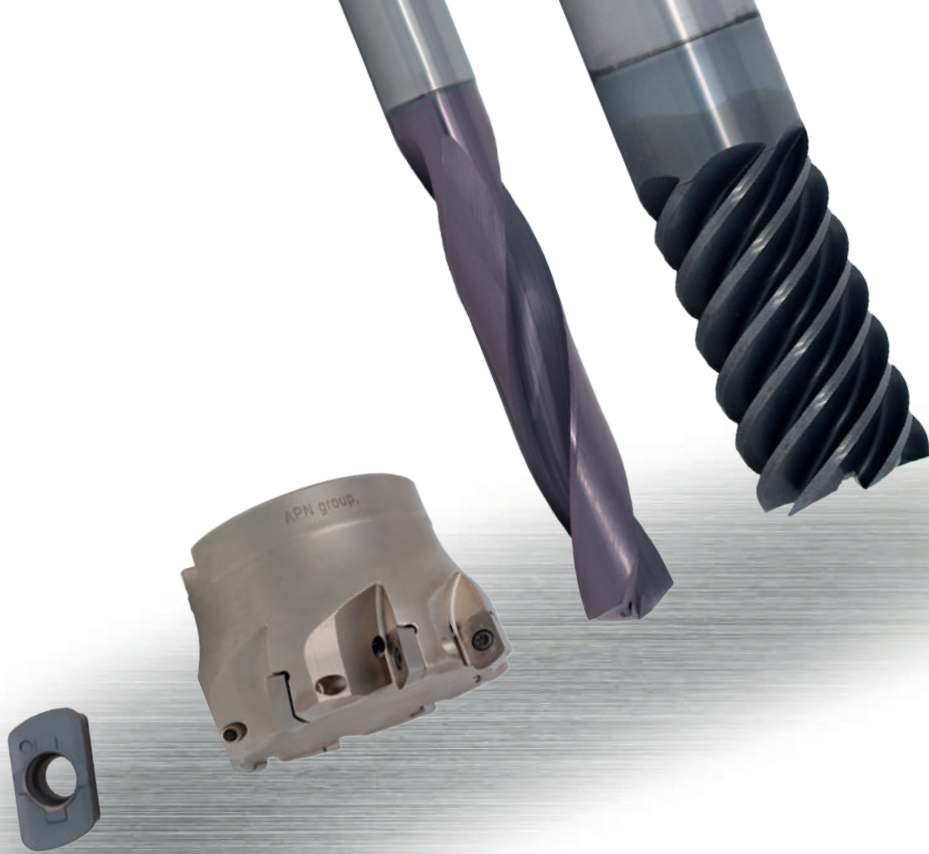




# Les Essentiels

**Fabricant Français**

**Outils 100% sur stock**

**Gamme d'outils spécialisée & polyvalente**

**apn** *group.*

Cutting Tools Specialists



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05

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# CODIFICATION DES FRAISES

|          |            |          |          |          |          |
|----------|------------|----------|----------|----------|----------|
| <b>A</b> | <b>001</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
| <b>1</b> | <b>2</b>   | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |

## 1 Type d'outil

A = Fraise  
B = Foret  
C = Alésoir  
D = Fraise à fileter  
E = Fraise à chanfreiner  
G = Porte-outils

## 2 Type de Famille

001 = Fraise 1Dt Polyglacée  
002 = Fraise 1Dt Polyglacée + Ray  
003 = Fraise 2Dts Eco  
...

## 3 Matière d'outil

0 = Carbone  
1 = HSS  
2 = Carbone brasé  
3 = PCD  
4 = CBN  
5 = Full PCD

## 6 Revêtement

0 = Non revêtu  
1 = AlCrN  
2 = TiAlN  
3 = AlCrNano  
4 = AlTiNano  
5 = AlCrN  
6 = Cryo  
7 = AlCrNano+Cryo  
8 = ZrN

## 7 Valeur du diamètre

Ø1 = 1mm  
Ø2 = 2mm  
...

## 8 Longueur de coupe Longueur totale

LUxLT = 7x57  
LUxLT = 8x57  
LUxLT = 11x57  
...

## I Lexique des matières

| Acier    | Inox     | Fonte    | Non<br>Ferreux | Superaliage | Materiaux<br>Durs | Composite |
|----------|----------|----------|----------------|-------------|-------------------|-----------|
| <b>P</b> | <b>M</b> | <b>K</b> | <b>N</b>       | <b>S</b>    | <b>H</b>          | <b>O</b>  |

|                      |         |        |    |
|----------------------|---------|--------|----|
| $\emptyset\emptyset$ | lu x lt | Ray/Ch | Qc |
| 7                    | 8       | 9      | 10 |

#### 4 Queue Cylindrique

- 1 = Queue renforcée DIN
- 2 = Queue passante norme usine
- 3 = Queue passante avec système rainuré
- 4 = Queue dégagée

#### 5 Type Attachement

- 0 = DIN6535HA (Cylindrique)
- 1 = DIN6535HB (Weldon)
- 2 = DIN6535HE (Whistlenotch)
- 3 = DIN6535HA + rainure d'arrosage
- 4 = Vissé

#### 9 Valeur du rayon / Valeur de chanfrein

R = 0,2  
Chanfrein = 0,2

#### 10 Valeur de queue cylindrique

$\emptyset Qc = 6$   
 $\emptyset Qc = 8$   
 $\emptyset Qc = 10$   
 ...

## II

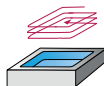
### Lexique des applications



Trochoïdale



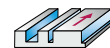
Epaulement  
super finition



Cycle de  
poche



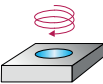
Surfaçage



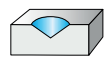
Rainurage et  
épaulement



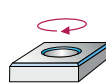
Copiage



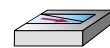
Interpolation  
hélicoïdale



Pointage

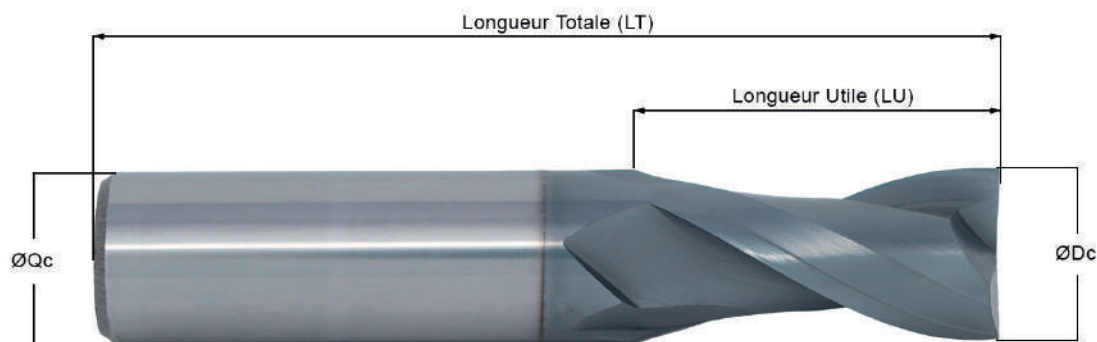


Contourage et  
chanfreinage



Travail en  
plongée

# A003 - Fraise carbure monobloc Z02



## Caractéristiques



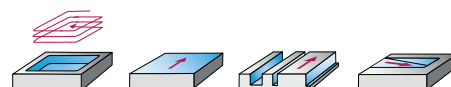
## Matières à usiner

| P    | M   | K | N  | S | H | O |
|------|-----|---|----|---|---|---|
| ●●●● | ●●● | ● | ●● |   |   |   |

## Références catalogue

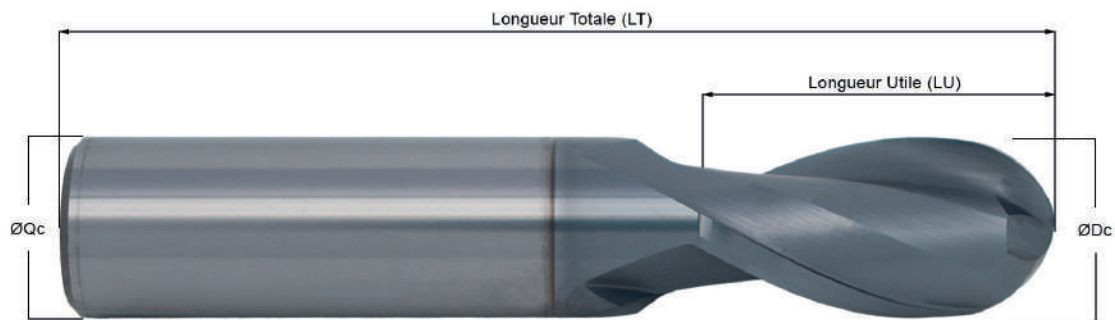
| Dc e8 | Qc h6 | LU | LT  | Référence Revêtue    | Dispo stock |
|-------|-------|----|-----|----------------------|-------------|
| 2     | 6     | 7  | 57  | A0030101-Ø2-7x57-Ø6  | ✓           |
| 3     | 6     | 8  | 57  | A0030101-Ø3-8x57-Ø6  | ✓           |
| 4     | 6     | 11 | 57  | A0030101-Ø4-11x57-Ø6 | ✓           |
| 6     | 6     | 13 | 57  | A0030201-Ø6-13x57    | ✓           |
| 8     | 8     | 19 | 63  | A0030201-Ø8-19x63    | ✓           |
| 10    | 10    | 22 | 72  | A0030201-Ø10-22x72   | ✓           |
| 12    | 12    | 26 | 83  | A0030201-Ø12-26x83   | ✓           |
| 16    | 16    | 32 | 92  | A0030201-Ø16-32x92   | ✓           |
| 20    | 20    | 38 | 104 | A0030201-Ø20-38x104  | ✓           |

## Applications



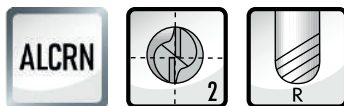


# A007 - Fraise carbure monobloc hémisphérique Z02



FRAISAGE

## Caractéristiques



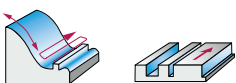
## Matières à usiner

| P    | M   | K | N  | S | H | O |
|------|-----|---|----|---|---|---|
| ●●●● | ●●● | ● | ●● |   |   |   |

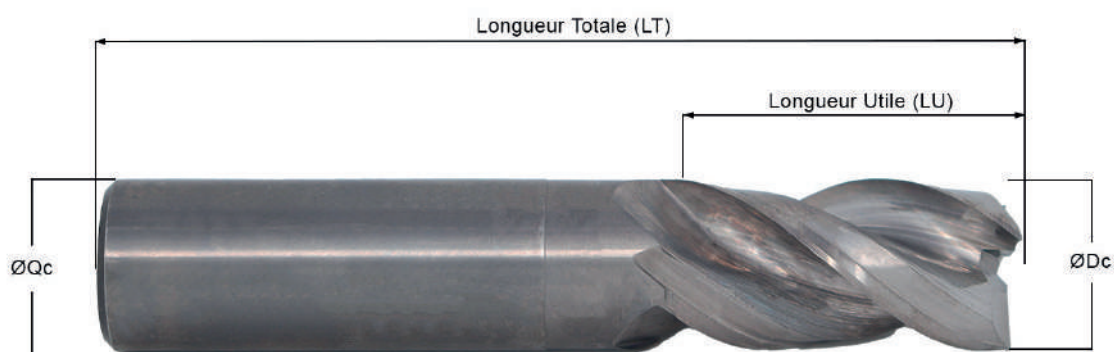
## Références catalogue

| Dc e8 | R   | Qc h6 | LU | LT  | Référence Revêtue    | Dispo stock |
|-------|-----|-------|----|-----|----------------------|-------------|
| 2     | 1   | 6     | 7  | 57  | A0070101-Ø2-7x57-Ø6  | ✓           |
| 3     | 1.5 | 6     | 8  | 57  | A0070201-Ø3-8x57-Ø6  | ✓           |
| 4     | 2   | 6     | 11 | 57  | A0070101-Ø4-11x57-Ø6 | ✓           |
| 6     | 3   | 6     | 13 | 57  | A0070201-Ø6-13x57    | ✓           |
| 8     | 4   | 8     | 19 | 63  | A0070201-Ø8-19x63    | ✓           |
| 10    | 5   | 10    | 22 | 72  | A0070201-Ø10-22x72   | ✓           |
| 12    | 6   | 12    | 26 | 83  | A0070201-Ø12-26x83   | ✓           |
| 16    | 8   | 16    | 32 | 92  | A0070201-Ø16-32x92   | ✓           |
| 20    | 10  | 20    | 38 | 104 | A0070201-Ø20-38x104  | ✓           |

## Applications



# A016 - Fraise carbure monobloc Z03



## Caractéristiques



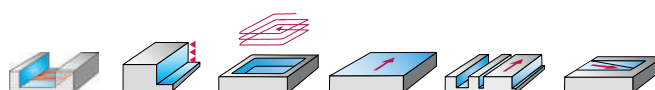
## Matières à usiner

| P | M  | K    | N     | S | H | O |
|---|----|------|-------|---|---|---|
| ● | ●● | ●●●● | ●●●●● | ● | ● | ● |

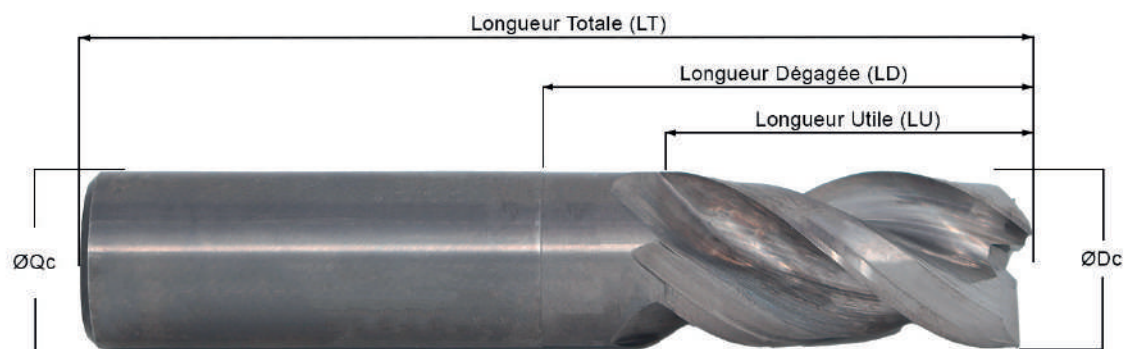
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | Référence Non Revêtue | Dispo stock |
|-------|-------|----|-----|-----------------------|-------------|
| 6     | 6     | 13 | 57  | A0160200-Ø6-13x57     | ✓           |
| 8     | 8     | 19 | 63  | A0160200-Ø8-19x63     | ✓           |
| 10    | 10    | 22 | 72  | A0160200-Ø10-22x72    | ✓           |
| 12    | 12    | 26 | 83  | A0160200-Ø12-26x83    | ✓           |
| 16    | 16    | 32 | 92  | A0160200-Ø16-32x92    | ✓           |
| 20    | 20    | 38 | 104 | A0160200-Ø20-38x104   | ✓           |

## Applications



# A016 - Fraise carbure monobloc dégagée Z03



FRAISAGE

## Caractéristiques



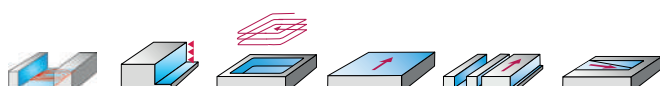
## Matières à usiner

| P | M  | K    | N     | S | H | O |
|---|----|------|-------|---|---|---|
| ● | ●● | ●●●● | ●●●●● | ● | ● | ● |

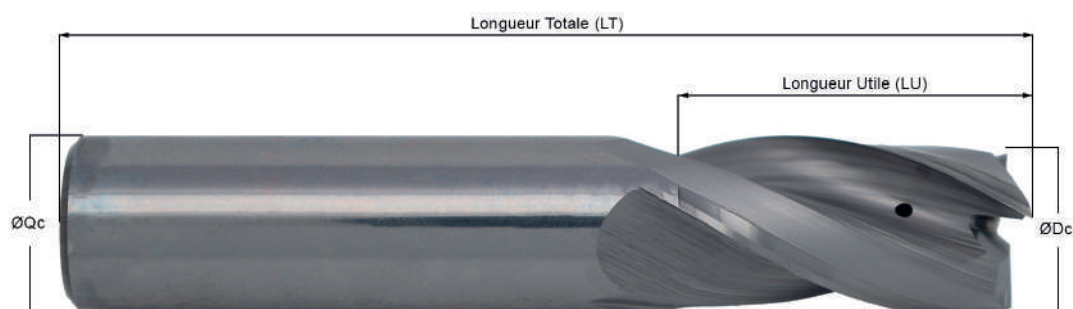
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | LD | Référence Non Revêtue | Dispo stock |
|-------|-------|----|-----|----|-----------------------|-------------|
| 6     | 6     | 13 | 57  | 39 | A0160400-Ø6-13x57     | ✓           |
| 8     | 8     | 19 | 63  | 39 | A0160400-Ø8-19x63     | ✓           |
| 10    | 10    | 22 | 72  | 42 | A0160400-Ø10-22x72    | ✓           |
| 12    | 12    | 26 | 83  | 47 | A0160400-Ø12-26x83    | ✓           |
| 16    | 16    | 32 | 92  | 52 | A0160400-Ø16-32x92    | ✓           |
| 20    | 20    | 38 | 104 | 54 | A0160400-Ø20-38x104   | ✓           |

