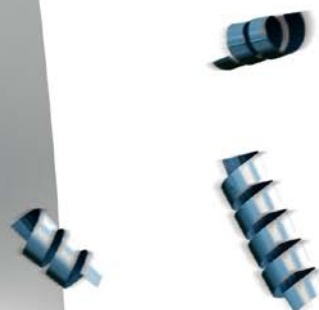
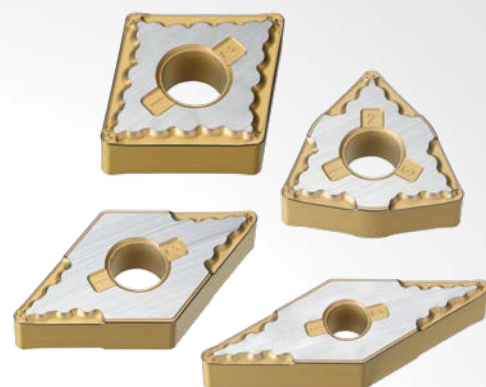
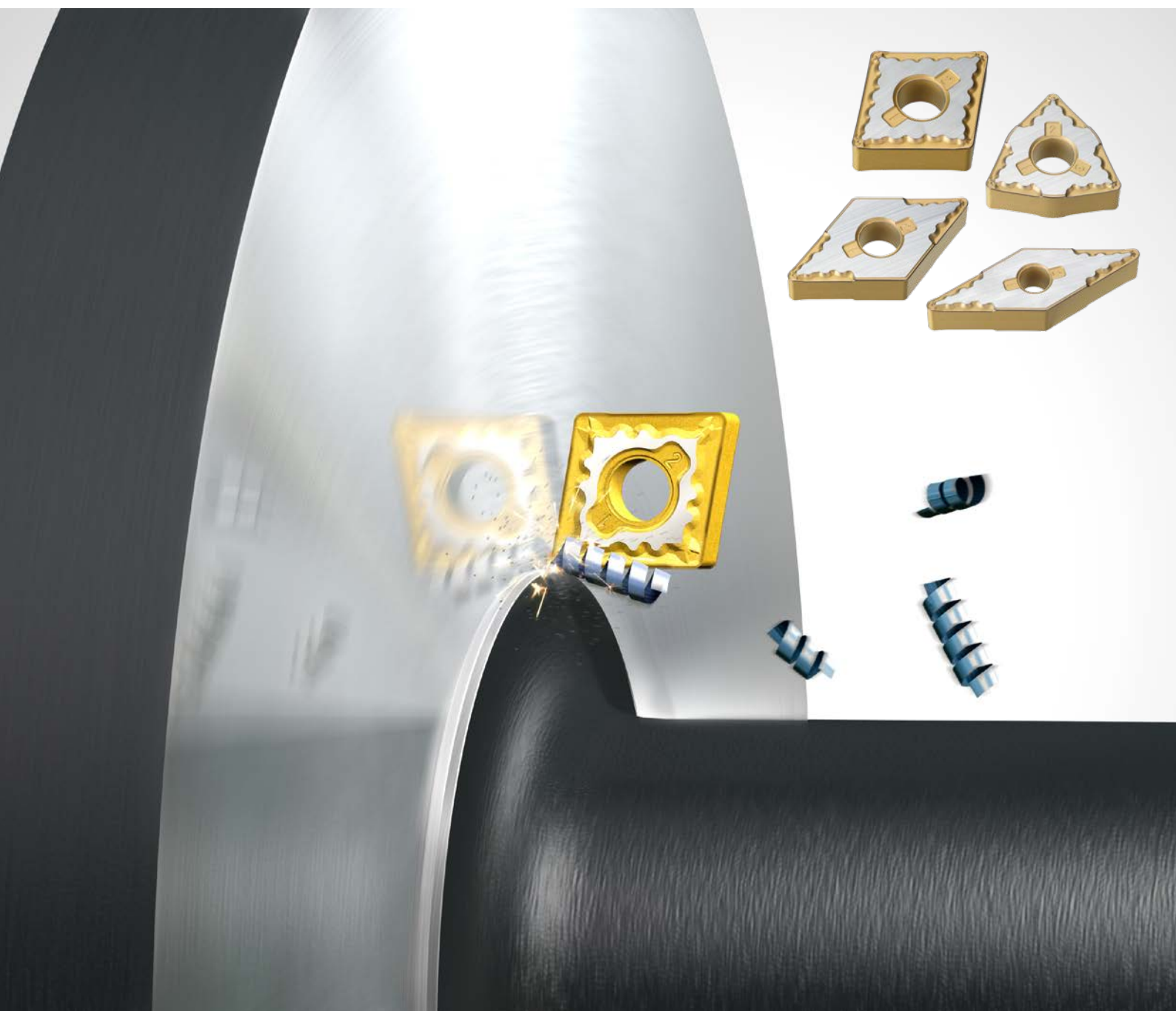


# SÉRIE MC6100

NUANCES DE TOURNAGE ACIER CVD  
POUR L'USINAGE À HAUTE VITESSE



# SÉRIE MC6100

## NUANCES DE TOURNAGE ACIER CVD

Résistance à l'usure et à l'écaillage améliorées par des revêtements de dernière génération.

### MC6115

P10 – Pour le tournage à grande vitesse



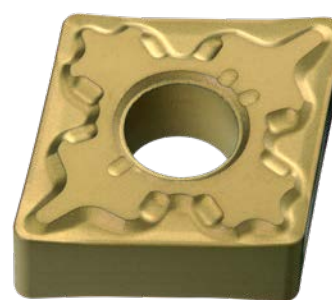
### MC6125

P20 – Nuance polyvalente



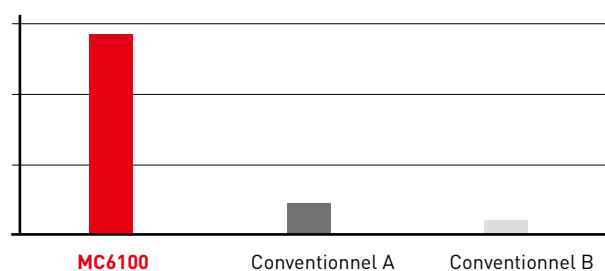
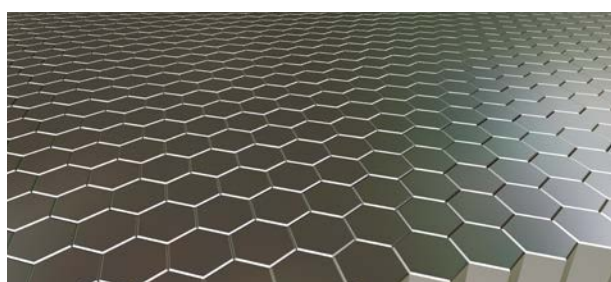
### MC6135

P30 – Pour le tournage au choc



### „SUPER“ NANO TEXTURE

La technologie de nano-texturation standard a été grandement améliorée, le revêtement  $\text{Al}_2\text{O}_3$  Mitsubishi Materials est la nouvelle référence du marché. La durée de vie est augmentée de manière significative grâce à la finesse et à l'orientation des cristaux de revêtement.



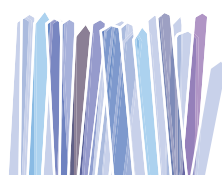
Teneur en grains d' $\text{Al}_2\text{O}_3$  avec la même orientation

### ORIENTATION CRISTALLINE (Représentation graphique)



Plaquettes CVD conventionnelles

La taille et l'orientation des grains sont inégales.



Nano-revêtement

L'homogénéité de taille et d'orientation des grains est améliorée.



Super nano-revêtement

L'homogénéité de taille et d'orientation des grains est considérablement améliorée.

# SÉRIE MC6100

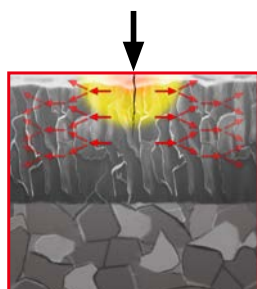
## RÉSISTANCE À L'ÉCAILLAGE

### RÉSISTANCE À L'ÉCAILLAGE RENFORCÉE

La fissuration provoquée par un usinage interrompu est évitée grâce à la réduction des contraintes de traction dans le revêtement. Dans la série MC6100, les contraintes de traction ont été réduites de 80 % par rapport aux plaquettes CVD conventionnelles.

### RÉDUCTION DE L'EFFORT DE TRACTION

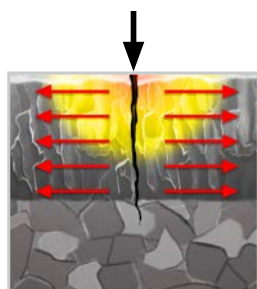
Choc pendant l'usinage



Effort de traction réduit

Série MC6100

La série MC6100 présente un niveau de contrainte beaucoup plus faible que les revêtements CVD conventionnels grâce au traitement de surface. Cela réduit l'intensité des impacts pendant l'usinage et protège la plaquette contre l'écaillage.



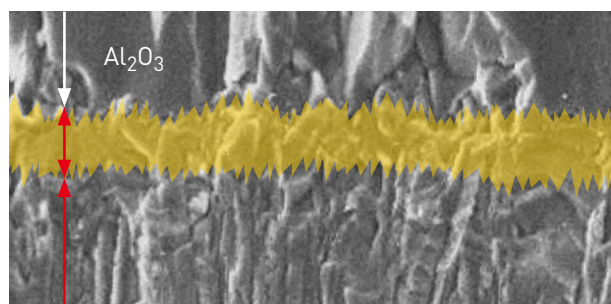
Effort de traction important

Plaquette CVD conventionnelle

Des fissures sont amorcées à la surface de la plaquette par les chocs. Elles se propagent à travers le revêtement vers le substrat en raison de l'important effort de traction dans le revêtement. Cela amène des écaillages de l'arête.

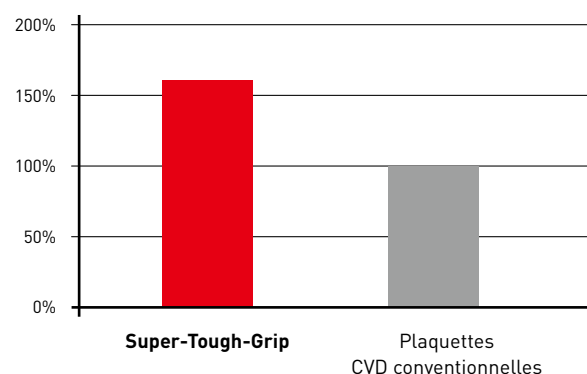
### SUPER-TOUGH-GRIP

La couche d'accroche Super Tough-GRIP est composée de cristaux fins qui renforcent l'adhésion entre les couches de revêtement.



(Représentation graphique)

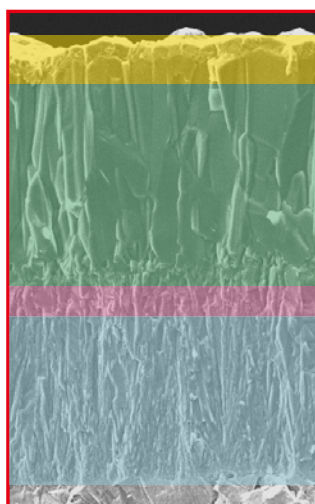
Force d'adhésion\*



\*La mesure de la force d'adhésion est obtenue par un test de quadrillage.

# MC6115

## DURÉE DE VIE ET PRODUCTIVITÉ AUGMENTÉES PAR UNE AMÉLIORATION SIGNIFICATIVE DE LA RÉSISTANCE À L'USURE ET À LA CHALEUR



### Couche extérieure dorée

Meilleure identification des arêtes utilisées.

### Couche de super nano-revêtement $Al_2O_3$

Excellente résistance à l'usure en cratère et à la chaleur.

### Super Tough-Grip

Couche d'accroche de dernière génération.

### Couche TiCN à grains fins

Grande résistance à l'usure en dépouille.

## NOUVELLE COUCHE DE REVÊTEMENT SUPÉRIEURE

La couche extérieure de MC6115 limite le collage des copeaux, améliorant ainsi la tenue de cote et l'état de surface des pièces. La couleur dorée permet d'identifier facilement les arêtes utilisées.

## EXEMPLE D'USINAGE : 20MC5

### COMPARAISON DE LA RÉSISTANCE À L'USURE

|            |               |
|------------|---------------|
| Matière    | 20MC5 170HB   |
| Plaquette  | CNMG120408-MH |
| Vc (m/min) | 200           |
| f (mm/tr)  | 0.3           |
| ap (mm)    | 1.5           |
| Arrosage   | Usinage à sec |

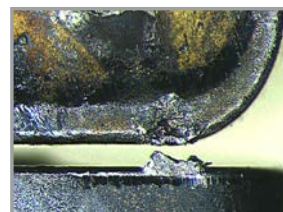
Résultats

Avec une nuance conventionnelle, le collage dégrade rapidement la plaquette. Ce type d'usure est efficacement évité avec la nuance MC6115.

### APRÈS 2 MINUTES D'USINAGE D'ACIER ALLIÉ



**MC6115**  
Brise-copeaux MH

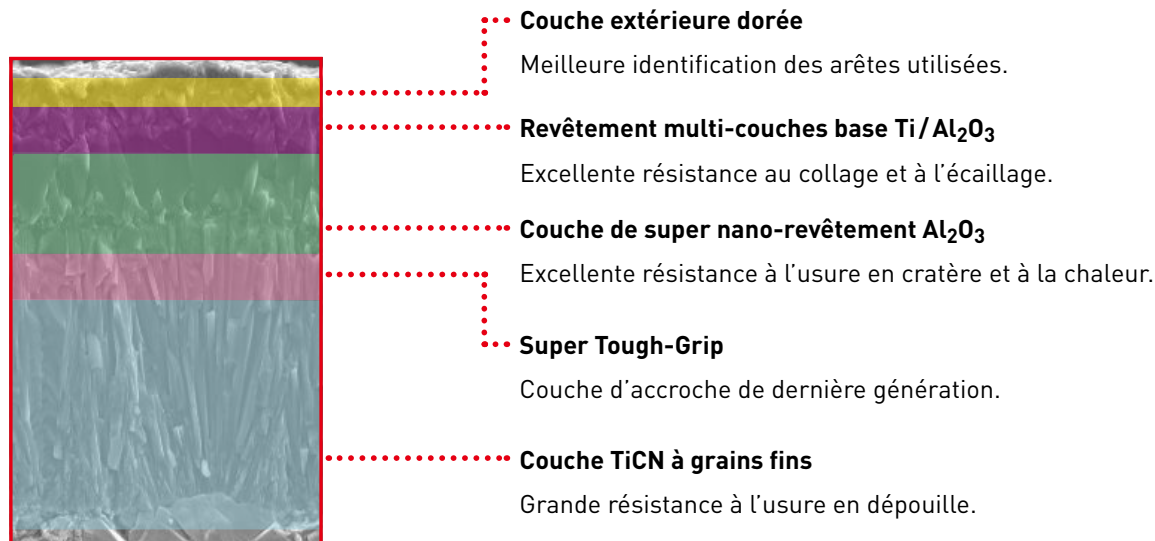


Plaquette CVD  
conventionnelle



# MC6125

## NUANCE POLYVALENTE POUR L'ACIER - AUGMENTATION DE LA DURÉE DE VIE ET PERFORMANCES STABLES SUR UNE PLUS LARGE GAMME D'APPLICATIONS



## TRAITEMENT DE SURFACE

MC6125 utilise un nouveau traitement de surface pour une résistance accrue à l'écaillage et au collage. Ce traitement permet l'utilisation de la nuance MC61125 pour une plus vaste gamme d'applications.

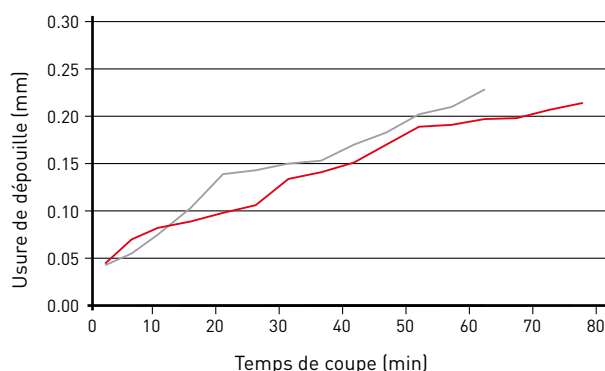
## EXEMPLE D'USINAGE : XC48

### COMPARAISON DE LA RÉSISTANCE À L'USURE

|            |               |
|------------|---------------|
| Matière    | XC48          |
| Plaquette  | CNMG120408-MH |
| Vc (m/min) | 200           |
| f (mm/tr)  | 0.3           |
| ap (mm)    | 1.5           |
| Arrosage   | Huile soluble |

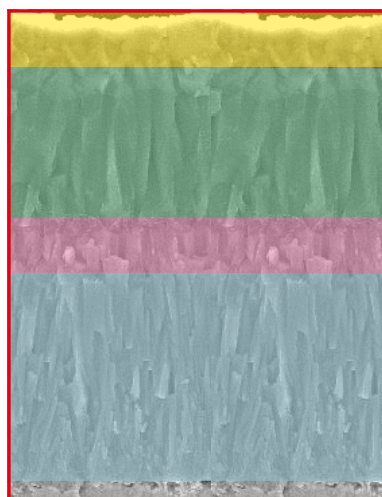
Résultats

Le traitement de surface a permis d'améliorer la stabilité et de prolonger la durée de vie de l'outil.



# MC6135

## POLYVALENCE OPTIMALE POUR LES OPÉRATIONS D'USINAGE INTERROMPU



- ..... **Couche extérieure dorée**  
Meilleure identification des arêtes utilisées.
- ..... **Couche de super nano-revêtement  $Al_2O_3$**   
Excellente résistance à l'usure en cratère et à la chaleur.
- ..... **Super Tough-Grip**  
Couche d'accroche de dernière génération.
- ..... **Couche TiCN à grains fins**  
Grande résistance à l'usure en dépouille.

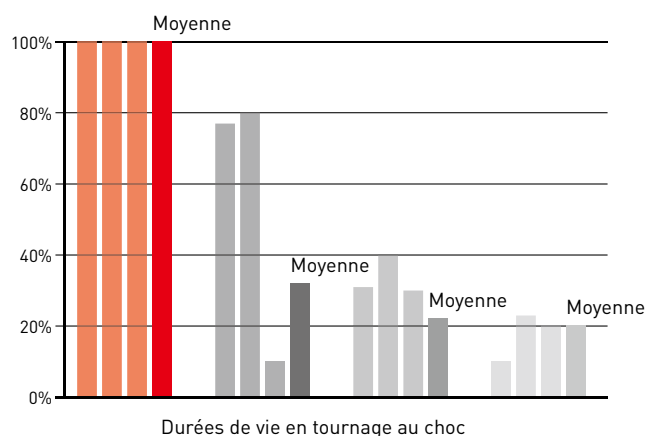
## REVÊTEMENT MINCE POUR UNE MEILLEURE RÉSISTANCE À L'ÉCAILLAGE

Grâce à la technologie de pointe de contrôle de l'orientation cristalline, il est possible de réaliser des revêtements minces avec une meilleure résistance à l'écaillage sans dégrader la résistance à l'usure. La nuance MC6135 assure donc une bonne productivité et une grande durée de vie en tournage au choc. (Revêtement 50 % plus mince qu'en technologie conventionnelle).

## COMPARATIF DE LA RÉSISTANCE AUX CHOCS (42CD4)

La nuance MC6135 possède une grande fiabilité en usinage au choc et ne présente que de faibles variations de durée de vie.

|                     |                                                          |
|---------------------|----------------------------------------------------------|
| Matière de la pièce | 42CD4                                                    |
| Plaquette           | CNMG120408-00                                            |
| Vc (m/min)          | 200                                                      |
| f (mm/tr)           | 0.35                                                     |
| ap (mm)             | 2.5                                                      |
| Arrosage            | Coupe lubrifiée                                          |
| Résultats           | Critère de durée de vie :<br>perte du contrôle du copeau |



# SÉRIE MC6100

## CRITÈRES DE SÉLECTION ET PLAGE D'APPLICATION

| Matière  | Mode de coupe   | Nuance        | P   | CVD    |
|----------|-----------------|---------------|-----|--------|
| P Aciers | Usinage continu | <i>Faible</i> | P10 | MC6115 |
|          | ↕               | <i>Moyen</i>  | P20 | MC6125 |
|          |                 | <i>Élevé</i>  | P30 | MC6135 |
|          |                 |               | P40 |        |
|          | Usinage au choc |               | P50 |        |



# BRISE-COPEAUX FPH

## POUR FAIBLE PROFONDEUR DE PASSE ET FORTE AVANCE

La combinaison d'un témoin positif et d'un brise-copeaux à deux étages optimise le contrôle copeaux à faible profondeur de passe et forte avance, permettant une haute productivité en finition.

### Géométrie convexe principale

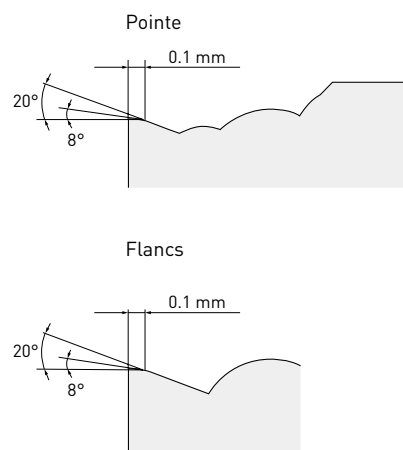
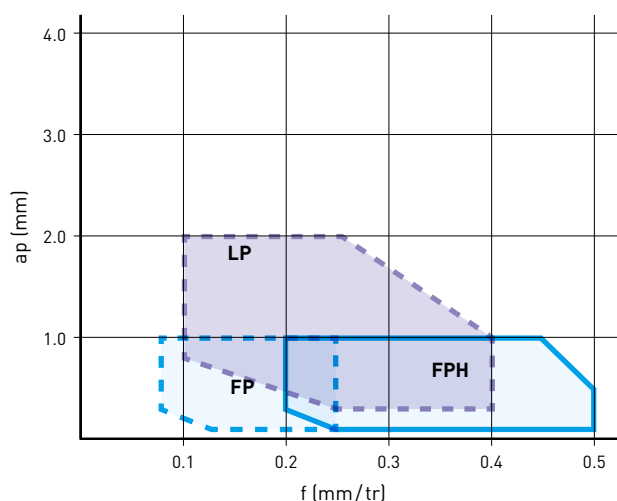
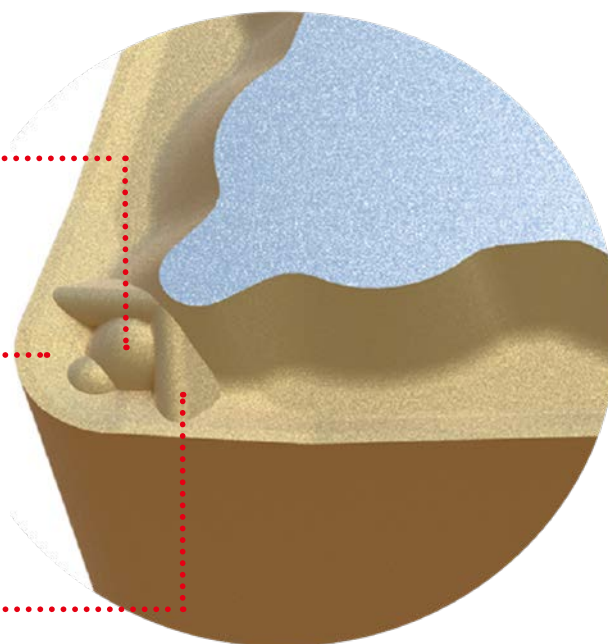
Assure un bon enroulement du copeau, même à forte avance lorsque le copeau est épais.

### Témoin positif

Équilibre optimal entre acuité et résistance.

