

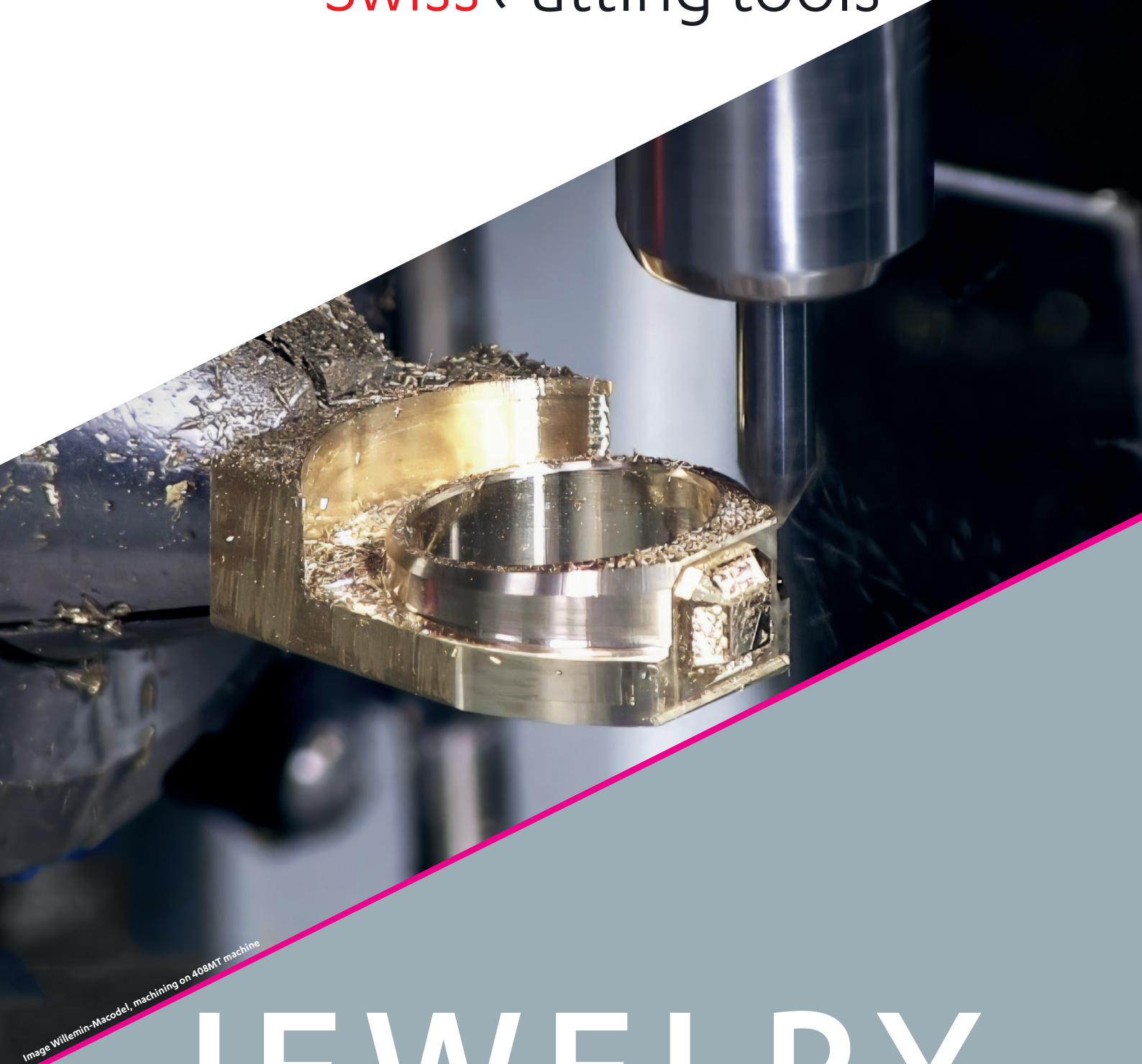


Image Willem-Macodel, machining on 408MT machine

JEWELRY

luxury accessories



SWISS MADE

PLATINUM

78

Pt

Platinum
195.08

46

Pd

Palladium
106.42

PALLADIUM

Milling

REF. 4010 - PCD end mill $l_1 = 1 \times d_1$



REF. 4200 - PCD end mill with ball end



REF. 4100 - T-slot cutter in PCD



Drilling

REF. 4500 - PCD twist drill - 2 teeth



REF. 353 - Twist drill Z3 (SUN coated)



Threading

REF. 45600 - PCD Whirling tools



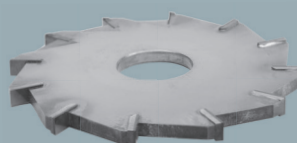
Engraving

REF. 4119-3 - Engraving mill in PCD - $\frac{3}{4}$



Sawing

PCD custom Slitting saw



Options :
(see p.10)



79

AuGold
196.97**GOLD****Milling****REF. 114-2** - End mill with ball end Z2**REF. 114-3** - End mill with ball end Z3**REF. 1510** - End mill Z3 $l_1=1x d_1$ **REF. 1520C01** - Ceramic end mill Z3 $l_1=2x d_1$
EXPERT gold**REF. 1120** - Multi-uses end mill**REF. 1430/1450** - Micro end mill for deep machining**Drilling****REF. 339** - Micro twist drill - helix 24°**REF. 340-1** - Twist drill - helix 24°**REF. 353** - Twist drill Z3**REF. 335** - Step drill**Engraving****REF. 119-2** - Helical engraving mill**REF. 4119-3** - Engraving mill in PCD - $\frac{3}{4}$ **Threading****REF. 5600** - Whirling tools Z3**Sawing****REF. 223-1** - Slitting saw DIN 1837 fine pitch**REF. 228-2** - Angle cutter 12° to 20°**Options :**
(see p.10)



SILVER

Milling

REF. 114-2 - End mill with ball end Z2



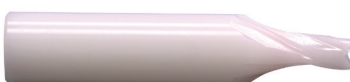
REF. 114-3 - End mill with ball end Z3



REF. 1510 - End mill Z3 $l_1=1xd_1$



REF. 1520C01 - Ceramic end mill Z3 $l_1=2xd_1$
EXPERT gold



REF. 1120 - Multi-uses end mill



Engraving

REF. 119-2 - Helical engraving mill



REF. 4119-3 - Engraving mill in PCD - $\frac{3}{4}$



Drilling

REF. 339 - Micro twist drill - helix 24°



REF. 340-1 - Twist drill - helix 24°



REF. 353 - Twist drill Z3



Threading

REF. 5600 - Whirling tools Z3



Sawing

REF. 223-1 - Slitting saw DIN 1837 fine pitch



REF. 228-2 - Angle cutter 12° to 20°



Options :
(see p.10)



22

Ti

Titanium
47.87

TITANIUM

Milling

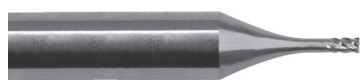
REF. 114-2 - End mill with ball end Z2



REF. 114-3 - End mill with ball end Z3



REF. 1430/1450 - Micro end mill for deep machining



REF. 104-0 - Finishing end mill Z3



REF. 3100 - EXPERT end mill titanium



REF. 1620F - End mill for superfine finishing



REF. 1120 - Multi-uses end mill



Engraving

REF. 119-3 - Engraving mill - 3/4



REF. 119-4 - Engraving mill V-shape



Drilling

REF. 353 - Micro-foret Z3



Threading

REF. 5600 - Whirling tools Z3



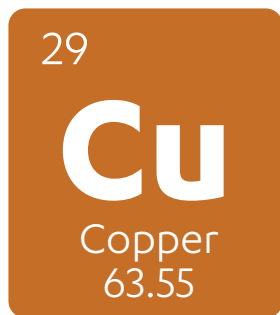
Sawing

REF. 226 - Slitting saw staggered teeth



REF. 228-2 - Angle cutter 12° to 20°

Options :
(see p.10)



+



BRASS LEAD-FREE BRASS

Milling

REF. 1820C01 - Ceramic EXPERT end mill for brass



REF. 1820 - EXPERT end mill for brass



REF. 114-2 - End mill with ball end Z2



REF. 114-3 - End mill with ball end Z3



REF. 4010 - PCD end mill $l_1 = l \times d_1$



Threading

REF. 5600 - Whirling tools Z3



REF. 45600 - PCD Whirling tools



Engraving

REF. 119-3 - Engraving mill - $\frac{3}{4}$



REF. 119-4 - Engraving mill V-shape



REF. 4119-3 - Engraving mill in PCD - $\frac{3}{4}$



Drilling

REF. 375 - EXPERT drill for brass



REF. 353 - Twist drill Z3



REF. 343 - Micro twist drill



Sawing

REF. 223-1 - Slitting saw DIN 1837 fine pitch



REF. 228-2 - Angle cutter 12° to 20°



Options :
(see p.10)



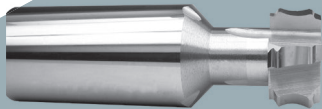
CUSTOM FORM TOOLS FOR ALL MATERIALS



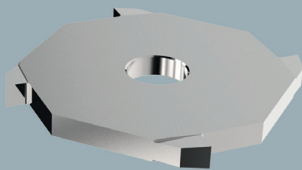
End mill



Step drill (1, 2 and 3 flutes)



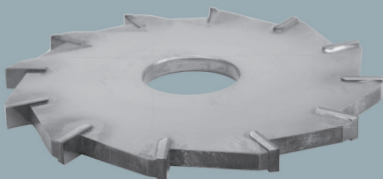
T-slot end mill



Polygon cutter



Thread mill

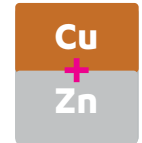
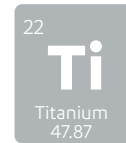
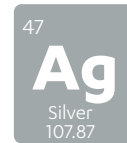
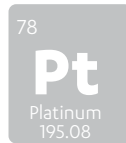


PCD Slitting saw



End mills with internal coolant

Material



Rec. Coating

SUN

SOLO

SOLO

MARC

SOLO

Tools

Page

Platinum /
Palladium

Gold

Silver

Titanium

Brass

REF. 104-0 - Finishing end mill Z3



11



REF. 114-2 - End mill with ball end Z2



12



REF. 114-3 - End mill with ball end Z3



13



REF. 1120 - Multi-uses end mills



14



REF. 1430-Micro end mill deep machining $l_2=3xd_1$



15



REF. 1450-Micro end mill deep machining $l_2=5xd_1$



16



REF. 1510 - End mill Z3 $l_1=1xd_1$



17-18



REF. 1520C01 - Ceramic end mill EXPERT gold



19



REF. 1620F - End mill for superfine finishing



20



REF. 1820 - EXPERT end mill for brass



21



REF. 1820C01 - Ceramic end mill EXPERT brass



22



REF. 3100 - EXPERT end mill titanium



23



REF. 4010 - PCD end mill $l_1=1xd_1$



24



REF. 4100 - T-slot cutter in PCD



25



REF. 4200 - PCD end mill with ball end

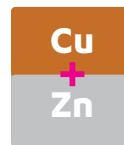


26-27



Milling

Material



Rec. Coating

SUN

SOLO

SOLO

MARC

SOLO

Tools

Page

Platinum /
Palladium

Gold

Silver

Titanium

Brass

Drilling

REF. 335 - Step drill



28



REF. 339 - Micro twist drill - helix 24°



29



REF. 340-1 - Twist drill - helix 24°



30-31



REF. 343 - Drill - helix 34°



32-33



REF. 353 - Twist drill Z3



34-36



REF. 375 - EXPERT drill for brass



37



REF. 4500 - PCD twist drill - 2 teeth



38-39



Sawing

REF. 223-1 - Slitting saw DIN 1837 fine pitch



41-46



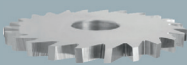
REF. 228-2 - Angle cutter 12° to 20°



47



REF. 226 - Slitting saw staggered teeth



48-49



Engraving

REF. 119-2 - Helical engraving mill - flat tip



50



REF. 119-3 - Engraving mill - 3/4 - flat tip



51



REF. 119-4 - Engraving mill V-shape



52



REF. 4119-3 - Engraving mill in PCD - 3/4



53



Threading

REF. 5600 - Whirling tools Z3



54



REF. 45600 - PCD Whirling tools



55



Options



C01

Ceramic (with beveled edge)

To order a ceramic tool, add the code "**C01**" after the part number.

Example: 104C01d0.50



H

Internal coolant

To order a tool with internal coolant, add the code "**H**" after the part number.

Example: 104Hd0.50



MCU
≤ ø3

Micro machining centre

To order a tool compatible with micro machining centres, add the code "**M**" before the part number.

Example: M104d0.50



701S
≤ ø3.2

701S

To order a WM701S-compatible tool, add the code "**7**" before the part number.

Example: 7104d0.50

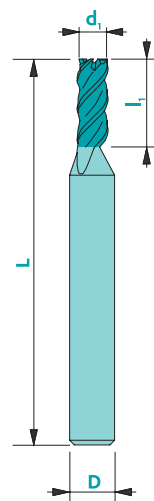
Finishing end mill Z3

104-0

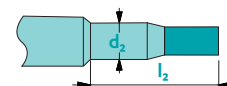
Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	80	100	□	■	Trio (PO)
Steel > 700 N/mm ²	60	80	□	■	Trio (PO)
Stainless steel	60	80	□	■	Tisi (BQ)
Cast iron	50	70	□	■	Nemo (NM)
Copper	80	100	□	■	Solo (DA)
Brass - Bronze	120	150	■	■	Solo (DA)
Aluminium	150	190	□	■	Solo (DA)
Gold - Silver	120	150	■	■	Solo (DA)
Platinum - Palladium	-	55	-	□	Sun (DG)
Superalloys	-	40	-	■	Tisi(BQ)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm} \rightarrow 0/-0.01$ $D: h5$
 $d_1 > 1 \text{ mm} \rightarrow 0/-0.02$
 $d_1 = D \rightarrow d_1: e8$



Upon request



Art. n°	d_1	l_1	D	L
---------	-------	-------	---	---

104-0d0.30	0.30	1.5	3	38
104-0d0.40	0.40	2.0	3	38
104-0d0.50	0.50	2.0	3	38
104-0d0.60	0.60	2.0	3	38
104-0d0.70	0.70	2.0	3	38
104-0d0.80	0.80	3.0	3	38
104-0d0.90	0.90	3.0	3	38
104-0d1.00	1.00	3.0	3	38
104-0d1.10	1.10	4.0	3	38
104-0d1.20	1.20	5.0	3	38
104-0d1.30	1.30	5.0	3	38
104-0d1.40	1.40	5.0	3	38
104-0d1.50	1.50	5.0	3	38
104-0d1.60	1.60	5.0	3	38
104-0d1.70	1.70	5.0	3	38
104-0d1.80	1.80	6.0	3	38
104-0d1.90	1.90	6.0	3	38
104-0d2.00	2.00	6.0	3	38
104-0d2.50	2.50	6.0	3	38
104-0d3.00	3.00	9.0	3	38
104-0d3.50	3.50	9.0	6	51
104-0d4.00	4.00	12.0	6	51
104-0d5.00	5.00	15.0	6	51
104-0d6.00	6.00	18.0	6	51
104-0d8.00	8.00	20.0	8	61
104-0d10.00	10.00	22.0	10	72
104-0d10.00	10.00	22.0	10	72
104-0d10.00	10.00	22.0	10	72

* Prices for coatings: contact us!
 To order a coated tool, add the 2-letter coating code to the article number

Available uncoated or coated



Z3



λ
45°

γ
8-10°

CARB



$$ap = 0.25 \times d_1 \quad ap = l_1 \text{ max.}$$

$$ae = \frac{d_1^2}{4 \times Ap}$$

If $d_1 \leq 0.5 \text{ mm}$, a double cone applies

Options

C01

H

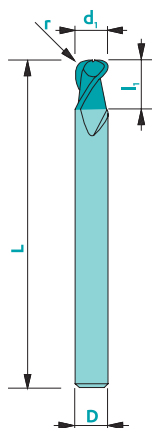
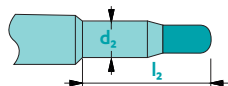
MCU
 $\leq \emptyset 3$

701S
 $\leq \emptyset 3.2$

End mill with ball end Z2



Upon request



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	80	100	□	■	Trio (PO)
Steel > 700 N/mm ²	60	80	□	■	Trio (PO)
Stainless steel	60	80	□	■	Tisi (BQ)
Cast iron	50	70	□	■	Nemo (NM)
Copper	80	100	□	■	Solo (DA)
Brass - Bronze	120	150	■	■	Solo (DA)
Aluminium	150	190	□	■	Solo (DA)
Gold - Silver	120	150	■	■	Solo (DA)
Platinum - Palladium	-	55	-	□	Sun (DG)
Superalloys	-	40	-	■	Tisi(BQ)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances

 $d_1 \leq 1 \text{ mm} \rightarrow 0/-0.01$
 $d_1 > 1 \text{ mm} \rightarrow 0/-0.02$
 $d_1 = D \rightarrow d_1 / r: e8$
 $+0/-0.01$
 $D: h5$
Available
uncoated or coated**Z2**
 λ
35°
 γ
8-10°
CARB $ap=0.25 \times d_1$ 
 $ap = l_1 \text{ max.}$
 $ae = \frac{d_1^2}{4 \times Ap}$

Art. n°	d_1	l_1	D	L	r
114-2d0.10	0.10	0.20	3	38	0.050
114-2d0.15	0.15	0.30	3	38	0.075
114-2d0.20	0.20	0.40	3	38	0.100
114-2d0.25	0.25	0.50	3	38	0.125
114-2d0.30	0.30	0.60	3	38	0.150
114-2d0.40	0.40	0.80	3	38	0.200
114-2d0.50	0.50	1.00	3	38	0.250
114-2d0.60	0.60	1.20	3	38	0.300
114-2d0.70	0.70	1.40	3	38	0.350
114-2d0.80	0.80	1.60	3	38	0.400
114-2d0.90	0.90	1.80	3	38	0.450
114-2d1.00	1.00	2.00	3	38	0.500
114-2d1.10	1.10	2.10	3	38	0.550
114-2d1.20	1.20	2.20	3	38	0.600
114-2d1.30	1.30	2.30	3	38	0.650
114-2d1.40	1.40	2.40	3	38	0.700
114-2d1.50	1.50	2.50	3	38	0.750
114-2d1.60	1.60	2.50	3	38	0.800

Art. n°	d_1	l_1	D	L	r
114-2d1.70	1.70	2.60	3	38	0.850
114-2d1.80	1.80	2.60	3	38	0.900
114-2d1.90	1.90	3.00	3	38	0.950
114-2d2.00	2.00	3.00	3	38	1.000
114-2d2.10	2.10	3.00	3	38	1.050
114-2d2.20	2.20	3.50	3	38	1.100
114-2d2.30	2.30	3.50	3	38	1.150
114-2d2.40	2.40	3.50	3	38	1.200
114-2d2.50	2.50	4.00	3	38	1.250
114-2d3.00	3.00	4.50	3	38	1.500
114-2d3.50	3.50	5.00	6	51	1.750
114-2d4.00	4.00	6.00	6	51	2.000
114-2d5.00	5.00	8.00	6	51	2.500
114-2d6.00	6.00	9.00	6	51	3.000
114-2d8.00	8.00	12.00	8	61	4.000
114-2d10.00	10.00	15.00	10	72	5.000
114-2d12.00	12.00	18.00	12	83	6.000