## Applications



# A139 - Fraise carbure monobloc avec arrosage Z03



## Caractéristiques



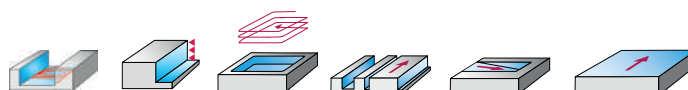
## Matières à usiner

| P  | M   | K | N    | S | H | O |
|----|-----|---|------|---|---|---|
| ●● | ●●● | ● | ●●●● | ● | ● | ● |

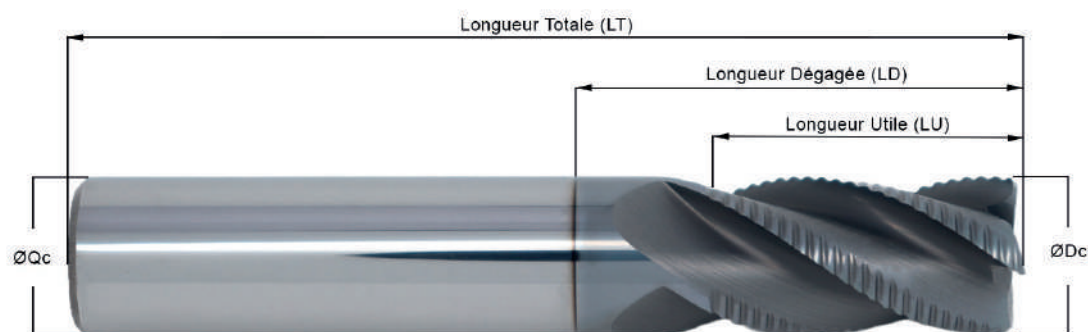
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | Référence Non Revêtue | Dispo stock |
|-------|-------|----|-----|-----------------------|-------------|
| 6     | 6     | 13 | 57  | A1390200-Ø6-13x57     | ✓           |
| 8     | 8     | 19 | 63  | A1390200-Ø8-19x63     | ✓           |
| 10    | 10    | 22 | 72  | A1390200-Ø10-22x72    | ✓           |
| 12    | 12    | 26 | 83  | A1390200-Ø12-26x83    | ✓           |
| 16    | 16    | 32 | 92  | A1390200-Ø16-32x92    | ✓           |
| 20    | 20    | 38 | 104 | A1390200-Ø20-38x104   | ✓           |

## Applications



# A055 - Fraise carbure monobloc ébauche dégagée Z04



FRAISAGE

## Caractéristiques



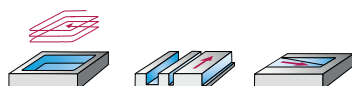
## Matières à usiner

| P     | M     | K     | N     | S     | H     | O     |
|-------|-------|-------|-------|-------|-------|-------|
| ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● | ●●●●● |

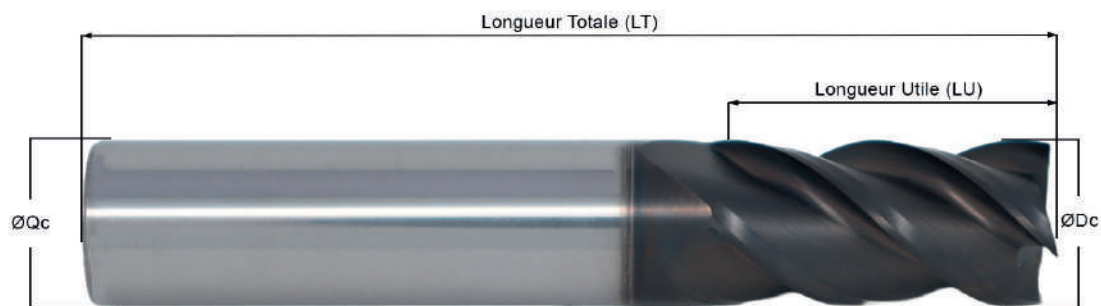
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | LD | Référence Revêtue   | Dispo stock |
|-------|-------|----|-----|----|---------------------|-------------|
| 6     | 6     | 13 | 57  | 39 | A0550401-Ø6-13x57   | ✓           |
| 8     | 8     | 19 | 63  | 39 | A0550401-Ø8-19x63   | ✓           |
| 10    | 10    | 22 | 72  | 42 | A0550401-Ø10-22x72  | ✓           |
| 12    | 12    | 26 | 83  | 47 | A0550401-Ø12-26x83  | ✓           |
| 16    | 16    | 32 | 92  | 52 | A0550401-Ø16-32x92  | ✓           |
| 20    | 20    | 38 | 104 | 54 | A0550401-Ø20-38x104 | ✓           |

## Applications



# A087 - Fraise carbure monobloc superalliages Z04



## Caractéristiques



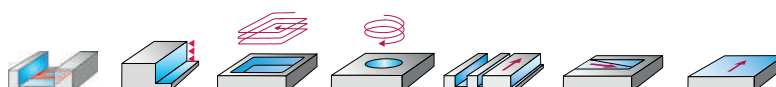
## Matières à usiner

| P   | M   | K | N | S    | H | O |
|-----|-----|---|---|------|---|---|
| ●●● | ●●● | ● | ● | ●●●● | ● | ● |

## Références catalogue

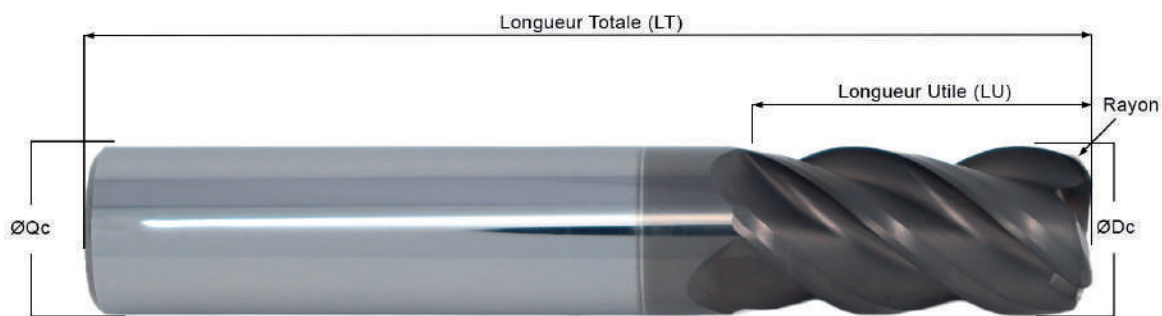
| Dc e8 | Qc h6 | LU | LT  | Référence Revêtue   | Dispo stock |
|-------|-------|----|-----|---------------------|-------------|
| 6     | 6     | 13 | 57  | A0870203-Ø6-13x57   | ✓           |
| 8     | 8     | 19 | 63  | A0870203-Ø8-19x63   | ✓           |
| 10    | 10    | 22 | 72  | A0870203-Ø10-22x72  | ✓           |
| 12    | 12    | 26 | 83  | A0870203-Ø12-26x83  | ✓           |
| 16    | 16    | 32 | 92  | A0870203-Ø16-32x92  | ✓           |
| 20    | 20    | 38 | 104 | A0870203-Ø20-38x104 | ✓           |

## Applications

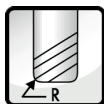




# A088 - Fraise carbure monobloc rayonnée Z04



## Caractéristiques



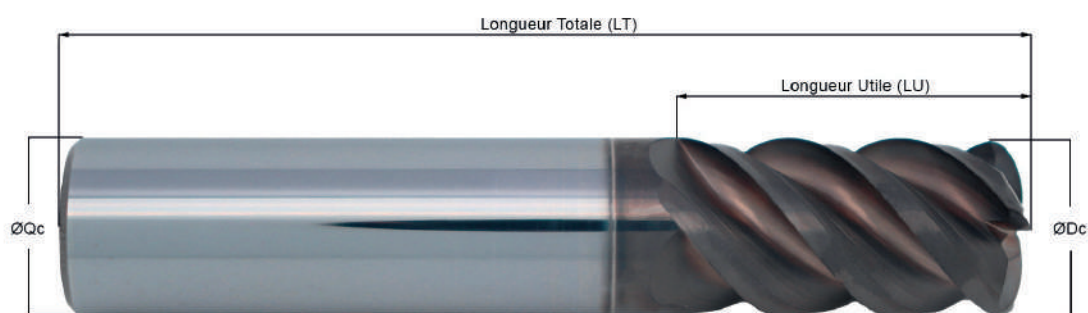
## Matières à usiner

| P   | M   | K | N | S    | H | O |
|-----|-----|---|---|------|---|---|
| ●●● | ●●● | ● | ● | ●●●● | ● | ● |

## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | R    | Référence Non Revêtue     | Dispo stock |
|-------|-------|----|-----|------|---------------------------|-------------|
| 6     | 6     | 13 | 57  | 0,2  | A0880203-Ø6-13x57-R0.2    | ✓           |
| 6     | 6     | 13 | 57  | 0,5  | A0880203-Ø6-13x57-R0.5    | ✓           |
| 8     | 8     | 19 | 63  | 0,2  | A0880203-Ø8-19x63-R0.2    | ✓           |
| 8     | 8     | 19 | 63  | 0,5  | A0880203-Ø8-19x63-R0.5    | ✓           |
| 10    | 10    | 22 | 72  | 0,5  | A0880203-Ø10-22x72-R0.5   | ✓           |
| 10    | 10    | 22 | 72  | 1    | A0880203-Ø10-22x72-R1     | ✓           |
| 10    | 10    | 22 | 72  | 1,5  | A0880203-Ø10-22x72-R1.5   | ✓           |
| 10    | 10    | 22 | 72  | 2    | A0880203-Ø10-22x72-R2     | ✓           |
| 10    | 10    | 22 | 72  | 2,5  | A0880203-Ø10-22x72-R2.5   | ✓           |
| 12    | 12    | 26 | 83  | 0,5  | A0880203-Ø12-26x83-R0.5   | ✓           |
| 12    | 12    | 26 | 83  | 1    | A0880203-Ø12-26x83-R1     | ✓           |
| 12    | 12    | 26 | 83  | 1,5  | A0880203-Ø12-26x83-R1.5   | ✓           |
| 12    | 12    | 26 | 83  | 2    | A0880203-Ø12-26x83-R2     | ✓           |
| 12    | 12    | 26 | 83  | 2,5  | A0880203-Ø12-26x83-R2.5   | ✓           |
| 12    | 12    | 26 | 83  | 3    | A0880203-Ø12-26x83-R3     | ✓           |
| 16    | 16    | 32 | 92  | 0,5  | A0880203-Ø16-32x92-R0.5   | ✓           |
| 16    | 16    | 32 | 92  | 1    | A0880203-Ø16-32x92-R1     | ✓           |
| 16    | 16    | 32 | 92  | 1,2  | A0880203-Ø16-32x92-R1.2   | ✓           |
| 16    | 16    | 32 | 92  | 1,6  | A0880203-Ø16-32x92-R1.6   | ✓           |
| 16    | 16    | 32 | 92  | 2    | A0880203-Ø16-32x92-R2     | ✓           |
| 16    | 16    | 32 | 92  | 2,5  | A0880203-Ø16-32x92-R2.5   | ✓           |
| 16    | 16    | 32 | 92  | 3    | A0880203-Ø16-32x92-R3     | ✓           |
| 16    | 16    | 32 | 92  | 4    | A0880203-Ø16-32x92-R4     | ✓           |
| 20    | 20    | 38 | 104 | 1    | A0880203-Ø20-38x104-R1    | ✓           |
| 20    | 20    | 38 | 104 | 2    | A0880203-Ø20-38x104-R2    | ✓           |
| 20    | 20    | 38 | 104 | 2,5  | A0880203-Ø20-38x104-R2.5  | ✓           |
| 20    | 20    | 38 | 104 | 3,05 | A0880203-Ø20-38x104-R3.05 | ✓           |
| 20    | 20    | 38 | 104 | 4    | A0880203-Ø20-38x104-R4    | ✓           |
| 20    | 20    | 38 | 104 | 8    | A0880203-Ø20-38x104-R8    | ✓           |

# A091 - Fraise carbure monobloc grande avance Z04



## Caractéristiques



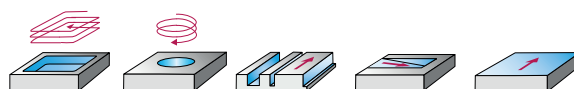
## Matières à usiner

| P    | M  | K  | N | S    | H    | O |
|------|----|----|---|------|------|---|
| ●●●● | ●● | ●● | ● | ●●●● | ●●●● | ● |

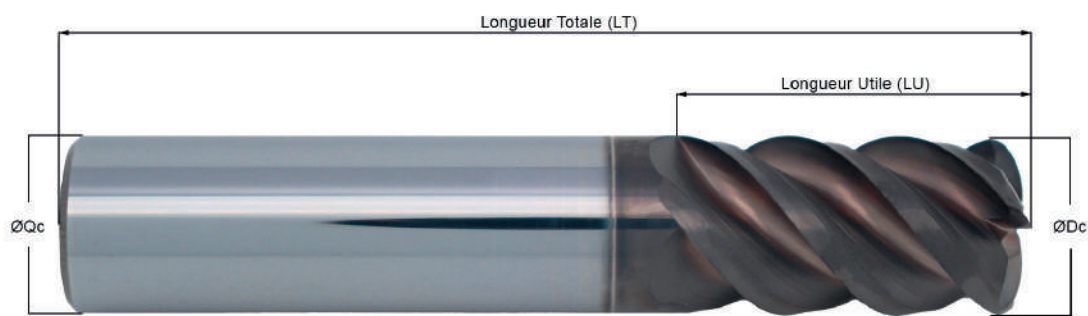
## Références catalogue

| Dc e8 | Re1  | Rprog | Re2  | Qc h6 | LU | LT  | Référence Revêtue    | Dispo stock |
|-------|------|-------|------|-------|----|-----|----------------------|-------------|
| 4     | 1    | 0,7   | 0,5  | 6     | 11 | 57  | A0910103-Ø4-11x57-Ø6 | ✓           |
| 5     | 1,25 | 0,88  | 0,63 | 6     | 13 | 57  | A0910103-Ø5-13x57-Ø6 | ✓           |
| 6     | 1,5  | 1,05  | 0,75 | 6     | 13 | 57  | A0910203-Ø6-13x57    | ✓           |
| 8     | 2    | 1,4   | 1    | 8     | 19 | 63  | A0910203-Ø8-19x63    | ✓           |
| 10    | 2,5  | 1,75  | 1,25 | 10    | 22 | 72  | A0910203-Ø10-22x72   | ✓           |
| 12    | 3    | 2,1   | 1,5  | 12    | 26 | 83  | A0910203-Ø12-26x83   | ✓           |
| 16    | 4    | 2,8   | 2    | 16    | 32 | 92  | A0910203-Ø16-32x92   | ✓           |
| 20    | 5    | 3,5   | 2,5  | 20    | 38 | 104 | A0910203-Ø20-38x104  | ✓           |

## Applications

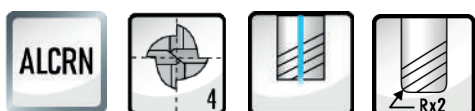


# A092 - Fraise carbure monobloc GA arrosage central Z04



FRAISAGE

## Caractéristiques



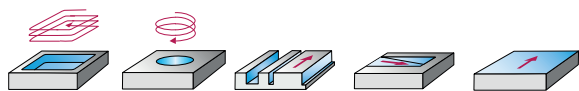
## Matières à usiner

| P    | M  | K  | N  | S    | H    | O    |
|------|----|----|----|------|------|------|
| ●●●● | ●● | ●● | ●● | ●●●● | ●●●● | ●●●● |

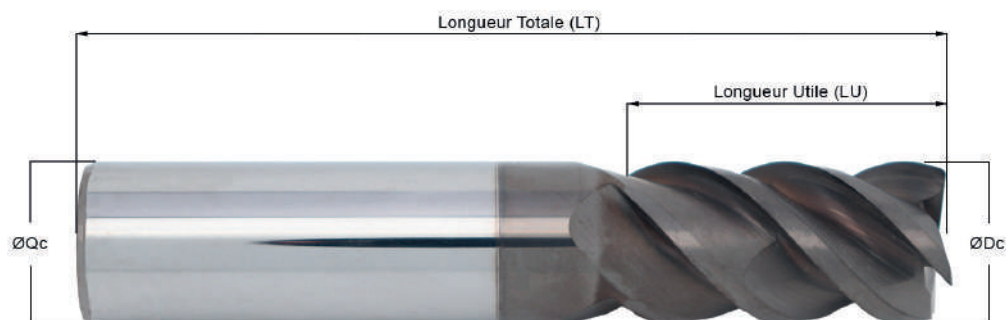
## Références catalogue

| Dc e8 | Re1  | Rprog | Re2   | Qc h6 | LU | LT  | Référence Revêtue    | Dispo stock |
|-------|------|-------|-------|-------|----|-----|----------------------|-------------|
| 4     | 1    | 0,7   | 0,5   | 6     | 11 | 57  | A0920103-Ø4-11x57-Ø6 | ✓           |
| 5     | 1,25 | 0,88  | 0,625 | 6     | 13 | 57  | A0920103-Ø5-13x57-Ø6 | ✓           |
| 6     | 1,5  | 1,05  | 0,75  | 6     | 13 | 57  | A0920203-Ø6-13x57    | ✓           |
| 8     | 2    | 1,4   | 1     | 8     | 19 | 63  | A0920203-Ø8-19x63    | ✓           |
| 10    | 2,5  | 1,75  | 1,25  | 10    | 22 | 72  | A0920203-Ø10-22x72   | ✓           |
| 12    | 3    | 2,1   | 1,5   | 12    | 26 | 83  | A0920203-Ø12-26x83   | ✓           |
| 16    | 4    | 2,8   | 2     | 16    | 32 | 92  | A0920203-Ø16-32x92   | ✓           |
| 20    | 5    | 3,5   | 2,5   | 20    | 38 | 104 | A0920203-Ø20-38x104  | ✓           |

