6	4
	3	●	MMS0300S-DIN-C	15.0	19.5	24.5	61.5	61	0.5	6	3
	5	□	MMS0300L-DIN	23.0	27.5	28.5	65.5	65	0.5	6	4
	5	●	MMS0300L-DIN-C	23.0	27.5	28.5	65.5	65	0.5	6	3
	3	★	MMS0300X3DB	9.5	21.5	23.5	70.5	70	0.5	6	3
	5	★	MMS0300X5DB	15.5	28.5	31.5	78.5	78	0.5	6	3
3.05	3	□	MMS0305S-DIN	15.0	19.6	24.6	61.6	61	0.6	6	4
	3	●	MMS0305S-DIN-C	15.0	19.6	24.6	61.6	61	0.6	6	3
	5	□	MMS0305L-DIN	23.0	27.6	28.6	65.6	65	0.6	6	4
	5	●	MMS0305L-DIN-C	23.0	27.6	28.6	65.6	65	0.6	6	3
3.1	3	□	MMS0310S-DIN	14.9	19.6	24.6	61.6	61	0.6	6	4
	3	●	MMS0310S-DIN-C	14.9	19.6	24.6	61.6	61	0.6	6	3
	5	□	MMS0310L-DIN	22.9	27.6	28.6	65.6	65	0.6	6	4
	5	●	MMS0310L-DIN-C	22.9	27.6	28.6	65.6	65	0.6	6	3
	3	★	MMS0310X3DB	9.9	21.6	23.6	70.6	70	0.6	6	3
	5	★	MMS0310X5DB	16.1	28.6	31.6	78.6	78	0.6	6	3
3.2	3	□	MMS0320S-DIN	14.8	19.6	24.6	61.6	61	0.6	6	4
	3	●	MMS0320S-DIN-C	14.8	19.6	24.6	61.6	61	0.6	6	3
	5	□	MMS0320L-DIN	22.8	27.6	28.6	65.6	65	0.6	6	4
	5	●	MMS0320L-DIN-C	22.8	27.6	28.6	65.6	65	0.6	6	3
	3	★	MMS0320X3DB	10.2	21.6	23.6	70.6	70	0.6	6	3
	5	★	MMS0320X5DB	16.6	28.6	31.6	78.6	78	0.6	6	3
3.3	3	□	MMS0330S-DIN	14.7	19.6	24.6	61.6	61	0.6	6	4
	3	●	MMS0330S-DIN-C	14.7	19.6	24.6	61.6	61	0.6	6	3
	5	□	MMS0330L-DIN	22.7	27.6	28.6	65.6	65	0.6	6	4
	5	●	MMS0330L-DIN-C	22.7	27.6	28.6	65.6	65	0.6	6	3
	3	★	MMS0330X3DB	10.5	21.6	23.6	70.6	70	0.6	6	3
	5	★	MMS0330X5DB	17.1	28.6	31.6	78.6	78	0.6	6	3
3.4	3	□	MMS0340S-DIN	14.5	19.6	24.6	61.6	61	0.6	6	4
	3	●	MMS0340S-DIN-C	14.5	19.6	24.6	61.6	61	0.6	6	3
	5	□	MMS0340L-DIN	22.5	27.6	28.6	65.6	65	0.6	6	4
	5	●	MMS0340L-DIN-C	22.5	27.6	28.6	65.6	65	0.6	6	3

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.4	3	★	MMS0340X3DB	10.8	21.6	23.6	70.6	70	0.6	6	3
	5	★	MMS0340X5DB	17.6	28.6	31.6	78.6	78	0.6	6	3
3.5	3	□	MMS0350S-DIN	14.4	19.6	24.6	61.6	61	0.6	6	4
	3	●	MMS0350S-DIN-C	14.4	19.6	24.6	61.6	61	0.6	6	3
	5	□	MMS0350L-DIN	22.4	27.6	28.6	65.6	65	0.6	6	4
	5	●	MMS0350L-DIN-C	22.4	27.6	28.6	65.6	65	0.6	6	3
	3	★	MMS0350X3DB	11.1	21.6	23.6	70.6	70	0.6	6	3
	5	★	MMS0350X5DB	18.1	28.6	31.6	78.6	78	0.6	6	3
3.6	3	□	MMS0360S-DIN	14.3	19.7	24.7	61.7	61	0.7	6	4
	3	●	MMS0360S-DIN-C	14.3	19.7	24.7	61.7	61	0.7	6	3
	5	□	MMS0360L-DIN	22.3	27.7	28.7	65.7	65	0.7	6	4
	5	●	MMS0360L-DIN-C	22.3	27.7	28.7	65.7	65	0.7	6	3
	3	★	MMS0360X3DB	11.5	22.7	23.7	70.7	70	0.7	6	3
	5	★	MMS0360X5DB	18.7	30.7	31.7	78.7	78	0.7	6	3
3.7	3	□	MMS0370S-DIN	14.1	19.7	24.7	61.7	61	0.7	6	4
	3	●	MMS0370S-DIN-C	14.1	19.7	24.7	61.7	61	0.7	6	3
	5	□	MMS0370L-DIN	22.1	27.7	28.7	65.7	65	0.7	6	4
	5	●	MMS0370L-DIN-C	22.1	27.7	28.7	65.7	65	0.7	6	3
	3	★	MMS0370X3DB	11.8	22.7	23.7	70.7	70	0.7	6	3
	5	★	MMS0370X5DB	19.2	30.7	31.7	78.7	78	0.7	6	3
3.8	3	□	MMS0380S-DIN	18.0	23.7	28.7	65.7	65	0.7	6	4
	3	●	MMS0380S-DIN-C	18.0	23.7	28.7	65.7	65	0.7	6	3
	5	□	MMS0380L-DIN	30.0	35.7	36.7	73.7	73	0.7	6	4
	5	●	MMS0380L-DIN-C	30.0	35.7	36.7	73.7	73	0.7	6	3
	3	★	MMS0380X3DB	12.1	22.7	23.7	70.7	70	0.7	6	3
	5	★	MMS0380X5DB	19.7	30.7	31.7	78.7	78	0.7	6	3
3.9	3	□	MMS0390S-DIN	17.9	23.7	28.7	65.7	65	0.7	6	4
	3	●	MMS0390S-DIN-C	17.9	23.7	28.7	65.7	65	0.7	6	3
	5	□	MMS0390L-DIN	29.9	35.7	36.7	73.7	73	0.7	6	4
	5	●	MMS0390L-DIN-C	29.9	35.7	36.7	73.7	73	0.7	6	3
	3	★	MMS0390X3DB	12.4	22.7	23.7	70.7	70	0.7	6	3
	5	★	MMS0390X5DB	20.2	30.7	31.7	78.7	78	0.7	6	3

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
4.0	3	□	MMS0400S-DIN	17.7	23.7	28.7	65.7	65	0.7	6	4
	3	●	MMS0400S-DIN-C	17.7	23.7	28.7	65.7	65	0.7	6	3
	5	□	MMS0400L-DIN	29.7	35.7	36.7	73.7	73	0.7	6	4
	5	●	MMS0400L-DIN-C	29.7	35.7	36.7	73.7	73	0.7	6	3
	3	★	MMS0400X3DB	12.7	22.7	23.7	70.7	70	0.7	6	3
	5	★	MMS0400X5DB	20.7	30.7	31.7	78.7	78	0.7	6	3
4.05	3	□	MMS0405S-DIN	17.7	23.7	28.7	65.7	65	0.7	6	4
	3	●	MMS0405S-DIN-C	17.7	23.7	28.7	65.7	65	0.7	6	3
	5	□	MMS0405L-DIN	29.7	35.7	36.7	73.7	73	0.7	6	4
	5	●	MMS0405L-DIN-C	29.7	35.7	36.7	73.7	73	0.7	6	3
4.1	3	□	MMS0410S-DIN	17.6	23.7	28.7	65.7	65	0.7	6	4
	3	●	MMS0410S-DIN-C	17.6	23.7	28.7	65.7	65	0.7	6	3
	5	□	MMS0410L-DIN	29.6	35.7	36.7	73.7	73	0.7	6	4
	5	●	MMS0410L-DIN-C	29.6	35.7	36.7	73.7	73	0.7	6	3
	3	★	MMS0410X3DB	13.0	24.7	26.7	73.7	73	0.7	6	3
	5	★	MMS0410X5DB	21.2	33.7	35.7	82.7	82	0.7	6	3
4.2	3	□	MMS0420S-DIN	17.5	23.8	28.8	65.8	65	0.8	6	4
	3	●	MMS0420S-DIN-C	17.5	23.8	28.8	65.8	65	0.8	6	3
	5	□	MMS0420L-DIN	29.5	35.8	36.8	73.8	73	0.8	6	4
	5	●	MMS0420L-DIN-C	29.5	35.8	36.8	73.8	73	0.8	6	3
	3	★	MMS0420X3DB	13.4	24.8	26.8	73.8	73	0.8	6	3
	5	★	MMS0420X5DB	21.8	33.8	35.8	82.8	82	0.8	6	3
4.3	3	□	MMS0430S-DIN	17.3	23.8	28.8	65.8	65	0.8	6	4
	3	●	MMS0430S-DIN-C	17.3	23.8	28.8	65.8	65	0.8	6	3
	5	□	MMS0430L-DIN	29.3	35.8	36.8	73.8	73	0.8	6	4
	5	●	MMS0430L-DIN-C	29.3	35.8	36.8	73.8	73	0.8	6	3
	3	★	MMS0430X3DB	13.7	24.8	26.8	73.8	73	0.8	6	3
	5	★	MMS0430X5DB	22.3	33.8	35.8	82.8	82	0.8	6	3
4.4	3	□	MMS0440S-DIN	17.2	23.8	28.8	65.8	65	0.8	6	4
	3	□	MMS0440S-DIN-C	17.2	23.8	28.8	65.8	65	0.8	6	3
	5	□	MMS0440L-DIN	29.2	35.8	36.8	73.8	73	0.8	6	4
	5	□	MMS0440L-DIN-C	29.2	35.8	36.8	73.8	73	0.8	6	3
	3	★	MMS0440X3DB	14.0	24.8	26.8	73.8	73	0.8	6	3
	5	★	MMS0440X5DB	22.8	33.8	35.8	82.8	82	0.8	6	3
4.5	3	□	MMS0450S-DIN	17.1	23.8	28.8	65.8	65	0.8	6	4
	3	●	MMS0450S-DIN-C	17.1	23.8	28.8	65.8	65	0.8	6	3
	5	□	MMS0450L-DIN	29.1	35.8	36.8	73.8	73	0.8	6	4
	5	●	MMS0450L-DIN-C	29.1	35.8	36.8	73.8	73	0.8	6	3
	3	★	MMS0450X3DB	14.3	24.8	26.8	73.8	73	0.8	6	3
	5	★	MMS0450X5DB	23.3	33.8	35.8	82.8	82	0.8	6	3
4.6	3	□	MMS0460S-DIN	16.9	23.8	28.8	65.8	65	0.8	6	2
	3	●	MMS0460S-DIN-C	16.9	23.8	28.8	65.8	65	0.8	6	1
	5	□	MMS0460L-DIN	28.9	35.8	36.8	73.8	73	0.8	6	2
	5	●	MMS0460L-DIN-C	28.9	35.8	36.8	73.8	73	0.8	6	1
	3	★	MMS0460X3DB	14.6	25.8	28.8	75.8	75	0.8	6	1
	5	★	MMS0460X5DB	23.8	35.8	38.8	85.8	85	0.8	6	1
4.65	3	□	MMS0465S-DIN	16.9	23.8	28.8	65.8	65	0.8	6	2
	3	●	MMS0465S-DIN-C	16.9	23.8	28.8	65.8	65	0.8	6	1
	5	□	MMS0465L-DIN	28.9	35.8	36.8	73.8	73	0.8	6	2
	5	●	MMS0465L-DIN-C	28.9	35.8	36.8	73.8	73	0.8	6	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
4.7	3	□	MMS0470S-DIN	16.8	23.9	28.9	65.9	65	0.9	6	2
	3	□	MMS0470S-DIN-C	16.8	23.9	28.9	65.9	65	0.9	6	1
	5	□	MMS0470L-DIN	28.8	35.9	36.9	73.9	73	0.9	6	2
	5	□	MMS0470L-DIN-C	28.8	35.9	36.9	73.9	73	0.9	6	1
	3	★	MMS0470X3DB	15.0	25.9	28.9	75.9	75	0.9	6	1
	5	★	MMS0470X5DB	24.4	35.9	38.9	85.9	85	0.9	6	1
4.8	3	□	MMS0480S-DIN	20.7	27.9	28.9	65.9	65	0.9	6	2
	3	●	MMS0480S-DIN-C	20.7	27.9	28.9	65.9	65	0.9	6	1
	5	□	MMS0480L-DIN	36.7	43.9	44.9	81.9	81	0.9	6	2
	5	●	MMS0480L-DIN-C	36.7	43.9	44.9	81.9	81	0.9	6	1
	3	★	MMS0480X3DB	15.3	25.9	28.9	75.9	75	0.9	6	1
	5	★	MMS0480X5DB	24.9	35.9	38.9	85.9	85	0.9	6	1
4.9	3	□	MMS0490S-DIN	20.5	27.9	28.9	65.9	65	0.9	6	2
	3	□	MMS0490S-DIN-C	20.5	27.9	28.9	65.9	65	0.9	6	1
	5	□	MMS0490L-DIN	36.5	43.9	44.9	81.9	81	0.9	6	2
	5	□	MMS0490L-DIN-C	36.5	43.9	44.9	81.9	81	0.9	6	1
	3	★	MMS0490X3DB	15.6	25.9	28.9	75.9	75	0.9	6	1
	5	★	MMS0490X5DB	25.4	35.9	38.9	85.9	85	0.9	6	1
5.0	3	□	MMS0500S-DIN	20.4	27.9	28.9	65.9	65	0.9	6	2
	3	●	MMS0500S-DIN-C	20.4	27.9	28.9	65.9	65	0.9	6	1
	5	□	MMS0500L-DIN	36.4	43.9	44.9	81.9	81	0.9	6	2
	5	●	MMS0500L-DIN-C	36.4	43.9	44.9	81.9	81	0.9	6	1
	3	★	MMS0500X3DB	15.9	25.9	28.9	75.9	75	0.9	6	1
	5	★	MMS0500X5DB	25.9	35.9	38.9	85.9	85	0.9	6	1
5.05	3	□	MMS0505S-DIN	20.3	27.9	28.9	65.9	65	0.9	6	2
	3	●	MMS0505S-DIN-C	20.3	27.9	28.9	65.9	65	0.9	6	1
	5	□	MMS0505L-DIN	36.3	43.9	44.9	81.9	81	0.9	6	2
	5	●	MMS0505L-DIN-C	36.3	43.9	44.9	81.9	81	0.9	6	1
5.1	3	□	MMS0510S-DIN	20.3	27.9	28.9	65.9	65	0.9	6	2
	3	●	MMS0510S-DIN-C	20.3	27.9	28.9	65.9	65	0.9	6	1
	5	□	MMS0510L-DIN	36.3	43.9	44.9	81.9	81	0.9	6	2
	5	●	MMS0510L-DIN-C	36.3	43.9	44.9	81.9	81	0.9	6	1
	3	★	MMS0510X3DB	16.2	28.9	30.9	81.9	81	0.9	6	1
	5	★	MMS0510X5DB	26.4	39.9	42.9	89.9	89	0.9	6	1
5.2	3	□	MMS0520S-DIN	20.1	27.9	28.9	65.9	65	0.9	6	2
	3	●	MMS0520S-DIN-C	20.1	27.9	28.9	65.9	65	0.9	6	1
	5	□	MMS0520L-DIN	36.1	43.9	44.9	81.9	81	0.9	6	2
	5	●	MMS0520L-DIN-C	36.1	43.9	44.9	81.9	81	0.9	6	1
	3	★	MMS0520X3DB	16.5	28.9	30.9	81.9	81	0.9	6	1
	5	★	MMS0520X5DB	26.9	39.9	42.9	89.9	89	0.9	6	1
5.3	3	□	MMS0530S-DIN	20.0	28.0	29.0	66.0	65	1.0	6	2
	3	□	MMS0530S-DIN-C	20.0	28.0	29.0	66.0	65	1.0	6	1
	5	□	MMS0530L-DIN	36.0	44.0	45.0	82.0	81	1.0	6	2
	5	□	MMS0530L-DIN-C	36.0	44.0	45.0	82.0	81	1.0	6	1
	3	★	MMS0530X3DB	16.9	29.0	31.0	82.0	81	1.0	6	1
	5	★	MMS0530X5DB	27.5	40.0	43.0	90.0	89	1.0	6	1
5.4	3	□	MMS0540S-DIN	19.9	28.0	29.0	66.0	65	1.0	6	2
	3	□	MMS0540S-DIN-C	19.9	28.0	29.0	66.0	65	1.0	6	1
	5	□	MMS0540L-DIN	35.9	44.0	45.0	82.0	81	1.0	6	2
	5	□	MMS0540L-DIN-C	35.9	44.0	45.0	82.0	81	1.0	6	1
	3	★	MMS0540X3DB	17.2	29.0	31.0	82.0	81	1.0	6	1
	5	★	MMS0540X5DB	28.0	40.0	43.0	90.0	89	1.0	6	1

PARAMETRI DI TAGLIO ➤ M090

GUIDA OPERATIVA ➤ M089

DATI TECNICI ➤ P001

MMS

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
5.5	3	□	MMS0550S-DIN	19.8	28.0	29.0	66.0	65	1.0	6	2
	3	●	MMS0550S-DIN-C	19.8	28.0	29.0	66.0	65	1.0	6	1
	5	□	MMS0550L-DIN	35.8	44.0	45.0	82.0	81	1.0	6	2
	5	●	MMS0550L-DIN-C	35.8	44.0	45.0	82.0	81	1.0	6	1
	3	★	MMS0550X3DB	17.5	29.0	31.0	82.0	81	1.0	6	1
	5	★	MMS0550X5DB	28.5	40.0	43.0	90.0	89	1.0	6	1
5.55	3	□	MMS0555S-DIN	19.7	28.0	29.0	66.0	65	1.0	6	2
	3	●	MMS0555S-DIN-C	19.7	28.0	29.0	66.0	65	1.0	6	1
	5	●	MMS0555L-DIN-C	35.7	44.0	45.0	82.0	81	1.0	6	1
5.6	3	□	MMS0560S-DIN	19.6	28.0	29.0	66.0	65	1.0	6	2
	3	●	MMS0560S-DIN-C	19.6	28.0	29.0	66.0	65	1.0	6	1
	5	□	MMS0560L-DIN	35.6	44.0	45.0	82.0	81	1.0	6	2
	5	●	MMS0560L-DIN-C	35.6	44.0	45.0	82.0	81	1.0	6	1
	3	★	MMS0560X3DB	17.8	31.0	31.0	82.0	81	1.0	6	1
	5	★	MMS0560X5DB	29.0	43.0	43.0	90.0	89	1.0	6	1
5.7	3	□	MMS0570S-DIN	19.5	28.0	29.0	66.0	65	1.0	6	2
	3	●	MMS0570S-DIN-C	19.5	28.0	29.0	66.0	65	1.0	6	1
	5	□	MMS0570L-DIN	35.5	44.0	45.0	82.0	81	1.0	6	2
	5	●	MMS0570L-DIN-C	35.5	44.0	45.0	82.0	81	1.0	6	1
	3	★	MMS0570X3DB	18.1	31.0	31.0	82.0	81	1.0	6	1
	5	★	MMS0570X5DB	29.5	43.0	43.0	90.0	89	1.0	6	1
5.8	3	□	MMS0580S-DIN	19.4	28.1	29.1	66.1	65	1.1	6	2
	3	●	MMS0580S-DIN-C	19.4	28.1	29.1	66.1	65	1.1	6	1
	5	□	MMS0580L-DIN	35.4	44.1	45.1	82.1	81	1.1	6	2
	5	●	MMS0580L-DIN-C	35.4	44.1	45.1	82.1	81	1.1	6	1
	3	★	MMS0580X3DB	18.5	31.1	31.1	82.1	81	1.1	6	1
	5	★	MMS0580X5DB	30.1	43.1	43.1	90.1	89	1.1	6	1
5.9	3	□	MMS0590S-DIN	19.2	28.1	29.1	66.1	65	1.1	6	2
	3	□	MMS0590S-DIN-C	19.2	28.1	29.1	66.1	65	1.1	6	1
	5	□	MMS0590L-DIN	35.2	44.1	45.1	82.1	81	1.1	6	2
	5	□	MMS0590L-DIN-C	35.2	44.1	45.1	82.1	81	1.1	6	1
	3	★	MMS0590X3DB	18.8	31.1	31.1	82.1	81	1.1	6	1
	5	★	MMS0590X5DB	30.6	43.1	43.1	90.1	89	1.1	6	1
6.0	3	□	MMS0600S-DIN	19.1	28.1	29.1	66.1	65	1.1	6	2
	3	●	MMS0600S-DIN-C	19.1	28.1	29.1	66.1	65	1.1	6	1
	5	□	MMS0600L-DIN	35.1	44.1	45.1	82.1	81	1.1	6	2
	5	●	MMS0600L-DIN-C	35.1	44.1	45.1	82.1	81	1.1	6	1
	3	★	MMS0600X3DB	19.1	31.1	31.1	82.1	81	1.1	6	1
	5	★	MMS0600X5DB	31.1	43.1	43.1	90.1	89	1.1	6	1
6.05	3	□	MMS0605S-DIN	25.0	34.1	42.1	79.1	78	1.1	8	2
	3	●	MMS0605S-DIN-C	25.0	34.1	42.1	79.1	78	1.1	8	1
	5	□	MMS0605L-DIN	44.0	53.1	54.1	91.1	90	1.1	8	2
	5	●	MMS0605L-DIN-C	44.0	53.1	54.1	91.1	90	1.1	8	1
6.1	3	□	MMS0610S-DIN	25.0	34.1	42.1	79.1	78	1.1	8	2
	3	●	MMS0610S-DIN-C	25.0	34.1	42.1	79.1	78	1.1	8	1
	5	□	MMS0610L-DIN	44.0	53.1	54.1	91.1	90	1.1	8	2
	5	●	MMS0610L-DIN-C	44.0	53.1	54.1	91.1	90	1.1	8	1
	3	★	MMS0610X3DB	19.4	34.1	36.1	87.1	86	1.1	8	1
	5	★	MMS0610X5DB	31.6	47.1	49.1	96.1	95	1.1	8	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
6.2	3	□	MMS0620S-DIN	24.8	34.1	42.1	79.1	78	1.1	8	2
	3	●	MMS0620S-DIN-C	24.8	34.1	42.1	79.1	78	1.1	8	1
	5	□	MMS0620L-DIN	43.8	53.1	54.1	91.1	90	1.1	8	2
	5	●	MMS0620L-DIN-C	43.8	53.1	54.1	91.1	90	1.1	8	1
	3	★	MMS0620X3DB	19.7	34.1	36.1	87.1	86	1.1	8	1
	5	★	MMS0620X5DB	32.1	47.1	49.1	96.1	95	1.1	8	1
6.3	3	□	MMS0630S-DIN	24.7	34.1	42.1	79.1	78	1.1	8	2
	3	□	MMS0630S-DIN-C	24.7	34.1	42.1	79.1	78	1.1	8	1
	5	□	MMS0630L-DIN	43.7	53.1	54.1	91.1	90	1.1	8	2
	5	□	MMS0630L-DIN-C	43.7	53.1	54.1	91.1	90	1.1	8	1
	3	★	MMS0630X3DB	20.0	34.1	36.1	87.1	86	1.1	8	1
	5	★	MMS0630X5DB	32.6	47.1	49.1	96.1	95	1.1	8	1
6.4	3	□	MMS0640S-DIN	24.6	34.2	42.2	79.2	78	1.2	8	2
	3	□	MMS0640S-DIN-C	24.6	34.2	42.2	79.2	78	1.2	8	1
	5	□	MMS0640L-DIN	43.6	53.2	54.2	91.2	90	1.2	8	2
	5	□	MMS0640L-DIN-C	43.6	53.2	54.2	91.2	90	1.2	8	1
	3	★	MMS0640X3DB	20.4	34.2	36.2	87.2	86	1.2	8	1
	5	★	MMS0640X5DB	33.2	47.2	49.2	96.2	95	1.2	8	1
6.5	3	□	MMS0650S-DIN	24.4	34.2	42.2	79.2	78	1.2	8	2
	3	●	MMS0650S-DIN-C	24.4	34.2	42.2	79.2	78	1.2	8	1
	5	□	MMS0650L-DIN	43.4	53.2	54.2	91.2	90	1.2	8	2
	5	●	MMS0650L-DIN-C	43.4	53.2	54.2	91.2	90	1.2	8	1
	3	★	MMS0650X3DB	20.7	34.2	36.2	87.2	86	1.2	8	1
	5	★	MMS0650X5DB	33.7	47.2	49.2	96.2	95	1.2	8	1
6.6	3	□	MMS0660S-DIN	24.3	34.2	42.2	79.2	78	1.2	8	2
	3	●	MMS0660S-DIN-C	24.3	34.2	42.2	79.2	78	1.2	8	1
	5	□	MMS0660L-DIN	43.3	53.2	54.2	91.2	90	1.2	8	2
	5	●	MMS0660L-DIN-C	43.3	53.2	54.2	91.2	90	1.2	8	1
	3	★	MMS0660X3DB	21.0	36.2	38.2	91.2	90	1.2	8	1
	5	★	MMS0660X5DB	34.2	50.2	52.2	99.2	98	1.2	8	1
6.7	3	□	MMS0670S-DIN	24.2	34.2	42.2	79.2	78	1.2	8	2
	3	□	MMS0670S-DIN-C	24.2	34.2	42.2	79.2	78	1.2	8	1
	5	□	MMS0670L-DIN	43.2	53.2	54.2	91.2	90	1.2	8	2
	5	□	MMS0670L-DIN-C	43.2	53.2	54.2	91.2	90	1.2	8	1
	3	★	MMS0670X3DB	21.3	36.2	38.2	91.2	90	1.2	8	1
	5	★	MMS0670X5DB	34.7	50.2	52.2	99.2	98	1.2	8	1
6.8	3	□	MMS0680S-DIN	24.0	34.2	42.2	79.2	78	1.2	8	2
	3	●	MMS0680S-DIN-C	24.0	34.2	42.2	79.2	78	1.2	8	1
	5	□	MMS0680L-DIN	43.0	53.2	54.2	91.2	90	1.2	8	2
	5	●	MMS0680L-DIN-C	43.0	53.2	54.2	91.2	90	1.2	8	1
	3	★	MMS0680X3DB	21.6	36.2	38.2	91.2	90	1.2	8	1
	5	★	MMS0680X5DB	35.2	50.2	52.2	99.2	98	1.2	8	1
6.9	3	□	MMS0690S-DIN	23.9	34.3	42.3	79.3	78	1.3	8	2
	3	●	MMS0690S-DIN-C	23.9	34.3	42.3	79.3	78	1.3	8	1
	5	□	MMS0690L-DIN	42.9	53.3	54.3	91.3	90	1.3	8	2
	5	●	MMS0690L-DIN-C	42.9	53.3	54.3	91.3	90	1.3	8	1
	3	★	MMS0690X3DB	22.0	36.3	38.3	91.3	90	1.3	8	1
	5	★	MMS0690X5DB	35.8	50.3	52.3	99.3	98	1.3	8	1

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
7.0	3	□	MMS0700S-DIN	23.8	34.3	42.3	79.3	78	1.3	8	2
	3	●	MMS0700S-DIN-C	23.8	34.3	42.3	79.3	78	1.3	8	1
	5	□	MMS0700L-DIN	42.8	53.3	54.3	91.3	90	1.3	8	2
	5	●	MMS0700L-DIN-C	42.8	53.3	54.3	91.3	90	1.3	8	1
	3	★	MMS0700X3DB	22.3	36.3	38.3	91.3	90	1.3	8	1
	5	★	MMS0700X5DB	36.3	50.3	52.3	99.3	98	1.3	8	1
7.1	3	□	MMS0710S-DIN	30.6	41.3	42.3	79.3	78	1.3	8	2
	3	□	MMS0710S-DIN-C	30.6	41.3	42.3	79.3	78	1.3	8	1
	5	□	MMS0710L-DIN	42.6	53.3	54.3	91.3	90	1.3	8	2
	5	□	MMS0710L-DIN-C	42.6	53.3	54.3	91.3	90	1.3	8	1
	3	★	MMS0710X3DB	22.6	39.3	40.3	91.3	90	1.3	8	1
	5	★	MMS0710X5DB	36.8	54.3	57.3	104.3	103	1.3	8	1
7.2	3	□	MMS0720S-DIN	30.5	41.3	42.3	79.3	78	1.3	8	2
	3	□	MMS0720S-DIN-C	30.5	41.3	42.3	79.3	78	1.3	8	1
	5	□	MMS0720L-DIN	42.5	53.3	54.3	91.3	90	1.3	8	2
	5	□	MMS0720L-DIN-C	42.5	53.3	54.3	91.3	90	1.3	8	1
	3	★	MMS0720X3DB	22.9	39.3	40.3	91.3	90	1.3	8	1
	5	★	MMS0720X5DB	37.3	54.3	57.3	104.3	103	1.3	8	1
7.3	3	□	MMS0730S-DIN	30.4	41.3	42.3	79.3	78	1.3	8	2
	3	●	MMS0730S-DIN-C	30.4	41.3	42.3	79.3	78	1.3	8	1
	5	□	MMS0730L-DIN	42.4	53.3	54.3	91.3	90	1.3	8	2
	5	●	MMS0730L-DIN-C	42.4	53.3	54.3	91.3	90	1.3	8	1
	3	★	MMS0730X3DB	23.2	39.3	40.3	91.3	90	1.3	8	1
	5	★	MMS0730X5DB	37.8	54.3	57.3	104.3	103	1.3	8	1
7.4	3	□	MMS0740S-DIN	30.2	41.3	42.3	79.3	78	1.3	8	2
	3	●	MMS0740S-DIN-C	30.2	41.3	42.3	79.3	78	1.3	8	1
	5	□	MMS0740L-DIN	42.2	53.3	54.3	91.3	90	1.3	8	2
	5	●	MMS0740L-DIN-C	42.2	53.3	54.3	91.3	90	1.3	8	1
	3	★	MMS0740X3DB	23.5	39.3	40.3	91.3	90	1.3	8	1
	5	★	MMS0740X5DB	38.3	54.3	57.3	104.3	103	1.3	8	1
7.5	3	□	MMS0750S-DIN	30.1	41.4	42.4	79.4	78	1.4	8	2
	3	●	MMS0750S-DIN-C	30.1	41.4	42.4	79.4	78	1.4	8	1
	5	□	MMS0750L-DIN	42.1	53.4	54.4	91.4	90	1.4	8	2
	5	●	MMS0750L-DIN-C	42.1	53.4	54.4	91.4	90	1.4	8	1
	3	★	MMS0750X3DB	23.9	39.4	40.4	91.4	90	1.4	8	1
	5	★	MMS0750X5DB	38.9	54.4	57.4	104.4	103	1.4	8	1
7.6	3	□	MMS0760S-DIN	30.0	41.4	42.4	79.4	78	1.4	8	2
	3	□	MMS0760S-DIN-C	30.0	41.4	42.4	79.4	78	1.4	8	1
	5	□	MMS0760L-DIN	42.0	53.4	54.4	91.4	90	1.4	8	2
	5	□	MMS0760L-DIN-C	42.0	53.4	54.4	91.4	90	1.4	8	1
	3	★	MMS0760X3DB	24.2	41.4	41.4	91.4	90	1.4	8	1
	5	★	MMS0760X5DB	39.4	57.4	57.4	104.4	103	1.4	8	1
7.7	3	□	MMS0770S-DIN	29.9	41.4	42.4	79.4	78	1.4	8	2
	3	□	MMS0770S-DIN-C	29.9	41.4	42.4	79.4	78	1.4	8	1
	5	□	MMS0770L-DIN	41.9	53.4	54.4	91.4	90	1.4	8	2
	5	□	MMS0770L-DIN-C	41.9	53.4	54.4	91.4	90	1.4	8	1
	3	★	MMS0770X3DB	24.5	41.4	41.4	91.4	90	1.4	8	1
	5	★	MMS0770X5DB	39.9	57.4	57.4	104.4	103	1.4	8	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
7.8	3	□	MMS0780S-DIN	29.7	41.4	42.4	79.4	78	1.4	8	2
	3	●	MMS0780S-DIN-C	29.7	41.4	42.4	79.4	78	1.4	8	1
	5	□	MMS0780L-DIN	41.7	53.4	54.4	91.4	90	1.4	8	2
	5	●	MMS0780L-DIN-C	41.7	53.4	54.4	91.4	90	1.4	8	1
	3	★	MMS0780X3DB	24.8	41.4	41.4	91.4	90	1.4	8	1
	5	★	MMS0780X5DB	40.4	57.4	57.4	104.4	103	1.4	8	1
7.9	3	□	MMS0790S-DIN	29.6	41.4	42.4	79.4	78	1.4	8	2
	3	□	MMS0790S-DIN-C	29.6	41.4	42.4	79.4	78	1.4	8	1
	5	□	MMS0790L-DIN	41.6	53.4	54.4	91.4	90	1.4	8	2
	5	□	MMS0790L-DIN-C	41.6	53.4	54.4	91.4	90	1.4	8	1
	3	★	MMS0790X3DB	25.1	41.4	41.4	91.4	90	1.4	8	1
	5	★	MMS0790X5DB	40.9	57.4	57.4	104.4	103	1.4	8	1
8.0	3	□	MMS0800S-DIN	29.5	41.5	42.5	79.5	78	1.5	8	2
	3	●	MMS0800S-DIN-C	29.5	41.5	42.5	79.5	78	1.5	8	1
	5	□	MMS0800L-DIN	41.5	53.5	54.5	91.5	90	1.5	8	2
	5	●	MMS0800L-DIN-C	41.5	53.5	54.5	91.5	90	1.5	8	1
	3	★	MMS0800X3DB	25.5	41.5	41.5	91.5	90	1.5	8	1
	5	★	MMS0800X5DB	41.5	57.5	57.5	104.5	103	1.5	8	1
8.05	3	□	MMS0805S-DIN	34.4	46.5	47.5	88.5	87	1.5	10	2
	3	●	MMS0805S-DIN-C	34.4	46.5	47.5	88.5	87	1.5	10	1
	5	□	MMS0805L-DIN	48.4	60.5	61.5	102.5	101	1.5	10	2
	5	●	MMS0805L-DIN-C	48.4	60.5	61.5	102.5	101	1.5	10	1
8.1	3	□	MMS0810S-DIN	34.3	46.5	47.5	88.5	87	1.5	10	2
	3	□	MMS0810S-DIN-C	34.3	46.5	47.5	88.5	87	1.5	10	1
	5	□	MMS0810L-DIN	48.3	60.5	61.5	102.5	101	1.5	10	2
	5	□	MMS0810L-DIN-C	48.3	60.5	61.5	102.5	101	1.5	10	1
	3	★	MMS0810X3DB	25.8	44.5	46.5	97.5	96	1.5	10	1
	5	★	MMS0810X5DB	42.0	61.5	63.5	114.5	113	1.5	10	1
8.2	3	□	MMS0820S-DIN	34.2	46.5	47.5	88.5	87	1.5	10	2
	3	□	MMS0820S-DIN-C	34.2	46.5	47.5	88.5	87	1.5	10	1
	5	□	MMS0820L-DIN	48.2	60.5	61.5	102.5	101	1.5	10	2
	5	□	MMS0820L-DIN-C	48.2	60.5	61.5	102.5	101	1.5	10	1
	3	★	MMS0820X3DB	26.1	44.5	46.5	97.5	96	1.5	10	1
	5	★	MMS0820X5DB	42.5	61.5	63.5	114.5	113	1.5	10	1
8.3	3	□	MMS0830S-DIN	34.1	46.5	47.5	88.5	87	1.5	10	2
	3	●	MMS0830S-DIN-C	34.1	46.5	47.5	88.5	87	1.5	10	1
	5	□	MMS0830L-DIN	48.1	60.5	61.5	102.5	101	1.5	10	2
	5	●	MMS0830L-DIN-C	48.1	60.5	61.5	102.5	101	1.5	10	1
	3	★	MMS0830X3DB	26.4	44.5	46.5	97.5	96	1.5	10	1
	5	★	MMS0830X5DB	43.0	61.5	63.5	114.5	113	1.5	10	1
8.4	3	□	MMS0840S-DIN	33.9	46.5	47.5	88.5	87	1.5	10	2
	3	□	MMS0840S-DIN-C	33.9	46.5	47.5	88.5	87	1.5	10	1
	5	□	MMS0840L-DIN	47.9	60.5	61.5	102.5	101	1.5	10	2
	5	□	MMS0840L-DIN-C	47.9	60.5	61.5	102.5	101	1.5	10	1
	3	★	MMS0840X3DB	26.7	44.5	46.5	97.5	96	1.5	10	1
	5	★	MMS0840X5DB	43.5	61.5	63.5	114.5	113	1.5	10	1
8.5	3	□	MMS0850S-DIN	33.8	46.5	47.5	88.5	87	1.5	10	2
	3	●	MMS0850S-DIN-C	33.8	46.5	47.5	88.5	87	1.5	10	1
	5	□	MMS0850L-DIN	47.8	60.5	61.5	102.5	101	1.5	10	2
	5	●	MMS0850L-DIN-C	47.8	60.5	61.5	102.5	101	1.5	10	1
	3	★	MMS0850X3DB	27.0	44.5	46.5	97.5	96	1.5	10	1
	5	★	MMS0850X5DB	44.0	61.5	63.5	114.5	113	1.5	10	1

PARAMETRI DI TAGLIO ➤ M090

GUIDA OPERATIVA ➤ M089

DATI TECNICI ➤ P001

MMS

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.6	3	□	MMS0860S-DIN	33.7	46.6	47.6	88.6	87	1.6	10	2
	3	●	MMS0860S-DIN-C	33.7	46.6	47.6	88.6	87	1.6	10	1
	5	□	MMS0860L-DIN	47.7	60.6	61.6	102.6	101	1.6	10	2
	5	●	MMS0860L-DIN-C	47.7	60.6	61.6	102.6	101	1.6	10	1
	3	★	MMS0860X3DB	27.4	46.6	48.6	102.6	101	1.6	10	1
	5	★	MMS0860X5DB	44.6	64.6	66.6	117.6	116	1.6	10	1
8.7	3	□	MMS0870S-DIN	33.5	46.6	47.6	88.6	87	1.6	10	2
	3	●	MMS0870S-DIN-C	33.5	46.6	47.6	88.6	87	1.6	10	1
	5	□	MMS0870L-DIN	47.5	60.6	61.6	102.6	101	1.6	10	2
	5	●	MMS0870L-DIN-C	47.5	60.6	61.6	102.6	101	1.6	10	1
	3	★	MMS0870X3DB	27.7	46.6	48.6	102.6	101	1.6	10	1
	5	★	MMS0870X5DB	45.1	64.6	66.6	117.6	116	1.6	10	1
8.8	3	□	MMS0880S-DIN	33.4	46.6	47.6	88.6	87	1.6	10	2
	3	●	MMS0880S-DIN-C	33.4	46.6	47.6	88.6	87	1.6	10	1
	5	□	MMS0880L-DIN	47.4	60.6	61.6	102.6	101	1.6	10	2
	5	●	MMS0880L-DIN-C	47.4	60.6	61.6	102.6	101	1.6	10	1
	3	★	MMS0880X3DB	28.0	46.6	48.6	102.6	101	1.6	10	1
	5	★	MMS0880X5DB	45.6	64.6	66.6	117.6	116	1.6	10	1
8.9	3	□	MMS0890S-DIN	33.3	46.6	47.6	88.6	87	1.6	10	2
	3	□	MMS0890S-DIN-C	33.3	46.6	47.6	88.6	87	1.6	10	1
	5	□	MMS0890L-DIN	47.3	60.6	61.6	102.6	101	1.6	10	2
	5	□	MMS0890L-DIN-C	47.3	60.6	61.6	102.6	101	1.6	10	1
	3	★	MMS0890X3DB	28.3	46.6	48.6	102.6	101	1.6	10	1
	5	★	MMS0890X5DB	46.1	64.6	66.6	117.6	116	1.6	10	1
9.0	3	□	MMS0900S-DIN	33.1	46.6	47.6	88.6	87	1.6	10	2
	3	●	MMS0900S-DIN-C	33.1	46.6	47.6	88.6	87	1.6	10	1
	5	□	MMS0900L-DIN	47.1	60.6	61.6	102.6	101	1.6	10	2
	5	●	MMS0900L-DIN-C	47.1	60.6	61.6	102.6	101	1.6	10	1
	3	★	MMS0900X3DB	28.6	46.6	48.6	102.6	101	1.6	10	1
	5	★	MMS0900X5DB	46.6	64.6	66.6	117.6	116	1.6	10	1
9.1	3	□	MMS0910S-DIN	33.0	46.7	47.7	88.7	87	1.7	10	2
	3	□	MMS0910S-DIN-C	33.0	46.7	47.7	88.7	87	1.7	10	1
	5	□	MMS0910L-DIN	47.0	60.7	61.7	102.7	101	1.7	10	2
	5	□	MMS0910L-DIN-C	47.0	60.7	61.7	102.7	101	1.7	10	1
	3	★	MMS0910X3DB	29.0	49.7	51.7	102.7	101	1.7	10	1
	5	★	MMS0910X5DB	47.2	68.7	71.7	122.7	121	1.7	10	1
9.2	3	□	MMS0920S-DIN	32.9	46.7	47.7	88.7	87	1.7	10	2
	3	□	MMS0920S-DIN-C	32.9	46.7	47.7	88.7	87	1.7	10	1
	5	□	MMS0920L-DIN	46.9	60.7	61.7	102.7	101	1.7	10	2
	5	□	MMS0920L-DIN-C	46.9	60.7	61.7	102.7	101	1.7	10	1
	3	★	MMS0920X3DB	29.3	49.7	51.7	102.7	101	1.7	10	1
	5	★	MMS0920X5DB	47.7	68.7	71.7	122.7	121	1.7	10	1
9.3	3	□	MMS0930S-DIN	32.7	46.7	47.7	88.7	87	1.7	10	2
	3	●	MMS0930S-DIN-C	32.7	46.7	47.7	88.7	87	1.7	10	1
	5	□	MMS0930L-DIN	46.7	60.7	61.7	102.7	101	1.7	10	2
	5	●	MMS0930L-DIN-C	46.7	60.7	61.7	102.7	101	1.7	10	1
	3	★	MMS0930X3DB	29.6	49.7	51.7	102.7	101	1.7	10	1
	5	★	MMS0930X5DB	48.2	68.7	71.7	122.7	121	1.7	10	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
9.4	3	□	MMS0940S-DIN	32.6	46.7	47.7	88.7	87	1.7	10	2
	3	□	MMS0940S-DIN-C	32.6	46.7	47.7	88.7	87	1.7	10	1
	5	□	MMS0940L-DIN	46.6	60.7	61.7	102.7	101	1.7	10	2
	5	□	MMS0940L-DIN-C	46.6	60.7	61.7	102.7	101	1.7	10	1
	3	★	MMS0940X3DB	29.9	49.7	51.7	102.7	101	1.7	10	1
	5	★	MMS0940X5DB	48.7	68.7	71.7	122.7	121	1.7	10	1
9.5	3	□	MMS0950S-DIN	32.5	46.7	47.7	88.7	87	1.7	10	2
	3	●	MMS0950S-DIN-C	32.5	46.7	47.7	88.7	87	1.7	10	1
	5	□	MMS0950L-DIN	46.5	60.7	61.7	102.7	101	1.7	10	2
	5	●	MMS0950L-DIN-C	46.5	60.7	61.7	102.7	101	1.7	10	1
	3	★	MMS0950X3DB	30.2	49.7	51.7	102.7	101	1.7	10	1
	5	★	MMS0950X5DB	49.2	68.7	71.7	122.7	121	1.7	10	1
9.6	3	□	MMS0960S-DIN	32.3	46.7	47.7	88.7	87	1.7	10	2
	3	□	MMS0960S-DIN-C	32.3	46.7	47.7	88.7	87	1.7	10	1
	5	□	MMS0960L-DIN	46.3	60.7	61.7	102.7	101	1.7	10	2
	5	□	MMS0960L-DIN-C	46.3	60.7	61.7	102.7	101	1.7	10	1
	3	★	MMS0960X3DB	30.5	51.7	51.7	102.7	101	1.7	10	1
	5	★	MMS0960X5DB	49.7	71.7	71.7	122.7	121	1.7	10	1
9.7	3	□	MMS0970S-DIN	32.2	46.8	47.8	88.8	87	1.8	10	2
	3	□	MMS0970S-DIN-C	32.2	46.8	47.8	88.8	87	1.8	10	1
	5	□	MMS0970L-DIN	46.2	60.8	61.8	102.8	101	1.8	10	2
	5	□	MMS0970L-DIN-C	46.2	60.8	61.8	102.8	101	1.8	10	1
	3	★	MMS0970X3DB	30.9	51.8	51.8	102.8	101	1.8	10	1
	5	★	MMS0970X5DB	50.3	71.8	71.8	122.8	121	1.8	10	1
9.8	3	□	MMS0980S-DIN	32.1	46.8	47.8	88.8	87	1.8	10	2
	3	●	MMS0980S-DIN-C	32.1	46.8	47.8	88.8	87	1.8	10	1
	5	□	MMS0980L-DIN	46.1	60.8	61.8	102.8	101	1.8	10	2
	5	●	MMS0980L-DIN-C	46.1	60.8	61.8	102.8	101	1.8	10	1
	3	★	MMS0980X3DB	31.2	51.8	51.8	102.8	101	1.8	10	1
	5	★	MMS0980X5DB	50.8	71.8	71.8	122.8	121	1.8	10	1
9.9	3	□	MMS0990S-DIN	32.0	46.8	47.8	88.8	87	1.8	10	2
	3	□	MMS0990S-DIN-C	32.0	46.8	47.8	88.8	87	1.8	10	1
	5	□	MMS0990L-DIN	46.0	60.8	61.8	102.8	101	1.8	10	2
	5	□	MMS0990L-DIN-C	46.0	60.8	61.8	102.8	101	1.8	10	1
	3	★	MMS0990X3DB	31.5	51.8	51.8	102.8	101	1.8	10	1
	5	★	MMS0990X5DB	51.3	71.8	71.8	122.8	121	1.8	10	1
10.0	3	□	MMS1000S-DIN	31.8	46.8	47.8	88.8	87	1.8	10	2
	3	●	MMS1000S-DIN-C	31.8	46.8	47.8	88.8	87	1.8	10	1
	5	□	MMS1000L-DIN	45.8	60.8	61.8	102.8	101	1.8	10	2
	5	●	MMS1000L-DIN-C	45.8	60.8	61.8	102.8	101	1.8	10	1
	3	★	MMS1000X3DB	31.8	51.8	51.8	102.8	101	1.8	10	1
	5	★	MMS1000X5DB	51.8	71.8	71.8	122.8	121	1.8	10	1
10.05	3	□	MMS1005S-DIN	39.8	54.8	55.8	101.8	100	1.8	12	2
	3	●	MMS1005S-DIN-C	39.8	54.8	55.8	101.8	100	1.8	12	1
	5	□	MMS1005L-DIN	55.8	70.8	71.8	117.8	116	1.8	12	2
	5	●	MMS1005L-DIN-C	55.8	70.8	71.8	117.8	116	1.8	12	1

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
10.1	3	□	MMS1010S-DIN	39.7	54.8	55.8	101.8	100	1.8	12	2
	3	□	MMS1010S-DIN-C	39.7	54.8	55.8	101.8	100	1.8	12	1
	5	□	MMS1010L-DIN	55.7	70.8	71.8	117.8	116	1.8	12	2
	5	□	MMS1010L-DIN-C	55.7	70.8	71.8	117.8	116	1.8	12	1
	3	★	MMS1010X3DB	32.1	54.8	56.8	112.8	111	1.8	12	1
	5	★	MMS1010X5DB	52.3	75.8	79.8	135.8	134	1.8	12	1
10.2	3	□	MMS1020S-DIN	39.6	54.9	55.9	101.9	100	1.9	12	2
	3	●	MMS1020S-DIN-C	39.6	54.9	55.9	101.9	100	1.9	12	1
	5	□	MMS1020L-DIN	55.6	70.9	71.9	117.9	116	1.9	12	2
	5	●	MMS1020L-DIN-C	55.6	70.9	71.9	117.9	116	1.9	12	1
	3	★	MMS1020X3DB	32.5	54.9	56.9	112.9	111	1.9	12	1
	5	★	MMS1020X5DB	52.9	75.9	79.9	135.9	134	1.9	12	1
10.3	3	□	MMS1030S-DIN	39.4	54.9	55.9	101.9	100	1.9	12	2
	3	●	MMS1030S-DIN-C	39.4	54.9	55.9	101.9	100	1.9	12	1
	5	□	MMS1030L-DIN	55.4	70.9	71.9	117.9	116	1.9	12	2
	5	●	MMS1030L-DIN-C	55.4	70.9	71.9	117.9	116	1.9	12	1
	3	★	MMS1030X3DB	32.8	54.9	56.9	112.9	111	1.9	12	1
	5	★	MMS1030X5DB	53.4	75.9	79.9	135.9	134	1.9	12	1
10.4	3	□	MMS1040S-DIN	39.3	54.9	55.9	101.9	100	1.9	12	2
	3	●	MMS1040S-DIN-C	39.3	54.9	55.9	101.9	100	1.9	12	1
	5	□	MMS1040L-DIN	55.3	70.9	71.9	117.9	116	1.9	12	2
	5	●	MMS1040L-DIN-C	55.3	70.9	71.9	117.9	116	1.9	12	1
	3	★	MMS1040X3DB	33.1	54.9	56.9	112.9	111	1.9	12	1
	5	★	MMS1040X5DB	53.9	75.9	79.9	135.9	134	1.9	12	1
10.5	3	□	MMS1050S-DIN	39.2	54.9	55.9	101.9	100	1.9	12	2
	3	●	MMS1050S-DIN-C	39.2	54.9	55.9	101.9	100	1.9	12	1
	5	□	MMS1050L-DIN	55.2	70.9	71.9	117.9	116	1.9	12	2
	5	●	MMS1050L-DIN-C	55.2	70.9	71.9	117.9	116	1.9	12	1
	3	★	MMS1050X3DB	33.4	54.9	56.9	112.9	111	1.9	12	1
	5	★	MMS1050X5DB	54.4	75.9	79.9	135.9	134	1.9	12	1
10.6	3	□	MMS1060S-DIN	39.0	54.9	55.9	101.9	100	1.9	12	2
	3	□	MMS1060S-DIN-C	39.0	54.9	55.9	101.9	100	1.9	12	1
	5	□	MMS1060L-DIN	55.0	70.9	71.9	117.9	116	1.9	12	2
	5	□	MMS1060L-DIN-C	55.0	70.9	71.9	117.9	116	1.9	12	1
	3	★	MMS1060X3DB	33.7	56.9	57.9	117.9	116	1.9	12	1
	5	★	MMS1060X5DB	54.9	78.9	79.9	135.9	134	1.9	12	1
10.7	3	□	MMS1070S-DIN	38.9	54.9	55.9	101.9	100	1.9	12	2
	3	●	MMS1070S-DIN-C	38.9	54.9	55.9	101.9	100	1.9	12	1
	5	□	MMS1070L-DIN	54.9	70.9	71.9	117.9	116	1.9	12	2
	5	●	MMS1070L-DIN-C	54.9	70.9	71.9	117.9	116	1.9	12	1
	3	★	MMS1070X3DB	34.0	56.9	57.9	117.9	116	1.9	12	1
	5	★	MMS1070X5DB	55.4	78.9	79.9	135.9	134	1.9	12	1
10.8	3	□	MMS1080S-DIN	38.8	55.0	56.0	102.0	100	2.0	12	2
	3	●	MMS1080S-DIN-C	38.8	55.0	56.0	102.0	100	2.0	12	1
	5	□	MMS1080L-DIN	54.8	71.0	72.0	118.0	116	2.0	12	2
	5	●	MMS1080L-DIN-C	54.8	71.0	72.0	118.0	116	2.0	12	1
	3	★	MMS1080X3DB	34.4	57.0	58.0	118.0	116	2.0	12	1
	5	★	MMS1080X5DB	56.0	79.0	80.0	136.0	134	2.0	12	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
10.9	3	□	MMS1090S-DIN	38.6	55.0	56.0	102.0	100	2.0	12	2
	3	□	MMS1090S-DIN-C	38.6	55.0	56.0	102.0	100	2.0	12	1
	5	□	MMS1090L-DIN	54.6	71.0	72.0	118.0	116	2.0	12	2
	5	□	MMS1090L-DIN-C	54.6	71.0	72.0	118.0	116	2.0	12	1
	3	★	MMS1090X3DB	34.7	57.0	58.0	118.0	116	2.0	12	1
	5	★	MMS1090X5DB	56.5	79.0	80.0	136.0	134	2.0	12	1
11.0	3	□	MMS1100S-DIN	38.5	55.0	56.0	102.0	100	2.0	12	2
	3	●	MMS1100S-DIN-C	38.5	55.0	56.0	102.0	100	2.0	12	1
	5	□	MMS1100L-DIN	54.5	71.0	72.0	118.0	116	2.0	12	2
	5	●	MMS1100L-DIN-C	54.5	71.0	72.0	118.0	116	2.0	12	1
	3	★	MMS1100X3DB	35.0	57.0	58.0	118.0	116	2.0	12	1
	5	★	MMS1100X5DB	57.0	79.0	80.0	136.0	134	2.0	12	1
11.1	3	□	MMS1110S-DIN	38.4	55.0	56.0	102.0	100	2.0	12	2
	3	□	MMS1110S-DIN-C	38.4	55.0	56.0	102.0	100	2.0	12	1
	5	□	MMS1110L-DIN	54.4	71.0	72.0	118.0	116	2.0	12	2
	5	□	MMS1110L-DIN-C	54.4	71.0	72.0	118.0	116	2.0	12	1
	3	★	MMS1110X3DB	35.3	60.0	62.0	118.0	116	2.0	12	1
	5	★	MMS1110X5DB	57.5	83.0	86.0	142.0	140	2.0	12	1
11.2	3	□	MMS1120S-DIN	38.2	55.0	56.0	102.0	100	2.0	12	2
	3	●	MMS1120S-DIN-C	38.2	55.0	56.0	102.0	100	2.0	12	1
	5	□	MMS1120L-DIN	54.2	71.0	72.0	118.0	116	2.0	12	2
	5	●	MMS1120L-DIN-C	54.2	71.0	72.0	118.0	116	2.0	12	1
	3	★	MMS1120X3DB	35.6	60.0	62.0	118.0	116	2.0	12	1
	5	★	MMS1120X5DB	58.0	83.0	86.0	142.0	140	2.0	12	1
11.3	3	□	MMS1130S-DIN	38.1	55.1	56.1	102.1	100	2.1	12	2
	3	□	MMS1130S-DIN-C	38.1	55.1	56.1	102.1	100	2.1	12	1
	5	□	MMS1130L-DIN	54.1	71.1	72.1	118.1	116	2.1	12	2
	5	□	MMS1130L-DIN-C	54.1	71.1	72.1	118.1	116	2.1	12	1
	3	★	MMS1130X3DB	36.0	60.1	62.1	118.1	116	2.1	12	1
	5	★	MMS1130X5DB	58.6	83.1	86.1	142.1	140	2.1	12	1
11.4	3	□	MMS1140S-DIN	38.0	55.1	56.1	102.1	100	2.1	12	2
	3	●	MMS1140S-DIN-C	38.0	55.1	56.1	102.1	100	2.1	12	1
	5	□	MMS1140L-DIN	54.0	71.1	72.1	118.1	116	2.1	12	2
	5	●	MMS1140L-DIN-C	54.0	71.1	72.1	118.1	116	2.1	12	1
	3	★	MMS1140X3DB	36.3	60.1	62.1	118.1	116	2.1	12	1
	5	★	MMS1140X5DB	59.1	83.1	86.1	142.1	140	2.1	12	1
11.5	3	□	MMS1150S-DIN	37.8	55.1	56.1	102.1	100	2.1	12	2
	3	●	MMS1150S-DIN-C	37.8	55.1	56.1	102.1	100	2.1	12	1
	5	□	MMS1150L-DIN	53.8	71.1	72.1	118.1	116	2.1	12	2
	5	●	MMS1150L-DIN-C	53.8	71.1	72.1	118.1	116	2.1	12	1
	3	★	MMS1150X3DB	36.6	60.1	62.1	118.1	116	2.1	12	1
	5	★	MMS1150X5DB	59.6	83.1	86.1	142.1	140	2.1	12	1
11.6	3	□	MMS1160S-DIN	37.7	55.1	56.1	102.1	100	2.1	12	2
	3	□	MMS1160S-DIN-C	37.7	55.1	56.1	102.1	100	2.1	12	1
	5	□	MMS1160L-DIN	53.7	71.1	72.1	118.1	116	2.1	12	2
	5	□	MMS1160L-DIN-C	53.7	71.1	72.1	118.1	116	2.1	12	1
	3	★	MMS1160X3DB	36.9	62.1	62.1	118.1	116	2.1	12	1
	5	★	MMS1160X5DB	60.1	86.1	86.1	142.1	140	2.1	12	1

PARAMETRI DI TAGLIO ➤ M090
GUIDA OPERATIVA ➤ M089
DATI TECNICI ➤ P001

MMS

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
11.7	3	□	MMS1170S-DIN	37.6	55.1	56.1	102.1	100	2.1	12	2
	3	●	MMS1170S-DIN-C	37.6	55.1	56.1	102.1	100	2.1	12	1
	5	□	MMS1170L-DIN	53.6	71.1	72.1	118.1	116	2.1	12	2
	5	●	MMS1170L-DIN-C	53.6	71.1	72.1	118.1	116	2.1	12	1
	3	★	MMS1170X3DB	37.2	62.1	62.1	118.1	116	2.1	12	1
	5	★	MMS1170X5DB	60.6	86.1	86.1	142.1	140	2.1	12	1
11.8	3	□	MMS1180S-DIN	37.4	55.1	56.1	102.1	100	2.1	12	2
	3	●	MMS1180S-DIN-C	37.4	55.1	56.1	102.1	100	2.1	12	1
	5	□	MMS1180L-DIN	53.4	71.1	72.1	118.1	116	2.1	12	2
	5	●	MMS1180L-DIN-C	53.4	71.1	72.1	118.1	116	2.1	12	1
	3	★	MMS1180X3DB	37.5	62.1	62.1	118.1	116	2.1	12	1
	5	★	MMS1180X5DB	61.1	86.1	86.1	142.1	140	2.1	12	1
11.9	3	□	MMS1190S-DIN	37.3	55.2	56.2	102.2	100	2.2	12	2
	3	□	MMS1190S-DIN-C	37.3	55.2	56.2	102.2	100	2.2	12	1
	5	□	MMS1190L-DIN	53.3	71.2	72.2	118.2	116	2.2	12	2
	5	□	MMS1190L-DIN-C	53.3	71.2	72.2	118.2	116	2.2	12	1
	3	★	MMS1190X3DB	37.9	62.2	62.2	118.2	116	2.2	12	1
	5	★	MMS1190X5DB	61.7	86.2	86.2	142.2	140	2.2	12	1
12.0	3	□	MMS1200S-DIN	37.2	55.2	56.2	102.2	100	2.2	12	2
	3	●	MMS1200S-DIN-C	37.2	55.2	56.2	102.2	100	2.2	12	1
	5	□	MMS1200L-DIN	53.2	71.2	72.2	118.2	116	2.2	12	2
	5	●	MMS1200L-DIN-C	53.2	71.2	72.2	118.2	116	2.2	12	1
	3	★	MMS1200X3DB	38.2	62.2	62.2	118.2	116	2.2	12	1
	5	★	MMS1200X5DB	62.2	86.2	86.2	142.2	140	2.2	12	1
12.05	3	□	MMS1205S-DIN	42.1	60.2	61.2	107.2	105	2.2	14	2
	3	●	MMS1205S-DIN-C	42.1	60.2	61.2	107.2	105	2.2	14	1
	5	□	MMS1205L-DIN	59.1	77.2	78.2	124.2	122	2.2	14	2
	5	●	MMS1205L-DIN-C	59.1	77.2	78.2	124.2	122	2.2	14	1
12.1	3	□	MMS1210S-DIN	42.1	60.2	61.2	107.2	105	2.2	14	2
	3	□	MMS1210S-DIN-C	42.1	60.2	61.2	107.2	105	2.2	14	1
	5	□	MMS1210L-DIN	59.1	77.2	78.2	124.2	122	2.2	14	2
	5	□	MMS1210L-DIN-C	59.1	77.2	78.2	124.2	122	2.2	14	1
	3	★	MMS1210X3DB	38.5	65.2	68.2	124.2	122	2.2	14	1
	5	★	MMS1210X5DB	62.7	90.2	94.2	150.2	148	2.2	14	1
12.2	3	□	MMS1220S-DIN	41.9	60.2	61.2	107.2	105	2.2	14	2
	3	□	MMS1220S-DIN-C	41.9	60.2	61.2	107.2	105	2.2	14	1
	5	□	MMS1220L-DIN	58.9	77.2	78.2	124.2	122	2.2	14	2
	5	□	MMS1220L-DIN-C	58.9	77.2	78.2	124.2	122	2.2	14	1
	3	★	MMS1220X3DB	38.8	65.2	68.2	124.2	122	2.2	14	1
	5	★	MMS1220X5DB	63.2	90.2	94.2	150.2	148	2.2	14	1
12.3	3	□	MMS1230S-DIN	41.8	60.2	61.2	107.2	105	2.2	14	2
	3	□	MMS1230S-DIN-C	41.8	60.2	61.2	107.2	105	2.2	14	1
	5	□	MMS1230L-DIN	58.8	77.2	78.2	124.2	122	2.2	14	2
	5	□	MMS1230L-DIN-C	58.8	77.2	78.2	124.2	122	2.2	14	1
	3	★	MMS1230X3DB	39.1	65.2	68.2	124.2	122	2.2	14	1
	5	★	MMS1230X5DB	63.7	90.2	94.2	150.2	148	2.2	14	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
12.4	3	□	MMS1240S-DIN	41.7	60.3	61.3	107.3	105	2.3	14	2
	3	□	MMS1240S-DIN-C	41.7	60.3	61.3	107.3	105	2.3	14	1
	5	□	MMS1240L-DIN	58.7	77.3	78.3	124.3	122	2.3	14	2
	5	□	MMS1240L-DIN-C	58.7	77.3	78.3	124.3	122	2.3	14	1
	3	★	MMS1240X3DB	39.5	65.3	68.3	124.3	122	2.3	14	1
	5	★	MMS1240X5DB	64.3	90.3	94.3	150.3	148	2.3	14	1
12.5	3	□	MMS1250S-DIN	41.5	60.3	61.3	107.3	105	2.3	14	2
	3	●	MMS1250S-DIN-C	41.5	60.3	61.3	107.3	105	2.3	14	1
	5	□	MMS1250L-DIN	58.5	77.3	78.3	124.3	122	2.3	14	2
	5	●	MMS1250L-DIN-C	58.5	77.3	78.3	124.3	122	2.3	14	1
	3	★	MMS1250X3DB	39.8	65.3	68.3	124.3	122	2.3	14	1
	5	★	MMS1250X5DB	64.8	90.3	94.3	150.3	148	2.3	14	1
12.6	3	□	MMS1260S-DIN	41.4	60.3	61.3	107.3	105	2.3	14	2
	3	●	MMS1260S-DIN-C	41.4	60.3	61.3	107.3	105	2.3	14	1
	5	□	MMS1260L-DIN	58.4	77.3	78.3	124.3	122	2.3	14	2
	5	●	MMS1260L-DIN-C	58.4	77.3	78.3	124.3	122	2.3	14	1
	3	★	MMS1260X3DB	40.1	67.3	68.3	124.3	122	2.3	14	1
	5	★	MMS1260X5DB	65.3	93.3	94.3	150.3	148	2.3	14	1
12.7	3	□	MMS1270S-DIN	41.3	60.3	61.3	107.3	105	2.3	14	2
	3	●	MMS1270S-DIN-C	41.3	60.3	61.3	107.3	105	2.3	14	1
	5	□	MMS1270L-DIN	58.3	77.3	78.3	124.3	122	2.3	14	2
	5	●	MMS1270L-DIN-C	58.3	77.3	78.3	124.3	122	2.3	14	1
	3	★	MMS1270X3DB	40.4	67.3	68.3	124.3	122	2.3	14	1
	5	★	MMS1270X5DB	65.8	93.3	94.3	150.3	148	2.3	14	1
12.8	3	□	MMS1280S-DIN	41.1	60.3	61.3	107.3	105	2.3	14	2
	3	□	MMS1280S-DIN-C	41.1	60.3	61.3	107.3	105	2.3	14	1
	5	□	MMS1280L-DIN	58.1	77.3	78.3	124.3	122	2.3	14	2
	5	□	MMS1280L-DIN-C	58.1	77.3	78.3	124.3	122	2.3	14	1
	3	★	MMS1280X3DB	40.7	67.3	68.3	124.3	122	2.3	14	1
	5	★	MMS1280X5DB	66.3	93.3	94.3	150.3	148	2.3	14	1
12.9	3	□	MMS1290S-DIN	41.0	60.3	61.3	107.3	105	2.3	14	2
	3	□	MMS1290S-DIN-C	41.0	60.3	61.3	107.3	105	2.3	14	1
	5	□	MMS1290L-DIN	58.0	77.3	78.3	124.3	122	2.3	14	2
	5	□	MMS1290L-DIN-C	58.0	77.3	78.3	124.3	122	2.3	14	1
	3	★	MMS1290X3DB	41.0	67.3	68.3	124.3	122	2.3	14	1
	5	★	MMS1290X5DB	66.8	93.3	94.3	150.3	148	2.3	14	1
13.0	3	□	MMS1300S-DIN	40.9	60.4	61.4	107.4	105	2.4	14	2
	3	●	MMS1300S-DIN-C	40.9	60.4	61.4	107.4	105	2.4	14	1
	5	□	MMS1300L-DIN	57.9	77.4	78.4	124.4	122	2.4	14	2
	5	●	MMS1300L-DIN-C	57.9	77.4	78.4	124.4	122	2.4	14	1
	3	★	MMS1300X3DB	41.4	67.4	68.4	124.4	122	2.4	14	1
	5	★	MMS1300X5DB	67.4	93.4	94.4	150.4	148	2.4	14	1
13.1	3	□	MMS1310S-DIN	40.7	60.4	61.4	107.4	105	2.4	14	2
	3	□	MMS1310S-DIN-C	40.7	60.4	61.4	107.4	105	2.4	14	1
	5	□	MMS1310L-DIN	57.7	77.4	78.4	124.4	122	2.4	14	2
	5	□	MMS1310L-DIN-C	57.7	77.4	78.4	124.4	122	2.4	14	1
	3	★	MMS1310X3DB	41.7	70.4	72.4	128.4	126	2.4	14	1
	5	★	MMS1310X5DB	67.9	97.4	100.4	156.4	154	2.4	14	1

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
13.2	3	□	MMS1320S-DIN	40.6	60.4	61.4	107.4	105	2.4	14	2
	3	□	MMS1320S-DIN-C	40.6	60.4	61.4	107.4	105	2.4	14	1
	5	□	MMS1320L-DIN	57.6	77.4	78.4	124.4	122	2.4	14	2
	5	□	MMS1320L-DIN-C	57.6	77.4	78.4	124.4	122	2.4	14	1
	3	★	MMS1320X3DB	42.0	70.4	72.4	128.4	126	2.4	14	1
	5	★	MMS1320X5DB	68.4	97.4	100.4	156.4	154	2.4	14	1
13.3	3	□	MMS1330S-DIN	40.5	60.4	61.4	107.4	105	2.4	14	2
	3	□	MMS1330S-DIN-C	40.5	60.4	61.4	107.4	105	2.4	14	1
	5	□	MMS1330L-DIN	57.5	77.4	78.4	124.4	122	2.4	14	2
	5	□	MMS1330L-DIN-C	57.5	77.4	78.4	124.4	122	2.4	14	1
	3	★	MMS1330X3DB	42.3	70.4	72.4	128.4	126	2.4	14	1
	5	★	MMS1330X5DB	68.9	97.4	100.4	156.4	154	2.4	14	1
13.4	3	□	MMS1340S-DIN	40.3	60.4	61.4	107.4	105	2.4	14	2
	3	□	MMS1340S-DIN-C	40.3	60.4	61.4	107.4	105	2.4	14	1
	5	□	MMS1340L-DIN	57.3	77.4	78.4	124.4	122	2.4	14	2
	5	□	MMS1340L-DIN-C	57.3	77.4	78.4	124.4	122	2.4	14	1
	3	★	MMS1340X3DB	42.6	70.4	72.4	128.4	126	2.4	14	1
	5	★	MMS1340X5DB	69.4	97.4	100.4	156.4	154	2.4	14	1
13.5	3	□	MMS1350S-DIN	40.2	60.5	61.5	107.5	105	2.5	14	2
	3	●	MMS1350S-DIN-C	40.2	60.5	61.5	107.5	105	2.5	14	1
	5	□	MMS1350L-DIN	57.2	77.5	78.5	124.5	122	2.5	14	2
	5	●	MMS1350L-DIN-C	57.2	77.5	78.5	124.5	122	2.5	14	1
	3	★	MMS1350X3DB	43.0	70.5	72.5	128.5	126	2.5	14	1
	5	★	MMS1350X5DB	70.0	97.5	100.5	156.5	154	2.5	14	1
13.6	3	□	MMS1360S-DIN	40.1	60.5	61.5	107.5	105	2.5	14	2
	3	□	MMS1360S-DIN-C	40.1	60.5	61.5	107.5	105	2.5	14	1
	5	□	MMS1360L-DIN	57.1	77.5	78.5	124.5	122	2.5	14	2
	5	□	MMS1360L-DIN-C	57.1	77.5	78.5	124.5	122	2.5	14	1
	3	★	MMS1360X3DB	43.3	72.5	72.5	128.5	126	2.5	14	1
	5	★	MMS1360X5DB	70.5	100.5	100.5	156.5	154	2.5	14	1
13.7	3	□	MMS1370S-DIN	39.9	60.5	61.5	107.5	105	2.5	14	2
	3	●	MMS1370S-DIN-C	39.9	60.5	61.5	107.5	105	2.5	14	1
	5	□	MMS1370L-DIN	56.9	77.5	78.5	124.5	122	2.5	14	2
	5	●	MMS1370L-DIN-C	56.9	77.5	78.5	124.5	122	2.5	14	1
	3	★	MMS1370X3DB	43.6	72.5	72.5	128.5	126	2.5	14	1
	5	★	MMS1370X5DB	71.0	100.5	100.5	156.5	154	2.5	14	1
13.8	3	□	MMS1380S-DIN	39.8	60.5	61.5	107.5	105	2.5	14	2
	3	□	MMS1380S-DIN-C	39.8	60.5	61.5	107.5	105	2.5	14	1
	5	□	MMS1380L-DIN	56.8	77.5	78.5	124.5	122	2.5	14	2
	5	□	MMS1380L-DIN-C	56.8	77.5	78.5	124.5	122	2.5	14	1
	3	★	MMS1380X3DB	43.9	72.5	72.5	128.5	126	2.5	14	1
	5	★	MMS1380X5DB	71.5	100.5	100.5	156.5	154	2.5	14	1
13.9	3	□	MMS1390S-DIN	39.7	60.5	61.5	107.5	105	2.5	14	2
	3	□	MMS1390S-DIN-C	39.7	60.5	61.5	107.5	105	2.5	14	1
	5	□	MMS1390L-DIN	56.7	77.5	78.5	124.5	122	2.5	14	2
	5	□	MMS1390L-DIN-C	56.7	77.5	78.5	124.5	122	2.5	14	1
	3	★	MMS1390X3DB	44.2	72.5	72.5	128.5	126	2.5	14	1
	5	★	MMS1390X5DB	72.0	100.5	100.5	156.5	154	2.5	14	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
14.0	3	□	MMS1400S-DIN	39.5	60.5	61.5	107.5	105	2.5	14	2
	3	●	MMS1400S-DIN-C	39.5	60.5	61.5	107.5	105	2.5	14	1
	5	□	MMS1400L-DIN	56.5	77.5	78.5	124.5	122	2.5	14	2
	5	●	MMS1400L-DIN-C	56.5	77.5	78.5	124.5	122	2.5	14	1
	3	★	MMS1400X3DB	44.5	72.5	72.5	128.5	126	2.5	14	1
	5	★	MMS1400X5DB	72.5	100.5	100.5	156.5	154	2.5	14	1
14.05	3	□	MMS1405S-DIN	43.5	64.6	65.6	114.6	112	2.6	16	2
	3	□	MMS1405S-DIN-C	43.5	64.6	65.6	114.6	112	2.6	16	1
	5	□	MMS1405L-DIN	61.5	82.6	83.6	132.6	130	2.6	16	2
	5	□	MMS1405L-DIN-C	61.5	82.6	83.6	132.6	130	2.6	16	1
14.1	3	□	MMS1410S-DIN	43.4	64.6	65.6	114.6	112	2.6	16	2
	3	□	MMS1410S-DIN-C	43.4	64.6	65.6	114.6	112	2.6	16	1
	5	□	MMS1410L-DIN	61.4	82.6	83.6	132.6	130	2.6	16	2
	5	□	MMS1410L-DIN-C	61.4	82.6	83.6	132.6	130	2.6	16	1
	3	★	MMS1410X3DB	44.9	75.6	78.6	137.6	135	2.6	16	1
	5	★	MMS1410X5DB	73.1	104.6	108.6	167.6	165	2.6	16	1
14.2	3	□	MMS1420S-DIN	43.3	64.6	65.6	114.6	112	2.6	16	2
	3	□	MMS1420S-DIN-C	43.3	64.6	65.6	114.6	112	2.6	16	1
	5	□	MMS1420L-DIN	61.3	82.6	83.6	132.6	130	2.6	16	2
	5	□	MMS1420L-DIN-C	61.3	82.6	83.6	132.6	130	2.6	16	1
	3	★	MMS1420X3DB	45.2	75.6	78.6	137.6	135	2.6	16	1
	5	★	MMS1420X5DB	73.6	104.6	108.6	167.6	165	2.6	16	1
14.3	3	□	MMS1430S-DIN	43.2	64.6	65.6	114.6	112	2.6	16	2
	3	□	MMS1430S-DIN-C	43.2	64.6	65.6	114.6	112	2.6	16	1
	5	□	MMS1430L-DIN	61.2	82.6	83.6	132.6	130	2.6	16	2
	5	□	MMS1430L-DIN-C	61.2	82.6	83.6	132.6	130	2.6	16	1
	3	★	MMS1430X3DB	45.5	75.6	78.6	137.6	135	2.6	16	1
	5	★	MMS1430X5DB	74.1	104.6	108.6	167.6	165	2.6	16	1
14.4	3	□	MMS1440S-DIN	43.0	64.6	65.6	114.6	112	2.6	16	2
	3	□	MMS1440S-DIN-C	43.0	64.6	65.6	114.6	112	2.6	16	1
	5	□	MMS1440L-DIN	61.0	82.6	83.6	132.6	130	2.6	16	2
	5	□	MMS1440L-DIN-C	61.0	82.6	83.6	132.6	130	2.6	16	1
	3	★	MMS1440X3DB	45.8	75.6	78.6	137.6	135	2.6	16	1
	5	★	MMS1440X5DB	74.6	104.6	108.6	167.6	165	2.6	16	1
14.5	3	□	MMS1450S-DIN	42.9	64.6	65.6	114.6	112	2.6	16	2
	3	□	MMS1450S-DIN-C	42.9	64.6	65.6	114.6	112	2.6	16	1
	5	□	MMS1450L-DIN	60.9	82.6	83.6	132.6	130	2.6	16	2
	5	□	MMS1450L-DIN-C	60.9	82.6	83.6	132.6	130	2.6	16	1
	3	★	MMS1450X3DB	46.1	75.6	78.6	137.6	135	2.6	16	1
	5	★	MMS1450X5DB	75.1	104.6	108.6	167.6	165	2.6	16	1
14.6	3	□	MMS1460S-DIN	42.8	64.7	65.7	114.7	112	2.7	16	2
	3	□	MMS1460S-DIN-C	42.8	64.7	65.7	114.7	112	2.7	16	1
	5	□	MMS1460L-DIN	60.8	82.7	83.7	132.7	130	2.7	16	2
	5	□	MMS1460L-DIN-C	60.8	82.7	83.7	132.7	130	2.7	16	1
	3	★	MMS1460X3DB	46.5	77.7	78.7	137.7	135	2.7	16	1
	5	★	MMS1460X5DB	75.7	107.7	108.7	167.7	165	2.7	16	1
14.7	3	□	MMS1470S-DIN	42.6	64.7	65.7	114.7	112	2.7	16	2
	3	□	MMS1470S-DIN-C	42.6	64.7	65.7	114.7	112	2.7	16	1
	5	□	MMS1470L-DIN	60.6	82.7	83.7	132.7	130	2.7	16	2
	5	□	MMS1470L-DIN-C	60.6	82.7	83.7	132.7	130	2.7	16	1
	3	★	MMS1470X3DB	46.8	77.7	78.7	137.7	135	2.7	16	1
	5	★	MMS1470X5DB	76.2	107.7	108.7	167.7	165	2.7	16	1

PARAMETRI DI TAGLIO ➤ M090

GUIDA OPERATIVA ➤ M089

DATI TECNICI ➤ P001

MMS

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
14.8	3	□	MMS1480S-DIN	42.5	64.7	65.7	114.7	112	2.7	16	2
	3	□	MMS1480S-DIN-C	42.5	64.7	65.7	114.7	112	2.7	16	1
	5	□	MMS1480L-DIN	60.5	82.7	83.7	132.7	130	2.7	16	2
	5	□	MMS1480L-DIN-C	60.5	82.7	83.7	132.7	130	2.7	16	1
	3	★	MMS1480X3DB	47.1	77.7	78.7	137.7	135	2.7	16	1
	5	★	MMS1480X5DB	76.7	107.7	108.7	167.7	165	2.7	16	1
14.9	3	□	MMS1490S-DIN	42.4	64.7	65.7	114.7	112	2.7	16	2
	3	□	MMS1490S-DIN-C	42.4	64.7	65.7	114.7	112	2.7	16	1
	5	□	MMS1490L-DIN	60.4	82.7	83.7	132.7	130	2.7	16	2
	5	□	MMS1490L-DIN-C	60.4	82.7	83.7	132.7	130	2.7	16	1
	3	★	MMS1490X3DB	47.4	77.7	78.7	137.7	135	2.7	16	1
	5	★	MMS1490X5DB	77.2	107.7	108.7	167.7	165	2.7	16	1
15.0	3	□	MMS1500S-DIN	42.2	64.7	65.7	114.7	112	2.7	16	2
	3	□	MMS1500S-DIN-C	42.2	64.7	65.7	114.7	112	2.7	16	1
	5	□	MMS1500L-DIN	60.2	82.7	83.7	132.7	130	2.7	16	2
	5	□	MMS1500L-DIN-C	60.2	82.7	83.7	132.7	130	2.7	16	1
	3	★	MMS1500X3DB	47.7	77.7	78.7	137.7	135	2.7	16	1
	5	★	MMS1500X5DB	77.7	107.7	108.7	167.7	165	2.7	16	1
15.1	3	□	MMS1510S-DIN	42.1	64.7	65.7	114.7	112	2.7	16	2
	3	□	MMS1510S-DIN-C	42.1	64.7	65.7	114.7	112	2.7	16	1
	5	□	MMS1510L-DIN	60.1	82.7	83.7	132.7	130	2.7	16	2
	5	□	MMS1510L-DIN-C	60.1	82.7	83.7	132.7	130	2.7	16	1
	3	★	MMS1510X3DB	48.0	80.7	82.7	141.7	139	2.7	16	1
	5	★	MMS1510X5DB	78.2	111.7	114.7	173.7	171	2.7	16	1
15.2	3	□	MMS1520S-DIN	42.0	64.8	65.8	114.8	112	2.8	16	2
	3	□	MMS1520S-DIN-C	42.0	64.8	65.8	114.8	112	2.8	16	1
	5	□	MMS1520L-DIN	60.0	82.8	83.8	132.8	130	2.8	16	2
	5	□	MMS1520L-DIN-C	60.0	82.8	83.8	132.8	130	2.8	16	1
	3	★	MMS1520X3DB	48.4	80.8	82.8	141.8	139	2.8	16	1
	5	★	MMS1520X5DB	78.8	111.8	114.8	173.8	171	2.8	16	1
15.3	3	□	MMS1530S-DIN	41.8	64.8	65.8	114.8	112	2.8	16	2
	3	□	MMS1530S-DIN-C	41.8	64.8	65.8	114.8	112	2.8	16	1
	5	□	MMS1530L-DIN	59.8	82.8	83.8	132.8	130	2.8	16	2
	5	□	MMS1530L-DIN-C	59.8	82.8	83.8	132.8	130	2.8	16	1
	3	★	MMS1530X3DB	48.7	80.8	82.8	141.8	139	2.8	16	1
	5	★	MMS1530X5DB	79.3	111.8	114.8	173.8	171	2.8	16	1
15.4	3	□	MMS1540S-DIN	41.7	64.8	65.8	114.8	112	2.8	16	2
	3	□	MMS1540S-DIN-C	41.7	64.8	65.8	114.8	112	2.8	16	1
	5	□	MMS1540L-DIN	59.7	82.8	83.8	132.8	130	2.8	16	2
	5	□	MMS1540L-DIN-C	59.7	82.8	83.8	132.8	130	2.8	16	1
	3	★	MMS1540X3DB	49.0	80.8	82.8	141.8	139	2.8	16	1
	5	★	MMS1540X5DB	79.8	111.8	114.8	173.8	171	2.8	16	1
15.5	3	□	MMS1550S-DIN	41.6	64.8	65.8	114.8	112	2.8	16	2
	3	□	MMS1550S-DIN-C	41.6	64.8	65.8	114.8	112	2.8	16	1
	5	□	MMS1550L-DIN	59.6	82.8	83.8	132.8	130	2.8	16	2
	5	□	MMS1550L-DIN-C	59.6	82.8	83.8	132.8	130	2.8	16	1
	3	★	MMS1550X3DB	49.3	80.8	82.8	141.8	139	2.8	16	1
	5	★	MMS1550X5DB	80.3	111.8	114.8	173.8	171	2.8	16	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
15.6	3	□	MMS1560S-DIN	41.4	64.8	65.8	114.8	112	2.8	16	2
	3	□	MMS1560S-DIN-C	41.4	64.8	65.8	114.8	112	2.8	16	1
	5	□	MMS1560L-DIN	59.4	82.8	83.8	132.8	130	2.8	16	2
	5	□	MMS1560L-DIN-C	59.4	82.8	83.8	132.8	130	2.8	16	1
	3	★	MMS1560X3DB	49.6	82.8	82.8	141.8	139	2.8	16	1
	5	★	MMS1560X5DB	80.8	114.8	114.8	173.8	171	2.8	16	1
15.7	3	□	MMS1570S-DIN	41.3	64.9	65.9	114.9	112	2.9	16	2
	3	□	MMS1570S-DIN-C	41.3	64.9	65.9	114.9	112	2.9	16	1
	5	□	MMS1570L-DIN	59.3	82.9	83.9	132.9	130	2.9	16	2
	5	□	MMS1570L-DIN-C	59.3	82.9	83.9	132.9	130	2.9	16	1
	3	★	MMS1570X3DB	50.0	82.9	82.9	141.9	139	2.9	16	1
	5	★	MMS1570X5DB	81.4	114.9	114.9	173.9	171	2.9	16	1
15.8	3	□	MMS1580S-DIN	41.2	64.9	65.9	114.9	112	2.9	16	2
	3	□	MMS1580S-DIN-C	41.2	64.9	65.9	114.9	112	2.9	16	1
	5	□	MMS1580L-DIN	59.2	82.9	83.9	132.9	130	2.9	16	2
	5	□	MMS1580L-DIN-C	59.2	82.9	83.9	132.9	130	2.9	16	1
	3	★	MMS1580X3DB	50.3	82.9	82.9	141.9	139	2.9	16	1
	5	★	MMS1580X5DB	81.9	114.9	114.9	173.9	171	2.9	16	1
15.9	3	□	MMS1590S-DIN	41.0	64.9	65.9	114.9	112	2.9	16	2
	3	□	MMS1590S-DIN-C	41.0	64.9	65.9	114.9	112	2.9	16	1
	5	□	MMS1590L-DIN	59.0	82.9	83.9	132.9	130	2.9	16	2
	5	□	MMS1590L-DIN-C	59.0	82.9	83.9	132.9	130	2.9	16	1
	3	★	MMS1590X3DB	50.6	82.9	82.9	141.9	139	2.9	16	1
	5	★	MMS1590X5DB	82.4	114.9	114.9	173.9	171	2.9	16	1
16.0	3	□	MMS1600S-DIN	40.9	64.9	65.9	114.9	112	2.9	16	2
	3	□	MMS1600S-DIN-C	40.9	64.9	65.9	114.9	112	2.9	16	1
	5	□	MMS1600L-DIN	58.9	82.9	83.9	132.9	130	2.9	16	2
	5	□	MMS1600L-DIN-C	58.9	82.9	83.9	132.9	130	2.9	16	1
	3	★	MMS1600X3DB	50.9	82.9	82.9	141.9	139	2.9	16	1
	5	★	MMS1600X5DB	82.9	114.9	114.9	173.9	171	2.9	16	1
16.1	3	□	MMS1610S-DIN	48.8	72.9	73.9	122.9	120	2.9	18	2
	3	□	MMS1610S-DIN-C	48.8	72.9	73.9	122.9	120	2.9	18	1
	5	□	MMS1610L-DIN	68.8	92.9	93.9	142.9	140	2.9	18	2
	5	□	MMS1610L-DIN-C	68.8	92.9	93.9	142.9	140	2.9	18	1
	3	□	MMS1610X3DB	51.2	85.9	88.9	147.9	145	2.9	18	1
	5	□	MMS1610X5DB	83.4	118.9	122.9	181.9	179	2.9	18	1
16.2	3	□	MMS1620S-DIN	48.6	72.9	73.9	122.9	120	2.9	18	2
	3	□	MMS1620S-DIN-C	48.6	72.9	73.9	122.9	120	2.9	18	1
	5	□	MMS1620L-DIN	68.6	92.9	93.9	142.9	140	2.9	18	2
	5	□	MMS1620L-DIN-C	68.6	92.9	93.9	142.9	140	2.9	18	1
	3	□	MMS1620X3DB	51.5	85.9	88.9	147.9	145	2.9	18	1
	5	□	MMS1620X5DB	83.9	118.9	122.9	181.9	179	2.9	18	1
16.3	3	□	MMS1630S-DIN	48.5	73.0	74.0	123.0	120	3.0	18	2
	3	□	MMS1630S-DIN-C	48.5	73.0	74.0	123.0	120	3.0	18	1
	5	□	MMS1630L-DIN	68.5	93.0	94.0	143.0	140	3.0	18	2
	5	□	MMS1630L-DIN-C	68.5	93.0	94.0	143.0	140	3.0	18	1
	3	□	MMS1630X3DB	51.9	86.0	89.0	148.0	145	3.0	18	1
	5	□	MMS1630X5DB	84.5	119.0	123.0	182.0	179	3.0	18	1

★ : Inventario mantenuto in Giappone. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
16.4	3	□	MMS1640S-DIN	48.4	73.0	74.0	123.0	120	3.0	18	2
	3	□	MMS1640S-DIN-C	48.4	73.0	74.0	123.0	120	3.0	18	1
	5	□	MMS1640L-DIN	68.4	93.0	94.0	143.0	140	3.0	18	2
	5	□	MMS1640L-DIN-C	68.4	93.0	94.0	143.0	140	3.0	18	1
	3	□	MMS1640X3DB	52.2	86.0	89.0	148.0	145	3.0	18	1
	5	□	MMS1640X5DB	85.0	119.0	123.0	182.0	179	3.0	18	1
16.5	3	□	MMS1650S-DIN	48.3	73.0	74.0	123.0	120	3.0	18	2
	3	□	MMS1650S-DIN-C	48.3	73.0	74.0	123.0	120	3.0	18	1
	5	□	MMS1650L-DIN	68.3	93.0	94.0	143.0	140	3.0	18	2
	5	□	MMS1650L-DIN-C	68.3	93.0	94.0	143.0	140	3.0	18	1
	3	★	MMS1650X3DB	52.5	86.0	89.0	148.0	145	3.0	18	1
	5	★	MMS1650X5DB	85.5	119.0	123.0	182.0	179	3.0	18	1
16.6	3	□	MMS1660S-DIN	48.1	73.0	74.0	123.0	120	3.0	18	2
	3	□	MMS1660S-DIN-C	48.1	73.0	74.0	123.0	120	3.0	18	1
	5	□	MMS1660L-DIN	68.1	93.0	94.0	143.0	140	3.0	18	2
	5	□	MMS1660L-DIN-C	68.1	93.0	94.0	143.0	140	3.0	18	1
	3	□	MMS1660X3DB	52.8	88.0	89.0	148.0	145	3.0	18	1
	5	□	MMS1660X5DB	86.0	122.0	123.0	182.0	179	3.0	18	1
16.7	3	□	MMS1670S-DIN	48.0	73.0	74.0	123.0	120	3.0	18	2
	3	□	MMS1670S-DIN-C	48.0	73.0	74.0	123.0	120	3.0	18	1
	5	□	MMS1670L-DIN	68.0	93.0	94.0	143.0	140	3.0	18	2
	5	□	MMS1670L-DIN-C	68.0	93.0	94.0	143.0	140	3.0	18	1
	3	□	MMS1670X3DB	53.1	88.0	89.0	148.0	145	3.0	18	1
	5	□	MMS1670X5DB	86.5	122.0	123.0	182.0	179	3.0	18	1
16.8	3	□	MMS1680S-DIN	47.9	73.1	74.1	123.1	120	3.1	18	2
	3	□	MMS1680S-DIN-C	47.9	73.1	74.1	123.1	120	3.1	18	1
	5	□	MMS1680L-DIN	67.9	93.1	94.1	143.1	140	3.1	18	2
	5	□	MMS1680L-DIN-C	67.9	93.1	94.1	143.1	140	3.1	18	1
	3	□	MMS1680X3DB	53.5	88.1	89.1	148.1	145	3.1	18	1
	5	□	MMS1680X5DB	87.1	122.1	123.1	182.1	179	3.1	18	1
16.9	3	□	MMS1690S-DIN	47.7	73.1	74.1	123.1	120	3.1	18	2
	3	□	MMS1690S-DIN-C	47.7	73.1	74.1	123.1	120	3.1	18	1
	5	□	MMS1690L-DIN	67.7	93.1	94.1	143.1	140	3.1	18	2
	5	□	MMS1690L-DIN-C	67.7	93.1	94.1	143.1	140	3.1	18	1
	3	□	MMS1690X3DB	53.8	88.1	89.1	148.1	145	3.1	18	1
	5	□	MMS1690X5DB	87.6	122.1	123.1	182.1	179	3.1	18	1
17.0	3	□	MMS1700S-DIN	47.6	73.1	74.1	123.1	120	3.1	18	2
	3	□	MMS1700S-DIN-C	47.6	73.1	74.1	123.1	120	3.1	18	1
	5	□	MMS1700L-DIN	67.6	93.1	94.1	143.1	140	3.1	18	2
	5	□	MMS1700L-DIN-C	67.6	93.1	94.1	143.1	140	3.1	18	1
	3	★	MMS1700X3DB	54.1	88.1	89.1	148.1	145	3.1	18	1
	5	★	MMS1700X5DB	88.1	122.1	123.1	182.1	179	3.1	18	1
17.1	3	□	MMS1710S-DIN	47.5	73.1	74.1	123.1	120	3.1	18	2
	3	□	MMS1710S-DIN-C	47.5	73.1	74.1	123.1	120	3.1	18	1
	5	□	MMS1710L-DIN	67.5	93.1	94.1	143.1	140	3.1	18	2
	5	□	MMS1710L-DIN-C	67.5	93.1	94.1	143.1	140	3.1	18	1
	3	□	MMS1710X3DB	54.4	91.1	93.1	152.1	149	3.1	18	1
	5	□	MMS1710X5DB	88.6	126.1	129.1	188.1	185	3.1	18	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
17.2	3	□	MMS1720S-DIN	47.3	73.1	74.1	123.1	120	3.1	18	2
	3	□	MMS1720S-DIN-C	47.3	73.1	74.1	123.1	120	3.1	18	1
	5	□	MMS1720L-DIN	67.3	93.1	94.1	143.1	140	3.1	18	2
	5	□	MMS1720L-DIN-C	67.3	93.1	94.1	143.1	140	3.1	18	1
	3	□	MMS1720X3DB	54.7	91.1	93.1	152.1	149	3.1	18	1
	5	□	MMS1720X5DB	89.1	126.1	129.1	188.1	185	3.1	18	1
17.3	3	□	MMS1730S-DIN	47.2	73.1	74.1	123.1	120	3.1	18	2
	3	□	MMS1730S-DIN-C	47.2	73.1	74.1	123.1	120	3.1	18	1
	5	□	MMS1730L-DIN	67.2	93.1	94.1	143.1	140	3.1	18	2
	5	□	MMS1730L-DIN-C	67.2	93.1	94.1	143.1	140	3.1	18	1
	3	□	MMS1730X3DB	55.0	91.1	93.1	152.1	149	3.1	18	1
	5	□	MMS1730X5DB	89.6	126.1	129.1	188.1	185	3.1	18	1
17.4	3	□	MMS1740S-DIN	47.1	73.2	74.2	123.2	120	3.2	18	2
	3	□	MMS1740S-DIN-C	47.1	73.2	74.2	123.2	120	3.2	18	1
	5	□	MMS1740L-DIN	67.1	93.2	94.2	143.2	140	3.2	18	2
	5	□	MMS1740L-DIN-C	67.1	93.2	94.2	143.2	140	3.2	18	1
	3	□	MMS1740X3DB	55.4	91.2	93.2	152.2	149	3.2	18	1
	5	□	MMS1740X5DB	90.2	126.2	129.2	188.2	185	3.2	18	1
17.5	3	□	MMS1750S-DIN	46.9	73.2	74.2	123.2	120	3.2	18	2
	3	□	MMS1750S-DIN-C	46.9	73.2	74.2	123.2	120	3.2	18	1
	5	□	MMS1750L-DIN	66.9	93.2	94.2	143.2	140	3.2	18	2
	5	□	MMS1750L-DIN-C	66.9	93.2	94.2	143.2	140	3.2	18	1
	3	★	MMS1750X3DB	55.7	91.2	93.2	152.2	149	3.2	18	1
	5	★	MMS1750X5DB	90.7	126.2	129.2	188.2	185	3.2	18	1
17.6	3	□	MMS1760S-DIN	46.8	73.2	74.2	123.2	120	3.2	18	2
	3	□	MMS1760S-DIN-C	46.8	73.2	74.2	123.2	120	3.2	18	1
	5	□	MMS1760L-DIN	66.8	93.2	94.2	143.2	140	3.2	18	2
	5	□	MMS1760L-DIN-C	66.8	93.2	94.2	143.2	140	3.2	18	1
	3	□	MMS1760X3DB	56.0	93.2	93.2	152.2	149	3.2	18	1
	5	□	MMS1760X5DB	91.2	129.2	129.2	188.2	185	3.2	18	1
17.7	3	□	MMS1770S-DIN	46.7	73.2	74.2	123.2	120	3.2	18	2
	3	□	MMS1770S-DIN-C	46.7	73.2	74.2	123.2	120	3.2	18	1
	5	□	MMS1770L-DIN	66.7	93.2	94.2	143.2	140	3.2	18	2
	5	□	MMS1770L-DIN-C	66.7	93.2	94.2	143.2	140	3.2	18	1
	3	□	MMS1770X3DB	56.3	93.2	93.2	152.2	149	3.2	18	1
	5	□	MMS1770X5DB	91.7	129.2	129.2	188.2	185	3.2	18	1
17.8	3	□	MMS1780S-DIN	46.5	73.2	74.2	123.2	120	3.2	18	2
	3	□	MMS1780S-DIN-C	46.5	73.2	74.2	123.2	120	3.2	18	1
	5	□	MMS1780L-DIN	66.5	93.2	94.2	143.2	140	3.2	18	2
	5	□	MMS1780L-DIN-C	66.5	93.2	94.2	143.2	140	3.2	18	1
	3	□	MMS1780X3DB	56.6	93.2	93.2	152.2	149	3.2	18	1
	5	□	MMS1780X5DB	92.2	129.2	129.2	188.2	185	3.2	18	1
17.9	3	□	MMS1790S-DIN	46.4	73.3	74.3	123.3	120	3.3	18	2
	3	□	MMS1790S-DIN-C	46.4	73.3	74.3	123.3	120	3.3	18	1
	5	□	MMS1790L-DIN	66.4	93.3	94.3	143.3	140	3.3	18	2
	5	□	MMS1790L-DIN-C	66.4	93.3	94.3	143.3	140	3.3	18	1
	3	□	MMS1790X3DB	57.0	93.3	93.3	152.3	149	3.3	18	1
	5	□	MMS1790X5DB	92.8	129.3	129.3	188.3	185	3.3	18	1

PARAMETRI DI TAGLIO ➤ M090
GUIDA OPERATIVA ➤ M089
DATI TECNICI ➤ P001

MMS

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
18.0	3	□	MMS1800S-DIN	46.3	73.3	74.3	123.3	120	3.3	18	2
	3	□	MMS1800S-DIN-C	46.3	73.3	74.3	123.3	120	3.3	18	1
	5	□	MMS1800L-DIN	66.3	93.3	94.3	143.3	140	3.3	18	2
	5	□	MMS1800L-DIN-C	66.3	93.3	94.3	143.3	140	3.3	18	1
	3	★	MMS1800X3DB	57.3	93.3	93.3	152.3	149	3.3	18	1
	5	★	MMS1800X5DB	93.3	129.3	129.3	188.3	185	3.3	18	1
18.1	3	□	MMS1810S-DIN	52.1	79.3	80.3	131.3	128	3.3	20	2
	3	□	MMS1810S-DIN-C	52.1	79.3	80.3	131.3	128	3.3	20	1
	5	□	MMS1810L-DIN	74.1	101.3	102.3	153.3	150	3.3	20	2
	5	□	MMS1810L-DIN-C	74.1	101.3	102.3	153.3	150	3.3	20	1
	3	□	MMS1810X3DB	57.6	96.3	99.3	160.3	157	3.3	20	1
	5	□	MMS1810X5DB	93.8	133.3	137.3	198.3	195	3.3	20	1
18.2	3	□	MMS1820S-DIN	52.0	79.3	80.3	131.3	128	3.3	20	2
	3	□	MMS1820S-DIN-C	52.0	79.3	80.3	131.3	128	3.3	20	1
	5	□	MMS1820L-DIN	74.0	101.3	102.3	153.3	150	3.3	20	2
	5	□	MMS1820L-DIN-C	74.0	101.3	102.3	153.3	150	3.3	20	1
	3	□	MMS1820X3DB	57.9	96.3	99.3	160.3	157	3.3	20	1
	5	□	MMS1820X5DB	94.3	133.3	137.3	198.3	195	3.3	20	1
18.3	3	□	MMS1830S-DIN	51.9	79.3	80.3	131.3	128	3.3	20	2
	3	□	MMS1830S-DIN-C	51.9	79.3	80.3	131.3	128	3.3	20	1
	5	□	MMS1830L-DIN	73.9	101.3	102.3	153.3	150	3.3	20	2
	5	□	MMS1830L-DIN-C	73.9	101.3	102.3	153.3	150	3.3	20	1
	3	□	MMS1830X3DB	58.2	96.3	99.3	160.3	157	3.3	20	1
	5	□	MMS1830X5DB	94.8	133.3	137.3	198.3	195	3.3	20	1
18.4	3	□	MMS1840S-DIN	51.7	79.3	80.3	131.3	128	3.3	20	2
	3	□	MMS1840S-DIN-C	51.7	79.3	80.3	131.3	128	3.3	20	1
	5	□	MMS1840L-DIN	73.7	101.3	102.3	153.3	150	3.3	20	2
	5	□	MMS1840L-DIN-C	73.7	101.3	102.3	153.3	150	3.3	20	1
	3	□	MMS1840X3DB	58.5	96.3	99.3	160.3	157	3.3	20	1
	5	□	MMS1840X5DB	95.3	133.3	137.3	198.3	195	3.3	20	1
18.5	3	□	MMS1850S-DIN	51.6	79.4	80.4	131.4	128	3.4	20	2
	3	□	MMS1850S-DIN-C	51.6	79.4	80.4	131.4	128	3.4	20	1
	5	□	MMS1850L-DIN	73.6	101.4	102.4	153.4	150	3.4	20	2
	5	□	MMS1850L-DIN-C	73.6	101.4	102.4	153.4	150	3.4	20	1
	3	★	MMS1850X3DB	58.9	96.4	99.4	160.4	157	3.4	20	1
	5	★	MMS1850X5DB	95.9	133.4	137.4	198.4	195	3.4	20	1
18.6	3	□	MMS1860S-DIN	51.5	79.4	80.4	131.4	128	3.4	20	2
	3	□	MMS1860S-DIN-C	51.5	79.4	80.4	131.4	128	3.4	20	1
	5	□	MMS1860L-DIN	73.5	101.4	102.4	153.4	150	3.4	20	2
	5	□	MMS1860L-DIN-C	73.5	101.4	102.4	153.4	150	3.4	20	1
	3	□	MMS1860X3DB	59.2	98.4	99.4	160.4	157	3.4	20	1
	5	□	MMS1860X5DB	96.4	136.4	137.4	198.4	195	3.4	20	1
18.7	3	□	MMS1870S-DIN	51.4	79.4	80.4	131.4	128	3.4	20	2
	3	□	MMS1870S-DIN-C	51.4	79.4	80.4	131.4	128	3.4	20	1
	5	□	MMS1870L-DIN	73.4	101.4	102.4	153.4	150	3.4	20	2
	5	□	MMS1870L-DIN-C	73.4	101.4	102.4	153.4	150	3.4	20	1
	3	□	MMS1870X3DB	59.5	98.4	99.4	160.4	157	3.4	20	1
	5	□	MMS1870X5DB	96.9	136.4	137.4	198.4	195	3.4	20	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
18.8	3	□	MMS1880S-DIN	51.2	79.4	80.4	131.4	128	3.4	20	2
	3	□	MMS1880S-DIN-C	51.2	79.4	80.4	131.4	128	3.4	20	1
	5	□	MMS1880L-DIN	73.2	101.4	102.4	153.4	150	3.4	20	2
	5	□	MMS1880L-DIN-C	73.2	101.4	102.4	153.4	150	3.4	20	1
	3	□	MMS1880X3DB	59.8	98.4	99.4	160.4	157	3.4	20	1
	5	□	MMS1880X5DB	97.4	136.4	137.4	198.4	195	3.4	20	1
18.9	3	□	MMS1890S-DIN	51.1	79.4	80.4	131.4	128	3.4	20	2
	3	□	MMS1890S-DIN-C	51.1	79.4	80.4	131.4	128	3.4	20	1
	5	□	MMS1890L-DIN	73.1	101.4	102.4	153.4	150	3.4	20	2
	5	□	MMS1890L-DIN-C	73.1	101.4	102.4	153.4	150	3.4	20	1
	3	□	MMS1890X3DB	60.1	98.4	99.4	160.4	157	3.4	20	1
	5	□	MMS1890X5DB	97.9	136.4	137.4	198.4	195	3.4	20	1
19.0	3	□	MMS1900S-DIN	51.0	79.5	80.5	131.5	128	3.5	20	2
	3	□	MMS1900S-DIN-C	51.0	79.5	80.5	131.5	128	3.5	20	1
	5	□	MMS1900L-DIN	73.0	101.5	102.5	153.5	150	3.5	20	2
	5	□	MMS1900L-DIN-C	73.0	101.5	102.5	153.5	150	3.5	20	1
	3	★	MMS1900X3DB	60.5	98.5	99.5	160.5	157	3.5	20	1
	5	★	MMS1900X5DB	98.5	136.5	137.5	198.5	195	3.5	20	1
19.1	3	□	MMS1910S-DIN	50.8	79.5	80.5	131.5	128	3.5	20	2
	3	□	MMS1910S-DIN-C	50.8	79.5	80.5	131.5	128	3.5	20	1
	5	□	MMS1910L-DIN	72.8	101.5	102.5	153.5	150	3.5	20	2
	5	□	MMS1910L-DIN-C	72.8	101.5	102.5	153.5	150	3.5	20	1
	3	□	MMS1910X3DB	60.8	101.5	103.5	164.5	161	3.5	20	1
	5	□	MMS1910X5DB	99.0	140.5	143.5	204.5	201	3.5	20	1
19.2	3	□	MMS1920S-DIN	50.7	79.5	80.5	131.5	128	3.5	20	2
	3	□	MMS1920S-DIN-C	50.7	79.5	80.5	131.5	128	3.5	20	1
	5	□	MMS1920L-DIN	72.7	101.5	102.5	153.5	150	3.5	20	2
	5	□	MMS1920L-DIN-C	72.7	101.5	102.5	153.5	150	3.5	20	1
	3	□	MMS1920X3DB	61.1	101.5	103.5	164.5	161	3.5	20	1
	5	□	MMS1920X5DB	99.5	140.5	143.5	204.5	201	3.5	20	1
19.3	3	□	MMS1930S-DIN	50.6	79.5	80.5	131.5	128	3.5	20	2
	3	□	MMS1930S-DIN-C	50.6	79.5	80.5	131.5	128	3.5	20	1
	5	□	MMS1930L-DIN	72.6	101.5	102.5	153.5	150	3.5	20	2
	5	□	MMS1930L-DIN-C	72.6	101.5	102.5	153.5	150	3.5	20	1
	3	□	MMS1930X3DB	61.4	101.5	103.5	164.5	161	3.5	20	1
	5	□	MMS1930X5DB	100.0	140.5	143.5	204.5	201	3.5	20	1
19.4	3	□	MMS1940S-DIN	50.4	79.5	80.5	131.5	128	3.5	20	2
	3	□	MMS1940S-DIN-C	50.4	79.5	80.5	131.5	128	3.5	20	1
	5	□	MMS1940L-DIN	72.4	101.5	102.5	153.5	150	3.5	20	2
	5	□	MMS1940L-DIN-C	72.4	101.5	102.5	153.5	150	3.5	20	1
	3	□	MMS1940X3DB	61.7	101.5	103.5	164.5	161	3.5	20	1
	5	□	MMS1940X5DB	100.5	140.5	143.5	204.5	201	3.5	20	1
19.5	3	□	MMS1950S-DIN	50.3	79.5	80.5	131.5	128	3.5	20	2
	3	□	MMS1950S-DIN-C	50.3	79.5	80.5	131.5	128	3.5	20	1
	5	□	MMS1950L-DIN	72.3	101.5	102.5	153.5	150	3.5	20	2
	5	□	MMS1950L-DIN-C	72.3	101.5	102.5	153.5	150	3.5	20	1
	3	★	MMS1950X3DB	62.0	101.5	103.5	164.5	161	3.5	20	1
	5	★	MMS1950X5DB	101.0	140.5	143.5	204.5	201	3.5	20	1

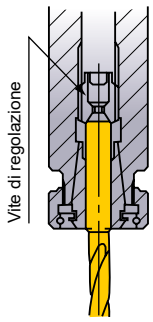
★ : Inventario mantenuto in Giappone. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
19.6	3	□	MMS1960S-DIN	50.2	79.6	80.6	131.6	128	3.6	20	2
	3	□	MMS1960S-DIN-C	50.2	79.6	80.6	131.6	128	3.6	20	1
	5	□	MMS1960L-DIN	72.2	101.6	102.6	153.6	150	3.6	20	2
	5	□	MMS1960L-DIN-C	72.2	101.6	102.6	153.6	150	3.6	20	1
	3	□	MMS1960X3DB	62.4	103.6	103.6	164.6	161	3.6	20	1
	5	□	MMS1960X5DB	101.6	143.6	143.6	204.6	201	3.6	20	1
19.7	3	□	MMS1970S-DIN	50.0	79.6	80.6	131.6	128	3.6	20	2
	3	□	MMS1970S-DIN-C	50.0	79.6	80.6	131.6	128	3.6	20	1
	5	□	MMS1970L-DIN	72.0	101.6	102.6	153.6	150	3.6	20	2
	5	□	MMS1970L-DIN-C	72.0	101.6	102.6	153.6	150	3.6	20	1
	3	□	MMS1970X3DB	62.7	103.6	103.6	164.6	161	3.6	20	1
	5	□	MMS1970X5DB	102.1	143.6	143.6	204.6	201	3.6	20	1
19.8	3	□	MMS1980S-DIN	49.9	79.6	80.6	131.6	128	3.6	20	2
	3	□	MMS1980S-DIN-C	49.9	79.6	80.6	131.6	128	3.6	20	1
	5	□	MMS1980L-DIN	71.9	101.6	102.6	153.6	150	3.6	20	2
	5	□	MMS1980L-DIN-C	71.9	101.6	102.6	153.6	150	3.6	20	1
	3	□	MMS1980X3DB	63.0	103.6	103.6	164.6	161	3.6	20	1
	5	□	MMS1980X5DB	102.6	143.6	143.6	204.6	201	3.6	20	1

DC (mm)	Profondità foro (L/D)	DP7020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
19.9	3	□	MMS1990S-DIN	49.8	79.6	80.6	131.6	128	3.6	20	2
	3	□	MMS1990S-DIN-C	49.8	79.6	80.6	131.6	128	3.6	20	1
	5	□	MMS1990L-DIN	71.8	101.6	102.6	153.6	150	3.6	20	2
	5	□	MMS1990L-DIN-C	71.8	101.6	102.6	153.6	150	3.6	20	1
	3	□	MMS1990X3DB	63.3	103.6	103.6	164.6	161	3.6	20	1
	5	□	MMS1990X5DB	103.1	143.6	143.6	204.6	201	3.6	20	1
20.0	3	□	MMS2000S-DIN	49.6	79.6	80.6	131.6	128	3.6	20	2
	3	□	MMS2000S-DIN-C	49.6	79.6	80.6	131.6	128	3.6	20	1
	5	□	MMS2000L-DIN	71.6	101.6	102.6	153.6	150	3.6	20	2
	5	□	MMS2000L-DIN-C	71.6	101.6	102.6	153.6	150	3.6	20	1
	3	★	MMS2000X3DB	63.6	103.6	103.6	164.6	161	3.6	20	1
	5	★	MMS2000X5DB	103.6	143.6	143.6	204.6	201	3.6	20	1

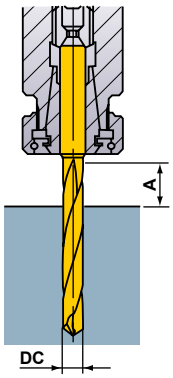
GUIDA OPERATIVA

Mandrino di tenuta



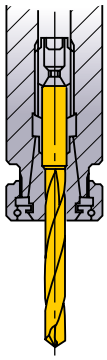
La ghiera reggispinta del mandrino blocca la punta in modo sicuro.