### Géométrie convexe secondaire

Assure le contrôle du copeau en copiage à profondeur de passe variable.



### UTILISATION

1. Le brise-copeaux FPH est prévu pour des profondeurs de passe inférieures à 1 mm et des avances supérieures à 0.2 mm/tour.
2. Pour des profondeurs de passe supérieures 1 mm, le brise-copeaux LP est préconisé.
3. Pour des avances inférieures à 0.2 mm/tour, le brise-copeaux FP est préconisé.

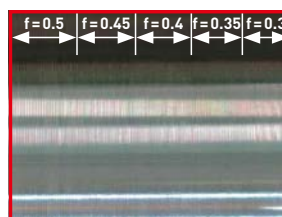
# BRISE-COPEAUX FPH

## PERFORMANCES DE COUPE

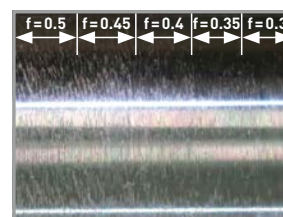
### 42CD4 : ÉTAT DE SURFACE ET CONTRÔLE DU COPEAU

L'excellent contrôle du copeau du brise-copeaux FPH permet d'obtenir de très bons états de surface.

|            |                          |
|------------|--------------------------|
| Matière    | 42CD4                    |
| Plaquette  | CNMG120408- MC6125       |
| Vc (m/min) | 200                      |
| f (mm/tr)  | Variable, voir ci-contre |
| ap (mm)    | 0.2                      |
| Arrosage   | Huile soluble            |



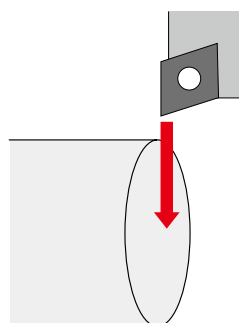
MC6125 + FPH



Conventionnel

### CONTRÔLE DU COPEAU

|            |               |
|------------|---------------|
| Matière    | 42CD4         |
| Plaquette  | DNMG150408-   |
| Vc (m/min) | 200           |
| f (mm/tr)  | 0.3           |
| ap (mm)    | 0.2           |
| Arrosage   | Usinage à sec |



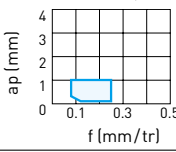
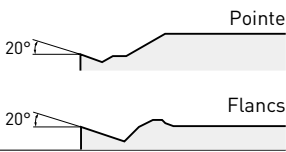
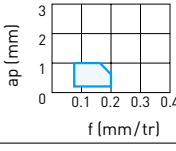
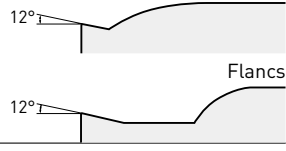
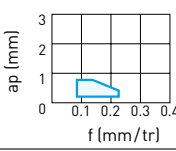
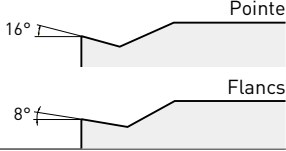
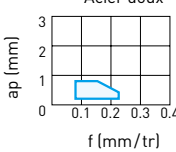
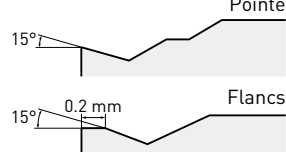
| FPH                         | Brise-copeaux de finition conventionnel                      | Brise-copeaux de semi-finition conventionnel                                            |
|-----------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|                             |                                                              |                                                                                         |
| Contrôle du copeau optimal. | Contrôle du copeau excessif, risque de rayures sur la pièce. | Contrôle de copeau insuffisant, risque de bourrage et d'enroulement autour de la pièce. |



# SÉRIE MC6100

## BRISE-COPEAUX POUR LE TOURNAGE DE L'ACIER

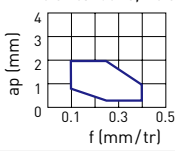
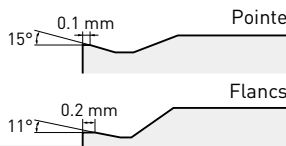
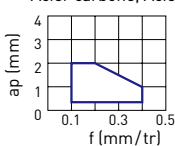
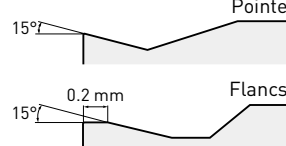
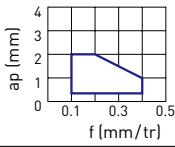
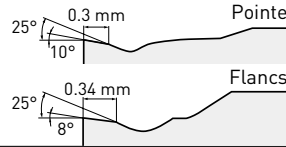
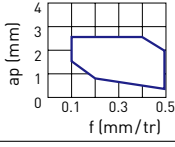
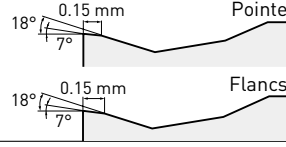
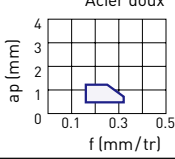
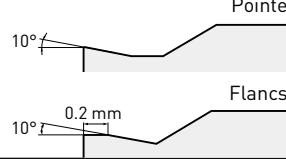
### PLAQUETTES NÉGATIVES

| Tolérance | Caractéristiques                                                                                                                                                                                                                                                                                                                                                                                   | Géométrie de coupe                                                                                                                                                                                   |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M         | <b>FINITION</b><br> <b>PREMIER CHOIX POUR LA FINITION DES ACIERS CARBONE ET ALLIÉS</b><br>Le contrôle du copeau sur une large plage d'avances et évite l'enroulement des copeaux autour de la pièce. Le grand angle de coupe permet de supprimer les vibrations lors de l'usinage de la pièces de faible raideur. | Acier carbone, Acier allié<br>  |
|           |  <b>BRISE-COPEAUX ALTERNATIF POUR LA FINITION DES ACIERS CARBONE ET ALLIÉS</b><br>Bon contrôle du copeau même à faible profondeur de passe.                                                                                                                                                                       | Acier carbone, Acier allié<br>  |
|           |  <b>BRISE-COPEAUX ALTERNATIF POUR LA FINITION DES ACIERS DOUX</b><br>Bon contrôle du copeau même à faible profondeur de passe. Grande acuité pour une performance optimale.                                                                                                                                      | Acier doux<br>                |
|           |  <b>PREMIER CHOIX POUR LA FINITION DES ACIERS DOUX</b><br>Excellent contrôle du copeau dans les matières tendres, grande résistance au collage. Pour la finition des aciers doux.                                                                                                                               | Acier doux<br>              |

1/4

## SÉRIE MC6100 – BRISE-COPEAUX POUR LE TOURNAGE DE L'ACIER

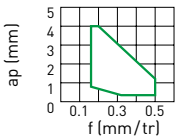
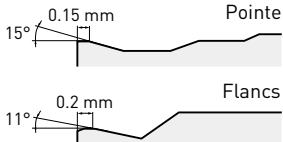
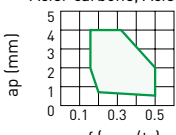
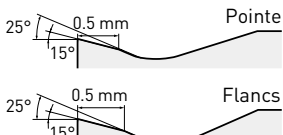
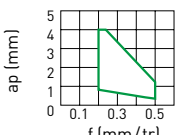
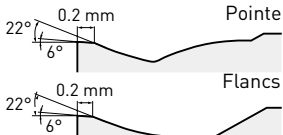
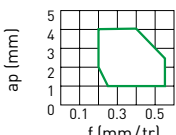
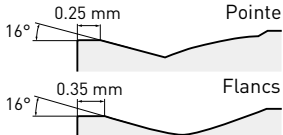
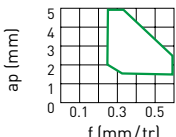
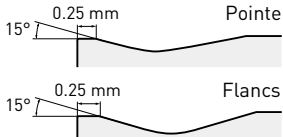
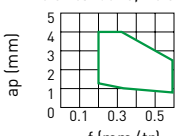
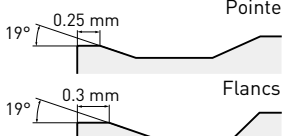
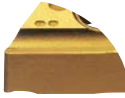
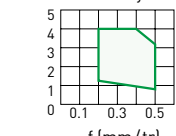
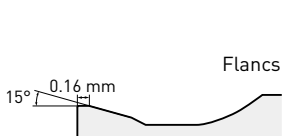
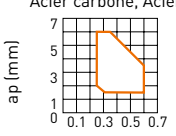
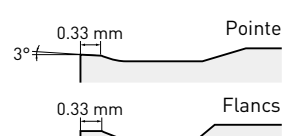
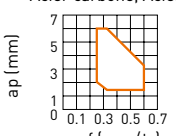
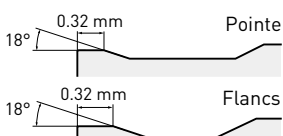
## PLAQUETTES NÉGATIVES

| Tolérance     |    | Caractéristiques                                                                                                                                                                                                                                                                                                                  | Géométrie de coupe                                                                                                |                                                                                       |
|---------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| SEMI-FINITION |                                                                                     |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                   |                                                                                       |
| M             |    | <b>PREMIÈRE RECOMMANDATION POUR LA SEMI-FINITION DES ACIERS CARBONE ET ALLIÉS.</b><br>Contrôle stable des copeaux dans laplage de semi-finition. L'arête incurvée permet une évacuation fluide des copeaux.                                                                                                                       | Acier carbone, Acier allié<br>  |    |
|               |    | <b>BRISE-COPEAUX ALTERNATIF POUR LA SEMI-FINITION DES ACIERS CARBONE ET ALLIÉS.</b><br>Convient à de faibles profondeurs de passe et à des avances élevées. L'arête incurvée permet une évacuation fluide des copeaux. Recommandé pour les pièces de dureté de 160 – 250 HB.                                                      | Acier carbone, Acier allié<br>  |    |
|               |    | <b>BRISE-COPEAUX ALTERNATIF POUR LA SEMI-FINITION DES ACIERS CARBONE ET ALLIÉS.</b><br>Meilleur contrôle des copeaux à de faibles profondeurs de passe. L'arête de coupe ondulée permet de travailler en copiage et en tournage arrière. Recommandé pour les pièces dans la plage 200 – 300HB.                                    | Acier carbone, Acier allié<br>  |    |
|               |   | <b>PLAQUETTE RACLEUSE RÉVERSIBLE POUR LA SEMI-FINITION D'ACIER CARBONE, ALLIÉ, INOXYDABLE ET DE LA FONTE.</b><br>Par rapport aux brise-copeaux conventionnels, l'état de surface est assuré même avec une avance par tour doublée. La conception du racleur garantit une plus grande productivité et un meilleur état de surface. | Acier carbone, Acier allié<br> |   |
|               |  | <b>PREMIER CHOIX POUR LA SEMI-FINITION DES ACIERS DOUX</b><br>Excellent contrôle du copeau, bonne résistance au collage. Brise-copeaux optimisé pour la semi-finition des aciers doux.                                                                                                                                            | Acier doux<br>                |  |

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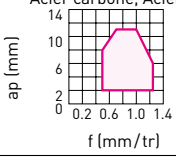
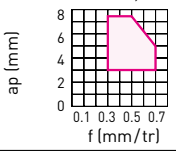
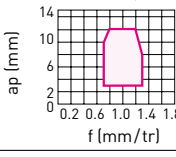
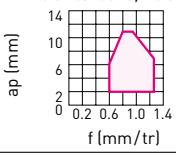
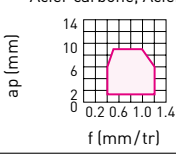
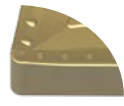
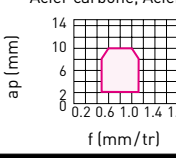
## SÉRIE MC6100 – BRISE-COPEAUX POUR LE TOURNAGE DE L'ACIER

## PLAQUETTES NÉGATIVES

| Tolérance              | Caractéristiques                                                                                                                                                                                                                                                                                                                                                                                         | Géométrie de coupe                                                                                                                                                                                           |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ÉBAUCHE MOYENNE</b> |                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                              |
| M                      |  <p><b>PREMIÈRE RECOMMANDATION POUR L'ÉBAUCHE MOYENNE DES ACIERS CARBONE ET ALLIÉS</b><br/>Adapté à l'ébauche moyenne et à la semi-finition. Géométrie du brise-copeaux adaptée au copiage et au tournage arrière. Géométrie de coupe pour un équilibre optimal entre acuité et résistance à l'écaillage.</p> <p>MP</p> | <p>Acier carbone, Acier allié</p>       |
|                        |  <p><b>BRISE-COPEAUX ALTERNATIF POUR L'ÉBAUCHE MOYENNE</b><br/>L'arête tranchante offre une performance optimale. L'arête droite assure une grande résistance à l'écaillage. Disponible pour les nuances autres que MP9005, MP9015, MP9025, MT9015.</p> <p>MS</p>                                                       | <p>Acier carbone, Acier allié</p>       |
|                        |  <p><b>BRISE-COPEAUX ALTERNATIF POUR L'ÉBAUCHE MOYENNE DES ACIERS CARBONE ET ALLIÉS</b><br/>Idéal pour les applications de coupe générales. Témoin positif permettant une coupe précise.</p> <p>MA</p>                                                                                                                  | <p>Acier carbone, Acier allié</p>       |
|                        |  <p><b>BRISE-COPEAUX ALTERNATIF POUR L'ÉBAUCHE MOYENNE DES ACIERS CARBONE ET ALLIÉS</b><br/>Témoin plat pour une résistance d'arête élevée. Bon contrôle des copeaux avec une poche à copeaux adaptée.</p> <p>MH</p>                                                                                                   | <p>Acier carbone, Acier allié</p>     |
|                        |  <p><b>BRISE-COPEAUX ALTERNATIF POUR L'ÉBAUCHE MOYENNE DES ACIERS CARBONE ET ALLIÉS</b><br/>Témoin plat pour une résistance d'arête élevée. La forme plate du brise-copeaux offre une haute résistance de l'arête.</p> <p>Standard</p>                                                                                | <p>Acier carbone, Acier allié</p>   |
|                        |  <p><b>PLAQUETTE RACLEUSE RÉVERSIBLE POUR L'ÉBAUCHE MOYENNE D'ACIER CARBONE, ALLIÉ, INOXYDABLE ET DE LA FONTE</b><br/>La conception du racleur garantit une plus grande productivité et un meilleur état de surface. Une large poche à copeaux empêche le bourrage.</p> <p>MW</p>                                     | <p>Acier carbone, Acier allié</p>   |
|                        |  <p><b>BRISE-COPEAUX ALTERNATIF POUR L'ÉBAUCHE MOYENNE</b><br/>Bon équilibre entre la résistance et l'acuité d'arête. Brise-copeaux à droite ou à gauche.</p> <p>R/L-ES</p>                                                                                                                                           | <p>Acier inoxydable</p>             |
| <b>ÉBAUCHE</b>         |                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                              |
| M                      |  <p><b>PREMIÈRE RECOMMANDATION POUR L'ÉBAUCHE DES ACIERS CARBONE ET ALLIÉS</b><br/>Pour une ébauche au choc et l'écroûtage. Bon équilibre entre résistance d'arête et acuité grâce à un angle de coupe adapté.</p> <p>RP</p>                                                                                          | <p>Acier carbone, Acier allié</p>   |
|                        |  <p><b>BRISE-COPEAUX ALTERNATIF POUR L'ÉBAUCHE DES ACIERS CARBONE, ALLIÉS ET LA FONTE</b><br/>Pour une ébauche au choc et l'écroûtage. La combinaison d'un témoin large et d'une grande poche à copeaux permet des avances élevées.</p> <p>GH</p>                                                                     | <p>Acier carbone, Acier allié</p>   |

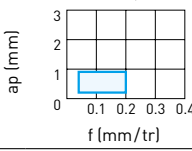
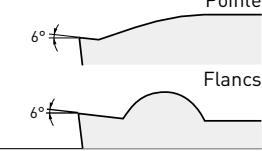
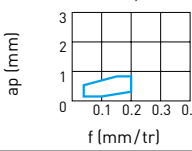
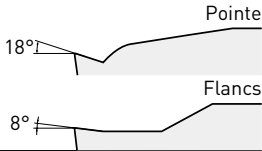
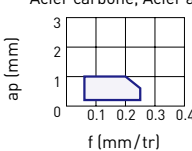
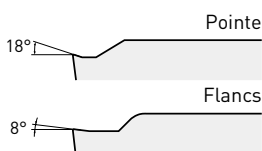
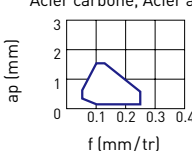
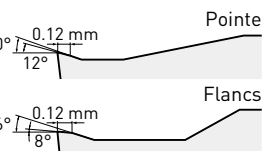
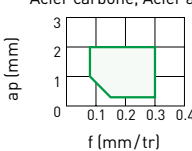
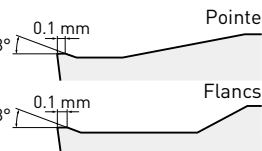
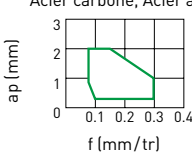
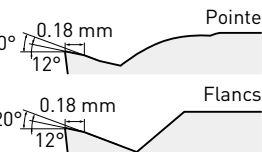
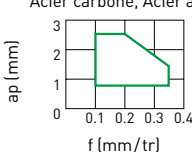
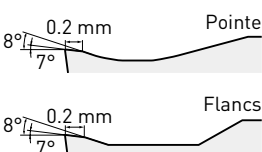
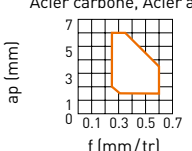
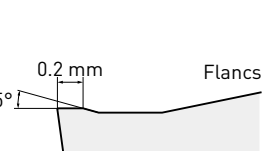
## SÉRIE MC6100 – BRISE-COPEAUX POUR LE TOURNAGE DE L'ACIER

## PLAQUETTES NÉGATIVES

| Tolérance |                                                                                     | Caractéristiques                                                                                                                                                                                                                                                                                                    | Géométrie de coupe                                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <b>ÉBAUCHE</b>                                                                      |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                |
|           |    | <b>PREMIER CHOIX POUR LES ACIERS CARBONE ET ALLIÉS</b><br>Pour les avances et profondeurs de passe moyennes. L'arête droite et le chanfrein négatif assurent un bon équilibre entre acuité et résistance. Gorge large et brise-copeaux ondulé pour un bon contrôle des copeaux.                                     | Acier carbone, Acier allié<br><br>23° 0.43 mm Pointe<br>21° 0.52 mm Flancs   |
|           |    | <b>BRISE-COPEAUX ALTERNATIF POUR LES ACIERS AU CARBONE ET ALLIÉS</b><br>Faible prise de puissance grâce au témoin plat et étroit. Excellent contrôle du copeau.                                                                                                                                                     | Acier carbone, Acier allié<br><br>15° 0.34 mm                                |
|           |    | <b>BRISE-COPEAUX ALTERNATIF POUR LES ACIERS AU CARBONE ET ALLIÉS</b><br>Grande résistance d'arête. Excellente contrôle du copeau même avec une forte avance et grande profondeur de passe.                                                                                                                          | Acier carbone, Acier allié<br><br>20° 0.58 mm                                |
| M         |   | <b>BRISE-COPEAUX ALTERNATIF POUR LES ACIERS AU CARBONE ET ALLIÉS</b><br>Pour les fortes avances et le tournage au choc. Témoin large et grand chanfrein négatif pour une grande résistance d'arête. La grande largeur de gorge permet d'éviter le bourrage de copeaux.                                              | Acier carbone, Acier allié<br><br>20° 0.68 mm Pointe<br>20° 0.68 mm Flancs  |
|           |  | <b>BRISE-COPEAUX ALTERNATIF POUR TOURNAGE LOURD DES ACIERS AU CARBONE ET ALLIÉS</b><br>Couvre la plage basse du tournage lourd. Prise de puissance réduite grâce au témoin positif et à l'arête rayonnée. Les protubérances en forme de goutte améliore le contrôle du copeau sans créer d'efforts supplémentaires. | Acier carbone, Acier allié<br><br>22° 0.42 mm Pointe<br>22° 0.42 mm Flancs |
|           |  | <b>BRISE-COPEAUX ALTERNATIF POUR LE TOURNAGE LOURD DES ACIERS CARBONE, ALLIÉS ET INOXYDABLES</b><br>Le témoin plat assure un excellent équilibre entre acuité et résistance de l'arête.                                                                                                                             | Acier carbone, Acier allié<br><br>16° 0.32 mm                              |

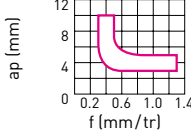
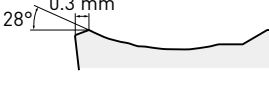
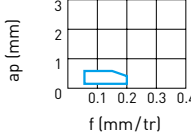
## SÉRIE MC6100 – BRISE-COPEAUX POUR LE TOURNAGE DE L'ACIER

## PLAQUETTES POSITIVES 5°, 7°

| Tolérance            |                                                                                     | Caractéristiques                                                                                                                                                                                                                                                                                                                 | Géométrie de coupe                                                                                                                                                                                          |
|----------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FINITION</b>      |                                                                                     |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                             |
| M                    |    | <b>PREMIER CHOIX POUR LA FINITION DES ACIERS AU CARBONE, ALLIÉS ET DOUX</b><br>La protubérance du brise-copeaux au centre du rayon contrôle les copeaux même à faible profondeur de passe. Bonne résistance à l'écaillage du rayon.                                                                                              | Acier carbone, Acier allié<br><br>     |
|                      |    | <b>BRISE-COPEAUX ALTERNATIF POUR LA FINITION DES ACIERS AU CARBONE, ALLIÉS, DOUX ET INOXYDABLES</b><br>Pour les faibles profondeurs de passe et avances. La grande acuité d'arête réduit les efforts de coupe et permet ainsi d'excellentes performances.                                                                        | Acier carbone, Acier allié<br><br>     |
| <b>COUPE LÉGÈRE</b>  |                                                                                     |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                             |
| M                    |    | <b>PREMIER CHOIX POUR LA COUPE LÉGÈRE DES ACIERS AU CARBONE, ALLIÉS ET DOUX</b><br>Bonne acuité d'arête grâce au grand angle de coupe. Évite le collage et le matage de surface. La protubérance du brise-copeaux optimisée assure un contrôle du copeau fiable.                                                                 | Acier carbone, Acier allié<br><br>     |
|                      |   | <b>PLAQUETTE RACLEUSE POUR LES ACIERS AU CARBONE, ALLIÉS, DOUX ET INOXYDABLES</b><br>Par rapport à une plaquette conventionnelle, un bon état de surface est assuré même à forte avance. Le témoin positif assure une bonne acuité.                                                                                              | Acier carbone, Acier allié<br><br>   |
| <b>COUPE MOYENNE</b> |                                                                                     |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                             |
| M                    |  | <b>PREMIER CHOIX POUR LA COUPE MOYENNE DES ACIERS AU CARBONE, ALLIÉS ET DOUX</b><br>Bon équilibre des résistances à l'usure et à l'écaillage grâce au témoin plat. La grande poche à copeaux réduit les efforts de coupe et les risques de vibrations et de bourrage de copeaux, même pour des profondeurs de passe importantes. | Acier carbone, Acier allié<br><br> |
|                      |  | <b>BRISE-COPEAUX ALTERNATIF POUR LA COUPE MOYENNE DES ACIERS AU CARBONE, ALLIÉS, DOUX ET INOXYDABLES</b><br>Grand angle de coupe pour des performances d'arête optimales. Le double brise-copeaux et la forme arrondie sur la face de coupe assurent un excellent contrôle du copeau.                                            | Acier carbone, Acier allié<br><br> |
|                      |  | <b>PLAQUETTES RACLEUSE POUR LA COUPE MOYENNE DES ACIERS AU CARBONE, ALLIÉS, DOUX ET INOXYDABLES</b><br>La plaquette racleuse permet une avance jusqu'à deux fois supérieure. La grande poche à copeaux empêche le bourrage.                                                                                                      | Acier carbone, Acier allié<br><br> |
|                      |  | <b>BRISE-COPEAUX ALTERNATIF POUR LA COUPE MOYENNE DES ACIERS AU CARBONE, ALLIÉS, DOUX, INOXYDABLES ET FONTES</b><br>Équilibre entre résistance et acuité d'arête par la combinaison d'un témoin plat et d'un grand angle de coupe.                                                                                               | Acier carbone, Acier allié<br><br> |

## SÉRIE MC6100 – BRISE-COPEAUX POUR LE TOURNAGE DE L'ACIER

## PLAQUETTES POSITIVES 7°

| Tolérance |                                                                                   | Caractéristiques                                                                                                                                                                                                                                                   |                                                                                                                  | Géométrie de coupe                                                                  |  |
|-----------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| ÉBAUCHE   |                                                                                   |                                                                                                                                                                                                                                                                    |                                                                                                                  |                                                                                     |  |
| M         |  | <b>BRISE-COPEAUX D'ÉBAUCHE POUR LES ACIERS AU CARBONE ET ALLIÉS</b><br>Le brise-copeaux à grande gorge empêche le bourrage des copeaux a grande profondeur de passe.<br>Les petites encoches améliorent le contrôle des copeaux à de faibles profondeurs de coupe. | Acier carbone, Acier allié<br> |  |  |
|           | RR                                                                                |                                                                                                                                                                                                                                                                    |                                                                                                                  |                                                                                     |  |
| FINITION  |                                                                                   |                                                                                                                                                                                                                                                                    |                                                                                                                  |                                                                                     |  |
| M         |  | <b>BRISE-COPEAUX DE COPIAGE POUR LES ACIERS AU CARBONE ET ALLIÉS</b><br>Le contrôle du copeau est assuré par une géométrie de copiage spécifique.                                                                                                                  | Acier carbone, Acier allié<br> |  |  |
|           | SVX                                                                               |                                                                                                                                                                                                                                                                    |                                                                                                                  |                                                                                     |  |

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## PLAQUETTES POSITIVES 11°

Tolérance

Caractéristiques

Géométrie de coupe

FINITION

M

FV

**PREMIER CHOIX POUR LA FINITION DES ACIERS AU CARBONE, ALLIÉS, DOUX ET INOXYDABLES**

Pour les faibles profondeurs de passe et avances.  
La grande acuité d'arête réduit les efforts de coupe et permet ainsi d'excellentes performances.