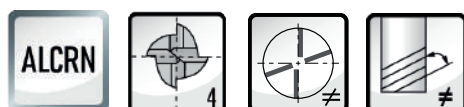
## Applications



# A110 - Fraise carbure monobloc à poche à copeaux Z04



## Caractéristiques



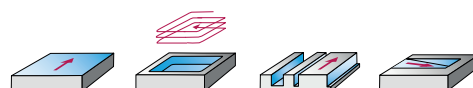
## Matières à usiner

| P   | M   | K | N | S    | H | O |
|-----|-----|---|---|------|---|---|
| ●●● | ●●● | ● | ● | ●●●● | ● | ● |

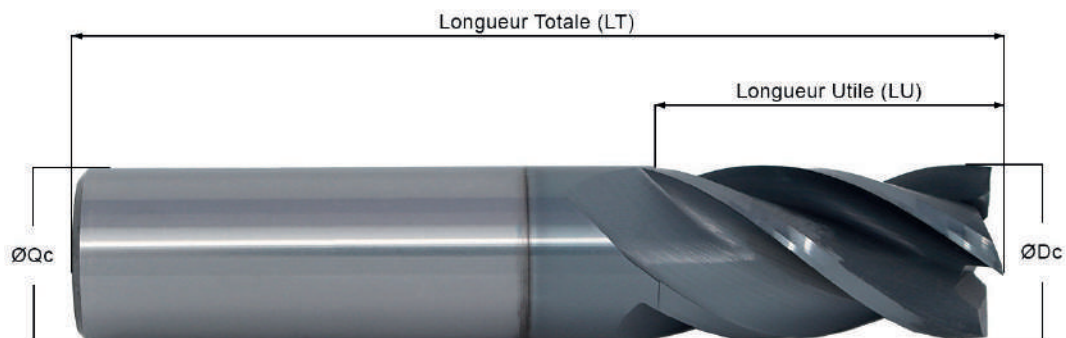
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | Référence Revêtue   | Dispo stock |
|-------|-------|----|-----|---------------------|-------------|
| 6     | 6     | 13 | 57  | A1100203-Ø6-13x57   | ✓           |
| 8     | 8     | 19 | 63  | A1100203-Ø8-19x63   | ✓           |
| 10    | 10    | 22 | 72  | A1100203-Ø10-22x72  | ✓           |
| 12    | 12    | 26 | 83  | A1100203-Ø12-26x83  | ✓           |
| 16    | 16    | 32 | 92  | A1100203-Ø16-32x92  | ✓           |
| 20    | 20    | 38 | 104 | A1100203-Ø20-38x104 | ✓           |

## Applications



# A400 - Fraise carbure monobloc polyvalente Z04



## Caractéristiques



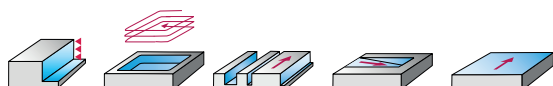
## Matières à usiner

| P  | M  | K  | N  | S  | H  | O  |
|----|----|----|----|----|----|----|
| ●● | ●● | ●● | ●● | ●● | ●● | ●● |

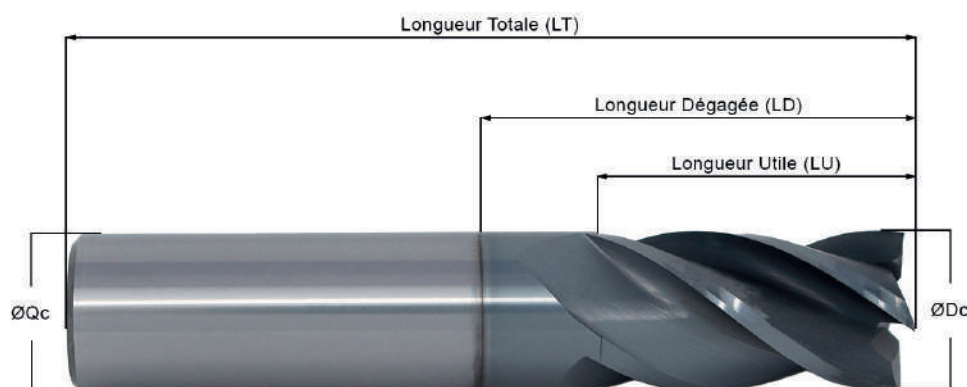
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | Référence Revêtue   | Dispo stock |
|-------|-------|----|-----|---------------------|-------------|
| 2     | 2     | 7  | 38  | A4000201-Ø2-7x38    | ✓           |
| 3     | 3     | 8  | 38  | A4000201-Ø3-8x38    | ✓           |
| 4     | 6     | 11 | 57  | A4000201-Ø4-11x50   | ✓           |
| 5     | 6     | 13 | 57  | A4000201-Ø5-13x50   | ✓           |
| 6     | 6     | 13 | 57  | A4000201-Ø6-13x57   | ✓           |
| 8     | 8     | 19 | 63  | A4000201-Ø8-19x63   | ✓           |
| 10    | 10    | 22 | 72  | A4000201-Ø10-22x72  | ✓           |
| 12    | 12    | 26 | 83  | A4000201-Ø12-26x83  | ✓           |
| 14    | 14    | 26 | 83  | A4000201-Ø14-26x83  | ✓           |
| 16    | 16    | 32 | 92  | A4000201-Ø16-32x92  | ✓           |
| 18    | 18    | 32 | 92  | A4000201-Ø18-32x92  | ✓           |
| 20    | 20    | 38 | 104 | A4000201-Ø20-38x104 | ✓           |

## Applications



# A400 - Fraise carbure monobloc polyvalente dégagée Z04



## Caractéristiques



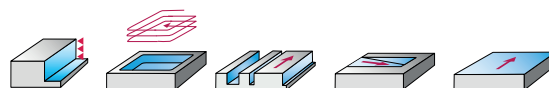
## Matières à usiner

| P  | M  | K  | N  | S  | H  | O  |
|----|----|----|----|----|----|----|
| ●● | ●● | ●● | ●● | ●● | ●● | ●● |

## Références catalogue

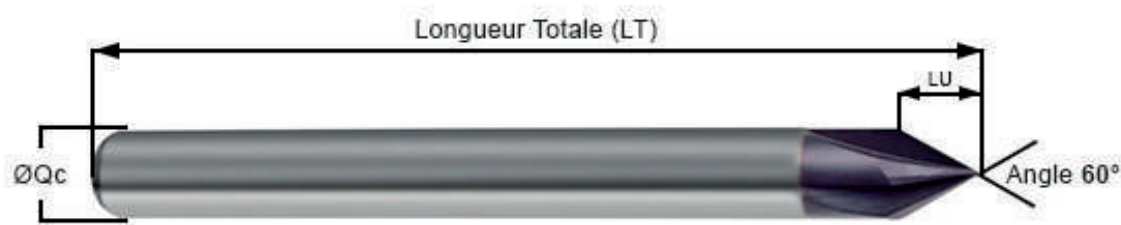
| Dc e8 | Qc h6 | LU | LT  | LD | Référence Revêtue   | Dispo stock |
|-------|-------|----|-----|----|---------------------|-------------|
| 2     | 2     | 7  | 38  | 29 | A4000401-Ø2-7x38    | ✓           |
| 3     | 3     | 8  | 38  | 29 | A4000401-Ø3-8x38    | ✓           |
| 4     | 6     | 11 | 57  | 39 | A4000401-Ø4-11x50   | ✓           |
| 5     | 6     | 13 | 57  | 39 | A4000401-Ø5-13x50   | ✓           |
| 6     | 6     | 13 | 57  | 39 | A4000401-Ø6-13x57   | ✓           |
| 8     | 8     | 19 | 63  | 39 | A4000401-Ø8-19x63   | ✓           |
| 10    | 10    | 22 | 72  | 42 | A4000401-Ø10-22x72  | ✓           |
| 12    | 12    | 26 | 83  | 47 | A4000401-Ø12-26x83  | ✓           |
| 14    | 14    | 26 | 83  | 48 | A4000401-Ø14-26x83  | ✓           |
| 16    | 16    | 32 | 92  | 52 | A4000401-Ø16-32x92  | ✓           |
| 18    | 18    | 32 | 92  | 47 | A4000401-Ø18-32x92  | ✓           |
| 20    | 20    | 38 | 104 | 54 | A4000401-Ø20-38x104 | ✓           |

## Applications





# E001 - Fraise carbure monobloc à chanfrein à 60° Z04



FRAISAGE

## Caractéristiques



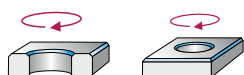
## Matières à usiner

| P    | M    | K  | N | S  | H | O |
|------|------|----|---|----|---|---|
| ●●●● | ●●●● | ●● | ● | ●● |   | ● |

## Références catalogue

| Dc e8 | Qc h6 | LU   | LT | Référence Revêtue    | Dispo stock |
|-------|-------|------|----|----------------------|-------------|
| 4     | 4     | 3,5  | 50 | E0010201-Ø4-3.5x50   | ✓           |
| 6     | 6     | 5,2  | 57 | E0010201-Ø6-5.2x57   | ✓           |
| 8     | 8     | 7    | 63 | E0010201-Ø8-7x63     | ✓           |
| 10    | 10    | 8,7  | 72 | E0010201-Ø10-8.7x72  | ✓           |
| 12    | 12    | 10,4 | 83 | E0010201-Ø12-10.4x83 | ✓           |

## Applications



# E002 - Fraise carbure monobloc à chanfrein à 90° Z04



## Caractéristiques



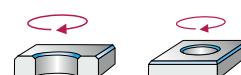
## Matières à usiner

| P    | M   | K  | N | S  | H | O |
|------|-----|----|---|----|---|---|
| ●●●● | ●●● | ●● | ● | ●● |   | ● |

## Références catalogue

| Dc e8 | Qc h6 | LU | LT | Référence Revêtue | Dispo stock |
|-------|-------|----|----|-------------------|-------------|
| 4     | 4     | 2  | 50 | E0020201-Ø4-2x50  | ✓           |
| 6     | 6     | 3  | 57 | E0020201-Ø6-3x57  | ✓           |
| 8     | 8     | 4  | 63 | E0020201-Ø8-4x63  | ✓           |
| 10    | 10    | 5  | 72 | E0020201-Ø10-5x72 | ✓           |
| 12    | 12    | 6  | 83 | E0020201-Ø12-6x83 | ✓           |

## Applications



## E003 - Fraise carbure monobloc à chanfrein à 120° Z04



FRAISAGE

### Caractéristiques



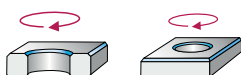
### Matières à usiner

| P    | M   | K  | N | S  | H | O |
|------|-----|----|---|----|---|---|
| ●●●● | ●●● | ●● | ● | ●● |   | ● |

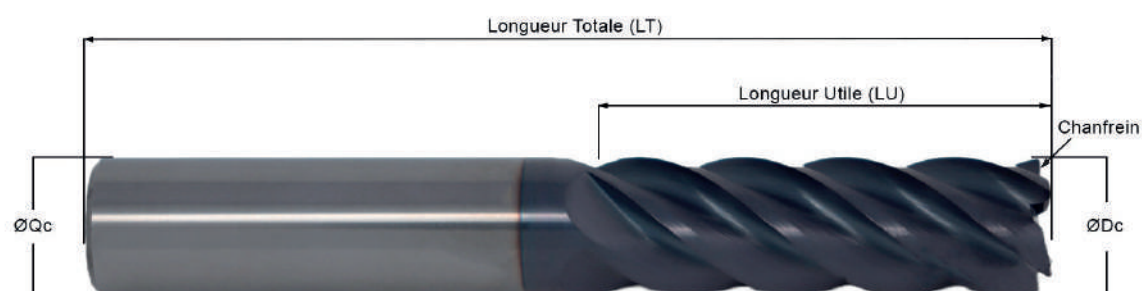
### Références catalogue

| Dc e8 | Qc h6 | LU  | LT | Référence Revêtue   | Dispo stock |
|-------|-------|-----|----|---------------------|-------------|
| 4     | 4     | 1,2 | 50 | E0030201-Ø4-1.2x50  | ✓           |
| 6     | 6     | 1,8 | 57 | E0030201-Ø6-1.8x57  | ✓           |
| 8     | 8     | 2,4 | 63 | E0030201-Ø8-2.4x63  | ✓           |
| 10    | 10    | 2,9 | 72 | E0030201-Ø10-2.9x72 | ✓           |
| 12    | 12    | 3,5 | 83 | E0030201-Ø12-3.5x83 | ✓           |

### Applications



# A176 - Fraise carbure monobloc trochoïdale Z05



## Caractéristiques



## Matières à usiner

| P  | M    | K | N | S   | H | O |
|----|------|---|---|-----|---|---|
| ●● | ●●●● | ● | ● | ●●● | ● | ● |

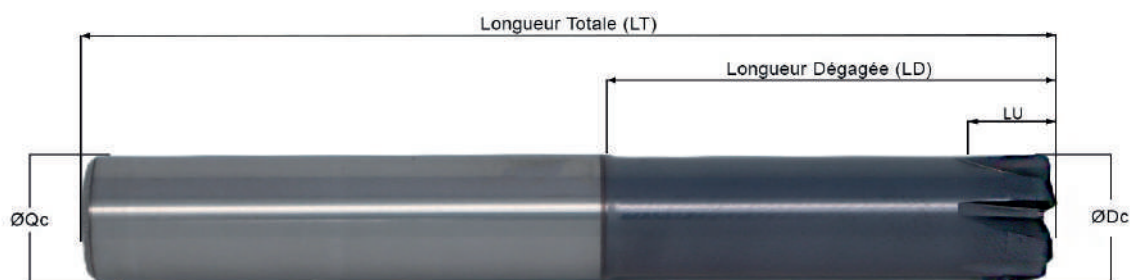
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | Chanfrein | Référence Revêtue         | Dispo stock |
|-------|-------|----|-----|-----------|---------------------------|-------------|
| 6     | 6     | 18 | 62  | 0,10      | A176021G-Ø6-18x62-CH0,1   | ✓           |
| 8     | 8     | 24 | 68  | 0,15      | A176021G-Ø8-24x68-CH0,15  | ✓           |
| 10    | 10    | 30 | 80  | 0,20      | A176021G-Ø10-30x80-CH0,2  | ✓           |
| 12    | 12    | 36 | 93  | 0,20      | A176021G-Ø12-36x93-CH0,2  | ✓           |
| 16    | 16    | 48 | 108 | 0,30      | A176021G-Ø16-48x108-CH0,3 | ✓           |
| 20    | 20    | 60 | 126 | 0,40      | A176021G-Ø20-60x126-CH0,4 | ✓           |

## Applications

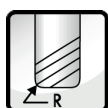
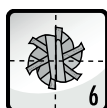


# A181 - Fraise carbure monobloc grande avance Z06



FRAISAGE

## Caractéristiques



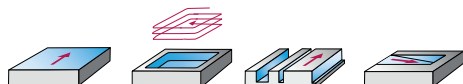
## Matières à usiner

| P    | M   | K  | N | S   | H   | O |
|------|-----|----|---|-----|-----|---|
| ●●●● | ●●● | ●● | ● | ●●● | ●●● | ● |

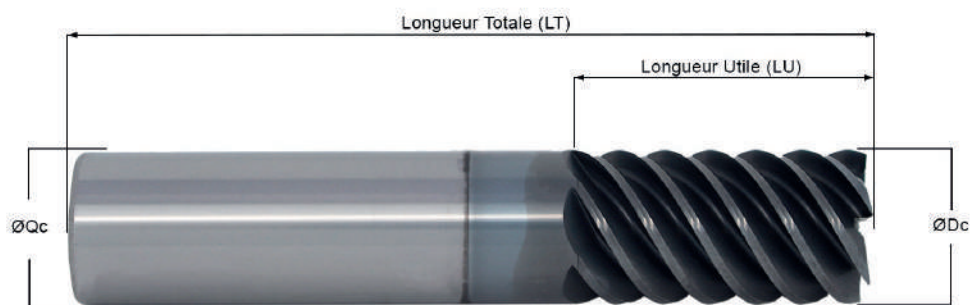
## Références catalogue

| Dc e8 | Qc h6 | LU  | LT | LD | Rayon | Référence Revêtue          | Dispo stock |
|-------|-------|-----|----|----|-------|----------------------------|-------------|
| 6     | 4     | 2,5 | 60 | 15 | 0,50  | A181010G-Ø4-2,5x60-Ø6-R0,5 | ✓           |
| 6     | 6     | 3,0 | 60 | 20 | 0,50  | A181020G-Ø6-3x60-R0,5      | ✓           |
| 8     | 8     | 3,5 | 70 | 30 | 0,50  | A181020G-Ø8-3,5x70-R0,5    | ✓           |
| 10    | 10    | 4   | 75 | 35 | 1     | A181020G-Ø10-4x75-R1       | ✓           |
| 12    | 12    | 4   | 90 | 40 | 1     | A181020G-Ø12-4x90-R1       | ✓           |

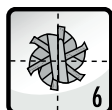
## Applications



# A097 - Fraise carbure monobloc de finition Z06



## Caractéristiques



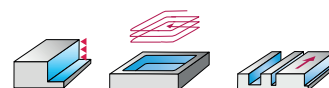
## Matières à usiner

| P    | M    | K  | N    | S    | H | O |
|------|------|----|------|------|---|---|
| ●●●● | ●●●● | ●● | ●●●● | ●●●● | ● |   |

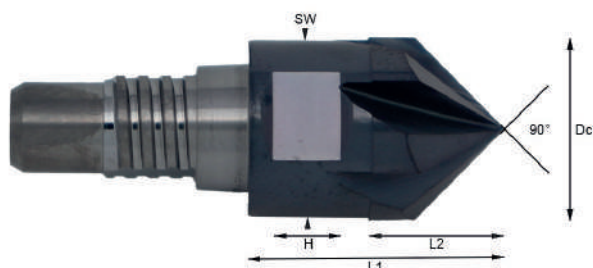
## Références catalogue

| Dc e8 | Qc h6 | LU | LT  | Référence Revêtue   | Dispo stock |
|-------|-------|----|-----|---------------------|-------------|
| 6     | 6     | 13 | 57  | A0970201-Ø6-13X57   | ✓           |
| 8     | 8     | 19 | 63  | A0970201-Ø8-19X63   | ✓           |
| 10    | 10    | 22 | 72  | A0970201-Ø10-22X72  | ✓           |
| 12    | 12    | 26 | 83  | A0970201-Ø12-26X83  | ✓           |
| 14    | 14    | 26 | 83  | A0970201-Ø14-26X83  | ✓           |
| 16    | 16    | 32 | 92  | A0970201-Ø16-32X92  | ✓           |
| 20    | 20    | 38 | 104 | A0970201-Ø20-38X104 | ✓           |