Lunghezza punta



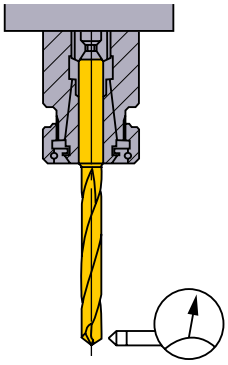
A ≥ DC x 1.5

Montaggio punta



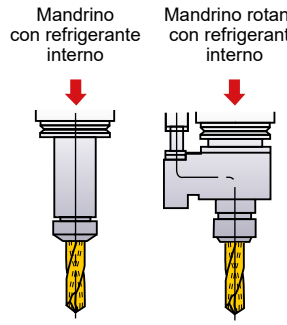
Non bloccare la punta sull'elica.

Tolleranza d'installazione



Eccentricità ≤ 0.03mm

Tipo con refrigerante interno



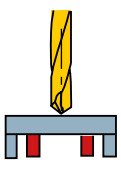
La pressione del refrigerante è di circa 5 bar—70 bar.

Utilizzo del refrigerante

1) Particelle di polvere e sporcizia possono ostruire i fori del passaggio refrigerante e impedire un flusso efficace. È consigliabile sostituire regolarmente il refrigerante.

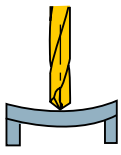
2) Piccole particelle di sporco possono bloccare i fori di lubrificazione. Utilizzare un filtro come misura preventiva. Con punte di diametro ridotto, scegliere un filtraggio fine.

Pezzi sottili



OK

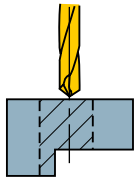
Supporti per il pezzo



X

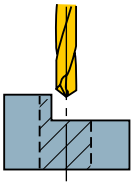
Se tende a flettere

Taglio interrotto



OK

①Ridurre l'avanzamento quando si fora sulla parte con taglio interrotto.



Richiede una precedente lavorazione

①Praticare un'impronta piana con fresa integrale prima della foratura.

PARAMETRI DI TAGLIO ➤ M090
DATI TECNICI ➤ P001

MMS

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	M					M				
	Acciaio inossidabile austenitico (≤200HB) X5CrNi1810, X5CrNiMo17-12-2					Acciaio inossidabile austenitico (>200HB) X2CrNiN1810, X2CrNiMoN17-12-2				
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Avanzamento della tavola (mm/min)
3.2	80	7900	0.13	(0.08—0.18)	1025	60	5900	0.10	(0.05—0.15)	590
4.0	80	6300	0.15	(0.10—0.20)	945	60	4700	0.12	(0.08—0.18)	560
5.0	80	5000	0.15	(0.10—0.20)	750	60	3800	0.12	(0.08—0.18)	455
6.3	80	4000	0.17	(0.12—0.22)	680	60	3000	0.15	(0.10—0.20)	450
8.0	80	3100	0.19	(0.14—0.24)	585	60	2300	0.17	(0.12—0.22)	390
10.0	60	1900	0.20	(0.15—0.25)	380	50	1500	0.18	(0.13—0.23)	270
12.0	60	1500	0.21	(0.16—0.26)	315	50	1300	0.19	(0.14—0.24)	245
16.0	60	1100	0.22	(0.17—0.27)	240	50	900	0.20	(0.15—0.25)	180
20.0	60	900	0.23	(0.18—0.28)	205	50	700	0.21	(0.16—0.26)	145

Materiale da lavorare	M					M				
	Acciai inossidabili duplex (≤280HB) X3CrNiMoN27-5-2					Acciai inossidabili, ferritici e martensitici (≤200HB) X10Cr13, X6Cr17				
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Avanzamento della tavola (mm/min)
3.2	50	4900	0.10	(0.05—0.15)	490	80	7900	0.13	(0.08—0.18)	1025
4.0	50	3900	0.12	(0.08—0.18)	465	80	6300	0.15	(0.10—0.20)	945
5.0	50	3100	0.12	(0.08—0.18)	370	80	5000	0.15	(0.10—0.20)	750
6.3	50	2500	0.15	(0.10—0.20)	375	80	4000	0.17	(0.12—0.22)	680
8.0	50	1900	0.17	(0.12—0.22)	320	80	3100	0.19	(0.14—0.24)	585
10.0	40	1200	0.18	(0.13—0.23)	215	60	1900	0.20	(0.15—0.25)	380
12.0	40	1000	0.19	(0.14—0.24)	190	60	1500	0.21	(0.16—0.26)	315
16.0	40	700	0.20	(0.15—0.25)	140	60	1100	0.22	(0.17—0.27)	240
20.0	40	600	0.21	(0.16—0.26)	125	60	900	0.23	(0.18—0.28)	205

Materiale da lavorare	M					M				
	Acciai inossidabili, ferritici e martensitici (>200HB) X20CrNi17-2, X30Cr13					Acciai inossidabili temprati (<450HB) X5CrNiCuNb164, X7CrNiAl177, 17-4PH, 17-7PH				
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Avanzamento della tavola (mm/min)
3.2	60	5900	0.10	(0.05—0.15)	590	50	4900	0.10	(0.05—0.15)	490
4.0	60	4700	0.12	(0.08—0.18)	560	50	3900	0.12	(0.08—0.18)	465
5.0	60	3800	0.12	(0.08—0.18)	455	50	3100	0.12	(0.08—0.18)	370
6.3	60	3000	0.15	(0.10—0.20)	450	50	2500	0.15	(0.10—0.20)	375
8.0	60	2300	0.17	(0.12—0.22)	390	50	1900	0.17	(0.12—0.22)	320
10.0	50	1500	0.18	(0.13—0.23)	270	40	1200	0.18	(0.13—0.23)	215
12.0	50	1300	0.19	(0.14—0.24)	245	40	1000	0.19	(0.14—0.24)	190
16.0	50	900	0.20	(0.15—0.25)	180	40	700	0.20	(0.15—0.25)	140
20.0	50	700	0.21	(0.16—0.26)	145	40	600	0.21	(0.16—0.26)	125

Nota 1) Per una foratura stabile consigliamo di aggiungere refrigerante ad alta pressione.
Nota 2) Come refrigerante consigliamo un'emulsione.
Nota 3) In caso di utilizzo di refrigeranti non solubili in acqua consigliamo di ridurre il numero di giri del 10—20%.

TABELLA DI CONFRONTO PER ACCIAI INOSSIDABILI

Materiale da lavorare		Germania		USA	Giappone
		W-no.	**DIN**	AISI/SAE	JIS
Acciai inossidabili austenitici e martensitici	≤200HB	1.4005	X12CrS3	416	SUS416
		1.4006	X10Cr13	410	SUS410
		1.4016	X6Cr17	430	SUS430
		1.4113	X6CrMo17	434	SUS434
		1.4510	X6CrTi17	430Ti	SUS430LX
		1.4512	X6CrTi12	409	—
	>200HB	1.4021	X20Cr13	420	SUS420J1
		1.4057	X20CrNi17-2	431	SUS431
		1.4028	X30Cr13	420	SUS420J2
		1.4125	X10CrMo17	440C	SUS440C
Acciaio inossidabile PH	<450HB	1.4542	X5CrNiCuNb16 4	630 (17-4PH)	SUS630
		1.4545	—	S15500 (15-5PH)	—
		1.4568	X7CrNiAl17 7	631 (17-7PH)	SUS631
Acciaio inossidabile austenitico	≤200HB	1.4301	X5CrNi18 10	304	SUS304
		1.4303	X5CrNi8-12	305	SUS305
		1.4305	X12CrNiS18-9	303	SUS303
		1.4307	X2CrNi19-11	304L	SUS304L
		1.4401	X5CrNiMo17 12 2	316	SUS316
	>200HB	1.4311	X2CrNiN18 10	304LN	SUS304LN
		1.4404	X2CrNiMo17 12 2	316L	SUS316L
		1.4406	X2CrNiMoN17 12 2	316LN	SUS316LN
		1.4435	X2CrNiMo18 14 3	—	SUS316L
		1.4438	X2CrNiMo18 15 4	317L	SUS317L
		1.4529	X1NiCrMoCuN25 20 7	N08926	—
		1.4541	X6CrNiTi18-10	321	SUS321
		1.4550	X6CrNiNb18-10	347	SUS347
		1.4571	X6CrNiMoTi17 12 2	316Ti	SUS316Ti
Acciaio duplex	≤280HB	1.4362	X2CrNiN23 4	—	—
		1.4410	X2CrNiMoN25 7 4	S32750	SCS14A
		1.4460	X3CrNiMoN27 5 2	329	SUS329J1
		1.4462	X2CrNiMoN22 5 3	S31803	SUS329J3L

FORATURA (METALLO DURO)

DSAS

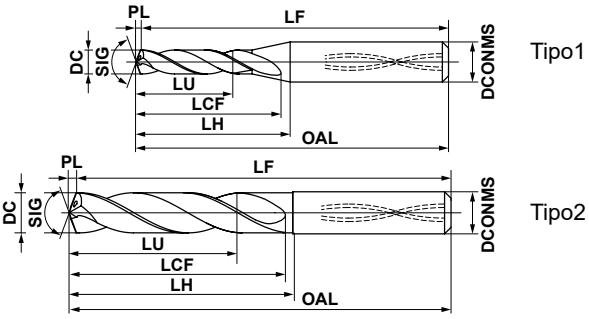
P | M | K | N | **S** | H

Refrigerante interno



Il colore del rivestimento può variare a seconda della direzione in cui lo si guarda. Ciò non incide sulle prestazioni della punta.

DC=3	3<DC≤6	6<DC≤10	10<DC≤15
0 −0.018	0 −0.018	0 −0.022	0 −0.027
DCONMS=6	**6<DCONMS≤10**	**10<DCONMS≤16**	
0 −0.018	0 −0.009	0 −0.011	



DC (mm)	Profondità foro (L/D)	DP9020	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.00	3	●	**DSAS0300X03S060**	9.5	21.5	23.5	70.5	70	0.5	6	1
3.00	5	●	**DSAS0300X05S060**	15.5	28.5	31.5	78.5	78	0.5	6	1
3.10	3	●	**DSAS0310X03S060**	9.9	21.6	23.6	70.6	70	0.6	6	1
3.10	5	●	**DSAS0310X05S060**	16.1	28.6	31.6	78.6	78	0.6	6	1
3.18	3	●	**DSAS0318X03S060**	10.1	21.6	23.6	70.6	70	0.6	6	1
3.18	5	●	**DSAS0318X05S060**	16.5	28.6	31.6	78.6	78	0.6	6	1
3.20	3	●	**DSAS0320X03S060**	10.2	21.6	23.6	70.6	70	0.6	6	1
3.20	5	●	**DSAS0320X05S060**	16.6	28.6	31.6	78.6	78	0.6	6	1
3.26	3	●	**DSAS0326X03S060**	10.4	21.6	23.6	70.6	70	0.6	6	1
3.26	5	●	**DSAS0326X05S060**	16.9	28.6	31.6	78.6	78	0.6	6	1
3.30	3	●	**DSAS0330X03S060**	10.5	21.6	23.6	70.6	70	0.6	6	1
3.30	5	●	**DSAS0330X05S060**	17.1	28.6	31.6	78.6	78	0.6	6	1
3.40	3	●	**DSAS0340X03S060**	10.8	21.6	23.6	70.6	70	0.6	6	1
3.40	5	●	**DSAS0340X05S060**	17.6	28.6	31.6	78.6	78	0.6	6	1
3.50	3	●	**DSAS0350X03S060**	11.1	21.6	23.6	70.6	70	0.6	6	1
3.50	5	●	**DSAS0350X05S060**	18.1	28.6	31.6	78.6	78	0.6	6	1
3.57	3	●	**DSAS0357X03S060**	11.4	22.7	23.7	70.7	70	0.7	6	1
3.57	5	●	**DSAS0357X05S060**	18.6	30.7	31.7	78.7	78	0.7	6	1
3.60	3	●	**DSAS0360X03S060**	11.5	22.7	23.7	70.7	70	0.7	6	1
3.60	5	●	**DSAS0360X05S060**	18.7	30.7	31.7	78.7	78	0.7	6	1
3.70	3	●	**DSAS0370X03S060**	11.8	22.7	23.7	70.7	70	0.7	6	1
3.70	5	●	**DSAS0370X05S060**	19.2	30.7	31.7	78.7	78	0.7	6	1
3.80	3	●	**DSAS0380X03S060**	12.1	22.7	23.7	70.7	70	0.7	6	1
3.80	5	●	**DSAS0380X05S060**	19.7	30.7	31.7	78.7	78	0.7	6	1
3.90	3	●	**DSAS0390X03S060**	12.4	22.7	23.7	70.7	70	0.7	6	1
3.90	5	●	**DSAS0390X05S060**	20.2	30.7	31.7	78.7	78	0.7	6	1
3.97	3	●	**DSAS0397X03S060**	12.6	22.7	23.7	70.7	70	0.7	6	1
3.97	5	●	**DSAS0397X05S060**	20.5	30.7	31.7	78.7	78	0.7	6	1
4.00	3	●	**DSAS0400X03S060**	12.7	22.7	23.7	70.7	70	0.7	6	1
4.00	5	●	**DSAS0400X05S060**	20.7	30.7	31.7	78.7	78	0.7	6	1
4.10	3	●	**DSAS0410X03S060**	13.0	24.7	26.7	73.7	73	0.7	6	1
4.10	5	●	**DSAS0410X05S060**	21.2	33.7	35.7	82.7	82	0.7	6	1
4.20	3	●	**DSAS0420X03S060**	13.4	24.8	26.8	73.8	73	0.8	6	1
4.20	5	●	**DSAS0420X05S060**	21.8	33.8	35.8	82.8	82	0.8	6	1
4.30	3	●	**DSAS0430X03S060**	13.7	24.8	26.8	73.8	73	0.8	6	1
4.30	5	●	**DSAS0430X05S060**	22.3	33.8	35.8	82.8	82	0.8	6	1
4.37	3	●	**DSAS0437X03S060**	13.9	24.8	26.8	73.8	73	0.8	6	1
4.37	5	●	**DSAS0437X05S060**	22.6	33.8	35.8	82.8	82	0.8	6	1
4.40	3	●	**DSAS0440X03S060**	14.0	24.8	26.8	73.8	73	0.8	6	1
4.40	5	●	**DSAS0440X05S060**	22.8	33.8	35.8	82.8	82	0.8	6	1

Nota 1) I fori passanti per il refrigerante delle punte con Ø 5 mm o inferiore sono rotondi.

● : **Inventario mantenuto.**

DC (mm)	Profondità foro (L/D)	DP9020	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
4.50	3	●	**DSAS0450X03S060**	14.3	24.8	26.8	73.8	73	0.8	6	1
4.50	5	●	**DSAS0450X05S060**	23.3	33.8	35.8	82.8	82	0.8	6	1
4.60	3	●	**DSAS0460X03S060**	14.6	25.8	28.8	75.8	75	0.8	6	1
4.60	5	●	**DSAS0460X05S060**	23.8	35.8	38.8	85.8	85	0.8	6	1
4.70	3	●	**DSAS0470X03S060**	15.0	25.9	28.9	75.9	75	0.9	6	1
4.70	5	●	**DSAS0470X05S060**	24.4	35.9	38.9	85.9	85	0.9	6	1
4.76	3	●	**DSAS0476X03S060**	15.2	25.9	28.9	75.9	75	0.9	6	1
4.76	5	●	**DSAS0476X05S060**	24.7	35.9	38.9	85.9	85	0.9	6	1
4.80	3	●	**DSAS0480X03S060**	15.3	25.9	28.9	75.9	75	0.9	6	1
4.80	5	●	**DSAS0480X05S060**	24.9	35.9	38.9	85.9	85	0.9	6	1
4.86	3	●	**DSAS0486X03S060**	15.5	25.9	28.9	75.9	75	0.9	6	1
4.86	5	●	**DSAS0486X05S060**	25.2	35.9	38.9	85.9	85	0.9	6	1
4.90	3	●	**DSAS0490X03S060**	15.6	25.9	28.9	75.9	75	0.9	6	1
4.90	5	●	**DSAS0490X05S060**	25.4	35.9	38.9	85.9	85	0.9	6	1
5.00	3	●	**DSAS0500X03S060**	15.9	28.9	29.9	81.9	81	0.9	6	2
5.00	5	●	**DSAS0500X05S060**	25.9	39.9	42.9	89.9	89	0.9	6	2
5.10	3	●	**DSAS0510X03S060**	16.2	28.9	29.9	81.9	81	0.9	6	2
5.10	5	●	**DSAS0510X05S060**	26.4	39.9	42.9	89.9	89	0.9	6	2
5.16	3	●	**DSAS0516X03S060**	16.5	29.0	30.0	82.0	81	1.0	6	2
5.16	5	●	**DSAS0516X05S060**	26.8	40.0	43.0	90.0	89	1.0	6	2
5.20	3	●	**DSAS0520X03S060**	16.6	29.0	30.0	82.0	81	1.0	6	2
5.20	5	●	**DSAS0520X05S060**	27.0	40.0	43.0	90.0	89	1.0	6	2
5.30	3	●	**DSAS0530X03S060**	16.9	29.0	30.0	82.0	81	1.0	6	2
5.30	5	●	**DSAS0530X05S060**	27.5	40.0	43.0	90.0	89	1.0	6	2
5.40	3	●	**DSAS0540X03S060**	17.2	29.0	30.0	82.0	81	1.0	6	2
5.40	5	●	**DSAS0540X05S060**	28.0	40.0	43.0	90.0	89	1.0	6	2
5.50	3	●	**DSAS0550X03S060**	17.5	29.0	30.0	82.0	81	1.0	6	2
5.50	5	●	**DSAS0550X05S060**	28.5	40.0	43.0	90.0	89	1.0	6	2
5.56	3	●	**DSAS0556X03S060**	17.8	31.1	31.1	82.1	81	1.1	6	2
5.56	5	●	**DSAS0556X05S060**	28.9	43.1	43.1	90.1	89	1.1	6	2
5.60	3	●	**DSAS0560X03S060**	17.9	31.1	31.1	82.1	81	1.1	6	2
5.60	5	●	**DSAS0560X05S060**	29.1	43.1	43.1	90.1	89	1.1	6	2
5.70	3	●	**DSAS0570X03S060**	18.2	31.1	31.1	82.1	81	1.1	6	2
5.70	5	●	**DSAS0570X05S060**	29.6	43.1	43.1	90.1	89	1.1	6	2
5.80	3	●	**DSAS0580X03S060**	18.5	31.1	31.1	82.1	81	1.1	6	2
5.80	5	●	**DSAS0580X05S060**	30.1	43.1	43.1	90.1	89	1.1	6	2
5.90	3	●	**DSAS0590X03S060**	18.8	31.1	31.1	82.1	81	1.1	6	2
5.90	5	●	**DSAS0590X05S060**	30.6	43.1	43.1	90.1	89	1.1	6	2
5.95	3	●	**DSAS0595X03S060**	19.0	31.1	31.1	82.1	81	1.1	6	2
5.95	5	●	**DSAS0595X05S060**	30.9	43.1	43.1	90.1	89	1.1	6	2
6.00	3	●	**DSAS0600X03S060**	19.1	31.1	31.1	82.1	81	1.1	6	2
6.00	5	●	**DSAS0600X05S060**	31.1	43.1	43.1	90.1	89	1.1	6	2
6.10	3	●	**DSAS0610X03S080**	19.5	34.2	37.2	87.2	86	1.2	8	2
6.10	5	●	**DSAS0610X05S080**	31.7	47.2	49.2	96.2	95	1.2	8	2
6.20	3	●	**DSAS0620X03S080**	19.8	34.2	37.2	87.2	86	1.2	8	2
6.20	5	●	**DSAS0620X05S080**	32.2	47.2	49.2	96.2	95	1.2	8	2
6.30	3	●	**DSAS0630X03S080**	20.1	34.2	37.2	87.2	86	1.2	8	2
6.30	5	●	**DSAS0630X05S080**	32.7	47.2	49.2	96.2	95	1.2	8	2
6.35	3	●	**DSAS0635X03S080**	20.3	34.2	37.2	87.2	86	1.2	8	2
6.35	5	●	**DSAS0635X05S080**	33.0	47.2	49.2	96.2	95	1.2	8	2
6.40	3	●	**DSAS0640X03S080**	20.4	34.2	37.2	87.2	86	1.2	8	2
6.40	5	●	**DSAS0640X05S080**	33.2	47.2	49.2	96.2	95	1.2	8	2
6.50	3	●	**DSAS0650X03S080**	20.7	34.2	37.2	87.2	86	1.2	8	2
6.50	5	●	**DSAS0650X05S080**	33.7	47.2	49.2	96.2	95	1.2	8	2
6.60	3	●	**DSAS0660X03S080**	21.1	36.3	38.3	91.3	90	1.3	8	2
6.60	5	●	**DSAS0660X05S080**	34.3	50.3	52.3	99.3	98	1.3	8	2
6.70	3	●	**DSAS0670X03S080**	21.4	36.3	38.3	91.3	90	1.3	8	2
6.70	5	●	**DSAS0670X05S080**	34.8	50.3	52.3	99.3	98	1.3	8	2

PARAMETRI DI TAGLIO ➤ **M097**
DATI TECNICI ➤ **P001**

DSAS

DC (mm)	Profondità foro (L/D)	DP9020	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
6.75	3	●	**DSAS0675X03S080**	21.5	36.3	38.3	91.3	90	1.3	8	2
6.75	5	●	**DSAS0675X05S080**	35.0	50.3	52.3	99.3	98	1.3	8	2
6.80	3	●	**DSAS0680X03S080**	21.7	36.3	38.3	91.3	90	1.3	8	2
6.80	5	●	**DSAS0680X05S080**	35.3	50.3	52.3	99.3	98	1.3	8	2
6.90	3	●	**DSAS0690X03S080**	22.0	36.3	38.3	91.3	90	1.3	8	2
6.90	5	●	**DSAS0690X05S080**	35.8	50.3	52.3	99.3	98	1.3	8	2
6.95	3	●	**DSAS0695X03S080**	22.2	36.3	38.3	91.3	90	1.3	8	2
6.95	5	●	**DSAS0695X05S080**	36.1	50.3	52.3	99.3	98	1.3	8	2
7.00	3	●	**DSAS0700X03S080**	22.3	36.3	38.3	91.3	90	1.3	8	2
7.00	5	●	**DSAS0700X05S080**	36.3	50.3	52.3	99.3	98	1.3	8	2
7.10	3	●	**DSAS0710X03S080**	22.7	39.4	40.4	91.4	90	1.4	8	2
7.10	5	●	**DSAS0710X05S080**	36.9	54.4	57.4	104.4	103	1.4	8	2
7.14	3	●	**DSAS0714X03S080**	22.8	39.4	40.4	91.4	90	1.4	8	2
7.14	5	●	**DSAS0714X05S080**	37.1	54.4	57.4	104.4	103	1.4	8	2
7.20	3	●	**DSAS0720X03S080**	23.0	39.4	40.4	91.4	90	1.4	8	2
7.20	5	●	**DSAS0720X05S080**	37.4	54.4	57.4	104.4	103	1.4	8	2
7.30	3	●	**DSAS0730X03S080**	23.3	39.4	40.4	91.4	90	1.4	8	2
7.30	5	●	**DSAS0730X05S080**	37.9	54.4	57.4	104.4	103	1.4	8	2
7.40	3	●	**DSAS0740X03S080**	23.6	39.4	40.4	91.4	90	1.4	8	2
7.40	5	●	**DSAS0740X05S080**	38.4	54.4	57.4	104.4	103	1.4	8	2
7.50	3	●	**DSAS0750X03S080**	23.9	39.4	40.4	91.4	90	1.4	8	2
7.50	5	●	**DSAS0750X05S080**	38.9	54.4	57.4	104.4	103	1.4	8	2
7.54	3	●	**DSAS0754X03S080**	24.1	41.5	41.5	91.5	90	1.5	8	2
7.54	5	●	**DSAS0754X05S080**	39.2	57.5	57.5	104.5	103	1.5	8	2
7.60	3	●	**DSAS0760X03S080**	24.3	41.5	41.5	91.5	90	1.5	8	2
7.60	5	●	**DSAS0760X05S080**	39.5	57.5	57.5	104.5	103	1.5	8	2
7.70	3	●	**DSAS0770X03S080**	24.6	41.5	41.5	91.5	90	1.5	8	2
7.70	5	●	**DSAS0770X05S080**	40.0	57.5	57.5	104.5	103	1.5	8	2
7.80	3	●	**DSAS0780X03S080**	24.9	41.5	41.5	91.5	90	1.5	8	2
7.80	5	●	**DSAS0780X05S080**	40.5	57.5	57.5	104.5	103	1.5	8	2
7.90	3	●	**DSAS0790X03S080**	25.2	41.5	41.5	91.5	90	1.5	8	2
7.90	5	●	**DSAS0790X05S080**	41.0	57.5	57.5	104.5	103	1.5	8	2
7.94	3	●	**DSAS0794X03S080**	25.3	41.5	41.5	91.5	90	1.5	8	2
7.94	5	●	**DSAS0794X05S080**	41.2	57.5	57.5	104.5	103	1.5	8	2
8.00	3	●	**DSAS0800X03S080**	25.5	41.5	41.5	91.5	90	1.5	8	2
8.00	5	●	**DSAS0800X05S080**	41.5	57.5	57.5	104.5	103	1.5	8	2
8.10	3	●	**DSAS0810X03S100**	25.8	44.5	47.5	97.5	96	1.5	10	2
8.10	5	●	**DSAS0810X05S100**	42.0	61.5	63.5	114.5	113	1.5	10	2
8.20	3	●	**DSAS0820X03S100**	26.1	44.5	47.5	97.5	96	1.5	10	2
8.20	5	●	**DSAS0820X05S100**	42.5	61.5	63.5	114.5	113	1.5	10	2
8.30	3	●	**DSAS0830X03S100**	26.4	44.5	47.5	97.5	96	1.5	10	2
8.30	5	●	**DSAS0830X05S100**	43.0	61.5	63.5	114.5	113	1.5	10	2
8.33	3	●	**DSAS0833X03S100**	26.5	44.5	47.5	97.5	96	1.5	10	2
8.33	5	●	**DSAS0833X05S100**	43.2	61.5	63.5	114.5	113	1.5	10	2
8.40	3	●	**DSAS0840X03S100**	26.7	44.5	47.5	97.5	96	1.5	10	2
8.40	5	●	**DSAS0840X05S100**	43.5	61.5	63.5	114.5	113	1.5	10	2
8.50	3	●	**DSAS0850X03S100**	27.0	44.5	47.5	97.5	96	1.5	10	2
8.50	5	●	**DSAS0850X05S100**	44.0	61.5	63.5	114.5	113	1.5	10	2
8.60	3	●	**DSAS0860X03S100**	27.4	46.6	48.6	102.6	101	1.6	10	2
8.60	5	●	**DSAS0860X05S100**	44.6	64.6	66.6	117.6	116	1.6	10	2
8.70	3	●	**DSAS0870X03S100**	27.7	46.6	48.6	102.6	101	1.6	10	2
8.70	5	●	**DSAS0870X05S100**	45.1	64.6	66.6	117.6	116	1.6	10	2
8.73	3	●	**DSAS0873X03S100**	27.8	46.6	48.6	102.6	101	1.6	10	2
8.73	5	●	**DSAS0873X05S100**	45.3	64.6	66.6	117.6	116	1.6	10	2
8.80	3	●	**DSAS0880X03S100**	28.0	46.6	48.6	102.6	101	1.6	10	2
8.80	5	●	**DSAS0880X05S100**	45.6	64.6	66.6	117.6	116	1.6	10	2
8.90	3	●	**DSAS0890X03S100**	28.3	46.6	48.6	102.6	101	1.6	10	2
8.90	5	●	**DSAS0890X05S100**	46.1	64.6	66.6	117.6	116	1.6	10	2

● : **Inventario mantenuto.**

DC (mm)	Profondità foro (L/D)	DP9020	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
9.00	3	●	**DSAS0900X03S100**	28.6	46.6	48.6	102.6	101	1.6	10	2
9.00	5	●	**DSAS0900X05S100**	46.6	64.6	66.6	117.6	116	1.6	10	2
9.10	3	●	**DSAS0910X03S100**	29.1	49.8	50.8	102.8	101	1.8	10	2
9.10	5	●	**DSAS0910X05S100**	47.3	68.8	71.8	122.8	121	1.8	10	2
9.20	3	●	**DSAS0920X03S100**	29.4	49.8	50.8	102.8	101	1.8	10	2
9.20	5	●	**DSAS0920X05S100**	47.8	68.8	71.8	122.8	121	1.8	10	2
9.30	3	●	**DSAS0930X03S100**	29.7	49.8	50.8	102.8	101	1.8	10	2
9.30	5	●	**DSAS0930X05S100**	48.3	68.8	71.8	122.8	121	1.8	10	2
9.40	3	●	**DSAS0940X03S100**	30.0	49.8	50.8	102.8	101	1.8	10	2
9.40	5	●	**DSAS0940X05S100**	48.8	68.8	71.8	122.8	121	1.8	10	2
9.50	3	●	**DSAS0950X03S100**	30.3	49.8	50.8	102.8	101	1.8	10	2
9.50	5	●	**DSAS0950X05S100**	49.3	68.8	71.8	122.8	121	1.8	10	2
9.53	3	●	**DSAS0953X03S100**	30.4	49.8	50.8	102.8	101	1.8	10	2
9.53	5	●	**DSAS0953X05S100**	49.4	68.8	71.8	122.8	121	1.8	10	2
9.60	3	●	**DSAS0960X03S100**	30.6	49.8	50.8	102.8	101	1.8	10	2
9.60	5	●	**DSAS0960X05S100**	49.8	68.8	71.8	122.8	121	1.8	10	2
9.70	3	●	**DSAS0970X03S100**	30.9	49.8	50.8	102.8	101	1.8	10	2
9.70	5	●	**DSAS0970X05S100**	50.3	68.8	71.8	122.8	121	1.8	10	2
9.80	3	●	**DSAS0980X03S100**	31.2	51.8	51.8	102.8	101	1.8	10	2
9.80	5	●	**DSAS0980X05S100**	50.8	71.8	71.8	122.8	121	1.8	10	2
9.90	3	●	**DSAS0990X03S100**	31.5	51.9	51.8	102.8	101	1.8	10	2
9.90	5	●	**DSAS0990X05S100**	51.3	71.8	71.8	122.8	121	1.8	10	2
9.92	3	●	**DSAS0992X03S100**	31.6	51.8	51.8	102.8	101	1.8	10	2
9.92	5	●	**DSAS0992X05S100**	51.4	71.8	71.8	122.8	121	1.8	10	2
10.00	3	●	**DSAS1000X03S100**	31.8	51.8	51.8	102.8	101	1.8	10	2
10.00	5	●	**DSAS1000X05S100**	51.8	71.8	71.8	122.8	121	1.8	10	2
10.10	3	●	**DSAS1010X03S120**	32.2	54.9	57.9	112.9	111	1.9	12	2
10.10	5	●	**DSAS1010X05S120**	52.4	75.9	79.9	135.9	134	1.9	12	2
10.20	3	●	**DSAS1020X03S120**	32.5	54.9	57.9	112.9	111	1.9	12	2
10.20	5	●	**DSAS1020X05S120**	52.9	75.9	79.9	135.9	134	1.9	12	2
10.30	3	●	**DSAS1030X03S120**	32.8	54.9	57.9	112.9	111	1.9	12	2
10.30	5	●	**DSAS1030X05S120**	53.4	75.9	79.9	135.9	134	1.9	12	2
10.32	3	●	**DSAS1032X03S120**	32.9	54.9	57.9	112.9	111	1.9	12	2
10.32	5	●	**DSAS1032X05S120**	53.5	75.9	79.9	135.9	134	1.9	12	2
10.40	3	●	**DSAS1040X03S120**	33.1	54.9	57.9	112.9	111	1.9	12	2
10.40	5	●	**DSAS1040X05S120**	53.9	75.9	79.9	135.9	134	1.9	12	2
10.50	3	●	**DSAS1050X03S120**	33.4	54.9	57.9	112.9	111	1.9	12	2
10.50	5	●	**DSAS1050X05S120**	54.4	75.9	79.9	135.9	134	1.9	12	2
10.60	3	●	**DSAS1060X03S120**	33.7	54.9	57.9	112.9	111	1.9	12	2
10.60	5	●	**DSAS1060X05S120**	54.9	75.9	79.9	135.9	134	1.9	12	2
10.70	3	●	**DSAS1070X03S120**	34.0	54.9	57.9	112.9	111	1.9	12	2
10.70	5	●	**DSAS1070X05S120**	55.4	75.9	79.9	135.9	134	1.9	12	2
10.72	3	●	**DSAS1072X03S120**	34.1	57.0	59.0	118.0	116	2.0	12	2
10.72	5	●	**DSAS1072X05S120**	55.6	79.0	80.0	142.0	140	2.0	12	2
10.80	3	●	**DSAS1080X03S120**	34.4	57.0	59.0	118.0	116	2.0	12	2
10.80	5	●	**DSAS1080X05S120**	56.0	79.0	80.0	142.0	140	2.0	12	2
10.90	3	●	**DSAS1090X03S120**	34.7	57.0	59.0	118.0	116	2.0	12	2
10.90	5	●	**DSAS1090X05S120**	56.5	79.0	80.0	142.0	140	2.0	12	2
11.00	3	●	**DSAS1100X03S120**	35.0	57.0	59.0	118.0	116	2.0	12	2
11.00	5	●	**DSAS1100X05S120**	57.0	79.0	80.0	142.0	140	2.0	12	2
11.10	3	●	**DSAS1110X03S120**	35.4	60.1	61.1	118.1	116	2.1	12	2
11.10	5	●	**DSAS1110X05S120**	57.6	83.1	86.1	142.1	140	2.1	12	2
11.11	3	●	**DSAS1111X03S120**	35.4	60.1	61.1	118.1	116	2.1	12	2
11.11	5	●	**DSAS1111X05S120**	57.7	83.1	86.1	142.1	140	2.1	12	2
11.20	3	●	**DSAS1120X03S120**	35.7	60.1	61.1	118.1	116	2.1	12	2
11.20	5	●	**DSAS1120X05S120**	58.1	83.1	86.1	142.1	140	2.1	12	2
11.30	3	●	**DSAS1130X03S120**	36.0	60.1	61.1	118.1	116	2.1	12	2
11.30	5	●	**DSAS1130X05S120**	58.6	83.1	86.1	142.1	140	2.1	12	2

PARAMETRI DI TAGLIO ➢ **M097**
DATI TECNICI ➢ **P001**

FORATURA (METALLO DURO)

DSAS

DC (mm)	Profondità foro (L/D)	DP9020	Codice di ordinazione	Dimensioni (mm)							Tipo
				LU	LCF	LH	OAL	LF	PL	DCONMS	
11.40	3	●	**DSAS1140X03S120**	36.3	60.1	61.1	118.1	116	2.1	12	2
11.40	5	●	**DSAS1140X05S120**	59.1	83.1	86.1	142.1	140	2.1	12	2
11.50	3	●	**DSAS1150X03S120**	36.6	60.1	61.1	118.1	116	2.1	12	2
11.50	5	●	**DSAS1150X05S120**	59.6	83.1	86.1	142.1	140	2.1	12	2
11.51	3	●	**DSAS1151X03S120**	36.7	62.2	62.2	118.2	116	2.2	12	2
11.51	5	●	**DSAS1151X05S120**	59.7	86.2	86.2	142.2	140	2.2	12	2
11.60	3	●	**DSAS1160X03S120**	37.0	62.2	62.2	118.2	116	2.2	12	2
11.60	5	●	**DSAS1160X05S120**	60.2	86.2	86.2	142.2	140	2.2	12	2
11.70	3	●	**DSAS1170X03S120**	37.3	62.2	62.2	118.2	116	2.2	12	2
11.70	5	●	**DSAS1170X05S120**	60.7	86.2	86.2	142.2	140	2.2	12	2
11.80	3	●	**DSAS1180X03S120**	37.6	62.2	62.2	118.2	116	2.2	12	2
11.80	5	●	**DSAS1180X05S120**	61.2	86.2	86.2	142.2	140	2.2	12	2
11.90	3	●	**DSAS1190X03S120**	37.9	62.2	62.2	118.2	116	2.2	12	2
11.90	5	●	**DSAS1190X05S120**	61.7	86.2	86.2	142.2	140	2.2	12	2
12.00	3	●	**DSAS1200X03S120**	38.2	62.2	62.2	118.2	116	2.2	12	2
12.00	5	●	**DSAS1200X05S120**	62.2	86.2	86.2	142.2	140	2.2	12	2

● : **Inventario mantenuto.**

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		S			
		Lega resistente al calore Inconel®718 ecc.		Lega di titanio Ti-6Al-4V ecc.	
Diam. Punta **DC** (mm)	**L/D**	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)
3	**≤ 5**	1000	0.06 (0.04—0.10)	4200	0.08 (0.06—0.12)
4	**≤ 5**	790	0.06 (0.04—0.10)	3100	0.10 (0.08—0.16)
5	**≤ 5**	760	0.08 (0.06—0.12)	2500	0.12 (0.08—0.20)
6	**≤ 5**	790	0.10 (0.08—0.15)	2100	0.14 (0.10—0.20)
8	**≤ 5**	590	0.10 (0.08—0.15)	1600	0.18 (0.15—0.25)
10	**≤ 5**	570	0.10 (0.08—0.15)	1300	0.22 (0.18—0.28)
12	**≤ 5**	530	0.12 (0.08—0.15)	1100	0.24 (0.20—0.30)

Nota 1) Per ottenere forature stabili si raccomanda il passaggio del refrigerante ad alta pressione nel mandrino.
Nota 2) Come refrigerante si consiglia un'emulsione di tipo idrosolubile.
Nota 3) Se viene usato refrigerante non idrosolubile ridurre la velocità di taglio del 10-20%.
Nota 4) Per la foratura con refrigerante esterno, si consiglia l'avanzamento con incrementi di DCx0,5 di profondità per favorire la rottura dei trucioli.

FORATURA (METALLO DURO)

MNS

P | M | K | **N** | S | H

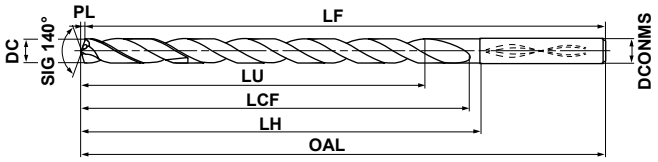
Refrigerante interno



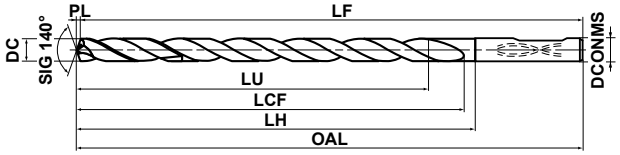
	DC=3	3<DC≤6	6<DC≤10	10<DC≤18	18<DC≤20
Tipo DIN	+0.016 +0.004	+0.016 +0.004	+0.021 +0.006	+0.025 +0.007	+0.029 +0.008
Altri	0 −0.014	0 −0.018	0 −0.022	0 −0.027	
h6	0 −0.006	0 −0.008	0 −0.009	0 −0.011	0 −0.013

● Le punte con diametro pari o superiore a 4.5 mm sono provviste di 2 fori di refrigerazione.
● Le punte con diametro pari o superiore a 4.6 mm sono provviste di 4 fori di refrigerazione.

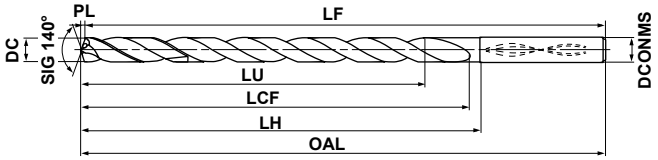
●Tipo 1 MNS----DIN-C, MNS-C, MNS----LB, MNS----DB (codolo cilindrico)



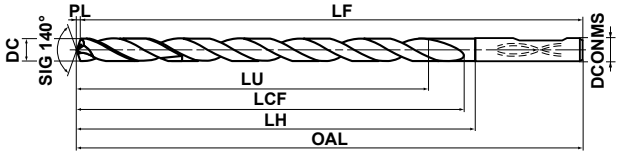
●Tipo 2 MNS----S/L-DIN (codolo Whistle Notch)



●Tipo 3 MNS----DIN-C, MNS-C, MNS----LB, MNS----DB (codolo cilindrico)



●Tipo 4 MNS----S/L-DIN (codolo Whistle Notch)



● Le punte MNS sono adatte per l'utilizzo con mandrini a calettamento a caldo.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	**MNS0300S-DIN**	15.0	19.5	24.5	61.5	61	0.5	6	2
	3	□	**MNS0300S-DIN-C**	15.0	19.5	24.5	61.5	61	0.5	6	1
	5	□	**MNS0300L-DIN**	23.0	27.5	28.5	65.5	65	0.5	6	2
	5	●	**MNS0300L-DIN-C**	23.0	27.5	28.5	65.5	65	0.5	6	1
	8	□	**MNS0300-L8C**	24.5	33.5	36.5	73.5	73	0.5	6	1
	10	□	**MNS0300-L10C**	30.5	39.5	42.5	79.5	79	0.5	6	1
	12	●	**MNS0300-L12C**	36.5	45.5	48.5	85.5	85	0.5	6	1
3.0	15	□	**MNS0300-L15C**	45.5	54.5	57.5	94.5	94	0.5	6	1
	20	●	**MNS0300-L20C**	60.5	69.5	72.5	109.5	109	0.5	6	1
	25	□	**MNS0300-L25C**	75.5	84.5	87.5	124.5	124	0.5	6	1
	30	●	**MNS0300-L30C**	90.5	99.5	102.5	139.5	139	0.5	6	1
	5	★	**MNS0300LB**	15.5	33.5	33.5	81.5	81	0.5	3	1
	10	★	**MNS0300X10DB**	30.5	39.5	42.5	90.5	90	0.5	3	1
	20	★	**MNS0300X20DB**	60.5	69.5	72.5	120.5	120	0.5	3	1
	30	★	**MNS0300X30DB**	90.5	99.5	102.5	150.5	150	0.5	3	1
	3	□	**MNS0310S-DIN**	14.9	19.6	24.6	61.6	61	0.6	6	2
	3	□	**MNS0310S-DIN-C**	14.9	19.6	24.6	61.6	61	0.6	6	1
	5	□	**MNS0310L-DIN**	22.9	27.6	28.6	65.6	65	0.6	6	2
	5	□	**MNS0310L-DIN-C**	22.9	27.6	28.6	65.6	65	0.6	6	1
	8	□	**MNS0310-L8C**	25.4	39.6	42.6	79.6	79	0.6	6	1
	10	□	**MNS0310-L10C**	31.6	46.6	49.6	86.6	86	0.6	6	1
	12	□	**MNS0310-L12C**	37.8	53.6	56.6	93.6	93	0.6	6	1
3.1	15	□	**MNS0310-L15C**	47.1	63.6	66.6	103.6	103	0.6	6	1
	20	□	**MNS0310-L20C**	62.6	81.6	84.6	121.6	121	0.6	6	1
	25	□	**MNS0310-L25C**	78.1	98.6	101.6	138.6	138	0.6	6	1
	30	□	**MNS0310-L30C**	93.6	116.6	119.6	156.6	156	0.6	6	1
	5	★	**MNS0310LB**	16.1	39.6	39.6	87.6	87	0.6	4	1
	10	□	**MNS0310X10DB**	31.6	46.6	49.6	97.6	97	0.6	4	1
	20	□	**MNS0310X20DB**	62.6	81.6	84.6	132.6	132	0.6	4	1
	30	□	**MNS0310X30DB**	93.6	116.6	119.6	167.6	167	0.6	4	1

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	**MNS0320S-DIN**	14.8	19.6	24.6	61.6	61	0.6	6	2
	3	□	**MNS0320S-DIN-C**	14.8	19.6	24.6	61.6	61	0.6	6	1
	5	□	**MNS0320L-DIN**	22.8	27.6	28.6	65.6	65	0.6	6	2
	5	●	**MNS0320L-DIN-C**	22.8	27.6	28.6	65.6	65	0.6	6	1
	8	□	**MNS0320-L8C**	26.2	39.6	42.6	79.6	79	0.6	6	1
	10	□	**MNS0320-L10C**	32.6	46.6	49.6	86.6	86	0.6	6	1
	12	●	**MNS0320-L12C**	39.0	53.6	56.6	93.6	93	0.6	6	1
3.2	15	□	**MNS0320-L15C**	48.6	63.6	66.6	103.6	103	0.6	6	1
	20	●	**MNS0320-L20C**	64.6	81.6	84.6	121.6	121	0.6	6	1
	25	□	**MNS0320-L25C**	80.6	98.6	101.6	138.6	138	0.6	6	1
	30	●	**MNS0320-L30C**	96.6	116.6	119.6	156.6	156	0.6	6	1
	5	★	**MNS0320LB**	16.6	39.6	39.6	87.6	87	0.6	4	1
	10	★	**MNS0320X10DB**	32.6	46.6	49.6	97.6	97	0.6	4	1
	20	★	**MNS0320X20DB**	64.6	81.6	84.6	132.6	132	0.6	4	1
	30	★	**MNS0320X30DB**	96.6	116.6	119.6	167.6	167	0.6	4	1
	3	□	**MNS0330S-DIN**	14.7	19.6	24.6	61.6	61	0.6	6	2
	3	□	**MNS0330S-DIN-C**	14.7	19.6	24.6	61.6	61	0.6	6	1
	5	□	**MNS0330L-DIN**	22.7	27.6	28.6	65.6	65	0.6	6	2
	5	●	**MNS0330L-DIN-C**	22.7	27.6	28.6	65.6	65	0.6	6	1
	8	□	**MNS0330-L8C**	27.0	39.6	42.6	79.6	79	0.6	6	1
	10	□	**MNS0330-L10C**	33.6	46.6	49.6	86.6	86	0.6	6	1
	12	●	**MNS0330-L12C**	40.2	53.6	56.6	93.6	93	0.6	6	1
3.3	15	□	**MNS0330-L15C**	50.1	63.6	66.6	103.6	103	0.6	6	1
	20	●	**MNS0330-L20C**	66.6	81.6	84.6	121.6	121	0.6	6	1
	25	□	**MNS0330-L25C**	83.1	98.6	101.6	138.6	138	0.6	6	1
	30	●	**MNS0330-L30C**	99.6	116.6	119.6	156.6	156	0.6	6	1
	5	★	**MNS0330LB**	17.1	39.6	39.6	87.6	87	0.6	4	1
	10	□	**MNS0330X10DB**	33.6	46.6	49.6	97.6	97	0.6	4	1
	20	□	**MNS0330X20DB**	66.6	81.6	84.6	132.6	132	0.6	4	1
	30	□	**MNS0330X30DB**	99.6	116.6	119.6	167.6	167	0.6	4	1

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0340S-DIN	14.5	19.6	24.6	61.6	61	0.6	6	2
	3	□	MNS0340S-DIN-C	14.5	19.6	24.6	61.6	61	0.6	6	1
	5	□	MNS0340L-DIN	22.5	27.6	28.6	65.6	65	0.6	6	2
	5	□	MNS0340L-DIN-C	22.5	27.6	28.6	65.6	65	0.6	6	1
	8	□	MNS0340-L8C	27.8	39.6	42.6	79.6	79	0.6	6	1
	10	□	MNS0340-L10C	34.6	46.6	49.6	86.6	86	0.6	6	1
	12	□	MNS0340-L12C	41.4	53.6	56.6	93.6	93	0.6	6	1
3.4	15	□	MNS0340-L15C	51.6	63.6	66.6	103.6	103	0.6	6	1
	20	□	MNS0340-L20C	68.6	81.6	84.6	121.6	121	0.6	6	1
	25	□	MNS0340-L25C	85.6	98.6	101.6	138.6	138	0.6	6	1
	30	□	MNS0340-L30C	102.6	116.6	119.6	156.6	156	0.6	6	1
	5	★	MNS0340LB	17.6	39.6	39.6	87.6	87	0.6	4	1
	10	★	MNS0340X10DB	34.6	46.6	49.6	97.6	97	0.6	4	1
	20	★	MNS0340X20DB	68.6	81.6	84.6	132.6	132	0.6	4	1
	30	★	MNS0340X30DB	102.6	116.6	119.6	167.6	167	0.6	4	1
	3	□	MNS0350S-DIN	14.4	19.6	24.6	61.6	61	0.6	6	2
	3	□	MNS0350S-DIN-C	14.4	19.6	24.6	61.6	61	0.6	6	1
	5	□	MNS0350L-DIN	22.4	27.6	28.6	65.6	65	0.6	6	2
	5	●	MNS0350L-DIN-C	22.4	27.6	28.6	65.6	65	0.6	6	1
	8	□	MNS0350-L8C	28.6	39.6	42.6	79.6	79	0.6	6	1
	10	□	MNS0350-L10C	35.6	46.6	49.6	86.6	86	0.6	6	1
	12	●	MNS0350-L12C	42.6	53.6	56.6	93.6	93	0.6	6	1
3.5	15	□	MNS0350-L15C	53.1	63.6	66.6	103.6	103	0.6	6	1
	20	●	MNS0350-L20C	70.6	81.6	84.6	121.6	121	0.6	6	1
	25	□	MNS0350-L25C	88.1	98.6	101.6	138.6	138	0.6	6	1
	30	●	MNS0350-L30C	105.6	116.6	119.6	156.6	156	0.6	6	1
	5	★	MNS0350LB	18.1	39.6	39.6	87.6	87	0.6	4	1
	10	□	MNS0350X10DB	35.6	46.6	49.6	97.6	97	0.6	4	1
	20	□	MNS0350X20DB	70.6	81.6	84.6	132.6	132	0.6	4	1
	30	□	MNS0350X30DB	105.6	116.6	119.6	167.6	167	0.6	4	1
	3	□	MNS0360S-DIN	14.3	19.7	24.7	61.7	61	0.7	6	2
	3	□	MNS0360S-DIN-C	14.3	19.7	24.7	61.7	61	0.7	6	1
	5	□	MNS0360L-DIN	22.3	27.7	28.7	65.7	65	0.7	6	2
	5	□	MNS0360L-DIN-C	22.3	27.7	28.7	65.7	65	0.7	6	1
	8	□	MNS0360-L8C	29.5	44.7	47.7	84.7	84	0.7	6	1
	10	□	MNS0360-L10C	36.7	52.7	55.7	92.7	92	0.7	6	1
	12	□	MNS0360-L12C	43.9	60.7	63.7	100.7	100	0.7	6	1
3.6	15	□	MNS0360-L15C	54.7	72.7	75.7	112.7	112	0.7	6	1
	20	□	MNS0360-L20C	72.7	92.7	95.7	132.7	132	0.7	6	1
	25	□	MNS0360-L25C	90.7	112.7	115.7	152.7	152	0.7	6	1
	30	□	MNS0360-L30C	108.7	132.7	135.7	172.7	172	0.7	6	1
	5	★	MNS0360LB	18.7	44.7	44.7	92.7	92	0.7	4	1
	10	★	MNS0360X10DB	36.7	52.7	55.7	103.7	103	0.7	4	1
	20	★	MNS0360X20DB	72.7	92.7	95.7	143.7	143	0.7	4	1
	30	★	MNS0360X30DB	108.7	132.7	135.7	183.7	183	0.7	4	1

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0370S-DIN	14.1	19.7	24.7	61.7	61	0.7	6	2
	3	□	MNS0370S-DIN-C	14.1	19.7	24.7	61.7	61	0.7	6	1
	5	□	MNS0370L-DIN	22.1	27.7	28.7	65.7	65	0.7	6	2
	5	□	MNS0370L-DIN-C	22.1	27.7	28.7	65.7	65	0.7	6	1
	8	□	MNS0370-L8C	30.3	44.7	47.7	84.7	84	0.7	6	1
	10	□	MNS0370-L10C	37.7	52.7	55.7	92.7	92	0.7	6	1
	12	□	MNS0370-L12C	45.1	60.7	63.7	100.7	100	0.7	6	1
3.7	15	□	MNS0370-L15C	56.2	72.7	75.7	112.7	112	0.7	6	1
	20	□	MNS0370-L20C	74.7	92.7	95.7	132.7	132	0.7	6	1
	25	□	MNS0370-L25C	93.2	112.7	115.7	152.7	152	0.7	6	1
	30	□	MNS0370-L30C	111.7	132.7	135.7	172.7	172	0.7	6	1
	5	★	MNS0370LB	19.2	44.7	44.7	92.7	92	0.7	4	1
	10	□	MNS0370X10DB	37.7	52.7	55.7	103.7	103	0.7	4	1
	20	□	MNS0370X20DB	74.7	92.7	95.7	143.7	143	0.7	4	1
	30	□	MNS0370X30DB	111.7	132.7	135.7	183.7	183	0.7	4	1
	3	□	MNS0380S-DIN	18.0	23.7	28.7	65.7	65	0.7	6	2
	3	□	MNS0380S-DIN-C	18.0	23.7	28.7	65.7	65	0.7	6	1
	5	□	MNS0380L-DIN	30.0	35.7	36.7	73.7	73	0.7	6	2
	5	□	MNS0380L-DIN-C	30.0	35.7	36.7	73.7	73	0.7	6	1
	8	□	MNS0380-L8C	31.1	44.7	47.7	84.7	84	0.7	6	1
	10	□	MNS0380-L10C	38.7	52.7	55.7	92.7	92	0.7	6	1
	12	□	MNS0380-L12C	46.3	60.7	63.7	100.7	100	0.7	6	1
3.8	15	□	MNS0380-L15C	57.7	72.7	75.7	112.7	112	0.7	6	1
	20	□	MNS0380-L20C	76.7	92.7	95.7	132.7	132	0.7	6	1
	25	□	MNS0380-L25C	95.7	112.7	115.7	152.7	152	0.7	6	1
	30	□	MNS0380-L30C	114.7	132.7	135.7	172.7	172	0.7	6	1
	5	★	MNS0380LB	19.7	44.7	44.7	92.7	92	0.7	4	1
	10	□	MNS0380X10DB	38.7	52.7	55.7	103.7	103	0.7	4	1
	20	□	MNS0380X20DB	76.7	92.7	95.7	143.7	143	0.7	4	1
	30	□	MNS0380X30DB	114.7	132.7	135.7	183.7	183	0.7	4	1
	3	□	MNS0390S-DIN	17.9	23.7	28.7	65.7	65	0.7	6	2
	3	□	MNS0390S-DIN-C	17.9	23.7	28.7	65.7	65	0.7	6	1
	5	□	MNS0390L-DIN	29.9	35.7	36.7	73.7	73	0.7	6	2
	5	□	MNS0390L-DIN-C	29.9	35.7	36.7	73.7	73	0.7	6	1
	8	□	MNS0390-L8C	31.9	44.7	47.7	84.7	84	0.7	6	1
	10	□	MNS0390-L10C	39.7	52.7	55.7	92.7	92	0.7	6	1
	12	□	MNS0390-L12C	47.5	60.7	63.7	100.7	100	0.7	6	1
3.9	15	□	MNS0390-L15C	59.2	72.7	75.7	112.7	112	0.7	6	1
	20	□	MNS0390-L20C	78.7	92.7	95.7	132.7	132	0.7	6	1
	25	□	MNS0390-L25C	98.2	112.7	115.7	152.7	152	0.7	6	1
	30	□	MNS0390-L30C	117.7	132.7	135.7	172.7	172	0.7	6	1
	5	★	MNS0390LB	20.2	44.7	44.7	92.7	92	0.7	4	1
	10	★	MNS0390X10DB	39.7	52.7	55.7	103.7	103	0.7	4	1
	20	★	MNS0390X20DB	78.7	92.7	95.7	143.7	143	0.7	4	1
	30	★	MNS0390X30DB	117.7	132.7	135.7	183.7	183	0.7	4	1

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0400S-DIN	17.7	23.7	28.7	65.7	65	0.7	6	2
	3	□	MNS0400S-DIN-C	17.7	23.7	28.7	65.7	65	0.7	6	1
	5	□	MNS0400L-DIN	29.7	35.7	36.7	73.7	73	0.7	6	2
	5	●	MNS0400L-DIN-C	29.7	35.7	36.7	73.7	73	0.7	6	1
	8	□	MNS0400-L8C	32.7	44.7	47.7	84.7	84	0.7	6	1
	10	□	MNS0400-L10C	40.7	52.7	55.7	92.7	92	0.7	6	1
	12	●	MNS0400-L12C	48.7	60.7	63.7	100.7	100	0.7	6	1
4.0	15	□	MNS0400-L15C	60.7	72.7	75.7	112.7	112	0.7	6	1
	20	●	MNS0400-L20C	80.7	92.7	95.7	132.7	132	0.7	6	1
	25	●	MNS0400-L25C	100.7	112.7	115.7	152.7	152	0.7	6	1
	30	●	MNS0400-L30C	120.7	132.7	135.7	172.7	172	0.7	6	1
	5	★	MNS0400LB	20.7	44.7	44.7	92.7	92	0.7	4	1
	10	★	MNS0400X10DB	40.7	52.7	55.7	103.7	103	0.7	4	1
	20	★	MNS0400X20DB	80.7	92.7	95.7	143.7	143	0.7	4	1
	30	★	MNS0400X30DB	120.7	132.7	135.7	183.7	183	0.7	4	1
	3	□	MNS0410S-DIN	17.6	23.7	28.7	65.7	65	0.7	6	2
	3	□	MNS0410S-DIN-C	17.6	23.7	28.7	65.7	65	0.7	6	1
	5	□	MNS0410L-DIN	29.6	35.7	36.7	73.7	73	0.7	6	2
	5	□	MNS0410L-DIN-C	29.6	35.7	36.7	73.7	73	0.7	6	1
	8	□	MNS0410-L8C	33.5	50.7	53.7	90.7	90	0.7	6	1
	10	□	MNS0410-L10C	41.7	59.7	62.7	99.7	99	0.7	6	1
	12	□	MNS0410-L12C	49.9	68.7	71.7	108.7	108	0.7	6	1
4.1	15	□	MNS0410-L15C	62.2	81.7	84.7	121.7	121	0.7	6	1
	20	□	MNS0410-L20C	82.7	104.7	107.7	144.7	144	0.7	6	1
	25	□	MNS0410-L25C	103.2	126.7	129.7	166.7	166	0.7	6	1
	30	□	MNS0410-L30C	123.7	149.7	152.7	189.7	189	0.7	6	1
	5	★	MNS0410LB	21.2	50.7	50.7	100.7	100	0.7	5	1
	10	□	MNS0410X10DB	41.7	59.7	62.7	112.7	112	0.7	5	1
	20	□	MNS0410X20DB	82.7	104.7	107.7	157.7	157	0.7	5	1
	30	□	MNS0410X30DB	123.7	149.7	152.7	202.7	202	0.7	5	1
	3	□	MNS0420S-DIN	17.5	23.8	28.8	65.8	65	0.8	6	2
	3	□	MNS0420S-DIN-C	17.5	23.8	28.8	65.8	65	0.8	6	1
	5	□	MNS0420L-DIN	29.5	35.8	36.8	73.8	73	0.8	6	2
	5	●	MNS0420L-DIN-C	29.5	35.8	36.8	73.8	73	0.8	6	1
	8	□	MNS0420-L8C	34.4	50.8	53.8	90.8	90	0.8	6	1
	10	□	MNS0420-L10C	42.8	59.8	62.8	99.8	99	0.8	6	1
	12	●	MNS0420-L12C	51.2	68.8	71.8	108.8	108	0.8	6	1
4.2	15	□	MNS0420-L15C	63.8	81.8	84.8	121.8	121	0.8	6	1
	20	●	MNS0420-L20C	84.8	104.8	107.8	144.8	144	0.8	6	1
	25	□	MNS0420-L25C	105.8	126.8	129.8	166.8	166	0.8	6	1
	30	●	MNS0420-L30C	126.8	149.8	152.8	189.8	189	0.8	6	1
	5	★	MNS0420LB	21.8	50.8	50.8	100.8	100	0.8	5	1
	10	□	MNS0420X10DB	42.8	59.8	62.8	112.8	112	0.8	5	1
	20	□	MNS0420X20DB	84.8	104.8	107.8	157.8	157	0.8	5	1
	30	□	MNS0420X30DB	126.8	149.8	152.8	202.8	202	0.8	5	1

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0430S-DIN	17.3	23.8	28.8	65.8	65	0.8	6	2
	3	□	MNS0430S-DIN-C	17.3	23.8	28.8	65.8	65	0.8	6	1
	5	□	MNS0430L-DIN	29.3	35.8	36.8	73.8	73	0.8	6	2
	5	□	MNS0430L-DIN-C	29.3	35.8	36.8	73.8	73	0.8	6	1
	8	□	MNS0430-L8C	35.2	50.8	53.8	90.8	90	0.8	6	1
	10	□	MNS0430-L10C	43.8	59.8	62.8	99.8	99	0.8	6	1
	12	□	MNS0430-L12C	52.4	68.8	71.8	108.8	108	0.8	6	1
4.3	15	□	MNS0430-L15C	65.3	81.8	84.8	121.8	121	0.8	6	1
	20	□	MNS0430-L20C	86.8	104.8	107.8	144.8	144	0.8	6	1
	25	□	MNS0430-L25C	108.3	126.8	129.8	166.8	166	0.8	6	1
	30	□	MNS0430-L30C	129.8	149.8	152.8	189.8	189	0.8	6	1
	5	★	MNS0430LB	22.3	50.8	50.8	100.8	100	0.8	5	1
	10	□	MNS0430X10DB	43.8	59.8	62.8	112.8	112	0.8	5	1
	20	□	MNS0430X20DB	86.8	104.8	107.8	157.8	157	0.8	5	1
	30	□	MNS0430X30DB	129.8	149.8	152.8	202.8	202	0.8	5	1
	3	□	MNS0440S-DIN	17.2	23.8	28.8	65.8	65	0.8	6	2
	3	□	MNS0440S-DIN-C	17.2	23.8	28.8	65.8	65	0.8	6	1
	5	□	MNS0440L-DIN	29.2	35.8	36.8	73.8	73	0.8	6	2
	5	□	MNS0440L-DIN-C	29.2	35.8	36.8	73.8	73	0.8	6	1
	8	□	MNS0440-L8C	36.0	50.8	53.8	90.8	90	0.8	6	1
	10	□	MNS0440-L10C	44.8	59.8	62.8	99.8	99	0.8	6	1
	12	□	MNS0440-L12C	53.6	68.8	71.8	108.8	108	0.8	6	1
4.4	15	□	MNS0440-L15C	66.8	81.8	84.8	121.8	121	0.8	6	1
	20	□	MNS0440-L20C	88.8	104.8	107.8	144.8	144	0.8	6	1
	25	□	MNS0440-L25C	110.8	126.8	129.8	166.8	166	0.8	6	1
	30	□	MNS0440-L30C	132.8	149.8	152.8	189.8	189	0.8	6	1
	5	★	MNS0440LB	22.8	50.8	50.8	100.8	100	0.8	5	1
	10	□	MNS0440X10DB	44.8	59.8	62.8	112.8	112	0.8	5	1
	20	□	MNS0440X20DB	88.8	104.8	107.8	157.8	157	0.8	5	1
	30	□	MNS0440X30DB	132.8	149.8	152.8	202.8	202	0.8	5	1
	3	□	MNS0450S-DIN	17.1	23.8	28.8	65.8	65	0.8	6	2
	3	□	MNS0450S-DIN-C	17.1	23.8	28.8	65.8	65	0.8	6	1
	5	□	MNS0450L-DIN	29.1	35.8	36.8	73.8	73	0.8	6	2
	5	●	MNS0450L-DIN-C	29.1	35.8	36.8	73.8	73	0.8	6	1
	8	□	MNS0450-L8C	36.8	50.8	53.8	90.8	90	0.8	6	1
	10	□	MNS0450-L10C	45.8	59.8	62.8	99.8	99	0.8	6	1
	12	●	MNS0450-L12C	54.8	68.8	71.8	108.8	108	0.8	6	1
4.5	15	□	MNS0450-L15C	68.3	81.8	84.8	121.8	121	0.8	6	1
	20	●	MNS0450-L20C	90.8	104.8	107.8	144.8	144	0.8	6	1
	25	□	MNS0450-L25C	113.3	126.8	129.8	166.8	166	0.8	6	1
	30	●	MNS0450-L30C	135.8	149.8	152.8	189.8	189	0.8	6	1
	5	★	MNS0450LB	23.3	50.8	50.8	100.8	100	0.8	5	1
	10	□	MNS0450X10DB	45.8	59.8	62.8	112.8	112	0.8	5	1
	20	□	MNS0450X20DB	90.8	104.8	107.8	157.8	157	0.8	5	1
	30	□	MNS0450X30DB	135.8	149.8	152.8	202.8	202	0.8	5	1

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0460S-DIN	17.1	23.8	28.8	65.8	65	0.8	6	4
	3	□	MNS0460S-DIN-C	16.9	23.8	28.8	65.8	65	0.8	6	3
	5	□	MNS0460L-DIN	28.9	35.8	36.8	73.8	73	0.8	6	4
	5	□	MNS0460L-DIN-C	28.9	35.8	36.8	73.8	73	0.8	6	3
	8	□	MNS0460-L8C	37.6	55.8	58.8	95.8	95	0.8	6	3
	10	□	MNS0460-L10C	46.8	65.8	68.8	105.8	105	0.8	6	3
	12	□	MNS0460-L12C	56.0	75.8	78.8	115.8	115	0.8	6	3
4.6	15	□	MNS0460-L15C	69.8	90.8	93.8	130.8	130	0.8	6	3
	20	□	MNS0460-L20C	92.8	115.8	118.8	155.8	155	0.8	6	3
	25	□	MNS0460-L25C	115.8	140.8	143.8	180.8	180	0.8	6	3
	30	□	MNS0460-L30C	138.8	165.8	168.8	205.8	205	0.8	6	3
	5	★	MNS0460LB	23.8	55.8	55.8	105.8	105	0.8	5	3
	10	□	MNS0460X10DB	46.8	65.8	68.8	118.8	118	0.8	5	3
	20	□	MNS0460X20DB	92.8	115.8	118.8	168.8	168	0.8	5	3
	30	□	MNS0460X30DB	138.8	165.8	168.8	218.8	218	0.8	5	3
	3	□	MNS0465S-DIN	16.9	23.8	28.8	65.8	65	0.8	6	4
4.65	3	□	MNS0465S-DIN-C	16.9	23.8	28.8	65.8	65	0.8	6	3
	5	□	MNS0465L-DIN	28.9	35.8	36.8	73.8	73	0.8	6	4
	5	●	MNS0465L-DIN-C	28.9	35.8	36.8	73.8	73	0.8	6	3
	3	□	MNS0470S-DIN	16.8	23.9	28.9	65.9	65	0.9	6	4
	3	□	MNS0470S-DIN-C	16.8	23.9	28.9	65.9	65	0.9	6	3
	5	□	MNS0470L-DIN	28.8	35.9	36.9	73.9	73	0.9	6	4
	5	□	MNS0470L-DIN-C	28.8	35.9	36.9	73.9	73	0.9	6	3
	8	□	MNS0470-L8C	38.5	55.9	58.9	95.9	95	0.9	6	3
	10	□	MNS0470-L10C	47.9	65.9	68.9	105.9	105	0.9	6	3
	12	□	MNS0470-L12C	57.3	75.9	78.9	115.9	115	0.9	6	3
4.7	15	□	MNS0470-L15C	71.4	90.9	93.9	130.9	130	0.9	6	3
	20	□	MNS0470-L20C	94.9	115.9	118.9	155.9	155	0.9	6	3
	25	□	MNS0470-L25C	118.4	140.9	143.9	180.9	180	0.9	6	3
	30	□	MNS0470-L30C	141.9	165.9	168.9	205.9	205	0.9	6	3
	5	★	MNS0470LB	24.4	55.9	55.9	105.9	105	0.9	5	3
	10	□	MNS0470X10DB	47.9	65.9	68.9	118.9	118	0.9	5	3
	20	□	MNS0470X20DB	94.9	115.9	118.9	168.9	168	0.9	5	3
	30	□	MNS0470X30DB	141.9	165.9	168.9	218.9	218	0.9	5	3
	3	□	MNS0480S-DIN	20.7	27.9	28.9	65.9	65	0.9	6	4
	3	□	MNS0480S-DIN-C	20.7	27.9	28.9	65.9	65	0.9	6	3
	5	□	MNS0480L-DIN	36.7	43.9	44.9	81.9	81	0.9	6	4
	5	□	MNS0480L-DIN-C	36.7	43.9	44.9	81.9	81	0.9	6	3
	8	□	MNS0480-L8C	39.3	55.9	58.9	95.9	95	0.9	6	3
	10	□	MNS0480-L10C	48.9	65.9	68.9	105.9	105	0.9	6	3
	12	□	MNS0480-L12C	58.5	75.9	78.9	115.9	115	0.9	6	3
4.8	15	□	MNS0480-L15C	72.9	90.9	93.9	130.9	130	0.9	6	3
	20	□	MNS0480-L20C	96.9	115.9	118.9	155.9	155	0.9	6	3
	25	□	MNS0480-L25C	120.9	140.9	143.9	180.9	180	0.9	6	3
	30	□	MNS0480-L30C	144.9	165.9	168.9	205.9	205	0.9	6	3
	5	★	MNS0480LB	24.9	55.9	55.9	105.9	105	0.9	5	3
	10	□	MNS0480X10DB	48.9	65.9	68.9	118.9	118	0.9	5	3
	20	□	MNS0480X20DB	96.9	115.9	118.9	168.9	168	0.9	5	3
	30	□	MNS0480X30DB	144.9	165.9	168.9	218.9	218	0.9	5	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0490S-DIN	20.5	27.9	28.9	65.9	65	0.9	6	4
	3	□	MNS0490S-DIN-C	20.5	27.9	28.9	65.9	65	0.9	6	3
	5	□	MNS0490L-DIN	36.5	43.9	44.9	81.9	81	0.9	6	4
	5	□	MNS0490L-DIN-C	36.5	43.9	44.9	81.9	81	0.9	6	3
	8	□	MNS0490-L8C	40.1	55.9	58.9	95.9	95	0.9	6	3
	10	□	MNS0490-L10C	49.9	65.9	68.9	105.9	105	0.9	6	3
	12	□	MNS0490-L12C	59.7	75.9	78.9	115.9	115	0.9	6	3
4.9	15	□	MNS0490-L15C	74.4	90.9	93.9	130.9	130	0.9	6	3
	20	□	MNS0490-L20C	98.9	115.9	118.9	155.9	155	0.9	6	3
	25	□	MNS0490-L25C	123.4	140.9	143.9	180.9	180	0.9	6	3
	30	□	MNS0490-L30C	147.9	165.9	168.9	205.9	205	0.9	6	3
	5	★	MNS0490LB	25.4	55.9	55.9	105.9	105	0.9	5	3
	10	★	MNS0490X10DB	49.9	65.9	68.9	118.9	118	0.9	5	3
	20	★	MNS0490X20DB	98.9	115.9	118.9	168.9	168	0.9	5	3
	30	★	MNS0490X30DB	147.9	165.9	168.9	218.9	218	0.9	5	3
	3	□	MNS0500S-DIN	20.4	27.9	28.9	65.9	65	0.9	6	4
	3	□	MNS0500S-DIN-C	20.4	27.9	28.9	65.9	65	0.9	6	3
	5	□	MNS0500L-DIN	36.4	43.9	44.9	81.9	81	0.9	6	4
	5	●	MNS0500L-DIN-C	36.4	43.9	44.9	81.9	81	0.9	6	3
	8	□	MNS0500-L8C	40.9	55.9	58.9	95.9	95	0.9	6	3
	10	□	MNS0500-L10C	50.9	65.9	68.9	105.9	105	0.9	6	3
	12	●	MNS0500-L12C	60.9	75.9	78.9	115.9	115	0.9	6	3
5.0	15	□	MNS0500-L15C	75.9	90.9	93.9	130.9	130	0.9	6	3
	20	●	MNS0500-L20C	100.9	115.9	118.9	155.9	155	0.9	6	3
	25	□	MNS0500-L25C	125.9	140.9	143.9	180.9	180	0.9	6	3
	30	●	MNS0500-L30C	150.9	165.9	168.9	205.9	205	0.9	6	3
	5	★	MNS0500LB	25.9	44.9	44.9	100.9	100	0.9	6	3
	10	★	MNS0500X10DB	50.9	65.9	68.9	118.9	118	0.9	5	3
	20	★	MNS0500X20DB	100.9	115.9	118.9	168.9	168	0.9	5	3
	30	★	MNS0500X30DB	150.9	165.9	168.9	218.9	218	0.9	5	3
	3	□	MNS0510S-DIN	20.3	27.9	28.9	65.9	65	0.9	6	4
	3	□	MNS0510S-DIN-C	20.3	27.9	28.9	65.9	65	0.9	6	3
	5	□	MNS0510L-DIN	36.3	43.9	44.9	81.9	81	0.9	6	4
	5	●	MNS0510L-DIN-C	36.3	43.9	44.9	81.9	81	0.9	6	3
	8	□	MNS0510-L8C	41.7	61.9	64.9	101.9	101	0.9	6	3
	10	□	MNS0510-L10C	51.9	72.9	75.9	112.9	112	0.9	6	3
	12	□	MNS0510-L12C	62.1	83.9	86.9	123.9	123	0.9	6	3
5.1	15	□	MNS0510-L15C	77.4	99.9	102.9	139.9	139	0.9	6	3
	20	□	MNS0510-L20C	102.9	127.9	130.9	167.9	167	0.9	6	3
	25	□	MNS0510-L25C	128.4	154.9	157.9	194.9	194	0.9	6	3
	30	□	MNS0510-L30C	153.9	182.9	185.9	222.9	222	0.9	6	3
	5	★	MNS0510LB	26.4	44.9	44.9	100.9	100	0.9	6	3
	10	★	MNS0510X10DB	51.9	72.9	75.9	127.9	127	0.9	6	3
	20	★	MNS0510X20DB	102.9	127.9	130.9	182.9	182	0.9	6	3
	30	★	MNS0510X30DB	153.9	182.9	185.9	237.9	237	0.9	6	3