Acier carbone, Acier allié

COUPE LÉGÈRE

M

LP

**PREMIER CHOIX POUR LA COUPE LÉGÈRE DES ACIERS AU CARBONE, ALLIÉS ET DOUX**

Bonne acuité d'arête grâce au grand angle de coupe.  
Évite le collage et le matage de surface. La protubérance du brise-copeaux optimisée assure un contrôle du copeau fiable.

Acier carbone, Acier allié

**PLAQUETTE RACLEUSE POUR LA SEMI-FINITION DES ACIERS AU CARBONE, ALLIÉS, DOUX ET INOXYDABLES**

Par rapport aux brise-copeaux conventionnels, l'état de surface est assuré même avec une avance par tour doublée.  
Le témoin positif réduit les efforts de coupe.

Acier carbone, Acier allié

SW

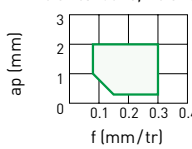
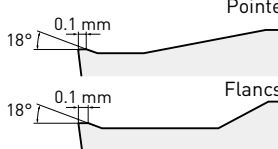
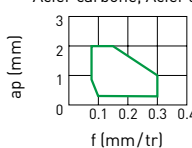
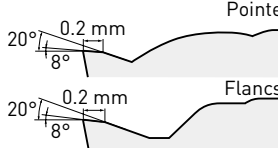
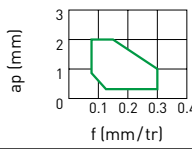
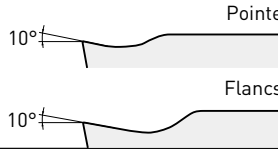
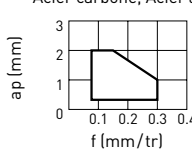
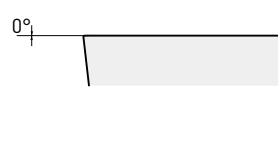
1/1

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## SÉRIE MC6100 – BRISE-COPEAUX POUR LE TOURNAGE DE L'ACIER

## PLAQUETTES POSITIVES 11°

| Tolérance       |                                                                                    | Caractéristiques                                                                                                                                                                                                                                                                                                                                  |                                                                                                                   | Géométrie de coupe                                                                   |  |
|-----------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| COUPE MOYENNE   |                                                                                    |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                   |                                                                                      |  |
| M               |   | <b>PREMIER CHOIX POUR L'ÉBAUCHE MOYENNE DES ACIERS AU CARBONE, ALLIÉS ET DOUX</b><br>Bon équilibre entre la résistance à l'usure et à la fracturation grâce à l'arête de coupe à témoin plat. La poche à copeaux large réduit l'effort de coupe, réduit les vibrations et le bourrage de copeaux, même pour des profondeurs de passe importantes. | Acier carbone, Acier allié<br>  |   |  |
|                 |   | <b>PREMIER CHOIX POUR LA COUPE MOYENNE DES ACIERS AU CARBONE, ALLIÉS, DOUX, INOXYDABLES ET FONTES</b><br>Grand angle de coupe pour des performances d'arête optimales. Le double brise-copeaux et la forme arrondie sur la face de coupe assurent un excellent contrôle du copeau.                                                                | Acier carbone, Acier allié<br>  |   |  |
|                 |   | <b>BRISE-COPEAUX ALTERNATIF POUR LA COUPE MOYENNE DES ACIERS AU CARBONE, ALLIÉS ET INOXYDABLES</b><br>Brise-copeaux standard pour un usage général.                                                                                                                                                                                               | Acier carbone, Acier allié<br>  |   |  |
| PLAQUETTE PLATE |                                                                                    |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                   |                                                                                      |  |
| M               |  | <b>PLAQUETTE PLATE</b><br>Sans brise-copeaux.<br>Grande fiabilité en usinage instable en raison de la grande résistance d'arête.                                                                                                                                                                                                                  | Acier carbone, Acier allié<br> |  |  |

1/1

# MC6115

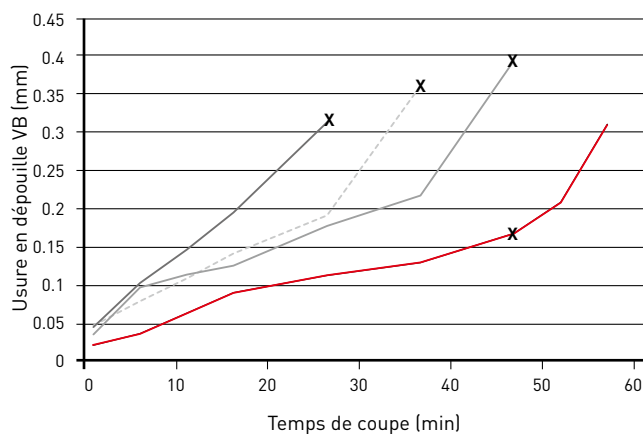
## PERFORMANCES DE COUPE

### USINAGE D'XC48 : COMPARAISON DE LA RÉSISTANCE À L'USURE EN USINAGE À SEC

|            |                                                                                               |
|------------|-----------------------------------------------------------------------------------------------|
| Matière    | XC48                                                                                          |
| Plaquette  | CNMG120408-  |
| Vc (m/min) | 300                                                                                           |
| f (mm/tr)  | 0.3                                                                                           |
| ap (mm)    | 1.5                                                                                           |
| Arrosage   | Usinage à sec                                                                                 |



**MC6115**  
10 min



Conventionnel A  
10 min



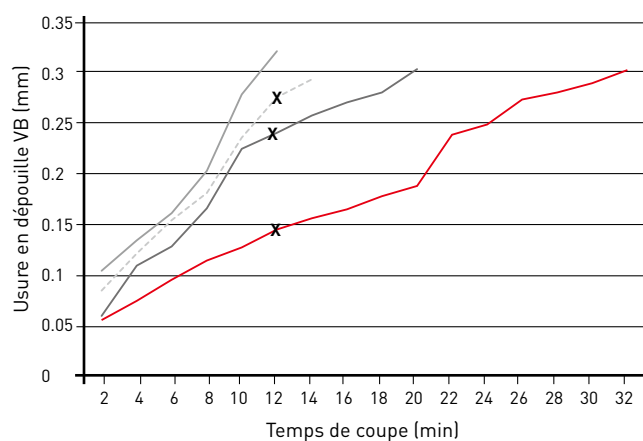
Conventionnel B  
8 min

### USINAGE DE 100C6 : COMPARAISON DE LA RÉSISTANCE À L'USURE EN COUPE LUBRIFIÉE

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Matière de la pièce | 100C6                                                                                           |
| Plaquette           | CNMG120408-  |
| Vc (m/min)          | 300                                                                                             |
| f (mm/tr)           | 0.3                                                                                             |
| ap (mm)             | 1.5                                                                                             |
| Arrosage            | Coupe lubrifiée                                                                                 |



**MC6115**  
12 min



Conventionnel A  
12 min



Conventionnel B  
12 min

## MC6115 – PERFORMANCES DE COUPE

## USINAGE DE 42CD4 : COMPARAISON DE LA RÉSISTANCE À L'USURE EN COUPE LUBRIFIÉE

|            |                                                                                               |
|------------|-----------------------------------------------------------------------------------------------|
| Matière    | 42CD4                                                                                         |
| Plaquette  | CNMG120408-  |
| Vc (m/min) | 350                                                                                           |
| f (mm/tr)  | 0.3                                                                                           |
| ap (mm)    | 1.5                                                                                           |
| Arrosage   | Coupe lubrifiée                                                                               |



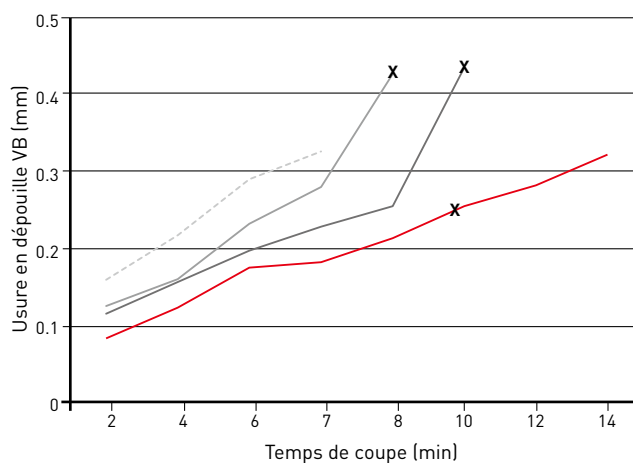
**MC6115**  
10 min



Conventionnel A  
10 min



Conventionnel B  
8 min

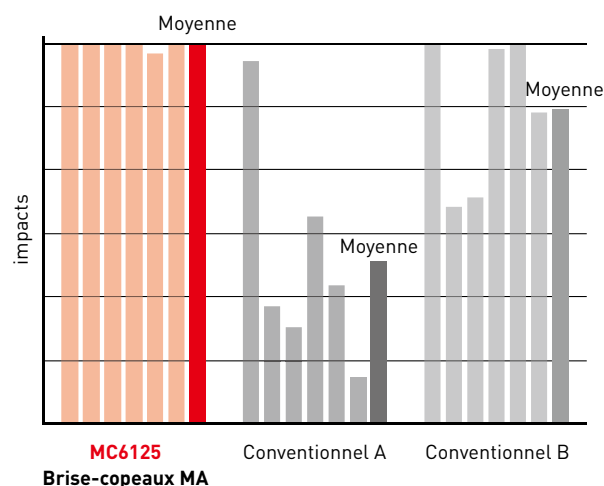


# MC6125

## PERFORMANCES DE COUPE

### COMPARAISON DE LA RÉSISTANCE AUX CHOCS

|            |                                                                                               |
|------------|-----------------------------------------------------------------------------------------------|
| Matière    | 42CD4                                                                                         |
| Plaquette  | CNMG120408-  |
| Vc (m/min) | 200                                                                                           |
| f (mm/tr)  | 0.25                                                                                          |
| ap (mm)    | 1.5                                                                                           |
| Arrosage   | Coupe lubrifiée                                                                               |



### USINAGE DE 20MC5 : COMPARAISON D'USURE EN COUPE CONTINUE LUBRIFIÉE

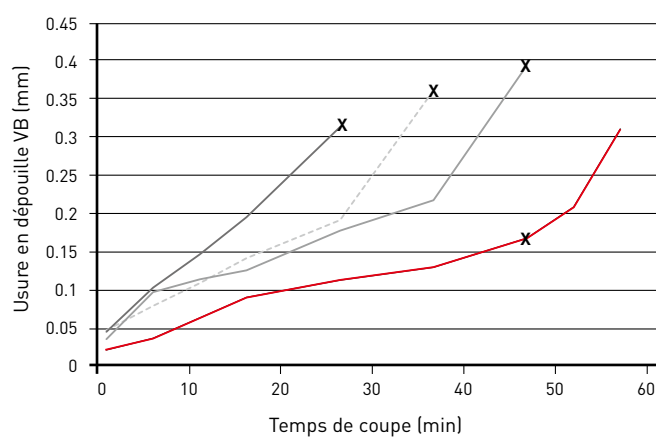
|            |                                                                                                 |
|------------|-------------------------------------------------------------------------------------------------|
| Matière    | 20MC5                                                                                           |
| Plaquette  | CNMG120408-  |
| Vc (m/min) | 300                                                                                             |
| f (mm/tr)  | 0.3                                                                                             |
| ap (mm)    | 1.5                                                                                             |
| Arrosage   | Coupe lubrifiée                                                                                 |



**MC6125**  
46 min



Conventionnel A  
46 min

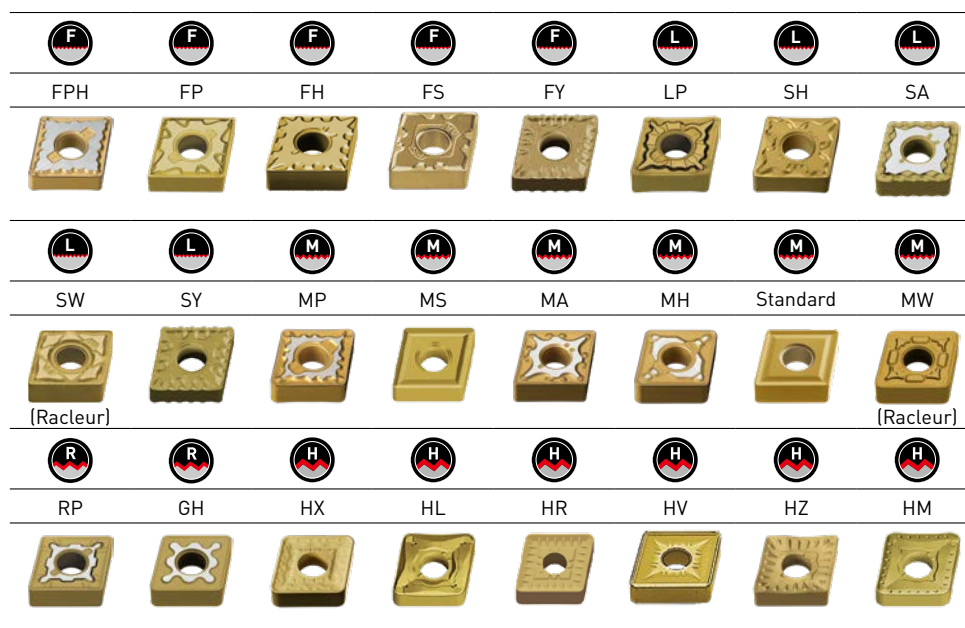
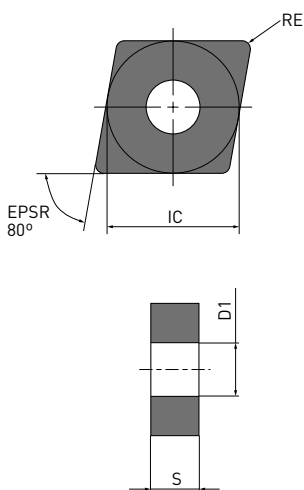


# CNMG, CNMM

## PLAQUETTES NÉGATIVES À TROU

Classe M

CNMG, CNMM



| Référence      |   <br>  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1   |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|------|
| CNMG120404-FPH | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ●      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-FPH | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ●      | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120412-FPH | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ●      | 12.7  | 4.76 | 1.2 | 5.16 |
| CNMG120402-FP  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7  | 4.76 | 0.2 | 5.16 |
| CNMG120404-FP  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-FP  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120412-FP  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| CNMG120402-FH  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7  | 4.76 | 0.2 | 5.16 |
| CNMG120404-FH  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-FH  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      |        | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120404-FS  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      |        | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120404-FY  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-FY  | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120404-LP  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-LP  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120412-LP  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| CNMG09T304-SH  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ●      |        | 9.525 | 3.97 | 0.4 | 3.81 |
| CNMG09T308-SH  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ●      |        | 9.525 | 3.97 | 0.8 | 3.81 |
| CNMG120404-SH  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-SH  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120412-SH  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| CNMG120404-SA  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-SA  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120412-SA  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| CNMG120404-SW  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      |        | 12.7  | 4.76 | 0.4 | 5.16 |
| CNMG120408-SW  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      |        | 12.7  | 4.76 | 0.8 | 5.16 |
| CNMG120412-SW  | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      |        | 12.7  | 4.76 | 1.2 | 5.16 |

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[Conditionnement par quantité 10]

● / ★ = Extension de gamme

● : Article stocké. ★ : Article stocké au Japon.

## CNMG, CNMM – PLAQUETTES NÉGATIVES À TROU

| Référence     |  | MC6115 | MC6125 | MC6135 | IC     | S    | RE  | D1   |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|--------|------|-----|------|
|               |                                                                                   |        |        |        |        |      |     |      |
| CNMG120404-SY | L                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| CNMG120408-SY | L                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120404-MP | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.4 | 5.16 |
| CNMG120408-MP | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412-MP | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMG120416-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMG160608-MP | M                                                                                 | ★      | ●      | ★      | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG160612-MP | M                                                                                 | ★      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG160616-MP | M                                                                                 | ★      | ●      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG090308-MS | M                                                                                 | ★      | ★      |        | 9.525  | 3.18 | 0.8 | 3.81 |
| CNMG09T308-MS | M                                                                                 | ★      | ●      |        | 9.525  | 3.97 | 0.8 | 3.81 |
| CNMG120404-MS | M                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| CNMG120408-MS | M                                                                                 | ●      | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412-MS | M                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMG120404-MA | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| CNMG120408-MA | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412-MA | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMG120416-MA | M                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMG160608-MA | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG160612-MA | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG160616-MA | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG190612-MA | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMG190616-MA | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMG120404-MH | M                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| CNMG120408-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMG120416-MH | M                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMG160608-MH | M                                                                                 | ★      | ★      |        | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG160612-MH | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG160616-MH | M                                                                                 | ★      | ★      |        | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG190612-MH | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMG190616-MH | M                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMG090308    | M                                                                                 | ★      | ★      |        | 9.525  | 3.18 | 0.8 | 3.81 |
| CNMG09T304    | M                                                                                 | ★      | ★      | ★      | 9.525  | 3.97 | 0.4 | 3.81 |
| CNMG09T308    | M                                                                                 | ★      | ★      | ★      | 9.525  | 3.97 | 0.8 | 3.81 |
| CNMG120404    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| CNMG120408    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412    | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMG120416    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMG160608    | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 0.8 | 6.35 |
| CNMG160612    | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG160616    | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG190608    | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 0.8 | 7.93 |
| CNMG190612    | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMG190616    | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMG120408-MW | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412-MW | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |

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[Conditionnement par quantité 10]



## CNMG, CNMM – PLAQUETTES NÉGATIVES À TROU

| Référence                  |  | MC6115 | MC6125 | MC6135 | IC     | S    | RE  | D1   |
|----------------------------|-----------------------------------------------------------------------------------|--------|--------|--------|--------|------|-----|------|
|                            |                                                                                   |        |        |        |        |      |     |      |
| CNMG120408-RP              | R                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412-RP              | R                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMG120416-RP              | R                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMG160612-RP              | R                                                                                 | ●      | ●      | ●      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG160616-RP              | R                                                                                 | ●      | ●      | ●      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG190612-RP              | R                                                                                 | ●      | ●      | ●      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMG190616-RP              | R                                                                                 | ●      | ●      | ●      | 19.05  | 6.35 | 1.6 | 7.93 |
| <b>NEW</b> CNMM190624-RP*1 | R                                                                                 | ●      | ●      |        | 19.05  | 6.35 | 2.4 | 7.93 |
| CNMG120408-GH              | R                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMG120412-GH              | R                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMG120416-GH              | R                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMG160612-GH              | R                                                                                 | ★      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMG160616-GH              | R                                                                                 | ★      | ●      |        | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMG190612-GH              | R                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMG190616-GH              | R                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMM120408-HX              | H                                                                                 |        | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMM120412-HX              | H                                                                                 |        | ★      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMM160612-HX              | H                                                                                 |        | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMM160616-HX              | H                                                                                 |        | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMM190612-HX              | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMM190616-HX              | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMM190624-HX              | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 2.4 | 7.93 |
| CNMM250924-HX              | H                                                                                 | ●      | ★      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |
| CNMM120408-HL              | H                                                                                 |        | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMM120412-HL              | H                                                                                 |        | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMM120416-HL              | H                                                                                 |        |        | ●      | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMM160612-HL              | H                                                                                 |        | ●      | ●      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMM160616-HL              | H                                                                                 |        | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMM190612-HL              | H                                                                                 | ●      | ●      | ●      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMM190616-HL              | H                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMM190624-HL              | H                                                                                 | ●      | ★      | ★      | 19.05  | 6.35 | 2.4 | 7.93 |
| CNMM250924-HR              | H                                                                                 | ●      | ●      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |
| CNMM190616-HV              | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMM190624-HV              | H                                                                                 | ★      | ★      | ★      | 19.05  | 6.35 | 2.4 | 7.93 |
| CNMM250924-HV              | H                                                                                 | ★      | ●      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |
| CNMM120408-HZ              | H                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| CNMM120412-HZ              | H                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| CNMM120416-HZ              | H                                                                                 |        |        | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| CNMM160612-HZ              | H                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMM160616-HZ              | H                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMM190612-HZ              | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMM190616-HZ              | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMM160612-HM              | H                                                                                 |        | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| CNMM160616-HM              | H                                                                                 |        | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| CNMM190612-HM              | H                                                                                 | ●      | ●      | ●      | 19.05  | 6.35 | 1.2 | 7.93 |
| CNMM190616-HM              | H                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| CNMM190624-HM              | H                                                                                 | ●      | ★      | ★      | 19.05  | 6.35 | 2.4 | 7.93 |
| CNMM250924-HM              | H                                                                                 | ★      | ★      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |

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[Conditionnement par quantité 10]



\*1 Brise-copeaux RP sur plaquette non-réversible.

● / ★ = Extension de gamme

● : Article stocké. ★ : Article stocké au Japon.