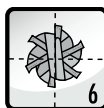
## Applications



## A197 - EIR à chanfreiner Z06



### Caractéristiques



### Matières à usiner

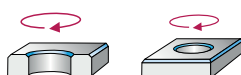
| P    | M    | K  | N | S  | H | O |
|------|------|----|---|----|---|---|
| ●●●● | ●●●● | ●● | ● | ●● |   | ● |

### Références catalogue

| Taille   | Dc e8 | L2 | L1 | SW x H | Référence Revêtue     | Dispo stock |
|----------|-------|----|----|--------|-----------------------|-------------|
| E.I.R 10 | 10,00 | 7  | 14 | 8x3    | A197042-Ø10-7x14-A10  | ✓           |
| E.I.R 20 | 12,00 | 9  | 17 | 10x4   | A197042-Ø12-9x17-A20  | ✓           |
| E.I.R 30 | 16,00 | 12 | 21 | 13x4   | A197042-Ø16-12x21-A30 | ✓           |
| E.I.R 40 | 20,00 | 15 | 26 | 16x5   | A197042-Ø20-15x26-A40 | ✓           |

### Applications

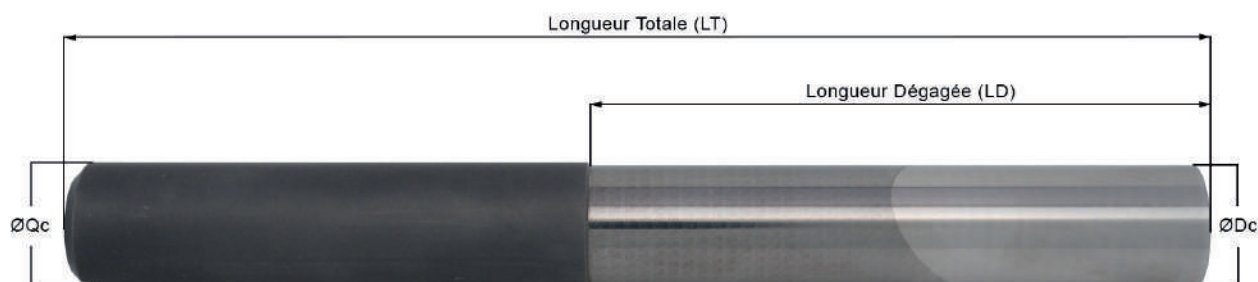
### Couples pour le montage



| Taille   | Couple (Nm) |
|----------|-------------|
| E.I.R 10 | 12          |
| E.I.R 20 | 15          |
| E.I.R 30 | 30          |
| E.I.R 40 | 45          |



# G001 - Porte-outils E.I.R droit



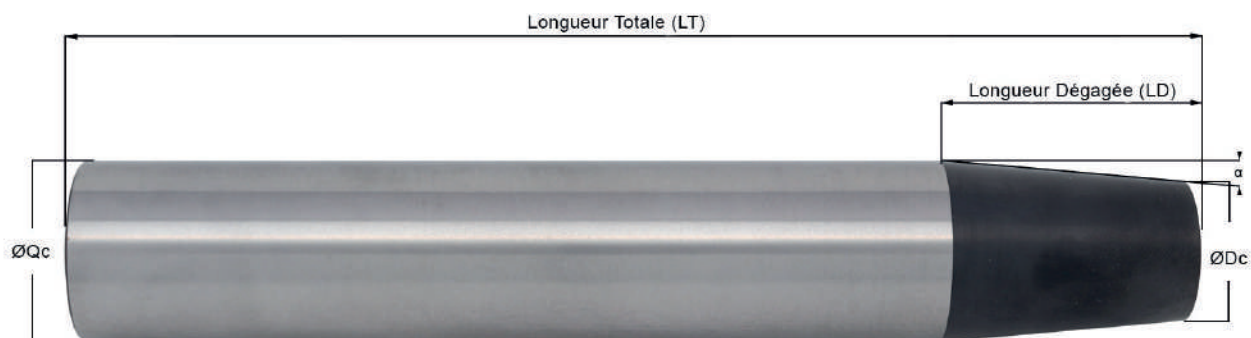
## Caractéristiques



## Références catalogue

| Taille     | Qc | Dc   | LT  | LD | Référence               | Dispo stock |
|------------|----|------|-----|----|-------------------------|-------------|
| COURT      |    |      |     |    |                         |             |
| E.I.R 10   | 10 | 9,6  | 65  | 5  | G0011100-Ø10-5x65-A10   | ✓           |
| E.I.R 20   | 12 | 11,6 | 75  | 5  | G0011100-Ø12-5x75-A20   | ✓           |
| E.I.R 30   | 16 | 15,4 | 80  | 6  | G0011100-Ø16-6x80-A30   | ✓           |
| E.I.R 40   | 20 | 19,2 | 90  | 6  | G0011100-Ø20-6x90-A40   | ✓           |
| LONG       |    |      |     |    |                         |             |
| E.I.R 10   | 10 | 9,6  | 75  | 18 | G0011100-Ø10-18x75-A10  | ✓           |
| E.I.R 20   | 12 | 11,6 | 85  | 21 | G0011100-Ø12-21x85-A20  | ✓           |
| E.I.R 30   | 16 | 15,4 | 95  | 23 | G0011100-Ø16-23x95-A30  | ✓           |
| E.I.R 40   | 20 | 19,2 | 110 | 28 | G0011100-Ø20-28x110-A40 | ✓           |
| EXTRA LONG |    |      |     |    |                         |             |
| E.I.R 10   | 10 | 9,6  | 111 | 56 | G0010100-Ø10-56x111-A10 | ✓           |
| E.I.R 20   | 12 | 11,6 | 128 | 63 | G0010100-Ø12-63x128-A20 | ✓           |
| E.I.R 30   | 16 | 15,4 | 149 | 79 | G0010100-Ø16-79x149-A30 | ✓           |
| E.I.R 40   | 20 | 19,2 | 174 | 94 | G0010100-Ø20-94x174-A40 | ✓           |

## G002 - Porte-outils E.I.R conique



### Caractéristiques



### Références catalogue

| Taille             | Qc | Dc   | LT  | LD | Référence               | Dispo stock |
|--------------------|----|------|-----|----|-------------------------|-------------|
| $\alpha = 5^\circ$ |    |      |     |    |                         |             |
| E.I.R 10           | 16 | 9,6  | 105 | 36 | G0021100-Ø16-36x105-A10 | ✓           |
| E.I.R 20           | 20 | 11,6 | 120 | 48 | G0021100-Ø20-48x120-A20 | ✓           |
| E.I.R 30           | 20 | 15,4 | 135 | 26 | G0021100-Ø20-26x135-A30 | ✓           |
| E.I.R 40           | 25 | 19,2 | 150 | 33 | G0021100-Ø25-33x150-A40 | ✓           |
| $\alpha = 1^\circ$ |    |      |     |    |                         |             |
| E.I.R 10           | 16 | 9,6  | 110 | 36 | G0021100-Ø16-36x110-A10 | ✓           |
| E.I.R 20           | 20 | 11,6 | 130 | 53 | G0021100-Ø20-53x130-A20 | ✓           |
| E.I.R 30           | 20 | 15,4 | 145 | 59 | G0021100-Ø20-59x145-A30 | ✓           |
| E.I.R 40           | 25 | 19,2 | 180 | 74 | G0021100-Ø25-74x180-A40 | ✓           |



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# CODIFICATION DES OUTILS À PLAQUETTES

|          |          |          |          |           |           |           |          |          |            |
|----------|----------|----------|----------|-----------|-----------|-----------|----------|----------|------------|
| <b>S</b> | <b>O</b> | <b>K</b> | <b>U</b> | <b>12</b> | <b>05</b> | <b>AZ</b> | <b>E</b> | <b>-</b> | <b>PMS</b> |
| 1        | 2        | 3        | 4        | 5         | 6         | 7         | 8        | -        | 9          |

## 1 - Formes de plaquettes



A



E



R



S



X

## 2 - Angles de dépouilles

D

15°

P

11°

O

Dépouille  
spécifique

## 3 - Tolérances



|   | d<br>(±mm) | m<br>(±mm) | s<br>(±mm) | d = 6,35/9,52 | d = 12,7 | d = 15,8/19,05 |
|---|------------|------------|------------|---------------|----------|----------------|
| C | 0,025      | 0,013      | 0,025      | ◆             | ◆        | ◆              |
| H | 0,013      | 0,013      | 0,025      | ◆             | ◆        | ◆              |
| K | 0,05       | 0,013      | 0,025      | ◆             |          |                |
|   | 0,08       | 0,013      | 0,025      |               | ◆        |                |
|   | 0,10       | 0,013      | 0,025      |               |          | ◆              |
| L | 0,05       | 0,025      | 0,025      | ◆             |          |                |
|   | 0,08       | 0,025      | 0,025      |               | ◆        |                |
|   | 0,10       | 0,025      | 0,025      |               |          | ◆              |
| M | 0,05       | 0,008      | 0,013      | ◆             |          |                |
|   | 0,08       | 0,013      | 0,013      |               | ◆        |                |
|   | 0,10       | 0,015      | 0,013      |               |          | ◆              |

## 4 - Formes de plaquettes



T



U

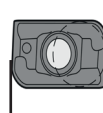
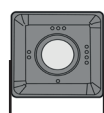
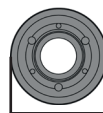
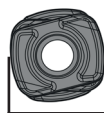


W

Forme  
Spécifique

X

## 5 - Longueurs d'arêtes



## 6 - Epaisseurs de plaquettes

03 s=3,97

T3 s=3,97

04 s=4,76

05 s=5,56

06 s=6,35

## 7 - Rayons de bec

05 r=0,5

A : 45°

D = 5°

08 r=0,8

M0 : Ø

E = 20°

10 r=1,0

P : 90°

Z = autre°

15 r=1,5

16 r=1,6

24 r=2,4

32 r=3,2

## 8 - Arêtes de coupe

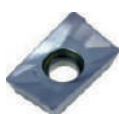


F : Arête vive

E : Préparation  
d'arêteS : Chanfrein +  
Préparation d'arête



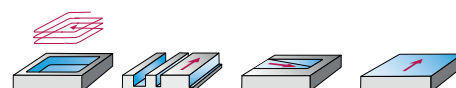
## APKT10/APHT10 - 2 arêtes de coupe à 90°

| Références     | Acier  |        |        |        | Inox                                                                              |        |        | Fonte  | Non ferreux                                                                         | Superalliage |        |
|----------------|--------|--------|--------|--------|-----------------------------------------------------------------------------------|--------|--------|--------|-------------------------------------------------------------------------------------|--------------|--------|
|                | CERMET | APCP15 | APCP25 | APPP35 | APPM20                                                                            | APPM25 | APPM35 | APCK15 | APWN15                                                                              | APPS10       | APPS15 |
| APKT1003PDE-MS |        |        |        |        |                                                                                   |        | ◆      |        |                                                                                     |              |        |
| APHT1003F-N    |        |        |        |        |                                                                                   |        |        |        | ◆                                                                                   |              |        |
|                |        |        |        |        |  |        |        |        |  |              |        |

## APKT16 - 2 arêtes de coupe à 90°

| Références     | Acier                                                                               |        |        |        | Inox   |        |        | Fonte                                                                                | Non ferreux | Superalliage |        |
|----------------|-------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------------------------------------------------------------------------------------|-------------|--------------|--------|
|                | CERMET                                                                              | APCP15 | APCP25 | APPP35 | APPM20 | APPM25 | APPM35 | APCK15                                                                               | APWN15      | APPS10       | APPS15 |
| APKT1604PDE-PK |                                                                                     |        |        |        |        |        |        | ◆                                                                                    |             |              |        |
| APKT1604PDE-PK |                                                                                     |        |        | ◆      |        |        |        |                                                                                      |             |              |        |
|                |  |        |        |        |        |        |        |  |             |              |        |

### Applications





# SDKT09/SDHT09 - 4 arêtes de coupe à 90°

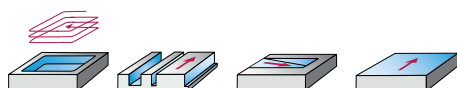
| Références     | Acier                                                                             |        |        |        | Inox                                                                              |        |        | Fonte  | Non ferreux                                                                         | Superalliage                                                                        |        |
|----------------|-----------------------------------------------------------------------------------|--------|--------|--------|-----------------------------------------------------------------------------------|--------|--------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|
|                | CERMET                                                                            | APCP15 | APCP25 | APPP35 | APPM20                                                                            | APPM25 | APPM35 | APCK15 | APWN15                                                                              | APPS10                                                                              | APCS40 |
| SDKT09T308S-MS |                                                                                   |        |        |        |                                                                                   |        |        |        |                                                                                     |                                                                                     | ◆      |
| SDKT09T308S-MS |                                                                                   |        |        |        |                                                                                   | ◆      |        |        |                                                                                     |                                                                                     |        |
| SDKT09T308S-P  |                                                                                   |        |        | ◆      |                                                                                   |        |        |        |                                                                                     |                                                                                     |        |
| SDHT09T308F-N  |                                                                                   |        |        |        |                                                                                   |        |        |        | ◆                                                                                   |                                                                                     |        |
|                |  |        |        |        |  |        |        |        |  |  |        |



| Porte-outils | Références            | Ø  | Attachements | Z | LT  | LDgt |
|--------------|-----------------------|----|--------------|---|-----|------|
|              | F.SDKT09.Ø25.QC.Z03   | 25 | Cylindrique  | 3 | 88  | 32   |
|              | F.SDKT09.Ø32.QC.Z04   | 32 | Cylindrique  | 4 | 100 | 40   |
|              | F.SDKT09.Ø40.AL16.Z05 | 40 | Alésage      | 5 | 40  | -    |
|              | F.SDKT09.Ø50.AL22.Z06 | 50 | Alésage      | 6 | 40  | -    |
|              | F.SDKT09.Ø63.AL22.Z07 | 63 | Alésage      | 7 | 40  | -    |
|              | F.SDKT09.Ø80.AL27.Z09 | 80 | Alésage      | 9 | 50  | -    |

|  | Désignation                    | Référence | Taille torx |
|-------------------------------------------------------------------------------------|--------------------------------|-----------|-------------|
|                                                                                     | Pièce détachée<br>Vis M3 x 7,3 | ACAP77613 | T08         |

## Applications



# SDKT12/SDHT12 - 4 arêtes de coupe à 90°

| Références     | Acier                                                                             |        |        |        | Inox                                                                              |        |        | Fonte  | Non<br>ferreux                                                                      | Superaliage |        |
|----------------|-----------------------------------------------------------------------------------|--------|--------|--------|-----------------------------------------------------------------------------------|--------|--------|--------|-------------------------------------------------------------------------------------|-------------|--------|
|                | CERMET                                                                            | APCP15 | APCP25 | APPP35 | APPM20                                                                            | APPM35 | APPM40 | APCK15 | APWN15                                                                              | APPS10      | APPS15 |
| SDKT120508S-MS |                                                                                   |        |        |        |                                                                                   | ◆      |        |        |                                                                                     |             |        |
| SDKT120508S-MS |                                                                                   |        |        |        |                                                                                   |        | ◆      |        |                                                                                     |             |        |
| SDKT120508S-P  |                                                                                   |        |        | ◆      |                                                                                   |        |        |        |                                                                                     |             |        |
| SDHT120508F-N  |                                                                                   |        |        |        |                                                                                   |        |        |        | ◆                                                                                   |             |        |
|                |  |        |        |        |  |        |        |        |  |             |        |

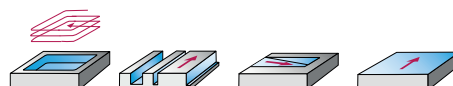


| Porte-outils | Références            | Ø  | Attachements | Z | LT  | LDgt |
|--------------|-----------------------|----|--------------|---|-----|------|
|              | F.SDKT12.Ø32.QC.Z03   | 32 | Cylindrique  | 3 | 100 | 40   |
|              | F.SDKT12.Ø40.AL16.Z04 | 40 | Alésage      | 4 | 40  | -    |
|              | F.SDKT12.Ø50.AL22.Z05 | 50 | Alésage      | 5 | 40  | -    |
|              | F.SDKT12.Ø63.AL22.Z06 | 63 | Alésage      | 6 | 40  | -    |
|              | F.SDKT12.Ø80.AL27.Z07 | 80 | Alésage      | 7 | 50  | -    |



| Pièce détachée | Désignation                                  | Référence    | Taille torx |
|----------------|----------------------------------------------|--------------|-------------|
|                | Vis M4 x 8,5                                 | ACAP11037484 | T15         |
|                | Vis M4 x 11                                  | ACAP1345432  | T15         |
|                | Vis alésage M8 x 30<br>Uniquement fraise Ø40 | ACAP1103680  | -           |

## Applications



## EPHT07/EPHW07 - 2 arêtes de coupe grande avance

|               | Acier                                                                             | Inox                                                                              |        |        | Fonte  | Non<br>ferreux | Superaliage |                                                                                     | Dure                                                                                |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|--------|--------|----------------|-------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Références    | APPP35                                                                            | APPM20                                                                            | APPM25 | APPM40 | APCK15 | APWN15         | APPS35      | APCS40                                                                              | APPH15                                                                              |
| EPHT070315-MS |                                                                                   |                                                                                   |        |        |        |                |             | ◆                                                                                   |                                                                                     |
| EPHT070315-MS |                                                                                   |                                                                                   |        | ◆      |        |                |             |                                                                                     |                                                                                     |
| EPHT070315-P  | ◆                                                                                 |                                                                                   |        |        |        |                |             |                                                                                     |                                                                                     |
| EPHW070315-H  |                                                                                   |                                                                                   |        |        |        |                |             |                                                                                     | ◆                                                                                   |
|               |  |  |        |        |        |                |             |  |  |

