

# Index - Drills

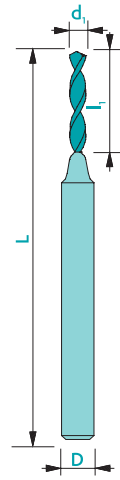
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# EXPERT drill for composite materials

Material	Vc [m/min]
Composite materials	200
Steel < 700 N/mm <sup>2</sup>	-
Steel > 700 N/mm <sup>2</sup>	-
Stainless steel	-
Cast iron	-
Copper	-
Brass - Bronze	-
Aluminium	-
Gold - Silver	-
Platinum - Palladium	-
Superalloys	-
Titanium	-

Tolerances  $d_1$ : +0/-0.004  
D : h5



Available coated only

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
300 d0.5x8FC	0.50	8	3	38
300 d1x10FC	1.00	10	3	38
300 d1.5x10FC	1.50	10	3	38
300 d2x10FC	2.00	10	3	38
300 d3x12FC	3.00	12	3	38
300 d6x18FC	6.00	18	6	51

Other dimensions available upon request



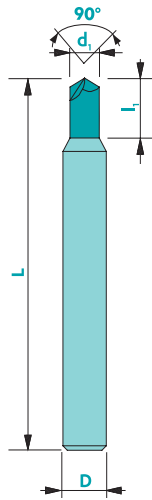
Z2



MG

N  
HSC

## Centering & Chamfering tool 90°



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	■	Rico

not adapted - adapted □ highly adapted ■

Tolerances  $d_1 \pm 3 \rightarrow +/-.01$   
 $d_1 = 3 \rightarrow h5$

$L_1: +0.2/-0$   
 $D: h5$

Available uncoated or coated (see page 61)



**Z2**



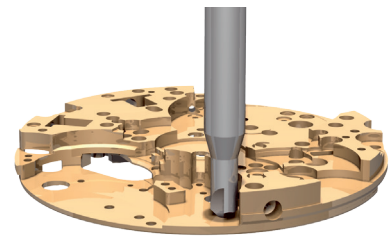
**Y**

**0°**

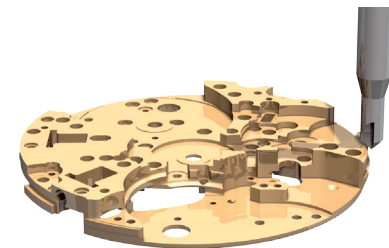
**MG10**

**N**

Art. n°	$d_1$	$L_1$	D	L
330-90d0.40	0.40	2.0	3.0	38
330-90d0.50	0.50	2.0	3.0	38
330-90d0.60	0.60	2.0	3.0	38
330-90d0.70	0.70	2.0	3.0	38
330-90d0.80	0.80	2.0	3.0	38
330-90d0.90	0.90	2.0	3.0	38
330-90d1.00	1.00	2.0	3.0	38
330-90d1.10	1.10	2.0	3.0	38
330-90d1.20	1.20	2.0	3.0	38
330-90d1.30	1.30	2.5	3.0	38
330-90d1.40	1.40	2.5	3.0	38
330-90d1.50	1.50	3.0	3.0	38
330-90d1.60	1.60	3.0	3.0	38
330-90d1.70	1.70	3.0	3.0	38
330-90d1.80	1.80	3.0	3.0	38
330-90d1.90	1.90	3.0	3.0	38
330-90d2.00	2.00	4.0	3.0	38
330-90d2.50	2.50	4.5	3.0	38
330-90d3.00	3.00	-	3.0	38



Centering



Chamfering



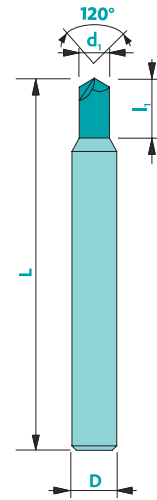
# Centering & Chamfering tool 120°

330-120

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	■	Rico

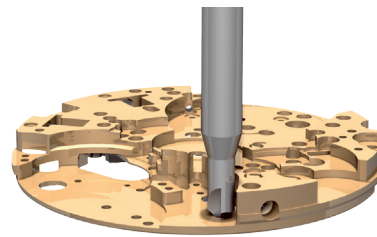
not adapted - adapted □ highly adapted ■

Tolerances  $d_1 \pm 3 \rightarrow +/ - 0.01$   $l_1: +0.2/-0$   
 $d_1 = 3 \rightarrow h5$   $D: h5$

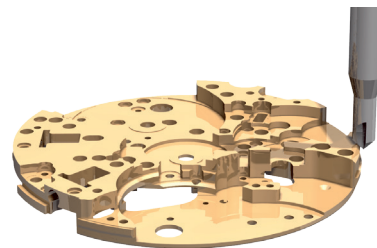


Available uncoated or coated (see page 61)

Art. n°	$d_1$	$l_1$	D	L
330-120d0.60	0.60	2.0	3.0	38
330-120d0.70	0.70	2.0	3.0	38
330-120d0.80	0.80	2.0	3.0	38
330-120d0.90	0.90	2.0	3.0	38
330-120d1.00	1.00	2.0	3.0	38
330-120d1.10	1.10	2.0	3.0	38
330-120d1.20	1.20	2.0	3.0	38
330-120d1.30	1.30	2.5	3.0	38
330-120d1.40	1.40	2.5	3.0	38
330-120d1.50	1.50	3.0	3.0	38
330-120d1.60	1.60	3.0	3.0	38
330-120d1.70	1.70	3.0	3.0	38
330-120d1.80	1.80	3.0	3.0	38
330-120d1.90	1.90	3.0	3.0	38
330-120d2.00	2.00	4.0	3.0	38
330-120d2.50	2.50	4.5	3.0	38
330-120d3.00	3.00	-	3.0	38



Centering



Chamfering



120°

Z2

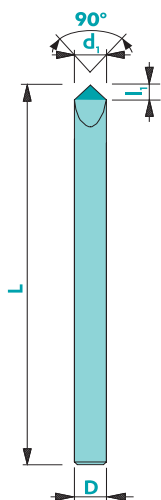


Y  
0°

MG10

N

## Pyramid center drill



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	-	-	-	-	-
Steel > 700 N/mm <sup>2</sup>	-	-	-	-	-
Stainless steel	60	70	□	■	Nemo
Cast iron	30	35	□	■	Nemo
Copper	-	-	-	-	-
Brass - Bronze	80	120	■	■	Solo
Aluminium	-	-	-	-	-
Gold - Silver	-	-	-	-	-
Platinum - Palladium	-	-	-	-	-
Superalloys	-	25	-	■	Trio
Titanium	-	-	-	-	-

not adapted - adapted □ highly adapted ■

Tolerances  $d_1 \leq 3 \rightarrow \pm 0.01$   $l_1: +0.2/-0$   
 $d_1 = 3 \rightarrow h5$   $D: h5$

Available uncoated or coated (see page 61)

Art. n°	$d_1$	$l_1$	D	L
331-90d0.40	0.40	2.0	3.0	38
331-90d0.50	0.50	2.0	3.0	38
331-90d0.60	0.60	2.0	3.0	38
331-90d0.70	0.70	2.0	3.0	38
331-90d0.80	0.80	2.0	3.0	38
331-90d0.90	0.90	2.0	3.0	38
331-90d1.00	1.00	2.0	3.0	38
331-90d1.10	1.10	2.0	3.0	38
331-90d1.20	1.20	2.0	3.0	38
331-90d1.30	1.30	2.5	3.0	38
331-90d1.40	1.40	2.5	3.0	38
331-90d1.50	1.50	3.0	3.0	38
331-90d1.60	1.60	3.0	3.0	38
331-90d1.70	1.70	3.0	3.0	38
331-90d1.80	1.80	3.0	3.0	38
331-90d1.90	1.90	3.0	3.0	38
331-90d2.00	2.00	4.0	3.0	38
331-90d2.50	2.50	4.5	3.0	38
331-90d3.00	3.00	-	3.0	38

**Z2**

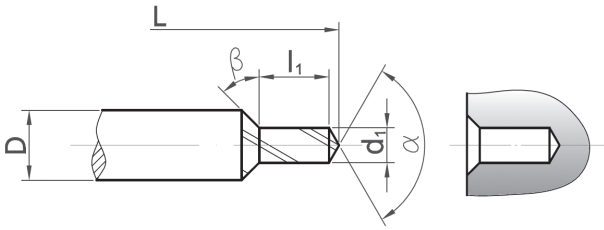


**Y 0°**

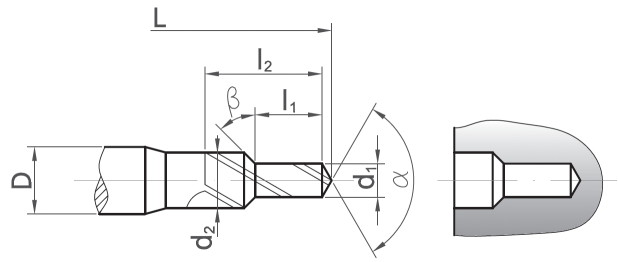
**MG10 N**

# Step drill in solid carbide

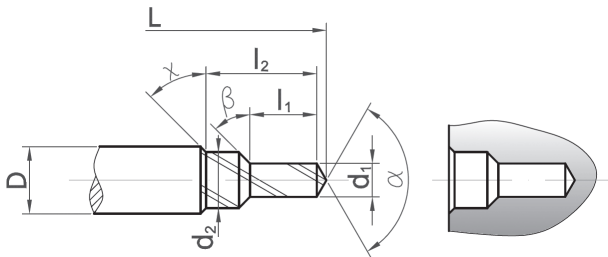
Type A



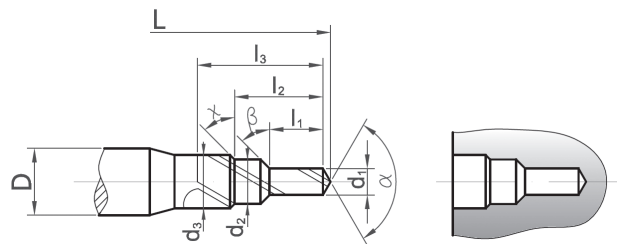
Type B



Type C



Type D



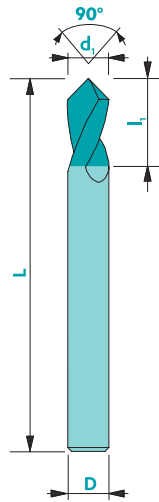
Order       Quotation request

<input type="checkbox"/> Type A		<input type="checkbox"/> Type B		<input type="checkbox"/> Type C		<input type="checkbox"/> Type D			
<b>Dimensions :</b>			<b>Helix angle :</b>			<b>Quantity :</b>			
D : _____ L : _____ α : _____			<input type="checkbox"/> 24° for brass and steel <input type="checkbox"/> 34° for stainless steel, synthetic and aluminium			_____			
d <sub>1</sub> : _____ l <sub>1</sub> : _____ β : _____			<b>Coolant holes ?</b>		<b>Coating :</b>				
d <sub>2</sub> : _____ l <sub>2</sub> : _____ X : _____			<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Uncoated <input type="checkbox"/> Coated * : _____				
d <sub>3</sub> : _____ l <sub>3</sub> : _____ Z : <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3			<b>Machined material :</b>					<b>Order No :</b>	
_____			_____					_____	
<b>Company's stamp &amp; date :</b>					<b>Contact person :</b>				
_____					_____				

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.

# NC Center drill 90°



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	■	Rico

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 (see page 61)

**90°** **Z2**

**24°**

**MG10** **N**

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
337d0.40	0.40	2.0	2.0	38
337d0.50	0.50	2.0	2.0	38
337d0.55	0.55	2.0	2.0	38
337d0.60	0.60	2.0	2.0	38
337d0.65	0.65	2.0	2.0	38
337d0.70	0.70	2.0	2.0	38
337d0.75	0.75	2.0	2.0	38
337d0.80	0.80	3.0	2.0	38
337d0.85	0.85	3.0	2.0	38
337d0.90	0.90	3.0	2.0	38
337d0.95	0.95	3.0	2.0	38
337d1.00	1.00	3.0	2.0	38
337d1.05	1.05	3.0	2.0	38
337d1.10	1.10	3.0	2.0	38
337d1.15	1.15	3.0	2.0	38
337d1.20	1.20	3.0	2.0	38
337d1.25	1.25	3.0	2.0	38
337d1.30	1.30	3.0	2.0	38
337d1.35	1.35	3.0	2.0	38
337d1.40	1.40	3.0	2.0	38
337d1.45	1.45	3.0	2.0	38
337d1.50	1.50	5.0	2.0	38
337d1.60	1.60	5.0	2.0	38
337d1.70	1.70	5.0	2.0	38
337d1.80	1.80	5.0	2.0	38
337d1.90	1.90	5.0	2.0	38
337d2.00	2.00	8.0	2.0	38

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
337d2.50	2.50	8.0	2.5	38
337d3.00	3.00	10.0	3.0	44
337d4.00	4.00	12.0	4.0	50
337d5.00	5.00	12.0	5.0	50
337d6.00	6.00	15.0	6.0	61
337d8.00	8.00	20.0	8.0	72
337d10.00	10.00	20.0	10.0	72
337d12.00	12.00	25.0	12.0	83
337d16.00	16.00	25.0	16.0	83
337d20.00	20.00	35.0	20.0	104

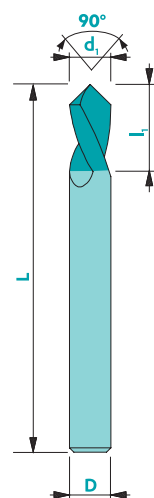
# NC Center drill 90° - left-hand cut

**337-1**

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	■	Rico

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 (see page 61)

Art. n°	$d_1$	$l_1$	D	L
337-1d0.80	0.80	3.0	2.0	38
337-1d0.90	0.90	3.0	2.0	38
337-1d1.00	1.00	3.0	2.0	38
337-1d1.10	1.10	3.0	2.0	38
337-1d1.20	1.20	3.0	2.0	38
337-1d1.30	1.30	3.0	2.0	38
337-1d1.40	1.40	3.0	2.0	38
337-1d1.50	1.50	5.0	2.0	38
337-1d1.60	1.60	5.0	2.0	38
337-1d1.70	1.70	5.0	2.0	38
337-1d1.80	1.80	5.0	2.0	38
337-1d1.90	1.90	5.0	2.0	38
337-1d2.00	2.00	8.0	2.0	38
337-1d2.50	2.50	8.0	2.5	38
337-1d3.00	3.00	10.0	3.0	44
337-1d4.00	4.00	12.0	4.0	50
337-1d5.00	5.00	12.0	5.0	50
337-1d6.00	6.00	15.0	6.0	61
337-1d8.00	8.00	20.0	8.0	72
337-1d10.00	10.00	20.0	10.0	72