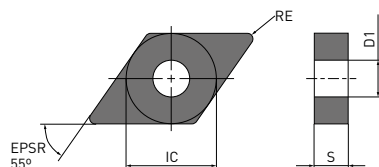


# DNMG, DNMX, DNMM, RNMG

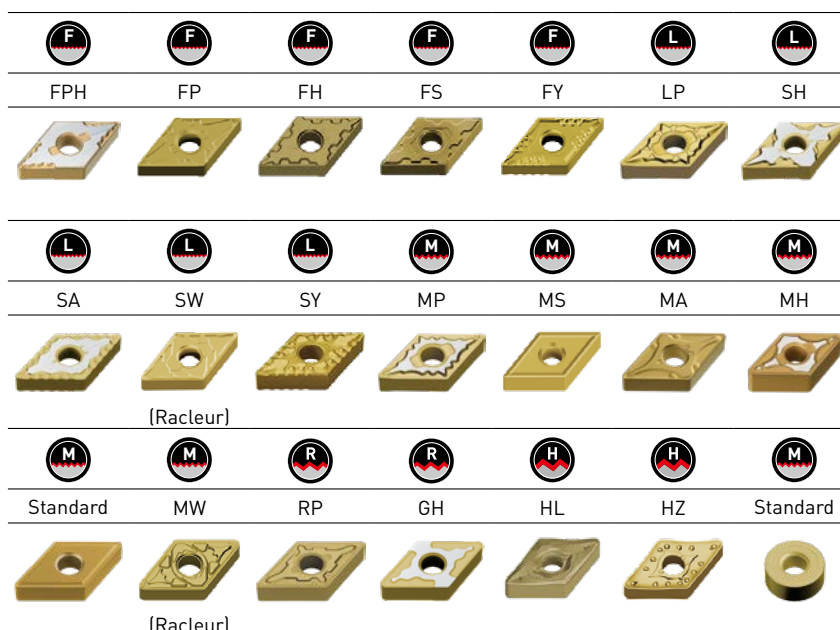
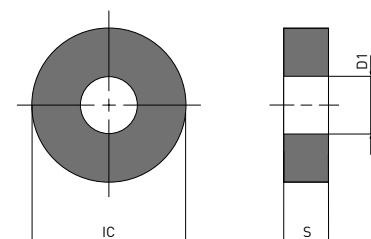
## PLAQUETTES NÉGATIVES À TROU

### Classe M

#### DNMG, DNMX, DNMM



#### RNMG



| Référence      |   |  |  |  |        |        |        |                               |
|----------------|---|--|--|--|--------|--------|--------|-------------------------------|
|                |   |  |  |  | MC6115 | MC6125 | MC6135 |                               |
| DNMG150404-FPH | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.4 D1 5.16 |
| DNMG150408-FPH | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.8 D1 5.16 |
| DNMG150412-FPH | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 1.2 D1 5.16 |
| DNMG150604-FPH | F |  |  |  | ●      | ●      | ●      | IC 12.7 S 6.35 RE 0.4 D1 5.16 |
| DNMG150608-FPH | F |  |  |  | ●      | ●      | ●      | IC 12.7 S 6.35 RE 0.8 D1 5.16 |
| DNMG150612-FPH | F |  |  |  | ●      | ●      | ●      | IC 12.7 S 6.35 RE 1.2 D1 5.16 |
| DNMG150402-FP  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.2 D1 5.16 |
| DNMG150404-FP  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.4 D1 5.16 |
| DNMG150408-FP  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.8 D1 5.16 |
| DNMG150412-FP  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 1.2 D1 5.16 |
| DNMG150602-FP  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 6.35 RE 0.2 D1 5.16 |
| DNMG150604-FP  | F |  |  |  | ●      | ★      | ★      | IC 12.7 S 6.35 RE 0.4 D1 5.16 |
| DNMG150608-FP  | F |  |  |  | ●      | ★      | ★      | IC 12.7 S 6.35 RE 0.8 D1 5.16 |
| DNMG150612-FP  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 6.35 RE 1.2 D1 5.16 |
| DNMG150402-FH  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.2 D1 5.16 |
| DNMG150404-FH  | F |  |  |  | ★      | ★      |        | IC 12.7 S 4.76 RE 0.4 D1 5.16 |
| DNMG150408-FH  | F |  |  |  | ★      | ★      |        | IC 12.7 S 4.76 RE 0.8 D1 5.16 |
| DNMG150602-FH  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 6.35 RE 0.2 D1 5.16 |
| DNMG150604-FH  | F |  |  |  | ●      | ★      | ★      | IC 12.7 S 6.35 RE 0.4 D1 5.16 |
| DNMG150608-FH  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 6.35 RE 0.8 D1 5.16 |
| DNMG150408-FS  | F |  |  |  |        | ★      | ★      | IC 12.7 S 4.76 RE 0.8 D1 5.16 |
| DNMG150404-FY  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.4 D1 5.16 |
| DNMG150408-FY  | F |  |  |  | ★      | ★      | ★      | IC 12.7 S 4.76 RE 0.8 D1 5.16 |
| DNMG150608-FY  | F |  |  |  | ●      | ●      | ★      | IC 12.7 S 6.35 RE 0.8 D1 5.16 |

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[Conditionnement par quantité 10]



● / ★ = Extension de gamme

● : Article stocké. ★ : Article stocké au Japon.

## DNMG, DNMX, DNMM, RNMG – PLAQUETTES NÉGATIVES À TROU

| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1   |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|------|
|               |                                                                                   |        |        |        |       |      |     |      |
| DNMG110404-LP | L                                                                                 | ●      | ●      | ●      | 9.525 | 4.76 | 0.4 | 3.81 |
| DNMG110408-LP | L                                                                                 | ●      | ●      | ●      | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMG150404-LP | L                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-LP | L                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-LP | L                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150604-LP | L                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608-LP | L                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-LP | L                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG110404-SH | L                                                                                 | ●      | ★      |        | 9.525 | 4.76 | 0.4 | 3.81 |
| DNMG110408-SH | L                                                                                 | ●      | ●      |        | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMG150404-SH | L                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-SH | L                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-SH | L                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150604-SH | L                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608-SH | L                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-SH | L                                                                                 | ●      | ★      |        | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG150404-SA | L                                                                                 | ★      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-SA | L                                                                                 | ★      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-SA | L                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150604-SA | L                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608-SA | L                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-SA | L                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMX110404-SW | L                                                                                 | ●      | ●      |        | 9.525 | 4.76 | 0.4 | 3.81 |
| DNMX110408-SW | L                                                                                 | ●      | ●      |        | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMX150404-SW | L                                                                                 | ●      | ●      |        | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMX150408-SW | L                                                                                 | ●      | ●      |        | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMX150412-SW | L                                                                                 | ●      | ★      |        | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMX150604-SW | L                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMX150608-SW | L                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMX150612-SW | L                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG150404-SY | L                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-SY | L                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150608-SY | L                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150404-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150416-MP | M                                                                                 | ★      | ●      | ★      | 12.7  | 4.76 | 1.6 | 5.16 |
| DNMG150604-MP | M                                                                                 | ●      | ●      | ●      | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608-MP | M                                                                                 | ●      | ●      | ●      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG150616-MP | M                                                                                 | ●      | ●      | ●      | 12.7  | 6.35 | 1.6 | 5.16 |
| DNMG110408-MS | M                                                                                 | ★      | ●      |        | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMG150404-MS | M                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-MS | M                                                                                 | ★      | ★      |        | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-MS | M                                                                                 | ★      | ★      |        | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150604-MS | M                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608-MS | M                                                                                 | ★      | ★      |        | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-MS | M                                                                                 | ★      | ★      |        | 12.7  | 6.35 | 1.2 | 5.16 |

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[Conditionnement par quantité 10]

## DNMG, DNMX, DNMM, RNMG – PLAQUETTES NÉGATIVES À TROU

| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1   |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|------|
|               |                                                                                   |        |        |        |       |      |     |      |
| DNMG110404-MA | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| DNMG110408-MA | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMG110412-MA | M                                                                                 | ●      | ★      | ★      | 9.525 | 4.76 | 1.2 | 3.81 |
| DNMG150404-MA | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-MA | M                                                                                 | ●      | ●      | ●      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-MA | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150604-MA | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608-MA | M                                                                                 | ●      | ●      | ●      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-MA | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG150616-MA | M                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 1.6 | 5.16 |
| DNMG150404-MH | M                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408-MH | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-MH | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150604-MH | M                                                                                 | ★      | ★      |        | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608-MH | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-MH | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG110408    | M                                                                                 | ★      | ●      |        | 9.525 | 4.76 | 0.8 | 3.81 |
| DNMG150404    | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| DNMG150408    | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412    | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150416    | M                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 1.6 | 5.16 |
| DNMG150604    | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.4 | 5.16 |
| DNMG150608    | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612    | M                                                                                 | ●      | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG150616    | M                                                                                 | ●      | ★      | ★      | 12.7  | 6.35 | 1.6 | 5.16 |
| DNMX150408-MW | M                                                                                 | ●      | ★      |        | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMX150412-MW | M                                                                                 | ●      | ★      |        | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMX150608-MW | M                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMX150612-MW | M                                                                                 | ●      | ●      |        | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG150408-RP | R                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-RP | R                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150416-RP | R                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 1.6 | 5.16 |
| DNMG150608-RP | R                                                                                 | ●      | ●      | ●      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-RP | R                                                                                 | ●      | ●      | ●      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMG150616-RP | R                                                                                 | ●      | ●      | ●      | 12.7  | 6.35 | 1.6 | 5.16 |
| DNMG150408-GH | R                                                                                 | ★      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMG150412-GH | R                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMG150608-GH | R                                                                                 | ★      | ●      | ★      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMG150612-GH | R                                                                                 | ★      | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMM150408-HL | H                                                                                 |        | ★      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMM150412-HL | H                                                                                 |        | ★      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMM150608-HL | H                                                                                 |        | ●      | ●      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMM150612-HL | H                                                                                 |        | ●      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| DNMM150408-HZ | H                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| DNMM150412-HZ | H                                                                                 | ★      | ★      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| DNMM150608-HZ | H                                                                                 | ★      | ●      | ★      | 12.7  | 6.35 | 0.8 | 5.16 |
| DNMM150612-HZ | H                                                                                 | ★      | ★      | ★      | 12.7  | 6.35 | 1.2 | 5.16 |
| RNMG120400    | M                                                                                 | ★      | ●      | ★      | 12.0  | 4.76 | —   | 5.16 |

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[Conditionnement par quantité 10]

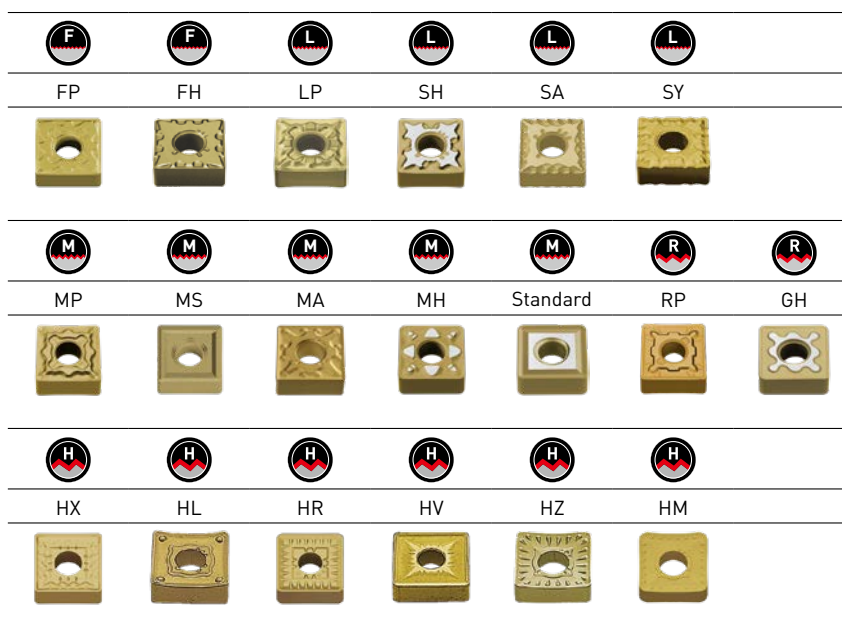
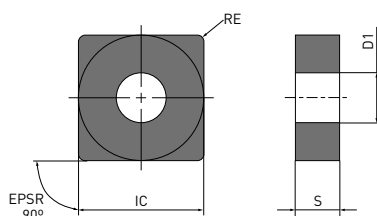


# SNMG, SNMM

## PLAQUETTES NÉGATIVES À TROU

Classe M

SNMG, SNMM



| Référence     |   <br>  | MC6115 | MC6125 | MC6135 | IC   | S    | RE  | D1   |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|------|------|-----|------|
| SNMG120404-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7 | 4.76 | 0.4 | 5.16 |
| SNMG120408-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7 | 4.76 | 0.8 | 5.16 |
| SNMG120412-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7 | 4.76 | 1.2 | 5.16 |
| SNMG120404-FH | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      |        | 12.7 | 4.76 | 0.4 | 5.16 |
| SNMG120408-FH | F                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      |        | 12.7 | 4.76 | 0.8 | 5.16 |
| SNMG120404-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7 | 4.76 | 0.4 | 5.16 |
| SNMG120408-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ●      | 12.7 | 4.76 | 0.8 | 5.16 |
| SNMG120412-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7 | 4.76 | 1.2 | 5.16 |
| SNMG120404-SH | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      |        | 12.7 | 4.76 | 0.4 | 5.16 |
| SNMG120408-SH | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ●      | ★      | 12.7 | 4.76 | 0.8 | 5.16 |
| SNMG120412-SH | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      | ★      | 12.7 | 4.76 | 1.2 | 5.16 |
| SNMG120404-SA | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ★      |        | 12.7 | 4.76 | 0.4 | 5.16 |
| SNMG120408-SA | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ★      | ●      | ★      | 12.7 | 4.76 | 0.8 | 5.16 |
| SNMG120412-SA | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ●      | ★      | 12.7 | 4.76 | 1.2 | 5.16 |
| SNMG120408-SY | L                                                                                                                                                                                                                                                                                                                                                                                                                                      | ●      | ★      | ★      | 12.7 | 4.76 | 0.8 | 5.16 |

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[Conditionnement par quantité 10]

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## SNMG, SNMM – PLAQUETTES NÉGATIVES À TROU

| Référence     |  | MC6115 | MC6125 | MC6135 | IC     | S    | RE  | D1   |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|--------|------|-----|------|
|               |                                                                                   |        |        |        |        |      |     |      |
| SNMG120404-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| SNMG120408-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMG120412-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMG120404-MS | M                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 0.4 | 5.16 |
| SNMG120408-MS | M                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMG120412-MS | M                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMG120404-MA | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| SNMG120408-MA | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMG120412-MA | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMG150608-MA | M                                                                                 | ★      | ●      | ★      | 15.875 | 6.35 | 0.8 | 6.35 |
| SNMG150612-MA | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMG150616-MA | M                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| SNMG190612-MA | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMG190616-MA | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMG120408-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMG120412-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMG190612-MH | M                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMG190616-MH | M                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMG090304    | M                                                                                 | ★      | ●      | ★      | 9.525  | 3.18 | 0.4 | 3.81 |
| SNMG090308    | M                                                                                 | ●      | ●      | ★      | 9.525  | 3.18 | 0.8 | 3.81 |
| SNMG120404    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| SNMG120408    | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMG120412    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMG120416    | M                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| SNMG120420    | M                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 2.0 | 5.16 |
| SNMG150612    | M                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMG150616    | M                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| SNMG190612    | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMG190616    | M                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |

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[Conditionnement par quantité 10]

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## SNMG, SNMM – PLAQUETTES NÉGATIVES À TROU

| Référence           |  | MC6115 | MC6125 | MC6135 | IC     | S    | RE  | D1   |
|---------------------|-----------------------------------------------------------------------------------|--------|--------|--------|--------|------|-----|------|
|                     |                                                                                   |        |        |        |        |      |     |      |
| SNMG120408-RP       | R                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMG120412-RP       | R                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMG120416-RP       | R                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| SNMG150612-RP       | R                                                                                 | ●      | ●      | ●      | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMG150616-RP       | R                                                                                 | ●      | ●      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| SNMG190612-RP       | R                                                                                 | ●      | ●      | ●      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMG190616-RP       | R                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| NEW SNMM190624-RP*1 | R                                                                                 | ●      | ●      |        | 19.05  | 6.35 | 2.4 | 7.93 |
| SNMG120408-GH       | R                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMG120412-GH       | R                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMG120416-GH       | R                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 1.6 | 5.16 |
| SNMG150612-GH       | R                                                                                 | ★      | ●      |        | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMG150616-GH       | R                                                                                 | ●      | ●      |        | 15.875 | 6.35 | 1.6 | 6.35 |
| SNMG190612-GH       | R                                                                                 | ★      | ●      |        | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMG190616-GH       | R                                                                                 | ★      | ●      |        | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMM120408-HX       | H                                                                                 |        | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMM120412-HX       | H                                                                                 |        | ★      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMM150612-HX       | H                                                                                 |        | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMM190612-HX       | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMM190616-HX       | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMM190624-HX       | H                                                                                 | ●      | ★      | ★      | 19.05  | 6.35 | 2.4 | 7.93 |
| SNMM250724-HX       | H                                                                                 | ★      | ★      | ●      | 25.4   | 7.94 | 2.4 | 9.12 |
| NEW SNMM250732-HX   | H                                                                                 |        | ●      |        | 25.4   | 7.94 | 3.2 | 9.12 |
| SNMM250924-HX       | H                                                                                 | ★      | ★      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |
| SNMM120408-HL       | H                                                                                 |        | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMM120412-HL       | H                                                                                 |        | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMM150612-HL       | H                                                                                 |        | ●      | ●      | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMM190612-HL       | H                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMM190616-HL       | H                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMM190624-HL       | H                                                                                 | ●      | ★      | ★      | 19.05  | 6.35 | 2.4 | 7.93 |
| SNMM250724-HR       | H                                                                                 | ●      | ★      | ●      | 25.4   | 7.94 | 2.4 | 9.12 |
| NEW SNMM250732-HR   | H                                                                                 |        | ●      |        | 25.4   | 7.94 | 3.2 | 9.12 |
| SNMM250924-HR       | H                                                                                 | ●      | ★      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |
| SNMM190616-HV       | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMM190624-HV       | H                                                                                 | ★      | ★      | ★      | 19.05  | 6.35 | 2.4 | 7.93 |
| SNMM250724-HV       | H                                                                                 | ★      | ●      | ●      | 25.4   | 7.94 | 2.4 | 9.12 |
| SNMM250924-HV       | H                                                                                 | ★      | ●      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |
| SNMM120408-HZ       | H                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| SNMM120412-HZ       | H                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| SNMM150612-HZ       | H                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMM190612-HZ       | H                                                                                 | ★      | ●      | ●      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMM190616-HZ       | H                                                                                 | ★      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMM150612-HM       | H                                                                                 |        | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| SNMM190612-HM       | H                                                                                 | ●      | ★      | ★      | 19.05  | 6.35 | 1.2 | 7.93 |
| SNMM190616-HM       | H                                                                                 | ●      | ●      | ★      | 19.05  | 6.35 | 1.6 | 7.93 |
| SNMM190624-HM       | H                                                                                 | ●      | ★      | ●      | 19.05  | 6.35 | 2.4 | 7.93 |
| SNMM250724-HM       | H                                                                                 | ★      | ★      | ●      | 25.4   | 7.94 | 2.4 | 9.12 |
| NEW SNMM250732-HM   | H                                                                                 |        | ●      |        | 25.4   | 7.94 | 3.2 | 9.12 |
| SNMM250924-HM       | H                                                                                 | ★      | ★      | ●      | 25.4   | 9.52 | 2.4 | 9.12 |

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[Conditionnement par quantité 10]

\*1 Brise-copeaux RP sur plaquette non-réversible.

● / ★ = Extension de gamme

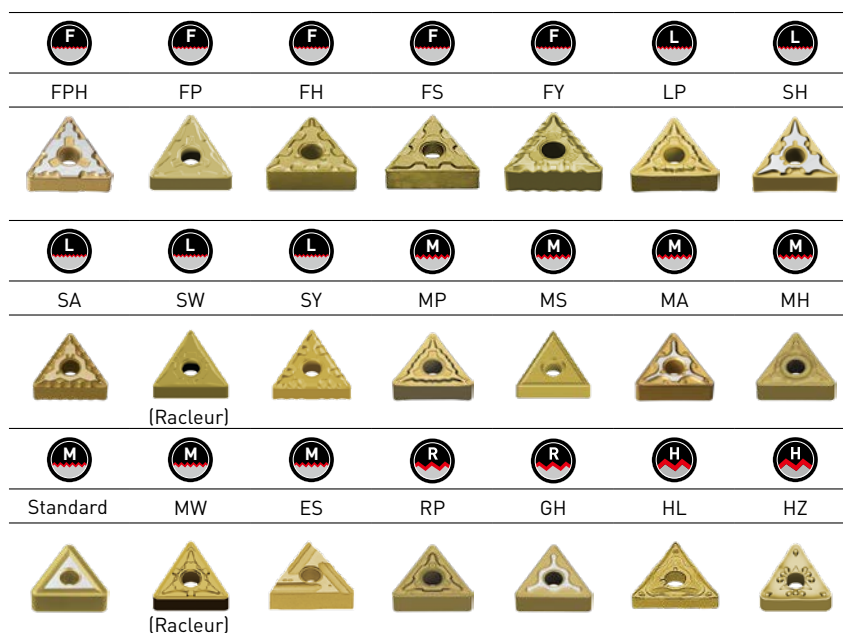
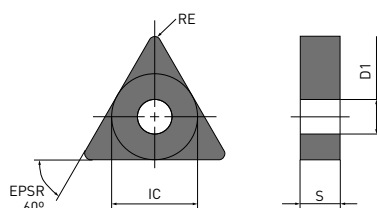
● : Article stocké. ★ : Article stocké au Japon.

# TNMG, TNMX, TNMM

## PLAQUETTES NÉGATIVES À TROU

### Classe M

### TNMG, TNMX, TNMM



| Référence      |   |  |  |  |        |        |        |                     |
|----------------|---|--|--|--|--------|--------|--------|---------------------|
|                |   |  |  |  | MC6115 | MC6125 | MC6135 |                     |
| TNMG160404-FPH | F |  |  |  | ●      | ●      | ●      | 9.525 4.76 0.4 3.81 |
| TNMG160408-FPH | F |  |  |  | ●      | ●      | ●      | 9.525 4.76 0.8 3.81 |
| TNMG160412-FPH | F |  |  |  | ●      | ●      | ●      | 9.525 4.76 1.2 3.81 |
| TNMG160402-FP  | F |  |  |  | ★      | ★      | ★      | 9.525 4.76 0.2 3.81 |
| TNMG160404-FP  | F |  |  |  | ●      | ★      | ★      | 9.525 4.76 0.4 3.81 |
| TNMG160408-FP  | F |  |  |  | ★      | ★      | ★      | 9.525 4.76 0.8 3.81 |
| TNMG160412-FP  | F |  |  |  | ★      | ★      | ★      | 9.525 4.76 1.2 3.81 |
| TNMG160402-FH  | F |  |  |  | ★      | ★      | ★      | 9.525 4.76 0.2 3.81 |
| TNMG160404-FH  | F |  |  |  | ●      | ★      |        | 9.525 4.76 0.4 3.81 |
| TNMG160408-FH  | F |  |  |  | ●      | ★      | ★      | 9.525 4.76 0.8 3.81 |
| TNMG160404-FS  | F |  |  |  |        | ★      | ★      | 9.525 4.76 0.4 3.81 |
| TNMG160408-FS  | F |  |  |  |        | ★      | ★      | 9.525 4.76 0.8 3.81 |
| TNMG160404-FY  | F |  |  |  | ●      | ●      | ★      | 9.525 4.76 0.4 3.81 |
| TNMG160408-FY  | F |  |  |  | ●      | ★      | ★      | 9.525 4.76 0.8 3.81 |
| TNMG160404-LP  | L |  |  |  | ●      | ●      | ★      | 9.525 4.76 0.4 3.81 |
| TNMG160408-LP  | L |  |  |  | ●      | ●      | ★      | 9.525 4.76 0.8 3.81 |
| TNMG160412-LP  | L |  |  |  | ●      | ●      | ★      | 9.525 4.76 1.2 3.81 |
| TNMG220408-LP  | L |  |  |  | ●      | ●      | ★      | 12.7 4.76 0.8 5.16  |
| TNMG220412-LP  | L |  |  |  | ●      | ●      | ★      | 12.7 4.76 1.2 5.16  |
| TNMG160404-SH  | L |  |  |  | ★      | ★      | ★      | 9.525 4.76 0.4 3.81 |
| TNMG160408-SH  | L |  |  |  | ★      | ★      | ★      | 9.525 4.76 0.8 3.81 |
| TNMG220408-SH  | L |  |  |  | ★      | ★      |        | 12.7 4.76 0.8 5.16  |

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[Conditionnement par quantité 10]



● / ★ = Extension de gamme

● : Article stocké. ★ : Article stocké au Japon.