FRAISAGE

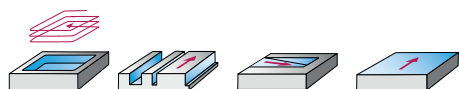


|              | Références            | Ø  | Attachements | Z | LT  | LDgt |
|--------------|-----------------------|----|--------------|---|-----|------|
| Porte-outils | F.EPHT07.Ø16.QC.Z02   | 16 | Cylindrique  | 2 | 160 | 30   |
|              | F.EPHT07.Ø20.QC.Z03   | 20 | Cylindrique  | 3 | 200 | 32   |
|              | F.EPHT07.Ø25.QC.Z04   | 25 | Cylindrique  | 4 | 225 | 40   |
|              | F.EPHT07.Ø32.QC.Z05   | 32 | Cylindrique  | 5 | 250 | 50   |
|              | F.EPHT07.Ø40.AL16.Z06 | 40 | Alésage      | 6 | 40  | -    |
|              | F.EPHT07.Ø42.AL16.Z06 | 42 | Alésage      | 6 | 40  | -    |
|              | F.EPHT07.Ø50.AL22.Z07 | 50 | Alésage      | 7 | 40  | -    |
|              | F.EPHT07.Ø52.AL22.Z07 | 52 | Alésage      | 7 | 40  | -    |
|              | F.EPHT07.Ø63.AL22.Z08 | 63 | Alésage      | 8 | 50  | -    |
|              | F.EPHT07.Ø66.AL27.Z08 | 66 | Alésage      | 8 | 50  | -    |



|                | Désignation  | Référence  | Taille torx |
|----------------|--------------|------------|-------------|
| Pièce détachée | Vis M3 x 5,7 | ACAP169857 | T08         |

### Applications



# XDLT10 - 4 arêtes de coupe grande avance

| Références      | Acier                                                                             |        |        |        | Inox                                                                              |        |        | Fonte  | Non<br>ferreux | Superalliage                                                                        |        |
|-----------------|-----------------------------------------------------------------------------------|--------|--------|--------|-----------------------------------------------------------------------------------|--------|--------|--------|----------------|-------------------------------------------------------------------------------------|--------|
|                 | CERMET                                                                            | APCP15 | APCP25 | APPP35 | APPM20                                                                            | APPM25 | APPM35 | APCK15 | APWN15         | APPS10                                                                              | APPS40 |
| XDLT10T308E-PMS |                                                                                   |        |        |        |                                                                                   |        | ◆      |        |                |                                                                                     | ◆      |
| XDLT10T308S-PMK |                                                                                   |        |        | ◆      |                                                                                   |        | ◆      |        |                |                                                                                     |        |
|                 |  |        |        |        |  |        |        |        |                |  |        |

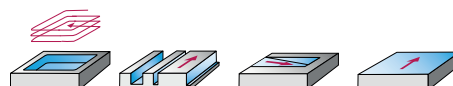


| Porte-outils | Références               | Ø  | Attachements | Z | LT  | LDgt |
|--------------|--------------------------|----|--------------|---|-----|------|
|              | F.XDLT10.Ø25.QC.Z03      | 25 | Cylindrique  | 3 | 225 | 50   |
|              | F.XDLT10.Ø40.QC.AL16.Z04 | 40 | Alésage      | 4 | 40  | -    |
|              | F.XDLT10.Ø50.QC.AL22.Z05 | 50 | Alésage      | 5 | 40  | -    |
|              | F.XDLT10.Ø63.QC.AL22.Z06 | 63 | Alésage      | 6 | 40  | -    |



| Pièces détachées | Désignations                | Références | Taille torx |
|------------------|-----------------------------|------------|-------------|
|                  | Vis M3,5 x 7,2 pour QC      | ACAP54976  | T15         |
|                  | Vis M3,5 x 8,6 pour Alésage | ACAP165795 | T15         |

## Applications



# XOLT13 - 4 arêtes de coupe grande avance

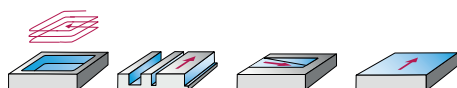
| Références      | Acier                                                                             |        |        |        | Inox                                                                              |        |        | Fonte  | Non ferreux | Superaliage                                                                         |        |
|-----------------|-----------------------------------------------------------------------------------|--------|--------|--------|-----------------------------------------------------------------------------------|--------|--------|--------|-------------|-------------------------------------------------------------------------------------|--------|
|                 | CERMET                                                                            | APCP15 | APCP25 | APPP35 | APPM20                                                                            | APPM25 | APPM35 | APCK15 | APWN15      | APPS10                                                                              | APPS40 |
| XOLT130410E-PMS |                                                                                   |        |        |        |                                                                                   |        | ◆      |        |             |                                                                                     | ◆      |
| XOLT130410S-PMK |                                                                                   |        |        | ◆      |                                                                                   |        |        |        |             |                                                                                     |        |
|                 |  |        |        |        |  |        |        |        |             |  |        |



| Porte-outils | Références            | Ø  | Attachements | Z | LT  | LDgt |
|--------------|-----------------------|----|--------------|---|-----|------|
|              | F.XOLT13.Ø35.QC.Z03   | 35 | Cylindrique  | 3 | 250 | 63   |
|              | F.XOLT13.Ø50.AL22.Z04 | 50 | Alésage      | 4 | 40  | -    |
|              | F.XOLT13.Ø63.AL22.Z05 | 63 | Alésage      | 5 | 40  | -    |
|              | F.XOLT13.Ø80.AL27.Z07 | 80 | Alésage      | 7 | 50  | -    |

|  | Désignation     | Référence  | Taille torx |
|-------------------------------------------------------------------------------------|-----------------|------------|-------------|
|                                                                                     | Vis M4,5 x 10,5 | ACAP106022 | T20         |

## Applications



## RPMX12 - Plaquette ronde

| Références    | Acier  |                                                                                   |        |        | Inox   |                                                                                   |        | Fonte  | Non ferreux                                                                         | Superalliage |                                                                                     |
|---------------|--------|-----------------------------------------------------------------------------------|--------|--------|--------|-----------------------------------------------------------------------------------|--------|--------|-------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|
|               | CERMET | APCP15                                                                            | APCP25 | APPP35 | APPM20 | APPM25                                                                            | APPM35 | APCK15 | APWN15                                                                              | APPS10       | APPS40                                                                              |
| RDHX1204MO-N  |        |                                                                                   |        |        |        |                                                                                   |        |        | ◆                                                                                   |              |                                                                                     |
| RPHX1204MO-S  |        |                                                                                   |        |        |        |                                                                                   |        |        |                                                                                     |              | ◆                                                                                   |
| RPMX1204MO-M  |        |                                                                                   |        |        |        | ◆                                                                                 |        |        |                                                                                     |              |                                                                                     |
| RPMX1204MO-PK |        |                                                                                   | ◆      |        |        |                                                                                   |        |        |                                                                                     |              |                                                                                     |
|               |        |  |        |        |        |  |        |        |  |              |  |

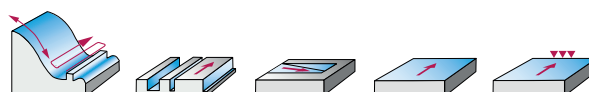


| Porte-outils | Références               | Ø   | Attachements | Z  | LT  | LDgt |
|--------------|--------------------------|-----|--------------|----|-----|------|
|              | F.RPMX12.Ø25.QC.Z02.LD30 | 25  | Cylindrique  | 2  | 86  | 30   |
|              | F.RPMX12.Ø25.QC.Z02.LD60 | 25  | Cylindrique  | 2  | 116 | 60   |
|              | F.RPMX12.Ø32.QC.Z03.LD40 | 32  | Cylindrique  | 3  | 100 | 40   |
|              | F.RPMX12.Ø32.QC.Z03.LD70 | 32  | Cylindrique  | 3  | 130 | 70   |
|              | F.RPMX12.Ø40.AL16.Z04    | 40  | Alésage      | 4  | 40  | -    |
|              | F.RPMX12.Ø50.AL22.Z05    | 50  | Alésage      | 5  | 40  | -    |
|              | F.RPMX12.Ø63.AL22.Z06    | 63  | Alésage      | 6  | 40  | -    |
|              | F.RPMX12.Ø80.AL27.Z08    | 80  | Alésage      | 8  | 50  | -    |
|              | F.RPMX12.Ø100.AL32.Z10   | 100 | Alésage      | 10 | 50  | -    |



| Pièces détachées | Désignations                                           | Références   | Taille torx |
|------------------|--------------------------------------------------------|--------------|-------------|
|                  | Vis M4 x 8,5 pour PO trou lisse                        | ACAP1355432  | T15         |
|                  | Vis M4 x 11 pour Alésage pour porte-outils cylindrique | ACAP11037484 | T15+        |

## Applications



**Vitesse de rotation :**

$$n = \frac{1000 \times V_c}{D_c \times \pi} \text{ tr/min}$$

**Vitesse de coupe :**

$$V_c = \frac{D_c \times \pi \times n}{1000} \text{ m/min}$$

**Vitesse d'avance :**

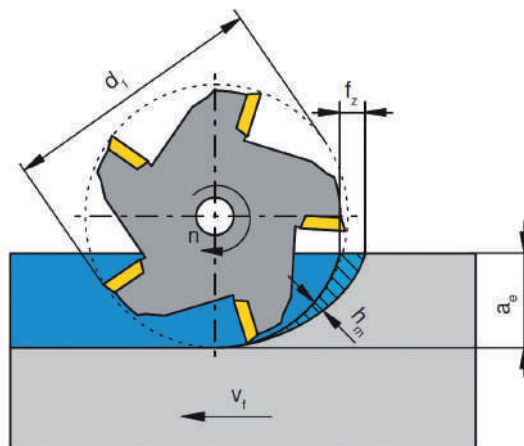
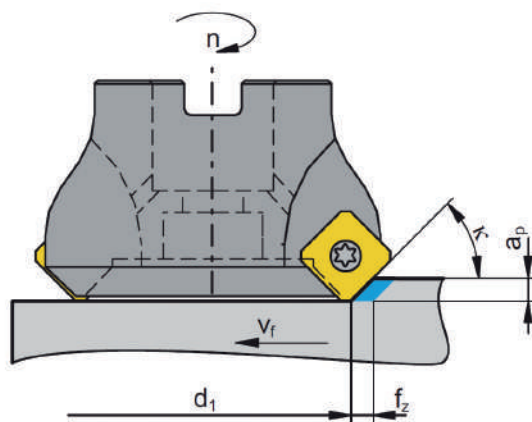
$$V_f = n \times z \times f_z \text{ mm/min}$$

**Avance :**

$$f_z = \frac{V_f}{n \times z} \text{ mm/z}$$

**Débit copeaux :**

$$f_z = \frac{a_e \times a_p \times V_f}{1000} \text{ cm}^3/\text{min}$$



|                |                                                          |
|----------------|----------------------------------------------------------|
| n              | Vitesse de rotation tr/min                               |
| D <sub>c</sub> | Diamètre de coupe mm                                     |
| V <sub>c</sub> | Vitesse de coupe m/min                                   |
| V <sub>f</sub> | Vitesse d'avance mm/min                                  |
| f              | Avance par rotation mm                                   |
| Q              | Débit de copeaux par unité de temps cm <sup>3</sup> /min |
| a <sub>p</sub> | Profondeur de coupe mm                                   |
| a <sub>e</sub> | Largeur de coupe                                         |







## INDEX

- **Foret 3xDiamètre**

B022 - Foret carbure 3xD à trous d'huile

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- **Foret 5xDiamètre**

B008 - Foret carbure 5xD à trous d'huile

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# CODIFICATION DES FORETS

|          |            |          |          |          |          |
|----------|------------|----------|----------|----------|----------|
| <b>B</b> | <b>001</b> | <b>X</b> | <b>X</b> | <b>X</b> | <b>X</b> |
| <b>1</b> | <b>2</b>   | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |

## 1 Type d'outil

A = Fraise  
B = Foret  
C = Alésoir  
D = Fraise à fileter  
E = Fraise à chanfreiner

## 2 Type de Famille

001 = Fraise 1Dt Polyglacée  
002 = Fraise 1Dt Polyglacée + Ray  
003 = Fraise 2Dts Eco  
...

## 3 Matière d'outil

0 = Carbure  
1 = HSS  
2 = Carbure brasé  
3 = PCD  
4 = CBN  
5 = Full PCD

## 6 Revêtement

0 = Non revetu  
1 = AlCrN  
2 = TiAlN  
3 = AlCrNano  
4 = AlTiNano  
5 = AlCrN  
6 = Cryo  
7 = AlCrNano+Cryo  
8 = ZrN

## 7 Valeur du diamètre

Ø1 = 1mm  
Ø2 = 2mm  
...

## 8 Longueur de coupe Longueur totale

LUxLT = 7x57  
LUxLT = 8x57  
LUxLT = 11x57  
...

## I Lexique des matières

|       |      |       |                |             |                   |           |
|-------|------|-------|----------------|-------------|-------------------|-----------|
| Acier | Inox | Fonte | Non<br>Ferreux | Superaliage | Materiaux<br>Durs | Composite |
| P     | M    | K     | N              | S           | H                 | O         |

|    |         |   |    |
|----|---------|---|----|
| Ø0 | lu x lt | - | Qc |
| 7  | 8       | 9 | 10 |

#### 4 Queue Cylindrique

- 1 = Queue renforcée DIN
- 2 = Queue passante norme usine
- 3 = Queue passante avec système rainuré
- 4 = Queue dégagée

#### 5 Type Attachement

- 0 = DIN6535HA (Cylindrique)
- 1 = DIN6535HB (Weldon)
- 2 = DIN6535HE (Whistlenotch)
- 3 = DIN6535HA + rainure d'arrosage
- 4 = Vissé

#### 9 -

#### 10 Valeur de queue cylindrique

- Ø2 = 3
- Ø2 = 6
- Ø2 = 8
- ...

## II

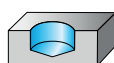
### Lexique des applications



Trou sécant



Couches Empilées



Trou borgne

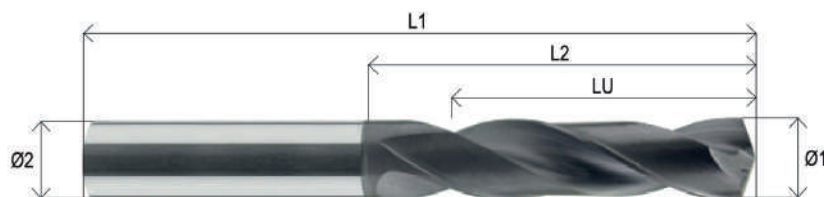


Trou débouchant



Perçage localisé

# B022 - Foret carbure 3xD à trous d'huile



## Caractéristiques



## Matières à usiner

| P   | M   | K  | N  | S   | H | O |
|-----|-----|----|----|-----|---|---|
| ●●● | ●●● | ●● | ●● | ●●● | ● | ● |

## Références catalogue

| Ø1  | Ø2 | L2 | L1 | LU | Références             |
|-----|----|----|----|----|------------------------|
| 3   | 6  | 20 | 62 | 14 | B0220102-Ø3-20x62-Ø6   |
| 3,1 | 6  | 20 | 62 | 14 | B0220102-Ø3,1-20x62-Ø6 |
| 3,2 | 6  | 20 | 62 | 14 | B0220102-Ø3,2-20x62-Ø6 |
| 3,3 | 6  | 20 | 62 | 14 | B0220102-Ø3,3-20x62-Ø6 |
| 3,4 | 6  | 20 | 62 | 14 | B0220102-Ø3,4-20x62-Ø6 |
| 3,5 | 6  | 20 | 62 | 14 | B0220102-Ø3,5-20x62-Ø6 |
| 3,6 | 6  | 20 | 62 | 14 | B0220102-Ø3,6-20x62-Ø6 |
| 3,7 | 6  | 20 | 62 | 14 | B0220102-Ø3,7-20x62-Ø6 |
| 3,8 | 6  | 24 | 66 | 17 | B0220102-Ø3,8-24x66-Ø6 |
| 3,9 | 6  | 24 | 66 | 17 | B0220102-Ø3,9-24x66-Ø6 |
| 4   | 6  | 24 | 66 | 17 | B0220102-Ø4-24x66-Ø6   |
| 4,1 | 6  | 24 | 66 | 17 | B0220102-Ø4,1-24x66-Ø6 |
| 4,2 | 6  | 24 | 66 | 17 | B0220102-Ø4,2-24x66-Ø6 |
| 4,3 | 6  | 24 | 66 | 17 | B0220102-Ø4,3-24x66-Ø6 |
| 4,4 | 6  | 24 | 66 | 17 | B0220102-Ø4,4-24x66-Ø6 |
| 4,5 | 6  | 24 | 66 | 17 | B0220102-Ø4,5-24x66-Ø6 |
| 4,6 | 6  | 24 | 66 | 17 | B0220102-Ø4,6-24x66-Ø6 |
| 4,7 | 6  | 24 | 66 | 17 | B0220102-Ø4,7-24x66-Ø6 |
| 4,8 | 6  | 28 | 66 | 20 | B0220102-Ø4,8-28x66-Ø6 |
| 4,9 | 6  | 28 | 66 | 20 | B0220102-Ø4,9-28x66-Ø6 |
| 5   | 6  | 28 | 66 | 20 | B0220102-Ø5-28x66-Ø6   |
| 5,1 | 6  | 28 | 66 | 20 | B0220102-Ø5,1-28x66-Ø6 |
| 5,2 | 6  | 28 | 66 | 20 | B0220102-Ø5,2-28x66-Ø6 |
| 5,3 | 6  | 28 | 66 | 20 | B0220102-Ø5,3-28x66-Ø6 |
| 5,4 | 6  | 28 | 66 | 20 | B0220102-Ø5,4-28x66-Ø6 |
| 5,5 | 6  | 28 | 66 | 20 | B0220102-Ø5,5-28x66-Ø6 |
| 5,6 | 6  | 28 | 66 | 20 | B0220102-Ø5,6-28x66-Ø6 |
| 5,7 | 6  | 28 | 66 | 20 | B0220102-Ø5,7-28x66-Ø6 |
| 5,8 | 6  | 28 | 66 | 20 | B0220102-Ø5,8-28x66-Ø6 |
| 5,9 | 6  | 28 | 66 | 20 | B0220102-Ø5,9-28x66-Ø6 |
| 6   | 6  | 28 | 66 | 20 | B0220202-Ø6-28x66      |
| 6,1 | 8  | 34 | 79 | 24 | B0220102-Ø6,1-34x79-Ø8 |
| 6,2 | 8  | 34 | 79 | 24 | B0220102-Ø6,2-34x79-Ø8 |
| 6,3 | 8  | 34 | 79 | 24 | B0220102-Ø6,3-34x79-Ø8 |
| 6,4 | 8  | 34 | 79 | 24 | B0220102-Ø6,4-34x79-Ø8 |
| 6,5 | 8  | 34 | 79 | 24 | B0220102-Ø6,5-34x79-Ø8 |
| 6,6 | 8  | 34 | 79 | 24 | B0220102-Ø6,6-34x79-Ø8 |
| 6,7 | 8  | 34 | 79 | 24 | B0220102-Ø6,7-34x79-Ø8 |
| 6,8 | 8  | 34 | 79 | 24 | B0220102-Ø6,8-34x79-Ø8 |
| 6,9 | 8  | 34 | 79 | 24 | B0220102-Ø6,9-34x79-Ø8 |
| 7   | 8  | 34 | 79 | 24 | B0220102-Ø7-34x79-Ø8   |