To order a coated tool, add the 2-letter coating code to the article number

If $d_1 \leq 0.5 \text{ mm}$, a double cone applies

Options

C01**MCU**
 $\leq \varnothing 3$ **701S**
 $\leq \varnothing 3.2$

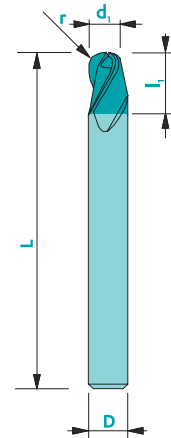
End mill with ball end Z3

114-3

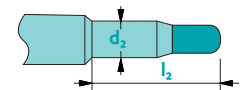
Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	80	100	□	■	Trio (PO)
Steel > 700 N/mm ²	60	80	□	■	Trio (PO)
Stainless steel	60	80	□	■	Tisi (BQ)
Cast iron	50	70	□	■	Nemo (NM)
Copper	80	100	□	■	Solo (DA)
Brass - Bronze	120	150	■	■	Solo (DA)
Aluminium	150	190	□	■	Solo (DA)
Gold - Silver	120	150	■	■	Solo (DA)
Platinum - Palladium	-	55	-	□	Sun (DG)
Superalloys	-	40	-	■	Tisi(BQ)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm}$ ▶ 0/-0.01
 $d_1 > 1 \text{ mm}$ ▶ 0/-0.02
 $d_1 = D$ ▶ $d_1/r: e8$
 D: h5
 +0/-0.01



Upon request



Art. n°	d ₁	L ₁	D	L	r
114-3d1.00	1.0	2.0	3	38	0.50
114-3d1.50	1.5	2.5	3	38	0.75
114-3d2.00	2.0	3.0	3	38	1.00
114-3d2.50	2.5	4.0	3	38	1.25
114-3d3.00	3.0	4.5	3	38	1.50
114-3d3.50	3.5	5.0	6	51	1.75
114-3d4.00	4.0	6.0	6	51	2.00
114-3d5.00	5.0	8.0	6	51	2.50
114-3d6.00	6.0	9.0	6	51	3.00
114-3d8.00	8.0	12.0	8	61	4.00
114-3d10.00	10.0	15.0	10	72	5.00
114-3d12.00	12.0	18.0	12	83	6.00
114-3d12.00	12.0	18.0	12	83	6.00

* Prices for coatings: contact us!
 To order a coated tool, add the 2-letter coating code to the article number

Available uncoated or coated



Z3



λ
30°

γ
8-10°

CARB



$$ap = 0.25 \times d_1$$

$$ap = l_1 \text{ max.}$$

$$ae = \frac{d_1^2}{4 \times ap}$$

Options

C01

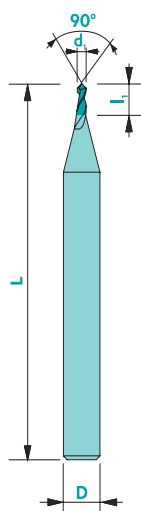
H

MCU
≤ Ø3

701S
≤ Ø3.2

1120

Multi-uses end mill



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm ²	100	130	□	■	Trio (PO)
Steel > 700 N/mm ²	80	100	-	■	Trio (PO)
Stainless steel	50	70	□	■	Trio (PO)
Cast iron	60	100	□	■	Nemo (NM)
Copper	130	160	□	■	Solo (DA)
Brass - Bronze	140	190	■	□	Solo (DA)
Aluminium	200	350	□	■	Solo (DA)
Gold - Silver	140	180	■	■	Solo (DA)
Platinum - Palladium	-	35	-	□	Sun (DG)
Superalloys	-	40	-	■	Solo (DA)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm} \rightarrow +0/-0.01$ $D: h5$
 $d_1 > 1 \text{ mm} \rightarrow +0/-0.02$
 $d_1 = D \rightarrow d_1: e8$

Available
uncoated or coated

Art. n°	d_1	l_1	D	L
1120d0.50	0.50	1.0	3	38
1120d0.60	0.60	1.2	3	38
1120d0.70	0.70	1.4	3	38
1120d0.80	0.80	1.6	3	38
1120d0.90	0.90	1.8	3	38
1120d1.00	1.00	2.0	3	38
1120d1.50	1.50	3.0	3	38
1120d2.00	2.00	4.0	3	38
1120d3.00	3.00	6.0	6	51
1120d4.00	4.00	8.0	6	51
1120d6.00	6.00	12.0	6	51



90°

Z2



λ
35°



γ
8-10°

MG10

N



$ap=0.25xd_1$



$ae=0.5xd_1$
 $ap=0.5xd_1$

Upon request



120°



60°

Options

C01



MCU
≤ Ø3

701S
≤ Ø3.2

Micro end mill for deep machining $l_2=3xd_1$

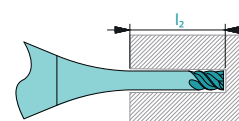
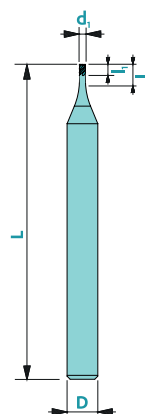
1430

Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	-	-	-	-	-
Steel > 700 N/mm ²	-	-	-	-	-
Stainless steel	-	40	-	■	Tisi (BQ)
Cast iron	-	-	-	-	-
Copper	-	-	-	-	-
Brass - Bronze	-	-	■	■	Solo (DA)
Aluminium	-	-	-	-	-
Gold - Silver	120	150	■	■	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Cobalt-chrome	-	100	-	■	Trio (PO)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted ■ highly adapted ■

Tolerances
 d_1 : 0/-0.01
 l_1 : +0.05/0
 l_2 : +0.2/0

D: h5
L: ±0.5



Art. n°	d_1	l_1	l_2	D	L	Z
1430d0.20	0.20	0.30	0.60	3.0	38	3
1430d0.25	0.25	0.38	0.75	3.0	38	3
1430d0.30	0.30	0.45	0.90	3.0	38	3
1430d0.35	0.35	0.52	1.05	3.0	38	4
1430d0.40	0.40	0.60	1.20	3.0	38	4
1430d0.45	0.45	0.68	1.35	3.0	38	4
1430d0.50	0.50	0.75	1.50	3.0	38	4
1430d0.60	0.60	0.90	1.80	3.0	38	4
1430d0.70	0.70	1.05	2.10	3.0	38	4
1430d0.80	0.80	1.20	2.40	3.0	38	4
1430d0.90	0.90	1.35	2.70	3.0	38	4
1430d1.00	1.00	1.50	3.00	3.0	38	4

* Prices for coatings: contact us!
To order a coated tool, add the 2-letter coating code to the article number

Available
uncoated or coated



Z3-4



λ
45°

γ
14°

CARB



$pas=0.8xd_1$

$ap= l_1 \max.$

$ae= \frac{d_1^2}{4xAp}$

If $d_1 \leq 0.5$ mm, a double cone applies

Options

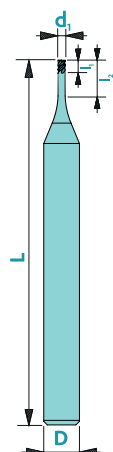
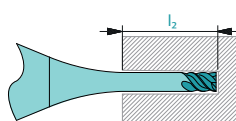
C01

MCU
≤ Ø3

701S
≤ Ø3.2

1450

Micro end mill for deep machining $l_2=5d_1$



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	-	-	-	-	-
Steel > 700 N/mm ²	-	-	-	-	-
Stainless steel	-	40	-	■	Tisi (BQ)
Cast iron	-	-	-	-	-
Copper	-	-	-	-	-
Brass - Bronze	-	-	■	■	Solo (DA)
Aluminium	-	-	-	-	-
Gold - Silver	120	150	■	■	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Cobalt-chrome	-	100	-	■	Trio (PO)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted ■ highly adapted ■

Tolerances

d_1 : 0/-0.01
 l_1 : +0.05/0
 l_2 : +0.2/0

D: h5
 L: ±0.5

Available
uncoated or coated



Z3-4



λ
45°

γ
14°

CARB



$pas=0.8 \times d_1$



$ap= l_1 \max.$
 $ae= \frac{d_1^2}{4 \times Ap}$

If $d_1 \leq 0.5$ mm, a double cone applies

Art. n°	d_1	l_1	l_2	D	L	Z
1450d0.20	0.20	0.30	1.00	3.0	38	3
1450d0.25	0.25	0.38	1.25	3.0	38	3
1450d0.30	0.30	0.45	1.50	3.0	38	3
1450d0.35	0.35	0.52	1.75	3.0	38	4
1450d0.40	0.40	0.60	2.00	3.0	38	4
1450d0.45	0.45	0.68	2.25	3.0	38	4
1450d0.50	0.50	0.75	2.50	3.0	38	4
1450d0.60	0.60	0.90	3.00	3.0	38	4
1450d0.70	0.70	1.05	3.50	3.0	38	4
1450d0.80	0.80	1.20	4.00	3.0	38	4
1450d0.90	0.90	1.35	4.50	3.0	38	4
1450d1.00	1.00	1.50	5.00	3.0	38	4

* Prices for coatings: contact us!

To order a coated tool, add the 2-letter coating code to the article number

Options

C01

MCU
≤ Ø3

701S
≤ Ø3.2

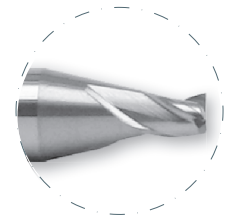
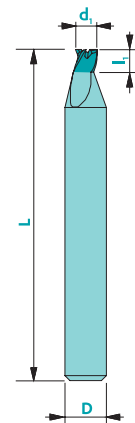
End mill Z3 $l_1=1 \times d_1$

1510

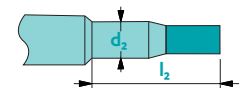
Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	80	100	□	■	Trio (PO)
Steel > 700 N/mm ²	60	80	□	■	Trio (PO)
Stainless steel	60	80	□	■	Tisi (BQ)
Cast iron	50	70	□	■	Nemo (NM)
Copper	80	100	□	■	Solo (DA)
Brass - Bronze	120	150	■	■	Solo (DA)
Aluminium	150	190	□	■	Solo (DA)
Gold - Silver	120	150	■	■	Solo (DA)
Platinum - Palladium	-	55	-	□	Sun (DG)
Superalloys	-	40	-	■	Tisi (BQ)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm}$ ▶ 0/-0.01 $D: h5$
 $d_1 > 1 \text{ mm}$ ▶ 0/-0.02
 $d_1 = D$ ▶ $d_1: e8$



Upon request



Art. n°	d_1	l_1	D	L
1510d0.30	0.30	0.30	3	38
1510d0.35	0.35	0.35	3	38
1510d0.40	0.40	0.40	3	38
1510d0.45	0.45	0.45	3	38
1510d0.50	0.50	0.50	3	38
1510d0.55	0.55	0.55	3	38
1510d0.60	0.60	0.60	3	38
1510d0.65	0.65	0.65	3	38
1510d0.70	0.70	0.70	3	38
1510d0.75	0.75	0.75	3	38
1510d0.80	0.80	0.80	3	38
1510d0.85	0.85	0.85	3	38
1510d0.90	0.90	0.90	3	38
1510d0.95	0.95	0.95	3	38
1510d1.00	1.00	1.00	3	38
1510d1.05	1.05	1.05	3	38
1510d1.10	1.10	1.10	3	38
1510d1.15	1.15	1.15	3	38
1510d1.20	1.20	1.20	3	38
1510d1.25	1.25	1.25	3	38
1510d1.30	1.30	1.30	3	38
1510d1.35	1.35	1.35	3	38
1510d1.40	1.40	1.40	3	38
1510d1.45	1.45	1.45	3	38
1510d1.50	1.50	1.50	3	38
1510d1.55	1.55	1.55	3	38
1510d1.60	1.60	1.60	3	38
1510d1.65	1.65	1.65	3	38
1510d1.70	1.70	1.70	3	38
1510d1.75	1.75	1.75	3	38
1510d1.80	1.80	1.80	3	38

Art. n°	d_1	l_1	D	L
1510d1.85	1.85	1.85	3	38
1510d1.90	1.90	1.90	3	38
1510d1.95	1.95	1.95	3	38
1510d2.00	2.00	2.00	3	38
1510d2.05	2.05	2.05	3	38
1510d2.10	2.10	2.10	3	38
1510d2.15	2.15	2.15	3	38
1510d2.20	2.20	2.20	3	38
1510d2.25	2.25	2.25	3	38
1510d2.30	2.30	2.30	3	38
1510d2.35	2.35	2.35	3	38
1510d2.40	2.40	2.40	3	38
1510d2.45	2.45	2.45	3	38
1510d2.50	2.50	2.50	3	38
1510d2.55	2.55	2.55	3	38
1510d2.60	2.60	2.60	3	38
1510d2.65	2.65	2.65	3	38
1510d2.70	2.70	2.70	3	38
1510d2.75	2.75	2.75	3	38
1510d2.80	2.80	2.80	3	38
1510d2.85	2.85	2.85	3	38
1510d2.90	2.90	2.90	3	38
1510d2.95	2.95	2.95	3	38
1510d3.00	3.00	3.00	6	51
1510d3.10	3.10	3.10	6	51
1510d3.20	3.20	3.20	6	51
1510d3.30	3.30	3.30	6	51
1510d3.40	3.40	3.40	6	51
1510d3.50	3.50	3.50	6	51
1510d3.60	3.60	3.60	6	51
1510d3.70	3.70	3.70	6	51

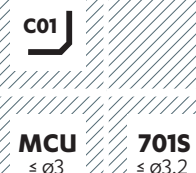
Available uncoated or coated



$$ap = 0.25 \times d_1 \quad ap = l_1 \max. \quad ae = \frac{d_1^2}{4 \times Ap}$$

If $d_1 \leq 0.5 \text{ mm}$, a double cone applies

Options



To order a coated tool, add the 2-letter coating code to the article number



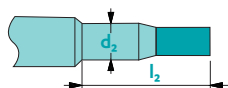
1510

Continuation

End mill Z3 $l_1=1 \times d_1$



Upon request



Available
uncoated or coated



Z3



λ
30°

γ
8-10°

CARB



$$ap=0.25 \times d_1$$



$$ap= l_1 \text{ max.}$$

$$ae= \frac{d_1^2}{4 \times Ap}$$

Art. n°	d_1	l_1	D	L
1510d3.80	3.80	3.80	6	51
1510d3.90	3.90	3.90	6	51
1510d4.00	4.00	4.00	6	51
1510d4.10	4.10	4.10	6	51
1510d4.20	4.20	4.20	6	51
1510d4.30	4.30	4.30	6	51
1510d4.40	4.40	4.40	6	51
1510d4.50	4.50	4.50	6	51
1510d4.60	4.60	4.60	6	51
1510d4.70	4.70	4.70	6	51
1510d4.80	4.80	4.80	6	51
1510d4.90	4.90	4.90	6	51
1510d5.00	5.00	5.00	6	51
1510d5.10	5.10	5.10	6	51
1510d5.20	5.20	5.20	6	51
1510d5.30	5.30	5.30	6	51
1510d5.40	5.40	5.40	6	51
1510d5.50	5.50	5.50	6	51
1510d5.60	5.60	5.60	6	51
1510d5.70	5.70	5.70	6	51
1510d5.80	5.80	5.80	6	51
1510d5.90	5.90	5.90	6	51
1510d6.00	6.00	6.00	6	51
1510d6.50	6.50	6.50	8	61
1510d7.00	7.00	7.00	8	61
1510d7.50	7.50	7.50	8	61
1510d8.00	8.00	8.00	8	61
1510d8.50	8.50	8.50	10	72
1510d9.00	9.00	9.00	10	72
1510d9.50	9.50	9.50	10	72
1510d10.00	10.00	10.00	10	72
1510d11.00	11.00	11.00	11	83
1510d12.00	12.00	12.00	12	83
1510d13.00	13.00	13.00	13	83
1510d14.00	14.00	14.00	14	83
1510d15.00	15.00	15.00	15	83
1510d16.00	16.00	16.00	16	92

To order a coated tool, add the 2-letter coating code to the article number

Options

C01

MCU
≤ Ø3

701S
≤ Ø3.2

Ceramic end mill Z3 $l_1=2 \times d_1$ EXPERT gold



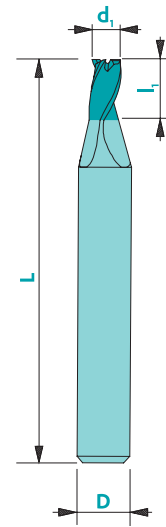
1520C01

Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Composite	-	-	-	-	-
Steel < 700 N/mm ²	-	-	-	-	-
Steel > 700 N/mm ²	-	-	-	-	-
Stainless steel	-	-	-	-	-
Cast iron	-	-	-	-	-
Copper	150-500	-	■	-	-
Brass - Bronze	250	-	■	-	-
Aluminium	100-200	-	■	-	-
Gold - Silver	200	-	■	-	-
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	-	-	-	-	-

not adapted - adapted ■ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm}$ ► 0/-0.01
 $d_1 > 1 \text{ mm}$ ► 0/-0.02

D: h5



Art. n°	d_1	l_1	D	L
1520C01d0.50	0.50	1.00	3	38
1520C01d0.80	0.80	1.60	3	38
1520C01d1.00	1.00	2.00	3	38
1520C01d1.50	1.50	3.00	3	38
1520C01d2.00	2.00	4.00	3	38
1520C01d3.00	3.00	5.00	6	51

Available
uncoated



Z3



λ
30°

γ
8-10°

C01



$$ap=0.25 \times d_1$$

$$ap= l_1 \text{ max.}$$

$$ae= \frac{d_1^2}{4 \times Ap}$$

If $d_1 \leq 0.5 \text{ mm}$, a double cone applies

Options

MCU
 $\leq \varnothing 3$

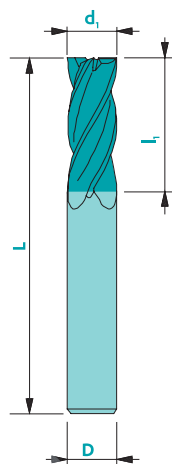
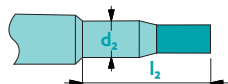
701S
 $\leq \varnothing 3.2$

1620F

End mill for superfine finishing



Upon request



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	-	-	-	-	-
Steel > 700 N/mm ²	-	-	-	-	-
Stainless steel	-	100	-	■	Tisi (BQ)
Cast iron	-	-	-	-	-
Copper	-	-	-	-	-
Brass - Bronze	-	-	-	■	Tisi (BQ)
Aluminium	-	-	-	-	-
Gold - Silver	-	-	-	■	Tisi (BQ)
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	-	60	-	■	Tisi (BQ)

not adapted - adapted ■ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm} \rightarrow 0/-0.01$
 $d_1 > 1 \text{ mm} \rightarrow 0/-0.02$
 $d_1 = D \rightarrow d_1 : e8$

D: h5

Available
coated only

└ Z4



λ
35-40°

γ
8°

CARB



$ap = l_1 \text{ max.}$
 $ae = \frac{d_1^2}{4xAp}$

Art. n°	d_1	l_1	D	L
1620Fd2.00BQ	2.0	4	6	51
1620Fd3.00BQ	3.0	6	6	51
1620Fd4.00BQ	4.0	8	6	51
1620Fd5.00BQ	5.0	10	6	51
1620Fd6.00BQ	6.0	12	6	51
1620Fd8.00BQ	8.0	16	8	61
1620Fd10.00BQ	10.0	20	10	72
1620Fd12.00BQ	12.0	24	12	83

To order a coated tool, add the 2-letter coating code to the article number

Options

MCU
≤ Ø3

701S
≤ Ø3.2

EXPERT end mill for brass - spiral toothing

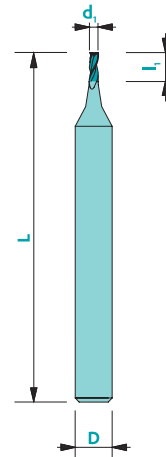


1820

Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	-	-	-	-	-
Steel > 700 N/mm ²	-	-	-	-	-
Stainless steel	-	-	-	-	-
Cast iron	-	-	-	-	-
Copper	-	-	-	-	-
Brass - Bronze	140	190	■	□	Solo (DA)
Aluminium	-	-	-	-	-
Gold - Silver	-	-	□	□	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	-	-	-	■	Marc (ME)

not adapted - adapted □ highly adapted ■

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



Art. n°	d_1	l_1	D	L
1820d0.50	0.50	1.00	4	38
1820d0.80	0.80	1.60	4	38
1820d1.00	1.00	2.00	4	38
1820d1.50	1.50	3.00	4	38
1820d2.00	2.00	4.00	4	38
1820d3.00	3.00	5.00	4	38

