

5. PCD/CVD/CBN tools



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PCD/CVD/CBN cutting tools

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| | | | | | | |
|------------------|--|--|--|------|-----------------|-------------------|
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|------------------|--|--|--|------|-----------------|-------------------|

Engraving mills / Countersink in PCD (CVD & CBN upon request)

| | | | | | | |
|--------------------|--|--|--|----|-----------------|-------------------|
| REF. 4119-3 | | | | Z1 | λ 0° | Page 79 |
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PCD End mills with ball end (CVD & CBN upon request)

| | | | | | | |
|------------------|--|--|--|------|-----------------|-------------------|
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|------------------|--|--|--|------|-----------------|-------------------|

PCD twist drills (CVD & CBN upon request)

| | | | | | | |
|------------------|--|--|--|----|------------------|-------------------|
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|------------------|--|--|--|----|------------------|-------------------|

PCD thread mill (CVD & CBN upon request)

| | | | | | | |
|-------------------|--|--|--|------|-----------------|-------------------|
| REF. 45200 | | | | Z1-2 | λ 0° | Page 84 |
|-------------------|--|--|--|------|-----------------|-------------------|

► Special tools in PCD/CBN/CVD upon request.
See examples page 28.

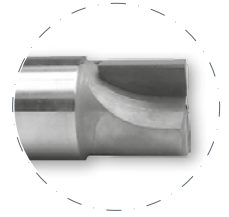
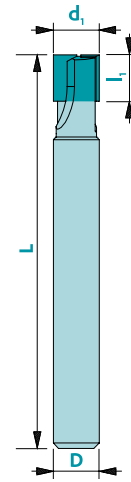
PCD end mill $l_1=1xd_1$

4010

| Material | Vc | Uncoated |
|-------------------------------|------|----------|
| Steel < 700 N/mm ² | - | - |
| Steel > 700 N/mm ² | - | - |
| Stainless steel | - | - |
| Cast iron | - | - |
| Copper | 350 | ■ |
| Brass - Bronze | 500 | ■ |
| Aluminium | 1000 | ■ |
| Gold - Silver | 300 | ■ |
| Platinum - Palladium | 130 | ■ |
| Superalloys | - | - |
| Titanium | 120 | ■ |

not adapted - adapted highly adapted

Tolerances $d_1 < 1\text{mm}$ ▶ +0/-0.01 l_1 : +0.2/-0
 $d_1 > 1\text{mm}$ ▶ +0/-0.02 D:h5

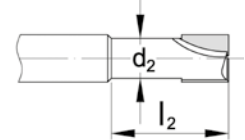


| Art. n° | d_1 | l_1 | D | L | Z |
|------------------|-------|-------|----|-----|---|
| 4010d0.50L38Z1 | 0.5 | 0.5 | 6 | 38 | 1 |
| 4010d1.00L38Z1 | 1.0 | 1.0 | 6 | 38 | 1 |
| 4010d1.50L38Z1 | 1.5 | 1.5 | 6 | 38 | 1 |
| 4010d2.00L38Z1 | 2.0 | 2.0 | 6 | 38 | 1 |
| 4010d2.50L38Z1 | 2.5 | 2.5 | 6 | 38 | 1 |
| 4010d3.00L38Z1 | 3.0 | 3.0 | 6 | 38 | 1 |
| 4010d3.50L38Z1 | 3.5 | 3.5 | 6 | 38 | 1 |
| 4010d4.00L51Z1 | 4.0 | 4.0 | 6 | 51 | 1 |
| 4010d4.00L51Z2 | 4.0 | 4.0 | 6 | 51 | 2 |
| 4010d5.00L51Z2 | 5.0 | 5.0 | 6 | 51 | 2 |
| 4010d6.00L51Z2 | 6.0 | 6.0 | 6 | 51 | 2 |
| 4010d7.00L61Z2 | 7.0 | 7.0 | 8 | 61 | 2 |
| 4010d8.00L61Z2 | 8.0 | 8.0 | 8 | 61 | 2 |
| 4010d8.00L120Z2 | 8.0 | 8.0 | 8 | 120 | 2 |
| 4010d10.00L72Z2 | 10.0 | 10.0 | 10 | 72 | 2 |
| 4010d10.00L120Z2 | 10.0 | 10.0 | 10 | 120 | 2 |
| 4010d12.00L83Z2 | 12.0 | 12.0 | 12 | 83 | 2 |
| 4010d12.00L150Z2 | 12.0 | 12.0 | 12 | 150 | 2 |
| 4010d14.00L83Z2 | 14.0 | 14.0 | 14 | 83 | 2 |
| 4010d14.00L150Z2 | 14.0 | 14.0 | 14 | 150 | 2 |
| 4010d16.00L92Z2 | 16.0 | 16.0 | 16 | 92 | 2 |
| 4010d16.00L180Z2 | 16.0 | 16.0 | 16 | 180 | 2 |
| 4010d20.00L104Z2 | 20.0 | 20.0 | 20 | 104 | 2 |
| 4010d20.00L180Z2 | 20.0 | 20.0 | 20 | 180 | 2 |

| | |
|-----------------|----------------|
| | Z1-2 |
| | |
| λ 0° | γ 0° |
| PCD | HSC |
| | |