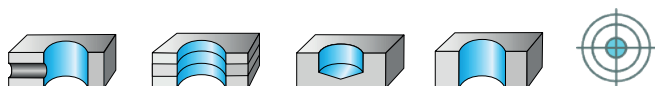
| Ø1   | Ø2 | L2 | L1  | LU | Références                |
|------|----|----|-----|----|---------------------------|
| 7,1  | 8  | 41 | 79  | 29 | B0220102-Ø7,1-41x79-Ø8    |
| 7,2  | 8  | 41 | 79  | 29 | B0220102-Ø7,2-41x79-Ø8    |
| 7,3  | 8  | 41 | 79  | 29 | B0220102-Ø7,3-41x79-Ø8    |
| 7,4  | 8  | 41 | 79  | 29 | B0220102-Ø7,4-41x79-Ø8    |
| 7,5  | 8  | 41 | 79  | 29 | B0220102-Ø7,5-41x79-Ø8    |
| 7,6  | 8  | 41 | 79  | 29 | B0220102-Ø7,6-41x79-Ø8    |
| 7,7  | 8  | 41 | 79  | 29 | B0220102-Ø7,7-41x79-Ø8    |
| 7,8  | 8  | 41 | 79  | 29 | B0220102-Ø7,8-41x79-Ø8    |
| 7,9  | 8  | 41 | 79  | 29 | B0220102-Ø7,9-41x79-Ø8    |
| 8    | 8  | 41 | 79  | 29 | B0220202-Ø8-41x79         |
| 8,1  | 10 | 47 | 89  | 35 | B0220102-Ø8,1-47x89-Ø10   |
| 8,2  | 10 | 47 | 89  | 35 | B0220102-Ø8,2-47x89-Ø10   |
| 8,3  | 10 | 47 | 89  | 35 | B0220102-Ø8,3-47x89-Ø10   |
| 8,4  | 10 | 47 | 89  | 35 | B0220102-Ø8,4-47x89-Ø10   |
| 8,5  | 10 | 47 | 89  | 35 | B0220102-Ø8,5-47x89-Ø10   |
| 8,6  | 10 | 47 | 89  | 35 | B0220102-Ø8,6-47x89-Ø10   |
| 8,7  | 10 | 47 | 89  | 35 | B0220102-Ø8,7-47x89-Ø10   |
| 8,8  | 10 | 47 | 89  | 35 | B0220102-Ø8,8-47x89-Ø10   |
| 8,9  | 10 | 47 | 89  | 35 | B0220102-Ø8,9-47x89-Ø10   |
| 9    | 10 | 47 | 89  | 35 | B0220102-Ø9-47x89-Ø10     |
| 9,1  | 10 | 47 | 89  | 35 | B0220102-Ø9,1-47x89-Ø10   |
| 9,2  | 10 | 47 | 89  | 35 | B0220102-Ø9,2-47x89-Ø10   |
| 9,3  | 10 | 47 | 89  | 35 | B0220102-Ø9,3-47x89-Ø10   |
| 9,4  | 10 | 47 | 89  | 35 | B0220102-Ø9,4-47x89-Ø10   |
| 9,5  | 10 | 47 | 89  | 35 | B0220102-Ø9,5-47x89-Ø10   |
| 9,6  | 10 | 47 | 89  | 35 | B0220102-Ø9,6-47x89-Ø10   |
| 9,7  | 10 | 47 | 89  | 35 | B0220102-Ø9,7-47x89-Ø10   |
| 9,8  | 10 | 47 | 89  | 35 | B0220102-Ø9,8-47x89-Ø10   |
| 9,9  | 10 | 47 | 89  | 35 | B0220102-Ø9,9-47x89-Ø10   |
| 10   | 10 | 47 | 89  | 35 | B0220202-Ø10-47x89        |
| 10,1 | 12 | 55 | 102 | 40 | B0220102-Ø10,1-55x102-Ø12 |
| 10,2 | 12 | 55 | 102 | 40 | B0220102-Ø10,2-55x102-Ø12 |
| 10,3 | 12 | 55 | 102 | 40 | B0220102-Ø10,3-55x102-Ø12 |
| 10,4 | 12 | 55 | 102 | 40 | B0220102-Ø10,4-55x102-Ø12 |
| 10,5 | 12 | 55 | 102 | 40 | B0220102-Ø10,5-55x102-Ø12 |
| 10,6 | 12 | 55 | 102 | 40 | B0220102-Ø10,6-55x102-Ø12 |
| 10,7 | 12 | 55 | 102 | 40 | B0220102-Ø10,7-55x102-Ø12 |
| 10,8 | 12 | 55 | 102 | 40 | B0220102-Ø10,8-55x102-Ø12 |
| 10,9 | 12 | 55 | 102 | 40 | B0220102-Ø10,9-55x102-Ø12 |
| 11   | 12 | 55 | 102 | 40 | B0220102-Ø11-55x102-Ø12   |
| 11,1 | 12 | 55 | 102 | 40 | B0220102-Ø11,1-55x102-Ø12 |



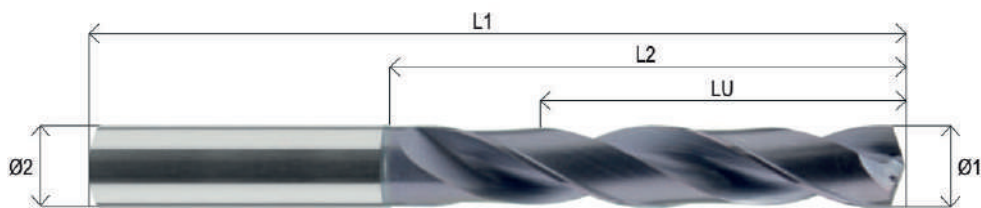
| Ø1   | Ø2 | L2 | L1  | LU | Références                |
|------|----|----|-----|----|---------------------------|
| 11,2 | 12 | 55 | 102 | 40 | B0220102-Ø11,2-55x102-Ø12 |
| 11,3 | 12 | 55 | 102 | 40 | B0220102-Ø11,3-55x102-Ø12 |
| 11,4 | 12 | 55 | 102 | 40 | B0220102-Ø11,4-55x102-Ø12 |
| 11,5 | 12 | 55 | 102 | 40 | B0220102-Ø11,5-55x102-Ø12 |
| 11,6 | 12 | 55 | 102 | 40 | B0220102-Ø11,6-55x102-Ø12 |
| 11,7 | 12 | 55 | 102 | 40 | B0220102-Ø11,7-55x102-Ø12 |
| 11,8 | 12 | 55 | 102 | 40 | B0220102-Ø11,8-55x102-Ø12 |
| 11,9 | 12 | 55 | 102 | 40 | B0220102-Ø11,9-55x102-Ø12 |
| 12   | 12 | 55 | 102 | 40 | B0220202-Ø12-55x102       |
| 12,3 | 14 | 60 | 107 | 43 | B0220102-Ø12,3-60x107-Ø14 |
| 12,5 | 14 | 60 | 107 | 43 | B0220102-Ø12,5-60x107-Ø14 |
| 12,8 | 14 | 60 | 107 | 43 | B0220102-Ø12,8-60x107-Ø14 |
| 13   | 14 | 60 | 107 | 43 | B0220102-Ø13-60x107-Ø14   |
| 13,5 | 14 | 60 | 107 | 43 | B0220102-Ø13,5-60x107-Ø14 |
| 13,8 | 14 | 60 | 107 | 43 | B0220102-Ø13,8-60x107-Ø14 |
| 14   | 14 | 60 | 107 | 43 | B0220202-Ø14-60x107       |
| 14,5 | 16 | 65 | 115 | 45 | B0220102-Ø14,5-65x115-Ø16 |

| Ø1   | Ø2 | L2 | L1  | LU | Références                |
|------|----|----|-----|----|---------------------------|
| 14,8 | 16 | 65 | 115 | 45 | B0220102-Ø14,8-65x115-Ø16 |
| 15   | 16 | 65 | 115 | 45 | B0220102-Ø15-65x115-Ø16   |
| 15,5 | 16 | 65 | 115 | 45 | B0220102-Ø15,5-65x115-Ø16 |
| 15,8 | 16 | 65 | 115 | 45 | B0220102-Ø15,8-65x115-Ø16 |
| 16   | 16 | 65 | 115 | 45 | B0220202-Ø16-65x115       |
| 16,5 | 18 | 73 | 123 | 51 | B0220102-Ø16,5-73x123-Ø18 |
| 16,8 | 18 | 73 | 123 | 51 | B0220102-Ø16,8-73x123-Ø18 |
| 17   | 18 | 73 | 123 | 51 | B0220102-Ø17-73x123-Ø18   |
| 17,5 | 18 | 73 | 123 | 51 | B0220102-Ø17,5-73x123-Ø18 |
| 17,8 | 18 | 73 | 123 | 51 | B0220102-Ø17,8-73x123-Ø18 |
| 18   | 18 | 73 | 123 | 51 | B0220202-Ø18-73x123       |
| 18,5 | 20 | 79 | 131 | 55 | B0220102-Ø18,5-79x131-Ø20 |
| 19   | 20 | 79 | 131 | 55 | B0220102-Ø19-79x131-Ø20   |
| 19,5 | 20 | 79 | 131 | 55 | B0220102-Ø19,5-79x131-Ø20 |
| 19,8 | 20 | 79 | 131 | 55 | B0220102-Ø19,8-79x131-Ø20 |
| 20   | 20 | 79 | 131 | 55 | B0220202-Ø20-79x131       |

## Applications



# B008 - Foret carbure 5xD à trous d'huile



## Caractéristiques



## Matières à usiner

| P   | M   | K | N  | S  | H | O |
|-----|-----|---|----|----|---|---|
| ●●● | ●●● | ● | ●● | ●● | ● | ● |

## Références catalogue

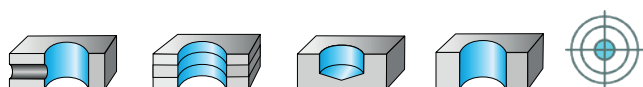
| Ø1  | Ø2 | L2 | L1 | LU | Références             | Ø1  | Ø2 | L2 | L1  | LU | Références               |
|-----|----|----|----|----|------------------------|-----|----|----|-----|----|--------------------------|
| 1   | 3  | 10 | 55 | 7  | B0080102-Ø1-10x55-Ø3   | 5,0 | 6  | 44 | 82  | 35 | B0080102-Ø5-44x82-Ø6     |
| 1,1 | 3  | 12 | 55 | 10 | B0080102-Ø1,1-12x55-Ø3 | 5,1 | 6  | 44 | 82  | 35 | B0080102-Ø5,1-44x82-Ø6   |
| 1,2 | 3  | 12 | 55 | 10 | B0080102-Ø1,2-12x55-Ø3 | 5,2 | 6  | 44 | 82  | 35 | B0080102-Ø5,2-44x82-Ø6   |
| 1,3 | 3  | 12 | 55 | 10 | B0080102-Ø1,3-12x55-Ø3 | 5,3 | 6  | 44 | 82  | 35 | B0080102-Ø5,3-44x82-Ø6   |
| 1,4 | 3  | 12 | 55 | 10 | B0080102-Ø1,4-12x55-Ø3 | 5,4 | 6  | 44 | 82  | 35 | B0080102-Ø5,4-44x82-Ø6   |
| 1,5 | 3  | 12 | 55 | 10 | B0080102-Ø1,5-12x55-Ø3 | 5,5 | 6  | 44 | 82  | 35 | B0080102-Ø5,5-44x82-Ø6   |
| 1,6 | 3  | 16 | 55 | 13 | B0080102-Ø1,6-16x55-Ø3 | 5,6 | 6  | 44 | 82  | 35 | B0080102-Ø5,6-44x82-Ø6   |
| 1,7 | 3  | 16 | 55 | 13 | B0080102-Ø1,7-16x55-Ø3 | 5,7 | 6  | 44 | 82  | 35 | B0080102-Ø5,7-44x82-Ø6   |
| 1,8 | 3  | 16 | 55 | 13 | B0080102-Ø1,8-16x55-Ø3 | 5,8 | 6  | 44 | 82  | 35 | B0080102-Ø5,8-44x82-Ø6   |
| 1,9 | 3  | 16 | 55 | 13 | B0080102-Ø1,9-16x55-Ø3 | 5,9 | 6  | 44 | 82  | 35 | B0080102-Ø5,9-44x82-Ø6   |
| 2,0 | 3  | 21 | 57 | 16 | B0080102-Ø2-21x57-Ø3   | 6,0 | 6  | 44 | 82  | 35 | B0080202-Ø6-44x82        |
| 2,1 | 3  | 16 | 57 | 16 | B0080102-Ø2,1-21x57-Ø3 | 6,1 | 8  | 53 | 91  | 43 | B0080102-Ø6,1-53x91-Ø8   |
| 2,2 | 3  | 21 | 57 | 16 | B0080102-Ø2,2-21x57-Ø3 | 6,2 | 8  | 53 | 91  | 43 | B0080102-Ø6,2-53x92-Ø8   |
| 2,3 | 3  | 21 | 57 | 16 | B0080102-Ø2,3-21x57-Ø3 | 6,3 | 8  | 53 | 91  | 43 | B0080102-Ø6,3-53x91-Ø8   |
| 2,4 | 3  | 21 | 57 | 16 | B0080102-Ø2,4-21x57-Ø3 | 6,4 | 8  | 53 | 91  | 43 | B0080102-Ø6,4-53x91-Ø8   |
| 2,5 | 3  | 21 | 57 | 16 | B0080102-Ø2,5-21x57-Ø3 | 6,5 | 8  | 53 | 91  | 43 | B0080102-Ø6,5-53x91-Ø8   |
| 2,6 | 3  | 21 | 57 | 19 | B0080102-Ø2,6-21x57-Ø3 | 6,6 | 8  | 53 | 91  | 43 | B0080102-Ø6,6-53x91-Ø8   |
| 2,7 | 3  | 21 | 57 | 19 | B0080102-Ø2,7-21x57-Ø3 | 6,7 | 8  | 53 | 91  | 43 | B0080102-Ø6,7-53x91-Ø8   |
| 2,8 | 3  | 21 | 57 | 19 | B0080102-Ø2,8-21x57-Ø3 | 6,8 | 8  | 53 | 91  | 43 | B0080102-Ø6,8-53x91-Ø8   |
| 2,9 | 3  | 21 | 57 | 18 | B0080102-Ø2,9-21x57-Ø3 | 6,9 | 8  | 53 | 91  | 43 | B0080102-Ø6,9-53x91-Ø8   |
| 3,0 | 6  | 28 | 66 | 23 | B0080102-Ø3-28x66-Ø6   | 7,0 | 8  | 53 | 91  | 43 | B0080102-Ø7-53x91-Ø8     |
| 3,1 | 6  | 28 | 66 | 23 | B0080102-Ø3,1-28x66-Ø6 | 7,1 | 8  | 53 | 91  | 43 | B0080102-Ø7,1-53x91-Ø8   |
| 3,2 | 6  | 28 | 66 | 23 | B0080102-Ø3,2-28x66-Ø6 | 7,2 | 8  | 53 | 91  | 43 | B0080102-Ø7,2-53x91-Ø8   |
| 3,3 | 6  | 28 | 66 | 23 | B0080102-Ø3,3-28x66-Ø6 | 7,3 | 8  | 53 | 91  | 43 | B0080102-Ø7,3-53x91-Ø8   |
| 3,4 | 6  | 28 | 66 | 23 | B0080102-Ø3,4-28x66-Ø6 | 7,4 | 8  | 53 | 91  | 43 | B0080102-Ø7,4-53x91-Ø8   |
| 3,5 | 6  | 28 | 66 | 23 | B0080102-Ø3,5-28x66-Ø6 | 7,5 | 8  | 53 | 91  | 43 | B0080102-Ø7,5-53x91-Ø8   |
| 3,6 | 6  | 28 | 66 | 23 | B0080102-Ø3,6-28x66-Ø6 | 7,6 | 8  | 53 | 91  | 43 | B0080102-Ø7,6-53x91-Ø8   |
| 3,7 | 6  | 28 | 66 | 23 | B0080102-Ø3,7-28x66-Ø6 | 7,7 | 8  | 53 | 91  | 43 | B0080102-Ø7,7-53x91-Ø8   |
| 3,8 | 6  | 36 | 74 | 29 | B0080102-Ø3,8-36x74-Ø6 | 7,8 | 8  | 53 | 91  | 43 | B0080102-Ø7,8-53x91-Ø8   |
| 3,9 | 6  | 36 | 74 | 29 | B0080102-Ø3,9-36x74-Ø6 | 7,9 | 8  | 53 | 91  | 43 | B0080102-Ø7,9-53x91-Ø8   |
| 4,0 | 6  | 36 | 74 | 29 | B0080102-Ø4-36x74-Ø6   | 8,0 | 8  | 53 | 91  | 43 | B0080202-Ø8-53x91        |
| 4,1 | 6  | 36 | 74 | 29 | B0080102-Ø4,1-36x74-Ø6 | 8,1 | 10 | 61 | 103 | 49 | B0080102-Ø8,1-61x103-Ø10 |
| 4,2 | 6  | 36 | 74 | 29 | B0080102-Ø4,2-36x74-Ø6 | 8,2 | 10 | 61 | 103 | 49 | B0080102-Ø8,2-61x103-Ø10 |
| 4,3 | 6  | 36 | 74 | 29 | B0080102-Ø4,3-36x74-Ø6 | 8,3 | 10 | 61 | 103 | 49 | B0080102-Ø8,3-61x103-Ø10 |
| 4,4 | 6  | 36 | 74 | 29 | B0080102-Ø4,4-36x74-Ø6 | 8,4 | 10 | 61 | 103 | 49 | B0080102-Ø8,4-61x103-Ø10 |
| 4,5 | 6  | 36 | 74 | 29 | B0080102-Ø4,5-36x74-Ø6 | 8,5 | 10 | 61 | 103 | 49 | B0080102-Ø8,5-61x103-Ø10 |
| 4,6 | 6  | 36 | 74 | 29 | B0080102-Ø4,6-36x74-Ø6 | 8,6 | 10 | 61 | 103 | 49 | B0080102-Ø8,6-61x103-Ø10 |
| 4,7 | 6  | 36 | 74 | 29 | B0080102-Ø4,7-36x74-Ø6 | 8,7 | 10 | 61 | 103 | 49 | B0080102-Ø8,7-61x103-Ø10 |
| 4,8 | 6  | 44 | 82 | 35 | B0080102-Ø4,8-44x82-Ø6 | 8,8 | 10 | 61 | 103 | 49 | B0080102-Ø8,8-61x103-Ø10 |
| 4,9 | 6  | 44 | 82 | 35 | B0080102-Ø4,9-44x82-Ø6 | 8,9 | 10 | 61 | 103 | 49 | B0080102-Ø8,9-61x103-Ø10 |