PARAMETRI DI TAGLIO ➢ M118
GUIDA OPERATIVA ➢ M119
DATI TECNICI ➢ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0520S-DIN	20.1	27.9	28.9	65.9	65	0.9	6	4
	3	□	MNS0520S-DIN-C	20.1	27.9	28.9	65.9	65	0.9	6	3
	5	□	MNS0520L-DIN	36.1	43.9	44.9	81.9	81	0.9	6	4
	5	□	MNS0520L-DIN-C	36.1	43.9	44.9	81.9	81	0.9	6	3
	8	□	MNS0520-L8C	42.5	61.9	64.9	101.9	101	0.9	6	3
	10	□	MNS0520-L10C	52.9	72.9	75.9	112.9	112	0.9	6	3
	12	□	MNS0520-L12C	63.3	83.9	86.9	123.9	123	0.9	6	3
5.2	15	□	MNS0520-L15C	78.9	99.9	102.9	139.9	139	0.9	6	3
	20	□	MNS0520-L20C	104.9	127.9	130.9	167.9	167	0.9	6	3
	25	□	MNS0520-L25C	130.9	154.9	157.9	194.9	194	0.9	6	3
	30	□	MNS0520-L30C	156.9	182.9	185.9	222.9	222	0.9	6	3
	5	★	MNS0520LB	26.9	44.9	44.9	100.9	100	0.9	6	3
	10	□	MNS0520X10DB	52.9	72.9	75.9	127.9	127	0.9	6	3
	20	□	MNS0520X20DB	104.9	127.9	130.9	182.9	182	0.9	6	3
	30	□	MNS0520X30DB	156.9	182.9	185.9	237.9	237	0.9	6	3
	3	□	MNS0530S-DIN	20.0	28.0	29.0	66.0	65	1.0	6	4
	3	□	MNS0530S-DIN-C	20.0	28.0	29.0	66.0	65	1.0	6	3
	5	□	MNS0530L-DIN	36.0	44.0	45.0	82.0	81	1.0	6	4
	5	□	MNS0530L-DIN-C	36.0	44.0	45.0	82.0	81	1.0	6	3
	8	□	MNS0530-L8C	43.4	62.0	65.0	102.0	101	1.0	6	3
	10	□	MNS0530-L10C	54.0	73.0	76.0	113.0	112	1.0	6	3
	12	□	MNS0530-L12C	64.6	84.0	87.0	124.0	123	1.0	6	3
5.3	15	□	MNS0530-L15C	80.5	100.0	103.0	140.0	139	1.0	6	3
	20	□	MNS0530-L20C	107.0	128.0	131.0	168.0	167	1.0	6	3
	25	□	MNS0530-L25C	133.5	155.0	158.0	195.0	194	1.0	6	3
	30	□	MNS0530-L30C	160.0	183.0	186.0	223.0	222	1.0	6	3
	5	★	MNS0530LB	27.5	45.0	45.0	101.0	100	1.0	6	3
	10	□	MNS0530X10DB	54.0	73.0	76.0	128.0	127	1.0	6	3
	20	□	MNS0530X20DB	107.0	128.0	131.0	183.0	182	1.0	6	3
	30	□	MNS0530X30DB	160.0	183.0	186.0	238.0	237	1.0	6	3
	3	□	MNS0540S-DIN	19.9	28.0	29.0	66.0	65	1.0	6	4
	3	□	MNS0540S-DIN-C	19.9	28.0	29.0	66.0	65	1.0	6	3
	5	□	MNS0540L-DIN	35.9	44.0	45.0	82.0	81	1.0	6	4
	5	□	MNS0540L-DIN-C	35.9	44.0	45.0	82.0	81	1.0	6	3
	8	□	MNS0540-L8C	44.2	62.0	65.0	102.0	101	1.0	6	3
	10	□	MNS0540-L10C	55.0	73.0	76.0	113.0	112	1.0	6	3
	12	□	MNS0540-L12C	65.8	84.0	87.0	124.0	123	1.0	6	3
5.4	15	□	MNS0540-L15C	82.0	100.0	103.0	140.0	139	1.0	6	3
	20	□	MNS0540-L20C	109.0	128.0	131.0	168.0	167	1.0	6	3
	25	□	MNS0540-L25C	136.0	155.0	158.0	195.0	194	1.0	6	3
	30	□	MNS0540-L30C	163.0	183.0	186.0	223.0	222	1.0	6	3
	5	★	MNS0540LB	28.0	45.0	45.0	101.0	100	1.0	6	3
	10	□	MNS0540X10DB	55.0	73.0	76.0	128.0	127	1.0	6	3
	20	□	MNS0540X20DB	109.0	128.0	131.0	183.0	182	1.0	6	3
	30	□	MNS0540X30DB	163.0	183.0	186.0	238.0	237	1.0	6	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0550S-DIN	19.8	28.0	29.0	66.0	65	1.0	6	4
	3	□	MNS0550S-DIN-C	19.8	28.0	29.0	66.0	65	1.0	6	3
	5	□	MNS0550L-DIN	35.8	44.0	45.0	82.0	81	1.0	6	4
	5	●	MNS0550L-DIN-C	35.8	44.0	45.0	82.0	81	1.0	6	3
	8	□	MNS0550-L8C	45.0	62.0	65.0	102.0	101	1.0	6	3
	10	□	MNS0550-L10C	56.0	73.0	76.0	113.0	112	1.0	6	3
	12	●	MNS0550-L12C	67.0	84.0	87.0	124.0	123	1.0	6	3
5.5	15	□	MNS0550-L15C	83.5	100.0	103.0	140.0	139	1.0	6	3
	20	●	MNS0550-L20C	111.0	128.0	131.0	168.0	167	1.0	6	3
	25	□	MNS0550-L25C	138.5	155.0	158.0	195.0	194	1.0	6	3
	30	●	MNS0550-L30C	166.0	183.0	186.0	223.0	222	1.0	6	3
	5	★	MNS0550LB	28.5	45.0	45.0	101.0	100	1.0	6	3
	10	★	MNS0550X10DB	56.0	73.0	76.0	128.0	127	1.0	6	3
	20	★	MNS0550X20DB	111.0	128.0	131.0	183.0	182	1.0	6	3
	30	★	MNS0550X30DB	166.0	183.0	186.0	238.0	237	1.0	6	3
	3	□	MNS0555S-DIN	19.7	28.0	29.0	66.0	65	1.0	6	4
	3	□	MNS0555S-DIN-C	19.7	28.0	29.0	66.0	65	1.0	6	3
5.55	5	□	MNS0555L-DIN	35.7	44.0	45.0	82.0	81	1.0	6	4
	5	●	MNS0555L-DIN-C	35.7	44.0	45.0	82.0	81	1.0	6	3
	3	□	MNS0560S-DIN	19.6	28.0	29.0	66.0	65	1.0	6	4
	3	□	MNS0560S-DIN-C	19.6	28.0	29.0	66.0	65	1.0	6	3
	5	□	MNS0560L-DIN	35.6	44.0	45.0	82.0	81	1.0	6	4
	5	□	MNS0560L-DIN-C	35.6	44.0	45.0	82.0	81	1.0	6	3
	8	□	MNS0560-L8C	45.8	67.0	70.0	107.0	106	1.0	6	3
	10	□	MNS0560-L10C	57.0	79.0	82.0	119.0	118	1.0	6	3
	12	□	MNS0560-L12C	68.2	91.0	94.0	131.0	130	1.0	6	3
5.6	15	□	MNS0560-L15C	85.0	109.0	112.0	149.0	148	1.0	6	3
	20	□	MNS0560-L20C	113.0	139.0	142.0	179.0	178	1.0	6	3
	25	□	MNS0560-L25C	141.0	169.0	172.0	209.0	208	1.0	6	3
	30	□	MNS0560-L30C	169.0	199.0	202.0	239.0	238	1.0	6	3
	5	★	MNS0560LB	29.0	49.0	49.0	101.0	100	1.0	6	3
	10	□	MNS0560X10DB	57.0	79.0	82.0	134.0	133	1.0	6	3
	20	□	MNS0560X20DB	113.0	139.0	142.0	194.0	193	1.0	6	3
	30	□	MNS0560X30DB	169.0	199.0	202.0	254.0	253	1.0	6	3
	3	□	MNS0570S-DIN	19.5	28.0	29.0	66.0	65	1.0	6	4
	3	□	MNS0570S-DIN-C	19.5	28.0	29.0	66.0	65	1.0	6	3
	5	□	MNS0570L-DIN	35.5	44.0	45.0	82.0	81	1.0	6	4
	5	□	MNS0570L-DIN-C	35.5	44.0	45.0	82.0	81	1.0	6	3
	8	□	MNS0570-L8C	46.6	67.0	70.0	107.0	106	1.0	6	3
	10	□	MNS0570-L10C	58.0	79.0	82.0	119.0	118	1.0	6	3
	12	□	MNS0570-L12C	69.4	91.0	94.0	131.0	130	1.0	6	3
5.7	15	□	MNS0570-L15C	86.5	109.0	112.0	149.0	148	1.0	6	3
	20	□	MNS0570-L20C	115.0	139.0	142.0	179.0	178	1.0	6	3
	25	□	MNS0570-L25C	143.5	169.0	172.0	209.0	208	1.0	6	3
	30	□	MNS0570-L30C	172.0	199.0	202.0	239.0	238	1.0	6	3
	5	★	MNS0570LB	29.5	49.0	49.0	101.0	100	1.0	6	3
	10	□	MNS0570X10DB	58.0	79.0	82.0	134.0	133	1.0	6	3
	20	□	MNS0570X20DB	115.0	139.0	142.0	194.0	193	1.0	6	3
	30	□	MNS0570X30DB	172.0	199.0	202.0	254.0	253	1.0	6	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
5.8	3	□	MNS0580S-DIN	19.4	28.1	29.1	66.1	65	1.1	6	4
	3	□	MNS0580S-DIN-C	19.4	28.1	29.1	66.1	65	1.1	6	3
	5	□	MNS0580L-DIN	35.4	44.1	45.1	82.1	81	1.1	6	4
	5	□	MNS0580L-DIN-C	35.4	44.1	45.1	82.1	81	1.1	6	3
	8	□	MNS0580-L8C	47.5	67.1	70.1	107.1	106	1.1	6	3
	10	□	MNS0580-L10C	59.1	79.1	82.1	119.1	118	1.1	6	3
	12	□	MNS0580-L12C	70.7	91.1	94.1	131.1	130	1.1	6	3
	15	□	MNS0580-L15C	88.1	109.1	112.1	149.1	148	1.1	6	3
	20	□	MNS0580-L20C	117.1	139.1	142.1	179.1	178	1.1	6	3
	25	□	MNS0580-L25C	146.1	169.1	172.1	209.1	208	1.1	6	3
	30	□	MNS0580-L30C	175.1	199.1	202.1	239.1	238	1.1	6	3
	5	★	MNS0580LB	30.1	49.1	49.1	101.1	100	1.1	6	3
	10	□	MNS0580X10DB	59.1	79.1	82.1	134.1	133	1.1	6	3
	20	□	MNS0580X20DB	117.1	139.1	142.1	194.1	193	1.1	6	3
	30	□	MNS0580X30DB	175.1	199.1	202.1	254.1	253	1.1	6	3
5.9	3	□	MNS0590S-DIN	19.2	28.1	29.1	66.1	65	1.1	6	4
	3	□	MNS0590S-DIN-C	19.2	28.1	29.1	66.1	65	1.1	6	3
	5	□	MNS0590L-DIN	35.2	44.1	45.1	82.1	81	1.1	6	4
	5	□	MNS0590L-DIN-C	35.2	44.1	45.1	82.1	81	1.1	6	3
	8	□	MNS0590-L8C	48.3	67.1	70.1	107.1	106	1.1	6	3
	10	□	MNS0590-L10C	60.1	79.1	82.1	119.1	118	1.1	6	3
	12	□	MNS0590-L12C	71.9	91.1	94.1	131.1	130	1.1	6	3
	15	□	MNS0590-L15C	89.6	109.1	112.1	149.1	148	1.1	6	3
	20	□	MNS0590-L20C	119.1	139.1	142.1	179.1	178	1.1	6	3
	25	□	MNS0590-L25C	148.6	169.1	172.1	209.1	208	1.1	6	3
	30	□	MNS0590-L30C	178.1	199.1	202.1	239.1	238	1.1	6	3
	5	★	MNS0590LB	30.6	49.1	49.1	101.1	100	1.1	6	3
	10	□	MNS0590X10DB	60.1	79.1	82.1	134.1	133	1.1	6	3
	20	□	MNS0590X20DB	119.1	139.1	142.1	194.1	193	1.1	6	3
	30	□	MNS0590X30DB	178.1	199.1	202.1	254.1	253	1.1	6	3
6.0	3	□	MNS0600S-DIN	19.1	28.1	29.1	66.1	65	1.1	6	4
	3	□	MNS0600S-DIN-C	19.1	28.1	29.1	66.1	65	1.1	6	3
	5	●	MNS0600L-DIN-C	35.1	44.1	45.1	82.1	81	1.1	6	3
	8	□	MNS0600-L8C	49.1	67.1	70.1	107.1	106	1.1	6	3
	10	□	MNS0600-L10C	61.1	79.1	82.1	119.1	118	1.1	6	3
	12	●	MNS0600-L12C	73.1	91.1	94.1	131.1	130	1.1	6	3
	15	□	MNS0600-L15C	91.1	109.1	112.1	149.1	148	1.1	6	3
	20	●	MNS0600-L20C	121.1	139.1	142.1	179.1	178	1.1	6	3
	25	□	MNS0600-L25C	151.1	169.1	172.1	209.1	208	1.1	6	3
	30	●	MNS0600-L30C	181.1	199.1	202.1	239.1	238	1.1	6	3
	5	★	MNS0600LB	31.1	49.1	49.1	101.1	100	1.1	6	3
	10	★	MNS0600X10DB	61.1	79.1	82.1	134.1	133	1.1	6	3
	20	★	MNS0600X20DB	121.1	139.1	142.1	194.1	193	1.1	6	3
	30	★	MNS0600X30DB	181.1	199.1	202.1	254.1	253	1.1	6	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
6.1	3	□	MNS0610S-DIN	25.0	34.1	42.1	79.1	78	1.1	8	4
	3	□	MNS0610S-DIN-C	25.0	34.1	42.1	79.1	78	1.1	8	3
	5	□	MNS0610L-DIN	44.0	53.1	54.1	91.1	90	1.1	8	4
	5	□	MNS0610L-DIN-C	44.0	53.1	54.1	91.1	90	1.1	8	3
	8	□	MNS0610-L8C	49.9	73.1	76.1	113.1	112	1.1	8	3
	10	□	MNS0610-L10C	62.1	86.1	89.1	126.1	125	1.1	8	3
	12	□	MNS0610-L12C	74.3	99.1	102.1	139.1	138	1.1	8	3
	15	□	MNS0610-L15C	92.6	118.1	121.1	158.1	157	1.1	8	3
	20	□	MNS0610-L20C	123.1	151.1	154.1	191.1	190	1.1	8	3
	25	□	MNS0610-L25C	153.6	183.1	186.1	223.1	222	1.1	8	3
	30	□	MNS0610-L30C	184.1	216.1	219.1	256.1	255	1.1	8	3
	5	★	MNS0610LB	31.6	53.1	53.1	110.1	109	1.1	7	3
	10	★	MNS0610X10DB	62.1	86.1	89.1	142.1	141	1.1	7	3
	20	★	MNS0610X20DB	123.1	151.1	154.1	207.1	206	1.1	7	3
	30	★	MNS0610X30DB	184.1	216.1	219.1	272.1	271	1.1	7	3
6.2	3	□	MNS0620S-DIN	24.8	34.1	42.1	79.1	78	1.1	8	4
	3	□	MNS0620S-DIN-C	24.8	34.1	42.1	79.1	78	1.1	8	3
	5	□	MNS0620L-DIN	43.8	53.1	54.1	91.1	90	1.1	8	4
	5	□	MNS0620L-DIN-C	43.8	53.1	54.1	91.1	90	1.1	8	3
	8	□	MNS0620-L8C	50.7	73.1	76.1	113.1	112	1.1	8	3
	10	□	MNS0620-L10C	63.1	86.1	89.1	126.1	125	1.1	8	3
	12	□	MNS0620-L12C	75.5	99.1	102.1	139.1	138	1.1	8	3
	15	□	MNS0620-L15C	94.1	118.1	121.1	158.1	157	1.1	8	3
	20	□	MNS0620-L20C	125.1	151.1	154.1	191.1	190	1.1	8	3
	25	□	MNS0620-L25C	156.1	183.1	186.1	223.1	222	1.1	8	3
	30	□	MNS0620-L30C	187.1	216.1	219.1	256.1	255	1.1	8	3
	5	★	MNS0620LB	32.1	53.1	53.1	110.1	109	1.1	7	3
	10	□	MNS0620X10DB	63.1	86.1	89.1	142.1	141	1.1	7	3
	20	□	MNS0620X20DB	125.1	151.1	154.1	207.1	206	1.1	7	3
	30	□	MNS0620X30DB	187.1	216.1	219.1	272.1	271	1.1	7	3
6.3	3	□	MNS0630S-DIN	24.7	34.1	42.1	79.1	78	1.1	8	4
	3	□	MNS0630S-DIN-C	24.7	34.1	42.1	79.1	78	1.1	8	3
	5	□	MNS0630L-DIN	43.7	53.1	54.1	91.1	90	1.1	8	4
	5	□	MNS0630L-DIN-C	43.7	53.1	54.1	91.1	90	1.1	8	3
	8	□	MNS0630-L8C	51.5	73.1	76.1	113.1	112	1.1	8	3
	10	□	MNS0630-L10C	64.1	86.1	89.1	126.1	125	1.1	8	3
	12	□	MNS0630-L12C	76.7	99.1	102.1	139.1	138	1.1	8	3
	15	□	MNS0630-L15C	95.6	118.1	121.1	158.1	157	1.1	8	3
	20	□	MNS0630-L20C	127.1	151.1	154.1	191.1	190	1.1	8	3
	25	□	MNS0630-L25C	158.6	183.1	186.1	223.1	222	1.1	8	3
	30	□	MNS0630-L30C	190.1	216.1	219.1	256.1	255	1.1	8	3
	5	★	MNS0630LB	32.6	53.1	53.1	110.1	109	1.1	7	3
	10	□	MNS0630X10DB	64.1	86.1	89.1	142.1	141	1.1	7	3
	20	□	MNS0630X20DB	127.1	151.1	154.1	207.1	206	1.1	7	3
	30	□	MNS0630X30DB	190.1	216.1	219.1	272.1	271	1.1	7	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0640S-DIN	24.6	34.2	42.2	79.2	78	1.2	8	4
	3	□	MNS0640S-DIN-C	24.6	34.2	42.2	79.2	78	1.2	8	3
	5	□	MNS0640L-DIN	43.6	53.2	54.2	91.2	90	1.2	8	4
	5	□	MNS0640L-DIN-C	43.6	53.2	54.2	91.2	90	1.2	8	3
	8	□	MNS0640-L8C	52.4	73.2	76.2	113.2	112	1.2	8	3
	10	□	MNS0640-L10C	65.2	86.2	89.2	126.2	125	1.2	8	3
	12	□	MNS0640-L12C	78.0	99.2	102.2	139.2	138	1.2	8	3
6.4	15	□	MNS0640-L15C	97.2	118.2	121.2	158.2	157	1.2	8	3
	20	□	MNS0640-L20C	129.2	151.2	154.2	191.2	190	1.2	8	3
	25	□	MNS0640-L25C	161.2	183.2	186.2	223.2	222	1.2	8	3
	30	□	MNS0640-L30C	193.2	216.2	219.2	256.2	255	1.2	8	3
	5	★	MNS0640LB	33.2	53.2	53.2	110.2	109	1.2	7	3
	10	□	MNS0640X10DB	65.2	86.2	89.2	142.2	141	1.2	7	3
	20	□	MNS0640X20DB	129.2	151.2	154.2	207.2	206	1.2	7	3
	30	□	MNS0640X30DB	193.2	216.2	219.2	272.2	271	1.2	7	3
	3	□	MNS0650S-DIN	24.4	34.2	42.2	79.2	78	1.2	8	4
	3	□	MNS0650S-DIN-C	24.4	34.2	42.2	79.2	78	1.2	8	3
	5	□	MNS0650L-DIN	43.4	53.2	54.2	91.2	90	1.2	8	4
	5	●	MNS0650L-DIN-C	43.4	53.2	54.2	91.2	90	1.2	8	3
	8	□	MNS0650-L8C	53.2	73.2	76.2	113.2	112	1.2	8	3
	10	□	MNS0650-L10C	66.2	86.2	89.2	126.2	125	1.2	8	3
	12	●	MNS0650-L12C	79.2	99.2	102.2	139.2	138	1.2	8	3
6.5	15	□	MNS0650-L15C	98.7	118.2	121.2	158.2	157	1.2	8	3
	20	●	MNS0650-L20C	131.2	151.2	154.2	191.2	190	1.2	8	3
	25	□	MNS0650-L25C	163.7	183.2	186.2	223.2	222	1.2	8	3
	30	●	MNS0650-L30C	196.2	216.2	219.2	256.2	255	1.2	8	3
	5	★	MNS0650LB	33.7	53.2	53.2	110.2	109	1.2	7	3
	10	★	MNS0650X10DB	66.2	86.2	89.2	142.2	141	1.2	7	3
	20	★	MNS0650X20DB	131.2	151.2	154.2	207.2	206	1.2	7	3
	30	★	MNS0650X30DB	196.2	216.2	219.2	272.2	271	1.2	7	3
	3	□	MNS0660S-DIN	24.3	34.2	42.2	79.2	78	1.2	8	4
	3	□	MNS0660S-DIN-C	24.3	34.2	42.2	79.2	78	1.2	8	3
	5	□	MNS0660L-DIN	43.3	53.2	54.2	91.2	90	1.2	8	4
	5	□	MNS0660L-DIN-C	43.3	53.2	54.2	91.2	90	1.2	8	3
	8	□	MNS0660-L8C	54.0	78.2	81.2	118.2	117	1.2	8	3
	10	□	MNS0660-L10C	67.2	92.2	95.2	132.2	131	1.2	8	3
	12	□	MNS0660-L12C	80.4	106.2	109.2	146.2	145	1.2	8	3
6.6	15	□	MNS0660-L15C	100.2	127.2	130.2	167.2	166	1.2	8	3
	20	□	MNS0660-L20C	133.2	162.2	165.2	202.2	201	1.2	8	3
	25	□	MNS0660-L25C	166.2	197.2	200.2	237.2	236	1.2	8	3
	30	□	MNS0660-L30C	199.2	232.2	235.2	272.2	271	1.2	8	3
	5	★	MNS0660LB	34.2	57.2	57.2	110.2	109	1.2	7	3
	10	□	MNS0660X10DB	67.2	92.2	95.2	148.2	147	1.2	7	3
	20	□	MNS0660X20DB	133.2	162.2	165.2	218.2	217	1.2	7	3
	30	□	MNS0660X30DB	199.2	232.2	235.2	288.2	287	1.2	7	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0670S-DIN	24.2	34.2	42.2	79.2	78	1.2	8	4
	3	□	MNS0670S-DIN-C	24.2	34.2	42.2	79.2	78	1.2	8	3
	5	□	MNS0670L-DIN	43.2	53.2	54.2	91.2	90	1.2	8	4
	5	□	MNS0670L-DIN-C	43.2	53.2	54.2	91.2	90	1.2	8	3
	8	□	MNS0670-L8C	54.8	78.2	81.2	118.2	117	1.2	8	3
	10	□	MNS0670-L10C	68.2	92.2	95.2	132.2	131	1.2	8	3
	12	□	MNS0670-L12C	81.6	106.2	109.2	146.2	145	1.2	8	3
6.7	15	□	MNS0670-L15C	101.7	127.2	130.2	167.2	166	1.2	8	3
	20	□	MNS0670-L20C	135.2	162.2	165.2	202.2	201	1.2	8	3
	25	□	MNS0670-L25C	168.7	197.2	200.2	237.2	236	1.2	8	3
	30	□	MNS0670-L30C	202.2	232.2	235.2	272.2	271	1.2	8	3
	5	★	MNS0670LB	34.7	57.2	57.2	110.2	109	1.2	7	3
	10	★	MNS0670X10DB	68.2	92.2	95.2	148.2	147	1.2	7	3
	20	★	MNS0670X20DB	135.2	162.2	165.2	218.2	217	1.2	7	3
	30	★	MNS0670X30DB	202.2	232.2	235.2	288.2	287	1.2	7	3
	3	□	MNS0680S-DIN	24.0	34.2	42.2	79.2	78	1.2	8	4
	3	□	MNS0680S-DIN-C	24.0	34.2	42.2	79.2	78	1.2	8	3
	5	□	MNS0680L-DIN	43.0	53.2	54.2	91.2	90	1.2	8	4
	5	●	MNS0680L-DIN-C	43.0	53.2	54.2	91.2	90	1.2	8	3
	8	□	MNS0680-L8C	55.6	78.2	81.2	118.2	117	1.2	8	3
	10	□	MNS0680-L10C	69.2	92.2	95.2	132.2	131	1.2	8	3
	12	●	MNS0680-L12C	82.8	106.2	109.2	146.2	145	1.2	8	3
6.8	15	□	MNS0680-L15C	103.2	127.2	130.2	167.2	166	1.2	8	3
	20	●	MNS0680-L20C	137.2	162.2	165.2	202.2	201	1.2	8	3
	25	□	MNS0680-L25C	171.2	197.2	200.2	237.2	236	1.2	8	3
	30	●	MNS0680-L30C	205.2	232.2	235.2	272.2	271	1.2	8	3
	5	★	MNS0680LB	35.2	57.2	57.2	110.2	109	1.2	7	3
	10	□	MNS0680X10DB	69.2	92.2	95.2	148.2	147	1.2	7	3
	20	□	MNS0680X20DB	137.2	162.2	165.2	218.2	217	1.2	7	3
	30	□	MNS0680X30DB	205.2	232.2	235.2	288.2	287	1.2	7	3
	3	□	MNS0690S-DIN	23.9	34.3	42.3	79.3	78	1.3	8	4
	3	□	MNS0690S-DIN-C	23.9	34.3	42.3	79.3	78	1.3	8	3
	5	□	MNS0690L-DIN	42.9	53.3	54.3	91.3	90	1.3	8	4
	5	□	MNS0690L-DIN-C	42.9	53.3	54.3	91.3	90	1.3	8	3
	8	□	MNS0690-L8C	56.5	78.3	81.3	118.3	117	1.3	8	3
	10	□	MNS0690-L10C	70.3	92.3	95.3	132.3	131	1.3	8	3
	12	□	MNS0690-L12C	84.1	106.3	109.3	146.3	145	1.3	8	3
6.9	15	□	MNS0690-L15C	104.8	127.3	130.3	167.3	166	1.3	8	3
	20	□	MNS0690-L20C	139.3	162.3	165.3	202.3	201	1.3	8	3
	25	□	MNS0690-L25C	173.8	197.3	200.3	237.3	236	1.3	8	3
	30	□	MNS0690-L30C	208.3	232.3	235.3	272.3	271	1.3	8	3
	5	★	MNS0690LB	35.8	57.3	57.3	110.3	109	1.3	7	3
	10	□	MNS0690X10DB	70.3	92.3	95.3	148.3	147	1.3	7	3
	20	□	MNS0690X20DB	139.3	162.3	165.3	218.3	217	1.3	7	3
	30	□	MNS0690X30DB	208.3	232.3	235.3	288.3	287	1.3	7	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0700S-DIN	23.8	34.3	42.3	79.3	78	1.3	8	4
	3	□	MNS0700S-DIN-C	23.8	34.3	42.3	79.3	78	1.3	8	3
	5	□	MNS0700L-DIN	42.8	53.3	54.3	91.3	90	1.3	8	4
	5	●	MNS0700L-DIN-C	42.8	53.3	54.3	91.3	90	1.3	8	3
	8	□	MNS0700-L8C	57.3	78.3	81.3	118.3	117	1.3	8	3
	10	□	MNS0700-L10C	71.3	92.3	95.3	132.3	131	1.3	8	3
	12	●	MNS0700-L12C	85.3	106.3	109.3	146.3	145	1.3	8	3
7.0	15	□	MNS0700-L15C	106.3	127.3	130.3	167.3	166	1.3	8	3
	20	●	MNS0700-L20C	141.3	162.3	165.3	202.3	201	1.3	8	3
	25	□	MNS0700-L25C	176.3	197.3	200.3	237.3	236	1.3	8	3
	30	●	MNS0700-L30C	211.3	232.3	235.3	272.3	271	1.3	8	3
	5	★	MNS0700LB	36.3	57.3	57.3	110.3	109	1.3	7	3
	10	★	MNS0700X10DB	71.3	92.3	95.3	148.3	147	1.3	7	3
	20	★	MNS0700X20DB	141.3	162.3	165.3	218.3	217	1.3	7	3
	30	★	MNS0700X30DB	211.3	232.3	235.3	288.3	287	1.3	7	3
	3	□	MNS0710S-DIN	30.6	41.3	42.3	79.3	78	1.3	8	4
	3	□	MNS0710S-DIN-C	30.6	41.3	42.3	79.3	78	1.3	8	3
	5	□	MNS0710L-DIN	42.6	53.3	54.3	91.3	90	1.3	8	4
	5	□	MNS0710L-DIN-C	42.6	53.3	54.3	91.3	90	1.3	8	3
	8	□	MNS0710-L8C	58.1	84.3	87.3	124.3	123	1.3	8	3
	10	□	MNS0710-L10C	72.3	99.3	102.3	139.3	138	1.3	8	3
	12	□	MNS0710-L12C	86.5	114.3	117.3	154.3	153	1.3	8	3
7.1	15	□	MNS0710-L15C	107.8	136.3	139.3	176.3	175	1.3	8	3
	20	□	MNS0710-L20C	143.3	174.3	177.3	214.3	213	1.3	8	3
	25	□	MNS0710-L25C	178.8	211.3	214.3	251.3	250	1.3	8	3
	30	□	MNS0710-L30C	214.3	249.3	252.3	289.3	288	1.3	8	3
	5	★	MNS0710LB	36.8	61.3	65.3	119.3	118	1.3	8	3
	10	□	MNS0710X10DB	72.3	99.3	102.3	156.3	155	1.3	8	3
	20	□	MNS0710X20DB	143.3	174.3	177.3	231.3	230	1.3	8	3
	30	□	MNS0710X30DB	214.3	249.3	252.3	306.3	305	1.3	8	3
	3	□	MNS0720S-DIN	30.5	41.3	42.3	79.3	78	1.3	8	4
	3	□	MNS0720S-DIN-C	30.5	41.3	42.3	79.3	78	1.3	8	3
	5	□	MNS0720L-DIN	42.5	53.3	54.3	91.3	90	1.3	8	4
	5	□	MNS0720L-DIN-C	42.5	53.3	54.3	91.3	90	1.3	8	3
	8	□	MNS0720-L8C	58.9	84.3	87.3	124.3	123	1.3	8	3
	10	□	MNS0720-L10C	73.3	99.3	102.3	139.3	138	1.3	8	3
	12	□	MNS0720-L12C	87.7	114.3	117.3	154.3	153	1.3	8	3
7.2	15	□	MNS0720-L15C	109.3	136.3	139.3	176.3	175	1.3	8	3
	20	□	MNS0720-L20C	145.3	174.3	177.3	214.3	213	1.3	8	3
	25	□	MNS0720-L25C	181.3	211.3	214.3	251.3	250	1.3	8	3
	30	□	MNS0720-L30C	217.3	249.3	252.3	289.3	288	1.3	8	3
	5	★	MNS0720LB	37.3	61.3	65.3	119.3	118	1.3	8	3
	10	★	MNS0720X10DB	73.3	99.3	102.3	156.3	155	1.3	8	3
	20	★	MNS0720X20DB	145.3	174.3	177.3	231.3	230	1.3	8	3
	30	★	MNS0720X30DB	217.3	249.3	252.3	306.3	305	1.3	8	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0730S-DIN	30.4	41.3	42.3	79.3	78	1.3	8	4
	3	□	MNS0730S-DIN-C	30.4	41.3	42.3	79.3	78	1.3	8	3
	5	□	MNS0730L-DIN	42.4	53.3	54.3	91.3	90	1.3	8	4
	5	□	MNS0730L-DIN-C	42.4	53.3	54.3	91.3	90	1.3	8	3
	8	□	MNS0730-L8C	59.7	84.3	87.3	124.3	123	1.3	8	3
	10	□	MNS0730-L10C	74.3	99.3	102.3	139.3	138	1.3	8	3
	12	□	MNS0730-L12C	88.9	114.3	117.3	154.3	153	1.3	8	3
7.3	15	□	MNS0730-L15C	110.8	136.3	139.3	176.3	175	1.3	8	3
	20	□	MNS0730-L20C	147.3	174.3	177.3	214.3	213	1.3	8	3
	25	□	MNS0730-L25C	183.8	211.3	214.3	251.3	250	1.3	8	3
	30	□	MNS0730-L30C	220.3	249.3	252.3	289.3	288	1.3	8	3
	5	★	MNS0730LB	37.8	61.3	65.3	119.3	118	1.3	8	3
	10	□	MNS0730X10DB	74.3	99.3	102.3	156.3	155	1.3	8	3
	20	□	MNS0730X20DB	147.3	174.3	177.3	231.3	230	1.3	8	3
	30	□	MNS0730X30DB	220.3	249.3	252.3	306.3	305	1.3	8	3
	3	□	MNS0740S-DIN	30.2	41.3	42.3	79.3	78	1.3	8	4
	3	□	MNS0740S-DIN-C	30.2	41.3	42.3	79.3	78	1.3	8	3
	5	□	MNS0740L-DIN	42.2	53.3	54.3	91.3	90	1.3	8	4
	5	□	MNS0740L-DIN-C	42.2	53.3	54.3	91.3	90	1.3	8	3
	8	□	MNS0740-L8C	60.5	84.3	87.3	124.3	123	1.3	8	3
	10	□	MNS0740-L10C	75.3	99.3	102.3	139.3	138	1.3	8	3
	12	□	MNS0740-L12C	90.1	114.3	117.3	154.3	153	1.3	8	3
7.4	15	□	MNS0740-L15C	112.3	136.3	139.3	176.3	175	1.3	8	3
	20	□	MNS0740-L20C	149.3	174.3	177.3	214.3	213	1.3	8	3
	25	□	MNS0740-L25C	186.3	211.3	214.3	251.3	250	1.3	8	3
	30	□	MNS0740-L30C	223.3	249.3	252.3	289.3	288	1.3	8	3
	5	★	MNS0740LB	38.3	61.3	65.3	119.3	118	1.3	8	3
	10	□	MNS0740X10DB	75.3	99.3	102.3	156.3	155	1.3	8	3
	20	□	MNS0740X20DB	149.3	174.3	177.3	231.3	230	1.3	8	3
	30	□	MNS0740X30DB	223.3	249.3	252.3	306.3	305	1.3	8	3
	3	□	MNS0750S-DIN	30.1	41.4	42.4	79.4	78	1.4	8	4
	3	□	MNS0750S-DIN-C	30.1	41.4	42.4	79.4	78	1.4	8	3
	5	□	MNS0750L-DIN	42.1	53.4	54.4	91.4	90	1.4	8	4
	5	●	MNS0750L-DIN-C	42.1	53.4	54.4	91.4	90	1.4	8	3
	8	□	MNS0750-L8C	61.4	84.4	87.4	124.4	123	1.4	8	3
	10	□	MNS0750-L10C	76.4	99.4	102.4	139.4	138	1.4	8	3
	12	●	MNS0750-L12C	91.4	114.4	117.4	154.4	153	1.4	8	3
7.5	15	□	MNS0750-L15C	113.9	136.4	139.4	176.4	175	1.4	8	3
	20	●	MNS0750-L20C	151.4	174.4	177.4	214.4	213	1.4	8	3
	25	□	MNS0750-L25C	188.9	211.4	214.4	251.4	250	1.4	8	3
	30	●	MNS0750-L30C	226.4	249.4	252.4	289.4	288	1.4	8	3
	5	★	MNS0750LB	38.9	61.4	65.4	119.4	118	1.4	8	3
	10	□	MNS0750X10DB	76.4	99.4	102.4	156.4	155	1.4	8	3
	20	□	MNS0750X20DB	151.4	174.4	177.4	231.4	230	1.4	8	3
	30	□	MNS0750X30DB	226.4	249.4	252.4	306.4	305	1.4	8	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0760S-DIN	30.0	41.4	42.4	79.4	78	1.4	8	4
	3	□	MNS0760S-DIN-C	30.0	41.4	42.4	79.4	78	1.4	8	3
	5	□	MNS0760L-DIN	42.0	53.4	54.4	91.4	90	1.4	8	4
	5	□	MNS0760L-DIN-C	42.0	53.4	54.4	91.4	90	1.4	8	3
	8	□	MNS0760-L8C	62.2	89.4	92.4	129.4	128	1.4	8	3
	10	□	MNS0760-L10C	77.4	105.4	108.4	145.4	144	1.4	8	3
	12	□	MNS0760-L12C	92.6	121.4	124.4	161.4	160	1.4	8	3
7.6	15	□	MNS0760-L15C	115.4	145.4	148.4	185.4	184	1.4	8	3
	20	□	MNS0760-L20C	153.4	185.4	188.4	225.4	224	1.4	8	3
	25	□	MNS0760-L25C	191.4	225.4	228.4	265.4	264	1.4	8	3
	30	□	MNS0760-L30C	229.4	265.4	268.4	305.4	304	1.4	8	3
	5	★	MNS0760LB	39.4	65.4	65.4	119.4	118	1.4	8	3
	10	□	MNS0760X10DB	77.4	105.4	108.4	162.4	161	1.4	8	3
	20	□	MNS0760X20DB	153.4	185.4	188.4	242.4	241	1.4	8	3
	30	□	MNS0760X30DB	229.4	265.4	268.4	322.4	321	1.4	8	3
	3	□	MNS0770S-DIN	29.9	41.4	42.4	79.4	78	1.4	8	4
	3	□	MNS0770S-DIN-C	29.9	41.4	42.4	79.4	78	1.4	8	3
	5	□	MNS0770L-DIN	41.9	53.4	54.4	91.4	90	1.4	8	4
	5	□	MNS0770L-DIN-C	41.9	53.4	54.4	91.4	90	1.4	8	3
	8	□	MNS0770-L8C	63.0	89.4	92.4	129.4	128	1.4	8	3
	10	□	MNS0770-L10C	78.4	105.4	108.4	145.4	144	1.4	8	3
	12	□	MNS0770-L12C	93.8	121.4	124.4	161.4	160	1.4	8	3
7.7	15	□	MNS0770-L15C	116.9	145.4	148.4	185.4	184	1.4	8	3
	20	□	MNS0770-L20C	155.4	185.4	188.4	225.4	224	1.4	8	3
	25	□	MNS0770-L25C	193.9	225.4	228.4	265.4	264	1.4	8	3
	30	□	MNS0770-L30C	232.4	265.4	268.4	305.4	304	1.4	8	3
	5	★	MNS0770LB	39.9	65.4	65.4	119.4	118	1.4	8	3
	10	□	MNS0770X10DB	78.4	105.4	108.4	162.4	161	1.4	8	3
	20	□	MNS0770X20DB	155.4	185.4	188.4	242.4	241	1.4	8	3
	30	□	MNS0770X30DB	232.4	265.4	268.4	322.4	321	1.4	8	3
	3	□	MNS0780S-DIN	29.7	41.4	42.4	79.4	78	1.4	8	4
	3	□	MNS0780S-DIN-C	29.7	41.4	42.4	79.4	78	1.4	8	3
	5	□	MNS0780L-DIN	41.7	53.4	54.4	91.4	90	1.4	8	4
	5	□	MNS0780L-DIN-C	41.7	53.4	54.4	91.4	90	1.4	8	3
	8	□	MNS0780-L8C	63.8	89.4	92.4	129.4	128	1.4	8	3
	10	□	MNS0780-L10C	79.4	105.4	108.4	145.4	144	1.4	8	3
	12	□	MNS0780-L12C	95.0	121.4	124.4	161.4	160	1.4	8	3
7.8	15	□	MNS0780-L15C	118.4	145.4	148.4	185.4	184	1.4	8	3
	20	□	MNS0780-L20C	157.4	185.4	188.4	225.4	224	1.4	8	3
	25	□	MNS0780-L25C	196.4	225.4	228.4	265.4	264	1.4	8	3
	30	□	MNS0780-L30C	235.4	265.4	268.4	305.4	304	1.4	8	3
	5	★	MNS0780LB	40.4	65.4	65.4	119.4	118	1.4	8	3
	10	★	MNS0780X10DB	79.4	105.4	108.4	162.4	161	1.4	8	3
	20	★	MNS0780X20DB	157.4	185.4	188.4	242.4	241	1.4	8	3
	30	★	MNS0780X30DB	235.4	265.4	268.4	322.4	321	1.4	8	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0790S-DIN	29.6	41.4	42.4	79.4	78	1.4	8	4
	3	□	MNS0790S-DIN-C	29.6	41.4	42.4	79.4	78	1.4	8	3
	5	□	MNS0790L-DIN	41.6	53.4	54.4	91.4	90	1.4	8	4
	5	□	MNS0790L-DIN-C	41.6	53.4	54.4	91.4	90	1.4	8	3
	8	□	MNS0790-L8C	64.6	89.4	92.4	129.4	128	1.4	8	3
	10	□	MNS0790-L10C	80.4	105.4	108.4	145.4	144	1.4	8	3
	12	□	MNS0790-L12C	96.2	121.4	124.4	161.4	160	1.4	8	3
7.9	15	□	MNS0790-L15C	119.9	145.4	148.4	185.4	184	1.4	8	3
	20	□	MNS0790-L20C	159.4	185.4	188.4	225.4	224	1.4	8	3
	25	□	MNS0790-L25C	198.9	225.4	228.4	265.4	264	1.4	8	3
	30	□	MNS0790-L30C	238.4	265.4	268.4	305.4	304	1.4	8	3
	5	★	MNS0790LB	40.9	65.4	65.4	119.4	118	1.4	8	3
	10	□	MNS0790X10DB	80.4	105.4	108.4	162.4	161	1.4	8	3
	20	□	MNS0790X20DB	159.4	185.4	188.4	242.4	241	1.4	8	3
	30	□	MNS0790X30DB	238.4	265.4	268.4	322.4	321	1.4	8	3
	3	□	MNS0800S-DIN	29.5	41.5	42.5	79.5	78	1.5	8	4
	3	□	MNS0800S-DIN-C	29.5	41.5	42.5	79.5	78	1.5	8	3
	5	□	MNS0800L-DIN	41.5	53.5	54.5	91.5	90	1.5	8	4
	5	●	MNS0800L-DIN-C	41.5	53.5	54.5	91.5	90	1.5	8	3
	8	□	MNS0800-L8C	65.5	89.5	92.5	129.5	128	1.5	8	3
	10	□	MNS0800-L10C	81.5	105.5	108.5	145.5	144	1.5	8	3
	12	●	MNS0800-L12C	97.5	121.5	124.5	161.5	160	1.5	8	3
8.0	15	□	MNS0800-L15C	121.5	145.5	148.5	185.5	184	1.5	8	3
	20	●	MNS0800-L20C	161.5	185.5	188.5	225.5	224	1.5	8	3
	25	□	MNS0800-L25C	201.5	225.5	228.5	265.5	264	1.5	8	3
	30	●	MNS0800-L30C	241.5	265.5	268.5	305.5	304	1.5	8	3
	5	★	MNS0800LB	41.5	65.5	65.5	119.5	118	1.5	8	3
	10	★	MNS0800X10DB	81.5	105.5	108.5	162.5	161	1.5	8	3
	20	★	MNS0800X20DB	161.5	185.5	188.5	242.5	241	1.5	8	3
	30	★	MNS0800X30DB	241.5	265.5	268.5	322.5	321	1.5	8	3
	3	□	MNS0810S-DIN	34.3	46.5	47.5	88.5	87	1.5	10	4
	3	□	MNS0810S-DIN-C	34.3	46.5	47.5	88.5	87	1.5	10	3
	5	□	MNS0810L-DIN	48.3	60.5	61.5	102.5	101	1.5	10	4
	5	□	MNS0810L-DIN-C	48.3	60.5	61.5	102.5	101	1.5	10	3
	8	□	MNS0810-L8C	66.3	95.5	98.5	139.5	138	1.5	10	3
	10	□	MNS0810-L10C	82.5	112.5	115.5	156.5	155	1.5	10	3
	12	□	MNS0810-L12C	98.7	129.5	132.5	173.5	172	1.5	10	3
8.1	15	□	MNS0810-L15C	123.0	154.5	157.5	198.5	197	1.5	10	3
	20	□	MNS0810-L20C	163.5	197.5	200.5	241.5	240	1.5	10	3
	25	□	MNS0810-L25C	204.0	239.5	242.5	283.5	282	1.5	10	3
	30	□	MNS0810-L30C	244.5	281.5	284.5	325.5	324	1.5	10	3
	5	★	MNS0810LB	42.0	69.5	73.5	128.5	127	1.5	9	3
	10	□	MNS0810X10DB	82.5	112.5	115.5	170.5	169	1.5	9	3
	20	□	MNS0810X20DB	163.5	197.5	200.5	255.5	254	1.5	9	3
	30	□	MNS0810X30DB	244.5	282.5	285.5	340.5	339	1.5	9	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.2	3	□	MNS0820S-DIN	34.2	46.5	47.5	88.5	87	1.5	10	4
	3	□	MNS0820S-DIN-C	34.2	46.5	47.5	88.5	87	1.5	10	3
	5	□	MNS0820L-DIN	48.2	60.5	61.5	102.5	101	1.5	10	4
	5	□	MNS0820L-DIN-C	48.2	60.5	61.5	102.5	101	1.5	10	3
	8	□	MNS0820-L8C	67.1	95.5	98.5	139.5	138	1.5	10	3
	5	★	MNS0820LB	42.5	69.5	73.5	128.5	127	1.5	9	3
	10	□	MNS0820X10DB	83.5	112.5	115.5	170.5	169	1.5	9	3
	20	□	MNS0820X20DB	165.5	197.5	200.5	255.5	254	1.5	9	3
	30	□	MNS0820X30DB	247.5	282.5	285.5	340.5	339	1.5	9	3
8.3	3	□	MNS0830S-DIN	34.1	46.5	47.5	88.5	87	1.5	10	4
	3	□	MNS0830S-DIN-C	34.1	46.5	47.5	88.5	87	1.5	10	3
	5	□	MNS0830L-DIN-C	48.1	60.5	61.5	102.5	101	1.5	10	3
	8	□	MNS0830-L8C	67.9	95.5	98.5	139.5	138	1.5	10	3
	10	□	MNS0830-L10C	84.5	112.5	115.5	156.5	155	1.5	10	3
	12	□	MNS0830-L12C	101.1	129.5	132.5	173.5	172	1.5	10	3
	15	□	MNS0830-L15C	126.0	154.5	157.5	198.5	197	1.5	10	3
	20	□	MNS0830-L20C	167.5	197.5	200.5	241.5	240	1.5	10	3
	25	□	MNS0830-L25C	209.0	239.5	242.5	283.5	282	1.5	10	3
	30	□	MNS0830-L30C	250.5	281.5	284.5	325.5	324	1.5	10	3
	5	★	MNS0830LB	43.0	69.5	73.5	128.5	127	1.5	9	3
	10	□	MNS0830X10DB	84.5	112.5	115.5	170.5	169	1.5	9	3
	20	□	MNS0830X20DB	167.5	197.5	200.5	255.5	254	1.5	9	3
	30	□	MNS0830X30DB	250.5	282.5	285.5	340.5	339	1.5	9	3
8.4	3	□	MNS0840S-DIN	33.9	46.5	47.5	88.5	87	1.5	10	4
	3	□	MNS0840S-DIN-C	33.9	46.5	47.5	88.5	87	1.5	10	3
	5	□	MNS0840L-DIN	47.9	60.5	61.5	102.5	101	1.5	10	4
	5	□	MNS0840L-DIN-C	47.9	60.5	61.5	102.5	101	1.5	10	3
	8	□	MNS0840-L8C	68.7	95.5	98.5	139.5	138	1.5	10	3
	10	□	MNS0840-L10C	85.5	112.5	115.5	156.5	155	1.5	10	3
	12	□	MNS0840-L12C	102.3	129.5	132.5	173.5	172	1.5	10	3
	15	□	MNS0840-L15C	127.5	154.5	157.5	198.5	197	1.5	10	3
	20	□	MNS0840-L20C	169.5	197.5	200.5	241.5	240	1.5	10	3
	25	□	MNS0840-L25C	211.5	239.5	242.5	283.5	282	1.5	10	3
	30	□	MNS0840-L30C	253.5	281.5	284.5	325.5	324	1.5	10	3
	5	★	MNS0840LB	43.5	69.5	73.5	128.5	127	1.5	9	3
	10	□	MNS0840X10DB	85.5	112.5	115.5	170.5	169	1.5	9	3
	20	□	MNS0840X20DB	169.5	197.5	200.5	255.5	254	1.5	9	3
	30	□	MNS0840X30DB	253.5	282.5	285.5	340.5	339	1.5	9	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.5	3	□	MNS0850S-DIN	33.8	46.5	47.5	88.5	87	1.5	10	4
	3	□	MNS0850S-DIN-C	33.8	46.5	47.5	88.5	87	1.5	10	3
	5	□	MNS0850L-DIN	47.8	60.5	61.5	102.5	101	1.5	10	4
	5	●	MNS0850L-DIN-C	47.8	60.5	61.5	102.5	101	1.5	10	3
	8	□	MNS0850-L8C	69.5	95.5	98.5	139.5	138	1.5	10	3
	10	□	MNS0850-L10C	86.5	112.5	115.5	156.5	155	1.5	10	3
	12	●	MNS0850-L12C	103.5	129.5	132.5	173.5	172	1.5	10	3
	15	□	MNS0850-L15C	129.0	154.5	157.5	198.5	197	1.5	10	3
	20	●	MNS0850-L20C	171.5	197.5	200.5	241.5	240	1.5	10	3
	25	□	MNS0850-L25C	214.0	239.5	242.5	283.5	282	1.5	10	3
	30	●	MNS0850-L30C	256.5	281.5	284.5	325.5	324	1.5	10	3
	5	★	MNS0850LB	44.0	69.5	73.5	128.5	127	1.5	9	3
	10	□	MNS0850X10DB	86.5	112.5	115.5	170.5	169	1.5	9	3
	20	□	MNS0850X20DB	171.5	197.5	200.5	255.5	254	1.5	9	3
	30	□	MNS0850X30DB	256.5	282.5	285.5	340.5	339	1.5	9	3
8.6	3	□	MNS0860S-DIN	33.7	46.6	47.6	88.6	87	1.6	10	4
	3	□	MNS0860S-DIN-C	33.7	46.6	47.6	88.6	87	1.6	10	3
	5	□	MNS0860L-DIN-C	47.7	60.6	61.6	102.6	101	1.6	10	3
	8	□	MNS0860-L8C	70.4	100.6	103.6	144.6	143	1.6	10	3
	10	□	MNS0860-L10C	87.6	118.6	121.6	162.6	161	1.6	10	3
	12	□	MNS0860-L12C	104.8	136.6	139.6	180.6	179	1.6	10	3
	15	□	MNS0860-L15C	130.6	163.6	166.6	207.6	206	1.6	10	3
	20	□	MNS0860-L20C	173.6	208.6	211.6	252.6	251	1.6	10	3
	25	□	MNS0860-L25C	216.6	253.6	256.6	297.6	296	1.6	10	3
	30	□	MNS0860-L30C	259.6	297.6	300.6	341.6	340	1.6	10	3
	5	★	MNS0860LB	44.6	73.6	73.6	128.6	127	1.6	9	3
	10	□	MNS0860X10DB	87.6	118.6	121.6	176.6	175	1.6	9	3
	20	□	MNS0860X20DB	173.6	208.6	211.6	266.6	265	1.6	9	3
	30	□	MNS0860X30DB	259.6	298.6	301.6	356.6	355	1.6	9	3
8.7	3	□	MNS0870S-DIN	33.5	46.6	47.6	88.6	87	1.6	10	4
	3	□	MNS0870S-DIN-C	33.5	46.6	47.6	88.6	87	1.6	10	3
	5	□	MNS0870L-DIN	47.5	60.6	61.6	102.6	101	1.6	10	4
	5	□	MNS0870L-DIN-C	47.5	60.6	61.6	102.6	101	1.6	10	3
	8	□	MNS0870-L8C	71.2	100.6	103.6	144.6	143	1.6	10	3
	10	□	MNS0870-L10C	88.6	118.6	121.6	162.6	161	1.6	10	3
	12	□	MNS0870-L12C	106.0	136.6	139.6	180.6	179	1.6	10	3
	15	□	MNS0870-L15C	132.1	163.6	166.6	207.6	206	1.6	10	3
	20	□	MNS0870-L20C	175.6	208.6	211.6	252.6	251	1.6	10	3
	25	□	MNS0870-L25C	219.1	253.6	256.6	297.6	296	1.6	10	3
	30	□	MNS0870-L30C	262.6	297.6	300.6	341.6	340	1.6	10	3
	5	★	MNS0870LB	45.1	73.6	73.6	128.6	127	1.6	9	3
	10	□	MNS0870X10DB	88.6	118.6	121.6	176.6	175	1.6	9	3
	20	□	MNS0870X20DB	175.6	208.6	211.6	266.6	265	1.6	9	3
	30	□	MNS0870X30DB	262.6	298.6	301.6	356.6	355	1.6	9	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0880S-DIN	33.4	46.6	47.6	88.6	87	1.6	10	4
	3	□	MNS0880S-DIN-C	33.4	46.6	47.6	88.6	87	1.6	10	3
	5	□	MNS0880L-DIN	47.4	60.6	61.6	102.6	101	1.6	10	4
	5	□	MNS0880L-DIN-C	47.4	60.6	61.6	102.6	101	1.6	10	3
	8	□	MNS0880-L8C	72.0	100.6	103.6	144.6	143	1.6	10	3
	10	□	MNS0880-L10C	89.6	118.6	121.6	162.6	161	1.6	10	3
	12	□	MNS0880-L12C	107.2	136.6	139.6	180.6	179	1.6	10	3
8.8	15	□	MNS0880-L15C	133.6	163.6	166.6	207.6	206	1.6	10	3
	20	□	MNS0880-L20C	177.6	208.6	211.6	252.6	251	1.6	10	3
	25	□	MNS0880-L25C	221.6	253.6	256.6	297.6	296	1.6	10	3
	30	□	MNS0880-L30C	265.6	297.6	300.6	341.6	340	1.6	10	3
	5	★	MNS0880LB	45.6	73.6	73.6	128.6	127	1.6	9	3
	10	□	MNS0880X10DB	89.6	118.6	121.6	176.6	175	1.6	9	3
	20	□	MNS0880X20DB	177.6	208.6	211.6	266.6	265	1.6	9	3
	30	□	MNS0880X30DB	265.6	298.6	301.6	356.6	355	1.6	9	3
	3	□	MNS0890S-DIN	33.3	46.6	47.6	88.6	87	1.6	10	4
	3	□	MNS0890S-DIN-C	33.3	46.6	47.6	88.6	87	1.6	10	3
	5	□	MNS0890L-DIN	47.3	60.6	61.6	102.6	101	1.6	10	4
	5	□	MNS0890L-DIN-C	47.3	60.6	61.6	102.6	101	1.6	10	3
	8	□	MNS0890-L8C	72.8	100.6	103.6	144.6	143	1.6	10	3
	10	□	MNS0890-L10C	90.6	118.6	121.6	162.6	161	1.6	10	3
	12	□	MNS0890-L12C	108.4	136.6	139.6	180.6	179	1.6	10	3
8.9	15	□	MNS0890-L15C	135.1	163.6	166.6	207.6	206	1.6	10	3
	20	□	MNS0890-L20C	179.6	208.6	211.6	252.6	251	1.6	10	3
	25	□	MNS0890-L25C	224.1	253.6	256.6	297.6	296	1.6	10	3
	30	□	MNS0890-L30C	268.6	297.6	300.6	341.6	340	1.6	10	3
	5	★	MNS0890LB	46.1	73.6	73.6	128.6	127	1.6	9	3
	10	□	MNS0890X10DB	90.6	118.6	121.6	176.6	175	1.6	9	3
	20	□	MNS0890X20DB	179.6	208.6	211.6	266.6	265	1.6	9	3
	30	□	MNS0890X30DB	268.6	298.6	301.6	356.6	355	1.6	9	3
	3	□	MNS0900S-DIN	33.1	46.6	47.6	88.6	87	1.6	10	4
	3	□	MNS0900S-DIN-C	33.1	46.6	47.6	88.6	87	1.6	10	3
	5	□	MNS0900L-DIN	47.1	60.6	61.6	102.6	101	1.6	10	4
	5	●	MNS0900L-DIN-C	47.1	60.6	61.6	102.6	101	1.6	10	3
	8	□	MNS0900-L8C	73.6	100.6	103.6	144.6	143	1.6	10	3
	10	□	MNS0900-L10C	91.6	118.6	121.6	162.6	161	1.6	10	3
	12	●	MNS0900-L12C	109.6	136.6	139.6	180.6	179	1.6	10	3
9.0	15	□	MNS0900-L15C	136.6	163.6	166.6	207.6	206	1.6	10	3
	20	●	MNS0900-L20C	181.6	208.6	211.6	252.6	251	1.6	10	3
	25	□	MNS0900-L25C	226.6	253.6	256.6	297.6	296	1.6	10	3
	30	●	MNS0900-L30C	271.6	297.6	300.6	341.6	340	1.6	10	3
	5	★	MNS0900LB	46.6	73.6	73.6	128.6	127	1.6	9	3
	10	★	MNS0900X10DB	91.6	118.6	121.6	176.6	175	1.6	9	3
	20	★	MNS0900X20DB	181.6	208.6	211.6	266.6	265	1.6	9	3
	30	★	MNS0900X30DB	271.6	298.6	301.6	356.6	355	1.6	9	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS0910S-DIN	33.0	46.7	47.7	88.7	87	1.7	10	4
	3	□	MNS0910S-DIN-C	33.0	46.7	47.7	88.7	87	1.7	10	3
	5	□	MNS0910L-DIN	47.0	60.7	61.7	102.7	101	1.7	10	4
	5	□	MNS0910L-DIN-C	47.0	60.7	61.7	102.7	101	1.7	10	3
	8	□	MNS0910-L8C	74.5	106.7	109.7	150.7	149	1.7	10	3
	10	□	MNS0910-L10C	92.7	125.7	128.7	169.7	168	1.7	10	3
	12	□	MNS0910-L12C	110.9	144.7	147.7	188.7	187	1.7	10	3
9.1	15	□	MNS0910-L15C	138.2	172.7	175.7	216.7	215	1.7	10	3
	20	□	MNS0910-L20C	183.7	220.7	223.7	264.7	263	1.7	10	3
	25	□	MNS0910-L25C	229.2	267.7	270.7	311.7	310	1.7	10	3
	30	□	MNS0910-L30C	274.7	315.7	318.7	359.7	358	1.7	10	3
	5	★	MNS0910LB	47.2	77.7	81.7	137.7	136	1.7	10	3
	10	□	MNS0910X10DB	92.7	125.7	128.7	183.7	182	1.7	10	3
	20	□	MNS0910X20DB	183.7	220.7	223.7	278.7	277	1.7	10	3
	30	□	MNS0910X30DB	274.7	315.7	318.7	373.7	372	1.7	10	3
	3	□	MNS0920S-DIN	32.9	46.7	47.7	88.7	87	1.7	10	4
	3	□	MNS0920S-DIN-C	32.9	46.7	47.7	88.7	87	1.7	10	3
	5	□	MNS0920L-DIN	46.9	60.7	61.7	102.7	101	1.7	10	4
	5	□	MNS0920L-DIN-C	46.9	60.7	61.7	102.7	101	1.7	10	3
	8	□	MNS0920-L8C	75.3	106.7	109.7	150.7	149	1.7	10	3
	10	□	MNS0920-L10C	93.7	125.7	128.7	169.7	168	1.7	10	3
	12	□	MNS0920-L12C	112.1	144.7	147.7	188.7	187	1.7	10	3
9.2	15	□	MNS0920-L15C	139.7	172.7	175.7	216.7	215	1.7	10	3
	20	□	MNS0920-L20C	185.7	220.7	223.7	264.7	263	1.7	10	3
	25	□	MNS0920-L25C	231.7	267.7	270.7	311.7	310	1.7	10	3
	30	□	MNS0920-L30C	277.7	315.7	318.7	359.7	358	1.7	10	3
	5	★	MNS0920LB	47.7	77.7	81.7	137.7	136	1.7	10	3
	10	□	MNS0920X10DB	93.7	125.7	128.7	183.7	182	1.7	10	3
	20	□	MNS0920X20DB	185.7	220.7	223.7	278.7	277	1.7	10	3
	30	□	MNS0920X30DB	277.7	315.7	318.7	373.7	372	1.7	10	3
	3	□	MNS0930S-DIN	32.7	46.7	47.7	88.7	87	1.7	10	4
	3	□	MNS0930S-DIN-C	32.7	46.7	47.7	88.7	87	1.7	10	3
	5	□	MNS0930L-DIN	46.7	60.7	61.7	102.7	101	1.7	10	4
	5	□	MNS0930L-DIN-C	46.7	60.7	61.7	102.7	101	1.7	10	3
	8	□	MNS0930-L8C	76.1	106.7	109.7	150.7	149	1.7	10	3
	10	□	MNS0930-L10C	94.7	125.7	128.7	169.7	168	1.7	10	3
	12	□	MNS0930-L12C	113.3	144.7	147.7	188.7	187	1.7	10	3
9.3	15	□	MNS0930-L15C	141.2	172.7	175.7	216.7	215	1.7	10	3
	20	□	MNS0930-L20C	187.7	220.7	223.7	264.7	263	1.7	10	3
	25	□	MNS0930-L25C	234.2	267.7	270.7	311.7	310	1.7	10	3
	30	□	MNS0930-L30C	280.7	315.7	318.7	359.7	358	1.7	10	3
	5	★	MNS0930LB	48.2	77.7	81.7	137.7	136	1.7	10	3
	10	□	MNS0930X10DB	94.7	125.7	128.7	183.7	182	1.7	10	3
	20	□	MNS0930X20DB	187.7	220.7	223.7	278.7	277	1.7	10	3
	30	□	MNS0930X30DB	280.7	315.7	318.7	373.7	372	1.7	10	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	**MNS0940S-DIN**	32.6	46.7	47.7	88.7	87	1.7	10	4
	3	□	**MNS0940S-DIN-C**	32.6	46.7	47.7	88.7	87	1.7	10	3
	5	□	**MNS0940L-DIN**	46.6	60.7	61.7	102.7	101	1.7	10	4
	5	□	**MNS0940L-DIN-C**	46.6	60.7	61.7	102.7	101	1.7	10	3
	8	□	**MNS0940-L8C**	76.9	106.7	109.7	150.7	149	1.7	10	3
	10	□	**MNS0940-L10C**	95.7	125.7	128.7	169.7	168	1.7	10	3
	12	□	**MNS0940-L12C**	114.5	144.7	147.7	188.7	187	1.7	10	3
9.4	15	□	**MNS0940-L15C**	142.7	172.7	175.7	216.7	215	1.7	10	3
	20	□	**MNS0940-L20C**	189.7	220.7	223.7	264.7	263	1.7	10	3
	25	□	**MNS0940-L25C**	236.7	267.7	270.7	311.7	310	1.7	10	3
	30	□	**MNS0940-L30C**	283.7	315.7	318.7	359.7	358	1.7	10	3
	5	★	**MNS0940LB**	48.7	77.7	81.7	137.7	136	1.7	10	3
	10	□	**MNS0940X10DB**	95.7	125.7	128.7	183.7	182	1.7	10	3
	20	□	**MNS0940X20DB**	189.7	220.7	223.7	278.7	277	1.7	10	3
	30	□	**MNS0940X30DB**	283.7	315.7	318.7	373.7	372	1.7	10	3
	3	□	**MNS0950S-DIN**	32.5	46.7	47.7	88.7	87	1.7	10	4
	3	□	**MNS0950S-DIN-C**	32.5	46.7	47.7	88.7	87	1.7	10	3
	5	□	**MNS0950L-DIN**	46.5	60.7	61.7	102.7	101	1.7	10	4
	5	●	**MNS0950L-DIN-C**	46.5	60.7	61.7	102.7	101	1.7	10	3
	8	□	**MNS0950-L8C**	77.7	106.7	109.7	150.7	149	1.7	10	3
	10	□	**MNS0950-L10C**	96.7	125.7	128.7	169.7	168	1.7	10	3
	12	●	**MNS0950-L12C**	115.7	144.7	147.7	188.7	187	1.7	10	3
9.5	15	□	**MNS0950-L15C**	144.2	172.7	175.7	216.7	215	1.7	10	3
	20	●	**MNS0950-L20C**	191.7	220.7	223.7	264.7	263	1.7	10	3
	25	□	**MNS0950-L25C**	239.2	267.7	270.7	311.7	310	1.7	10	3
	30	●	**MNS0950-L30C**	286.7	315.7	318.7	359.7	358	1.7	10	3
	5	★	**MNS0950LB**	49.2	77.7	81.7	137.7	136	1.7	10	3
	10	□	**MNS0950X10DB**	96.7	125.7	128.7	183.7	182	1.7	10	3
	20	□	**MNS0950X20DB**	191.7	220.7	223.7	278.7	277	1.7	10	3
	30	□	**MNS0950X30DB**	286.7	315.7	318.7	373.7	372	1.7	10	3
	3	□	**MNS0960S-DIN**	32.3	46.7	47.7	88.7	87	1.7	10	4
	3	□	**MNS0960S-DIN-C**	32.3	46.7	47.7	88.7	87	1.7	10	3
	5	□	**MNS0960L-DIN**	46.3	60.7	61.7	102.7	101	1.7	10	4
	5	□	**MNS0960L-DIN-C**	46.3	60.7	61.7	102.7	101	1.7	10	3
	8	□	**MNS0960-L8C**	78.5	111.7	114.7	155.7	154	1.7	10	3
	10	□	**MNS0960-L10C**	97.7	131.7	134.7	175.7	174	1.7	10	3
	12	□	**MNS0960-L12C**	116.9	151.7	154.7	195.7	194	1.7	10	3
9.6	15	□	**MNS0960-L15C**	145.7	181.7	184.7	225.7	224	1.7	10	3
	20	□	**MNS0960-L20C**	193.7	231.7	234.7	275.7	274	1.7	10	3
	25	□	**MNS0960-L25C**	241.7	281.7	284.7	325.7	324	1.7	10	3
	30	□	**MNS0960-L30C**	289.7	331.7	334.7	375.7	374	1.7	10	3
	5	★	**MNS0960LB**	49.7	81.7	81.7	137.7	136	1.7	10	3
	10	□	**MNS0960X10DB**	97.7	131.7	134.7	189.7	188	1.7	10	3
	20	□	**MNS0960X20DB**	193.7	231.7	234.7	289.7	288	1.7	10	3
	30	□	**MNS0960X30DB**	289.7	331.7	334.7	389.7	388	1.7	10	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	**MNS0970S-DIN**	32.2	46.8	47.8	88.8	87	1.8	10	4
	3	□	**MNS0970S-DIN-C**	32.2	46.8	47.8	88.8	87	1.8	10	3
	5	□	**MNS0970L-DIN**	46.2	60.8	61.8	102.8	101	1.8	10	4
	5	□	**MNS0970L-DIN-C**	46.2	60.8	61.8	102.8	101	1.8	10	3
	8	□	**MNS0970-L8C**	79.4	111.8	114.8	155.8	154	1.8	10	3
	10	□	**MNS0970-L10C**	98.8	131.8	134.8	175.8	174	1.8	10	3
	12	□	**MNS0970-L12C**	118.2	151.8	154.8	195.8	194	1.8	10	3
9.7	15	□	**MNS0970-L15C**	147.3	181.8	184.8	225.8	224	1.8	10	3
	20	□	**MNS0970-L20C**	195.8	231.8	234.8	275.8	274	1.8	10	3
	25	□	**MNS0970-L25C**	244.3	281.8	284.8	325.8	324	1.8	10	3
	30	□	**MNS0970-L30C**	292.8	331.8	334.8	375.8	374	1.8	10	3
	5	★	**MNS0970LB**	50.3	81.8	81.8	137.8	136	1.8	10	3
	10	□	**MNS0970X10DB**	98.8	131.8	134.8	189.8	188	1.8	10	3
	20	□	**MNS0970X20DB**	195.8	231.8	234.8	289.8	288	1.8	10	3
	30	□	**MNS0970X30DB**	292.8	331.8	334.8	389.8	388	1.8	10	3
	3	□	**MNS0980S-DIN**	32.1	46.8	47.8	88.8	87	1.8	10	4
	3	□	**MNS0980S-DIN-C**	32.1	46.8	47.8	88.8	87	1.8	10	3
	5	□	**MNS0980L-DIN**	46.1	60.8	61.8	102.8	101	1.8	10	4
	5	□	**MNS0980L-DIN-C**	46.1	60.8	61.8	102.8	101	1.8	10	3
	8	□	**MNS0980-L8C**	80.2	111.8	114.8	155.8	154	1.8	10	3
	10	□	**MNS0980-L10C**	99.8	131.8	134.8	175.8	174	1.8	10	3
	12	□	**MNS0980-L12C**	119.4	151.8	154.8	195.8	194	1.8	10	3
9.8	15	□	**MNS0980-L15C**	148.8	181.8	184.8	225.8	224	1.8	10	3
	20	□	**MNS0980-L20C**	197.8	231.8	234.8	275.8	274	1.8	10	3
	25	□	**MNS0980-L25C**	246.8	281.8	284.8	325.8	324	1.8	10	3
	30	□	**MNS0980-L30C**	295.8	331.8	334.8	375.8	374	1.8	10	3
	5	★	**MNS0980LB**	50.8	81.8	81.8	137.8	136	1.8	10	3
	10	★	**MNS0980X10DB**	99.8	131.8	134.8	189.8	188	1.8	10	3
	20	★	**MNS0980X20DB**	197.8	231.8	234.8	289.8	288	1.8	10	3
	30	★	**MNS0980X30DB**	295.8	331.8	334.8	389.8	388	1.8	10	3
	3	□	**MNS0990S-DIN**	32.0	46.8	47.8	88.8	87	1.8	10	4
	3	□	**MNS0990S-DIN-C**	32.0	46.8	47.8	88.8	87	1.8	10	3
	5	□	**MNS0990L-DIN**	46.0	60.8	61.8	102.8	101	1.8	10	4
	5	□	**MNS0990L-DIN-C**	46.0	60.8	61.8	102.8	101	1.8	10	3
	8	□	**MNS0990-L8C**	81.0	111.8	114.8	155.8	154	1.8	10	3
	10	□	**MNS0990-L10C**	100.8	131.8	134.8	175.8	174	1.8	10	3
	12	□	**MNS0990-L12C**	120.6	151.8	154.8	195.8	194	1.8	10	3
9.9	15	□	**MNS0990-L15C**	150.3	181.8	184.8	225.8	224	1.8	10	3
	20	□	**MNS0990-L20C**	199.8	231.8	234.8	275.8	274	1.8	10	3
	25	□	**MNS0990-L25C**	249.3	281.8	284.8	325.8	324	1.8	10	3
	30	□	**MNS0990-L30C**	298.8	331.8	334.8	375.8	374	1.8	10	3
	5	★	**MNS0990LB**	51.3	81.8	81.8	137.8	136	1.8	10	3
	10	□	**MNS0990X10DB**	100.8	131.8	134.8	189.8	188	1.8	10	3
	20	□	**MNS0990X20DB**	199.8	231.8	234.8	289.8	288	1.8	10	3
	30	□	**MNS0990X30DB**	298.8	331.8	334.8	389.8	388	1.8	10	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS1000S-DIN	31.8	46.8	47.8	88.8	87	1.8	10	4
	3	□	MNS1000S-DIN-C	31.8	46.8	47.8	88.8	87	1.8	10	3
	5	□	MNS1000L-DIN	45.8	60.8	61.8	102.8	101	1.8	10	4
	5	●	MNS1000L-DIN-C	45.8	60.8	61.8	102.8	101	1.8	10	3
	8	□	MNS1000-L8C	81.8	111.8	114.8	155.8	154	1.8	10	3
	10	□	MNS1000-L10C	101.8	131.8	134.8	175.8	174	1.8	10	3
	12	●	MNS1000-L12C	121.8	151.8	154.8	195.8	194	1.8	10	3
10.0	15	□	MNS1000-L15C	151.8	181.8	184.8	225.8	224	1.8	10	3
	20	●	MNS1000-L20C	201.8	231.8	234.8	275.8	274	1.8	10	3
	25	□	MNS1000-L25C	251.8	281.8	284.8	325.8	324	1.8	10	3
	30	●	MNS1000-L30C	301.8	331.8	334.8	375.8	374	1.8	10	3
	5	★	MNS1000LB	51.8	81.8	81.8	137.8	136	1.8	10	3
	10	★	MNS1000X10DB	101.8	131.8	134.8	189.8	188	1.8	10	3
	20	★	MNS1000X20DB	201.8	231.8	234.8	289.8	288	1.8	10	3
	30	★	MNS1000X30DB	301.8	331.8	334.8	389.8	388	1.8	10	3
	3	□	MNS1010S-DIN	39.7	54.8	55.8	101.8	100	1.8	12	4
	3	□	MNS1010S-DIN-C	39.7	54.8	55.8	101.8	100	1.8	12	3
	5	□	MNS1010L-DIN	55.7	70.8	71.8	117.8	116	1.8	12	4
	5	□	MNS1010L-DIN-C	55.7	70.8	71.8	117.8	116	1.8	12	3
	8	□	MNS1010-L8C	82.6	117.8	120.8	166.8	165	1.8	12	3
	10	□	MNS1010-L10C	102.8	138.8	141.8	187.8	186	1.8	12	3
10.1	12	□	MNS1010-L12C	123.0	159.8	162.8	208.8	207	1.8	12	3
	15	□	MNS1010-L15C	153.3	190.8	193.8	239.8	238	1.8	12	3
	20	□	MNS1010-L20C	203.8	243.8	246.8	292.8	291	1.8	12	3
	25	□	MNS1010-L25C	254.3	295.8	298.8	344.8	343	1.8	12	3
	5	★	MNS1010LB	52.3	85.8	89.8	150.8	149	1.8	11	3
	10	□	MNS1010X10DB	102.8	138.8	141.8	202.8	201	1.8	11	3
	20	□	MNS1010X20DB	203.8	243.8	246.8	307.8	306	1.8	11	3
	3	□	MNS1020S-DIN	39.6	54.9	55.9	101.9	100	1.9	12	4
	3	□	MNS1020S-DIN-C	39.6	54.9	55.9	101.9	100	1.9	12	3
	5	□	MNS1020L-DIN	55.6	70.9	71.9	117.9	116	1.9	12	4
	5	□	MNS1020L-DIN-C	55.6	70.9	71.9	117.9	116	1.9	12	3
	8	□	MNS1020-L8C	83.5	117.9	120.9	166.9	165	1.9	12	3
	10	□	MNS1020-L10C	103.9	138.9	141.9	187.9	186	1.9	12	3
10.2	12	□	MNS1020-L12C	124.3	159.9	162.9	208.9	207	1.9	12	3
	15	□	MNS1020-L15C	154.9	190.9	193.9	239.9	238	1.9	12	3
	20	□	MNS1020-L20C	205.9	243.9	246.9	292.9	291	1.9	12	3
	25	□	MNS1020-L25C	256.9	295.9	298.9	344.9	343	1.9	12	3
	5	★	MNS1020LB	52.9	85.9	89.9	150.9	149	1.9	11	3
	10	□	MNS1020X10DB	103.9	138.9	141.9	202.9	201	1.9	11	3
	20	□	MNS1020X20DB	205.9	243.9	246.9	307.9	306	1.9	11	3
	3	□	MNS1030S-DIN	39.4	54.9	55.9	101.9	100	1.9	12	4
	3	□	MNS1030S-DIN-C	39.4	54.9	55.9	101.9	100	1.9	12	3
	5	□	MNS1030L-DIN	55.4	70.9	71.9	117.9	116	1.9	12	4
10.3	5	□	MNS1030L-DIN-C	55.4	70.9	71.9	117.9	116	1.9	12	3
	8	□	MNS1030-L8C	84.3	117.9	120.9	166.9	165	1.9	12	3
	10	□	MNS1030-L10C	104.9	138.9	141.9	187.9	186	1.9	12	3
	12	□	MNS1030-L12C	125.5	159.9	162.9	208.9	207	1.9	12	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	15	□	MNS1030-L15C	156.4	190.9	193.9	239.9	238	1.9	12	3
	20	□	MNS1030-L20C	207.9	243.9	246.9	292.9	291	1.9	12	3
	25	□	MNS1030-L25C	259.4	295.9	298.9	344.9	343	1.9	12	3
10.3	5	★	MNS1030LB	53.4	85.9	89.9	150.9	149	1.9	11	3
	10	□	MNS1030X10DB	104.9	138.9	141.9	202.9	201	1.9	11	3
	20	□	MNS1030X20DB	207.9	243.9	246.9	307.9	306	1.9	11	3
	3	□	MNS1040S-DIN	39.3	54.9	55.9	101.9	100	1.9	12	4
	3	□	MNS1040S-DIN-C	39.3	54.9	55.9	101.9	100	1.9	12	3
	5	□	MNS1040L-DIN	55.3	70.9	71.9	117.9	116	1.9	12	4
	5	□	MNS1040L-DIN-C	55.3	70.9	71.9	117.9	116	1.9	12	3
	8	□	MNS1040-L8C	85.1	117.9	120.9	166.9	165	1.9	12	3
	10	□	MNS1040-L10C	105.9	138.9	141.9	187.9	186	1.9	12	3
10.4	12	□	MNS1040-L12C	126.7	159.9	162.9	208.9	207	1.9	12	3
	15	□	MNS1040-L15C	157.9	190.9	193.9	239.9	238	1.9	12	3
	20	□	MNS1040-L20C	209.9	243.9	246.9	292.9	291	1.9	12	3
	25	□	MNS1040-L25C	261.9	295.9	298.9	344.9	343	1.9	12	3
	5	★	MNS1040LB	53.9	85.9	89.9	150.9	149	1.9	11	3
	10	□	MNS1040X10DB	105.9	138.9	141.9	202.9	201	1.9	11	3
	20	□	MNS1040X20DB	209.9	243.9	246.9	307.9	306	1.9	11	3
	3	□	MNS1050S-DIN	39.2	54.9	55.9	101.9	100	1.9	12	4
	3	□	MNS1050S-DIN-C	39.2	54.9	55.9	101.9	100	1.9	12	3
	5	□	MNS1050L-DIN	55.2	70.9	71.9	117.9	116	1.9	12	4
	5	●	MNS1050L-DIN-C	55.2	70.9	71.9	117.9	116	1.9	12	3
	8	□	MNS1050-L8C	85.9	117.9	120.9	166.9	165	1.9	12	3
	10	□	MNS1050-L10C	106.9	138.9	141.9	187.9	186	1.9	12	3
10.5	12	●	MNS1050-L12C	127.9	159.9	162.9	208.9	207	1.9	12	3
	15	□	MNS1050-L15C	159.4	190.9	193.9	239.9	238	1.9	12	3
	20	●	MNS1050-L20C	211.9	243.9	246.9	292.9	291	1.9	12	3
	25	□	MNS1050-L25C	264.4	295.9	298.9	344.9	343	1.9	12	3
	5	★	MNS1050LB	54.4	85.9	89.9	150.9	149	1.9	11	3
	10	★	MNS1050X10DB	106.9	138.9	141.9	202.9	201	1.9	11	3
	20	★	MNS1050X20DB	211.9	243.9	246.9	307.9	306	1.9	11	3
	3	□	MNS1060S-DIN	39.0	54.9	55.9	101.9	100	1.9	12	4
	3	□	MNS1060S-DIN-C	39.0	54.9	55.9	101.9	100	1.9	12	3
	5	□	MNS1060L-DIN	55.0	70.9	71.9	117.9	116	1.9	12	4
	5	□	MNS1060L-DIN-C	55.0	70.9	71.9	117.9	116	1.9	12	3
	8	□	MNS1060-L8C	86.7	122.9	125.9	171.9	170	1.9	12	3
	10	□	MNS1060-L10C	107.9	144.9	147.9	193.9	192	1.9	12	3
10.6	12	□	MNS1060-L12C	129.1	166.9	169.9	215.9	214	1.9	12	3
	15	□	MNS1060-L15C	160.9	199.9	202.9	248.9	247	1.9	12	3
	20	□	MNS1060-L20C	213.9	254.9	257.9	303.9	302	1.9	12	3
	25	□	MNS1060-L25C	266.9	309.9	312.9	358.9	357	1.9	12	3
	5	★	MNS1060LB	54.9	89.9	89.9	150.9	149	1.9	11	3
	10	□	MNS1060X10DB	107.9	144.9	147.9	208.9	207	1.9	11	3
	20	□	MNS1060X20DB	213.9	254.9	257.9	318.9	317	1.9	11	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS1070S-DIN	38.9	54.9	55.9	101.9	100	1.9	12	4
	3	□	MNS1070S-DIN-C	38.9	54.9	55.9	101.9	100	1.9	12	3
	5	□	MNS1070L-DIN	54.9	70.9	71.9	117.9	116	1.9	12	4
	5	□	MNS1070L-DIN-C	54.9	70.9	71.9	117.9	116	1.9	12	3
	8	□	MNS1070-L8C	87.5	122.9	125.9	171.9	170	1.9	12	3
	10	□	MNS1070-L10C	108.9	144.9	147.9	193.9	192	1.9	12	3
10.7	12	□	MNS1070-L12C	130.3	166.9	169.9	215.9	214	1.9	12	3
	15	□	MNS1070-L15C	162.4	199.9	202.9	248.9	247	1.9	12	3
	20	□	MNS1070-L20C	215.9	254.9	257.9	303.9	302	1.9	12	3
	25	□	MNS1070-L25C	269.4	309.9	312.9	358.9	357	1.9	12	3
	5	★	MNS1070LB	55.4	89.9	89.9	150.9	149	1.9	11	3
	10	□	MNS1070X10DB	108.9	144.9	147.9	208.9	207	1.9	11	3
	20	□	MNS1070X20DB	215.9	254.9	257.9	318.9	317	1.9	11	3
	3	□	MNS1080S-DIN	38.8	55.0	56.0	102.0	100	2.0	12	4
	3	□	MNS1080S-DIN-C	38.8	55.0	56.0	102.0	100	2.0	12	3
	5	□	MNS1080L-DIN	54.8	71.0	72.0	118.0	116	2.0	12	4
	5	□	MNS1080L-DIN-C	54.8	71.0	72.0	118.0	116	2.0	12	3
	8	□	MNS1080-L8C	88.4	123.0	126.0	172.0	170	2.0	12	3
	10	□	MNS1080-L10C	110.0	145.0	148.0	194.0	192	2.0	12	3
10.8	12	□	MNS1080-L12C	131.6	167.0	170.0	216.0	214	2.0	12	3
	15	□	MNS1080-L15C	164.0	200.0	203.0	249.0	247	2.0	12	3
	20	□	MNS1080-L20C	218.0	255.0	258.0	304.0	302	2.0	12	3
	25	□	MNS1080-L25C	272.0	310.0	313.0	359.0	357	2.0	12	3
	5	★	MNS1080LB	56.0	90.0	90.0	151.0	149	2.0	11	3
	10	□	MNS1080X10DB	110.0	145.0	148.0	209.0	207	2.0	11	3
	20	□	MNS1080X20DB	218.0	255.0	258.0	319.0	317	2.0	11	3
	3	□	MNS1090S-DIN	38.6	55.0	56.0	102.0	100	2.0	12	4
	3	□	MNS1090S-DIN-C	38.6	55.0	56.0	102.0	100	2.0	12	3
	5	□	MNS1090L-DIN	54.6	71.0	72.0	118.0	116	2.0	12	4
	5	□	MNS1090L-DIN-C	54.6	71.0	72.0	118.0	116	2.0	12	3
	8	□	MNS1090-L8C	89.2	123.0	126.0	172.0	170	2.0	12	3
	10	□	MNS1090-L10C	111.0	145.0	148.0	194.0	192	2.0	12	3
10.9	12	□	MNS1090-L12C	132.8	167.0	170.0	216.0	214	2.0	12	3
	15	□	MNS1090-L15C	165.5	200.0	203.0	249.0	247	2.0	12	3
	20	□	MNS1090-L20C	220.0	255.0	258.0	304.0	302	2.0	12	3
	25	□	MNS1090-L25C	274.5	310.0	313.0	359.0	357	2.0	12	3
	5	★	MNS1090LB	56.5	90.0	90.0	151.0	149	2.0	11	3
	10	□	MNS1090X10DB	111.0	145.0	148.0	209.0	207	2.0	11	3
	20	□	MNS1090X20DB	220.0	255.0	258.0	319.0	317	2.0	11	3
	3	□	MNS1100S-DIN	38.5	55.0	56.0	102.0	100	2.0	12	4
	3	□	MNS1100S-DIN-C	38.5	55.0	56.0	102.0	100	2.0	12	3
	5	□	MNS1100L-DIN	54.5	71.0	72.0	118.0	116	2.0	12	4
11.0	5	●	MNS1100L-DIN-C	54.5	71.0	72.0	118.0	116	2.0	12	3
	8	□	MNS1100-L8C	90.0	123.0	126.0	172.0	170	2.0	12	3
	10	□	MNS1100-L10C	112.0	145.0	148.0	194.0	192	2.0	12	3
	12	●	MNS1100-L12C	134.0	167.0	170.0	216.0	214	2.0	12	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	15	□	MNS1100-L15C	167.0	200.0	203.0	249.0	247	2.0	12	3
	20	●	MNS1100-L20C	222.0	255.0	258.0	304.0	302	2.0	12	3
	25	□	MNS1100-L25C	277.0	310.0	313.0	359.0	357	2.0	12	3
11.0	5	★	MNS1100LB	57.0	90.0	90.0	151.0	149	2.0	11	3
	10	★	MNS1100X10DB	112.0	145.0	148.0	209.0	207	2.0	11	3
	20	★	MNS1100X20DB	222.0	255.0	258.0	319.0	317	2.0	11	3
	3	□	MNS1110S-DIN	38.4	55.0	56.0	102.0	100	2.0	12	4
	3	□	MNS1110S-DIN-C	38.4	55.0	56.0	102.0	100	2.0	12	3
	5	□	MNS1110L-DIN	54.4	71.0	72.0	118.0	116	2.0	12	4
	5	□	MNS1110L-DIN-C	54.4	71.0	72.0	118.0	116	2.0	12	3
	8	□	MNS1110-L8C	90.8	129.0	132.0	178.0	176	2.0	12	3
	10	□	MNS1110-L10C	113.0	152.0	155.0	201.0	199	2.0	12	3
11.1	12	□	MNS1110-L12C	135.2	175.0	178.0	224.0	222	2.0	12	3
	15	□	MNS1110-L15C	168.5	209.0	212.0	258.0	256	2.0	12	3
	20	□	MNS1110-L20C	224.0	267.0	270.0	316.0	314	2.0	12	3
	25	□	MNS1110-L25C	279.5	324.0	327.0	373.0	371	2.0	12	3
	5	★	MNS1110LB	57.5	94.0	98.0	160.0	158	2.0	12	3
	10	□	MNS1110X10DB	113.0	152.0	155.0	217.0	215	2.0	12	3
	20	□	MNS1110X20DB	224.0	267.0	270.0	332.0	330	2.0	12	3
	3	□	MNS1120S-DIN	38.2	55.0	56.0	102.0	100	2.0	12	4
	3	□	MNS1120S-DIN-C	38.2	55.0	56.0	102.0	100	2.0	12	3
	5	□	MNS1120L-DIN	54.2	71.0	72.0	118.0	116	2.0	12	4
	5	□	MNS1120L-DIN-C	54.2	71.0	72.0	118.0	116	2.0	12	3
	8	□	MNS1120-L8C	91.6	129.0	132.0	178.0	176	2.0	12	3
	10	□	MNS1120-L10C	114.0	152.0	155.0	201.0	199	2.0	12	3
11.2	12	□	MNS1120-L12C	136.4	175.0	178.0	224.0	222	2.0	12	3
	15	□	MNS1120-L15C	170.0	209.0	212.0	258.0	256	2.0	12	3
	20	□	MNS1120-L20C	226.0	267.0	270.0	316.0	314	2.0	12	3
	25	□	MNS1120-L25C	282.0	324.0	327.0	373.0	371	2.0	12	3
	5	★	MNS1120LB	58.0	94.0	98.0	160.0	158	2.0	12	3
	10	□	MNS1120X10DB	114.0	152.0	155.0	217.0	215	2.0	12	3
	20	□	MNS1120X20DB	226.0	267.0	270.0	332.0	330	2.0	12	3
	3	□	MNS1130S-DIN	38.1	55.1	56.1	102.1	100	2.1	12	4
	3	□	MNS1130S-DIN-C	38.1	55.1	56.1	102.1	100	2.1	12	3
	5	□	MNS1130L-DIN	54.1	71.1	72.1	118.1	116	2.1	12	4
	5	□	MNS1130L-DIN-C	54.1	71.1	72.1	118.1	116	2.1	12	3
	8	□	MNS1130-L8C	92.5	129.1	132.1	178.1	176	2.1	12	3
	10	□	MNS1130-L10C	115.1	152.1	155.1	201.1	199	2.1	12	3
11.3	12	□	MNS1130-L12C	137.7	175.1	178.1	224.1	222	2.1	12	3
	15	□	MNS1130-L15C	171.6	209.1	212.1	258.1	256	2.1	12	3
	20	□	MNS1130-L20C	228.1	267.1	270.1	316.1	314	2.1	12	3
	25	□	MNS1130-L25C	284.6	324.1	327.1	373.1	371	2.1	12	3
	5	★	MNS1130LB	58.6	94.1	98.1	160.1	158	2.1	12	3
	10	□	MNS1130X10DB	115.1	152.1	155.1	217.1	215	2.1	12	3
	20	□	MNS1130X20DB	228.1	267.1	270.1	332.1	330	2.1	12	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	□	MNS1140S-DIN	38.0	55.1	56.1	102.1	100	2.1	12	4
	3	□	MNS1140S-DIN-C	38.0	55.1	56.1	102.1	100	2.1	12	3
	5	□	MNS1140L-DIN	54.0	71.1	72.1	118.1	116	2.1	12	4
	5	□	MNS1140L-DIN-C	54.0	71.1	72.1	118.1	116	2.1	12	3
	8	□	MNS1140-L8C	93.3	129.1	132.1	178.1	176	2.1	12	3
	10	□	MNS1140-L10C	116.1	152.1	155.1	201.1	199	2.1	12	3
11.4	12	□	MNS1140-L12C	138.9	175.1	178.1	224.1	222	2.1	12	3
	15	□	MNS1140-L15C	173.1	209.1	212.1	258.1	256	2.1	12	3
	20	□	MNS1140-L20C	230.1	267.1	270.1	316.1	314	2.1	12	3
	25	□	MNS1140-L25C	287.1	324.1	327.1	373.1	371	2.1	12	3
	5	★	MNS1140LB	59.1	94.1	98.1	160.1	158	2.1	12	3
	10	□	MNS1140X10DB	116.1	152.1	155.1	217.1	215	2.1	12	3
	20	□	MNS1140X20DB	230.1	267.1	270.1	332.1	330	2.1	12	3
	3	□	MNS1150S-DIN	37.8	55.1	56.1	102.1	100	2.1	12	4
	3	□	MNS1150S-DIN-C	37.8	55.1	56.1	102.1	100	2.1	12	3
	5	□	MNS1150L-DIN	53.8	71.1	72.1	118.1	116	2.1	12	4
	5	●	MNS1150L-DIN-C	53.8	71.1	72.1	118.1	116	2.1	12	3
	8	□	MNS1150-L8C	94.1	129.1	132.1	178.1	176	2.1	12	3
	10	□	MNS1150-L10C	117.1	152.1	155.1	201.1	199	2.1	12	3
11.5	12	●	MNS1150-L12C	140.1	175.1	178.1	224.1	222	2.1	12	3
	15	□	MNS1150-L15C	174.6	209.1	212.1	258.1	256	2.1	12	3
	20	●	MNS1150-L20C	232.1	267.1	270.1	316.1	314	2.1	12	3
	25	□	MNS1150-L25C	289.6	324.1	327.1	373.1	371	2.1	12	3
	5	★	MNS1150LB	59.6	94.1	98.1	160.1	158	2.1	12	3
	10	□	MNS1150X10DB	117.1	152.1	155.1	217.1	215	2.1	12	3
	20	□	MNS1150X20DB	232.1	267.1	270.1	332.1	330	2.1	12	3
	3	□	MNS1160S-DIN	37.7	55.1	56.1	102.1	100	2.1	12	4
	3	□	MNS1160S-DIN-C	37.7	55.1	56.1	102.1	100	2.1	12	3
	5	□	MNS1160L-DIN	53.7	71.1	72.1	118.1	116	2.1	12	4
	5	□	MNS1160L-DIN-C	53.7	71.1	72.1	118.1	116	2.1	12	3
	8	□	MNS1160-L8C	94.9	134.1	137.1	183.1	181	2.1	12	3
	10	□	MNS1160-L10C	118.1	158.1	161.1	207.1	205	2.1	12	3
11.6	12	□	MNS1160-L12C	141.3	182.1	185.1	231.1	229	2.1	12	3
	15	□	MNS1160-L15C	176.1	218.1	221.1	267.1	265	2.1	12	3
	20	□	MNS1160-L20C	234.1	278.1	281.1	327.1	325	2.1	12	3
	25	□	MNS1160-L25C	292.1	338.1	341.1	387.1	385	2.1	12	3
	5	★	MNS1160LB	60.1	98.1	98.1	160.1	158	2.1	12	3
	10	□	MNS1160X10DB	118.1	158.1	161.1	223.1	221	2.1	12	3
	20	□	MNS1160X20DB	234.1	278.1	281.1	343.1	341	2.1	12	3
	3	□	MNS1170S-DIN	37.6	55.1	56.1	102.1	100	2.1	12	4
	3	□	MNS1170S-DIN-C	37.6	55.1	56.1	102.1	100	2.1	12	3
	5	□	MNS1170L-DIN	53.6	71.1	72.1	118.1	116	2.1	12	4
11.7	5	□	MNS1170L-DIN-C	53.6	71.1	72.1	118.1	116	2.1	12	3
	8	□	MNS1170-L8C	95.7	134.1	137.1	183.1	181	2.1	12	3
	10	□	MNS1170-L10C	119.1	158.1	161.1	207.1	205	2.1	12	3
	12	□	MNS1170-L12C	142.5	182.1	185.1	231.1	229	2.1	12	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	15	□	MNS1170-L15C	177.6	218.1	221.1	267.1	265	2.1	12	3
	20	□	MNS1170-L20C	236.1	278.1	281.1	327.1	325	2.1	12	3
	25	□	MNS1170-L25C	294.6	338.1	341.1	387.1	385	2.1	12	3
11.7	5	★	MNS1170LB	60.6	98.1	98.1	160.1	158	2.1	12	3
	10	□	MNS1170X10DB	119.1	158.1	161.1	223.1	221	2.1	12	3
	20	□	MNS1170X20DB	236.1	278.1	281.1	343.1	341	2.1	12	3
	3	□	MNS1180S-DIN	37.4	55.1	56.1	102.1	100	2.1	12	4
	3	□	MNS1180S-DIN-C	37.4	55.1	56.1	102.1	100	2.1	12	3
	5	□	MNS1180L-DIN	53.4	71.1	72.1	118.1	116	2.1	12	4
	5	□	MNS1180L-DIN-C	53.4	71.1	72.1	118.1	116	2.1	12	3
	8	□	MNS1180-L8C	96.5	134.1	137.1	183.1	181	2.1	12	3
	10	□	MNS1180-L10C	120.1	158.1	161.1	207.1	205	2.1	12	3
11.8	12	□	MNS1180-L12C	143.7	182.1	185.1	231.1	229	2.1	12	3
	15	□	MNS1180-L15C	179.1	218.1	221.1	267.1	265	2.1	12	3
	20	□	MNS1180-L20C	238.1	278.1	281.1	327.1	325	2.1	12	3
	25	□	MNS1180-L25C	297.1	338.1	341.1	387.1	385	2.1	12	3
	5	★	MNS1180LB	61.1	98.1	98.1	160.1	158	2.1	12	3
	10	□	MNS1180X10DB	120.1	158.1	161.1	223.1	221	2.1	12	3
	20	□	MNS1180X20DB	238.1	278.1	281.1	343.1	341	2.1	12	3
	3	□	MNS1190S-DIN	37.3	55.2	56.2	102.2	100	2.2	12	4
	3	□	MNS1190S-DIN-C	37.3	55.2	56.2	102.2	100	2.2	12	3
	5	□	MNS1190L-DIN	53.3	71.2	72.2	118.2	116	2.2	12	4
	5	□	MNS1190L-DIN-C	53.3	71.2	72.2	118.2	116	2.2	12	3
	8	□	MNS1190-L8C	97.4	134.2	137.2	183.2	181	2.2	12	3
	10	□	MNS1190-L10C	121.2	158.2	161.2	207.2	205	2.2	12	3
11.9	12	□	MNS1190-L12C	145.0	182.2	185.2	231.2	229	2.2	12	3
	15	□	MNS1190-L15C	180.7	218.2	221.2	267.2	265	2.2	12	3
	20	□	MNS1190-L20C	240.2	278.2	281.2	327.2	325	2.2	12	3
	25	□	MNS1190-L25C	299.7	338.2	341.2	387.2	385	2.2	12	3
	5	★	MNS1190LB	61.7	98.2	98.2	160.2	158	2.2	12	3
	10	□	MNS1190X10DB	121.2	158.2	161.2	223.2	221	2.2	12	3
	20	□	MNS1190X20DB	240.2	278.2	281.2	343.2	341	2.2	12	3
	3	□	MNS1200S-DIN	37.2	55.2	56.2	102.2	100	2.2	12	4
	3	□	MNS1200S-DIN-C	37.2	55.2	56.2	102.2	100	2.2	12	3
	5	□	MNS1200L-DIN	53.2	71.2	72.2	118.2	116	2.2	12	4
	5	●	MNS1200L-DIN-C	53.2	71.2	72.2	118.2	116	2.2	12	3
	8	□	MNS1200-L8C	98.2	134.2	137.2	183.2	181	2.2	12	3
	10	□	MNS1200-L10C	122.2	158.2	161.2	207.2	205	2.2	12	3
12.0	12	●	MNS1200-L12C	146.2	182.2	185.2	231.2	229	2.2	12	3
	15	□	MNS1200-L15C	182.2	218.2	221.2	267.2	265	2.2	12	3
	20	●	MNS1200-L20C	242.2	278.2	281.2	327.2	325	2.2	12	3
	25	□	MNS1200-L25C	302.2	338.2	341.2	387.2	385	2.2	12	3
	5	★	MNS1200LB	62.2	98.2	98.2	160.2	158	2.2	12	3
	10	★	MNS1200X10DB	122.2	158.2	161.2	223.2	221	2.2	12	3
	20	★	MNS1200X20DB	242.2	278.2	281.2	343.2	341	2.2	12	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
12.1	3	□	MNS1210S-DIN	42.1	60.2	61.2	107.2	105	2.2	14	4
	3	□	MNS1210S-DIN-C	42.1	60.2	61.2	107.2	105	2.2	14	3
	5	□	MNS1210L-DIN	59.1	77.2	78.2	124.2	122	2.2	14	4
	5	□	MNS1210L-DIN-C	59.1	77.2	78.2	124.2	122	2.2	14	3
	8	□	MNS1210-L8C	99.0	140.2	143.2	189.2	187	2.2	14	3
	10	□	MNS1210-L10C	123.2	165.2	168.2	214.2	212	2.2	14	3
	12	□	MNS1210-L12C	147.4	190.2	193.2	239.2	237	2.2	14	3
	15	□	MNS1210-L15C	183.7	227.2	230.2	276.2	274	2.2	14	3
	20	□	MNS1210-L20C	244.2	290.2	293.2	339.2	337	2.2	14	3
	5	★	MNS1210LB	62.7	102.2	106.2	169.2	167	2.2	13	3
	10	□	MNS1210X10DB	123.2	165.2	168.2	231.2	229	2.2	13	3
	20	□	MNS1210X20DB	244.2	290.2	293.2	356.2	354	2.2	13	3
12.2	3	□	MNS1220S-DIN	41.9	60.2	61.2	107.2	105	2.2	14	4
	3	□	MNS1220S-DIN-C	41.9	60.2	61.2	107.2	105	2.2	14	3
	5	□	MNS1220L-DIN	58.9	77.2	78.2	124.2	122	2.2	14	4
	5	□	MNS1220L-DIN-C	58.9	77.2	78.2	124.2	122	2.2	14	3
	8	□	MNS1220-L8C	99.8	140.2	143.2	189.2	187	2.2	14	3
	10	□	MNS1220-L10C	124.2	165.2	168.2	214.2	212	2.2	14	3
	12	□	MNS1220-L12C	148.6	190.2	193.2	239.2	237	2.2	14	3
	15	□	MNS1220-L15C	185.2	227.2	230.2	276.2	274	2.2	14	3
	20	□	MNS1220-L20C	246.2	290.2	293.2	339.2	337	2.2	14	3
	5	★	MNS1220LB	63.2	102.2	106.2	169.2	167	2.2	13	3
	10	□	MNS1220X10DB	124.2	165.2	168.2	231.2	229	2.2	13	3
	20	□	MNS1220X20DB	246.2	290.2	293.2	356.2	354	2.2	13	3
12.3	3	□	MNS1230S-DIN	41.8	60.2	61.2	107.2	105	2.2	14	4
	3	□	MNS1230S-DIN-C	41.8	60.2	61.2	107.2	105	2.2	14	3
	5	□	MNS1230L-DIN	58.8	77.2	78.2	124.2	122	2.2	14	4
	5	□	MNS1230L-DIN-C	58.8	77.2	78.2	124.2	122	2.2	14	3
	8	□	MNS1230-L8C	100.6	140.2	143.2	189.2	187	2.2	14	3
	10	□	MNS1230-L10C	125.2	165.2	168.2	214.2	212	2.2	14	3
	12	□	MNS1230-L12C	149.8	190.2	193.2	239.2	237	2.2	14	3
	15	□	MNS1230-L15C	186.7	227.2	230.2	276.2	274	2.2	14	3
	20	□	MNS1230-L20C	248.2	290.2	293.2	339.2	337	2.2	14	3
	5	★	MNS1230LB	63.7	102.2	106.2	169.2	167	2.2	13	3
	10	□	MNS1230X10DB	125.2	165.2	168.2	231.2	229	2.2	13	3
	20	□	MNS1230X20DB	248.2	290.2	293.2	356.2	354	2.2	13	3
12.4	3	□	MNS1240S-DIN	41.7	60.3	61.3	107.3	105	2.3	14	4
	3	□	MNS1240S-DIN-C	41.7	60.3	61.3	107.3	105	2.3	14	3
	5	□	MNS1240L-DIN	58.7	77.3	78.3	124.3	122	2.3	14	4
	5	□	MNS1240L-DIN-C	58.7	77.3	78.3	124.3	122	2.3	14	3
	8	□	MNS1240-L8C	101.5	140.3	143.3	189.3	187	2.3	14	3
	10	□	MNS1240-L10C	126.3	165.3	168.3	214.3	212	2.3	14	3
	12	□	MNS1240-L12C	151.1	190.3	193.3	239.3	237	2.3	14	3
	15	□	MNS1240-L15C	188.3	227.3	230.3	276.3	274	2.3	14	3
	20	□	MNS1240-L20C	250.3	290.3	293.3	339.3	337	2.3	14	3
	5	★	MNS1240LB	64.3	102.3	106.3	169.3	167	2.3	13	3
	10	□	MNS1240X10DB	126.3	165.3	168.3	231.3	229	2.3	13	3
	20	□	MNS1240X20DB	250.3	290.3	293.3	356.3	354	2.3	13	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
12.5	3	□	MNS1250S-DIN	41.5	60.3	61.3	107.3	105	2.3	14	4
	3	□	MNS1250S-DIN-C	41.5	60.3	61.3	107.3	105	2.3	14	3
	5	□	MNS1250L-DIN	58.5	77.3	78.3	124.3	122	2.3	14	4
	5	●	MNS1250L-DIN-C	58.5	77.3	78.3	124.3	122	2.3	14	3
	8	□	MNS1250-L8C	102.3	140.3	143.3	189.3	187	2.3	14	3
	10	□	MNS1250-L10C	127.3	165.3	168.3	214.3	212	2.3	14	3
	12	●	MNS1250-L12C	152.3	190.3	193.3	239.3	237	2.3	14	3
	15	□	MNS1250-L15C	189.8	227.3	230.3	276.3	274	2.3	14	3
	20	●	MNS1250-L20C	252.3	290.3	293.3	339.3	337	2.3	14	3
	5	★	MNS1250LB	64.8	102.3	106.3	169.3	167	2.3	13	3
	10	□	MNS1250X10DB	127.3	165.3	168.3	231.3	229	2.3	13	3
	20	□	MNS1250X20DB	252.3	290.3	293.3	356.3	354	2.3	13	3
12.6	3	□	MNS1260S-DIN	41.4	60.3	61.3	107.3	105	2.3	14	4
	3	□	MNS1260S-DIN-C	41.4	60.3	61.3	107.3	105	2.3	14	3
	5	□	MNS1260L-DIN	58.4	77.3	78.3	124.3	122	2.3	14	4
	5	□	MNS1260L-DIN-C	58.4	77.3	78.3	124.3	122	2.3	14	3
	8	□	MNS1260-L8C	103.1	145.3	148.3	194.3	192	2.3	14	3
	10	□	MNS1260-L10C	128.3	171.3	174.3	220.3	218	2.3	14	3
	12	□	MNS1260-L12C	153.5	197.3	200.3	246.3	244	2.3	14	3
	15	□	MNS1260-L15C	191.3	236.3	239.3	285.3	283	2.3	14	3
	20	□	MNS1260-L20C	254.3	301.3	304.3	350.3	348	2.3	14	3
	5	★	MNS1260LB	65.3	106.3	106.3	169.3	167	2.3	13	3
	10	□	MNS1260X10DB	128.3	171.3	174.3	237.3	235	2.3	13	3
	20	□	MNS1260X20DB	254.3	301.3	304.3	367.3	365	2.3	13	3
12.7	3	□	MNS1270S-DIN	41.3	60.3	61.3	107.3	105	2.3	14	4
	3	□	MNS1270S-DIN-C	41.3	60.3	61.3	107.3	105	2.3	14	3
	5	□	MNS1270L-DIN	58.3	77.3	78.3	124.3	122	2.3	14	4
	5	□	MNS1270L-DIN-C	58.3	77.3	78.3	124.3	122	2.3	14	3
	8	□	MNS1270-L8C	103.9	145.3	148.3	194.3	192	2.3	14	3
	10	□	MNS1270-L10C	129.3	171.3	174.3	220.3	218	2.3	14	3
	12	□	MNS1270-L12C	154.7	197.3	200.3	246.3	244	2.3	14	3
	15	□	MNS1270-L15C	192.8	236.3	239.3	285.3	283	2.3	14	3
	20	□	MNS1270-L20C	256.3	301.3	304.3	350.3	348	2.3	14	3
	5	★	MNS1270LB	65.8	106.3	106.3	169.3	167	2.3	13	3
	10	□	MNS1270X10DB	129.3	171.3	174.3	237.3	235	2.3	13	3
	20	□	MNS1270X20DB	256.3	301.3	304.3	367.3	365	2.3	13	3
12.8	3	□	MNS1280S-DIN	41.1	60.3	61.3	107.3	105	2.3	14	4
	3	□	MNS1280S-DIN-C	41.1	60.3	61.3	107.3	105	2.3	14	3
	5	□	MNS1280L-DIN	58.1	77.3	78.3	124.3	122	2.3	14	4
	5	□	MNS1280L-DIN-C	58.1	77.3	78.3	124.3	122	2.3	14	3
	8	□	MNS1280-L8C	104.7	145.3	148.3	194.3	192	2.3	14	3
	10	□	MNS1280-L10C	130.3	171.3	174.3	220.3	218	2.3	14	3
	12	□	MNS1280-L12C	155.9	197.3	200.3	246.3	244	2.3	14	3
	15	□	MNS1280-L15C	194.3	236.3	239.3	285.3	283	2.3	14	3
	20	□	MNS1280-L20C	258.3	301.3	304.3	350.3	348	2.3	14	3
	5	★	MNS1280LB	66.3	106.3	106.3	169.3	167	2.3	13	3
	10	□	MNS1280X10DB	130.3	171.3	174.3	237.3	235	2.3	13	3
	20	□	MNS1280X20DB	258.3	301.3	304.3	367.3	365	2.3	13	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
12.9	3	□	MNS1290S-DIN	41.0	60.3	61.3	107.3	105	2.3	14	4
	3	□	MNS1290S-DIN-C	41.0	60.3	61.3	107.3	105	2.3	14	3
	5	□	MNS1290L-DIN	58.0	77.3	78.3	124.3	122	2.3	14	4
	5	□	MNS1290L-DIN-C	58.0	77.3	78.3	124.3	122	2.3	14	3
	8	□	MNS1290-L8C	105.5	145.3	148.3	194.3	192	2.3	14	3
	10	□	MNS1290-L10C	131.3	171.3	174.3	220.3	218	2.3	14	3
	12	□	MNS1290-L12C	157.1	197.3	200.3	246.3	244	2.3	14	3
	15	□	MNS1290-L15C	195.8	236.3	239.3	285.3	283	2.3	14	3
	20	□	MNS1290-L20C	260.3	301.3	304.3	350.3	348	2.3	14	3
	5	★	MNS1290LB	66.8	106.3	106.3	169.3	167	2.3	13	3
	10	□	MNS1290X10DB	131.3	171.3	174.3	237.3	235	2.3	13	3
	20	□	MNS1290X20DB	260.3	301.3	304.3	367.3	365	2.3	13	3
13.0	3	□	MNS1300S-DIN	40.9	60.4	61.4	107.4	105	2.4	14	4
	3	□	MNS1300S-DIN-C	40.9	60.4	61.4	107.4	105	2.4	14	3
	5	□	MNS1300L-DIN	57.9	77.4	78.4	124.4	122	2.4	14	4
	5	●	MNS1300L-DIN-C	57.9	77.4	78.4	124.4	122	2.4	14	3
	8	□	MNS1300-L8C	106.4	145.4	148.4	194.4	192	2.4	14	3
	10	□	MNS1300-L10C	132.4	171.4	174.4	220.4	218	2.4	14	3
	12	●	MNS1300-L12C	158.4	197.4	200.4	246.4	244	2.4	14	3
	15	□	MNS1300-L15C	197.4	236.4	239.4	285.4	283	2.4	14	3
	20	●	MNS1300-L20C	262.4	301.4	304.4	350.4	348	2.4	14	3
	5	★	MNS1300LB	67.4	106.4	106.4	169.4	167	2.4	13	3
	10	★	MNS1300X10DB	132.4	171.4	174.4	237.4	235	2.4	13	3
	20	★	MNS1300X20DB	262.4	301.4	304.4	367.4	365	2.4	13	3
13.1	3	□	MNS1310S-DIN	40.7	60.4	61.4	107.4	105	2.4	14	4
	3	□	MNS1310S-DIN-C	40.7	60.4	61.4	107.4	105	2.4	14	3
	5	□	MNS1310L-DIN	57.7	77.4	78.4	124.4	122	2.4	14	4
	5	□	MNS1310L-DIN-C	57.7	77.4	78.4	124.4	122	2.4	14	3
	8	□	MNS1310-L8C	107.2	151.4	154.4	200.4	198	2.4	14	3
	10	□	MNS1310-L10C	133.4	178.4	181.4	227.4	225	2.4	14	3
	12	□	MNS1310-L12C	159.6	205.4	208.4	254.4	252	2.4	14	3
	15	□	MNS1310-L15C	198.9	245.4	248.4	294.4	292	2.4	14	3
	20	□	MNS1310-L20C	264.4	313.4	316.4	362.4	360	2.4	14	3
	5	★	MNS1310LB	67.9	110.4	114.4	178.4	176	2.4	14	3
	10	□	MNS1310X10DB	133.4	178.4	181.4	245.4	243	2.4	14	3
	20	□	MNS1310X20DB	264.4	313.4	316.4	380.4	378	2.4	14	3
13.2	3	□	MNS1320S-DIN	40.6	60.4	61.4	107.4	105	2.4	14	4
	3	□	MNS1320S-DIN-C	40.6	60.4	61.4	107.4	105	2.4	14	3
	5	□	MNS1320L-DIN	57.6	77.4	78.4	124.4	122	2.4	14	4
	5	□	MNS1320L-DIN-C	57.6	77.4	78.4	124.4	122	2.4	14	3
	8	□	MNS1320-L8C	108.0	151.4	154.4	200.4	198	2.4	14	3
	10	□	MNS1320-L10C	134.4	178.4	181.4	227.4	225	2.4	14	3
	12	□	MNS1320-L12C	160.8	205.4	208.4	254.4	252	2.4	14	3
	15	□	MNS1320-L15C	200.4	245.4	248.4	294.4	292	2.4	14	3
	20	□	MNS1320-L20C	266.4	313.4	316.4	362.4	360	2.4	14	3
	5	★	MNS1320LB	68.4	110.4	114.4	178.4	176	2.4	14	3
	10	□	MNS1320X10DB	134.4	178.4	181.4	245.4	243	2.4	14	3
	20	□	MNS1320X20DB	266.4	313.4	316.4	380.4	378	2.4	14	3
13.3	3	□	MNS1330S-DIN	40.5	60.4	61.4	107.4	105	2.4	14	4
	3	□	MNS1330S-DIN-C	40.5	60.4	61.4	107.4	105	2.4	14	3
	5	□	MNS1330L-DIN	57.5	77.4	78.4	124.4	122	2.4	14	4
	5	□	MNS1330L-DIN-C	57.5	77.4	78.4	124.4	122	2.4	14	3
	8	□	MNS1330-L8C	108.8	151.4	154.4	200.4	198	2.4	14	3
	10	□	MNS1330-L10C	135.4	178.4	181.4	227.4	225	2.4	14	3
	12	□	MNS1330-L12C	162.0	205.4	208.4	254.4	252	2.4	14	3
	15	□	MNS1330-L15C	201.9	245.4	248.4	294.4	292	2.4	14	3
	20	□	MNS1330-L20C	268.4	313.4	316.4	362.4	360	2.4	14	3
	5	★	MNS1330LB	68.9	110.4	114.4	178.4	176	2.4	14	3
	10	□	MNS1330X10DB	135.4	178.4	181.4	245.4	243	2.4	14	3
	20	□	MNS1330X20DB	268.4	313.4	316.4	380.4	378	2.4	14	3
13.4	3	□	MNS1340S-DIN	40.3	60.4	61.4	107.4	105	2.4	14	4
	3	□	MNS1340S-DIN-C	40.3	60.4	61.4	107.4	105	2.4	14	3
	5	□	MNS1340L-DIN	57.3	77.4	78.4	124.4	122	2.4	14	4
	5	□	MNS1340L-DIN-C	57.3	77.4	78.4	124.4	122	2.4	14	3
	8	□	MNS1340-L8C	109.6	151.4	154.4	200.4	198	2.4	14	3
	10	□	MNS1340-L10C	136.4	178.4	181.4	227.4	225	2.4	14	3
	12	□	MNS1340-L12C	163.2	205.4	208.4	254.4	252	2.4	14	3
	15	□	MNS1340-L15C	203.4	245.4	248.4	294.4	292	2.4	14	3
	20	□	MNS1340-L20C	270.4	313.4	316.4	362.4	360	2.4	14	3
	5	★	MNS1340LB	69.4	110.4	114.4	178.4	176	2.4	14	3
	10	□	MNS1340X10DB	136.4	178.4	181.4	245.4	243	2.4	14	3
	20	□	MNS1340X20DB	270.4	313.4	316.4	380.4	378	2.4	14	3
13.5	3	□	MNS1350S-DIN	40.2	60.5	61.5	107.5	105	2.5	14	4
	3	□	MNS1350S-DIN-C	40.2	60.5	61.5	107.5	105	2.5	14	3
	5	□	MNS1350L-DIN	57.2	77.5	78.5	124.5	122	2.5	14	4
	5	●	MNS1350L-DIN-C	57.2	77.5	78.5	124.5	122	2.5	14	3
	8	□	MNS1350-L8C	110.5	151.5	154.5	200.5	198	2.5	14	3
	10	□	MNS1350-L10C	137.5	178.5	181.5	227.5	225	2.5	14	3
	12	●	MNS1350-L12C	164.5	205.5	208.5	254.5	252	2.5	14	3
	15	□	MNS1350-L15C	205.0	245.5	248.5	294.5	292	2.5	14	3
	20	●	MNS1350-L20C	272.5	313.5	316.5	362.5	360	2.5	14	3
	5	★	MNS1350LB	70.0	110.5	114.5	178.5	176	2.5	14	3
	10	□	MNS1350X10DB	137.5	178.5	181.5	245.5	243	2.5	14	3
	20	□	MNS1350X20DB	272.5	313.5	316.5	380.5	378	2.5	14	3
13.6	3	□	MNS1360S-DIN	40.1	60.5	61.5	107.5	105	2.5	14	4
	3	□	MNS1360S-DIN-C	40.1	60.5	61.5	107.5	105	2.5	14	3
	5	□	MNS1360L-DIN	57.1	77.5	78.5	124.5	122	2.5	14	4
	5	□	MNS1360L-DIN-C	57.1	77.5	78.5	124.5	122	2.5	14	3
	8	□	MNS1360-L8C	111.3	156.5	159.5	205.5	203	2.5	14	3
	10	□	MNS1360-L10C	138.5	184.5	187.5	233.5	231	2.5	14	3
	12	□	MNS1360-L12C	165.7	212.5	215.5	261.5	259	2.5	14	3
	15	□	MNS1360-L15C	206.5	254.5	257.5	303.5	301	2.5	14	3
	20	□	MNS1360-L20C	274.5	324.5	327.5	373.5	371	2.5	14	3
	5	★	MNS1360LB	70.5	114.5	114.5	178.5	176	2.5	14	3
	10	□	MNS1360X10DB	138.5	184.5	187.5	251.5	249	2.5	14	3
	20	□	MNS1360X20DB	274.5	324.5	327.5	391.5	389	2.5	14	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
13.7	3	□	MNS1370S-DIN	39.9	60.5	61.5	107.5	105	2.5	14	4
	3	□	MNS1370S-DIN-C	39.9	60.5	61.5	107.5	105	2.5	14	3
	5	□	MNS1370L-DIN	56.9	77.5	78.5	124.5	122	2.5	14	4
	5	□	MNS1370L-DIN-C	56.9	77.5	78.5	124.5	122	2.5	14	3
	8	□	MNS1370-L8C	112.1	156.5	159.5	205.5	203	2.5	14	3
	10	□	MNS1370-L10C	139.5	184.5	187.5	233.5	231	2.5	14	3
	12	□	MNS1370-L12C	166.9	212.5	215.5	261.5	259	2.5	14	3
	15	□	MNS1370-L15C	208.0	254.5	257.5	303.5	301	2.5	14	3
	20	□	MNS1370-L20C	276.5	324.5	327.5	373.5	371	2.5	14	3
	5	★	MNS1370LB	71.0	114.5	114.5	178.5	176	2.5	14	3
	10	□	MNS1370X10DB	139.5	184.5	187.5	251.5	249	2.5	14	3
	20	□	MNS1370X20DB	276.5	324.5	327.5	391.5	389	2.5	14	3
13.8	3	□	MNS1380S-DIN	39.8	60.5	61.5	107.5	105	2.5	14	4
	3	□	MNS1380S-DIN-C	39.8	60.5	61.5	107.5	105	2.5	14	3
	5	□	MNS1380L-DIN	56.8	77.5	78.5	124.5	122	2.5	14	4
	5	□	MNS1380L-DIN-C	56.8	77.5	78.5	124.5	122	2.5	14	3
	8	□	MNS1380-L8C	112.9	156.5	159.5	205.5	203	2.5	14	3
	10	□	MNS1380-L10C	140.5	184.5	187.5	233.5	231	2.5	14	3
	12	□	MNS1380-L12C	168.1	212.5	215.5	261.5	259	2.5	14	3
	15	□	MNS1380-L15C	209.5	254.5	257.5	303.5	301	2.5	14	3
	20	□	MNS1380-L20C	278.5	324.5	327.5	373.5	371	2.5	14	3
	5	★	MNS1380LB	71.5	114.5	114.5	178.5	176	2.5	14	3
	10	□	MNS1380X10DB	140.5	184.5	187.5	251.5	249	2.5	14	3
	20	□	MNS1380X20DB	278.5	324.5	327.5	391.5	389	2.5	14	3
13.9	3	□	MNS1390S-DIN	39.7	60.5	61.5	107.5	105	2.5	14	4
	3	□	MNS1390S-DIN-C	39.7	60.5	61.5	107.5	105	2.5	14	3
	5	□	MNS1390L-DIN	56.7	77.5	78.5	124.5	122	2.5	14	4
	5	□	MNS1390L-DIN-C	56.7	77.5	78.5	124.5	122	2.5	14	3
	8	□	MNS1390-L8C	113.7	156.5	159.5	205.5	203	2.5	14	3
	10	□	MNS1390-L10C	141.5	184.5	187.5	233.5	231	2.5	14	3
	12	□	MNS1390-L12C	169.3	212.5	215.5	261.5	259	2.5	14	3
	15	□	MNS1390-L15C	211.0	254.5	257.5	303.5	301	2.5	14	3
	20	□	MNS1390-L20C	280.5	324.5	327.5	373.5	371	2.5	14	3
	5	★	MNS1390LB	72.0	114.5	114.5	178.5	176	2.5	14	3
	10	□	MNS1390X10DB	141.5	184.5	187.5	251.5	249	2.5	14	3
	20	□	MNS1390X20DB	280.5	324.5	327.5	391.5	389	2.5	14	3
14.0	3	□	MNS1400S-DIN	39.5	60.5	61.5	107.5	105	2.5	14	4
	3	□	MNS1400S-DIN-C	39.5	60.5	61.5	107.5	105	2.5	14	3
	5	□	MNS1400L-DIN	56.5	77.5	78.5	124.5	122	2.5	14	4
	5	●	MNS1400L-DIN-C	56.5	77.5	78.5	124.5	122	2.5	14	3
	8	□	MNS1400-L8C	114.5	156.5	159.5	205.5	203	2.5	14	3
	10	□	MNS1400-L10C	142.5	184.5	187.5	233.5	231	2.5	14	3
	12	●	MNS1400-L12C	170.5	212.5	215.5	261.5	259	2.5	14	3
	15	□	MNS1400-L15C	212.5	254.5	257.5	303.5	301	2.5	14	3
	20	●	MNS1400-L20C	282.5	324.5	327.5	373.5	371	2.5	14	3
	5	★	MNS1400LB	72.5	114.5	114.5	178.5	176	2.5	14	3
	10	★	MNS1400X10DB	142.5	184.5	187.5	251.5	249	2.5	14	3
	20	★	MNS1400X20DB	282.5	324.5	327.5	391.5	389	2.5	14	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
14.1	3	□	MNS1410S-DIN	43.4	64.6	65.6	114.6	112	2.6	16	4
	3	□	MNS1410S-DIN-C	43.4	64.6	65.6	114.6	112	2.6	16	3
	5	□	MNS1410L-DIN	61.4	82.6	83.6	132.6	130	2.6	16	4
	5	□	MNS1410L-DIN-C	61.4	82.6	83.6	132.6	130	2.6	16	3
14.2	3	□	MNS1420S-DIN	43.3	64.6	65.6	114.6	112	2.6	16	4
	3	□	MNS1420S-DIN-C	43.3	64.6	65.6	114.6	112	2.6	16	3
	5	□	MNS1420L-DIN	61.3	82.6	83.6	132.6	130	2.6	16	4
	5	●	MNS1420L-DIN-C	61.3	82.6	83.6	132.6	130	2.6	16	3
14.3	3	□	MNS1430S-DIN	43.2	64.6	65.6	114.6	112	2.6	16	4
	3	□	MNS1430S-DIN-C	43.2	64.6	65.6	114.6	112	2.6	16	3
	5	□	MNS1430L-DIN	61.2	82.6	83.6	132.6	130	2.6	16	4
	5	□	MNS1430L-DIN-C	61.2	82.6	83.6	132.6	130	2.6	16	3
14.4	3	□	MNS1440S-DIN	43.0	64.6	65.6	114.6	112	2.6	16	4
	3	□	MNS1440S-DIN-C	43.0	64.6	65.6	114.6	112	2.6	16	3
	5	□	MNS1440L-DIN	61.0	82.6	83.6	132.6	130	2.6	16	4
	5	□	MNS1440L-DIN-C	61.0	82.6	83.6	132.6	130	2.6	16	3
14.5	3	□	MNS1450S-DIN	42.9	64.6	65.6	114.6	112	2.6	16	4
	3	□	MNS1450S-DIN-C	42.9	64.6	65.6	114.6	112	2.6	16	3
	5	□	MNS1450L-DIN	60.9	82.6	83.6	132.6	130	2.6	16	4
	5	●	MNS1450L-DIN-C	60.9	82.6	83.6	132.6	130	2.6	16	3
14.6	3	□	MNS1460S-DIN	42.8	64.7	65.7	114.7	112	2.7	16	4
	3	□	MNS1460S-DIN-C	42.8	64.7	65.7	114.7	112	2.7	16	3
	5	□	MNS1460L-DIN	60.8	82.7	83.7	132.7	130	2.7	16	4
	5	□	MNS1460L-DIN-C	60.8	82.7	83.7	132.7	130	2.7	16	3
14.7	3	□	MNS1470S-DIN	42.6	64.7	65.7	114.7	112	2.7	16	4
	3	□	MNS1470S-DIN-C	42.6	64.7	65.7	114.7	112	2.7	16	3
	5	□	MNS1470L-DIN	60.6	82.7	83.7	132.7	130	2.7	16	4
	5	□	MNS1470L-DIN-C	60.6	82.7	83.7	132.7	130	2.7	16	3
14.8	3	□	MNS1480S-DIN	42.5	64.7	65.7	114.7	112	2.7	16	4
	3	□	MNS1480S-DIN-C	42.5	64.7	65.7	114.7	112	2.7	16	3
	5	□	MNS1480L-DIN	60.5	82.7	83.7	132.7	130	2.7	16	4
	5	□	MNS1480L-DIN-C	60.5	82.7	83.7	132.7	130	2.7	16	3
14.9	3	□	MNS1490S-DIN	42.4	64.7	65.7	114.7	112	2.7	16	4
	3	□	MNS1490S-DIN-C	42.4	64.7	65.7	114.7	112	2.7	16	3
	5	□	MNS1490L-DIN	60.4	82.7	83.7	132.7	130	2.7	16	4
	5	□	MNS1490L-DIN-C	60.4	82.7	83.7	132.7	130	2.7	16	3
15.0	3	□	MNS1500S-DIN	42.2	64.7	65.7	114.7	112	2.7	16	4
	3	□	MNS1500S-DIN-C	42.2	64.7	65.7	114.7	112	2.7	16	3
	5	□	MNS1500L-DIN	60.2	82.7	83.7	132.7	130	2.7	16	4
	5	●	MNS1500L-DIN-C	60.2	82.7	83.7	132.7	130	2.7	16	3
15.1	3	□	MNS1510S-DIN	42.1	64.7	65.7	114.7	112	2.7	16	4
	3	□	MNS1510S-DIN-C	42.1	64.7	65.7	114.7	112	2.7	16	3
	5	□	MNS1510L-DIN	60.1	82.7	83.7	132.7	130	2.7	16	4
	5	□	MNS1510L-DIN-C	60.1	82.7	83.7	132.7	130	2.7	16	3
15.2	3	□	MNS1520S-DIN	42.0	64.8	65.8	114.8	112	2.8	16	4
	3	□	MNS1520S-DIN-C	42.0	64.8	65.8	114.8	112	2.8	16	3
	5	□	MNS1520L-DIN	60.0	82.8	83.8	132.8	130	2.8	16	4
	5	□	MNS1520L-DIN-C	60.0	82.8	83.8	132.8	130	2.8	16	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
15.3	3	□	MNS1530S-DIN	41.8	64.8	65.8	114.8	112	2.8	16	4
	3	□	MNS1530S-DIN-C	41.8	64.8	65.8	114.8	112	2.8	16	3
	5	□	MNS1530L-DIN	59.8	82.8	83.8	132.8	130	2.8	16	4
	5	□	MNS1530L-DIN-C	59.8	82.8	83.8	132.8	130	2.8	16	3
15.4	3	□	MNS1540S-DIN	41.7	64.8	65.8	114.8	112	2.8	16	4
	3	□	MNS1540S-DIN-C	41.7	64.8	65.8	114.8	112	2.8	16	3
	5	□	MNS1540L-DIN	59.7	82.8	83.8	132.8	130	2.8	16	4
	5	□	MNS1540L-DIN-C	59.7	82.8	83.8	132.8	130	2.8	16	3
15.5	3	□	MNS1550S-DIN	41.6	64.8	65.8	114.8	112	2.8	16	4
	3	□	MNS1550S-DIN-C	41.6	64.8	65.8	114.8	112	2.8	16	3
	5	□	MNS1550L-DIN	59.6	82.8	83.8	132.8	130	2.8	16	4
	5	●	MNS1550L-DIN-C	59.6	82.8	83.8	132.8	130	2.8	16	3
15.6	3	□	MNS1560S-DIN	41.4	64.8	65.8	114.8	112	2.8	16	4
	3	□	MNS1560S-DIN-C	41.4	64.8	65.8	114.8	112	2.8	16	3
	5	□	MNS1560L-DIN	59.4	82.8	83.8	132.8	130	2.8	16	4
	5	□	MNS1560L-DIN-C	59.4	82.8	83.8	132.8	130	2.8	16	3
15.7	3	□	MNS1570S-DIN	41.3	64.9	65.9	114.9	112	2.9	16	4
	3	□	MNS1570S-DIN-C	41.3	64.9	65.9	114.9	112	2.9	16	3
	5	□	MNS1570L-DIN	59.3	82.9	83.9	132.9	130	2.9	16	4
	5	□	MNS1570L-DIN-C	59.3	82.9	83.9	132.9	130	2.9	16	3
15.8	3	□	MNS1580S-DIN	41.2	64.9	65.9	114.9	112	2.9	16	4
	3	□	MNS1580S-DIN-C	41.2	64.9	65.9	114.9	112	2.9	16	3
	5	□	MNS1580L-DIN	59.2	82.9	83.9	132.9	130	2.9	16	4
	5	□	MNS1580L-DIN-C	59.2	82.9	83.9	132.9	130	2.9	16	3
15.9	3	□	MNS1590S-DIN	41.0	64.9	65.9	114.9	112	2.9	16	4
	3	□	MNS1590S-DIN-C	41.0	64.9	65.9	114.9	112	2.9	16	3
	5	□	MNS1590L-DIN	59.0	82.9	83.9	132.9	130	2.9	16	4
	5	□	MNS1590L-DIN-C	59.0	82.9	83.9	132.9	130	2.9	16	3
16.0	3	□	MNS1600S-DIN	40.9	64.9	65.9	114.9	112	2.9	16	4
	3	□	MNS1600S-DIN-C	40.9	64.9	65.9	114.9	112	2.9	16	3
	5	□	MNS1600L-DIN	58.9	82.9	83.9	132.9	130	2.9	16	4
	5	●	MNS1600L-DIN-C	58.9	82.9	83.9	132.9	130	2.9	16	3
16.1	3	□	MNS1610S-DIN	48.8	72.9	73.9	122.9	120	2.9	18	4
	3	□	MNS1610S-DIN-C	48.8	72.9	73.9	122.9	120	2.9	18	3
	5	□	MNS1610L-DIN	68.8	92.9	93.9	142.9	140	2.9	18	4
	5	□	MNS1610L-DIN-C	68.8	92.9	93.9	142.9	140	2.9	18	3
16.2	3	□	MNS1620S-DIN	48.6	72.9	73.9	122.9	120	2.9	18	4
	3	□	MNS1620S-DIN-C	48.6	72.9	73.9	122.9	120	2.9	18	3
	5	□	MNS1620L-DIN	68.6	92.9	93.9	142.9	140	2.9	18	4
	5	□	MNS1620L-DIN-C	68.6	92.9	93.9	142.9	140	2.9	18	3
16.3	3	□	MNS1630S-DIN	48.5	73.0	74.0	123.0	120	3.0	18	4
	3	□	MNS1630S-DIN-C	48.5	73.0	74.0	123.0	120	3.0	18	3
	5	□	MNS1630L-DIN	68.5	93.0	94.0	143.0	140	3.0	18	4
	5	□	MNS1630L-DIN-C	68.5	93.0	94.0	143.0	140	3.0	18	3
16.4	3	□	MNS1640S-DIN	48.4	73.0	74.0	123.0	120	3.0	18	4
	3	□	MNS1640S-DIN-C	48.4	73.0	74.0	123.0	120	3.0	18	3
	5	□	MNS1640L-DIN	68.4	93.0	94.0	143.0	140	3.0	18	4
	5	□	MNS1640L-DIN-C	68.4	93.0	94.0	143.0	140	3.0	18	3
16.5	3	□	MNS1650S-DIN	48.3	73.0	74.0	123.0	120	3.0	18	4
	3	□	MNS1650S-DIN-C	48.3	73.0	74.0	123.0	120	3.0	18	3
	5	□	MNS1650L-DIN	68.3	93.0	94.0	143.0	140	3.0	18	4
	5	●	MNS1650L-DIN-C	68.3	93.0	94.0	143.0	140	3.0	18	3
16.6	3	□	MNS1660S-DIN	48.1	73.0	74.0	123.0	120	3.0	18	4
	3	□	MNS1660S-DIN-C	48.1	73.0	74.0	123.0	120	3.0	18	3
	5	□	MNS1660L-DIN	68.1	93.0	94.0	143.0	140	3.0	18	4
	5	□	MNS1660L-DIN-C	68.1	93.0	94.0	143.0	140	3.0	18	3
16.7	3	□	MNS1670S-DIN	48.0	73.0	74.0	123.0	120	3.0	18	4
	3	□	MNS1670S-DIN-C	48.0	73.0	74.0	123.0	120	3.0	18	3
	5	□	MNS1670L-DIN	68.0	93.0	94.0	143.0	140	3.0	18	4
	5	□	MNS1670L-DIN-C	68.0	93.0	94.0	143.0	140	3.0	18	3
16.8	3	□	MNS1680S-DIN	47.9	73.1	74.1	123.1	120	3.1	18	4
	3	□	MNS1680S-DIN-C	47.9	73.1	74.1	123.1	120	3.1	18	3
	5	□	MNS1680L-DIN	67.9	93.1	94.1	143.1	140	3.1	18	4
	5	□	MNS1680L-DIN-C	67.9	93.1	94.1	143.1	140	3.1	18	3
16.9	3	□	MNS1690S-DIN	47.7	73.1	74.1	123.1	120	3.1	18	4
	3	□	MNS1690S-DIN-C	47.7	73.1	74.1	123.1	120	3.1	18	3
	5	□	MNS1690L-DIN	67.7	93.1	94.1	143.1	140	3.1	18	4
	5	□	MNS1690L-DIN-C	67.7	93.1	94.1	143.1	140	3.1	18	3
17.0	3	□	MNS1700S-DIN	47.6	73.1	74.1	123.1	120	3.1	18	4
	3	□	MNS1700S-DIN-C	47.6	73.1	74.1	123.1	120	3.1	18	3
	5	□	MNS1700L-DIN	67.6	93.1	94.1	143.1	140	3.1	18	4
	5	●	MNS1700L-DIN-C	67.6	93.1	94.1	143.1	140	3.1	18	3
17.1	3	□	MNS1710S-DIN	47.5	73.1	74.1	123.1	120	3.1	18	4
	3	□	MNS1710S-DIN-C	47.5	73.1	74.1	123.1	120	3.1	18	3
	5	□	MNS1710L-DIN	67.5	93.1	94.1	143.1	140	3.1	18	4
	5	□	MNS1710L-DIN-C	67.5	93.1	94.1	143.1	140	3.1	18	3
17.2	3	□	MNS1720S-DIN	47.3	73.1	74.1	123.1	120	3.1	18	4
	3	□	MNS1720S-DIN-C	47.3	73.1	74.1	123.1	120	3.1	18	3
	5	□	MNS1720L-DIN	67.3	93.1	94.1	143.1	140	3.1	18	4
	5	□	MNS1720L-DIN-C	67.3	93.1	94.1	143.1	140	3.1	18	3
17.3	3	□	MNS1730S-DIN	47.2	73.1	74.1	123.1	120	3.1	18	4
	3	□	MNS1730S-DIN-C	47.2	73.1	74.1	123.1	120	3.1	18	3
	5	□	MNS1730L-DIN	67.2	93.1	94.1	143.1	140	3.1	18	4
	5	□	MNS1730L-DIN-C	67.2	93.1	94.1	143.1	140	3.1	18	3
17.4	3	□	MNS1740S-DIN	47.1	73.2	74.2	123.2	120	3.2	18	4
	3	□	MNS1740S-DIN-C	47.1	73.2	74.2	123.2	120	3.2	18	3
	5	□	MNS1740L-DIN	67.1	93.2	94.2	143.2	140	3.2	18	4
	5	□	MNS1740L-DIN-C	67.1	93.2	94.2	143.2	140	3.2	18	3
17.5	3	□	MNS1750S-DIN	46.9	73.2	74.2	123.2	120	3.2	18	4
	3	□	MNS1750S-DIN-C	46.9	73.2	74.2	123.2	120	3.2	18	3
	5	□	MNS1750L-DIN	66.9	93.2	94.2	143.2	140	3.2	18	4
	5	●	MNS1750L-DIN-C	66.9	93.2	94.2	143.2	140	3.2	18	3
17.6	3	□	MNS1760S-DIN	46.8	73.2	74.2	123.2	120	3.2	18	4
	3	□	MNS1760S-DIN-C	46.8	73.2	74.2	123.2	120	3.2	18	3
	5	□	MNS1760L-DIN	66.8	93.2	94.2	143.2	140	3.2	18	4
	5	□	MNS1760L-DIN-C	66.8	93.2	94.2	143.2	140	3.2	18	3

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
17.7	3	□	MNS1770S-DIN	46.7	73.2	74.2	123.2	120	3.2	18	4
	3	□	MNS1770S-DIN-C	46.7	73.2	74.2	123.2	120	3.2	18	3
	5	□	MNS1770L-DIN	66.7	93.2	94.2	143.2	140	3.2	18	4
	5	□	MNS1770L-DIN-C	66.7	93.2	94.2	143.2	140	3.2	18	3
17.8	3	□	MNS1780S-DIN	46.5	73.2	74.2	123.2	120	3.2	18	4
	3	□	MNS1780S-DIN-C	46.5	73.2	74.2	123.2	120	3.2	18	3
	5	□	MNS1780L-DIN	66.5	93.2	94.2	143.2	140	3.2	18	4
	5	□	MNS1780L-DIN-C	66.5	93.2	94.2	143.2	140	3.2	18	3
17.9	3	□	MNS1790S-DIN	46.4	73.3	74.3	123.3	120	3.3	18	4
	3	□	MNS1790S-DIN-C	46.4	73.3	74.3	123.3	120	3.3	18	3
	5	□	MNS1790L-DIN	66.4	93.3	94.3	143.3	140	3.3	18	4
	5	□	MNS1790L-DIN-C	66.4	93.3	94.3	143.3	140	3.3	18	3
18.0	3	□	MNS1800S-DIN	46.3	73.3	74.3	123.3	120	3.3	18	4
	3	□	MNS1800S-DIN-C	46.3	73.3	74.3	123.3	120	3.3	18	3
	5	□	MNS1800L-DIN	66.3	93.3	94.3	143.3	140	3.3	18	4
	5	●	MNS1800L-DIN-C	66.3	93.3	94.3	143.3	140	3.3	18	3
18.1	3	□	MNS1810S-DIN	52.1	79.3	80.3	131.3	128	3.3	20	4
	3	□	MNS1810S-DIN-C	52.1	79.3	80.3	131.3	128	3.3	20	3
	5	□	MNS1810L-DIN	74.1	101.3	102.3	153.3	150	3.3	20	4
	5	□	MNS1810L-DIN-C	74.1	101.3	102.3	153.3	150	3.3	20	3
18.2	3	□	MNS1820S-DIN	52.0	79.3	80.3	131.3	128	3.3	20	4
	3	□	MNS1820S-DIN-C	52.0	79.3	80.3	131.3	128	3.3	20	3
	5	□	MNS1820L-DIN	74.0	101.3	102.3	153.3	150	3.3	20	4
	5	□	MNS1820L-DIN-C	74.0	101.3	102.3	153.3	150	3.3	20	3
18.3	3	□	MNS1830S-DIN	51.9	79.3	80.3	131.3	128	3.3	20	4
	3	□	MNS1830S-DIN-C	51.9	79.3	80.3	131.3	128	3.3	20	3
	5	□	MNS1830L-DIN	73.9	101.3	102.3	153.3	150	3.3	20	4
	5	□	MNS1830L-DIN-C	73.9	101.3	102.3	153.3	150	3.3	20	3
18.4	3	□	MNS1840S-DIN	51.7	79.3	80.3	131.3	128	3.3	20	4
	3	□	MNS1840S-DIN-C	51.7	79.3	80.3	131.3	128	3.3	20	3
	5	□	MNS1840L-DIN	73.7	101.3	102.3	153.3	150	3.3	20	4
	5	□	MNS1840L-DIN-C	73.7	101.3	102.3	153.3	150	3.3	20	3
18.5	3	□	MNS1850S-DIN	51.6	79.4	80.4	131.4	128	3.4	20	4
	3	□	MNS1850S-DIN-C	51.6	79.4	80.4	131.4	128	3.4	20	3
	5	□	MNS1850L-DIN	73.6	101.4	102.4	153.4	150	3.4	20	4
	5	●	MNS1850L-DIN-C	73.6	101.4	102.4	153.4	150	3.4	20	3
18.6	3	□	MNS1860S-DIN	51.5	79.4	80.4	131.4	128	3.4	20	4
	3	□	MNS1860S-DIN-C	51.5	79.4	80.4	131.4	128	3.4	20	3
	5	□	MNS1860L-DIN	73.5	101.4	102.4	153.4	150	3.4	20	4
	5	□	MNS1860L-DIN-C	73.5	101.4	102.4	153.4	150	3.4	20	3
18.7	3	□	MNS1870S-DIN	51.4	79.4	80.4	131.4	128	3.4	20	4
	3	□	MNS1870S-DIN-C	51.4	79.4	80.4	131.4	128	3.4	20	3
	5	□	MNS1870L-DIN	73.4	101.4	102.4	153.4	150	3.4	20	4
	5	□	MNS1870L-DIN-C	73.4	101.4	102.4	153.4	150	3.4	20	3
18.8	3	□	MNS1880S-DIN	51.2	79.4	80.4	131.4	128	3.4	20	4
	3	□	MNS1880S-DIN-C	51.2	79.4	80.4	131.4	128	3.4	20	3
	5	□	MNS1880L-DIN	73.2	101.4	102.4	153.4	150	3.4	20	4
	5	□	MNS1880L-DIN-C	73.2	101.4	102.4	153.4	150	3.4	20	3

DC (mm)	Profondità foro (L/D)	TF15	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
18.9	3	□	MNS1890S-DIN	51.1	79.4	80.4	131.4	128	3.4	20	4
	3	□	MNS1890S-DIN-C	51.1	79.4	80.4	131.4	128	3.4	20	3
	5	□	MNS1890L-DIN	73.1	101.4	102.4	153.4	150	3.4	20	4
	5	□	MNS1890L-DIN-C	73.1	101.4	102.4	153.4	150	3.4	20	3
19.0	3	□	MNS1900S-DIN	51.0	79.5	80.5	131.5	128	3.5	20	4
	3	□	MNS1900S-DIN-C	51.0	79.5	80.5	131.5	128	3.5	20	3
	5	□	MNS1900L-DIN	73.0	101.5	102.5	153.5	150	3.5	20	4
	5	□	MNS1900L-DIN-C	73.0	101.5	102.5	153.5	150	3.5	20	3
19.1	3	□	MNS1910S-DIN	50.8	79.5	80.5	131.5	128	3.5	20	4
	3	□	MNS1910S-DIN-C	50.8	79.5	80.5	131.5	128	3.5	20	3
	5	□	MNS1910L-DIN	72.8	101.5	102.5	153.5	150	3.5	20	4
	5	□	MNS1910L-DIN-C	72.8	101.5	102.5	153.5	150	3.5	20	3
19.2	3	□	MNS1920S-DIN	50.7	79.5	80.5	131.5	128	3.5	20	4
	3	□	MNS1920S-DIN-C	50.7	79.5	80.5	131.5	128	3.5	20	3
	5	□	MNS1920L-DIN	72.7	101.5	102.5	153.5	150	3.5	20	4
	5	□	MNS1920L-DIN-C	72.7	101.5	102.5	153.5	150	3.5	20	3
19.3	3	□	MNS1930S-DIN	50.6	79.5	80.5	131.5	128	3.5	20	4
	5	□	MNS1930L-DIN	72.6	101.5	102.5	153.5	150	3.5	20	4
	5	□	MNS1930L-DIN-C	72.6	101.5	102.5	153.5	150	3.5	20	3
19.4	3	□	MNS1940S-DIN	50.4	79.5	80.5	131.5	128	3.5	20	4
	3	□	MNS1940S-DIN-C	50.4	79.5	80.5	131.5	128	3.5	20	3
	5	□	MNS1940L-DIN	72.4	101.5	102.5	153.5	150	3.5	20	4
	5	□	MNS1940L-DIN-C	72.4	101.5	102.5	153.5	150	3.5	20	3
19.5	3	□	MNS1950S-DIN	50.3	79.5	80.5	131.5	128	3.5	20	4
	3	□	MNS1950S-DIN-C	50.3	79.5	80.5	131.5	128	3.5	20	3
	5	□	MNS1950L-DIN	72.3	101.5	102.5	153.5	150	3.5	20	4
	5	●	MNS1950L-DIN-C	72.3	101.5	102.5	153.5	150	3.5	20	3
19.6	3	□	MNS1960S-DIN	50.2	79.6	80.6	131.6	128	3.6	20	4
	3	□	MNS1960S-DIN-C	50.2	79.6	80.6	131.6	128	3.6	20	3
	5	□	MNS1960L-DIN	72.2	101.6	102.6	153.6	150	3.6	20	4
	5	□	MNS1960L-DIN-C	72.2	101.6	102.6	153.6	150	3.6	20	3
19.7	3	□	MNS1970S-DIN	50.0	79.6	80.6	131.6	128	3.6	20	4
	3	□	MNS1970S-DIN-C	50.0	79.6	80.6	131.6	128	3.6	20	3
	5	□	MNS1970L-DIN	72.0	101.6	102.6	153.6	150	3.6	20	4
	5	□	MNS1970L-DIN-C	72.0	101.6	102.6	153.6	150	3.6	20	3
19.8	3	□	MNS1980S-DIN	49.9	79.6	80.6	131.6	128	3.6	20	4
	3	□	MNS1980S-DIN-C	49.9	79.6	80.6	131.6	128	3.6	20	3
	5	□	MNS1980L-DIN	71.9	101.6	102.6	153.6	150	3.6	20	4
	5	□	MNS1980L-DIN-C	71.9	101.6	102.6	153.6	150	3.6	20	3
19.9	3	□	MNS1990S-DIN	49.8	79.6	80.6	131.6	128	3.6	20	4
	3	□	MNS1990S-DIN-C	49.8	79.6	80.6	131.6	128	3.6	20	3
	5	□	MNS1990L-DIN	71.8	101.6	102.6	153.6	150	3.6	20	4
	5	□	MNS1990L-DIN-C	71.8	101.6	102.6	153.6	150	3.6	20	3
20.0	3	□	MNS2000S-DIN	49.6	79.6	80.6	131.6	128	3.6	20	4
	3	□	MNS2000S-DIN-C	49.6	79.6	80.6	131.6	128	3.6	20	3
	5	□	MNS2000L-DIN	71.6	101.6	102.6	153.6	150	3.6	20	4
	5	●	MNS2000L-DIN-C	71.6	101.6	102.6	153.6	150	3.6	20	3

PARAMETRI DI TAGLIO ➤ M118
GUIDA OPERATIVA ➤ M119
DATI TECNICI ➤ P001

MNS

PARAMETRI DI TAGLIO CONSIGLIATI

■ Profondità foro : L/D = 3, 5, 8 (Punte LB, S-DIN, S-DIN-C, L-DIN, L-DIN-C, L8C)

Materiale da lavorare	N								
	Lega di alluminio (Si<5%)			Lega di alluminio (5%≤Si≤10%)			Lega di alluminio (Si>10%)		
Diam. Punta **DC** (mm)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	
3.2	11900	0.1	(0.11—0.16)	11900	0.15	(0.16—0.21)	11900	0.15	(0.16—0.21)
4.0	9500	0.15	(0.13—0.20)	9500	0.2	(0.20—0.27)	9500	0.2	(0.20—0.27)
5.0	7600	0.2	(0.17—0.25)	7600	0.25	(0.25—0.33)	7600	0.25	(0.25—0.33)
6.3	7500	0.25	(0.21—0.32)	7500	0.35	(0.32—0.42)	7500	0.35	(0.32—0.42)
8.0	5900	0.3	(0.27—0.40)	5900	0.45	(0.40—0.53)	5900	0.45	(0.40—0.53)
10.0	4700	0.4	(0.33—0.50)	4700	0.55	(0.50—0.67)	4700	0.55	(0.50—0.67)
12.0	5300	0.5	(0.40—0.60)	5300	0.7	(0.60—0.80)	5300	0.7	(0.60—0.80)
14.0	4500	0.5	(0.40—0.60)	4500	0.7	(0.60—0.80)	4500	0.7	(0.60—0.80)
16.0	4000	0.5	(0.40—0.60)	4000	0.7	(0.60—0.80)	4000	0.7	(0.60—0.80)
18.0	3500	0.5	(0.40—0.60)	3500	0.7	(0.60—0.80)	3500	0.7	(0.60—0.80)
20.0	3200	0.5	(0.40—0.60)	3200	0.7	(0.60—0.80)	3200	0.7	(0.60—0.80)

Nota 1) Se viene utilizzata la punta con una lunghezza superiore a L/D 10, è necessario utilizzare i fori pilota come guida (senza foro pilota la punta può rompersi.)