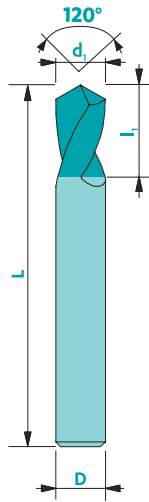
**Z2**



**MG10**

**N**

## NC Center drill 120°



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	■	Rico

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 (see page 61)

	<b>Z2</b>
<b>λ 24°</b>	
<b>MG10</b>	<b>N</b>

Art. n°	d <sub>1</sub>	L <sub>1</sub>	D	L
337-2d0.50	0.50	2.0	2.0	38
337-2d0.55	0.55	2.0	2.0	38
337-2d0.60	0.60	2.0	2.0	38
337-2d0.65	0.65	2.0	2.0	38
337-2d0.70	0.70	2.0	2.0	38
337-2d0.75	0.75	2.0	2.0	38
337-2d0.80	0.80	3.0	2.0	38
337-2d0.85	0.85	3.0	2.0	38
337-2d0.90	0.90	3.0	2.0	38
337-2d0.95	0.95	3.0	2.0	38
337-2d1.00	1.00	3.0	2.0	38
337-2d1.05	1.05	3.0	2.0	38
337-2d1.10	1.10	3.0	2.0	38
337-2d1.15	1.15	3.0	2.0	38
337-2d1.20	1.20	3.0	2.0	38
337-2d1.25	1.25	3.0	2.0	38
337-2d1.30	1.30	3.0	2.0	38
337-2d1.35	1.35	3.0	2.0	38
337-2d1.40	1.40	3.0	2.0	38
337-2d1.45	1.45	3.0	2.0	38
337-2d1.50	1.50	5.0	2.0	38
337-2d1.60	1.60	5.0	2.0	38
337-2d1.70	1.70	5.0	2.0	38
337-2d1.80	1.80	5.0	2.0	38
337-2d1.90	1.90	5.0	2.0	38
337-2d2.00	2.00	8.0	2.0	38
337-2d2.50	2.50	8.0	2.5	38

Art. n°	d <sub>1</sub>	L <sub>1</sub>	D	L
337-2d3.00	3.00	10.0	3.0	44
337-2d4.00	4.00	12.0	4.0	50
337-2d5.00	5.00	12.0	5.0	50
337-2d6.00	6.00	15.0	6.0	61
337-2d8.00	8.00	20.0	8.0	72
337-2d10.00	10.00	20.0	10.0	72
337-2d12.00	12.00	25.0	12.0	83
337-2d16.00	16.00	25.0	16.0	83
337-2d20.00	20.00	35.0	20.0	104

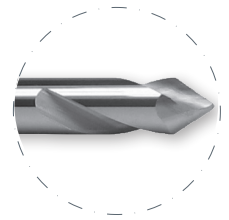
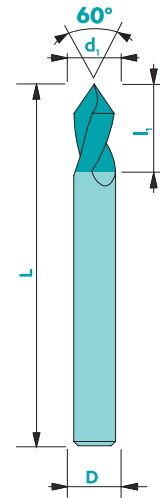
# NC Center drill 60°

**337-3**

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	■	Rico

not adapted - adapted □ highly adapted ■

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

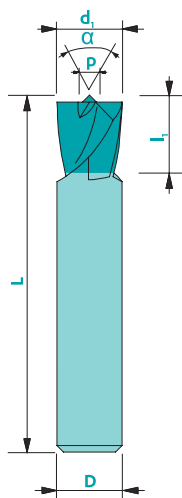
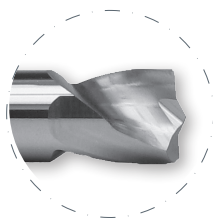


Available uncoated or coated (see page 61)

Art. n°	$d_1$	$l_1$	D	L
337-3d0.50	0.50	3.0	2.0	38
337-3d0.60	0.60	3.0	2.0	38
337-3d0.70	0.70	3.0	2.0	38
337-3d0.80	0.80	3.0	2.0	38
337-3d0.90	0.90	3.0	2.0	38
337-3d1.00	1.00	3.0	2.0	38
337-3d1.10	1.10	3.0	2.0	38
337-3d1.20	1.20	3.0	2.0	38
337-3d1.30	1.30	3.0	2.0	38
337-3d1.40	1.40	3.0	2.0	38
337-3d1.50	1.50	5.0	2.0	38
337-3d1.60	1.60	5.0	2.0	38
337-3d1.70	1.70	5.0	2.0	38
337-3d1.80	1.80	5.0	2.0	38
337-3d1.90	1.90	5.0	2.0	38
337-3d2.00	2.00	8.0	2.0	38
337-3d2.50	2.50	8.0	2.5	38
337-3d3.00	3.00	10.0	3.0	44
337-3d4.00	4.00	12.0	4.0	50
337-3d5.00	5.00	12.0	5.0	50
337-3d6.00	6.00	15.0	6.0	61
337-3d8.00	8.00	20.0	8.0	72
337-3d10.00	10.00	20.0	10.0	72
337-3d12.00	12.00	25.0	12.0	83
337-3d16.00	16.00	25.0	16.0	83
337-3d20.00	20.00	35.0	20.0	104

	<b>Z2</b>
$\lambda$ <b>24°</b>	
<b>MG10</b>	<b>N</b>

## Twist drill with centering tip



Available uncoated or coated (see page 61)

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	■	Rico

not adapted - adapted □ highly adapted ■

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

**Z2**

**24°**

**MG10 N**

Art. n°	$d_1$	$l_1$	D	L
338d2.00	2.00	8.0	3	33
338d2.10	2.10	8.0	3	33
338d2.20	2.20	8.0	3	33
338d2.30	2.30	8.0	3	33
338d2.40	2.40	8.0	3	33
338d2.50	2.50	8.0	3	33
338d2.60	2.60	8.0	3	33
338d2.70	2.70	8.0	3	33
338d2.80	2.80	8.0	3	33
338d2.90	2.90	8.0	3	33
338d3.00	3.00	8.0	3	33
338d3.10	3.10	8.0	4	33
338d3.20	3.20	8.0	4	33
338d3.30	3.30	8.0	4	33
338d3.40	3.40	8.0	4	33
338d3.50	3.50	8.0	4	33
338d3.60	3.60	8.0	4	33
338d3.70	3.70	8.0	4	33
338d3.80	3.80	8.0	4	33
338d3.90	3.90	8.0	4	33
338d4.00	4.00	8.0	4	33
338d4.10	4.10	8.0	5	33
338d4.20	4.20	8.0	5	33
338d4.30	4.30	8.0	5	33
338d4.40	4.40	8.0	5	33
338d4.50	4.50	8.0	5	33
338d4.60	4.60	8.0	5	33
338d4.70	4.70	8.0	5	33
338d4.80	4.80	8.0	5	33

Art. n°	$d_1$	$l_1$	D	L
338d4.90	4.90	8.0	5	33
338d5.00	5.00	8.0	5	33
338d5.10	5.10	8.0	6	33
338d5.20	5.20	8.0	6	33
338d5.30	5.30	8.0	6	33
338d5.40	5.40	8.0	6	33
338d5.50	5.50	8.0	6	33
338d5.60	5.60	8.0	6	33
338d5.70	5.70	8.0	6	33
338d5.80	5.80	8.0	6	33
338d5.90	5.90	8.0	6	33
338d6.00	6.00	8.0	6	33
338d6.50	6.50	8.0	7	33
338d7.00	7.00	8.0	7	33
338d7.50	7.50	8.0	8	33
338d8.00	8.00	8.0	8	33

Centering tip diameter\*:

Ø P: \_\_\_\_\_

Centering tip angle ( $\alpha$ )\*:

90°  120°  Other: \_\_\_\_\_

\* Unless you specify otherwise, the diameter of the centering tip will be 1/3 of  $d_1$  and the point angle will be 120°

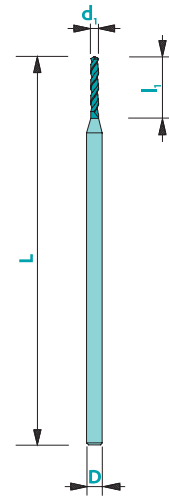


# Micro twist drill - helix 24°

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	□	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	□	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: -0.002/-0.004  
D: h5



Available uncoated or coated (see page 61)

Art. n°	d <sub>1</sub>	l <sub>1</sub>	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

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
339d0.31	0.31	1.50	1	30
339d0.32	0.32	1.50	1	30
339d0.33	0.33	1.50	1	30
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



Z2

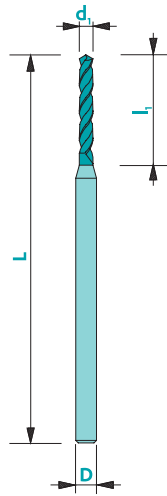


λ  
24°

MG10

N

## Micro twist drill - helix 34°



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	■	■	Solo
Gold - Silver	80	100	□	□	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	□	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: -0.002/-0.004  
D: h5

Available uncoated or coated (see page 61)

**118°**

**Z2**

**λ 34°**

**MG10 N**

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
340d0.50	0.50	4.0	1.5	30
340d0.51	0.51	4.0	1.5	30
340d0.52	0.52	4.0	1.5	30
340d0.53	0.53	4.0	1.5	30
340d0.54	0.54	4.0	1.5	30
340d0.55	0.55	4.0	1.5	30
340d0.56	0.56	4.0	1.5	30
340d0.57	0.57	4.0	1.5	30
340d0.58	0.58	4.0	1.5	30
340d0.59	0.59	4.0	1.5	30
340d0.60	0.60	5.0	1.5	30
340d0.61	0.61	5.0	1.5	30
340d0.62	0.62	5.0	1.5	30
340d0.63	0.63	5.0	1.5	30
340d0.64	0.64	5.0	1.5	30
340d0.65	0.65	5.0	1.5	30
340d0.66	0.66	5.0	1.5	30
340d0.67	0.67	5.0	1.5	30
340d0.68	0.68	5.0	1.5	30
340d0.69	0.69	5.0	1.5	30
340d0.70	0.70	5.0	1.5	30
340d0.71	0.71	5.0	1.5	30
340d0.72	0.72	5.0	1.5	30
340d0.73	0.73	5.0	1.5	30
340d0.74	0.74	5.0	1.5	30
340d0.75	0.75	5.0	1.5	30
340d0.76	0.76	5.0	1.5	30
340d0.77	0.77	5.0	1.5	30
340d0.78	0.78	5.0	1.5	30
340d0.79	0.79	5.0	1.5	30
340d0.80	0.80	6.0	1.5	30

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
340d0.81	0.81	6.0	1.5	30
340d0.82	0.82	6.0	1.5	30
340d0.83	0.83	6.0	1.5	30
340d0.84	0.84	6.0	1.5	30
340d0.85	0.85	6.0	1.5	30
340d0.86	0.86	6.0	1.5	30
340d0.87	0.87	6.0	1.5	30
340d0.88	0.88	6.0	1.5	30
340d0.89	0.89	6.0	1.5	30
340d0.90	0.90	7.0	1.5	30
340d0.91	0.91	7.0	1.5	30
340d0.92	0.92	7.0	1.5	30
340d0.93	0.93	7.0	1.5	30
340d0.94	0.94	7.0	1.5	30
340d0.95	0.95	7.0	1.5	30
340d0.96	0.96	7.0	1.5	30
340d0.97	0.97	7.0	1.5	30
340d0.98	0.98	7.0	1.5	30
340d0.99	0.99	7.0	1.5	30
340d1.00	1.00	8.0	1.5	30
340d1.01	1.01	8.0	1.5	30
340d1.02	1.02	8.0	1.5	30
340d1.03	1.03	8.0	1.5	30
340d1.04	1.04	8.0	1.5	30
340d1.05	1.05	8.0	1.5	30
340d1.06	1.06	8.0	1.5	30
340d1.07	1.07	8.0	1.5	30
340d1.08	1.08	8.0	1.5	30



# Micro twist drill - helix 34°

**340**

Continuation

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



Available  
uncoated or coated  
(see page 61)



118°

**Z2**

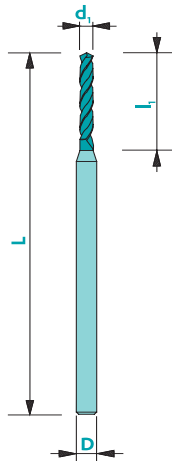


λ  
34°

**MC10**

**N**

## Twist drill - helix 24°



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	□	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	□	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: -0.002/-0.004  
D: h5

Available uncoated or coated (see page 61)

**118°** **Z2**

**24°**

**MG10** **N**

Art. n°	d <sub>1</sub>	l <sub>1</sub>	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

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
340-1d0.71	0.71	5.0	1.5	30
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