Other dimensions available upon request

* Prices for coatings: contact us!
 To order a coated tool, add the 2-letter coating code to the article number

Available uncoated or coated



Z3



λ
30°

γ
4°

CARB



$$ap = 0.25 \times d_1$$

$$ap = l_1 \max. \\ ae = \frac{d_1^2}{4 \times Ap}$$

If $d_1 \leq 0.5 \text{ mm}$, a double cone applies

Options

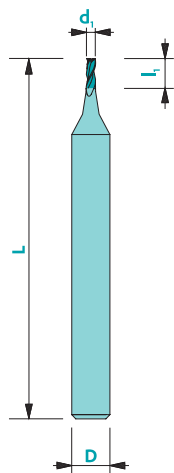


MCU
≤ Ø3

701S
≤ Ø3.2

1820C01

Ceramic end mill EXPERT brass



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Composite	-	-	-	-	-
Steel < 700 N/mm²	-	-	-	-	-
Steel > 700 N/mm²	-	-	-	-	-
Stainless steel	-	-	-	-	-
Cast iron	-	-	-	-	-
Copper	-	-	-	-	-
Brass - Bronze	150-500	-	■	-	-
Aluminium	-	-	-	-	-
Gold - Silver	100-200	-	■	-	-
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	-	-	-	-	-

not adapted - adapted ■ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm} \rightarrow 0/-0.01$ $D: h5$
 $d_1 > 1 \text{ mm} \rightarrow 0/-0.02$

Available
uncoated



0.02-0.05

Z3



λ
30°

γ
4°

C01



$$ap = 0.25 \times d_1$$



$$ap = l_1 \max. \frac{d_1^2}{4 \times ap}$$

If $d_1 \leq 0.5 \text{ mm}$, a double
cone applies

Art. n°	d_1	l_1	D	L
1820C01d0.50	0.50	1.00	4	38
1820C01d0.80	0.80	1.60	4	38
1820C01d1.00	1.00	2.00	4	38
1820C01d1.50	1.50	3.00	4	38
1820C01d2.00	2.00	4.00	4	38
1820C01d3.00	3.00	5.00	4	38

Options

MCU
 $\leq \varnothing 3$

701S
 $\leq \varnothing 3.2$

EXPERT end mill titanium

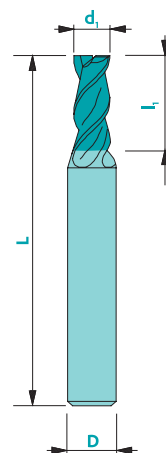


3100

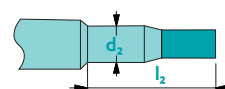
Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	-	-	-	-	-
Steel > 700 N/mm ²	-	-	-	-	-
Stainless steel	-	-	-	-	-
Cast iron	-	-	-	-	-
Copper	-	-	-	-	-
Brass - Bronze	-	-	-	-	-
Aluminium	-	-	-	-	-
Gold - Silver	-	-	-	-	-
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted ■ highly adapted ■

Tolerances $d_1 \leq 1 \text{ mm} \rightarrow 0/-0.01$
 $d_1 > 1 \text{ mm} \rightarrow 0/-0.02$
 $d_1 = D \rightarrow d_1: e8$ D: h5



Upon request



Art. n°	d_1	l_1	D	L	Z
3100d0.50	0.5	1.0	6	57	3
3100d0.60	0.6	1.2	6	57	3
3100d0.70	0.7	1.4	6	57	3
3100d0.80	0.8	1.6	6	57	3
3100d0.90	0.9	1.8	6	57	3
3100d1.00	1.0	2.0	6	57	3
3100d1.10	1.1	2.2	6	57	3
3100d1.20	1.2	2.4	6	57	3
3100d1.30	1.3	2.6	6	57	3
3100d1.40	1.4	2.8	6	57	3
3100d1.50	1.5	3.0	6	57	3
3100d1.60	1.6	3.2	6	57	3
3100d1.70	1.7	3.4	6	57	3
3100d1.80	1.8	3.6	6	57	3
3100d1.90	1.9	3.8	6	57	3
3100d2.00	2.0	4.0	6	57	3
3100d2.10	2.1	4.2	6	57	3
3100d2.20	2.2	4.4	6	57	3
3100d2.30	2.3	4.6	6	57	3
3100d2.40	2.4	4.8	6	57	3
3100d2.50	2.5	5.0	6	57	3
3100d2.60	2.6	5.2	6	57	3
3100d2.70	2.7	5.4	6	57	3
3100d2.80	2.8	5.6	6	57	3

Art. n°	d_1	l_1	D	L	Z
3100d2.90	2.9	5.8	6	57	3
3100d3.00	3.0	6.0	6	57	3
3100d3.50	3.5	7.0	6	57	3
3100d4.00	4.0	8.0	6	57	3
3100d5.00	5.0	10.0	6	57	3
3100d6.00	6.0	12.0	8	63	3
3100d8.00	8.0	16.0	8	63	3
3100d10.00	10.0	20.0	10	72	4
3100d12.00	12.0	24.0	12	83	4

Available uncoated or coated



Z3-4



λ
45°

γ
8°

CARB



$$ap = 0.25 \times d_1 \quad ap = l_1 \text{ max.}$$

$$ae = \frac{d_1^2}{4 \times \lambda}$$

If $d_1 \leq 0.5 \text{ mm}$, a double cone applies

* Prices for coatings: contact us!
 To order a coated tool, add the 2-letter coating code to the article number

Options



MCU
 $\leq \varnothing 3$

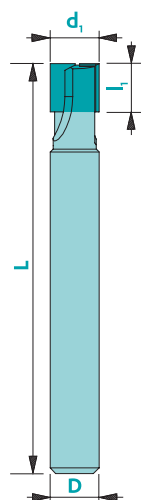
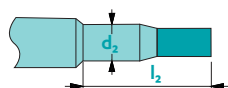
701S
 $\leq \varnothing 3.2$

4010

PCD end mill $l_1=1xd_1$



Upon request



Material

Steel < 700 N/mm²

Steel > 700 N/mm²

Stainless steel

Cast iron

Copper

Brass - Bronze

Aluminium

Gold - Silver

Platinum - Palladium

Superalloys

Titanium

Composite

Vc [m/min]

Uncoated

not adapted - adapted ■ highly adapted ■

Tolerances

$d_1 < 1 \text{ mm}$ ▶ 0/-0.01

$d_1 > 1 \text{ mm}$ ▶ 0/-0.02

$l_1: +0.2/-0$

D: h5

Available
uncoated only



Z1-2



λ
0°



γ
0°

PCD



$ap=0.15xd_1$



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

If $d_1 \leq 0.5 \text{ mm}$, a double
cone applies

Options



0.03-0.20



0.05-2.00



MCU

$\leq \varnothing 3$

701S

$\leq \varnothing 6$

Art. n°	d_1	l_1	D	L	Z
4010d0.20L38Z1	0.2	0.2	6	38	1
4010d0.30L38Z1	0.3	0.3	6	38	1
4010d0.40L38Z1	0.4	0.4	6	38	1
4010d0.40L38Z2	0.4	0.4	6	38	2
4010d0.50L38Z1	0.5	0.5	6	38	1
4010d0.50L38Z2	0.5	0.5	6	38	2
4010d0.60L38Z1	0.6	0.6	6	38	1
4010d0.60L38Z2	0.6	0.6	6	38	2
4010d0.70L38Z1	0.7	0.7	6	38	1
4010d0.70L38Z2	0.7	0.7	6	38	2
4010d0.80L38Z1	0.8	0.8	6	38	1
4010d0.80L38Z2	0.8	0.8	6	38	2
4010d0.90L38Z1	0.9	0.9	6	38	1
4010d0.90L38Z2	0.9	0.9	6	38	2
4010d1.00L38Z1	1.0	1.0	6	38	1
4010d1.00L38Z2	1.0	1.0	6	38	2
4010d1.50L38Z1	1.5	1.5	6	38	1
4010d1.50L38Z2	1.5	1.5	6	38	2
4010d2.00L38Z1	2.0	2.0	6	38	1
4010d2.00L38Z2	2.0	2.0	6	38	2
4010d2.50L38Z1	2.5	2.5	6	38	1
4010d2.50L38Z2	2.5	2.5	6	38	2
4010d3.00L38Z1	3.0	3.0	6	38	1
4010d3.00L38Z2	3.0	3.0	6	38	2
4010d3.50L38Z1	3.5	3.5	6	38	1
4010d3.50L38Z2	3.5	3.5	6	38	2
4010d4.00L51Z1	4.0	4.0	6	51	1
4010d4.00L51Z2	4.0	4.0	6	51	2
4010d5.00L51Z1	5.0	5.0	6	51	1

Art. n°	d_1	l_1	D	L	Z
4010d5.00L51Z2	5.0	5.0	6	51	2
4010d6.00L51Z1	6.0	6.0	6	51	1
4010d6.00L51Z2	6.0	6.0	6	51	2
4010d7.00L61Z1	7.0	7.0	8	61	1
4010d7.00L61Z2	7.0	7.0	8	61	2
4010d8.00L61Z1	8.0	8.0	8	61	1
4010d8.00L61Z2	8.0	8.0	8	61	2
4010d8.00L120Z1	8.0	8.0	8	120	1
4010d8.00L120Z2	8.0	8.0	8	120	2
4010d10.00L72Z1	10.0	10.0	10	72	1
4010d10.00L72Z2	10.0	10.0	10	72	2
4010d10.00L120Z1	10.0	10.0	10	120	1
4010d10.00L120Z2	10.0	10.0	10	120	2
4010d12.00L83Z1	12.0	12.0	12	83	1
4010d12.00L83Z2	12.0	12.0	12	83	2
4010d12.00L150Z1	12.0	12.0	12	150	1
4010d12.00L150Z2	12.0	12.0	12	150	2
4010d14.00L83Z1	14.0	14.0	14	83	1
4010d14.00L83Z2	14.0	14.0	14	83	2
4010d14.00L150Z1	14.0	14.0	14	150	1
4010d14.00L150Z2	14.0	14.0	14	150	2
4010d16.00L92Z1	16.0	16.0	16	92	1
4010d16.00L92Z2	16.0	16.0	16	92	2
4010d16.00L180Z1	16.0	16.0	16	180	1
4010d16.00L180Z2	16.0	16.0	16	180	2
4010d20.00L104Z1	20.0	20.0	20	104	1
4010d20.00L104Z2	20.0	20.0	20	104	2
4010d20.00L180Z1	20.0	20.0	20	180	1
4010d20.00L180Z2	20.0	20.0	20	180	2

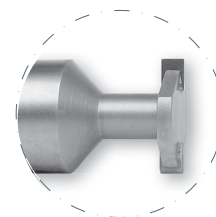
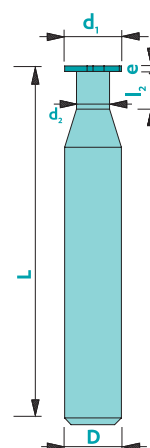
d_1 possible every 0.1 mm, other dimensions, CVD/CBN available upon request.

$d_1 \leq 1.0 \text{ mm}$: Z2 possible in «PCD Monobloc» instead of soldered inserts

T-slot cutter in PCD

Material	Vc [m/min]	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	-	-
Composite	500	■

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 $d_2: 0/-0.1$ D: h5

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

Available
uncoated only



Z1-2



λ
0°

γ
0°

PCD

☐ 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 : $\varnothing 3 \times L 38$, $\varnothing 4 \times L 38$, $\varnothing 6 \times L 38$, $\varnothing 6 \times L 51$, $\varnothing 8 \times L 61$, $\varnothing 10 \times L 72$, $\varnothing 12 \times L 83$, $\varnothing 16 \times L 92$, $\varnothing 20 \times L 104$

d_1 possible every 0.1 mm, other dimensions, CVD/CBN available upon request.

Options

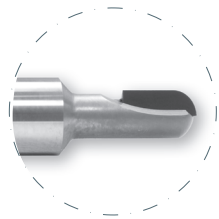


MCU
≤ $\varnothing 3$

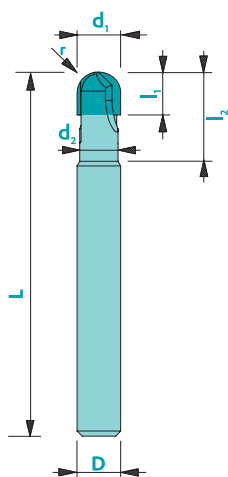
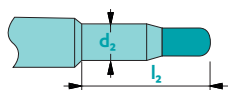
701S
≤ $\varnothing 6$

4200

PCD end mill with ball end



Upon request



Material

Steel < 700 N/mm²

Steel > 700 N/mm²

Stainless steel

Cast iron

Copper

Brass - Bronze

Aluminium

Gold - Silver

Platinum - Palladium

Superalloys

Titanium

Composite

Vc [m/min]

Uncoated

not adapted - adapted ■ highly adapted ■

Tolerances

$d_1 < 1 \text{ mm}$ ▶ 0/-0.01

$d_1 > 1 \text{ mm}$ ▶ 0/-0.02

0/-0.01

D: h5

Available
uncoated only



Z1-Z2



λ
0°

γ
0°

PCD



ae=0.1xd₁
ap=0.1xd₁

$d_1 \leq 1.0 \text{ mm}$: Z2 possible in
«PCD Monobloc» instead
of soldered inserts

Options



MCU
≤ Ø3

701S
≤ Ø6

Art. n°	d ₁	l ₁	r	d ₂	l ₂	D	L	Z
4200d0.30L38Z1	0.30	0.30	0.15	-	-	6	38	1
4200d0.40L38Z1	0.40	0.40	0.20	-	-	6	38	1
4200d0.50L38Z1	0.50	0.50	0.25	-	-	6	38	1
4200d0.50L38Z2	0.50	0.50	0.25	-	-	6	38	2
4200d0.60L38Z1	0.60	0.60	0.30	-	-	6	38	1
4200d0.60L38Z2	0.60	0.60	0.30	-	-	6	38	2
4200d0.70L38Z1	0.70	0.70	0.35	-	-	6	38	1
4200d0.70L38Z2	0.70	0.70	0.35	-	-	6	38	2
4200d0.80L38Z1	0.80	0.80	0.40	-	-	6	38	1
4200d0.80L38Z2	0.80	0.80	0.40	-	-	6	38	2
4200d0.90L38Z1	0.90	0.90	0.45	-	-	6	38	1
4200d0.90L38Z2	0.90	0.90	0.45	-	-	6	38	2
4200d1.00L38Z1	1.00	1.00	0.50	-	-	6	38	1
4200d1.00L38Z2	1.00	1.00	0.50	-	-	6	38	2
4200d1.50L38Z1	1.50	1.50	0.75	-	-	6	38	1
4200d1.50L38Z2	1.50	1.50	0.75	-	-	6	38	2
4200d2.00L38Z1	2.00	2.00	1.00	1.75	6.50	6	38	1
4200d2.00L38Z2	2.00	2.00	1.00	1.75	6.50	6	38	2
4200d2.50L38Z1	2.50	2.50	1.25	2.20	7.50	6	38	1
4200d2.50L38Z2	2.50	2.50	1.25	2.20	7.50	6	38	2
4200d3.00L38Z1	3.00	3.00	1.50	2.60	8.00	6	38	1
4200d3.00L38Z2	3.00	3.00	1.50	2.60	8.00	6	38	2
4200d3.50L38Z1	3.50	3.50	1.75	3.00	9.00	6	38	1
4200d3.50L38Z2	3.50	3.50	1.75	3.00	9.00	6	38	2
4200d4.00L51Z1	4.00	4.00	2.00	3.50	10.00	6	51	1
4200d4.00L51Z2	4.00	4.00	2.00	3.50	10.00	6	51	2
4200d5.00L51Z1	5.00	5.00	2.50	4.40	11.00	6	51	1
4200d5.00L51Z2	5.00	5.00	2.50	4.40	11.00	6	51	2

PCD end mill with ball end

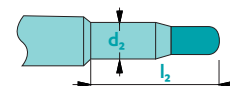
4200

Continuation

Art. n°	d ₁	l ₁	r	d ₂	l ₂	D	L	Z
4200d6.00L51Z1	6.00	6.00	3.00	5.25	12.50	6	51	1
4200d6.00L51Z2	6.00	6.00	3.00	5.25	12.50	6	51	2
4200d8.00L61Z1	8.00	8.00	4.00	7.00	15.00	8	61	1
4200d8.00L61Z2	8.00	8.00	4.00	7.00	15.00	8	61	2
4200d8.00L120Z1	8.00	8.00	4.00	7.00	15.00	8	120	1
4200d8.00L120Z2	8.00	8.00	4.00	7.00	15.00	8	120	2
4200d10.00L72Z1	10.00	10.00	5.00	8.75	17.00	10	72	1
4200d10.00L72Z2	10.00	10.00	5.00	8.75	17.00	10	72	2
4200d10.00L120Z1	10.00	10.00	5.00	8.75	17.00	10	120	1
4200d10.00L120Z2	10.00	10.00	5.00	8.75	17.00	10	120	2
4200d12.00L83Z1	12.00	12.00	6.00	10.50	20.00	12	83	1
4200d12.00L83Z2	12.00	12.00	6.00	10.50	20.00	12	83	2
4200d12.00L150Z1	12.00	12.00	6.00	10.50	20.00	12	150	1
4200d12.00L150Z2	12.00	12.00	6.00	10.50	20.00	12	150	2



Upon request



Available
uncoated only



Z1-2



λ
0°

γ
0°

PCD



ae=0.1xd₁
ap=0.1xd₁

Options

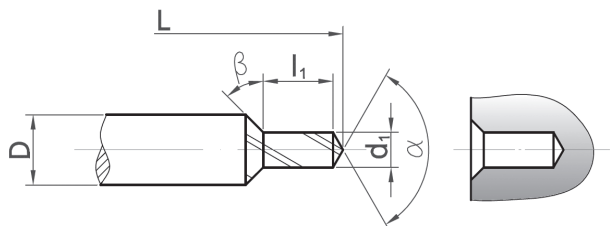


MCU
≤ Ø3

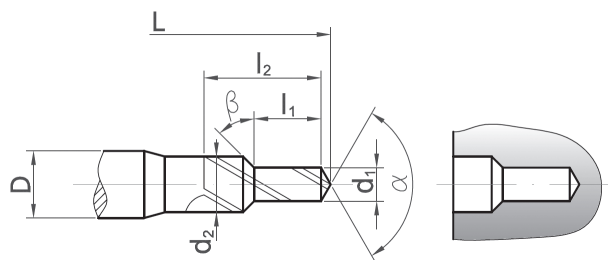
701S
≤ Ø6

Step drill in solid carbide

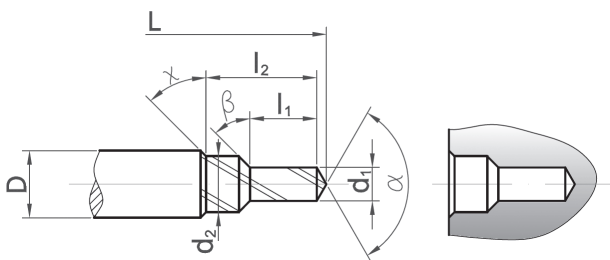
Type A



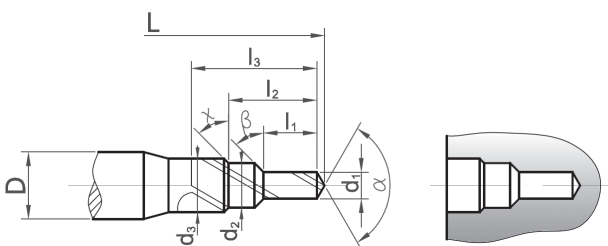
Type B



Type C



Type D



☐ Order		☐ Quotation request	
☐ Type A		☐ Type B	
☐ Type C		☐ Type D	
Dimensions : D : _____ L : _____ α : _____ d ₁ : _____ l ₁ : _____ β : _____ d ₂ : _____ l ₂ : _____ X : _____ d ₃ : _____ l ₃ : _____ Z : ☐ 1 ☐ 2 ☐ 3		Helix angle : ☐ 24° for brass and steel ☐ 34° for stainless steel, synthetic and aluminium Coolant holes ? ☐ Yes ☐ No	
Quantity : _____		Coating : ☐ Uncoated ☐ Coated * : _____	
Machined material : _____		Order No : _____	
☐ MCU $\leq \varnothing 3$ ☐ 701S $\leq \varnothing 6$		Company's stamp & date : _____	
Contact person : _____			

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

* Without information, the most suitable Coating will be applied.