$ap=0.15xd_1$ $ae=0.03xd_1$
 $ap=1xd_1$

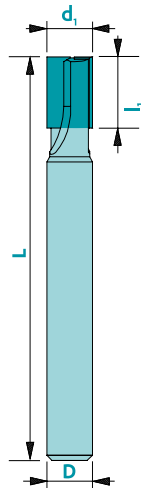
Upon request



| | |
|------------------|---------------|
| 45° 0.03-0.20 | 0.05-2.00 |
|------------------|---------------|

Other dimensions, CVD/CBN available upon request.

PCD end mill $l_1=1.5xd_1$



Material

| | Vc | Uncoated |
|-------------------------------|------|----------|
| Steel < 700 N/mm ² | - | - |
| Steel > 700 N/mm ² | - | - |
| Stainless steel | - | - |
| Cast iron | - | - |
| Copper | 350 | ■ |
| Brass - Bronze | 500 | ■ |
| Aluminium | 1000 | ■ |
| Gold - Silver | 300 | ■ |
| Platinum - Palladium | 130 | ■ |
| Superalloys | - | - |
| Titanium | 120 | ■ |

not adapted - adapted highly adapted

Tolerances

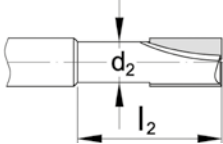
$d_1 < 1\text{mm}$ ▶ +0/-0.01 D: h5
 $d_1 > 1\text{mm}$ ▶ +0/-0.02

| | |
|------------------------|-----------------------|
| | Z1-2 |
| | |
| λ 0° | γ 0° |
| PCD | HSC |
| | |

$ap=0.1xd_1$

$ae=0.03xd_1$
 $ap=1.5xd_1$

Upon request



| | |
|-------------------------|---------------|
| 45° 0.03-0.20 | 0.05-2.00 |
|-------------------------|---------------|

| Art. n° | d_1 | l_1 | D | L | Z |
|------------------|-------|-------|----|-----|---|
| 4015d1.00L38Z1 | 1.0 | 1.5 | 6 | 38 | 1 |
| 4015d1.50L38Z1 | 1.5 | 2.5 | 6 | 38 | 1 |
| 4015d2.00L38Z1 | 2.0 | 3.0 | 6 | 38 | 1 |
| 4015d2.50L38Z1 | 2.5 | 3.5 | 6 | 38 | 1 |
| 4015d3.00L38Z1 | 3.0 | 4.5 | 6 | 38 | 1 |
| 4015d3.50L38Z1 | 3.5 | 5.0 | 6 | 38 | 1 |
| 4015d4.00L51Z1 | 4.0 | 6.0 | 6 | 51 | 1 |
| 4015d4.00L51Z2 | 4.0 | 6.0 | 6 | 51 | 2 |
| 4015d5.00L51Z2 | 5.0 | 7.5 | 6 | 51 | 2 |
| 4015d6.00L51Z2 | 6.0 | 9.0 | 6 | 51 | 2 |
| 4015d7.00L61Z2 | 7.0 | 10.5 | 8 | 61 | 2 |
| 4015d8.00L61Z2 | 8.0 | 12.0 | 8 | 61 | 2 |
| 4015d8.00L120Z2 | 8.0 | 12.0 | 8 | 120 | 2 |
| 4015d10.00L72Z2 | 10.0 | 15.0 | 10 | 72 | 2 |
| 4015d10.00L120Z2 | 10.0 | 15.0 | 10 | 120 | 2 |
| 4015d12.00L83Z2 | 12.0 | 18.0 | 12 | 83 | 2 |
| 4015d12.00L150Z2 | 12.0 | 18.0 | 12 | 150 | 2 |

Other dimensions, CVD/CBN available upon request.

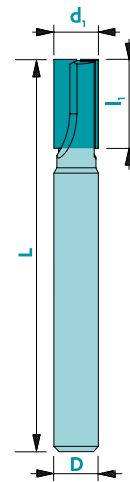
PCD end mill $l_1=2xd_1$

4020

| Material | Vc | Uncoated |
|-------------------------------|------|----------|
| Steel < 700 N/mm ² | - | - |
| Steel > 700 N/mm ² | - | - |
| Stainless steel | - | - |
| Cast iron | - | - |
| Copper | 350 | ■ |
| Brass - Bronze | 500 | ■ |
| Aluminium | 1000 | ■ |
| Gold - Silver | 300 | ■ |
| Platinum - Palladium | 130 | ■ |
| Superalloys | - | - |
| Titanium | 120 | ■ |