# Twist drill - helix 24°

# 340-1

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
340-1d1.00	1.00	8.0	1.5	30	340-1d1.44	1.44	11.0	1.5	30
340-1d1.01	1.01	8.0	1.5	30	340-1d1.45	1.45	11.0	1.5	30
340-1d1.02	1.02	8.0	1.5	30	340-1d1.46	1.46	11.0	1.5	30
340-1d1.03	1.03	8.0	1.5	30	340-1d1.47	1.47	11.0	1.5	30
340-1d1.04	1.04	8.0	1.5	30	340-1d1.48	1.48	11.0	1.5	30
340-1d1.05	1.05	8.0	1.5	30	340-1d1.49	1.49	11.0	1.5	30
340-1d1.06	1.06	8.0	1.5	30	340-1d1.50	1.50	12.0	2.0	38
340-1d1.07	1.07	8.0	1.5	30	340-1d1.51	1.51	12.0	2.0	38
340-1d1.08	1.08	8.0	1.5	30	340-1d1.52	1.52	12.0	2.0	38
340-1d1.09	1.09	8.0	1.5	30	340-1d1.53	1.53	12.0	2.0	38
340-1d1.10	1.10	9.0	1.5	30	340-1d1.54	1.54	12.0	2.0	38
340-1d1.11	1.11	9.0	1.5	30	340-1d1.55	1.55	12.0	2.0	38
340-1d1.12	1.12	9.0	1.5	30	340-1d1.56	1.56	12.0	2.0	38
340-1d1.13	1.13	9.0	1.5	30	340-1d1.57	1.57	12.0	2.0	38
340-1d1.14	1.14	9.0	1.5	30	340-1d1.58	1.58	12.0	2.0	38
340-1d1.15	1.15	9.0	1.5	30	340-1d1.59	1.59	12.0	2.0	38
340-1d1.16	1.16	9.0	1.5	30	340-1d1.60	1.60	12.0	2.0	38
340-1d1.17	1.17	9.0	1.5	30	340-1d1.61	1.61	12.0	2.0	38
340-1d1.18	1.18	9.0	1.5	30	340-1d1.62	1.62	12.0	2.0	38
340-1d1.19	1.19	9.0	1.5	30	340-1d1.63	1.63	12.0	2.0	38
340-1d1.20	1.20	10.0	1.5	30	340-1d1.64	1.64	12.0	2.0	38
340-1d1.21	1.21	10.0	1.5	30	340-1d1.65	1.65	12.0	2.0	38
340-1d1.22	1.22	10.0	1.5	30	340-1d1.66	1.66	12.0	2.0	38
340-1d1.23	1.23	10.0	1.5	30	340-1d1.67	1.67	12.0	2.0	38
340-1d1.24	1.24	10.0	1.5	30	340-1d1.68	1.68	12.0	2.0	38
340-1d1.25	1.25	10.0	1.5	30	340-1d1.69	1.69	12.0	2.0	38
340-1d1.26	1.26	10.0	1.5	30	340-1d1.70	1.70	12.0	2.0	38
340-1d1.27	1.27	10.0	1.5	30	340-1d1.71	1.71	12.0	2.0	38
340-1d1.28	1.28	10.0	1.5	30	340-1d1.72	1.72	12.0	2.0	38
340-1d1.29	1.29	10.0	1.5	30	340-1d1.73	1.73	12.0	2.0	38
340-1d1.30	1.30	10.0	1.5	30	340-1d1.74	1.74	12.0	2.0	38
340-1d1.31	1.31	10.0	1.5	30	340-1d1.75	1.75	12.0	2.0	38
340-1d1.32	1.32	10.0	1.5	30	340-1d1.76	1.76	12.0	2.0	38
340-1d1.33	1.33	10.0	1.5	30	340-1d1.77	1.77	12.0	2.0	38
340-1d1.34	1.34	10.0	1.5	30	340-1d1.78	1.78	12.0	2.0	38
340-1d1.35	1.35	11.0	1.5	30	340-1d1.79	1.79	12.0	2.0	38
340-1d1.36	1.36	11.0	1.5	30	340-1d1.80	1.80	12.0	2.0	38
340-1d1.37	1.37	11.0	1.5	30	340-1d1.81	1.81	12.0	2.0	38
340-1d1.38	1.38	11.0	1.5	30	340-1d1.82	1.82	12.0	2.0	38
340-1d1.39	1.39	11.0	1.5	30	340-1d1.83	1.83	12.0	2.0	38
340-1d1.40	1.40	11.0	1.5	30	340-1d1.84	1.84	12.0	2.0	38
340-1d1.41	1.41	11.0	1.5	30	340-1d1.85	1.85	12.0	2.0	38
340-1d1.42	1.42	11.0	1.5	30	340-1d1.86	1.86	12.0	2.0	38
340-1d1.43	1.43	11.0	1.5	30	340-1d1.87	1.87	12.0	2.0	38



Available uncoated or coated (see page 61)



118°

**Z2**



λ  
24°

**MC10**

**N**



# 340-1

Continuation

## Twist drill - helix 24°



Available  
uncoated or coated  
(see page 61)



118°

**Z2**



$\lambda$

**24°**

**MG10**

**N**

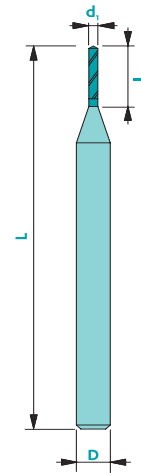
Art. n°	$d_1$	$l_1$	D	L
340-1d1.88	<b>1.88</b>	<b>12.0</b>	2.0	38
340-1d1.89	<b>1.89</b>	<b>12.0</b>	2.0	38
340-1d1.90	<b>1.90</b>	<b>12.0</b>	2.0	38
340-1d1.91	<b>1.91</b>	<b>12.0</b>	2.0	38
340-1d1.92	<b>1.92</b>	<b>12.0</b>	2.0	38
340-1d1.93	<b>1.93</b>	<b>12.0</b>	2.0	38
340-1d1.94	<b>1.94</b>	<b>12.0</b>	2.0	38
340-1d1.95	<b>1.95</b>	<b>12.0</b>	2.0	38
340-1d1.96	<b>1.96</b>	<b>12.0</b>	2.0	38
340-1d1.97	<b>1.97</b>	<b>12.0</b>	2.0	38
340-1d1.98	<b>1.98</b>	<b>12.0</b>	2.0	38
340-1d1.99	<b>1.99</b>	<b>12.0</b>	2.0	38

# Micro twist drill - helix 34° - shank Ø3

342

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	■	■	Solo
Gold - Silver	80	100	□	□	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	□	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■



Tolerances d<sub>1</sub>: -0.002/-0.004  
D: h5

Available uncoated or coated (see page 61)

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
342d0.05	0.05	0.30	3	38
342d0.06	0.06	0.40	3	38
342d0.07	0.07	0.40	3	38
342d0.08	0.08	0.50	3	38
342d0.09	0.09	0.50	3	38
342d0.10	0.10	0.50	3	38
342d0.11	0.11	0.50	3	38
342d0.12	0.12	0.50	3	38
342d0.13	0.13	0.50	3	38
342d0.14	0.14	0.50	3	38
342d0.15	0.15	0.80	3	38
342d0.16	0.16	0.80	3	38
342d0.17	0.17	0.80	3	38
342d0.18	0.18	0.80	3	38
342d0.19	0.19	0.80	3	38
342d0.20	0.20	0.80	3	38
342d0.21	0.21	1.00	3	38
342d0.22	0.22	1.00	3	38
342d0.23	0.23	1.00	3	38
342d0.24	0.24	1.00	3	38
342d0.25	0.25	1.00	3	38
342d0.26	0.26	1.50	3	38
342d0.27	0.27	1.50	3	38
342d0.28	0.28	1.50	3	38
342d0.29	0.29	1.50	3	38
342d0.30	0.30	1.50	3	38
342d0.31	0.31	2.00	3	38
342d0.32	0.32	2.00	3	38
342d0.33	0.33	2.00	3	38

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
342d0.34	0.34	2.00	3	38
342d0.35	0.35	2.00	3	38
342d0.36	0.36	3.00	3	38
342d0.37	0.37	3.00	3	38
342d0.38	0.38	3.00	3	38
342d0.39	0.39	3.00	3	38
342d0.40	0.40	3.00	3	38
342d0.41	0.41	3.00	3	38
342d0.42	0.42	3.00	3	38
342d0.43	0.43	3.00	3	38
342d0.44	0.44	3.00	3	38
342d0.45	0.45	3.00	3	38
342d0.46	0.46	3.00	3	38
342d0.47	0.47	4.00	3	38
342d0.48	0.48	4.00	3	38
342d0.49	0.49	4.00	3	38
342d0.50	0.50	4.00	3	38
342d0.51	0.51	4.00	3	38
342d0.52	0.52	4.00	3	38
342d0.53	0.53	4.00	3	38
342d0.54	0.54	4.00	3	38
342d0.55	0.55	4.00	3	38
342d0.56	0.56	4.00	3	38
342d0.57	0.57	4.00	3	38
342d0.58	0.58	4.00	3	38
342d0.59	0.59	4.00	3	38
342d0.60	0.60	4.00	3	38
342d0.61	0.61	5.00	3	38
342d0.62	0.62	5.00	3	38



118°

Z2



λ  
34°

MG10

N



## Micro twist drill - helix 34° - shank Ø3



Available  
uncoated or coated  
(see page 61)



118°

Z2

λ  
34°

MG10

N

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
342d0.63	0.63	5.00	3	38
342d0.64	0.64	5.00	3	38
342d0.65	0.65	5.00	3	38
342d0.66	0.66	5.00	3	38
342d0.67	0.67	5.00	3	38
342d0.68	0.68	5.00	3	38
342d0.69	0.69	5.00	3	38
342d0.70	0.70	5.00	3	38
342d0.71	0.71	5.00	3	38
342d0.72	0.72	5.00	3	38
342d0.73	0.73	5.00	3	38
342d0.74	0.74	5.00	3	38
342d0.75	0.75	5.00	3	38
342d0.76	0.76	5.00	3	38
342d0.77	0.77	5.00	3	38
342d0.78	0.78	5.00	3	38
342d0.79	0.79	5.00	3	38
342d0.80	0.80	5.00	3	38
342d0.81	0.81	6.00	3	38
342d0.82	0.82	6.00	3	38
342d0.83	0.83	6.00	3	38
342d0.84	0.84	6.00	3	38
342d0.85	0.85	6.00	3	38
342d0.86	0.86	6.00	3	38
342d0.87	0.87	6.00	3	38
342d0.88	0.88	6.00	3	38
342d0.89	0.89	6.00	3	38
342d0.90	0.90	6.00	3	38
342d0.91	0.91	6.00	3	38
342d0.92	0.92	6.00	3	38
342d0.93	0.93	6.00	3	38
342d0.94	0.94	6.00	3	38
342d0.95	0.95	6.00	3	38
342d0.96	0.96	6.00	3	38
342d0.97	0.97	6.00	3	38
342d0.98	0.98	6.00	3	38
342d0.99	0.99	6.00	3	38
342d1.00	1.00	6.00	3	38
342d1.01	1.01	6.00	3	38
342d1.02	1.02	6.00	3	38
342d1.03	1.03	6.00	3	38
342d1.04	1.04	6.00	3	38
342d1.05	1.05	6.00	3	38

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
342d1.06	1.06	6.00	3	38
342d1.07	1.07	6.00	3	38
342d1.08	1.08	6.00	3	38
342d1.09	1.09	6.00	3	38
342d1.10	1.10	6.00	3	38
342d1.12	1.12	6.00	3	38
342d1.13	1.13	6.00	3	38
342d1.14	1.14	6.00	3	38
342d1.15	1.15	6.00	3	38
342d1.16	1.16	6.00	3	38
342d1.17	1.17	6.00	3	38
342d1.18	1.18	6.00	3	38
342d1.19	1.19	6.00	3	38
342d1.20	1.20	6.00	3	38
342d1.21	1.21	8.00	3	38
342d1.22	1.22	8.00	3	38
342d1.23	1.23	8.00	3	38
342d1.24	1.24	8.00	3	38
342d1.25	1.25	8.00	3	38
342d1.26	1.26	8.00	3	38
342d1.27	1.27	8.00	3	38
342d1.28	1.28	8.00	3	38
342d1.29	1.29	8.00	3	38
342d1.30	1.30	8.00	3	38
342d1.31	1.31	8.00	3	38
342d1.32	1.32	8.00	3	38
342d1.33	1.33	8.00	3	38
342d1.34	1.34	8.00	3	38
342d1.35	1.35	8.00	3	38
342d1.36	1.36	8.00	3	38
342d1.37	1.37	8.00	3	38
342d1.38	1.38	8.00	3	38
342d1.39	1.39	8.00	3	38
342d1.40	1.40	8.00	3	38
342d1.41	1.41	8.00	3	38
342d1.42	1.42	8.00	3	38
342d1.43	1.43	8.00	3	38
342d1.44	1.44	8.00	3	38
342d1.45	1.45	8.00	3	38
342d1.46	1.46	8.00	3	38
342d1.47	1.47	8.00	3	38
342d1.48	1.48	8.00	3	38
342d1.49	1.49	8.00	3	38



# Micro twist drill - helix 34° - shank Ø3

**342**

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
342d1.50	1.50	8.00	3	38	342d1.95	1.95	12.00	3	38
342d1.51	1.51	8.00	3	38	342d1.96	1.96	12.00	3	38
342d1.52	1.52	8.00	3	38	342d1.97	1.97	12.00	3	38
342d1.53	1.53	8.00	3	38	342d1.98	1.98	12.00	3	38
342d1.54	1.54	8.00	3	38	342d1.99	1.99	12.00	3	38
342d1.55	1.55	8.00	3	38	342d2.00	2.00	12.00	3	38
342d1.56	1.56	8.00	3	38	342d2.05	2.05	12.00	3	38
342d1.57	1.57	8.00	3	38	342d2.10	2.10	12.00	3	38
342d1.58	1.58	8.00	3	38	342d2.15	2.15	12.00	3	38
342d1.59	1.59	8.00	3	38	342d2.20	2.20	12.00	3	38
342d1.60	1.60	8.00	3	38	342d2.25	2.25	12.00	3	38
342d1.61	1.61	8.00	3	38	342d2.30	2.30	12.00	3	38
342d1.62	1.62	8.00	3	38	342d2.35	2.35	12.00	3	38
342d1.63	1.63	8.00	3	38	342d2.40	2.40	12.00	3	38
342d1.64	1.64	8.00	3	38	342d2.45	2.45	12.00	3	38
342d1.65	1.65	8.00	3	38	342d2.50	2.50	12.00	3	38
342d1.66	1.66	8.00	3	38					
342d1.67	1.67	8.00	3	38					
342d1.68	1.68	8.00	3	38					
342d1.69	1.69	8.00	3	38					
342d1.70	1.70	8.00	3	38					
342d1.71	1.71	12.00	3	38					
342d1.72	1.72	12.00	3	38					
342d1.73	1.73	12.00	3	38					
342d1.74	1.74	12.00	3	38					
342d1.75	1.75	12.00	3	38					
342d1.76	1.76	12.00	3	38					
342d1.77	1.77	12.00	3	38					
342d1.78	1.78	12.00	3	38					
342d1.79	1.79	12.00	3	38					
342d1.80	1.80	12.00	3	38					
342d1.81	1.81	12.00	3	38					
342d1.82	1.82	12.00	3	38					
342d1.83	1.83	12.00	3	38					
342d1.84	1.84	12.00	3	38					
342d1.85	1.85	12.00	3	38					
342d1.86	1.86	12.00	3	38					
342d1.87	1.87	12.00	3	38					
342d1.88	1.88	12.00	3	38					
342d1.89	1.89	12.00	3	38					
342d1.90	1.90	12.00	3	38					
342d1.91	1.91	12.00	3	38					
342d1.92	1.92	12.00	3	38					
342d1.93	1.93	12.00	3	38					
342d1.94	1.94	12.00	3	38					