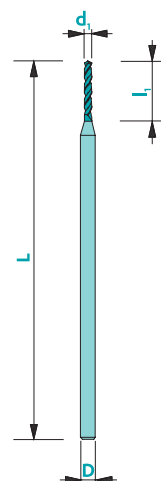
Micro twist drill - helix 24°

339

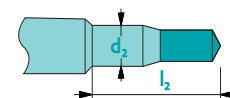
Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	70	80	□	■	Tisi (BQ)
Steel > 700 N/mm ²	60	70	□	■	Tisi (BQ)
Stainless steel	20	40	□	□	Tisi (BQ)
Cast iron	60	70	□	■	Tisi (BQ)
Copper	100	130	□	□	Solo (DA)
Brass - Bronze	80	120	■	■	Solo (DA)
Aluminium	100	120	□	■	Solo (DA)
Gold - Silver	80	100	■	■	Solo (DA)
Platinum - Palladium	-	20	-	□	Sun (DG)
Superalloys	-	25	-	■	Trio (PO)
Titanium	40	60	□	□	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances
 d_1 : -0.002/-0.004
D: h5



Upon request



Art. n°	d_1	L_1	D	L
339d0.05	0.05	0.35	1	30
339d0.06	0.06	0.40	1	30
339d0.07	0.07	0.50	1	30
339d0.08	0.08	0.60	1	30
339d0.09	0.09	0.65	1	30
339d0.10	0.10	0.70	1	30
339d0.11	0.11	0.70	1	30
339d0.12	0.12	0.70	1	30
339d0.13	0.13	0.70	1	30
339d0.14	0.14	0.70	1	30
339d0.15	0.15	1.00	1	30
339d0.16	0.16	1.00	1	30
339d0.17	0.17	1.00	1	30
339d0.18	0.18	1.00	1	30
339d0.19	0.19	1.00	1	30
339d0.20	0.20	1.00	1	30
339d0.21	0.21	1.00	1	30
339d0.22	0.22	1.00	1	30
339d0.23	0.23	1.00	1	30
339d0.24	0.24	1.00	1	30
339d0.25	0.25	1.00	1	30
339d0.26	0.26	1.00	1	30
339d0.27	0.27	1.00	1	30
339d0.28	0.28	1.00	1	30
339d0.29	0.29	1.00	1	30
339d0.30	0.30	1.50	1	30
339d0.31	0.31	1.50	1	30
339d0.32	0.32	1.50	1	30
339d0.33	0.33	1.50	1	30

Art. n°	d_1	L_1	D	L
339d0.34	0.34	1.50	1	30
339d0.35	0.35	1.50	1	30
339d0.36	0.36	1.50	1	30
339d0.37	0.37	1.50	1	30
339d0.38	0.38	1.50	1	30
339d0.39	0.39	1.50	1	30
339d0.40	0.40	2.00	1	30
339d0.41	0.41	2.00	1	30
339d0.42	0.42	2.00	1	30
339d0.43	0.43	2.00	1	30
339d0.44	0.44	2.00	1	30
339d0.45	0.45	3.50	1	30
339d0.46	0.46	3.50	1	30
339d0.47	0.47	3.50	1	30
339d0.48	0.48	3.50	1	30
339d0.49	0.49	4.00	1	30
339d0.50	0.50	4.00	1	30

Available
uncoated or coated



118°

Z2



24°

CARB

If $d_1 \leq 0.2$ mm, a double
cone applies

Options

MCU
≤ Ø3

701S
≤ Ø6

* Prices for other coatings: contact us!

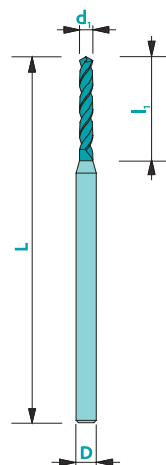
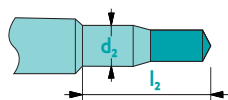
To order a coated tool, add the 2-letter coating code to the article number

340-1

Micro twist drill - helix 34°



Upon request



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	70	80	□	■	Tisi (BQ)
Steel > 700 N/mm ²	60	70	□	■	Tisi (BQ)
Stainless steel	20	40	□	□	Tisi (BQ)
Cast iron	60	70	□	■	Tisi (BQ)
Copper	100	130	□	□	Solo (DA)
Brass - Bronze	80	120	■	■	Solo (DA)
Aluminium	100	120	□	■	Solo (DA)
Gold - Silver	80	100	■	■	Solo (DA)
Platinum - Palladium	-	20	-	□	Sun (DG)
Superalloys	-	25	-	■	Trio (PO)
Titanium	40	60	□	□	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances d_1 : -0.002/-0.004
D: h5

Available
uncoated or coated
(see page 314)



118°

Z2



λ
24°

CARB

Options

MCU
≤ Ø3

701S
≤ Ø6

Art. n°	d_1	l_1	D	L
340-1d0.40	0.40	3.0	1.5	30
340-1d0.41	0.41	3.0	1.5	30
340-1d0.42	0.42	3.0	1.5	30
340-1d0.43	0.43	3.0	1.5	30
340-1d0.44	0.44	3.0	1.5	30
340-1d0.45	0.45	3.0	1.5	30
340-1d0.46	0.46	3.0	1.5	30
340-1d0.47	0.47	3.0	1.5	30
340-1d0.48	0.48	3.0	1.5	30
340-1d0.49	0.49	3.0	1.5	30
340-1d0.50	0.50	4.0	1.5	30
340-1d0.51	0.51	4.0	1.5	30
340-1d0.52	0.52	4.0	1.5	30
340-1d0.53	0.53	4.0	1.5	30
340-1d0.54	0.54	4.0	1.5	30
340-1d0.55	0.55	4.0	1.5	30
340-1d0.56	0.56	4.0	1.5	30
340-1d0.57	0.57	4.0	1.5	30
340-1d0.58	0.58	4.0	1.5	30
340-1d0.59	0.59	4.0	1.5	30
340-1d0.60	0.60	5.0	1.5	30
340-1d0.61	0.61	5.0	1.5	30
340-1d0.62	0.62	5.0	1.5	30
340-1d0.63	0.63	5.0	1.5	30
340-1d0.64	0.64	5.0	1.5	30
340-1d0.65	0.65	5.0	1.5	30
340-1d0.66	0.66	5.0	1.5	30
340-1d0.67	0.67	5.0	1.5	30
340-1d0.68	0.68	5.0	1.5	30
340-1d0.69	0.69	5.0	1.5	30
340-1d0.70	0.70	5.0	1.5	30
340-1d0.71	0.71	5.0	1.5	30

Art. n°	d_1	l_1	D	L
340-1d0.72	0.72	5.0	1.5	30
340-1d0.73	0.73	5.0	1.5	30
340-1d0.74	0.74	5.0	1.5	30
340-1d0.75	0.75	5.0	1.5	30
340-1d0.76	0.76	5.0	1.5	30
340-1d0.77	0.77	5.0	1.5	30
340-1d0.78	0.78	5.0	1.5	30
340-1d0.79	0.79	5.0	1.5	30
340-1d0.80	0.80	6.0	1.5	30
340-1d0.81	0.81	6.0	1.5	30
340-1d0.82	0.82	6.0	1.5	30
340-1d0.83	0.83	6.0	1.5	30
340-1d0.84	0.84	6.0	1.5	30
340-1d0.85	0.85	6.0	1.5	30
340-1d0.86	0.86	6.0	1.5	30
340-1d0.87	0.87	6.0	1.5	30
340-1d0.88	0.88	6.0	1.5	30
340-1d0.89	0.89	6.0	1.5	30
340-1d0.90	0.90	7.0	1.5	30
340-1d0.91	0.91	7.0	1.5	30
340-1d0.92	0.92	7.0	1.5	30
340-1d0.93	0.93	7.0	1.5	30
340-1d0.94	0.94	7.0	1.5	30
340-1d0.95	0.95	7.0	1.5	30
340-1d0.96	0.96	7.0	1.5	30
340-1d0.97	0.97	7.0	1.5	30
340-1d0.98	0.98	7.0	1.5	30
340-1d0.99	0.99	7.0	1.5	30
340-1d1.00	1.00	8.0	1.5	30
340-1d1.01	1.01	8.0	1.5	30
340-1d1.02	1.02	8.0	1.5	30
340-1d1.03	1.03	8.0	1.5	30

* Prices for other coatings: contact us!

To order a coated tool, add the 2-letter coating code to the article number

Micro twist drill - helix 34°

340-1

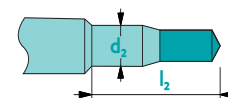
Continuation

Art. n°	d ₁	l ₁	D	L
340-1d1.04	1.04	8.0	1.5	30
340-1d1.05	1.05	8.0	1.5	30
340-1d1.06	1.06	8.0	1.5	30
340-1d1.07	1.07	8.0	1.5	30
340-1d1.08	1.08	8.0	1.5	30
340-1d1.09	1.09	8.0	1.5	30
340-1d1.10	1.10	9.0	1.5	30
340-1d1.11	1.11	9.0	1.5	30
340-1d1.12	1.12	9.0	1.5	30
340-1d1.13	1.13	9.0	1.5	30
340-1d1.14	1.14	9.0	1.5	30
340-1d1.15	1.15	9.0	1.5	30
340-1d1.16	1.16	9.0	1.5	30
340-1d1.17	1.17	9.0	1.5	30
340-1d1.18	1.18	9.0	1.5	30
340-1d1.19	1.19	9.0	1.5	30
340-1d1.20	1.20	10.0	1.5	30
340-1d1.21	1.21	10.0	1.5	30
340-1d1.22	1.22	10.0	1.5	30
340-1d1.23	1.23	10.0	1.5	30
340-1d1.24	1.24	10.0	1.5	30
340-1d1.25	1.25	10.0	1.5	30
340-1d1.26	1.26	10.0	1.5	30
340-1d1.27	1.27	10.0	1.5	30
340-1d1.28	1.28	10.0	1.5	30
340-1d1.29	1.29	10.0	1.5	30
340-1d1.30	1.30	10.0	1.5	30
340-1d1.31	1.31	10.0	1.5	30
340-1d1.32	1.32	10.0	1.5	30
340-1d1.33	1.33	10.0	1.5	30
340-1d1.34	1.34	10.0	1.5	30
340-1d1.35	1.35	11.0	1.5	30
340-1d1.36	1.36	11.0	1.5	30
340-1d1.37	1.37	11.0	1.5	30
340-1d1.38	1.38	11.0	1.5	30
340-1d1.39	1.39	11.0	1.5	30
340-1d1.40	1.40	11.0	1.5	30
340-1d1.41	1.41	11.0	1.5	30
340-1d1.42	1.42	11.0	1.5	30
340-1d1.43	1.43	11.0	1.5	30
340-1d1.44	1.44	11.0	1.5	30
340-1d1.45	1.45	11.0	1.5	30
340-1d1.46	1.46	11.0	1.5	30
340-1d1.47	1.47	11.0	1.5	30
340-1d1.48	1.48	11.0	1.5	30
340-1d1.49	1.49	11.0	1.5	30
340-1d1.50	1.50	12.0	2.0	38
340-1d1.51	1.51	12.0	2.0	38

Art. n°	d ₁	l ₁	D	L
340-1d1.52	1.52	12.0	2.0	38
340-1d1.53	1.53	12.0	2.0	38
340-1d1.54	1.54	12.0	2.0	38
340-1d1.55	1.55	12.0	2.0	38
340-1d1.56	1.56	12.0	2.0	38
340-1d1.57	1.57	12.0	2.0	38
340-1d1.58	1.58	12.0	2.0	38
340-1d1.59	1.59	12.0	2.0	38
340-1d1.60	1.60	12.0	2.0	38
340-1d1.61	1.61	12.0	2.0	38
340-1d1.62	1.62	12.0	2.0	38
340-1d1.63	1.63	12.0	2.0	38
340-1d1.64	1.64	12.0	2.0	38
340-1d1.65	1.65	12.0	2.0	38
340-1d1.66	1.66	12.0	2.0	38
340-1d1.67	1.67	12.0	2.0	38
340-1d1.68	1.68	12.0	2.0	38
340-1d1.69	1.69	12.0	2.0	38
340-1d1.70	1.70	12.0	2.0	38
340-1d1.71	1.71	12.0	2.0	38
340-1d1.72	1.72	12.0	2.0	38
340-1d1.73	1.73	12.0	2.0	38
340-1d1.74	1.74	12.0	2.0	38
340-1d1.75	1.75	12.0	2.0	38
340-1d1.76	1.76	12.0	2.0	38
340-1d1.77	1.77	12.0	2.0	38
340-1d1.78	1.78	12.0	2.0	38
340-1d1.79	1.79	12.0	2.0	38
340-1d1.80	1.80	12.0	2.0	38
340-1d1.81	1.81	12.0	2.0	38
340-1d1.82	1.82	12.0	2.0	38
340-1d1.83	1.83	12.0	2.0	38
340-1d1.84	1.84	12.0	2.0	38
340-1d1.85	1.85	12.0	2.0	38
340-1d1.86	1.86	12.0	2.0	38
340-1d1.87	1.87	12.0	2.0	38
340-1d1.88	1.88	12.0	2.0	38
340-1d1.89	1.89	12.0	2.0	38
340-1d1.90	1.90	12.0	2.0	38
340-1d1.91	1.91	12.0	2.0	38
340-1d1.92	1.92	12.0	2.0	38
340-1d1.93	1.93	12.0	2.0	38
340-1d1.94	1.94	12.0	2.0	38
340-1d1.95	1.95	12.0	2.0	38
340-1d1.96	1.96	12.0	2.0	38
340-1d1.97	1.97	12.0	2.0	38
340-1d1.98	1.98	12.0	2.0	38
340-1d1.99	1.99	12.0	2.0	38



Upon request



Available
uncoated or coated
(see page 314)



118°

Z2



λ
24°

CARB

Options

MCU
≤ Ø3

701S
≤ Ø6

* Prices for other coatings: contact us!

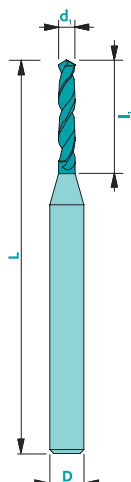
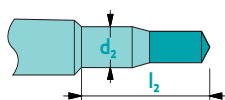
To order a coated tool, add the 2-letter coating code to the article number

343-6

Drill - helix 34° - l₁=6 mm



Upon request



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	70	80	□	□	Tisi (BQ)
Steel > 700 N/mm ²	60	70	□	■	Tisi (BQ)
Stainless steel	20	40	□	■	Tisi (BQ)
Cast iron	60	70	□	■	Tisi (BQ)
Copper	100	130	□	■	Solo (DA)
Brass - Bronze	80	120	■	■	Solo (DA)
Aluminium	100	120	■	■	Solo (DA)
Gold - Silver	80	100	□	□	Solo (DA)
Platinum - Palladium	-	20	-	□	Sun (DG)
Superalloys	-	25	-	□	Trio (PO)
Titanium	40	60	□	□	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances d₁: -0.002/-0.004
D: h5

Available
uncoated or coated



118°

Z2



λ
34°

CARB

Options

MCU
≤ Ø3

701S
≤ Ø6

Art. n°	d ₁	l ₁	D	L
343-6d0.60	0.60	6.0	2.0	38
343-6d0.61	0.61	6.0	2.0	38
343-6d0.62	0.62	6.0	2.0	38
343-6d0.63	0.63	6.0	2.0	38
343-6d0.64	0.64	6.0	2.0	38
343-6d0.65	0.65	6.0	2.0	38
343-6d0.66	0.66	6.0	2.0	38
343-6d0.67	0.67	6.0	2.0	38
343-6d0.68	0.68	6.0	2.0	38
343-6d0.69	0.69	6.0	2.0	38
343-6d0.70	0.70	6.0	2.0	38
343-6d0.71	0.71	6.0	2.0	38
343-6d0.72	0.72	6.0	2.0	38
343-6d0.73	0.73	6.0	2.0	38
343-6d0.74	0.74	6.0	2.0	38
343-6d0.75	0.75	6.0	2.0	38
343-6d0.76	0.76	6.0	2.0	38
343-6d0.77	0.77	6.0	2.0	38
343-6d0.78	0.78	6.0	2.0	38
343-6d0.79	0.79	6.0	2.0	38
343-6d0.80	0.80	6.0	2.0	38
343-6d0.81	0.81	6.0	2.0	38
343-6d0.82	0.82	6.0	2.0	38
343-6d0.83	0.83	6.0	2.0	38
343-6d0.84	0.84	6.0	2.0	38
343-6d0.85	0.85	6.0	2.0	38
343-6d0.86	0.86	6.0	2.0	38
343-6d0.87	0.87	6.0	2.0	38
343-6d0.88	0.88	6.0	2.0	38

Art. n°	d ₁	l ₁	D	L
343-6d0.89	0.89	6.0	2.0	38
343-6d0.90	0.90	6.0	2.0	38
343-6d0.91	0.91	6.0	2.0	38
343-6d0.92	0.92	6.0	2.0	38
343-6d0.93	0.93	6.0	2.0	38
343-6d0.94	0.94	6.0	2.0	38
343-6d0.95	0.95	6.0	2.0	38
343-6d0.96	0.96	6.0	2.0	38
343-6d0.97	0.97	6.0	2.0	38
343-6d0.98	0.98	6.0	2.0	38
343-6d0.99	0.99	6.0	2.0	38
343-6d1.00	1.00	6.0	2.0	38
343-6d1.01	1.01	6.0	2.0	38
343-6d1.02	1.02	6.0	2.0	38
343-6d1.03	1.03	6.0	2.0	38
343-6d1.04	1.04	6.0	2.0	38
343-6d1.05	1.05	6.0	2.0	38
343-6d1.06	1.06	6.0	2.0	38
343-6d1.07	1.07	6.0	2.0	38
343-6d1.08	1.08	6.0	2.0	38
343-6d1.09	1.09	6.0	2.0	38
343-6d1.09	1.09	6.0	2.0	38
343-6d1.10	1.10	6.0	2.0	38
343-6d1.11	1.11	6.0	2.0	38
343-6d1.12	1.12	6.0	2.0	38
343-6d1.13	1.13	6.0	2.0	38
343-6d1.14	1.14	6.0	2.0	38
343-6d1.15	1.15	6.0	2.0	38
343-6d1.16	1.16	6.0	2.0	38