not adapted - adapted ■ highly adapted ■

Tolerances $d_1 < 1\text{mm}$ ▶ +0/-0.01 D: h5
 $d_1 > 1\text{mm}$ ▶ +0/-0.02



| Art. n° | d_1 | l_1 | D | L | Z |
|-----------------|-------|-------|---|-----|---|
| 4020d2.00L38Z1 | 2.0 | 4.0 | 6 | 38 | 1 |
| 4020d2.50L38Z1 | 2.5 | 5.0 | 6 | 38 | 1 |
| 4020d3.00L38Z1 | 3.0 | 6.0 | 6 | 38 | 1 |
| 4020d3.50L38Z1 | 3.5 | 7.0 | 6 | 38 | 1 |
| 4020d4.00L38Z1 | 4.0 | 8.0 | 6 | 38 | 1 |
| 4020d5.00L51Z2 | 5.0 | 10.0 | 6 | 51 | 2 |
| 4020d6.00L51Z2 | 6.0 | 12.0 | 6 | 51 | 2 |
| 4020d8.00L61Z2 | 8.0 | 16.0 | 8 | 61 | 2 |
| 4020d8.00L120Z2 | 8.0 | 16.0 | 8 | 120 | 2 |



Z1-2



λ
0°

γ
0°

PCD

HSC

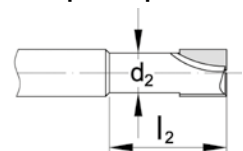


$ap=0.15xd_1$



$ae=0.03xd_1$
 $ap=1xd_1$

Upon request

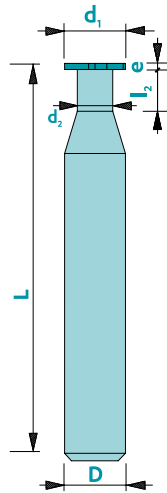
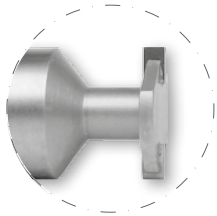


45°
0.03-0.20

r
0.05-2.00

Other dimensions, CVD/CBN available upon request.

T-slot cutter in PCD



Material

| | Vc | Uncoated |
|-------------------------------|------|----------|
| Steel < 700 N/mm ² | - | - |
| Steel > 700 N/mm ² | - | - |
| Stainless steel | - | - |
| Cast iron | - | - |
| Copper | 350 | ■ |
| Brass - Bronze | 500 | ■ |
| Aluminium | 1000 | ■ |
| Gold - Silver | 300 | ■ |
| Platinum - Palladium | 130 | ■ |
| Superalloys | - | - |
| Titanium | 120 | ■ |

not adapted - adapted highly adapted

Tolerances

$d_1 < 1\text{mm}$ ▶ +0/-0.01 e : +0.01/-0.01 l_2 : +0.2/-0
 $d_1 > 1\text{mm}$ ▶ +0/-0.02 d_2 : +0/-0.5 D : h5

| | |
|-----------------|----------------|
| | Z1-Z2 |
| | Z1-Z2 |
| λ 0° | γ 0° |
| PCD | HSC |

| Art. n° | d_1 | e | d_2 | l_2 | D | L | Z |
|------------------|-------|-----------|-------|-------|----|----|---|
| 4100d3.00e#.#Z1 | 3 | 0.6 - 1.5 | 1.5 | 2 | 4 | 38 | 1 |
| 4100d4.00e#.#Z1 | 4 | 0.6 - 1.5 | 2.5 | 3 | 4 | 38 | 1 |
| 4100d4.00e#.#Z2 | 4 | 0.6 - 1.5 | 2.5 | 3 | 4 | 38 | 2 |
| 4100d5.00e#.#Z1 | 5 | 0.6 - 1.5 | 3.0 | 3 | 5 | 38 | 1 |
| 4100d5.00e#.#Z2 | 5 | 0.6 - 1.5 | 3.0 | 3 | 5 | 38 | 2 |
| 4100d6.00e#.#Z2 | 6 | 0.6 - 2.0 | 3.5 | 4 | 6 | 38 | 2 |
| 4100d8.00e#.#Z2 | 8 | 0.6 - 3.0 | 4.0 | 5 | 8 | 51 | 2 |
| 4100d10.00e#.#Z2 | 10 | 0.6 - 3.0 | 5.0 | 5 | 10 | 51 | 2 |
| 4100d12.00e#.#Z2 | 12 | 0.6 - 4.0 | 6.0 | 6 | 10 | 51 | 2 |
| 4100d15.00e#.#Z2 | 15 | 0.6 - 5.0 | 8.0 | 8 | 10 | 61 | 2 |
| 4100d16.00e#.#Z2 | 16 | 0.6 - 2.9 | 8.0 | 8 | 10 | 61 | 2 |
| 4100d16.00e#.#Z2 | 16 | 3.0 - 6.0 | 8.0 | 8 | 10 | 61 | 2 |