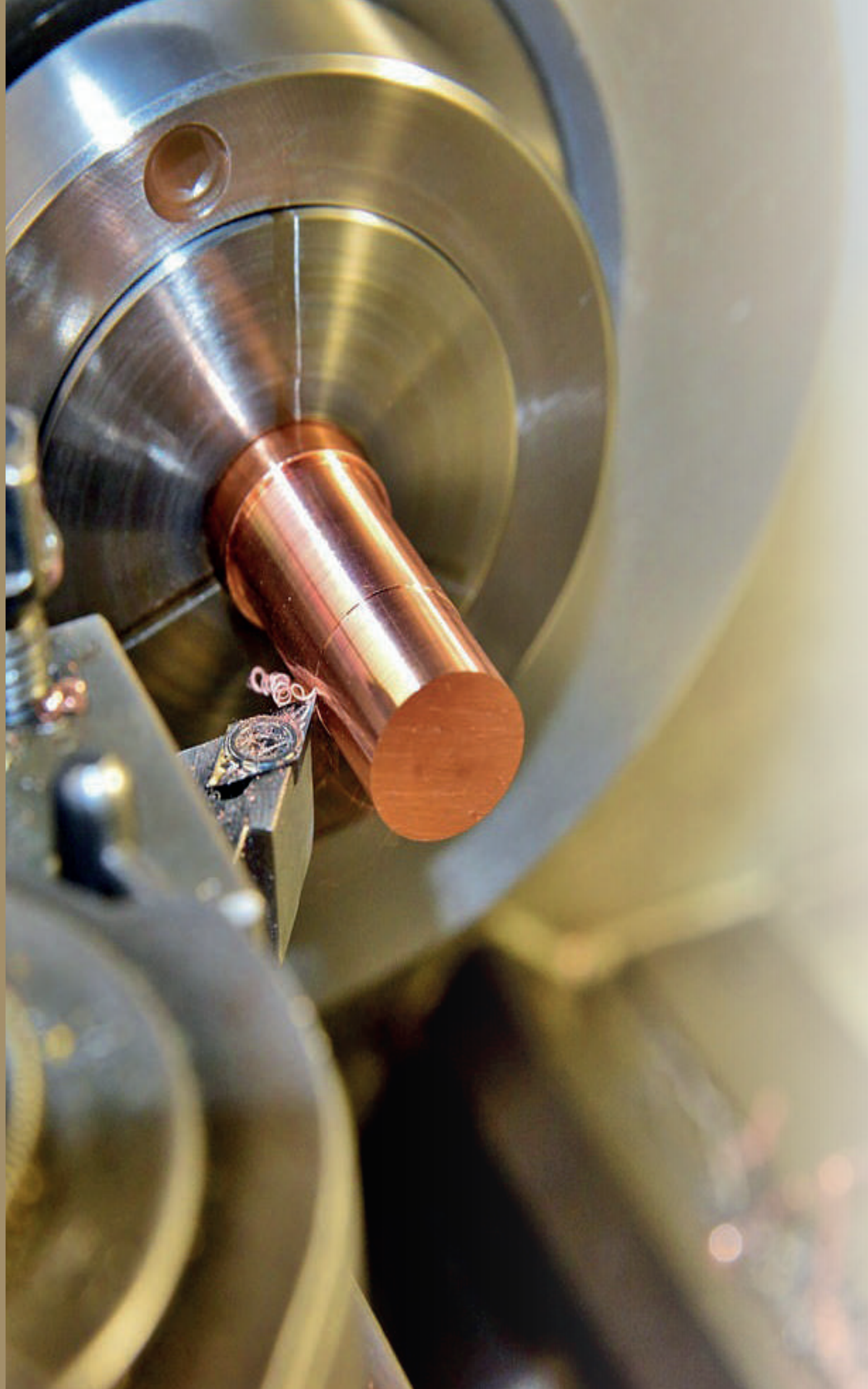


| Ø1   | Ø2 | L2 | L1  | LU | Références                |
|------|----|----|-----|----|---------------------------|
| 9,0  | 10 | 61 | 103 | 49 | B0080102-Ø9-61x103-Ø10    |
| 9,1  | 10 | 61 | 103 | 49 | B0080102-Ø9,1-61x103-Ø10  |
| 9,2  | 10 | 61 | 103 | 49 | B0080102-Ø9,2-61x103-Ø10  |
| 9,3  | 10 | 61 | 103 | 49 | B0080102-Ø9,3-61x103-Ø10  |
| 9,4  | 10 | 61 | 103 | 49 | B0080102-Ø9,4-61x103-Ø10  |
| 9,5  | 10 | 61 | 103 | 49 | B0080102-Ø9,5-61x103-Ø10  |
| 9,6  | 10 | 61 | 103 | 49 | B0080102-Ø9,6-61x103-Ø10  |
| 9,7  | 10 | 61 | 103 | 49 | B0080102-Ø9,7-61x103-Ø10  |
| 9,8  | 10 | 61 | 103 | 49 | B0080102-Ø9,8-61x103-Ø10  |
| 9,9  | 10 | 61 | 103 | 49 | B0080102-Ø9,9-61x103-Ø10  |
| 10,0 | 10 | 61 | 103 | 49 | B0080202-Ø10-61x103       |
| 10,1 | 12 | 71 | 118 | 56 | B0080102-Ø10,1-71x118-Ø12 |
| 10,2 | 12 | 71 | 118 | 56 | B0080102-Ø10,2-71x118-Ø12 |
| 10,3 | 12 | 71 | 118 | 56 | B0080102-Ø10,3-71x118-Ø12 |
| 10,4 | 12 | 71 | 118 | 56 | B0080102-Ø10,4-71x118-Ø12 |
| 10,5 | 12 | 71 | 118 | 56 | B0080102-Ø10,5-71x118-Ø12 |
| 10,6 | 12 | 71 | 118 | 56 | B0080102-Ø10,6-71x118-Ø12 |
| 10,7 | 12 | 71 | 118 | 56 | B0080102-Ø10,7-71x118-Ø12 |
| 10,8 | 12 | 71 | 118 | 56 | B0080102-Ø10,8-71x118-Ø12 |
| 10,9 | 12 | 71 | 118 | 56 | B0080102-Ø10,9-71x118-Ø12 |
| 11,0 | 12 | 71 | 118 | 56 | B0080102-Ø11-71x118-Ø12   |
| 11,1 | 12 | 71 | 118 | 56 | B0080102-Ø11,1-71x118-Ø12 |
| 11,2 | 12 | 71 | 118 | 56 | B0080102-Ø11,2-71x118-Ø12 |
| 11,3 | 12 | 71 | 118 | 56 | B0080102-Ø11,3-71x118-Ø12 |
| 11,4 | 12 | 71 | 118 | 56 | B0080102-Ø11,4-71x118-Ø12 |
| 11,5 | 12 | 71 | 118 | 56 | B0080102-Ø11,5-71x118-Ø12 |
| 11,6 | 12 | 71 | 118 | 56 | B0080102-Ø11,6-71x118-Ø12 |
| 11,7 | 12 | 71 | 118 | 56 | B0080102-Ø11,7-71x118-Ø12 |
| 11,8 | 12 | 71 | 118 | 56 | B0080102-Ø11,8-71x118-Ø12 |
| 11,9 | 12 | 71 | 118 | 56 | B0080102-Ø11,9-71x118-Ø12 |
| 12   | 12 | 71 | 118 | 56 | B0080202-Ø12-71x118       |
| 12,2 | 14 | 77 | 124 | 60 | B0080102-Ø12,2-77x124-Ø14 |
| 12,3 | 14 | 77 | 124 | 60 | B0080102-Ø12,3-77x124-Ø14 |
| 12,5 | 14 | 77 | 124 | 60 | B0080102-Ø12,5-77x124-Ø14 |
| 12,8 | 14 | 77 | 124 | 60 | B0080102-Ø12,8-77x124-Ø14 |
| 13   | 14 | 77 | 124 | 60 | B0080102-Ø13-77x124-Ø14   |
| 13,5 | 14 | 77 | 124 | 60 | B0080102-Ø13,5-77x124-Ø14 |
| 13,8 | 14 | 77 | 124 | 60 | B0080102-Ø13,8-77x124-Ø14 |
| 14   | 14 | 77 | 124 | 60 | B0080202-Ø14-77x124       |
| 14,5 | 16 | 83 | 133 | 63 | B0080102-Ø14,5-83x133-Ø16 |
| 14,8 | 16 | 83 | 133 | 63 | B0080102-Ø14,8-83x133-Ø16 |
| 15   | 16 | 83 | 133 | 63 | B0080102-Ø15-83x133-Ø16   |
| 15,1 | 16 | 83 | 133 | 63 | B0080102-Ø15,1-83x133-Ø16 |
| 15,5 | 16 | 83 | 133 | 63 | B0080102-Ø15,5-83x133-Ø16 |
| 15,8 | 16 | 83 | 133 | 63 | B0080102-Ø15,8-83x133-Ø16 |
| 16   | 16 | 83 | 133 | 63 | B0080202-Ø16-83x133       |
| 16,8 | 18 | 93 | 143 | 71 | B0080102-Ø16,8-93x143-Ø18 |
| 17   | 18 | 93 | 143 | 71 | B0080102-Ø17-93x143-Ø18   |
| 17,5 | 18 | 93 | 143 | 71 | B0080102-Ø17,5-93x143-Ø18 |
| 17,8 | 12 | 71 | 143 | 56 | B0080102-Ø17,8-93x143-Ø18 |

| Ø1   | Ø2 | L2  | L1  | LU | Références                 |
|------|----|-----|-----|----|----------------------------|
| 18   | 18 | 93  | 143 | 71 | B0080202-Ø18-93x143        |
| 18,5 | 20 | 101 | 153 | 77 | B0080102-Ø18,5-101x153-Ø20 |
| 19   | 20 | 101 | 153 | 77 | B0080102-Ø19-101x153-Ø20   |
| 19,5 | 20 | 101 | 153 | 77 | B0080102-Ø19,5-101x153-Ø20 |
| 20   | 20 | 101 | 153 | 77 | B0080202-Ø20-101x153       |

## Applications





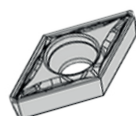
# PLAQUETTES DE TOURNAGE

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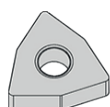
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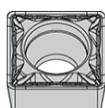
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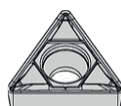
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- **Triangle 60°**

|        |                                                 |    |
|--------|-------------------------------------------------|----|
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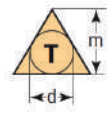
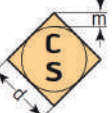
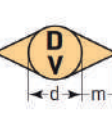
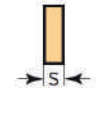
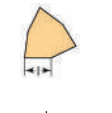
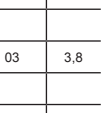
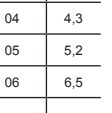
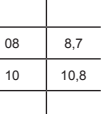
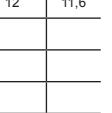
# CODIFICATION DES PLAQUETTES

|          |          |          |          |           |           |           |          |          |           |             |           |
|----------|----------|----------|----------|-----------|-----------|-----------|----------|----------|-----------|-------------|-----------|
| <b>D</b> | <b>N</b> | <b>M</b> | <b>G</b> | <b>11</b> | <b>04</b> | <b>08</b> | <b>*</b> | <b>-</b> | <b>SF</b> | <b>APCP</b> | <b>25</b> |
| 1        | 2        | 3        | 4        | 5         | 6         | 7         | 8        | -        | 9         | 10          | 11        |

|     |   |   |   |   |   |
|-----|---|---|---|---|---|
| 2   | 3 | 4 | 5 | 6 | 7 |
| ISO |   |   |   |   |   |

| 1 - Forme de plaquette                                                              |          |
|-------------------------------------------------------------------------------------|----------|
|    | <b>A</b> |
|    | <b>C</b> |
|    | <b>D</b> |
|    | <b>R</b> |
|  | <b>S</b> |
|  | <b>T</b> |
|  | <b>V</b> |
|  | <b>W</b> |

| 2 - Angle de dépouille                                                            |          |
|-----------------------------------------------------------------------------------|----------|
|  | <b>B</b> |
|  | <b>C</b> |
|  | <b>N</b> |

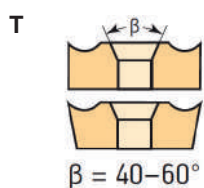
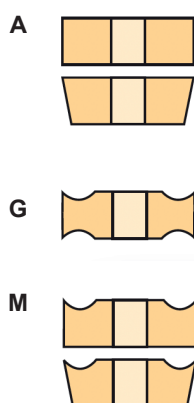
| 3 - Tolérances                                                                       |                                                |                           |         |
|--------------------------------------------------------------------------------------|------------------------------------------------|---------------------------|---------|
| Ecart admissible en mm pour                                                          |                                                |                           |         |
|                                                                                      | d                                              | m                         | s       |
|    | <b>A</b> ± 0,025                               | ± 0,005                   | ± 0,025 |
|    | <b>C</b> ± 0,025                               | ± 0,013                   | ± 0,025 |
|   | <b>E</b> ± 0,025                               | ± 0,025                   | ± 0,025 |
|  | <b>F</b> ± 0,013                               | ± 0,005                   | ± 0,025 |
|  | <b>H</b> ± 0,013                               | ± 0,013                   | ± 0,025 |
|  | <b>J<sup>1</sup></b> ± 0,05-0,152 <sup>2</sup> | ± 0,005                   | ± 0,025 |
|  | <b>K<sup>1</sup></b> ± 0,05-0,152 <sup>2</sup> | ± 0,013                   | ± 0,025 |
|  | <b>L<sup>1</sup></b> ± 0,05-0,152 <sup>2</sup> | ± 0,025                   | ± 0,025 |
|  | <b>N</b> ± 0,05-0,152 <sup>2</sup>             | ± 0,08-0,202 <sup>2</sup> | ± 0,025 |
|  | <b>U</b> ± 0,08-0,252 <sup>2</sup>             | ± 0,13-0,382 <sup>2</sup> | ± 0,130 |