Available  
uncoated or coated  
(see page 61)



118°

**Z2**

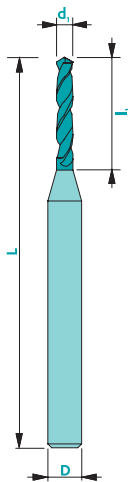


λ  
34°

**MG10**

**N**

## Drill - helix 34° - $l_1=6$ mm



Available uncoated or coated (see page 61)

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	■	■	Solo
Gold - Silver	80	100	□	□	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	□	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances  $d_1$ : -0.002/-0.004  
D: h5

**118°**

**Z2**

**λ 34°**

**MG10 N**

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
343-6d1.10	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



# Drill - helix 34° - l<sub>1</sub>=6 mm

## 343-6

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
343-6d1.17	1.17	6.0	2.0	38	343-6d1.62	1.62	6.0	2.0	38
343-6d1.18	1.18	6.0	2.0	38	343-6d1.63	1.63	6.0	2.0	38
343-6d1.19	1.19	6.0	2.0	38	343-6d1.64	1.64	6.0	2.0	38
343-6d1.20	1.20	6.0	2.0	38	343-6d1.65	1.65	6.0	2.0	38
343-6d1.21	1.21	6.0	2.0	38	343-6d1.66	1.66	6.0	2.0	38
343-6d1.22	1.22	6.0	2.0	38	343-6d1.67	1.67	6.0	2.0	38
343-6d1.23	1.23	6.0	2.0	38	343-6d1.68	1.68	6.0	2.0	38
343-6d1.24	1.24	6.0	2.0	38	343-6d1.69	1.69	6.0	2.0	38
343-6d1.25	1.25	6.0	2.0	38	343-6d1.70	1.70	6.0	2.0	38
343-6d1.26	1.26	6.0	2.0	38	343-6d1.71	1.71	6.0	2.0	38
343-6d1.27	1.27	6.0	2.0	38	343-6d1.72	1.72	6.0	2.0	38
343-6d1.28	1.28	6.0	2.0	38	343-6d1.73	1.73	6.0	2.0	38
343-6d1.29	1.29	6.0	2.0	38	343-6d1.74	1.74	6.0	2.0	38
343-6d1.30	1.30	6.0	2.0	38	343-6d1.75	1.75	6.0	2.0	38
343-6d1.31	1.31	6.0	2.0	38	343-6d1.76	1.76	6.0	2.0	38
343-6d1.32	1.32	6.0	2.0	38	343-6d1.77	1.77	6.0	2.0	38
343-6d1.33	1.33	6.0	2.0	38	343-6d1.78	1.78	6.0	2.0	38
343-6d1.34	1.34	6.0	2.0	38	343-6d1.79	1.79	6.0	2.0	38
343-6d1.35	1.35	6.0	2.0	38	343-6d1.80	1.80	6.0	2.0	38
343-6d1.36	1.36	6.0	2.0	38	343-6d1.81	1.81	6.0	2.0	38
343-6d1.37	1.37	6.0	2.0	38	343-6d1.82	1.82	6.0	2.0	38
343-6d1.38	1.38	6.0	2.0	38	343-6d1.83	1.83	6.0	2.0	38
343-6d1.39	1.39	6.0	2.0	38	343-6d1.84	1.84	6.0	2.0	38
343-6d1.40	1.40	6.0	2.0	38	343-6d1.85	1.85	6.0	2.0	38
343-6d1.41	1.41	6.0	2.0	38	343-6d1.86	1.86	6.0	2.0	38
343-6d1.42	1.42	6.0	2.0	38	343-6d1.87	1.87	6.0	2.0	38
343-6d1.43	1.43	6.0	2.0	38	343-6d1.88	1.88	6.0	2.0	38
343-6d1.44	1.44	6.0	2.0	38	343-6d1.89	1.89	6.0	2.0	38
343-6d1.45	1.45	6.0	2.0	38	343-6d1.90	1.90	6.0	2.0	38
343-6d1.46	1.46	6.0	2.0	38	343-6d1.91	1.91	6.0	2.0	38
343-6d1.47	1.47	6.0	2.0	38	343-6d1.92	1.92	6.0	2.0	38
343-6d1.48	1.48	6.0	2.0	38	343-6d1.93	1.93	6.0	2.0	38
343-6d1.49	1.49	6.0	2.0	38	343-6d1.94	1.94	6.0	2.0	38
343-6d1.50	1.50	6.0	2.0	38	343-6d1.95	1.95	6.0	2.0	38
343-6d1.51	1.51	6.0	2.0	38	343-6d1.96	1.96	6.0	2.0	38
343-6d1.52	1.52	6.0	2.0	38	343-6d1.97	1.97	6.0	2.0	38
343-6d1.53	1.53	6.0	2.0	38	343-6d1.98	1.98	6.0	2.0	38
343-6d1.54	1.54	6.0	2.0	38	343-6d1.99	1.99	6.0	2.0	38
343-6d1.55	1.55	6.0	2.0	38	343-6d2.00	2.00	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					



Available  
uncoated or coated  
(see page 61)



118°

Z2

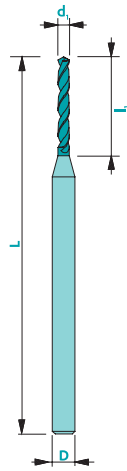


λ  
34°

MG10

N

## Drill - helix 34° - $l_1=8$ mm



Available uncoated or coated (see page 61)

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	■	■	Solo
Gold - Silver	80	100	□	□	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	□	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances  $d_1$ : -0.002/-0.004  
D: h5

**118°**

**Z2**

**34°**

**MG10 N**

Art. n°	$d_1$	$l_1$	D	L	Art. n°	$d_1$	$l_1$	D	L
343-8d0.80	0.80	8.0	2.0	38	343-8d1.10	1.10	8.0	2.0	38
343-8d0.81	0.81	8.0	2.0	38	343-8d1.11	1.11	8.0	2.0	38
343-8d0.82	0.82	8.0	2.0	38	343-8d1.12	1.12	8.0	2.0	38
343-8d0.83	0.83	8.0	2.0	38	343-8d1.13	1.13	8.0	2.0	38
343-8d0.84	0.84	8.0	2.0	38	343-8d1.14	1.14	8.0	2.0	38
343-8d0.85	0.85	8.0	2.0	38	343-8d1.15	1.15	8.0	2.0	38
343-8d0.86	0.86	8.0	2.0	38	343-8d1.16	1.16	8.0	2.0	38
343-8d0.87	0.87	8.0	2.0	38	343-8d1.17	1.17	8.0	2.0	38
343-8d0.88	0.88	8.0	2.0	38	343-8d1.18	1.18	8.0	2.0	38
343-8d0.89	0.89	8.0	2.0	38	343-8d1.19	1.19	8.0	2.0	38
343-8d0.90	0.90	8.0	2.0	38	343-8d1.20	1.20	8.0	2.0	38
343-8d0.91	0.91	8.0	2.0	38	343-8d1.21	1.21	8.0	2.0	38
343-8d0.92	0.92	8.0	2.0	38	343-8d1.22	1.22	8.0	2.0	38
343-8d0.93	0.93	8.0	2.0	38	343-8d1.23	1.23	8.0	2.0	38
343-8d0.94	0.94	8.0	2.0	38	343-8d1.24	1.24	8.0	2.0	38
343-8d0.95	0.95	8.0	2.0	38	343-8d1.25	1.25	8.0	2.0	38
343-8d0.96	0.96	8.0	2.0	38	343-8d1.26	1.26	8.0	2.0	38
343-8d0.97	0.97	8.0	2.0	38	343-8d1.27	1.27	8.0	2.0	38
343-8d0.98	0.98	8.0	2.0	38	343-8d1.28	1.28	8.0	2.0	38
343-8d0.99	0.99	8.0	2.0	38	343-8d1.29	1.29	8.0	2.0	38
343-8d1.00	1.00	8.0	2.0	38	343-8d1.30	1.30	8.0	2.0	38
343-8d1.01	1.01	8.0	2.0	38	343-8d1.31	1.31	8.0	2.0	38
343-8d1.02	1.02	8.0	2.0	38	343-8d1.32	1.32	8.0	2.0	38
343-8d1.03	1.03	8.0	2.0	38	343-8d1.33	1.33	8.0	2.0	38
343-8d1.04	1.04	8.0	2.0	38	343-8d1.34	1.34	8.0	2.0	38
343-8d1.05	1.05	8.0	2.0	38	343-8d1.35	1.35	8.0	2.0	38
343-8d1.06	1.06	8.0	2.0	38	343-8d1.36	1.36	8.0	2.0	38
343-8d1.07	1.07	8.0	2.0	38	343-8d1.37	1.37	8.0	2.0	38
343-8d1.08	1.08	8.0	2.0	38	343-8d1.38	1.38	8.0	2.0	38
343-8d1.09	1.09	8.0	2.0	38	343-8d1.39	1.39	8.0	2.0	38



# Drill - helix 34° - l<sub>1</sub>=8 mm

## 343-8

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
343-8d1.40	1.40	8.0	2.0	38	343-8d1.85	1.85	8.0	2.0	38
343-8d1.41	1.41	8.0	2.0	38	343-8d1.86	1.86	8.0	2.0	38
343-8d1.42	1.42	8.0	2.0	38	343-8d1.87	1.87	8.0	2.0	38
343-8d1.43	1.43	8.0	2.0	38	343-8d1.88	1.88	8.0	2.0	38
343-8d1.44	1.44	8.0	2.0	38	343-8d1.89	1.89	8.0	2.0	38
343-8d1.45	1.45	8.0	2.0	38	343-8d1.90	1.90	8.0	2.0	38
343-8d1.46	1.46	8.0	2.0	38	343-8d1.91	1.91	8.0	2.0	38
343-8d1.47	1.47	8.0	2.0	38	343-8d1.92	1.92	8.0	2.0	38
343-8d1.48	1.48	8.0	2.0	38	343-8d1.93	1.93	8.0	2.0	38
343-8d1.49	1.49	8.0	2.0	38	343-8d1.94	1.94	8.0	2.0	38
343-8d1.50	1.50	8.0	2.0	38	343-8d1.95	1.95	8.0	2.0	38
343-8d1.51	1.51	8.0	2.0	38	343-8d1.96	1.96	8.0	2.0	38
343-8d1.52	1.52	8.0	2.0	38	343-8d1.97	1.97	8.0	2.0	38
343-8d1.53	1.53	8.0	2.0	38	343-8d1.98	1.98	8.0	2.0	38
343-8d1.54	1.54	8.0	2.0	38	343-8d1.99	1.99	8.0	2.0	38
343-8d1.55	1.55	8.0	2.0	38	343-8d2.00	2.00	8.0	2.0	38
343-8d1.56	1.56	8.0	2.0	38	343-8d2.01	2.01	8.0	3.0	38
343-8d1.57	1.57	8.0	2.0	38	343-8d2.02	2.02	8.0	3.0	38
343-8d1.58	1.58	8.0	2.0	38	343-8d2.03	2.03	8.0	3.0	38
343-8d1.59	1.59	8.0	2.0	38	343-8d2.04	2.04	8.0	3.0	38
343-8d1.60	1.60	8.0	2.0	38	343-8d2.05	2.05	8.0	3.0	38
343-8d1.61	1.61	8.0	2.0	38	343-8d2.06	2.06	8.0	3.0	38
343-8d1.62	1.62	8.0	2.0	38	343-8d2.07	2.07	8.0	3.0	38
343-8d1.63	1.63	8.0	2.0	38	343-8d2.08	2.08	8.0	3.0	38
343-8d1.64	1.64	8.0	2.0	38	343-8d2.09	2.09	8.0	3.0	38
343-8d1.65	1.65	8.0	2.0	38	343-8d2.10	2.10	8.0	3.0	38
343-8d1.66	1.66	8.0	2.0	38	343-8d2.11	2.11	8.0	3.0	38
343-8d1.67	1.67	8.0	2.0	38	343-8d2.12	2.12	8.0	3.0	38
343-8d1.68	1.68	8.0	2.0	38	343-8d2.13	2.13	8.0	3.0	38
343-8d1.69	1.69	8.0	2.0	38	343-8d2.14	2.14	8.0	3.0	38
343-8d1.70	1.70	8.0	2.0	38	343-8d2.15	2.15	8.0	3.0	38
343-8d1.71	1.71	8.0	2.0	38	343-8d2.16	2.16	8.0	3.0	38
343-8d1.72	1.72	8.0	2.0	38	343-8d2.17	2.17	8.0	3.0	38
343-8d1.73	1.73	8.0	2.0	38	343-8d2.18	2.18	8.0	3.0	38
343-8d1.74	1.74	8.0	2.0	38	343-8d2.19	2.19	8.0	3.0	38
343-8d1.75	1.75	8.0	2.0	38	343-8d2.20	2.20	8.0	3.0	38
343-8d1.76	1.76	8.0	2.0	38	343-8d2.21	2.21	8.0	3.0	38
343-8d1.77	1.77	8.0	2.0	38	343-8d2.22	2.22	8.0	3.0	38
343-8d1.78	1.78	8.0	2.0	38	343-8d2.23	2.23	8.0	3.0	38
343-8d1.79	1.79	8.0	2.0	38	343-8d2.24	2.24	8.0	3.0	38
343-8d1.80	1.80	8.0	2.0	38	343-8d2.25	2.25	8.0	3.0	38
343-8d1.81	1.81	8.0	2.0	38	343-8d2.26	2.26	8.0	3.0	38
343-8d1.82	1.82	8.0	2.0	38	343-8d2.27	2.27	8.0	3.0	38
343-8d1.83	1.83	8.0	2.0	38	343-8d2.28	2.28	8.0	3.0	38
343-8d1.84	1.84	8.0	2.0	38	343-8d2.29	2.29	8.0	3.0	38



Available uncoated or coated (see page 61)



118°

Z2



λ  
34°

MG10

N



## Drill - helix 34° - l<sub>1</sub>=8 mm



Available uncoated or coated (see page 61)