## TNMG, TNMX, TNMM – PLAQUETTES NÉGATIVES À TROU

| Référence     |  | MC6115 | MC6125 | MC6135 | IC     | S    | RE  | D1   |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|--------|------|-----|------|
|               |                                                                                   |        |        |        |        |      |     |      |
| TNMG160404-SA | L                                                                                 | ★      | ★      | ★      | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408-SA | L                                                                                 | ★      | ★      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412-SA | L                                                                                 | ★      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG220408-SA | L                                                                                 | ●      | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220412-SA | L                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMX160404-SW | L                                                                                 | ●      | ●      |        | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMX160408-SW | L                                                                                 | ●      | ●      |        | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160404-SY | L                                                                                 | ●      | ★      | ★      | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408-SY | L                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160404-MP | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408-MP | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412-MP | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG220408-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220412-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMG160404-MS | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408-MS | M                                                                                 | ★      | ★      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412-MS | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG220408-MS | M                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG160404-MA | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408-MA | M                                                                                 | ●      | ●      | ●      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412-MA | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG220408-MA | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220412-MA | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMG270608-MA | M                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 0.8 | 6.35 |
| TNMG270612-MA | M                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| TNMG160404-MH | M                                                                                 | ★      | ●      | ★      | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408-MH | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412-MH | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG220408-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220412-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMG110304    | M                                                                                 | ★      | ●      | ★      | 6.35   | 3.18 | 0.4 | 2.26 |
| TNMG110308    | M                                                                                 | ★      | ★      | ★      | 6.35   | 3.18 | 0.8 | 2.26 |
| TNMG160304    | M                                                                                 | ★      | ★      | ★      | 9.525  | 3.18 | 0.4 | 3.81 |
| TNMG160308    | M                                                                                 | ★      | ★      | ★      | 9.525  | 3.18 | 0.8 | 3.81 |
| TNMG160404    | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408    | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412    | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG160416    | M                                                                                 | ★      | ★      | ★      | 9.525  | 4.76 | 1.6 | 3.81 |
| TNMG220404    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| TNMG220408    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220412    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMG220416    | M                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| TNMG270608    | M                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 0.8 | 6.35 |
| TNMG270612    | M                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| TNMG270616    | M                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |

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(Conditionnement par quantité 10)



## TNMG, TNMX, TNMM - PLAQUETTES NÉGATIVES À TROU

| Référence      |  | MC6115 | MC6125 | MC6135 | IC     | S    | RE  | D1   |
|----------------|-----------------------------------------------------------------------------------|--------|--------|--------|--------|------|-----|------|
| TNMX160408-MW  | M                                                                                 | ●      | ●      |        | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMX160412-MW  | M                                                                                 | ●      | ●      |        | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG160404R-ES | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160404L-ES | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 0.4 | 3.81 |
| TNMG160408R-ES | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160408L-ES | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG220408R-ES | M                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220408L-ES | M                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG160408-RP  | R                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412-RP  | R                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG220408-RP  | R                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220412-RP  | R                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMG220416-RP  | R                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| TNMG270612-RP  | R                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| TNMG270616-RP  | R                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.6 | 6.35 |
| TNMG160408-GH  | R                                                                                 | ★      | ★      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMG160412-GH  | R                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMG220408-GH  | R                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMG220412-GH  | R                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMG220416-GH  | R                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 1.6 | 5.16 |
| TNMG270612-GH  | R                                                                                 | ★      | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| TNMG270616-GH  | R                                                                                 | ★      | ★      |        | 15.875 | 6.35 | 1.6 | 6.35 |
| TNMM160408-HL  | H                                                                                 |        | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMM160412-HL  | H                                                                                 |        | ●      | ●      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMM220408-HL  | H                                                                                 |        | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMM220412-HL  | H                                                                                 |        | ●      | ●      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMM220416-HL  | H                                                                                 |        | ★      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| TNMM160408-HZ  | H                                                                                 | ★      | ★      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| TNMM160412-HZ  | H                                                                                 |        | ★      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| TNMM220408-HZ  | H                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| TNMM220412-HZ  | H                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| TNMM220416-HZ  | H                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |

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[Conditionnement par quantité 10]

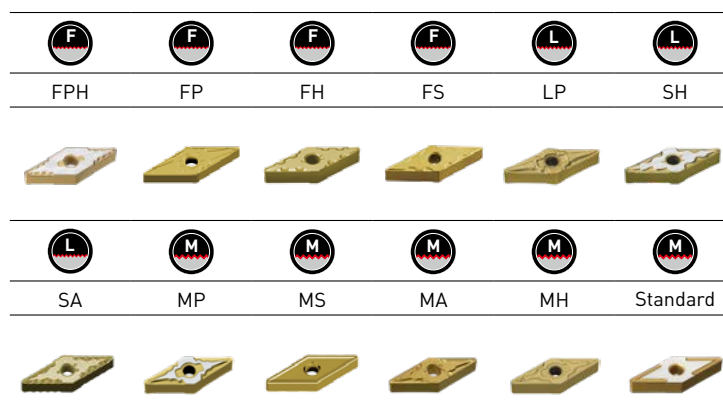
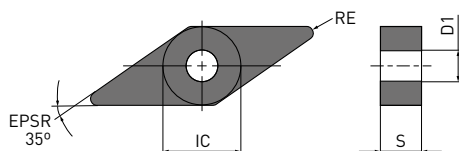


# VNMG

## PLAQUETTES NÉGATIVES À TROU

### Classe M

### VNMG



| Référence      |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1   |
|----------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|------|
| VNMG160404-FPH | F                                                                                 | ●      | ●      | ●      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-FPH | F                                                                                 | ●      | ●      | ●      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160412-FPH | F                                                                                 | ●      | ●      | ●      | 9.525 | 4.76 | 1.2 | 3.81 |
| VNMG160402-FP  | F                                                                                 | ★      | ★      | ★      | 9.525 | 4.76 | 0.2 | 3.81 |
| VNMG160404-FP  | F                                                                                 | ●      | ★      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-FP  | F                                                                                 | ★      | ★      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160412-FP  | F                                                                                 | ★      | ★      | ★      | 9.525 | 4.76 | 1.2 | 3.81 |
| VNMG160402-FH  | F                                                                                 | ★      | ★      | ★      | 9.525 | 4.76 | 0.2 | 3.81 |
| VNMG160404-FH  | F                                                                                 | ★      | ★      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-FH  | F                                                                                 | ★      | ★      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404-FS  | F                                                                                 |        | ★      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-FS  | F                                                                                 |        | ★      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404-LP  | L                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-LP  | L                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404-SH  | L                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-SH  | L                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404-SA  | L                                                                                 | ●      | ★      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-SA  | L                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404-MP  | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-MP  | M                                                                                 | ●      | ●      | ●      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160412-MP  | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 1.2 | 3.81 |
| VNMG160404-MS  | M                                                                                 | ★      | ●      |        | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-MS  | M                                                                                 | ★      | ★      |        | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404-MA  | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-MA  | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404-MH  | M                                                                                 | ★      | ★      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408-MH  | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160404     | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 3.81 |
| VNMG160408     | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 3.81 |
| VNMG160412     | M                                                                                 | ●      | ●      | ★      | 9.525 | 4.76 | 1.2 | 3.81 |

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[Conditionnement par quantité 10]



● / ★ = Extension de gamme

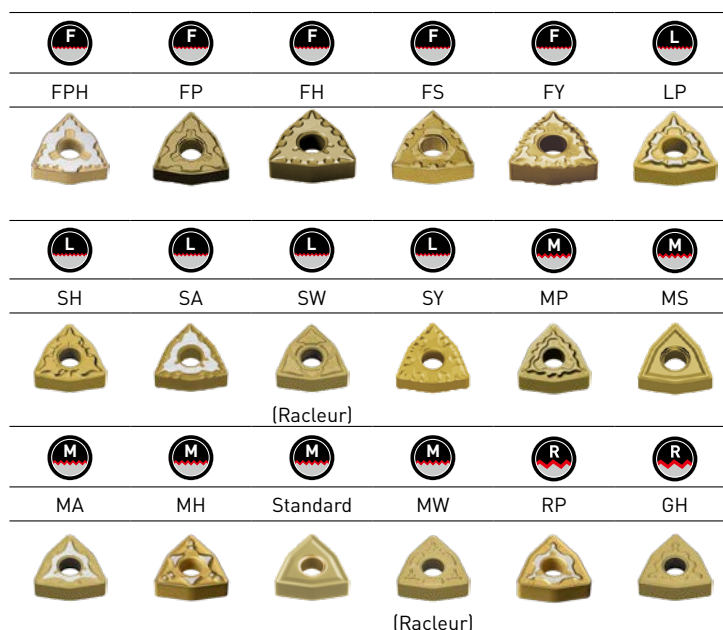
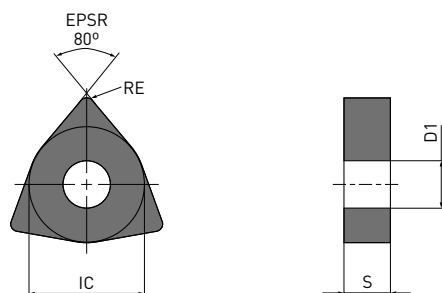
● : Article stocké. ★ : Article stocké au Japon.

# WNMG

## PLAQUETTES NÉGATIVES À TROU

Classe M

WNMG



| Référence      |   | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1   |
|----------------|---|--------|--------|--------|-------|------|-----|------|
| WNMG080404-FPH | F | ●      | ●      | ●      | 12.7  | 4.76 | 0.4 | 5.16 |
| WNMG080408-FPH | F | ●      | ●      | ●      | 12.7  | 4.76 | 0.8 | 5.16 |
| WNMG080412-FPH | F | ●      | ●      | ●      | 12.7  | 4.76 | 1.2 | 5.16 |
| WNMG080402-FP  | F | ★      | ★      | ★      | 12.7  | 4.76 | 0.2 | 5.16 |
| WNMG080404-FP  | F | ★      | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| WNMG080408-FP  | F | ★      | ★      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| WNMG080412-FP  | F | ★      | ★      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| WNMG080404-FH  | F | ★      | ★      |        | 12.7  | 4.76 | 0.4 | 5.16 |
| WNMG080408-FH  | F | ★      | ★      |        | 12.7  | 4.76 | 0.8 | 5.16 |
| WNMG080404-FS  | F |        | ★      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| WNMG080408-FS  | F |        | ★      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| WNMG080408-FY  | F | ★      | ★      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| WNMG06T304-LP  | L | ★      | ★      | ●      | 9.525 | 3.97 | 0.4 | 3.81 |
| WNMG06T308-LP  | L | ●      | ★      | ●      | 9.525 | 3.97 | 0.8 | 3.81 |
| WNMG060404-LP  | L | ●      | ●      | ●      | 9.525 | 4.76 | 0.4 | 3.81 |
| WNMG060408-LP  | L | ●      | ●      | ●      | 9.525 | 4.76 | 0.8 | 3.81 |
| WNMG080404-LP  | L | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| WNMG080408-LP  | L | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| WNMG080412-LP  | L | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |
| WNMG06T304-SH  | L | ●      | ●      |        | 9.525 | 3.97 | 0.4 | 3.81 |
| WNMG06T308-SH  | L | ●      | ●      |        | 9.525 | 3.97 | 0.8 | 3.81 |
| WNMG060404-SH  | L | ★      | ●      |        | 9.525 | 4.76 | 0.4 | 3.81 |
| WNMG060408-SH  | L | ●      | ★      |        | 9.525 | 4.76 | 0.8 | 3.81 |
| WNMG080404-SH  | L | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.16 |
| WNMG080408-SH  | L | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.16 |
| WNMG080412-SH  | L | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.16 |

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[Conditionnement par quantité 10]



● / ★ = Extension de gamme

● : Article stocké. ★ : Article stocké au Japon.

## WNMG - PLAQUETTES NÉGATIVES À TROU

| Référence     |  | MC6115 | MC6125 | MC6135 | IC     | S    | RE  | D1   |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|--------|------|-----|------|
| WNMG080404-SA | L                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| WNMG080408-SA | L                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412-SA | L                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 1.2 | 5.16 |
| WNMG060404-SW | L                                                                                 | ●      | ★      |        | 9.525  | 4.76 | 0.4 | 3.81 |
| WNMG060408-SW | L                                                                                 | ●      | ●      |        | 9.525  | 4.76 | 0.8 | 3.81 |
| WNMG080404-SW | L                                                                                 | ●      | ★      |        | 12.7   | 4.76 | 0.4 | 5.16 |
| WNMG080408-SW | L                                                                                 | ●      | ★      |        | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412-SW | L                                                                                 | ●      | ★      |        | 12.7   | 4.76 | 1.2 | 5.16 |
| WNMG080408-SY | L                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG06T304-MP | M                                                                                 | ●      | ●      | ●      | 9.525  | 3.97 | 0.4 | 3.81 |
| WNMG06T308-MP | M                                                                                 | ●      | ●      | ●      | 9.525  | 3.97 | 0.8 | 3.81 |
| WNMG06T312-MP | M                                                                                 | ●      | ●      | ●      | 9.525  | 3.97 | 1.2 | 3.81 |
| WNMG060404-MP | M                                                                                 | ●      | ●      | ●      | 9.525  | 4.76 | 0.4 | 3.81 |
| WNMG060408-MP | M                                                                                 | ●      | ●      | ●      | 9.525  | 4.76 | 0.8 | 3.81 |
| WNMG060412-MP | M                                                                                 | ●      | ●      | ●      | 9.525  | 4.76 | 1.2 | 3.81 |
| WNMG080404-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| WNMG080408-MP | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| WNMG080416-MP | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.6 | 5.16 |
| WNMG06T304-MS | M                                                                                 | ★      | ●      |        | 9.525  | 3.97 | 0.4 | 3.81 |
| WNMG06T308-MS | M                                                                                 | ★      | ★      |        | 9.525  | 3.97 | 0.8 | 3.81 |
| WNMG060404-MS | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 0.4 | 3.81 |
| WNMG060408-MS | M                                                                                 | ★      | ★      |        | 9.525  | 4.76 | 0.8 | 3.81 |
| WNMG080404-MS | M                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| WNMG080408-MS | M                                                                                 | ★      | ★      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412-MS | M                                                                                 | ★      | ★      |        | 12.7   | 4.76 | 1.2 | 5.16 |
| WNMG06T304-MA | M                                                                                 | ★      | ●      |        | 9.525  | 3.97 | 0.4 | 3.81 |
| WNMG06T308-MA | M                                                                                 | ★      | ●      |        | 9.525  | 3.97 | 0.8 | 3.81 |
| WNMG06T312-MA | M                                                                                 | ★      | ★      |        | 9.525  | 3.97 | 1.2 | 3.81 |
| WNMG060404-MA | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.4 | 3.81 |
| WNMG060408-MA | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| WNMG060412-MA | M                                                                                 | ★      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| WNMG080404-MA | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| WNMG080408-MA | M                                                                                 | ●      | ●      | ●      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412-MA | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| WNMG080416-MA | M                                                                                 | ●      | ●      |        | 12.7   | 4.76 | 1.6 | 5.16 |
| WNMG100612-MA | M                                                                                 |        | ★      | ★      | 15.875 | 6.35 | 1.2 | 6.35 |
| WNMG080404-MH | M                                                                                 | ★      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| WNMG080408-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412-MH | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| WNMG080404    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.4 | 5.16 |
| WNMG080408    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412    | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |
| WNMG060408-MW | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 0.8 | 3.81 |
| WNMG060412-MW | M                                                                                 | ●      | ●      | ★      | 9.525  | 4.76 | 1.2 | 3.81 |
| WNMG080408-MW | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 0.8 | 5.16 |
| WNMG080412-MW | M                                                                                 | ●      | ●      | ★      | 12.7   | 4.76 | 1.2 | 5.16 |

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[Conditionnement par quantité 10]



## WNMG – PLAQUETTES NÉGATIVES À TROU

| Référence     |  | MC6115 | MC6125 | MC6135 | IC   | S    | RE  | D1   |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|------|------|-----|------|
|               |                                                                                   |        |        |        |      |      |     |      |
| WNMG080408-RP | R                                                                                 | ●      | ●      | ●      | 12.7 | 4.76 | 0.8 | 5.16 |
| WNMG080412-RP | R                                                                                 | ●      | ●      | ●      | 12.7 | 4.76 | 1.2 | 5.16 |
| WNMG080416-RP | R                                                                                 | ●      | ●      |        | 12.7 | 4.76 | 1.6 | 5.16 |
| WNMG080408-GH | R                                                                                 | ★      | ●      | ★      | 12.7 | 4.76 | 0.8 | 5.16 |
| WNMG080412-GH | R                                                                                 | ★      | ●      | ★      | 12.7 | 4.76 | 1.2 | 5.16 |

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[Conditionnement par quantité 10]

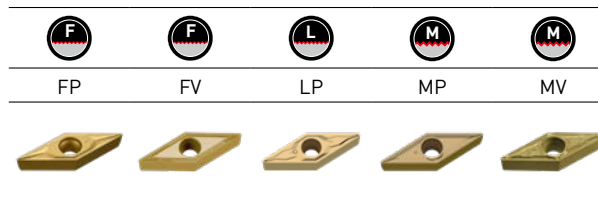
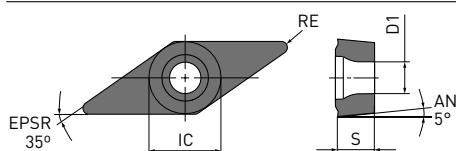
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# VBMT

## PLAQUETTES POSITIVES 5° (À TROU)

Classe M

VBMT



| Référence     |   <br>  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| VBMT110302-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.2 | 2.9 |
| VBMT110304-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.9 |
| VBMT110308-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ★      | ★      | 6.35  | 3.18 | 0.8 | 2.9 |
| VBMT160404-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VBMT160408-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VBMT160412-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ●      | 9.525 | 4.76 | 1.2 | 4.4 |
| VBMT110304-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.9 |
| VBMT110308-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ●      | ★      | 6.35  | 3.18 | 0.8 | 2.9 |
| VBMT160404-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VBMT160408-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VBMT110304-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.9 |
| VBMT110308-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.8 | 2.9 |
| VBMT160404-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VBMT160408-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VBMT160412-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ●      | 9.525 | 4.76 | 1.2 | 4.4 |
| VBMT160404-MP | M                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VBMT160408-MP | M                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VBMT110304-MV | M                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.9 |
| VBMT110308-MV | M                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ●      | ★      | 6.35  | 3.18 | 0.8 | 2.9 |
| VBMT160404-MV | M                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VBMT160408-MV | M                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ★      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |

1/1

[Conditionnement par quantité 10]

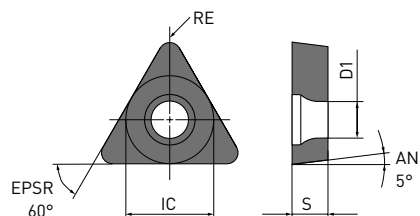
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# TBMT, WBMT

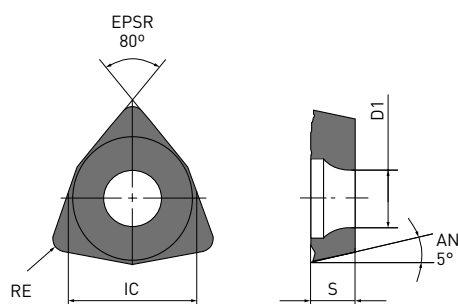
## PLAQUETTES POSITIVES 5° (À TROU)

Classe M

### TBMT



### WBMT



FV



MV



| Référence      |  | MC6115 | MC6125 | MC6135 | IC   | S    | RE  | D1  |
|----------------|-------------------------------------------------------------------------------------|--------|--------|--------|------|------|-----|-----|
| TBMT060102-FV  | F                                                                                   | ●      |        | ●      | 3.97 | 1.59 | 0.2 | 2.3 |
| TBMT060104-FV  | F                                                                                   | ●      |        | ●      | 3.97 | 1.59 | 0.4 | 2.3 |
| WBMTL30202R-MV | M                                                                                   |        | ●      | ★      | 4.76 | 2.38 | 0.2 | 2.3 |
| WBMTL30202L-MV | M                                                                                   |        | ★      | ★      | 4.76 | 2.38 | 0.2 | 2.3 |
| WBMTL30204R-MV | M                                                                                   |        | ★      | ★      | 4.76 | 2.38 | 0.4 | 2.3 |
| WBMTL30204L-MV | M                                                                                   |        | ★      | ★      | 4.76 | 2.38 | 0.4 | 2.3 |

1/1

(Conditionnement par quantité 10)



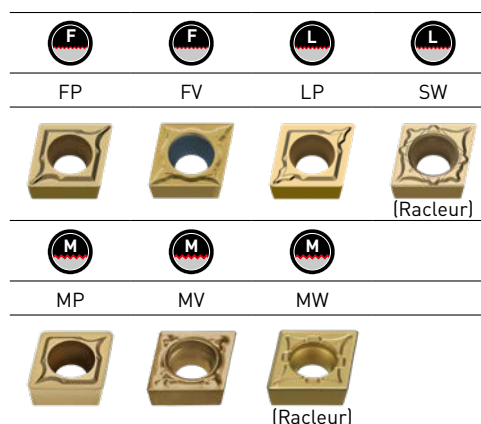
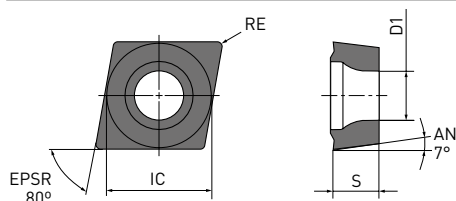


# CCMT, CCMH

## PLAQUETTES POSITIVES 7° (À TROU)

Classe M

CCMT, CCMH



| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| CCMT060202-FP | F                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| CCMT060204-FP | F                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| CCMT09T302-FP | F                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| CCMT09T304-FP | F                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| CCMT09T308-FP | F                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| CCMT060202-FV | F                                                                                 |        | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| CCMT060204-FV | F                                                                                 |        | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| CCMT09T302-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| CCMT09T304-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| CCMT09T308-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| CCMT060202-LP | L                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| CCMT060204-LP | L                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| CCMT060208-LP | L                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| CCMT09T302-LP | L                                                                                 | ●      | ●      | ●      | 9.525 | 3.97 | 0.2 | 4.4 |
| CCMT09T304-LP | L                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| CCMT09T308-LP | L                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| CCMT060202-SW | L                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| CCMT060204-SW | L                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| CCMT060208-SW | L                                                                                 | ●      | ●      | ●      | 6.35  | 2.38 | 0.8 | 2.8 |
| CCMT09T302-SW | L                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| CCMT09T304-SW | L                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| CCMT09T308-SW | L                                                                                 | ●      | ●      | ●      | 9.525 | 3.97 | 0.8 | 4.4 |

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(Conditionnement par quantité 10)