To order a coated tool, add the 2-letter coating code to the article number

Drill - helix 34° - l₁=6 mm

343-6

Continuation

Art. n°	d ₁	l ₁	D	L
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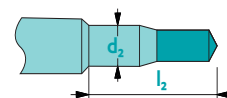
343-6d1.17	1.17	6.0	2.0	38
343-6d1.18	1.18	6.0	2.0	38
343-6d1.19	1.19	6.0	2.0	38
343-6d1.20	1.20	6.0	2.0	38
343-6d1.21	1.21	6.0	2.0	38
343-6d1.22	1.22	6.0	2.0	38
343-6d1.23	1.23	6.0	2.0	38
343-6d1.24	1.24	6.0	2.0	38
343-6d1.25	1.25	6.0	2.0	38
343-6d1.26	1.26	6.0	2.0	38
343-6d1.27	1.27	6.0	2.0	38
343-6d1.28	1.28	6.0	2.0	38
343-6d1.29	1.29	6.0	2.0	38
343-6d1.30	1.30	6.0	2.0	38
343-6d1.31	1.31	6.0	2.0	38
343-6d1.32	1.32	6.0	2.0	38
343-6d1.33	1.33	6.0	2.0	38
343-6d1.34	1.34	6.0	2.0	38
343-6d1.35	1.35	6.0	2.0	38
343-6d1.36	1.36	6.0	2.0	38
343-6d1.37	1.37	6.0	2.0	38
343-6d1.38	1.38	6.0	2.0	38
343-6d1.39	1.39	6.0	2.0	38
343-6d1.40	1.40	6.0	2.0	38
343-6d1.41	1.41	6.0	2.0	38
343-6d1.42	1.42	6.0	2.0	38
343-6d1.43	1.43	6.0	2.0	38
343-6d1.44	1.44	6.0	2.0	38
343-6d1.45	1.45	6.0	2.0	38
343-6d1.46	1.46	6.0	2.0	38
343-6d1.47	1.47	6.0	2.0	38
343-6d1.48	1.48	6.0	2.0	38
343-6d1.49	1.49	6.0	2.0	38
343-6d1.50	1.50	6.0	2.0	38
343-6d1.51	1.51	6.0	2.0	38
343-6d1.52	1.52	6.0	2.0	38
343-6d1.53	1.53	6.0	2.0	38
343-6d1.54	1.54	6.0	2.0	38
343-6d1.55	1.55	6.0	2.0	38
343-6d1.56	1.56	6.0	2.0	38
343-6d1.57	1.57	6.0	2.0	38
343-6d1.58	1.58	6.0	2.0	38
343-6d1.59	1.59	6.0	2.0	38
343-6d1.60	1.60	6.0	2.0	38
343-6d1.61	1.61	6.0	2.0	38

Art. n°	d ₁	l ₁	D	L
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343-6d1.62	1.62	6.0	2.0	38
343-6d1.63	1.63	6.0	2.0	38
343-6d1.64	1.64	6.0	2.0	38
343-6d1.65	1.65	6.0	2.0	38
343-6d1.66	1.66	6.0	2.0	38
343-6d1.67	1.67	6.0	2.0	38
343-6d1.68	1.68	6.0	2.0	38
343-6d1.69	1.69	6.0	2.0	38
343-6d1.70	1.70	6.0	2.0	38
343-6d1.71	1.71	6.0	2.0	38
343-6d1.72	1.72	6.0	2.0	38
343-6d1.73	1.73	6.0	2.0	38
343-6d1.74	1.74	6.0	2.0	38
343-6d1.75	1.75	6.0	2.0	38
343-6d1.76	1.76	6.0	2.0	38
343-6d1.77	1.77	6.0	2.0	38
343-6d1.78	1.78	6.0	2.0	38
343-6d1.79	1.79	6.0	2.0	38
343-6d1.80	1.80	6.0	2.0	38
343-6d1.81	1.81	6.0	2.0	38
343-6d1.82	1.82	6.0	2.0	38
343-6d1.83	1.83	6.0	2.0	38
343-6d1.84	1.84	6.0	2.0	38
343-6d1.85	1.85	6.0	2.0	38
343-6d1.86	1.86	6.0	2.0	38
343-6d1.87	1.87	6.0	2.0	38
343-6d1.88	1.88	6.0	2.0	38
343-6d1.89	1.89	6.0	2.0	38
343-6d1.90	1.90	6.0	2.0	38
343-6d1.91	1.91	6.0	2.0	38
343-6d1.92	1.92	6.0	2.0	38
343-6d1.93	1.93	6.0	2.0	38
343-6d1.94	1.94	6.0	2.0	38
343-6d1.95	1.95	6.0	2.0	38
343-6d1.96	1.96	6.0	2.0	38
343-6d1.97	1.97	6.0	2.0	38
343-6d1.98	1.98	6.0	2.0	38
343-6d1.99	1.99	6.0	2.0	38
343-6d2.00	2.00	6.0	2.0	38



Upon request



Available
uncoated or coated



118°

Z2



λ
34°

CARB

Options

MCU
≤ Ø3

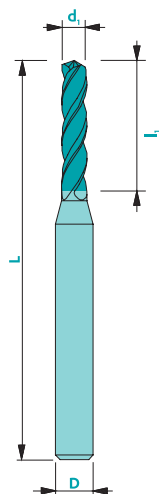
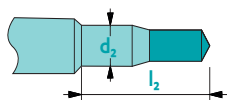
701S
≤ Ø6

To order a coated tool, add the 2-letter coating code to the article number

Twist drill Z3 - shank Ø3



Upon request



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	70	80	□	□	Tisi (BQ)
Steel > 700 N/mm ²	60	70	□	□	Tisi (BQ)
Stainless steel	20	40	□	□	Tisi (BQ)
Cast iron	60	70	□	□	Tisi (BQ)
Copper	100	130	□	□	Solo (DA)
Brass - Bronze	80	120	□	□	Solo (DA)
Aluminium	100	120	□	□	Solo (DA)
Gold - Silver	80	100	■	■	Solo (DA)
Platinum - Palladium	-	20	-	□	Sun (DG)
Superalloys	-	25	-	■	Trio (PO)
Titanium	40	60	■	■	Marc (DG)

not adapted - adapted □ highly adapted ■

Tolerances d_1 : -0.002/-0.004
D: h5

Available
uncoated or coated

Z3

λ
34°

CARB

If $d_1 \leq 0.2$ mm, a double
cone applies

Options

MCU
≤ Ø3701S
≤ Ø6

Art. n°	d_1	l_1	D	L
353d0.15	0.15	2.0	3.0	38
353d0.18	0.18	2.0	3.0	38
353d0.20	0.20	3.0	3.0	38
353d0.21	0.21	3.0	3.0	38
353d0.22	0.22	3.0	3.0	38
353d0.23	0.23	3.0	3.0	38
353d0.24	0.24	3.0	3.0	38
353d0.25	0.25	3.5	3.0	38
353d0.26	0.26	3.5	3.0	38
353d0.27	0.27	3.5	3.0	38
353d0.28	0.28	3.5	3.0	38
353d0.29	0.29	3.5	3.0	38
353d0.30	0.30	5.0	3.0	38
353d0.31	0.31	5.0	3.0	38
353d0.32	0.32	5.0	3.0	38
353d0.33	0.33	5.0	3.0	38
353d0.34	0.34	5.0	3.0	38
353d0.35	0.35	5.0	3.0	38
353d0.36	0.36	5.0	3.0	38
353d0.37	0.37	5.0	3.0	38
353d0.38	0.38	5.0	3.0	38
353d0.39	0.39	5.0	3.0	38
353d0.40	0.40	6.0	3.0	38
353d0.41	0.41	6.0	3.0	38
353d0.42	0.42	6.0	3.0	38
353d0.43	0.43	6.0	3.0	38
353d0.44	0.44	6.0	3.0	38
353d0.45	0.45	6.0	3.0	38
353d0.46	0.46	6.0	3.0	38

Art. n°	d_1	l_1	D	L
353d0.47	0.47	6.0	3.0	38
353d0.48	0.48	6.0	3.0	38
353d0.49	0.49	6.0	3.0	38
353d0.50	0.50	6.0	3.0	38
353d0.51	0.51	6.0	3.0	38
353d0.52	0.52	6.0	3.0	38
353d0.53	0.53	6.0	3.0	38
353d0.54	0.54	6.0	3.0	38
353d0.55	0.55	7.0	3.0	38
353d0.56	0.56	7.0	3.0	38
353d0.57	0.57	7.0	3.0	38
353d0.58	0.58	7.0	3.0	38
353d0.59	0.59	7.0	3.0	38
353d0.60	0.60	7.0	3.0	38
353d0.61	0.61	7.0	3.0	38
353d0.62	0.62	7.0	3.0	38
353d0.63	0.63	7.0	3.0	38
353d0.64	0.64	7.0	3.0	38
353d0.65	0.65	7.0	3.0	38
353d0.66	0.66	7.0	3.0	38
353d0.67	0.67	7.0	3.0	38
353d0.68	0.68	7.0	3.0	38
353d0.69	0.69	7.0	3.0	38
353d0.70	0.70	9.5	3.0	38
353d0.71	0.71	9.5	3.0	38
353d0.72	0.72	9.5	3.0	38
353d0.73	0.73	9.5	3.0	38
353d0.74	0.74	9.5	3.0	38
353d0.75	0.75	9.5	3.0	38

To order a coated tool, add the 2-letter coating code to the article number

Twist drill Z3 - shank Ø3

353

Continuation

Art. n°	d ₁	l ₁	D	L
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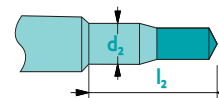
353d0.76	0.76	9.5	3.0	38
353d0.77	0.77	9.5	3.0	38
353d0.78	0.78	9.5	3.0	38
353d0.79	0.79	9.5	3.0	38
353d0.80	0.80	9.5	3.0	38
353d0.81	0.81	9.5	3.0	38
353d0.82	0.82	9.5	3.0	38
353d0.83	0.83	9.5	3.0	38
353d0.84	0.84	9.5	3.0	38
353d0.85	0.85	9.5	3.0	38
353d0.86	0.86	9.5	3.0	38
353d0.87	0.87	9.5	3.0	38
353d0.88	0.88	9.5	3.0	38
353d0.89	0.89	9.5	3.0	38
353d0.90	0.90	9.5	3.0	38
353d0.91	0.91	9.5	3.0	38
353d0.92	0.92	9.5	3.0	38
353d0.93	0.93	9.5	3.0	38
353d0.94	0.94	9.5	3.0	38
353d0.95	0.95	9.5	3.0	38
353d0.96	0.96	9.5	3.0	38
353d0.97	0.97	9.5	3.0	38
353d0.98	0.98	9.5	3.0	38
353d0.99	0.99	9.5	3.0	38
353d1.00	1.00	9.5	3.0	38
353d1.01	1.01	9.5	3.0	38
353d1.02	1.02	9.5	3.0	38
353d1.03	1.03	9.5	3.0	38
353d1.04	1.04	9.5	3.0	38
353d1.05	1.05	10.5	3.0	38
353d1.06	1.06	10.5	3.0	38
353d1.07	1.07	10.5	3.0	38
353d1.08	1.08	10.5	3.0	38
353d1.09	1.09	10.5	3.0	38
353d1.10	1.10	10.5	3.0	38
353d1.11	1.11	10.5	3.0	38
353d1.12	1.12	10.5	3.0	38
353d1.13	1.13	10.5	3.0	38
353d1.14	1.14	10.5	3.0	38
353d1.15	1.15	10.5	3.0	38
353d1.16	1.16	10.5	3.0	38
353d1.17	1.17	10.5	3.0	38
353d1.18	1.18	10.5	3.0	38
353d1.19	1.19	10.5	3.0	38

Art. n°	d ₁	l ₁	D	L
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353d1.20	1.20	10.5	3.0	38
353d1.21	1.21	10.5	3.0	38
353d1.22	1.22	10.5	3.0	38
353d1.23	1.23	10.5	3.0	38
353d1.24	1.24	10.5	3.0	38
353d1.25	1.25	10.5	3.0	38
353d1.26	1.26	10.5	3.0	38
353d1.27	1.27	10.5	3.0	38
353d1.28	1.28	10.5	3.0	38
353d1.29	1.29	10.5	3.0	38
353d1.30	1.30	10.5	3.0	38
353d1.31	1.31	10.5	3.0	38
353d1.32	1.32	10.5	3.0	38
353d1.33	1.33	10.5	3.0	38
353d1.34	1.34	10.5	3.0	38
353d1.35	1.35	10.5	3.0	38
353d1.36	1.36	10.5	3.0	38
353d1.37	1.37	10.5	3.0	38
353d1.38	1.38	10.5	3.0	38
353d1.39	1.39	10.5	3.0	38
353d1.40	1.40	10.5	3.0	38
353d1.41	1.41	10.5	3.0	38
353d1.42	1.42	10.5	3.0	38
353d1.43	1.43	10.5	3.0	38
353d1.44	1.44	10.5	3.0	38
353d1.45	1.45	10.5	3.0	38
353d1.46	1.46	10.5	3.0	38
353d1.47	1.47	10.5	3.0	38
353d1.48	1.48	10.5	3.0	38
353d1.49	1.49	10.5	3.0	38
353d1.50	1.50	10.5	3.0	38
353d1.51	1.51	10.5	3.0	38
353d1.52	1.52	10.5	3.0	38
353d1.53	1.53	10.5	3.0	38
353d1.54	1.54	10.5	3.0	38
353d1.55	1.55	10.5	3.0	38
353d1.56	1.56	10.5	3.0	38
353d1.57	1.57	10.5	3.0	38
353d1.58	1.58	10.5	3.0	38
353d1.59	1.59	10.5	3.0	38
353d1.60	1.60	10.5	3.0	38
353d1.61	1.61	10.5	3.0	38
353d1.62	1.62	10.5	3.0	38
353d1.63	1.63	10.5	3.0	38



Upon request



Available
uncoated or coated



140°

Z3



λ
34°

CARB

Options

MCU
≤ Ø3

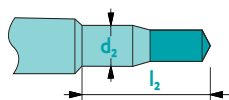
701S
≤ Ø6

To order a coated tool, add the 2-letter coating code to the article number

Twist drill Z3 - shank Ø3



Upon request

Available
uncoated or coated

140°

Z3

λ
34°

CARB

Options

MCU
≤ Ø3701S
≤ Ø6

Art. n°	d ₁	l ₁	D	L
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353d1.64	1.64	10.5	3.0	38
353d1.65	1.65	10.5	3.0	38
353d1.66	1.66	10.5	3.0	38
353d1.67	1.67	10.5	3.0	38
353d1.68	1.68	10.5	3.0	38
353d1.69	1.69	10.5	3.0	38
353d1.70	1.70	10.5	3.0	38
353d1.71	1.71	10.5	3.0	38
353d1.72	1.72	10.5	3.0	38
353d1.73	1.73	10.5	3.0	38
353d1.74	1.74	10.5	3.0	38
353d1.75	1.75	10.5	3.0	38
353d1.76	1.76	10.5	3.0	38
353d1.77	1.77	10.5	3.0	38
353d1.78	1.78	10.5	3.0	38
353d1.79	1.79	10.5	3.0	38
353d1.80	1.80	10.5	3.0	38
353d1.81	1.81	10.5	3.0	38
353d1.82	1.82	10.5	3.0	38
353d1.83	1.83	10.5	3.0	38
353d1.84	1.84	10.5	3.0	38
353d1.85	1.85	10.5	3.0	38
353d1.86	1.86	10.5	3.0	38
353d1.87	1.87	10.5	3.0	38
353d1.88	1.88	10.5	3.0	38
353d1.89	1.89	10.5	3.0	38
353d1.90	1.90	10.5	3.0	38
353d1.91	1.91	10.5	3.0	38
353d1.92	1.92	10.5	3.0	38
353d1.93	1.93	10.5	3.0	38
353d1.94	1.94	10.5	3.0	38
353d1.95	1.95	10.5	3.0	38
353d1.96	1.96	10.5	3.0	38
353d1.97	1.97	10.5	3.0	38
353d1.98	1.98	10.5	3.0	38
353d1.99	1.99	10.5	3.0	38
353d2.00	2.00	10.5	3.0	38
353d2.05	2.05	10.5	3.0	38
353d2.10	2.10	10.5	3.0	38
353d2.15	2.15	10.5	3.0	38
353d2.20	2.20	10.5	3.0	38
353d2.25	2.25	10.5	3.0	38
353d2.30	2.30	10.5	3.0	38
353d2.35	2.35	10.5	3.0	38

Art. n°	d ₁	l ₁	D	L
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353d2.40	2.40	10.5	3.0	38
353d2.45	2.45	10.5	3.0	38
353d2.50	2.50	10.5	3.0	38
353d2.55	2.55	10.5	3.0	38
353d2.60	2.60	10.5	3.0	38
353d2.65	2.65	10.5	3.0	38
353d2.70	2.70	10.5	3.0	38
353d2.75	2.75	10.5	3.0	38
353d2.80	2.80	10.5	3.0	38
353d2.85	2.85	10.5	3.0	38
353d2.90	2.90	10.5	3.0	38
353d2.95	2.95	10.5	3.0	38
353d3.00	3.00	10.5	3.0	38

To order a coated tool, add the 2-letter coating code to the article number

Expert drill for brass

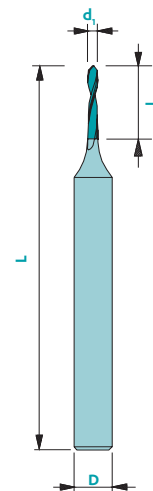


375

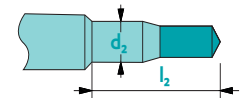
Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	-	-	-	-	-
Steel > 700 N/mm ²	-	-	-	-	-
Stainless steel	-	-	-	-	-
Cast iron	-	-	-	-	-
Copper	-	-	-	-	-
Brass - Bronze	115	130	■	■	Solo (DA)
Aluminium	-	-	-	-	-
Gold - Silver	-	-	□	□	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	-	-	-	-	-

not adapted - adapted □ highly adapted ■

Tolerances d_1 : -0.002/-0.004
 l_1 : 0.1/-0
D: h5



Upon request



Art. n°	d_1	l_1	D	L
375d#.#	0.20-0.29	1.0	3	38
375d#.#	0.30-0.34	1.5	3	38
375d#.#	0.35-0.39	2.0	3	38
375d#.#	0.40-0.49	3.0	3	38
375d#.#	0.50-0.79	4.0	3	38
375d#.#	0.80-1.19	6.0	3	38
375d#.#	1.20-1.50	8.0	3	38

* Prices for other coatings: contact us!
To order a coated tool, add the 2-letter coating code to the article number

Available
uncoated or coated



90°

Z2



Variable

CARB

If $d_1 \leq 0.2$ mm, a double cone applies

Options

MCU
 $\leq \varnothing 3$

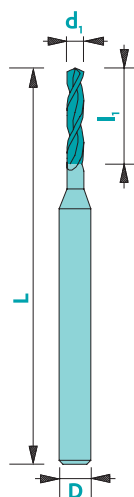
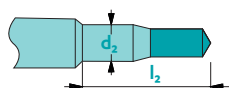
701S
 $\leq \varnothing 6$

4500

PCD twist drill - 2 teeth



Upon request



Material

Vc [m/min]

Uncoated

Steel < 700 N/mm²

-

-

Steel > 700 N/mm²

-

-

Stainless steel

-

-

Cast iron

-

-

Copper

180

■

Brass - Bronze

280

■

Aluminium

250

■

Gold - Silver

200

■

Platinum - Palladium

100

■

Superalloys

-

-

Titanium

-

-

Composite

500

■

not adapted - adapted ■ highly adapted ■

Tolerances

 $d_1 = 0/-0.013$

D: h6

Available
uncoated only

Z2

 λ
30°

PCD

If $d_1 \leq 0.5$ mm, a double
cone applies

Options

MCU
 $\leq \varnothing 3$

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
4500d0.77	0.77	5.0	3	38

Art. n°	d_1	l_1	D	L
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
4500d1.06	1.06	8.0	3	38
4500d1.07	1.07	8.0	3	38

Other dimensions, CVD/CBN available upon request.