Nota 2) Per il preforo di guida, si raccomandano punte Mitsubishi Materials MNS, MAE-MB o MAS-MB.

■ Profondità foro : L/D = 10, 12, 15, 20, 25, 30 (Punte X10DB, X20DB, X30DB, L10C, L12C, L15C, L20C, L25C, L30C)

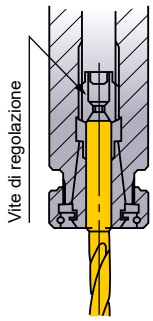
Materiale da lavorare	N								
	Lega di alluminio (Si<5%)			Lega di alluminio (5%≤Si≤10%)			Lega di alluminio (Si>10%)		
Diam. Punta **DC** (mm)	Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)		Giri (min^{-1})	Avanzamento (min.—max.) (mm/giro)	
3.2	8900	0.1	(0.11—0.16)	8900	0.15	(0.16—0.21)	8900	0.15	(0.16—0.21)
4.0	7100	0.15	(0.13—0.20)	7100	0.2	(0.20—0.27)	7100	0.2	(0.20—0.27)
5.0	5700	0.2	(0.17—0.25)	5700	0.25	(0.25—0.33)	5700	0.25	(0.25—0.33)
6.3	6000	0.25	(0.21—0.32)	6000	0.35	(0.32—0.42)	6000	0.35	(0.32—0.42)
8.0	4700	0.3	(0.27—0.40)	4700	0.45	(0.40—0.53)	4700	0.45	(0.40—0.53)
10.0	3800	0.4	(0.33—0.50)	3800	0.55	(0.50—0.67)	3800	0.55	(0.50—0.67)
12.0	4200	0.5	(0.40—0.60)	4200	0.7	(0.60—0.80)	4200	0.7	(0.60—0.80)
14.0	3600	0.5	(0.40—0.60)	3600	0.7	(0.60—0.80)	3600	0.7	(0.60—0.80)
16.0	3200	0.5	(0.40—0.60)	3200	0.7	(0.60—0.80)	3200	0.7	(0.60—0.80)
18.0	2800	0.5	(0.40—0.60)	2800	0.7	(0.60—0.80)	2800	0.7	(0.60—0.80)
20.0	2500	0.5	(0.40—0.60)	2500	0.7	(0.60—0.80)	2500	0.7	(0.60—0.80)

Nota 1) Se viene utilizzata la punta con una lunghezza superiore a L/D 10, è necessario utilizzare i fori pilota come guida (senza foro pilota la punta può rompersi.)

Nota 2) Per il preforo di guida, si raccomandano punte Mitsubishi Materials MNS, MAE-MB o MAS-MB.

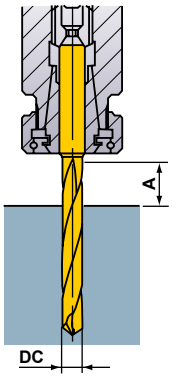
■ AVVERTENZE PER L'UTILIZZO DELLA PUNTA MNS (L/D 3, 5, 8)

Mandrino di tenuta



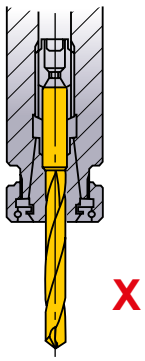
La ghiera reggispinta del mandrino blocca la punta in modo sicuro.

Lunghezza punta



A : ≥ DC x 1.5

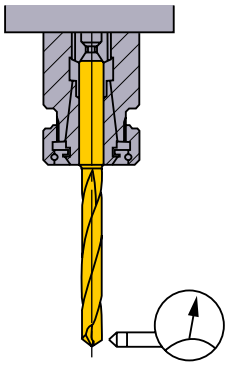
Montaggio punta



X

Non bloccare la punta sull'elica.

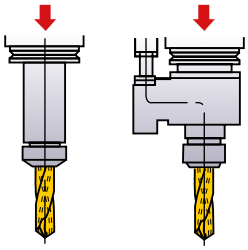
Tolleranza d'installazione



Eccentricità ≤ 0.03mm

Metodo refrigerante (MNS)

Mandrino con refrigerante interno | Mandrino rotante con refrigerante interno



La pressione del refrigerante è circa 5 bar—70 bar

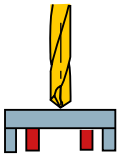
Utilizzo del refrigerante

<Tipo **MNS**>

1) Eventuali particelle di sporco e di polvere nel refrigerante usato possono ostruire il foro dell'olio e impedire un flusso efficace. Si raccomanda di sostituire regolarmente il refrigerante.

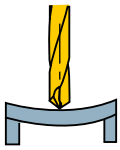
2) Piccoli trucioli potrebbero bloccarsi nel foro di lubrificazione. Si raccomanda quindi di utilizzare un filtro a scopo preventivo. In caso di utilizzo di punte di piccolo diametro si raccomanda di impiegare un filtro a maglia fine.

Pezzi sottili



OK

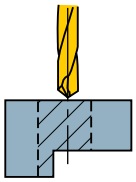
Supporti per il pezzo



X

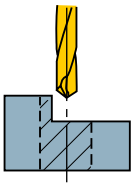
Se tende a flettere

Taglio interrotto



OK

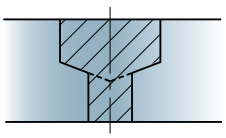
①Ridurre l'avanzamento quando si fora sulla parte con taglio interrotto.



Richiede una precedente lavorazione

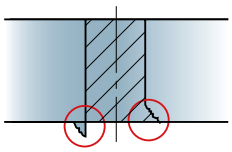
①Praticare un'impronta piana con fresa integrale prima della foratura.

Foratura a gradino



①Suddividere la lavorazione in due processi.
②Forare il diametro maggiore per primo.
*Su richiesta possono essere prodotti utensili per smussatura e lamatura.

Bave e scheggiature sul pezzo



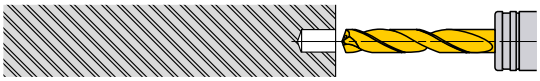
①Ridurre la velocità di avanzamento quando si giunge all'apertura del foro.
②Includere uno smusso.
③Variare l'angolo della punta.

MNS

■ AVVERTENZE PER L'UTILIZZO DELLA PUNTA MNS SUPER LUNGA (L/D 10, 12, 15, 20, 25, 30)

FORATURA PER SUPERFICIE PIANA ● Realizzazione di un foro cieco

■ 1. Realizzare un foro pilota



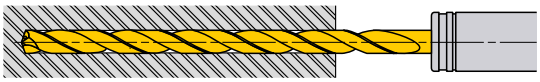
①Utilizzare una punta con un angolo più grande (più piatto) rispetto al tipo superlungo. Si consigliano Mitsubishi Materials MNS, MAE-MB o MAS-MB.
②Praticare un foro pilota molto preciso.
③Profondità di foratura: circa 1DC o superiore.
(Adattare la profondità del foro pilota alla lunghezza della punta super lunga.)

■ 2. Taglio iniziale con la punta di tipo lungo



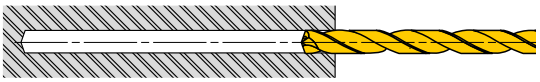
①Entrare nel foro pilota a velocità ridotta (velocità di taglio 20—30 m/min, avanzamento 0.2—0.3 mm/giro).
②Arrestare la punta lunga 1—3 mm prima del fondo del foro pilota.

■ 3. Realizzare il foro profondo



①Iniziare alla velocità consigliata e avanzare in modo continuo (senza interrompere l'avanzamento).

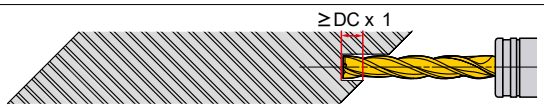
■ 4. Arretramento della punta



①Dopo la foratura ridurre la velocità 1—2 mm prima della fine del foro (velocità di circa 20—30 m/min).
②Arretrare la punta fino alla profondità di partenza del foro pilota (Vf=3000mm/min.)
③Arretrare la punta dal foro pilota a bassa velocità (n=300, Vf=3000mm/min).

FORATURA INTERROTTA ● Forature e rotture su superfici o angolazioni irregolari

■ 1. Lamatura



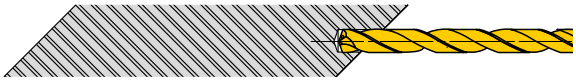
①Quando si esegue un foro profondo su una superficie inclinata, utilizzare la punta MFE come punta per il foro pilota.
②Assicurarsi che venga eseguito un foro ad alta precisione come guida.
③Profondità di foratura: Circa DC×1.

■ 2. Realizzare un foro pilota



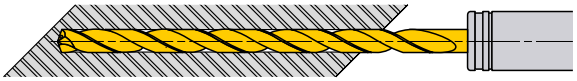
①Utilizzare una punta con un angolo più grande (più piatto) rispetto al tipo superlungo. Si consigliano Mitsubishi Materials MNS, MAE-MB o MAS-MB.
②Praticare un foro pilota molto preciso.
③Profondità di foratura: circa 1DC o superiore.
(Adattare la profondità del foro pilota alla lunghezza della punta super lunga.)

■ 3. Taglio iniziale con la punta di tipo lungo



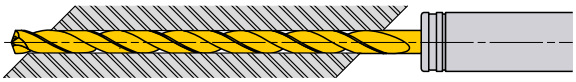
①Entrare nel foro pilota a velocità ridotta (velocità di taglio 20—30 m/min, avanzamento 0.2—0.3 mm/giro).
②Arrestare la punta lunga 1—3 mm prima del fondo del foro pilota.

■ 4. Realizzare il foro profondo



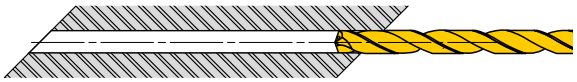
①Iniziare alla velocità consigliata e avanzare in modo continuo (senza interrompere l'avanzamento).

■ 5. Sfondamento



①Durante lo sfondamento, il tagliente può danneggiarsi.
②Si consiglia un avanzamento di 0.05—0.1 mm/giro.

■ 6. Arretramento della punta



①Arretrare la punta alla profondità di partenza del foro pilota con avanzamento di 3000 mm/min.
②Quindi uscire dal foro ad una velocità di 20—30 m/min e un avanzamento di 0.2—0.3 mm/giro.

Note

FORATURA (METALLO DURO)

MAE, MAS

- Adatte per la foratura di alluminio e ghisa.
- Fori di alta precisione.
- Adatte per la realizzazione di pre-fori per filettatura a rullatura.
- Il foro passante elicoidale per il refrigerante permette una lavorazione ad alta velocità (tipo MAS).

UWC | Solo MAS | 140° | N

P | M | **K** | **N** | S | H

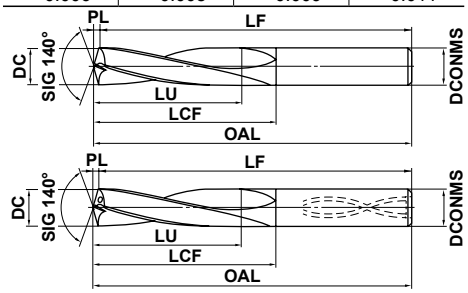
MAE (Refrigerante esterno)



MAS (Refrigerante interno)



DC=3	3<DC≤6	6<DC≤10	10<DC≤16
+0.005 0	+0.005 0	+0.005 0	+0.005 0
0 −0.006	0 −0.008	0 −0.009	0 −0.011



Nota 1) I tipi MAS superiori a Ø 5.0 hanno una cavità nell'estremità.
Nota 2) Le punte MAE/MAS sono adatte per l'utilizzo con mandrini a calettamento a caldo.

DC (mm)	Profondità foro (L/D)	Refrigerante (Int./Est.)	HTi10	Codice di ordinazione	Dimensioni (mm) LU	LCF	OAL	LF	PL	DCONMS
	3	Est.	★	**MAE0300MB**	9.5	21.5	61.5	61	0.5	3
3.0	3	Int.	□	**MAS0300MB**	9.5	21.5	61.5	61	0.5	3
	6	Int.	●	**MAS0300LB**	18.5	30.5	70.5	70	0.5	3
	3	Est.	★	**MAE0310MB**	9.9	24.6	64.6	64	0.6	4
3.1	3	Int.	□	**MAS0310MB**	9.9	24.6	64.6	64	0.6	4
	6	Int.	★	**MAS0310LB**	19.2	34.6	74.6	74	0.6	4
	3	Est.	★	**MAE0320MB**	10.2	24.6	64.6	64	0.6	4
3.2	3	Int.	□	**MAS0320MB**	10.2	24.6	64.6	64	0.6	4
	6	Int.	★	**MAS0320LB**	19.8	34.6	74.6	74	0.6	4
	3	Est.	★	**MAE0330MB**	10.5	24.6	64.6	64	0.6	4
3.3	3	Int.	□	**MAS0330MB**	10.5	24.6	64.6	64	0.6	4
	6	Int.	●	**MAS0330LB**	20.4	34.6	74.6	74	0.6	4
	3	Est.	★	**MAE0340MB**	10.8	24.6	64.6	64	0.6	4
3.4	3	Int.	□	**MAS0340MB**	10.8	24.6	64.6	64	0.6	4
	6	Int.	★	**MAS0340LB**	21.0	34.6	74.6	74	0.6	4
	3	Est.	★	**MAE0350MB**	11.1	24.6	64.6	64	0.6	4
3.5	3	Int.	□	**MAS0350MB**	11.1	24.6	64.6	64	0.6	4
	6	Int.	●	**MAS0350LB**	21.6	34.6	74.6	74	0.6	4
	3	Est.	★	**MAE0360MB**	11.5	28.7	68.7	68	0.7	4
3.6	3	Int.	□	**MAS0360MB**	11.5	28.7	68.7	68	0.7	4
	6	Int.	★	**MAS0360LB**	22.3	40.7	80.7	80	0.7	4
	3	Est.	★	***MAE0365MB**	11.7	28.7	68.7	68	0.7	4
3.65	3	Int.	□	***MAS0365MB**	11.7	28.7	68.7	68	0.7	4
	6	Int.	●	***MAS0365LB**	22.6	40.7	80.7	80	0.7	4
	3	Est.	★	**MAE0370MB**	11.8	28.7	68.7	68	0.7	4
3.7	3	Int.	□	**MAS0370MB**	11.8	28.7	68.7	68	0.7	4
	6	Int.	★	**MAS0370LB**	22.9	40.7	80.7	80	0.7	4
	3	Est.	★	**MAE0380MB**	12.1	28.7	68.7	68	0.7	4
3.8	3	Int.	□	**MAS0380MB**	12.1	28.7	68.7	68	0.7	4
	6	Int.	★	**MAS0380LB**	23.5	40.7	80.7	80	0.7	4
	3	Est.	★	**MAE0390MB**	12.4	28.7	68.7	68	0.7	4
3.9	3	Int.	□	**MAS0390MB**	12.4	28.7	68.7	68	0.7	4
	6	Int.	★	**MAS0390LB**	24.1	40.7	80.7	80	0.7	4
	3	Est.	★	**MAE0400MB**	12.7	28.7	68.7	68	0.7	4
4.0	3	Int.	□	**MAS0400MB**	12.7	28.7	68.7	68	0.7	4
	6	Int.	●	**MAS0400LB**	24.7	40.7	80.7	80	0.7	4
	3	Est.	★	**MAE0410MB**	13.0	31.7	71.7	71	0.7	5
4.1	3	Int.	□	**MAS0410MB**	13.0	31.7	71.7	71	0.7	5
	6	Int.	★	**MAS0410LB**	25.3	44.7	84.7	84	0.7	5
	3	Est.	★	**MAE0420MB**	13.4	31.8	71.8	71	0.8	5
4.2	3	Int.	□	**MAS0420MB**	13.4	31.8	71.8	71	0.8	5
	6	Int.	●	**MAS0420LB**	26.0	44.8	84.8	84	0.8	5
	3	Est.	★	**MAE0430MB**	13.7	31.8	71.8	71	0.8	5
4.3	3	Int.	□	**MAS0430MB**	13.7	31.8	71.8	71	0.8	5
	6	Int.	★	**MAS0430LB**	26.6	44.8	84.8	84	0.8	5
	3	Est.	★	**MAE0440MB**	14.0	31.8	71.8	71	0.8	5
4.4	3	Int.	□	**MAS0440MB**	14.0	31.8	71.8	71	0.8	5
	6	Int.	★	**MAS0440LB**	27.2	44.8	84.8	84	0.8	5
	3	Est.	★	**MAE0450MB**	14.3	31.8	71.8	71	0.8	5
4.5	3	Int.	□	**MAS0450MB**	14.3	31.8	71.8	71	0.8	5
	6	Int.	★	**MAS0450LB**	27.8	44.8	84.8	84	0.8	5
	3	Est.	★	***MAE0460MB**	14.6	33.8	73.8	73	0.8	5
4.6	3	Int.	□	***MAS0460MB**	14.6	33.8	73.8	73	0.8	5
	6	Int.	●	***MAS0460LB**	28.4	48.8	88.8	88	0.8	5
	3	Est.	★	**MAE0470MB**	15.0	33.9	73.9	73	0.9	5
4.7	3	Int.	□	**MAS0470MB**	15.0	33.9	73.9	73	0.9	5
	6	Int.	★	**MAS0470LB**	29.1	48.9	88.9	88	0.9	5
	3	Est.	★	**MAE0480MB**	15.3	33.9	73.9	73	0.9	5
4.8	3	Int.	□	**MAS0480MB**	15.3	33.9	73.9	73	0.9	5
	6	Int.	★	**MAS0480LB**	29.7	48.9	88.9	88	0.9	5
	3	Est.	★	**MAE0490MB**	15.6	33.9	73.9	73	0.9	5
4.9	3	Int.	□	**MAS0490MB**	15.6	33.9	73.9	73	0.9	5
	6	Int.	★	**MAS0490LB**	30.3	48.9	88.9	88	0.9	5
	3	Est.	★	**MAE0500MB**	15.9	33.9	73.9	73	0.9	5
5.0	3	Int.	●	**MAS0500MB**	15.9	33.9	73.9	73	0.9	5
	6	Int.	●	**MAS0500LB**	30.9	48.9	88.9	88	0.9	5
	3	Est.	★	**MAE0510MB**	16.2	36.9	76.9	76	0.9	6
5.1	3	Int.	□	**MAS0510MB**	16.2	36.9	76.9	76	0.9	6
	6	Int.	★	**MAS0510LB**	31.5	52.9	92.9	92	0.9	6
	3	Est.	★	**MAE0520MB**	16.5	36.9	76.9	76	0.9	6
5.2	3	Int.	□	**MAS0520MB**	16.5	36.9	76.9	76	0.9	6
	6	Int.	●	**MAS0520LB**	32.1	52.9	92.9	92	0.9	6
	3	Est.	★	**MAE0530MB**	16.9	37.0	77.0	76	1.0	6
5.3	3	Int.	□	**MAS0530MB**	16.9	37.0	77.0	76	1.0	6
	6	Int.	★	**MAS0530LB**	32.8	53.0	93.0	92	1.0	6
	3	Est.	★	**MAE0540MB**	17.2	37.0	77.0	76	1.0	6
5.4	3	Int.	□	**MAS0540MB**	17.2	37.0	77.0	76	1.0	6
	6	Int.	★	**MAS0540LB**	33.4	53.0	93.0	92	1.0	6

★ : Dimensioni standard fori per filettatura a rullatura.

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	Refrigerante (Int./Est.)	HTi10	Codice di ordinazione	Dimensioni (mm) LU	LCF	OAL	LF	PL	DCONMS
	3	Est.	★	* MAE0550MB	17.5	37.0	77.0	76	1.0	6
5.5	3	Int.	★	* MAS0550MB	17.5	37.0	77.0	76	1.0	6
	6	Int.	●	* MAS0550LB	34.0	53.0	93.0	92	1.0	6
	3	Est.	★	MAE0560MB	17.8	40.0	80.0	79	1.0	6
5.6	3	Int.	□	MAS0560MB	17.8	40.0	80.0	79	1.0	6
	6	Int.	★	MAS0560LB	34.6	58.0	98.0	97	1.0	6
	3	Est.	★	MAE0570MB	18.1	40.0	80.0	79	1.0	6
5.7	3	Int.	□	MAS0570MB	18.1	40.0	80.0	79	1.0	6
	6	Int.	★	MAS0570LB	35.2	58.0	98.0	97	1.0	6
	3	Est.	★	MAE0580MB	18.5	40.1	80.1	79	1.1	6
5.8	3	Int.	□	MAS0580MB	18.5	40.1	80.1	79	1.1	6
	6	Int.	★	MAS0580LB	35.9	58.1	98.1	97	1.1	6
	3	Est.	★	MAE0590MB	18.8	40.1	80.1	79	1.1	6
5.9	3	Int.	□	MAS0590MB	18.8	40.1	80.1	79	1.1	6
	6	Int.	★	MAS0590LB	36.5	58.1	98.1	97	1.1	6
	3	Est.	★	MAE0600MB	19.1	40.1	80.1	79	1.1	6
6.0	3	Int.	●	MAS0600MB	19.1	40.1	80.1	79	1.1	6
	6	Int.	●	MAS0600LB	37.1	58.1	98.1	97	1.1	6
	3	Est.	★	MAE0610MB	19.4	43.1	85.1	84	1.1	7
6.1	3	Int.	□	MAS0610MB	19.4	43.1	85.1	84	1.1	7
	6	Int.	★	MAS0610LB	37.7	63.1	105.1	104	1.1	7
	3	Est.	★	MAE0620MB	19.7	43.1	85.1	84	1.1	7
6.2	3	Int.	□	MAS0620MB	19.7	43.1	85.1	84	1.1	7
	6	Int.	★	MAS0620LB	38.3	63.1	105.1	104	1.1	7
	3	Est.	★	MAE0630MB	20.0	43.1	85.1	84	1.1	7
6.3	3	Int.	□	MAS0630MB	20.0	43.1	85.1	84	1.1	7
	6	Int.	★	MAS0630LB	38.9	63.1	105.1	104	1.1	7
	3	Est.	★	MAE0640MB	20.4	43.2	85.2	84	1.2	7
6.4	3	Int.	□	MAS0640MB	20.4	43.2	85.2	84	1.2	7
	6	Int.	★	MAS0640LB	39.6	63.2	105.2	104	1.2	7
	3	Est.	★	MAE0650MB	20.7	43.2	85.2	84	1.2	7
6.5	3	Int.	★	MAS0650MB	20.7	43.2	85.2	84	1.2	7
	6	Int.	●	MAS0650LB	40.2	63.2	105.2	104	1.2	7
	3	Est.	★	MAE0660MB	21.0	43.2	85.2	84	1.2	7
6.6	3	Int.	□	MAS0660MB	21.0	43.2	85.2	84	1.2	7
	6	Int.	★	MAS0660LB	40.8	66.2	108.2	107	1.2	7
	3	Est.	★	MAE0670MB	21.3	43.2	85.2	84	1.2	7
6.7	3	Int.	□	MAS0670MB	21.3	43.2	85.2	84	1.2	7
	6	Int.	●	MAS0670LB	41.4	66.2	108.2	107	1.2	7
	3	Est.	★	MAE0680MB	21.6	43.2	85.2	84	1.2	7
6.8	3	Int.	★	MAS0680MB	21.6	43.2	85.2	84	1.2	7
	6	Int.	●	MAS0680LB	42.0	66.2	108.2	107	1.2	7
	3	Est.	★	MAE0690MB	22.0	43.3	85.3	84	1.3	7
6.9	3	Int.	□	MAS0690MB	22.0	43.3	85.3	84	1.3	7
	6	Int.	★	MAS0690LB	42.7	66.3	108.3	107	1.3	7
	3	Est.	★	MAE0700MB	22.3	43.3	85.3	84	1.3	7
7.0	3	Int.	★	MAS0700MB	22.3	43.3	85.3	84	1.3	7
	6	Int.	●	MAS0700LB	43.3	66.3	108.3	107	1.3	7
	3	Est.	★	MAE0710MB	22.6	49.3	91.3	90	1.3	8
7.1	3	Int.	□	MAS0710MB	22.6	49.3	91.3	90	1.3	8
	6	Int.	★	MAS0710LB	43.9	69.3	111.3	110	1.3	8
	3	Est.	★	MAE0720MB	22.9	49.3	91.3	90	1.3	8
7.2	3	Int.	□	MAS0720MB	22.9	49.3	91.3	90	1.3	8
	6	Int.	★	MAS0720LB	44.5	69.3	111.3	110	1.3	8
	3	Est.	★	MAE0730MB	23.2	49.3	91.3	90	1.3	8
7.3	3	Int.	□	MAS0730MB	23.2	49.3	91.3	90	1.3	8
	6	Int.	★	MAS0730LB	45.1	69.3	111.3	110	1.3	8
	3	Est.	★	* MAE0735MB	23.4	49.3	91.3	90	1.3	8
7.35	3	Int.	★	* MAS0735MB	23.4	49.3	91.3	90	1.3	8
	6	Int.	●	* MAS0735LB	45.4	69.3	111.3	110	1.3	8
	3	Est.	★	MAE0740MB	23.5	49.3	91.3	90	1.3	8
7.4	3	Int.	□	MAS0740MB	23.5	49.3	91.3	90	1.3	8
	6	Int.	★	MAS0740LB	45.7	69.3	111.3	110	1.3	8
	3	Est.	★	MAE0750MB	23.9	49.4	91.4	90	1.4	8
7.5	3	Int.	□	MAS0750MB	23.9	49.4	91.4	90	1.4	8
	6	Int.	★	MAS0750LB	46.4	69.4	111.4	110	1.4	8
	3	Est.	★	MAE0760MB	24.2	49.4	91.4	90	1.4	8
7.6	3	Int.	□	MAS0760MB	24.2	49.4	91.4	90	1.4	8
	6	Int.	★	MAS0760LB	47.0	73.4	115.4	114	1.4	8
	3	Est.	★	MAE0770MB	24.5	49.4	91.4	90	1.4	8
7.7	3	Int.	□	MAS0770MB	24.5	49.4	91.4	90	1.4	8
	6	Int.	★	MAS0770LB	47.6	73.4	115.4	114	1.4	8
	3	Est.	★	MAE0780MB	24.8	49.4	91.4	90	1.4	8
7.8	3	Int.	□	MAS0780MB	24.8	49.4	91.4	90	1.4	8
	6	Int.	★	MAS0780LB	48.2	73.4	115.4	114	1.4	8
	3	Est.	★	MAE0790MB	25.1	49.4	91.4	90	1.4	8
7.9	3	Int.	□	MAS0790MB	25.1	49.4	91.4	90	1.4	8
	6	Int.	★	MAS0790LB	48.8	73.4	115.4	114	1.4	8
	3	Est.	★	MAE0800MB	25.5	49.5	91.5	90	1.5	8
8.0	3	Int.	●	MAS0800MB	25.5	49.5	91.5	90	1.5	8
	6	Int.	●	MAS0800LB	49.5	73.5	115.5	114	1.5	8
	3	Est.	★	MAE0810MB	25.8	51.5	95.5	94	1.5	9
8.1	3	Int.	□	MAS0810MB	25.8	51.5	95.5	94	1.5	9
	6	Int.	★	MAS0810LB	50.1	76.5	120.5	119	1.5	9
	3	Est.	★	MAE0820MB	26.1	51.5	95.5	94	1.5	9
8.2	3	Int.	□	MAS0820MB	26.1	51.5	95.5	94	1.5	9
	6	Int.	★	MAS0820LB	50.7	76.5	120.5	119	1.5	9
	3	Est.	★	MAE0830MB	26.4	51.5	95.5	94	1.5	9
8.3	3	Int.	□	MAS0830MB	26.4	51.5	95.5	94	1.5	9
	6	Int.	★	MAS0830LB	51.3	76.5	120.5	119	1.5	9
	3	Est.	★	MAE0840MB	26.7	51.5	95.5	94	1.5	9
8.4	3	Int.	□	MAS0840MB	26.7	51.5	95.5	94	1.5	9
	6	Int.	★	MAS0840LB	51.9	76.5	120.5	119	1.5	9
	3	Est.	★	MAE0850MB	27.0	51.5	95.5	94	1.5	9
8.5	3	Int.	●	MAS0850MB	27.0	51.5	95.5	94	1.5	9
	6	Int.	★	MAS0850LB	52.5	76.5	120.5	119	1.5	9

★ : Dimensioni standard fori per filettatura a rullatura.

PARAMETRI DI TAGLIO ➤ M127
DATI TECNICI ➤ P001

MAE, MAS

DC (mm)	Profondità foro (L/D)	Refrigerante (Int./Est.)	HTi10	Codice di ordinazione	Dimensioni (mm) LU	LCF	OAL	LF	PL	DCONMS
	3	Est.	★	MAE0860MB	27.4	51.6	95.6	94	1.6	9
8.6	3	Int.	□	MAS0860MB	27.4	51.6	95.6	94	1.6	9
	6	Int.	★	MAS0860LB	53.2	78.6	122.6	121	1.6	9
	3	Est.	★	MAE0870MB	27.7	51.6	95.6	94	1.6	9
8.7	3	Int.	□	MAS0870MB	27.7	51.6	95.6	94	1.6	9
	6	Int.	★	MAS0870LB	53.8	78.6	122.6	121	1.6	9
	3	Est.	★	MAE0880MB	28.0	51.6	95.6	94	1.6	9
8.8	3	Int.	□	MAS0880MB	28.0	51.6	95.6	94	1.6	9
	6	Int.	★	MAS0880LB	54.4	78.6	122.6	121	1.6	9
	3	Est.	★	MAE0890MB	28.3	51.6	95.6	94	1.6	9
8.9	3	Int.	□	MAS0890MB	28.3	51.6	95.6	94	1.6	9
	6	Int.	★	MAS0890LB	55.0	78.6	122.6	121	1.6	9
	3	Est.	★	MAE0900MB	28.6	51.6	95.6	94	1.6	9
9.0	3	Int.	★	MAS0900MB	28.6	51.6	95.6	94	1.6	9
	6	Int.	●	MAS0900LB	55.6	78.6	122.6	121	1.6	9
	3	Est.	★	MAE0910MB	29.0	54.7	98.7	97	1.7	10
9.1	3	Int.	□	MAS0910MB	29.0	54.7	98.7	97	1.7	10
	6	Int.	★	MAS0910LB	56.3	82.7	126.7	125	1.7	10
	3	Est.	★	MAE0920MB	29.3	54.7	98.7	97	1.7	10
9.2	3	Int.	□	MAS0920MB	29.3	54.7	98.7	97	1.7	10
	6	Int.	★	MAS0920LB	56.9	82.7	126.7	125	1.7	10
	3	Est.	★	＊MAE0921MB	29.3	54.7	98.7	97	1.7	10
9.21	3	Int.	★	＊MAS0921MB	29.3	54.7	98.7	97	1.7	10
	6	Int.	★	＊MAS0921LB	57.0	82.7	126.7	125	1.7	10
	3	Est.	★	MAE0930MB	29.6	54.7	98.7	97	1.7	10
9.3	3	Int.	□	MAS0930MB	29.6	54.7	98.7	97	1.7	10
	6	Int.	★	MAS0930LB	57.5	82.7	126.7	125	1.7	10
	3	Est.	★	MAE0940MB	29.9	54.7	98.7	97	1.7	10
9.4	3	Int.	□	MAS0940MB	29.9	54.7	98.7	97	1.7	10
	6	Int.	★	MAS0940LB	58.1	82.7	126.7	125	1.7	10
	3	Est.	★	MAE0950MB	30.2	54.7	98.7	97	1.7	10
9.5	3	Int.	★	MAS0950MB	30.2	54.7	98.7	97	1.7	10
	6	Int.	●	MAS0950LB	58.7	82.7	126.7	125	1.7	10
	3	Est.	★	MAE0960MB	30.5	54.7	98.7	97	1.7	10
9.6	3	Int.	□	MAS0960MB	30.5	54.7	98.7	97	1.7	10
	6	Int.	★	MAS0960LB	59.3	82.7	126.7	125	1.7	10
	3	Est.	★	MAE0970MB	30.9	54.8	98.8	97	1.8	10
9.7	3	Int.	□	MAS0970MB	30.9	54.8	98.8	97	1.8	10
	6	Int.	★	MAS0970LB	60.0	82.8	126.8	125	1.8	10
	3	Est.	★	MAE0980MB	31.2	54.8	98.8	97	1.8	10
9.8	3	Int.	□	MAS0980MB	31.2	54.8	98.8	97	1.8	10
	6	Int.	★	MAS0980LB	60.6	82.8	126.8	125	1.8	10
	3	Est.	★	MAE0990MB	31.5	54.8	98.8	97	1.8	10
9.9	3	Int.	□	MAS0990MB	31.5	54.8	98.8	97	1.8	10
	6	Int.	★	MAS0990LB	61.2	82.8	126.8	125	1.8	10
	3	Est.	★	MAE1000MB	31.8	54.8	98.8	97	1.8	10
10.0	3	Int.	●	MAS1000MB	31.8	54.8	98.8	97	1.8	10
	6	Int.	●	MAS1000LB	61.8	82.8	126.8	125	1.8	10

DC (mm)	Profondità foro (L/D)	Refrigerante (Int./Est.)	HTi10	Codice di ordinazione	Dimensioni (mm) LU	LCF	OAL	LF	PL	DCONMS
	3	Est.	□	MAE1010MB	32.1	56.8	102.8	101	1.8	11
10.1	3	Int.	□	MAS1010MB	32.1	56.8	102.8	101	1.8	11
	6	Int.	□	MAS1010LB	62.4	90.8	136.8	135	1.8	11
	3	Est.	□	MAE1020MB	32.5	56.9	102.9	101	1.9	11
10.2	3	Int.	□	MAS1020MB	32.5	56.9	102.9	101	1.9	11
	6	Int.	□	MAS1020LB	63.1	90.9	136.9	135	1.9	11
	3	Est.	★	MAE1030MB	32.8	56.9	102.9	101	1.9	11
10.3	3	Int.	★	MAS1030MB	32.8	56.9	102.9	101	1.9	11
	6	Int.	●	MAS1030LB	63.7	90.9	136.9	135	1.9	11
	3	Est.	□	MAE1040MB	33.1	56.9	102.9	101	1.9	11
10.4	3	Int.	□	MAS1040MB	33.1	56.9	102.9	101	1.9	11
	6	Int.	□	MAS1040LB	64.3	90.9	136.9	135	1.9	11
	3	Est.	★	MAE1050MB	33.4	56.9	102.9	101	1.9	11
10.5	3	Int.	★	MAS1050MB	33.4	56.9	102.9	101	1.9	11
	6	Int.	●	MAS1050LB	64.9	90.9	136.9	135	1.9	11
	3	Est.	□	MAE1060MB	33.7	56.9	102.9	101	1.9	11
10.6	3	Int.	□	MAS1060MB	33.7	56.9	102.9	101	1.9	11
	6	Int.	□	MAS1060LB	65.5	90.9	136.9	135	1.9	11
	3	Est.	□	MAE1070MB	34.0	56.9	102.9	101	1.9	11
10.7	3	Int.	□	MAS1070MB	34.0	56.9	102.9	101	1.9	11
	6	Int.	□	MAS1070LB	66.1	90.9	136.9	135	1.9	11
	3	Est.	□	MAE1080MB	34.4	57.0	103.0	101	2.0	11
10.8	3	Int.	□	MAS1080MB	34.4	57.0	103.0	101	2.0	11
	6	Int.	□	MAS1080LB	66.8	91.0	137.0	135	2.0	11
	3	Est.	□	MAE1090MB	34.7	57.0	103.0	101	2.0	11
10.9	3	Int.	□	MAS1090MB	34.7	57.0	103.0	101	2.0	11
	6	Int.	□	MAS1090LB	67.4	91.0	137.0	135	2.0	11
	3	Est.	★	MAE1100MB	35.0	57.0	103.0	101	2.0	11
11.0	3	Int.	★	MAS1100MB	35.0	57.0	103.0	101	2.0	11
	6	Int.	●	MAS1100LB	68.0	91.0	137.0	135	2.0	11
	3	Est.	★	＊MAE1108MB	35.2	62.0	108.0	106	2.0	12
11.08	3	Int.	★	＊MAS1108MB	35.2	62.0	108.0	106	2.0	12
	6	Int.	●	＊MAS1108LB	68.5	96.0	142.0	140	2.0	12
	3	Est.	□	MAE1110MB	35.3	62.0	108.0	106	2.0	12
11.1	3	Int.	□	MAS1110MB	35.3	62.0	108.0	106	2.0	12
	6	Int.	□	MAS1110LB	68.6	96.0	142.0	140	2.0	12
	3	Est.	□	MAE1120MB	35.6	62.0	108.0	106	2.0	12
11.2	3	Int.	□	MAS1120MB	35.6	62.0	108.0	106	2.0	12
	6	Int.	□	MAS1120LB	69.2	96.0	142.0	140	2.0	12
	3	Est.	□	MAE1130MB	36.0	62.1	108.1	106	2.1	12
11.3	3	Int.	□	MAS1130MB	36.0	62.1	108.1	106	2.1	12
	6	Int.	□	MAS1130LB	69.9	96.1	142.1	140	2.1	12
	3	Est.	□	MAE1140MB	36.3	62.1	108.1	106	2.1	12
11.4	3	Int.	□	MAS1140MB	36.3	62.1	108.1	106	2.1	12
	6	Int.	□	MAS1140LB	70.5	96.1	142.1	140	2.1	12
	3	Est.	□	MAE1150MB	36.6	62.1	108.1	106	2.1	12
11.5	3	Int.	□	MAS1150MB	36.6	62.1	108.1	106	2.1	12
	6	Int.	□	MAS1150LB	71.1	96.1	142.1	140	2.1	12

＊ : Dimensioni standard fori per filettatura a rullatura.

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	Refrigerante (Int./Est.)	HTi10	Codice di ordinazione	Dimensioni (mm) LU	LCF	OAL	LF	PL	DCONMS
	3	Est.	□	**MAE1160MB**	36.9	62.1	108.1	106	2.1	12
11.6	3	Int.	□	**MAS1160MB**	36.9	62.1	108.1	106	2.1	12
	6	Int.	□	**MAS1160LB**	71.7	96.1	142.1	140	2.1	12
	3	Est.	□	**MAE1170MB**	37.2	62.1	108.1	106	2.1	12
11.7	3	Int.	□	**MAS1170MB**	37.2	62.1	108.1	106	2.1	12
	6	Int.	□	**MAS1170LB**	72.3	96.1	142.1	140	2.1	12
	3	Est.	□	**MAE1180MB**	37.5	62.1	108.1	106	2.1	12
11.8	3	Int.	□	**MAS1180MB**	37.5	62.1	108.1	106	2.1	12
	6	Int.	□	**MAS1180LB**	72.9	96.1	142.1	140	2.1	12
	3	Est.	□	**MAE1190MB**	37.9	62.2	108.2	106	2.2	12
11.9	3	Int.	□	**MAS1190MB**	37.9	62.2	108.2	106	2.2	12
	6	Int.	□	**MAS1190LB**	73.6	96.2	142.2	140	2.2	12
	3	Est.	★	**MAE1200MB**	38.2	62.2	108.2	106	2.2	12
12.0	3	Int.	●	**MAS1200MB**	38.2	62.2	108.2	106	2.2	12
	6	Int.	●	**MAS1200LB**	74.2	96.2	142.2	140	2.2	12
	3	Est.	□	**MAE1210MB**	38.5	67.2	117.2	115	2.2	13
12.1	3	Int.	□	**MAS1210MB**	38.5	67.2	117.2	115	2.2	13
	6	Int.	□	**MAS1210LB**	74.8	102.2	152.2	150	2.2	13
	3	Est.	□	**MAE1220MB**	38.8	67.2	117.2	115	2.2	13
12.2	3	Int.	□	**MAS1220MB**	38.8	67.2	117.2	115	2.2	13
	6	Int.	□	**MAS1220LB**	75.4	102.2	152.2	150	2.2	13
	3	Est.	□	**MAE1230MB**	39.1	67.2	117.2	115	2.2	13
12.3	3	Int.	□	**MAS1230MB**	39.1	67.2	117.2	115	2.2	13
	6	Int.	□	**MAS1230LB**	76.0	102.2	152.2	150	2.2	13
	3	Est.	□	**MAE1240MB**	39.5	67.3	117.3	115	2.3	13
12.4	3	Int.	□	**MAS1240MB**	39.5	67.3	117.3	115	2.3	13
	6	Int.	□	**MAS1240LB**	76.7	102.3	152.3	150	2.3	13
	3	Est.	★	**MAE1250MB**	39.8	67.3	117.3	115	2.3	13
12.5	3	Int.	●	**MAS1250MB**	39.8	67.3	117.3	115	2.3	13
	6	Int.	●	**MAS1250LB**	77.3	102.3	152.3	150	2.3	13
	3	Est.	□	**MAE1260MB**	40.1	67.3	117.3	115	2.3	13
12.6	3	Int.	□	**MAS1260MB**	40.1	67.3	117.3	115	2.3	13
	6	Int.	□	**MAS1260LB**	77.9	102.3	152.3	150	2.3	13
	3	Est.	□	**MAE1270MB**	40.4	67.3	117.3	115	2.3	13
12.7	3	Int.	□	**MAS1270MB**	40.4	67.3	117.3	115	2.3	13
	6	Int.	□	**MAS1270LB**	78.5	102.3	152.3	150	2.3	13
	3	Est.	□	**MAE1280MB**	40.7	67.3	117.3	115	2.3	13
12.8	3	Int.	□	**MAS1280MB**	40.7	67.3	117.3	115	2.3	13
	6	Int.	□	**MAS1280LB**	79.1	102.3	152.3	150	2.3	13
	3	Est.	□	**MAE1290MB**	41.0	67.3	117.3	115	2.3	13
12.9	3	Int.	□	**MAS1290MB**	41.0	67.3	117.3	115	2.3	13
	6	Int.	□	**MAS1290LB**	79.7	102.3	152.3	150	2.3	13
	3	Est.	★	***MAE1296MB**	41.3	67.4	117.4	115	2.4	13
12.96	3	Int.	★	***MAS1296MB**	41.3	67.4	117.4	115	2.4	13
	6	Int.	★	***MAS1296LB**	80.2	102.4	152.4	150	2.4	13
	3	Est.	★	**MAE1300MB**	41.4	67.4	117.4	115	2.4	13
13.0	3	Int.	★	**MAS1300MB**	41.4	67.4	117.4	115	2.4	13
	6	Int.	●	**MAS1300LB**	80.4	102.4	152.4	150	2.4	13
	3	Est.	□	**MAE1310MB**	41.7	72.4	122.4	120	2.4	14
13.1	3	Int.	□	**MAS1310MB**	41.7	72.4	122.4	120	2.4	14
	6	Int.	□	**MAS1310LB**	81.0	112.4	162.4	160	2.4	14
	3	Est.	□	**MAE1320MB**	42.0	72.4	122.4	120	2.4	14
13.2	3	Int.	□	**MAS1320MB**	42.0	72.4	122.4	120	2.4	14
	6	Int.	□	**MAS1320LB**	81.6	112.4	162.4	160	2.4	14
	3	Est.	□	**MAE1330MB**	42.3	72.4	122.4	120	2.4	14
13.3	3	Int.	□	**MAS1330MB**	42.3	72.4	122.4	120	2.4	14
	6	Int.	□	**MAS1330LB**	82.2	112.4	162.4	160	2.4	14
	3	Est.	□	**MAE1340MB**	42.6	72.4	122.4	120	2.4	14
13.4	3	Int.	□	**MAS1340MB**	42.6	72.4	122.4	120	2.4	14
	6	Int.	□	**MAS1340LB**	82.8	112.4	162.4	160	2.4	14
	3	Est.	★	**MAE1350MB**	43.0	72.5	122.5	120	2.5	14
13.5	3	Int.	★	**MAS1350MB**	43.0	72.5	122.5	120	2.5	14
	6	Int.	★	**MAS1350LB**	83.5	112.5	162.5	160	2.5	14
	3	Est.	□	**MAE1360MB**	43.3	72.5	122.5	120	2.5	14
13.6	3	Int.	□	**MAS1360MB**	43.3	72.5	122.5	120	2.5	14
	6	Int.	□	**MAS1360LB**	84.1	112.5	162.5	160	2.5	14
	3	Est.	□	**MAE1370MB**	43.6	72.5	122.5	120	2.5	14
13.7	3	Int.	□	**MAS1370MB**	43.6	72.5	122.5	120	2.5	14
	6	Int.	□	**MAS1370LB**	84.7	112.5	162.5	160	2.5	14
	3	Est.	□	**MAE1380MB**	43.9	72.5	122.5	120	2.5	14
13.8	3	Int.	□	**MAS1380MB**	43.9	72.5	122.5	120	2.5	14
	6	Int.	□	**MAS1380LB**	85.3	112.5	162.5	160	2.5	14
	3	Est.	□	**MAE1390MB**	44.2	72.5	122.5	120	2.5	14
13.9	3	Int.	□	**MAS1390MB**	44.2	72.5	122.5	120	2.5	14
	6	Int.	□	**MAS1390LB**	85.9	112.5	162.5	160	2.5	14
	3	Est.	★	**MAE1400MB**	44.5	72.5	122.5	120	2.5	14
14.0	3	Int.	●	**MAS1400MB**	44.5	72.5	122.5	120	2.5	14
	6	Int.	●	**MAS1400LB**	86.5	112.5	162.5	160	2.5	14
	3	Est.	□	**MAE1410MB**	44.9	74.6	132.6	130	2.6	15
14.1	3	Int.	□	**MAS1410MB**	44.9	74.6	132.6	130	2.6	15
	6	Int.	□	**MAS1410LB**	87.2	117.6	175.6	173	2.6	15
	3	Est.	□	**MAE1420MB**	45.2	74.6	132.6	130	2.6	15
14.2	3	Int.	□	**MAS1420MB**	45.2	74.6	132.6	130	2.6	15
	6	Int.	□	**MAS1420LB**	87.8	117.6	175.6	173	2.6	15
	3	Est.	□	**MAE1430MB**	45.5	74.6	132.6	130	2.6	15
14.3	3	Int.	□	**MAS1430MB**	45.5	74.6	132.6	130	2.6	15
	6	Int.	□	**MAS1430LB**	88.4	117.6	175.6	173	2.6	15
	3	Est.	□	**MAE1440MB**	45.8	74.6	132.6	130	2.6	15
14.4	3	Int.	□	**MAS1440MB**	45.8	74.6	132.6	130	2.6	15
	6	Int.	□	**MAS1440LB**	89.0	117.6	175.6	173	2.6	15
	3	Est.	□	**MAE1450MB**	46.1	74.6	132.6	130	2.6	15
14.5	3	Int.	□	**MAS1450MB**	46.1	74.6	132.6	130	2.6	15
	6	Int.	□	**MAS1450LB**	89.6	117.6	175.6	173	2.6	15
	3	Est.	□	**MAE1460MB**	46.5	74.7	132.7	130	2.7	15
14.6	3	Int.	□	**MAS1460MB**	46.5	74.7	132.7	130	2.7	15
	6	Int.	□	**MAS1460LB**	90.3	117.7	175.7	173	2.7	15

★ : Dimensioni standard fori per filettatura a rullatura.

PARAMETRI DI TAGLIO ➢ M127
DATI TECNICI ➢ P001

MAE, MAS

DC (mm)	Profondità foro (L/D)	Refrigerante (Int./Est.)	HTi10	Codice di ordinazione	Dimensioni (mm) LU	LCF	OAL	LF	PL	DCONMS
	3	Est.	□	**MAE1470MB**	46.8	74.7	132.7	130	2.7	15
14.7	3	Int.	□	**MAS1470MB**	46.8	74.7	132.7	130	2.7	15
	6	Int.	□	**MAS1470LB**	90.9	117.7	175.7	173	2.7	15
	3	Est.	□	**MAE1480MB**	47.1	74.7	132.7	130	2.7	15
14.8	3	Int.	□	**MAS1480MB**	47.1	74.7	132.7	130	2.7	15
	6	Int.	□	**MAS1480LB**	91.5	117.7	175.7	173	2.7	15
	3	Est.	□	**MAE1490MB**	47.4	74.7	132.7	130	2.7	15
14.9	3	Int.	□	**MAS1490MB**	47.4	74.7	132.7	130	2.7	15
	6	Int.	□	**MAS1490LB**	92.1	117.7	175.7	173	2.7	15
	3	Est.	★	***MAE1496MB**	47.6	74.7	132.7	130	2.7	15
14.96	3	Int.	★	***MAS1496MB**	47.6	74.7	132.7	130	2.7	15
	6	Int.	★	***MAS1496LB**	92.5	117.7	175.7	173	2.7	15
	3	Est.	★	**MAE1500MB**	47.7	74.7	132.7	130	2.7	15
15.0	3	Int.	★	**MAS1500MB**	47.7	74.7	132.7	130	2.7	15
	6	Int.	●	**MAS1500LB**	92.7	117.7	175.7	173	2.7	15
	3	Est.	□	**MAE1510MB**	48.0	78.7	136.7	134	2.7	16
15.1	3	Int.	□	**MAS1510MB**	48.0	78.7	136.7	134	2.7	16
	6	Int.	□	**MAS1510LB**	93.3	122.7	180.7	178	2.7	16
	3	Est.	□	**MAE1520MB**	48.4	78.8	136.8	134	2.8	16
15.2	3	Int.	□	**MAS1520MB**	48.4	78.8	136.8	134	2.8	16
	6	Int.	□	**MAS1520LB**	94.0	122.8	180.8	178	2.8	16
	3	Est.	□	**MAE1530MB**	48.7	78.8	136.8	134	2.8	16
15.3	3	Int.	□	**MAS1530MB**	48.7	78.8	136.8	134	2.8	16
	6	Int.	□	**MAS1530LB**	94.6	122.8	180.8	178	2.8	16
	3	Est.	□	**MAE1540MB**	49.0	78.8	136.8	134	2.8	16
15.4	3	Int.	□	**MAS1540MB**	49.0	78.8	136.8	134	2.8	16
	6	Int.	□	**MAS1540LB**	95.2	122.8	180.8	178	2.8	16
	3	Est.	□	**MAE1550MB**	49.3	78.8	136.8	134	2.8	16
15.5	3	Int.	□	**MAS1550MB**	49.3	78.8	136.8	134	2.8	16
	6	Int.	□	**MAS1550LB**	95.8	122.8	180.8	178	2.8	16
	3	Est.	□	**MAE1560MB**	49.6	78.8	136.8	134	2.8	16
15.6	3	Int.	□	**MAS1560MB**	49.6	78.8	136.8	134	2.8	16
	6	Int.	□	**MAS1560LB**	96.4	122.8	180.8	178	2.8	16
	3	Est.	□	**MAE1570MB**	50.0	78.9	136.9	134	2.9	16
15.7	3	Int.	□	**MAS1570MB**	50.0	78.9	136.9	134	2.9	16
	6	Int.	□	**MAS1570LB**	97.1	122.9	180.9	178	2.9	16
	3	Est.	□	**MAE1580MB**	50.3	78.9	136.9	134	2.9	16
15.8	3	Int.	□	**MAS1580MB**	50.3	78.9	136.9	134	2.9	16
	6	Int.	□	**MAS1580LB**	97.7	122.9	180.9	178	2.9	16
	3	Est.	□	**MAE1590MB**	50.6	78.9	136.9	134	2.9	16
15.9	3	Int.	□	**MAS1590MB**	50.6	78.9	136.9	134	2.9	16
	6	Int.	□	**MAS1590LB**	98.3	122.9	180.9	178	2.9	16
	3	Est.	★	**MAE1600MB**	50.9	78.9	136.9	134	2.9	16
16.0	3	Int.	★	**MAS1600MB**	50.9	78.9	136.9	134	2.9	16
	6	Int.	●	**MAS1600LB**	98.9	122.9	180.9	178	2.9	16

* : Dimensioni standard fori per filettatura a rullatura.

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

PARAMETRI DI TAGLIO CONSIGLIATI

Tipo		Materiale da lavorare	Diam. Punta **Ø 3.0—Ø 6.0**		Diam. Punta **Ø 6.1—Ø 10.0**		Diam. Punta **Ø 10.1—Ø 16.0**	
			Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)
MAE	N	Lega di alluminio	90 (40—140)	0.15 (0.05—0.3)	100 (50—150)	0.2 (0.1—0.3)	120 (60—170)	0.25 (0.1—0.4)
		Lega di alluminio fusa	100 (60—150)	0.12 (0.05—0.25)	110 (70—160)	0.15 (0.05—0.25)	130 (80—180)	0.2 (0.1—0.3)
	K	Ghisa grigia	40 (20—60)	0.15 (0.1—0.2)	60 (40—80)	0.2 (0.1—0.3)	80 (60—100)	0.3 (0.2—0.4)
		Ghisa sferoidale	30 (20—40)	0.1 (0.05—0.15)	40 (20—60)	0.12 (0.05—0.2)	60 (40—80)	0.2 (0.1—0.3)
MAS	N	Lega di alluminio	100 (60—150)	0.15 (0.05—0.3)	120 (80—170)	0.2 (0.1—0.3)	150 (100—200)	0.25 (0.1—0.4)
		Lega di alluminio fusa	120 (80—170)	0.12 (0.05—0.25)	150 (100—180)	0.15 (0.05—0.25)	160 (120—200)	0.2 (0.1—0.3)
	K	Ghisa grigia	60 (40—80)	0.15 (0.1—0.2)	80 (60—110)	0.2 (0.1—0.3)	100 (70—130)	0.3 (0.2—0.4)
		Ghisa sferoidale	45 (30—60)	0.1 (0.05—0.15)	60 (40—80)	0.12 (0.05—0.2)	80 (60—100)	0.2 (0.1—0.3)

■ DIAMETRI FORI E PUNTE PER MASCHIATURE FILETTATE

Misura del filetto	Maschiature filettate			Maschiatura filettata rullata		
	Diametro della punta **(DC)**	Tolleranza diametro foro		Diametro della punta **(DC)**	Tolleranza diametro foro	
		min.	max.		min.	max.
M4x0.7	**3.3**	3.242	3.422	**3.65**	3.65	3.70
M5x0.8	**4.2**	4.134	4.334	**4.60**	4.59	4.66
M6x1.0	**5.0**	4.917	5.153	**5.50**	5.48	5.57
M8x1.25	**6.8**	6.647	6.912	**7.35**	7.34	7.41
M10x1.5	**8.5**	8.376	8.676	**9.21**	9.18	9.28
M12x1.75	**10.3**	10.106	10.441	**11.08**	11.05	11.15
M14x2	**12.0**	11.835	12.210	**12.96**	12.92	13.04
M16x2	**14.0**	13.835	14.210	**14.96**	14.92	15.04

FORATURA (METALLO DURO)

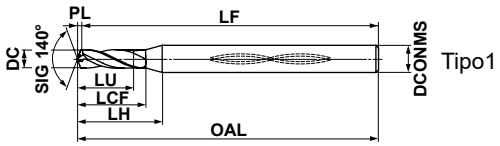
MHS

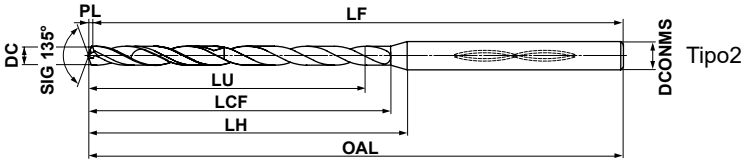
- Elevata resistenza al carico assiale e unico doppio margine.
- Foratura continua con lunga durata dell'utensile per acciaio temprato 35HRC-55HRC.

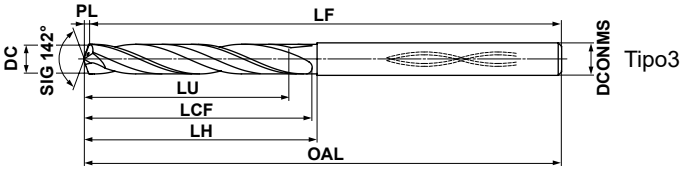
P | M | K | N | S | H

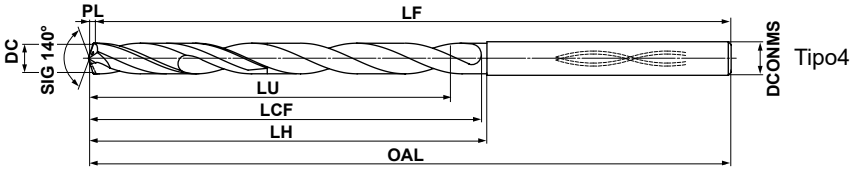
Refrigerante interno











DC≤3	3<DC≤6	6<DC≤10	10<DC≤12
+0.010 −0.002	+0.010 −0.002	+0.010 −0.005	+0.010 −0.008
DCONMS=3	3<DCONMS≤6	6<DCONMS≤10	10<DCONMS≤12
0 −0.006	0 −0.008	0 −0.009	0 −0.011

- Le punte MHS sono adatte per l'utilizzo con mandrini a calettamento a caldo.
- Utilizzare la punta più corta dello stesso diametro come punta pilota.

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	3	★	MHS0095L006B	3.0	6.2	10.0	60.2	60	0.17	3	1
	6	★	MHS0095L009B	5.9	9.2	13.0	60.2	60	0.17	3	2
0.95	13	★	MHS0095L015B	12.5	15.2	19.0	60.2	60	0.17	3	2
	23	★	MHS0095L025B	22.0	25.2	29.0	60.2	60	0.17	3	2
	30	★	MHS0095L035B	28.7	35.2	39.0	80.2	80	0.17	3	2
	3	●	MHS0100L006B	3.2	6.2	9.9	60.2	60	0.2	3	1
	6	●	MHS0100L009B	6.2	9.2	12.9	60.2	60	0.2	3	2
1.00	12	★	MHS0100L015B	12.2	15.2	18.9	60.2	60	0.2	3	2
	22	●	MHS0100L025B	22.2	25.2	28.9	60.2	60	0.2	3	2
	30	●	MHS0100L035B	30.2	35.2	38.9	80.2	80	0.2	3	2
	2	●	MHS0110L006B	2.4	6.2	9.7	60.2	60	0.2	3	1
	5	★	MHS0110L009B	5.7	9.2	12.7	60.2	60	0.2	3	2
1.10	11	●	MHS0110L015B	12.3	15.2	18.7	60.2	60	0.2	3	2
	20	●	MHS0110L025B	22.2	25.2	28.7	60.2	60	0.2	3	2
	29	●	MHS0110L035B	32.1	35.2	38.7	80.2	80	0.2	3	2
	2	●	MHS0120L006B	2.6	6.2	9.6	60.2	60	0.2	3	1
	5	★	MHS0120L009B	6.2	9.2	12.6	60.2	60	0.2	3	2
1.20	10	●	MHS0120L015B	12.2	15.2	18.6	60.2	60	0.2	3	2
	18	●	MHS0120L025B	21.8	25.2	28.6	60.2	60	0.2	3	2
	26	●	MHS0120L035B	31.4	35.2	38.6	80.2	80	0.2	3	2
	2	●	MHS0130L007B	2.8	7.2	10.4	60.2	60	0.2	3	1
	5	★	MHS0130L011B	6.8	11.3	14.5	60.3	60	0.3	3	2
1.30	12	●	MHS0130L020B	15.9	20.3	23.5	60.3	60	0.3	3	2
	20	●	MHS0130L030B	26.3	30.3	33.5	80.3	80	0.3	3	2
	30	●	MHS0130L045B	39.3	45.3	48.5	80.3	80	0.3	3	2
	2	●	MHS0140L007B	3.1	7.3	10.3	60.3	60	0.3	3	1
	5	★	MHS0140L011B	7.3	11.3	14.3	60.3	60	0.3	3	2
1.40	11	●	MHS0140L020B	15.7	20.3	23.3	60.3	60	0.3	3	2
	18	★	MHS0140L030B	25.5	30.3	33.3	80.3	80	0.3	3	2
	29	★	MHS0140L045B	40.9	45.3	48.3	80.3	80	0.3	3	2
	3	●	MHS0145L008B	4.7	8.3	11.2	60.3	60	0.3	3	1
	6	★	MHS0145L013B	9.0	13.3	16.2	60.3	60	0.3	3	2
1.45	11	★	MHS0145L020B	16.3	20.3	23.2	60.3	60	0.3	3	2
	21	●	MHS0145L035B	30.8	35.3	38.2	80.3	80	0.3	3	2
	30	★	MHS0145L055B	43.8	55.3	58.2	100.3	100	0.3	3	2
	2	●	MHS0150L008B	3.3	8.3	11.1	60.3	60	0.3	3	1
	6	★	MHS0150L013B	9.3	13.3	16.1	60.3	60	0.3	3	2
1.50	10	●	MHS0150L020B	15.3	20.3	23.1	60.3	60	0.3	3	2
	20	●	MHS0150L035B	30.3	35.3	38.1	80.3	80	0.3	3	2
	30	●	MHS0150L055B	45.3	55.3	58.1	100.3	100	0.3	3	2
	2	●	MHS0160L008B	3.5	8.3	10.9	60.3	60	0.3	3	1
	5	★	MHS0160L013B	8.3	13.3	15.9	60.3	60	0.3	3	2
1.60	10	●	MHS0160L020B	16.3	20.3	22.9	60.3	60	0.3	3	2
	19	●	MHS0160L035B	30.7	35.3	37.9	80.3	80	0.3	3	2
	30	●	MHS0160L055B	48.3	55.3	57.9	100.3	100	0.3	3	2
	2	●	MHS0170L008B	3.7	8.3	10.7	60.3	60	0.3	3	1
	5	★	MHS0170L013B	8.9	13.4	15.8	60.4	60	0.4	3	2
1.70	9	●	MHS0170L020B	15.7	20.4	22.8	60.4	60	0.4	3	2
	18	●	MHS0170L035B	31.0	35.4	37.8	80.4	80	0.4	3	2
	29	●	MHS0170L055B	49.7	55.4	57.8	100.4	100	0.4	3	2

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
1.80	3	●	MHS0180L010B	5.7	10.3	12.5	60.3	60	0.3	3	1
	5	★	MHS0180L015B	9.4	15.4	17.6	60.4	60	0.4	3	2
	11	●	MHS0180L025B	20.2	25.4	27.6	60.4	60	0.4	3	2
	22	●	MHS0180L045B	40.0	45.4	47.6	80.4	80	0.4	3	2
	30	●	MHS0180L065B	54.4	65.4	67.6	100.4	100	0.4	3	2
1.90	2	●	MHS0190L010B	4.1	10.3	12.4	60.3	60	0.3	3	1
	5	★	MHS0190L015B	9.9	15.4	17.5	60.4	60	0.4	3	2
	10	●	MHS0190L025B	19.4	25.4	27.5	60.4	60	0.4	3	2
	21	●	MHS0190L045B	40.3	45.4	47.5	80.4	80	0.4	3	2
	30	●	MHS0190L065B	57.4	65.4	67.5	100.4	100	0.4	3	2
1.95	2	●	MHS0195L010B	4.3	10.4	12.4	60.4	60	0.4	3	1
	5	★	MHS0195L015B	10.2	15.4	17.4	60.4	60	0.4	3	2
	10	★	MHS0195L025B	19.9	25.4	27.4	60.4	60	0.4	3	2
	20	●	MHS0195L045B	39.4	45.4	47.4	80.4	80	0.4	3	2
	30	★	MHS0195L065B	58.9	65.4	67.4	100.4	100	0.4	3	2
2.00	2	●	MHS0200L010B	4.4	10.4	12.3	60.4	60	0.4	3	1
	5	★	MHS0200L015B	10.4	15.4	17.3	60.4	60	0.4	3	2
	9	●	MHS0200L025B	18.4	25.4	27.3	60.4	60	0.4	3	2
	20	●	MHS0200L045B	40.4	45.4	47.3	80.4	80	0.4	3	2
	30	●	MHS0200L065B	60.4	65.4	67.3	100.4	100	0.4	3	2
2.10	3	●	MHS0210L012B	6.7	12.4	14.1	60.4	60	0.4	3	1
	7	★	MHS0210L020B	15.1	20.4	22.1	60.4	60	0.4	3	2
	11	●	MHS0210L030B	23.5	30.4	32.1	80.4	80	0.4	3	2
	23	●	MHS0210L055B	48.7	55.4	57.1	100.4	100	0.4	3	2
	30	●	MHS0210L075B	63.4	75.4	77.1	120.4	120	0.4	3	2
2.20	2	●	MHS0220L012B	4.8	12.4	13.9	60.4	60	0.4	3	1
	6	★	MHS0220L020B	13.7	20.5	22.0	60.5	60	0.5	3	2
	11	●	MHS0220L030B	24.7	30.5	32.0	80.5	80	0.5	3	2
	22	●	MHS0220L055B	48.9	55.5	57.0	100.5	100	0.5	3	2
	30	●	MHS0220L075B	66.5	75.5	77.0	120.5	120	0.5	3	2
2.30	2	●	MHS0230L012B	5.0	12.4	13.7	60.4	60	0.4	3	1
	6	★	MHS0230L020B	14.3	20.5	21.8	60.5	60	0.5	3	2
	10	●	MHS0230L030B	23.5	30.5	31.8	80.5	80	0.5	3	2
	21	●	MHS0230L055B	48.8	55.5	56.8	100.5	100	0.5	3	2
	30	●	MHS0230L075B	69.5	75.5	76.8	120.5	120	0.5	3	2
2.40	2	●	MHS0240L012B	5.2	12.4	13.5	60.4	60	0.4	3	1
	5	★	MHS0240L020B	12.5	20.5	21.6	60.5	60	0.5	3	2
	9	●	MHS0240L030B	22.1	30.5	31.6	80.5	80	0.5	3	2
	20	●	MHS0240L055B	48.5	55.5	56.6	100.5	100	0.5	3	2
	28	●	MHS0240L075B	67.7	75.5	76.6	120.5	120	0.5	3	2
2.45	2	★	MHS0245L013B	5.3	13.4	14.4	70.4	70	0.4	4	1
	5	★	MHS0245L020B	12.8	20.5	21.5	70.5	70	0.5	4	2
	11	★	MHS0245L035B	27.5	35.5	36.5	90.5	90	0.5	4	2
	24	★	MHS0245L065B	59.3	65.5	66.5	110.5	110	0.5	4	2
	30	★	MHS0245L090B	74.0	90.5	91.5	140.5	140	0.5	4	2
2.50	2	●	MHS0250L013B	5.5	13.5	16.3	70.5	70	0.5	4	1
	5	★	MHS0250L020B	13.0	20.5	23.3	70.5	70	0.5	4	2
	11	●	MHS0250L035B	28.0	35.5	38.3	90.5	90	0.5	4	2
	23	●	MHS0250L065B	58.0	65.5	68.3	110.5	110	0.5	4	2
	30	●	MHS0250L090B	75.5	90.5	93.3	140.5	140	0.5	4	2

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
2.60	2	●	MHS0260L013B	5.7	13.5	16.1	70.5	70	0.5	4	1
	5	★	MHS0260L020B	13.5	20.5	23.1	70.5	70	0.5	4	2
	10	●	MHS0260L035B	26.5	35.5	38.1	90.5	90	0.5	4	2
	22	●	MHS0260L065B	57.7	65.5	68.1	110.5	110	0.5	4	2
	30	●	MHS0260L090B	78.5	90.5	93.1	140.5	140	0.5	4	2
2.70	2	●	MHS0270L013B	5.9	13.5	15.9	70.5	70	0.5	4	1
	4	★	MHS0270L020B	11.4	20.6	23.0	70.6	70	0.6	4	2
	10	●	MHS0270L035B	27.6	35.6	38.0	90.6	90	0.6	4	2
	21	●	MHS0270L065B	57.3	65.6	68.0	110.6	110	0.6	4	2
	30	●	MHS0270L090B	81.6	90.6	93.0	140.6	140	0.6	4	2
2.80	2	●	MHS0280L014B	6.1	14.5	16.7	70.5	70	0.5	4	1
	4	★	MHS0280L020B	11.8	20.6	22.8	70.6	70	0.6	4	2
	9	●	MHS0280L035B	25.8	35.6	37.8	90.6	90	0.6	4	2
	20	●	MHS0280L065B	56.6	65.6	67.8	110.6	110	0.6	4	2
	29	●	MHS0280L090B	81.8	90.6	92.8	140.6	140	0.6	4	2
2.90	2	●	MHS0290L014B	6.3	14.5	16.6	70.5	70	0.5	4	1
	4	★	MHS0290L020B	12.2	20.6	22.7	70.6	70	0.6	4	2
	9	●	MHS0290L035B	26.7	35.6	37.7	90.6	90	0.6	4	2
	19	●	MHS0290L065B	55.7	65.6	67.7	110.6	110	0.6	4	2
	28	●	MHS0290L090B	81.8	90.6	92.7	140.6	140	0.6	4	2
2.95	2	★	MHS0295L014B	6.4	14.5	16.5	70.5	70	0.5	4	1
	4	★	MHS0295L020B	12.4	20.6	22.6	70.6	70	0.6	4	2
	9	★	MHS0295L035B	27.2	35.6	37.6	90.6	90	0.6	4	2
	19	●	MHS0295L065B	56.7	65.6	67.6	110.6	110	0.6	4	2
	28	★	MHS0295L090B	83.2	90.6	92.6	140.6	140	0.6	4	2
3.0	4	●	MHS0300L020B	12.5	19.5	20.5	70.5	70	0.5	4	3
	10	●	MHS0300L040B	30.5	39.5	40.5	90.5	90	0.5	4	4
	17	●	MHS0300L060B	51.5	59.5	60.5	110.5	110	0.5	4	4
	27	●	MHS0300L090B	81.5	89.5	90.5	140.5	140	0.5	4	4
3.1	4	□	MHS0310L020B	12.9	20.0	20.5	70.5	70	0.5	4	3
	10	□	MHS0310L040B	31.6	40.1	40.6	90.6	90	0.6	4	4
	17	□	MHS0310L060B	53.3	60.1	60.6	110.6	110	0.6	4	4
	26	□	MHS0310L090B	81.2	90.1	90.6	140.6	140	0.6	4	4
3.2	4	□	MHS0320L020B	13.4	20.1	20.6	70.6	70	0.6	4	3
	10	□	MHS0320L040B	32.6	40.1	40.6	90.6	90	0.6	4	4
	16	□	MHS0320L060B	51.8	60.1	60.6	110.6	110	0.6	4	4
	25	□	MHS0320L090B	80.6	90.1	90.6	140.6	140	0.6	4	4
3.3	3	□	MHS0330L020B	10.5	20.1	20.6	70.6	70	0.6	4	3
	9	□	MHS0330L040B	30.3	40.1	40.6	90.6	90	0.6	4	4
	16	□	MHS0330L060B	53.4	60.1	60.6	110.6	110	0.6	4	4
	25	□	MHS0330L090B	83.1	90.1	90.6	140.6	140	0.6	4	4
3.4	3	□	MHS0340L020B	10.8	20.1	20.6	70.6	70	0.6	4	3
	9	□	MHS0340L040B	31.2	40.1	40.6	90.6	90	0.6	4	4
	15	□	MHS0340L060B	51.6	60.1	60.6	110.6	110	0.6	4	4
	24	□	MHS0340L090B	82.2	90.1	90.6	140.6	140	0.6	4	4
3.5	3	●	MHS0350L020B	11.1	20.1	20.6	70.6	70	0.6	4	3
	9	●	MHS0350L040B	32.1	40.1	40.6	90.6	90	0.6	4	4
	14	●	MHS0350L060B	49.6	60.1	60.6	110.6	110	0.6	4	4
	23	●	MHS0350L090B	81.1	90.1	90.6	140.6	140	0.6	4	4

PARAMETRI DI TAGLIO ➤ M136
GUIDA OPERATIVA ➤ M137
DATI TECNICI ➤ P001

MHS

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
3.6	3	□	MHS0360L020B	11.4	20.6	20.6	70.6	70	0.6	4	3
	9	□	MHS0360L040B	33.1	40.7	40.7	90.7	90	0.7	4	4
	14	□	MHS0360L060B	51.1	60.7	60.7	110.7	110	0.7	4	4
	22	□	MHS0360L090B	79.9	90.7	90.7	140.7	140	0.7	4	4
	30	□	MHS0360L120B	108.7	120.7	120.7	170.7	170	0.7	4	4
3.7	3	□	MHS0370L020B	11.7	20.6	20.6	70.6	70	0.6	4	3
	8	□	MHS0370L040B	30.3	40.7	40.7	90.7	90	0.7	4	4
	14	□	MHS0370L060B	52.5	60.7	60.7	110.7	110	0.7	4	4
	22	□	MHS0370L090B	82.1	90.7	90.7	140.7	140	0.7	4	4
	30	□	MHS0370L120B	111.7	120.7	120.7	170.7	170	0.7	4	4
3.8	3	★	MHS0380L020B	12.1	20.7	20.7	70.7	70	0.7	4	3
	8	★	MHS0380L040B	31.1	40.7	40.7	90.7	90	0.7	4	4
	13	★	MHS0380L060B	50.1	60.7	60.7	110.7	110	0.7	4	4
	21	★	MHS0380L090B	80.5	90.7	90.7	140.7	140	0.7	4	4
	29	★	MHS0380L120B	110.9	120.7	120.7	170.7	170	0.7	4	4
3.9	3	★	MHS0390L020B	12.4	20.7	20.7	70.7	70	0.7	4	3
	8	★	MHS0390L040B	31.9	40.7	40.7	90.7	90	0.7	4	4
	13	★	MHS0390L060B	51.4	60.7	60.7	110.7	110	0.7	4	4
	21	□	MHS0390L090B	82.6	90.7	90.7	140.7	140	0.7	4	4
	28	□	MHS0390L120B	109.9	120.7	120.7	170.7	170	0.7	4	4
4.0	2	●	MHS0400L020B	8.7	20.7	20.7	70.7	70	0.7	4	3
	7	●	MHS0400L040B	28.7	40.7	40.7	90.7	90	0.7	4	4
	12	●	MHS0400L060B	48.7	60.7	60.7	110.7	110	0.7	4	4
	20	●	MHS0400L090B	80.7	90.7	90.7	140.7	140	0.7	4	4
	27	●	MHS0400L120B	108.7	120.7	120.7	170.7	170	0.7	4	4
4.1	2	□	MHS0410L020B	8.9	19.2	20.7	70.7	70	0.7	6	3
	7	□	MHS0410L040B	29.4	39.2	40.7	90.7	90	0.7	6	4
	12	□	MHS0410L060B	49.9	59.2	60.7	110.7	110	0.7	6	4
	19	□	MHS0410L090B	78.6	89.2	90.7	140.7	140	0.7	6	4
	26	□	MHS0410L120B	107.3	119.2	120.7	170.7	170	0.7	6	4
4.2	2	□	MHS0420L020B	9.1	19.2	20.7	70.7	70	0.7	6	3
	7	□	MHS0420L040B	30.2	39.3	40.8	90.8	90	0.8	6	4
	11	□	MHS0420L060B	47.0	59.3	60.8	110.8	110	0.8	6	4
	19	□	MHS0420L090B	80.6	89.3	90.8	140.8	140	0.8	6	4
	26	□	MHS0420L120B	110.0	119.3	120.8	170.8	170	0.8	6	4
4.3	2	□	MHS0430L020B	9.3	19.2	20.7	70.7	70	0.7	6	3
	6	□	MHS0430L040B	26.6	39.3	40.8	90.8	90	0.8	6	4
	11	□	MHS0430L060B	48.1	59.3	60.8	110.8	110	0.8	6	4
	18	□	MHS0430L090B	78.2	89.3	90.8	140.8	140	0.8	6	4
	25	□	MHS0430L120B	108.3	119.3	120.8	170.8	170	0.8	6	4
4.4	2	★	MHS0440L020B	9.6	19.3	20.8	70.8	70	0.8	6	3
	6	□	MHS0440L040B	27.2	39.3	40.8	90.8	90	0.8	6	4
	11	□	MHS0440L060B	49.2	59.3	60.8	110.8	110	0.8	6	4
	18	□	MHS0440L090B	80.0	89.3	90.8	140.8	140	0.8	6	4
	24	□	MHS0440L120B	106.4	119.3	120.8	170.8	170	0.8	6	4
4.5	2	●	MHS0450L020B	9.8	19.3	20.8	70.8	70	0.8	6	3
	6	●	MHS0450L040B	27.8	39.3	40.8	90.8	90	0.8	6	4
	10	●	MHS0450L060B	45.8	59.3	60.8	110.8	110	0.8	6	4
	17	●	MHS0450L090B	77.3	89.3	90.8	140.8	140	0.8	6	4
	24	●	MHS0450L120B	108.8	119.3	120.8	170.8	170	0.8	6	4

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
4.6	2	□	MHS0460L020B	10.0	19.8	20.8	70.8	70	0.8	6	3
	6	□	MHS0460L040B	28.4	39.8	40.8	90.8	90	0.8	6	4
	10	□	MHS0460L060B	46.8	59.8	60.8	110.8	110	0.8	6	4
	17	□	MHS0460L090B	79.0	89.8	90.8	140.8	140	0.8	6	4
	23	□	MHS0460L120B	106.6	119.8	120.8	170.8	170	0.8	6	4
	30	□	MHS0460L150B	138.8	149.8	150.8	200.8	200	0.8	6	4
4.7	2	□	MHS0470L020B	10.2	19.8	20.8	70.8	70	0.8	6	3
	6	□	MHS0470L040B	29.1	39.9	40.9	90.9	90	0.9	6	4
	10	□	MHS0470L060B	47.9	59.9	60.9	110.9	110	0.9	6	4
	16	□	MHS0470L090B	76.1	89.9	90.9	140.9	140	0.9	6	4
	23	□	MHS0470L120B	109.0	119.9	120.9	170.9	170	0.9	6	4
	29	□	MHS0470L150B	137.2	149.9	150.9	200.9	200	0.9	6	4
4.8	1	★	MHS0480L020B	5.6	19.8	20.8	70.8	70	0.8	6	3
	6	★	MHS0480L040B	29.7	39.9	40.9	90.9	90	0.9	6	4
	10	★	MHS0480L060B	48.9	59.9	60.9	110.9	110	0.9	6	4
	16	★	MHS0480L090B	77.7	89.9	90.9	140.9	140	0.9	6	4
	22	★	MHS0480L120B	106.5	119.9	120.9	170.9	170	0.9	6	4
	29	★	MHS0480L150B	140.1	149.9	150.9	200.9	200	0.9	6	4
4.9	1	□	MHS0490L020B	5.7	19.8	20.8	70.8	70	0.8	6	3
	5	□	MHS0490L040B	25.4	39.9	40.9	90.9	90	0.9	6	4
	10	□	MHS0490L060B	49.9	59.9	60.9	110.9	110	0.9	6	4
	16	□	MHS0490L090B	79.3	89.9	90.9	140.9	140	0.9	6	4
	22	□	MHS0490L120B	108.7	119.9	120.9	170.9	170	0.9	6	4
	28	□	MHS0490L150B	138.1	149.9	150.9	200.9	200	0.9	6	4
5.0	1	●	MHS0500L020B	5.9	19.9	20.9	70.9	70	0.9	6	3
	5	●	MHS0500L040B	25.9	39.9	40.9	90.9	90	0.9	6	4
	9	●	MHS0500L060B	45.9	59.9	60.9	110.9	110	0.9	6	4
	15	●	MHS0500L090B	75.9	89.9	90.9	140.9	140	0.9	6	4
	21	●	MHS0500L120B	105.9	119.9	120.9	170.9	170	0.9	6	4
	27	●	MHS0500L150B	135.9	149.9	150.9	200.9	200	0.9	6	4
5.1	3	□	MHS0510L030B	16.2	30.4	30.9	80.9	80	0.9	6	3
	9	□	MHS0510L060B	46.8	60.4	60.9	110.9	110	0.9	6	4
	15	□	MHS0510L090B	77.4	90.4	90.9	140.9	140	0.9	6	4
	21	□	MHS0510L120B	108.0	120.4	120.9	170.9	170	0.9	6	4
	27	□	MHS0510L150B	138.6	150.4	150.9	200.9	200	0.9	6	4
5.2	3	□	MHS0520L030B	16.5	30.4	30.9	80.9	80	0.9	6	3
	9	□	MHS0520L060B	47.7	60.4	60.9	110.9	110	0.9	6	4
	15	□	MHS0520L090B	78.9	90.4	90.9	140.9	140	0.9	6	4
	20	□	MHS0520L120B	104.9	120.4	120.9	170.9	170	0.9	6	4
	26	□	MHS0520L150B	136.1	150.4	150.9	200.9	200	0.9	6	4
5.3	3	□	MHS0530L030B	16.8	30.4	30.9	80.9	80	0.9	6	3
	9	□	MHS0530L060B	48.7	60.5	61.0	111.0	110	1.0	6	4
	14	★	MHS0530L090B	75.2	90.5	91.0	141.0	140	1.0	6	4
	20	□	MHS0530L120B	107.0	120.5	121.0	171.0	170	1.0	6	4
	26	□	MHS0530L150B	138.8	150.5	151.0	201.0	200	1.0	6	4
5.4	3	□	MHS0540L030B	17.1	30.4	30.9	80.9	80	0.9	6	3
	9	□	MHS0540L060B	49.6	60.5	61.0	111.0	110	1.0	6	4
	14	□	MHS0540L090B	76.6	90.5	91.0	141.0	140	1.0	6	4
	20	□	MHS0540L120B	109.0	120.5	121.0	171.0	170	1.0	6	4
	25	□	MHS0540L150B	136.0	150.5	151.0	201.0	200	1.0	6	4

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
5.5	3	●	MHS0550L030B	17.4	30.4	30.9	80.9	80	0.9	6	3
	8	●	MHS0550L060B	45.0	60.5	61.0	111.0	110	1.0	6	4
	14	●	MHS0550L090B	78.0	90.5	91.0	141.0	140	1.0	6	4
	19	●	MHS0550L120B	105.5	120.5	121.0	171.0	170	1.0	6	4
	25	●	MHS0550L150B	138.5	150.5	151.0	201.0	200	1.0	6	4
5.6	3	□	MHS0560L030B	17.8	31.0	31.0	81.0	80	1.0	6	3
	8	□	MHS0560L060B	45.8	61.0	61.0	111.0	110	1.0	6	4
	14	□	MHS0560L090B	79.4	91.0	91.0	141.0	140	1.0	6	4
	19	□	MHS0560L120B	107.4	121.0	121.0	171.0	170	1.0	6	4
	24	□	MHS0560L150B	135.4	151.0	151.0	201.0	200	1.0	6	4
5.7	3	□	MHS0570L030B	18.1	31.0	31.0	81.0	80	1.0	6	3
	8	□	MHS0570L060B	46.6	61.0	61.0	111.0	110	1.0	6	4
	13	□	MHS0570L090B	75.1	91.0	91.0	141.0	140	1.0	6	4
	19	□	MHS0570L120B	109.3	121.0	121.0	171.0	170	1.0	6	4
	24	□	MHS0570L150B	137.8	151.0	151.0	201.0	200	1.0	6	4
5.8	3	★	MHS0580L030B	18.4	31.0	31.0	81.0	80	1.0	6	3
	8	★	MHS0580L060B	47.5	61.1	61.1	111.1	110	1.1	6	4
	13	★	MHS0580L090B	76.5	91.1	91.1	141.1	140	1.1	6	4
	18	★	MHS0580L120B	105.5	121.1	121.1	171.1	170	1.1	6	4
	23	★	MHS0580L150B	134.5	151.1	151.1	201.1	200	1.1	6	4
5.9	3	□	MHS0590L030B	18.7	31.0	31.0	81.0	80	1.0	6	3
	8	□	MHS0590L060B	48.3	61.1	61.1	111.1	110	1.1	6	4
	13	□	MHS0590L090B	77.8	91.1	91.1	141.1	140	1.1	6	4
	18	□	MHS0590L120B	107.3	121.1	121.1	171.1	170	1.1	6	4
	23	□	MHS0590L150B	136.8	151.1	151.1	201.1	200	1.1	6	4
6.0	2	●	MHS0600L030B	13.0	31.0	31.0	81.0	80	1.0	6	3
	7	●	MHS0600L060B	43.1	61.1	61.1	111.1	110	1.1	6	4
	12	●	MHS0600L090B	73.1	91.1	91.1	141.1	140	1.1	6	4
	17	●	MHS0600L120B	103.1	121.1	121.1	171.1	170	1.1	6	4
	22	●	MHS0600L150B	133.1	151.1	151.1	201.1	200	1.1	6	4
6.1	2	□	MHS0610L030B	13.3	29.6	31.1	81.1	80	1.1	8	3
	7	□	MHS0610L060B	43.8	59.6	61.1	111.1	110	1.1	8	4
	12	□	MHS0610L090B	74.3	89.6	91.1	141.1	140	1.1	8	4
	17	□	MHS0610L120B	104.8	119.6	121.1	171.1	170	1.1	8	4
	22	□	MHS0610L150B	135.3	149.6	151.1	201.1	200	1.1	8	4
6.2	2	□	MHS0620L030B	13.5	29.6	31.1	81.1	80	1.1	8	3
	7	□	MHS0620L060B	44.5	59.6	61.1	111.1	110	1.1	8	4
	12	□	MHS0620L090B	75.5	89.6	91.1	141.1	140	1.1	8	4
	17	□	MHS0620L120B	106.5	119.6	121.1	171.1	170	1.1	8	4
	21	□	MHS0620L150B	131.3	149.6	151.1	201.1	200	1.1	8	4
6.3	2	□	MHS0630L030B	13.7	29.6	31.1	81.1	80	1.1	8	3
	7	□	MHS0630L060B	45.2	59.6	61.1	111.1	110	1.1	8	4
	12	□	MHS0630L090B	76.7	89.6	91.1	141.1	140	1.1	8	4
	16	□	MHS0630L120B	101.9	119.6	121.1	171.1	170	1.1	8	4
	21	□	MHS0630L150B	133.4	149.6	151.1	201.1	200	1.1	8	4
6.4	2	□	MHS0640L030B	13.9	29.6	31.1	81.1	80	1.1	8	3
	7	□	MHS0640L060B	46.0	59.7	61.2	111.2	110	1.2	8	4
	11	□	MHS0640L090B	71.6	89.7	91.2	141.2	140	1.2	8	4
	16	□	MHS0640L120B	103.6	119.7	121.2	171.2	170	1.2	8	4
	21	□	MHS0640L150B	135.6	149.7	151.2	201.2	200	1.2	8	4

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
6.5	2	●	MHS0650L030B	14.1	29.6	31.1	81.1	80	1.1	8	3
	6	●	MHS0650L060B	40.2	59.7	61.2	111.2	110	1.2	8	4
	11	●	MHS0650L090B	72.7	89.7	91.2	141.2	140	1.2	8	4
	16	●	MHS0650L120B	105.2	119.7	121.2	171.2	170	1.2	8	4
	20	●	MHS0650L150B	131.2	149.7	151.2	201.2	200	1.2	8	4
6.6	2	□	MHS0660L030B	14.3	30.1	31.1	81.1	80	1.1	8	3
	6	□	MHS0660L060B	40.8	60.2	61.2	111.2	110	1.2	8	4
	11	□	MHS0660L090B	73.8	90.2	91.2	141.2	140	1.2	8	4
	16	□	MHS0660L120B	106.8	120.2	121.2	171.2	170	1.2	8	4
	20	□	MHS0660L150B	133.2	150.2	151.2	201.2	200	1.2	8	4
	28	□	MHS0660L200B	186.0	200.2	201.2	251.2	250	1.2	8	4
6.7	2	□	MHS0670L030B	14.6	30.2	31.2	81.2	80	1.2	8	3
	6	□	MHS0670L060B	41.4	60.2	61.2	111.2	110	1.2	8	4
	11	□	MHS0670L090B	74.9	90.2	91.2	141.2	140	1.2	8	4
	15	□	MHS0670L120B	101.7	120.2	121.2	171.2	170	1.2	8	4
	20	□	MHS0670L150B	135.2	150.2	151.2	201.2	200	1.2	8	4
	27	□	MHS0670L200B	182.1	200.2	201.2	251.2	250	1.2	8	4
6.8	2	★	MHS0680L030B	14.8	30.2	31.2	81.2	80	1.2	8	3
	6	★	MHS0680L060B	42.0	60.2	61.2	111.2	110	1.2	8	4
	11	★	MHS0680L090B	76.0	90.2	91.2	141.2	140	1.2	8	4
	15	★	MHS0680L120B	103.2	120.2	121.2	171.2	170	1.2	8	4
	19	★	MHS0680L150B	130.4	150.2	151.2	201.2	200	1.2	8	4
	27	★	MHS0680L200B	184.8	200.2	201.2	251.2	250	1.2	8	4
6.9	2	□	MHS0690L030B	15.0	30.2	31.2	81.2	80	1.2	8	3
	6	□	MHS0690L060B	42.7	60.3	61.3	111.3	110	1.3	8	4
	10	□	MHS0690L090B	70.3	90.3	91.3	141.3	140	1.3	8	4
	15	□	MHS0690L120B	104.8	120.3	121.3	171.3	170	1.3	8	4
	19	□	MHS0690L150B	132.4	150.3	151.3	201.3	200	1.3	8	4
	26	□	MHS0690L200B	180.7	200.3	201.3	251.3	250	1.3	8	4
7.0	2	●	MHS0700L030B	15.2	30.2	31.2	81.2	80	1.2	8	3
	6	●	MHS0700L060B	43.3	60.3	61.3	111.3	110	1.3	8	4
	10	●	MHS0700L090B	71.3	90.3	91.3	141.3	140	1.3	8	4
	14	●	MHS0700L120B	99.3	120.3	121.3	171.3	170	1.3	8	4
	19	●	MHS0700L150B	134.3	150.3	151.3	201.3	200	1.3	8	4
	26	●	MHS0700L200B	183.3	200.3	201.3	251.3	250	1.3	8	4
7.1	2	□	MHS0710L030B	15.4	30.7	31.2	81.2	80	1.2	8	3
	6	□	MHS0710L060B	43.9	60.8	61.3	111.3	110	1.3	8	4
	10	□	MHS0710L090B	72.3	90.8	91.3	141.3	140	1.3	8	4
	14	□	MHS0710L120B	100.7	120.8	121.3	171.3	170	1.3	8	4
	19	□	MHS0710L150B	136.2	150.8	151.3	201.3	200	1.3	8	4
	26	□	MHS0710L200B	185.9	200.8	201.3	251.3	250	1.3	8	4
7.2	2	□	MHS0720L030B	15.6	30.7	31.2	81.2	80	1.2	8	3
	6	□	MHS0720L060B	44.5	60.8	61.3	111.3	110	1.3	8	4
	10	□	MHS0720L090B	73.3	90.8	91.3	141.3	140	1.3	8	4
	14	□	MHS0720L120B	102.1	120.8	121.3	171.3	170	1.3	8	4
	18	□	MHS0720L150B	130.9	150.8	151.3	201.3	200	1.3	8	4
	25	□	MHS0720L200B	181.3	200.8	201.3	251.3	250	1.3	8	4

PARAMETRI DI TAGLIO ➤ M136
GUIDA OPERATIVA ➤ M137
DATI TECNICI ➤ P001

MHS

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
7.3	2	□	MHS0730L030B	15.9	30.8	31.3	81.3	80	1.3	8	3
	6	□	MHS0730L060B	45.1	60.8	61.3	111.3	110	1.3	8	4
	10	□	MHS0730L090B	74.3	90.8	91.3	141.3	140	1.3	8	4
	14	□	MHS0730L120B	103.5	120.8	121.3	171.3	170	1.3	8	4
	18	□	MHS0730L150B	132.7	150.8	151.3	201.3	200	1.3	8	4
	25	□	MHS0730L200B	183.8	200.8	201.3	251.3	250	1.3	8	4
7.4	1	□	MHS0740L030B	8.7	30.8	31.3	81.3	80	1.3	8	3
	6	□	MHS0740L060B	45.7	60.8	61.3	111.3	110	1.3	8	4
	10	□	MHS0740L090B	75.3	90.8	91.3	141.3	140	1.3	8	4
	14	□	MHS0740L120B	104.9	120.8	121.3	171.3	170	1.3	8	4
	18	□	MHS0740L150B	134.5	150.8	151.3	201.3	200	1.3	8	4
	24	□	MHS0740L200B	178.9	200.8	201.3	251.3	250	1.3	8	4
7.5	1	●	MHS0750L030B	8.8	30.8	31.3	81.3	80	1.3	8	3
	5	●	MHS0750L060B	38.9	60.9	61.4	111.4	110	1.4	8	4
	9	●	MHS0750L090B	68.9	90.9	91.4	141.4	140	1.4	8	4
	13	●	MHS0750L120B	98.9	120.9	121.4	171.4	170	1.4	8	4
	17	●	MHS0750L150B	128.9	150.9	151.4	201.4	200	1.4	8	4
	24	●	MHS0750L200B	181.4	200.9	201.4	251.4	250	1.4	8	4
7.6	1	□	MHS0760L030B	8.9	31.3	31.3	81.3	80	1.3	8	3
	5	□	MHS0760L060B	39.4	61.4	61.4	111.4	110	1.4	8	4
	9	□	MHS0760L090B	69.8	91.4	91.4	141.4	140	1.4	8	4
	13	□	MHS0760L120B	100.2	121.4	121.4	171.4	170	1.4	8	4
	17	□	MHS0760L150B	130.6	151.4	151.4	201.4	200	1.4	8	4
	24	□	MHS0760L200B	183.8	201.4	201.4	251.4	250	1.4	8	4
	30	□	MHS0760L250B	229.4	251.4	251.4	301.4	300	1.4	8	4
7.7	1	□	MHS0770L030B	9.0	31.3	31.3	81.3	80	1.3	8	3
	5	□	MHS0770L060B	39.9	61.4	61.4	111.4	110	1.4	8	4
	9	□	MHS0770L090B	70.7	91.4	91.4	141.4	140	1.4	8	4
	13	□	MHS0770L120B	101.5	121.4	121.4	171.4	170	1.4	8	4
	17	□	MHS0770L150B	132.3	151.4	151.4	201.4	200	1.4	8	4
	23	□	MHS0770L200B	178.5	201.4	201.4	251.4	250	1.4	8	4
	30	□	MHS0770L250B	232.4	251.4	251.4	301.4	300	1.4	8	4
7.8	1	★	MHS0780L030B	9.1	31.3	31.3	81.3	80	1.3	8	3
	5	★	MHS0780L060B	40.4	61.4	61.4	111.4	110	1.4	8	4
	9	★	MHS0780L090B	71.6	91.4	91.4	141.4	140	1.4	8	4
	13	★	MHS0780L120B	102.8	121.4	121.4	171.4	170	1.4	8	4
	17	★	MHS0780L150B	134.0	151.4	151.4	201.4	200	1.4	8	4
	23	★	MHS0780L200B	180.8	201.4	201.4	251.4	250	1.4	8	4
	30	★	MHS0780L250B	235.4	251.4	251.4	301.4	300	1.4	8	4
7.9	1	□	MHS0790L030B	9.3	31.4	31.4	81.4	80	1.4	8	3
	5	□	MHS0790L060B	40.9	61.4	61.4	111.4	110	1.4	8	4
	9	□	MHS0790L090B	72.5	91.4	91.4	141.4	140	1.4	8	4
	13	□	MHS0790L120B	104.1	121.4	121.4	171.4	170	1.4	8	4
	16	□	MHS0790L150B	127.8	151.4	151.4	201.4	200	1.4	8	4
	23	□	MHS0790L200B	183.1	201.4	201.4	251.4	250	1.4	8	4
	29	□	MHS0790L250B	230.5	251.4	251.4	301.4	300	1.4	8	4

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.0	1	●	MHS0800L030B	9.4	31.4	31.4	81.4	80	1.4	8	3
	5	●	MHS0800L060B	41.5	61.5	61.5	111.5	110	1.5	8	4
	9	●	MHS0800L090B	73.5	91.5	91.5	141.5	140	1.5	8	4
	12	●	MHS0800L120B	97.5	121.5	121.5	171.5	170	1.5	8	4
	16	●	MHS0800L150B	129.5	151.5	151.5	201.5	200	1.5	8	4
	22	●	MHS0800L200B	177.5	201.5	201.5	251.5	250	1.5	8	4
	29	●	MHS0800L250B	233.5	251.5	251.5	301.5	300	1.5	8	4
8.1	2	□	MHS0810L040B	17.6	39.9	41.4	101.4	100	1.4	10	3
	8	□	MHS0810L090B	66.3	90.0	91.5	151.5	150	1.5	10	4
	12	□	MHS0810L120B	98.7	120.0	121.5	181.5	180	1.5	10	4
	16	□	MHS0810L150B	131.1	150.0	151.5	211.5	210	1.5	10	4
	22	□	MHS0810L200B	179.7	200.0	201.5	261.5	260	1.5	10	4
	28	□	MHS0810L250B	228.3	250.0	251.5	311.5	310	1.5	10	4
8.2	2	□	MHS0820L040B	17.8	39.9	41.4	101.4	100	1.4	10	3
	8	□	MHS0820L090B	67.1	90.0	91.5	151.5	150	1.5	10	4
	12	□	MHS0820L120B	99.9	120.0	121.5	181.5	180	1.5	10	4
	16	□	MHS0820L150B	132.7	150.0	151.5	211.5	210	1.5	10	4
	22	□	MHS0820L200B	181.9	200.0	201.5	261.5	260	1.5	10	4
	28	□	MHS0820L250B	231.1	250.0	251.5	311.5	310	1.5	10	4
8.3	2	□	MHS0830L040B	18.0	39.9	41.4	101.4	100	1.4	10	3
	8	□	MHS0830L090B	67.9	90.0	91.5	151.5	150	1.5	10	4
	12	□	MHS0830L120B	101.1	120.0	121.5	181.5	180	1.5	10	4
	15	□	MHS0830L150B	126.0	150.0	151.5	211.5	210	1.5	10	4
	21	□	MHS0830L200B	175.8	200.0	201.5	261.5	260	1.5	10	4
	27	□	MHS0830L250B	225.6	250.0	251.5	311.5	310	1.5	10	4
8.4	2	□	MHS0840L040B	18.2	39.9	41.4	101.4	100	1.4	10	3
	8	□	MHS0840L090B	68.7	90.0	91.5	151.5	150	1.5	10	4
	12	□	MHS0840L120B	102.3	120.0	121.5	181.5	180	1.5	10	4
	15	□	MHS0840L150B	127.5	150.0	151.5	211.5	210	1.5	10	4
	21	□	MHS0840L200B	177.9	200.0	201.5	261.5	260	1.5	10	4
	27	□	MHS0840L250B	228.3	250.0	251.5	311.5	310	1.5	10	4
8.5	2	●	MHS0850L040B	18.5	40.0	41.5	101.5	100	1.5	10	3
	8	●	MHS0850L090B	69.5	90.0	91.5	151.5	150	1.5	10	4
	11	●	MHS0850L120B	95.0	120.0	121.5	181.5	180	1.5	10	4
	15	●	MHS0850L150B	129.0	150.0	151.5	211.5	210	1.5	10	4
	21	●	MHS0850L200B	180.0	200.0	201.5	261.5	260	1.5	10	4
	27	●	MHS0850L250B	231.0	250.0	251.5	311.5	310	1.5	10	4
8.6	2	□	MHS0860L040B	18.7	40.5	41.5	101.5	100	1.5	10	3
	8	□	MHS0860L090B	70.4	90.6	91.6	151.6	150	1.6	10	4
	11	□	MHS0860L120B	96.2	120.6	121.6	181.6	180	1.6	10	4
	15	□	MHS0860L150B	130.6	150.6	151.6	211.6	210	1.6	10	4
	21	□	MHS0860L200B	182.2	200.6	201.6	261.6	260	1.6	10	4
	26	□	MHS0860L250B	225.2	250.6	251.6	311.6	310	1.6	10	4
8.7	2	□	MHS0870L040B	18.9	40.5	41.5	101.5	100	1.5	10	3
	8	□	MHS0870L090B	71.2	90.6	91.6	151.6	150	1.6	10	4
	11	□	MHS0870L120B	97.3	120.6	121.6	181.6	180	1.6	10	4
	15	□	MHS0870L150B	132.1	150.6	151.6	211.6	210	1.6	10	4
	20	□	MHS0870L200B	175.6	200.6	201.6	261.6	260	1.6	10	4
	26	□	MHS0870L250B	227.8	250.6	251.6	311.6	310	1.6	10	4

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
8.8	2	★	**MHS0880L040B**	19.1	40.5	41.5	101.5	100	1.5	10	3
	8	★	**MHS0880L090B**	72.0	90.6	91.6	151.6	150	1.6	10	4
	11	★	**MHS0880L120B**	98.4	120.6	121.6	181.6	180	1.6	10	4
	14	★	**MHS0880L150B**	124.8	150.6	151.6	211.6	210	1.6	10	4
	20	★	**MHS0880L200B**	177.6	200.6	201.6	261.6	260	1.6	10	4
	26	★	**MHS0880L250B**	230.4	250.6	251.6	311.6	310	1.6	10	4
8.9	2	□	**MHS0890L040B**	19.3	40.5	41.5	101.5	100	1.5	10	3
	7	□	**MHS0890L090B**	63.9	90.6	91.6	151.6	150	1.6	10	4
	11	□	**MHS0890L120B**	99.5	120.6	121.6	181.6	180	1.6	10	4
	14	□	**MHS0890L150B**	126.2	150.6	151.6	211.6	210	1.6	10	4
	20	□	**MHS0890L200B**	179.6	200.6	201.6	261.6	260	1.6	10	4
	25	□	**MHS0890L250B**	224.1	250.6	251.6	311.6	310	1.6	10	4
9.0	2	●	**MHS0900L040B**	19.5	40.5	41.5	101.5	100	1.5	10	3
	7	●	**MHS0900L090B**	64.6	90.6	91.6	151.6	150	1.6	10	4
	11	●	**MHS0900L120B**	100.6	120.6	121.6	181.6	180	1.6	10	4
	14	●	**MHS0900L150B**	127.6	150.6	151.6	211.6	210	1.6	10	4
	20	●	**MHS0900L200B**	181.6	200.6	201.6	261.6	260	1.6	10	4
	25	●	**MHS0900L250B**	226.6	250.6	251.6	311.6	310	1.6	10	4
9.1	2	□	**MHS0910L040B**	19.8	41.1	41.6	101.6	100	1.6	10	3
	7	□	**MHS0910L090B**	65.4	91.2	91.7	151.7	150	1.7	10	4
	11	□	**MHS0910L120B**	101.8	121.2	121.7	181.7	180	1.7	10	4
	14	□	**MHS0910L150B**	129.1	151.2	151.7	211.7	210	1.7	10	4
	19	□	**MHS0910L200B**	174.6	201.2	201.7	261.7	260	1.7	10	4
	25	□	**MHS0910L250B**	229.2	251.2	251.7	311.7	310	1.7	10	4
	30	□	**MHS0910L300B**	274.7	301.2	301.7	361.7	360	1.7	10	4
9.2	2	□	**MHS0920L040B**	20.0	41.1	41.6	101.6	100	1.6	10	3
	7	□	**MHS0920L090B**	66.1	91.2	91.7	151.7	150	1.7	10	4
	10	□	**MHS0920L120B**	93.7	121.2	121.7	181.7	180	1.7	10	4
	14	□	**MHS0920L150B**	130.5	151.2	151.7	211.7	210	1.7	10	4
	19	□	**MHS0920L200B**	176.5	201.2	201.7	261.7	260	1.7	10	4
	25	□	**MHS0920L250B**	231.7	251.2	251.7	311.7	310	1.7	10	4
	30	□	**MHS0920L300B**	277.7	301.2	301.7	361.7	360	1.7	10	4
9.3	2	□	**MHS0930L040B**	20.2	41.1	41.6	101.6	100	1.6	10	3
	7	□	**MHS0930L090B**	66.8	91.2	91.7	151.7	150	1.7	10	4
	10	□	**MHS0930L120B**	94.7	121.2	121.7	181.7	180	1.7	10	4
	14	□	**MHS0930L150B**	131.9	151.2	151.7	211.7	210	1.7	10	4
	19	□	**MHS0930L200B**	178.4	201.2	201.7	261.7	260	1.7	10	4
	24	□	**MHS0930L250B**	224.9	251.2	251.7	311.7	310	1.7	10	4
	30	□	**MHS0930L300B**	280.7	301.2	301.7	361.7	360	1.7	10	4
9.4	2	□	**MHS0940L040B**	20.4	41.1	41.6	101.6	100	1.6	10	3
	7	□	**MHS0940L090B**	67.5	91.2	91.7	151.7	150	1.7	10	4
	10	□	**MHS0940L120B**	95.7	121.2	121.7	181.7	180	1.7	10	4
	13	□	**MHS0940L150B**	123.9	151.2	151.7	211.7	210	1.7	10	4
	19	□	**MHS0940L200B**	180.3	201.2	201.7	261.7	260	1.7	10	4
	24	□	**MHS0940L250B**	227.3	251.2	251.7	311.7	310	1.7	10	4
	29	□	**MHS0940L300B**	274.3	301.2	301.7	361.7	360	1.7	10	4

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
9.5	2	★	**MHS0950L040B**	20.6	41.1	41.6	101.6	100	1.6	10	3
	7	★	**MHS0950L090B**	68.2	91.2	91.7	151.7	150	1.7	10	4
	10	★	**MHS0950L120B**	96.7	121.2	121.7	181.7	180	1.7	10	4
	13	★	**MHS0950L150B**	125.2	151.2	151.7	211.7	210	1.7	10	4
	18	★	**MHS0950L200B**	172.7	201.2	201.7	261.7	260	1.7	10	4
	24	★	**MHS0950L250B**	229.7	251.2	251.7	311.7	310	1.7	10	4
	29	★	**MHS0950L300B**	277.2	301.2	301.7	361.7	360	1.7	10	4
9.6	2	□	**MHS0960L040B**	20.9	41.7	41.7	101.7	100	1.7	10	3
	7	□	**MHS0960L090B**	68.9	91.7	91.7	151.7	150	1.7	10	4
	10	□	**MHS0960L120B**	97.7	121.7	121.7	181.7	180	1.7	10	4
	13	□	**MHS0960L150B**	126.5	151.7	151.7	211.7	210	1.7	10	4
	18	□	**MHS0960L200B**	174.5	201.7	201.7	261.7	260	1.7	10	4
	24	□	**MHS0960L250B**	232.1	251.7	251.7	311.7	310	1.7	10	4
	29	□	**MHS0960L300B**	280.1	301.7	301.7	361.7	360	1.7	10	4
9.7	2	□	**MHS0970L040B**	21.1	41.7	41.7	101.7	100	1.7	10	3
	7	□	**MHS0970L090B**	69.7	91.8	91.8	151.8	150	1.8	10	4
	10	□	**MHS0970L120B**	98.8	121.8	121.8	181.8	180	1.8	10	4
	13	□	**MHS0970L150B**	127.9	151.8	151.8	211.8	210	1.8	10	4
	18	□	**MHS0970L200B**	176.4	201.8	201.8	261.8	260	1.8	10	4
	23	□	**MHS0970L250B**	224.9	251.8	251.8	311.8	310	1.8	10	4
	28	□	**MHS0970L300B**	273.4	301.8	301.8	361.8	360	1.8	10	4
9.8	2	★	**MHS0980L040B**	21.3	41.7	41.7	101.7	100	1.7	10	3
	7	★	**MHS0980L090B**	70.4	91.8	91.8	151.8	150	1.8	10	4
	10	★	**MHS0980L120B**	99.8	121.8	121.8	181.8	180	1.8	10	4
	13	★	**MHS0980L150B**	129.2	151.8	151.8	211.8	210	1.8	10	4
	18	★	**MHS0980L200B**	178.2	201.8	201.8	261.8	260	1.8	10	4
	23	★	**MHS0980L250B**	227.2	251.8	251.8	311.8	310	1.8	10	4
	28	★	**MHS0980L300B**	276.2	301.8	301.8	361.8	360	1.8	10	4
9.9	2	□	**MHS0990L040B**	21.5	41.7	41.7	101.7	100	1.7	10	3
	7	□	**MHS0990L090B**	71.1	91.8	91.8	151.8	150	1.8	10	4
	10	□	**MHS0990L120B**	100.8	121.8	121.8	181.8	180	1.8	10	4
	13	□	**MHS0990L150B**	130.5	151.8	151.8	211.8	210	1.8	10	4
	18	□	**MHS0990L200B**	180.0	201.8	201.8	261.8	260	1.8	10	4
	23	□	**MHS0990L250B**	229.5	251.8	251.8	311.8	310	1.8	10	4
	28	□	**MHS0990L300B**	279.0	301.8	301.8	361.8	360	1.8	10	4
10.0	1	●	**MHS1000L040B**	11.7	41.7	41.7	101.7	100	1.7	10	3
	6	●	**MHS1000L090B**	61.8	91.8	91.8	151.8	150	1.8	10	4
	9	●	**MHS1000L120B**	91.8	121.8	121.8	181.8	180	1.8	10	4
	12	●	**MHS1000L150B**	121.8	151.8	151.8	211.8	210	1.8	10	4
	17	●	**MHS1000L200B**	171.8	201.8	201.8	261.8	260	1.8	10	4
	22	●	**MHS1000L250B**	221.8	251.8	251.8	311.8	310	1.8	10	4
	27	●	**MHS1000L300B**	271.8	301.8	301.8	361.8	360	1.8	10	4
10.1	1	□	**MHS1010L040B**	11.8	40.2	41.7	101.7	100	1.7	12	3
	6	□	**MHS1010L090B**	62.4	90.3	91.8	151.8	150	1.8	12	4
	9	□	**MHS1010L120B**	92.7	120.3	121.8	181.8	180	1.8	12	4
	12	□	**MHS1010L150B**	123.0	150.3	151.8	211.8	210	1.8	12	4
	17	□	**MHS1010L200B**	173.5	200.3	201.8	261.8	260	1.8	12	4
	22	□	**MHS1010L250B**	224.0	250.3	251.8	311.8	310	1.8	12	4
	27	□	**MHS1010L300B**	274.5	300.3	301.8	361.8	360	1.8	12	4

PARAMETRI DI TAGLIO ➤ M136
GUIDA OPERATIVA ➤ M137
DATI TECNICI ➤ P001

MHS

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
10.2	1	□	MHS1020L040B	12.0	40.3	41.8	101.8	100	1.8	12	3
	6	□	MHS1020L090B	63.1	90.4	91.9	151.9	150	1.9	12	4
	9	□	MHS1020L120B	93.7	120.4	121.9	181.9	180	1.9	12	4
	12	□	MHS1020L150B	124.3	150.4	151.9	211.9	210	1.9	12	4
	17	□	MHS1020L200B	175.3	200.4	201.9	261.9	260	1.9	12	4
	22	□	MHS1020L250B	226.3	250.4	251.9	311.9	310	1.9	12	4
	27	□	MHS1020L300B	277.3	300.4	301.9	361.9	360	1.9	12	4
10.3	1	□	MHS1030L040B	12.1	40.3	41.8	101.8	100	1.8	12	3
	6	□	MHS1030L090B	63.7	90.4	91.9	151.9	150	1.9	12	4
	9	□	MHS1030L120B	94.6	120.4	121.9	181.9	180	1.9	12	4
	12	□	MHS1030L150B	125.5	150.4	151.9	211.9	210	1.9	12	4
	17	□	MHS1030L200B	177.0	200.4	201.9	261.9	260	1.9	12	4
	22	□	MHS1030L250B	228.5	250.4	251.9	311.9	310	1.9	12	4
	26	□	MHS1030L300B	269.7	300.4	301.9	361.9	360	1.9	12	4
10.4	1	□	MHS1040L040B	12.2	40.3	41.8	101.8	100	1.8	12	3
	6	□	MHS1040L090B	64.3	90.4	91.9	151.9	150	1.9	12	4
	9	□	MHS1040L120B	95.5	120.4	121.9	181.9	180	1.9	12	4
	12	□	MHS1040L150B	126.7	150.4	151.9	211.9	210	1.9	12	4
	17	□	MHS1040L200B	178.7	200.4	201.9	261.9	260	1.9	12	4
	21	□	MHS1040L250B	220.3	250.4	251.9	311.9	310	1.9	12	4
	26	□	MHS1040L300B	272.3	300.4	301.9	361.9	360	1.9	12	4
10.5	1	★	MHS1050L040B	12.3	40.3	41.8	101.8	100	1.8	12	3
	6	★	MHS1050L090B	64.9	90.4	91.9	151.9	150	1.9	12	4
	9	★	MHS1050L120B	96.4	120.4	121.9	181.9	180	1.9	12	4
	12	★	MHS1050L150B	127.9	150.4	151.9	211.9	210	1.9	12	4
	16	★	MHS1050L200B	169.9	200.4	201.9	261.9	260	1.9	12	4
	21	★	MHS1050L250B	222.4	250.4	251.9	311.9	310	1.9	12	4
	26	★	MHS1050L300B	274.9	300.4	301.9	361.9	360	1.9	12	4
10.6	1	□	MHS1060L040B	12.4	40.8	41.8	101.8	100	1.8	12	3
	6	□	MHS1060L090B	65.5	90.9	91.9	151.9	150	1.9	12	4
	9	□	MHS1060L120B	97.3	120.9	121.9	181.9	180	1.9	12	4
	12	□	MHS1060L150B	129.1	150.9	151.9	211.9	210	1.9	12	4
	16	□	MHS1060L200B	171.5	200.9	201.9	261.9	260	1.9	12	4
	21	□	MHS1060L250B	224.5	250.9	251.9	311.9	310	1.9	12	4
	26	□	MHS1060L300B	277.5	300.9	301.9	361.9	360	1.9	12	4
10.7	1	□	MHS1070L040B	12.5	40.8	41.8	101.8	100	1.8	12	3
	6	□	MHS1070L090B	66.1	90.9	91.9	151.9	150	1.9	12	4
	9	□	MHS1070L120B	98.2	120.9	121.9	181.9	180	1.9	12	4
	11	□	MHS1070L150B	119.6	150.9	151.9	211.9	210	1.9	12	4
	16	□	MHS1070L200B	173.1	200.9	201.9	261.9	260	1.9	12	4
	21	□	MHS1070L250B	226.6	250.9	251.9	311.9	310	1.9	12	4
	25	□	MHS1070L300B	269.4	300.9	301.9	361.9	360	1.9	12	4
10.8	1	★	MHS1080L040B	12.7	40.9	41.9	101.9	100	1.9	12	3
	6	★	MHS1080L090B	66.8	91.0	92.0	152.0	150	2.0	12	4
	9	★	MHS1080L120B	99.2	121.0	122.0	182.0	180	2.0	12	4
	11	★	MHS1080L150B	120.8	151.0	152.0	212.0	210	2.0	12	4
	16	★	MHS1080L200B	174.8	201.0	202.0	262.0	260	2.0	12	4
	21	★	MHS1080L250B	228.8	251.0	252.0	312.0	310	2.0	12	4
	25	★	MHS1080L300B	272.0	301.0	302.0	362.0	360	2.0	12	4

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
10.9	1	□	MHS1090L040B	12.8	40.9	41.9	101.9	100	1.9	12	3
	6	□	MHS1090L090B	67.4	91.0	92.0	152.0	150	2.0	12	4
	8	□	MHS1090L120B	89.2	121.0	122.0	182.0	180	2.0	12	4
	11	□	MHS1090L150B	121.9	151.0	152.0	212.0	210	2.0	12	4
	16	□	MHS1090L200B	176.4	201.0	202.0	262.0	260	2.0	12	4
	20	□	MHS1090L250B	220.0	251.0	252.0	312.0	310	2.0	12	4
	25	□	MHS1090L300B	274.5	301.0	302.0	362.0	360	2.0	12	4
11.0	1	●	MHS1100L040B	12.9	40.9	41.9	101.9	100	1.9	12	3
	6	●	MHS1100L090B	68.0	91.0	92.0	152.0	150	2.0	12	4
	8	●	MHS1100L120B	90.0	121.0	122.0	182.0	180	2.0	12	4
	11	●	MHS1100L150B	123.0	151.0	152.0	212.0	210	2.0	12	4
	16	●	MHS1100L200B	178.0	201.0	202.0	262.0	260	2.0	12	4
	20	●	MHS1100L250B	222.0	251.0	252.0	312.0	310	2.0	12	4
	25	●	MHS1100L300B	277.0	301.0	302.0	362.0	360	2.0	12	4
11.1	1	□	MHS1110L040B	13.0	41.4	41.9	101.9	100	1.9	12	3
	6	□	MHS1110L090B	68.6	91.5	92.0	152.0	150	2.0	12	4
	8	□	MHS1110L120B	90.8	121.5	122.0	182.0	180	2.0	12	4
	11	□	MHS1110L150B	124.1	151.5	152.0	212.0	210	2.0	12	4
	15	□	MHS1110L200B	168.5	201.5	202.0	262.0	260	2.0	12	4
	20	□	MHS1110L250B	224.0	251.5	252.0	312.0	310	2.0	12	4
	24	□	MHS1110L300B	268.4	301.5	302.0	362.0	360	2.0	12	4
11.2	1	□	MHS1120L040B	13.1	41.4	41.9	101.9	100	1.9	12	3
	5	□	MHS1120L090B	58.0	91.5	92.0	152.0	150	2.0	12	4
	8	□	MHS1120L120B	91.6	121.5	122.0	182.0	180	2.0	12	4
	11	□	MHS1120L150B	125.2	151.5	152.0	212.0	210	2.0	12	4
	15	□	MHS1120L200B	170.0	201.5	202.0	262.0	260	2.0	12	4
	20	□	MHS1120L250B	226.0	251.5	252.0	312.0	310	2.0	12	4
	24	□	MHS1120L300B	270.8	301.5	302.0	362.0	360	2.0	12	4
11.3	1	□	MHS1130L040B	13.2	41.4	41.9	101.9	100	1.9	12	3
	5	□	MHS1130L090B	58.6	91.6	92.1	152.1	150	2.1	12	4
	8	□	MHS1130L120B	92.5	121.6	122.1	182.1	180	2.1	12	4
	11	□	MHS1130L150B	126.4	151.6	152.1	212.1	210	2.1	12	4
	15	□	MHS1130L200B	171.6	201.6	202.1	262.1	260	2.1	12	4
	20	□	MHS1130L250B	228.1	251.6	252.1	312.1	310	2.1	12	4
	24	□	MHS1130L300B	273.3	301.6	302.1	362.1	360	2.1	12	4
11.4	1	□	MHS1140L040B	13.4	41.5	42.0	102.0	100	2.0	12	3
	5	□	MHS1140L090B	59.1	91.6	92.1	152.1	150	2.1	12	4
	8	□	MHS1140L120B	93.3	121.6	122.1	182.1	180	2.1	12	4
	11	□	MHS1140L150B	127.5	151.6	152.1	212.1	210	2.1	12	4
	15	□	MHS1140L200B	173.1	201.6	202.1	262.1	260	2.1	12	4
	19	□	MHS1140L250B	218.7	251.6	252.1	312.1	310	2.1	12	4
	24	□	MHS1140L300B	275.7	301.6	302.1	362.1	360	2.1	12	4
11.5	1	★	MHS1150L040B	13.5	41.5	42.0	102.0	100	2.0	12	3
	5	★	MHS1150L090B	59.6	91.6	92.1	152.1	150	2.1	12	4
	8	★	MHS1150L120B	94.1	121.6	122.1	182.1	180	2.1	12	4
	10	★	MHS1150L150B	117.1	151.6	152.1	212.1	210	2.1	12	4
	15	★	MHS1150L200B	174.6	201.6	202.1	262.1	260	2.1	12	4
	19	★	MHS1150L250B	220.6	251.6	252.1	312.1	310	2.1	12	4
	24	★	MHS1150L300B	278.1	301.6	302.1	362.1	360	2.1	12	4

Nota 1) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.
□ : Non a magazzino, prodotti solo su ordinazione.