## CCMT, CCMH -PLAQUETTES POSITIVES 7° (À TROU)

| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| CCMT060202-MP | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| CCMT060204-MP | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| CCMT060208-MP | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| CCMT080302-MP | M                                                                                 | ★      | ★      |        | 7.94  | 3.18 | 0.2 | 3.4 |
| CCMT080304-MP | M                                                                                 | ●      | ★      |        | 7.94  | 3.18 | 0.4 | 3.4 |
| CCMT080308-MP | M                                                                                 | ●      | ★      |        | 7.94  | 3.18 | 0.8 | 3.4 |
| CCMT09T302-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| CCMT09T304-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| CCMT09T308-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| CCMT120404-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.5 |
| CCMT120408-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.5 |
| CCMT120412-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 1.2 | 5.5 |
| CCMH060202-MV | M                                                                                 |        | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| CCMH060204-MV | M                                                                                 |        | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| CCMT060204-MW | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| CCMT060208-MW | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| CCMT09T304-MW | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| CCMT09T308-MW | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| CCMT120404-MW | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.5 |
| CCMT120408-MW | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.5 |

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[Conditionnement par quantité 10]

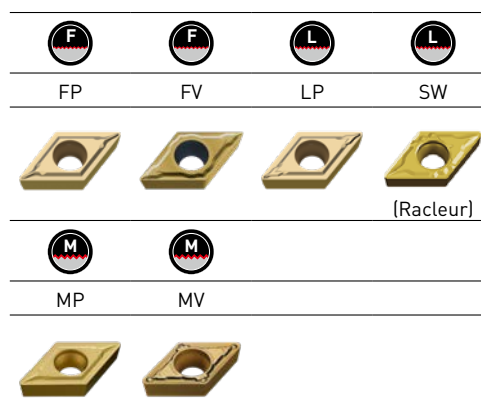
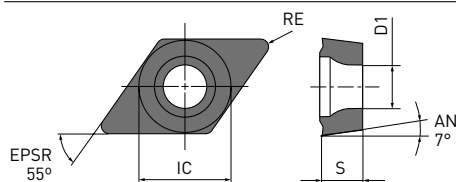
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# DCMT, DCMX

## PLAQUETTES POSITIVES 7° (À TROU)

Classe M

DCMT, DCMX



| Référence     |      | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| DCMT070202-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| DCMT070204-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| DCMT11T302-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| DCMT11T304-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| DCMT11T308-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| DCMT070202-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| DCMT070204-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| DCMT070208-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                         |        | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| DCMT11T302-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                         |        | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| DCMT11T304-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| DCMT11T308-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| DCMT070202-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| DCMT070204-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| DCMT070208-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| DCMT11T302-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| DCMT11T304-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| DCMT11T308-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| DCMX070202-SW | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ●      | 6.35  | 2.38 | 0.2 | 2.8 |
| DCMX070204-SW | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ●      | 6.35  | 2.38 | 0.4 | 2.8 |
| DCMX070208-SW | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ●      | 6.35  | 2.38 | 0.8 | 2.8 |
| DCMX11T302-SW | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ●      | 9.525 | 3.97 | 0.2 | 4.4 |
| DCMX11T304-SW | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ●      | 9.525 | 3.97 | 0.4 | 4.4 |
| DCMX11T308-SW | L                                                                                                                                                                                                                                                                                                                                                                                                                         | ●      | ●      | ●      | 9.525 | 3.97 | 0.8 | 4.4 |

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[Conditionnement par quantité 10]



## DCMT, DCMX -PLAQUETTES POSITIVES 7° (À TROU)

| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
|               |                                                                                   |        |        |        |       |      |     |     |
| DCMT070202-MP | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| DCMT070204-MP | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| DCMT070208-MP | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| DCMT11T302-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| DCMT11T304-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| DCMT11T308-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| DCMT11T312-MP | M                                                                                 | ●      | ●      |        | 9.525 | 3.97 | 1.2 | 4.4 |
| DCMT150404-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.5 |
| DCMT150408-MP | M                                                                                 | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.5 |
| DCMT150412-MP | M                                                                                 | ●      | ●      |        | 12.7  | 4.76 | 1.2 | 5.5 |
| DCMT070202-MV | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| DCMT070204-MV | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| DCMT070208-MV | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| DCMT11T302-MV | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.2 | 4.4 |
| DCMT11T304-MV | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| DCMT11T308-MV | M                                                                                 | ●      | ★      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |

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[Conditionnement par quantité 10]

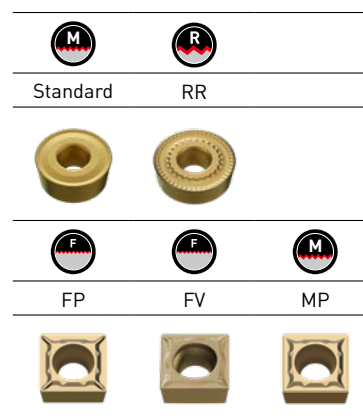
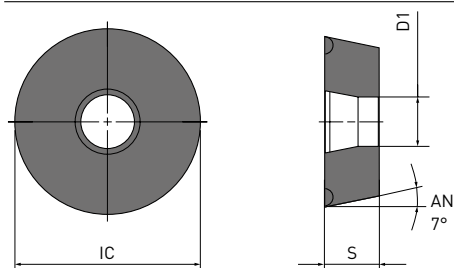


# RCMT, RCMX, SCMT

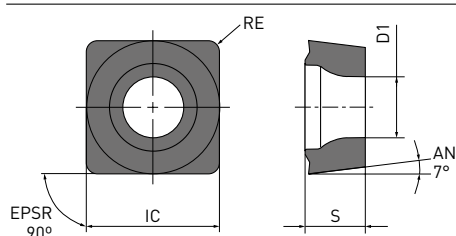
## PLAQUETTES POSITIVES 7° (À TROU)

### Classe M

#### RCMT, RCMX



#### SCMT



| Référence     |   |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|---|--|--------|--------|--------|-------|------|-----|-----|
| RCMT0602M0    | M |  | ●      | ●      |        | 6     | 2.38 | —   | 2.8 |
| RCMT0803M0    | M |  | ●      | ●      |        | 8     | 3.18 | —   | 3.4 |
| RCMX1003M0    | M |  | ●      | ●      | ★      | 10    | 3.18 | —   | 3.6 |
| RCMX1204M0    | M |  | ★      | ●      | ★      | 12    | 4.76 | —   | 4.2 |
| RCMX1606M0    | M |  | ★      | ●      | ★      | 16    | 6.35 | —   | 5.2 |
| RCMX2006M0    | M |  | ●      | ●      | ●      | 20    | 6.35 | —   | 6.5 |
| RCMX2507M0    | M |  | ★      | ●      | ★      | 25    | 7.94 | —   | 7.2 |
| RCMX3209M0    | M |  | ★      | ★      | ★      | 32    | 9.52 | —   | 9.5 |
| RCMX1606M0-RR | R |  | ★      | ●      | ●      | 16    | 6.35 | —   | 5.2 |
| RCMX2006M0-RR | R |  | ●      | ★      | ●      | 20    | 6.35 | —   | 6.5 |
| RCMX2507M0-RR | R |  | ★      | ●      | ●      | 25    | 7.94 | —   | 7.2 |
| RCMX3209M0-RR | R |  | ★      | ★      | ★      | 32    | 9.52 | —   | 9.5 |
| SCMT09T304-FP | F |  | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| SCMT09T308-FP | F |  | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| SCMT09T304-FV | F |  |        | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| SCMT09T304-LP | L |  | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| SCMT09T308-LP | L |  | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| SCMT09T304-MP | M |  | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| SCMT09T308-MP | M |  | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| SCMT120404-MP | M |  | ●      | ●      | ★      | 12.7  | 4.76 | 0.4 | 5.5 |
| SCMT120408-MP | M |  | ●      | ●      | ★      | 12.7  | 4.76 | 0.8 | 5.5 |
| SCMT120412-MP | M |  | ●      | ★      |        | 12.7  | 4.76 | 1.2 | 5.5 |

1/1

[Conditionnement par quantité 10]

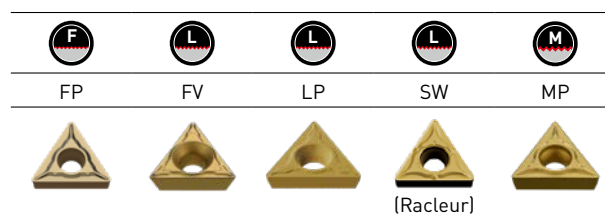
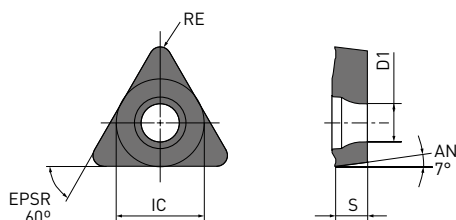


# TCMT, TCMX

## PLAQUETTES POSITIVES 7° (À TROU)

Classe M

TCMT, TCMX



| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| TCMT090202-FP | F                                                                                 | ●      | ★      | ★      | 5.56  | 2.38 | 0.2 | 2.5 |
| TCMT090204-FP | F                                                                                 | ●      | ●      | ★      | 5.56  | 2.38 | 0.4 | 2.5 |
| TCMT110202-FP | F                                                                                 | ●      | ★      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| TCMT110204-FP | F                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| TCMT16T304-FP | F                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| TCMT110204-FV | F                                                                                 |        | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| TCMT16T304-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| TCMT090204-LP | L                                                                                 | ●      | ●      | ★      | 5.56  | 2.38 | 0.4 | 2.5 |
| TCMT090208-LP | L                                                                                 | ●      | ★      | ★      | 5.56  | 2.38 | 0.8 | 2.5 |
| TCMT110202-LP | L                                                                                 | ●      | ●      | ●      | 6.35  | 2.38 | 0.2 | 2.8 |
| TCMT110204-LP | L                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| TCMT110208-LP | L                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| TCMT16T304-LP | L                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| TCMT16T308-LP | L                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| TCMX090204-SW | L                                                                                 | ●      | ●      | ●      | 5.56  | 2.38 | 0.4 | 2.5 |
| TCMX110204-SW | L                                                                                 | ●      | ●      | ●      | 6.35  | 2.38 | 0.4 | 2.8 |
| TCMT090204-MP | M                                                                                 | ●      | ★      | ★      | 5.56  | 2.38 | 0.4 | 2.5 |
| TCMT090208-MP | M                                                                                 | ●      | ★      | ★      | 5.56  | 2.38 | 0.8 | 2.5 |
| TCMT110202-MP | M                                                                                 | ●      | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| TCMT110204-MP | M                                                                                 | ●      | ★      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| TCMT110208-MP | M                                                                                 | ●      | ★      | ★      | 6.35  | 2.38 | 0.8 | 2.8 |
| TCMT130304-MP | M                                                                                 | ●      | ●      | ★      | 7.94  | 3.18 | 0.4 | 3.4 |
| TCMT16T304-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.4 | 4.4 |
| TCMT16T308-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 0.8 | 4.4 |
| TCMT16T312-MP | M                                                                                 | ●      | ●      | ★      | 9.525 | 3.97 | 1.2 | 4.4 |

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[Conditionnement par quantité 10]

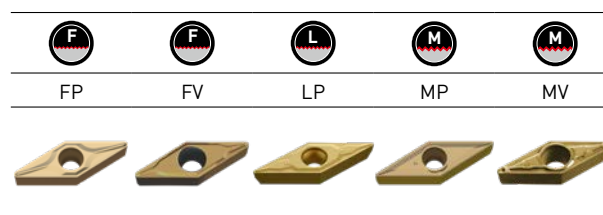
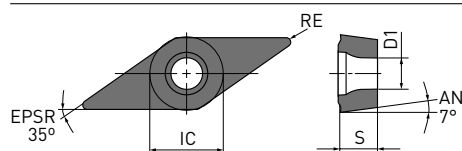


# VCMT

## PLAQUETTES POSITIVES 7° (À TROU)

Classe M

VCMT



| Référence     |   <br>  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| VCMT080202-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ●      | 4.76  | 2.38 | 0.2 | 2.4 |
| VCMT080204-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ●      | 4.76  | 2.38 | 0.4 | 2.4 |
| VCMT110302-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.2 | 2.8 |
| VCMT110304-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.8 |
| VCMT160404-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VCMT160408-FP | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VCMT080202-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ●      | ★      | 4.76  | 2.38 | 0.2 | 2.4 |
| VCMT080204-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ●      | ★      | 4.76  | 2.38 | 0.4 | 2.4 |
| VCMT160404-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VCMT160408-FV | F                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VCMT080202-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ★      | ★      | 4.76  | 2.38 | 0.2 | 2.4 |
| VCMT080204-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 4.76  | 2.38 | 0.4 | 2.4 |
| VCMT110304-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.8 |
| VCMT110308-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.8 | 2.8 |
| VCMT160404-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VCMT160408-LP | L                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VCMT110304-MP | M                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.8 |
| VCMT160404-MP | M                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.4 | 4.4 |
| VCMT160408-MP | M                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ●      | ★      | 9.525 | 4.76 | 0.8 | 4.4 |
| VCMT160412-MP | M                                                                                                                                                                                                                                                                                                                                                                                                                            | ●      | ★      | ★      | 9.525 | 4.76 | 1.2 | 4.4 |
| VCMT080202-MV | M                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ★      | ★      | 4.76  | 2.38 | 0.2 | 2.4 |
| VCMT080204-MV | M                                                                                                                                                                                                                                                                                                                                                                                                                            |        | ●      | ★      | 4.76  | 2.38 | 0.4 | 2.4 |

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(Conditionnement par quantité 10)

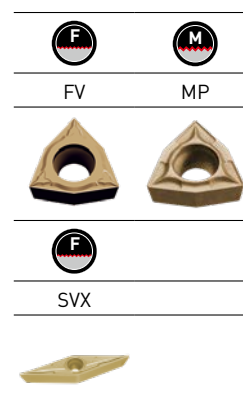
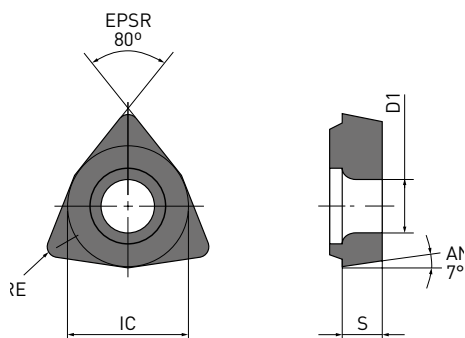


# WCMT, XCMT

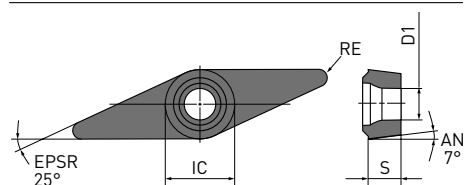
## PLAQUETTES POSITIVES 7° (À TROU)

### Classe M

#### WCMT



#### XCMT



| Référence      |   | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1   |
|----------------|---|--------|--------|--------|-------|------|-----|------|
| WCMT020102-FV  | F |        | ●      |        | 3.97  | 1.59 | 0.2 | 2.3  |
| WCMT020104-FV  | F |        | ●      |        | 3.97  | 1.59 | 0.4 | 2.3  |
| WCMTL30202-FV  | F |        | ●      |        | 4.76  | 2.38 | 0.2 | 2.3  |
| WCMTL30204-FV  | F |        | ●      |        | 4.76  | 2.38 | 0.4 | 2.3  |
| WCMT040202-FV  | F |        | ●      |        | 6.35  | 2.38 | 0.2 | 2.8  |
| WCMT040204-FV  | F |        | ●      |        | 6.35  | 2.38 | 0.4 | 2.8  |
| WCMT06T302-FV  | F |        | ●      |        | 9.525 | 3.97 | 0.2 | 4.4  |
| WCMT06T304-FV  | F |        | ●      |        | 9.525 | 3.97 | 0.4 | 4.4  |
| WCMT020102-MP  | M | ★      | ★      | ★      | 3.97  | 1.59 | 0.2 | 2.3  |
| WCMT020104-MP  | M | ★      | ★      | ★      | 3.97  | 1.59 | 0.4 | 2.3  |
| WCMTL30202-MP  | M | ★      | ★      |        | 4.76  | 2.38 | 0.2 | 2.3  |
| WCMTL30204-MP  | M | ★      | ★      |        | 4.76  | 2.38 | 0.4 | 2.3  |
| WCMT040202-MP  | M | ★      | ★      | ★      | 6.35  | 2.38 | 0.2 | 2.8  |
| WCMT040204-MP  | M | ★      | ★      | ★      | 6.35  | 2.38 | 0.4 | 2.8  |
| WCMT040208-MP  | M |        | ★      | ★      | 6.35  | 2.38 | 0.8 | 2.8  |
| WCMT06T304-MP  | M | ★      | ★      | ★      | 9.525 | 3.97 | 0.4 | 4.4  |
| WCMT06T308-MP  | M | ★      | ★      | ★      | 9.525 | 3.97 | 0.8 | 4.4  |
| XCMT150304-SVX | F |        | ●      | ★      | 6.35  | 3.18 | 0.4 | 2.85 |
| XCMT150308-SVX | F |        | ●      | ★      | 6.35  | 3.18 | 0.8 | 2.85 |

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[Conditionnement par quantité 10]



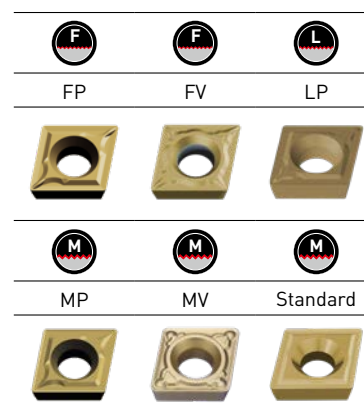
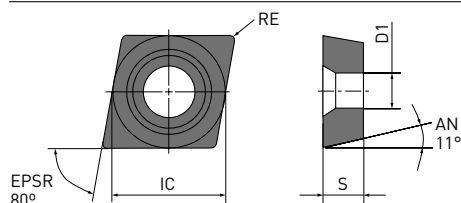


# CPMH

## PLAQUETTES POSITIVES 11° (À TROU)

Classe M

CPMH



| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| CPMH080202-FP | F                                                                                 |        | ●      | ●      | 7.94  | 2.38 | 0.2 | 3.5 |
| CPMH080204-FP | F                                                                                 |        | ●      | ●      | 7.94  | 2.38 | 0.4 | 3.5 |
| CPMH090302-FP | F                                                                                 |        | ●      | ●      | 9.525 | 3.18 | 0.2 | 4.5 |
| CPMH090304-FP | F                                                                                 |        | ●      | ●      | 9.525 | 3.18 | 0.4 | 4.5 |
| CPMH090308-FP | F                                                                                 |        | ●      | ●      | 9.525 | 3.18 | 0.8 | 4.5 |
| CPMH080202-FV | F                                                                                 |        | ★      | ★      | 7.94  | 2.38 | 0.2 | 3.5 |
| CPMH080204-FV | F                                                                                 |        | ●      | ★      | 7.94  | 2.38 | 0.4 | 3.5 |
| CPMH090302-FV | F                                                                                 |        | ★      | ★      | 9.525 | 3.18 | 0.2 | 4.5 |
| CPMH090304-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.4 | 4.5 |
| CPMH090308-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.8 | 4.5 |
| CPMH080202-LP | L                                                                                 |        | ●      | ★      | 7.94  | 2.38 | 0.2 | 3.5 |
| CPMH080204-LP | L                                                                                 | ●      | ●      | ★      | 7.94  | 2.38 | 0.4 | 3.5 |
| CPMH080208-LP | L                                                                                 | ●      | ●      | ●      | 7.94  | 2.38 | 0.8 | 3.5 |
| CPMH090302-LP | L                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.2 | 4.5 |
| CPMH090304-LP | L                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.4 | 4.5 |
| CPMH090308-LP | L                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.8 | 4.5 |
| CPMH080204-MP | M                                                                                 | ●      | ●      | ●      | 7.94  | 2.38 | 0.4 | 3.5 |
| CPMH080208-MP | M                                                                                 | ●      | ●      | ●      | 7.94  | 2.38 | 0.8 | 3.5 |
| CPMH090304-MP | M                                                                                 | ●      | ●      | ●      | 9.525 | 3.18 | 0.4 | 4.5 |
| CPMH090308-MP | M                                                                                 | ●      | ●      | ●      | 9.525 | 3.18 | 0.8 | 4.5 |
| CPMH080204-MV | M                                                                                 |        | ●      | ★      | 7.94  | 2.38 | 0.4 | 3.5 |
| CPMH080208-MV | M                                                                                 |        | ●      | ★      | 7.94  | 2.38 | 0.8 | 3.5 |
| CPMH090304-MV | M                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.4 | 4.5 |
| CPMH090308-MV | M                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.8 | 4.5 |
| CPMH080204    | M                                                                                 | ★      | ●      |        | 7.94  | 2.38 | 0.4 | 3.5 |
| CPMH080208    | M                                                                                 | ★      | ●      |        | 7.94  | 2.38 | 0.8 | 3.5 |
| CPMH090304    | M                                                                                 | ★      | ●      |        | 9.525 | 3.18 | 0.4 | 4.5 |
| CPMH090308    | M                                                                                 | ★      | ●      | ★      | 9.525 | 3.18 | 0.8 | 4.5 |

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[Conditionnement par quantité 10]

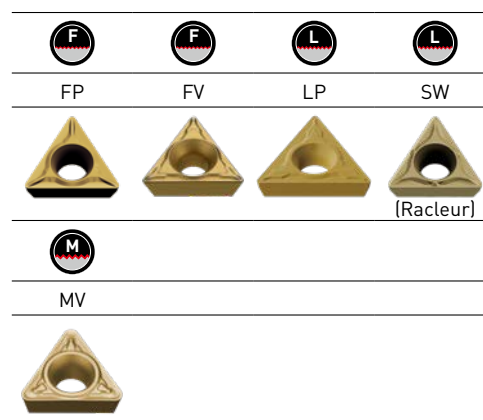
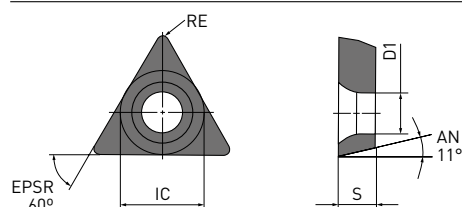


# TPMH, TPMX

## PLAQUETTES POSITIVES 11° (À TROU)

### Classe M

### TPMH, TPMX



| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
| TPMH090202-FP | F                                                                                 | ●      | ●      | ●      | 5.56  | 2.38 | 0.2 | 2.9 |
| TPMH090204-FP | F                                                                                 | ●      | ●      | ●      | 5.56  | 2.38 | 0.4 | 2.9 |
| TPMH110302-FP | F                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.2 | 3.4 |
| TPMH110304-FP | F                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.4 | 3.4 |
| TPMH110308-FP | F                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.8 | 3.4 |
| TPMH080202-FV | F                                                                                 |        | ★      | ★      | 4.76  | 2.38 | 0.2 | 2.4 |
| TPMH080204-FV | F                                                                                 |        | ★      | ★      | 4.76  | 2.38 | 0.4 | 2.4 |
| TPMH090202-FV | F                                                                                 |        | ★      | ★      | 5.56  | 2.38 | 0.2 | 2.9 |
| TPMH090204-FV | F                                                                                 |        | ●      | ★      | 5.56  | 2.38 | 0.4 | 2.9 |
| TPMH110302-FV | F                                                                                 |        | ★      | ★      | 6.35  | 3.18 | 0.2 | 3.4 |
| TPMH110304-FV | F                                                                                 | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 3.4 |
| TPMH110308-FV | F                                                                                 | ●      | ●      | ★      | 6.35  | 3.18 | 0.8 | 3.4 |
| TPMH160302-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.2 | 4.4 |
| TPMH160304-FV | F                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.4 | 4.4 |
| TPMH160308-FV | F                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.8 | 4.4 |
| TPMH080202-LP | L                                                                                 |        | ●      | ★      | 4.76  | 2.38 | 0.2 | 2.4 |
| TPMH080204-LP | L                                                                                 |        | ●      | ★      | 4.76  | 2.38 | 0.4 | 2.4 |
| TPMH090202-LP | L                                                                                 | ●      | ★      | ★      | 5.56  | 2.38 | 0.2 | 2.9 |
| TPMH090204-LP | L                                                                                 | ●      | ●      | ★      | 5.56  | 2.38 | 0.4 | 2.9 |
| TPMH110302-LP | L                                                                                 | ●      | ★      | ★      | 6.35  | 3.18 | 0.2 | 3.4 |
| TPMH110304-LP | L                                                                                 | ●      | ●      | ★      | 6.35  | 3.18 | 0.4 | 3.4 |
| TPMH110308-LP | L                                                                                 | ●      | ★      | ★      | 6.35  | 3.18 | 0.8 | 3.4 |
| TPMH160302-LP | L                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.2 | 4.4 |
| TPMH160304-LP | L                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.4 | 4.4 |
| TPMH160308-LP | L                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.8 | 4.4 |
| TPMX090202-SW | L                                                                                 | ●      | ●      | ●      | 5.56  | 2.38 | 0.2 | 2.9 |
| TPMX090204-SW | L                                                                                 | ●      | ●      | ●      | 5.56  | 2.38 | 0.4 | 2.9 |
| TPMX090208-SW | L                                                                                 | ●      | ●      | ●      | 5.56  | 2.38 | 0.8 | 2.9 |
| TPMX110302-SW | L                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.2 | 3.4 |
| TPMX110304-SW | L                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.4 | 3.4 |
| TPMX110308-SW | L                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.8 | 3.4 |