38

LOUIS BELET

swiss made

PCD twist drill - 2 teeth

4500

Continuation

Art. n°	d ₁	l ₁	D	L
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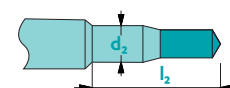
4500d1.08	1.08	8.0	3	38
4500d1.09	1.09	8.0	3	38
4500d1.10	1.10	9.0	3	38
4500d1.11	1.11	9.0	3	38
4500d1.12	1.12	9.0	3	38
4500d1.13	1.13	9.0	3	38
4500d1.14	1.14	9.0	3	38
4500d1.15	1.15	9.0	3	38
4500d1.16	1.16	9.0	3	38
4500d1.17	1.17	9.0	3	38
4500d1.18	1.18	9.0	3	38
4500d1.19	1.19	9.0	3	38
4500d1.20	1.20	9.0	3	38
4500d1.21	1.21	9.0	3	38
4500d1.22	1.22	9.0	3	38
4500d1.23	1.23	9.0	3	38
4500d1.24	1.24	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
4500d1.55	1.55	9.0	3	38
4500d1.60	1.60	9.0	3	38

Art. n°	d ₁	l ₁	D	L
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4500d1.65	1.65	9.0	3	38
4500d1.70	1.70	9.0	3	38
4500d1.75	1.75	9.0	3	38
4500d1.80	1.80	9.0	3	38
4500d1.85	1.85	9.0	3	38
4500d1.90	1.90	9.0	3	38
4500d1.95	1.95	9.0	3	38
4500d2.00	2.00	9.0	3	38
4500d2.05	2.05	9.0	3	38
4500d2.10	2.10	9.0	3	38
4500d2.15	2.15	9.0	3	38
4500d2.20	2.20	9.0	3	38
4500d2.25	2.25	9.0	3	38
4500d2.29	2.29	9.0	3	38
4500d2.30	2.30	9.0	3	38
4500d2.40	2.40	9.0	3	38
4500d2.50	2.50	9.0	3	38



Upon request



Available
uncoated only



118°

Z2



λ
30°

PCD

Options

MCU
≤ Ø3

Other dimensions available upon request.

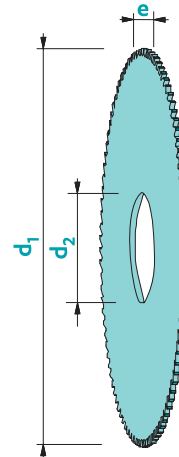
Slitting saw DIN 1837 fine pitch

223-1

Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating *
Steel < 700 N/mm ²	80	120	□	■	Tisi (BQ)
Steel > 700 N/mm ²	60	100	□	■	Tisi (BQ)
Stainless steel	60	100	□	■	Tisi (BQ)
Cast iron	50	90	□	■	Tisi (BQ)
Copper	200	300	□	■	Solo (DA)
Brass - Bronze	200	300	■	□	Solo (DA)
Aluminium	250	400	□	■	Solo (DA)
Gold - Silver	150	300	□	■	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	20	40	□	■	Trio (PO)
Titanium	40	60	□	□	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances
e : ± 0.01
d₂ : H7



Art. n°	d ₁	e	d ₂	Z
223-1d15e0.10A5Z64	15	0.10	5	64
223-1d15e0.15A5Z64	15	0.15	5	64
223-1d15e0.20A5Z64	15	0.20	5	64
223-1d15e0.25A5Z64	15	0.25	5	64
223-1d15e0.30A5Z64	15	0.30	5	64
223-1d15e0.35A5Z64	15	0.35	5	64
223-1d15e0.40A5Z64	15	0.40	5	64
223-1d15e0.45A5Z48	15	0.45	5	48
223-1d15e0.50A5Z48	15	0.50	5	48
223-1d15e0.60A5Z48	15	0.60	5	48
223-1d15e0.70A5Z48	15	0.70	5	48
223-1d15e0.80A5Z40	15	0.80	5	40
223-1d15e0.90A5Z40	15	0.90	5	40
223-1d15e1.00A5Z40	15	1.00	5	40
223-1d15e1.10A5Z40	15	1.10	5	40
223-1d15e1.20A5Z40	15	1.20	5	40
223-1d15e1.30A5Z40	15	1.30	5	40
223-1d15e1.40A5Z40	15	1.40	5	40
223-1d15e1.50A5Z40	15	1.50	5	40
223-1d15e1.60A5Z40	15	1.60	5	40
223-1d15e1.70A5Z40	15	1.70	5	40
223-1d15e1.80A5Z40	15	1.80	5	40
223-1d15e1.90A5Z40	15	1.90	5	40
223-1d15e2.00A5Z40	15	2.00	5	40
223-1d15e2.10A5Z40	15	2.10	5	40
223-1d15e2.20A5Z40	15	2.20	5	40
223-1d15e2.30A5Z40	15	2.30	5	40
223-1d15e2.40A5Z40	15	2.40	5	40
223-1d15e2.50A5Z40	15	2.50	5	40
223-1d15e2.60A5Z40	15	2.60	5	40

Art. n°	d ₁	e	d ₂	Z
223-1d15e2.70A5Z40	15	2.70	5	40
223-1d15e2.80A5Z40	15	2.80	5	40
223-1d15e2.90A5Z40	15	2.90	5	40
223-1d15e3.00A5Z40	15	3.00	5	40
223-1d15e3.10A5Z24	15	3.10	5	24
223-1d15e3.20A5Z24	15	3.20	5	24
223-1d15e3.30A5Z24	15	3.30	5	24
223-1d15e3.40A5Z24	15	3.40	5	24
223-1d15e3.50A5Z24	15	3.50	5	24
223-1d15e3.60A5Z24	15	3.60	5	24
223-1d15e3.70A5Z24	15	3.70	5	24
223-1d15e3.80A5Z24	15	3.80	5	24
223-1d15e3.90A5Z24	15	3.90	5	24
223-1d15e4.00A5Z24	15	4.00	5	24
223-1d15e4.50A5Z24	15	4.50	5	24
223-1d15e5.00A5Z24	15	5.00	5	24
223-1d15e5.50A5Z24	15	5.50	5	24
223-1d15e6.00A5Z24	15	6.00	5	24
223-1d20e0.10A5Z80	20	0.10	5	80
223-1d20e0.15A5Z80	20	0.15	5	80
223-1d20e0.20A5Z80	20	0.20	5	80
223-1d20e0.25A5Z64	20	0.25	5	64
223-1d20e0.30A5Z64	20	0.30	5	64
223-1d20e0.35A5Z64	20	0.35	5	64
223-1d20e0.40A5Z64	20	0.40	5	64
223-1d20e0.45A5Z48	20	0.45	5	48
223-1d20e0.50A5Z48	20	0.50	5	48
223-1d20e0.60A5Z48	20	0.60	5	48
223-1d20e0.70A5Z48	20	0.70	5	48
223-1d20e0.80A5Z40	20	0.80	5	40

Available
uncoated or coated



Z
24-160



λ
0°

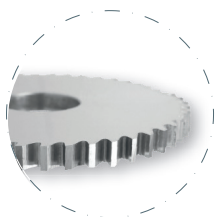
γ
6°

CARB

To order a coated tool, add the 2-letter coating code to the article number.



Slitting saw DIN 1837 fine pitch



Available
uncoated or coated



Z
24-160



λ
0°

γ
6°

CARB

Art. n°	d ₁	e	d ₂	Z
223-1d20e0.90A5Z40	20	0.90	5	40
223-1d20e1.00A5Z40	20	1.00	5	40
223-1d20e1.10A5Z40	20	1.10	5	40
223-1d20e1.20A5Z40	20	1.20	5	40
223-1d20e1.30A5Z40	20	1.30	5	40
223-1d20e1.40A5Z40	20	1.40	5	40
223-1d20e1.50A5Z40	20	1.50	5	40
223-1d20e1.60A5Z40	20	1.60	5	40
223-1d20e1.70A5Z32	20	1.70	5	32
223-1d20e1.80A5Z32	20	1.80	5	32
223-1d20e1.90A5Z32	20	1.90	5	32
223-1d20e2.00A5Z32	20	2.00	5	32
223-1d20e2.10A5Z32	20	2.10	5	32
223-1d20e2.20A5Z32	20	2.20	5	32
223-1d20e2.30A5Z32	20	2.30	5	32
223-1d20e2.40A5Z32	20	2.40	5	32
223-1d20e2.50A5Z32	20	2.50	5	32
223-1d20e2.60A5Z32	20	2.60	5	32
223-1d20e2.70A5Z32	20	2.70	5	32
223-1d20e2.80A5Z32	20	2.80	5	32
223-1d20e2.90A5Z32	20	2.90	5	32
223-1d20e3.00A5Z32	20	3.00	5	32
223-1d20e3.10A5Z24	20	3.10	5	24
223-1d20e3.20A5Z24	20	3.20	5	24
223-1d20e3.30A5Z24	20	3.30	5	24
223-1d20e3.40A5Z24	20	3.40	5	24
223-1d20e3.50A5Z24	20	3.50	5	24
223-1d20e3.60A5Z24	20	3.60	5	24
223-1d20e3.70A5Z24	20	3.70	5	24
223-1d20e3.80A5Z24	20	3.80	5	24
223-1d20e3.90A5Z24	20	3.90	5	24
223-1d20e4.00A5Z24	20	4.00	5	24
223-1d20e4.50A5Z24	20	4.50	5	24
223-1d20e5.00A5Z24	20	5.00	5	24
223-1d20e5.50A5Z24	20	5.50	5	24
223-1d20e6.00A5Z24	20	6.00	5	24
223-1d25e0.10A8Z80	25	0.10	8	80
223-1d25e0.15A8Z80	25	0.15	8	80
223-1d25e0.20A8Z80	25	0.20	8	80
223-1d25e0.25A8Z80	25	0.25	8	80
223-1d25e0.30A8Z80	25	0.30	8	80
223-1d25e0.35A8Z64	25	0.35	8	64
223-1d25e0.40A8Z64	25	0.40	8	64
223-1d25e0.45A8Z64	25	0.45	8	64
223-1d25e0.50A8Z64	25	0.50	8	64

Art. n°	d ₁	e	d ₂	Z
223-1d25e0.60A8Z64	25	0.60	8	64
223-1d25e0.70A8Z48	25	0.70	8	48
223-1d25e0.80A8Z48	25	0.80	8	48
223-1d25e0.90A8Z48	25	0.90	8	48
223-1d25e1.00A8Z48	25	1.00	8	48
223-1d25e1.10A8Z48	25	1.10	8	48
223-1d25e1.20A8Z48	25	1.20	8	48
223-1d25e1.30A8Z40	25	1.30	8	40
223-1d25e1.40A8Z40	25	1.40	8	40
223-1d25e1.50A8Z40	25	1.50	8	40
223-1d25e1.60A8Z40	25	1.60	8	40
223-1d25e1.70A8Z40	25	1.70	8	40
223-1d25e1.80A8Z40	25	1.80	8	40
223-1d25e1.90A8Z40	25	1.90	8	40
223-1d25e2.00A8Z40	25	2.00	8	40
223-1d25e2.10A8Z40	25	2.10	8	40
223-1d25e2.20A8Z40	25	2.20	8	40
223-1d25e2.30A8Z40	25	2.30	8	40
223-1d25e2.40A8Z40	25	2.40	8	40
223-1d25e2.50A8Z40	25	2.50	8	40
223-1d25e2.60A8Z32	25	2.60	8	32
223-1d25e2.70A8Z32	25	2.70	8	32
223-1d25e2.80A8Z32	25	2.80	8	32
223-1d25e2.90A8Z32	25	2.90	8	32
223-1d25e3.00A8Z32	25	3.00	8	32
223-1d25e3.10A8Z32	25	3.10	8	32
223-1d25e3.20A8Z32	25	3.20	8	32
223-1d25e3.30A8Z32	25	3.30	8	32
223-1d25e3.40A8Z32	25	3.40	8	32
223-1d25e3.50A8Z32	25	3.50	8	32
223-1d25e3.60A8Z32	25	3.60	8	32
223-1d25e3.70A8Z32	25	3.70	8	32
223-1d25e3.80A8Z32	25	3.80	8	32
223-1d25e3.90A8Z32	25	3.90	8	32
223-1d25e4.00A8Z32	25	4.00	8	32
223-1d25e4.50A8Z32	25	4.50	8	32
223-1d25e5.00A8Z32	25	5.00	8	32
223-1d25e5.50A8Z24	25	5.50	8	24
223-1d25e6.00A8Z24	25	6.00	8	24
--> Ref. 223-2	30	0.10	8	100
--> Ref. 223-2	30	0.15	8	100
--> Ref. 223-2	30	0.20	8	100
--> Ref. 223-2	30	0.25	8	100
223-1d30e0.30A8Z80	30	0.30	8	80
223-1d30e0.35A8Z80	30	0.35	8	80

To order a coated tool, add the 2-letter coating code to the article number.

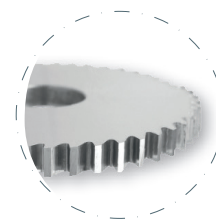
Slitting saw DIN 1837 fine pitch

223-1

Continuation

Art. n°	d ₁	e	d ₂	Z
223-1d30e0.40A8Z80	30	0.40	8	80
223-1d30e0.45A8Z80	30	0.45	8	80
223-1d30e0.50A8Z80	30	0.50	8	80
223-1d30e0.60A8Z64	30	0.60	8	64
223-1d30e0.70A8Z64	30	0.70	8	64
223-1d30e0.80A8Z64	30	0.80	8	64
223-1d30e0.90A8Z64	30	0.90	8	64
223-1d30e1.00A8Z64	30	1.00	8	64
223-1d30e1.10A8Z48	30	1.10	8	48
223-1d30e1.20A8Z48	30	1.20	8	48
223-1d30e1.30A8Z48	30	1.30	8	48
223-1d30e1.40A8Z48	30	1.40	8	48
223-1d30e1.50A8Z48	30	1.50	8	48
223-1d30e1.60A8Z48	30	1.60	8	48
223-1d30e1.70A8Z48	30	1.70	8	48
223-1d30e1.80A8Z48	30	1.80	8	48
223-1d30e1.90A8Z48	30	1.90	8	48
223-1d30e2.00A8Z48	30	2.00	8	48
223-1d30e2.10A8Z40	30	2.10	8	40
223-1d30e2.20A8Z40	30	2.20	8	40
223-1d30e2.30A8Z40	30	2.30	8	40
223-1d30e2.40A8Z40	30	2.40	8	40
223-1d30e2.50A8Z40	30	2.50	8	40
223-1d30e2.60A8Z40	30	2.60	8	40
223-1d30e2.70A8Z40	30	2.70	8	40
223-1d30e2.80A8Z40	30	2.80	8	40
223-1d30e2.90A8Z40	30	2.90	8	40
223-1d30e3.00A8Z40	30	3.00	8	40
223-1d30e3.10A8Z40	30	3.10	8	40
223-1d30e3.20A8Z40	30	3.20	8	40
223-1d30e3.30A8Z40	30	3.30	8	40
223-1d30e3.40A8Z40	30	3.40	8	40
223-1d30e3.50A8Z40	30	3.50	8	40
223-1d30e3.60A8Z40	30	3.60	8	40
223-1d30e3.70A8Z40	30	3.70	8	40
223-1d30e3.80A8Z40	30	3.80	8	40
223-1d30e3.90A8Z40	30	3.90	8	40
223-1d30e4.00A8Z40	30	4.00	8	40
223-1d30e4.50A8Z32	30	4.50	8	32
223-1d30e5.00A8Z32	30	5.00	8	32
223-1d30e5.50A8Z32	30	5.50	8	32
223-1d30e6.00A8Z32	30	6.00	8	32
223-1d40e0.10A10Z128	40	0.10	10	128
223-1d40e0.15A10Z128	40	0.15	10	128
223-1d40e0.20A10Z128	40	0.20	10	128

Art. n°	d ₁	e	d ₂	Z
--> Ref. 223-2	40	0.25	10	100
--> Ref. 223-2	40	0.30	10	100
--> Ref. 223-2	40	0.35	10	100
--> Ref. 223-2	40	0.40	10	100
223-1d40e0.45A10Z80	40	0.45	10	80
223-1d40e0.50A10Z80	40	0.50	10	80
223-1d40e0.60A10Z80	40	0.60	10	80
223-1d40e0.70A10Z80	40	0.70	10	80
223-1d40e0.80A10Z80	40	0.80	10	80
223-1d40e0.90A10Z64	40	0.90	10	64
223-1d40e1.00A10Z64	40	1.00	10	64
223-1d40e1.10A10Z64	40	1.10	10	64
223-1d40e1.20A10Z64	40	1.20	10	64
223-1d40e1.30A10Z64	40	1.30	10	64
223-1d40e1.40A10Z64	40	1.40	10	64
223-1d40e1.50A10Z64	40	1.50	10	64
223-1d40e1.60A10Z64	40	1.60	10	64
223-1d40e1.70A10Z48	40	1.70	10	48
223-1d40e1.80A10Z48	40	1.80	10	48
223-1d40e1.90A10Z48	40	1.90	10	48
223-1d40e2.00A10Z48	40	2.00	10	48
223-1d40e2.10A10Z48	40	2.10	10	48
223-1d40e2.20A10Z48	40	2.20	10	48
223-1d40e2.30A10Z48	40	2.30	10	48
223-1d40e2.40A10Z48	40	2.40	10	48
223-1d40e2.50A10Z48	40	2.50	10	48
223-1d40e2.60A10Z48	40	2.60	10	48
223-1d40e2.70A10Z48	40	2.70	10	48
223-1d40e2.80A10Z48	40	2.80	10	48
223-1d40e2.90A10Z48	40	2.90	10	48
223-1d40e3.00A10Z48	40	3.00	10	48
223-1d40e3.10A10Z40	40	3.10	10	40
223-1d40e3.20A10Z40	40	3.20	10	40
223-1d40e3.30A10Z40	40	3.30	10	40
223-1d40e3.40A10Z40	40	3.40	10	40
223-1d40e3.50A10Z40	40	3.50	10	40
223-1d40e3.60A10Z40	40	3.60	10	40
223-1d40e3.70A10Z40	40	3.70	10	40
223-1d40e3.80A10Z40	40	3.80	10	40
223-1d40e3.90A10Z40	40	3.90	10	40
223-1d40e4.00A10Z40	40	4.00	10	40
223-1d40e4.50A10Z40	40	4.50	10	40
223-1d40e5.00A10Z40	40	5.00	10	40
223-1d40e5.50A10Z40	40	5.50	10	40
223-1d40e6.00A10Z40	40	6.00	10	40



Available
uncoated or coated



Z
24-160



λ
0°

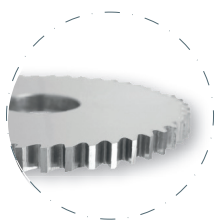
γ
6°

CARB

To order a coated tool, add the 2-letter coating code to the article number.