118°

Z2



λ  
34°

MG10

N

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
343-8d2.30	2.30	8.0	3.0	38
343-8d2.31	2.31	8.0	3.0	38
343-8d2.32	2.32	8.0	3.0	38
343-8d2.33	2.33	8.0	3.0	38
343-8d2.34	2.34	8.0	3.0	38
343-8d2.35	2.35	8.0	3.0	38
343-8d2.36	2.36	8.0	3.0	38
343-8d2.37	2.37	8.0	3.0	38
343-8d2.38	2.38	8.0	3.0	38
343-8d2.39	2.39	8.0	3.0	38
343-8d2.40	2.40	8.0	3.0	38
343-8d2.41	2.41	8.0	3.0	38
343-8d2.42	2.42	8.0	3.0	38
343-8d2.43	2.43	8.0	3.0	38
343-8d2.44	2.44	8.0	3.0	38
343-8d2.45	2.45	8.0	3.0	38
343-8d2.46	2.46	8.0	3.0	38
343-8d2.47	2.47	8.0	3.0	38
343-8d2.48	2.48	8.0	3.0	38
343-8d2.49	2.49	8.0	3.0	38
343-8d2.50	2.50	8.0	3.0	38
343-8d2.51	2.51	8.0	3.0	38
343-8d2.52	2.52	8.0	3.0	38
343-8d2.53	2.53	8.0	3.0	38
343-8d2.54	2.54	8.0	3.0	38
343-8d2.55	2.55	8.0	3.0	38
343-8d2.56	2.56	8.0	3.0	38
343-8d2.57	2.57	8.0	3.0	38
343-8d2.58	2.58	8.0	3.0	38
343-8d2.59	2.59	8.0	3.0	38
343-8d2.60	2.60	8.0	3.0	38
343-8d2.61	2.61	8.0	3.0	38
343-8d2.62	2.62	8.0	3.0	38
343-8d2.63	2.63	8.0	3.0	38
343-8d2.64	2.64	8.0	3.0	38
343-8d2.65	2.65	8.0	3.0	38
343-8d2.66	2.66	8.0	3.0	38
343-8d2.67	2.67	8.0	3.0	38
343-8d2.68	2.68	8.0	3.0	38
343-8d2.69	2.69	8.0	3.0	38
343-8d2.70	2.70	8.0	3.0	38
343-8d2.71	2.71	8.0	3.0	38
343-8d2.72	2.72	8.0	3.0	38
343-8d2.73	2.73	8.0	3.0	38
343-8d2.74	2.74	8.0	3.0	38

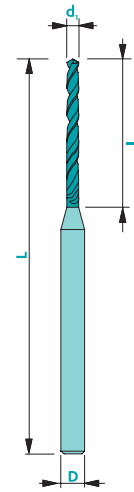
Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
343-8d2.75	2.75	8.0	3.0	38
343-8d2.76	2.76	8.0	3.0	38
343-8d2.77	2.77	8.0	3.0	38
343-8d2.78	2.78	8.0	3.0	38
343-8d2.79	2.79	8.0	3.0	38
343-8d2.80	2.80	8.0	3.0	38
343-8d2.81	2.81	8.0	3.0	38
343-8d2.82	2.82	8.0	3.0	38
343-8d2.83	2.83	8.0	3.0	38
343-8d2.84	2.84	8.0	3.0	38
343-8d2.85	2.85	8.0	3.0	38
343-8d2.86	2.86	8.0	3.0	38
343-8d2.87	2.87	8.0	3.0	38
343-8d2.88	2.88	8.0	3.0	38
343-8d2.89	2.89	8.0	3.0	38
343-8d2.90	2.90	8.0	3.0	38
343-8d2.91	2.91	8.0	3.0	38
343-8d2.92	2.92	8.0	3.0	38
343-8d2.93	2.93	8.0	3.0	38
343-8d2.94	2.94	8.0	3.0	38
343-8d2.95	2.95	8.0	3.0	38
343-8d2.96	2.96	8.0	3.0	38
343-8d2.97	2.97	8.0	3.0	38
343-8d2.98	2.98	8.0	3.0	38
343-8d2.99	2.99	8.0	3.0	38
343-8d3.00	3.00	8.0	3.0	38
343-8d3.10	3.10	8.0	4.0	38
343-8d3.20	3.20	8.0	4.0	38
343-8d3.30	3.30	8.0	4.0	38
343-8d3.40	3.40	8.0	4.0	38
343-8d3.50	3.50	8.0	4.0	38
343-8d3.60	3.60	8.0	4.0	38
343-8d3.70	3.70	8.0	4.0	38
343-8d3.80	3.80	8.0	4.0	38
343-8d3.90	3.90	8.0	4.0	38
343-8d4.00	4.00	8.0	4.0	38
343-8d4.10	4.10	8.0	4.5	38
343-8d4.20	4.20	8.0	4.5	38
343-8d4.30	4.30	8.0	4.5	38
343-8d4.40	4.40	8.0	4.5	38
343-8d4.50	4.50	8.0	4.5	38
343-8d5.00	5.00	8.0	5.0	38
343-8d5.50	5.50	8.0	5.5	38
343-8d6.00	6.00	8.0	6.0	38

## Drill - helix 34° - l<sub>1</sub>=12 mm

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	■	■	Solo
Gold - Silver	80	100	□	□	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	□	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: -0.002/-0.004  
D: h5



Available uncoated or coated (see page 61)

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
343-12d0.80	0.80	12.0	2.0	38	343-12d1.08	1.08	12.0	2.0	38
343-12d0.81	0.81	12.0	2.0	38	343-12d1.09	1.09	12.0	2.0	38
343-12d0.82	0.82	12.0	2.0	38	343-12d1.10	1.10	12.0	2.0	38
343-12d0.83	0.83	12.0	2.0	38	343-12d1.11	1.11	12.0	2.0	38
343-12d0.84	0.84	12.0	2.0	38	343-12d1.12	1.12	12.0	2.0	38
343-12d0.85	0.85	12.0	2.0	38	343-12d1.13	1.13	12.0	2.0	38
343-12d0.86	0.86	12.0	2.0	38	343-12d1.14	1.14	12.0	2.0	38
343-12d0.87	0.87	12.0	2.0	38	343-12d1.15	1.15	12.0	2.0	38
343-12d0.88	0.88	12.0	2.0	38	343-12d1.16	1.16	12.0	2.0	38
343-12d0.89	0.89	12.0	2.0	38	343-12d1.17	1.17	12.0	2.0	38
343-12d0.90	0.90	12.0	2.0	38	343-12d1.18	1.18	12.0	2.0	38
343-12d0.91	0.91	12.0	2.0	38	343-12d1.19	1.19	12.0	2.0	38
343-12d0.92	0.92	12.0	2.0	38	343-12d1.20	1.20	12.0	2.0	38
343-12d0.93	0.93	12.0	2.0	38	343-12d1.21	1.21	12.0	2.0	38
343-12d0.94	0.94	12.0	2.0	38	343-12d1.22	1.22	12.0	2.0	38
343-12d0.95	0.95	12.0	2.0	38	343-12d1.23	1.23	12.0	2.0	38
343-12d0.96	0.96	12.0	2.0	38	343-12d1.24	1.24	12.0	2.0	38
343-12d0.97	0.97	12.0	2.0	38	343-12d1.25	1.25	12.0	2.0	38
343-12d0.98	0.98	12.0	2.0	38	343-12d1.26	1.26	12.0	2.0	38
343-12d0.99	0.99	12.0	2.0	38	343-12d1.27	1.27	12.0	2.0	38
343-12d1.00	1.00	12.0	2.0	38	343-12d1.28	1.28	12.0	2.0	38
343-12d1.01	1.01	12.0	2.0	38	343-12d1.29	1.29	12.0	2.0	38
343-12d1.02	1.02	12.0	2.0	38	343-12d1.30	1.30	12.0	2.0	38
343-12d1.03	1.03	12.0	2.0	38	343-12d1.31	1.31	12.0	2.0	38
343-12d1.04	1.04	12.0	2.0	38	343-12d1.32	1.32	12.0	2.0	38
343-12d1.05	1.05	12.0	2.0	38	343-12d1.33	1.33	12.0	2.0	38
343-12d1.06	1.06	12.0	2.0	38	343-12d1.34	1.34	12.0	2.0	38
343-12d1.07	1.07	12.0	2.0	38	343-12d1.35	1.35	12.0	2.0	38



Z2



λ  
34°

MG10

N



## Drill - helix 34° - $l_1=12$ mm



Available  
uncoated or coated  
(see page 61)

**Z2**

118°



$\lambda$   
**34°**

**MG10**

**N**

Art. n°	$d_1$	$l_1$	D	L
343-12d1.36	1.36	12.0	2.0	38
343-12d1.37	1.37	12.0	2.0	38
343-12d1.38	1.38	12.0	2.0	38
343-12d1.39	1.39	12.0	2.0	38
343-12d1.40	1.40	12.0	2.0	38
343-12d1.41	1.41	12.0	2.0	38
343-12d1.42	1.42	12.0	2.0	38
343-12d1.43	1.43	12.0	2.0	38
343-12d1.44	1.44	12.0	2.0	38
343-12d1.45	1.45	12.0	2.0	38
343-12d1.46	1.46	12.0	2.0	38
343-12d1.47	1.47	12.0	2.0	38
343-12d1.48	1.48	12.0	2.0	38
343-12d1.49	1.49	12.0	2.0	38
343-12d1.50	1.50	12.0	2.0	38
343-12d1.51	1.51	12.0	2.0	38
343-12d1.52	1.52	12.0	2.0	38
343-12d1.53	1.53	12.0	2.0	38
343-12d1.54	1.54	12.0	2.0	38
343-12d1.55	1.55	12.0	2.0	38
343-12d1.56	1.56	12.0	2.0	38
343-12d1.57	1.57	12.0	2.0	38
343-12d1.58	1.58	12.0	2.0	38
343-12d1.59	1.59	12.0	2.0	38
343-12d1.60	1.60	12.0	2.0	38
343-12d1.61	1.61	12.0	2.0	38
343-12d1.62	1.62	12.0	2.0	38
343-12d1.63	1.63	12.0	2.0	38
343-12d1.64	1.64	12.0	2.0	38
343-12d1.65	1.65	12.0	2.0	38
343-12d1.66	1.66	12.0	2.0	38
343-12d1.67	1.67	12.0	2.0	38
343-12d1.68	1.68	12.0	2.0	38
343-12d1.69	1.69	12.0	2.0	38
343-12d1.70	1.70	12.0	2.0	38
343-12d1.71	1.71	12.0	2.0	38
343-12d1.72	1.72	12.0	2.0	38
343-12d1.73	1.73	12.0	2.0	38
343-12d1.74	1.74	12.0	2.0	38
343-12d1.75	1.75	12.0	2.0	38
343-12d1.76	1.76	12.0	2.0	38
343-12d1.77	1.77	12.0	2.0	38
343-12d1.78	1.78	12.0	2.0	38
343-12d1.79	1.79	12.0	2.0	38

Art. n°	$d_1$	$l_1$	D	L
343-12d1.80	1.80	12.0	2.0	38
343-12d1.81	1.81	12.0	2.0	38
343-12d1.82	1.82	12.0	2.0	38
343-12d1.83	1.83	12.0	2.0	38
343-12d1.84	1.84	12.0	2.0	38
343-12d1.85	1.85	12.0	2.0	38
343-12d1.86	1.86	12.0	2.0	38
343-12d1.87	1.87	12.0	2.0	38
343-12d1.88	1.88	12.0	2.0	38
343-12d1.89	1.89	12.0	2.0	38
343-12d1.90	1.90	12.0	2.0	38
343-12d1.91	1.91	12.0	2.0	38
343-12d1.92	1.92	12.0	2.0	38
343-12d1.93	1.93	12.0	2.0	38
343-12d1.94	1.94	12.0	2.0	38
343-12d1.95	1.95	12.0	2.0	38
343-12d1.96	1.96	12.0	2.0	38
343-12d1.97	1.97	12.0	2.0	38
343-12d1.98	1.98	12.0	2.0	38
343-12d1.99	1.99	12.0	2.0	38
343-12d2.00	2.00	12.0	2.0	38
343-12d2.05	2.05	12.0	3.0	38
343-12d2.10	2.10	12.0	3.0	38
343-12d2.15	2.15	12.0	3.0	38
343-12d2.17	2.17	12.0	3.0	38
343-12d2.18	2.18	12.0	3.0	38
343-12d2.20	2.20	12.0	3.0	38
343-12d2.25	2.25	12.0	3.0	38
343-12d2.27	2.27	12.0	3.0	38
343-12d2.28	2.28	12.0	3.0	38
343-12d2.30	2.30	12.0	3.0	38
343-12d2.35	2.35	12.0	3.0	38
343-12d2.37	2.37	12.0	3.0	38
343-12d2.38	2.38	12.0	3.0	38
343-12d2.40	2.40	12.0	3.0	38
343-12d2.45	2.45	12.0	3.0	38
343-12d2.50	2.50	12.0	3.0	38
343-12d2.55	2.55	12.0	3.0	38
343-12d2.60	2.60	12.0	3.0	38
343-12d2.65	2.65	12.0	3.0	38
343-12d2.70	2.70	12.0	3.0	38
343-12d2.80	2.80	12.0	3.0	38
343-12d2.90	2.90	12.0	3.0	38
343-12d2.95	2.95	12.0	3.0	38





# Drill - helix 34° - $l_1=12$ mm

**343-12**

Continuation

Art. n°	$d_1$	$l_1$	D	L
343-12d3.00	3.00	12.0	3.0	38
343-12d3.10	3.10	12.0	4.0	38
343-12d3.20	3.20	12.0	4.0	38
343-12d3.30	3.30	12.0	4.0	38
343-12d3.40	3.40	12.0	4.0	38
343-12d3.50	3.50	12.0	4.0	38
343-12d3.60	3.60	12.0	4.0	38
343-12d3.70	3.70	12.0	4.0	38
343-12d3.80	3.80	12.0	4.0	38
343-12d3.90	3.90	12.0	4.0	38
343-12d4.00	4.00	12.0	4.0	38
343-12d4.10	4.10	12.0	4.5	38
343-12d4.20	4.20	12.0	4.5	38
343-12d4.30	4.30	12.0	4.5	38
343-12d4.40	4.40	12.0	4.5	38
343-12d4.50	4.50	12.0	4.5	38
343-12d5.00	5.00	12.0	5.0	38
343-12d5.50	5.50	12.0	5.5	38
343-12d6.00	6.00	12.0	6.0	38