DC (mm)	Profondità foro (L/D)	VP15TF	Codice di ordinazione	Dimensioni (mm) LU	LCF	LH	OAL	LF	PL	DCONMS	Tipo
	1	□	**MHS1160L040B**	13.6	42.0	42.0	102.0	100	2.0	12	3
	5	□	**MHS1160L090B**	60.1	92.1	92.1	152.1	150	2.1	12	4
	8	□	**MHS1160L120B**	94.9	122.1	122.1	182.1	180	2.1	12	4
11.6	10	□	**MHS1160L150B**	118.1	152.1	152.1	212.1	210	2.1	12	4
	15	□	**MHS1160L200B**	176.1	202.1	202.1	262.1	260	2.1	12	4
	19	□	**MHS1160L250B**	222.5	252.1	252.1	312.1	310	2.1	12	4
	23	□	**MHS1160L300B**	268.9	302.1	302.1	362.1	360	2.1	12	4
	1	□	**MHS1170L040B**	13.7	42.0	42.0	102.0	100	2.0	12	3
	5	□	**MHS1170L090B**	60.6	92.1	92.1	152.1	150	2.1	12	4
	8	□	**MHS1170L120B**	95.7	122.1	122.1	182.1	180	2.1	12	4
11.7	10	□	**MHS1170L150B**	119.1	152.1	152.1	212.1	210	2.1	12	4
	15	□	**MHS1170L200B**	177.6	202.1	202.1	262.1	260	2.1	12	4
	19	□	**MHS1170L250B**	224.4	252.1	252.1	312.1	310	2.1	12	4
	23	□	**MHS1170L300B**	271.2	302.1	302.1	362.1	360	2.1	12	4
	1	★	**MHS1180L040B**	13.8	42.0	42.0	102.0	100	2.0	12	3
	5	★	**MHS1180L090B**	61.1	92.1	92.1	152.1	150	2.1	12	4
	8	★	**MHS1180L120B**	96.5	122.1	122.1	182.1	180	2.1	12	4
11.8	10	★	**MHS1180L150B**	120.1	152.1	152.1	212.1	210	2.1	12	4
	14	★	**MHS1180L200B**	167.3	202.1	202.1	262.1	260	2.1	12	4
	19	★	**MHS1180L250B**	226.3	252.1	252.1	312.1	310	2.1	12	4
	23	★	**MHS1180L300B**	273.5	302.1	302.1	362.1	360	2.1	12	4
	1	□	**MHS1190L040B**	13.9	42.0	42.0	102.0	100	2.0	12	3
	5	□	**MHS1190L090B**	61.7	92.2	92.2	152.2	150	2.2	12	4
	8	□	**MHS1190L120B**	97.4	122.2	122.2	182.2	180	2.2	12	4
11.9	10	□	**MHS1190L150B**	121.2	152.2	152.2	212.2	210	2.2	12	4
	14	□	**MHS1190L200B**	168.8	202.2	202.2	262.2	260	2.2	12	4
	19	□	**MHS1190L250B**	228.3	252.2	252.2	312.2	310	2.2	12	4
	23	□	**MHS1190L300B**	275.9	302.2	302.2	362.2	360	2.2	12	4
	1	●	**MHS1200L040B**	14.1	42.1	42.1	102.1	100	2.1	12	3
	5	●	**MHS1200L090B**	62.2	92.2	92.2	152.2	150	2.2	12	4
	7	●	**MHS1200L120B**	86.2	122.2	122.2	182.2	180	2.2	12	4
12.0	10	●	**MHS1200L150B**	122.2	152.2	152.2	212.2	210	2.2	12	4
	14	●	**MHS1200L200B**	170.2	202.2	202.2	262.2	260	2.2	12	4
	18	●	**MHS1200L250B**	218.2	252.2	252.2	312.2	310	2.2	12	4
	22	●	**MHS1200L300B**	266.2	302.2	302.2	362.2	360	2.2	12	4

PARAMETRI DI TAGLIO ➤ M136
GUIDA OPERATIVA ➤ M137
DATI TECNICI ➤ P001

MHS

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	P				M			
	Acciaio dolce (≤180HB), Acciaio al carbonio, Acciaio legato (180−280HB) Ck10, Ck45, 42CrMo4				Acciai inossidabili austenitici e martensitici (>200HB) X20CrNi17-2, X30Cr13			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)
1.0	40	12700	0.030 (0.020−0.040)	380	20	6400	0.030 (0.020−0.040)	190
1.2	50	13300	0.035 (0.025−0.050)	465	30	8000	0.035 (0.025−0.050)	280
1.6	60	11900	0.050 (0.030−0.065)	595	40	8000	0.050 (0.030−0.065)	400
2.0	70	11100	0.060 (0.040−0.080)	665	50	8000	0.060 (0.040−0.080)	480
2.5	80	10200	0.075 (0.050−0.100)	765	60	7600	0.075 (0.050−0.100)	570
3.2	80	8000	0.100 (0.070−0.130)	800	60	6000	0.100 (0.070−0.130)	600
4.0	80	6400	0.100 (0.090−0.110)	640	60	4800	0.090 (0.080−0.090)	430
5.0	80	5100	0.130 (0.110−0.140)	665	60	3800	0.110 (0.100−0.120)	420
6.3	80	4000	0.160 (0.140−0.180)	640	60	3000	0.140 (0.130−0.150)	420
8.0	80	3200	0.200 (0.180−0.230)	640	60	2400	0.170 (0.160−0.190)	410
10.0	80	2600	0.250 (0.220−0.280)	650	60	1900	0.220 (0.200−0.230)	420
12.0	80	2100	0.300 (0.270−0.340)	630	60	1600	0.260 (0.240−0.280)	415

Materiale da lavorare	P				H		M	
	Acciaio pre-temprato (35−45HRC), Acciaio legato per utensili (≤350HB) X36CrMo17, X210Cr12, 55NiCrMoV6				Acciaio temprato (40−55HRC), Acciaio inossidabile PH (<450HB) X20CrNi17-2, X30Cr13 X5CrNiCuNb164, X7CrNiAl17-7			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)
1.0	20	6400	0.025 (0.020−0.030)	160	40	12700	0.020 (0.015−0.025)	255
1.2	30	8000	0.030 (0.020−0.035)	240	40	10600	0.025 (0.020−0.030)	265
1.6	40	8000	0.040 (0.030−0.045)	320	50	10000	0.035 (0.025−0.040)	350
2.0	50	8000	0.045 (0.035−0.060)	360	50	8000	0.040 (0.030−0.050)	320
2.5	60	7600	0.060 (0.045−0.075)	455	60	7600	0.050 (0.040−0.065)	380
3.2	60	6000	0.080 (0.060−0.090)	480	60	6000	0.060 (0.050−0.080)	360
4.0	60	4800	0.080 (0.070−0.100)	385	60	4800	0.080 (0.060−0.100)	385
5.0	60	3800	0.110 (0.090−0.130)	420	60	3800	0.100 (0.080−0.130)	380
6.3	60	3000	0.130 (0.110−0.160)	390	60	3000	0.110 (0.090−0.130)	330
8.0	60	2400	0.170 (0.140−0.200)	410	60	2400	0.140 (0.120−0.160)	335
10.0	60	1900	0.210 (0.170−0.250)	400	60	1900	0.170 (0.140−0.200)	325
12.0	60	1600	0.250 (0.210−0.300)	400	60	1600	0.210 (0.170−0.240)	335

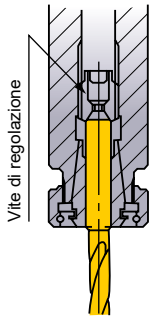
Materiale da lavorare	H	S		
	Acciaio temprato (40−55HRC), Lega resistente al calore X40CrMoV51, 55NiCrMoV7, Inconel®718			
Diam. Punta **DC** (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (min.−max.) (mm/giro)	Avanzamento della tavola (mm/min)
1.0	10	3200	0.015 (0.015−0.020)	50
1.2	10	2700	0.020 (0.015−0.025)	55
1.6	10	2000	0.025 (0.020−0.030)	50
2.0	20	3200	0.035 (0.025−0.040)	110
2.5	20	2600	0.040 (0.030−0.050)	105
3.2	20	2000	0.050 (0.040−0.070)	100
4.0	30	2400	0.070 (0.050−0.080)	170
5.0	30	1900	0.080 (0.060−0.100)	150
6.3	30	1500	0.090 (0.080−0.110)	135
8.0	40	1600	0.120 (0.100−0.130)	190
10.0	40	1300	0.150 (0.130−0.170)	195
12.0	40	1100	0.180 (0.150−0.200)	200

Nota 1) Se viene utilizzata la punta con una lunghezza superiore a L/D 10, è necessario utilizzare i fori pilota come guida. (senza foro pilota la punta può rompersi).

Nota 2) Utilizzare la punta con il tagliente più corto delle stesse dimensioni come punta pilota.

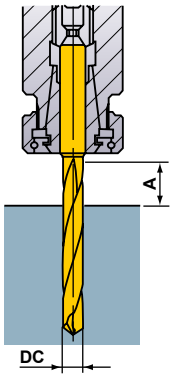
■ GUIDA OPERATIVA

Mandrino di tenuta



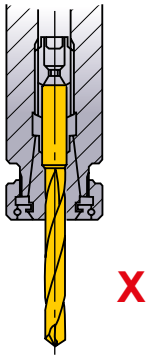
La ghiera reggispinta del mandrino blocca la punta in modo sicuro.

Lunghezza punta



A ≥ DC x 2

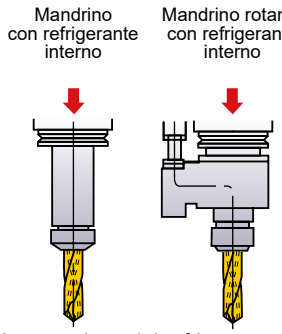
Montaggio punta



X

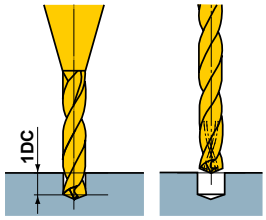
Non bloccare la punta sull'elica.

Tipo con refrigerante interno



La pressione del refrigerante è di circa 15 bar—70 bar.
Pressione del refrigerante consigliata: ≥30 bar

Montaggio punta



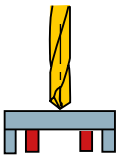
1) Realizzare un foro pilota di circa 1DC(DC: diametro punta) usando la punta MHS con taglienti più corti.
2) Usare il foro pilota come guida ed introdurre la punta lunga. A seconda dell'applicazione, eseguire una foratura profonda.

Utilizzo del refrigerante

1) Particelle di polvere e sporcizia possono ostruire i fori del passaggio refrigerante e impedire un flusso efficace. È consigliabile sostituire regolarmente il refrigerante.

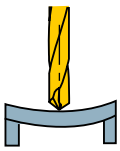
2) Piccole particelle di sporco possono bloccare i fori di lubrificazione. Utilizzare un filtro come misura preventiva. Con punte di diametro ridotto, scegliere un filtraggio fine.

Pezzi sottili



OK

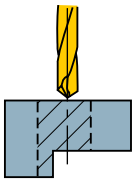
Supporti per il pezzo



X

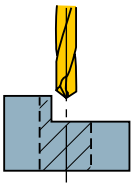
Se tende a flettere

Taglio interrotto



OK

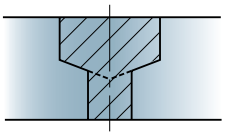
①Ridurre l'avanzamento quando si fora sulla parte con taglio interrotto.



Richiede una precedente lavorazione

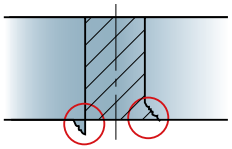
①Praticare un'impronta piana con fresa integrale prima della foratura.

Foratura a gradino



①Suddividere la lavorazione in due processi.
②Praticare prima il foro più grande.
*La punta che realizza i due diametri contemporaneamente può essere prodotta su richiesta.

Bave e scheggiature sul pezzo



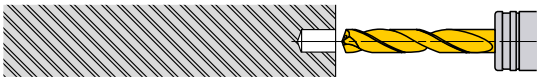
①Ridurre la velocità di avanzamento prima dell'uscita della punta dal foro.
②Variare l'angolo della punta.

MHS

■ MANUALE D'USO PER PUNTA LUNGA DI TIPO MHS (L/D ≥ 10)

FORATURA PER SUPERFICIE PIANA ● Foratura di un foro cieco

■ 1. Foratura di un foro pilota



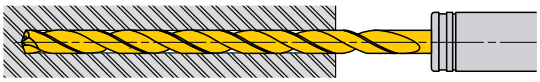
①Utilizzare una punta con un angolo tra i taglienti maggiore (più piatta) rispetto al tipo più lungo. Usare l'elica più corta possibile.
②Assicurarsi che la punta esegua un foro guida ad elevata precisione.
③Profondità di foratura: circa 1DC o superiore.
(Regolare la profondità del foro pilota in base alla lunghezza del tipo più lungo.)

■ 2. Taglio iniziale con punta di tipo lungo



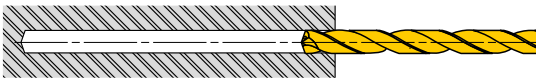
①Inserire la punta lunga nel foro pilota ad un numero di giri ridotto.
Giri 1000min^{-1}, avanzamento 0.2mm—0.3mm/giro.
②Fermare la punta lunga a 0.5mm—1mm dal fondo del foro pilota.

■ 3. Foratura in profondità



①Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

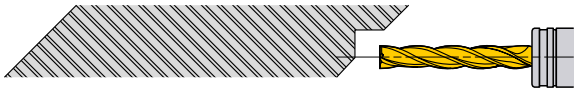
■ 4. Arretramento della punta



①Dopo aver praticato la foratura, ridurre il numero di giri del tagliente fino a circa 0.5mm-1mm dalla fine del foro (giri di circa 1000 min^{-1})
②Arretrare la punta fino al punto di inizio del foro a una velocità di avanzamento pari a 3000mm/min.
③Infine, liberare il foro a una velocità di taglio pari a 20m-30m/min e una velocità di avanzamento pari a 0.2mm-0.3mm/giro.

FORATURA INTERROTTA ● Foratura passante con interruzione o su superfici irregolari con piani inclinati

■ 1. Spianatura



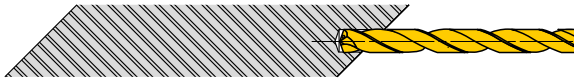
①Eseguire una superficie piana utilizzando una fresa frontale o una fresa per cave in grado di spianare. Realizzare il diametro della spianatura della stessa dimensione del diametro del foro profondo richiesto.

■ 2. Foratura di un foro pilota



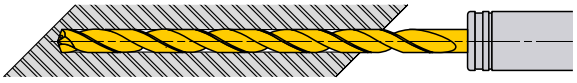
①Utilizzare una punta con un angolo tra i taglienti maggiore (più piatta) rispetto al tipo più lungo. Usare l'elica più corta possibile.
②Assicurare che la guida pratichi un foro a elevata precisione.
③Profondità di foratura: circa 1DC o superiore.
(Regolare la profondità del foro pilota in base alla lunghezza del tipo più lungo.)

■ 3. Taglio iniziale con punta di tipo lungo



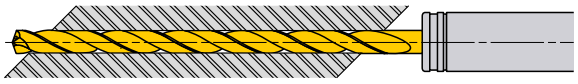
①Inserire la punta lunga nel foro pilota ad un numero di giri ridotto.
Giri 1000min^{-1}, avanzamento 0.2mm—0.3mm/giro.
②Fermare la punta lunga a 0.5mm—1mm dal fondo del foro pilota.

■ 4. Foratura in profondità



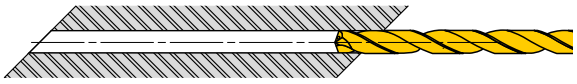
①Iniziare il taglio alla velocità consigliata e avanzare con un ciclo ad avanzamento continuo.

■ 5. Sfondamento



①Il tagliente potrebbe essere danneggiato in fase di sfondamento.
②Ridurre la velocità di avanzamento al momento dell'uscita dell'utensile sull'inclinato.

■ 6. Ritrazione della punta



①Infine, liberare il foro a una velocità di taglio pari a 20m—30m/min e una velocità di avanzamento pari a 0.2mm—0.3mm/giro.
②Ritrarre la punta dal punto di inizio del foro a una velocità di avanzamento pari a 3000mm/min.

FORATURA (A INSERTI)

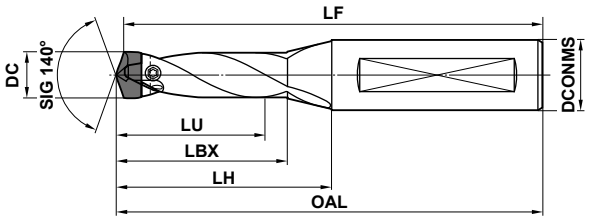
STAW

- Tagliente ondulato per un buon controllo del truciolo.
- Il sistema di bloccaggio ad elevata rigidità offre stabilità e affidabilità nell'esecuzione di fori piccoli.



P M K N S H





PORTAUTENSILE

DC (mm)	Profondità foro (L/D)	Portautensile: Codice di ordinazione	Portautensile: Disponibilità	Dimensioni (mm): LU	LBX	LH	OAL	LF	DCONMS	F: Chiave	Inserto: DC (mm)	Inserto: Codice di ordinazione	Inserto: Disponibilità VP15TF
10.0 – 10.4	1.5	STAWSS1000S16	●	16.8	23.8	33.8	81.8	80	16	TIP06F	10.0	* STAWN1000TH	●
												STAWK1000TG	
	3	STAWSN1000S16	●	31.8	38.8	48.8	96.8	95	16	TIP06F	10.1	STAWN1010TH	●
												STAWK1010TG	
	5	STAWMN1000S16	●	51.8	58.8	68.8	116.8	115	16	TIP06F	10.2	STAWN1020TH	●
												STAWK1020TG	
	8	STAWLN1000S16	●	81.8	88.8	98.8	146.8	145	16	TIP06F	10.3	STAWN1030TH	●
												STAWK1030TG	
											10.4	STAWN1040TH	●
												STAWK1040TG	
10.5 – 10.9	1.5	STAWSS1050S16	●	17.7	23.9	33.9	81.9	80	16	TIP06F	10.5	* STAWN1050TH	●
												STAWK1050TG	
	3	STAWSN1050S16	●	33.4	38.9	48.9	96.9	95	16	TIP06F	10.6	STAWN1060TH	●
												STAWK1060TG	
	5	STAWMN1050S16	●	54.4	58.9	68.9	116.9	115	16	TIP06F	10.7	STAWN1070TH	●
												STAWK1070TG	
	8	STAWLN1050S16	●	85.9	88.9	98.9	146.9	145	16	TIP06F	10.8	STAWN1080TH	●
												STAWK1080TG	
											10.9	STAWN1090TH	●
												STAWK1090TG	
11.0 – 11.4	1.5	STAWSS1100S16	●	18.5	27.0	38.0	86.0	84	16	TIP06F	11.0	* STAWN1100TH	●
												STAWK1100TG	
	3	STAWSN1100S16	●	35.0	43.0	54.0	102.0	100	16	TIP06F	11.1	STAWN1110TH	●
												STAWK1110TG	
	5	STAWMN1100S16	●	57.0	68.0	79.0	127.0	125	16	TIP06F	11.2	STAWN1120TH	●
												STAWK1120TG	
	8	STAWLN1100S16	●	90.0	98.0	109.0	157.0	155	16	TIP06F	11.3	STAWN1130TH	●
												STAWK1130TG	
											11.4	STAWN1140TH	●
												STAWK1140TG	
11.5 – 11.9	1.5	STAWSS1150S16	●	19.4	27.1	38.1	86.1	84	16	TIP06F	11.5	* STAWN1150TH	●
												STAWK1150TG	
	3	STAWSN1150S16	●	36.6	43.1	54.1	102.1	100	16	TIP06F	11.6	STAWN1160TH	●
												STAWK1160TG	
	5	STAWMN1150S16	●	59.6	68.1	79.1	127.1	125	16	TIP06F	11.7	STAWN1170TH	●
												STAWK1170TG	
	8	STAWLN1150S16	●	94.1	98.1	109.1	157.1	155	16	TIP06F	11.8	STAWN1180TH	●
												STAWK1180TG	
											11.9	STAWN1190TH	●
												STAWK1190TG	
12.0 – 12.4	1.5	STAWSS1200S16	●	20.2	29.2	41.2	89.2	87	16	TIP06F	12.0	* STAWN1200TH	●
												STAWK1200TG	
	3	STAWSN1200S16	●	38.2	47.2	59.2	107.2	105	16	TIP06F	12.1	STAWN1210TH	●
												STAWK1210TG	
	5	STAWMN1200S16	●	62.2	72.2	84.2	132.2	130	16	TIP06F	12.2	STAWN1220TH	●
												STAWK1220TG	
	8	STAWLN1200S16	●	98.2	107.2	119.2	167.2	165	16	TIP06F	12.3	STAWN1230TH	●
												STAWK1230TG	
											12.4	STAWN1240TH	●
												STAWK1240TG	

Nota 1) Le dimensioni sopra indicate (*) si applicano per l'installazione degli inserti.
Nota 2) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto.
(Nota: 1 inserto in una confezione)

DESCRIZIONE DEGLI INSERTI ➤ M142
PARAMETRI DI TAGLIO ➤ M144
NOTE PER L'USO ➤ M145
RICAMBI ➤ N001
DATI TECNICI ➤ P001

STAW

DC (mm)	Profondità foro (L/D)	Portautensile: Codice di ordinazione	Portautensile: Disponibilità	Dimensioni (mm): LU	LBX	LH	OAL	LF	DCONMS	F W Chiave	Inserto: DC (mm)	Inserto: Codice di ordinazione	Inserto: Disponibilità VP15TF
12.5 — 12.9	1.5	STAWSS1250S16	●	21.1	29.3	41.3	89.3	87	16	TIP06F	12.5	* STAWN1250TH	●
												STAWK1250TG	
	3	STAWSN1250S16	●	39.8	47.3	59.3	107.3	105	16	TIP06F	12.6	STAWN1260TH	●
												STAWK1260TG	
	5	STAWMN1250S16	●	64.8	72.3	84.3	132.3	130	16	TIP06F	12.7	STAWN1270TH	●
												STAWK1270TG	
	8	STAWLN1250S16	●	102.3	107.3	119.3	167.3	165	16	TIP06F	12.8	STAWN1280TH	●
												STAWK1280TG	
											12.9	STAWN1290TH	●
												STAWK1290TG	
13.0 — 13.4	1.5	STAWSS1300S16	●	21.9	32.4	45.4	93.4	91	16	TIP08W	13.0	* STAWN1300TH	●
												STAWK1300TG	
	3	STAWSN1300S16	●	41.4	51.4	64.4	112.4	110	16	TIP08W	13.1	STAWN1310TH	●
												STAWK1310TG	
	5	STAWMN1300S16	●	67.4	76.4	89.4	137.4	135	16	TIP08W	13.2	STAWN1320TH	●
												STAWK1320TG	
	8	STAWLN1300S16	●	106.4	116.4	129.4	177.4	175	16	TIP08W	13.3	STAWN1330TH	●
												STAWK1330TG	
											13.4	STAWN1340TH	●
												STAWK1340TG	
13.5 — 13.9	1.5	STAWSS1350S16	●	22.8	32.5	45.5	93.5	91	16	TIP08W	13.5	* STAWN1350TH	●
												STAWK1350TG	
	3	STAWSN1350S16	●	43.0	51.5	64.5	112.5	110	16	TIP08W	13.6	STAWN1360TH	●
												STAWK1360TG	
	5	STAWMN1350S16	●	70.0	76.5	89.5	137.5	135	16	TIP08W	13.7	STAWN1370TH	●
												STAWK1370TG	
	8	STAWLN1350S16	●	110.5	116.5	129.5	177.5	175	16	TIP08W	13.8	STAWN1380TH	●
												STAWK1380TG	
											13.9	STAWN1390TH	●
												STAWK1390TG	
14.0 — 14.4	1.5	STAWSS1400S16	●	23.5	33.5	47.5	95.5	93	16	TIP08W	14.0	* STAWN1400TH	●
												STAWK1400TG	
	3	STAWSN1400S16	●	44.5	55.5	69.5	117.5	115	16	TIP08W	14.1	STAWN1410TH	●
												STAWK1410TG	
	5	STAWMN1400S16	●	72.5	85.5	99.5	147.5	145	16	TIP08W	14.2	STAWN1420TH	●
												STAWK1420TG	
	8	STAWLN1400S16	●	114.5	124.5	139.5	187.5	185	16	TIP08W	14.3	STAWN1430TH	●
												STAWK1430TG	
											14.4	STAWN1440TH	●
												STAWK1440TG	
14.5 — 14.9	1.5	STAWSS1450S16	●	24.4	33.6	47.6	95.6	93	16	TIP08W	14.5	* STAWN1450TH	●
												STAWK1450TG	
	3	STAWSN1450S16	●	46.1	55.6	69.6	117.6	115	16	TIP08W	14.6	STAWN1460TH	●
												STAWK1460TG	
	5	STAWMN1450S16	●	75.1	85.6	99.6	147.6	145	16	TIP08W	14.7	STAWN1470TH	●
												STAWK1470TG	
	8	STAWLN1450S16	●	118.6	124.6	139.6	187.6	185	16	TIP08W	14.8	STAWN1480TH	●
												STAWK1480TG	
											14.9	STAWN1490TH	●
												STAWK1490TG	
15.0 — 15.4	1.5	STAWSS1500S20	●	25.2	35.7	50.7	100.7	98	20	TIP08W	15.0	* STAWN1500TH	●
												STAWK1500TG	
	3	STAWSN1500S20	●	47.7	62.7	77.7	127.7	125	20	TIP08W	15.1	STAWN1510TH	●
												STAWK1510TG	
	5	STAWMN1500S20	●	77.7	92.7	107.7	157.7	155	20	TIP08W	15.2	STAWN1520TH	●
												STAWK1520TG	
	8	STAWLN1500S20	●	122.7	132.7	150.7	200.7	198	20	TIP08W	15.3	STAWN1530TH	●
												STAWK1530TG	
											15.4	STAWN1540TH	●
												STAWK1540TG	

Nota 1) Le dimensioni sopra indicate (*) si applicano per l'installazione degli inserti.
Nota 2) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto.(Nota: 1 inserto in una confezione)

DC (mm)	Profondità foro (L/D)	Portautensile		Dimensioni (mm)						W	Inserto		
		Codice di ordinazione	Disponibilità	LU	LBX	LH	OAL	LF	DCONMS	Chiave	DC (mm)	Codice di ordinazione	Disponibilità VP15TF
15.5 | 16.4	1.5	**STAWSS1600S20**	●	26.1	36.8	52.8	102.8	100	20	TIP10W	15.5	* **STAWN1550T**	●
												STAWK1550TG	
											15.6	**STAWN1560T**	●
												STAWK1560TG	
											15.7	**STAWN1570T**	●
												STAWK1570TG	
	3	**STAWSN1600S20**	●	49.3	62.8	82.8	132.8	130	20	TIP10W	15.8	**STAWN1580T**	●
												STAWK1580TG	
											15.9	**STAWN1590T**	●
												STAWK1590TG	
	5	**STAWMN1600S20**	●	80.3	92.8	117.8	167.8	165	20	TIP10W	16.0	**STAWN1600T**	●
												STAWK1600TG	
											16.1	**STAWN1610T**	●
												STAWK1610TG	
											16.2	**STAWN1620T**	●
												STAWK1620TG	
	8	**STAWLN1600S20**	●	126.8	140.8	160.8	210.8	208	20	TIP10W	16.3	**STAWN1630T**	●
												STAWK1630TG	
											16.4	**STAWN1640T**	●
												STAWK1640TG	
16.5 | 17.4	1.5	**STAWSS1700S20**	●	27.8	39.0	56.0	106.0	103	20	TIP10W	16.5	* **STAWN1650T**	●
												STAWK1650TG	
											16.6	**STAWN1660T**	●
												STAWK1660TG	
											16.7	**STAWN1670T**	●
												STAWK1670TG	
	3	**STAWSN1700S20**	●	52.5	64.0	88.0	138.0	135	20	TIP10W	16.8	**STAWN1680T**	●
												STAWK1680TG	
											16.9	**STAWN1690T**	●
												STAWK1690TG	
	5	**STAWMN1700S20**	●	85.5	98.0	123.0	173.0	170	20	TIP10W	17.0	**STAWN1700T**	●
												STAWK1700TG	
											17.1	**STAWN1710T**	●
												STAWK1710TG	
											17.2	**STAWN1720T**	●
												STAWK1720TG	
	8	**STAWLN1700S20**	●	135.0	149.0	169.0	219.0	216	20	TIP10W	17.3	**STAWN1730T**	●
												STAWK1730TG	
											17.4	**STAWN1740T**	●
												STAWK1740TG	
17.5 | 18.4	1.5	**STAWSS1800S20**	●	29.5	40.2	58.2	108.2	105	20	TIP10W	17.5	* **STAWN1750T**	●
												STAWK1750TG	
											17.6	**STAWN1760T**	●
												STAWK1760TG	
											17.7	**STAWN1770T**	●
												STAWK1770TG	
	3	**STAWSN1800S20**	●	55.7	67.2	93.2	143.2	140	20	TIP10W	17.8	**STAWN1780T**	●
												STAWK1780TG	
											17.9	**STAWN1790T**	●
												STAWK1790TG	
	5	**STAWMN1800S20**	●	90.7	103.2	128.2	178.2	175	20	TIP10W	18.0	**STAWN1800T**	●
												STAWK1800TG	
											18.1	**STAWN1810T**	●
												STAWK1810TG	
											18.2	**STAWN1820T**	●
												STAWK1820TG	
	8	**STAWLN1800S20**	●	143.2	157.2	177.2	227.2	224	20	TIP10W	18.3	**STAWN1830T**	●
												STAWK1830TG	
											18.4	**STAWN1840T**	●
												STAWK1840TG	

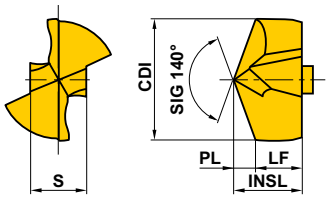
DESCRIZIONE DEGLI INSERTI ➤ **M142**
PARAMETRI DI TAGLIO ➤ **M144**
NOTE PER L'USO ➤ **M145**

RICAMBI ➤ **N001**
DATI TECNICI ➤ **P001**

STAW

INSERTI





Codice di ordinazione	Rivestito		Dimensioni (mm)					Applicabile all'utensile
	VP15TF		CDI	INSL	LF	PL	S	
STAWN1000TH	●		10.0	5.6	3.8	1.8	4.6	STAWSS1000S16 STAWSN1000S16 STAWMN1000S16 STAWLN1000S16
STAWN1010TH	●		10.1	5.6	3.8	1.8	4.6	
STAWN1020TH	●		10.2	5.7	3.8	1.9	4.6	
STAWN1030TH	●		10.3	5.7	3.8	1.9	4.6	
STAWN1040TH	●		10.4	5.7	3.8	1.9	4.6	
STAWN1050TH	●		10.5	5.9	4.0	1.9	4.8	STAWSS1050S16 STAWSN1050S16 STAWMN1050S16 STAWLN1050S16
STAWN1060TH	●		10.6	5.9	4.0	1.9	4.8	
STAWN1070TH	●		10.7	5.9	4.0	1.9	4.8	
STAWN1080TH	●		10.8	6.0	4.0	2.0	4.8	
STAWN1090TH	●		10.9	6.0	4.0	2.0	4.8	
STAWN1100TH	●		11.0	6.2	4.2	2.0	5.1	STAWSS1100S16 STAWSN1100S16 STAWMN1100S16 STAWLN1100S16
STAWN1110TH	●		11.1	6.2	4.2	2.0	5.1	
STAWN1120TH	●		11.2	6.2	4.2	2.0	5.1	
STAWN1130TH	●		11.3	6.3	4.2	2.1	5.1	
STAWN1140TH	●		11.4	6.3	4.2	2.1	5.1	
STAWN1150TH	●		11.5	6.5	4.4	2.1	5.3	STAWSS1150S16 STAWSN1150S16 STAWMN1150S16 STAWLN1150S16
STAWN1160TH	●		11.6	6.5	4.4	2.1	5.3	
STAWN1170TH	●		11.7	6.5	4.4	2.1	5.3	
STAWN1180TH	●		11.8	6.5	4.4	2.1	5.3	
STAWN1190TH	●		11.9	6.6	4.4	2.2	5.3	
STAWN1200TH	●		12.0	6.8	4.6	2.2	5.5	STAWSS1200S16 STAWSN1200S16 STAWMN1200S16 STAWLN1200S16
STAWN1210TH	●		12.1	6.8	4.6	2.2	5.5	
STAWN1220TH	●		12.2	6.8	4.6	2.2	5.5	
STAWN1230TH	●		12.3	6.8	4.6	2.2	5.5	
STAWN1240TH	●		12.4	6.9	4.6	2.3	5.5	
STAWN1250TH	●		12.5	7.1	4.8	2.3	5.8	STAWSS1250S16 STAWSN1250S16 STAWMN1250S16 STAWLN1250S16
STAWN1260TH	●		12.6	7.1	4.8	2.3	5.8	
STAWN1270TH	●		12.7	7.1	4.8	2.3	5.8	
STAWN1280TH	●		12.8	7.1	4.8	2.3	5.8	
STAWN1290TH	●		12.9	7.1	4.8	2.3	5.8	
STAWN1300TH	●		13.0	7.3	4.9	2.4	6.0	STAWSS1300S16 STAWSN1300S16 STAWMN1300S16 STAWLN1300S16
STAWN1310TH	●		13.1	7.3	4.9	2.4	6.0	
STAWN1320TH	●		13.2	7.3	4.9	2.4	6.0	
STAWN1330TH	●		13.3	7.3	4.9	2.4	6.0	
STAWN1340TH	●		13.4	7.3	4.9	2.4	6.0	
STAWN1350TH	●		13.5	7.6	5.1	2.5	6.2	STAWSS1350S16 STAWSN1350S16 STAWMN1350S16 STAWLN1350S16
STAWN1360TH	●		13.6	7.6	5.1	2.5	6.2	
STAWN1370TH	●		13.7	7.6	5.1	2.5	6.2	
STAWN1380TH	●		13.8	7.6	5.1	2.5	6.2	
STAWN1390TH	●		13.9	7.6	5.1	2.5	6.2	

● : Inventario mantenuto.(Nota: 1 inserto in una confezione)

Codice di ordinazione	Rivestito		Dimensioni (mm)					Applicabile all'utensile
	VP15TF		CDI	INSL	LF	PL	S	
STAWN1400TH	●		14.0	7.8	5.3	2.5	6.4	STAWSS1400S16 STAWSN1400S16 STAWMN1400S16 STAWLN1400S16
STAWN1410TH	●		14.1	7.9	5.3	2.6	6.4	
STAWN1420TH	●		14.2	7.9	5.3	2.6	6.4	
STAWN1430TH	●		14.3	7.9	5.3	2.6	6.4	
STAWN1440TH	●		14.4	7.9	5.3	2.6	6.4	
STAWN1450TH	●		14.5	8.1	5.5	2.6	6.7	STAWSS1450S16 STAWSN1450S16 STAWMN1450S16 STAWLN1450S16
STAWN1460TH	●		14.6	8.2	5.5	2.7	6.7	
STAWN1470TH	●		14.7	8.2	5.5	2.7	6.7	
STAWN1480TH	●		14.8	8.2	5.5	2.7	6.7	
STAWN1490TH	●		14.9	8.2	5.5	2.7	6.7	
STAWN1500TH	●		15.0	8.4	5.7	2.7	6.9	STAWSS1500S20 STAWSN1500S20 STAWMN1500S20 STAWLN1500S20
STAWN1510TH	●		15.1	8.4	5.7	2.7	6.9	
STAWN1520TH	●		15.2	8.5	5.7	2.8	6.9	
STAWN1530TH	●		15.3	8.5	5.7	2.8	6.9	
STAWN1540TH	●		15.4	8.5	5.7	2.8	6.9	
STAWN1550T	●		15.5	8.7	5.9	2.8	7.1	STAWSS1600S20 STAWSN1600S20 STAWMN1600S20 STAWLN1600S20
STAWN1560T	●		15.6	8.7	5.9	2.8	7.1	
STAWN1570T	●		15.7	8.8	5.9	2.9	7.1	
STAWN1580T	●		15.8	8.8	5.9	2.9	7.1	
STAWN1590T	●		15.9	8.8	5.9	2.9	7.1	
STAWN1600T	●		16.0	8.8	5.9	2.9	7.1	
STAWN1610T	●		16.1	8.8	5.9	2.9	7.1	
STAWN1620T	●		16.2	8.8	5.9	2.9	7.1	
STAWN1630T	●		16.3	8.9	5.9	3.0	7.1	
STAWN1640T	●		16.4	8.9	5.9	3.0	7.1	
STAWN1650T	●		16.5	9.3	6.3	3.0	7.6	STAWSS1700S20 STAWSN1700S20 STAWMN1700S20 STAWLN1700S20
STAWN1660T	●		16.6	9.3	6.3	3.0	7.6	
STAWN1670T	●		16.7	9.3	6.3	3.0	7.6	
STAWN1680T	●		16.8	9.4	6.3	3.1	7.6	
STAWN1690T	●		16.9	9.4	6.3	3.1	7.6	
STAWN1700T	●		17.0	9.4	6.3	3.1	7.6	
STAWN1710T	●		17.1	9.4	6.3	3.1	7.6	
STAWN1720T	●		17.2	9.4	6.3	3.1	7.6	
STAWN1730T	●		17.3	9.4	6.3	3.1	7.6	
STAWN1740T	●		17.4	9.5	6.3	3.2	7.6	
STAWN1750T	●		17.5	9.9	6.7	3.2	8.1	STAWSS1800S20 STAWSN1800S20 STAWMN1800S20 STAWLN1800S20
STAWN1760T	●		17.6	9.9	6.7	3.2	8.1	
STAWN1770T	●		17.7	9.9	6.7	3.2	8.1	
STAWN1780T	●		17.8	9.9	6.7	3.2	8.1	
STAWN1790T	●		17.9	10.0	6.7	3.3	8.1	
STAWN1800T	●		18.0	10.0	6.7	3.3	8.1	
STAWN1810T	●		18.1	10.0	6.7	3.3	8.1	
STAWN1820T	●		18.2	10.0	6.7	3.3	8.1	
STAWN1830T	●		18.3	10.0	6.7	3.3	8.1	
STAWN1840T	●		18.4	10.0	6.7	3.3	8.1	

PARAMETRI DI TAGLIO ➤ **M144**
NOTE PER L'USO ➤ **M145**
RICAMBI ➤ **N001**
DATI TECNICI ➤ **P001**

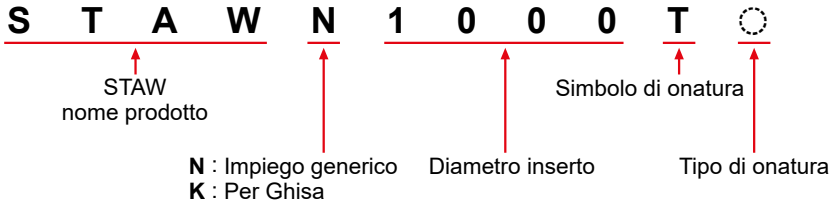
FORATURA (A INSERTI)

STAW

■CON ONATURA

Se si desidera ordinare un inserto con onatura non standard, utilizzare la seguente simbologia.

(Nome d'ordine inserto)



(Onatura standard)

Tipo di onatura	Con Onatura (mm)
F	0
G	0.02—0.05
H	0.05—0.10
- (Standard)	0.10—0.15
K	0.15—0.20
S	0.20—0.25
M	0.25—0.30

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		Diametro della punta	Ø 10.0—Ø 12.9		Ø 13.0—Ø 13.9		Ø 14.0—Ø 15.4		Ø 15.5—Ø 18.4	
		Condizioni / Durezza	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)
P	Acciaio dolce	≤180HB	80 (60—100)	0.20 (0.15—0.25)	90 (70—110)	0.25 (0.20—0.30)	100 (80—120)	0.30 (0.25—0.35)	100 (80—120)	0.35 (0.25—0.40)
	Acciaio al carbonio Acciaio legato	180—280HB	80 (60—100)	0.20 (0.15—0.25)	90 (70—110)	0.25 (0.20—0.30)	100 (80—120)	0.30 (0.25—0.35)	100 (80—120)	0.35 (0.25—0.40)
		280—350HB	70 (60—90)	0.20 (0.15—0.25)	80 (60—100)	0.25 (0.20—0.30)	90 (70—110)	0.25 (0.20—0.30)	90 (70—110)	0.30 (0.20—0.35)
M	Acciaio inossidabile	≤200HB	40 (30—50)	0.13 (0.10—0.16)	50 (40—60)	0.15 (0.12—0.18)	60 (50—70)	0.17 (0.14—0.20)	60 (50—70)	0.17 (0.14—0.20)
K	Ghisa	Resistenza alla trazione ≤350MPa	80 (60—100)	0.20 (0.15—0.25)	90 (70—110)	0.25 (0.20—0.30)	100 (80—120)	0.30 (0.25—0.35)	120 (80—140)	0.45 (0.35—0.55)
	Ghisa sferoidale	Resistenza alla trazione ≤450MPa	70 (60—90)	0.20 (0.15—0.25)	80 (60—100)	0.25 (0.20—0.30)	90 (70—110)	0.30 (0.25—0.35)	100 (80—120)	0.35 (0.25—0.40)

Nota 1) Se viene usata una punta per fori con profondità DCx1,5, è possibile aumentare la velocità di avanzamento di circa il 20%.
Nota 2) Se viene usato il supporto di tipo DCx8 ridurre la velocità di taglio di circa il 20%.
Nota 3) Se viene usato il supporto di tipo DCx8 si raccomanda di praticare un foro pilota.
Nota 4) Per l'acciaio inossidabile, usare refrigerante interno. (Nebulizzazione e lubrificazione minimale (MQL) non consigliate).

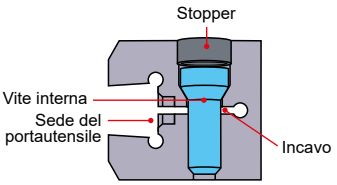
NOTE PER L'USO

■INSTALLAZIONE INSERTO

1. Prima di inserire l'inserto nel portautensile, assicurarsi che corpi estranei o polvere non siano presenti nella fessura del portautensile o nella fenditura. Se necessario, pulire con aria compressa.

2. Utilizzare la chiave in dotazione per allentare la vite interna ed aprire la sede del corpo punta, quindi inserire l'inserto nella fessura del portautensile come mostrato nella figura 1.
   *Per il fissaggio, assicurarsi che la chiave sia ben ferma contro la base della testa filettata interna.

3. Dopo aver inserito l'inserto nella sede del portautensile, stringere la vite interna premendo leggermente l'inserto all'interno della tasca, come mostrato nella figura 2, per bloccare e posizionare l'inserto in modo sicuro.
   *Per il fissaggio, assicurarsi che la chiave sia ben ferma contro la base della testa filettata interna.



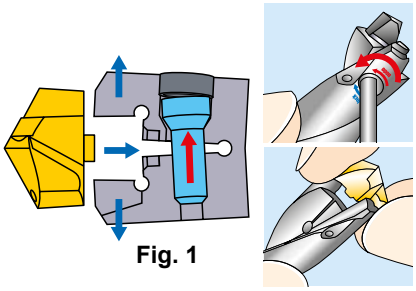


Fig. 1

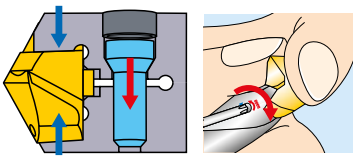
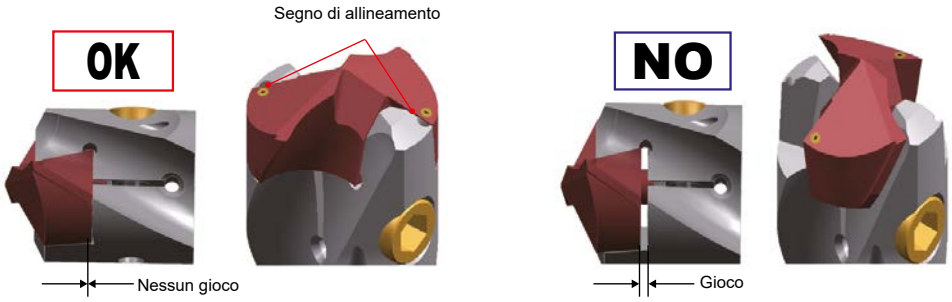


Fig. 2

Serrare la vite di bloccaggio secondo la coppia indicata di seguito.

Diam. Punta (mm)	Momento torcente N•m
10 −12.9	1
13 −15.4	2
15.5 −18.4	2.5

4. Controllare che non ci siano spazi vuoti tra il fondo dell'inserto e la fessura del portautensili.



Nota 1) Lo scarso o scorretto bloccaggio dell'inserto può causare una ridotta prestazione di foratura e/o la rottura della punta.
Pertanto, assicurarsi che i segni di allineamento presenti sia sul corpo che sull'inserto siano allineati al momento della regolazione.
Durante la lavorazione, utilizzare barriere di sicurezza e occhiali protettivi.

STAW

RICAMBI

Applicabile all'utensile	Numero di ordinazione della confezione (Vite interna e stopper)		
		Vite interna	Stopper
STAWSS/SN/MN/LN1000S16	WS203107TPS-35LH	WS203107TPS	WS35LH
STAWSS/SN/MN/LN1050S16	WS203107TPS-35LH	WS203107TPS	WS35LH
STAWSS/SN/MN/LN1100S16	WS203108TPS-35LH	WS203108TPS	WS35LH
STAWSS/SN/MN/LN1150S16	WS203108TPS-35LH	WS203108TPS	WS35LH
STAWSS/SN/MN/LN1200S16	WS203108TPS-35LH	WS203108TPS	WS35LH
STAWSS/SN/MN/LN1250S16	WS203108TPS-35LH	WS203108TPS	WS35LH
STAWSS/SN/MN/LN1300S16	WS253909TPS-45LH	WS253909TPS	WS45LH
STAWSS/SN/MN/LN1350S16	WS253909TPS-45LH	WS253909TPS	WS45LH
STAWSS/SN/MN/LN1400S16	WS253909TPS-45LH	WS253909TPS	WS45LH
STAWSS/SN/MN/LN1450S16	WS253909TPS-45LH	WS253909TPS	WS45LH
STAWSS/SN/MN/LN1500S20	WS253909TPS-45LH	WS253909TPS	WS45LH
STAWSS/SN/MN/LN1600S20	WS304912TPS-55LH	WS304912TPS	WS55LH
STAWSS/SN/MN/LN1700S20	WS304912TPS-55LH	WS304912TPS	WS55LH
STAWSS/SN/MN/LN1800S20	WS304912TPS-55LH	WS304912TPS	WS55LH

Nota 1) Nel set si trovano la vite, la vite di contrasto e il manuale di istruzioni. Seguire attentamente le indicazione quando si sostituiscono le parti di ricambio.

Note

FORATURA (A INSERTI)

TAW

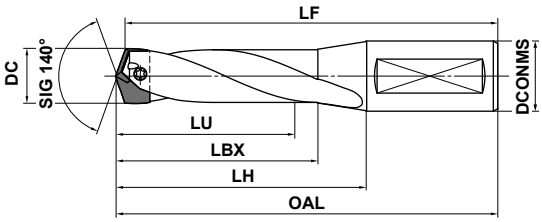
- Tagliente ondulato per un buon controllo del truciolo.
- Geometria a mille righe per un posizionamento preciso.
- Facile cambio dell'inserto.



P M K N S H

(Impiego generico)





■PORTAUTENSILE

DC (mm)	Profondità foro (L/D)	Portautensile: Codice di ordinazione	Portautensile: Disponibilità	LU	LBX	LH	OAL	LF	DCONMS	Vite di fissaggio	Chiave	Piastrina	Lubrificante anti-grippaggio	Inserto: DC (mm)	Inserto: Codice di ordinazione	Disponibilità: VP15TF	Disponibilità: VP10H
18.5 – 19.4	3	TAWSN1900S25	●	58.9	71.4	102.4	158.4	155.0	25	WS304517T	TKY10T	WPT4405	MK1KS	18.5	*TAWNH1850T	●	□
															TAWKH1850TG		
														18.6	TAWNH1860T	●	□
															TAWKH1860TG		
														18.7	TAWNH1870T	●	□
															TAWKH1870TG		
														18.8	TAWNH1880T	●	□
															TAWKH1880TG		
	5	TAWMN1900S25	●	95.9	110.4	137.4	193.4	190.0	25	WS304517T	TKY10T	WPT4405	MK1KS	18.9	TAWNH1890T	●	□
															TAWKH1890TG		
														19.0	TAWNH1900T	●	□
															TAWKH1900TG		
														19.1	TAWNH1910T	●	□
															TAWKH1910TG		
	8	TAWLN1900S25	●	151.4	165.4	188.4	244.4	241.0	25	WS304517T	TKY10T	WPT4405	MK1KS	19.2	TAWNH1920T	●	□
															TAWKH1920TG		
														19.3	TAWNH1930T	●	□
															TAWKH1930TG		
														19.4	TAWNH1940T	●	□
															TAWKH1940TG		
19.5 – 20.4	3	TAWSN2000S25	●	62.0	75.5	102.5	158.5	155.0	25	WS304518T	TKY10T	WPT4405	MK1KS	19.5	*TAWNH1950T	●	□
															TAWKH1950TG		
														19.6	TAWNH1960T	●	□
															TAWKH1960TG		
														19.7	TAWNH1970T	●	□
															TAWKH1970TG		
														19.8	TAWNH1980T	●	□
															TAWKH1980TG		
	5	TAWMN2000S25	●	101.0	116.5	142.5	198.5	195.0	25	WS304518T	TKY10T	WPT4405	MK1KS	19.9	TAWNH1990T	●	□
															TAWKH1990TG		
														20.0	TAWNH2000T	●	□
															TAWKH2000TG		
														20.1	TAWNH2010T	□	□
															TAWKH2010TG		
														20.2	TAWNH2020T	□	□
															TAWKH2020TG		
	8	TAWLN2000S25	●	159.5	173.5	196.5	252.5	249.0	25	WS304518T	TKY10T	WPT4405	MK1KS	20.3	TAWNH2030T	□	□
															TAWKH2030TG		
														20.4	TAWNH2040T	□	□
															TAWKH2040TG		

Nota 1) Le dimensioni sopra indicate (*) si applicano per l'installazione degli inserti.
Nota 2) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.
(Nota: 1 inserto in una confezione)

DC (mm)	Profondità foro (L/D)	Portautensile: Codice di ordinazione	Portautensile: Disponibilità	Dimensioni (mm): LU	LBX	LH	OAL	LF	DCONMS	Vite di fissaggio	Chiave	Piastrina	Lubrificante anti-grippaggio	Inserto: DC (mm)	Inserto: Codice di ordinazione	Disponibilità: VP15TF	Disponibilità: VP10H
20.5 – 21.4	3	TAWSN2100S25	●	65.2	78.7	102.7	158.7	155.0	25	WS304518T	TKY10T	WPT4405	MK1KS	20.5	*TAWNH2050T	●	□
															TAWKH2050TG		
														20.6	TAWNH2060T	□	□
															TAWKH2060TG		
														20.7	TAWNH2070T	□	□
															TAWKH2070TG		
														20.8	TAWNH2080T	□	□
															TAWKH2080TG		
														20.9	TAWNH2090T	□	□
															TAWKH2090TG		
	5	TAWMN2100S25	●	106.2	121.7	142.7	198.7	195.0	25	WS304518T	TKY10T	WPT4405	MK1KS	21.0	TAWNH2100T	●	□
															TAWKH2100TG		
														21.1	TAWNH2110T	□	□
															TAWKH2110TG		
														21.2	TAWNH2120T	□	□
															TAWKH2120TG		
	8	TAWLN2100S25	●	167.7	181.7	205.7	261.7	258.0	25	WS304518T	TKY10T	WPT4405	MK1KS	21.3	TAWNH2130T	□	□
															TAWKH2130TG		
														21.4	TAWNH2140T	□	□
															TAWKH2140TG		
21.5 – 22.4	3	TAWSN2200S25	●	68.4	83.2	108.2	164.2	160.3	25	WS355520T	TKY15T	WPT4405	MK1KS	21.5	*TAWNH2150T	●	□
															TAWKH2150TG		
														21.6	TAWNH2160T	□	□
															TAWKH2160TG		
														21.7	TAWNH2170T	□	□
															TAWKH2170TG		
														21.8	TAWNH2180T	□	□
															TAWKH2180TG		
														21.9	TAWNH2190T	□	□
															TAWKH2190TG		
	5	TAWMN2200S25	●	111.4	128.2	148.2	204.2	200.3	25	WS355520T	TKY15T	WPT4405	MK1KS	22.0	TAWNH2200T	●	□
															TAWKH2200TG		
														22.1	TAWNH2210T	□	□
															TAWKH2210TG		
														22.2	TAWNH2220T	□	□
															TAWKH2220TG		
	8	TAWLN2200S25	●	175.9	189.9	213.9	269.9	266.0	25	WS355520T	TKY15T	WPT4405	MK1KS	22.3	TAWNH2230T	□	□
															TAWKH2230TG		
														22.4	TAWNH2240T	□	□
															TAWKH2240TG		
22.5 – 23.4	3	TAWSN2300S25	●	71.6	86.4	108.4	164.4	160.3	25	WS355521T	TKY15T	WPT4405	MK1KS	22.5	*TAWNH2250T	●	□
															TAWKH2250TG		
														22.6	TAWNH2260T	□	□
															TAWKH2260TG		
														22.7	TAWNH2270T	□	□
															TAWKH2270TG		
														22.8	TAWNH2280T	□	□
															TAWKH2280TG		
														22.9	TAWNH2290T	□	□
															TAWKH2290TG		
	5	TAWMN2300S25	●	116.6	133.4	158.4	214.4	210.3	25	WS355521T	TKY15T	WPT4405	MK1KS	23.0	TAWNH2300T	●	□
															TAWKH2300TG		
														23.1	TAWNH2310T	□	□
															TAWKH2310TG		
														23.2	TAWNH2320T	□	□
															TAWKH2320TG		
	8	TAWLN2300S25	●	184.1	198.1	227.1	283.1	279.0	25	WS355521T	TKY15T	WPT4405	MK1KS	23.3	TAWNH2330T	□	□
															TAWKH2330TG		
														23.4	TAWNH2340T	□	□
															TAWKH2340TG		

DESCRIZIONE DEGLI INSERTI ➤ M153
PARAMETRI DI TAGLIO ➤ M155
NOTE PER L'USO ➤ M156

RICAMBI ➤ N001
DATI TECNICI ➤ P001

TAW

DC (mm)	Profondità foro (L/D)	Portautensile: Codice di ordinazione	Portautensile: Disponibilità	Dimensioni (mm): LU	LBX	LH	OAL	LF	DCONMS	Vite di fissaggio	Chiave	Piastrina	Lubrificante anti-grippaggio	Inserto: DC (mm)	Inserto: Codice di ordinazione	Disponibilità: VP15TF	Disponibilità: VP10H
23.5 – 24.4	3	TAWSN2400S32	●	74.8	90.6	114.6	174.6	170.3	32	WS355521T	TKY15T	WPT4405	MK1KS	23.5	*TAWNH2350T	●	□
															TAWKH2350TG		
														23.6	TAWNH2360T	□	□
															TAWKH2360TG		
														23.7	TAWNH2370T	□	□
															TAWKH2370TG		
														23.8	TAWNH2380T	□	□
															TAWKH2380TG		
	5	TAWMN2400S32	●	121.8	139.6	164.6	224.6	220.3	32	WS355521T	TKY15T	WPT4405	MK1KS	23.9	TAWNH2390T	□	□
															TAWKH2390TG		
														24.0	TAWNH2400T	●	□
															TAWKH2400TG		
														24.1	TAWNH2410T	□	□
															TAWKH2410TG		
														24.2	TAWNH2420T	□	□
															TAWKH2420TG		
	8	TAWLN2400S32	●	192.3	206.6	236.6	296.6	292.3	32	WS355521T	TKY15T	WPT4405	MK1KS	24.3	TAWNH2430T	□	□
															TAWKH2430TG		
														24.4	TAWNH2440T	□	□
															TAWKH2440TG		
24.5 – 25.4	3	TAWSN2500S32	●	78.0	93.1	115.1	175.1	170.6	32	WS406023T	TKY25T	WPT4405	MK1KS	24.5	*TAWNH2450T	●	□
															TAWKH2450TG		
														24.6	TAWNH2460T	□	□
															TAWKH2460TG		
														24.7	TAWNH2470T	□	□
															TAWKH2470TG		
														24.8	TAWNH2480T	□	□
															TAWKH2480TG		
	5	TAWMN2500S32	●	127.0	145.1	170.1	230.1	225.6	32	WS406023T	TKY25T	WPT4405	MK1KS	24.9	TAWNH2490T	□	□
															TAWKH2490TG		
														25.0	TAWNH2500T	●	□
															TAWKH2500TG		
														25.1	TAWNH2510T	□	□
															TAWKH2510TG		
														25.2	TAWNH2520T	□	□
															TAWKH2520TG		
	8	TAWLN2500S32	●	200.5	215.1	245.1	305.1	300.6	32	WS406023T	TKY25T	WPT4405	MK1KS	25.3	TAWNH2530T	□	□
															TAWKH2530TG		
														25.4	TAWNH2540T	□	□
															TAWKH2540TG		
25.5 – 26.4	3	TAWSN2600S32	●	81.1	97.2	120.2	180.2	175.6	32	WS406024T	TKY25T	WPT4405	MK1KS	25.5	*TAWNH2550T	●	□
															TAWKH2550TG		
														25.6	TAWNH2560T	□	□
															TAWKH2560TG		
														25.7	TAWNH2570T	□	□
															TAWKH2570TG		
														25.8	TAWNH2580T	□	□
															TAWKH2580TG		
	5	TAWMN2600S32	●	132.1	151.2	175.2	235.2	230.6	32	WS406024T	TKY25T	WPT4405	MK1KS	25.9	TAWNH2590T	□	□
															TAWKH2590TG		
														26.0	TAWNH2600T	●	□
															TAWKH2600TG		
														26.1	TAWNH2610T	□	□
															TAWKH2610TG		
														26.2	TAWNH2620T	□	□
															TAWKH2620TG		
	8	TAWLN2600S32	●	208.6	223.2	253.2	313.2	308.6	32	WS406024T	TKY25T	WPT4405	MK1KS	26.3	TAWNH2630T	□	□
															TAWKH2630TG		
														26.4	TAWNH2640T	□	□
															TAWKH2640TG		

Nota 1) Le dimensioni sopra indicate (*) si applicano per l'installazione degli inserti.
Nota 2) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

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(Nota: 1 inserto in una confezione)

DC (mm)	Profondità foro (L/D)	Portautensile: Codice di ordinazione	Portautensile: Disponibilità	LU	LBX	LH	OAL	LF	DCONMS	Vite di fissaggio	Chiave	Piastrina	Lubrificante anti-grippaggio	Inserto: DC (mm)	Inserto: Codice di ordinazione	Disponibilità: VP15TF	Disponibilità: VP10H
26.5 – 27.4	3	**TAWSN2700S32**	●	84.3	99.4	120.4	180.4	175.6	32	WS406024T	TKY25T	WPT4405	MK1KS	26.5	*TAWNH2650T	●	□
															TAWKH2650TG		
														26.6	TAWNH2660T	□	□
															TAWKH2660TG		
														26.7	TAWNH2670T	□	□
															TAWKH2670TG		
														26.8	TAWNH2680T	□	□
															TAWKH2680TG		
	5	**TAWMN2700S32**	●	137.3	156.4	180.4	240.4	235.6	32	WS406024T	TKY25T	WPT4405	MK1KS	26.9	TAWNH2690T	□	□
															TAWKH2690TG		
														27.0	TAWNH2700T	●	□
															TAWKH2700TG		
														27.1	TAWNH2710T	□	□
															TAWKH2710TG		
	8	**TAWLN2700S32**	●	216.8	231.4	261.4	321.4	316.6	32	WS406024T	TKY25T	WPT4405	MK1KS	27.2	TAWNH2720T	□	□
															TAWKH2720TG		
														27.3	TAWNH2730T	□	□
															TAWKH2730TG		
														27.4	TAWNH2740T	□	□
															TAWKH2740TG		
27.5 – 28.4	3	**TAWSN2800S32**	●	87.5	102.2	125.2	185.2	180.2	32	WS508026T	TKY27T	WPT4405	MK1KS	27.5	*TAWNH2750T	●	□
															TAWKH2750TG		
														27.6	TAWNH2760T	□	□
															TAWKH2760TG		
														27.7	TAWNH2770T	□	□
															TAWKH2770TG		
														27.8	TAWNH2780T	□	□
															TAWKH2780TG		
	5	**TAWMN2800S32**	●	142.5	162.2	185.2	245.2	240.2	32	WS508026T	TKY27T	WPT4405	MK1KS	27.9	TAWNH2790T	□	□
															TAWKH2790TG		
														28.0	TAWNH2800T	●	□
															TAWKH2800TG		
														28.1	TAWNH2810T	□	□
															TAWKH2810TG		
														28.2	TAWNH2820T	□	□
															TAWKH2820TG		
	8	**TAWLN2800S32**	●	225.0	239.2	269.2	329.2	324.2	32	WS508026T	TKY27T	WPT4405	MK1KS	28.3	TAWNH2830T	□	□
															TAWKH2830TG		
														28.4	TAWNH2840T	□	□
															TAWKH2840TG		
28.5 – 29.4	3	**TAWSN2900S32**	●	90.7	105.4	130.4	190.4	185.2	32	WS508027T	TKY27T	WPT4405	MK1KS	28.5	*TAWNH2850T	●	□
															TAWKH2850TG		
														28.6	TAWNH2860T	□	□
															TAWKH2860TG		
														28.7	TAWNH2870T	□	□
															TAWKH2870TG		
														28.8	TAWNH2880T	□	□
															TAWKH2880TG		
	5	**TAWMN2900S32**	●	147.7	167.4	190.4	250.4	245.2	32	WS508027T	TKY27T	WPT4405	MK1KS	28.9	TAWNH2890T	□	□
															TAWKH2890TG		
														29.0	TAWNH2900T	●	□
															TAWKH2900TG		
														29.1	TAWNH2910T	□	□
															TAWKH2910TG		
	8	**TAWLN2900S32**	●	233.2	247.4	277.4	337.4	332.2	32	WS508027T	TKY27T	WPT4405	MK1KS	29.2	TAWNH2920T	□	□
															TAWKH2920TG		
														29.3	TAWNH2930T	□	□
															TAWKH2930TG		
														29.4	TAWNH2940T	□	□
															TAWKH2940TG		

DESCRIZIONE DEGLI INSERTI ➤ M153
PARAMETRI DI TAGLIO ➤ M155
NOTE PER L'USO ➤ M156

RICAMBI ➤ N001
DATI TECNICI ➤ P001

TAW

DC (mm)	Profondità foro (L/D)	Portautensile: Codice di ordinazione	Portautensile: Disponibilità	LU	LBX	LH	OAL	LF	DCONMS	Vite di fissaggio	Chiave	Piastrina	Lubrificante anti-grippaggio	Inserto: DC (mm)	Inserto: Codice di ordinazione	Disponibilità: VP15TF	Disponibilità: VP10H
29.5 – 30.4	3	TAWSN3000S32	●	93.9	109.6	130.6	190.6	185.2	32	WS508027T	TKY27T	WPT4405	MK1KS	29.5	＊TAWNH2950T	●	□
															TAWKH2950TG		
														29.6	TAWNH2960T	□	□
															TAWKH2960TG		
														29.7	TAWNH2970T	□	□
															TAWKH2970TG		
														29.8	TAWNH2980T	□	□
															TAWKH2980TG		
														29.9	TAWNH2990T	□	□
															TAWKH2990TG		
	5	TAWMN3000S32	●	152.9	172.6	200.6	260.6	255.2	32	WS508027T	TKY27T	WPT4405	MK1KS	30.0	TAWNH3000T	●	□
															TAWKH3000TG		
														30.1	TAWNH3010T	□	□
															TAWKH3010TG		
														30.2	TAWNH3020T	□	□
															TAWKH3020TG		
	8	TAWLN3000S32	●	241.4	255.6	290.6	350.6	345.2	32	WS508027T	TKY27T	WPT4405	MK1KS	30.3	TAWNH3030T	□	□
															TAWKH3030TG		
														30.4	TAWNH3040T	□	□
															TAWKH3040TG		

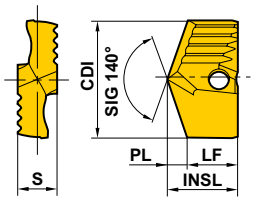
Nota 1) Le dimensioni sopra indicate (＊) si applicano per l'installazione degli inserti.
Nota 2) Per le geometrie non comprese nel catalogo, contattare il proprio referente Mitsubishi (es. diametri e lunghezze diversi possono essere eseguiti su ordinazione).

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(Nota: 1 inserto in una confezione)

INSERTI

Tipo H





Codice di ordinazione	Disponibilità VP15TF	Disponibilità VP10H	Dimensioni (mm) CDI	INSL	LF	PL	S	Applicabile all'utensile
TAWNH1850T	●	□	18.5	12.7	9.3	3.4	7.0	
TAWNH1860T	●	□	18.6	12.7	9.3	3.4	7.0	
TAWNH1870T	●	□	18.7	12.7	9.3	3.4	7.0	TAWSN 1900S25
TAWNH1880T	●	□	18.8	12.7	9.3	3.4	7.0	
TAWNH1890T	●	□	18.9	12.7	9.3	3.4	7.0	TAWMN 1900S25
TAWNH1900T	●	□	19.0	12.7	9.2	3.5	7.0	
TAWNH1910T	●	□	19.1	12.7	9.2	3.5	7.0	TAWLN 1900S25
TAWNH1920T	●	□	19.2	12.7	9.2	3.5	7.0	
TAWNH1930T	●	□	19.3	12.7	9.2	3.5	7.0	
TAWNH1940T	●	□	19.4	12.7	9.2	3.5	7.0	
TAWNH1950T	●	□	19.5	12.6	9.1	3.5	7.0	
TAWNH1960T	●	□	19.6	12.7	9.1	3.6	7.0	
TAWNH1970T	●	□	19.7	12.7	9.1	3.6	7.0	TAWSN 2000S25
TAWNH1980T	●	□	19.8	12.7	9.1	3.6	7.0	
TAWNH1990T	●	□	19.9	12.7	9.1	3.6	7.0	TAWMN 2000S25
TAWNH2000T	●	□	20.0	12.6	9.0	3.6	7.0	
TAWNH2010T	□	□	20.1	12.7	9.0	3.7	7.0	TAWLN 2000S25
TAWNH2020T	□	□	20.2	12.7	9.0	3.7	7.0	
TAWNH2030T	□	□	20.3	12.7	9.0	3.7	7.0	
TAWNH2040T	□	□	20.4	12.7	9.0	3.7	7.0	
TAWNH2050T	●	□	20.5	12.6	8.9	3.7	7.0	
TAWNH2060T	□	□	20.6	12.6	8.9	3.7	7.0	
TAWNH2070T	□	□	20.7	12.7	8.9	3.8	7.0	TAWSN 2100S25
TAWNH2080T	□	□	20.8	12.7	8.9	3.8	7.0	
TAWNH2090T	□	□	20.9	12.7	8.9	3.8	7.0	TAWMN 2100S25
TAWNH2100T	●	□	21.0	12.6	8.8	3.8	7.0	
TAWNH2110T	□	□	21.1	12.6	8.8	3.8	7.0	TAWLN 2100S25
TAWNH2120T	□	□	21.2	12.7	8.8	3.9	7.0	
TAWNH2130T	□	□	21.3	12.7	8.8	3.9	7.0	
TAWNH2140T	□	□	21.4	12.7	8.8	3.9	7.0	
TAWNH2150T	●	□	21.5	14.5	10.6	3.9	8.0	
TAWNH2160T	□	□	21.6	14.5	10.6	3.9	8.0	
TAWNH2170T	□	□	21.7	14.5	10.6	3.9	8.0	TAWSN 2200S25
TAWNH2180T	□	□	21.8	14.6	10.6	4.0	8.0	
TAWNH2190T	□	□	21.9	14.6	10.6	4.0	8.0	TAWMN 2200S25
TAWNH2200T	●	□	22.0	14.5	10.5	4.0	8.0	
TAWNH2210T	□	□	22.1	14.5	10.5	4.0	8.0	TAWLN 2200S25
TAWNH2220T	□	□	22.2	14.5	10.5	4.0	8.0	
TAWNH2230T	□	□	22.3	14.6	10.5	4.1	8.0	
TAWNH2240T	□	□	22.4	14.6	10.5	4.1	8.0	

Codice di ordinazione	Disponibilità VP15TF	Disponibilità VP10H	Dimensioni (mm) CDI	INSL	LF	PL	S	Applicabile all'utensile
TAWNH2250T	●	□	22.5	14.5	10.4	4.1	8.0	
TAWNH2260T	□	□	22.6	14.5	10.4	4.1	8.0	
TAWNH2270T	□	□	22.7	14.5	10.4	4.1	8.0	
TAWNH2280T	□	□	22.8	14.5	10.4	4.1	8.0	TAWSN 2300S25
TAWNH2290T	□	□	22.9	14.6	10.4	4.2	8.0	TAWMN 2300S25
TAWNH2300T	●	□	23.0	14.5	10.3	4.2	8.0	TAWLN 2300S25
TAWNH2310T	□	□	23.1	14.5	10.3	4.2	8.0	
TAWNH2320T	□	□	23.2	14.5	10.3	4.2	8.0	
TAWNH2330T	□	□	23.3	14.5	10.3	4.2	8.0	
TAWNH2340T	□	□	23.4	14.6	10.3	4.3	8.0	
TAWNH2350T	●	□	23.5	14.5	10.2	4.3	8.0	
TAWNH2360T	□	□	23.6	14.5	10.2	4.3	8.0	
TAWNH2370T	□	□	23.7	14.5	10.2	4.3	8.0	TAWSN 2400S32
TAWNH2380T	□	□	23.8	14.5	10.2	4.3	8.0	
TAWNH2390T	□	□	23.9	14.5	10.2	4.3	8.0	TAWMN 2400S32
TAWNH2400T	●	□	24.0	14.5	10.1	4.4	8.0	
TAWNH2410T	□	□	24.1	14.5	10.1	4.4	8.0	TAWLN 2400S32
TAWNH2420T	□	□	24.2	14.5	10.1	4.4	8.0	
TAWNH2430T	□	□	24.3	14.5	10.1	4.4	8.0	
TAWNH2440T	□	□	24.4	14.5	10.1	4.4	8.0	
TAWNH2450T	●	□	24.5	16.2	11.7	4.5	9.0	
TAWNH2460T	□	□	24.6	16.2	11.7	4.5	9.0	
TAWNH2470T	□	□	24.7	16.2	11.7	4.5	9.0	TAWSN 2500S32
TAWNH2480T	□	□	24.8	16.2	11.7	4.5	9.0	
TAWNH2490T	□	□	24.9	16.2	11.7	4.5	9.0	TAWMN 2500S32
TAWNH2500T	●	□	25.0	16.1	11.6	4.5	9.0	
TAWNH2510T	□	□	25.1	16.2	11.6	4.6	9.0	TAWLN 2500S32
TAWNH2520T	□	□	25.2	16.2	11.6	4.6	9.0	
TAWNH2530T	□	□	25.3	16.2	11.6	4.6	9.0	
TAWNH2540T	□	□	25.4	16.2	11.6	4.6	9.0	
TAWNH2550T	●	□	25.5	16.1	11.5	4.6	9.0	
TAWNH2560T	□	□	25.6	16.2	11.5	4.7	9.0	
TAWNH2570T	□	□	25.7	16.2	11.5	4.7	9.0	TAWSN 2600S32
TAWNH2580T	□	□	25.8	16.2	11.5	4.7	9.0	
TAWNH2590T	□	□	25.9	16.2	11.5	4.7	9.0	TAWMN 2600S32
TAWNH2600T	●	□	26.0	16.1	11.4	4.7	9.0	
TAWNH2610T	□	□	26.1	16.1	11.4	4.7	9.0	TAWLN 2600S32
TAWNH2620T	□	□	26.2	16.2	11.4	4.8	9.0	
TAWNH2630T	□	□	26.3	16.2	11.4	4.8	9.0	
TAWNH2640T	□	□	26.4	16.2	11.4	4.8	9.0	

PARAMETRI DI TAGLIO ➤ **M155**
NOTE PER L'USO ➤ **M156**
RICAMBI ➤ **N001**
DATI TECNICI ➤ **P001**

TAW

Codice di ordinazione	Disponibilità VP15TF	Disponibilità VP10H	Dimensioni (mm) CDI	INSL	LF	PL	S	Applicabile all'utensile
TAWNH2650T	●	□	26.5	16.1	11.3	4.8	9.0	
TAWNH2660T	□	□	26.6	16.1	11.3	4.8	9.0	
TAWNH2670T	□	□	26.7	16.2	11.3	4.9	9.0	TAWSN 2700S32
TAWNH2680T	□	□	26.8	16.2	11.3	4.9	9.0	
TAWNH2690T	□	□	26.9	16.2	11.3	4.9	9.0	TAWMN 2700S32
TAWNH2700T	●	□	27.0	16.1	11.2	4.9	9.0	
TAWNH2710T	□	□	27.1	16.1	11.2	4.9	9.0	TAWLN 2700S32
TAWNH2720T	□	□	27.2	16.1	11.2	4.9	9.0	
TAWNH2730T	□	□	27.3	16.2	11.2	5.0	9.0	
TAWNH2740T	□	□	27.4	16.2	11.2	5.0	9.0	
TAWNH2750T	●	□	27.5	17.3	12.3	5.0	10.0	
TAWNH2760T	□	□	27.6	17.3	12.3	5.0	10.0	
TAWNH2770T	□	□	27.7	17.3	12.3	5.0	10.0	TAWSN 2800S32
TAWNH2780T	□	□	27.8	17.4	12.3	5.1	10.0	
TAWNH2790T	□	□	27.9	17.4	12.3	5.1	10.0	TAWMN 2800S32
TAWNH2800T	●	□	28.0	17.3	12.2	5.1	10.0	
TAWNH2810T	□	□	28.1	17.3	12.2	5.1	10.0	TAWLN 2800S32
TAWNH2820T	□	□	28.2	17.3	12.2	5.1	10.0	
TAWNH2830T	□	□	28.3	17.4	12.2	5.2	10.0	
TAWNH2840T	□	□	28.4	17.4	12.2	5.2	10.0	

Codice di ordinazione	Disponibilità VP15TF	Disponibilità VP10H	Dimensioni (mm) CDI	INSL	LF	PL	S	Applicabile all'utensile
TAWNH2850T	●	□	28.5	17.3	12.1	5.2	10.0	
TAWNH2860T	□	□	28.6	17.3	12.1	5.2	10.0	
TAWNH2870T	□	□	28.7	17.3	12.1	5.2	10.0	TAWSN 2900S32
TAWNH2880T	□	□	28.8	17.3	12.1	5.2	10.0	
TAWNH2890T	□	□	28.9	17.4	12.1	5.3	10.0	TAWMN 2900S32
TAWNH2900T	●	□	29.0	17.3	12.0	5.3	10.0	
TAWNH2910T	□	□	29.1	17.3	12.0	5.3	10.0	TAWLN 2900S32
TAWNH2920T	□	□	29.2	17.3	12.0	5.3	10.0	
TAWNH2930T	□	□	29.3	17.3	12.0	5.3	10.0	
TAWNH2940T	□	□	29.4	17.4	12.0	5.4	10.0	
TAWNH2950T	●	□	29.5	17.3	11.9	5.4	10.0	
TAWNH2960T	□	□	29.6	17.3	11.9	5.4	10.0	
TAWNH2970T	□	□	29.7	17.3	11.9	5.4	10.0	TAWSN 3000S32
TAWNH2980T	□	□	29.8	17.3	11.9	5.4	10.0	
TAWNH2990T	□	□	29.9	17.3	11.9	5.4	10.0	TAWMN 3000S32
TAWNH3000T	●	□	30.0	17.3	11.8	5.5	10.0	
TAWNH3010T	□	□	30.1	17.3	11.8	5.5	10.0	TAWLN 3000S32
TAWNH3020T	□	□	30.2	17.3	11.8	5.5	10.0	
TAWNH3030T	□	□	30.3	17.3	11.8	5.5	10.0	
TAWNH3040T	□	□	30.4	17.3	11.8	5.5	10.0	

● : Inventario mantenuto. □ : Non a magazzino, prodotti solo su ordinazione.
(Nota: 1 inserto in una confezione)

PARAMETRI DI TAGLIO ➢ M155
NOTE PER L'USO ➢ M156
RICAMBI ➢ N001
DATI TECNICI ➢ P001

PARAMETRI DI TAGLIO CONSIGLIATI

	Materiale da lavorare	Diametro della punta / Condizioni / Durezza	Ø 18.5—Ø 21.4		Ø 21.5—Ø 24.4	
			Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)
P	Acciaio dolce	≤180HB	90 (70—110)	0.25 (0.20—0.30)	100 (80—120)	0.30 (0.25—0.35)
P	Acciaio al carbonio Acciaio legato	180—280HB	80 (60—100)	0.25 (0.20—0.30)	90 (70—110)	0.30 (0.25—0.35)
P		280—350HB	70 (50—90)	0.20 (0.15—0.25)	80 (60—100)	0.25 (0.20—0.30)
M	Acciaio inossidabile	≤200HB	60 (50—70)	0.20 (0.15—0.22)	60 (50—70)	0.20 (0.15—0.22)
K	Ghisa	Resistenza alla trazione ≤350MPa	120 (60—140)	0.25 (0.20—0.30)	130 (80—150)	0.35 (0.25—0.40)
K	Ghisa sferoidale	Resistenza alla trazione ≤450MPa	80 (60—90)	0.25 (0.20—0.30)	90 (60—100)	0.30 (0.25—0.35)

	Materiale da lavorare	Diametro della punta / Condizioni / Durezza	Ø 24.5—Ø 27.4		Ø 27.5—Ø 30.4	
			Velocità di taglio (m/min)	Avanzamento (mm/giro)	Velocità di taglio (m/min)	Avanzamento (mm/giro)
P	Acciaio dolce	≤180HB	110 (80—120)	0.30 (0.25—0.35)	110 (80—120)	0.30 (0.25—0.35)
P	Acciaio al carbonio Acciaio legato	180—280HB	100 (80—120)	0.30 (0.25—0.35)	100 (80—120)	0.30 (0.25—0.35)
P		280—350HB	90 (70—110)	0.25 (0.20—0.30)	90 (70—110)	0.25 (0.20—0.30)
M	Acciaio inossidabile	≤200HB	70 (60—80)	0.25 (0.20—0.28)	70 (60—80)	0.25 (0.20—0.28)
K	Ghisa	Resistenza alla trazione ≤350MPa	140 (90—160)	0.35 (0.25—0.40)	140 (90—160)	0.40 (0.30—0.45)
K	Ghisa sferoidale	Resistenza alla trazione ≤450MPa	100 (80—110)	0.30 (0.25—0.35)	100 (80—110)	0.30 (0.25—0.35)

Nota 1) Per la lavorazione dell'acciaio da costruzione e inox si consigliano inserti con onatura di tipo H.
Nota 2) Utilizzo raccomandato solo su macchina stabile e fissaggio rigido. Utilizzare refrigerante con passaggio interno quando si fora acciaio inossidabile (la refrigerazione con sistema MQL e nebulizzazione non è consigliata).

TAW

■CON ONATURA

Se si desidera ordinare un inserto con onatura non standard, utilizzare la seguente simbologia:

(Numero d'ordine inserto)

T	A	W	N	H	1	8	5	0	T	○

- TAW: Nome prodotto
- **H** : Tipo H
- Simbolo di onatura
- **N** : Impiego generico
- Diametro inserto
- Tipo di onatura

(Onatura standard)

Tipo di onatura	Con Onatura (mm)
F	0
G	0.02—0.05
H	0.05—0.10
- (Standard)	0.10—0.15
S	0.20—0.25
M	0.25—0.30

NOTE PER L'USO

■INSTALLAZIONE INSERTO

- Rimuovere la vite per posizionare l'inserto (tipo H).
- Far combaciare la struttura dentellata dell'utensile con quella dell'inserto, quindi far scorrere quest'ultimo fino alla fine della scalanatura.
- Stringere la vite di bloccaggio usando la chiave in dotazione e tenendo leggermente fermo l'inserto con le dita (figura 1).
- Controllare che non ci sia gioco tra la parte inferiore dell'inserto e l'utensile (figura 2).

Serrare la vite di bloccaggio secondo la coppia indicata di seguito.

Diam. Punta	Momento torcente
Ø14—Ø15	2.0N•m
Ø16—Ø18	2.0N•m
Ø19—Ø21	3.5N•m
Ø22—Ø24	5.5N•m
Ø25—Ø27	8.5N•m
Ø28—Ø30	12.0N•m

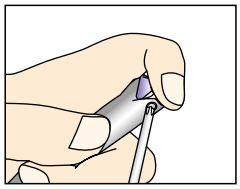


Fig. 1

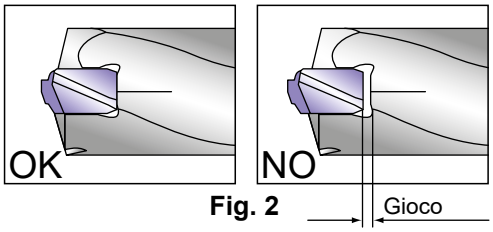


Fig. 2

SOSTITUZIONE INSERTO

- Pulire bene la struttura dentellata dell'utensile prima di montare un nuovo inserto.
  Rimuovere lo sporco dalla fessura alla base della struttura dentellata dell'utensile usando la piastrina di pulizia in dotazione.

Note

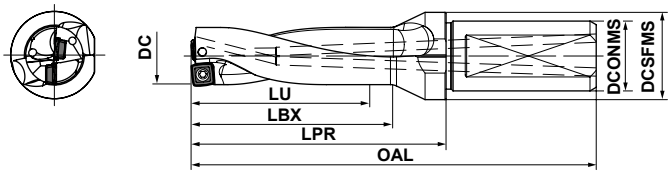
FORATURA (A INSERTI)

MVX

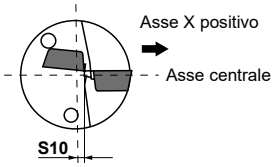
- Combinazione ideale di inserto CVD esterno e inserto PVD interno.
- Corpo ad elevata rigidità che consente la lavorazione di fori profondi fino a L/D=6.

P M K N S H





Offset massimo per la tornitura



	Tolleranza dei fori eseguiti (mm)		
L/D	Ø14.0—Ø33.0	Ø33.5—Ø47.0	Ø48.0—Ø63.0
2D, 3D	0 / + 0.25	0 / + 0.3	0 / + 0.3
4D, 5D	0 / + 0.35	0 / + 0.4	0 / + 0.45
6D	0 / + 0.45	0 / + 0.6	

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	Chiave
14.0	2	MVX1400X2F20	●	2	28	35	50	93	20	25	0.6	SO○X05	TPS20-1	TIP06F
	3	MVX1400X3F20	●	2	42	49	64	107	20	25	0.6	SO○X05	TPS20-1	TIP06F
	4	MVX1400X4F20	●	2	56	63	78	121	20	25	0.6	SO○X05	TPS20-1	TIP06F
	5	MVX1400X5F20	●	2	70	77	92	135	20	25	0.6	SO○X05	TPS20-1	TIP06F
14.5	2	MVX1450X2F20	●	2	29	36	51	94	20	25	0.5	SO○X05	TPS20-1	TIP06F
	3	MVX1450X3F20	●	2	43.5	50.5	65.5	108.5	20	25	0.5	SO○X05	TPS20-1	TIP06F
	4	MVX1450X4F20	●	2	58	65	80	123	20	25	0.5	SO○X05	TPS20-1	TIP06F
	5	MVX1450X5F20	●	2	72.5	79.5	94.5	137.5	20	25	0.5	SO○X05	TPS20-1	TIP06F
15.0	2	MVX1500X2F20	●	2	30	37	52	95	20	25	0.35	SO○X05	TPS20-1	TIP06F
	3	MVX1500X3F20	●	2	45	52	67	110	20	25	0.35	SO○X05	TPS20-1	TIP06F
	4	MVX1500X4F20	●	2	60	67	82	125	20	25	0.35	SO○X05	TPS20-1	TIP06F
	5	MVX1500X5F20	●	2	75	82	97	140	20	25	0.35	SO○X05	TPS20-1	TIP06F
15.5	2	MVX1550X2F20	●	2	31	38	53	96	20	25	0.3	SO○X05	TPS20-1	TIP06F
	3	MVX1550X3F20	●	2	46.5	53.5	68.5	111.5	20	25	0.3	SO○X05	TPS20-1	TIP06F
	4	MVX1550X4F20	●	2	62	69	84	127	20	25	0.3	SO○X05	TPS20-1	TIP06F
	5	MVX1550X5F20	●	2	77.5	84.5	99.5	142.5	20	25	0.3	SO○X05	TPS20-1	TIP06F
16.0	2	MVX1600X2F20	●	2	32	39	54	97	20	25	0.25	SO○X05	TPS20-1	TIP06F
	3	MVX1600X3F20	●	2	48	55	70	113	20	25	0.25	SO○X05	TPS20-1	TIP06F
	4	MVX1600X4F20	●	2	64	71	86	129	20	25	0.25	SO○X05	TPS20-1	TIP06F
	5	MVX1600X5F20	●	2	80	87	102	145	20	25	0.25	SO○X05	TPS20-1	TIP06F
16.5	2	MVX1650X2F20	●	2	33	40	55	98	20	25	0.25	SO○X05	TPS20-1	TIP06F
	3	MVX1650X3F20	●	2	49.5	56.5	71.5	114.5	20	25	0.25	SO○X05	TPS20-1	TIP06F
	4	MVX1650X4F20	●	2	66	73	88	131	20	25	0.25	SO○X05	TPS20-1	TIP06F
	5	MVX1650X5F20	●	2	82.5	89.5	104.5	147.5	20	25	0.25	SO○X05	TPS20-1	TIP06F
17.0	2	MVX1700X2F20	●	2	34	41	56	99	20	25	0.5	SO○X06	TPS25	TIP07F
	3	MVX1700X3F20	●	2	51	58	73	116	20	25	0.5	SO○X06	TPS25	TIP07F
	4	MVX1700X4F20	●	2	68	75	90	133	20	25	0.5	SO○X06	TPS25	TIP07F
	5	MVX1700X5F20	●	2	85	92	107	150	20	25	0.5	SO○X06	TPS25	TIP07F
	6	MVX1700X6F20	●	2	102	109	124	167	20	25	0.5	SO○X06	TPS25	TIP07F

✱ Coppia di serraggio (N • m) : TPS20-1=0.6, TPS25=1.0

● : Inventario mantenuto.

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	Chiave
	2	**MVX1750X2F25**	●	2	35	42	62	112	25	32	0.45	**SO○X06**	TPS25	TIP07F
	3	**MVX1750X3F25**	●	2	52.5	59.5	79.5	129.5	25	32	0.45	**SO○X06**	TPS25	TIP07F
17.5	4	**MVX1750X4F25**	●	2	70	77	97	147	25	32	0.45	**SO○X06**	TPS25	TIP07F
	5	**MVX1750X5F25**	●	2	87.5	94.5	114.5	164.5	25	32	0.45	**SO○X06**	TPS25	TIP07F
	6	**MVX1750X6F25**	●	2	105	112	132	182	25	32	0.45	**SO○X06**	TPS25	TIP07F
	2	**MVX1800X2F25**	●	2	36	43	63	113	25	32	0.4	**SO○X06**	TPS25	TIP07F
	3	**MVX1800X3F25**	●	2	54	61	81	131	25	32	0.4	**SO○X06**	TPS25	TIP07F
18.0	4	**MVX1800X4F25**	●	2	72	79	99	149	25	32	0.4	**SO○X06**	TPS25	TIP07F
	5	**MVX1800X5F25**	●	2	90	97	117	167	25	32	0.4	**SO○X06**	TPS25	TIP07F
	6	**MVX1800X6F25**	●	2	108	115	135	185	25	32	0.4	**SO○X06**	TPS25	TIP07F
	2	**MVX1850X2F25**	●	2	37	44	64	114	25	32	0.35	**SO○X06**	TPS25	TIP07F
	3	**MVX1850X3F25**	●	2	55.5	62.5	82.5	132.5	25	32	0.35	**SO○X06**	TPS25	TIP07F
18.5	4	**MVX1850X4F25**	●	2	74	81	101	151	25	32	0.35	**SO○X06**	TPS25	TIP07F
	5	**MVX1850X5F25**	●	2	92.5	99.5	119.5	169.5	25	32	0.35	**SO○X06**	TPS25	TIP07F
	6	**MVX1850X6F25**	●	2	111	118	138	188	25	32	0.35	**SO○X06**	TPS25	TIP07F
	2	**MVX1900X2F25**	●	2	38	45	65	115	25	32	0.3	**SO○X06**	TPS25	TIP07F
	3	**MVX1900X3F25**	●	2	57	64	84	134	25	32	0.3	**SO○X06**	TPS25	TIP07F
19.0	4	**MVX1900X4F25**	●	2	76	83	103	153	25	32	0.3	**SO○X06**	TPS25	TIP07F
	5	**MVX1900X5F25**	●	2	95	102	122	172	25	32	0.3	**SO○X06**	TPS25	TIP07F
	6	**MVX1900X6F25**	●	2	114	121	141	191	25	32	0.3	**SO○X06**	TPS25	TIP07F
	2	**MVX1950X2F25**	●	2	39	46	66	116	25	32	0.25	**SO○X06**	TPS25	TIP07F
	3	**MVX1950X3F25**	●	2	58.5	65.5	85.5	135.5	25	32	0.25	**SO○X06**	TPS25	TIP07F
19.5	4	**MVX1950X4F25**	●	2	78	85	105	155	25	32	0.25	**SO○X06**	TPS25	TIP07F
	5	**MVX1950X5F25**	●	2	97.5	104.5	124.5	174.5	25	32	0.25	**SO○X06**	TPS25	TIP07F
	6	**MVX1950X6F25**	●	2	117	124	144	194	25	32	0.25	**SO○X06**	TPS25	TIP07F
	2	**MVX2000X2F25**	●	2	40	47	67	117	25	32	0.6	**SO○X07**	TPS3	TIP10W
	3	**MVX2000X3F25**	●	2	60	67	87	137	25	32	0.6	**SO○X07**	TPS3	TIP10W
20.0	4	**MVX2000X4F25**	●	2	80	87	107	157	25	32	0.6	**SO○X07**	TPS3	TIP10W
	5	**MVX2000X5F25**	●	2	100	107	127	177	25	32	0.6	**SO○X07**	TPS3	TIP10W
	6	**MVX2000X6F25**	●	2	120	127	147	197	25	32	0.6	**SO○X07**	TPS3	TIP10W
20.5	2	**MVX2050X2F25**	●	2	41	48	68	118	25	32	0.55	**SO○X07**	TPS3	TIP10W
	3	**MVX2050X3F25**	●	2	61.5	68.5	88.5	138.5	25	32	0.55	**SO○X07**	TPS3	TIP10W
	2	**MVX2100X2F25**	●	2	42	49	69	119	25	32	0.5	**SO○X07**	TPS3	TIP10W
	3	**MVX2100X3F25**	●	2	63	70	90	140	25	32	0.5	**SO○X07**	TPS3	TIP10W
21.0	4	**MVX2100X4F25**	●	2	84	91	111	161	25	32	0.5	**SO○X07**	TPS3	TIP10W
	5	**MVX2100X5F25**	●	2	105	112	132	182	25	32	0.5	**SO○X07**	TPS3	TIP10W
	6	**MVX2100X6F25**	●	2	126	133	153	203	25	32	0.5	**SO○X07**	TPS3	TIP10W
21.5	2	**MVX2150X2F25**	●	2	43	50	70	120	25	32	0.45	**SO○X07**	TPS3	TIP10W
	3	**MVX2150X3F25**	●	2	64.5	71.5	91.5	141.5	25	32	0.45	**SO○X07**	TPS3	TIP10W
	2	**MVX2200X2F25**	●	2	44	51	71	121	25	32	0.4	**SO○X07**	TPS3	TIP10W
	3	**MVX2200X3F25**	●	2	66	73	93	143	25	32	0.4	**SO○X07**	TPS3	TIP10W
22.0	4	**MVX2200X4F25**	●	2	88	95	115	165	25	32	0.4	**SO○X07**	TPS3	TIP10W
	5	**MVX2200X5F25**	●	2	110	117	137	187	25	32	0.4	**SO○X07**	TPS3	TIP10W
	6	**MVX2200X6F25**	●	2	132	139	159	209	25	32	0.4	**SO○X07**	TPS3	TIP10W
22.5	2	**MVX2250X2F25**	●	2	45	52	72	122	25	32	0.35	**SO○X07**	TPS3	TIP10W
	3	**MVX2250X3F25**	●	2	67.5	74.5	94.5	144.5	25	32	0.35	**SO○X07**	TPS3	TIP10W

✱ Coppia di serraggio (N • m) : TPS25=1.0, TPS3=2.0

DESCRIZIONE DEGLI INSERTI	➤ M166	NOTE PER L'USO	➤ M171
PARAMETRI DI TAGLIO	➤ M167	RICAMBI	➤ N001
MANICOTTO "JUST FIT"	➤ M170	DATI TECNICI	➤ P001

MVX

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	Chiave
23.0	2	MVX2300X2F25	●	2	46	53	73	123	25	32	0.8	SO○X08	TPS351	TIP10W
	3	MVX2300X3F25	●	2	69	76	96	146	25	32	0.8	SO○X08	TPS351	TIP10W
	4	MVX2300X4F25	●	2	92	99	119	169	25	32	0.8	SO○X08	TPS351	TIP10W
	5	MVX2300X5F25	●	2	115	122	142	192	25	32	0.8	SO○X08	TPS351	TIP10W
	6	MVX2300X6F25	●	2	138	145	165	215	25	32	0.8	SO○X08	TPS351	TIP10W
23.5	2	MVX2350X2F25	●	2	47	54	74	124	25	32	0.75	SO○X08	TPS351	TIP10W
	3	MVX2350X3F25	●	2	70.5	77.5	97.5	147.5	25	32	0.75	SO○X08	TPS351	TIP10W
24.0	2	MVX2400X2F25	●	2	48	55	75	125	25	32	0.7	SO○X08	TPS351	TIP10W
	3	MVX2400X3F25	●	2	72	79	99	149	25	32	0.7	SO○X08	TPS351	TIP10W
	4	MVX2400X4F25	●	2	96	103	123	173	25	32	0.7	SO○X08	TPS351	TIP10W
	5	MVX2400X5F25	●	2	120	127	147	197	25	32	0.7	SO○X08	TPS351	TIP10W
	6	MVX2400X6F25	●	2	144	151	171	221	25	32	0.7	SO○X08	TPS351	TIP10W
24.5	2	MVX2450X2F25	●	2	49	56	76	126	25	32	0.65	SO○X08	TPS351	TIP10W
	3	MVX2450X3F25	●	2	73.5	80.5	100.5	150.5	25	32	0.65	SO○X08	TPS351	TIP10W
25.0	2	MVX2500X2F25	●	2	50	57	77	127	25	32	0.6	SO○X08	TPS351	TIP10W
	3	MVX2500X3F25	●	2	75	82	102	152	25	32	0.6	SO○X08	TPS351	TIP10W
	4	MVX2500X4F25	●	2	100	107	127	177	25	32	0.6	SO○X08	TPS351	TIP10W
	5	MVX2500X5F25	●	2	125	132	152	202	25	32	0.6	SO○X08	TPS351	TIP10W
	6	MVX2500X6F25	●	2	150	157	177	227	25	32	0.6	SO○X08	TPS351	TIP10W
25.5	2	MVX2550X2F25	●	2	51	58	78	128	25	32	0.6	SO○X08	TPS351	TIP10W
	3	MVX2550X3F25	●	2	76.5	83.5	103.5	153.5	25	32	0.6	SO○X08	TPS351	TIP10W
26.0	2	MVX2600X2F32	●	2	52	59	79	134	32	42	0.5	SO○X08	TPS351	TIP10W
	3	MVX2600X3F32	●	2	78	85	105	160	32	42	0.5	SO○X08	TPS351	TIP10W
	4	MVX2600X4F32	●	2	104	111	131	186	32	42	0.5	SO○X08	TPS351	TIP10W
	5	MVX2600X5F32	●	2	130	137	157	212	32	42	0.5	SO○X08	TPS351	TIP10W
	6	MVX2600X6F32	●	2	156	163	183	238	32	42	0.5	SO○X08	TPS351	TIP10W
26.5	2	MVX2650X2F32	●	2	53	60	80	135	32	42	0.5	SO○X08	TPS351	TIP10W
	3	MVX2650X3F32	●	2	79.5	86.5	106.5	161.5	32	42	0.5	SO○X08	TPS351	TIP10W
27.0	2	MVX2700X2F32	●	2	54	61	81	136	32	42	0.45	SO○X08	TPS351	TIP10W
	3	MVX2700X3F32	●	2	81	88	108	163	32	42	0.45	SO○X08	TPS351	TIP10W
	4	MVX2700X4F32	●	2	108	115	135	190	32	42	0.45	SO○X08	TPS351	TIP10W
	5	MVX2700X5F32	●	2	135	142	162	217	32	42	0.45	SO○X08	TPS351	TIP10W
	6	MVX2700X6F32	●	2	162	169	189	244	32	42	0.45	SO○X08	TPS351	TIP10W
27.5	2	MVX2750X2F32	●	2	55	62	82	137	32	42	0.4	SO○X08	TPS351	TIP10W
	3	MVX2750X3F32	●	2	82.5	89.5	109.5	164.5	32	42	0.4	SO○X08	TPS351	TIP10W
28.0	2	MVX2800X2F32	●	2	56	63	83	138	32	42	0.85	SO○X09	TPS4	TIP15W
	3	MVX2800X3F32	●	2	84	91	111	166	32	42	0.85	SO○X09	TPS4	TIP15W
	4	MVX2800X4F32	●	2	112	119	139	194	32	42	0.85	SO○X09	TPS4	TIP15W
	5	MVX2800X5F32	●	2	140	147	167	222	32	42	0.85	SO○X09	TPS4	TIP15W
	6	MVX2800X6F32	●	2	168	175	195	250	32	42	0.85	SO○X09	TPS4	TIP15W
28.5	2	MVX2850X2F32	●	2	57	64	84	139	32	42	0.8	SO○X09	TPS4	TIP15W
	3	MVX2850X3F32	●	2	85.5	92.5	112.5	167.5	32	42	0.8	SO○X09	TPS4	TIP15W
29.0	2	MVX2900X2F32	●	2	58	65	85	140	32	42	0.75	SO○X09	TPS4	TIP15W
	3	MVX2900X3F32	●	2	87	94	114	169	32	42	0.75	SO○X09	TPS4	TIP15W
	4	MVX2900X4F32	●	2	116	123	143	198	32	42	0.75	SO○X09	TPS4	TIP15W
	5	MVX2900X5F32	●	2	145	152	172	227	32	42	0.75	SO○X09	TPS4	TIP15W
	6	MVX2900X6F32	●	2	174	181	201	256	32	42	0.75	SO○X09	TPS4	TIP15W
29.5	2	MVX2950X2F32	●	2	59	66	86	141	32	42	0.7	SO○X09	TPS4	TIP15W
	3	MVX2950X3F32	●	2	88.5	95.5	115.5	170.5	32	42	0.7	SO○X09	TPS4	TIP15W

∗ Coppia di serraggio (N • m) : TPS351=2.5, TPS4=3.5

● : Inventario mantenuto.