Order Quotation request

| | | | |
|---|--|---|--|
| Dimensions : d_1 : _____ e : _____ d_2 : _____ D : _____ L : _____ l_2 : _____ | | Machined material : _____ _____ | |
| Quantity : _____ | | Contact person : _____ _____ | |
| Order No : _____ | | Company's stamp & date : _____ _____ | |

Standard dimensions of the bars : Ø 3x L 38, Ø 4x L 38, Ø 6x L 38, Ø 6x L 51, Ø 8x L 61, Ø 10x L 72, Ø 12x L 83, Ø 16x L 92, Ø 20x L 104

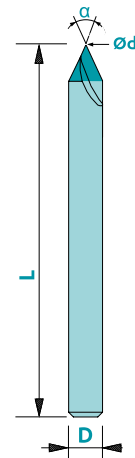
Other dimensions, CVD/CBN available upon request.

Engraving mill in PCD - 3/4 - flat tip

4119-3

| Material | n [rpm] | Ap | Uncoated |
|-------------------------------|-------------|-------------|----------|
| Steel < 700 N/mm ² | - | - | - |
| Steel > 700 N/mm ² | - | - | - |
| Stainless steel | - | - | - |
| Cast iron | - | - | - |
| Copper | 20 - 40'000 | 0.05 - 0.40 | ■ |
| Brass - Bronze | 25 - 40'000 | 0.05 - 0.40 | ■ |
| Aluminium | 25 - 40'000 | 0.05 - 0.50 | ■ |
| Gold - Silver | 20 - 40'000 | 0.05 - 0.40 | ■ |
| Platinum - Palladium | 25 - 40'000 | 0.05 - 0.40 | ■ |
| Superalloys | - | - | - |
| Titanium | 25 - 40'000 | 0.05 - 0.40 | □ |

not adapted - adapted □ highly adapted ■



Tolerances d_1 : +/- 0.01
D: h5

| Art. n° | α | d_1 | D | L | Art. n° | α | d_1 | D | L |
|----------------|----------|-------|---|----|----------------|----------|-------|---|----|
| 4119-3a40d0.05 | 40° | 0.05 | 3 | 33 | 4119-3a60d0.10 | 60° | 0.10 | 3 | 33 |
| 4119-3a40d0.08 | 40° | 0.08 | 3 | 33 | 4119-3a70d0.05 | 70° | 0.05 | 3 | 33 |
| 4119-3a40d0.10 | 40° | 0.10 | 3 | 33 | 4119-3a70d0.08 | 70° | 0.08 | 3 | 33 |
| 4119-3a50d0.05 | 50° | 0.05 | 3 | 33 | 4119-3a70d0.10 | 70° | 0.10 | 3 | 33 |
| 4119-3a50d0.08 | 50° | 0.08 | 3 | 33 | 4119-3a90d0.05 | 90° | 0.05 | 3 | 33 |
| 4119-3a50d0.10 | 50° | 0.10 | 3 | 33 | 4119-3a90d0.08 | 90° | 0.08 | 3 | 33 |
| 4119-3a60d0.05 | 60° | 0.05 | 3 | 33 | 4119-3a90d0.10 | 90° | 0.10 | 3 | 33 |
| 4119-3a60d0.08 | 60° | 0.08 | 3 | 33 | | | | | |



Z1



λ
0°

PCD

HSC

Order Quotation request

| | | | | | |
|--|--|---|--|---|--|
| Angle (α): <input type="checkbox"/> By default : 60° <input type="checkbox"/> 30° <input type="checkbox"/> 35° <input type="checkbox"/> 45° <input type="checkbox"/> Other : _____ <input type="checkbox"/> 50° <input type="checkbox"/> 55° <input type="checkbox"/> 90° | | Shank \emptyset : <input type="checkbox"/> By default : D=3 <input type="checkbox"/> Other : D= _____ | | Order No : _____ | |
| Machined material : _____ | | Quantity : _____ | | d_1 (from 0.02 mm) : _____ | |
| Contact person : _____ | | | Company's stamp & date : _____ | | |

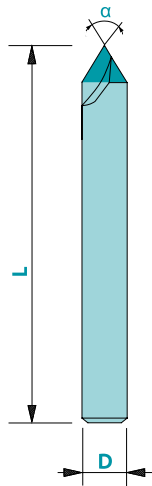
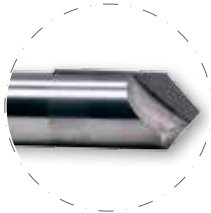
Standard dimensions of the bars :

\emptyset 3x L 38, \emptyset 4x L 38, \emptyset 6x L 38, \emptyset 6x L 51, \emptyset 8x L 61, \emptyset 10x L 72, \emptyset 12x L 83, \emptyset 16x L 92, \emptyset 20x L 104

Other dimensions, CVD/CBN available upon request.