Available  
uncoated or coated  
(see page 61)



118°

**Z2**

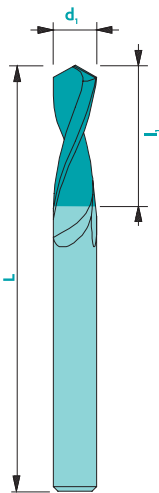


$\lambda$   
34°

**MG10**

**N**

## Twist drill - helix 24°



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	□	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	□	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: h5

Available uncoated or coated (see page 61)

**118°**

**Z2**

**λ 24°**

**MG10**
**N**

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
348d0.30	0.30	5.0	30	348d1.80	1.80	9.0	38
348d0.35	0.35	5.0	30	348d1.85	1.85	9.0	38
348d0.40	0.40	6.0	30	348d1.90	1.90	9.0	38
348d0.45	0.45	6.0	30	348d1.95	1.95	9.0	38
348d0.50	0.50	6.0	30	348d2.00	2.00	9.0	38
348d0.55	0.55	6.0	30	348d2.05	2.05	9.0	38
348d0.60	0.60	6.0	30	348d2.10	2.10	9.0	38
348d0.65	0.65	6.0	30	348d2.15	2.15	10.0	40
348d0.70	0.70	6.0	30	348d2.20	2.20	10.0	40
348d0.75	0.75	6.0	30	348d2.25	2.25	10.0	40
348d0.80	0.80	7.0	30	348d2.30	2.30	10.0	40
348d0.85	0.85	7.0	30	348d2.35	2.35	10.0	40
348d0.90	0.90	7.0	30	348d2.40	2.40	11.0	43
348d0.95	0.95	7.0	30	348d2.45	2.45	11.0	43
348d1.00	1.00	7.0	30	348d2.50	2.50	11.0	43
348d1.05	1.05	8.0	30	348d2.55	2.55	11.0	43
348d1.10	1.10	8.0	30	348d2.60	2.60	11.0	43
348d1.15	1.15	8.0	30	348d2.65	2.65	11.0	43
348d1.20	1.20	8.0	30	348d2.70	2.70	12.0	46
348d1.25	1.25	8.0	30	348d2.75	2.75	12.0	46
348d1.30	1.30	8.0	30	348d2.80	2.80	12.0	46
348d1.35	1.35	8.0	30	348d2.85	2.85	12.0	46
348d1.40	1.40	8.0	30	348d2.90	2.90	12.0	46
348d1.45	1.45	8.0	30	348d2.95	2.95	12.0	46
348d1.50	1.50	8.0	30	348d3.00	3.00	12.0	46
348d1.55	1.55	9.0	38	348d3.05	3.05	14.0	49
348d1.60	1.60	9.0	38	348d3.10	3.10	14.0	49
348d1.65	1.65	9.0	38	348d3.15	3.15	14.0	49
348d1.70	1.70	9.0	38	348d3.20	3.20	14.0	49
348d1.75	1.75	9.0	38				



# Twist drill - helix 24°

348

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
348d3.25	3.25	14.0	49	348d6.00	6.00	21.0	66
348d3.30	3.30	14.0	49	348d6.10	6.10	23.0	70
348d3.35	3.35	14.0	49	348d6.20	6.20	23.0	70
348d3.40	3.40	15.0	52	348d6.30	6.30	23.0	70
348d3.45	3.45	15.0	52	348d6.40	6.40	23.0	70
348d3.50	3.50	15.0	52	348d6.50	6.50	23.0	70
348d3.55	3.55	15.0	52	348d6.60	6.60	23.0	70
348d3.60	3.60	15.0	52	348d6.70	6.70	23.0	70
348d3.65	3.65	15.0	52	348d6.80	6.80	25.0	74
348d3.70	3.70	15.0	52	348d6.90	6.90	25.0	74
348d3.75	3.75	15.0	52	348d7.00	7.00	25.0	74
348d3.80	3.80	17.0	52	348d7.10	7.10	25.0	74
348d3.85	3.85	17.0	50	348d7.20	7.20	25.0	74
348d3.90	3.90	17.0	55	348d7.30	7.30	25.0	74
348d3.95	3.95	17.0	55	348d7.40	7.40	25.0	74
348d4.00	4.00	17.0	55	348d7.50	7.50	25.0	74
348d4.05	4.05	17.0	55	348d7.60	7.60	27.0	79
348d4.10	4.10	17.0	55	348d7.70	7.70	27.0	79
348d4.15	4.15	17.0	55	348d7.80	7.80	27.0	79
348d4.20	4.20	17.0	55	348d7.90	7.90	27.0	79
348d4.25	4.25	17.0	55	348d8.00	8.00	27.0	79
348d4.30	4.30	18.0	58	348d8.10	8.10	27.0	79
348d4.35	4.35	18.0	58	348d8.20	8.20	27.0	79
348d4.40	4.40	18.0	58	348d8.30	8.30	27.0	79
348d4.45	4.45	18.0	58	348d8.40	8.40	27.0	79
348d4.50	4.50	18.0	58	348d8.50	8.50	27.0	79
348d4.55	4.55	18.0	58	348d8.80	8.80	29.0	84
348d4.60	4.60	18.0	58	348d9.00	9.00	29.0	84
348d4.65	4.65	18.0	58	348d9.20	9.20	29.0	84
348d4.70	4.70	18.0	58	348d9.50	9.50	29.0	84
348d4.75	4.75	18.0	58	348d9.80	9.80	31.0	89
348d4.80	4.80	20.0	62	348d10.00	10.00	31.0	89
348d4.85	4.85	20.0	62	348d10.20	10.20	31.0	89
348d4.90	4.90	20.0	62	348d10.50	10.50	31.0	89
348d4.95	4.95	20.0	62	348d11.00	11.00	33.0	95
348d5.00	5.00	20.0	62	348d11.50	11.50	33.0	95
348d5.10	5.10	20.0	62	348d12.00	12.00	35.0	102
348d5.20	5.20	20.0	62	348d12.50	12.50	35.0	102
348d5.30	5.30	20.0	62	348d13.00	13.00	35.0	102
348d5.40	5.40	21.0	66	348d13.50	13.50	37.0	107
348d5.50	5.50	21.0	66	348d14.00	14.00	37.0	107
348d5.60	5.60	21.0	66	348d16.00	16.00	38.0	115
348d5.70	5.70	21.0	66				
348d5.80	5.80	21.0	66				
348d5.90	5.90	21.0	66				



Available  
uncoated or coated  
(see page 61)



118°

Z2

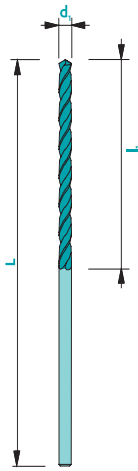


λ  
24°

MG10

N

## Long twist drill - helix 34°



Available uncoated or coated (see page 61)

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	■	■	Solo
Gold - Silver	80	100	□	□	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	□	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: h5

**118°**

**Z2**

**λ 34°**

**MG10 N**

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
352d0.300	0.300	3.7	38
352d0.350	0.350	3.7	38
352d0.400	0.400	4.7	38
352d0.450	0.450	4.7	38
352d0.500	0.500	5.7	38
352d0.550	0.550	5.7	38
352d0.600	0.600	7.7	38
352d0.650	0.650	7.7	38
352d0.700	0.700	9.7	38
352d0.750	0.750	9.7	38
352d0.800	0.800	11.7	38
352d0.850	0.850	11.7	38
352d0.900	0.900	14.7	38
352d0.950	0.950	14.7	38
352d1.000	1.000	14.7	38
352d1.050	1.050	14.7	38
352d1.100	1.100	14.7	38
352d1.150	1.150	14.7	38
352d1.200	1.200	14.7	38
352d1.250	1.250	14.7	38
352d1.300	1.300	14.7	38
352d1.350	1.350	14.7	38
352d1.400	1.400	14.7	38
352d1.450	1.450	14.7	38
352d1.500	1.500	14.7	38
352d1.550	1.550	14.7	38
352d1.600	1.600	14.7	38
352d1.650	1.650	14.7	38
352d1.700	1.700	14.7	38
352d1.750	1.750	14.7	38
352d1.800	1.800	14.7	38
352d1.850	1.850	14.7	38

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
352d1.900	1.900	14.7	38
352d1.950	1.950	14.7	38
352d2.000	2.000	14.7	38
352d2.050	2.050	14.7	38
352d2.100	2.100	14.7	38
352d2.150	2.150	14.7	38
352d2.200	2.200	14.7	38
352d2.250	2.250	14.7	38
352d2.300	2.300	14.7	38
352d2.350	2.350	14.7	38
352d2.400	2.400	14.7	38
352d2.450	2.450	14.7	38
352d2.500	2.500	14.7	38
352d2.550	2.550	14.7	38
352d2.600	2.600	14.7	38
352d2.650	2.650	14.7	38
352d2.700	2.700	14.7	38
352d2.750	2.750	14.7	38
352d2.800	2.800	14.7	38
352d2.850	2.850	14.7	38
352d2.900	2.900	14.7	38
352d2.950	2.950	14.7	38
352d3.000	3.000	14.7	38
352d3.050	3.050	14.7	38
352d3.100	3.100	14.7	38
352d3.150	3.150	14.7	38
352d3.175	3.175	14.7	38
352d3.200	3.200	19.7	50
352d3.300	3.300	19.7	50
352d3.400	3.400	19.7	50
352d3.500	3.500	19.7	50
352d3.600	3.600	19.7	50



# Long twist drill - helix 34°

352

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
352d3.700	3.700	19.7	50	352d8.500	8.500	36.0	79
352d3.800	3.800	19.7	50	352d8.600	8.600	39.0	84
352d3.900	3.900	19.7	50	352d8.700	8.700	39.0	84
352d4.000	4.000	19.7	50	352d8.800	8.800	39.0	84
352d4.100	4.100	24.7	50	352d8.900	8.900	39.0	84
352d4.200	4.200	24.7	50	352d9.000	9.000	39.0	84
352d4.300	4.300	24.7	50	352d9.100	9.100	39.0	84
352d4.400	4.400	24.7	50	352d9.200	9.200	39.0	84
352d4.500	4.500	24.7	50	352d9.300	9.300	39.0	84
352d4.600	4.600	24.7	50	352d9.400	9.400	39.0	84
352d4.700	4.700	24.7	50	352d9.500	9.500	39.0	84
352d4.800	4.800	24.7	50	352d9.600	9.600	41.0	89
352d4.900	4.900	24.7	50	352d9.700	9.700	41.0	89
352d5.000	5.000	24.7	50	352d9.800	9.800	41.0	89
352d5.100	5.100	24.7	50	352d9.900	9.900	41.0	89
352d5.200	5.200	24.7	50	352d10.000	10.000	41.0	89
352d5.300	5.300	24.7	50	352d10.200	10.200	41.0	89
352d5.400	5.400	24.7	50	352d10.500	10.500	41.0	89
352d5.500	5.500	24.7	50	352d11.000	11.000	45.0	95
352d5.600	5.600	24.7	50	352d11.500	11.500	45.0	95
352d5.700	5.700	24.7	50	352d12.000	12.000	49.0	102
352d5.800	5.800	24.7	50	352d12.500	12.500	49.0	102
352d5.900	5.900	24.7	50	352d13.000	13.000	49.0	102
352d6.000	6.000	24.7	50	352d13.500	13.500	52.0	107
352d6.100	6.100	30.0	70	352d14.000	14.000	52.0	107
352d6.200	6.200	30.0	70	352d15.000	15.000	54.0	111
352d6.300	6.300	30.0	70	352d16.000	16.000	56.0	115
352d6.400	6.400	30.0	70	352d17.000	17.000	58.0	119
352d6.500	6.500	30.0	70	352d18.000	18.000	60.0	123
352d6.600	6.600	30.0	70	352d19.000	19.000	62.0	127
352d6.700	6.700	30.0	70	352d20.000	20.000	64.0	131
352d6.800	6.800	33.0	74				
352d6.900	6.900	33.0	74				
352d7.000	7.000	33.0	74				
352d7.100	7.100	33.0	74				
352d7.200	7.200	33.0	74				
352d7.300	7.300	33.0	74				
352d7.400	7.400	33.0	74				
352d7.500	7.500	33.0	74				
352d7.600	7.600	36.0	79				
352d7.700	7.700	36.0	79				
352d7.800	7.800	36.0	79				
352d7.900	7.900	36.0	79				
352d8.000	8.000	36.0	79				
352d8.100	8.100	36.0	79				
352d8.200	8.200	36.0	79				
352d8.300	8.300	36.0	79				
352d8.400	8.400	36.0	79				



Available uncoated or coated (see page 61)



118°

Z2

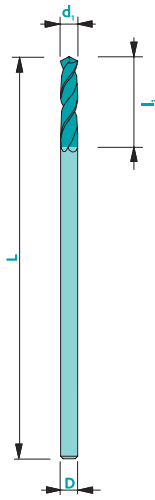


λ  
34°

MG10

N

## Short twist drill - helix 34°



Available uncoated or coated (see page 61)

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	■	Trio
Stainless steel	20	40	□	■	Nemo
Cast iron	60	70	□	■	Nemo
Copper	100	130	□	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	■	■	Solo
Gold - Silver	80	100	□	□	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	□	Trio
Titanium	40	60	□	□	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: h5

	<b>Z2</b>
<b>118°</b>	
<b>λ</b>	
<b>34°</b>	
<b>MG10</b>	<b>N</b>

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
352-1d0.30	0.30	1.5	30
352-1d0.40	0.40	2.3	30
352-1d0.50	0.50	2.8	30
352-1d0.60	0.60	3.3	30
352-1d0.70	0.70	4.3	30
352-1d0.80	0.80	4.8	30
352-1d0.90	0.90	5.3	30
352-1d1.00	1.00	5.7	30
352-1d1.10	1.10	6.7	30
352-1d1.20	1.20	7.7	30
352-1d1.30	1.30	7.7	30
352-1d1.40	1.40	8.8	32
352-1d1.50	1.50	8.8	32
352-1d1.60	1.60	9.7	34
352-1d1.70	1.70	9.7	34
352-1d1.80	1.80	10.7	36
352-1d1.90	1.90	10.7	36
352-1d2.00	2.00	11.5	38