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(Conditionnement par quantité 10)



## TPMH, TPMX – PLAQUETTES POSITIVES 11° (À TROU)

| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|-----|
|               |                                                                                   |        |        |        |       |      |     |     |
| TPMH080202-MV | M                                                                                 |        | ●      | ★      | 4.76  | 2.38 | 0.2 | 2.4 |
| TPMH080204-MV | M                                                                                 |        | ●      | ★      | 4.76  | 2.38 | 0.4 | 2.4 |
| TPMH090202-MV | M                                                                                 |        | ●      | ★      | 5.56  | 2.38 | 0.2 | 2.9 |
| TPMH090204-MV | M                                                                                 |        | ●      | ★      | 5.56  | 2.38 | 0.4 | 2.9 |
| TPMH090208-MV | M                                                                                 |        | ●      | ★      | 5.56  | 2.38 | 0.8 | 2.9 |
| TPMH110302-MV | M                                                                                 |        | ●      | ★      | 6.35  | 3.18 | 0.2 | 3.4 |
| TPMH110304-MV | M                                                                                 |        | ●      | ★      | 6.35  | 3.18 | 0.4 | 3.4 |
| TPMH110308-MV | M                                                                                 |        | ●      | ★      | 6.35  | 3.18 | 0.8 | 3.4 |
| TPMH160304-MV | M                                                                                 |        | ●      | ★      | 9.525 | 3.18 | 0.4 | 4.4 |
| TPMH160308-MV | M                                                                                 |        | ★      | ★      | 9.525 | 3.18 | 0.8 | 4.4 |
|               |                                                                                   |        |        |        |       |      |     | 2/2 |

[Conditionnement par quantité 10]

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# WPMT

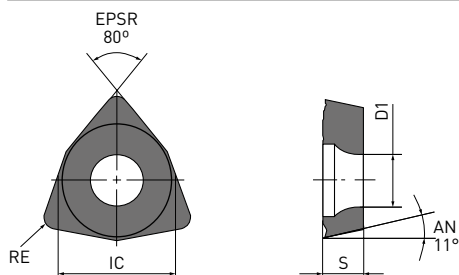
## PLAQUETTES POSITIVES 11° (À TROU)

Classe M

WPMT



MV



| Référence     |   | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1  |
|---------------|---|--------|--------|--------|-------|------|-----|-----|
| WPMT040202-MV | M |        | ●      | ★      | 6.35  | 2.38 | 0.2 | 2.8 |
| WPMT040204-MV | M |        | ★      | ★      | 6.35  | 2.38 | 0.4 | 2.8 |
| WPMT060304-MV | M |        | ★      | ★      | 9.525 | 3.18 | 0.4 | 4.4 |
| WPMT060308-MV | M |        | ●      | ★      | 9.525 | 3.18 | 0.8 | 4.4 |

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(Conditionnement par quantité 10)

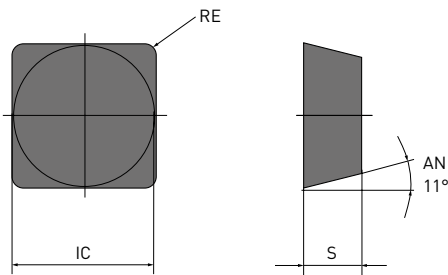


# SPMR, SPMN

## PLAQUETTES POSITIVES 11° (SANS TROU)

Classe M

SPMR, SPMN



Standard    Sans brise-copeaux



| Référence  |   | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1 |
|------------|---|--------|--------|--------|-------|------|-----|----|
|            |   |        |        |        |       |      |     |    |
| SPMR090304 | M | ★      | ★      | ★      | 9.525 | 3.18 | 0.4 | —  |
| SPMR090308 | M | ●      | ★      | ★      | 9.525 | 3.18 | 0.8 | —  |
| SPMR120304 | M | ●      | ★      | ★      | 12.7  | 3.18 | 0.4 | —  |
| SPMR120308 | M | ●      | ★      | ★      | 12.7  | 3.18 | 0.8 | —  |
| SPMN090308 | — | ★      |        |        | 9.525 | 3.18 | 0.8 | —  |
| SPMN120304 | — | ★      |        |        | 12.7  | 3.18 | 0.4 | —  |
| SPMN120308 | — | ●      |        |        | 12.7  | 3.18 | 0.8 | —  |
| SPMN120312 | — | ●      |        | ★      | 12.7  | 3.18 | 1.2 | —  |

1/1

[Conditionnement par quantité 10]

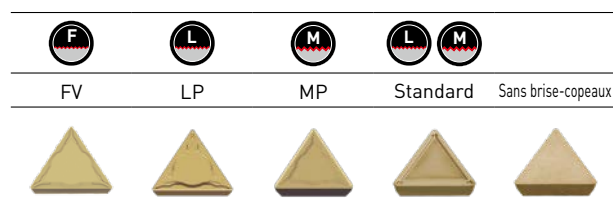
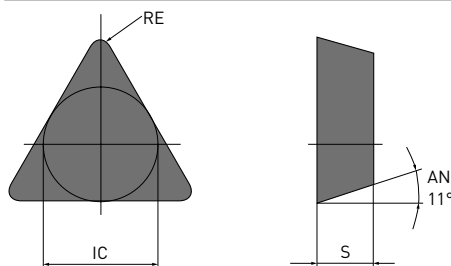


# TPMR, TPMN

## PLAQUETTES POSITIVES 11° (SANS TROU)

Classe M

TPMR, TPMN



| Référence     |  | MC6115 | MC6125 | MC6135 | IC    | S    | RE  | D1 |
|---------------|-----------------------------------------------------------------------------------|--------|--------|--------|-------|------|-----|----|
| TPMR160304-FV | F                                                                                 |        | ●      | ●      | 9.525 | 3.18 | 0.4 | —  |
| TPMR110304-LP | L                                                                                 |        | ●      | ●      | 6.35  | 3.18 | 0.4 | —  |
| TPMR110308-LP | L                                                                                 |        | ●      | ●      | 6.35  | 3.18 | 0.8 | —  |
| TPMR160304-LP | L                                                                                 | ●      | ●      | ●      | 9.525 | 3.18 | 0.4 | —  |
| TPMR160308-LP | L                                                                                 | ●      | ●      | ●      | 9.525 | 3.18 | 0.8 | —  |
| TPMR110304-MP | M                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.4 | —  |
| TPMR110308-MP | M                                                                                 | ●      | ●      | ●      | 6.35  | 3.18 | 0.8 | —  |
| TPMR160304-MP | M                                                                                 | ●      | ●      | ●      | 9.525 | 3.18 | 0.4 | —  |
| TPMR160308-MP | M                                                                                 | ●      | ●      | ●      | 9.525 | 3.18 | 0.8 | —  |
| TPMR110304    | M                                                                                 | ●      | ★      | ★      | 6.35  | 3.18 | 0.4 | —  |
| TPMR110308    | M                                                                                 | ●      | ★      | ★      | 6.35  | 3.18 | 0.8 | —  |
| TPMR160304    | M                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.4 | —  |
| TPMR160308    | M                                                                                 | ●      | ★      | ★      | 9.525 | 3.18 | 0.8 | —  |
| TPMR160312    | M                                                                                 | ●      | ★      |        | 9.525 | 3.18 | 1.2 | —  |
| TPMN110304    | —                                                                                 | ●      |        |        | 6.35  | 3.18 | 0.4 | —  |
| TPMN110308    | —                                                                                 | ★      |        |        | 6.35  | 3.18 | 0.8 | —  |
| TPMN160304    | —                                                                                 | ●      |        |        | 9.525 | 3.18 | 0.4 | —  |
| TPMN160308    | —                                                                                 | ●      |        |        | 9.525 | 3.18 | 0.8 | —  |
| TPMN160312    | —                                                                                 | ★      |        |        | 9.525 | 3.18 | 1.2 | —  |
| TPMN220404    | —                                                                                 | ★      |        |        | 12.7  | 4.76 | 0.4 | —  |
| TPMN220408    | —                                                                                 | ★      |        | ★      | 12.7  | 4.76 | 0.8 | —  |
| TPMN220412    | —                                                                                 | ★      |        |        | 12.7  | 4.76 | 1.2 | —  |

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(Conditionnement par quantité 10)



# SÉRIE MC6100

## CONDITIONS DE COUPE RECOMMANDÉES

### PLAQUETTES NÉGATIVES (TOURNAGE EXTERNE)

| Matière                       | Dureté       | Conditions                                                                          |  | Priorité | Nuance |  | Vc        | f           | ap           |
|-------------------------------|--------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------|--------|-------------------------------------------------------------------------------------|-----------|-------------|--------------|
| Acier doux                    | ≤180 HB      |    | F                                                                                 | 1        | MC6125 | FY                                                                                  | 385 – 605 | 0.09 – 0.23 | 0.20 – 0.80  |
|                               |              |    | F                                                                                 | 2        | MC6135 | FY                                                                                  | 315 – 480 | 0.09 – 0.23 | 0.20 – 0.80  |
|                               |              |    | L                                                                                 | 1        | MC6125 | SY                                                                                  | 350 – 550 | 0.16 – 0.33 | 0.50 – 1.20  |
|                               |              |    | L                                                                                 | 2        | MC6135 | SY                                                                                  | 290 – 435 | 0.16 – 0.33 | 0.50 – 1.20  |
| P<br>Aciers carbone et alliés | 180 – 280 HB |    | F                                                                                 | 1        | MC6115 | FPH                                                                                 | 275 – 525 | 0.20 – 0.50 | 0.10 – 1.00  |
|                               |              |    | F                                                                                 | 1        | MC6115 | FP                                                                                  | 250 – 480 | 0.08 – 0.25 | 0.10 – 1.00  |
|                               |              |    | F                                                                                 | 2        | MC6125 | FP                                                                                  | 275 – 425 | 0.08 – 0.25 | 0.10 – 1.00  |
|                               |              |    | L                                                                                 | 1        | MC6115 | LP                                                                                  | 250 – 480 | 0.10 – 0.40 | 0.30 – 2.00  |
|                               |              |    | L                                                                                 | 2        | MC6125 | LP                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|                               |              |    | L                                                                                 | 3        | MC6115 | SH                                                                                  | 250 – 480 | 0.10 – 0.40 | 0.30 – 2.00  |
|                               |              |    | L                                                                                 | 4        | MC6125 | SH                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|                               |              |    | L                                                                                 | 5        | MC6115 | SA                                                                                  | 250 – 480 | 0.10 – 0.40 | 0.30 – 2.00  |
|                               |              |   | L                                                                                 | 6        | MC6125 | SA                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|                               |              |  | L                                                                                 | 7        | MC6115 | SW                                                                                  | 250 – 480 | 0.10 – 0.50 | 0.30 – 2.50  |
|                               |              |  | L                                                                                 | 8        | MC6125 | SW                                                                                  | 275 – 425 | 0.10 – 0.50 | 0.30 – 2.50  |
|                               |              |  | M                                                                                 | 1        | MC6115 | MP                                                                                  | 230 – 440 | 0.16 – 0.50 | 0.30 – 4.00  |
|                               |              |  | M                                                                                 | 2        | MC6125 | MP                                                                                  | 250 – 390 | 0.16 – 0.50 | 0.30 – 4.00  |
|                               |              |  | M                                                                                 | 3        | MC6115 | MA                                                                                  | 230 – 440 | 0.20 – 0.50 | 0.30 – 4.00  |
|                               |              |  | M                                                                                 | 4        | MC6125 | MA                                                                                  | 250 – 390 | 0.20 – 0.50 | 0.30 – 4.00  |
|                               |              |  | M                                                                                 | 5        | MC6115 | Std                                                                                 | 230 – 440 | 0.25 – 0.60 | 1.50 – 5.00  |
|                               |              |  | M                                                                                 | 6        | MC6125 | Std                                                                                 | 250 – 390 | 0.25 – 0.60 | 1.50 – 5.00  |
|                               |              |  | M                                                                                 | 7        | MC6115 | MW                                                                                  | 230 – 440 | 0.20 – 0.60 | 0.90 – 4.00  |
|                               |              |  | M                                                                                 | 8        | MC6125 | MW                                                                                  | 250 – 390 | 0.20 – 0.60 | 0.90 – 4.00  |
|                               |              |  | R                                                                                 | 1        | MC6115 | RP                                                                                  | 215 – 415 | 0.25 – 0.60 | 1.50 – 6.00  |
|                               |              |  | R                                                                                 | 2        | MC6125 | RP                                                                                  | 235 – 370 | 0.25 – 0.60 | 1.50 – 6.00  |
|                               |              |  | R                                                                                 | 3        | MC6115 | GH                                                                                  | 215 – 415 | 0.25 – 0.60 | 1.50 – 6.00  |
|                               |              |  | R                                                                                 | 4        | MC6125 | GH                                                                                  | 235 – 370 | 0.25 – 0.60 | 1.50 – 6.00  |
|                               |              |  | H                                                                                 | 1        | MC6125 | HX                                                                                  | 210 – 330 | 0.50 – 1.26 | 3.00 – 11.00 |
|                               |              |  | H                                                                                 | 2        | MC6135 | HX                                                                                  | 170 – 260 | 0.50 – 1.26 | 3.00 – 11.00 |
|                               |              |  | H                                                                                 | 3        | MC6125 | HV                                                                                  | 175 – 270 | 0.58 – 1.26 | 4.00 – 12.00 |
|                               |              |  | H                                                                                 | 4        | MC6135 | HV                                                                                  | 140 – 215 | 0.58 – 1.26 | 4.00 – 12.00 |

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1. Les conditions de coupe pour les plaquettes positives 5°/7°/11° sont données à titre indicatif.  
En alésage, veuillez adapter les conditions de coupe en fonction du porte-à-faux.

## SÉRIE MC6100 – PLAQUETTES NÉGATIVES (TOURNAGE EXTERNE)

| Matière |                          | Dureté       | Conditions                                                                          | <div><div>F</div><div>L</div><div>M</div><div>R</div><div>H</div></div> | Priorité | Nuance |  | Vc        | f           | ap           |
|---------|--------------------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------|--------|-------------------------------------------------------------------------------------|-----------|-------------|--------------|
| P       | Aciers carbone et alliés | 180 – 280 HB |    | F                                                                       | 1        | MC6125 | FPH                                                                                 | 300 – 465 | 0.20 – 0.50 | 0.10 – 1.00  |
|         |                          |              |    | F                                                                       | 1        | MC6115 | FP                                                                                  | 250 – 480 | 0.08 – 0.25 | 0.10 – 1.00  |
|         |                          |              |    | F                                                                       | 2        | MC6125 | FP                                                                                  | 275 – 425 | 0.08 – 0.25 | 0.10 – 1.00  |
|         |                          |              |    | L                                                                       | 1        | MC6115 | LP                                                                                  | 250 – 480 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 2        | MC6125 | LP                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 3        | MC6115 | SH                                                                                  | 250 – 480 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 4        | MC6125 | SH                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 5        | MC6115 | SA                                                                                  | 250 – 480 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 6        | MC6125 | SA                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 7        | MC6115 | SW                                                                                  | 250 – 480 | 0.10 – 0.50 | 0.30 – 2.50  |
|         |                          |              |    | L                                                                       | 8        | MC6125 | SW                                                                                  | 275 – 425 | 0.10 – 0.50 | 0.30 – 2.50  |
|         |                          |              |    | M                                                                       | 1        | MC6125 | MP                                                                                  | 250 – 390 | 0.16 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 2        | MC6135 | MP                                                                                  | 205 – 310 | 0.16 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 3        | MC6125 | MA                                                                                  | 250 – 390 | 0.20 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 4        | MC6135 | MA                                                                                  | 205 – 310 | 0.20 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 5        | MC6125 | MH                                                                                  | 250 – 390 | 0.20 – 0.55 | 1.00 – 4.00  |
|         |                          |              |    | M                                                                       | 6        | MC6135 | MH                                                                                  | 205 – 310 | 0.20 – 0.55 | 1.00 – 4.00  |
|         |                          |              |    | M                                                                       | 7        | MC6125 | Std                                                                                 | 250 – 390 | 0.25 – 0.60 | 1.50 – 5.00  |
|         |                          |              |    | M                                                                       | 8        | MC6135 | Std                                                                                 | 205 – 310 | 0.25 – 0.60 | 1.50 – 5.00  |
|         |                          |              |   | M                                                                       | 9        | MC6125 | MW                                                                                  | 250 – 390 | 0.20 – 0.60 | 0.90 – 4.00  |
|         |                          |              |  | M                                                                       | 10       | MC6135 | MW                                                                                  | 205 – 310 | 0.20 – 0.60 | 0.90 – 4.00  |
|         |                          |              |  | R                                                                       | 1        | MC6135 | RP                                                                                  | 190 – 290 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |  | R                                                                       | 2        | MC6125 | RP                                                                                  | 235 – 370 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |  | R                                                                       | 3        | MC6135 | GH                                                                                  | 190 – 290 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |  | R                                                                       | 4        | MC6125 | GH                                                                                  | 235 – 370 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |  | H                                                                       | 1        | MC6135 | HX                                                                                  | 170 – 260 | 0.50 – 1.26 | 3.00 – 11.00 |
|         |                          |              |  | H                                                                       | 2        | MC6125 | HX                                                                                  | 210 – 330 | 0.50 – 1.26 | 3.00 – 11.00 |
|         |                          |              |  | H                                                                       | 3        | MC6135 | HV                                                                                  | 140 – 215 | 0.58 – 1.26 | 4.00 – 12.00 |
|         |                          |              |  | H                                                                       | 4        | MC6125 | HV                                                                                  | 175 – 270 | 0.58 – 1.26 | 4.00 – 12.00 |

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1. Les conditions de coupe pour les plaquettes positives 5°/7°/11° sont données à titre indicatif.  
En alésage, veuillez adapter les conditions de coupe en fonction du porte-à-faux.



## SÉRIE MC6100 – PLAQUETTES NÉGATIVES (TOURNAGE EXTERNE)

| Matière |                          | Dureté       | Conditions                                                                          | <div><div>F</div><div>L</div><div>M</div><div>R</div><div>H</div></div> | Priorité | Nuance |  | Vc        | f           | ap           |
|---------|--------------------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------|--------|-------------------------------------------------------------------------------------|-----------|-------------|--------------|
| P       | Aciers carbone et alliés | 180 – 280 HB |    | F                                                                       | 1        | MC6135 | FP                                                                                  | 245 – 370 | 0.08 – 0.25 | 0.10 – 1.00  |
|         |                          |              |    | F                                                                       | 2        | MC6125 | FP                                                                                  | 300 – 465 | 0.08 – 0.25 | 0.10 – 1.00  |
|         |                          |              |    | F                                                                       | 3        | MC6135 | FPH                                                                                 | 245 – 370 | 0.20 – 0.50 | 0.10 – 1.00  |
|         |                          |              |    | L                                                                       | 1        | MC6135 | LP                                                                                  | 225 – 340 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 2        | MC6125 | LP                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 3        | MC6135 | SH                                                                                  | 225 – 340 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 4        | MC6125 | SH                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 5        | MC6135 | SA                                                                                  | 225 – 340 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | L                                                                       | 6        | MC6125 | SA                                                                                  | 275 – 425 | 0.10 – 0.40 | 0.30 – 2.00  |
|         |                          |              |    | M                                                                       | 1        | MC6135 | MP                                                                                  | 205 – 310 | 0.16 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 2        | MC6125 | MP                                                                                  | 250 – 390 | 0.16 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 3        | MC6135 | MA                                                                                  | 205 – 310 | 0.20 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 4        | MC6125 | MA                                                                                  | 250 – 390 | 0.20 – 0.50 | 0.30 – 4.00  |
|         |                          |              |    | M                                                                       | 5        | MC6135 | MH                                                                                  | 205 – 310 | 0.20 – 0.55 | 1.00 – 4.00  |
|         |                          |              |    | M                                                                       | 6        | MC6125 | MH                                                                                  | 250 – 390 | 0.20 – 0.55 | 1.00 – 4.00  |
|         |                          |              |    | M                                                                       | 7        | MC6135 | Std                                                                                 | 205 – 310 | 0.25 – 0.60 | 1.50 – 5.00  |
|         |                          |              |    | M                                                                       | 8        | MC6125 | Std                                                                                 | 250 – 390 | 0.25 – 0.60 | 1.50 – 5.00  |
|         |                          |              |    | M                                                                       | 9        | MC6135 | MW                                                                                  | 205 – 310 | 0.20 – 0.60 | 0.90 – 4.00  |
|         |                          |              |    | M                                                                       | 10       | MC6125 | MW                                                                                  | 250 – 390 | 0.20 – 0.60 | 0.90 – 4.00  |
|         |                          |              |    | R                                                                       | 1        | MC6135 | RP                                                                                  | 190 – 290 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |   | R                                                                       | 2        | MC6125 | RP                                                                                  | 235 – 370 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |  | R                                                                       | 3        | MC6135 | GH                                                                                  | 190 – 290 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |  | R                                                                       | 4        | MC6125 | GH                                                                                  | 235 – 370 | 0.25 – 0.60 | 1.50 – 6.00  |
|         |                          |              |  | H                                                                       | 1        | MC6135 | HX                                                                                  | 170 – 260 | 0.50 – 1.26 | 3.00 – 11.00 |
|         |                          |              |  | H                                                                       | 2        | MC6125 | HX                                                                                  | 210 – 330 | 0.50 – 1.26 | 3.00 – 11.00 |

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1. Les conditions de coupe pour les plaquettes positives 5°/7°/11° sont données à titre indicatif.  
En alésage, veuillez adapter les conditions de coupe en fonction du porte-à-faux.