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	Chiave
	2	**MVX3000X2F32**	●	2	60	67	87	142	32	42	0.65	**SO○X09**	TPS4	TIP15W
	3	**MVX3000X3F32**	●	2	90	97	117	172	32	42	0.65	**SO○X09**	TPS4	TIP15W
30.0	4	**MVX3000X4F32**	●	2	120	127	147	202	32	42	0.65	**SO○X09**	TPS4	TIP15W
	5	**MVX3000X5F32**	●	2	150	157	177	232	32	42	0.65	**SO○X09**	TPS4	TIP15W
	6	**MVX3000X6F32**	●	2	180	187	207	262	32	42	0.65	**SO○X09**	TPS4	TIP15W
30.5	3	**MVX3050X3F32**	●	2	91.5	98.5	118.5	173.5	32	42	0.6	**SO○X09**	TPS4	TIP15W
	2	**MVX3100X2F32**	●	2	62	69	89	144	32	42	0.55	**SO○X09**	TPS4	TIP15W
	3	**MVX3100X3F32**	●	2	93	100	120	175	32	42	0.55	**SO○X09**	TPS4	TIP15W
	4	**MVX3100X4F32**	●	2	124	131	151	206	32	42	0.55	**SO○X09**	TPS4	TIP15W
31.0	2	**MVX3100X2F40**	●	2	62	69	89	154	40	50	0.55	**SO○X09**	TPS4	TIP15W
	3	**MVX3100X3F40**	●	2	93	100	120	185	40	50	0.55	**SO○X09**	TPS4	TIP15W
	4	**MVX3100X4F40**	●	2	124	131	151	216	40	50	0.55	**SO○X09**	TPS4	TIP15W
	5	**MVX3100X5F40**	●	2	155	162	182	247	40	50	0.55	**SO○X09**	TPS4	TIP15W
	6	**MVX3100X6F40**	●	2	186	193	213	278	40	50	0.55	**SO○X09**	TPS4	TIP15W
31.5	3	**MVX3150X3F40**	●	2	94.5	101.5	121.5	186.5	40	50	0.55	**SO○X09**	TPS4	TIP15W
	2	**MVX3200X2F32**	●	2	64	71	91	146	32	42	0.45	**SO○X09**	TPS4	TIP15W
	3	**MVX3200X3F32**	●	2	96	103	123	178	32	42	0.45	**SO○X09**	TPS4	TIP15W
	4	**MVX3200X4F32**	●	2	128	135	155	210	32	42	0.45	**SO○X09**	TPS4	TIP15W
32.0	2	**MVX3200X2F40**	●	2	64	71	91	156	40	50	0.45	**SO○X09**	TPS4	TIP15W
	3	**MVX3200X3F40**	●	2	96	103	123	188	40	50	0.45	**SO○X09**	TPS4	TIP15W
	4	**MVX3200X4F40**	●	2	128	135	155	220	40	50	0.45	**SO○X09**	TPS4	TIP15W
	5	**MVX3200X5F40**	●	2	160	167	187	252	40	50	0.45	**SO○X09**	TPS4	TIP15W
	6	**MVX3200X6F40**	●	2	192	199	219	284	40	50	0.45	**SO○X09**	TPS4	TIP15W
32.5	3	**MVX3250X3F40**	●	2	97.5	104.5	124.5	189.5	40	50	0.45	**SO○X09**	TPS4	TIP15W
	2	**MVX3300X2F32**	●	2	66	73	93	148	32	42	0.4	**SO○X09**	TPS4	TIP15W
	3	**MVX3300X3F32**	●	2	99	106	126	181	32	42	0.4	**SO○X09**	TPS4	TIP15W
	4	**MVX3300X4F32**	●	2	132	139	159	214	32	42	0.4	**SO○X09**	TPS4	TIP15W
33.0	2	**MVX3300X2F40**	●	2	66	73	93	158	40	50	0.4	**SO○X09**	TPS4	TIP15W
	3	**MVX3300X3F40**	●	2	99	106	126	191	40	50	0.4	**SO○X09**	TPS4	TIP15W
	4	**MVX3300X4F40**	●	2	132	139	159	224	40	50	0.4	**SO○X09**	TPS4	TIP15W
	5	**MVX3300X5F40**	●	2	165	172	192	257	40	50	0.4	**SO○X09**	TPS4	TIP15W
	6	**MVX3300X6F40**	●	2	198	205	225	290	40	50	0.4	**SO○X09**	TPS4	TIP15W
33.5	3	**MVX3350X3F40**	●	2	100.5	107.5	127.5	192.5	40	50	1.15	**SO○X11**	TPS43	TIP15W
	2	**MVX3400X2F40**	●	2	68	75	105	170	40	50	1.11	**SO○X11**	TPS43	TIP15W
	3	**MVX3400X3F40**	●	2	102	109	139	204	40	50	1.11	**SO○X11**	TPS43	TIP15W
34.0	4	**MVX3400X4F40**	●	2	136	143	173	238	40	50	1.11	**SO○X11**	TPS43	TIP15W
	5	**MVX3400X5F40**	●	2	170	177	207	272	40	50	1.11	**SO○X11**	TPS43	TIP15W
	6	**MVX3400X6F40**	●	2	204	211	241	306	40	50	1.1	**SO○X11**	TPS43	TIP15W
34.5	3	**MVX3450X3F40**	●	2	103.5	110.5	140.5	205.5	40	50	1.08	**SO○X11**	TPS43	TIP15W
	2	**MVX3500X2F40**	●	2	70	77	107	172	40	50	1.03	**SO○X11**	TPS43	TIP15W
	3	**MVX3500X3F40**	●	2	105	112	142	207	40	50	1.03	**SO○X11**	TPS43	TIP15W
35.0	4	**MVX3500X4F40**	●	2	140	147	177	242	40	50	1.03	**SO○X11**	TPS43	TIP15W
	5	**MVX3500X5F40**	●	2	175	182	212	277	40	50	1.03	**SO○X11**	TPS43	TIP15W
	6	**MVX3500X6F40**	●	2	210	217	247	312	40	50	1.02	**SO○X11**	TPS43	TIP15W
35.5	3	**MVX3550X3F40**	●	2	106.5	113.5	143.5	208.5	40	50	0.99	**SO○X11**	TPS43	TIP15W
	2	**MVX3600X2F40**	●	2	72	79	109	174	40	50	0.95	**SO○X11**	TPS43	TIP15W
	3	**MVX3600X3F40**	●	2	108	115	145	210	40	50	0.95	**SO○X11**	TPS43	TIP15W
36.0	4	**MVX3600X4F40**	●	2	144	151	181	246	40	50	0.95	**SO○X11**	TPS43	TIP15W
	5	**MVX3600X5F40**	●	2	180	187	217	282	40	50	0.95	**SO○X11**	TPS43	TIP15W
	6	**MVX3600X6F40**	●	2	216	223	253	318	40	50	0.94	**SO○X11**	TPS43	TIP15W

✱ Coppia di serraggio (N • m) : TPS4=3.5, TPS43=3.5

DESCRIZIONE DEGLI INSERTI	**➢ M166**	**NOTE PER L'USO**	**➢ M171**
PARAMETRI DI TAGLIO	**➢ M167**	**RICAMBI**	**➢ N001**
MANICOTTO "JUST FIT"	**➢ M170**	**DATI TECNICI**	**➢ P001**

FORATURA (A INSERTI)

MVX

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	Chiave
37.0	2	**MVX3700X2F40**	●	2	74	81	111	176	40	50	0.87	**SO○X11**	TPS43	TIP15W
	3	**MVX3700X3F40**	●	2	111	118	148	213	40	50	0.87	**SO○X11**	TPS43	TIP15W
	4	**MVX3700X4F40**	●	2	148	155	185	250	40	50	0.87	**SO○X11**	TPS43	TIP15W
	5	**MVX3700X5F40**	●	2	185	192	222	287	40	50	0.87	**SO○X11**	TPS43	TIP15W
	6	**MVX3700X6F40**	●	2	222	229	259	324	40	50	0.86	**SO○X11**	TPS43	TIP15W
38.0	2	**MVX3800X2F40**	●	2	76	83	113	178	40	50	0.79	**SO○X11**	TPS43	TIP15W
	3	**MVX3800X3F40**	●	2	114	121	151	216	40	50	0.79	**SO○X11**	TPS43	TIP15W
	4	**MVX3800X4F40**	●	2	152	159	189	254	40	50	0.79	**SO○X11**	TPS43	TIP15W
	5	**MVX3800X5F40**	●	2	190	197	227	292	40	50	0.79	**SO○X11**	TPS43	TIP15W
	6	**MVX3800X6F40**	●	2	228	235	265	330	40	50	0.78	**SO○X11**	TPS43	TIP15W
39.0	2	**MVX3900X2F40**	●	2	78	85	115	180	40	50	0.71	**SO○X11**	TPS43	TIP15W
	3	**MVX3900X3F40**	●	2	117	124	154	219	40	50	0.71	**SO○X11**	TPS43	TIP15W
	4	**MVX3900X4F40**	●	2	156	163	193	258	40	50	0.71	**SO○X11**	TPS43	TIP15W
	5	**MVX3900X5F40**	●	2	195	202	232	297	40	50	0.71	**SO○X11**	TPS43	TIP15W
	6	**MVX3900X6F40**	●	2	234	241	271	336	40	50	0.7	**SO○X11**	TPS43	TIP15W
40.0	2	**MVX4000X2F40**	●	2	80	87	117	182	40	50	1.46	**SO○X13**	TPS43	TIP15W
	3	**MVX4000X3F40**	●	2	120	127	157	222	40	50	1.46	**SO○X13**	TPS43	TIP15W
	4	**MVX4000X4F40**	●	2	160	167	197	262	40	50	1.46	**SO○X13**	TPS43	TIP15W
	5	**MVX4000X5F40**	●	2	200	207	237	302	40	50	1.46	**SO○X13**	TPS43	TIP15W
	6	**MVX4000X6F40**	●	2	240	247	277	342	40	50	1.45	**SO○X13**	TPS43	TIP15W
41.0	2	**MVX4100X2F40**	●	2	82	89	119	184	40	50	1.36	**SO○X13**	TPS43	TIP15W
	3	**MVX4100X3F40**	●	2	123	130	160	225	40	50	1.36	**SO○X13**	TPS43	TIP15W
	4	**MVX4100X4F40**	●	2	164	171	201	266	40	50	1.36	**SO○X13**	TPS43	TIP15W
	5	**MVX4100X5F40**	●	2	205	212	242	307	40	50	1.36	**SO○X13**	TPS43	TIP15W
	6	**MVX4100X6F40**	●	2	246	253	283	348	40	50	1.35	**SO○X13**	TPS43	TIP15W
42.0	2	**MVX4200X2F40**	●	2	84	91	121	186	40	50	1.27	**SO○X13**	TPS43	TIP15W
	3	**MVX4200X3F40**	●	2	126	133	163	228	40	50	1.27	**SO○X13**	TPS43	TIP15W
	4	**MVX4200X4F40**	●	2	168	175	205	270	40	63	1.27	**SO○X13**	TPS43	TIP15W
	5	**MVX4200X5F40**	●	2	210	217	247	312	40	63	1.27	**SO○X13**	TPS43	TIP15W
	6	**MVX4200X6F40**	●	2	252	259	289	354	40	63	1.27	**SO○X13**	TPS43	TIP15W
	4	**MVX4200X4F50**	★	2	168	175	205	280	50	63	1.27	**SO○X13**	TPS43	TIP15W
	5	**MVX4200X5F50**	★	2	210	217	247	322	50	63	1.27	**SO○X13**	TPS43	TIP15W
	6	**MVX4200X6F50**	★	2	252	259	289	364	50	63	1.26	**SO○X13**	TPS43	TIP15W
43.0	2	**MVX4300X2F40**	●	2	86	93	123	188	40	50	1.18	**SO○X13**	TPS43	TIP15W
	3	**MVX4300X3F40**	●	2	129	136	166	231	40	50	1.18	**SO○X13**	TPS43	TIP15W
	4	**MVX4300X4F40**	●	2	172	179	209	274	40	63	1.18	**SO○X13**	TPS43	TIP15W
	5	**MVX4300X5F40**	●	2	215	222	252	317	40	63	1.18	**SO○X13**	TPS43	TIP15W
	6	**MVX4300X6F40**	●	2	258	265	295	360	40	63	1.17	**SO○X13**	TPS43	TIP15W
	4	**MVX4300X4F50**	★	2	172	179	209	284	50	63	1.18	**SO○X13**	TPS43	TIP15W
	5	**MVX4300X5F50**	★	2	215	222	252	327	50	63	1.18	**SO○X13**	TPS43	TIP15W
	6	**MVX4300X6F50**	★	2	258	265	295	370	50	63	1.17	**SO○X13**	TPS43	TIP15W
44.0	2	**MVX4400X2F40**	●	2	88	95	125	190	40	50	1.08	**SO○X13**	TPS43	TIP15W
	3	**MVX4400X3F40**	●	2	132	139	169	234	40	50	1.08	**SO○X13**	TPS43	TIP15W
	4	**MVX4400X4F40**	●	2	176	183	213	278	40	63	1.08	**SO○X13**	TPS43	TIP15W
	5	**MVX4400X5F40**	●	2	220	227	257	322	40	63	1.08	**SO○X13**	TPS43	TIP15W
	4	**MVX4400X4F50**	★	2	176	183	213	288	50	63	1.08	**SO○X13**	TPS43	TIP15W
	5	**MVX4400X5F50**	★	2	220	227	257	332	50	63	1.08	**SO○X13**	TPS43	TIP15W

✱ Coppia di serraggio (N • m) : TPS43=3.5

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	W D Chiave
45.0	2	**MVX4500X2F40**	●	2	90	97	127	192	40	50	0.99	**SO○X13**	TPS43	TIP15W
	3	**MVX4500X3F40**	●	2	135	142	172	237	40	50	0.99	**SO○X13**	TPS43	TIP15W
	4	**MVX4500X4F40**	●	2	180	187	217	282	40	63	0.99	**SO○X13**	TPS43	TIP15W
	5	**MVX4500X5F40**	●	2	225	232	262	327	40	63	0.99	**SO○X13**	TPS43	TIP15W
	4	**MVX4500X4F50**	★	2	180	187	217	292	50	63	0.99	**SO○X13**	TPS43	TIP15W
	5	**MVX4500X5F50**	★	2	225	232	262	337	50	63	0.99	**SO○X13**	TPS43	TIP15W
46.0	2	**MVX4600X2F40**	●	2	92	99	129	194	40	50	0.89	**SO○X13**	TPS43	TIP15W
	3	**MVX4600X3F40**	●	2	138	145	175	240	40	50	0.89	**SO○X13**	TPS43	TIP15W
	4	**MVX4600X4F40**	●	2	184	191	221	286	40	63	0.89	**SO○X13**	TPS43	TIP15W
	5	**MVX4600X5F40**	●	2	230	237	267	332	40	63	0.89	**SO○X13**	TPS43	TIP15W
	4	**MVX4600X4F50**	★	2	184	191	221	296	50	63	0.89	**SO○X13**	TPS43	TIP15W
	5	**MVX4600X5F50**	★	2	230	237	267	342	50	63	0.89	**SO○X13**	TPS43	TIP15W
47.0	2	**MVX4700X2F40**	●	2	94	101	141	206	40	63	1.9	**SO○X16**	TPS54	TIP25D
	3	**MVX4700X3F40**	●	2	141	148	188	253	40	63	1.9	**SO○X16**	TPS54	TIP25D
	4	**MVX4700X4F40**	●	2	188	195	235	300	40	63	1.9	**SO○X16**	TPS54	TIP25D
	5	**MVX4700X5F40**	●	2	235	242	282	347	40	63	1.9	**SO○X16**	TPS54	TIP25D
	4	**MVX4700X4F50**	★	2	188	195	235	310	50	63	1.9	**SO○X16**	TPS54	TIP25D
	5	**MVX4700X5F50**	★	2	235	242	282	357	50	63	1.9	**SO○X16**	TPS54	TIP25D
48.0	2	**MVX4800X2F40**	●	2	96	103	143	208	40	63	1.8	**SO○X16**	TPS54	TIP25D
	3	**MVX4800X3F40**	●	2	144	151	191	256	40	63	1.8	**SO○X16**	TPS54	TIP25D
	4	**MVX4800X4F40**	●	2	192	199	239	304	40	63	1.8	**SO○X16**	TPS54	TIP25D
	5	**MVX4800X5F40**	●	2	240	247	287	352	40	63	1.8	**SO○X16**	TPS54	TIP25D
	4	**MVX4800X4F50**	★	2	192	199	239	314	50	63	1.8	**SO○X16**	TPS54	TIP25D
	5	**MVX4800X5F50**	★	2	240	247	287	362	50	63	1.8	**SO○X16**	TPS54	TIP25D
49.0	2	**MVX4900X2F40**	●	2	98	105	145	210	40	63	1.7	**SO○X16**	TPS54	TIP25D
	3	**MVX4900X3F40**	●	2	147	154	194	259	40	63	1.7	**SO○X16**	TPS54	TIP25D
	4	**MVX4900X4F40**	●	2	196	203	243	308	40	63	1.7	**SO○X16**	TPS54	TIP25D
	5	**MVX4900X5F40**	●	2	245	252	292	357	40	63	1.7	**SO○X16**	TPS54	TIP25D
	4	**MVX4900X4F50**	★	2	196	203	243	318	50	63	1.7	**SO○X16**	TPS54	TIP25D
	5	**MVX4900X5F50**	★	2	245	252	292	367	50	63	1.7	**SO○X16**	TPS54	TIP25D
50.0	2	**MVX5000X2F40**	●	2	100	107	147	212	40	63	1.6	**SO○X16**	TPS54	TIP25D
	3	**MVX5000X3F40**	●	2	150	157	197	262	40	63	1.6	**SO○X16**	TPS54	TIP25D
	4	**MVX5000X4F40**	●	2	200	207	247	312	40	63	1.6	**SO○X16**	TPS54	TIP25D
	5	**MVX5000X5F40**	●	2	250	257	297	362	40	63	1.6	**SO○X16**	TPS54	TIP25D
	4	**MVX5000X4F50**	★	2	200	207	247	322	50	63	1.6	**SO○X16**	TPS54	TIP25D
	5	**MVX5000X5F50**	★	2	250	257	297	372	50	63	1.6	**SO○X16**	TPS54	TIP25D
51.0	2	**MVX5100X2F40**	●	2	102	109	149	214	40	63	1.5	**SO○X16**	TPS54	TIP25D
	3	**MVX5100X3F40**	●	2	153	160	200	265	40	63	1.5	**SO○X16**	TPS54	TIP25D
	4	**MVX5100X4F40**	●	2	204	211	251	316	40	63	1.5	**SO○X16**	TPS54	TIP25D
	5	**MVX5100X5F40**	●	2	255	262	302	367	40	63	1.5	**SO○X16**	TPS54	TIP25D
	4	**MVX5100X4F50**	★	2	204	211	251	326	50	63	1.5	**SO○X16**	TPS54	TIP25D
	5	**MVX5100X5F50**	★	2	255	262	302	377	50	63	1.5	**SO○X16**	TPS54	TIP25D
52.0	2	**MVX5200X2F40**	●	2	104	111	151	216	40	63	1.39	**SO○X16**	TPS54	TIP25D
	3	**MVX5200X3F40**	●	2	156	163	203	268	40	63	1.39	**SO○X16**	TPS54	TIP25D
	4	**MVX5200X4F40**	●	2	208	215	255	320	40	63	1.39	**SO○X16**	TPS54	TIP25D
	5	**MVX5200X5F40**	●	2	260	267	307	372	40	63	1.39	**SO○X16**	TPS54	TIP25D
	4	**MVX5200X4F50**	★	2	208	215	255	330	50	63	1.39	**SO○X16**	TPS54	TIP25D
	5	**MVX5200X5F50**	★	2	260	267	307	382	50	63	1.39	**SO○X16**	TPS54	TIP25D

★ Coppia di serraggio (N • m) : TPS43=3.5, TPS54=7.5

DESCRIZIONE DEGLI INSERTI	➤ M166	NOTE PER L'USO	➤ M171
PARAMETRI DI TAGLIO	➤ M167	RICAMBI	➤ N001
MANICOTTO "JUST FIT"	➤ M170	DATI TECNICI	➤ P001

FORATURA (A INSERTI)

MVX

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	Chiave
53.0	2	**MVX5300X2F40**	●	2	106	113	153	218	40	63	1.29	**SO○X16**	TPS54	TIP25D
	3	**MVX5300X3F40**	●	2	159	166	206	271	40	63	1.29	**SO○X16**	TPS54	TIP25D
	4	**MVX5300X4F40**	●	2	212	219	259	324	40	63	1.29	**SO○X16**	TPS54	TIP25D
	5	**MVX5300X5F40**	●	2	265	272	312	377	40	63	1.29	**SO○X16**	TPS54	TIP25D
	4	**MVX5300X4F50**	★	2	212	219	259	334	50	63	1.29	**SO○X16**	TPS54	TIP25D
	5	**MVX5300X5F50**	★	2	265	272	312	387	50	63	1.29	**SO○X16**	TPS54	TIP25D
54.0	2	**MVX5400X2F40**	●	2	108	115	155	220	40	63	1.19	**SO○X16**	TPS54	TIP25D
	3	**MVX5400X3F40**	●	2	162	169	209	274	40	63	1.19	**SO○X16**	TPS54	TIP25D
	4	**MVX5400X4F40**	●	2	216	223	263	328	40	63	1.19	**SO○X16**	TPS54	TIP25D
	5	**MVX5400X5F40**	●	2	270	277	317	382	40	63	1.19	**SO○X16**	TPS54	TIP25D
	4	**MVX5400X4F50**	★	2	216	223	263	338	50	63	1.19	**SO○X16**	TPS54	TIP25D
	5	**MVX5400X5F50**	★	2	270	277	317	392	50	63	1.19	**SO○X16**	TPS54	TIP25D
55.0	2	**MVX5500X2F40**	●	2	110	117	157	222	40	63	1.08	**SO○X16**	TPS54	TIP25D
	3	**MVX5500X3F40**	●	2	165	172	212	277	40	63	1.08	**SO○X16**	TPS54	TIP25D
	4	**MVX5500X4F40**	●	2	220	227	267	332	40	63	1.08	**SO○X16**	TPS54	TIP25D
	5	**MVX5500X5F40**	●	2	275	282	322	387	40	63	1.08	**SO○X16**	TPS54	TIP25D
	4	**MVX5500X4F50**	★	2	220	227	267	342	50	63	1.08	**SO○X16**	TPS54	TIP25D
	5	**MVX5500X5F50**	●	2	275	282	322	397	50	63	1.08	**SO○X16**	TPS54	TIP25D
56.0	2	**MVX5600X2F40**	●	2	112	119	159	224	40	63	0.98	**SO○X16**	TPS54	TIP25D
	3	**MVX5600X3F40**	●	2	168	175	215	280	40	63	0.98	**SO○X16**	TPS54	TIP25D
	4	**MVX5600X4F40**	●	2	224	231	271	336	40	63	0.98	**SO○X16**	TPS54	TIP25D
	5	**MVX5600X5F40**	●	2	280	287	327	392	40	63	0.98	**SO○X16**	TPS54	TIP25D
	4	**MVX5600X4F50**	★	2	224	231	271	346	50	63	0.98	**SO○X16**	TPS54	TIP25D
	5	**MVX5600X5F50**	★	2	280	287	327	402	50	63	0.98	**SO○X16**	TPS54	TIP25D
57.0	2	**MVX5700X2F40**	●	2	114	121	161	226	40	68	1.47	**SO○X18**	TPS54	TIP25D
	3	**MVX5700X3F40**	●	2	171	178	218	283	40	68	1.47	**SO○X18**	TPS54	TIP25D
	4	**MVX5700X4F40**	●	2	228	235	275	340	40	68	1.47	**SO○X18**	TPS54	TIP25D
	5	**MVX5700X5F40**	●	2	285	292	332	397	40	68	1.47	**SO○X18**	TPS54	TIP25D
	4	**MVX5700X4F50**	★	2	228	235	275	350	50	68	1.47	**SO○X18**	TPS54	TIP25D
	5	**MVX5700X5F50**	★	2	285	292	332	407	50	68	1.47	**SO○X18**	TPS54	TIP25D
58.0	2	**MVX5800X2F40**	●	2	116	123	163	228	40	68	1.37	**SO○X18**	TPS54	TIP25D
	3	**MVX5800X3F40**	●	2	174	181	221	286	40	68	1.37	**SO○X18**	TPS54	TIP25D
	4	**MVX5800X4F40**	●	2	232	239	279	344	40	68	1.37	**SO○X18**	TPS54	TIP25D
	5	**MVX5800X5F40**	●	2	290	297	337	402	40	68	1.37	**SO○X18**	TPS54	TIP25D
	4	**MVX5800X4F50**	★	2	232	239	279	354	50	68	1.37	**SO○X18**	TPS54	TIP25D
	5	**MVX5800X5F50**	★	2	290	297	337	412	50	68	1.37	**SO○X18**	TPS54	TIP25D
59.0	2	**MVX5900X2F40**	●	2	118	125	165	230	40	68	1.26	**SO○X18**	TPS54	TIP25D
	3	**MVX5900X3F40**	●	2	177	184	224	289	40	68	1.26	**SO○X18**	TPS54	TIP25D
	4	**MVX5900X4F40**	●	2	236	243	283	348	40	68	1.26	**SO○X18**	TPS54	TIP25D
	5	**MVX5900X5F40**	●	2	295	302	342	407	40	68	1.26	**SO○X18**	TPS54	TIP25D
	4	**MVX5900X4F50**	★	2	236	243	283	358	50	68	1.26	**SO○X18**	TPS54	TIP25D
	5	**MVX5900X5F50**	★	2	295	302	342	417	50	68	1.26	**SO○X18**	TPS54	TIP25D
60.0	2	**MVX6000X2F40**	●	2	120	127	167	232	40	68	1.16	**SO○X18**	TPS54	TIP25D
	3	**MVX6000X3F40**	●	2	180	187	227	292	40	68	1.16	**SO○X18**	TPS54	TIP25D
	4	**MVX6000X4F40**	●	2	240	247	287	352	40	68	1.16	**SO○X18**	TPS54	TIP25D
	5	**MVX6000X5F40**	●	2	300	307	347	412	40	68	1.16	**SO○X18**	TPS54	TIP25D
	4	**MVX6000X4F50**	★	2	240	247	287	362	50	68	1.16	**SO○X18**	TPS54	TIP25D
	5	**MVX6000X5F50**	★	2	300	307	347	422	50	68	1.16	**SO○X18**	TPS54	TIP25D

∗ Coppia di serraggio (N • m) : TPS54=7.5

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DC (mm)	Profondità foro (L/D)	Codice ordinazione	Disponibilità	Denti	Dimensioni (mm) LU	LBX	LPR	OAL	DCONMS	DCSFMS	S10 (mm)	Inserto	Vite di bloccaggio	D Chiave
61.0	2	**MVX6100X2F40**	●	2	122	129	169	234	40	68	1.05	**SO○X18**	TPS54	TIP25D
	3	**MVX6100X3F40**	●	2	183	190	230	295	40	68	1.05	**SO○X18**	TPS54	TIP25D
	4	**MVX6100X4F40**	●	2	244	251	291	356	40	68	1.05	**SO○X18**	TPS54	TIP25D
	5	**MVX6100X5F40**	●	2	305	312	352	417	40	68	1.05	**SO○X18**	TPS54	TIP25D
	4	**MVX6100X4F50**	★	2	244	251	291	366	50	68	1.05	**SO○X18**	TPS54	TIP25D
	5	**MVX6100X5F50**	★	2	305	312	352	427	50	68	1.05	**SO○X18**	TPS54	TIP25D
62.0	2	**MVX6200X2F40**	●	2	124	131	171	236	40	68	0.95	**SO○X18**	TPS54	TIP25D
	3	**MVX6200X3F40**	●	2	186	193	233	298	40	68	0.95	**SO○X18**	TPS54	TIP25D
	4	**MVX6200X4F40**	●	2	248	255	295	360	40	68	0.95	**SO○X18**	TPS54	TIP25D
	5	**MVX6200X5F40**	●	2	310	317	357	422	40	68	0.95	**SO○X18**	TPS54	TIP25D
	4	**MVX6200X4F50**	★	2	248	255	295	370	50	68	0.95	**SO○X18**	TPS54	TIP25D
	5	**MVX6200X5F50**	★	2	310	317	357	432	50	68	0.95	**SO○X18**	TPS54	TIP25D
63.0	2	**MVX6300X2F40**	●	2	126	133	173	238	40	68	0.85	**SO○X18**	TPS54	TIP25D
	3	**MVX6300X3F40**	●	2	189	196	236	301	40	68	0.85	**SO○X18**	TPS54	TIP25D
	4	**MVX6300X4F40**	●	2	252	259	299	364	40	68	0.85	**SO○X18**	TPS54	TIP25D
	5	**MVX6300X5F40**	●	2	315	322	362	427	40	68	0.85	**SO○X18**	TPS54	TIP25D
	4	**MVX6300X4F50**	★	2	252	259	299	374	50	68	0.85	**SO○X18**	TPS54	TIP25D
	5	**MVX6300X5F50**	★	2	315	322	362	437	50	68	0.85	**SO○X18**	TPS54	TIP25D

★ Coppia di serraggio (N • m) : TPS54=7.5

DESCRIZIONE DEGLI INSERTI	➤ M166	NOTE PER L'USO	➤ M171
PARAMETRI DI TAGLIO	➤ M167	RICAMBI	➤ N001
MANICOTTO "JUST FIT"	➤ M170	DATI TECNICI	➤ P001

FORATURA (A INSERTI)

MVX

INSERTI

Forma	Diametro punta	Codice inserto	Dimensioni (mm) IC	S	RE	Rivestito VP15TF	MC1020	MC5020	DP8020	Metallo duro TF15		Geometria
UM	Ø14.0—Ø16.5	**SOMX052704-UM**	5.0	2.7	0.4	●	●	●				Ø14.0—Ø16.5
	Ø17.0—Ø19.5	**SOMX063005-UM**	6.0	3.0	0.5	●	●	●				
	Ø20.0—Ø22.5	**SOMX073505-UM**	7.0	3.5	0.5	●	●	●				
	Ø23.0—Ø27.5	**SOMX084005-UM**	8.3	4.0	0.5	●	●	●				
	Ø28.0—Ø33.0	**SOMX094506-UM**	9.7	4.5	0.6	●	●	●				
	Ø33.5—Ø39.0	**SOMX115506-UM**	11.6	5.5	0.6	●	●	●				Ø17.0—Ø63.0
	Ø40.0—Ø46.0	**SOMX136008-UM**	13.8	6.0	0.8	●	●	●				
	Ø47.0—Ø56.0	**SOMX166508-UM**	16.5	6.5	0.8	●	●	●				
Uso generico tagliente interno o esterno	Ø57.0—Ø63.0	**SOMX187008-UM**	18.2	7.0	0.8	●	●	●				
US	Ø17.0—Ø19.5	**SOMX063005-US**	6.0	3.0	0.5	●						
	Ø20.0—Ø22.5	**SOMX073505-US**	7.0	3.5	0.5	●						
	Ø23.0—Ø27.5	**SOMX084005-US**	8.0	4.0	0.5	●						
	Ø28.0—Ø33.0	**SOMX094506-US**	9.0	4.5	0.6	●						
	Ø33.5—Ø39.0	**SOMX115506-US**	11.6	5.5	0.6	●						
	Ø40.0—Ø46.0	**SOMX136008-US**	13.8	6.0	0.8	●						
	Ø47.0—Ø56.0	**SOMX166508-US**	16.5	6.5	0.8	●						
Per acciaio inossidabile e tagliente interno	Ø57.0—Ø63.0	**SOMX187008-US**	18.2	7.0	0.8	●						
UH	Ø17.0—Ø19.5	**SOMX062905-UH**	6.0	2.9	0.5				●			
	Ø20.0—Ø22.5	**SOMX073405-UH**	7.0	3.4	0.5				●			
	Ø23.0—Ø27.5	**SOMX083905-UH**	8.3	3.9	0.5				●			
	Ø28.0—Ø33.0	**SOMX094406-UH**	9.7	4.4	0.6				●			
	Ø33.5—Ø39.0	**SOMX115406-UH**	11.6	5.4	0.6				●			
	Ø40.0—Ø46.0	**SOMX135908-UH**	13.8	5.9	0.8				●			
	Ø47.0—Ø56.0	**SOMX166408-UH**	16.5	6.4	0.8				●			
Tagliente rinforzato uso su tagliente interno	Ø57.0—Ø63.0	**SOMX186908-UH**	18.2	6.9	0.8				●			
UN	Ø17.0—Ø19.5	**SOGX063005-UN**	6.0	3.0	0.5					●		
	Ø20.0—Ø22.5	**SOGX073505-UN**	7.0	3.5	0.5					●		
	Ø23.0—Ø27.5	**SOGX084005-UN**	8.3	4.0	0.5					●		
	Ø28.0—Ø33.0	**SOGX094506-UN**	9.7	4.5	0.6					●		
	Ø33.5—Ø39.0	**SOGX115506-UN**	11.6	5.5	0.6					●		
	Ø40.0—Ø46.0	**SOGX136008-UN**	13.8	6.0	0.8					●		
	Ø47.0—Ø56.0	**SOGX166508-UN**	16.5	6.5	0.8					●		
Per lega di alluminio tagliente interno o esterno	Ø57.0—Ø63.0	**SOGX187008-UN**	18.2	7.0	0.8					●		

Nota 1) MC1020 e MC5020 sono utilizzabili unicamente come inserti esterni. I DP8020 sono utilizzabili unicamente come inserti interni.

RACCOMANDAZIONE SUGLI INSERTI

		1ª scelta		Se l'inserto esterno si rompe	
		Inserto esterno	Inserto interno	Inserto esterno	Inserto interno
P	Acciaio dolce, acciaio legato	MC1020	VP15TF	VP15TF	VP15TF
		Rompitruciolo UM	Rompitruciolo UM	Rompitruciolo UM	Rompitruciolo UM
M	Acciaio inossidabile	MC1020	VP15TF	VP15TF	VP15TF
		Rompitruciolo UM	Rompitruciolo US	Rompitruciolo UM	Rompitruciolo US
K	Ghisa	MC5020	VP15TF	VP15TF	VP15TF
		Rompitruciolo UM	Rompitruciolo UM	Rompitruciolo UM	Rompitruciolo UM

		1ª scelta		Se l'inserto esterno si rompe	
		Inserto esterno	Inserto interno	Inserto esterno	Inserto interno
H	Acciaio temprato	MC1020	DP8020	VP15TF	DP8020
		Rompitruciolo UM	Rompitruciolo UH	Rompitruciolo UM	Rompitruciolo UH
N	Lega di alluminio	TF15	TF15		
		Rompitruciolo UN	Rompitruciolo UN		

● : Inventario mantenuto.

CONDIZIONI DI TAGLIO RACCOMANDATE

	Materiale da lavorare	Durezza	Vc (m/min)	Rompitruciolo interno	Ø 14—Ø 16.5 fr (mm/giro)		
					L/D=2, 3	4	5
P	Acciaio dolce (C15, Ck15)	≤180HB	200 (180—235)	UM	0.05 (0.04—0.06)	0.05 (0.04—0.06)	0.05 (0.04—0.06)
				UH	—	—	—
	Acciaio al carbonio, acciaio legato (Ck45, 41CrMo4)	180—280HB	140 (115—180)	UM	0.08 (0.06—0.14)	0.08 (0.06—0.09)	0.08 (0.06—0.09)
				UH	—	—	—
	Acciaio al carbonio, acciaio legato (100Cr6)	280—350HB	100 (75—140)	UM	0.08 (0.06—0.14)	0.08 (0.06—0.09)	0.08 (0.06—0.09)
				UH	—	—	—
	Leghe di Acciaio per utensili (X210Cr12)	≤350HB	135 (100—170)	UM	0.08 (0.06—0.14)	0.08 (0.06—0.09)	0.08 (0.06—0.09)
				UH	—	—	—
M	Acciaio inossidabile austenitico (X5CrNi18-10, X5CrNiMo17-12-2)	≤200HB	130 (80—180)	US	—	—	—
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)
	Acciaio inossidabile austenitico (X2CrNiN18-9, X5CrNiMoN17-11-2)	>200HB	130 (80—180)	US	—	—	—
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)
	Acciai inossidabili, ferritici e martensitici (X12Cr13, X6Cr17)	≤200HB	120 (80—165)	US	—	—	—
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)
	Acciai inossidabili, ferritici e martensitici (X17CrNi16-2, X30Cr13)	>200HB	120 (80—165)	US	—	—	—
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)
K	Ghisa grigia (GG25, GG30)	≤350MPa	160 (130—195)	UM	0.10 (0.06—0.14)	0.08 (0.06—0.10)	0.08 (0.06—0.10)
	Ghisa sferoidale (GG40)	≤450MPa	100 (80—135)	UM	0.10 (0.06—0.14)	0.08 (0.06—0.10)	0.08 (0.06—0.10)
	Ghisa sferoidale (GGG70)	≤800HB	100 (70—125)	UM	0.08 (0.06—0.12)	0.07 (0.06—0.08)	0.07 (0.06—0.08)
N	Lega di alluminio (AlMg1SiCu, AlZn5.5MgCu)	Si<5%	200 (100-350)	UN	—	—	—
	Lega di alluminio (AC4B)	5%≤Si≤10%	150 (100-200)	UN	—	—	—
	Lega di alluminio (ADC12, A390)	Si>10%	150 (100-200)	UN	—	—	—
H	Acciaio temprato (X40CrMoV51, 55NiCrMoV6)	38 - 45HRC	50 (30-80)	UH	—	—	—

Nota 1) Ridurre la velocità di taglio del 30% quando si usa VP15TF come inserto esterno.
Nota 2) L/D=3 è la profondità massima consigliata quando si usa solo refrigerante esterno.
Nota 3) Il passaggio di refrigerante interno è fortemente consigliato quando si fora l'acciaio inossidabile.

NOTE PER L'USO ➤ M171
RICAMBI ➤ N001
DATI TECNICI ➤ P001

FORATURA (A INSERTI)

MVX

CONDIZIONI DI TAGLIO RACCOMANDATE

	Materiale da lavorare	Durezza	Vc (m/min)	Rompitruciolo interno	Ø 17—Ø 19.5 fr (mm/giro) L/D=2, 3	4	5	6
P	Acciaio dolce (C15, Ck15)	≤180HB	200 (180—235)	UM	0.05 (0.04—0.06)	0.05 (0.04—0.06)	0.05 (0.04—0.06)	0.04 (0.04—0.05)
				UH				
	Acciaio al carbonio, acciaio legato (Ck45, 41CrMo4)	180—280HB	140 (115—180)	UM	0.08 (0.06—0.14)	0.08 (0.06—0.09)	0.08 (0.06—0.09)	0.05 (0.04—0.06)
				UH				
	Acciaio al carbonio, acciaio legato (100Cr6)	280—350HB	100 (75—140)	UM	0.08 (0.06—0.14)	0.08 (0.06—0.09)	0.08 (0.06—0.09)	0.05 (0.04—0.06)
				UH				
	Leghe di Acciaio per utensili (X210Cr12)	≤350HB	135 (100—170)	UM	0.08 (0.06—0.14)	0.08 (0.06—0.09)	0.08 (0.06—0.09)	0.05 (0.04—0.06)
				UH				
M	Acciaio inossidabile austenitico (X5CrNi18-10, X5CrNiMo17-12-2)	≤200HB	130 (80—180)	US	0.08 (0.06—0.12)	0.06 (0.04—0.08)	0.06 (0.04—0.08)	0.05 (0.04—0.06)
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)	0.04 (0.04—0.05)
	Acciaio inossidabile austenitico (X2CrNiN18-9, X5CrNiMoN17-11-2)	>200HB	130 (80—180)	US	0.08 (0.06—0.12)	0.06 (0.04—0.08)	0.06 (0.04—0.08)	0.05 (0.04—0.06)
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)	0.04 (0.04—0.05)
	Acciai inossidabili, ferritici e martensitici (X12Cr13, X6Cr17)	≤200HB	120 (80—165)	US	0.08 (0.06—0.12)	0.06 (0.04—0.08)	0.06 (0.04—0.08)	0.05 (0.04—0.06)
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)	0.04 (0.04—0.05)
	Acciai inossidabili, ferritici e martensitici (X17CrNi16-2, X30Cr13)	>200HB	120 (80—165)	US	0.08 (0.06—0.12)	0.06 (0.04—0.08)	0.06 (0.04—0.08)	0.05 (0.04—0.06)
				UM	0.06 (0.04—0.08)	0.05 (0.04—0.06)	0.05 (0.04—0.06)	0.04 (0.04—0.05)
K	Ghisa grigia (GG25, GG30)	≤350MPa	160 (130—195)	UM	0.11 (0.08—0.14)	0.09 (0.08—0.10)	0.09 (0.08—0.10)	0.05 (0.04—0.06)
	Ghisa sferoidale (GG40)	≤450MPa	100 (80—135)	UM	0.11 (0.08—0.14)	0.09 (0.08—0.10)	0.09 (0.08—0.10)	0.05 (0.04—0.06)
	Ghisa sferoidale (GGG70)	≤800HB	100 (70—125)	UM	0.11 (0.08—0.14)	0.09 (0.08—0.10)	0.09 (0.08—0.10)	0.05 (0.04—0.06)
N	Lega di alluminio (AlMg1SiCu, AlZn5.5MgCu)	Si<5%	200 (100-350)	UN	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)
	Lega di alluminio (AC4B)	5%≤Si≤10%	150 (100-200)	UN	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)
	Lega di alluminio (ADC12, A390)	Si>10%	150 (100-200)	UN	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)
H	Acciaio temprato (X40CrMoV51, 55NiCrMoV6)	38 - 45HRC	50 (30-80)	UH	0.08 (0.04—0.12)	0.06 (0.04—0.09)	—	—

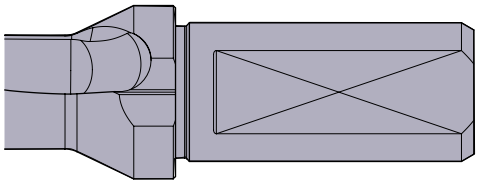
Nota 1) Ridurre la velocità di taglio del 30% quando si usa VP15TF come inserto esterno.
Nota 2) L/D=3 è la profondità massima consigliata quando si usa solo refrigerante esterno.
Nota 3) Il passaggio di refrigerante interno è fortemente consigliato quando si fora l'acciaio inossidabile.

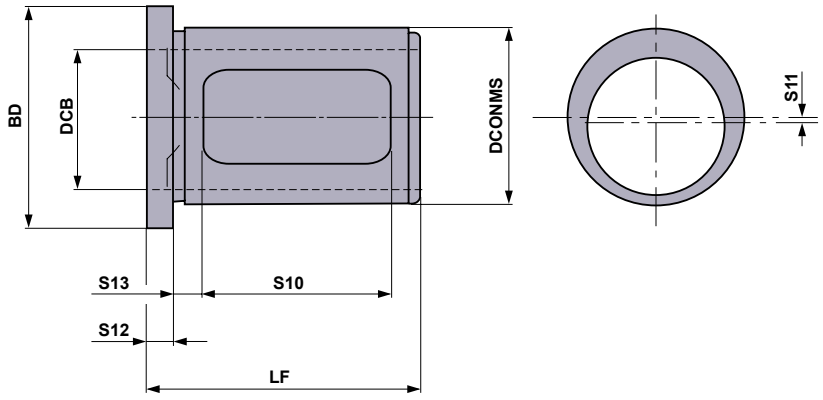
	Ø 20—Ø 23.5				Ø 24—Ø 29.5				Ø 30—Ø 63			
	fr (mm/giro)				fr (mm/giro)				fr (mm/giro)			
	L/D=2, 3	4	5	6	L/D=2, 3	4	5	6	L/D=2, 3	4	5	6
	0.06 (0.04—0.08)	0.06 (0.04—0.07)	0.06 (0.04—0.07)	0.04 (0.04—0.05)	0.07 (0.04—0.08)	0.06 (0.04—0.07)	0.06 (0.04—0.07)	0.05 (0.04—0.06)	0.08 (0.06—0.10)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)
	0.10 (0.06—0.18)	0.09 (0.06—0.12)	0.09 (0.06—0.12)	0.07 (0.06—0.08)	0.12 (0.08—0.18)	0.10 (0.08—0.12)	0.10 (0.08—0.12)	0.09 (0.08—0.10)	0.14 (0.08—0.20)	0.12 (0.08—0.16)	0.12 (0.08—0.16)	0.11 (0.10—0.12)
	0.10 (0.06—0.18)	0.09 (0.06—0.12)	0.09 (0.06—0.12)	0.07 (0.06—0.08)	0.12 (0.08—0.18)	0.10 (0.08—0.12)	0.10 (0.08—0.12)	0.09 (0.08—0.10)	0.14 (0.08—0.20)	0.12 (0.08—0.16)	0.12 (0.08—0.16)	0.11 (0.10—0.12)
	0.10 (0.06—0.18)	0.09 (0.06—0.12)	0.09 (0.06—0.12)	0.07 (0.06—0.08)	0.12 (0.08—0.18)	0.10 (0.08—0.12)	0.10 (0.08—0.12)	0.09 (0.08—0.10)	0.14 (0.08—0.20)	0.12 (0.08—0.16)	0.12 (0.08—0.16)	0.10 (0.08—0.12)
	0.10 (0.06—0.14)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.10 (0.06—0.14)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)	0.10 (0.06—0.14)	0.09 (0.06—0.12)	0.09 (0.06—0.12)	0.07 (0.06—0.10)
	0.08 (0.06—0.12)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.09 (0.06—0.12)	0.07 (0.06—0.09)	0.07 (0.06—0.09)	0.06 (0.06—0.08)	0.09 (0.06—0.12)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)
	0.10 (0.06—0.14)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.10 (0.06—0.14)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)	0.10 (0.06—0.14)	0.09 (0.06—0.12)	0.09 (0.06—0.12)	0.07 (0.06—0.10)
	0.08 (0.06—0.12)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.09 (0.06—0.12)	0.07 (0.06—0.09)	0.07 (0.06—0.09)	0.06 (0.06—0.08)	0.09 (0.06—0.12)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)
	0.10 (0.06—0.14)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.10 (0.06—0.14)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)	0.10 (0.06—0.14)	0.09 (0.06—0.12)	0.09 (0.06—0.12)	0.07 (0.06—0.10)
	0.08 (0.06—0.12)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.09 (0.06—0.12)	0.07 (0.06—0.09)	0.07 (0.06—0.09)	0.06 (0.06—0.08)	0.09 (0.06—0.12)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)
	0.10 (0.06—0.14)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.10 (0.06—0.14)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)	0.10 (0.06—0.14)	0.09 (0.06—0.12)	0.09 (0.06—0.12)	0.07 (0.06—0.10)
	0.08 (0.06—0.12)	0.07 (0.06—0.08)	0.07 (0.06—0.08)	0.06 (0.06—0.07)	0.09 (0.06—0.12)	0.07 (0.06—0.09)	0.07 (0.06—0.09)	0.06 (0.06—0.08)	0.09 (0.06—0.12)	0.08 (0.06—0.10)	0.08 (0.06—0.10)	0.07 (0.06—0.08)
	0.14 (0.10—0.18)	0.10 (0.10—0.12)	0.10 (0.10—0.12)	0.07 (0.06—0.08)	0.15 (0.10—0.20)	0.11 (0.10—0.13)	0.11 (0.10—0.13)	0.09 (0.08—0.10)	0.15 (0.10—0.20)	0.12 (0.10—0.13)	0.12 (0.10—0.13)	0.11 (0.10—0.12)
	0.13 (0.10—0.16)	0.10 (0.10—0.11)	0.10 (0.10—0.11)	0.07 (0.06—0.08)	0.14 (0.10—0.18)	0.11 (0.10—0.12)	0.11 (0.10—0.12)	0.09 (0.08—0.10)	0.15 (0.10—0.20)	0.12 (0.10—0.13)	0.12 (0.10—0.13)	0.11 (0.10—0.12)
	0.13 (0.10—0.16)	0.10 (0.10—0.11)	0.10 (0.10—0.11)	0.07 (0.06—0.08)	0.14 (0.10—0.18)	0.11 (0.10—0.12)	0.11 (0.10—0.12)	0.09 (0.08—0.10)	0.15 (0.10—0.20)	0.12 (0.10—0.13)	0.12 (0.10—0.13)	0.11 (0.10—0.12)
	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)	0.12 (0.05—0.20)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)
	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)	0.12 (0.05—0.20)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)
	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)	0.12 (0.05—0.20)	0.12 (0.05—0.18)	0.12 (0.05—0.18)	0.08 (0.05—0.12)
	0.09 (0.06—0.14)	0.07 (0.06—0.09)	—	—	0.09 (0.06—0.14)	0.07 (0.06—0.09)	—	—	0.11 (0.06—0.16)	0.09 (0.06—0.012)	—	—

NOTE PER L'USO ➤ M171
RICAMBI ➤ N001
DATI TECNICI ➤ P001

MANICOTTO “JUST FIT” [JFS]

● Manicotto studiato per migliorare la versatilità delle punte MVX, che permette di aumentare il diametro di taglio di incrementi di 0.1mm





Numero di ordinazione set	Numero di ordinazione pezzo singolo	Disponibilità	Dimensioni (mm)							✱Incremento (**S11**×2)	Codici corpi punta MVX adatti
			BD	**DCONMS**	**DCB**	**LF**	**S10**	**S12**	**S13**		
JFS-1	**JFS2520-10**	●	33	25	20	43	30	5	5	0.1	MVX1700 X ◌F20
	JFS2520-20	●	33	25	20	43	30	5	5	0.2	
	JFS2520-30	●	33	25	20	43	30	5	5	0.3	
	JFS2520-40	●	33	25	20	43	30	5	5	0.4	
	JFS2520-50	●	33	25	20	43	30	5	5	0.5	
JFS-2	**JFS3225-10**	●	40	32	25	50	34	5	5	0.1	MVX1750 X ◌F25 ⏐ MVX2550 X ◌F25
	JFS3225-20	●	40	32	25	50	34	5	5	0.2	
	JFS3225-30	●	40	32	25	50	34	5	5	0.3	
	JFS3225-40	●	40	32	25	50	34	5	5	0.4	
	JFS3225-50	●	40	32	25	50	34	5	5	0.5	
JFS-3	**JFS4032-10**	●	48	40	32	55	40	5	5	0.1	MVX2600 X ◌F32 ⏐ MVX3000 X ◌F32
	JFS4032-20	●	48	40	32	55	40	5	5	0.2	
	JFS4032-30	●	48	40	32	55	40	5	5	0.3	
	JFS4032-40	●	48	40	32	55	40	5	5	0.4	
	JFS4032-50	●	48	40	32	55	40	5	5	0.5	
JFS-4	**JFS5040-10**	★	68	50	40	65	50	5	5	0.1	MVX3100 X ◌F40 ⏐ MVX6300 X ◌F40
	JFS5040-20	★	68	50	40	65	50	5	5	0.2	
	JFS5040-30	★	68	50	40	65	50	5	5	0.3	
	JFS5040-40	★	68	50	40	65	50	5	5	0.4	
	JFS5040-50	★	68	50	40	65	50	5	5	0.5	

Non corrisponde al diametro dell’attacco Ø 50 mm.

✱ Incremento : misura dell’incremento nel diametro di taglio.

■ GUIDA ALLA SELEZIONE DI UN MANICOTTO “JUST FIT”

Diametro desiderato = (Ø punta+ Incremento manicotti “just fit”) + 0.1mm

(Es.) Diametro desiderato 20.3mm (maggiorazione 0.1mm).

Ø20.3=(MVX2000 X ◌F25+JFS3225-20)+0.1

- Punta 20mm
- Usando il manicotto Just Fit incremento di 0.2mm.
- Maggiorazione

<Utensile scelto>
PUNTE : **MVX2000 X ◌F25**
Manicotto “Just Fit” [JFS]
: **JFS3225-20**

Nota 1) La maggiorazione può variare a seconda dei parametri di taglio : la spiegazione serve solo a scopo indicativo.

■ ORDINAZIONE MANICOTTO JUST FIT

●Metodo di ordinazione 1

La maggiorazione può variare a seconda dei parametri di taglio. Si raccomanda quindi di acquistare il set. Per passare un ordine, usare il numero di ordinazione del set. (Serie di 5 manicotti)

●Metodo di ordinazione 2

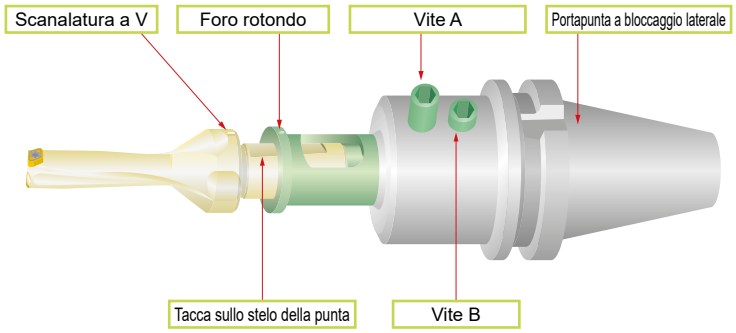
È possibile ordinare il manicotto singolarmente. Per passare un ordine, usare il numero di ordinazione pezzo singolo.

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

■ IMPIEGO DEL MANICOTTO “JUST FIT”

1. Inserendo la punta nel portapunta a bloccaggio laterale, allineare la scanalatura a V sul bordo periferico esterno della flangia della punta, i fori rotondi sul bordo periferico esterno della flangia del manicotto e le viti del portapunta a bloccaggio laterale. (Se la punta non ha una scanalatura a V, allineare la tacca sullo stelo della punta con i fori rotondi sul manicotto.)
2. Fissare le viti A del portapunta direttamente sulla punta attraverso la scanalatura del manicotto. Serrare la vite B in modo da non danneggiare il manicotto.

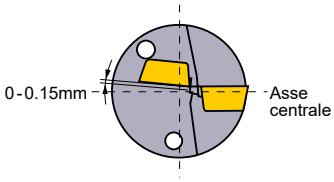
(Nota)
- Per il diametro del manicotto non è possibile fare regolazioni precise.
- Non usare con portapunta tipo a pinza.



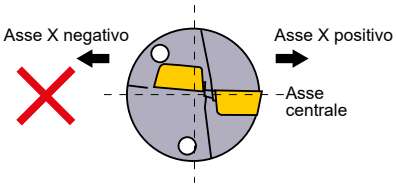
■ APPLICAZIONE DI PUNTA TIPO MVX

●Uso su tornio

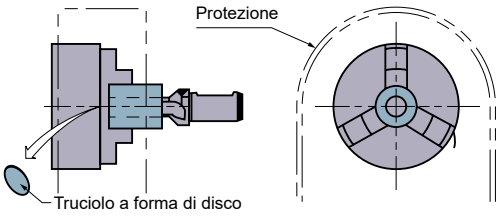
(1) L'inserto esterno e l'asse X della macchina devono essere paralleli. La punta è progettata con il centro dell'inserto interno da 0-0,15 mm più basso, quando si allinea il centro della punta e il centro del mandrino macchina.
*L'inserto interno può rompersi se l'altezza del centro dell'inserto interno è superiore all'asse X della macchina.



(2) Per regolare il diametro del foro mediante la compensazione della punta, regolare l'asse X in direzione positiva (direzione di espansione del diametro del foro). Fare riferimento all'elenco delle dimensioni del corpo punta per la regolazione massima di ogni corpo punta.
*Non si consiglia di regolare la direzione negativa dell'asse X (riduzione del diametro del foro), il corpo punta può interferire con il foro.



(3) Quando si realizzano fori passanti su un tornio, il disco prodotto dalla punta che esce dal pezzo da lavorare può essere espulso ad alta velocità. Per ridurre danni e lesioni si consiglia vivamente l'uso di una protezione.



PUNTE VIOLET

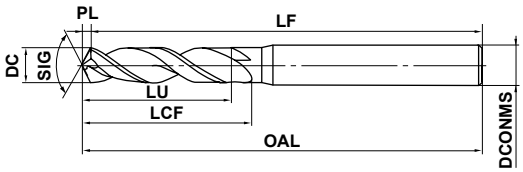
VAPDS

Tagliente corto, Alta precisione

DC<2 DC≥2

P M K N S H





*LU = LCF-2DC (max 3×DC)

0.5≤DC≤3	3<DC≤6	6<DC≤10	10<DC≤13
0 −0.014	0 −0.018	0 −0.022	0 −0.027

* Tutte le punte tranne quelle nell' intervallo tra 0.1mm e 2.0mm hanno tolleranza di 0−0.009mm.

●Il nuovo rivestimento VIOLET garantisce elevate prestazioni e lunghe durate.

DC (mm)	Codice di ordinazione	Dimensioni (mm) LCF	OAL	LF	PL	DCONMS	Disponibilità
0.50	VAPDSD0050	3.2	50.2	50	0.15	3	●
0.51	VAPDSD0051	3.2	50.2	50	0.15	3	★
0.52	VAPDSD0052	3.2	50.2	50	0.16	3	★
0.53	VAPDSD0053	3.2	50.2	50	0.16	3	★
0.54	VAPDSD0054	3.2	50.2	50	0.16	3	★
0.55	VAPDSD0055	3.2	50.2	50	0.17	3	★
0.56	VAPDSD0056	4.2	50.2	50	0.17	3	★
0.57	VAPDSD0057	4.2	50.2	50	0.17	3	★
0.58	VAPDSD0058	4.2	50.2	50	0.17	3	★
0.59	VAPDSD0059	4.2	50.2	50	0.18	3	★
0.60	VAPDSD0060	5.2	50.2	50	0.18	3	★
0.61	VAPDSD0061	5.2	50.2	50	0.18	3	★
0.62	VAPDSD0062	5.2	50.2	50	0.19	3	★
0.63	VAPDSD0063	5.2	50.2	50	0.19	3	★
0.64	VAPDSD0064	5.2	50.2	50	0.19	3	★
0.65	VAPDSD0065	5.2	50.2	50	0.20	3	★
0.66	VAPDSD0066	5.2	50.2	50	0.20	3	★
0.67	VAPDSD0067	5.2	50.2	50	0.20	3	★
0.68	VAPDSD0068	5.2	50.2	50	0.20	3	★
0.69	VAPDSD0069	5.2	50.2	50	0.21	3	★
0.70	VAPDSD0070	5.2	50.2	50	0.21	3	★
0.71	VAPDSD0071	5.2	50.2	50	0.21	3	★
0.72	VAPDSD0072	5.2	50.2	50	0.22	3	★
0.73	VAPDSD0073	5.2	50.2	50	0.22	3	★
0.74	VAPDSD0074	5.2	50.2	50	0.22	3	★
0.75	VAPDSD0075	5.2	50.2	50	0.23	3	★
0.76	VAPDSD0076	5.2	50.2	50	0.23	3	★
0.77	VAPDSD0077	5.2	50.2	50	0.23	3	★
0.78	VAPDSD0078	5.2	50.2	50	0.23	3	★
0.79	VAPDSD0079	5.2	50.2	50	0.24	3	★
0.80	VAPDSD0080	5.2	50.2	50	0.24	3	★
0.81	VAPDSD0081	5.2	50.2	50	0.24	3	★
0.82	VAPDSD0082	5.3	50.3	50	0.25	3	★

DC (mm)	Codice di ordinazione	Dimensioni (mm) LCF	OAL	LF	PL	DCONMS	Disponibilità
0.83	VAPDSD0083	5.3	50.3	50	0.25	3	★
0.84	VAPDSD0084	5.3	50.3	50	0.25	3	★
0.85	VAPDSD0085	5.3	50.3	50	0.26	3	★
0.86	VAPDSD0086	6.3	50.3	50	0.26	3	★
0.87	VAPDSD0087	6.3	50.3	50	0.26	3	★
0.88	VAPDSD0088	6.3	50.3	50	0.26	3	★
0.89	VAPDSD0089	6.3	50.3	50	0.27	3	★
0.90	VAPDSD0090	6.3	50.3	50	0.27	3	★
0.91	VAPDSD0091	6.3	50.3	50	0.27	3	★
0.92	VAPDSD0092	6.3	50.3	50	0.28	3	★
0.93	VAPDSD0093	6.3	50.3	50	0.28	3	★
0.94	VAPDSD0094	6.3	50.3	50	0.28	3	★
0.95	VAPDSD0095	6.3	50.3	50	0.29	3	★
0.96	VAPDSD0096	6.3	50.3	50	0.29	3	★
0.97	VAPDSD0097	6.3	50.3	50	0.29	3	★
0.98	VAPDSD0098	6.3	50.3	50	0.29	3	★
0.99	VAPDSD0099	6.3	50.3	50	0.30	3	★
1.00	VAPDSD0100	6.3	50.3	50	0.3	3	●
1.01	VAPDSD0101	6.3	50.3	50	0.3	3	★
1.02	VAPDSD0102	6.3	50.3	50	0.3	3	★
1.03	VAPDSD0103	6.3	50.3	50	0.3	3	★
1.04	VAPDSD0104	6.3	50.3	50	0.3	3	★
1.05	VAPDSD0105	6.3	50.3	50	0.3	3	★
1.06	VAPDSD0106	6.3	50.3	50	0.3	3	★
1.07	VAPDSD0107	8.3	55.3	55	0.3	3	★
1.08	VAPDSD0108	8.3	55.3	55	0.3	3	★
1.09	VAPDSD0109	8.3	55.3	55	0.3	3	★
1.10	VAPDSD0110	8.3	55.3	55	0.3	3	★
1.11	VAPDSD0111	8.3	55.3	55	0.3	3	★
1.12	VAPDSD0112	8.3	55.3	55	0.3	3	★
1.13	VAPDSD0113	8.3	55.3	55	0.3	3	★
1.14	VAPDSD0114	8.3	55.3	55	0.3	3	★
1.15	VAPDSD0115	8.4	55.4	55	0.4	3	★

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
1.16	VAPDSD0116	8.4	55.4	55	0.4	3	★
1.17	VAPDSD0117	8.4	55.4	55	0.4	3	★
1.18	VAPDSD0118	8.4	55.4	55	0.4	3	★
1.19	VAPDSD0119	8.4	55.4	55	0.4	3	★
1.20	VAPDSD0120	8.4	55.4	55	0.4	3	★
1.21	VAPDSD0121	8.4	55.4	55	0.4	3	★
1.22	VAPDSD0122	8.4	55.4	55	0.4	3	★
1.23	VAPDSD0123	8.4	55.4	55	0.4	3	★
1.24	VAPDSD0124	8.4	55.4	55	0.4	3	★
1.25	VAPDSD0125	8.4	55.4	55	0.4	3	★
1.26	VAPDSD0126	8.4	55.4	55	0.4	3	★
1.27	VAPDSD0127	8.4	55.4	55	0.4	3	★
1.28	VAPDSD0128	8.4	55.4	55	0.4	3	★
1.29	VAPDSD0129	8.4	55.4	55	0.4	3	★
1.30	VAPDSD0130	9.4	55.4	55	0.4	3	★
1.31	VAPDSD0131	9.4	55.4	55	0.4	3	★
1.32	VAPDSD0132	9.4	55.4	55	0.4	3	★
1.33	VAPDSD0133	9.4	55.4	55	0.4	3	★
1.34	VAPDSD0134	9.4	55.4	55	0.4	3	★
1.35	VAPDSD0135	9.4	55.4	55	0.4	3	★
1.36	VAPDSD0136	9.4	55.4	55	0.4	3	★
1.37	VAPDSD0137	9.4	55.4	55	0.4	3	★
1.38	VAPDSD0138	9.4	55.4	55	0.4	3	★
1.39	VAPDSD0139	9.4	55.4	55	0.4	3	★
1.40	VAPDSD0140	9.4	55.4	55	0.4	3	★
1.41	VAPDSD0141	9.4	55.4	55	0.4	3	★
1.42	VAPDSD0142	9.4	55.4	55	0.4	3	★
1.43	VAPDSD0143	9.4	55.4	55	0.4	3	★
1.44	VAPDSD0144	9.4	55.4	55	0.4	3	★
1.45	VAPDSD0145	9.4	55.4	55	0.4	3	★
1.46	VAPDSD0146	9.4	55.4	55	0.4	3	★
1.47	VAPDSD0147	9.4	55.4	55	0.4	3	★
1.48	VAPDSD0148	9.4	55.4	55	0.4	3	★
1.49	VAPDSD0149	9.5	55.5	55	0.5	3	★
1.50	VAPDSD0150	9.5	55.5	55	0.5	3	●
1.51	VAPDSD0151	11.5	55.5	55	0.5	3	★
1.52	VAPDSD0152	11.5	55.5	55	0.5	3	★
1.53	VAPDSD0153	11.5	55.5	55	0.5	3	★
1.54	VAPDSD0154	11.5	55.5	55	0.5	3	★
1.55	VAPDSD0155	11.5	55.5	55	0.5	3	★
1.56	VAPDSD0156	11.5	55.5	55	0.5	3	★
1.57	VAPDSD0157	11.5	55.5	55	0.5	3	★
1.58	VAPDSD0158	11.5	55.5	55	0.5	3	★
1.59	VAPDSD0159	11.5	55.5	55	0.5	3	★
1.60	VAPDSD0160	11.5	55.5	55	0.5	3	★
1.61	VAPDSD0161	11.5	55.5	55	0.5	3	★
1.62	VAPDSD0162	11.5	55.5	55	0.5	3	★
1.63	VAPDSD0163	11.5	55.5	55	0.5	3	★
1.64	VAPDSD0164	11.5	55.5	55	0.5	3	★
1.65	VAPDSD0165	11.5	55.5	55	0.5	3	★

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
1.66	VAPDSD0166	11.5	55.5	55	0.5	3	★
1.67	VAPDSD0167	11.5	55.5	55	0.5	3	★
1.68	VAPDSD0168	11.5	55.5	55	0.5	3	★
1.69	VAPDSD0169	11.5	55.5	55	0.5	3	★
1.70	VAPDSD0170	11.5	55.5	55	0.5	3	★
1.71	VAPDSD0171	11.5	55.5	55	0.5	3	★
1.72	VAPDSD0172	11.5	55.5	55	0.5	3	★
1.73	VAPDSD0173	11.5	55.5	55	0.5	3	★
1.74	VAPDSD0174	11.5	55.5	55	0.5	3	★
1.75	VAPDSD0175	11.5	55.5	55	0.5	3	★
1.76	VAPDSD0176	11.5	55.5	55	0.5	3	★
1.77	VAPDSD0177	11.5	55.5	55	0.5	3	★
1.78	VAPDSD0178	11.5	55.5	55	0.5	3	★
1.79	VAPDSD0179	11.5	55.5	55	0.5	3	★
1.80	VAPDSD0180	11.5	55.5	55	0.5	3	★
1.81	VAPDSD0181	11.5	55.5	55	0.5	3	★
1.82	VAPDSD0182	11.6	55.6	55	0.6	3	★
1.83	VAPDSD0183	11.6	55.6	55	0.6	3	★
1.84	VAPDSD0184	11.6	55.6	55	0.6	3	★
1.85	VAPDSD0185	11.6	55.6	55	0.6	3	★
1.86	VAPDSD0186	11.6	55.6	55	0.6	3	★
1.87	VAPDSD0187	11.6	55.6	55	0.6	3	★
1.88	VAPDSD0188	11.6	55.6	55	0.6	3	★
1.89	VAPDSD0189	11.6	55.6	55	0.6	3	★
1.90	VAPDSD0190	12.6	55.6	55	0.6	3	★
1.91	VAPDSD0191	12.6	60.6	60	0.6	3	★
1.92	VAPDSD0192	12.6	60.6	60	0.6	3	★
1.93	VAPDSD0193	12.6	60.6	60	0.6	3	★
1.94	VAPDSD0194	12.6	60.6	60	0.6	3	★
1.95	VAPDSD0195	12.6	60.6	60	0.6	3	★
1.96	VAPDSD0196	12.6	60.6	60	0.6	3	★
1.97	VAPDSD0197	12.6	60.6	60	0.6	3	★
1.98	VAPDSD0198	12.6	60.6	60	0.6	3	★
1.99	VAPDSD0199	12.6	60.6	60	0.6	3	★
2.00	VAPDSD0200	12.4	60.4	60	0.4	3	●
2.05	VAPDSD0205	12.4	60.4	60	0.4	3	★
2.10	VAPDSD0210	12.4	60.4	60	0.4	3	★
2.15	VAPDSD0215	12.5	60.5	60	0.5	3	★
2.20	VAPDSD0220	12.5	60.5	60	0.5	3	★
2.25	VAPDSD0225	12.5	60.5	60	0.5	3	★
2.30	VAPDSD0230	13.5	60.5	60	0.5	3	★
2.35	VAPDSD0235	13.5	60.5	60	0.5	3	★
2.40	VAPDSD0240	13.5	60.5	60	0.5	3	★
2.45	VAPDSD0245	13.5	60.5	60	0.5	3	★
2.50	VAPDSD0250	13.5	60.5	60	0.5	3	●
2.55	VAPDSD0255	13.5	60.5	60	0.5	3	★
2.60	VAPDSD0260	15.5	60.5	60	0.5	3	★
2.65	VAPDSD0265	15.6	60.6	60	0.6	3	★
2.70	VAPDSD0270	15.6	60.6	60	0.6	3	★
2.75	VAPDSD0275	15.6	60.6	60	0.6	3	★

PARAMETRI DI TAGLIO ➢ M176
DATI TECNICI ➢ P001

PUNTE VIOLET

VAPDS

Tagliente corto, Alta precisione

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
2.80	VAPDSD0280	15.6	60.6	60	0.6	3	★
2.85	VAPDSD0285	15.6	60.6	60	0.6	3	★
2.90	VAPDSD0290	15.6	60.6	60	0.6	3	★
2.95	VAPDSD0295	15.6	60.6	60	0.6	3	★
3.00	VAPDSD0300	15.6	60.6	60	0.6	3	●
3.05	VAPDSD0305	17.6	70.6	70	0.6	4	★
3.10	VAPDSD0310	17.6	70.6	70	0.6	4	★
3.15	VAPDSD0315	17.7	70.7	70	0.7	4	★
3.20	VAPDSD0320	17.7	70.7	70	0.7	4	★
3.25	VAPDSD0325	17.7	70.7	70	0.7	4	★
3.30	VAPDSD0330	19.7	70.7	70	0.7	4	★
3.35	VAPDSD0335	19.7	70.7	70	0.7	4	★
3.40	VAPDSD0340	19.7	70.7	70	0.7	4	★
3.45	VAPDSD0345	19.7	70.7	70	0.7	4	★
3.50	VAPDSD0350	19.7	70.7	70	0.7	4	●
3.55	VAPDSD0355	19.7	70.7	70	0.7	4	★
3.60	VAPDSD0360	21.8	70.8	70	0.8	4	★
3.65	VAPDSD0365	21.8	70.8	70	0.8	4	★
3.70	VAPDSD0370	21.8	70.8	70	0.8	4	★
3.75	VAPDSD0375	21.8	70.8	70	0.8	4	★
3.80	VAPDSD0380	21.8	70.8	70	0.8	4	★
3.85	VAPDSD0385	21.8	70.8	70	0.8	4	★
3.90	VAPDSD0390	21.8	70.8	70	0.8	4	★
3.95	VAPDSD0395	21.8	70.8	70	0.8	4	★
4.00	VAPDSD0400	21.8	70.8	70	0.8	4	●
4.05	VAPDSD0405	21.8	80.8	80	0.8	6	★
4.10	VAPDSD0410	21.9	80.9	80	0.9	6	★
4.15	VAPDSD0415	21.9	80.9	80	0.9	6	★
4.20	VAPDSD0420	21.9	80.9	80	0.9	6	★
4.25	VAPDSD0425	21.9	80.9	80	0.9	6	★
4.30	VAPDSD0430	23.9	80.9	80	0.9	6	★
4.35	VAPDSD0435	23.9	80.9	80	0.9	6	★
4.40	VAPDSD0440	23.9	80.9	80	0.9	6	★
4.45	VAPDSD0445	23.9	80.9	80	0.9	6	★
4.50	VAPDSD0450	23.9	80.9	80	0.9	6	●
4.55	VAPDSD0455	23.9	80.9	80	0.9	6	★
4.60	VAPDSD0460	26.0	81.0	80	1.0	6	★
4.65	VAPDSD0465	26.0	81.0	80	1.0	6	★
4.70	VAPDSD0470	26.0	81.0	80	1.0	6	★
4.75	VAPDSD0475	26.0	81.0	80	1.0	6	★
4.80	VAPDSD0480	26.0	81.0	80	1.0	6	★
4.85	VAPDSD0485	26.0	81.0	80	1.0	6	★
4.90	VAPDSD0490	26.0	81.0	80	1.0	6	★
4.95	VAPDSD0495	26.0	81.0	80	1.0	6	★
5.00	VAPDSD0500	26.0	81.0	80	1.0	6	●
5.05	VAPDSD0505	26.1	81.1	80	1.1	6	★
5.10	VAPDSD0510	26.1	81.1	80	1.1	6	★
5.15	VAPDSD0515	26.1	81.1	80	1.1	6	★
5.20	VAPDSD0520	26.1	81.1	80	1.1	6	★
5.25	VAPDSD0525	26.1	81.1	80	1.1	6	★

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
5.30	VAPDSD0530	26.1	81.1	80	1.1	6	★
5.35	VAPDSD0535	28.1	81.1	80	1.1	6	★
5.40	VAPDSD0540	28.1	81.1	80	1.1	6	★
5.45	VAPDSD0545	28.1	81.1	80	1.1	6	★
5.50	VAPDSD0550	28.1	81.1	80	1.1	6	●
5.55	VAPDSD0555	28.2	81.2	80	1.2	6	★
5.60	VAPDSD0560	28.2	81.2	80	1.2	6	★
5.65	VAPDSD0565	28.2	81.2	80	1.2	6	★
5.70	VAPDSD0570	28.2	81.2	80	1.2	6	★
5.75	VAPDSD0575	28.2	81.2	80	1.2	6	★
5.80	VAPDSD0580	28.2	81.2	80	1.2	6	★
5.85	VAPDSD0585	28.2	81.2	80	1.2	6	★
5.90	VAPDSD0590	28.2	81.2	80	1.2	6	★
5.95	VAPDSD0595	28.2	81.2	80	1.2	6	★
6.00	VAPDSD0600	28.2	81.2	80	1.2	6	●
6.05	VAPDSD0605	31.3	81.3	80	1.3	8	★
6.10	VAPDSD0610	31.3	81.3	80	1.3	8	★
6.15	VAPDSD0615	31.3	81.3	80	1.3	8	★
6.20	VAPDSD0620	31.3	81.3	80	1.3	8	★
6.25	VAPDSD0625	31.3	81.3	80	1.3	8	★
6.30	VAPDSD0630	31.3	81.3	80	1.3	8	★
6.35	VAPDSD0635	31.3	81.3	80	1.3	8	★
6.40	VAPDSD0640	31.3	81.3	80	1.3	8	★
6.45	VAPDSD0645	31.3	81.3	80	1.3	8	★
6.50	VAPDSD0650	31.4	81.4	80	1.4	8	●
6.55	VAPDSD0655	31.4	81.4	80	1.4	8	★
6.60	VAPDSD0660	31.4	81.4	80	1.4	8	★
6.65	VAPDSD0665	31.4	81.4	80	1.4	8	★
6.70	VAPDSD0670	31.4	81.4	80	1.4	8	★
6.75	VAPDSD0675	33.4	81.4	80	1.4	8	★
6.80	VAPDSD0680	33.4	81.4	80	1.4	8	★
6.85	VAPDSD0685	33.4	81.4	80	1.4	8	★
6.90	VAPDSD0690	33.4	81.4	80	1.4	8	★
6.95	VAPDSD0695	33.4	81.4	80	1.4	8	★
7.00	VAPDSD0700	33.5	81.5	80	1.5	8	●
7.05	VAPDSD0705	33.5	81.5	80	1.5	8	★
7.10	VAPDSD0710	33.5	81.5	80	1.5	8	★
7.15	VAPDSD0715	33.5	81.5	80	1.5	8	★
7.20	VAPDSD0720	33.5	81.5	80	1.5	8	★
7.25	VAPDSD0725	33.5	81.5	80	1.5	8	★
7.30	VAPDSD0730	33.5	81.5	80	1.5	8	★
7.35	VAPDSD0735	33.5	81.5	80	1.5	8	★
7.40	VAPDSD0740	33.5	81.5	80	1.5	8	★
7.45	VAPDSD0745	33.5	81.5	80	1.5	8	★
7.50	VAPDSD0750	33.6	81.6	80	1.6	8	●
7.55	VAPDSD0755	36.6	86.6	85	1.6	8	★
7.60	VAPDSD0760	36.6	86.6	85	1.6	8	★
7.65	VAPDSD0765	36.6	86.6	85	1.6	8	★
7.70	VAPDSD0770	36.6	86.6	85	1.6	8	★
7.75	VAPDSD0775	36.6	86.6	85	1.6	8	★

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
7.80	VAPDSD0780	36.6	86.6	85	1.6	8	★
7.85	VAPDSD0785	36.6	86.6	85	1.6	8	★
7.90	VAPDSD0790	36.6	86.6	85	1.6	8	★
7.95	VAPDSD0795	36.7	86.7	85	1.7	8	★
8.00	VAPDSD0800	36.7	86.7	85	1.7	8	●
8.05	VAPDSD0805	36.7	91.7	90	1.7	10	★
8.10	VAPDSD0810	36.7	91.7	90	1.7	10	★
8.15	VAPDSD0815	36.7	91.7	90	1.7	10	★
8.20	VAPDSD0820	36.7	91.7	90	1.7	10	★
8.25	VAPDSD0825	36.7	91.7	90	1.7	10	★
8.30	VAPDSD0830	36.7	91.7	90	1.7	10	★
8.35	VAPDSD0835	36.7	91.7	90	1.7	10	★
8.40	VAPDSD0840	36.7	91.7	90	1.7	10	★
8.45	VAPDSD0845	36.8	91.8	90	1.8	10	★
8.50	VAPDSD0850	36.8	91.8	90	1.8	10	●
8.55	VAPDSD0855	39.8	94.8	93	1.8	10	★
8.60	VAPDSD0860	39.8	94.8	93	1.8	10	★
8.65	VAPDSD0865	39.8	94.8	93	1.8	10	★
8.70	VAPDSD0870	39.8	94.8	93	1.8	10	★
8.75	VAPDSD0875	39.8	94.8	93	1.8	10	★
8.80	VAPDSD0880	39.8	94.8	93	1.8	10	★
8.85	VAPDSD0885	39.8	94.8	93	1.8	10	★
8.90	VAPDSD0890	39.8	94.8	93	1.8	10	★
8.95	VAPDSD0895	39.9	94.9	93	1.9	10	★
9.00	VAPDSD0900	39.9	94.9	93	1.9	10	●
9.10	VAPDSD0910	39.9	94.9	93	1.9	10	★
9.20	VAPDSD0920	39.9	94.9	93	1.9	10	★
9.30	VAPDSD0930	39.9	94.9	93	1.9	10	★
9.40	VAPDSD0940	40.0	95.0	93	2.0	10	★
9.50	VAPDSD0950	40.0	95.0	93	2.0	10	●
9.60	VAPDSD0960	43.0	98.0	96	2.0	10	★
9.70	VAPDSD0970	43.0	98.0	96	2.0	10	★
9.80	VAPDSD0980	43.0	98.0	96	2.0	10	★
9.90	VAPDSD0990	43.1	98.1	96	2.1	10	★
10.00	VAPDSD1000	43.1	98.1	96	2.1	10	●
10.10	VAPDSD1010	43.1	103.1	101	2.1	12	★
10.20	VAPDSD1020	43.1	103.1	101	2.1	12	★
10.30	VAPDSD1030	43.1	103.1	101	2.1	12	★
10.40	VAPDSD1040	43.2	103.2	101	2.2	12	★
10.50	VAPDSD1050	43.2	103.2	101	2.2	12	●
10.60	VAPDSD1060	43.2	103.2	101	2.2	12	★
10.70	VAPDSD1070	47.2	107.2	105	2.2	12	★
10.80	VAPDSD1080	47.2	107.2	105	2.2	12	★
10.90	VAPDSD1090	47.3	107.3	105	2.3	12	★
11.00	VAPDSD1100	47.3	107.3	105	2.3	12	●
11.10	VAPDSD1110	47.3	107.3	105	2.3	12	★
11.20	VAPDSD1120	47.3	107.3	105	2.3	12	★
11.30	VAPDSD1130	47.3	107.3	105	2.3	12	★
11.40	VAPDSD1140	47.4	107.4	105	2.4	12	★
11.50	VAPDSD1150	47.4	107.4	105	2.4	12	★

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
11.60	VAPDSD1160	47.4	107.4	105	2.4	12	★
11.70	VAPDSD1170	47.4	107.4	105	2.4	12	★
11.80	VAPDSD1180	47.4	107.4	105	2.4	12	★
11.90	VAPDSD1190	51.5	111.5	109	2.5	12	★
12.00	VAPDSD1200	51.5	111.5	109	2.5	12	●
12.10	VAPDSD1210	51.5	111.5	109	2.5	12	★
12.20	VAPDSD1220	51.5	111.5	109	2.5	12	★
12.30	VAPDSD1230	51.6	111.6	109	2.6	12	★
12.40	VAPDSD1240	51.6	111.6	109	2.6	12	★
12.50	VAPDSD1250	51.6	111.6	109	2.6	12	●
12.60	VAPDSD1260	51.6	111.6	109	2.6	12	★
12.70	VAPDSD1270	51.6	111.6	109	2.6	12	★
12.80	VAPDSD1280	51.7	111.7	109	2.7	12	★
12.90	VAPDSD1290	51.7	111.7	109	2.7	12	★
13.00	VAPDSD1300	51.7	111.7	109	2.7	12	★

PARAMETRI DI TAGLIO ➢ M176
DATI TECNICI ➢ P001

HSS

VAPDS

Tagliente corto, Alta precisione

M

FORATURA

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	P		P	K	P	M	P	M
	Profilati d'acciaio		Acciaio al carbonio Ck55 Acciaio legato Ghisa		Acciaio legato per utensili X210Cr12 (Materiali a bassa durezza) Acciaio inox ferritico X10CrAl18, X10CrAl13 Acciaio inox martensitico X20Cr13, X10CrAl13		Acciaio legato per utensili X40CrMoV51 (−40HRC) Precipitazione che indurisce acciaio inox X7CrNiAl177	
Diam. Punta **DC** (mm)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)
0.5	18000	0.02	16000	0.02	9000	0.02	8200	0.02
1.0	12000	0.05	10000	0.05	6300	0.05	5500	0.04
2.0	6400	0.09	5500	0.09	3200	0.09	2900	0.05
3.0	4300	0.13	3700	0.13	2100	0.13	1900	0.06
4.0	3200	0.15	2800	0.15	1600	0.15	1400	0.08
5.0	2600	0.18	2200	0.18	1300	0.18	1100	0.10
6.0	2100	0.19	1800	0.19	1100	0.20	950	0.11
8.0	1600	0.24	1400	0.24	800	0.22	720	0.13
10.0	1300	0.28	1100	0.28	640	0.25	570	0.15
12.0	1100	0.34	930	0.34	530	0.30	480	0.17
13.0	980	0.36	860	0.36	490	0.32	440	0.19

Nota 1) Ridurre il numero di giri e la velocità di avanzamento quando il pezzo da lavorare non è serrato saldamente o quando la macchina ha delle limitazioni.
Nota 2) Usare un portapunta a pinza o un portapunta per fresatura.
Nota 3) Usare liquido da taglio sufficiente.
Nota 4) Quando si eseguono fori superiori a 4 volte il rapporto diametro e profondità, utilizzare la foratura ad intermittenza.
Nota 5) I parametri di taglio sopra specificati sono standard quando si usa come lubrificante emulsione a base di acqua. Ridurre il numero di giri quando non si usa come lubrificante emulsione a base di acqua.

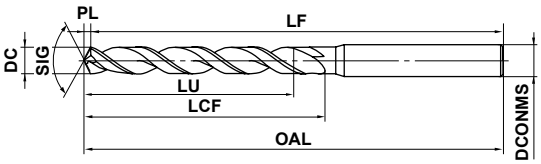
VAPDM

Tagliente medio, Alta precisione

HG HSS | V | 118° DC<2 | 135° DC≥2 | X

P M K N S H





*LU = LCF-2DC (max 5×DC)

0.5≤DC≤3	3<DC≤6	6<DC≤10	10<DC≤18	18<DC≤30	30<DC≤32
0 −0.014	0 −0.018	0 −0.022	0 −0.027	0 −0.033	0 −0.039

● Il nuovo rivestimento VIOLET garantisce elevate prestazioni e lunghe durate.

DC (mm)	Codice di ordinazione	Dimensioni (mm) LCF	OAL	LF	PL	DCONMS	Disponibilità
0.50	VAPDMD0050	6.2	50.2	50	0.15	3	●
0.55	VAPDMD0055	6.2	50.2	50	0.17	3	★
0.60	VAPDMD0060	8.2	50.2	50	0.18	3	★
0.65	VAPDMD0065	8.2	50.2	50	0.20	3	★
0.70	VAPDMD0070	10.2	50.2	50	0.21	3	★
0.75	VAPDMD0075	10.2	50.2	50	0.23	3	★
0.80	VAPDMD0080	10.2	50.2	50	0.24	3	★
0.85	VAPDMD0085	10.3	50.3	50	0.26	3	★
0.90	VAPDMD0090	12.3	50.3	50	0.27	3	★
0.95	VAPDMD0095	12.3	50.3	50	0.29	3	★
1.00	VAPDMD0100	12.3	60.3	60	0.3	3	●
1.05	VAPDMD0105	12.3	60.3	60	0.3	3	★
1.10	VAPDMD0110	16.3	60.3	60	0.3	3	★
1.15	VAPDMD0115	16.4	60.4	60	0.4	3	★
1.20	VAPDMD0120	16.4	60.4	60	0.4	3	★
1.25	VAPDMD0125	16.4	60.4	60	0.4	3	★
1.30	VAPDMD0130	16.4	60.4	60	0.4	3	★
1.35	VAPDMD0135	18.4	60.4	60	0.4	3	★
1.40	VAPDMD0140	18.4	60.4	60	0.4	3	★
1.45	VAPDMD0145	18.4	60.4	60	0.4	3	★
1.50	VAPDMD0150	18.5	60.5	60	0.5	3	●
1.55	VAPDMD0155	20.5	60.5	60	0.5	3	★
1.60	VAPDMD0160	20.5	60.5	60	0.5	3	★
1.65	VAPDMD0165	20.5	60.5	60	0.5	3	★
1.70	VAPDMD0170	20.5	60.5	60	0.5	3	★
1.75	VAPDMD0175	20.5	60.5	60	0.5	3	★
1.80	VAPDMD0180	22.5	60.5	60	0.5	3	★
1.85	VAPDMD0185	22.6	60.6	60	0.6	3	★
1.90	VAPDMD0190	22.6	60.6	60	0.6	3	★
1.95	VAPDMD0195	23.6	60.6	60	0.6	3	★
2.00	VAPDMD0200	23.4	70.4	70	0.4	3	●
2.05	VAPDMD0205	23.4	70.4	70	0.4	3	★
2.10	VAPDMD0210	23.4	70.4	70	0.4	3	★

DC (mm)	Codice di ordinazione	Dimensioni (mm) LCF	OAL	LF	PL	DCONMS	Disponibilità
2.15	VAPDMD0215	23.5	70.5	70	0.5	3	★
2.20	VAPDMD0220	26.5	70.5	70	0.5	3	★
2.25	VAPDMD0225	26.5	70.5	70	0.5	3	★
2.30	VAPDMD0230	26.5	70.5	70	0.5	3	★
2.35	VAPDMD0235	26.5	70.5	70	0.5	3	★
2.40	VAPDMD0240	29.5	70.5	70	0.5	3	★
2.45	VAPDMD0245	29.5	70.5	70	0.5	3	★
2.50	VAPDMD0250	29.5	70.5	70	0.5	3	●
2.55	VAPDMD0255	29.5	70.5	70	0.5	3	★
2.60	VAPDMD0260	29.5	70.5	70	0.5	3	★
2.65	VAPDMD0265	29.6	70.6	70	0.6	3	★
2.70	VAPDMD0270	32.6	70.6	70	0.6	3	★
2.75	VAPDMD0275	32.6	70.6	70	0.6	3	★
2.80	VAPDMD0280	32.6	70.6	70	0.6	3	★
2.85	VAPDMD0285	32.6	70.6	70	0.6	3	★
2.90	VAPDMD0290	32.6	70.6	70	0.6	3	★
2.95	VAPDMD0295	32.6	70.6	70	0.6	3	★
3.00	VAPDMD0300	32.6	70.6	70	0.6	3	●
3.05	VAPDMD0305	35.6	85.6	85	0.6	4	★
3.10	VAPDMD0310	35.6	85.6	85	0.6	4	★
3.15	VAPDMD0315	35.7	85.7	85	0.7	4	★
3.20	VAPDMD0320	35.7	85.7	85	0.7	4	★
3.25	VAPDMD0325	35.7	85.7	85	0.7	4	★
3.30	VAPDMD0330	35.7	85.7	85	0.7	4	★
3.35	VAPDMD0335	35.7	85.7	85	0.7	4	★
3.40	VAPDMD0340	38.7	85.7	85	0.7	4	★
3.45	VAPDMD0345	38.7	85.7	85	0.7	4	★
3.50	VAPDMD0350	38.7	85.7	85	0.7	4	●
3.55	VAPDMD0355	38.7	85.7	85	0.7	4	★
3.60	VAPDMD0360	38.8	85.8	85	0.8	4	★
3.65	VAPDMD0365	38.8	85.8	85	0.8	4	★
3.70	VAPDMD0370	38.8	85.8	85	0.8	4	★
3.75	VAPDMD0375	42.8	85.8	85	0.8	4	★

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

PARAMETRI DI TAGLIO ➤ M180
DATI TECNICI ➤ P001

VAPDM

Tagliente medio, Alta precisione

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
3.80	VAPDMD0380	42.8	85.8	85	0.8	4	★
3.85	VAPDMD0385	42.8	85.8	85	0.8	4	★
3.90	VAPDMD0390	42.8	85.8	85	0.8	4	★
3.95	VAPDMD0395	42.8	85.8	85	0.8	4	★
4.00	VAPDMD0400	42.8	85.8	85	0.8	4	●
4.05	VAPDMD0405	42.8	100.8	100	0.8	6	★
4.10	VAPDMD0410	42.9	100.9	100	0.9	6	★
4.15	VAPDMD0415	42.9	100.9	100	0.9	6	★
4.20	VAPDMD0420	42.9	100.9	100	0.9	6	★
4.25	VAPDMD0425	46.9	100.9	100	0.9	6	★
4.30	VAPDMD0430	46.9	100.9	100	0.9	6	★
4.35	VAPDMD0435	46.9	100.9	100	0.9	6	★
4.40	VAPDMD0440	46.9	100.9	100	0.9	6	★
4.45	VAPDMD0445	46.9	100.9	100	0.9	6	★
4.50	VAPDMD0450	46.9	100.9	100	0.9	6	●
4.55	VAPDMD0455	46.9	100.9	100	0.9	6	★
4.60	VAPDMD0460	47.0	101.0	100	1.0	6	★
4.65	VAPDMD0465	47.0	101.0	100	1.0	6	★
4.70	VAPDMD0470	47.0	101.0	100	1.0	6	★
4.75	VAPDMD0475	47.0	101.0	100	1.0	6	★
4.80	VAPDMD0480	52.0	101.0	100	1.0	6	★
4.85	VAPDMD0485	52.0	101.0	100	1.0	6	★
4.90	VAPDMD0490	52.0	101.0	100	1.0	6	★
4.95	VAPDMD0495	52.0	101.0	100	1.0	6	★
5.00	VAPDMD0500	52.0	101.0	100	1.0	6	●
5.05	VAPDMD0505	52.1	101.1	100	1.1	6	★
5.10	VAPDMD0510	52.1	101.1	100	1.1	6	★
5.15	VAPDMD0515	52.1	101.1	100	1.1	6	★
5.20	VAPDMD0520	52.1	101.1	100	1.1	6	★
5.25	VAPDMD0525	52.1	101.1	100	1.1	6	★
5.30	VAPDMD0530	52.1	101.1	100	1.1	6	★
5.35	VAPDMD0535	57.1	107.1	106	1.1	6	★
5.40	VAPDMD0540	57.1	107.1	106	1.1	6	★
5.45	VAPDMD0545	57.1	107.1	106	1.1	6	★
5.50	VAPDMD0550	57.1	107.1	106	1.1	6	●
5.55	VAPDMD0555	57.2	107.2	106	1.2	6	★
5.60	VAPDMD0560	57.2	107.2	106	1.2	6	★
5.65	VAPDMD0565	57.2	107.2	106	1.2	6	★
5.70	VAPDMD0570	57.2	107.2	106	1.2	6	★
5.75	VAPDMD0575	57.2	107.2	106	1.2	6	★
5.80	VAPDMD0580	57.2	107.2	106	1.2	6	★
5.85	VAPDMD0585	57.2	107.2	106	1.2	6	★
5.90	VAPDMD0590	57.2	107.2	106	1.2	6	★
5.95	VAPDMD0595	57.2	107.2	106	1.2	6	★
6.00	VAPDMD0600	57.2	107.2	106	1.2	6	●
6.05	VAPDMD0605	63.3	113.3	112	1.3	8	★
6.10	VAPDMD0610	63.3	113.3	112	1.3	8	★
6.15	VAPDMD0615	63.3	113.3	112	1.3	8	★
6.20	VAPDMD0620	63.3	113.3	112	1.3	8	★
6.25	VAPDMD0625	63.3	113.3	112	1.3	8	★

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
6.30	VAPDMD0630	63.3	113.3	112	1.3	8	★
6.35	VAPDMD0635	63.3	113.3	112	1.3	8	★
6.40	VAPDMD0640	63.3	113.3	112	1.3	8	★
6.45	VAPDMD0645	63.3	113.3	112	1.3	8	★
6.50	VAPDMD0650	63.4	113.4	112	1.4	8	●
6.55	VAPDMD0655	63.4	113.4	112	1.4	8	★
6.60	VAPDMD0660	63.4	113.4	112	1.4	8	★
6.65	VAPDMD0665	63.4	113.4	112	1.4	8	★
6.70	VAPDMD0670	63.4	113.4	112	1.4	8	★
6.75	VAPDMD0675	68.4	118.4	117	1.4	8	★
6.80	VAPDMD0680	68.4	118.4	117	1.4	8	★
6.85	VAPDMD0685	68.4	118.4	117	1.4	8	★
6.90	VAPDMD0690	68.4	118.4	117	1.4	8	★
6.95	VAPDMD0695	68.4	118.4	117	1.4	8	★
7.00	VAPDMD0700	68.5	118.5	117	1.5	8	●
7.05	VAPDMD0705	68.5	118.5	117	1.5	8	★
7.10	VAPDMD0710	68.5	118.5	117	1.5	8	★
7.15	VAPDMD0715	68.5	118.5	117	1.5	8	★
7.20	VAPDMD0720	68.5	118.5	117	1.5	8	★
7.25	VAPDMD0725	68.5	118.5	117	1.5	8	★
7.30	VAPDMD0730	68.5	118.5	117	1.5	8	★
7.35	VAPDMD0735	68.5	118.5	117	1.5	8	★
7.40	VAPDMD0740	68.5	118.5	117	1.5	8	★
7.45	VAPDMD0745	68.5	118.5	117	1.5	8	★
7.50	VAPDMD0750	68.6	118.6	117	1.6	8	●
7.55	VAPDMD0755	74.6	124.6	123	1.6	8	★
7.60	VAPDMD0760	74.6	124.6	123	1.6	8	★
7.65	VAPDMD0765	74.6	124.6	123	1.6	8	★
7.70	VAPDMD0770	74.6	124.6	123	1.6	8	★
7.75	VAPDMD0775	74.6	124.6	123	1.6	8	★
7.80	VAPDMD0780	74.6	124.6	123	1.6	8	★
7.85	VAPDMD0785	74.6	124.6	123	1.6	8	★
7.90	VAPDMD0790	74.6	124.6	123	1.6	8	★
7.95	VAPDMD0795	74.7	124.7	123	1.7	8	★
8.00	VAPDMD0800	74.7	124.7	123	1.7	8	●
8.05	VAPDMD0805	74.7	129.7	128	1.7	10	★
8.10	VAPDMD0810	74.7	129.7	128	1.7	10	★
8.15	VAPDMD0815	74.7	129.7	128	1.7	10	★
8.20	VAPDMD0820	74.7	129.7	128	1.7	10	★
8.25	VAPDMD0825	74.7	129.7	128	1.7	10	★
8.30	VAPDMD0830	74.7	129.7	128	1.7	10	★
8.35	VAPDMD0835	74.7	129.7	128	1.7	10	★
8.40	VAPDMD0840	74.7	129.7	128	1.7	10	★
8.45	VAPDMD0845	74.8	129.8	128	1.8	10	★
8.50	VAPDMD0850	74.8	129.8	128	1.8	10	●
8.55	VAPDMD0855	80.8	135.8	134	1.8	10	★
8.60	VAPDMD0860	80.8	135.8	134	1.8	10	★
8.65	VAPDMD0865	80.8	135.8	134	1.8	10	★
8.70	VAPDMD0870	80.8	135.8	134	1.8	10	★
8.75	VAPDMD0875	80.8	135.8	134	1.8	10	★

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
8.80	VAPDMD0880	80.8	135.8	134	1.8	10	★
8.85	VAPDMD0885	80.8	135.8	134	1.8	10	★
8.90	VAPDMD0890	80.8	135.8	134	1.8	10	★
8.95	VAPDMD0895	80.9	135.9	134	1.9	10	★
9.00	VAPDMD0900	80.9	135.9	134	1.9	10	●
9.10	VAPDMD0910	80.9	135.9	134	1.9	10	★
9.20	VAPDMD0920	80.9	135.9	134	1.9	10	★
9.30	VAPDMD0930	80.9	135.9	134	1.9	10	★
9.40	VAPDMD0940	81.0	136.0	134	2.0	10	★
9.50	VAPDMD0950	81.0	136.0	134	2.0	10	●
9.60	VAPDMD0960	87.0	142.0	140	2.0	10	★
9.70	VAPDMD0970	87.0	142.0	140	2.0	10	★
9.80	VAPDMD0980	87.0	142.0	140	2.0	10	★
9.90	VAPDMD0990	87.1	142.1	140	2.1	10	★
10.00	VAPDMD1000	87.1	142.1	140	2.1	10	●
10.10	VAPDMD1010	87.1	147.1	145	2.1	12	★
10.20	VAPDMD1020	87.1	147.1	145	2.1	12	★
10.30	VAPDMD1030	87.1	147.1	145	2.1	12	★
10.40	VAPDMD1040	87.2	147.2	145	2.2	12	★
10.50	VAPDMD1050	87.2	147.2	145	2.2	12	●
10.60	VAPDMD1060	87.2	147.2	145	2.2	12	★
10.70	VAPDMD1070	94.2	154.2	152	2.2	12	★
10.80	VAPDMD1080	94.2	154.2	152	2.2	12	★
10.90	VAPDMD1090	94.3	154.3	152	2.3	12	★
11.00	VAPDMD1100	94.3	154.3	152	2.3	12	●
11.10	VAPDMD1110	94.3	154.3	152	2.3	12	★
11.20	VAPDMD1120	94.3	154.3	152	2.3	12	★
11.30	VAPDMD1130	94.3	154.3	152	2.3	12	★
11.40	VAPDMD1140	94.4	154.4	152	2.4	12	★
11.50	VAPDMD1150	94.4	154.4	152	2.4	12	●
11.60	VAPDMD1160	94.4	154.4	152	2.4	12	★
11.70	VAPDMD1170	94.4	154.4	152	2.4	12	★
11.80	VAPDMD1180	94.4	154.4	152	2.4	12	★
11.90	VAPDMD1190	101.5	161.5	159	2.5	12	★
12.00	VAPDMD1200	101.5	161.5	159	2.5	12	●
12.10	VAPDMD1210	101.5	161.5	159	2.5	12	★
12.20	VAPDMD1220	101.5	161.5	159	2.5	12	★
12.30	VAPDMD1230	101.6	161.6	159	2.6	12	★
12.40	VAPDMD1240	101.6	161.6	159	2.6	12	★
12.50	VAPDMD1250	101.6	161.6	159	2.6	12	●
12.60	VAPDMD1260	101.6	161.6	159	2.6	12	★
12.70	VAPDMD1270	101.6	161.6	159	2.6	12	★
12.80	VAPDMD1280	101.7	161.7	159	2.7	12	★
12.90	VAPDMD1290	101.7	161.7	159	2.7	12	★
13.00	VAPDMD1300	101.7	161.7	159	2.7	12	●
13.50	VAPDMD1350	102.8	162.8	160	2.8	16	●
14.00	VAPDMD1400	102.9	162.9	160	2.9	16	●
14.10	VAPDMD1410	107.9	167.9	165	2.9	16	★
14.20	VAPDMD1420	107.9	167.9	165	2.9	16	★
14.50	VAPDMD1450	108.0	168.0	165	3.0	16	●
15.00	VAPDMD1500	108.1	168.1	165	3.1	16	●
15.50	VAPDMD1550	113.2	173.2	170	3.2	16	★
15.60	VAPDMD1560	113.2	173.2	170	3.2	16	★
15.70	VAPDMD1570	113.3	173.3	170	3.3	16	★
16.00	VAPDMD1600	113.3	173.3	170	3.3	16	●
16.50	VAPDMD1650	113.4	178.4	175	3.4	20	●
17.00	VAPDMD1700	113.5	178.5	175	3.5	20	●
17.50	VAPDMD1750	118.6	183.6	180	3.6	20	●
17.60	VAPDMD1760	118.7	183.7	180	3.7	20	★
17.70	VAPDMD1770	118.7	183.7	180	3.7	20	★
18.00	VAPDMD1800	118.7	183.7	180	3.7	20	●
18.50	VAPDMD1850	123.8	188.8	185	3.8	20	★
19.00	VAPDMD1900	123.9	188.9	185	3.9	20	★
19.50	VAPDMD1950	124.0	189.0	185	4.0	20	★
19.60	VAPDMD1960	124.1	189.1	185	4.1	20	★
19.70	VAPDMD1970	124.1	189.1	185	4.1	20	★
20.00	VAPDMD2000	124.1	189.1	185	4.1	20	★
20.50	VAPDMD2050	129.3	204.3	200	4.3	25	●
21.00	VAPDMD2100	129.4	204.4	200	4.4	25	●
21.10	VAPDMD2110	129.4	204.4	200	4.4	25	★
21.20	VAPDMD2120	129.4	204.4	200	4.4	25	★
21.50	VAPDMD2150	129.5	204.5	200	4.5	25	★
22.00	VAPDMD2200	129.6	204.6	200	4.6	25	●
22.50	VAPDMD2250	134.7	209.7	205	4.7	25	★
23.00	VAPDMD2300	134.8	209.8	205	4.8	25	●
23.50	VAPDMD2350	134.9	209.9	205	4.9	25	★
24.00	VAPDMD2400	140.0	215.0	210	5.0	25	★
24.50	VAPDMD2450	140.1	215.1	210	5.1	25	★
25.00	VAPDMD2500	140.2	215.2	210	5.2	25	★
25.50	VAPDMD2550	145.3	225.3	220	5.3	32	●
26.00	VAPDMD2600	145.4	225.4	220	5.4	32	★
26.50	VAPDMD2650	145.5	225.5	220	5.5	32	★
27.00	VAPDMD2700	145.6	225.6	220	5.6	32	★
28.00	VAPDMD2800	145.8	225.8	220	5.8	32	★
29.00	VAPDMD2900	151.0	231.0	225	6.0	32	★
30.00	VAPDMD3000	151.2	231.2	225	6.2	32	★
31.00	VAPDMD3100	156.4	236.4	230	6.4	32	★
32.00	VAPDMD3200	161.6	241.6	235	6.6	32	★

PARAMETRI DI TAGLIO ➢ M180
DATI TECNICI ➢ P001

HSS

VAPDM

Tagliente medio, Alta precisione

M

FORATURA

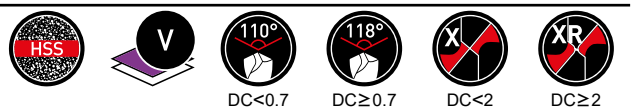
PARAMETRI DI TAGLIO CONSIGLIATI (Profondità di foratura standard : Fino a cinque volte il diametro della punta)

Materiale da lavorare	P		P	K	P	M	P	M
	Profilati d'acciaio		Acciaio al carbonio Ck55 Acciaio legato Ghisa		Acciaio legato per utensili X210Cr12 (Materiali a bassa durezza) Acciaio inox ferritico X10CrAl18, X10CrAl13 Acciaio inox martensitico X20Cr13, X10CrAl13		Acciaio legato per utensili X40CrMoV51 (−40HRC) Precipitazione che indurisce acciaio inox X7CrNiAl177	
Diam. Punta **DC** (mm)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)
0.5	17000	0.01	12800	0.01	8000	0.01	6600	0.01
1.0	11000	0.05	8300	0.05	5000	0.05	4100	0.04
2.0	6400	0.09	4800	0.09	2900	0.06	2400	0.05
3.0	4300	0.13	3200	0.13	1900	0.10	1600	0.06
4.0	3200	0.15	2400	0.15	1400	0.10	1200	0.08
5.0	2600	0.18	1900	0.18	1100	0.13	950	0.10
6.0	2100	0.19	1600	0.20	950	0.15	800	0.11
8.0	1600	0.24	1200	0.22	720	0.18	600	0.13
10.0	1300	0.28	950	0.25	570	0.21	480	0.15
12.0	1100	0.34	800	0.30	480	0.25	400	0.17
14.0	910	0.39	680	0.35	410	0.30	340	0.21
15.0	850	0.40	640	0.36	380	0.31	320	0.22
16.0	800	0.42	600	0.38	360	0.32	300	0.23
18.0	710	0.44	530	0.40	320	0.34	270	0.24
20.0	570	0.44	450	0.40	250	0.34	220	0.24
22.0	520	0.46	410	0.42	230	0.36	200	0.25
24.0	480	0.48	370	0.44	210	0.37	190	0.26
26.0	440	0.51	340	0.46	200	0.39	170	0.28
28.0	410	0.53	320	0.48	180	0.41	160	0.29
30.0	380	0.55	300	0.50	170	0.43	150	0.30
32.0	360	0.55	280	0.50	160	0.43	140	0.30

Nota 1) Ridurre il numero di giri e la velocità di avanzamento quando il pezzo da lavorare non è serrato saldamente o quando la macchina ha delle limitazioni.
Nota 2) Usare un portapunta a pinza o un portapunta per fresatura.
Nota 3) Usare liquido da taglio sufficiente.
Nota 4) Quando si eseguono fori superiori a 4 volte il rapporto diametro e profondità, utilizzare la foratura ad intermittenza.
Nota 5) I parametri di taglio sopra specificati sono standard quando si usa come lubrificante emulsione a base di acqua. Ridurre il numero di giri quando non si usa come lubrificante emulsione a base di acqua.