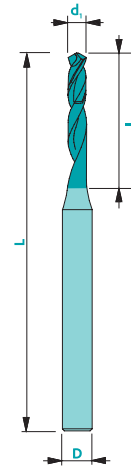
# EXPERT drill - stainless steel

370

Ø drill	f [mm/rotation]	Vc [m/min]	Pecking
Ø 0.50 - Ø 0.70	0.01 / 0.015	25	1/3xØ
Ø 0.71 - Ø 0.99	0.015 / 0.02	25	1/3xØ
Ø 1.00 - Ø 1.50	0.02 / 0.03	30	1/3xØ
Ø 1.50 - Ø 2.00	0.03 / 0.04	30	1/3xØ
Ø 2.00 - Ø 3.00	0.045 / 0.055	30	1/3xØ

Pre-centering with center drill ref. 337-2 recommended for diameters < 1.00 mm

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



Nemo coated  
(see page 61)

Art. n°	$d_1$	$l_1$	D	L	Art. n°	$d_1$	$l_1$	D	L
370d0.50NM	0.50	4	3	38	370d0.79NM	0.79	5	3	38
370d0.51NM	0.51	4	3	38	370d0.80NM	0.80	6	3	38
370d0.52NM	0.52	4	3	38	370d0.81NM	0.81	6	3	38
370d0.53NM	0.53	4	3	38	370d0.82NM	0.82	6	3	38
370d0.54NM	0.54	4	3	38	370d0.83NM	0.83	6	3	38
370d0.55NM	0.55	4	3	38	370d0.84NM	0.84	6	3	38
370d0.56NM	0.56	4	3	38	370d0.85NM	0.85	6	3	38
370d0.57NM	0.57	4	3	38	370d0.86NM	0.86	6	3	38
370d0.58NM	0.58	4	3	38	370d0.87NM	0.87	6	3	38
370d0.59NM	0.59	4	3	38	370d0.88NM	0.88	6	3	38
370d0.60NM	0.60	5	3	38	370d0.89NM	0.89	6	3	38
370d0.61NM	0.61	5	3	38	370d0.90NM	0.90	6	3	38
370d0.62NM	0.62	5	3	38	370d0.91NM	0.91	8	3	38
370d0.63NM	0.63	5	3	38	370d0.92NM	0.92	8	3	38
370d0.64NM	0.64	5	3	38	370d0.93NM	0.93	8	3	38
370d0.65NM	0.65	5	3	38	370d0.94NM	0.94	8	3	38
370d0.66NM	0.66	5	3	38	370d0.95NM	0.95	8	3	38
370d0.67NM	0.67	5	3	38	370d0.96NM	0.96	8	3	38
370d0.68NM	0.68	5	3	38	370d0.97NM	0.97	8	3	38
370d0.69NM	0.69	5	3	38	370d0.98NM	0.98	8	3	38
370d0.70NM	0.70	5	3	38	370d0.99NM	0.99	8	3	38
370d0.71NM	0.71	5	3	38	370d1.00NM	1.00	8	3	38
370d0.72NM	0.72	5	3	38	370d1.01NM	1.01	8	3	38
370d0.73NM	0.73	5	3	38	370d1.02NM	1.02	8	3	38
370d0.74NM	0.74	5	3	38	370d1.03NM	1.03	8	3	38
370d0.75NM	0.75	5	3	38	370d1.04NM	1.04	8	3	38
370d0.76NM	0.76	5	3	38	370d1.05NM	1.05	8	3	38
370d0.77NM	0.77	5	3	38	370d1.06NM	1.06	8	3	38
370d0.78NM	0.78	5	3	38	370d1.07NM	1.07	8	3	38



135°

Z2



λ  
Variable

MG10

N



## EXPERT drill - stainless steel



Nemo coated  
(see page 61)



135°

**Z2**
 $\lambda$   
Variable
**MG10****N**

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
370d1.08NM	1.08	8	3	38	370d1.65NM	1.65	10	3	38
370d1.09NM	1.09	8	3	38	370d1.70NM	1.70	12	3	38
370d1.10NM	1.10	8	3	38	370d1.75NM	1.75	12	3	38
370d1.11NM	1.11	8	3	38	370d1.80NM	1.80	12	3	38
370d1.12NM	1.12	8	3	38	370d1.85NM	1.85	12	3	38
370d1.13NM	1.13	8	3	38	370d1.90NM	1.90	12	3	38
370d1.14NM	1.14	8	3	38	370d1.95NM	1.95	12	3	38
370d1.15NM	1.15	8	3	38	370d2.00NM	2.00	12	3	38
370d1.16NM	1.16	8	3	38	370d2.05NM	2.05	12	3	38
370d1.17NM	1.17	8	3	38	370d2.10NM	2.10	12	3	38
370d1.18NM	1.18	8	3	38	370d2.15NM	2.15	12	3	38
370d1.19NM	1.19	8	3	38	370d2.20NM	2.20	12	3	38
370d1.20NM	1.20	8	3	38	370d2.25NM	2.25	12	3	38
370d1.21NM	1.21	8	3	38	370d2.30NM	2.30	12	3	38
370d1.22NM	1.22	8	3	38	370d2.35NM	2.35	12	3	38
370d1.23NM	1.23	8	3	38	370d2.40NM	2.40	12	3	38
370d1.24NM	1.24	8	3	38	370d2.45NM	2.45	12	3	38
370d1.25NM	1.25	8	3	38	370d2.50NM	2.50	12	3	38
370d1.26NM	1.26	8	3	38	370d2.60NM	2.60	12	3	38
370d1.27NM	1.27	8	3	38	370d2.70NM	2.70	12	3	38
370d1.28NM	1.28	8	3	38	370d2.80NM	2.80	12	3	38
370d1.29NM	1.29	8	3	38	370d2.90NM	2.90	12	3	38
370d1.30NM	1.30	8	3	38	370d3.00NM	3.00	12	3	38
370d1.31NM	1.31	8	3	38					
370d1.32NM	1.32	8	3	38					
370d1.33NM	1.33	8	3	38					
370d1.34NM	1.34	8	3	38					
370d1.35NM	1.35	8	3	38					
370d1.36NM	1.36	8	3	38					
370d1.37NM	1.37	8	3	38					
370d1.38NM	1.38	8	3	38					
370d1.39NM	1.39	8	3	38					
370d1.40NM	1.40	8	3	38					
370d1.41NM	1.41	8	3	38					
370d1.42NM	1.42	8	3	38					
370d1.43NM	1.43	8	3	38					
370d1.44NM	1.44	8	3	38					
370d1.45NM	1.45	8	3	38					
370d1.46NM	1.46	8	3	38					
370d1.47NM	1.47	8	3	38					
370d1.48NM	1.48	8	3	38					
370d1.49NM	1.49	8	3	38					
370d1.50NM	1.50	10	3	38					
370d1.55NM	1.55	10	3	38					
370d1.60NM	1.60	10	3	38					

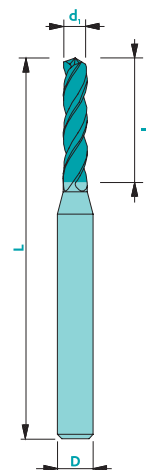


# Twist drill Z3 - shank Ø3

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	□	Trio
Stainless steel	20	40	□	□	Nemo
Cast iron	60	70	□	□	Nemo
Copper	100	130	□	□	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	□	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	■	■	Rico

not adapted - adapted □ highly adapted ■

Tolerances d<sub>1</sub>: -0.002/-0.004  
D: h5



Available uncoated or coated (see page 61)

Art. n°	d <sub>1</sub>	l <sub>1</sub>	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 <sub>1</sub>	l <sub>1</sub>	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



Z3



λ  
34°

MG10

N



## Twist drill Z3 - shank Ø3



Available  
uncoated or coated  
(see page 61)



140°

Z3

λ  
34°

MG10

N

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
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 <sub>1</sub>	l <sub>1</sub>	D	L
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



# Twist drill Z3 - shank Ø3

**353**

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
353d1.63	1.63	10.5	3.0	38	353d2.30	2.30	10.5	3.0	38
353d1.64	1.64	10.5	3.0	38	353d2.35	2.35	10.5	3.0	38
353d1.65	1.65	10.5	3.0	38	353d2.40	2.40	10.5	3.0	38
353d1.66	1.66	10.5	3.0	38	353d2.45	2.45	10.5	3.0	38
353d1.67	1.67	10.5	3.0	38	353d2.50	2.50	10.5	3.0	38
353d1.68	1.68	10.5	3.0	38	353d2.55	2.55	10.5	3.0	38
353d1.69	1.69	10.5	3.0	38	353d2.60	2.60	10.5	3.0	38
353d1.70	1.70	10.5	3.0	38	353d2.65	2.65	10.5	3.0	38
353d1.71	1.71	10.5	3.0	38	353d2.70	2.70	10.5	3.0	38
353d1.72	1.72	10.5	3.0	38	353d2.75	2.75	10.5	3.0	38
353d1.73	1.73	10.5	3.0	38	353d2.80	2.80	10.5	3.0	38
353d1.74	1.74	10.5	3.0	38	353d2.85	2.85	10.5	3.0	38
353d1.75	1.75	10.5	3.0	38	353d2.90	2.90	10.5	3.0	38
353d1.76	1.76	10.5	3.0	38	353d2.95	2.95	10.5	3.0	38
353d1.77	1.77	10.5	3.0	38	353d3.00	3.00	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					



Available  
uncoated or coated  
(see page 61)



140°

**Z3**

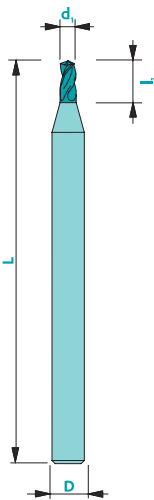


λ  
34°

**MG10**

**N**

## Twist drill Z3 - shank Ø3 - short



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	□	Trio
Stainless steel	20	40	□	□	Nemo
Cast iron	60	70	□	□	Nemo
Copper	100	130	□	□	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	□	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	■	■	Rico

not adapted - adapted □ highly adapted ■

Tolerances  $d_1$ : -0.002/-0.004  
D: h5

Available uncoated or coated (see page 61)

**140°** **Z3**

**34°**

**MG10** **N**

Art. n°	$d_1$	$l_1$	D	L
353-0d0.10	0.10	1.0	3.0	38
353-0d0.13	0.13	1.5	3.0	38
353-0d0.15	0.15	1.5	3.0	38
353-0d0.20	0.20	2.0	3.0	38
353-0d0.21	0.21	2.0	3.0	38
353-0d0.22	0.22	2.0	3.0	38
353-0d0.23	0.23	2.0	3.0	38
353-0d0.24	0.24	2.0	3.0	38
353-0d0.25	0.25	2.0	3.0	38
353-0d0.26	0.26	2.0	3.0	38
353-0d0.27	0.27	2.0	3.0	38
353-0d0.28	0.28	2.0	3.0	38
353-0d0.29	0.29	2.0	3.0	38
353-0d0.30	0.30	2.0	3.0	38
353-0d0.31	0.31	2.0	3.0	38
353-0d0.32	0.32	2.0	3.0	38
353-0d0.33	0.33	2.0	3.0	38
353-0d0.34	0.34	2.0	3.0	38
353-0d0.35	0.35	2.0	3.0	38
353-0d0.36	0.36	2.0	3.0	38
353-0d0.37	0.37	2.0	3.0	38
353-0d0.38	0.38	2.0	3.0	38
353-0d0.39	0.39	2.0	3.0	38
353-0d0.40	0.40	2.0	3.0	38
353-0d0.41	0.41	2.0	3.0	38
353-0d0.42	0.42	2.0	3.0	38
353-0d0.43	0.43	2.0	3.0	38
353-0d0.44	0.44	2.0	3.0	38
353-0d0.45	0.45	2.0	3.0	38
353-0d0.46	0.46	2.0	3.0	38

Art. n°	$d_1$	$l_1$	D	L
353-0d0.47	0.47	2.0	3.0	38
353-0d0.48	0.48	2.0	3.0	38
353-0d0.49	0.49	2.0	3.0	38
353-0d0.50	0.50	3.0	3.0	38
353-0d0.51	0.51	3.0	3.0	38
353-0d0.52	0.52	3.0	3.0	38
353-0d0.53	0.53	3.0	3.0	38
353-0d0.54	0.54	3.0	3.0	38
353-0d0.55	0.55	3.0	3.0	38
353-0d0.56	0.56	3.0	3.0	38
353-0d0.57	0.57	3.0	3.0	38
353-0d0.58	0.58	3.0	3.0	38
353-0d0.59	0.59	3.0	3.0	38
353-0d0.60	0.60	3.0	3.0	38
353-0d0.61	0.61	3.0	3.0	38
353-0d0.62	0.62	3.0	3.0	38
353-0d0.63	0.63	3.0	3.0	38
353-0d0.64	0.64	3.0	3.0	38
353-0d0.65	0.65	3.0	3.0	38
353-0d0.66	0.66	3.0	3.0	38
353-0d0.67	0.67	3.0	3.0	38
353-0d0.68	0.68	3.0	3.0	38
353-0d0.69	0.69	3.0	3.0	38
353-0d0.70	0.70	3.0	3.0	38
353-0d0.71	0.71	3.0	3.0	38
353-0d0.72	0.72	3.0	3.0	38
353-0d0.73	0.73	3.0	3.0	38
353-0d0.74	0.74	3.0	3.0	38
353-0d0.75	0.75	3.0	3.0	38