<sup>1</sup> plaquettes avec arrêtes de coupe rectifiées  
<sup>2</sup> En fonction de la taille de plaquette (voir norme ISO 1832)

| 5 - Longueur de l'arête de coupe l (mm) |                                                                                     |      |                                                                                     |      |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
|-----------------------------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------|--|
| Diamètre de cercle intérieur d          |  |      |  |      |  |        |  |        |  |        |  |        |  |  |
| mm                                      | Taille                                                                              | l    | Taille                                                                              | l    | Taille                                                                              | Taille | l                                                                                   | Taille | l                                                                                   | Taille | l                                                                                   | Taille | l                                                                                    |  |
| 3,97                                    |                                                                                     |      |                                                                                     |      |                                                                                     |        |                                                                                     | 06     | 6,9                                                                                 |        |                                                                                     |        |                                                                                      |  |
| 5                                       |                                                                                     |      |                                                                                     |      | 05                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     | 03     | 3,8                                                                                  |  |
| 5,56                                    |                                                                                     |      |                                                                                     |      |                                                                                     |        |                                                                                     | 09     | 9                                                                                   |        |                                                                                     |        |                                                                                      |  |
| 6                                       |                                                                                     |      |                                                                                     |      | 06                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 6,35                                    | 06                                                                                  | 6,4  | 07                                                                                  | 7,7  | 06 <sup>1</sup>                                                                     |        |                                                                                     | 11     | 11                                                                                  | 11     | 11                                                                                  | 04     | 4,3                                                                                  |  |
| 8                                       |                                                                                     |      |                                                                                     |      | 08                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     | 05     | 5,2                                                                                  |  |
| 9,525                                   | 09                                                                                  | 9,6  | 11                                                                                  | 11,6 | 09 <sup>1</sup>                                                                     | 09     | 9,5                                                                                 | 16     | 16,5                                                                                | 16     | 16,5                                                                                | 06     | 6,5                                                                                  |  |
| 10                                      |                                                                                     |      |                                                                                     |      | 10                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 12                                      |                                                                                     |      |                                                                                     |      | 12                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 12,7                                    | 12                                                                                  | 12,9 | 15                                                                                  | 15,5 | 12 <sup>1</sup>                                                                     | 12     | 12,7                                                                                | 22     | 22                                                                                  | 22     | 22,1                                                                                | 08     | 8,7                                                                                  |  |
| 15,875                                  | 16                                                                                  | 16,1 |                                                                                     |      |                                                                                     | 15     | 15,8                                                                                | 27     | 27                                                                                  |        |                                                                                     | 10     | 10,8                                                                                 |  |
| 16                                      |                                                                                     |      |                                                                                     |      | 16                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 17,46                                   |                                                                                     |      |                                                                                     |      |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                     | 12     | 11,6                                                                                 |  |
| 19,05                                   | 19                                                                                  | 19,3 |                                                                                     |      | 19 <sup>1</sup>                                                                     | 19     | 19,0                                                                                |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 20                                      |                                                                                     |      |                                                                                     |      | 20                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 25                                      |                                                                                     |      |                                                                                     |      | 25                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 25,4                                    | 25                                                                                  | 25,8 |                                                                                     |      | 25 <sup>1</sup>                                                                     | 25     | 25,4                                                                                |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |
| 32                                      |                                                                                     |      |                                                                                     |      | 32                                                                                  |        |                                                                                     |        |                                                                                     |        |                                                                                     |        |                                                                                      |  |

| 6 - Epaisseur de plaquette (mm)                                                       |                    |
|---------------------------------------------------------------------------------------|--------------------|
|  | <b>T3</b> s = 3,97 |
|  | <b>04</b> s = 4,76 |
|  | <b>05</b> s = 5,56 |
|  | <b>06</b> s = 6,35 |

## 6 - Epaisseur de plaquette (mm)



**X** Avec particularité demandant un dessin ou une description exacte de la plaquette amovible

## 7 - Rayons de bec r (mm)

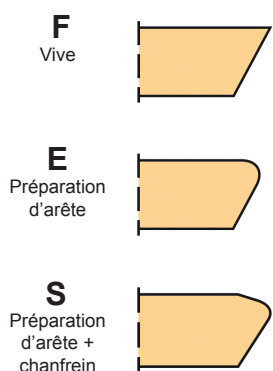


|           |           |
|-----------|-----------|
| <b>00</b> | $r = 0,0$ |
| <b>01</b> | $r = 0,1$ |
| <b>02</b> | $r = 0,2$ |
| <b>04</b> | $r = 0,4$ |
| <b>08</b> | $r = 0,8$ |
| <b>12</b> | $r = 1,2$ |
| <b>16</b> | $r = 1,6$ |
| <b>24</b> | $r = 2,4$ |



**M0** Version métrique (diamètre en mm)

## 8 - Arrête de coupe



## 9 - Brise copeau



## 10 - Nuance

|              |                        |
|--------------|------------------------|
| <b>AP_*P</b> | Acier                  |
| <b>AP_*M</b> | Inox                   |
| <b>AP_*K</b> | Fonte                  |
| <b>AP_*S</b> | Superalliage<br>Titane |
| <b>AP_*N</b> | Non ferreux            |

## 11 - Substrat

Condition machine (Arrosage, stabilité, ...), bridage, matière, ... idéale.

**10**  
**15**  
**20**  
**25**  
**30**  
**35**  
**40**

Plus résistant à l'usure  
(chocs, sans arrosage, mauvaise stabilité de machine, ...)

## CNGP - Plaquette de tournage négative rhombique 80°



### Références

|               | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superalliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------------|--------|
|               | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10       | APPS15 |
| CNGP120402F-F |        |        |        |        | ◆      |        |        |        |                |              |        |
| CNGP120404F-F |        |        |        |        | ◆      |        |        |        |                |              |        |
| CNGP120408F-F |        |        |        |        | ◆      |        |        |        |                |              |        |

F - Plaquette  
finition inox





# CNMG - Plaquette de tournage négative rhombique 80°



| Références    | Acier  |        |        |        | Inox   |        |        | Fonte  | Non ferreux | Superaliage |        |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|--------|
|               | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15      | APPS10      | APPS15 | APPS40 |
| CNMG120404-F  |        | ◆      |        |        |        |        |        |        |             |             |        |        |
| CNMG120404E-F | ◆      |        |        |        |        |        |        |        |             |             |        |        |
| CNMG120404-SF |        |        |        |        |        | ◆      |        |        |             |             |        |        |
| CNMG120408-SF |        |        |        |        | ◆      |        |        |        |             |             |        |        |
| CNMG120408-SF |        |        | ◆      |        |        | ◆      |        |        |             |             |        |        |
| CNMG120408-SF |        |        |        |        |        | ◆      |        |        |             |             |        |        |
| CNMG120408-SF |        |        |        |        |        |        |        |        |             |             | ◆      |        |
| CNMG120408-SF |        |        |        |        |        |        |        |        |             |             |        | ◆      |
| CNMG120408-E  |        |        | ◆      |        |        |        |        |        |             |             |        |        |
| CNMG120408-E  |        |        |        |        |        | ◆      |        |        |             |             |        |        |
| CNMG120412-E  |        |        |        | ◆      |        |        |        |        |             |             |        |        |
| CNMG160608-E  |        |        |        | ◆      |        |        |        |        |             |             |        |        |
| CNMG160612-E  |        |        |        | ◆      |        |        |        |        |             |             |        |        |

F - Plaquette  
 finition acier



SF - Plaquette  
 semi-finition acier



E - Plaquette  
 ébauche acier



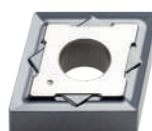
SF - Plaquette  
 semi-finition inox



E - Plaquette  
 ébauche inox



SF - Plaquette  
 semi-finition superalliage



SF - Plaquette  
 semi-finition superalliage





## CCGT - Plaquette de tournage positive rhombique 80°



### Références

CCGT09T302F-SF

| Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superaliage |        |
|--------|--------|--------|--------|--------|--------|--------|--------|----------------|-------------|--------|
| CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10      | APPS15 |
|        |        |        |        |        |        |        |        | ◆              |             |        |

SF - Plaquette  
semi-finition non ferreux



## CCMT - Plaquette de tournage positive rhombique 80°



|               | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superaliage |        |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|-------------|--------|--------|
| Références    | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10      | APPS15 | APPS40 |
| CCMT060202-F  |        |        |        |        |        | ◆      |        |        |                |             |        |        |
| CCMT060204-F  |        |        |        |        |        | ◆      |        |        |                |             |        |        |
| CCMT09T304-F  |        |        |        |        |        | ◆      |        |        |                |             |        |        |
| CCMT060204-SF |        |        |        |        |        | ◆      |        |        |                |             |        |        |

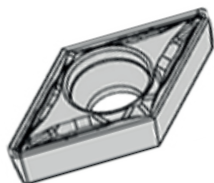
F - Plaquette  
 finition inox

F - Plaquette  
 finition inox

SF - Plaquette  
 semi-finition inox



## DMNG - Plaquette de tournage négative rhombique 55°

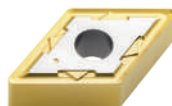


|               | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superaliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|-------------|--------|
| Références    | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10      | APPS15 |
| DNMG110408-SF |        |        |        |        |        | ◆      |        |        |                |             |        |
| DNMG150408-SF |        |        |        |        |        | ◆      |        |        |                |             |        |
| DNMG150604-SF |        |        |        |        | ◆      |        |        |        |                |             |        |
| DNMG150608-SF |        |        |        |        | ◆      |        |        |        |                |             |        |
| DNMG150608-SF |        |        |        |        |        |        |        |        |                |             | ◆      |

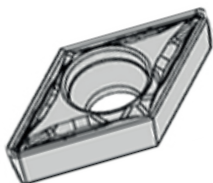
SF - Plaquette  
semi-finition inox



SF - Plaquette  
semi-finition superalliage



## DCGT - Plaquette de tournage positive rhombique 55°



### Références

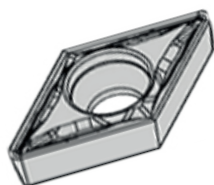
DCGT11T304F-SF

| Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superalliage |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------------|--------|--------|
| CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10       | APPS15 | APPS40 |
|        |        |        |        |        |        |        |        | ◆              |              |        |        |

SF - Plaquette  
semi-finition non ferreux



## DCMT - Plaquette de tournage positive rhombique 55°



### Références

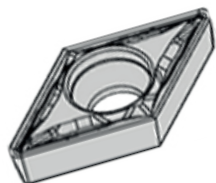
|               | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superaliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|-------------|--------|
|               | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10      | APPS15 |
| DCMT11T304-SF |        |        |        |        |        | ◆      |        |        |                |             |        |
| DCMT11T308-SF |        |        | ◆      |        |        |        |        |        |                |             |        |

SF - Plaquette  
semi-finition inox

SF - Plaquette  
semi-finition acier



## DNGP - Plaquette de tournage négative rhombique 55°



| Références    | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superalliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------------|--------|
|               | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10       | APPS15 |
| DNGP150602F-F |        |        |        |        | ◆      |        |        |        |                |              |        |
| DNGP150604F-F |        |        |        |        | ◆      |        |        |        |                |              |        |

F - Plaquette  
 finition inox



## VBMT - Plaquette de tournage positive rhombique 35°



### Références

|               | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superaliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|-------------|--------|
|               | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10      | APPS15 |
| VBMT160404-SF |        |        | ◆      |        |        |        |        |        |                |             |        |
| VBMT160404-SF |        |        |        |        | ◆      |        |        |        |                |             |        |
| VBMT160408-SF |        |        | ◆      |        |        |        |        |        |                |             |        |

SF - Plaquette  
semi-finition acier

SF - Plaquette  
semi-finition inox





## VCMT - Plaquette de tournage positive rhombique 35°



| Références    | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superalliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------------|--------|
|               | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10       | APPS15 |
| VCMT110302-F  |        |        |        |        |        | ◆      |        |        |                |              |        |
| VCMT160404-F  |        |        | ◆      |        |        |        |        |        |                |              |        |
| VCMT160404-F  |        |        |        |        |        | ◆      |        |        |                |              |        |
| VCMT110304-SF |        |        |        |        |        |        | ◆      |        |                |              |        |
| VCMT160408-SF |        |        | ◆      |        |        |        |        |        |                |              |        |
| VCMT160408-SF |        |        |        |        |        | ◆      |        |        |                |              |        |

F - Plaquette  
 finition acier

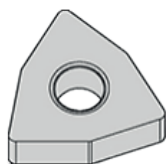
SF - Plaquette  
 semi-finition acier

F - Plaquette  
 finition inox

SF - Plaquette  
 semi-finition inox



## WNMG - Plaquette de tournage négative trigone 80°

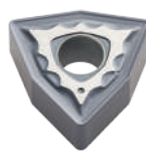


|               | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superaliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|-------------|--------|
| Références    | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10      | APPS15 |
| WNMG060404-SF |        | ◆      |        |        |        |        |        |        |                |             |        |
| WNMG060408-SF |        |        | ◆      |        |        |        |        |        |                |             |        |
| WNMG060408-SF |        |        |        |        |        | ◆      |        |        |                |             |        |
| WNMG080408-SF |        |        |        |        |        | ◆      |        |        |                |             |        |
| WNMG080412-E  |        |        |        |        |        | ◆      |        |        |                |             |        |

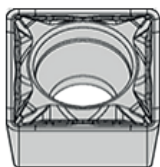
SF - Plaquette  
semi-finition acier

SF - Plaquette  
semi-finition inox

E - Plaquette  
ébauche inox



## SNMG - Plaquette de tournage négative carré 90°

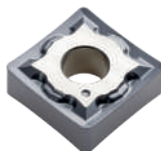


### Références

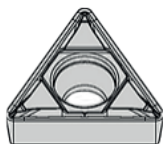
SNMG120408-SF

| Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superalliage |        |
|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------------|--------|
| CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10       | APPS15 |
|        |        |        |        |        | ◆      |        |        |                |              |        |

SF - Plaquette  
semi-finition inox



## TNMG - Plaquette de tournage négative triangulaire 60°



### Références

|               | Acier  |        |        |        | Inox   |        |        | Fonte  | Non<br>ferreux | Superalliage |        |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------------|--------|
|               | CERMET | APCP15 | APCP25 | APCP35 | APPM20 | APPM25 | APPM35 | APCK20 | APWN15         | APPS10       | APPS15 |
| TNMG160404-SF |        |        |        |        |        | ◆      |        |        |                |              |        |
| TNMG160408-E  |        |        |        |        |        | ◆      |        |        |                |              |        |

SF - Plaquette  
semi-finition inox



E - Plaquette  
ébauche inox



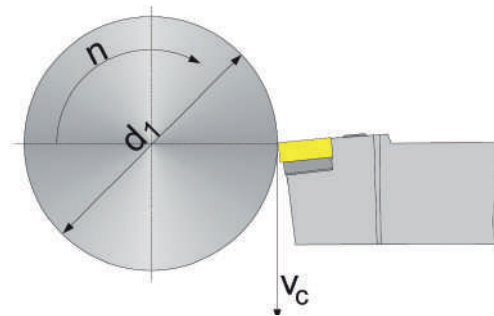
# INFORMATIONS TECHNIQUES TOURNAGE

**Vitesse de rotation :**

$$n = \frac{1000 \times V_c}{D_c \times \pi} \text{ tr/min}$$

**Vitesse de coupe :**

$$V_c = \frac{D_c \times \pi \times n}{1000} \text{ m/min}$$

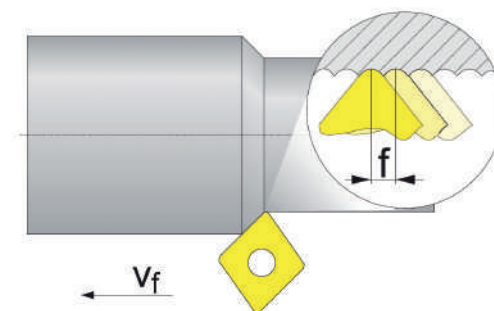


**Vitesse d'avance :**

$$V_f = n \times f \text{ mm/min}$$

**Avance :**

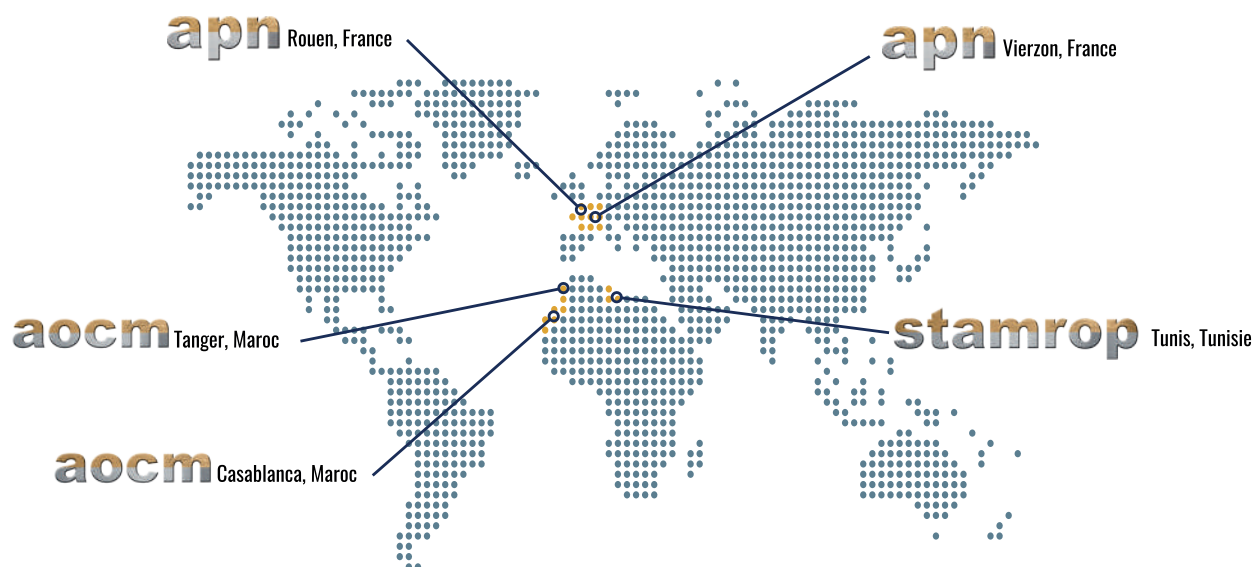
$$f = \frac{V_f}{n} \text{ mm}$$



**Débit copeaux :**

$$Q = V_c \times a_p \times f \text{ cm}^3/\text{min}$$

|       |                                                              |
|-------|--------------------------------------------------------------|
| $n$   | Vitesse de rotation tr/min                                   |
| $D_c$ | Diamètre de coupe mm                                         |
| $V_c$ | Vitesse de coupe m/min                                       |
| $V_f$ | Vitesse d'avance mm/min                                      |
| $f$   | Avance par rotation mm                                       |
| $Q$   | Débit de copeaux par unité de temps $\text{cm}^3/\text{min}$ |
| $a_p$ | Profondeur de coupe mm                                       |



35

Années d'expérience

100

Collaborateurs

30

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