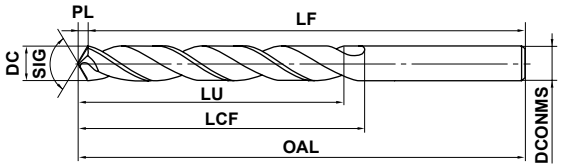
VSD

Stelo cilindrico



P M K N S H





*LU = LCF-2DC

0.5≤DC≤1	1≤DC≤3	3<DC≤6	6<DC≤10	10<DC≤13
0 −0.010	0 −0.014	0 −0.018	0 −0.022	0 −0.027

DC (mm)	Codice di ordinazione	Dimensioni (mm) LCF	OAL	LF	PL	DCONMS	Disponibilità
0.5	VSDD0050	6.2	27.2	27	0.18	0.5	★
0.6	VSDD0060	7.2	30.2	30	0.21	0.6	●
0.7	VSDD0070	9.2	32.2	32	0.21	0.7	●
0.8	VSDD0080	10.2	34.2	34	0.24	0.8	●
0.9	VSDD0090	11.3	36.3	36	0.27	0.9	●
1.0	VSDD0100	12.3	40.3	40	0.3	1.0	●
1.1	VSDD0110	14.3	42.3	42	0.3	1.1	●
1.2	VSDD0120	16.4	42.4	42	0.4	1.2	●
1.3	VSDD0130	16.4	45.4	45	0.4	1.3	●
1.4	VSDD0140	18.4	48.4	48	0.4	1.4	●
1.5	VSDD0150	18.5	48.5	48	0.5	1.5	●
1.6	VSDD0160	20.5	50.5	50	0.5	1.6	●
1.7	VSDD0170	20.5	50.5	50	0.5	1.7	★
1.8	VSDD0180	22.5	52.5	52	0.5	1.8	●
1.9	VSDD0190	22.6	52.6	52	0.6	1.9	●
2.0	VSDD0200	23.6	55.6	55	0.6	2.0	●
2.1	VSDD0210	23.6	55.6	55	0.6	2.1	●
2.2	VSDD0220	26.7	58.7	58	0.7	2.2	●
2.3	VSDD0230	26.7	58.7	58	0.7	2.3	★
2.4	VSDD0240	29.7	61.7	61	0.7	2.4	★
2.5	VSDD0250	29.8	61.8	61	0.8	2.5	●
2.6	VSDD0260	29.8	64.8	64	0.8	2.6	★
2.7	VSDD0270	32.8	64.8	64	0.8	2.7	★
2.8	VSDD0280	32.8	67.8	67	0.8	2.8	●
2.9	VSDD0290	32.9	71.9	71	0.9	2.9	★
3.0	VSDD0300	32.9	71.9	71	0.9	3.0	●
3.1	VSDD0310	35.9	71.9	71	0.9	3.1	●
3.2	VSDD0320	36.0	72.0	71	1.0	3.2	●
3.3	VSDD0330	36.0	74.0	73	1.0	3.3	●
3.4	VSDD0340	39.0	74.0	73	1.0	3.4	●
3.5	VSDD0350	39.1	74.1	73	1.1	3.5	●
3.6	VSDD0360	39.1	77.1	76	1.1	3.6	★
3.7	VSDD0370	39.1	77.1	76	1.1	3.7	★
3.8	VSDD0380	43.1	77.1	76	1.1	3.8	★
3.9	VSDD0390	43.2	80.2	79	1.2	3.9	★
4.0	VSDD0400	43.2	84.2	83	1.2	4.0	●
4.1	VSDD0410	43.2	84.2	83	1.2	4.1	●
4.2	VSDD0420	43.3	84.3	83	1.3	4.2	●
4.3	VSDD0430	47.3	84.3	83	1.3	4.3	●
4.4	VSDD0440	47.3	87.3	86	1.3	4.4	★

DC (mm)	Codice di ordinazione	Dimensioni (mm) LCF	OAL	LF	PL	DCONMS	Disponibilità
4.5	VSDD0450	47.4	87.4	86	1.4	4.5	●
4.6	VSDD0460	47.4	87.4	86	1.4	4.6	★
4.7	VSDD0470	47.4	90.4	89	1.4	4.7	★
4.8	VSDD0480	52.4	90.4	89	1.4	4.8	●
4.9	VSDD0490	52.5	93.5	92	1.5	4.9	★
5.0	VSDD0500	52.5	93.5	92	1.5	5.0	●
5.1	VSDD0510	52.5	93.5	92	1.5	5.1	●
5.2	VSDD0520	52.6	96.6	95	1.6	5.2	●
5.3	VSDD0530	52.6	96.6	95	1.6	5.3	★
5.4	VSDD0540	57.6	96.6	95	1.6	5.4	★
5.5	VSDD0550	57.7	96.7	95	1.7	5.5	●
5.6	VSDD0560	57.7	99.7	98	1.7	5.6	★
5.7	VSDD0570	57.7	99.7	98	1.7	5.7	★
5.8	VSDD0580	57.7	99.7	98	1.7	5.8	★
5.9	VSDD0590	57.8	99.8	98	1.8	5.9	●
6.0	VSDD0600	57.8	103.8	102	1.8	6.0	●
6.1	VSDD0610	63.8	103.8	102	1.8	6.1	★
6.2	VSDD0620	63.9	103.9	102	1.9	6.2	●
6.3	VSDD0630	63.9	103.9	102	1.9	6.3	●
6.4	VSDD0640	63.9	106.9	105	1.9	6.4	★
6.5	VSDD0650	64.0	107.0	105	2.0	6.5	●
6.6	VSDD0660	64.0	107.0	105	2.0	6.6	★
6.7	VSDD0670	64.0	107.0	105	2.0	6.7	★
6.8	VSDD0680	69.0	107.0	105	2.0	6.8	●
6.9	VSDD0690	69.1	107.1	105	2.1	6.9	★
7.0	VSDD0700	69.1	107.1	105	2.1	7.0	●
7.1	VSDD0710	69.1	110.1	108	2.1	7.1	★
7.2	VSDD0720	69.2	110.2	108	2.2	7.2	★
7.3	VSDD0730	69.2	110.2	108	2.2	7.3	●
7.4	VSDD0740	69.2	113.2	111	2.2	7.4	★
7.5	VSDD0750	69.3	113.3	111	2.3	7.5	★
7.6	VSDD0760	75.3	113.3	111	2.3	7.6	★
7.7	VSDD0770	75.3	116.3	114	2.3	7.7	★
7.8	VSDD0780	75.3	116.3	114	2.3	7.8	★
7.9	VSDD0790	75.4	116.4	114	2.4	7.9	●
8.0	VSDD0800	75.4	116.4	114	2.4	8.0	●
8.1	VSDD0810	75.4	119.4	117	2.4	8.1	★
8.2	VSDD0820	75.5	119.5	117	2.5	8.2	★
8.3	VSDD0830	75.5	119.5	117	2.5	8.3	★
8.4	VSDD0840	75.5	123.5	121	2.5	8.4	★

Nota 1) Meno di Ø 5 - Ø 1,9 mm: 5x/confezione, più di Ø 2 mm: 1x/confezione.

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

PARAMETRI DI TAGLIO ➢ M182
DATI TECNICI ➢ P001

PUNTE VIOLET

VSD

Stelo cilindrico

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
8.5	VSDD0850	75.6	123.6	121	2.6	8.5	●
8.6	VSDD0860	81.6	123.6	121	2.6	8.6	●
8.7	VSDD0870	81.6	123.6	121	2.6	8.7	●
8.8	VSDD0880	81.6	126.6	124	2.6	8.8	★
8.9	VSDD0890	81.7	126.7	124	2.7	8.9	★
9.0	VSDD0900	81.7	126.7	124	2.7	9.0	●
9.1	VSDD0910	81.7	126.7	124	2.7	9.1	★
9.2	VSDD0920	81.8	129.8	127	2.8	9.2	★
9.3	VSDD0930	81.8	129.8	127	2.8	9.3	★
9.4	VSDD0940	81.8	129.8	127	2.8	9.4	★
9.5	VSDD0950	81.9	129.9	127	2.9	9.5	●
9.6	VSDD0960	87.9	132.9	130	2.9	9.6	★
9.7	VSDD0970	87.9	132.9	130	2.9	9.7	★
9.8	VSDD0980	87.9	132.9	130	2.9	9.8	★
9.9	VSDD0990	88.0	133.0	130	3.0	9.9	★
10.0	VSDD1000	88.0	133.0	130	3.0	10.0	●
10.1	VSDD1010	88.0	136.0	133	3.0	10.1	★
10.2	VSDD1020	88.1	136.1	133	3.1	10.2	●
10.3	VSDD1030	88.1	136.1	133	3.1	10.3	●
10.4	VSDD1040	88.1	136.1	133	3.1	10.4	★
10.5	VSDD1050	88.2	140.2	137	3.2	10.5	●
10.6	VSDD1060	88.2	140.2	137	3.2	10.6	★
10.7	VSDD1070	95.2	140.2	137	3.2	10.7	★

DC (mm)	Codice di ordinazione	Dimensioni (mm)					Disponibilità
		LCF	OAL	LF	PL	DCONMS	
10.8	VSDD1080	95.2	143.2	140	3.2	10.8	★
10.9	VSDD1090	95.3	143.3	140	3.3	10.9	★
11.0	VSDD1100	95.3	143.3	140	3.3	11.0	●
11.1	VSDD1110	95.3	143.3	140	3.3	11.1	★
11.2	VSDD1120	95.4	146.4	143	3.4	11.2	★
11.3	VSDD1130	95.4	146.4	143	3.4	11.3	★
11.4	VSDD1140	95.4	146.4	143	3.4	11.4	★
11.5	VSDD1150	95.5	146.5	143	3.5	11.5	★
11.6	VSDD1160	95.5	149.5	146	3.5	11.6	★
11.7	VSDD1170	95.5	149.5	146	3.5	11.7	★
11.8	VSDD1180	95.5	149.5	146	3.5	11.8	★
11.9	VSDD1190	102.6	149.6	146	3.6	11.9	★
12.0	VSDD1200	102.6	152.6	149	3.6	12.0	●
12.1	VSDD1210	102.6	152.6	149	3.6	12.1	★
12.2	VSDD1220	102.7	152.7	149	3.7	12.2	★
12.3	VSDD1230	102.7	152.7	149	3.7	12.3	★
12.4	VSDD1240	102.7	155.7	152	3.7	12.4	★
12.5	VSDD1250	102.8	155.8	152	3.8	12.5	★
12.6	VSDD1260	102.8	155.8	152	3.8	12.6	★
12.7	VSDD1270	102.8	155.8	152	3.8	12.7	★
12.8	VSDD1280	102.8	155.8	152	3.8	12.8	★
12.9	VSDD1290	102.9	155.9	152	3.9	12.9	★
13.0	VSDD1300	102.9	155.9	152	3.9	13.0	●

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare	P		P		M		P	M
	Profilati d'acciaio		Acciaio al carbonio Ck55		Acciaio inossidabile X20Cr13		Acciaio inossidabile X5CrNi1810 Acciaio per utensili X210Cr12 (Materiali a bassa durezza) Acciaio trattato termicamente X40CrMoV51 (−40HRC)	
Velocità di taglio	40m/min		30m/min		20m/min		10−14m/min	
Diam. Punta DC (mm)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)	Girl (min^{-1})	Avanzamento (mm/giro)
0.5	15000	0.01	11250	0.01	7500	0.01	5620	0.01
1.0	10000	0.02	7500	0.02	5000	0.02	3750	0.02
1.5	8200	0.03	6150	0.03	4100	0.03	2800	0.03
2.0	6370	0.05	4780	0.05	3180	0.05	2200	0.04
3.0	4250	0.10	3180	0.10	2120	0.07	1400	0.06
4.0	3180	0.13	2390	0.13	1590	0.09	1100	0.08
5.0	2550	0.15	1910	0.15	1270	0.11	860	0.10
6.0	2120	0.18	1590	0.18	1060	0.13	720	0.11
7.0	1820	0.20	1360	0.20	910	0.14	610	0.12
8.0	1590	0.22	1190	0.21	800	0.15	540	0.13
9.0	1420	0.24	1060	0.22	710	0.17	480	0.14
10.0	1270	0.26	960	0.23	640	0.18	430	0.15
11.0	1160	0.28	870	0.24	580	0.19	390	0.16
12.0	1060	0.30	800	0.25	530	0.20	360	0.17
13.0	980	0.30	730	0.26	490	0.20	330	0.17

Nota 1) Ridurre il numero di giri quando il pezzo da lavorare non è serrato saldamente.
Nota 2) I parametri di taglio sopra specificati sono standard quando si usa come lubrificante emulsione a base di acqua.
Ridurre il numero di giri quando non si usa come lubrificante emulsione a base di acqua.

● : Inventario mantenuto. ★ : Inventario mantenuto in Giappone.

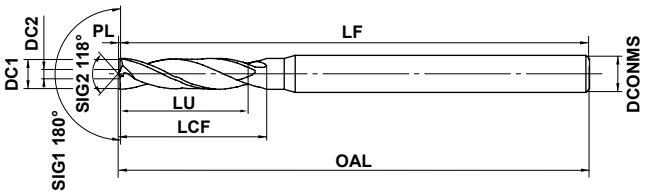
VAPDSCB

Lunghezza di taglio corta, elevata precisione, per lamature

P M K N S H



DC≤3	3<DC≤6	6<DC≤10	10<DC≤18	18<DC≤30	30<DC≤32
0 −0.014	0 −0.018	0 −0.022	0 −0.027	0 −0.033	0 −0.039



*LU = LCF-2DC (max 3×DC)

●L'esclusiva geometria garantisce una lamatura efficiente.
Eccellente rottura del truciolo e superfici svasate piane.

DC1 (mm)	Codice di ordinazione	Dimensioni (mm) DC2	LCF	OAL	LF	PL	DCONMS	Disponibilità
2.0	VAPDSCBD0200	0.7	12	60.2	60	0.2	3	★
2.1	VAPDSCBD0210	0.7	12	60.2	60	0.2	3	★
2.2	VAPDSCBD0220	0.7	12	60.2	60	0.2	3	★
2.3	VAPDSCBD0230	0.7	13	60.2	60	0.2	3	★
2.4	VAPDSCBD0240	0.7	13	60.2	60	0.2	3	★
2.5	VAPDSCBD0250	0.7	13	60.2	60	0.2	3	★
2.6	VAPDSCBD0260	0.8	15	60.2	60	0.2	3	★
2.7	VAPDSCBD0270	0.8	15	60.2	60	0.2	3	★
2.8	VAPDSCBD0280	0.8	15	60.2	60	0.2	3	★
2.9	VAPDSCBD0290	0.8	15	60.2	60	0.2	3	★
3.0	VAPDSCBD0300	0.8	15	60.2	60	0.2	3	★
3.1	VAPDSCBD0310	0.8	17	70.2	70	0.2	4	★
3.2	VAPDSCBD0320	0.8	17	70.2	70	0.2	4	★
3.3	VAPDSCBD0330	0.8	19	70.2	70	0.2	4	★
3.4	VAPDSCBD0340	0.8	19	70.2	70	0.2	4	★
3.5	VAPDSCBD0350	0.8	19	70.2	70	0.2	4	★
3.6	VAPDSCBD0360	1.0	21	70.2	70	0.2	4	★
3.7	VAPDSCBD0370	1.0	21	70.2	70	0.2	4	★
3.8	VAPDSCBD0380	1.0	21	70.2	70	0.2	4	★
3.9	VAPDSCBD0390	1.0	21	70.2	70	0.2	4	★
4.0	VAPDSCBD0400	1.0	21	70.3	70	0.3	4	★
4.1	VAPDSCBD0410	1.0	21	80.3	80	0.3	6	★
4.2	VAPDSCBD0420	1.0	21	80.3	80	0.3	6	★
4.3	VAPDSCBD0430	1.0	23	80.3	80	0.3	6	★
4.4	VAPDSCBD0440	1.0	23	80.3	80	0.3	6	★
4.5	VAPDSCBD0450	1.0	23	80.3	80	0.3	6	★
4.6	VAPDSCBD0460	1.4	25	80.3	80	0.3	6	★
4.7	VAPDSCBD0470	1.4	25	80.3	80	0.3	6	★
4.8	VAPDSCBD0480	1.4	25	80.3	80	0.3	6	★
4.9	VAPDSCBD0490	1.4	25	80.3	80	0.3	6	★
5.0	VAPDSCBD0500	1.4	25	80.4	80	0.4	6	★
5.1	VAPDSCBD0510	1.4	25	80.4	80	0.4	6	★
5.2	VAPDSCBD0520	1.4	25	80.4	80	0.4	6	★
5.3	VAPDSCBD0530	1.4	25	80.4	80	0.4	6	★
5.4	VAPDSCBD0540	1.4	27	80.4	80	0.4	6	★
5.5	VAPDSCBD0550	1.4	27	80.4	80	0.4	6	★
5.6	VAPDSCBD0560	1.4	27	80.4	80	0.4	6	★
5.7	VAPDSCBD0570	1.4	27	80.4	80	0.4	6	★
5.8	VAPDSCBD0580	1.4	27	80.4	80	0.4	6	★
5.9	VAPDSCBD0590	1.4	27	80.4	80	0.4	6	★

DC1 (mm)	Codice di ordinazione	Dimensioni (mm) DC2	LCF	OAL	LF	PL	DCONMS	Disponibilità
6.0	VAPDSCBD0600	1.4	27	80.4	80	0.4	6	★
6.1	VAPDSCBD0610	1.4	30	80.4	80	0.4	8	★
6.2	VAPDSCBD0620	1.4	30	80.4	80	0.4	8	★
6.3	VAPDSCBD0630	1.4	30	80.4	80	0.4	8	★
6.4	VAPDSCBD0640	1.4	30	80.4	80	0.4	8	★
6.5	VAPDSCBD0650	1.4	30	80.4	80	0.4	8	★
6.6	VAPDSCBD0660	1.8	30	80.4	80	0.4	8	★
6.7	VAPDSCBD0670	1.8	30	80.4	80	0.4	8	★
6.8	VAPDSCBD0680	1.8	32	80.4	80	0.4	8	★
6.9	VAPDSCBD0690	1.8	32	80.4	80	0.4	8	★
7.0	VAPDSCBD0700	1.8	32	80.6	80	0.6	8	★
7.1	VAPDSCBD0710	1.8	32	80.6	80	0.6	8	★
7.2	VAPDSCBD0720	1.8	32	80.6	80	0.6	8	★
7.3	VAPDSCBD0730	1.8	32	80.6	80	0.6	8	★
7.4	VAPDSCBD0740	1.8	32	80.6	80	0.6	8	★
7.5	VAPDSCBD0750	1.8	32	80.6	80	0.6	8	★
7.6	VAPDSCBD0760	2.0	35	85.6	85	0.6	8	★
7.7	VAPDSCBD0770	2.0	35	85.6	85	0.6	8	★
7.8	VAPDSCBD0780	2.0	35	85.6	85	0.6	8	★
7.9	VAPDSCBD0790	2.0	35	85.6	85	0.6	8	★
8.0	VAPDSCBD0800	2.0	35	85.6	85	0.6	8	★
8.1	VAPDSCBD0810	2.0	35	90.6	90	0.6	10	★
8.5	VAPDSCBD0850	2.0	35	90.6	90	0.6	10	★
8.6	VAPDSCBD0860	2.8	38	93.6	93	0.6	10	★
8.8	VAPDSCBD0880	2.8	38	93.6	93	0.6	10	★
9.0	VAPDSCBD0900	2.8	38	93.8	93	0.8	10	★
9.1	VAPDSCBD0910	2.8	38	93.8	93	0.8	10	★
9.5	VAPDSCBD0950	2.8	38	93.8	93	0.8	10	★
9.6	VAPDSCBD0960	3.2	41	96.8	96	0.8	10	★
9.8	VAPDSCBD0980	3.2	41	96.8	96	0.8	10	★
10.0	VAPDSCBD1000	3.2	41	96.9	96	0.9	10	★
10.1	VAPDSCBD1010	3.2	41	101.9	101	0.9	12	★
10.3	VAPDSCBD1030	3.2	41	101.9	101	0.9	12	★
10.5	VAPDSCBD1050	3.2	41	101.9	101	0.9	12	★
10.8	VAPDSCBD1080	3.7	45	105.9	105	0.9	12	★
11.0	VAPDSCBD1100	3.7	45	105.9	105	0.9	12	★
11.1	VAPDSCBD1110	3.7	45	105.9	105	0.9	12	★
11.5	VAPDSCBD1150	3.7	45	105.9	105	0.9	12	★
11.8	VAPDSCBD1180	3.7	45	105.9	105	0.9	12	★
12.0	VAPDSCBD1200	3.7	49	109.9	109	0.9	12	★

PARAMETRI DI TAGLIO ➢ M185
DATI TECNICI ➢ P001

VAPDSCB

Lunghezza di taglio corta, elevata precisione, per lamature

DC1 (mm)	Codice di ordinazione	Dimensioni (mm)						Disponibilità
		DC2	LCF	OAL	LF	PL	DCONMS	
12.5	VAPDSCBD1250	3.7	49	109.9	109	0.9	12	★
13.0	VAPDSCBD1300	4.2	49	110.1	109	1.1	12	★
13.5	VAPDSCBD1350	4.2	51	122.1	121	1.1	16	★
13.8	VAPDSCBD1380	4.2	51	122.1	121	1.1	16	★
14.0	VAPDSCBD1400	4.2	51	122.1	121	1.1	16	★
14.1	VAPDSCBD1410	5.5	58	124.1	123	1.1	16	★
14.2	VAPDSCBD1420	5.5	58	124.1	123	1.1	16	★
14.5	VAPDSCBD1450	5.5	58	124.1	123	1.1	16	★
14.8	VAPDSCBD1480	5.5	58	124.1	123	1.1	16	★
15.0	VAPDSCBD1500	5.5	58	124.3	123	1.3	16	★
15.5	VAPDSCBD1550	5.5	60	126.3	125	1.3	16	★
15.7	VAPDSCBD1570	5.5	60	126.3	125	1.3	16	★
15.8	VAPDSCBD1580	5.5	60	126.3	125	1.3	16	★
16.0	VAPDSCBD1600	5.5	60	126.3	125	1.3	16	★
17.0	VAPDSCBD1700	5.5	62	133.3	132	1.3	20	★
17.5	VAPDSCBD1750	5.5	63	134.6	133	1.6	20	★
17.6	VAPDSCBD1760	6.5	63	134.6	133	1.6	20	★
17.7	VAPDSCBD1770	6.5	63	134.6	133	1.6	20	★
17.8	VAPDSCBD1780	6.5	63	134.6	133	1.6	20	★
18.0	VAPDSCBD1800	6.5	63	134.6	133	1.6	20	★
18.1	VAPDSCBD1810	6.5	65	136.6	135	1.6	20	★
19.0	VAPDSCBD1900	6.5	65	136.6	135	1.6	20	★
19.8	VAPDSCBD1980	7.5	67	138.6	137	1.6	20	★
20.0	VAPDSCBD2000	7.5	67	138.8	137	1.8	20	★
20.1	VAPDSCBD2010	7.5	67	138.8	137	1.8	20	★
21.0	VAPDSCBD2100	7.5	75	166.8	165	1.8	25	★
22.0	VAPDSCBD2200	7.5	75	166.8	165	1.8	25	★
23.0	VAPDSCBD2300	7.5	80	171.8	170	1.8	25	★
24.0	VAPDSCBD2400	8.5	80	172.2	170	2.2	25	★
25.0	VAPDSCBD2500	8.5	85	182.2	180	2.2	25	★
26.0	VAPDSCBD2600	9.0	85	182.2	180	2.2	32	★
27.0	VAPDSCBD2700	9.0	95	192.2	190	2.2	32	★
28.0	VAPDSCBD2800	10.0	95	192.6	190	2.6	32	★
29.0	VAPDSCBD2900	10.0	100	197.6	195	2.6	32	★
30.0	VAPDSCBD3000	11.0	100	197.6	195	2.6	32	★
31.0	VAPDSCBD3100	11.0	105	202.6	200	2.6	32	★
32.0	VAPDSCBD3200	13.0	105	202.6	200	2.6	32	★

★ : Inventario mantenuto in Giappone.

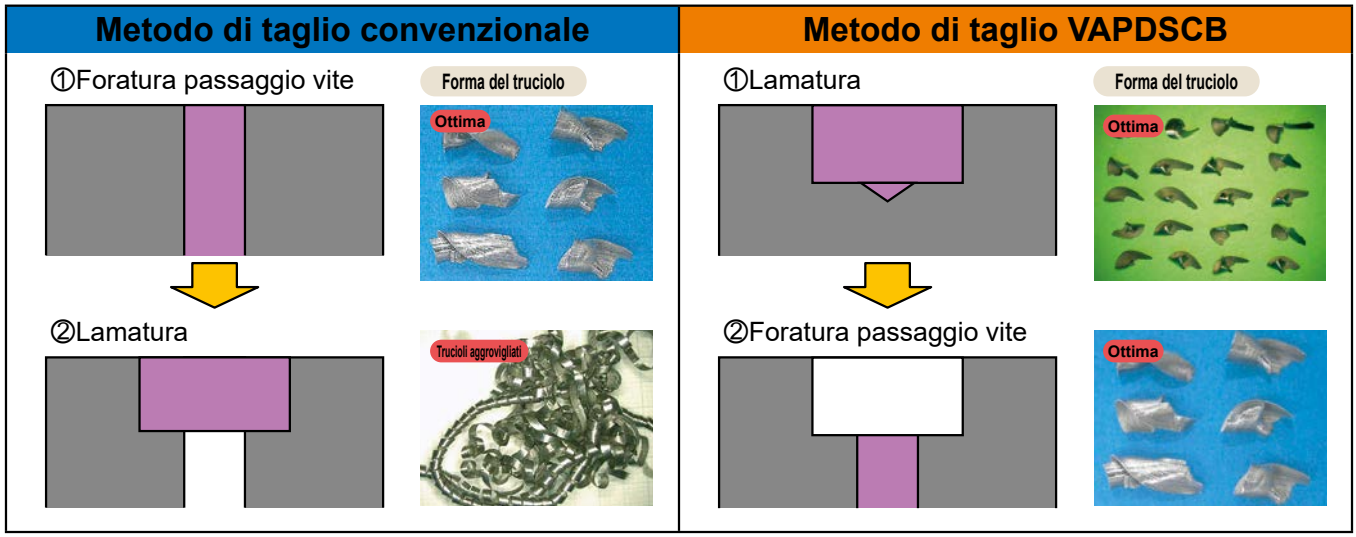
PARAMETRI DI TAGLIO CONSIGLIATI

Materiale lavorato	P / N		P / K		P / M		P / M	
	Acciaio da costruzione, Lega di alluminio		Acciaio al carbonio Ck55, Acciaio legato, Ghisa sferoidale		Acciaio legato per utensili X210Cr12, (Materiali di bassa durezza) Acciaio inossidabile ferritico, X10CrAl18, X10CrAl13 Acciaio inossidabile martensitico, X20Cr13, X10CrAl13		Acciaio legato per utensili, X40CrMoV51 (−40HRC) Acciaio inossidabile temprato, X7CrNiAl177	
Diam. Punta **DC** (mm)	Numero di giri (min^{-1})	Velocità di avanzamento (mm/giro)	Numero di giri (min^{-1})	Velocità di avanzamento (mm/giro)	Numero di giri (min^{-1})	Velocità di avanzamento (mm/giro)	Numero di giri (min^{-1})	Velocità di avanzamento (mm/giro)
2.0	5600	0.07	4800	0.07	3200	0.07	2800	0.04
3.0	3700	0.10	3200	0.10	2100	0.10	1900	0.05
4.0	2800	0.12	2400	0.12	1600	0.12	1400	0.06
5.0	2200	0.14	1900	0.14	1300	0.14	1150	0.07
6.0	1850	0.15	1600	0.15	1050	0.15	950	0.08
8.0	1400	0.20	1200	0.20	800	0.20	720	0.10
10.0	1100	0.23	960	0.23	640	0.21	570	0.11
12.0	950	0.26	800	0.26	530	0.24	470	0.12
14.0	800	0.27	680	0.27	450	0.25	410	0.13
16.0	700	0.28	500	0.28	360	0.26	300	0.14
18.0	620	0.29	450	0.29	320	0.27	260	0.15
20.0	560	0.30	400	0.30	290	0.27	240	0.15
22.0	510	0.32	360	0.32	260	0.29	220	0.16
24.0	460	0.33	330	0.33	240	0.30	200	0.16
26.0	430	0.35	310	0.35	220	0.31	180	0.17
28.0	400	0.36	290	0.36	210	0.33	170	0.18
30.0	370	0.37	270	0.37	190	0.34	160	0.18
32.0	350	0.38	250	0.38	180	0.35	150	0.19

Nota 1) I parametri di taglio riportati si riferiscono alla foratura con profondità DCx3 senza foro pilota.
Per la foratura di fori con profondità del foro inferiore a DCx1 è possibile aumentare il numero di giri del 20%.
Nota 2) Si consiglia la foratura senza foro pilota.
L'utilizzo del foro pilota può causare la mancata rottura del truciolo. Utilizzare un avanzamento a intermittenza quando è necessaria la rottura del truciolo.
Nota 3) Per la lamatura di superfici inclinate, si consiglia l'utilizzo di una fresa frontale in metallo duro.
Nota 4) Per la lavorazione di acciaio inossidabile austenitico (X5CrNi1810), ridurre il numero di giri del 30%-60% e la velocità di avanzamento del 40 - 60%.
Nota 5) Utilizzare un portapunta a pinza.
Nota 6) Ridurre il numero di giri e la velocità di avanzamento in base alle condizioni di foratura se il bloccaggio del pezzo o della macchina non è sufficientemente rigido.
Nota 7) Utilizzare una quantità idonea di fluido da taglio.
Nota 8) I parametri di taglio sopra specificati costituiscono linee guida quando si utilizza come lubrificante un fluido da taglio solubile in acqua.
Ridurre il numero di giri quando non si usa come lubrificante un fluido da taglio solubile in acqua.

METODO DI TAGLIO CONSIGLIATO

■ VAPDSCB è in grado di raggiungere una lavorazione altamente efficiente senza intasamento dei trucioli.



Nota 1) Quando si esegue la lamatura con VAPDSCB, la foratura del passaggio vite può generare la produzione continua di trucioli che si arrotolano attorno all'utensile.

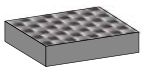
FORATURA (METALLO DURO)

MCC

P | M | K | N | S | H | **CFRP**

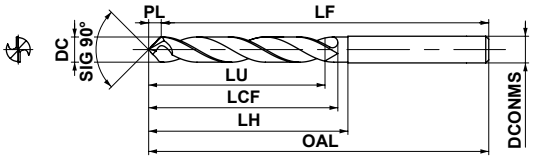

Macchina CNC

×


CFRP

Refrigerante esterno





3<DC≤6	6<DC≤10	10<DC≤18
0 −0.018	0 −0.022	0 −0.027
DCONMS=6	**6<DCONMS≤10**	**10<DCONMS≤12**
0 −0.008	0 −0.009	0 −0.011

Diam. Foro		Diam. Punta		Profondità Foro	Codice di ordinazione	Grado	Dimensioni (mm)						
* AWG	Pollice	DC (mm)	pollice	(L/D)		DD2105	LU	LCF	LH	OAL	LF	PL	DCONMS
—	3/16	4.76	.1875	3	**MCC0476X03S060**	★	16.7	40	40	80	77.6	2.4	6
—	1/4	6.38	.251	3	**MCC0638X03S080**	★	22.3	50	50	90	86.8	3.2	8
—	5/16	7.96	.3125	3	**MCC0796X03S080**	★	27.9	50	50	90	86.0	4.0	8
—	3/8	9.55	.375	3	**MCC0955X03S100**	★	33.5	50	50	100	95.2	4.8	10
—	7/16	11.14	.4375	3	**MCC1114X03S120**	★	39.0	60	60	110	104.4	5.6	12

***AWG** : American Wire Gage

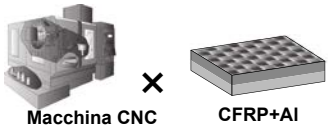
PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		X			
		CFRP			
Diam. Punta DC (mm)	Diam. Punta DC (pollice)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.−Max.) (mm/giro)	Avanzamento della tavola (mm/min)
4.76	**.1875**	100	6700	0.08 (0.05−0.12)	540
6.38	**.251**	100	5000	0.1 (0.05−0.12)	500
7.96	**.3125**	100	4000	0.1 (0.05−0.12)	400
9.55	**.375**	100	3400	0.1 (0.05−0.12)	340
11.14	**.4375**	100	2900	0.1 (0.05−0.12)	290

★ : Inventario mantenuto in Giappone. □ : Non a magazzino, prodotti solo su ordinazione.

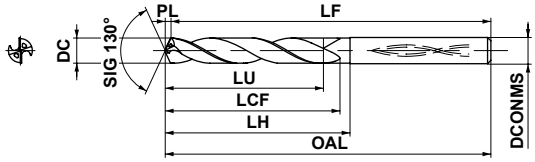
MCA

P | M | K | **N** | S | H | **CFRP+Al**



Refrigerante interno





	6<DC≤10 0 −0.022
h6	6<DCONMS≤10 0 −0.009

Diam. Foro		Diam. Punta		Profondità Foro	Codice di ordinazione	Grado	Dimensioni (mm)						
*AWG	pollice	DC (mm)	Pollice	(L/D)		DD2110	LU	LCF	LH	OAL	LF	PL	DCONMS
—	1/4	6.38	.251	5	**MCA0638X05S070**	□	33.4	51	51	91	89.5	1.5	7
—	3/8	9.55	.375	5	**MCA0955X05S100**	□	50.0	77	77	118	115.8	2.2	10

∗**AWG** : American Wire Gage

PARAMETRI DI TAGLIO CONSIGLIATI

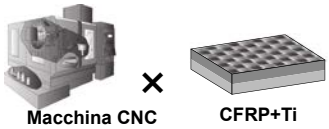
Materiale da lavorare		X				N			
		CFRP				Lega di alluminio (Si<5%) ASTM AlMg1SiCu, ASTM AlZn5.5MgCu etc			
Diam. Punta DC (mm)	Diam. Punta DC (pollice)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.—Max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.—Max.) (mm/giro)	Avanzamento della tavola (mm/min)
6.38	**.251**	100	5000	0.15 (0.10—0.20)	750	100	5000	0.03 (0.02—0.04)	150
9.55	**.375**	100	3400	0.15 (0.10—0.20)	680	100	3400	0.03 (0.02—0.04)	100

Nota 1) Si raccomanda di dividere le condizioni di taglio in funzione dei materiali lavorati.

FORATURA (METALLO DURO)

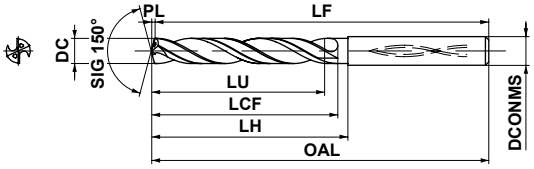
MCT

P | M | K | N | **S** | H | **CFRP+Ti**



Refrigerante interno





	6<DC≤10 0 −0.022
h6	6<DCONMS≤10 0 −0.009

Diam. Foro		Diam. Punta		Profondità Foro	Codice di ordinazione	Grado	Dimensioni (mm)						
*AWG	Pollice	DC (mm)	pollice	(L/D)		TF15	LU	LCF	LH	OAL	LF	PL	DCONMS
—	1/4	6.38	.251	5	**MCT0638X05S070**	□	32.8	47	47	96	95.1	0.9	7
—	3/8	9.55	.375	5	**MCT0955X05S100**	□	49.1	71	71	122	120.7	1.3	10

∗**AWG** : American Wire Gage

PARAMETRI DI TAGLIO CONSIGLIATI

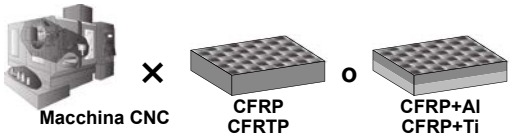
Materiale da lavorare		X				S				
		CFRP				Lega di titanio Ti-6Al-4V ecc.				
Diam. Punta DC (mm)	Diam. Punta DC (pollice)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.—Max.) (mm/giro)	Avanzamento della tavola (mm/min)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.—Max.) (mm/giro)	Avanzamento della tavola (mm/min)	Intervallo di avanzamento (mm)
6.38	**.251**	100	5000	0.15 (0.10—0.20)	750	15	750	0.02 (0.01—0.03)	15	1
9.55	**.375**	100	3400	0.15 (0.10—0.20)	680	15	500	0.02 (0.01—0.03)	10	1

Nota 1) Queste sono le condizioni di taglio con utilizzo di aria interna o nebulizzazione.
Nota 2) Si raccomanda di dividere le condizioni di taglio in funzione dei materiali lavorati.

□ : **Non a magazzino, prodotti solo su ordinazione.**

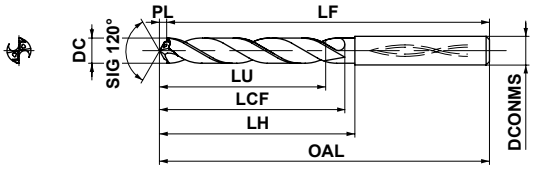
MCW

P | M | K | **N** | **S** | H | CFRP CFRTP | CFRP+Al CFRP+Ti



Refrigerante interno





	6<DC≤10 0 −0.022
h6	6<DCONMS≤10 0 −0.009

Diam. Foro		Diam. Punta		Profondità Foro	Codice di ordinazione	Grado		Dimensioni (mm)						
*AWG	Pollice	DC (mm)	pollice	(L/D)		HTi10	DD2110	LU	LCF	LH	OAL	LF	PL	DCONMS
—	1/4	6.38	.251	5	**MCW0638X05S070**	□	□	33.7	52	52	92	90.2	1.8	7
—	3/8	9.55	.375	5	**MCW0955X05S100**	□	□	50.6	73	73	119	116.2	2.8	10

∗**AWG** : American Wire Gage

PARAMETRI DI TAGLIO CONSIGLIATI

Materiale da lavorare		X			
		CFRP			
Diam. Punta DC (mm)	Diam. Punta DC (pollice)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.—Max.) (mm/giro)	Avanzamento della tavola (mm/min)
6.38	**.251**	100	5000	0.15 (0.10—0.20)	750
9.55	**.375**	100	3400	0.15 (0.10—0.20)	680

Materiale da lavorare		N					S				
		Lega di alluminio (Si<5%) AlMg1SiCu, AlZn5.5MgCu ecc.					Lega di titanio Ti-6Al-4V ecc.				
Diam. Punta DC (mm)	Diam. Punta DC (pollice)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.—Max.) (mm/giro)	Avanzamento della tavola (mm/min)	Intervallo di avanzamento (mm)	Velocità di taglio (m/min)	Giri (min^{-1})	Avanzamento (Min.—Max.) (mm/giro)	Avanzamento della tavola (mm/min)	Intervallo di avanzamento (mm)
6.38	**.251**	100	5000	0.15 (0.10—0.20)	750	3	15	750	0.02 (0.01—0.03)	15	1
9.55	**.375**	100	3400	0.15 (0.10—0.20)	500	3	15	500	0.02 (0.01—0.03)	10	1

Nota 1) Queste sono le condizioni di taglio con utilizzo di aria interna o nebulizzazione.
Nota 2) Si raccomanda di dividere le condizioni di taglio in funzione dei materiali lavorati.

FORATURA (METALLO DURO)

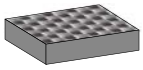
MCCH

P | M | K | **N** | S | H | **CFRP**



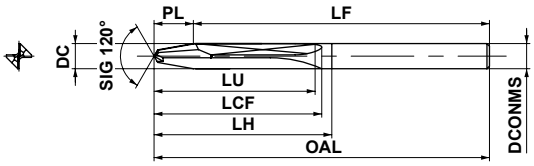
Utensile a mano

×



CFRP





1≤DC≤3	3<DC≤6	6<DC≤10
0 −0.014	0 −0.018	0 −0.022
DCONMS=3	**3<DCONMS≤6**	**6<DCONMS≤10**
0 −0.006	0 −0.008	0 −0.009

Diam. Foro		Diam. Punta		Profondità Foro	Codice di ordinazione	Grado	Dimensioni (mm)						
***AWG**	pollice	**DC** (mm)	pollice	(L/D)		**DT2030**	**LU**	**LCF**	**LH**	**OAL**	**LF**	**PL**	**DCONMS**
#40	—	2.5	.0985	15	**MCCH0250X15S030**	★	42.1	48	50	100	95.4	4.6	3
#30	—	3.26	.1285	10	**MCCH0326X10S040**	★	38.6	48	50	100	94.0	6.0	4
#20	—	4.1	.1615	8	**MCCH0410X08S050**	★	40.3	48	50	100	92.5	7.5	5
#11	—	4.86	.1915	5	**MCCH0486X05S050**	★	33.2	48	50	100	91.1	8.9	5
—	1/4	6.38	.251	3	**MCCH0638X03S070**	★	30.8	48	50	100	88.3	11.7	7
—	3/8	9.55	.375	2	**MCCH0955X02S100**	★	36.6	48	50	100	82.5	17.5	10

***AWG** : American Wire Gage

Nota 1) Per le condizioni di taglio riferirsi al manuale dell'utensile a mano.

★ : Inventario mantenuto in Giappone.

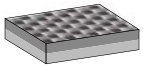
MCAH

P | M | K | **N** | S | H | **CFRP+Al**



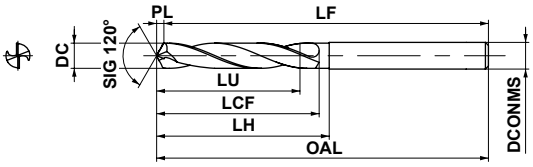
Utensile a mano

×



CFRP+Al





1≤DC≤3	3<DC≤6	6<DC≤10
0 −0.014	0 −0.018	0 −0.022
DCONMS=3	**3<DCONMS≤6**	**6<DCONMS≤10**
0 −0.006	0 −0.008	0 −0.009

Diam. Foro		Diam. Punta		Profondità Foro	Codice di ordinazione	Grado	Dimensioni (mm)						
***AWG**	pollice	**DC** (mm)	pollice	(L/D)		DT2030	**LU**	**LCF**	**LH**	**OAL**	**LF**	**PL**	**DCONMS**
#40	—	2.5	.0985	15	**MCAH0250X15S030**	★	38.2	50	50	100	99.3	0.7	3
#30	—	3.26	.1285	15	**MCAH0326X15S040**	★	49.8	50	50	100	99.1	0.9	4
#20	—	4.1	.1615	10	**MCAH0410X10S050**	★	42.2	50	50	100	98.8	1.2	5
#11	—	4.86	.1915	8	**MCAH0486X08S050**	★	40.3	50	50	100	98.6	1.4	5
—	1/4	6.38	.251	5	**MCAH0638X05S070**	★	33.7	50	50	100	98.2	1.8	7
—	3/8	9.55	.375	3	**MCAH0955X03S100**	★	31.5	50	50	100	97.2	2.8	10

***AWG** : American Wire Gage

Nota 1) Per le condizioni di taglio riferirsi al manuale dell'utensile a mano.

ALESATORE A TESTINA INTERCAMBIABILE

RX1S

Testina facile da sostituire con una elevata precisione

Design della testina studiato per un ottimale flusso di refrigerante



Geometria elicoidale per applicazioni con foro passante

Fori sull'elica per il passaggio del refrigerante.



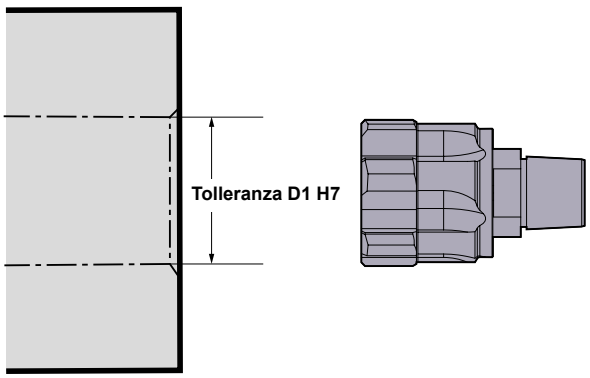
Geometria a taglienti dritti per applicazioni con foro cieco

Foro centrale per il passaggio del refrigerante.



Facile da usare con tolleranze per finiture di fori ad alta precisione

Tolleranza foro di precisione H7

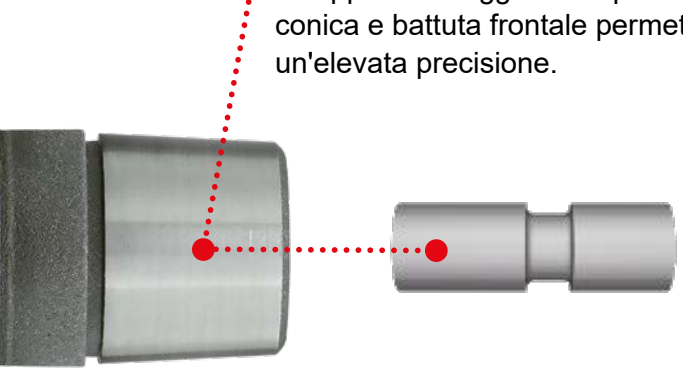






Fissaggio ad elevata precisione

Il doppio bloccaggio su superficie conica e battuta frontale permette un'elevata precisione.





Testina in metallo duro

Le elevate velocità di taglio incrementano le prestazioni.

Tagliente lappato e lucidato

L'eccellente finitura delle superfici permette una buona evacuazione dei trucioli.

Disponibili portautensili corti e lunghi

X03

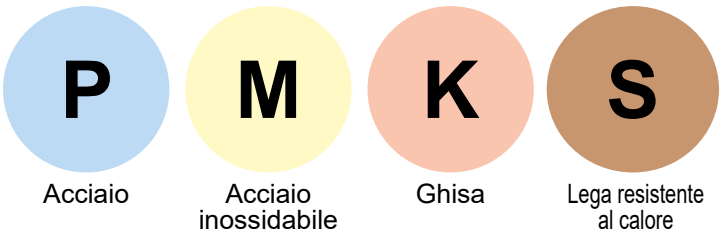


X05



Per un'ampia gamma di materiali

La combinazione tra un substrato in metallo duro altamente versatile ed un rivestimento PVD permette di ottenere un'alesatura ad alta precisione mantenendo, al tempo stesso, una lunga durata dell'utensile.



Acciaio | Acciaio inossidabile | Ghisa | Lega resistente al calore

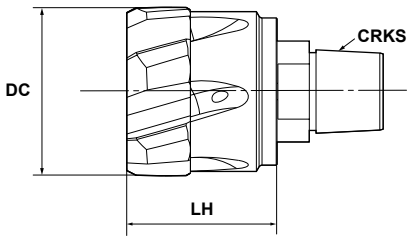
Soluzioni customizzate

Diverse testine da alesatura customizzate e progettate in modo ottimale, con varie classi di tolleranza, possono essere prodotte con incrementi di 1 µm, nei diametri (DC) da 14 mm a 29 mm.

RX1S NEW

P M K N S H





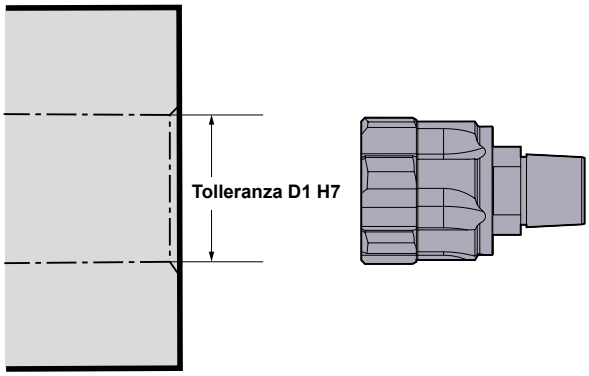
Tipo1

Testina a taglienti elicoidali per fori passanti

Con fori nell'elica per il passaggio del refrigerante

DC (mm)	Codice di ordinazione	Disponibilità RP1010	Numero di denti	LH (mm)	CRKS	Tipo	Portautensile
14	**RX1S14000H7DHTP1**	●	6	17.9	TP1	1	RX1SX○○S16ATP1
15	**RX1S15000H7DHTP1**	●	6	17.9	TP1	1	RX1SX○○S16ATP1
16	**RX1S16000H7DHTP2**	●	6	17.9	TP2	1	RX1SX○○S20ATP2
17	**RX1S17000H7DHTP2**	●	6	17.9	TP2	1	RX1SX○○S20ATP2
18	**RX1S18000H7DHTP3**	●	6	17.9	TP3	1	RX1SX○○S20ATP3
19	**RX1S19000H7DHTP3**	●	6	17.9	TP3	1	RX1SX○○S20ATP3
20	**RX1S20000H7DHTP4**	●	6	17.9	TP4	1	RX1SX○○S20ATP4
21	**RX1S21000H7DHTP4**	●	6	17.9	TP4	1	RX1SX○○S20ATP4
22	**RX1S22000H7DHTP4**	●	6	17.9	TP4	1	RX1SX○○S20ATP4
23	**RX1S23000H7DHTP5**	●	6	18.9	TP5	1	RX1SX○○S20ATP5
24	**RX1S24000H7DHTP5**	●	6	18.9	TP5	1	RX1SX○○S20ATP5
25	**RX1S25000H7DHTP5**	●	8	18.9	TP5	1	RX1SX○○S20ATP5
26	**RX1S26000H7DHTP5**	●	8	18.9	TP5	1	RX1SX○○S20ATP5
27	**RX1S27000H7DHTP5**	●	8	18.9	TP5	1	RX1SX○○S20ATP5
28	**RX1S28000H7DHTP6**	●	8	18.9	TP6	1	RX1SX○○S25ATP6
29	**RX1S29000H7DHTP6**	●	8	18.9	TP6	1	RX1SX○○S25ATP6

Nota 1) Le dimensioni della vite CRKS dello stelo e della testina devono essere le stesse.

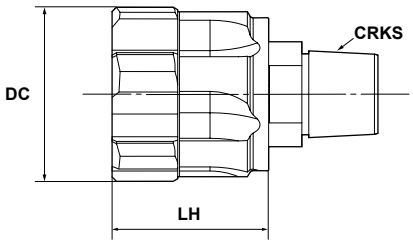


● : Inventario mantenuto.

ALESATORE A TESTINA INTERCAMBIABILE

RX1S NEW





Tipo1

Testina a taglienti diritti per fori ciechi

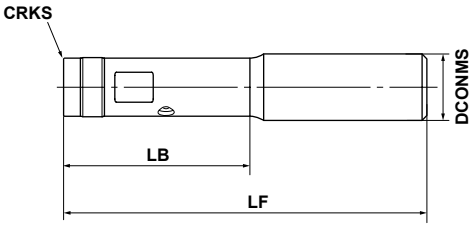
Con foro centrale per il passaggio del refrigerante

DC (mm)	Codice di ordinazione	Disponibilità RP1010	Numero di denti	LH (mm)	CRKS	Tipo	Portautensile
14	**RX1S14000H7DSTP1**	●	6	17.9	TP1	1	RX1SX○○S16ATP1
15	**RX1S15000H7DSTP1**	●	6	17.9	TP1	1	RX1SX○○S16ATP1
16	**RX1S16000H7DSTP2**	●	6	17.9	TP2	1	RX1SX○○S20ATP2
17	**RX1S17000H7DSTP2**	●	6	17.9	TP2	1	RX1SX○○S20ATP2
18	**RX1S18000H7DSTP3**	●	6	17.9	TP3	1	RX1SX○○S20ATP3
19	**RX1S19000H7DSTP3**	●	6	17.9	TP3	1	RX1SX○○S20ATP3
20	**RX1S20000H7DSTP4**	●	6	17.9	TP4	1	RX1SX○○S20ATP4
21	**RX1S21000H7DSTP4**	●	6	17.9	TP4	1	RX1SX○○S20ATP4
22	**RX1S22000H7DSTP4**	●	6	17.9	TP4	1	RX1SX○○S20ATP4
23	**RX1S23000H7DSTP5**	●	6	18.9	TP5	1	RX1SX○○S20ATP5
24	**RX1S24000H7DSTP5**	●	6	18.9	TP5	1	RX1SX○○S20ATP5
25	**RX1S25000H7DSTP5**	●	8	18.9	TP5	1	RX1SX○○S20ATP5
26	**RX1S26000H7DSTP5**	●	8	18.9	TP5	1	RX1SX○○S20ATP5
27	**RX1S27000H7DSTP5**	●	8	18.9	TP5	1	RX1SX○○S20ATP5
28	**RX1S28000H7DSTP6**	●	8	18.9	TP6	1	RX1SX○○S25ATP6
29	**RX1S29000H7DSTP6**	●	8	18.9	TP6	1	RX1SX○○S25ATP6

Nota 1) Le dimensioni della vite CRKS dello stelo e della testina devono essere le stesse.

● : **Inventario mantenuto.**





h6	12<DCONMS<16	20<DCONMS<25
	0 – 0.011	0 – 0.013

■ PORTAUTENSILE

CRKS	Codice di ordinazione	Disponibilità	Dimensioni (mm)				
			LB	LF	DCONMS	Min DC Testina	Max DC Testina
TP1	**RX1SX03S16ATP1**	●	35.0	91.0	16	14	15
TP1	**RX1SX05S16ATP1**	●	67.0	123.0	16	14	15
TP2	**RX1SX03S20ATP2**	●	39.0	99.0	20	16	17
TP2	**RX1SX05S20ATP2**	●	75.0	135.0	20	16	17
TP3	**RX1SX03S20ATP3**	●	45.0	106.0	20	18	19
TP3	**RX1SX05S20ATP3**	●	85.0	146.0	20	18	19
TP4	**RX1SX03S20ATP4**	●	51.5	113.5	20	20	22
TP4	**RX1SX05S20ATP4**	●	96.5	158.5	20	20	22
TP5	**RX1SX03S20ATP5**	●	65.5	130.5	20	23	27
TP5	**RX1SX05S20ATP5**	●	120.5	185.5	20	23	27
TP6	**RX1SX03S25ATP6**	●	80.5	152.5	25	28	29
TP6	**RX1SX05S25ATP6**	●	145.5	217.5	25	28	29

Nota 1) Le dimensioni della vite CRKS dello stelo e della testina devono essere le stesse.
Nota 2) Con il portautensili non è inclusa una chiave.

RICAMBI

Tipo di portainserto			
	Vite di fissaggio	Dimensione vite	Momento torcente (N•m)
RX1SX○○S16ATP1	RX1ST8TP1	T8	2
RX1SX○○S20ATP2	RX1ST10TP23	T10	3
RX1SX○○S20ATP3	RX1ST10TP23	T10	3
RX1SX○○S20ATP4	RX1ST15TP45	T15	5
RX1SX○○S20ATP5	RX1ST15TP45	T15	5
RX1SX○○S25ATP6	RX1ST25TP6	T25	9

Nota 1) La confezione delle viti di ricambio contiene 1 pezzi.

RICAMBI VENDUTI SEPARATAMENTE

Tipo di portainserto	
	Chiave
RX1SX○○S16ATP1	TKY08W
RX1SX○○S20ATP2	TKY10F
RX1SX○○S20ATP3	TKY10F
RX1SX○○S20ATP4	TKY15T
RX1SX○○S20ATP5	TKY15T
RX1SX○○S25ATP6	TKY25T

ALESATORE A TESTINA INTERCAMBIABILE

RX1S NEW

PARAMETRI DI TAGLIO CONSIGLIATI

	Materiale da lavorare	Proprietà	Velocità di taglio (m/min)	Avanzamento (mm/dente)	
				DC<20	DC≥20
P	Acciaio dolce (S235JR (1.0038), C10 (1.1121) ecc.)	Durezza ≤180HB	120 (90—155)	0.10—0.20	0.10—0.22
	Acciaio al carbonio, Acciaio legato (C45 (1.1191), 42CrMo4 (1.7225) ecc.)	Durezza 180—280HB	120 (90—155)	0.10—0.20	0.10—0.22
	Acciaio al carbonio, Acciaio legato (34CrNiMo6 (1.6582) ecc.)	Durezza 280—350HB	100 (75—130)	0.10—0.20	0.10—0.22
M	Acciaio inossidabile austenitico (X5CrNi18-10 (1.4301), X5CrNiMo17-12-2 (1.4401) ecc.)	Durezza ≤200HB	20 (15—30)	0.08—0.15	0.08—0.18
	Acciaio inox ferritico (X6Cr17 (1.4016) ecc.)	—	40 (30—60)	0.08—0.18	0.08—0.20
	Acciaio duplex (X2CrNiMoN22-5-3 (1.4462)J1 ecc.)	—	20 (15—30)	0.08—0.15	0.08—0.18
	Acciai inossidabili temprati (X5CrNiCuNb16-4 (1.4542) ecc.)	—	40 (30—60)	0.08—0.18	0.08—0.20
K	Ghisa grigia (GJL-300 (Ghisa grigia) ecc.)	Resistenza alla trazione ≤350MPa	110 (80—130)	0.10—0.20	0.10—0.22
	Ghisa sferoidale (GJL-450 (Ghisa grigia) ecc.)	Resistenza alla trazione ≤450MPa	90 (65—110)	0.10—0.20	0.10—0.22
S	Lega resistente al calore (Inconel®718 ecc.)	—	30 (20—40)	0.08—0.18	0.10—0.20
	Lega di titanio (Ti-6Al-4V ecc.)	—	30 (20—40)	0.08—0.18	0.10—0.20

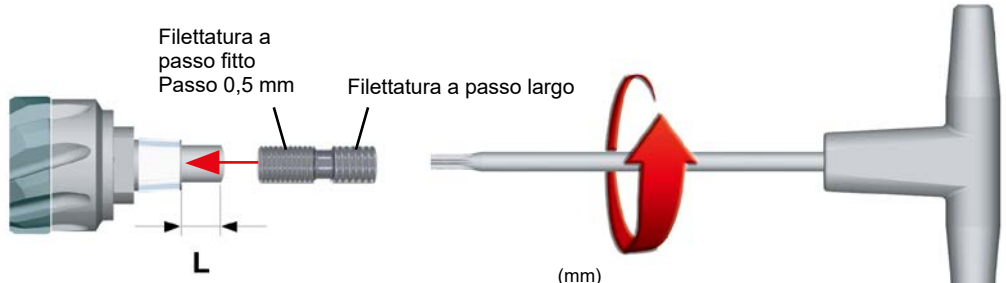
TOLLERANZA COSTRUTTIVA DIAMETRALE

(mm)

DC	14≤DC<15	15≤DC<20	20≤DC≤29
Tolleranza costruttiva	0.15—0.30	0.15—0.35	0.20—0.40

MONTAGGIO DELLA TESTINA

1 Usare una chiave Torx per regolare la sporgenza come indicato dalle dimensioni L riportate nell'immagine sottostante. I taglienti sono affilati. È pertanto necessario indossare guanti protettivi.



(mm)

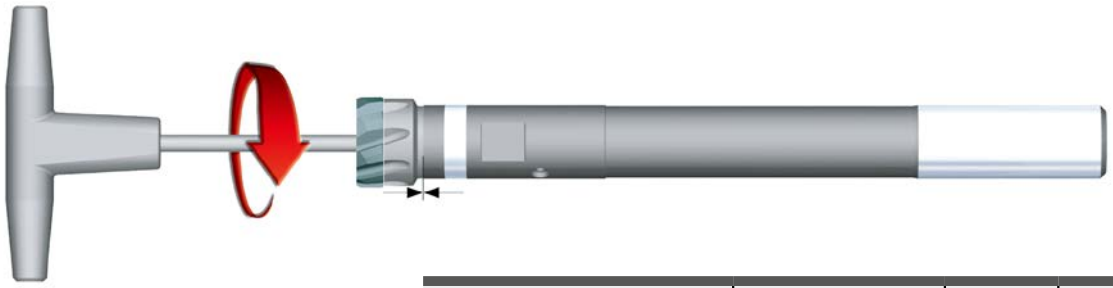
Testine **DC**	L
14 – 27	5.5 – 6.0
28, 29	6.0 – 6.5

La chiave Torx non è un accessorio.

2 Inserire la testina nello stelo.
A questo punto si vedrà una leggera apertura tra il lato frontale dello stelo e la testina.



3 Usare una chiave Torx per stringere finché stelo e testina non saranno serrati saldamente.



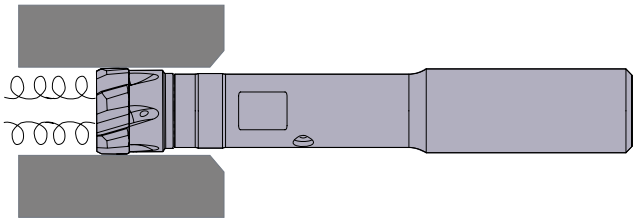
Tipo di portainserto	Vite di fissaggio	Dimensioni vite	Momento torcente (N•m)
RX1SX○○S16ATP1	RX1ST8TP1	T8	2
RX1SX○○S20ATP2, TP3	RX1ST10TP23	T10	3
RX1SX○○S20ATP4, TP5	RX1ST15TP45	T15	5
RX1SX○○S25ATP6	RX1ST25TP6	T25	9

Nota 1) La confezione delle viti di ricambio contiene 1 pezzi.

ALESATORE A TESTINA INTERCAMBIABILE

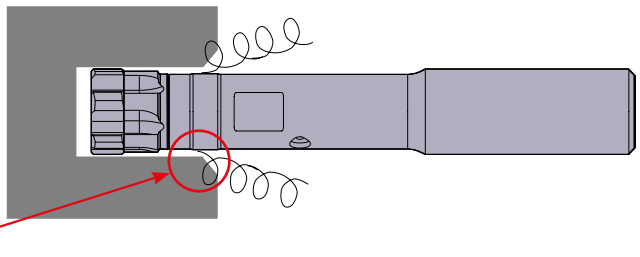
GUIDA OPERATIVA

● Si prega di usare una testina con taglienti elicoidali per i fori passanti e una testina con taglienti diritti per i fori ciechi.
La testina con taglienti elicoidali è progettata per espellere i trucioli in avanti, mentre quella a taglienti diritti è progettata per espellere i trucioli verso la parte posteriore.





Taglienti elicoidali

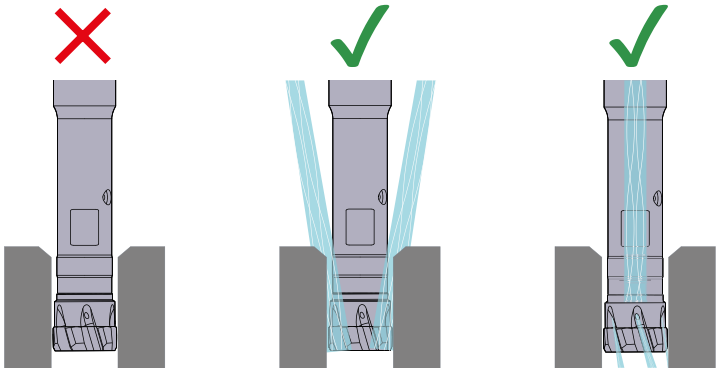




Taglienti diritti

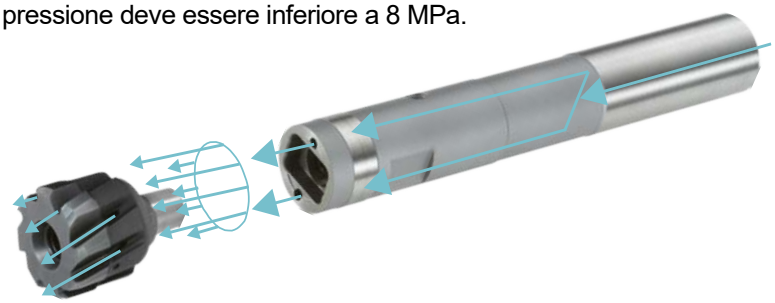
● Si raccomanda di preparare l'imbocco del foro guida prima dell'alesatura.
● Quando si esegue l'alesatura, in genere si raccomanda di riportare l'utensile alla stessa velocità di avanzamento.
● Quando si installa l'utensile in macchina la precisione di run-out del tagliente deve essere pari o inferiore a 5 µm.
● Per un corretto montaggio dello stelo consigliamo mandrini di tipo idraulico.

● Il primo consiglio per risultati migliori è quello di preferire il refrigerante interno al refrigerante esterno.
Il taglio a secco è sconsigliato. Con fori ciechi e refrigerante esterno si sconsiglia un'alesatura a profondità maggiori rispetto a DC x 3.

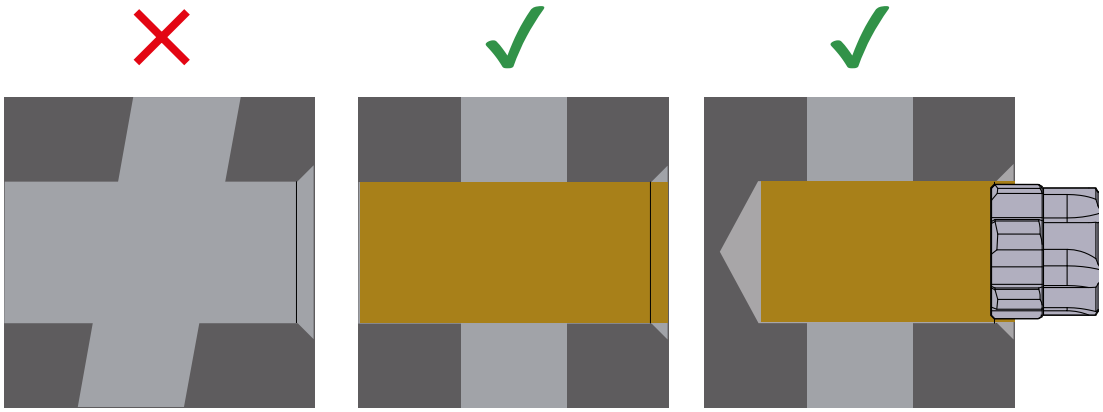


A secco | Esterno | Interno

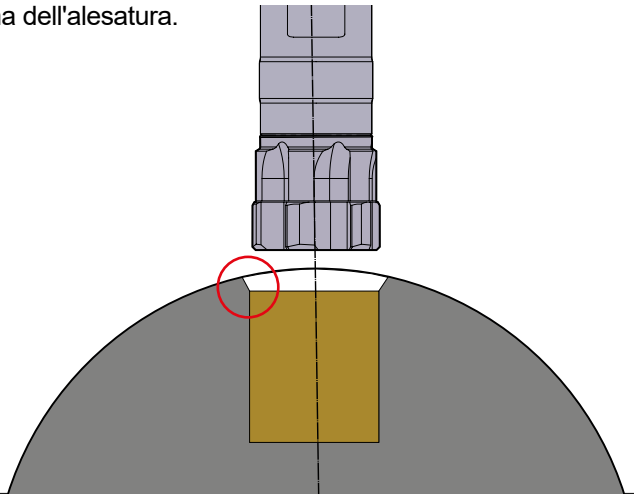
● Per l'alesatura con refrigerante interno la pressione deve essere inferiore a 8 MPa.



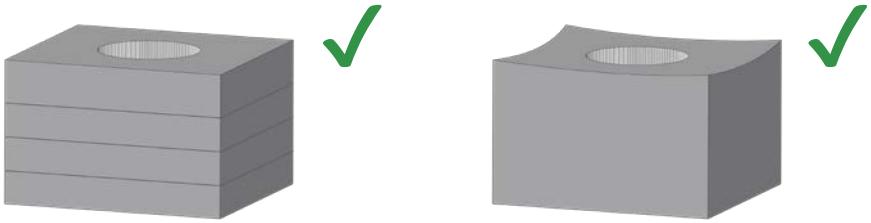
● È sconsigliata l'alesaturadi fori incrociati.



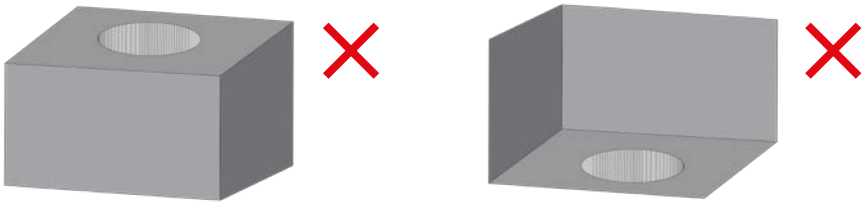
● Si consiglia di smussare le superfici cilindriche prima dell'alesatura.



● L'alesatura di piastre a pacchetto e su superficie concava è possibile.



● L'alesatura è sconsigliata se l'ingresso/uscita del foro guida si trova su una superficie inclinata.



Note

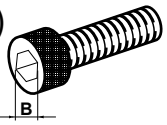
RICAMBI

IDENTIFICAZIONE N002
RICAMBI
- VITE DI FISSAGGIO N003
- BULLONE DI FISSAGGIO N008
- VITE/DADO DI REGOLAZIONE N009
- SPESSORE N010
- PERNO DI COMPENSAZIONE E LEVA DI BLOCCAGGIO N013
- PERNO DI ARRESTO N014
- STAFFA DI FISSAGGIO N014
- PIASTRINA ROMPITRUCIOLO N016
- LUBRIFICANTE ANTIGRIPPAGGIO N017



IDENTIFICAZIONE

■ IDENTIFICAZIONE DELLA VITE DI BLOCCAGGIO (Filetto metrico destro a passo grosso)



H **SC** **060** **05**

Lunghezza

Esempio	
Simbolo	L
05	5
10	10
20	20
30	30

Diametro della vite

Esempio	
Simbolo	d
050	M5
060	M6

● **Dimensioni foro esagonale**

Diametro	Passo	Dimensioni B			
		HBH	HFC	HSC	HS◌
M2	0.4	—	—	1.5	0.9
M2.5	0.45	—	—	2	1.3
M3	0.5	2	2	2.5	1.5
M4	0.7	2.5	2.5	3	2
M5	0.8	3	3	4	2.5
M6	1	4	4	5	3
M8	1.25	5	5	6	4
M10	1.5	6	6	8	5

Testa filettata

BH / BHA	CHUUBURASHI CO. / UNBRAKO CO.	Testa a sfera
FC	CHUUBURASHI CO.	Testa piana
SC	Standard JIS	Testa ad esagono incassato
PM	Standard JIS	Testa troncoconica
FM	Standard JIS	Testa piana
SD	Standard JIS	Vite di fermo (Punta tagliata)
SP	Standard JIS	Vite di fermo (Punta conica)
SR	Standard JIS	Vite di fermo (Punta a dente)
SS	Standard JIS	Vite di fermo (Punta piana)

	Simbolo	Geometria
A sede esagonale	H	
A taglio dritto	S	
A croce	C	

■ IDENTIFICAZIONE DELLA CHIAVE DI BLOCCAGGIO

HKY **15** **R**

Simbolo	Chiave
HKY	Chiave esagonale
TKY	Chiave a stella
RKY	Chiave R
TIP	Chiave Torx plus

Chiave esagonale

Simbolo	B
15	1.5
20	2
25	2.5
30	3
35	3.5
40	4
50	5
60	6

Chiave a stella

Simbolo	B	Dimensione
06	1.7	T6
08	2.3	T8
10	2.7	T10
15	3.3	T15
20	3.8	T20
25	4.4	T25
27	5.0	T27
30	5.5	T30

Chiave Torx plus

Simbolo	B	Dimensione
06	1.8	6IP
07	2.1	7IP
08	2.4	8IP
10	2.8	10IP
15	3.4	15IP

R	Chiave a L standard	
L	Chiave a L lunga	
T	Chiave T	
F FS	Chiave a bandiera	
W	Chiave a bandiera	
D DS	Cacciavite	
S	Chiave	

IMX **10** - **WR**

Simbolo	Chiave
iMX	Chiave di serraggio per serie iMX

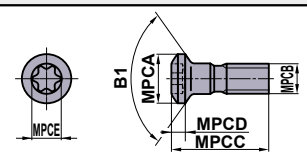
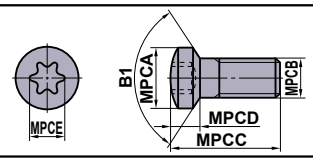
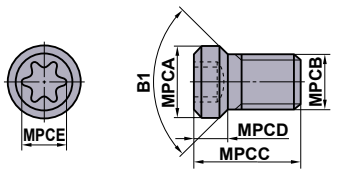
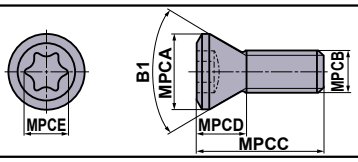
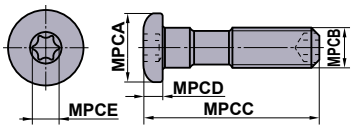
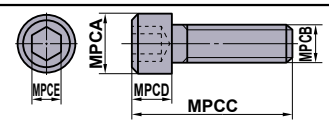
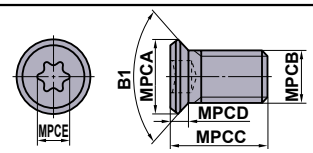
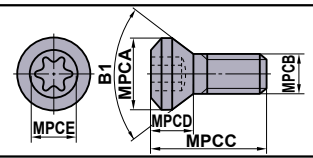
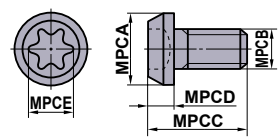
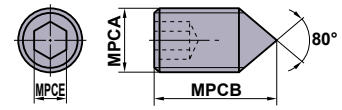
Chiave esagonale

Simbolo	B
10	8
12	10
16	13
20	16
25	20

WR

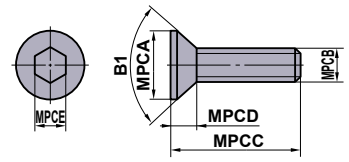
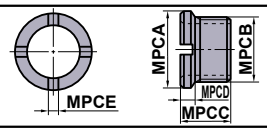
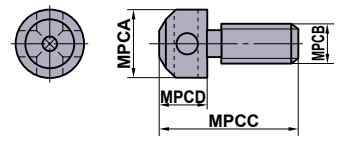
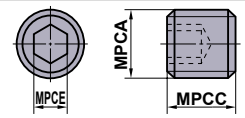
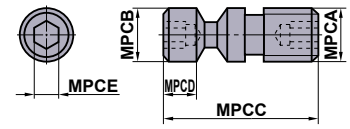
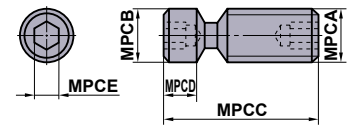
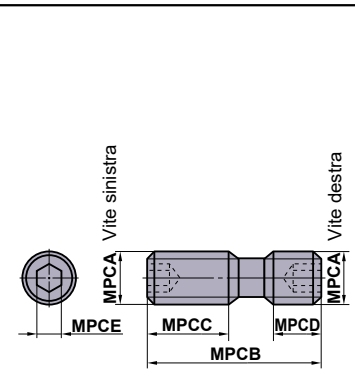
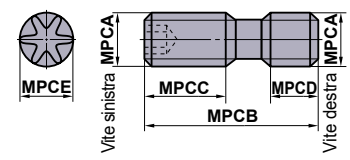
RICAMBI

VITE DI FISSAGGIO

Geometria	Codice di ordinazione	Dimensioni (mm) MPCA	MPCB	MPCC	MPCD	MPCE	Angolo B1	MPCDS	TQ (N•m)	Portautensile
	**AJS3010T10**	5	M3×0.5	10	1.5	2.8	120°	T10	2.5	Portautensile **Profilo** (➲C032) **AJX** (➲K194)
	AJS4012T15	7	M4×0.7	12	2.2	3.4	120°	T15	3.5	**AJX** (➲K194)
	AJS5014T25	8	M5×0.8	14	2.7	4.5	120°	T25	7.5	
	**BRS103**	5	M3×0.5	9.9	2.9	3.4	120°	T15	3.5	
	BRS105	8	M5×0.8	13.8	3.8	4.5	120°	T25	7.5	
	**CS200T**	3.2	M2×0.4	5	1.6	1.8	90°	T6	0.6	Barre alesatrici di tipo **F** (➲E028)
	CS250T	3.7	M2.5×0.45	6	1.8	2.4	90°	T8	1.0	**Serie per utensili di fresatura** (➲K001)
	* **CS250560T**	3.9	M2.5×0.45	5.2	2.5	2.4	60°	T8	1.0	**BRP** (➲K206)
	CS300590T	4.1	M3×0.5	5.5	2.1	2.4	90°	T8	1.0	
	CS300890T	4.1	M3×0.5	8	2.1	2.4	90°	T8	1.0	**DCCC** (➲K216)
	* **CS350860T**	5.5	M3.5×0.6	8.4	4.0	3.4	60°	T15	3.5	Barre alesatrici di tipo **MMTI** (➲G026) **BRP** (➲K206)
*	**CS350990T**	4.8	M3.5×0.6	9	2.4	2.8	90°	T10	2.5	**DCCC** (➲K216)
	CS401160T	5.7	M4×0.7	11	4.5	3.4	60°	T15	3.5	
	CS401990T	6.0	M4×0.7	19	3.0	3.9	90°	T20	3.5	
	CS451190T	6.3	M4.5×0.75	11	2.9	3.9	90°	T20	5.0	Portautensile di tipo **AL** (➲C034)
	* **CS5015060T**	7.2	M5×0.8	15	2.4	3.9	60°	T20	5.0	**AHX640S** (➲K042)
	CS502190T	8.5	M5×0.8	21	4.0	5.1	90°	T27	7.5	
	**CSF401260T**	7.2	M4×0.5	12	5.2	3.9	60°	T20	5.0	**PMR** (➲K252)
	**DC0520T**	8.5	M5×0.8	22.5	2.5	3.4	—	T15	3.5	Portautensile a **DOPPIO MORSETTO** (➲C008)
	DC0621T	10.5	M6×1.0	25	4	3.9	—	T20	5.0	**BARRA ALESATRICE DIMPLE BAR** (➲E015)
										Sistema **HSK** (➲H001)
	**DKS4**	5.6	M4×0.7	18	3.5	3	—	—	3.3	
	**FC400890T**	5.6	M4×0.7	7.5	1.3	2.8	90°	T10	2.5	Portautensile di tipo **AL** (➲C035)
										Barre alesatrici di tipo **AL** (➲E043)
	**GY05016S**	8.7	M5×0.8	16	3.5	3.9	90°	T20	5.0	Serie **GY** (➲F004)
	**GY06013M**	12	M6×1	18	5	5.6	—	T30	6.0	Serie **GY** (➲F004)
	**HSP05008C**	M5×0.8	8	—	—	2.5	—	—	2.5	Portautensile di tipo **MP** (➲C019)

RICAMBI

VITE DI FISSAGGIO

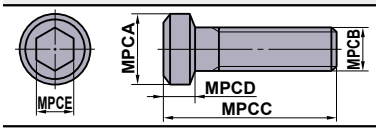
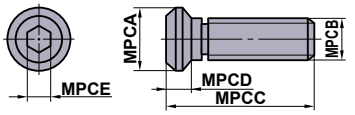
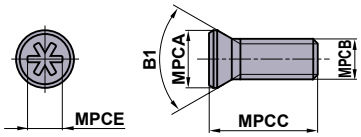
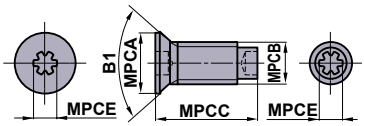
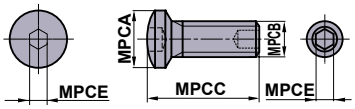
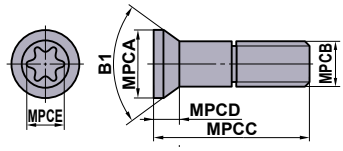
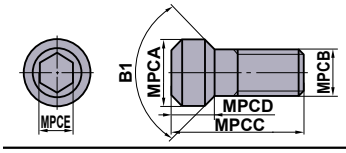
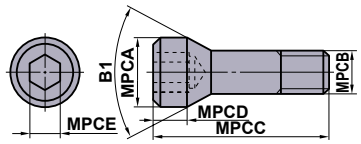
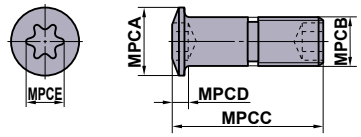
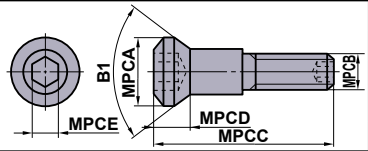
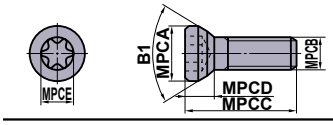
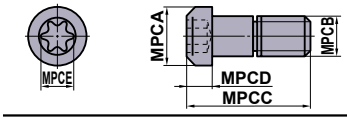
Geometria	Codice di ordinazione	Dimensioni (mm) MPCA	MPCB	MPCC	MPCD	MPCE	Angolo B1	MPCDS	TQ (N•m)	Portautensile
	**HY-A1**	4.4	M3×0.5	7	2.1	2	82°	—	1.5	
	HY-V1	5.5	M3×0.5	7	2.5	2	82°	—	1.5	
	HY2	5.5	M3×0.5	10	2.5	2	82°	—	1.5	
	HY3	7	M3.5×0.6	12	2.9	2	82°	—	1.5	
	HY4	9.3	M5×0.8	16	3.6	3	82°	—	3.3	
	**JSS6**	6.9	M6×0.75	4.5	1.5	0.8	—	—	—	
	JSS7	8	M7×0.75	4.4	1.5	1	—	—	—	
	**KS1**	7	M4×0.7	14	5	—	—	—	—	
	KS2	10	M6×1	18	7	—	—	—	—	
	KS2S	10	M6×1	18	7	—	—	—	—	
	**LLR1**	M5×0.8	—	3.5	—	2.5	—	—	—	
	LLR2	M6×1	—	5	—	3	—	—	—	
	☆**LLCS103**	M3×0.5	4	11	4.6	2	—	—	1.5	
	✱**LLCS105**	M5×0.8	M5×0.8	10	1.5	2	—	—	1.5	Barre alesatrici di tipo **P** (➲E038)
	LLCS106	M6×1	6	16.5	3.5	2.5	—	—	2.2	Sistema **HSK** (➲H001)
	✱**LLCS106S**	M6×1	6	13.4	0.7	2.5	—	—	2.2	
	LLCS108	M8×1.25	8	21	6.5	3	—	—	3.3	
	✱**LLCS108S**	M8×1.25	8	16.5	2	3	—	—	3.3	
	**LLCS110**	M10×1.5	10	29	8	4	—	—	7.0	
	LLCS112	M12×1	11.9	36.2	9	5	—	—	8.0	
	LLCS125	M5×0.8	M5×0.8	12	2	2	—	—	1.5	
	LLCS205	M5×0.8	M5×0.8	16	4	2	—	—	1.5	
	LLCS206	M6×1	6	26	13	2.5	—	—	2.2	
	LLCS208	M8×1.25	8	24	6.5	3	—	—	3.3	
	LLCS306	M6×1	6	21	4	2.5	—	—	2.2	
	LLCS310	M10×1	10	29	8	4	—	—	7.0	
	LLCS410	M10×1	10	30	6.6	4	—	—	7.0	
	LLCS508	M8×1	8	24	6.5	3	—	—	3.3	
	✱**LLCS508S**	M8×1	8	20.5	3	3	—	—	3.3	
	**LS1**	M6×1	22	8	8	3	—	—	5.0	
	LS2	M8×1	29	13	10	4	—	—	8.2	
	✱**LS4**	M6×1	15	8	4	3	—	—	5.0	**Serie per utensili di fresatura** (➲K001)
	✱**LS5**	M6×1	18	8	5	3	—	—	5.0	
	✱**LS6**	M8×1	24	13	5	4	—	—	8.2	
	✱**LS7**	M8×1	27	13	8	4	—	—	8.2	
	✱**LS8**	M6×0.75	18	7	7	3	—	—	5.0	
	✱**LS9**	M6×0.75	22	8	8	3	—	—	5.0	
	✱**LS10**	M7×0.75	16	6	6	4	—	—	8.2	
	✱**LS11**	M8×1	16	6	6	4	—	—	7.8	
	✱**LS12**	M8×1	24	7	7	4	—	—	7.8	
	✱**LS16**	M7×0.75	23	11	8	4	—	—	7.8	
	✱**LS20**	M10×1.5	26	9	9	5	—	—	9.0	
	✱**LS21**	M10×1.5	32	12	12	5	—	—	9.0	
	LS24	M8×1.25	24	8.5	8.5	4	—	—	7.8	
	LS25	M8×1	28.5	12.0	10.5	4	—	—	8.2	Portautensile a **DOPPIO MORSETTO** (➲C009)
	**LS14T**	M7×0.75	24	10	10	4.5	—	T25	8.0	
	LS15T	M7×0.75	18	7	7	4.5	—	T25	8.0	
	LS10TS	M7×0.75	13	6	4	4.5	—	T25	8.5	
	LS0622T	M6×0.75	22	8	8	3.4	—	T15	6.0	**AHX640W** (➲K049)

LLCS103, LLCS105
LLCS112, LLCS125
LLCS205

I prodotti contrassegnati con "✱" non presentano all'estremità il foro esagonale indicato con **MPCB**.

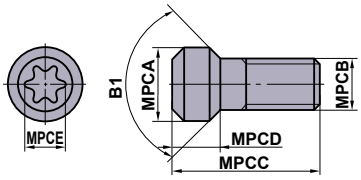
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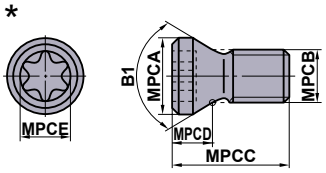
✱Vite destra senza foro esagonale

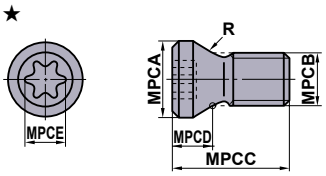
Geometria	Codice di ordinazione	Dimensioni (mm)					Angolo	MPCDS	TQ (N•m)	Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	B1			
	**MGS6**	10	M6×1	26	4	5	—	—	9.0	**APX3000** (➲K146)
	**MHT1**	11	M8×1	18.5	3.5	4	—	—	8.7	
	**NS251**	3.6	M2.5×0.45	7	—	2.2	60°	—	0.7	**BTVH** (➲D016)
	NS401	5.8	M4×0.7	6	—	3.6	60°	—	3.5	**CTAH-S** (➲D020)
	**NS402W**	5.85	M4×0.7	10	—	2.2	60°	—	0.7	**CTAH** (➲D020) **CTBH** (➲D022)
	NS403W	5.85	M4×0.7	12	—	2.2	60°	—	0.7	
	NS404W	5.8	M4×0.7	10	—	2.2	90°	—	0.7	
	**NS501W**	8	M5×0.8	16	—	2.5	120°	—	2.2	**UTENSILI SERIE MINI** (➲D001)
	NS502W	8	M5×0.8	20	—	2.5	120°	—	2.2	
	**RS3008T**	4.3	M3×0.35	8.6	2	2.4	61°	T8	1.5	**SRF** (➲K228) **SUF** (➲K232)
	RS3510T	5	M3.5×0.35	10	2.3	2.8	61°	T10	2.5	
	RS4015T	6	M4×0.5	14	2.7	3.4	61°	T15	3.3	
	RS5020T	8.1	M5×0.5	16.4	3.6	3.9	61°	T20	5.0	
	RS6025T	9.5	M6×0.75	21.5	4.2	4.5	61°	T25	7.5	
	RS8030T	12	M8×0.75	25	5	5.6	61°	T30	10.0	
	**S1**	3.5	M2×0.4	5.5	2.2	1.5	92°	—	0.6	
	S3	4.5	M3×0.5	7.7	2.4	2	92°	—	1.5	
	S4	5.3	M4×0.7	8	1.8	2.5	62°	—	2.2	
	S5	6.8	M5×0.8	9	2.4	3	62°	—	3.3	
	**SD32**	12	M8×1.25	28	7.2	6	50°	—	9.5	
	SD40	12	M8×1.25	36	7.2	6	50°	—	9.5	
	SD50	16	M10×1.5	46	8.2	8	50°	—	1.0	
	SD63	16	M10×1.5	61	8.2	8	50°	—	1.0	
	**SETS51**	6.8	M5×0.8	14.8	1.5	3.4	—	T15	3.5	Portautensile di tipo **MMTE** (➲G019)
	SETS61	8	M6×1	20	1.8	3.9	—	T20	5.0	Barre alesatrici di tipo **MMTI** (➲G026)
										Sistema **HSK** (➲H001)
	**SLCS105**	10	M5×0.8	25	6.3	4	90°	—	7.0	Portautensile di tipo **WP** (➲C017)
	SLCS106	12	M6×1	32	6.2	4	90°	—	7.0	
	**SPS1**	8.5	M5×0.8	16	4	4.5	70°	T25	5.0	
	**SRS5**	6.7	M5×0.8	16	3.5	3.9	—	T20	5.0	

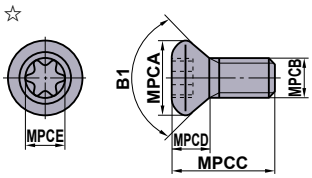
RICAMBI

VITE DI FISSAGGIO

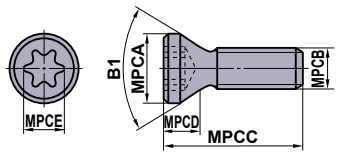
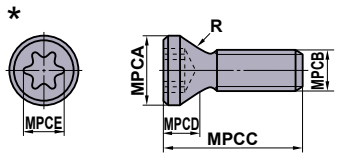
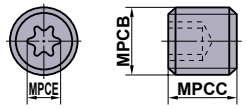
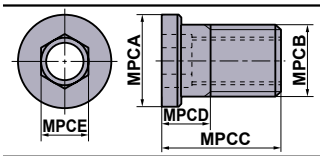
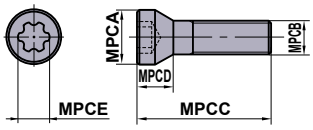
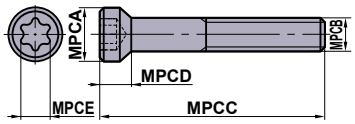


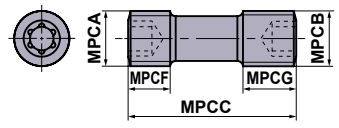






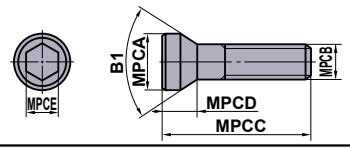
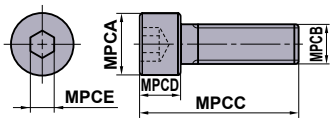
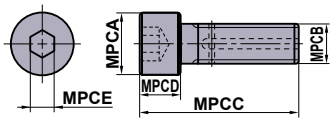
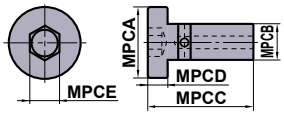
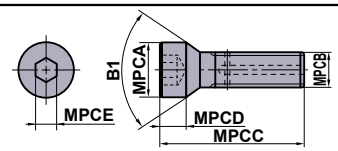
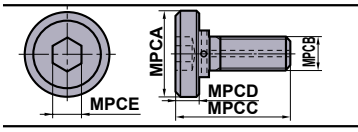
Geometria	Codice di ordinazione	Dimensioni (mm) MPCA	MPCB	MPCC	MPCD	MPCE	Angolo B1	MPCDS	TQ (N•m)	Portautensile
	* **TS16**	2.5	M1.6×0.35	3.2	1.6	1.8	60°	T6	0.6	**MICRO-DEX** (➲E018)
	TS2	2.7	M2×0.4	4.6	1.4	1.8	60°	T6	0.6	
	* **TS2A**	2.7	M2×0.4	4.5	1.2	1.8	60°	T6	0.6	**AQX** (➲K186)
	TS2C	2.7	M2×0.4	3.8	1.4	1.8	60°	T6	0.6	
	☆ **TS2D**	3.8	M2×0.4	5.3	1.9	1.8	82°	T6	0.6	**DIMPLE BAR** (➲E007)
	TS21	2.7	M2×0.4	3.4	1.4	1.8	60°	T6	0.6	Barre alesatrici di tipo **F** (➲E030)
	* **TS22**	3.0	M2.2×0.45	5	1.2	1.8	60°	T6	0.6	Barre alesatrici di tipo **S** (➲E031)
	* **TS25**	3.3	M2.5×0.45	5.5	1.7	2.4	60°	T8	1.0	**AQX** (➲K186) **AJX** (➲K194)
	☆ **TS25D**	4.4	M2.5×0.45	6.2	2.2	2.4	82°	T8	1.0	Barre alesatrici di tipo **MMTI** (➲G026)
	* **TS25H**	3.6	M2.5×0.45	5.5	2	2.4	60°	T8	1.0	**SRM2** (➲K236)
	TS202	2.7	M2×0.4	5.5	1.8	1.8	60°	T6	0.6	
	TS253	3.3	M2.5×0.45	4.5	1.7	2.4	60°	T8	1.0	**Serie per utensili di fresatura** (➲K001)
	TS254	3.3	M2.5×0.45	7	1.7	2.4	60°	T8	1.0	**UTENSILI SERIE MINI** (➲D001) **PMF** (➲K250)
	* **TS255**	3.5	M2.5×0.45	7.5	1.6	2.4	60°	T8	1.0	Portautensile **Profilo** (➲C032)
	TS3	3.9	M3×0.5	6	2	2.4	60°	T8	1.0	**TSMP** (➲K248)
	TS3D	5.0	M3×0.5	6	2.3	2.8	82°	T10	2.5	**DIMPLE BAR** (➲E007)
	* **TS3SB**	4.4	M3×0.5	8	2	2.4	80°	T8	1.5	**AXD4000** (➲K168)
	TS3SBS	4.4	M3×0.5	6.5	2	2.4	80°	T8	1.5	**AXD4000** (➲K168)
	☆ **TS31D**	4.8	M3×0.5	7.2	2.2	2.8	82°	T10	2.5	**DIMPLE BAR** (➲E007)
	* **TS32**	3.9	M3×0.5	7.5	2	2.4	60°	T8	2.0	**SRM2** (➲K236)
	* **TS33**	3.9	M3×0.5	6.7	2	2.4	60°	T8	1.5	**AQX** (➲K186) **AJX** (➲K194)
	TS35	4.8	M3.5×0.6	6.5	2.4	2.8	60°	T10	2.5	
	* **TS35D**	5.3	M3.5×0.6	12	2.8	3.4	60°	T15	3.5	Sistema **HSK** (➲H001)
	★ **TS35R**	5.7	M3.5×0.6	10	2.1	3.4	—	T15	3.5	**AHX440S** (➲K034) **AHX475S** (➲K038)
	TS351	4.8	M3.5×0.6	7.2	2.4	2.8	60°	T10	2.5	**AJX** (➲K194) **SRM2** (➲K236)
	TS352	4.8	M3.5×0.6	10	3	2.8	60°	T10	2.5	**VFX5** (➲K208)
	* **TS4SB**	5.8	M4×0.7	9	2.7	3.4	80°	T15	3.5	**AXD7000** (➲K180)
	* **TS4SBL**	5.8	M4×0.7	10.5	2.7	3.4	80°	T15	3.5	Serie **GY** (➲F004) **AXD7000** (➲K180)
	TS4	5.4	M4×0.7	8	2.6	3.4	60°	T15	3.5	**CE/CF/CGSP** (➲K246) **TSMP** (➲K248)
	TS4D	5.6	M4×0.7	7.7	2.5	3.4	82°	T15	3.5	**DIMPLE BAR** (➲E007)
	TS42	5.4	M4×0.7	6	2.6	3.4	60°	T15	3.5	
	TS43	5.4	M4×0.7	10	2.6	3.4	60°	T15	3.5	**AJX** (➲K194) **BRP** (➲K206) **SRM2** (➲K236)
	TS44	5.4	M4×0.7	12	2.6	3.4	60°	T15	3.5	
	TS406	5.4	M4×0.7	15.5	2.6	3.4	60°	T15	3.5	
	TS407	5.4	M4×0.7	9	2.6	3.4	60°	T15	3.5	**AQX** (➲K186) **AJX** (➲K194)
	TS450	5.9	M4.5×0.75	13	3.6	3.9	60°	T20	5.0	**VFX6** (➲K212)
	TS5S	6.8	M5×0.8	9	2.9	4.5	80°	T25	7.5	
	TS5	6.8	M5×0.8	9	3.2	4.5	60°	T25	7.5	Portautensile **SP** (➲C024) **CE/CF/CGSP** (➲K246) **TSMP** (➲K248)
	TS5L	6.8	M5×0.8	15	2.9	4.5	80°	T25	7.5	
	★ **TS5R**	6.9	M5×0.8	12	3.5	3.9	—	T20	5.0	**WWX400** (➲K067) **WJX** (➲K085)
	TS52	6.8	M5×0.8	8	3.2	4.5	60°	T25	7.5	**CE/CF/CGSP** (➲K246)
	TS53	6.8	M5×0.8	16	3.2	4.5	60°	T25	7.5	
	TS54	6.8	M5×0.8	12	3.2	4.5	60°	T25	7.5	**AJX** (➲K194)
	TS55	6.8	M5×0.8	10.5	3.2	4.5	60°	T25	7.5	Serie **GY** (➲F004) **AQX** (➲K186) **SPX** (➲K219) **SRM2** (➲K236)
	* **TS6S**	8.5	M6×1.0	13	4.4	5.6	60°	T30	10.0	**AQX** (➲K186) **SRM2** (➲K236)
	* **TS6**	8.5	M6×1.0	16	4.4	5.6	60°	T30	10.0	**SRM2** (➲K236)

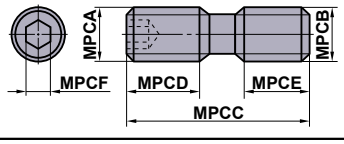
Geometria	Codice di ordinazione	Dimensioni (mm)					Angolo	MPCDS	TQ (N•m)	Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	B1			
	**TPS20-1**	2.65	M2×0.4	4.7	2.4	1.8	60°	6IP	0.6	**MVX** (➲M158)
	TPS25	3.3	M2.5×0.45	5.5	1.7	2.1	60°	7IP	1.0	**APX3000** (➲K146) **MVX** (➲M158)
	TPS25-1	3.3	M2.5×0.45	6.5	1.7	2.1	60°	7IP	1.0	**APX3000** (➲K146)
	TPS27F1	3.7	M2.7×0.35	6.5	1.8	2.1	60°	7IP	1.0	**VPX200** (➲K099)
	TPS27F2	3.7	M2.7×0.35	8.0	1.8	2.1	60°	7IP	1.0	**VPX300** (➲K113)
	TPS3	3.9	M3×0.5	6.7	1.4	2.82	60°	10IP	1.0	**MVX** (➲M158)
	* **TPS3R**	4.6	M3×0.5	8.5	1.4	2.82	—	10IP	2.0	**WJX09** (➲K085)
	TPS3SB	4.4	M3×0.5	8	2.0	2.82	80°	10IP	3.0	**AXD4000A** (➲K176)
	TPS35	5.3	M3.5×0.6	11.5	2.8	3.4	60°	15IP	3.5	**ASX445** (➲K026) **ASX400** (➲K080) **PMR** (➲K252)
	TPS351	4.8	M3.5×0.6	7.2	1.4	2.82	60°	10IP	2.5	**MVX** (➲M158)
	TPS351B	5.1	M3.5×0.6	7.2	1.4	2.82	60°	10IP	2.5	**ARP** (➲K254)
	TPS4	5.3	M4×0.7	8	2.6	3.4	60°	15IP	3.5	**APX4000** (➲K153) **ARP** (➲K254) **MVX** (➲M158)
	TPS40F1	5.3	M4×0.5	10.5	2.8	3.4	60°	15IP	3.0	**VPX300** (➲K113)
	TPS43	5.3	M4×0.7	10	2.6	3.4	60°	15IP	4.0	**APX4000** (➲K153) **MVX** (➲M158)
	* **TPS4R**	6.4	M4×0.7	10.6	2.9	3.4	—	15IP	3.5	**WSX445** (➲K016)
	TPS54	6.8	M5×0.8	12	3.2	4.5	60°	25IP	7.5	**MVX** (➲M158)
	**TSS04005**	—	M4×0.7	5	—	2.4	—	T8	—	**PMF** (➲K250)
	TSS04505S	—	M4.5×0.7	5	—	3.5	—	T10	3.5	**FMAX** (➲K056)
	TSS05006	—	M5×0.8	6	—	2.8	—	T10	—	
	TSS06010	—	M6×1	10	—	3.9	—	T20	—	
	**WCS503507H**	6.3	M5×0.5	7	3.3	3.5	—	—	5.0	**ASX445** (➲K026) **ASX400** (➲K080) **PMR** (➲K252)
	WCS604010H	7.8	M6×0.75	10	4.1	4.0	—	—	7.0	**PMR** (➲K252)
	**WS203107TPS**	3.1	M2×0.25	7.3	1.7	1.8	60°	6IP	1.0	**STAW** (➲M139)
	WS203108TPS	3.1	M2×0.25	8.3	1.9	1.8	60°	6IP	1.0	
	WS253909TPS	3.9	M2.5×0.35	9.5	2.4	2.4	60°	8IP	2.0	
	WS304912TPS	4.9	M3×0.35	12	3.25	2.82	60°	10IP	2.5	
	**WS254012T**	4	M2.5×0.45	11.5	2.2	2.4	80°	T8	2.0	**TAW** (➲M148)
	WS254013T	4	M2.5×0.45	12.5	2.2	2.4	80°	T8	2.0	
	WS254014T	4	M2.5×0.45	13.5	2.2	2.4	80°	T8	2.0	
	WS254015T	4	M2.5×0.45	14.5	2.2	2.4	80°	T8	2.0	
	WS254016T	4	M2.5×0.45	15.5	2.2	2.4	80°	T8	2.0	
	WS304517T	4.5	M3×0.5	16.5	3.4	2.8	60°	T10	3.5	
	WS304518T	4.5	M3×0.5	17.5	3.4	2.8	60°	T10	3.5	
	WS355520T	5.5	M3.5×0.6	19.5	3.9	3.4	60°	T15	5.5	
	WS355521T	5.5	M3.5×0.6	20.5	3.9	3.4	60°	T15	5.5	
	WS406023T	6	M4×0.7	22.0	4.4	4.5	60°	T25	8.5	
	WS406024T	6	M4×0.7	23.0	4.4	4.5	60°	T25	8.5	
	WS508026T	8	M5×0.8	25.0	5.2	5.1	60°	T27	12.0	
	WS508027T	8	M5×0.8	26.0	5.2	5.1	60°	T27	12.0	

Geometria	Codice di ordinazione	Dimensioni (mm)					Angolo	MPCDS	TQ (N•m)	Portautensile
		MPCA	MPCB	MPCC	MPCF	MPCG	B1			
	**RX1ST8TP1**	M4×0.7	M4×0.5	16.5	7.0	7.0	—	TX8	2.0	**RX1S** (➲M197)
	RX1ST10TP23	M5×0.8	M5×0.5	17.0	7.5	7.0	—	TX10	3.0	
	RX1ST15TP45	M6×1.0	M6×0.75	18.0	6.5	8.5	—	TX15	6.5	
	RX1ST25TP6	M10×1.5	M10×1.25	30.0	7.5	9.5	—	TX25	15.0	

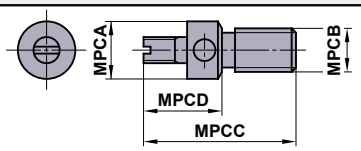
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BULLONE DI FISSAGGIO

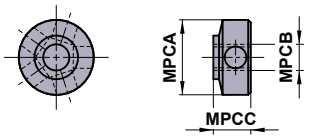
Geometria	Codice di ordinazione	Dimensioni (mm) MPCA	MPCB	MPCC	MPCD	MPCE	Angolo B1	MPCDS	TQ (N•m)	Portautensile
	**BOES101**	15	M10×1.5	45	10	8	60°	—	10.0	
	**HSC08025H** *	13	M8×1.25	33	8	5	—	—	24	**VPX200/300** (➲K099,K113) **ARP** (➲K254)
	HSC05030	8.5	M5×0.8	35	5	4	—	—	10	**APX3000/4000** (➲K146,K153)
	HSC08030H *	13	M8×1.25	38	8	5	—	—	24	**WSX445** (➲K016)
	HSC08045	13	M8×1.25	53	8	5	—	—	24	**VPX200/300** (➲K099,K113)
	HSC08040	13	M8×1.25	48	8	5	—	—	24	**WSX445** (➲K016)
	HSC08050	13	M8×1.25	58	8	5	—	—	24	**VPX200/300** (➲K099,K113)
	HSC10030H *	16	M10×1.5	40	10	6	—	—	40	APX3000/4000 (➲K146,K153) **AJX** (➲K194) **WSX445** (➲K016)
	HSC10035	16	M10×1.5	45	10	6	—	—	44	**VFX5** (➲K208) **VFX6** (➲K212)
	HSC10050	16	M10×1.5	60	10	8	—	—	44	APX3000/4000 (➲K146,K153) **VPX200/300** (➲K099,K113)
	HSC10055	16	M10×1.5	65	10	8	—	—	44	**VFX5** (➲K208)
	HSC10060	16	M10×1.5	70	10	8	—	—	44	**VPX200/300** (➲K099,K113)
	HSC10070	16	M10×1.5	80	10	8	—	—	44	**VPX200/300** (➲K099,K113) **ASPX** (➲K224)
	HSC12035	18	M12×1.75	47	12	10	—	—	80	**WSX445** (➲K016)
	HSC12035H *	18	M12×1.75	47	12	10	—	—	80	**APX3000/4000** (➲K146,K153) **AJX** (➲K194)
	**HSC12040**	18	M12×1.75	52	12	10	—	—	80	
	HSC12045	18	M12×1.75	57	12	10	—	—	80	**WSX445** (➲K016)
	HSC12060	18	M12×1.75	72	12	10	—	—	80	**VPX200/300** (➲K099,K113)
	HSC12070	18	M12×1.75	82	12	10	—	—	80	APX3000/4000 (➲K146,K153) **AJX** (➲K194) **WSX445** (➲K016)
	HSC16040	24	M16×2	56	16	14	—	—	150	**WSX445** (➲K016)
	HSC16040H *	24	M16×2	56	16	14	—	—	150	**APX3000/4000** (➲K146,K153) **AJX** (➲K194)
	HSC16055	24	M16×2	71	16	14	—	—	150	**VPX200/300** (➲K099,K113)
	HSC16065	24	M16×2	81	16	14	—	—	150	**VPX200/300** (➲K099,K113)
	HSC16080	24	M16×2	96	16	14	—	—	150	
* Con foro per refrigerante.	**HSC20040**	30	M20×2.5	60	20	17	—	—	320	
	HSC20090	30	M20×2.5	110	20	17	—	—	320	
	**HSCX12030H**	24	M12×1.75	37	7	8	—	—	40	**FMAX** (➲K056)
	HSCX16035H	30	M16×2	44	9	12	—	—	100	
	HSCX20035H	36	M20×2.5	46	11	14	—	—	180	
	**HFF08033H**	11	M8×1.25	33	5	5	90°	—	8.2	**WJX09** (➲K085)
	HFF08043H	11	M8×1.25	43	5	5	90°	—	8.2	**AXD4000** (➲K168)
	**MBA16033H**	40	M16×2	43	10	14	—	—	150	**AHX640** (per Ø100) (➲K042) **WSX445** (➲K016)
	MBA20040H	50	M20×2.5	54	14	17	—	—	320	**APX4000** (➲K153) **AHX475S** (➲K038) **AHX640S** (➲K042) **AXD4000** (➲K168) **AXD7000** (➲K180) **AJX** (➲K194)

Geometria	Codice di ordinazione	Dimensioni (mm) MPCA	MPCB	MPCC	MPCD	MPCE	MPCF	TQ (N•m)	Portautensile
	**HDS08030**	M8×0.75	M8×1.25	30	13.5	11.5	4	8.2	**BRP** (➲K206)
	HDS10031	M10×1.0	M10×1.5	31	14	12	5	9.0	**PMF** (➲K250)

VITE DI REGOLAZIONE

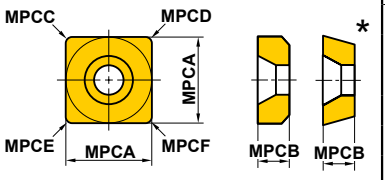
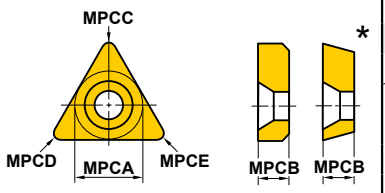
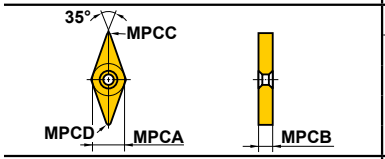
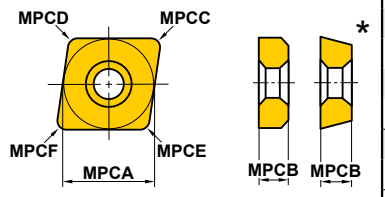
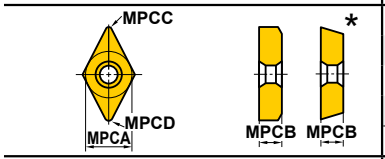
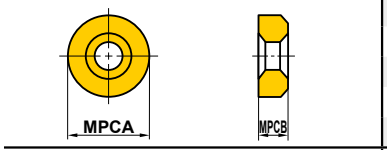
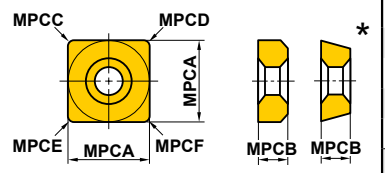
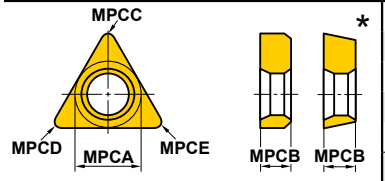
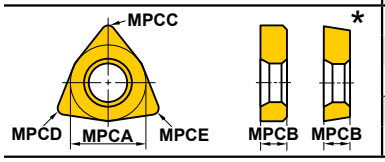
Geometria	Codice di ordinazione	Dimensioni (mm)					Angolo	MPCDS	TQ (N•m)	Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	B1			
	**KSS2**	6.6	M5×0.8	17.5	9	—	—	—	—	**FMAX** (➲K056)

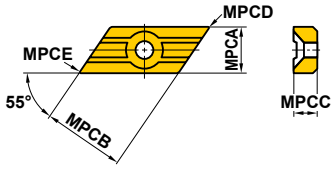
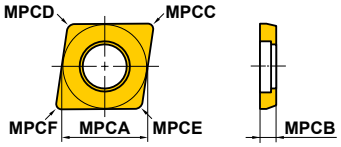
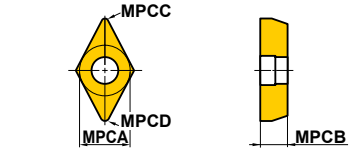
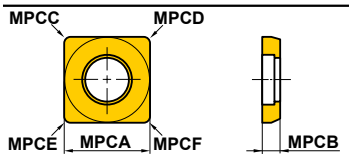
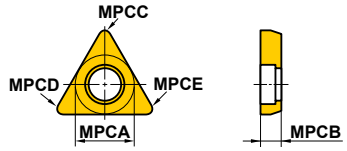
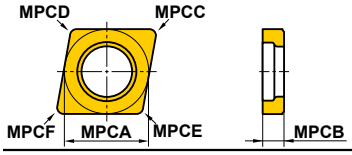
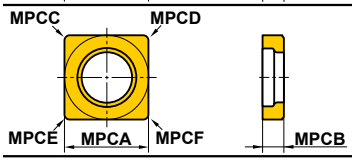
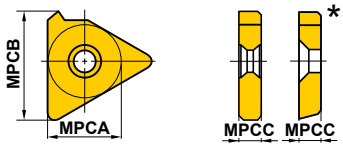
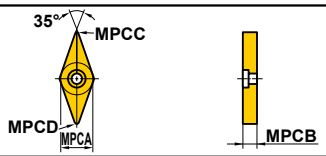
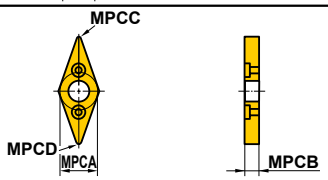
DADO DI MICRO-REGOLAZIONE

Geometria	Codice di ordinazione	Dimensioni (mm)					Angolo	MPCDS	TQ (N•m)	Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	B1			
	**KSN3**	8.6	M3×0.35	4.3	—	—	—	—	—	**FMAX** (➲K056)

RICAMBI

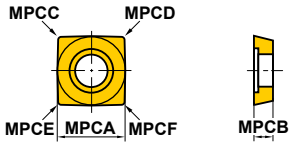
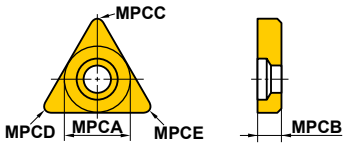
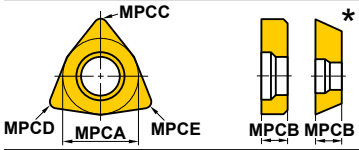
SPESSORE