Slitting saw DIN 1837 fine pitch



Available
uncoated or coated



Z
24-160



λ
0°

γ
6°

CARB

Art. n°	d ₁	e	d ₂	Z
223-1d50e0.20A13Z128	50	0.20	13	128
223-1d50e0.25A13Z128	50	0.25	13	128
223-1d50e0.30A13Z128	50	0.30	13	128
223-1d50e0.35A13Z100	50	0.35	13	100
223-1d50e0.40A13Z100	50	0.40	13	100
223-1d50e0.45A13Z100	50	0.45	13	100
223-1d50e0.50A13Z100	50	0.50	13	100
223-1d50e0.60A13Z100	50	0.60	13	100
223-1d50e0.70A13Z80	50	0.70	13	80
223-1d50e0.80A13Z80	50	0.80	13	80
223-1d50e0.90A13Z80	50	0.90	13	80
223-1d50e1.00A13Z80	50	1.00	13	80
223-1d50e1.10A13Z80	50	1.10	13	80
223-1d50e1.20A13Z80	50	1.20	13	80
223-1d50e1.30A13Z64	50	1.30	13	64
223-1d50e1.40A13Z64	50	1.40	13	64
223-1d50e1.50A13Z64	50	1.50	13	64
223-1d50e1.60A13Z64	50	1.60	13	64
223-1d50e1.70A13Z64	50	1.70	13	64
223-1d50e1.80A13Z64	50	1.80	13	64
223-1d50e1.90A13Z64	50	1.90	13	64
223-1d50e2.00A13Z64	50	2.00	13	64
223-1d50e2.10A13Z64	50	2.10	13	64
223-1d50e2.20A13Z64	50	2.20	13	64
223-1d50e2.30A13Z64	50	2.30	13	64
223-1d50e2.40A13Z64	50	2.40	13	64
223-1d50e2.50A13Z64	50	2.50	13	64
223-1d50e2.60A13Z48	50	2.60	13	48
223-1d50e2.70A13Z48	50	2.70	13	48
223-1d50e2.80A13Z48	50	2.80	13	48
223-1d50e2.90A13Z48	50	2.90	13	48
223-1d50e3.00A13Z48	50	3.00	13	48
223-1d50e3.10A13Z48	50	3.10	13	48
223-1d50e3.20A13Z48	50	3.20	13	48
223-1d50e3.30A13Z48	50	3.30	13	48
223-1d50e3.40A13Z48	50	3.40	13	48
223-1d50e3.50A13Z48	50	3.50	13	48
223-1d50e3.60A13Z48	50	3.60	13	48
223-1d50e3.70A13Z48	50	3.70	13	48
223-1d50e3.80A13Z48	50	3.80	13	48
223-1d50e3.90A13Z48	50	3.90	13	48
223-1d50e4.00A13Z48	50	4.00	13	48
223-1d50e4.50A13Z48	50	4.50	13	48
223-1d50e5.00A13Z48	50	5.00	13	48
223-1d50e5.50A13Z40	50	5.50	13	40

Art. n°	d ₁	e	d ₂	Z
223-1d50e6.00A13Z40	50	6.00	13	40
223-1d63e0.20A16Z160	63	0.20	16	160
223-1d63e0.25A16Z128	63	0.25	16	128
223-1d63e0.30A16Z128	63	0.30	16	128
223-1d63e0.35A16Z128	63	0.35	16	128
223-1d63e0.40A16Z128	63	0.40	16	128
223-1d63e0.45A16Z128	63	0.45	16	128
223-1d63e0.50A16Z128	63	0.50	16	128
223-1d63e0.60A16Z100	63	0.60	16	100
223-1d63e0.70A16Z100	63	0.70	16	100
223-1d63e0.80A16Z100	63	0.80	16	100
223-1d63e0.90A16Z100	63	0.90	16	100
223-1d63e1.00A16Z100	63	1.00	16	100
223-1d63e1.10A16Z80	63	1.10	16	80
223-1d63e1.20A16Z80	63	1.20	16	80
223-1d63e1.30A16Z80	63	1.30	16	80
223-1d63e1.40A16Z80	63	1.40	16	80
223-1d63e1.50A16Z80	63	1.50	16	80
223-1d63e1.60A16Z80	63	1.60	16	80
223-1d63e1.70A16Z80	63	1.70	16	80
223-1d63e1.80A16Z80	63	1.80	16	80
223-1d63e1.90A16Z80	63	1.90	16	80
223-1d63e2.00A16Z80	63	2.00	16	80
223-1d63e2.10A16Z64	63	2.10	16	64
223-1d63e2.20A16Z64	63	2.20	16	64
223-1d63e2.30A16Z64	63	2.30	16	64
223-1d63e2.40A16Z64	63	2.40	16	64
223-1d63e2.50A16Z64	63	2.50	16	64
223-1d63e2.60A16Z64	63	2.60	16	64
223-1d63e2.70A16Z64	63	2.70	16	64
223-1d63e2.80A16Z64	63	2.80	16	64
223-1d63e2.90A16Z64	63	2.90	16	64
223-1d63e3.00A16Z64	63	3.00	16	64
223-1d63e3.10A16Z64	63	3.10	16	64
223-1d63e3.20A16Z64	63	3.20	16	64
223-1d63e3.30A16Z64	63	3.30	16	64
223-1d63e3.40A16Z64	63	3.40	16	64
223-1d63e3.50A16Z64	63	3.50	16	64
223-1d63e3.60A16Z64	63	3.60	16	64
223-1d63e3.70A16Z64	63	3.70	16	64
223-1d63e3.80A16Z64	63	3.80	16	64
223-1d63e3.90A16Z64	63	3.90	16	64
223-1d63e4.00A16Z64	63	4.00	16	64
223-1d63e4.50A16Z48	63	4.50	16	48
223-1d63e5.00A16Z48	63	5.00	16	48

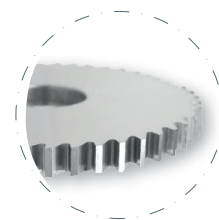
To order a coated tool, add the 2-letter coating code to the article number.

Slitting saw DIN 1837 fine pitch

223-1

Art. n°	d ₁	e	d ₂	Z
223-1d63e5.50A16Z48	63	5.50	16	48
223-1d63e6.00A16Z48	63	6.00	16	48
223-1d80e0.25A22Z160	80	0.25	22	160
223-1d80e0.30A22Z160	80	0.30	22	160
223-1d80e0.35A22Z160	80	0.35	22	160
223-1d80e0.40A22Z160	80	0.40	22	160
223-1d80e0.45A22Z128	80	0.45	22	128
223-1d80e0.50A22Z128	80	0.50	22	128
223-1d80e0.60A22Z128	80	0.60	22	128
223-1d80e0.70A22Z128	80	0.70	22	128
223-1d80e0.80A22Z128	80	0.80	22	128
223-1d80e0.90A22Z100	80	0.90	22	100
223-1d80e1.00A22Z100	80	1.00	22	100
223-1d80e1.10A22Z100	80	1.10	22	100
223-1d80e1.20A22Z100	80	1.20	22	100
223-1d80e1.30A22Z100	80	1.30	22	100
223-1d80e1.40A22Z100	80	1.40	22	100
223-1d80e1.50A22Z100	80	1.50	22	100
223-1d80e1.60A22Z100	80	1.60	22	100
223-1d80e1.70A22Z80	80	1.70	22	80
223-1d80e1.80A22Z80	80	1.80	22	80
223-1d80e1.90A22Z80	80	1.90	22	80
223-1d80e2.00A22Z80	80	2.00	22	80
223-1d80e2.10A22Z80	80	2.10	22	80
223-1d80e2.20A22Z80	80	2.20	22	80
223-1d80e2.30A22Z80	80	2.30	22	80
223-1d80e2.40A22Z80	80	2.40	22	80
223-1d80e2.50A22Z80	80	2.50	22	80
223-1d80e2.60A22Z80	80	2.60	22	80
223-1d80e2.70A22Z80	80	2.70	22	80
223-1d80e2.80A22Z80	80	2.80	22	80
223-1d80e2.90A22Z80	80	2.90	22	80
223-1d80e3.00A22Z80	80	3.00	22	80
223-1d80e3.10A22Z64	80	3.10	22	64
223-1d80e3.20A22Z64	80	3.20	22	64
223-1d80e3.30A22Z64	80	3.30	22	64
223-1d80e3.40A22Z64	80	3.40	22	64
223-1d80e3.50A22Z64	80	3.50	22	64
223-1d80e3.60A22Z64	80	3.60	22	64
223-1d80e3.70A22Z64	80	3.70	22	64
223-1d80e3.80A22Z64	80	3.80	22	64
223-1d80e3.90A22Z64	80	3.90	22	64
223-1d80e4.00A22Z64	80	4.00	22	64
223-1d80e4.50A22Z64	80	4.50	22	64
223-1d80e5.00A22Z64	80	5.00	22	64

Art. n°	d ₁	e	d ₂	Z
223-1d80e5.50A22Z64	80	5.50	22	64
223-1d80e6.00A22Z64	80	6.00	22	64
223-1d100e0.50A22Z160	100	0.50	22	160
223-1d100e0.60A22Z160	100	0.60	22	160
223-1d100e0.70A22Z128	100	0.70	22	128
223-1d100e0.80A22Z128	100	0.80	22	128
223-1d100e0.90A22Z128	100	0.90	22	128
223-1d100e1.00A22Z128	100	1.00	22	128
223-1d100e1.10A22Z128	100	1.10	22	128
223-1d100e1.20A22Z128	100	1.20	22	128
223-1d100e1.30A22Z100	100	1.30	22	100
223-1d100e1.40A22Z100	100	1.40	22	100
223-1d100e1.50A22Z100	100	1.50	22	100
223-1d100e1.60A22Z100	100	1.60	22	100
223-1d100e1.70A22Z100	100	1.70	22	100
223-1d100e1.80A22Z100	100	1.80	22	100
223-1d100e1.90A22Z100	100	1.90	22	100
223-1d100e2.00A22Z100	100	2.00	22	100
223-1d100e2.10A22Z100	100	2.10	22	100
223-1d100e2.20A22Z100	100	2.20	22	100
223-1d100e2.30A22Z100	100	2.30	22	100
223-1d100e2.40A22Z100	100	2.40	22	100
223-1d100e2.50A22Z100	100	2.50	22	100
223-1d100e2.60A22Z80	100	2.60	22	80
223-1d100e2.70A22Z80	100	2.70	22	80
223-1d100e2.80A22Z80	100	2.80	22	80
223-1d100e2.90A22Z80	100	2.90	22	80
223-1d100e3.00A22Z80	100	3.00	22	80
223-1d100e3.10A22Z80	100	3.10	22	80
223-1d100e3.20A22Z80	100	3.20	22	80
223-1d100e3.30A22Z80	100	3.30	22	80
223-1d100e3.40A22Z80	100	3.40	22	80
223-1d100e3.50A22Z80	100	3.50	22	80
223-1d100e3.60A22Z80	100	3.60	22	80
223-1d100e3.70A22Z80	100	3.70	22	80
223-1d100e3.80A22Z80	100	3.80	22	80
223-1d100e3.90A22Z80	100	3.90	22	80
223-1d100e4.00A22Z80	100	4.00	22	80
223-1d100e4.50A22Z80	100	4.50	22	80
223-1d100e5.00A22Z80	100	5.00	22	80
223-1d100e5.50A22Z64	100	5.50	22	64
223-1d100e6.00A22Z64	100	6.00	22	64
223-1d125e0.60A22Z160	125	0.60	22	160
223-1d125e0.70A22Z160	125	0.70	22	160
223-1d125e0.80A22Z160	125	0.80	22	160



Available
uncoated or coated



Z
24-160



λ
0°

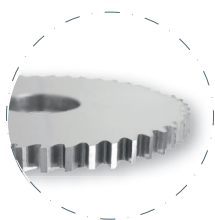
γ
6°

CARB

To order a coated tool, add the 2-letter coating code to the article number.



Slitting saw DIN 1837 fine pitch



Available
uncoated or coated



Z
24-160



λ
0°

γ
6°

CARB

Art. n°	d_1	e	d_2	Z
223-1d125e0.90A22Z160	125	0.90	22	160
223-1d125e1.00A22Z160	125	1.00	22	160
223-1d125e1.10A22Z128	125	1.10	22	128
223-1d125e1.20A22Z128	125	1.20	22	128
223-1d125e1.30A22Z128	125	1.30	22	128
223-1d125e1.40A22Z128	125	1.40	22	128
223-1d125e1.50A22Z128	125	1.50	22	128
223-1d125e1.60A22Z128	125	1.60	22	128
223-1d125e1.70A22Z128	125	1.70	22	128
223-1d125e1.80A22Z128	125	1.80	22	128
223-1d125e1.90A22Z128	125	1.90	22	128
223-1d125e2.00A22Z128	125	2.00	22	128
223-1d125e2.10A22Z100	125	2.10	22	100
223-1d125e2.20A22Z100	125	2.20	22	100
223-1d125e2.30A22Z100	125	2.30	22	100
223-1d125e2.40A22Z100	125	2.40	22	100
223-1d125e2.50A22Z100	125	2.50	22	100
223-1d125e2.60A22Z100	125	2.60	22	100
223-1d125e2.70A22Z100	125	2.70	22	100
223-1d125e2.80A22Z100	125	2.80	22	100
223-1d125e2.90A22Z100	125	2.90	22	100
223-1d125e3.00A22Z100	125	3.00	22	100
223-1d125e3.10A22Z100	125	3.10	22	100
223-1d125e3.20A22Z100	125	3.20	22	100
223-1d125e3.30A22Z100	125	3.30	22	100
223-1d125e3.40A22Z100	125	3.40	22	100
223-1d125e3.50A22Z100	125	3.50	22	100
223-1d125e3.60A22Z100	125	3.60	22	100
223-1d125e3.70A22Z100	125	3.70	22	100
223-1d125e3.80A22Z100	125	3.80	22	100
223-1d125e3.90A22Z100	125	3.90	22	100
223-1d125e4.00A22Z100	125	4.00	22	100
223-1d125e4.50A22Z100	125	4.50	22	100
223-1d125e5.00A22Z100	125	5.00	22	100
223-1d125e5.50A22Z100	125	5.50	22	100
223-1d125e6.00A22Z100	125	6.00	22	100
223-1d160e1.00A32Z160	160	1.00	32	160
223-1d160e1.20A32Z160	160	1.20	32	160
223-1d160e1.50A32Z160	160	1.50	32	160
223-1d160e1.60A32Z160	160	1.60	32	160
223-1d160e1.80A32Z128	160	1.80	32	128
223-1d160e2.00A32Z128	160	2.00	32	128
223-1d160e2.50A32Z128	160	2.50	32	128
223-1d160e3.00A32Z128	160	3.00	32	128

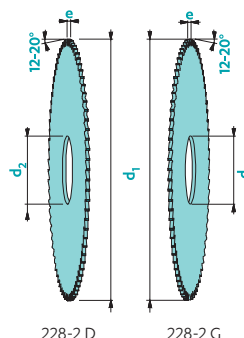
To order a coated tool, add the 2-letter coating code to the article number.

Angle cutter 12° to 20°

228-2

Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating *
Steel < 700 N/mm ²	80	120	□	■	Tisi (BQ)
Steel > 700 N/mm ²	60	100	□	■	Tisi (BQ)
Stainless steel	60	100	□	■	Tisi (BQ)
Cast iron	50	90	□	■	Tisi (BQ)
Copper	200	300	□	■	Solo (DA)
Brass - Bronze	200	300	■	□	Solo (DA)
Aluminium	250	400	□	■	Solo (DA)
Gold - Silver	150	300	□	■	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	20	40	□	■	Trio (PO)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted □ highly adapted ■



Tolerances e : ± 0.01
d₂ : H5

Right cut: 228-2D / Left cut: 228-2G

Art. n°	d ₁	e	d ₂	Z	a
228-2Dd30e0.5a##° / 228-2Gd30e0.5a##°	30	0.5	8	64	12-20°
228-2Dd30e0.7a##° / 228-2Gd30e0.7a##°	30	0.7	8	64	12-20°
228-2Dd30e0.8a##° / 228-2Gd30e0.8a##°	30	0.8	8	64	12-20°
228-2Dd30e1.0a##° / 228-2Gd30e1.0a##°	30	1.0	8	64	12-20°
228-2Dd30e1.5a##° / 228-2Gd30e1.5a##°	30	1.5	8	48	12-20°
228-2Dd40e0.5a##° / 228-2Gd40e0.5a##°	40	0.5	10	80	12-20°
228-2Dd40e0.8a##° / 228-2Gd40e0.8a##°	40	0.8	10	64	12-20°
228-2Dd40e1.0a##° / 228-2Gd40e1.0a##°	40	1.0	10	64	12-20°
228-2Dd50e0.5a##° / 228-2Gd50e0.5a##°	50	0.5	13	100	12-20°
228-2Dd50e0.8a##° / 228-2Gd50e0.8a##°	50	0.8	13	100	12-20°
228-2Dd50e1.0a##° / 228-2Gd50e1.0a##°	50	1.0	13	100	12-20°
228-2Dd63e0.5a##° / 228-2Gd63e0.5a##°	63	0.5	16	100	12-20°
228-2Dd63e0.7a##° / 228-2Gd63e0.7a##°	63	0.7	16	100	12-20°
228-2Dd63e0.8a##° / 228-2Gd63e0.8a##°	63	0.8	16	100	12-20°
228-2Dd63e1.0a##° / 228-2Gd63e1.0a##°	63	1.0	16	100	12-20°
228-2Dd80e0.5a##° / 228-2Gd80e0.5a##°	80	0.5	22	128	12-20°
228-2Dd80e0.8a##° / 228-2Gd80e0.8a##°	80	0.8	22	128	12-20°
228-2Dd80e1.0a##° / 228-2Gd80e1.0a##°	80	1.0	22	100	12-20°
228-2Dd100e0.6a##° / 228-2Gd100e0.6a##°	100	0.6	22	128	12-20°
228-2Dd100e0.7a##° / 228-2Gd100e0.7a##°	100	0.7	22	128	12-20°
228-2Dd100e0.8a##° / 228-2Gd100e0.8a##°	100	0.8	22	128	12-20°
228-2Dd100e1.0a##° / 228-2Gd100e1.0a##°	100	1.0	22	128	12-20°

To order a coated tool, add the 2-letter coating code to the article number.

Available
uncoated or coated

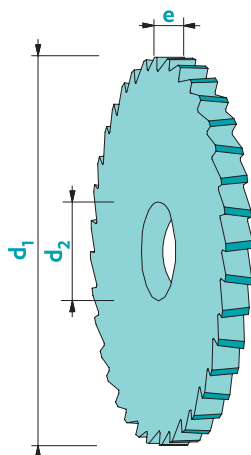


Z
64-128

λ
0°

CARB

Slitting saw staggered teeth



Material	Vc uncoated [m/min]	Vc coated [m/min]	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm²	80	120	□	■	Tisi (BQ)
Steel > 700 N/mm²	60	100	□	■	Tisi (BQ)
Stainless steel	60	100	□	■	Tisi (BQ)
Cast iron	50	90	□	■	Tisi (BQ)
Copper	200	300	□	■	Solo (DA)
Brass - Bronze	200	300	■	□	Solo (DA)
Aluminium	250	400	□	■	Solo (DA)
Gold - Silver	150	300	□	■	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	20	40	□	■	Trio (PO)
Titanium	40	60	■	■	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances e : ± 0.01
d₂ : H5

Available uncoated or coated

Z
12-36

λ
ALT

γ
6°

CARB

Art. n°	d ₁	e	d ₂	Z
226d15e1.5a5Z##	15	1.5	5	12 - 18
226d15e2.0a5Z##	15	2.0	5	12 - 18
226d15e2.5a5Z##	15	2.5	5	12 - 18
226d15e3.0a5Z##	15	3.0	5	12 - 18
226d15e3.5a5Z##	15	3.5	5	12 - 18
226d15e4.0a5Z##	15	4.0	5	12 - 18
226d15e4.5a5Z##	15	4.5	5	12 - 18
226d15e5.0a5Z##	15	5.0	5	12 - 18
226d15e5.5a5Z##	15	5.5	5	12 - 18
226d15e6.0a5Z##	15	6.0	5	12 - 18
226d20e1.5a5Z##	20	1.5	5	20 - 24
226d20e2.0a5Z##	20	2.0	5	20 - 24
226d20e2.5a5Z##	20	2.5	5	20 - 24
226d20e3.0a5Z##	20	3.0	5	20 - 24
226d20e3.5a5Z##	20	3.5	5	20 - 24
226d20e4.0a5Z##	20	4.0	5	20 - 24
226d20e4.5a5Z##	20	4.5	5	20 - 24
226d20e5.0a5Z##	20	5.0	5	20 - 24
226d20e5.5a5Z##	20	5.5	5	20 - 24
226d20e6.0a5Z##	20	6.0	5	20 - 24
226d25e1.5a8Z##	25	1.5	8	24 - 28
226d25e2.0a8Z##	25	2.0	8	24 - 28
226d25e2.5a8Z##	25	2.5	8	24 - 28
226d25e3.0a8Z##	25	3.0	8	24 - 28
226d25e3.5a8Z##	25	3.5	8	24 - 28
226d25e4.0a8Z##	25	4.0	8	24 - 28
226d25e4.5a8Z##	25	4.5	8	24 - 28
226d25e5.0a8Z##	25	5.0	8	24 - 28
226d25e5.5a8Z##	25	5.5	8	24 - 28
226d25e6.0a8Z##	25	6.0	8	24 - 28

Art. n°	d ₁	e	d ₂	Z
226d25e6.5a8Z##	25	6.5	8	24 - 28
226d25e7.0a8Z##	25	7.0	8	24 - 28
226d25e7.5a8Z##	25	7.5	8	24 - 28
226d25e8.0a8Z##	25	8.0	8	24 - 28
226d30e1.5a8Z##	30	1.5	8	24 - 28
226d30e2.0a8Z##	30	2.0	8	24 - 28
226d30e2.5a8Z##	30	2.5	8	24 - 28
226d30e3.0a8Z##	30	3.0	8	24 - 28
226d30e3.5a8Z##	30	3.5	8	24 - 28
226d30e4.0a8Z##	30	4.0	8	24 - 28
226d30e4.5a8Z##	30	4.5	8	24 - 28
226d30e5.0a8Z##	30	5.0	8	24 - 28
226d30e5.5a8Z##	30	5.5	8	24 - 28
226d30e6.0a8Z##	30	6.0	8	24 - 28
226d30e6.5a8Z##	30	6.5	8	24 - 28
226d30e7.0a8Z##	30	7.0	8	24 - 28
226d30e7.5a8Z##	30	7.5	8	24 - 28
226d30e8.0a8Z##	30	8.0	8	24 - 28
226d30e8.5a8Z##	30	8.5	8	24 - 28
226d30e9.0a8Z##	30	9.0	8	24 - 28
226d30e9.5a8Z##	30	9.5	8	24 - 28
226d30e10.0a8Z##	30	10.0	8	24 - 28
226d40e2.0a10Z##	40	2.0	10	28 - 32
226d40e2.5a10Z##	40	2.5	10	28 - 32
226d40e3.0a10Z##	40	3.0	10	28 - 32
226d40e3.5a10Z##	40	3.5	10	28 - 32
226d40e4.0a10Z##	40	4.0	10	28 - 32
226d40e4.5a10Z##	40	4.5	10	28 - 32
226d40e5.0a10Z##	40	5.0	10	28 - 32
226d40e5.5a10Z##	40	5.5	10	28 - 32

* Prices for other coatings: contact us!