4120

Countersink in PCD 90°



Material

| | Vc | Uncoated |
|-------------------------------|-----|----------|
| Steel < 700 N/mm ² | - | - |
| Steel > 700 N/mm ² | - | - |
| Stainless steel | - | - |
| Cast iron | - | - |
| Copper | 300 | ■ |
| Brass - Bronze | 400 | ■ |
| Aluminium | 800 | ■ |
| Gold - Silver | 220 | ■ |
| Platinum - Palladium | 110 | ■ |
| Superalloys | - | - |
| Titanium | 100 | ■ |

not adapted - adapted highly adapted

Tolerances $d_1: +/- 0.01$
D: h5

| Art. n° | α | D | L | Z |
|-----------|----------|---|----|---|
| 4120D3.00 | 90° | 3 | 38 | 1 |
| 4120D4.00 | 90° | 4 | 50 | 1 |
| 4120D6.00 | 90° | 6 | 50 | 2 |

| | |
|-----|-----------------|
| | Z1-2 |
| | λ 0° |
| PCD | HSC |

Other dimensions, CVD/CBN available upon request.

80

LOUIS BELET

swiss made

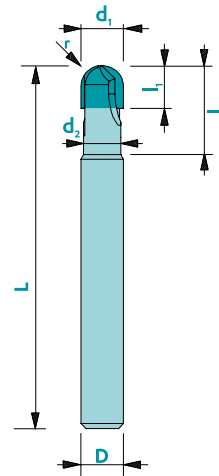
PCD end mill with ball end

4200

| Material | Vc | Uncoated |
|-------------------------------|-----|----------|
| Steel < 700 N/mm ² | - | - |
| Steel > 700 N/mm ² | - | - |
| Stainless steel | - | - |
| Cast iron | - | - |
| Copper | 300 | ■ |
| Brass - Bronze | 400 | ■ |
| Aluminium | 800 | ■ |
| Gold - Silver | 220 | ■ |
| Platinum - Palladium | 110 | ■ |
| Superalloys | - | - |
| Titanium | 100 | ■ |

not adapted - adapted ■ highly adapted ■

Tolerances $d_1 < 1\text{mm}$ ▶ +0/-0.01
 $d_1 > 1\text{mm}$ ▶ +0/-0.02 r +0/-0.01
 D: h5



| Art. n° | d_1 | l_1 | r | d_2 | l_2 | D | L | Z |
|-----------------|-------|-------|------|-------|-------|----|-----|---|
| 4200d1.0L38Z1 | 1.00 | 1.00 | 0.50 | - | - | 6 | 38 | 1 |
| 4200d1.5L38Z1 | 1.50 | 1.50 | 0.75 | - | - | 6 | 38 | 1 |
| 4200d2.0L38Z1 | 2.00 | 2.00 | 1.00 | 1.75 | 6.50 | 6 | 38 | 1 |
| 4200d2.5L38Z1 | 2.50 | 2.50 | 1.25 | 2.20 | 7.50 | 6 | 38 | 1 |
| 4200d2.5L38Z2 | 2.50 | 2.50 | 1.25 | 2.20 | 7.50 | 6 | 38 | 2 |
| 4200d3.0L38Z1 | 3.00 | 3.00 | 1.50 | 2.60 | 8.00 | 6 | 38 | 1 |
| 4200d3.0L38Z2 | 3.00 | 3.00 | 1.50 | 2.60 | 8.00 | 6 | 38 | 2 |
| 4200d3.5L38Z1 | 3.50 | 3.50 | 1.75 | 3.00 | 9.00 | 6 | 38 | 1 |
| 4200d3.5L38Z2 | 3.50 | 3.50 | 1.75 | 3.00 | 9.00 | 6 | 38 | 2 |
| 4200d4.0L51Z1 | 4.00 | 4.00 | 2.00 | 3.50 | 10.00 | 6 | 51 | 1 |
| 4200d4.0L51Z2 | 4.00 | 4.00 | 2.00 | 3.50 | 10.00 | 6 | 51 | 2 |
| 4200d5.0L51Z2 | 5.00 | 5.00 | 2.50 | 4.40 | 11.00 | 6 | 51 | 2 |
| 4200d6.0L51Z2 | 6.00 | 6.00 | 3.00 | 5.25 | 12.50 | 6 | 51 | 2 |
| 4200d8.0L61Z2 | 8.00 | 8.00 | 4.00 | 7.00 | 15.00 | 8 | 61 | 2 |
| 4200d8.0L120Z2 | 8.00 | 8.00 | 4.00 | 7.00 | 15.00 | 8 | 120 | 2 |
| 4200d10.0L72Z2 | 10.00 | 10.00 | 5.00 | 8.75 | 17.00 | 10 | 72 | 2 |
| 4200d10.0L120Z2 | 10.00 | 10.00 | 5.00 | 8.75 | 17.00 | 10 | 120 | 2 |
| 4200d12.0L83Z2 | 12.00 | 12.00 | 6.00 | 10.50 | 20.00 | 12 | 83 | 2 |
| 4200d12.0L150Z2 | 12.00 | 12.00 | 6.00 | 10.50 | 20.00 | 12 | 150 | 2 |

U Z1-2

λ 0° γ 0°

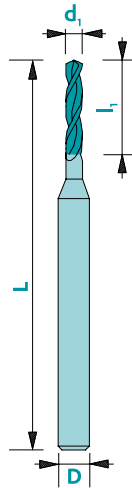
PCD HSC

ae=0.1xd₁
ap=0.1xd₁

Other dimensions, CVD/CBN available upon request.