Geometria	Codice di ordinazione	Dimensioni (mm)						Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	MPCF	
	* **PS42**	11.46	3.18	0.2	0.2	0.6	1.0	
	* **PT21**	5.11	2.38	0.2	0.2	0.6	—	Barre alesatrici di tipo **F** (➲E029)
	* **PT32**	8.28	3.18	0.2	0.2	0.6	—	
	* **PT42**	10.85	3.18	0.3	0.3	0.7	—	
	**DCSVN32**	9.52	3.18	0.8	1.2	—	—	Portautensile a **DOPPIO MORSETTO** (➲C019) **BARRA ALESATRICE DIMPLE BAR** (➲E017)
	**LLSCN3T3**	9.52	3.97	0.4	0.4	0.8	0.8	Portautensile di tipo **LL** (➲C008)
	LLSCN33	9.52	4.76	0.4	0.4	0.8	0.8	Portautensile di tipo **LL** (➲C008)
	LLSCN42	12.70	3.18	0.8	0.8	1.2	1.2	**BARRA ALESATRICE DIMPLE BAR** (➲E015)
	LLSCN53	15.87	4.76	1.2	1.2	1.6	1.6	Barre alesatrici di tipo **P** (➲E039)
	LLSCN63	19.05	4.76	1.2	1.2	1.6	1.6	Sistema **HSK** (➲H001)
	* **LLSCP42**	12.70	3.18	0.8	0.8	1.2	1.2	**BARRA ALESATRICE DIMPLE BAR** (➲E015)
	* **LLSCP63**	19.05	4.76	1.2	1.2	1.6	1.6	Barre alesatrici di tipo **P** (➲E039) Sistema **HSK** (➲H001)
	**LLSDN32**	9.52	3.18	0.8	1.2	—	—	Portautensile a **DOPPIO MORSETTO** (➲C010)
	LLSDN42	12.70	3.18	0.8	1.2	—	—	Portautensile di tipo **LL** (➲C010) **BARRA ALESATRICE DIMPLE BAR** (➲E015)
	LLSDN43	12.70	4.76	0.8	1.2	—	—	Barre alesatrici di tipo **P** (➲E039)
	LLSDN53	15.87	4.76	1.2	1.6	—	—	Sistema **HSK** (➲H001)
	* **LLSDP42**	12.70	3.18	0.8	1.2	—	—	**BARRA ALESATRICE DIMPLE BAR** (➲E015)
	**LLSRN103**	8.3	3.18	—	—	—	—	Portautensile di tipo **LL** (➲C026)
	LLSRN123	9.8	3.18	—	—	—	—	Sistema **HSK** (➲H001)
	LLSRN164	13.6	4.76	—	—	—	—	
	LLSRN204	17.3	4.76	—	—	—	—	
	LLSRN326	28.0	6.35	—	—	—	—	
	**LLSSN33**	9.52	4.76	0.8	0.8	1.2	1.2	**BARRA ALESATRICE DIMPLE BAR** (➲C014)
	LLSSN42	12.70	3.18	0.8	0.8	1.2	1.6	Barre alesatrici di tipo **P** (➲E038)
	LLSSN53	15.87	4.76	1.2	1.2	1.6	1.6	
	LLSSN63	19.05	4.76	1.2	1.2	1.6	2.0	
	LLSSN84	25.40	6.35	1.6	1.6	2.4	2.4	
	* **LLSSP42**	12.70	3.18	0.8	0.8	1.2	1.6	**BARRA ALESATRICE DIMPLE BAR** (➲E016)
	**LLSTE32**	7.6	3.18	0.4	0.4	0.4	—	
	LLSTN32	9.52	3.18	0.4	0.8	1.2	—	Portautensile di tipo **LL** (➲C016)
	LLSTN33	9.52	4.76	0.4	0.8	1.2	—	**BARRA ALESATRICE DIMPLE BAR** (➲E016)
	LLSTN42	12.70	3.18	0.4	0.8	1.2	—	Barre alesatrici di tipo **P** (➲E038)
	LLSTN53	15.87	4.76	0.8	1.2	1.6	—	
	* **LLSTP32**	9.52	3.18	0.4	0.8	1.2	—	
	**LLSWN32**	9.52	3.18	0.4	0.8	1.2	—	Portautensile di tipo **LL** (➲C022)
	LLSWN3T3	9.52	3.97	0.4	0.8	1.2	—	Portautensile a **DOPPIO MORSETTO** (➲C022)
	LLSWN42	12.70	3.18	0.4	0.8	1.2	—	**BARRA ALESATRICE DIMPLE BAR** (➲E017)
	* **LLSWP32**	9.52	3.18	0.4	0.8	1.2	—	
	* **LLSWP42**	12.70	3.18	0.4	0.8	1.2	—	

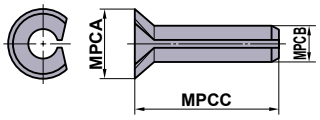
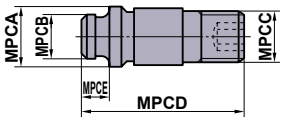
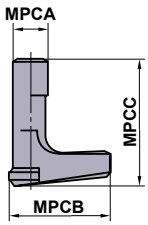
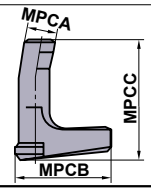
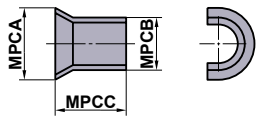
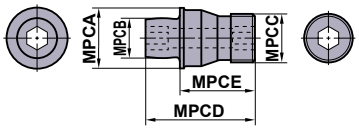
Geometria	Codice di ordinazione	Dimensioni (mm)						Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	MPCF	
	**MHS532R**	9.4	15.7	4.5	0.8	0.8	—	
 La posizione del foro è disassata.	**MLCP42**	12.58	3.18	1.2	1.2	1.2	1.2	Barre alesatrici di tipo **P** (➲E039)
 La posizione del foro è disassata.	**MLDP42**	12.56	3.18	1.2	1.2	—	—	Barre alesatrici di tipo **P** (➲E039)
 La posizione del foro è disassata.	**MLSP42**	12.63	3.18	1.2	1.2	1.2	1.2	Barre alesatrici di tipo **P** (➲E038)
 La posizione del foro è disassata.	**MLTP32**	9.50	3.18	1.2	1.2	1.2	—	Barre alesatrici di tipo **P** (➲E038)
	**MSCN63**	18.8	4.76	1.6	1.6	1.6	1.6	Portautensile a **DOPPIO MORSETTO** (➲C009) (per lavorazione pesante)
	**MSSN63**	18.8	4.76	1.6	1.6	1.6	1.6	Portautensile a **DOPPIO MORSETTO** (➲C012) (per lavorazione pesante)
	* **PT32T1R** * **PT32T2R**	8.28 8.28	13.34 13.19	3.18 3.18	— —	— —	— —	
	**PV321** **PV322** **PV323**	9.52 9.52 9.52	3.18 3.18 3.18	0.4 0.8 1.2	0.4 0.8 1.2	— — —	— — —	Portautensile di tipo **MP** (➲C019)
	**SPSVN32**	8.06	3.18	0.3	0.3	—	—	Portautensile di tipo **SP** (➲C030) Sistema **HSK** (➲H001)

RICAMBI

SPESSORE

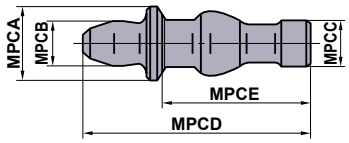
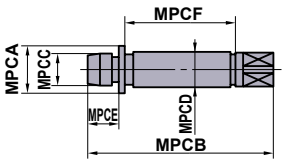
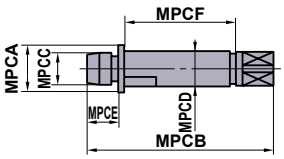
Geometria	Codice di ordinazione	Dimensioni (mm)						Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	MPCF	
	**STASX400N**	11.00	3.00	0.4	0.4	0.4	0.4	**ASX400** (➲K080)
	**STASX445N**	10.76	3.00	—	—	—	—	**ASX445** (➲K026)
	**WPSTN33**	9.3	4.76	0.8	0.4	1.2	—	Portautensile di tipo **WP** (➲C017)
	WPSTN43	12.50	4.76	0.8	0.4	1.2	—	
	* **WPSWC43**	12.50	4.76	0.4	0.8	1.2	—	
	WPSWN43	12.50	4.76	0.4	0.8	1.2	—	Portautensile di tipo **WP** (➲C023)

PERNO DI COMPENSAZIONE E LEVA DI BLOCCAGGIO

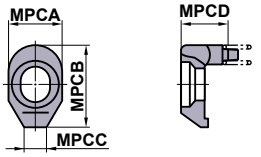
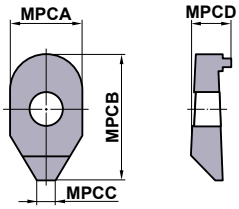
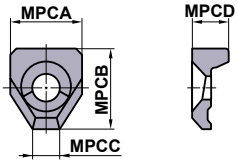
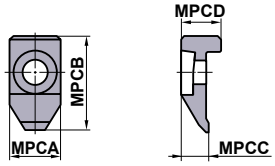
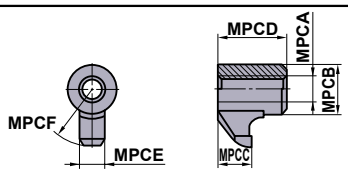
Geometria	Codice di ordinazione	Dimensioni (mm)					Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	
	**BCP141**	3.0	1.4	5.6	—	—	Portautensile di tipo **SP** (➲C030)
	BCP201	4.3	2	7.4	—	—	Barre alesatrici di tipo **F** (➲E029)
	BCP202	4.3	2	6.4	—	—	Sistema **HSK** (➲H013)
	**CCP33**	6.5	3.66	M5×0.8	18.5	3	Portautensile **WP** (➲C017)
	CCP34	7.5	5.0	M6×1.0	18.5	3	
	CCP44	7.5	5.0	M5×0.8	14.2	3	
	**LLCL12S**	2.1	9.3	5.6	—	—	Portautensile di tipo **LL** (➲C016)
	LLCL13	3.6	10	12.5	—	—	Barre alesatrici di tipo **P** (➲E039)
	LLCL13S	3.6	10	7.8	—	—	Sistema **HSK** (➲H001)
	LLCL14	4.7	13.4	13.2	—	—	
	LLCL14S	4.7	13.6	12.2	—	—	
	LLCL15	6.0	19	17	—	—	
	LLCL16	7.5	20.8	21	—	—	
	LLCL18	8.6	25.4	25.2	—	—	
	LLCL23	3.6	12.0	11.5	—	—	
	LLCL23S	3.6	11.6	9.5	—	—	
	LLCL24	4.7	16.2	14.8	—	—	
	LLCL25	6.0	17.1	17	—	—	
	**LLCL110**	3.0	10.7	11.6	—	—	
	LLCL112	3.5	13	13.5	—	—	
	LLCL116	4.5	18.5	18	—	—	
	LLCL120	5.6	20.3	19	—	—	
	LLCL125	6	24	24	—	—	
	LLCL132	8	30	27	—	—	
	**LLP13**	5.55	4.85	5.3	—	—	Portautensile di tipo **LL** (➲C008)
	LLP14	7.25	6.55	5.8	—	—	Portautensile a **DOPPIO MORSETTO** (➲C008)
	LLP15	8.8	8.05	8.6	—	—	**BARRA ALESATRICE DIMPLE BAR** (➲E015)
	LLP16	10.85	9.85	11.1	—	—	Barre alesatrici di tipo **P** (➲E038)
	LLP18	15.35	13.05	12.0	—	—	Sistema **HSK** (➲H001)
	LLP23	5.55	4.85	6.8	—	—	
	LLP24	7.25	6.55	9.1	—	—	
	**MP6**	11.9	7.8	M10×1	22.1	15	Portautensile a **DOPPIO MORSETTO** (➲C009) (per lavorazione pesante)

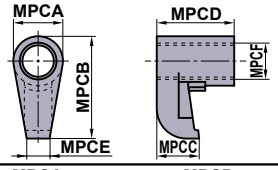
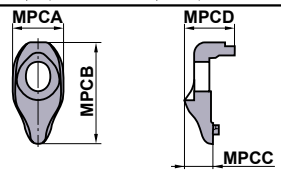
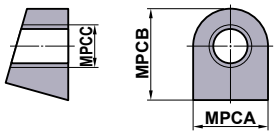
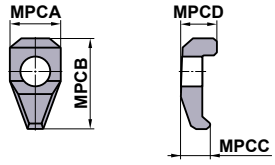
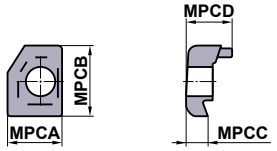
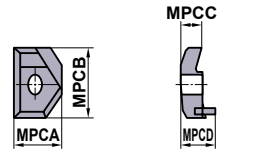
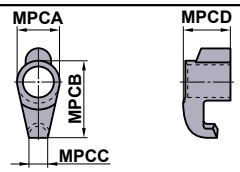
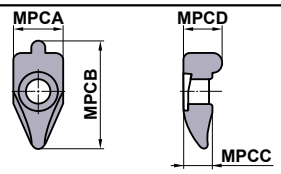
RICAMBI

PERNO DI ARRESTO

Geometria	Codice di ordinazione	Dimensioni (mm)						Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	MPCF	
	**P11S**	6	3.7	4	17	11.1	—	Portautensile di tipo **MP** (➲C019)
	P21S	7.5	4.9	4.5	17.2	11.5	—	
	**P221US**	4	18	2.11	3.5	3.3	7.7	
	**P333WS**	5.75	24	3.64	5.0	4.9	11.3	
	P434W	7.75	30	5.03	7.0	4.9	16.8	

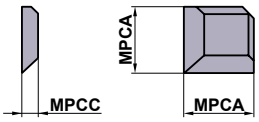
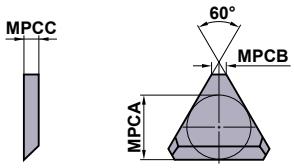
STAFFA DI FISSAGGIO

Geometria	Codice di ordinazione	Dimensioni (mm)						Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	MPCF	
	**AMS3**	7	12	3	3.3	—	—	Portautensile **Profilo** (➲C032)
	AMS4	9	13.5	3	3.8	—	—	**AJX** (➲K196)
	AMS5	10	15	3.5	5	—	—	
	**CA161**	13	20	6	8	—	—	
	**CCK13**	15	18.5	6	9	—	—	Portautensile di tipo **WP** (➲C017)
	CCK14	19	22	8	9.5	—	—	
	**CCTC1**	13	25	7	10.2	—	—	
	**CK231**	M6×1	8	4	7.5	4.5	9.5	
	CK232	M6×1	8	4.5	8	4.5	11.5	
	CK341	M8×1	11	5.5	13.5	6	13.5	
	CK342	M8×1	11	6	14	6	16.5	

Geometria	Codice di ordinazione	Dimensioni (mm)						Portautensile
		MPCA	MPCB	MPCC	MPCD	MPCE	MPCF	
	**CKW6**	10.9	22.5	9.2	16.8	5	M8×1	Portautensile a **DOPPIO MORSETTO** (➲C009) (per lavorazione pesante)
	**DCK2211**	11	22	6.57	11.1	—	—	Portautensile a **DOPPIO MORSETTO** (➲C008) **BARRA ALESATRICE DIMPLE BAR** (➲E015) Sistema **HSK** (➲H001)
	DCK2613	13	26.5	7.35	12.9	—	—	
	DCK3113	13	31	9	14.5	—	—	
	**KGC1**	12.0	15.0	M7×0.75	—	—	—	
	**LK1**	8	14.3	4.5	5.9	—	—	
	**MTK1R/L**	13	17.5	5	12	—	—	Portautensile di tipo **MG** (➲F132) Portautensile di tipo **MT** (➲G024) Sistema **HSK** (➲H001)
	**MTK2R/L**	18	28	7	14	—	—	
	**SETK51**	6.8	14.5	2.9	8	—	—	Portautensile di tipo **MMTE** (➲G019) Portautensile di tipo **MMTI** (➲G026) Sistema **HSK** (➲H001)
	SETK61	8.9	18.1	4.1	8.6	—	—	
	**SRK1R**	9.4	21	5.5	7.5	—	—	

RICAMBI

PIASTRINA ROMPITRUCIOLO

Geometria	Codice di ordinazione	Dimensioni (mm)					Portautensile
		MPCA	MPCB	MPCC	IC	LBB	
	**CBS3D**	8.0	–	1.5	9.525	1.5	
	CBS4D	10.2	–	2.5	12.70	2.5	
	**CBT2N**	5.67	1.4	1.5	6.35	1.0	Barre alesatrici di tipo **F** (➲E029) *In caso di inserti positivi, il rompitruciolo è 0.5mm più largo di quanto indicato nella lista.
	CBT3F	8.53	1.4	2.5	9.525	1.5	
	CBT4N	11.07	1.4	2.5	12.70	2.5	

LUBRIFICANTE ANTIGRIPPAGGIO

LUBRIFICANTE ANTIGRIPPAGGIO

Forma	Codice di ordinazione	Disponibilità	Volume (g)
	**MK1K**	★	20
	**MK1KS**	★	3

★ : **Inventario mantenuto in Giappone.**

Note

DATI TECNICI

CONFORMITÀ ALLA NORMA ISO13399 ..... P002
RISOLUZIONE DI PROBLEMI DI FORATURA P006
USURA DELLA PUNTA E DANNI AL TAGLIENTE P007
CARATTERISTICHE E SPECIFICHE DELLE PUNTE P008
FORMULE PER FORATURA P011
TABELLA DI CONFRONTO FRA I MATERIALI P012
RUGOSITÀ SUPERFICIALE P016
TABELLA DI CONFRONTO DELLE DUREZZE P017
TABELLA DELLE TOLLERANZE IDONEE (FORO) P018
TABELLA DELLE TOLLERANZE IDONEE (ALBERO) P020
DIAMETRI DELLE PUNTE PER MASCHIATURA P022
DIMENSIONE DEL FORO PER BULLONE A TESTA ESAGONALE INCASSATA P023
SISTEMA DI UNITÀ DI MISURA INTERNAZIONALI P024



CONFORMITÀ ALLA NORMA ISO13399

Elenco dei simboli di proprietà conformi a ISO13399

Ordine alfabetico

Fonte: Standard ISO13399
URL : https://www.iso.org/search/x/query/13399

Simboli di proprietà ISO13399	Contenuto
ADJLX	Limite di regolazione massimo
ADJRG	Campo di regolazione
ALF	Angolo di spoglia radiale
ALP	Angolo di spoglia assiale
AN	Angolo di spoglia principale
ANN	Angolo di spoglia secondario
APMX	Massima profondità di taglio
AS	Angolo di spoglia del tratto raschiante
ASP	Sporgenza vite di regolazione
AZ	Profondità massima di tuffo
B	Larghezza dello stelo
BBD	Bilanciato a disegno
BCH	Lunghezza smusso
BD	Diametro del corpo
BDX	Massima diametro del corpo
BHCC	Numero cerchi foro per bullone
BHTA	Angolo semiconico del corpo
BMC	Codice materiale del corpo
BS	Lunghezza del tagliente raschiante
BSR	Raggio tratto raschiante
CASC	Codice dimensione della cartuccia
CB	Numero rompitrucioli
CBDP	Profondità foro connessione
CBMD	Designazione produttore del rompitruciolo
CBP	Proprietà del rompitruciolo
CCMS	Codice di collegamento lato macchina
CCWS	Codice di collegamento lato pezzo da lavorare
CCP	Proprietà angolo smusso
CDI	Diametro di taglio dell'inserto
CDX	Profondità di taglio massima
CEATC	Codice tipologia angolo del tagliente
CECC	Codice condizione del tagliente
CEDC	Numero taglienti
CF	Lamatura
CHW	Larghezza smusso angolare
CICT	Numero oggetti da taglio
CNC	Numero angoli
CND	Diametro ingresso refrigerante
CNSC	Codice tipologia ingresso refrigerante
CNT	Dimensioni del filetto di ingresso refrigerante
CP	Pressione refrigerante
CRE	Raggio lamatura
CRKS	Misura della filettatura della bussola di bloccaggio del collegamento
CSP	Proprietà apporto refrigerante
CTP	Proprietà del rivestimento
CTX	Traslazione del punto di taglio in direzione X
CTY	Traslazione del punto di taglio in direzione Y
CUTDIA	Diametro massimo di asportazione
CUB	Base dell'unità di collegamento
CW	Larghezza di taglio
CWX	Larghezza di taglio massima
CXD	Diametro uscita refrigerante

Simboli di proprietà ISO13399	Contenuto
CXSC	Codice tipologia uscita refrigerante
CZC	Codice dimensione collegamento
D1	Diametro del foro di collegamento
DAH	Diametro del foro di accesso
DAXN	Diametro minimo esterno della scanalatura assiale
DAXX	Diametro massimo esterno della scanalatura assiale
DBC	Diametro cerchio fori per bulloni
DC	Diametro di taglio
DCB	Diametro foro di collegamento
DCBN	Diametro minimo del foro di collegamento
DCBX	Diametro massimo del foro di collegamento
DCC	Codice tipologia di configurazione del disegno
DCCB	Foro di collegamento del diametro della barenatura
DCIN	Diametro di taglio interno
DCINN	Diametro di taglio interno minimo
DCINX	Diametro di taglio interno massimo
DCN	Diametro minimo del foro
DCON	Diametro collegamento
DCONMS	Lato macchina del diametro di collegamento
DCONWS	Lato del pezzo da lavorare del diametro di collegamento
DCSC	Codice dimensione del diametro di taglio
DCSFMS	Diametro superficie contatto lato macchina
DCX	Diametro massima del foro
DF	Diametro superficie di contatto lato macchina
DHUB	Diametro del mozzo
DMIN	Diametro minimo del foro
DMM	Diametro stelo
DN	Diametro collo
DRVA	Angolo guida
EPSR	Angolo incluso dell'inserto
FHA	Angolo dell’elica
FHCSA	Angolo svasatura foro di fissaggio
FHCSD	Diametro svasatura foro di fissaggio
FLGT	Spessore della flangia
FMT	Tipologia forma
FXHLP	Proprietà del foro di fissaggio
GAMF	Angolo di spoglia radiale
GAMN	Angolo di spoglia normale
GAMO	Angolo di spoglia ortogonale
GAMP	Angolo di spoglia assiale
GAN	Angolo di spoglia dell'inserto
H	Altezza dello stelo
HA	Altezza teorica del filetto
HAND	Direzione
HBH	Altezza offset inferiore testa
HBKL	Lunghezza offset posteriore testa
HBKW	Larghezza offset posteriore testa
HBL	Lunghezza offset inferiore testa
HC	Altezza effettiva del filetto
HF	Altezza funzionale
HHUB	Altezza del mozzo
HTB	Altezza del corpo
IC	Diametro del cerchio inscritto
IFS	Codice tipologia di montaggio inserto
IIC	Codice interfaccia inserto
INSL	Lunghezza inserto
KAPR	Angolo del tagliente dell' utensile
KCH	Angolo di smusso raggiato

Simboli di proprietà ISO13399	Contenuto
KRINS	Angolo principale tagliente
KWW	Larghezza cava di trascinamento
KYP	Proprietà chiavetta di trascinamento
L	Lunghezza utilizzabile
LAMS	Angolo inclinaz.
LB	Lunghezza del corpo
LBB	Larghezza rompitruciolo
LBX	Lunghezza massimo del corpo
LCCB	Foro di collegamento della profondità della barenatura
LCF	Lunghezza curvatura del truciolo
LDRED	Lunghezza ridotta del diametro del corpo
LE	Lunghezza effettiva del tagliente
LF	Lunghezza funzionale
LFA	Una dimensione su LF
LH	Lunghezza testina
LPR	Lunghezza sporgente
LS	Lunghezza stelo
LSC	Lunghezza di bloccaggio
LSCN	Lunghezza minimo di bloccaggio
LSCX	Lunghezza massima di bloccaggio
LTA	Lunghezza LTA (lunghezza da MCS a CRP)
LU	Lunghezza utilizzabile
LUX	Lunghezza massima utilizzabile
M	Dimensione m
M2	Distanza tra il cerchio inscritto nominale e lo spigolo di un inserto che ha l'angolo secondario incluso
MHA	Angolo del foro di montaggio
MHD	Distanza del foro di montaggio
MHH	Altezza del foro di montaggio
MIID	Identificazione dell'inserto master
MTP	Codice tipologia di bloccaggio
NCE	Numero taglienti
NOF	Numero eliche
NOI	Numero intercambiabilità inserto
NT	Numero denti
OAH	Altezza totale
OAL	Lunghezza totale
OAW	Larghezza totale
PDPT	Profondità profilo dell'inserto
PDX	Distanza profilo ex
PDY	Distanza profilo ey
PFS	Codice tipologia profilo
PL	Lunghezza punta
PNA	Angolo profilo inserto
PRFRAD	Raggio del profilo
PSIR	Angolo di inclinazione utensile
PSIRL	Angolo del tagliente principale di sinistra
PSIRR	Angolo del tagliente principale di destra
RAL	Angolo di scarico sinistro
RAR	Angolo di scarico destro
RCP	Proprietà angolo arrotondato
RE	Raggio di punta
REL	Raggio di punta sinistro
RER	Raggio di punta destro
RMPX	Angolo massima di rampa
RPMX	Velocità rotazionale massima
S	Spessore inserto
S1	Spessore inserto
SC	Spessore inserto totale
SDL	Lunghezza diametro a gradini
SIG	Angolo tra i taglienti

Simboli di proprietà ISO13399	Contenuto
SSC	Codice dimensione sede inserto
SX	Codice forma della sezione trasversale del codolo
TC	Classe di tolleranza inserto
TCE	Codice del tagliente
TCTR	Classe di tolleranza filetto
TD	Diametro del filetto
THFT	Tipologia forma del filetto
THL	Lunghezza filettatura
THLGTH	Lunghezza del filetto
THSC	Codice forma del portautensile
THUB	Spessore del mozzo
TP	Passo del filetto
TPI	Filetti per pollice
TPIN	Filetti per pollice minimo
TPIX	Filetti per pollice massimo
TPN	Passo minimo del filetto
TPT	Tipologia profilo del filetto
TPX	Passo massima del filetto
TQ	Momento torcente
TSYC	Tipologia profilo del filetto
TTP	Tipo di filetto
ULDR	Rapporto diametro-lunghezza utilizzabile
UST	Unità di misura
W1	Larghezza inserto inserto
WEP	Proprietà tagliente wiper
WF	Larghezza funzionale
WF2	Distanza tra il punto di taglio e la superficie di appoggio anteriore dell'utensile di tornitura
WFS	Larghezza funzionale secondaria
WT	Peso dell'articolo
ZEFF	Numero di taglienti effettivi frontali
ZEFP	Numero di taglienti effettivi periferici
ZNC	Numero di taglienti centrali
ZNF	Numero inserti montati frontali
ZNP	Numero inserti montati periferici

Elenco dei simboli di riferimento conformi a ISO13399

ISO13399 Simboli di riferimento	Contenuto
CIP	Sistema di coordinate in processo
CRP	Punto di riferimento del taglio
CSW	Sistema di coordinate dal lato del pezzo da lavorare
MCS	Sistema di coordinate del montaggio
PCS	Sistema di coordinate primario

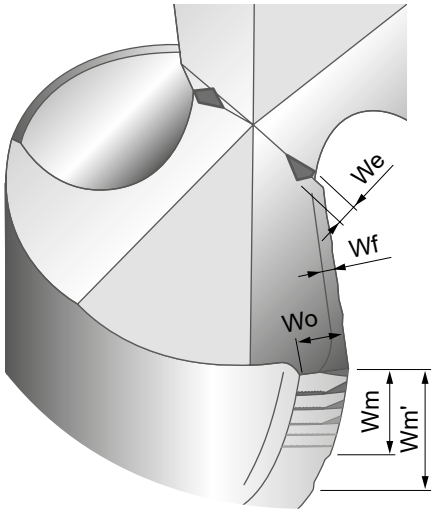
RISOLUZIONE DI PROBLEMI DI FORATURA

Problema / Soluzione / Fattori			Parametri di taglio: Velocità di taglio (Su ↗ / Giù ↘)	Parametri di taglio: Avanzamento (Su ↗ / Giù ↘)	Parametri di taglio: Avanzamento minore durante il taglio iniziale	Parametri di taglio: Avanzamento minore durante la penetrazione	Parametri di taglio: Avanzamento a fasi	Parametri di taglio: Aumentare la precisione di esecuzione del foro pilota e la profondità	Parametri di taglio: Refrigerante: Aumentare il rapporto dell'olio	Parametri di taglio: Refrigerante: Aumentare il volume	Parametri di taglio: Refrigerante: Aumentare la pressione del refrigerante	Tipo e geometria dell'utensile: Larghezza del tagliente trasversale (Su ↗ / Giù ↘)	Tipo e geometria dell'utensile: Larghezza di onatura (Su ↗ / Giù ↘)	Tipo e geometria dell'utensile: Spessore centrale (Su ↗ / Giù ↘)	Tipo e geometria dell'utensile: Ridurre la lunghezza dell'elica	Tipo e geometria dell'utensile: Ridurre l'altezza del labbro	Tipo e geometria dell'utensile: Utilizzare la punta con refrigerante interno	Tipo e geometria dell'utensile: Sostituire con una punta con assottigliamento a X	Macchina, installazione dell'utensile: Aumentare la precisione di installazione dell'utensile	Macchina, installazione dell'utensile: Ridurre lo sbalzo dell'utensile	Macchina, installazione dell'utensile: Superficie piana del pezzo da lavorare	Macchina, installazione dell'utensile: Aumentare la rigidità di bloccaggio dell'utensile	Macchina, installazione dell'utensile: Ridurre il gioco meccanico e aumentare la rigidità
Riduzione della durata della vita utensile	Rottura della punta	Rigidità della punta insufficiente												●	●								
		Parametri di taglio scorretti		● ↘																			
		Intensa deflessione del portautensili																		●			●
		La superficie del pezzo è inclinata																				●	
	Usura elevata in corrispondenza del tagliente periferico	Parametri di taglio scorretti	● ↘																				
		Aumento della temperatura nel punto di taglio							●	●								●					
		Tolleranza di concentricità insufficiente																		●			
	Rottura del tagliente periferico	Parametri di taglio scorretti		● ↘			●																
		Intensa deflessione del portautensili																		●			●
		Rumore, vibrazioni											● ↘								●	●	●
	Rottura del tagliente trasversale	Il tagliente trasversale è troppo largo										● ↘											
		Ingresso insufficiente			●																		
		Crepitii, vibrazioni											● ↘								●		●
Riduzione della qualità del foro	Il diametro del foro si ingrandisce	Rigidità della punta insufficiente												●	●								
		Geometria della punta inadeguata														●							
	Il diametro del foro si riduce	Aumento della temperatura nel punto di taglio							●	●								●					
		Parametri di taglio scorretti	● ↘																				
		Geometria della punta inadeguata														●							
	Rettilineità insufficiente	Rigidità della punta insufficiente												●	●								
		Intensa deflessione del portautensili																		●			●
		Pre-foro non corretto						●															
	Insufficiente precisione della posizione del foro, della rotondità e della qualità superficiale	Rigidità della punta insufficiente												●	●								
		Ingresso insufficiente																	●				
		Parametri di taglio scorretti			●																		
		Intensa deflessione del portautensili																		●			●
Bave	Formazione di bave in corrispondenza del foro di uscita	Geometria della punta inadeguata											● ↘										
		Parametri di taglio scorretti				●																	
Scarsa dispersione del truciolo	Trucioli lunghi	Parametri di taglio scorretti		● ↗				●															
		Scarsa evacuazione dei trucioli.								●	●			● ↘				●					
	Inceppamento dei trucioli	Parametri di taglio scorretti	● ↘	● ↘				●															
		Scarsa evacuazione dei trucioli.								●	●			● ↘				●					

USURA DELLA PUNTA E DANNI AL TAGLIENTE

■CONDIZIONI DI USURA DELLA PUNTA

La seguente tabella contiene un semplice disegno che rappresenta l'usura del tagliente di una punta. La formazione e l'entità dell'usura variano in funzione del materiale, del pezzo e delle condizioni di taglio. In generale, tuttavia, l'usura maggiore è quella periferica ed è quella che determina la durata di una punta. Durante la riaffilatura occorre asportare completamente la parte usurata sul fianco della punta. Se l'usura è elevata, occorre pertanto rimuovere una maggiore quantità di materiale per ripristinare il tagliente.



We : **Usura dei taglienti trasversali**

Wf : **Usura sul fianco (Centro del tagliente principale)**

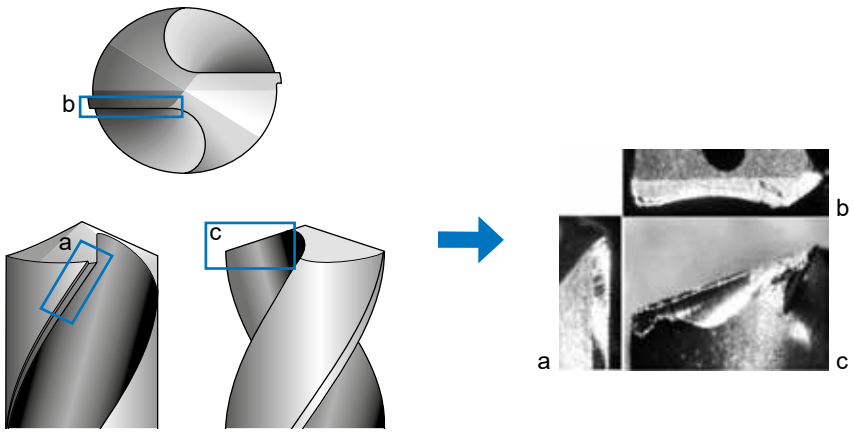
Wo : **Usura del pattino guida**

Wm : **Ampiezza di usura del margine**

Wm' : **Usura delle faccette di guida (Pattino guida)**

■DANNI AL TAGLIENTE

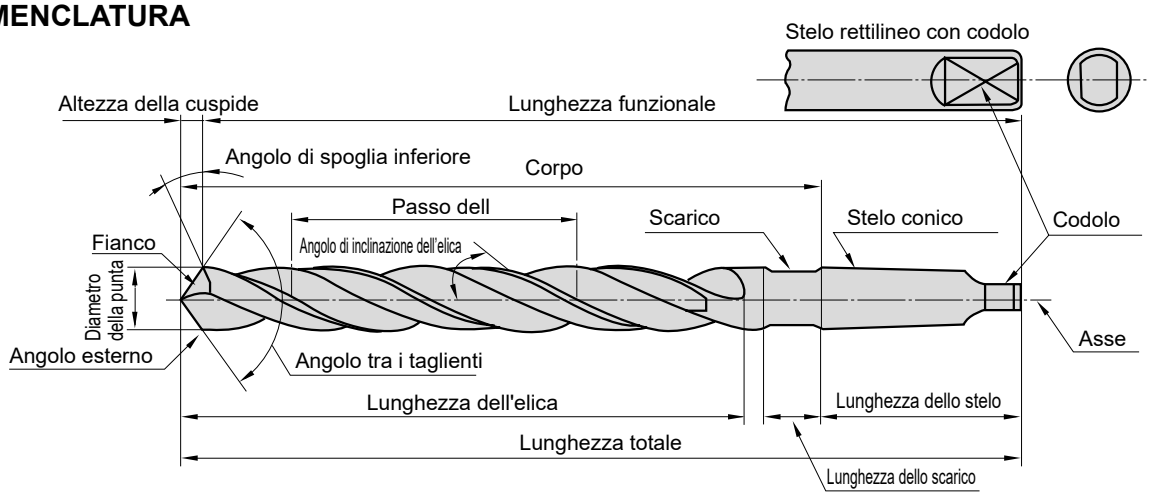
Durante la foratura il tagliente può subire fenomeni di scheggiatura, rottura e danni anomali. In questi casi è importante valutare attentamente il tipo di danno, indagare la causa e adottare opportune contromisure.

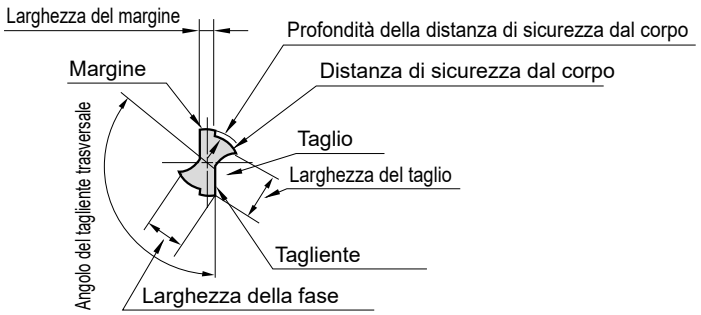


Danni al tagliente

CARATTERISTICHE E SPECIFICHE DELLE PUNTE

■NOMENCLATURA





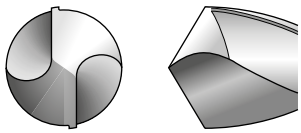
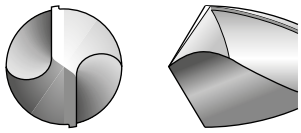
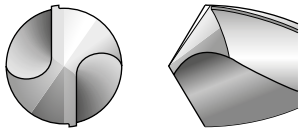
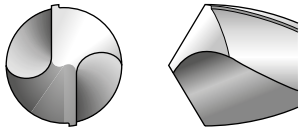
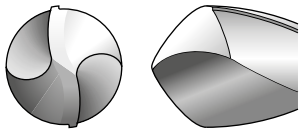
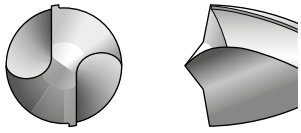
■SPECIFICHE DI FORMA E CARATTERISTICHE DI TAGLIO

Angolo di inclinazione dell'elica	E' un angolo che si genera tra l'asse di rotazione della punta e il margine primario dell'elica. L'angolo di spoglia di una punta varia a seconda della posizione del tagliente e diminuisce notevolmente man mano che la circonferenza raggiunge il centro. **Materiale a elevata durezza** **Piccolo** ◀·· **Angolo di spoglia** ··▶ **Largo** **Materiale tenero** (alluminio, ecc.)
Lunghezza dell'elica	È determinata da profondità del foro, lunghezza della boccola e tolleranza di riaffilatura. Dato che la durata di vita dell'utensile viene notevolmente influenzata, è necessario ridurla il più possibile.
Angolo tra i taglienti	Un angolo standard della punta ha il valore di 118° e deve essere modificato in base alle diverse applicazioni. **Materiale tenero di ottima lavorabilità** **Piccolo** ◀·· **Angolo tra i taglienti** ··▶ **Largo** **Per materiali duri e lavorazioni ad alta efficienza**
Spessore del nocciolo	È un elemento importante che determina la rigidità e la capacità di rompere il truciolo di una punta. Lo spessore del nocciolo è fissato a seconda delle applicazioni. Bassa resistenza al taglio Scarsa rigidità Ottime capacità di evacuazione del truciolo Materiale lavorabile **Sottile** ◀·· **Spessore del nocciolo** ··▶ **Spesso** Elevata resistenza al taglio Elevata rigidità Scarse capacità di evacuazione del truciolo Materiale di elevata durezza Foratura a foro trasversale ecc.
Margine	L'estremità della punta, definita "cuspide", ne determina il diametro e funge da guida durante l'operazione di foratura. La larghezza del margine è direttamente proporzionale all'attrito generato e alle prestazioni di guida. **Scarsa prestazione di guida** **Piccolo** ◀·· **Larghezza del margine** ··▶ **Largo** **Ottima prestazione di guida**
Conicità posteriore del diametro	Per ridurre l'attrito con la parte interna del foro, la porzione del taglio dall'estremità della punta allo stelo è leggermente conica. Il grado di conicità è in genere rappresentato dall'entità della riduzione del diametro rispetto alla lunghezza del taglio, che è di circa 0.04−0.1 mm. È impostato su un valore superiore per punte ad alta efficienza e materiali di lavoro che consentono la chiusura di fori.

■GEOMETRIA DEL TAGLIENTE E RELATIVA INFLUENZA

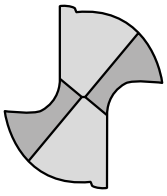
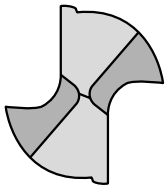
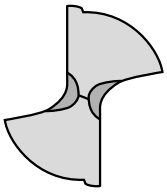
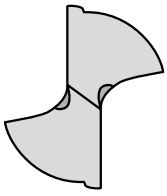
Come mostra la tabella di seguito riportata, è possibile selezionare la geometria ottimale del tagliente per diversi tipi di applicazione. Se si utilizza la geometria ottimale del tagliente si può ottenere una maggiore efficienza di lavorazione e una migliore precisione del foro.

●Forme del Tagliente

Affilatura	Forma	Proprietà e caratteristiche	Applicazione
Conico		• Il fianco è conico e l'angolo di spoglia inferiore diminuisce verso il centro della punta.	• Impiego generico
Piatto		• Il fianco è piatto. • Riaffilatura semplice	• Soprattutto per punte di piccolo diametro
Angoli a tre livelli		• Data la mancanza del tagliente trasversale, si forma un'elevata forza centripeta e un sovradimensionamento dei fori piccoli. • Richiede un'affilatrice speciale. • Affilatura dei tre taglienti	• Per operazioni di foratura che richiedono un'elevata precisione del foro e un esatto posizionamento
Punto spirale		• Per aumentare l'angolo di spoglia in prossimità del centro di foratura si combina l'affilatura conica con l'elica irregolare. • Tagliente trasversale a S con elevata forza centripeta e precisione di lavorazione	• Per operazioni di foratura che richiedono un'elevata precisione
Labbro radiale		• Il tagliente viene rettificato in senso radiale per distribuire il carico. • Elevata precisione di foratura e qualità superficiale. • Per fori passanti piccole bave sulla base • Richiede un'affilatrice speciale.	• Ghisa, Lega di alluminio • Per piastre in ghisa • Acciaio
Punta da centro		• Questa geometria presenta un angolo di taglio a due livelli che assicura un miglior centraggio e una riduzione delle forze di taglio all'uscita dal pezzo.	• Per operazioni di foratura in lamiere sottili

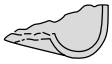
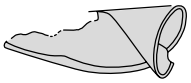
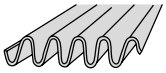
■ASSOTTIGLIAMENTO DEL NOCCIOLO

L'angolo di spoglia del tagliente di una punta si riduce verso il centro e diventa un angolo negativo in corrispondenza del tagliente trasversale. Durante la foratura, il centro della punta frantuma il pezzo da lavorare, generando il 50−70% della resistenza al taglio. L'assottigliamento del nocciolo è molto efficace nel ridurre la resistenza al taglio di una punta, rimuovere immediatamente i trucioli tagliati sul tagliente trasversale e migliorare la presa iniziale.

Forma	 **X Tipo**	 **XR Tipo**	 **S Tipo**	 **N Tipo**
Caratteristiche	Il carico di spinta si riduce sostanzialmente e migliorano le prestazioni di presa. È efficace quando il nocciolo è spesso.	Le prestazioni di presa sono leggermente inferiori a quelle del tipo X, ma il tagliente è rigido e il campo di applicazione è ampio.	Taglio semplice. Forma generalmente utilizzata.	Efficace quando il nocciolo è relativamente spesso.
Applicazioni principali	Foratura generica e foratura a foro profondo.	Foratura generica e foratura dell'acciaio inossidabile.	Foratura generica per acciaio, ghisa e metalli non ferrosi.	Foratura a foro profondo.

CARATTERISTICHE E SPECIFICHE DELLE PUNTE

■TRUCIOLI DI FORATURA

Tipi di trucioli	Forma	Caratteristiche e facilità di inclinazione
A spirale conica		I trucioli a forma di ventaglio tagliati dal tagliente vengono curvati dalla scanalatura. Trucioli di questo tipo si formano quando si lavora materiale duttile a bassi avanzamenti. Se il truciolo si rompe dopo parecchi giri, le prestazioni di inclinazione del truciolo sono soddisfacenti.
A passo lungo		I trucioli a passo lungo fuoriescono senza avvolgimento e si avvolgono facilmente attorno alla punta.
A ventaglio		Si tratta di un truciolo rotto dal taglio della punta e dalla parete di un foro trapanato. Viene generato quando la velocità di avanzamento è elevata.
A segmento		Un truciolo a spirale conica che viene rotto subito prima che il truciolo cresca in una forma a passo lungo dalla parete del foro trapanato a causa di duttilità insufficiente. Eccellente evacuazione e scarico del truciolo.
A zig-zag		Un truciolo che viene deformato e piegato a causa della forma del taglio e delle caratteristiche del materiale. Causa facilmente la compattazione del truciolo nel taglio.
Ad ago		Trucioli rotti per vibrazione o rotti quando materiale fragile viene arricciato con raggio ridotto. Le prestazioni di rottura sono relativamente soddisfacenti, ma questi trucioli possono diventare estremamente compatti.

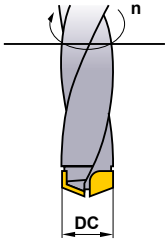
FORMULE PER FORATURA

■VELOCITÀ DI TAGLIO (Vc)

$$Vc = \frac{\pi \cdot DC \cdot n}{1000} \text{ (m/min)}$$

Vc (m/min): Velocità di taglio
π (3.14) : Pi
DC (mm) : Diametro della punta
n (min^{-1}) : Velocità del mandrino dell'asse principale

*Dividere per 1000 per trasformare da m in mm.



(Esempio) Trovare la velocità di taglio sapendo che la velocità del mandrino dell'asse principale è 1350 min^{-1} e il diametro di foratura è 12 mm.

(Risposta) Inserire π = 3.14, DC = 12, n = 1350 nella formula

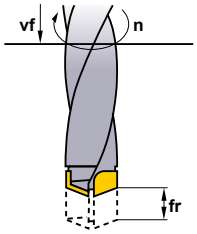
$$Vc = \frac{\pi \cdot DC \cdot n}{1000} = \frac{3.14 \times 12 \times 1350}{1000} = 50.9 \text{m/min}$$

La velocità di taglio è 50.9m/min.

■AVANZAMENTO DEL MANDRINO PRINCIPALE (Vf)

$$Vf = fr \cdot n \text{(mm/min)}$$

Vf (mm/min) : Avanzamento del mandrino (asse Z)
fr (mm/giro): Avanzamento per numero di giri
n (min^{-1}) : Velocità del mandrino dell'asse principale



(Esempio) Trovare la velocità del mandrino (Vf) sapendo che l'avanzamento per numero di giri è 0.2 mm/giro e la velocità del mandrino dell'asse principale è 1350 min^{-1}.

(Risposta) Inserire fr = 0.2, n=1350 nella formula

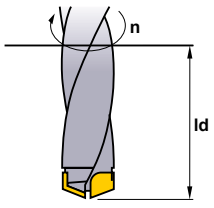
Vf = fr×n = 0.2×1350 = 270mm/min

L'avanzamento del mandrino è di 270 mm/min.

■DURATA DELLA FORATURA (Tc)

$$Tc = \frac{ld \cdot i}{n \cdot fr}$$

Tc (min) : Durata della foratura
n (min^{-1}) : Velocità del mandrino
ld (mm) : Profondità foro
fr (mm/giro): Avanzamento per numero di giri
i : Numero di fori



: Velocità di rotazione del mandrino principale

(Esempio) Trovare il tempo di foratura necessario per praticare un foro lungo 30 mm in acciaio legato sapendo che la velocità di taglio è 50 m/min e l'avanzamento è 0.15 mm/giro.

(Risposta) Velocità del mandrino $n = \frac{50 \times 1000}{15 \times 3.14} = 1061.57 \text{min}^{-1}$

$$Tc = \frac{30 \times 1}{1061.57 \times 0.15} = 0.188$$

$$= 0.188 \times 60 \fallingdotseq 11.3 \text{ sec}$$

TABELLA DI CONFRONTO FRA I MATERIALI

ACCIAIO AL CARBONIO

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
1.0038	RSt.37-2	4360 40 C	–	E 24-2 Ne	–	–	1311	STKM 12A STKM 12C	A570.36	15
1.0401	C15	080M15	–	CC12	C15, C16	F.111	1350	–	1015	15
1.0402	C22	050A20	2C	CC20	C20, C21	F.112	1450	–	1020	20
1.0715	9SMn28	230M07	1A	S250	CF9SMn28	F.2111 11SMn28	1912	SUM22	1213	Y15
1.0718	9SMnPb28	–	–	S250Pb	CF9SMnPb28	11SMnPb28	1914	SUM22L	12L13	–
1.0722	10SPb20	–	–	10PbF2	CF10Pb20	10SPb20	–	–	–	–
1.0736	9SMn36	240M07	1B	S300	CF9SMn36	12SMn35	–	–	1215	Y13
1.0737	9SMnPb36	–	–	S300Pb	CF9SMnPb36	12SMnP35	1926	–	12L14	–
1.1141	Ck15	080M15	32C	XC12	C16	C15K	1370	S15C	1015	15
1.1158	Ck25	–	–	–	–	–	–	S25C	1025	25
1.8900	StE380	4360 55 E	–	–	FeE390KG	–	2145	–	A572-60	–
1.0501	C35	060A35	–	CC35	C35	F.113	1550	–	1035	35
1.0503	C45	080M46	–	CC45	C45	F.114	1650	–	1045	45
1.0726	35S20	212M36	8M	35MF4	–	F210G	1957	–	1140	–
1.1157	40Mn4	150M36	15	35M5	–	–	–	–	1039	40Mn
1.1167	36Mn5	–	–	40M5	–	36Mn5	2120	SMn438(H)	1335	35Mn2
1.1170	28Mn6	150M28	14A	20M5	C28Mn	–	–	SCMn1	1330	30Mn
1.1183	Cf35	060A35	–	XC38TS	C36	–	1572	S35C	1035	35Mn
1.1191	Ck45	080M46	–	XC42	C45	C45K	1672	S45C	1045	Ck45
1.1213	C50	060A52	–	XC48TS	C53	–	1674	S50C	1050	50
1.0535	C55	070M55	9	–	C55	–	1655	–	1055	55
1.0601	C60	080A62	43D	CC55	C60	–	–	–	1060	60
1.1203	Ck55	070M55	–	XC55	C50	C55K	–	S55C	1055	55
1.1221	Ck60	080A62	43D	XC60	C60	–	1678	S58C	1060	60Mn
1.1274	Ck101	060A96	–	XC100	–	F.5117	1870	–	1095	–
1.1545	C105W1	BW1A	–	Y105	C36KU	F.5118	1880	SK3	W1	–
1.1545	C105W1	BW2	–	Y120	C120KU	F.515	2900	SUP4	W210	–

ACCIAIO LEGATO

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
1.0144	St.44.2	4360 43 C	–	E28-3	–	–	1412	SM400A, SM400B SM400C	A573-81	–
1.0570	St52-3	4360 50 B	–	E36-3	Fe52BFN Fe52CFN	–	2132	SM490A, SM490B SM490C	–	–
1.0841	St52-3	150M19	–	20MC5	Fe52	F.431	2172	–	5120	–
1.0904	55Si7	250A53	45	55S7	55Si8	56Si7	2085	–	9255	55Si2Mn
1.0961	60SiCr7	–	–	60SC7	60SiCr8	60SiCr8	–	–	9262	–
1.3505	100Cr6	534A99	31	100C6	100Cr6	F.131	2258	SUJ2	ASTM 52100	Gr15, 45G
1.5415	15Mo3	1501-240	–	15D3	16Mo3KW	16Mo3	2912	–	ASTM A204Gr.A	–
1.5423	16Mo5	1503-245-420	–	–	16Mo5	16Mo5	–	–	4520	–
1.5622	14Ni6	–	–	16N6	14Ni6	15Ni6	–	–	ASTM A350LF5	–
1.5662	X8Ni9	1501-509-510	–	–	X10Ni9	XBNi09	–	–	ASTM A353	–
1.5710	36NiCr6	640A35	111A	35NC6	–	–	–	SNC236	3135	–
1.5732	14NiCr10	–	–	14NC11	16NiCr11	15NiCr11	–	SNC415(H)	3415	–
1.5752	14NiCr14	655M13	36A	12NC15	–	–	–	SNC815(H)	3415, 3310	–
1.6523	21NiCrMo2	805M20	362	20NCD2	20NiCrMo2	20NiCrMo2	2506	SNCM220(H)	8620	–
1.6546	40NiCrMo22	311-Type 7	–	–	40NiCrMo2(KB)	40NiCrMo2	–	SNCM240	8740	–
1.6587	17CrNiMo6	820A16	–	18NCD6	–	14NiCrMo13	–	–	–	–
1.7015	15Cr3	523M15	–	12C3	–	–	–	SCr415(H)	5015	15Cr

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
1.7045	42Cr4	–	–	–	–	42Cr4	2245	SCr440	5140	40Cr
1.7176	55Cr3	527A60	48	55C3	–	–	–	SUP9(A)	5155	20CrMn
1.7262	15CrMo5	–	–	12CD4	–	12CrMo4	2216	SCM415(H)	–	–
1.7335	13CrMo4 4	1501-620Gr27	–	15CD3.5 15CD4.5	14CrMo45	14CrMo45	–	–	ASTM A182 F11, F12	–
1.7380	10CrMo910	1501-622 Gr31, 45	–	12CD9 12CD10	12CrMo9 12CrMo10	TU.H	2218	–	ASTM A182 F.22	–
1.7715	14MoV63	1503-660-440	–	–	–	13MoCrV6	–	–	–	–
1.8523	39CrMoV13 9	897M39	40C	–	36CrMoV12	–	–	–	–	–
1.6511	36CrNiMo4	816M40	110	40NCD3	38NiCrMo4(KB)	35NiCrMo4	–	–	9840	–
1.6582	34CrNiMo6	817M40	24	35NCD6	35NiCrMo6(KB)	–	2541	–	4340	40CrNiMoA
1.7033	34Cr4	530A32	18B	32C4	34Cr4(KB)	35Cr4	–	SCr430(H)	5132	35Cr
1.7035	41Cr4	530M40	18	42C4	41Cr4	42Cr4	–	SCr440(H)	5140	40Cr
1.7131	16MnCr5	(527M20)	–	16MC5	16MnCr5	16MnCr5	2511	–	5115	18CrMn
1.7218	25CrMo4	1717CDS110 708M20	–	25CD4	25CrMo4(KB)	55Cr3	2225	SCM420 SCM430	4130	30CrMn
1.7220	34CrMo4	708A37	19B	35CD4	35CrMo4	34CrMo4	2234	SCM432 SCCRM3	4137 4135	35CrMo
1.7223	41CrMo4	708M40	19A	42CD4TS	41CrMo4	42CrMo4	2244	SCM 440	4140 4142	40CrMoA
1.7225	42CrMo4	708M40	19A	42CD4	42CrMo4	42CrMo4	2244	SCM440(H)	4140	42CrMo 42CrMnMo
1.7361	32CrMo12	722M24	40B	30CD12	32CrMo12	F.124.A	2240	–	–	–
1.8159	50CrV4	735A50	47	50CV4	50CrV4	51CrV4	2230	SUP10	6150	50CrVA
1.8509	41CrAlMo7	905M39	41B	40CAD6 40CAD2	41CrAlMo7	41CrAlMo7	2940	–	–	–
1.2067	100Cr6	BL3	–	Y100C6	–	100Cr6	–	–	L3	CrV, 9SiCr
1.2419	105WCr6	–	–	105WC13	100WCr6 107WCr5KU	105WCr5	2140	SKS31 SKS2, SKS3	–	CrWMo
1.2713	55NiCrMoV6	BH224/5	–	55NCDV7	–	F.520.S	–	SKT4	L6	5CrNiMo
1.5662	X8Ni9	1501-509	–	–	X10Ni9	XBNi09	–	–	ASTM A353	–
1.5680	12Ni19	–	–	Z18N5	–	–	–	–	2515	–
1.6657	14NiCrMo134	832M13	36C	–	15NiCrMo13	14NiCrMo131	–	–	–	–
1.2080	X210Cr12	BD3	–	Z200C12	X210Cr13KU X250Cr12KU	X210Cr12	–	SKD1	D3 ASTM D3	Cr12
1.2601	X153CrMoV12	BD2	–	–	X160CrMoV12	–	–	SKD11	D2	Cr12MoV
1.2363	X100CrMoV5	BA2	–	Z100CDV5	X100CrMoV5	F.5227	2260	SKD12	A2	Cr5Mo1V
1.2344	X40CrMoV51 X40CrMoV51	BH13	–	Z40CDV5	X35CrMoV05KU X40CrMoV51KU	X40CrMoV5	2242	SKD61	H13 ASTM H13	40CrMoV5
1.2436	X210CrW12	–	–	–	X215CrW121KU	X210CrW12	2312	SKD2	–	–
1.2542	45WCrV7	BS1	–	–	45WCrV8KU	45WCrSi8	2710	–	S1	–
1.2581	X30WCrV93	BH21	–	Z30WCV9	X28W09KU	X30WCrV9	–	SKD5	H21	30WCrV9
1.2601	X165CrMoV12	–	–	–	X165CrMoW12KU	X160CrMoV12	2310	–	–	–
1.2833	100V1	BW2	–	Y1105V	–	–	–	SKS43	W210	V
1.3255	S 18-1-2-5	BT4	–	Z80WKCV	X78WCo1805KU	HS18-1-1-5	–	SKH3	T4	W18Cr4VCo5
1.3355	S 18-0-1	BT1	–	Z80WCV	X75W18KU	HS18-0-1	–	SKH2	T1	–
1.3401	G-X120Mn12	Z120M12	–	Z120M12	XG120Mn12	X120MN12	–	SCMnH/1	–	–
1.4718	X45CrSi93	401S45	52	Z45CS9	X45CrSi8	F.322	–	SUH1	HW3	X45CrSi93
1.3343	S6-5-2	4959BA2	–	Z40CSD10	15NiCrMo13	–	2715	SUH3	D3	–
1.3343	S6/5/2	BM2	–	Z85WDCV	HS6-5-2-2	F.5603	2722	SKH9, SKH51	M2	–
1.3348	S 2-9-2	–	–	–	HS2-9-2	HS2-9-2	2782	–	M7	–
1.3243	S6/5/2/5	BM35	–	6-5-2-5	HS6-5-2-5	F.5613	2723	SKH55	M35	–

TABELLA DI CONFRONTO FRA I MATERIALI

■ACCIAIO INOSSIDABILE (FERRITICO, MARTENSITICO)

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
1.4000	X7Cr13	403S17	–	Z6C13	X6Cr13	F.3110	2301	SUS403	403	OCr13 1Cr12
1.4001	X7Cr14	–	–	–	–	F.8401	–	–	–	–
1.4005	X12CrS13	416S21	–	Z11CF13	X12CrS13	F.3411	2380	SUS416	416	–
1.4006	X10Cr13	410S21	56A	Z10C14	X12Cr13	F.3401	2302	SUS410	410	1Cr13
1.4016	X8Cr17	430S15	60	Z8C17	X8Cr17	F.3113	2320	SUS430	430	1Cr17
1.4027	G-X20Cr14	420C29	56B	Z20C13M	–	–	–	SCS2	–	–
1.4034	X46Cr13	420S45	56D	Z40CM Z38C13M	X40Cr14	F.3405	2304	SUS420J2	–	4Cr13
1.4003	–	405S17	–	Z8CA12	X6CrAl13	–	–	–	405	–
1.4021	–	420S37	–	Z8CA12	X20Cr13	–	2303	–	420	–
1.4057	X22CrNi17	431S29	57	Z15CNi6.02	X16CrNi16	F.3427	2321	SUS431	431	1Cr17Ni2
1.4104	X12CrMoS17	–	–	Z10CF17	X10CrS17	F.3117	2383	SUS430F	430F	Y1Cr17
1.4113	X6CrMo17	434S17	–	Z8CD17.01	X8CrMo17	–	2325	SUS434	434	1Cr17Mo
1.4313	X5CrNi134	425C11	–	Z4CND13.4M	(G)X6CrNi304	–	2385	SCS5	CA6-NM	–
1.4724	X10CrA113	403S17	–	Z10C13	X10CrA112	F.311	–	SUS405	405	OCr13Al
1.4742	X10CrA118	430S15	60	Z10CAS18	X8Cr17	F.3113	–	SUS430	430	Cr17
1.4747	X80CrNiSi20	443S65	59	Z80CSN20.02	X80CrSiNi20	F.320B	–	SUH4	HNV6	–
1.4762	X10CrA124	–	–	Z10CAS24	X16Cr26	–	2322	SUH446	446	2Cr25N
1.4871	X53CrMnNiN219	349S54	–	Z52CMN21.09	X53CrMnNiN219	–	–	SUH35	EV8	5Cr2Mn9Ni4N
1.4521	X1CrMoTi182	–	–	–	–	–	2326	–	S44400	–
1.4922	X20CrMoV12-1	–	–	–	X20CrMoNi1201	–	2317	–	–	–
1.4542	–	–	–	Z7CNU17-04	–	–	–	–	630	–

■ACCIAIO INOSSIDABILE (AUSTENITICO)

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
1.4306	X2CrNi1911	304S11	–	Z2CN18.10	X2CrNi18.11	–	2352	SUS304L	304L	OCr19Ni10
1.4350	X5CrNi189	304S11	58E	Z6CN18.09	X5CrNi1810	F.3551 F.3541 F.3504	2332	SUS304	304	OCr18Ni9
1.4305	X12CrNiS188	303S21	58M	Z10CNF18.09	X10CrNiS18.09	F.3508	2346	SUS303	303	1Cr18Ni9MoZr
–	–	304C12	–	Z3CN19.10	–	–	2333	SUS304L	–	–
1.4306	X2CrNi189	304S12	–	Z2CrNi1810	X2CrNi18.11	F.3503	2352	SCS19	304L	–
1.4310	X12CrNi177	–	–	Z12CN17.07	X12CrNi1707	F.3517	2331	SUS301	301	Cr17Ni7
1.4311	X2CrNiN1810	304S62	–	Z2CN18.10	–	–	2371	SUS304LN	304LN	–
1.4401	X5CrNiMo1810	316S16	58J	Z6CND17.11	X5CrNiMo1712	F.3543	2347	SUS316	316	0Cr17Ni11Mo2
1.4308	G-X6CrNi189	304C15	–	Z6CN18.10M	–	–	–	SCS13	–	–
1.4408	G-X6CrNiMo1810	316C16	–	–	–	F.8414	–	SCS14	–	–
1.4581	G-X5CrNiMoNb1810	318C17	–	Z4CNDNb1812M	XG8CrNiMo1811	–	–	SCS22	–	–
1.4429	X2CrNiMoN1813	–	–	Z2CND17.13	–	–	2375	SUS316LN	316LN	OCr17Ni13Mo
1.4404	–	316S13	–	Z2CND17.12	X2CrNiMo1712	–	2348	–	316L	–
1.4435	X2CrNiMo1812	316S13	–	Z2CND17.12	X2CrNiMo1712	–	2353	SCS16 SUS316L	316L	0Cr27Ni12Mo3
1.4436	–	316S13	–	Z6CND18-12-03	X8CrNiMo1713	–	2343, 2347	–	316	–
1.4438	X2CrNiMo1816	317S12	–	Z2CND19.15	X2CrNiMo1816	–	2367	SUS317L	317L	00Cr19Ni13Mo
1.4539	X1NiCrMo	–	–	Z6CNT18.10	–	–	2562	–	UNS V 0890A	–
1.4541	X10CrNiTi189	321S12	58B	Z6CNT18.10	X6CrNiTi1811	F.3553 F.3523	2337	SUS321	321	1Cr18NI9Ti
1.4550	X10CrNiNb189	347S17	58F	Z6CNNb18.10	X6CrNiNb1811	F.3552 F.3524	2338	SUS347	347	1Cr18Ni11Nb
1.4571	X10CrNiMoTi1810	320S17	58J	Z6CNDT17.12	X6CrNiMoTi1712	F.3535	2350	–	316Ti	Cr18Ni12Mo2T
1.4583	X10CrNiMoNb1812	–	–	Z6CNDNb1713B	X6CrNiMoNb1713	–	–	–	318	Cr17Ni12Mo3Mb

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
1.4828	X15CrNiSi2012	309S24	–	Z15CNS20.12	X6CrNi2520	–	–	SUH309	309	1Cr23Ni13
1.4845	X12CrNi2521	310S24	–	Z12CN2520	X6CrNi2520	F.331	2361	SUH310	310S	OCr25Ni20
1.4406	X10CrNi18.08	–	58C	Z1NCDU25.20	–	F.8414	2370	SCS17	308	–
1.4418	X4CrNiMo165	–	–	Z6CND16-04-01	–	–	–	–	–	–
1.4568 1.4504	–	316S111	–	Z8CNA17-07	X2CrNiMo1712	–	–	–	17-7PH	–
1.4563	–	–	–	Z1NCDU31-27-03 Z1CNDU20-18-06AZ	–	–	2584 2378	–	NO8028 S31254	–
1.4878	X12CrNiTi189	321S32	58B, 58C	Z6CNT18.12B	X6CrNiTi18 11	F.3523	–	SUS321	321	1Cr18Ni9Ti

■ACCIAI RESISTENTI AL CALORE

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
1.4864	X12NiCrSi3616	–	–	Z12NCS35.16	–	–	–	SUH330	330	–
1.4865	G-X40NiCrSi3818	330C11	–	–	XG50NiCr3919	–	–	SCH15	HT, HT 50	–

■GHISA GRIGIA

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
–	–	–	–	–	–	–	0100	–	–	–
–	GG 10	–	–	Ft 10 D	–	–	0110	FC100	No 20 B	–
0.6015	GG 15	Grade 150	–	Ft 15 D	G15	FG15	0115	FC150	No 25 B	HT150
0.6020	GG 20	Grade 220	–	Ft 20 D	G20	–	0120	FC200	No 30 B	HT200
0.6025	GG 25	Grade 260	–	Ft 25 D	G25	FG25	0125	FC250	No 35 B	HT250
–	–	–	–	–	–	–	–	–	No 40 B	–
0.6030	GG 30	Grade 300	–	Ft 30 D	G30	FG30	0130	FC300	No 45 B	HT300
0.6035	GG 35	Grade 350	–	Ft 35 D	G35	FG35	0135	FC350	No 50 B	HT350
0.6040	GG 40	Grade 400	–	Ft 40 D	–	–	0140	–	No 55 B	HT400
0.6660	GGL NiCr202	L-NiCuCr202	–	L-NC 202	–	–	0523	–	A436 Type 2	–

■GHISA SFEROIDALE

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
0.7040	GGG 40	SNG 420/12	–	FCS 400-12	GS 370-17	FGE 38-17	07 17-02	FCD400	60-40-18	QT400-18
–	GGG 40.3	SNG 370/17	–	FGS 370-17	–	–	07 17-12	–	–	–
0.7033	GGG 35.3	–	–	–	–	–	07 17-15	–	–	–
0.7050	GGG 50	SNG 500/7	–	FGS 500-7	GS 500	FGE 50-7	07 27-02	FCD500	80-55-06	QT500-7
0.7660	GGG NiCr202	Grade S6	–	S-NC202	–	–	07 76	–	A43D2	–
–	GGG NiMn137	L-NiMn 137	–	L-MN 137	–	–	07 72	–	–	–
–	GGG 60	SNG 600/3	–	FGS 600-3	–	–	07 32-03	FCD600	–	QT600-3
0.7070	GGG 70	SNG 700/2	–	FGS 700-2	GS 700-2	FGS 70-2	07 37-01	FCD700	100-70-03	QT700-18

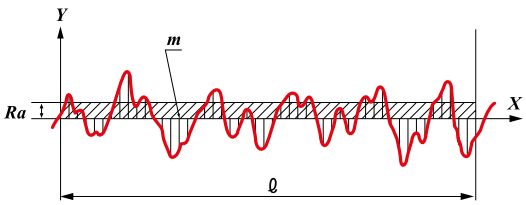
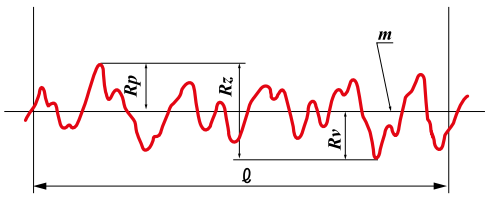
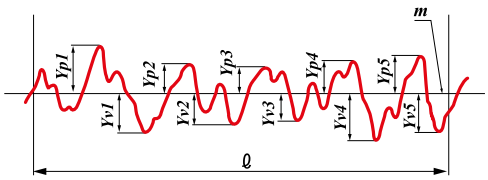
■GHISA MALLEABILE

Germania		Regno Unito		Francia	Italia	Spagna	Svezia	Giappone	USA	Cina
W-nr.	DIN	BS	EN	AFNOR	UNI	UNE	SS	JIS	AISI/SAE	GB
–	–	8 290/6	–	MN 32-8	–	–	08 14	FCMB310	–	–
–	GTS-35	B 340/12	–	MN 35-10	–	–	08 15	FCMW330	32510	–
0.8145	GTS-45	P 440/7	–	Mn 450	GMN45	–	08 52	FCMW370	40010	–
0.8155	GTS-55	P 510/4	–	MP 50-5	GMN55	–	08 54	FCMP490	50005	–
–	GTS-65	P 570/3	–	MP 60-3	–	–	08 58	FCMP540	70003	–
0.8165	GTS-65-02	P 570/3	–	Mn 650-3	GMN 65	–	08 56	FCMP590	A220-70003	–
–	GTS-70-02	P 690/2	–	Mn 700-2	GMN 70	–	08 62	FCMP690	A220-80002	–

RUGOSITÀ SUPERFICIALE

RUGOSITÀ SUPERFICIALE

(Da JIS B 0601-1994)

Tipo	Simbolo	Determinazione	Esempio di determinazione (figura)
Rugosità media aritmetica	Ra	**Ra è il valore ottenuto mediante la seguente formula ed espresso in micrometri (μm) quando si campiona la sola lunghezza di riferimento a partire dalla curva di rugosità nella direzione della linea mediana, considerando l'asse X nella direzione della linea mediana e l'asse Y nella direzione dell'ingrandimento longitudinale di questa area campionata, e la curva di rugosità è espressa da y=f(x):** $Ra=\frac{1}{\ell}\int_0^{\ell}\lvert f(x)\rvert dx$	
Altezza massima	Rz	**Rz è tale solo quando la lunghezza di riferimento viene campionata a partire dalla curva di rugosità nella direzione della linea mediana, la distanza tra la linea di picco del profilo superiore e la linea di valle del profilo inferiore sull'area campionata viene misurata nella direzione di ingrandimento longitudinale della curva di rugosità e il valore ottenuto è espresso in micrometri (μm).** **Nota)** Nel calcolo di Rz, viene selezionata come lunghezza di campionatura un'area priva di picchi eccessivamente elevati o di valli eccessivamente basse, che potrebbero essere considerati difetti. $Rz=R_P+Rv$	
Rugosità media su dieci punti	RzJIS	**RzJIS è tale solo se la lunghezza di riferimento viene campionata dalla curva di rugosità nella direzione della linea mediana, la somma del valore medio dei valori assoluti delle altezze di cinque picchi di profilo più alti (Yp) e delle profondità delle cinque valli di profilo più profonde (Yv) misurate nella direzione di ingrandimento verticale dalla linea mediana di tale area campionata, e tale somma è espressa in micrometri (μm).** $Rz_{JIS}=\frac{(Yp1+Yp2+Yp3+Yp4+Yp5)+(Yv1+Yv2+Yv3+Yv4+Yv5)}{5}$	 $Yp1, Yp2, Yp3, Yp4, Yp5$:Altezze dei cinque picchi del profilo più alti dell'area campionata corrispondenti alla lunghezza di riferimento l. $Yv1, Yv2, Yv3, Yv4, Yv5$:Altezze delle cinque valli del profilo più profonde dell'area campionata corrispondente alla lunghezza di riferimento l.

■RAPPORTO TRA MEDIA ARITMETICA (Ra) E DESIGNAZIONE CONVENZIONALE (DATI DI RIFERIMENTO)

Rugosità media aritmetica **Ra**		Rugosità Max. **Rz**	Rugosità media su dieci punti **RzJIS**	Lunghezza di campionatura per **Rz • RzJIS** l (mm)	Segno convenzionale di finitura Mark
Serie standard	Valore di asportazione λc (mm)	Serie standard			
0.012 a	0.08	0.05s	0.05z	0.08	▽▽▽▽
0.025 a	0.25	0.1 s	0.1 z		
0.05 a		0.2 s	0.2 z	0.25	
0.1 a	0.8	0.4 s	0.4 z		
0.2 a		0.8 s	0.8 z	0.8	
0.4 a		1.6 s	1.6 z		▽▽▽
0.8 a		3.2 s	3.2 z		
1.6 a		6.3 s	6.3 z		
3.2 a	2.5	12.5 s	12.5 z	2.5	▽▽
6.3 a		25 s	25 z		
12.5 a	8	50 s	50 z		▽
25 a		100 s	100 z	8	
50 a		200 s	200 z		–
100 a	–	400 s	400 z	–	

*La correlazione tra i tre valori è puramente indicativa e non è esatta.
*Ra: La lunghezza di valutazione di Rz e RzJIS è data dl valore di asportazione e dalla lunghezza di campionatura moltiplicati rispettivamente per 5.

TABELLA DI CONFRONTO DELLE DUREZZE

NUMERI DI CONVERSIONE DELLA DUREZZA DELL'ACCIAIO

Durezza Brinell (HB), 10 mm sfera,carico: 3000kgf		Durezza Vickers	Durezza Rockwell				Durezza Shore	Resistenza alla trazione (circa)
Sfera standard	Sfera carburo tungsteno		Scala graduata A, carico: 60kgf, punta di diamante	Scala graduata B, carico: 100kgf, 1/16" SFERICA	Scala graduata C, carico: 150kgf, punta di diamante	Scala graduata D, carico: 100kgf, punta di diamante		MPa
		(HV)	(HRA)	(HRB)	(HRC)	(HRD)	(HS)	
—	—	940	85.6	—	68.0	76.9	97	—
—	—	920	85.3	—	67.5	76.5	96	—
—	—	900	85.0	—	67.0	76.1	95	—
—	(767)	880	84.7	—	66.4	75.7	93	—
—	(757)	860	84.4	—	65.9	75.3	92	—
—	(745)	840	84.1	—	65.3	74.8	91	—
—	(733)	820	83.8	—	64.7	74.3	90	—
—	(722)	800	83.4	—	64.0	73.8	88	—
—	(712)	—	—	—	—	—	—	—
—	(710)	780	83.0	—	63.3	73.3	87	—
—	(698)	760	82.6	—	62.5	72.6	86	—
—	(684)	740	82.2	—	61.8	72.1	—	—
—	(682)	737	82.2	—	61.7	72.0	84	—
—	(670)	720	81.8	—	61.0	71.5	83	—
—	(656)	700	81.3	—	60.1	70.8	—	—
—	(653)	697	81.2	—	60.0	70.7	81	—
—	(647)	690	81.1	—	59.7	70.5	—	—
—	(638)	680	80.8	—	59.2	70.1	80	—
—	630	670	80.6	—	58.8	69.8	—	—
—	627	667	80.5	—	58.7	69.7	79	—
—	—	677	80.7	—	59.1	70.0	—	—
—	601	640	79.8	—	57.3	68.7	77	—
—	—	640	79.8	—	57.3	68.7	—	—
—	578	615	79.1	—	56.0	67.7	75	—
—	—	607	78.8	—	55.6	67.4	—	—
—	555	591	78.4	—	54.7	66.7	73	2055
—	—	579	78.0	—	54.0	66.1	—	2015
—	534	569	77.8	—	53.5	65.8	71	1985
—	—	533	77.1	—	52.5	65.0	—	1915
—	514	547	76.9	—	52.1	64.7	70	1890
(495)	—	539	76.7	—	51.6	64.3	—	1855
—	—	530	76.4	—	51.1	63.9	—	1825
	495	528	76.3	—	51.0	63.8	68	1820
(477)	—	516	75.9	—	50.3	63.2	—	1780
—	—	508	75.6	—	49.6	62.7	—	1740
	477	508	75.6	—	49.6	62.7	66	1740
(461)	—	495	75.1	—	48.8	61.9	—	1680
—	—	491	74.9	—	48.5	61.7	—	1670
	461	491	74.9	—	48.5	61.7	65	1670
444	—	474	74.3	—	47.2	61.0	—	1595
—	—	472	74.2	—	47.1	60.8	—	1585
—	444	472	74.2	—	47.1	60.8	63	1585

Durezza Brinell (HB), 10 mm sfera,carico: 3000kgf		Durezza Vickers	Durezza Rockwell				Durezza Shore	Resistenza alla trazione (circa)
Sfera standard	Sfera carburo tungsteno		Scala graduata A, carico: 60kgf, punta di diamante	Scala graduata B, carico: 100kgf, 1/16" SFERICA	Scala graduata C, carico: 150kgf, punta di diamante	Scala graduata D, carico: 100kgf, punta di diamante		MPa
		(HV)	(HRA)	(HRB)	(HRC)	(HRD)	(HS)	
429	429	455	73.4	—	45.7	59.7	61	1510
415	415	440	72.8	—	44.5	58.8	59	1460
401	401	425	72.0	—	43.1	57.8	58	1390
388	388	410	71.4	—	41.8	56.8	56	1330
375	375	396	70.6	—	40.4	55.7	54	1270
363	363	383	70.0	—	39.1	54.6	52	1220
352	352	372	69.3	(110.0)	37.9	53.8	51	1180
341	341	360	68.7	(109.0)	36.6	52.8	50	1130
331	331	350	68.1	(108.5)	35.5	51.9	48	1095
321	321	339	67.5	(108.0)	34.3	51.0	47	1060
311	311	328	66.9	(107.5)	33.1	50.0	46	1025
302	302	319	66.3	(107.0)	32.1	49.3	45	1005
293	293	309	65.7	(106.0)	30.9	48.3	43	970
285	285	301	65.3	(105.5)	29.9	47.6	—	950
277	277	292	64.6	(104.5)	28.8	46.7	41	925
269	269	284	64.1	(104.0)	27.6	45.9	40	895
262	262	276	63.6	(103.0)	26.6	45.0	39	875
255	255	269	63.0	(102.0)	25.4	44.2	38	850
248	248	261	62.5	(101.0)	24.2	43.2	37	825
241	241	253	61.8	100	22.8	42.0	36	800
235	235	247	61.4	99.0	21.7	41.4	35	785
229	229	241	60.8	98.2	20.5	40.5	34	765
223	223	234	—	97.3	(18.8)	—	—	—
217	217	228	—	96.4	(17.5)	—	33	725
212	212	222	—	95.5	(16.0)	—	—	705
207	207	218	—	94.6	(15.2)	—	32	690
201	201	212	—	93.8	(13.8)	—	31	675
197	197	207	—	92.8	(12.7)	—	30	655
192	192	202	—	91.9	(11.5)	—	29	640
187	187	196	—	90.7	(10.0)	—	—	620
183	183	192	—	90.0	(9.0)	—	28	615
179	179	188	—	89.0	(8.0)	—	27	600
174	174	182	—	87.8	(6.4)	—	—	585
170	170	178	—	86.8	(5.4)	—	26	570
167	167	175	—	86.0	(4.4)	—	—	560
163	163	171	—	85.0	(3.3)	—	25	545
156	156	163	—	82.9	(0.9)	—	—	525
149	149	156	—	80.8	—	—	23	505
143	143	150	—	78.7	—	—	22	490
137	137	143	—	76.4	—	—	21	460
131	131	137	—	74.0	—	—	—	450
126	126	132	—	72.0	—	—	20	435
121	121	127	—	69.8	—	—	19	415
116	116	122	—	67.6	—	—	18	400
111	111	117	—	65.7	—	—	15	385

Nota 1) Il suddetto elenco è identico a quello presente nel manuale dei metalli dell'AMS con resistenza alla trazione in valore metrico approssimativo e durezza Brinell superiore al campo raccomandato.

Nota 2) 1MPa=1N/mm^2

Nota 3) Le cifre tra parentesi ( ) sono raramente utilizzate e sono incluse per puro riferimento. L'elenco è tratto dal 'Manuale JIS - Acciaio I'.

TABELLA DELLE TOLLERANZE IDONEE(FORO)

Classificazione delle dimensioni standard (mm)		Classe della zona di tolleranza geometrica dei fori															
>	≤	B10	C9	C10	D8	D9	D10	E7	E8	E9	F6	F7	F8	G6	G7	H6	H7
—	3	+180 +140	+85 +60	+100 +60	+34 +20	+45 +20	+60 +20	+24 +14	+28 +14	+39 +14	+12 +6	+16 +6	+20 +6	+8 +2	+12 +2	+6 0	+10 0
3	6	+188 +140	+100 +70	+118 +70	+48 +30	+60 +30	+78 +30	+32 +20	+38 +20	+50 +20	+18 +10	+22 +10	+28 +10	+12 +4	+16 +4	+8 0	+12 0
6	10	+208 +150	+116 +80	+138 +80	+62 +40	+76 +40	+98 +40	+40 +25	+47 +25	+61 +25	+22 +13	+28 +13	+35 +13	+14 +5	+20 +5	+9 0	+15 0
10	14	+220 +150	+138 +95	+165 +95	+77 +50	+93 +50	+120 +50	+50 +32	+59 +32	+75 +32	+27 +16	+34 +16	+43 +16	+17 +6	+24 +6	+11 0	+18 0
14	18																
18	24	+244 +160	+162 +110	+194 +110	+98 +65	+117 +65	+149 +65	+61 +40	+73 +40	+92 +40	+33 +20	+41 +20	+53 +20	+20 +7	+28 +7	+13 0	+21 0
24	30																
30	40	+270 +170	+182 +120	+220 +120	+119	+142	+180	+75	+89	+112	+41	+50	+64	+25	+34	+16	+25
40	50	+280 +180	+192 +130	+230 +130	+80	+80	+80	+50	+50	+50	+25	+25	+25	+9	+9	0	0
50	65	+310 +190	+214 +140	+260 +140	+146	+174	+220	+90	+106	+134	+49	+60	+76	+29	+40	+19	+30
65	80	+320 +200	+224 +150	+270 +150	+100	+100	+100	+60	+60	+60	+30	+30	+30	+10	+10	0	0
80	100	+360 +220	+257 +170	+310 +170	+174	+207	+260	+107	+126	+159	+58	+71	+90	+34	+47	+22	+35
100	120	+380 +240	+267 +180	+320 +180	+120	+120	+120	+72	+72	+72	+36	+36	+36	+12	+12	0	0
120	140	+420 +260	+300 +200	+360 +200													
140	160	+440 +280	+310 +210	+370 +210	+208 +145	+245 +145	+305 +145	+125 +85	+148 +85	+185 +85	+68 +43	+83 +43	+106 +43	+39 +14	+54 +14	+25 0	+40 0
160	180	+470 +310	+330 +230	+390 +230													
180	200	+525 +340	+355 +240	+425 +240													
200	225	+565 +380	+375 +260	+445 +260	+242 +170	+285 +170	+355 +170	+146 +100	+172 +100	+215 +100	+79 +50	+96 +50	+122 +50	+44 +15	+61 +15	+29 0	+46 0
225	250	+605 +420	+395 +280	+465 +280													
250	280	+690 +480	+430 +300	+510 +300	+271	+320	+400	+162	+191	+240	+88	+108	+137	+49	+69	+32	+52
280	315	+750 +540	+460 +330	+540 +330	+190	+190	+190	+110	+110	+110	+56	+56	+56	+17	+17	0	0
315	355	+830 +600	+500 +360	+590 +360	+299	+350	+440	+182	+214	+265	+98	+119	+151	+54	+75	+36	+57
355	400	+910 +680	+540 +400	+630 +400	+210	+210	+210	+125	+125	+125	+62	+62	+62	+18	+18	0	0
400	450	+1010 +760	+595 +440	+690 +440	+327	+385	+480	+198	+232	+290	+108	+131	+165	+60	+83	+40	+63
450	500	+1090 +840	+635 +480	+730 +480	+230	+230	+230	+135	+135	+135	+68	+68	+68	+20	+20	0	0

Nota 1) I valori riportati nell'area superiore delle rispettive righe indicano la tolleranza dimensionale massima, mentre i valori riportati nell'area inferiore delle rispettive righe indicano la tolleranza dimensionale minima.

Unità : μm

Classe della zona di tolleranza geometrica dei fori																
H8	**H9**	**H10**	**JS6**	**JS7**	**K6**	**K7**	**M6**	**M7**	**N6**	**N7**	**P6**	**P7**	**R7**	**S7**	**T7**	**U7**	**X7**
+14 0	+25 0	+40 0	±3	±5	0 −6	0 −10	−2 −8	−2 −12	−4 −10	−4 −14	−6 −12	−6 −16	−10 −20	−14 −24	—	−18 −28	−20 −30
+18 0	+30 0	+48 0	±4	±6	+2 −6	+3 −9	−1 −9	0 −12	−5 −13	−4 −16	−9 −17	−8 −20	−11 −23	−15 −27	—	−19 −31	−24 −36
+22 0	+36 0	+58 0	±4.5	±7	+2 −7	+5 −10	−3 −12	0 −15	−7 −16	−4 −19	−12 −21	−9 −24	−13 −28	−17 −32	—	−22 −37	−28 −43
+27 0	+43 0	+70 0	±5.5	±9	+2 −9	+6 −12	−4 −15	0 −18	−9 −20	−5 −23	−15 −26	−11 −29	−16 −34	−21 −39	— —	−26 −44	−33 −51 −38 −56
+33 0	+52 0	+84 0	±6.5	±10	+2 −11	+6 −15	−4 −17	0 −21	−11 −24	−7 −28	−18 −31	−14 −35	−20 −41	−27 −48	— −33 −54	−33 −54 −40 −61	−46 −67 −56 −77
+39 0	+62 0	+100 0	±8	±12	+3 −13	+7 −18	−4 −20	0 −25	−12 −28	−8 −33	−21 −37	−17 −42	−25 −50	−34 −59	−39 −64 −45 −70	−51 −76 −61 −86	—
+46 0	+74 0	+120 0	±9.5	±15	+4 −15	+9 −21	−5 −24	0 −30	−14 −33	−9 −39	−26 −45	−21 −51	−30 −60 −32 −62	−42 −72 −48 −78	−55 −85 −64 −94	−76 −106 −91 −121	—
+54 0	+87 0	+140 0	±11	±17	+4 −18	+10 −25	−6 −28	0 −35	−16 −38	−10 −45	−30 −52	−24 −59	−38 −73 −41 −76	−58 −93 −66 −101	−78 −113 −91 −126	−111 −146 −131 −166	—
+63 0	+100 0	+160 0	±12.5	±20	+4 −21	+12 −28	−8 −33	0 −40	−20 −45	−12 −52	−36 −61	−28 −68	−48 −88 −50 −90 −53 −93	−77 −117 −85 −125 −93 −133	−107 −147 −119 −159 −131 −171	—	—
+72 0	+115 0	+185 0	±14.5	±23	+5 −24	+13 −33	−8 −37	0 −46	−22 −51	−14 −60	−41 −70	−33 −79	−60 −106 −63 −109 −67 −113	−105 −151 −113 −159 −123 −169	—	—	—
+81 0	+130 0	+210 0	±16	±26	+5 −27	+16 −36	−9 −41	0 −52	−25 −57	−14 −66	−47 −79	−36 −88	−74 −126 −78 −130	—	—	—	—
+89 0	+140 0	+230 0	±18	±28	+7 −29	+17 −40	−10 −46	0 −57	−26 −62	−16 −73	−51 −87	−41 −98	−87 −144 −93 −150	—	—	—	—
+97 0	+155 0	+250 0	±20	±31	+8 −32	+18 −45	−10 −50	0 −63	−27 −67	−17 −80	−55 −95	−45 −108	−103 −166 −109 −172	—	—	—	—

TABELLA DELLE TOLLERANZE IDONEE(ALBERO)

Classificazione delle dimensioni standard (mm)		Classe della zona di tolleranza geometrica degli alberi														
>	≤	b9	c9	d8	d9	e7	e8	e9	f6	f7	f8	g5	g6	h5	h6	h7
—	3	−140 −165	−60 −85	−20 −34	−20 −45	−14 −24	−14 −28	−14 −39	−6 −12	−6 −16	−6 −20	−2 −6	−2 −8	0 −4	0 −6	0 −10
3	6	−140 −170	−70 −100	−30 −48	−30 −60	−20 −32	−20 −38	−20 −50	−10 −18	−10 −22	−10 −28	−4 −9	−4 −12	0 −5	0 −8	0 −12
6	10	−150 −186	−80 −116	−40 −62	−40 −76	−25 −40	−25 −47	−25 −61	−13 −22	−13 −28	−13 −35	−5 −11	−5 −14	0 −6	0 −9	0 −15
10	14	−150 −193	−95 −138	−50 −77	−50 −93	−32 −50	−32 −59	−32 −75	−16 −27	−16 −34	−16 −43	−6 −14	−6 −17	0 −8	0 −11	0 −18
14	18															
18	24	−160 −212	−110 −162	−65 −98	−65 −117	−40 −61	−40 −73	−40 −92	−20 −33	−20 −41	−20 −53	−7 −16	−7 −20	0 −9	0 −13	0 −21
24	30															
30	40	−170 −232	−120 −182	−80 −119	−80 −142	−50 −75	−50 −89	−50 −112	−25 −41	−25 −50	−25 −64	−9 −20	−9 −25	0 −11	0 −16	0 −25
40	50	−180 −242	−130 −192													
50	65	−190 −264	−140 −214	−100 −146	−100 −174	−60 −90	−60 −106	−60 −134	−30 −49	−30 −60	−30 −76	−10 −23	−10 −29	0 −13	0 −19	0 −30
65	80	−200 −274	−150 −224													
80	100	−220 −307	−170 −257	−120 −174	−120 −207	−72 −107	−72 −126	−72 −159	−36 −58	−36 −71	−36 −90	−12 −27	−12 −34	0 −15	0 −22	0 −35
100	120	−240 −327	−180 −267													
120	140	−260 −360	−200 −300	−145 −208	−145 −245	−85 −125	−85 −148	−85 −185	−43 −68	−43 −83	−43 −106	−14 −32	−14 −39	0 −18	0 −25	0 −40
140	160	−280 −380	−210 −310													
160	180	−310 −410	−230 −330													
180	200	−340 −455	−240 −355	−170 −242	−170 −285	−100 −146	−100 −172	−100 −215	−50 −79	−50 −96	−50 −122	−15 −35	−15 −44	0 −20	0 −29	0 −46
200	225	−380 −495	−260 −375													
225	250	−420 −535	−280 −395													
250	280	−480 −610	−300 −430	−190 −271	−190 −320	−110 −162	−110 −191	−110 −240	−56 −88	−56 −108	−56 −137	−17 −40	−17 −49	0 −23	0 −32	0 −52
280	315	−540 −670	−330 −460													
315	355	−600 −740	−360 −500	−210 −299	−210 −350	−125 −182	−125 −214	−125 −265	−62 −98	−62 −119	−62 −151	−18 −43	−18 −54	0 −25	0 −36	0 −57
355	400	−680 −820	−400 −540													
400	450	−760 −915	−440 −595	−230 −327	−230 −385	−135 −198	−135 −232	−135 −290	−68 −108	−68 −131	−68 −165	−20 −47	−20 −60	0 −27	0 −40	0 −63
450	500	−840 −995	−480 −635													

Nota 1) I valori riportati nell'area superiore delle rispettive righe indicano la tolleranza dimensionale massima, mentre i valori riportati nell'area inferiore delle rispettive righe indicano la tolleranza dimensionale minima.

Unità : μm

Classe della zona di tolleranza geometrica degli alberi															
h8	**h9**	**js5**	**js6**	**js7**	**k5**	**k6**	**m5**	**m6**	**n6**	**p6**	**r6**	**s6**	**t6**	**u6**	**x6**
0 −14	0 −25	±2	±3	±5	+4 0	+6 0	+6 +2	+8 +2	+10 +4	+12 +6	+16 +10	+20 +14	—	+24 +18	+26 +20
0 −18	0 −30	±2.5	±4	±6	+6 +1	+9 +1	+9 +4	+12 +4	+16 +8	+20 +12	+23 +15	+27 +19	—	+31 +23	+36 +28
0 −22	0 −36	±3	±4.5	±7	+7 +1	+10 +1	+12 +6	+15 +6	+19 +10	+24 +15	+28 +19	+32 +23	—	+37 +28	+43 +34
0 −27	0 −43	±4	±5.5	±9	+9 +1	+12 +1	+15 +7	+18 +7	+23 +12	+29 +18	+34 +23	+39 +28	—	+44 +33	+51 +40 +56 +45
0 −33	0 −52	±4.5	±6.5	±10	+11 +2	+15 +2	+17 +8	+21 +8	+28 +15	+35 +22	+41 +28	+48 +35	— +54 +41	+54 +41 +61 +48	+67 +54 +77 +64
0 −39	0 −62	±5.5	±8	±12	+13 +2	+18 +2	+20 +9	+25 +9	+33 +17	+42 +26	+50 +34	+59 +43	+64 +48 +70 +54	+76 +60 +86 +70	—
0 −46	0 −74	±6.5	±9.5	±15	+15 +2	+21 +2	+24 +11	+30 +11	+39 +20	+51 +32	+60 +41 +62 +43	+72 +53 +78 +59	+85 +66 +94 +75	+106 +87 +121 +102	—
0 −54	0 −87	±7.5	±11	±17	+18 +3	+25 +3	+28 +13	+35 +13	+45 +23	+59 +37	+73 +51 +76 +54	+93 +71 +101 +79	+113 +91 +126 +104	+146 +124 +166 +144	—
0 −63	0 −100	±9	±12.5	±20	+21 +3	+28 +3	+33 +15	+40 +15	+52 +27	+68 +43	+88 +63 +90 +65 +93 +68	+117 +92 +125 +100 +133 +108	+147 +122 +159 +134 +171 +146	—	—
0 −72	0 −115	±10	±14.5	±23	+24 +4	+33 +4	+37 +17	+46 +17	+60 +31	+79 +50	+106 +77 +109 +80 +113 +84	+151 +122 +159 +130 +169 +140	—	—	—
0 −81	0 −130	±11.5	±16	±26	+27 +4	+36 +4	+43 +20	+52 +20	+66 +34	+88 +56	+126 +94 +130 +98	—	—	—	—
0 −89	0 −140	±12.5	±18	±28	+29 +4	+40 +4	+46 +21	+57 +21	+73 +37	+98 +62	+144 +108 +150 +114	—	—	—	—
0 −97	0 −155	±13.5	±20	±31	+32 +5	+45 +5	+50 +23	+63 +23	+80 +40	+108 +68	+166 +126 +172 +132	—	—	—	—

DIAMETRI DELLE PUNTE PER MASCHIATURA

●Filetto a vite metrica grossa

Nominale	Diametro della punta	
	HSS	Metallo duro
M1 ×0.25	0.75	0.75
M1.1×0.25	0.85	0.85
M1.2×0.25	0.95	0.95
M1.4×0.3	1.10	1.10
M1.6×0.35	1.25	1.30
M1.7×0.35	1.35	1.40
M1.8×0.35	1.45	1.50
M2 ×0.4	1.60	1.65
M2.2×0.45	1.75	1.80
M2.3×0.4	1.90	1.95
M2.5×0.45	2.10	2.15
M2.6×0.45	2.15	2.20
M3 ×0.5	2.50	2.55
M3.5×0.6	2.90	2.95
M4 ×0.7	3.3	3.4
M4.5×0.75	3.8	3.9
M5 ×0.8	4.2	4.3
M6 ×1.0	5.0	5.1
M7 ×1.0	6.0	6.1
M8 ×1.25	6.8	6.9
M9 ×1.25	7.8	7.9
M10 ×1.5	8.5	8.7
M11 ×1.5	9.5	9.7
M12 ×1.75	10.3	10.5
M14 ×2.0	12.0	12.2
M16 ×2.0	14.0	14.2
M18 ×2.5	15.5	15.7
M20 ×2.5	17.5	17.7
M22 ×2.5	19.5	19.7
M24 ×3.0	21.0	—
M27 ×3.0	24.0	—
M30 ×3.5	26.5	—
M33 ×3.5	29.5	—
M36 ×4.0	32.0	—
M39 ×4.0	35.0	—
M42 ×4.5	37.5	—
M45 ×4.5	40.5	—
M48 ×5.0	43.0	—

●Filetto per vite metrica fine

Nominale	Diametro della punta	
	HSS	Metallo duro
M1 ×0.2	0.80	0.80
M1.1×0.2	0.90	0.90
M1.2×0.2	1.00	1.00
M1.4×0.2	1.20	1.20
M1.6×0.2	1.40	1.40
M1.8×0.2	1.60	1.60
M2 ×0.25	1.75	1.75
M2.2×0.25	1.95	2.00
M2.5×0.35	2.20	2.20
M3 ×0.35	2.70	2.70
M3.5×0.35	3.20	3.20
M4 ×0.5	3.50	3.55
M4.5×0.5	4.00	4.05
M5 ×0.5	4.50	4.55
M5.5×0.5	5.00	5.05
M6 ×0.75	5.30	5.35
M7 ×0.75	6.30	6.35
M8 ×1.0	7.00	7.10
M8 ×0.75	7.30	7.35
M9 ×1.0	8.00	8.10
M9 ×0.75	8.30	8.35
M10 ×1.25	8.80	8.90
M10 ×1.0	9.00	9.10
M10 ×0.75	9.30	9.35
M11 ×1.0	10.0	10.1
M11 ×0.75	10.3	10.3
M12 ×1.5	10.5	10.7
M12 ×1.25	10.8	10.9
M12 ×1.0	11.0	11.1
M14 ×1.5	12.5	12.7
M14 ×1.0	13.0	13.1
M15 ×1.5	13.5	13.7
M15 ×1.0	14.0	14.1
M16 ×1.5	14.5	14.7
M16 ×1.0	15.0	15.1
M17 ×1.5	15.5	15.7
M17 ×1.0	16.0	16.1
M18 ×2.0	16.0	16.3
M18 ×1.5	16.5	16.7
M18 ×1.0	17.0	17.1

Nominale	Diametro della punta	
	HSS	Metallo duro
M20 ×2.0	18.0	18.3
M20 ×1.5	18.5	18.7
M20 ×1.0	19.0	19.1
M22 ×2.0	20.0	—
M22 ×1.5	20.5	—
M22 ×1.0	21.0	—
M24 ×2.0	22.0	—
M24 ×1.5	22.5	—
M24 ×1.0	23.0	—
M25 ×2.0	23.0	—
M25 ×1.5	23.5	—
M25 ×1.0	24.0	—
M26 ×1.5	24.5	—
M27 ×2.0	25.0	—
M27 ×1.5	25.5	—
M27 ×1.0	26.0	—
M28 ×2.0	26.0	—
M28 ×1.5	26.5	—
M28 ×1.0	27.0	—
M30 ×3.0	27.0	—
M30 ×2.0	28.0	—
M30 ×1.5	28.5	—
M30 ×1.0	29.0	—
M32 ×2.0	30.0	—
M32 ×1.5	30.5	—
M33 ×3.0	30.0	—
M33 ×2.0	31.0	—
M33 ×1.5	31.5	—
M35 ×1.5	33.5	—
M36 ×3.0	33.0	—
M36 ×2.0	34.0	—
M36 ×1.5	34.5	—
M38 ×1.5	36.5	—
M39 ×3.0	36.0	—
M39 ×2.0	37.0	—
M39 ×1.5	37.5	—
M40 ×3.0	37.0	—
M40 ×2.0	38.0	—
M40 ×1.5	38.5	—
M42 ×4.0	38.0	—

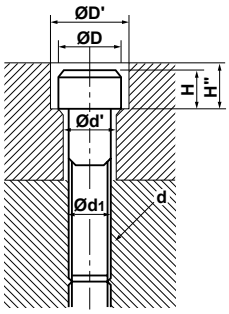
Nominale	Diametro della punta	
	HSS	Metallo duro
M42 ×3.0	39.0	—
M42 ×2.0	40.0	—
M42 ×1.5	40.5	—
M45 ×4.0	41.0	—
M45 ×3.0	42.0	—
M45 ×2.0	43.0	—
M45 ×1.5	43.5	—
M48 ×4.0	44.0	—
M48 ×3.0	45.0	—
M48 ×2.0	46.0	—
M48 ×1.5	46.5	—
M50 ×3.0	47.0	—
M50 ×2.0	48.0	—
M50 ×1.5	48.5	—

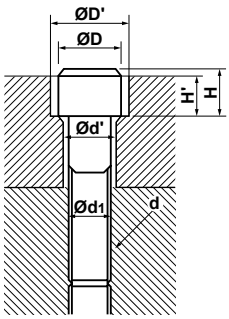
Nota 1) È opportuno misurare le dimensioni del foro, dato che la precisione di un foro trapanato può variare a seconda dei parametri di foratura. Qualora ritenuto non idoneo per un foro di spillatura, è necessario correggere opportunamente il diametro della punta.

DIMENSIONE DEL FORO PER BULLONE A TESTA ESAGONALE INCASSATA

DIMENSIONI DI CONTROFORATURA PER FORO PER VITE O BULLONE A TESTA ESAGONALE INCASSATA Unità : mm

Dimensioni nominali del filetto d	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
d_1	3	4	5	6	8	10	12	14	16	18	20	22	24	27	30
d'	3.4	4.5	5.5	6.6	9	11	14	16	18	20	22	24	26	30	33
D	5.5	7	8.5	10	13	16	18	21	24	27	30	33	36	40	45
D'	6.5	8	9.5	11	14	17.5	20	23	26	29	32	35	39	43	48
H	3	4	5	6	8	10	12	14	16	18	20	22	24	27	30
H'	2.7	3.6	4.6	5.5	7.4	9.2	11	12.8	14.5	16.5	18.5	20.5	22.5	25	28
H"	3.3	4.4	5.4	6.5	8.6	10.8	13	15.2	17.5	19.5	21.5	23.5	25.5	29	32





SISTEMA DI UNITÀ DI MISURA INTERNAZIONALI

■TABELLA DI CONVERSIONE UNITARIA PER SEMPLICE MODIFICA IN UNITÀ SI
(In grassetto sono indicate le unità di misura nel sitema internazionale (SI))

●Pressione

Pa	**kPa**	**MPa**	bar	kgf/cm^2	atm	mmH$_2$O	mmHg o Torr
1	1×10^{-3}	1×10^{-6}	1×10^{-5}	1.01972×10^{-5}	9.86923×10^{-6}	1.01972×10^{-1}	7.50062×10^{-3}
1×10^{3}	1	1×10^{-3}	1×10^{-2}	1.01972×10^{-2}	9.86923×10^{-3}	1.01972×10^{2}	7.50062
1×10^{6}	1×10^{3}	1	1×10	1.01972×10	9.86923	1.01972×10^{5}	7.50062×10^{3}
1×10^{5}	1×10^{2}	1×10^{-1}	1	1.01972	9.86923×10^{-1}	1.01972×10^{4}	7.50062×10^{2}
9.80665×10^{4}	9.80665×10	9.80665×10^{-2}	9.80665×10^{-1}	1	9.67841×10^{-1}	1×10^{4}	7.35559×10^{2}
1.01325×10^{5}	1.01325×10^{2}	1.01325×10^{-1}	1.01325	1.03323	1	1.03323×10^{4}	7.60000×10^{2}
9.80665	9.80665×10^{-3}	9.80665×10^{-6}	9.80665×10^{-5}	1×10^{-4}	9.67841×10^{-5}	1	7.35559×10^{-2}
1.33322×10^{2}	1.33322×10^{-1}	1.33322×10^{-4}	1.33322×10^{-3}	1.35951×10^{-3}	1.31579×10^{-3}	1.35951×10	1

Nota 1) 1Pa=1N/m^2

●Forza

N	dyn	kgf
1	1×10^{5}	1.01972×10^{-1}
1×10^{-5}	1	1.01972×10^{-6}
9.80665	9.80665×10^{5}	1

●Sollecitazione

Pa	**MPa** or **N/mm^2**	kgf/mm^2	kgf/cm^2
1	1×10^{-6}	1.01972×10^{-7}	1.01972×10^{-5}
1×10^{6}	1	1.01972×10^{-1}	1.01972×10
9.80665×10^{6}	9.80665	1	1×10^{2}
9.80665×10^{4}	9.80665×10^{-2}	1×10^{-2}	1

Nota 1) 1Pa=1N/m^2

●Lavoro / Energia / Quantità di calore

J	kW•h	kgf•m	kcal
1	2.77778×10^{-7}	1.01972×10^{-1}	2.38889×10^{-4}
3.600×10^{6}	1	3.67098×10^{5}	8.6000×10^{2}
9.80665	2.72407×10^{-6}	1	2.34270×10^{-3}
4.18605×10^{3}	1.16279×10^{-3}	4.26858×10^{2}	1

Nota 1) 1J=1W•s, 1J=1N•m
1cal=4.18605J
(Per la legge dei pesi e delle misure)

●Potenza (velocità di produzione / forza motrice) / velocità del flusso di calore

W	kgf•m/s	PS	kcal/h
1	1.01972×10^{-1}	1.35962×10^{-3}	8.6000×10^{-1}
9.80665	1	1.33333×10^{-2}	8.43371
7.355×10^{2}	7.5×10	1	6.32529×10^{2}
1.16279	1.18572×10^{-1}	1.58095×10^{-3}	1

Nota 1) 1W=1J/s, PS:Cavalli vapore francesi
1PS=0.7355kW
1cal=4.18605J
(Per la legge dei pesi e delle misure)

INDICE

INDICE PER CODICE DI ORDINAZIONE

A 2
B 2
C 2
D 2
F 2
G 2
H 2
J 2
K 2
L 2
M 3
N 3
P 3
R 3
S 3
T 3
V 4
W 4



INDICE PER CODICE DI ORDINAZIONE

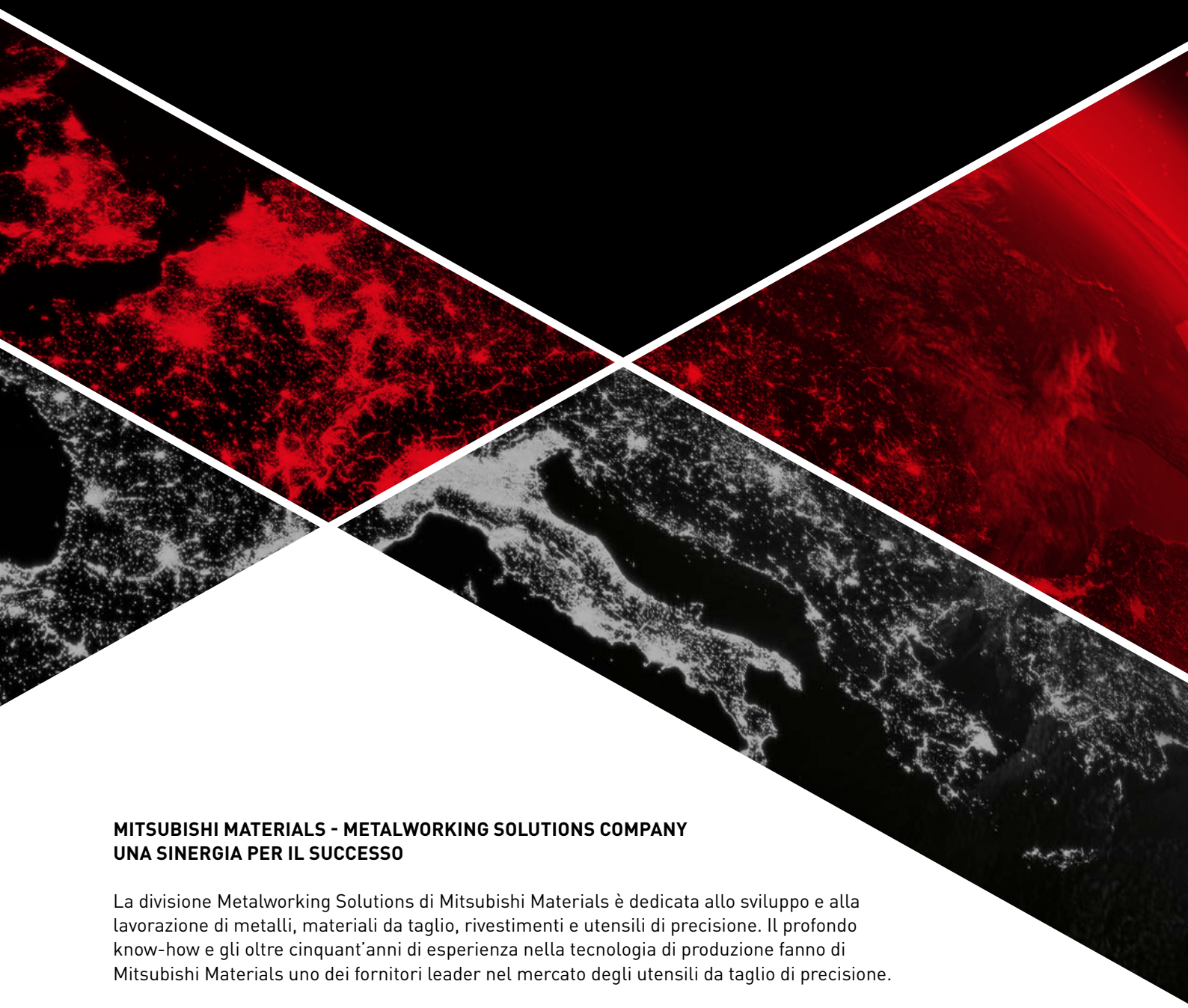
Codice di ordinazione	Nome prodotto	Pagina
A		
AJS○○○○T○○	Vite di fissaggio	N003
AMS○	Staffa di fissaggio	N014
B		
BCP○○○	Spina dello spessore	N013
BOES101	Grano di registrazione	N008
BRS○○○	Vite di fissaggio	N003
C		
CA○○○	Staffa di fissaggio	N014
CBS○○	Piastrina rompitruciolo	N016
CBT○○	Piastrina rompitruciolo	N016
CCK○○	Staffa di fissaggio	N014
CCP○○	Perno dello spessore	N013
CCTC1	Staffa di fissaggio	N014
CK○○○	Staffa di fissaggio	N014
CKW6	Staffa di fissaggio	N015
CSF401260T	Vite di fissaggio	N003
CS○○○T	Vite di fissaggio	N003
CS○○○○○○T	Vite di fissaggio	N003
CS○○○○○○○T	Vite di fissaggio	N003
D		
DCK○○○○	Staffa di fissaggio	N015
DCSVN32	Spessore	N010
DC○○○○T	Vite di fissaggio	N003
DFAS	Punta DFAS	M020–M022
DKS○	Vite di fissaggio	N003
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