## SÉRIE MC6100 – PLAQUETTES POSITIVES 5° ET 7° (TOURNAGE EXTERNE)

| Matière                                                                             |                          | Dureté       | Conditions                                                                          |  | Priorité  | Nuance      |  | Vc          | f           | ap          |
|-------------------------------------------------------------------------------------|--------------------------|--------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|-------------|-------------------------------------------------------------------------------------|-------------|-------------|-------------|
| P                                                                                   | Acier doux               | ≤180 HB      |    | F                                                                                 | 1         | MC6115      | FP                                                                                  | 295 – 570   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                                                                     |                          |              |    | F                                                                                 | 2         | MC6115      | FV                                                                                  | 295 – 570   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                                                                     |                          |              |    | L                                                                                 | 1         | MC6115      | LP                                                                                  | 295 – 570   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                                                                     |                          |              |    | L                                                                                 | 2         | MC6115      | SW                                                                                  | 295 – 570   | 0.06 – 0.24 | 0.20 – 1.50 |
|                                                                                     |                          |              |    | M                                                                                 | 1         | MC6115      | MP                                                                                  | 245 – 475   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                                                                     |                          |              |    | M                                                                                 | 2         | MC6115      | MV                                                                                  | 245 – 475   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                                                                     |                          |              |    | M                                                                                 | 3         | MC6115      | MW                                                                                  | 245 – 475   | 0.10 – 0.35 | 0.80 – 2.50 |
|                                                                                     |                          |              |    | F                                                                                 | 1         | MC6125      | FP                                                                                  | 320 – 505   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                                                                     |                          |              |    | F                                                                                 | 2         | MC6135      | FP                                                                                  | 265 – 400   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                                                                     |                          |              |    | L                                                                                 | 1         | MC6125      | LP                                                                                  | 320 – 505   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                                                                     |                          |              |    | L                                                                                 | 2         | MC6135      | LP                                                                                  | 265 – 400   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                                                                     |                          |              |    | L                                                                                 | 3         | MC6125      | SW                                                                                  | 320 – 505   | 0.06 – 0.24 | 0.20 – 1.50 |
|                                                                                     |                          |              |    | M                                                                                 | 1         | MC6125      | MP                                                                                  | 270 – 420   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                                                                     |                          |              |    | M                                                                                 | 2         | MC6135      | MP                                                                                  | 220 – 330   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                                                                     |                          |              |    | M                                                                                 | 3         | MC6125      | MV                                                                                  | 270 – 420   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                                                                     |                          |              |    | M                                                                                 | 4         | MC6125      | MW                                                                                  | 270 – 420   | 0.10 – 0.35 | 0.80 – 2.50 |
|                                                                                     | Aciers carbone et alliés | 180 – 280 HB |    | F                                                                                 | 1         | MC6115      | FP                                                                                  | 220 – 420   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                                                                     |                          |              |    | F                                                                                 | 2         | MC6125      | FP                                                                                  | 240 – 370   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                                                                     |                          |              |   | F                                                                                 | 3         | MC6115      | FV                                                                                  | 220 – 420   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                                                                     |                          |              |  | L                                                                                 | 1         | MC6115      | LP                                                                                  | 220 – 420   | 0.06 – 0.25 | 0.20 – 1.00 |
|  |                          |              | L                                                                                   | 2                                                                                 | MC6125    | LP          | 240 – 370                                                                           | 0.06 – 0.25 | 0.20 – 1.00 |             |
|  |                          |              | M                                                                                   | 1                                                                                 | MC6125    | MP          | 200 – 310                                                                           | 0.08 – 0.30 | 0.30 – 2.00 |             |
|  |                          |              | M                                                                                   | 2                                                                                 | MC6115    | MP          | 180 – 350                                                                           | 0.08 – 0.30 | 0.30 – 2.00 |             |
|  |                          |              | M                                                                                   | 3                                                                                 | MC6125    | MV          | 200 – 310                                                                           | 0.08 – 0.30 | 0.30 – 2.00 |             |
|  |                          |              | M                                                                                   | 4                                                                                 | MC6115    | MV          | 180 – 350                                                                           | 0.08 – 0.30 | 0.30 – 2.00 |             |
|  |                          |              | M                                                                                   | 5                                                                                 | MC6115    | MW          | 180 – 350                                                                           | 0.10 – 0.35 | 0.80 – 2.50 |             |
|  |                          |              | F                                                                                   | 1                                                                                 | MC6125    | FP          | 240 – 370                                                                           | 0.04 – 0.20 | 0.20 – 0.90 |             |
|  |                          |              | F                                                                                   | 2                                                                                 | MC6135    | FP          | 195 – 295                                                                           | 0.04 – 0.20 | 0.20 – 0.90 |             |
|  |                          |              | F                                                                                   | 3                                                                                 | MC6125    | FV          | 240 – 370                                                                           | 0.04 – 0.20 | 0.20 – 0.90 |             |
|  |                          |              | L                                                                                   | 1                                                                                 | MC6125    | LP          | 240 – 370                                                                           | 0.06 – 0.25 | 0.20 – 1.00 |             |
|  | L                        | 2            | MC6135                                                                              | LP                                                                                | 195 – 295 | 0.06 – 0.25 | 0.20 – 1.00                                                                         |             |             |             |
|  | L                        | 3            | MC6125                                                                              | SW                                                                                | 240 – 370 | 0.06 – 0.24 | 0.20 – 1.50                                                                         |             |             |             |
|  | M                        | 1            | MC6125                                                                              | MP                                                                                | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00                                                                         |             |             |             |
|  | M                        | 2            | MC6135                                                                              | MP                                                                                | 160 – 245 | 0.08 – 0.30 | 0.30 – 2.00                                                                         |             |             |             |
|  | M                        | 3            | MC6125                                                                              | MV                                                                                | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00                                                                         |             |             |             |

1/2

1/2

1. Les conditions de coupe pour les plaquettes positives 5°/7°/11° sont données à titre indicatif.  
En alésage, veuillez adapter les conditions de coupe en fonction du porte-à-faux.
2. Veuillez scanner le code QR pour les conditions de coupe de la plaquette de copiage XCMT.



## SÉRIE MC6100 – PLAQUETTES POSITIVES 5° ET 7° (TOURNAGE EXTERNE)

| Matière                    | Dureté       | Conditions |  | Priorité | Nuance |  | Vc        | f           | ap          |
|----------------------------|--------------|------------|-----------------------------------------------------------------------------------|----------|--------|-------------------------------------------------------------------------------------|-----------|-------------|-------------|
|                            |              |            |                                                                                   |          |        |                                                                                     |           |             |             |
| P Aciers carbone et alliés | 280 – 350 HB | ●          | F                                                                                 | 1        | MC6115 | FP                                                                                  | 155 – 295 | 0.04 – 0.20 | 0.20 – 0.90 |
|                            |              | ●          | F                                                                                 | 2        | MC6115 | FV                                                                                  | 155 – 295 | 0.04 – 0.20 | 0.20 – 0.90 |
|                            |              | ●          | L                                                                                 | 1        | MC6115 | LP                                                                                  | 155 – 295 | 0.06 – 0.25 | 0.20 – 1.00 |
|                            |              | ●          | M                                                                                 | 1        | MC6115 | MP                                                                                  | 130 – 245 | 0.08 – 0.30 | 0.30 – 2.00 |
|                            |              | ●          | M                                                                                 | 2        | MC6115 | MV                                                                                  | 130 – 245 | 0.08 – 0.30 | 0.30 – 2.00 |
|                            |              | ✚          | F                                                                                 | 1        | MC6125 | FP                                                                                  | 170 – 265 | 0.04 – 0.20 | 0.20 – 0.90 |
|                            |              | ✚          | F                                                                                 | 2        | MC6135 | FP                                                                                  | 135 – 210 | 0.04 – 0.20 | 0.20 – 0.90 |
|                            |              | ✚          | L                                                                                 | 1        | MC6125 | LP                                                                                  | 170 – 265 | 0.06 – 0.25 | 0.20 – 1.00 |
|                            |              | ✚          | L                                                                                 | 2        | MC6135 | LP                                                                                  | 135 – 210 | 0.06 – 0.25 | 0.20 – 1.00 |
|                            |              | ✚          | M                                                                                 | 1        | MC6125 | MP                                                                                  | 140 – 220 | 0.08 – 0.30 | 0.30 – 2.00 |
|                            |              | ✚          | M                                                                                 | 2        | MC6135 | MP                                                                                  | 115 – 175 | 0.08 – 0.30 | 0.30 – 2.00 |
|                            |              | ✚          | M                                                                                 | 3        | MC6125 | MV                                                                                  | 140 – 220 | 0.08 – 0.30 | 0.30 – 2.00 |

2/2

1. Les conditions de coupe pour les plaquettes positives 5°/7°/11° sont données à titre indicatif.  
En alésage, veuillez adapter les conditions de coupe en fonction du porte-à-faux.
2. Veuillez scanner le code QR pour les conditions de coupe de la plaquette de copiage XCMT.



## SÉRIE MC6100 – PLAQUETTES POSITIVES 11° (TOURNAGE EXTERNE)

| Matière | Dureté                   | Conditions   |      | Priorité | Nuance |  | Vc        | f           | ap          |
|---------|--------------------------|--------------|---------------------------------------------------------------------------------------|----------|--------|-------------------------------------------------------------------------------------|-----------|-------------|-------------|
|         |                          |              |                                                                                       |          |        |                                                                                     |           |             |             |
| P       | Acier doux               | ≤180 HB      |  F   | 1        | MC6125 | FP                                                                                  | 320 – 505 | 0.04 – 0.20 | 0.20 – 0.90 |
|         |                          |              |  F   | 2        | MC6125 | FV                                                                                  | 320 – 505 | 0.04 – 0.20 | 0.20 – 0.90 |
|         |                          |              |  L   | 1        | MC6125 | LP                                                                                  | 320 – 505 | 0.06 – 0.25 | 0.20 – 1.00 |
|         |                          |              |  L   | 2        | MC6115 | R-Std                                                                               | 245 – 475 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 1        | MC6125 | MP                                                                                  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 2        | MC6115 | MP                                                                                  | 245 – 475 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 3        | MC6125 | MV                                                                                  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 4        | MC6115 | MV                                                                                  | 245 – 475 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  L   | 1        | MC6125 | LP                                                                                  | 320 – 505 | 0.06 – 0.25 | 0.20 – 1.00 |
|         |                          |              |  L   | 2        | MC6135 | LP                                                                                  | 265 – 400 | 0.06 – 0.25 | 0.20 – 1.00 |
|         |                          |              |  M   | 1        | MC6125 | MP                                                                                  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 2        | MC6135 | MP                                                                                  | 220 – 330 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 3        | MC6125 | MV                                                                                  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 4        | MC6135 | MV                                                                                  | 220 – 330 | 0.08 – 0.30 | 0.30 – 2.00 |
|         | Aciers carbone et alliés | 180 – 280 HB |  F   | 1        | MC6125 | FP                                                                                  | 240 – 370 | 0.04 – 0.20 | 0.20 – 0.90 |
|         |                          |              |  F   | 2        | MC6125 | FV                                                                                  | 240 – 370 | 0.04 – 0.20 | 0.20 – 0.90 |
|         |                          |              |  L   | 1        | MC6125 | LP                                                                                  | 240 – 370 | 0.06 – 0.25 | 0.20 – 1.00 |
|         |                          |              |  L   | 2        | MC6115 | LP                                                                                  | 220 – 420 | 0.06 – 0.25 | 0.20 – 1.00 |
|         |                          |              |  M   | 1        | MC6125 | MP                                                                                  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M   | 2        | MC6125 | MV                                                                                  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M | 3        | MC6115 | R-Std                                                                               | 180 – 350 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M | 4        | MC6125 | R-Std                                                                               | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  L | 1        | MC6125 | LP                                                                                  | 240 – 370 | 0.06 – 0.25 | 0.20 – 1.00 |
|         |                          |              |  L | 2        | MC6135 | LP                                                                                  | 195 – 295 | 0.06 – 0.25 | 0.20 – 1.00 |
|         |                          |              |  M | 1        | MC6125 | MP                                                                                  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M | 2        | MC6135 | MP                                                                                  | 160 – 245 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M | 3        | MC6125 | MV                                                                                  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|         |                          |              |  M | 4        | MC6135 | MV                                                                                  | 160 – 245 | 0.08 – 0.30 | 0.30 – 2.00 |

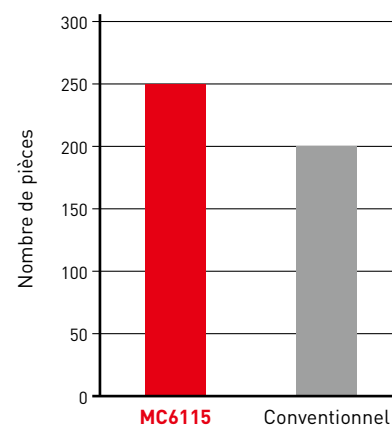
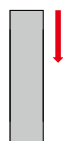
1/1

1/1

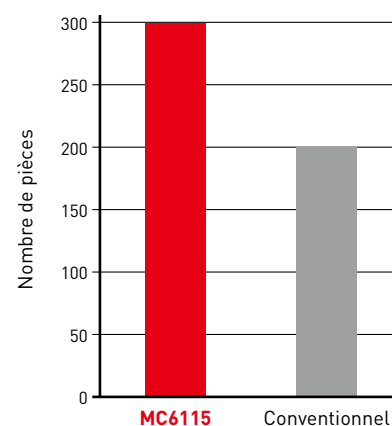
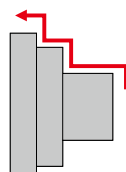
# MC6115

## EXEMPLES D'APPLICATIONS

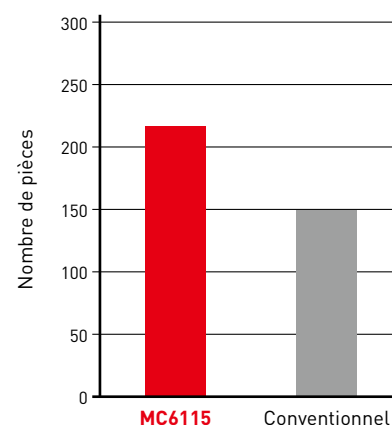
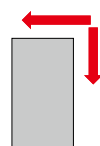
|            |                                                                                                                                            |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Plaquette  | WNMG080412-MP                                                                                                                              |
| Matière    | 20Cr4                                                                                                                                      |
| Pièce      | Pièces machine                                                                                                                             |
| Opération  | Dressage                                                                                                                                   |
| Vc (m/min) | 235                                                                                                                                        |
| f (mm/tr)  | 0.35                                                                                                                                       |
| ap (mm)    | 1.0                                                                                                                                        |
| Arrosage   | Coupe lubrifiée                                                                                                                            |
| Résultats  | MC6115 présente une longue durée de vie avec une excellente résistance à l'usure et une coupe stable par rapport au produit conventionnel. |



|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| Plaquette  | WNMG080408-MP                                                                                       |
| Matière    | 42CD4                                                                                               |
| Pièce      | Moyeu                                                                                               |
| Opération  | Chariotage/dressage                                                                                 |
| Vc (m/min) | 300                                                                                                 |
| f (mm/tr)  | 0.25-0.35                                                                                           |
| ap (mm)    | 1-2.5                                                                                               |
| Arrosage   | Coupe lubrifiée                                                                                     |
| Résultats  | La résistance à l'usure supérieure aux produits conventionnels prolonge la durée de vie de l'outil. |



|            |                                                                                                                        |
|------------|------------------------------------------------------------------------------------------------------------------------|
| Plaquette  | DNMG150612-SA                                                                                                          |
| Matière    | Acier à roulements                                                                                                     |
| Pièce      | Bague de roulement                                                                                                     |
| Opération  | Chariotage/dressage                                                                                                    |
| Vc (m/min) | 260                                                                                                                    |
| f (mm/tr)  | 0.3-0.35                                                                                                               |
| ap (mm)    | 0.5                                                                                                                    |
| Arrosage   | Coupe lubrifiée                                                                                                        |
| Résultats  | La très grande résistance à l'écaillage a permis d'atteindre 150 % de durée de vie et d'identifier facilement l'usure. |



Les exemples ci-dessus sont issus d'applications réelles et peuvent par conséquent différer des conditions recommandées.

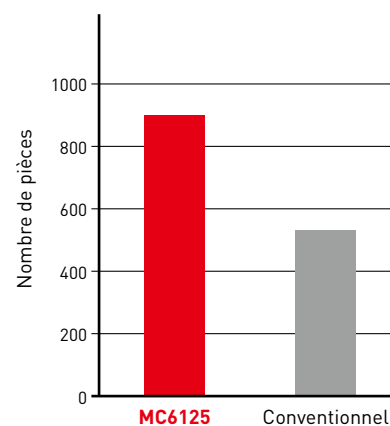
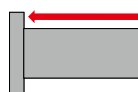
# MC6125

## EXEMPLES D'APPLICATIONS

|            |                              |
|------------|------------------------------|
| Plaquette  | CNMG120408-MA                |
| Matière    | XC45                         |
| Pièce      | Barre hexagonale             |
| Opération  | Finition, chariotage au choc |
| Vc (m/min) | 150                          |
| f (mm/tr)  | 0.2                          |
| ap (mm)    | 2.0, 1.6                     |
| Arrosage   | Huile soluble                |

Résultats

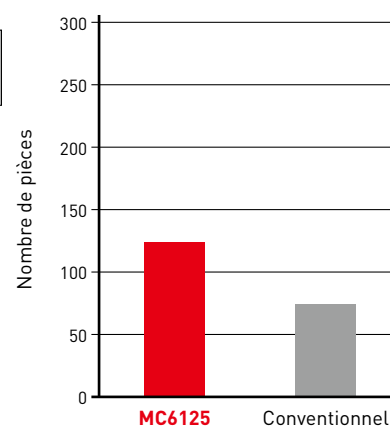
Écaillage suivi de rupture plaquette avec les produits conventionnels. Bonne durée de vie stable avec le MC6125, bon contrôle du copeau.



|            |                  |
|------------|------------------|
| Plaquette  | DNMG150412-SH    |
| Matière    | XC48             |
| Opération  | Finition au choc |
| Vc (m/min) | 200              |
| f (mm/tr)  | 0.3              |
| ap (mm)    | 1.2              |
| Arrosage   | Huile soluble    |

Résultats

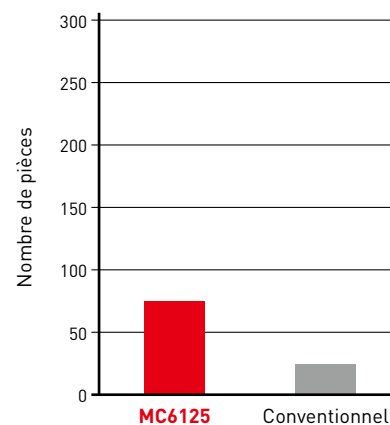
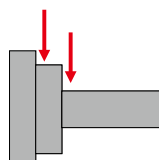
Performances stables de la nuance MC6125, durée de vie augmentée de 50 %.



|            |               |
|------------|---------------|
| Plaquette  | CNMG120412-RP |
| Matière    | 35CD4         |
| Pièce      | Flasque       |
| Opération  | Dressage      |
| Vc (m/min) | 200           |
| f (mm/tr)  | 0.25          |
| ap (mm)    | 1.5           |
| Arrosage   | Huile soluble |

Résultats

Durée de vie instable avec une plaquette conventionnelle. Durée de vie régulière et largement supérieure en MC6125.



# SYMBOLES

|                                                                                                                               |                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Conditions de coupe recommandées            | OPÉRATIONS                                                                                                                                                                       |
| <b>NEW</b> Produit nouveau ou extension de gamme, présenté dans les dernières nouveautés, pas intégré au catalogue principal. |  Ébauche                                                                                        |
| <b>NEW</b> Produit ou extension de gamme présenté antérieurement mais pas encore intégré au catalogue principal.              |  Ébauche moyenne                                                                                |
| APPLICATION                                                                                                                   |  Semi-finition                                                                                  |
|  Surfaçage                                   |  Pré-finition                                                                                   |
|  Chanfreinage                                |  Finition                                                                                       |
|  Surfaçage-dressage rayonné                  |  Super-finition                                                                                 |
|  Surfaçage en fond de poche                 | MATIÈRE DE L'OUTIL                                                                                                                                                               |
|  Surfaçage-dressage                        |  <b>Carbure Ultra Micro Grain</b><br>Substrat carbure à sub-micro grains.                     |
|  Contournage                               |  <b>Nitride de bore cubique</b><br>CBN Mitsubishi Materials.                                  |
|  Rainurage                                 |  <b>Céramique</b><br>Pour l'usinage haute vitesse performant des alliages réfractaires.       |
|  Copiage                                   |  <b>Acier rapide fritté haute dureté</b><br>Substrat acier rapide en métallurgie des poudres. |
|  Ramping                                   |  <b>Acier rapide fortement alliée</b><br>Outil en acier rapide fortement allié.               |
|  Rainurage rayonné                         |  <b>Acier rapide au cobalt</b><br>Outil en acier rapide au cobalt.                            |
|  Copiage                                   |  <b>Acier rapide</b><br>Outil en acier rapide.                                                |
|  Rainurage en T                            |                                                                                                                                                                                  |

# SYMBOLES

## REVÊTEMENT



### Revêtement SMART MIRACLE

Les Nouvelles technologies de revêtement lisse et dense pour le fraisage de haute efficacité des matériaux difficiles à usiner



### Revêtement CRN

Revêtement CrN, pour l'usinage des électrodes en cuivre et des matières non-ferreuses.



### Revêtement VIOLET

Vie de l'outil accrue 2 à 3 fois supérieure à celui d'un revêtement TIN basique.



### Revêtement DP

Revêtement de nouvelle génération pour le perçage.



### Revêtement MIRACLE

Le revêtement original MIRACLE (Al, Ti)N. Adapté à l'usinage à sec.



### Revêtement (Al, Ti)N

(Al,Ti)N offre une haute polyvalence.



### Revêtement multicouche (Al,Ti,Cr)N

Offre une haute polyvalence pour l'acier au carbone, les alliages d'acier, et les aciers trempés.



### Revêtement IMPACT MIRACLE

Technologie simple phase nano Crystal pour haute dureté et résistance thermique.



### Revêtement MIRACLE

Revêtement original MIRACLE (Al,Ti)N. Adapté aussi à l'usinage à sec.



### Revêtement VFR

Le revêtement PVD multicouche (AlTiSti)N est idéal pour le fraisage de matières extrêmement dures jusqu'à 70HRC.



### Revêtement DLC

Dureté similaire au revêtement CVD Diamant à très haute accroche.



### Revêtement Diamant

Adapté au CFRP & CFRP-Aluminium.



### Revêtement Diamant

Adapté à l'usinage graphite.



### Revêtement Diamant

Revêtement CVD diamant original. Adapté au perçage CFRP.



### Revêtement diamant CVD

L'utilisation d'un revêtement diamant micrograins multicouches améliore considérablement la résistance à l'usure et l'état de surface.

## PROPRIÉTÉS



### Arête vive

Indique que la fraise a une arête vive.



### Renfort de bec

Arête renforcée avec chanfrein de protection.



### Angle de coupe



### Angle d'hélice

Indique l'angle d'hélice de la fraise.



### Angle de pointe

Indique le point d'angle à la pointe du foret. Par exemple 140° est affiché.



### Profil Ebauche



### Hélice variable



### Creux de dent rayonné



### Angle d'attaque

Par exemple 90° est affiché.

## AMINCISSEMENT DE L'ÂME



### Type X

Amincissement X utilisé à la pointe du foret.



### Type XR

Amincissement XR utilisé à la pointe du foret.



### Type S

Poussée réduite, généralement utilisé pour les forets HSS.



### Type N

Efficace quand l'amincissement est épais.



### Brise-copeaux



# SYMBOLES

## TOLÉRANCE



**Tolérance de l'angle de cône**  
Indique la tolérance de l'angle de cône.



**Tolérance R**  
Indique la tolérance radiale de la fraise boule.



**Tolérance R**  
Indique la tolérance radiale du rayon d'une fraise.



**Tolérance R**  
Indique la tolérance radiale du rayon.



**Diamètre extérieur**  
Indique la tolérance de diamètre extérieur de la fraise.



**Tolérance de pointe**  
Indique la tolérance du diamètre de pointe.



**Tolérance de diamètre de queue**  
Indique la tolérance de diamètre de queue.



**Tolérance de diamètre de queue**  
Indique la tolérance de diamètre de queue.



**Tolérance foret/diamètre**

## ARROSAGE



**Externe**



**Interne**



**Interne**



**Arrosage central interne**



**Arrosage interne radial**



**Arrosage interne**



**Arrosage interne**



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Publié par :  MITSUBISHI MATERIALS TOOLS EUROPE