4500

PCD twist drill - 2 teeth



Material

Steel < 700 N/mm²Steel > 700 N/mm²

Stainless steel

Cast iron

Copper

Brass - Bronze

Aluminium

Gold - Silver

Platinum - Palladium

Superalloys

Titanium

Vc

Uncoated

-

-

-

-

180

280

250

200

100

-

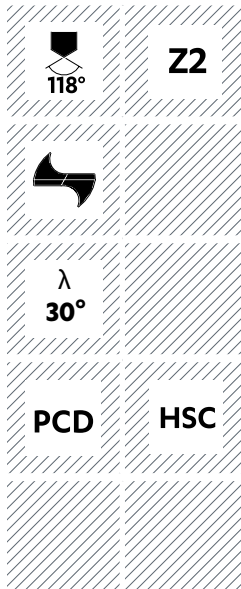
140

not adapted - adapted highly adapted

Tolerances

 $d_1 = +0/-0.13$

D: h6



| Art. n° | d ₁ | l ₁ | D | L |
|-----------|----------------|----------------|---|----|
| 4500d0.48 | 0.48 | 4.0 | 3 | 38 |
| 4500d0.49 | 0.49 | 4.0 | 3 | 38 |
| 4500d0.50 | 0.50 | 4.0 | 3 | 38 |
| 4500d0.51 | 0.51 | 4.0 | 3 | 38 |
| 4500d0.52 | 0.52 | 4.0 | 3 | 38 |
| 4500d0.53 | 0.53 | 4.0 | 3 | 38 |
| 4500d0.54 | 0.54 | 4.0 | 3 | 38 |
| 4500d0.55 | 0.55 | 4.0 | 3 | 38 |
| 4500d0.56 | 0.56 | 4.0 | 3 | 38 |
| 4500d0.57 | 0.57 | 4.0 | 3 | 38 |
| 4500d0.58 | 0.58 | 4.0 | 3 | 38 |
| 4500d0.59 | 0.59 | 4.0 | 3 | 38 |
| 4500d0.60 | 0.60 | 5.0 | 3 | 38 |
| 4500d0.61 | 0.61 | 5.0 | 3 | 38 |
| 4500d0.62 | 0.62 | 5.0 | 3 | 38 |
| 4500d0.63 | 0.63 | 5.0 | 3 | 38 |
| 4500d0.64 | 0.64 | 5.0 | 3 | 38 |
| 4500d0.65 | 0.65 | 5.0 | 3 | 38 |
| 4500d0.66 | 0.66 | 5.0 | 3 | 38 |
| 4500d0.67 | 0.67 | 5.0 | 3 | 38 |
| 4500d0.68 | 0.68 | 5.0 | 3 | 38 |
| 4500d0.69 | 0.69 | 5.0 | 3 | 38 |
| 4500d0.70 | 0.70 | 5.0 | 3 | 38 |
| 4500d0.71 | 0.71 | 5.0 | 3 | 38 |
| 4500d0.72 | 0.72 | 5.0 | 3 | 38 |
| 4500d0.73 | 0.73 | 5.0 | 3 | 38 |
| 4500d0.74 | 0.74 | 5.0 | 3 | 38 |
| 4500d0.75 | 0.75 | 5.0 | 3 | 38 |
| 4500d0.76 | 0.76 | 5.0 | 3 | 38 |