To order a coated tool, add the 2-letter coating code to the article number.



Slitting saw staggered teeth

226

Continuation

Art. n°	d ₁	e	d ₂	Z
226d40e6.0a10Z##	40	6.0	10	28 - 32
226d40e6.5a10Z##	40	6.5	10	28 - 32
226d40e7.0a10Z##	40	7.0	10	28 - 32
226d40e7.5a10Z##	40	7.5	10	28 - 32
226d40e8.0a10Z##	40	8.0	10	28 - 32
226d40e8.5a10Z##	40	8.5	10	28 - 32
226d40e9.0a10Z##	40	9.0	10	28 - 32
226d40e9.5a10Z##	40	9.5	10	28 - 32
226d40e10.0a10Z##	40	10.0	10	28 - 32
226d40e11.0a10Z##	40	11.0	10	28 - 32
226d40e12.0a10Z##	40	12.0	10	28 - 32
226d50e2.0a13Z##	50	2.0	13	28 - 32
226d50e2.5a13Z##	50	2.5	13	28 - 32
226d50e3.0a13Z##	50	3.0	13	28 - 32
226d50e3.5a13Z##	50	3.5	13	28 - 32
226d50e4.0a13Z##	50	4.0	13	28 - 32
226d50e4.5a13Z##	50	4.5	13	28 - 32
226d50e5.0a13Z##	50	5.0	13	28 - 32
226d50e5.5a13Z##	50	5.5	13	28 - 32
226d50e6.0a13Z##	50	6.0	13	28 - 32
226d50e6.5a13Z##	50	6.5	13	28 - 32
226d50e7.0a13Z##	50	7.0	13	28 - 32
226d50e7.5a13Z##	50	7.5	13	28 - 32
226d50e8.0a13Z##	50	8.0	13	28 - 32
226d50e8.5a13Z##	50	8.5	13	28 - 32
226d50e9.0a13Z##	50	9.0	13	28 - 32
226d50e9.5a13Z##	50	9.5	13	28 - 32
226d50e10.0a13Z##	50	10.0	13	28 - 32
226d50e11.0a13Z##	50	11.0	13	28 - 32
226d50e12.0a13Z##	50	12.0	13	28 - 32
226d63e2.0a16Z##	63	2.0	16	28 - 36
226d63e2.5a16Z##	63	2.5	16	28 - 36
226d63e3.0a16Z##	63	3.0	16	28 - 36
226d63e3.5a16Z##	63	3.5	16	28 - 36
226d63e4.0a16Z##	63	4.0	16	28 - 36
226d63e4.5a16Z##	63	4.5	16	28 - 36
226d63e5.0a16Z##	63	5.0	16	28 - 36
226d63e5.5a16Z##	63	5.5	16	28 - 36
226d63e6.0a16Z##	63	6.0	16	28 - 36
226d63e6.5a16Z##	63	6.5	16	28 - 36
226d63e7.0a16Z##	63	7.0	16	28 - 36
226d63e7.5a16Z##	63	7.5	16	28 - 36
226d63e8.0a16Z##	63	8.0	16	28 - 36
226d63e8.5a16Z##	63	8.5	16	28 - 36
226d63e9.0a16Z##	63	9.0	16	28 - 36

Art. n°	d ₁	e	d ₂	Z
226d63e10.0a16Z##	63	10.0	16	28 - 36
226d80e2.0a22Z##	80	2.0	22	28 - 36
226d80e2.5a22Z##	80	2.5	22	28 - 36
226d80e3.0a22Z##	80	3.0	22	28 - 36
226d80e3.5a22Z##	80	3.5	22	28 - 36
226d80e4.0a22Z##	80	4.0	22	28 - 36
226d80e4.5a22Z##	80	4.5	22	28 - 36
226d80e5.0a22Z##	80	5.0	22	28 - 36
226d80e5.5a22Z##	80	5.5	22	28 - 36
226d80e6.0a22Z##	80	6.0	22	28 - 36
226d80e6.5a22Z##	80	6.5	22	28 - 36
226d80e7.0a22Z##	80	7.0	22	28 - 36
226d80e7.5a22Z##	80	7.5	22	28 - 36
226d80e8.0a22Z##	80	8.0	22	28 - 36
226d80e8.5a22Z##	80	8.5	22	28 - 36
226d80e9.0a22Z##	80	9.0	22	28 - 36
226d80e9.5a22Z##	80	9.5	22	28 - 36
226d80e10.0a22Z##	80	10.0	22	28 - 36
226d80e11.0a22Z##	80	11.0	22	28 - 36
226d80e12.0a22Z##	80	12.0	22	28 - 36



Available
uncoated or coated



Z
12-36



λ
ALT

γ
6°

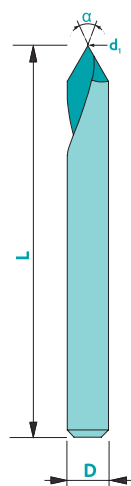
CARB

* Prices for other coatings: contact us!

To order a coated tool, add the 2-letter coating code to the article number.

119-2

Helical engraving mill - flat tip



Material	n [rpm]	Ap	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	25 - 40'000	0.05 - 0.40	□	■	Tisi (BQ)
Steel > 700 N/mm ²	20 - 40'000	0.05 - 0.30	-	■	Tisi (BQ)
Stainless steel	20 - 30'000	0.05 - 0.30	-	□	Tisi (BQ)
Cast iron	25 - 40'000	0.05 - 0.40	□	■	Tisi (BQ)
Copper	20 - 40'000	0.05 - 0.40	□	■	Solo (DA)
Brass - Bronze	25 - 40'000	0.05 - 0.40	□	□	Solo (DA)
Aluminium	25 - 40'000	0.05 - 0.50	□	■	Solo (DA)
Gold - Silver	20 - 40'000	0.05 - 0.40	■	□	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	25 - 40'000	0.05 - 0.40	□	□	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances
 d_t : ± 0.01
 D : h5

Available
uncoated or coated

Article number: 119-2a##d#.##

Example: End mill ref. 119-2 with 25° angle and tip diameter 0.05 mm: 119-2a25d0.05

α^*	d_t^{**}	D	L
15-45°	0.02-0.09	3	33
15-45°	0.10-0.30	3	33
50-140°	0.02-0.09	3	33
50-140°	0.10-0.30	3	33

* Available angles: every 5° between 15° and 45°; every 10° between 50° and 140°

** Available diameters: every 0.01 mm between 0.02 and 0.09 mm; every 0.05 mm between 0.10 and 0.30 mm

Other dimensions (angle, tip diameter, shank) upon request

* Prices for coatings: contact us!

To order a coated tool, add the 2-letter coating code to the article number

If $\alpha < 30^\circ$, a double cone applies

Options

C01

H

MCU
≤ Ø3

701S
≤ Ø3.2

50

LOUIS BELET

swiss made

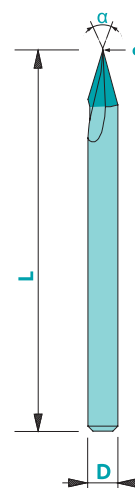
Engraving mill- $\frac{3}{4}$ - flat tip

119-3

Material	n [rpm]	Ap	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm ²	25 - 40'000	0.05 - 0.40	■	■	Tisi (BQ)
Steel > 700 N/mm ²	20 - 40'000	0.05 - 0.30	-	■	Tisi (BQ)
Stainless steel	20 - 30'000	0.05 - 0.30	-	■	Tisi (BQ)
Cast iron	25 - 40'000	0.05 - 0.40	■	■	Tisi (BQ)
Copper	20 - 40'000	0.05 - 0.40	■	■	Solo (DA)
Brass - Bronze	25 - 40'000	0.05 - 0.40	■	■	Solo (DA)
Aluminium	25 - 40'000	0.05 - 0.50	■	■	Solo (DA)
Gold - Silver	20 - 40'000	0.05 - 0.40	■	■	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	25 - 40'000	0.05 - 0.40	■	■	Marc (ME)

not adapted - adapted ■ highly adapted ■

Tolerances
 d_1 : ± 0.01
 D : h5



Article number: 119-3a##d#.#

Example: End mill ref. 119-3 with 25° angle and tip diameter 0.05 mm: 119-3a25d0.05

α	d_1	D	L
15-45°	0.02-0.09	3	33
15-45°	0.10-0.30	3	33
50-140°	0.02-0.09	3	33
50-140°	0.10-0.30	3	33

Available angles: every 5° between 15° and 45°; every 10° between 50° and 140°

Available radius: every 0.01 mm between 0.02 and 0.09 mm; every 0.05 mm between 0.10 and 0.30 mm

Other dimensions (angle, radius, shank) upon request

To order a coated tool, add the 2-letter coating code to the article number

Available
uncoated or coated

0.02-0.20



λ
0°

CARB

If $\alpha < 30^\circ$, a double
cone applies

Options

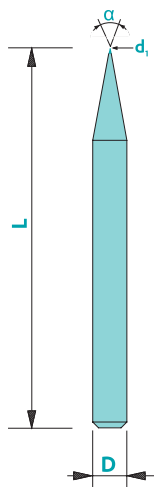
C01



MCU
 $\leq \varnothing 3$

701S
 $\leq \varnothing 3.2$

Engraving mill V-shape - reinforced



Material	n [rpm]	Ap	Uncoated	Coated	Rec. Coating*
Steel < 700 N/mm²	25 - 40'000	0.05 - 0.40	□	■	Tisi (BQ)
Steel > 700 N/mm²	20 - 40'000	0.05 - 0.30	-	■	Tisi (BQ)
Stainless steel	20 - 30'000	0.05 - 0.30	-	□	Tisi (BQ)
Cast iron	25 - 40'000	0.05 - 0.40	□	■	Tisi (BQ)
Copper	20 - 40'000	0.05 - 0.40	□	■	Solo (DA)
Brass - Bronze	25 - 40'000	0.05 - 0.40	■	■	Solo (DA)
Aluminium	25 - 40'000	0.05 - 0.50	□	■	Solo (DA)
Gold - Silver	20 - 40'000	0.05 - 0.40	■	□	Solo (DA)
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	25 - 40'000	0.05 - 0.40	□	■	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances d_t : ±0.01
D: h5

Article number: 119-4a##d#.##

Example: End mill ref. 119-4 with 25° angle and tip diameter 0.05 mm: 119-4a25d0.05

α	d _t	D	L
15-45°	0.02-0.09	3	33
15-45°	0.10-0.30	3	33
50-140°	0.02-0.09	3	33
50-140°	0.10-0.30	3	33

Available angles: every 5° between 15° and 45°; every 10° between 50° and 140°

Available radius: every 0.01 mm between 0.02 and 0.09 mm; every 0.05 mm between 0.10 and 0.30 mm

Other dimensions (angle, radius, shank) upon request

To order a coated tool, add the 2-letter coating code to the article number

Available
uncoated or coated



CARB

If α < 30°, a double
cone applies

Options

C01



MCU
≤ Ø3

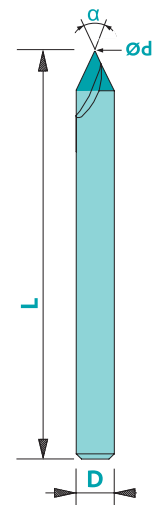
701S
≤ Ø3.2

Engraving mill in PCD - $\frac{3}{4}$ - flat tip

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	-	-	-
Composite	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
4119-3a40d0.05	40°	0.05	3	33
4119-3a40d0.08	40°	0.08	3	33
4119-3a40d0.10	40°	0.10	3	33
4119-3a50d0.05	50°	0.05	3	33
4119-3a50d0.08	50°	0.08	3	33
4119-3a50d0.10	50°	0.10	3	33
4119-3a60d0.05	60°	0.05	3	33
4119-3a60d0.08	60°	0.08	3	33

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

Available
uncoated only



λ
0°

PCD

If $d_1 \leq 0.5$ mm, a double
cone applies

☐ Order ☐ Quotation request

Angle (α): ☐ By default : 60° ☐ 30° ☐ 35° ☐ 45° ☐ Other : _____ ☐ 50° ☐ 55° ☐ 90°		Shank $\emptyset$: ☐ By default : D=3 ☐ Other : D= _____	
Machined material : _____		Quantity : _____	
Order No : _____		d_1 (from 0.02 mm) : _____	
Contact person : _____		Company's stamp & date : _____	

Standard dimensions of the bars : $\emptyset 3 \times L 38$, $\emptyset 4 \times L 38$, $\emptyset 6 \times L 38$, $\emptyset 6 \times L 51$, $\emptyset 8 \times L 61$, $\emptyset 10 \times L 72$, $\emptyset 12 \times L 83$, $\emptyset 16 \times L 92$, $\emptyset 20 \times L 104$
 Other dimensions, CVD/CBN available upon request.

Options



MCU
 $\leq \emptyset 3$

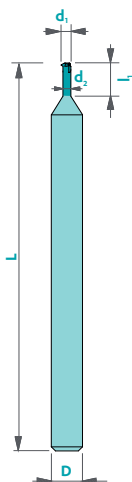
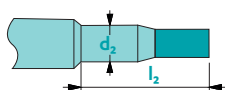
701S
 $\leq \emptyset 6$

5600

Whirling tools Z3 - NIHS norm 06-10



Upon request



Material	Vc	Uncoated	Coated	Rec. Coating *
Steel < 700 N/mm ²	Max spindle speed	□	■	Tisi (BQ)
Steel > 700 N/mm ²	Max spindle speed	□	■	Tisi (BQ)
Stainless steel	Max spindle speed	□	■	Tisi (BQ)
Cast iron	Max spindle speed	□	■	Tisi (BQ)
Copper	Max spindle speed	□	■	Solo (DA)
Brass - Bronze	Max spindle speed	■	□	Solo (DA)
Aluminium	Max spindle speed	■	■	Solo (DA)
Gold - Silver	Max spindle speed	■	■	Solo (DA)
Platinum - Palladium	Max spindle speed	-	□	Sun (DG)
Superalloys	Max spindle speed	-	■	Nemo (NO)
Titanium	Max spindle speed	■	□	Marc (ME)

not adapted - adapted □ highly adapted ■

Tolerances D: h5

Available
uncoated or coated

Z3

CARB

Art. n°	Ø nominal	Pitch	d ₁	l ₁	d ₂	D	L
5600S0.80	S0.80	0.200	0.60	2.00	0.38	3	38
5600S0.90	S0.90	0.225	0.68	2.25	0.43	3	38
5600S1.00	S1.00	0.250	0.76	2.50	0.48	3	38
5600S1.20	S1.20	0.250	0.94	2.50	0.66	3	38
5600S1.40	S1.40	0.300	1.10	3.00	0.76	3	38
5600M1.00	M1.00	0.250	0.76	2.50	0.48	3	38
5600M1.20	M1.20	0.250	0.94	2.50	0.66	3	38
5600M1.40	M1.40	0.300	1.10	3.00	0.76	3	38
5600M1.60	M1.60	0.350	1.25	3.50	0.85	3	38
5600M1.80	M1.80	0.350	1.45	3.50	1.05	3	38
5600M2.00	M2.00	0.400	1.60	4.00	1.15	3	38
5600M2.20	M2.20	0.450	1.70	4.50	1.19	3	38
5600M2.50	M2.50	0.450	2.00	5.00	1.49	3	38
5600M3.00	M3.00	0.500	2.40	5.50	1.84	3	38

To order a coated tool, add the 2-letter coating code to the article number.

Options

C01

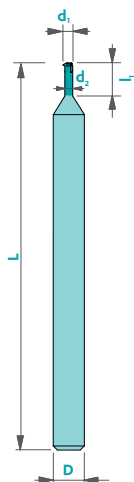


MCU
≤ Ø3

701S
≤ Ø6

PCD Whirling tools

45600



Material	Vc	Uncoated
Steel < 700 N/mm²	Max spindle speed	-
Steel > 700 N/mm²	Max spindle speed	-
Stainless steel	Max spindle speed	-
Cast iron	Max spindle speed	-
Copper	Max spindle speed	■
Brass - Bronze	Max spindle speed	■
Aluminium	Max spindle speed	■
Gold - Silver	Max spindle speed	■
Platinum - Palladium	Max spindle speed	■
Superalloys	Max spindle speed	-
Titanium	Max spindle speed	-
Composite	Max spindle speed	□

not adapted - adapted ■ highly adapted ■

Tolerances D: h5



Art. n°	Ø nominal	pitch	d ₁	l ₁	d ₂	D	L
45600S0.60	S0.60	0.150	0.45	1.50	0.29	3	38
45600S0.70	S0.70	0.175	0.54	1.75	0.34	3	38
45600S0.80	S0.80	0.200	0.60	2.00	0.38	3	38
45600S0.90	S0.90	0.225	0.68	2.25	0.43	3	38
45600S1.00	S1.00	0.250	0.76	2.50	0.48	3	38
45600S1.20	S1.20	0.250	0.94	2.50	0.66	3	38
45600S1.40	S1.40	0.300	1.10	3.00	0.76	3	38
45600M1.00	M1.00	0.250	0.76	2.50	0.48	3	38
45600M1.20	M1.20	0.250	0.94	2.50	0.66	3	38
45600M1.40	M1.40	0.300	1.10	3.00	0.76	3	38
45600M1.60	M1.60	0.350	1.25	3.50	0.85	3	38
45600M1.80	M1.80	0.350	1.45	3.50	1.05	3	38
45600M2.00	M2.00	0.400	1.60	4.00	1.15	3	38
45600M2.20	M2.20	0.450	1.70	4.50	1.19	3	38
45600M2.50	M2.50	0.450	2.00	5.00	1.49	3	38
45600M3.00	M3.00	0.500	2.40	5.50	1.84	3	38

Z3

PCD

Options



MCU
≤ Ø3

701S
≤ Ø6



Since 1948

Louis BELET SA is a family business of about 180 employees and is in the heart of the land of luxury and precision. The company is run by the two grandchildren of the founder, Mrs Roxane Piquerez and Mr Arnaud Maître.

LOUIS BELET SA

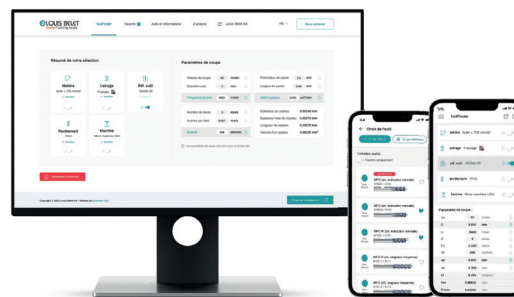
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