| Art. n° | d ₁ | l ₁ | D | L |
|-----------|----------------|----------------|---|----|
| 4500d0.77 | 0.77 | 5.0 | 3 | 38 |
| 4500d0.78 | 0.78 | 5.0 | 3 | 38 |
| 4500d0.79 | 0.79 | 5.0 | 3 | 38 |
| 4500d0.80 | 0.80 | 6.0 | 3 | 38 |
| 4500d0.81 | 0.81 | 6.0 | 3 | 38 |
| 4500d0.82 | 0.82 | 6.0 | 3 | 38 |
| 4500d0.83 | 0.83 | 6.0 | 3 | 38 |
| 4500d0.84 | 0.84 | 6.0 | 3 | 38 |
| 4500d0.85 | 0.85 | 6.0 | 3 | 38 |
| 4500d0.86 | 0.86 | 6.0 | 3 | 38 |
| 4500d0.87 | 0.87 | 6.0 | 3 | 38 |
| 4500d0.88 | 0.88 | 6.0 | 3 | 38 |
| 4500d0.89 | 0.89 | 6.0 | 3 | 38 |
| 4500d0.90 | 0.90 | 7.0 | 3 | 38 |
| 4500d0.91 | 0.91 | 7.0 | 3 | 38 |
| 4500d0.92 | 0.92 | 7.0 | 3 | 38 |
| 4500d0.93 | 0.93 | 7.0 | 3 | 38 |
| 4500d0.94 | 0.94 | 7.0 | 3 | 38 |
| 4500d0.95 | 0.95 | 7.0 | 3 | 38 |
| 4500d0.96 | 0.96 | 7.0 | 3 | 38 |
| 4500d0.97 | 0.97 | 7.0 | 3 | 38 |
| 4500d0.98 | 0.98 | 7.0 | 3 | 38 |
| 4500d0.99 | 0.99 | 7.0 | 3 | 38 |
| 4500d1.00 | 1.00 | 8.0 | 3 | 38 |
| 4500d1.01 | 1.01 | 8.0 | 3 | 38 |
| 4500d1.02 | 1.02 | 8.0 | 3 | 38 |
| 4500d1.03 | 1.03 | 8.0 | 3 | 38 |
| 4500d1.04 | 1.04 | 8.0 | 3 | 38 |
| 4500d1.05 | 1.05 | 8.0 | 3 | 38 |

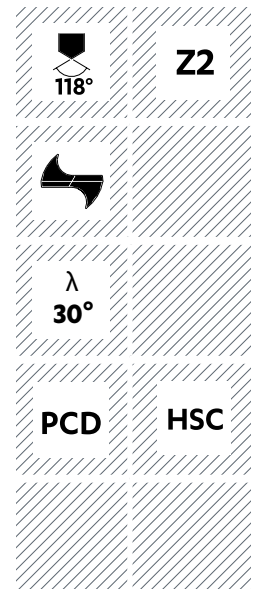


PCD twist drill - 2 teeth

4500

Continuation

| Art. n° | d ₁ | l ₁ | D | L | Art. n° | d ₁ | l ₁ | D | L |
|-----------|----------------|----------------|---|----|-----------|----------------|----------------|---|----|
| 4500d1.06 | 1.06 | 8.0 | 3 | 38 | 4500d1.55 | 1.55 | 9.0 | 3 | 38 |
| 4500d1.07 | 1.07 | 8.0 | 3 | 38 | 4500d1.60 | 1.60 | 9.0 | 3 | 38 |
| 4500d1.08 | 1.08 | 8.0 | 3 | 38 | 4500d1.65 | 1.65 | 9.0 | 3 | 38 |
| 4500d1.09 | 1.09 | 8.0 | 3 | 38 | 4500d1.70 | 1.70 | 9.0 | 3 | 38 |
| 4500d1.10 | 1.10 | 9.0 | 3 | 38 | 4500d1.75 | 1.75 | 9.0 | 3 | 38 |
| 4500d1.11 | 1.11 | 9.0 | 3 | 38 | 4500d1.80 | 1.80 | 9.0 | 3 | 38 |
| 4500d1.12 | 1.12 | 9.0 | 3 | 38 | 4500d1.85 | 1.85 | 9.0 | 3 | 38 |
| 4500d1.13 | 1.13 | 9.0 | 3 | 38 | 4500d1.90 | 1.90 | 9.0 | 3 | 38 |
| 4500d1.14 | 1.14 | 9.0 | 3 | 38 | 4500d1.95 | 1.95 | 9.0 | 3 | 38 |
| 4500d1.15 | 1.15 | 9.0 | 3 | 38 | 4500d2.00 | 2.00 | 9.0 | 3 | 38 |
| 4500d1.16 | 1.16 | 9.0 | 3 | 38 | 4500d2.05 | 2.05 | 9.0 | 3 | 38 |
| 4500d1.17 | 1.17 | 9.0 | 3 | 38 | 4500d2.10 | 2.10 | 9.0 | 3 | 38 |
| 4500d1.18 | 1.18 | 9.0 | 3 | 38 | 4500d2.15 | 2.15 | 9.0 | 3 | 38 |
| 4500d1.19 | 1.19 | 9.0 | 3 | 38 | 4500d2.20 | 2.20 | 9.0 | 3 | 38 |
| 4500d1.20 | 1.20 | 9.0 | 3 | 38 | 4500d2.25 | 2.25 | 9.0 | 3 | 38 |
| 4500d1.21 | 1.21 | 9.0 | 3 | 38 | 4500d2.29 | 2.29 | 9.0 | 3 | 38 |
| 4500d1.22 | 1.22 | 9.0 | 3 | 38 | 4500d2.30 | 2.30 | 9.0 | 3 | 38 |
| 4500d1.23 | 1.23 | 9.0 | 3 | 38 | 4500d2.40 | 2.40 | 9.0 | 3 | 38 |
| 4500d1.24 | 1.24 | 9.0 | 3 | 38 | 4500d2.50 | 2.50 | 9.0 | 3 | 38 |
| 4500d1.25 | 1.25 | 9.0 | 3 | 38 | | | | | |
| 4500d1.26 | 1.26 | 9.0 | 3 | 38 | | | | | |
| 4500d1.27 | 1.27 | 9.0 | 3 | 38 | | | | | |
| 4500d1.28 | 1.28 | 9.0 | 3 | 38 | | | | | |
| 4500d1.29 | 1.29 | 9.0 | 3 | 38 | | | | | |
| 4500d1.30 | 1.30 | 9.0 | 3 | 38 | | | | | |
| 4500d1.31 | 1.31 | 9.0 | 3 | 38 | | | | | |
| 4500d1.32 | 1.32 | 9.0 | 3 | 38 | | | | | |
| 4500d1.33 | 1.33 | 9.0 | 3 | 38 | | | | | |
| 4500d1.34 | 1.34 | 9.0 | 3 | 38 | | | | | |
| 4500d1.35 | 1.35 | 9.0 | 3 | 38 | | | | | |
| 4500d1.36 | 1.36 | 9.0 | 3 | 38 | | | | | |
| 4500d1.37 | 1.37 | 9.0 | 3 | 38 | | | | | |
| 4500d1.38 | 1.38 | 9.0 | 3 | 38 | | | | | |
| 4500d1.39 | 1.39 | 9.0 | 3 | 38 | | | | | |
| 4500d1.40 | 1.40 | 9.0 | 3 | 38 | | | | | |
| 4500d1.41 | 1.41 | 9.0 | 3 | 38 | | | | | |
| 4500d1.42 | 1.42 | 9.0 | 3 | 38 | | | | | |
| 4500d1.43 | 1.43 | 9.0 | 3 | 38 | | | | | |
| 4500d1.44 | 1.44 | 9.0 | 3 | 38 | | | | | |
| 4500d1.45 | 1.45 | 9.0 | 3 | 38 | | | | | |
| 4500d1.46 | 1.46 | 9.0 | 3 | 38 | | | | | |
| 4500d1.47 | 1.47 | 9.0 | 3 | 38 | | | | | |
| 4500d1.48 | 1.48 | 9.0 | 3 | 38 | | | | | |
| 4500d1.49 | 1.49 | 9.0 | 3 | 38 | | | | | |
| 4500d1.50 | 1.50 | 9.0 | 3 | 38 | | | | | |

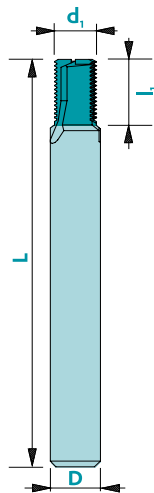
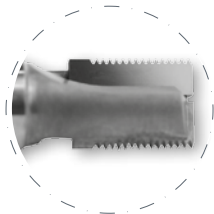


Other dimensions, CVD/CBN available upon request.

45200

PCD thread mill

Internal and external threading



Material

| | Vc | Uncoated |
|-------------------------------|-----|----------|
| Steel < 700 N/mm ² | - | - |
| Steel > 700 N/mm ² | - | - |
| Stainless steel | - | - |
| Cast iron | - | - |
| Copper | 150 | ■ |
| Brass - Bronze | 140 | ■ |
| Aluminium | 200 | ■ |
| Gold - Silver | 140 | ■ |
| Platinum - Palladium | 80 | ■ |
| Superalloys | - | - |
| Titanium | 40 | □ |

not adapted - adapted □ highly adapted ■

Tolerances

 $d_1 = +0/-0.1$
 D: h5
Z1-2 λ **0°** γ **0°****PCD****HSC**

| Art. n° | Ø nominal | Pitch | d_1 | l_1 | D | L | Z |
|------------|-----------|-------|-------|-------|---|----|---|
| 45200M2.00 | M2.00 | 0.40 | 1.40 | 4.0 | 3 | 38 | 1 |
| 45200M2.50 | M2.50 | 0.45 | 1.80 | 5.0 | 6 | 57 | 1 |
| 45200M3.00 | M3.00 | 0.50 | 2.30 | 6.0 | 6 | 57 | 1 |
| 45200M4.00 | M4.00 | 0.70 | 3.00 | 8.0 | 6 | 57 | 2 |
| 45200M5.00 | M5.00 | 0.80 | 3.80 | 10.0 | 6 | 57 | 2 |
| 45200M6.00 | M6.00 | 1.00 | 4.50 | 12.0 | 6 | 57 | 2 |
| 45200M8.00 | M8.00 | 1.25 | 5.00 | 16.0 | 6 | 57 | 2 |

Other dimensions, CVD/CBN available upon request.