# Twist drill Z3 - shank Ø3 - short

**353-0**

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L
353-Od0.76	0.76	3.0	3.0	38	353-Od1.20	1.20	3.5	3.0	38
353-Od0.77	0.77	3.0	3.0	38	353-Od1.21	1.21	3.5	3.0	38
353-Od0.78	0.78	3.0	3.0	38	353-Od1.22	1.22	3.5	3.0	38
353-Od0.79	0.79	3.0	3.0	38	353-Od1.23	1.23	3.5	3.0	38
353-Od0.80	0.80	3.0	3.0	38	353-Od1.24	1.24	3.5	3.0	38
353-Od0.81	0.81	3.0	3.0	38	353-Od1.25	1.25	3.5	3.0	38
353-Od0.82	0.82	3.0	3.0	38	353-Od1.26	1.26	3.5	3.0	38
353-Od0.83	0.83	3.0	3.0	38	353-Od1.27	1.27	3.5	3.0	38
353-Od0.84	0.84	3.0	3.0	38	353-Od1.28	1.28	3.5	3.0	38
353-Od0.85	0.85	3.0	3.0	38	353-Od1.29	1.29	3.5	3.0	38
353-Od0.86	0.86	3.0	3.0	38	353-Od1.30	1.30	3.5	3.0	38
353-Od0.87	0.87	3.0	3.0	38	353-Od1.31	1.31	3.5	3.0	38
353-Od0.88	0.88	3.0	3.0	38	353-Od1.32	1.32	3.5	3.0	38
353-Od0.89	0.89	3.0	3.0	38	353-Od1.33	1.33	3.5	3.0	38
353-Od0.90	0.90	3.0	3.0	38	353-Od1.34	1.34	3.5	3.0	38
353-Od0.91	0.91	3.0	3.0	38	353-Od1.35	1.35	3.5	3.0	38
353-Od0.92	0.92	3.0	3.0	38	353-Od1.36	1.36	3.5	3.0	38
353-Od0.93	0.93	3.0	3.0	38	353-Od1.37	1.37	3.5	3.0	38
353-Od0.94	0.94	3.0	3.0	38	353-Od1.38	1.38	3.5	3.0	38
353-Od0.95	0.95	3.0	3.0	38	353-Od1.39	1.39	3.5	3.0	38
353-Od0.96	0.96	3.0	3.0	38	353-Od1.40	1.40	3.5	3.0	38
353-Od0.97	0.97	3.0	3.0	38	353-Od1.41	1.41	3.5	3.0	38
353-Od0.98	0.98	3.0	3.0	38	353-Od1.42	1.42	3.5	3.0	38
353-Od0.99	0.99	3.0	3.0	38	353-Od1.43	1.43	3.5	3.0	38
353-Od1.00	1.00	3.5	3.0	38	353-Od1.44	1.44	3.5	3.0	38
353-Od1.01	1.01	3.5	3.0	38	353-Od1.45	1.45	3.5	3.0	38
353-Od1.02	1.02	3.5	3.0	38	353-Od1.46	1.46	3.5	3.0	38
353-Od1.03	1.03	3.5	3.0	38	353-Od1.47	1.47	3.5	3.0	38
353-Od1.04	1.04	3.5	3.0	38	353-Od1.48	1.48	3.5	3.0	38
353-Od1.05	1.05	3.5	3.0	38	353-Od1.49	1.49	3.5	3.0	38
353-Od1.06	1.06	3.5	3.0	38	353-Od1.50	1.50	3.5	3.0	38
353-Od1.07	1.07	3.5	3.0	38					
353-Od1.08	1.08	3.5	3.0	38					
353-Od1.09	1.09	3.5	3.0	38					
353-Od1.10	1.10	3.5	3.0	38					
353-Od1.11	1.11	3.5	3.0	38					
353-Od1.12	1.12	3.5	3.0	38					
353-Od1.13	1.13	3.5	3.0	38					
353-Od1.14	1.14	3.5	3.0	38					
353-Od1.15	1.15	3.5	3.0	38					
353-Od1.16	1.16	3.5	3.0	38					
353-Od1.17	1.17	3.5	3.0	38					
353-Od1.18	1.18	3.5	3.0	38					
353-Od1.19	1.19	3.5	3.0	38					



Available  
uncoated or coated  
(see page 61)



140°

**Z3**

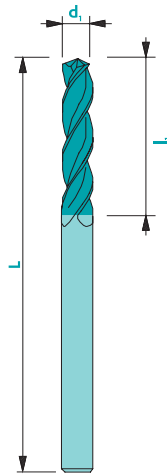


λ  
34°

**MG10**

**N**

## Twist drill Z3



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	□	Trio
Stainless steel	20	40	□	□	Nemo
Cast iron	60	70	□	□	Nemo
Copper	100	130	□	□	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	□	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	■	■	Rico

not adapted - adapted □ highly adapted ■

Tolerances  $d_1$ ; h5

Available uncoated or coated (see page 61)

**140°** **Z3**

**34°**

**MG10** **N**

Art. n°	$d_1$	$l_1$	L
353-1d1.00	1.00	6.0	38
353-1d1.10	1.10	6.5	38
353-1d1.20	1.20	7.5	38
353-1d1.30	1.30	7.5	38
353-1d1.40	1.40	8.5	38
353-1d1.50	1.50	8.5	38
353-1d1.60	1.60	9.5	38
353-1d1.70	1.70	9.5	38
353-1d1.80	1.80	10.5	38
353-1d1.90	1.90	10.5	38
353-1d2.00	2.00	11.5	38
353-1d2.10	2.10	11.5	38
353-1d2.20	2.20	12.5	40
353-1d2.30	2.30	12.5	40
353-1d2.40	2.40	13.5	43
353-1d2.50	2.50	13.5	43
353-1d2.60	2.60	13.5	43
353-1d2.70	2.70	15.5	46
353-1d2.80	2.80	15.5	46
353-1d2.90	2.90	15.5	46
353-1d3.00	3.00	15.5	46
353-1d3.10	3.10	17.0	49
353-1d3.20	3.20	17.0	49
353-1d3.30	3.30	17.0	49
353-1d3.40	3.40	19.0	52
353-1d3.50	3.50	19.0	52
353-1d3.60	3.60	19.0	52
353-1d3.70	3.70	19.0	52
353-1d3.80	3.80	21.0	55
353-1d3.90	3.90	21.0	55
353-1d4.00	4.00	21.0	55

Art. n°	$d_1$	$l_1$	L
353-1d4.10	4.10	21.0	55
353-1d4.20	4.20	21.0	55
353-1d4.30	4.30	22.5	58
353-1d4.40	4.40	22.5	58
353-1d4.50	4.50	22.5	58
353-1d4.60	4.60	22.5	58
353-1d4.70	4.70	22.5	58
353-1d4.80	4.80	24.5	62
353-1d4.90	4.90	24.5	62
353-1d5.00	5.00	24.5	62
353-1d5.10	5.10	24.5	62
353-1d5.20	5.20	24.5	62
353-1d5.30	5.30	24.5	62
353-1d5.40	5.40	26.0	66
353-1d5.50	5.50	26.0	66
353-1d5.60	5.60	26.0	66
353-1d5.70	5.70	26.0	66
353-1d5.80	5.80	26.0	66
353-1d5.90	5.90	26.0	66
353-1d6.00	6.00	26.0	66
353-1d6.10	6.10	28.5	70
353-1d6.20	6.20	28.5	70
353-1d6.30	6.30	28.5	70
353-1d6.40	6.40	28.5	70
353-1d6.50	6.50	28.5	70
353-1d6.60	6.60	28.5	70
353-1d6.70	6.70	28.5	70
353-1d6.80	6.80	31.0	74
353-1d6.90	6.90	31.0	74



# Twist drill Z3

**353-1**

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
353-1d7.00	7.00	31.0	74
353-1d7.10	7.10	31.0	74
353-1d7.20	7.20	31.0	74
353-1d7.30	7.30	31.0	74
353-1d7.40	7.40	31.0	74
353-1d7.50	7.50	31.0	74
353-1d7.60	7.60	34.0	79
353-1d7.70	7.70	34.0	79
353-1d7.80	7.80	34.0	79
353-1d7.90	7.90	34.0	79
353-1d8.00	8.00	34.0	79
353-1d8.10	8.10	34.0	79
353-1d8.20	8.20	34.0	79
353-1d8.30	8.30	34.0	79
353-1d8.40	8.40	34.0	79
353-1d8.50	8.50	34.0	79
353-1d8.60	8.60	36.5	84
353-1d8.70	8.70	36.5	84
353-1d8.80	8.80	36.5	84
353-1d8.90	8.90	36.5	84
353-1d9.00	9.00	36.5	84
353-1d9.10	9.10	36.5	84
353-1d9.20	9.20	36.5	84
353-1d9.30	9.30	36.5	84
353-1d9.40	9.40	36.5	84
353-1d9.50	9.50	36.5	84
353-1d9.60	9.60	39.0	89
353-1d9.70	9.70	39.0	89
353-1d9.80	9.80	39.0	89
353-1d9.90	9.90	39.0	89
353-1d10.00	10.00	39.0	89
353-1d10.20	10.20	39.0	89
353-1d10.50	10.50	39.0	89
353-1d11.00	11.00	43.0	95
353-1d11.50	11.50	43.0	95
353-1d12.00	12.00	47.0	102



Available  
uncoated or coated  
(see page 61)



140°

**Z3**

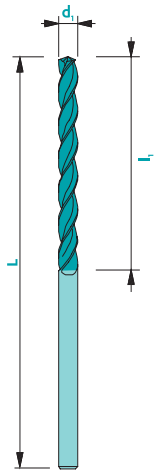


λ  
34°

**MG10**

**N**

## Twist drill Z3 - long serie



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	□	□	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	□	□	Trio
Stainless steel	20	40	□	□	Nemo
Cast iron	60	70	□	□	Nemo
Copper	100	130	□	□	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	□	□	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	□	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	■	■	Rico

not adapted - adapted □ highly adapted ■

Tolerances  $d_1$ ; h5

Available uncoated or coated (see page 61)

**140°**

**Z3**

**34°**

**MG10 N**

Art. n°	$d_1$	$l_1$	L
353-2d1.00	1.00	11.5	38
353-2d1.10	1.10	13.0	38
353-2d1.12	1.20	15.0	38
353-2d1.30	1.30	15.0	38
353-2d1.40	1.40	17.0	40
353-2d1.50	1.50	17.0	40
353-2d1.60	1.60	19.0	43
353-2d1.70	1.70	19.0	43
353-2d1.80	1.80	21.0	46
353-2d1.90	1.90	21.0	46
353-2d2.00	2.00	22.0	49
353-2d2.10	2.10	22.0	49
353-2d2.20	2.20	25.0	53
353-2d2.30	2.30	25.0	53
353-2d2.40	2.40	28.0	57
353-2d2.50	2.50	28.0	57
353-2d2.60	2.60	28.0	57
353-2d2.70	2.70	31.0	61
353-2d2.80	2.80	31.0	61
353-2d2.90	2.90	31.0	61
353-2d3.00	3.00	31.0	61
353-2d3.10	3.10	34.0	65
353-2d3.20	3.20	34.0	65
353-2d3.30	3.30	34.0	65
353-2d3.40	3.40	37.0	70
353-2d3.50	3.50	37.0	70
353-2d3.60	3.60	37.0	70
353-2d3.70	3.70	37.0	70
353-2d3.80	3.80	41.0	75
353-2d3.90	3.90	41.0	75
353-2d4.00	4.00	41.0	75

Art. n°	$d_1$	$l_1$	L
353-2d4.10	4.10	41.0	75
353-2d4.20	4.20	41.0	75
353-2d4.30	4.30	45.0	80
353-2d4.40	4.40	45.0	80
353-2d4.50	4.50	45.0	80
353-2d4.60	4.60	45.0	80
353-2d4.70	4.70	45.0	80
353-2d4.80	4.80	50.0	86
353-2d4.90	4.90	50.0	86
353-2d5.00	5.00	50.0	86
353-2d5.10	5.10	50.0	86
353-2d5.20	5.20	50.0	86
353-2d5.30	5.30	50.0	86
353-2d5.40	5.40	55.0	93
353-2d5.50	5.50	55.0	93
353-2d5.60	5.60	55.0	93
353-2d5.70	5.70	55.0	93
353-2d5.80	5.80	55.0	93
353-2d5.90	5.90	55.0	93
353-2d6.00	6.00	55.0	93
353-2d6.10	6.10	60.0	101
353-2d6.20	6.20	60.0	101
353-2d6.30	6.30	60.0	101
353-2d6.40	6.40	60.0	101
353-2d6.50	6.50	60.0	101
353-2d6.60	6.60	60.0	101
353-2d6.70	6.70	60.0	101
353-2d6.80	6.80	66.0	109
353-2d6.90	6.90	66.0	109





# Twist drill Z3 - long serie

**353-2**

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	L
353-2d7.00	7.00	66.0	109
353-2d7.10	7.10	66.0	109
353-2d7.20	7.20	66.0	109
353-2d7.30	7.30	66.0	109
353-2d7.40	7.40	66.0	109
353-2d7.50	7.50	66.0	109
353-2d7.60	7.60	72.0	117
353-2d7.70	7.70	72.0	117
353-2d7.80	7.80	72.0	117
353-2d7.90	7.90	72.0	117
353-2d8.00	8.00	72.0	117
353-2d8.10	8.10	72.0	117
353-2d8.20	8.20	72.0	117
353-2d8.30	8.30	72.0	117
353-2d8.40	8.40	72.0	117
353-2d8.50	8.50	72.0	117
353-2d8.60	8.60	78.0	125
353-2d8.70	8.70	78.0	125
353-2d8.80	8.80	78.0	125
353-2d8.90	8.90	78.0	125
353-2d9.00	9.00	78.0	125
353-2d9.10	9.10	78.0	125
353-2d9.20	9.20	78.0	125
353-2d9.30	9.30	78.0	125
353-2d9.40	9.40	78.0	125
353-2d9.50	9.50	78.0	125
353-2d9.60	9.60	84.0	133
353-2d9.70	9.70	84.0	133
353-2d9.80	9.80	84.0	133
353-2d9.90	9.90	84.0	133
353-2d10.00	10.00	84.0	133
353-2d10.20	10.20	84.0	133
353-2d10.50	10.50	84.0	133
353-2d11.00	11.00	91.0	142
353-2d11.50	11.50	91.0	142
353-2d12.00	12.00	98.0	151
353-2d12.50	12.50	98.0	151
353-2d13.00	13.00	98.0	151
353-2d13.50	13.50	105.0	160
353-2d14.00	14.00	105.0	160



Available  
uncoated or coated  
(see page 61)



140°

**Z3**

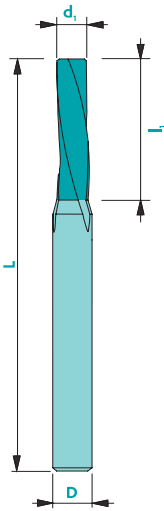
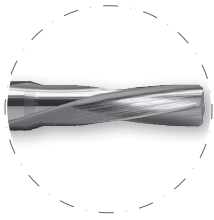


λ  
34°

**MG10**

**N**

## Reamer for watchmakers



Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	15	20	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	10	15	□	■	Trio
Stainless steel	10	15	□	■	Trio
Cast iron	10	15	□	■	Trio
Copper	15	40	□	■	Solo
Brass - Bronze	20	40	□	■	Solo
Aluminium	10	35	■	□	Solo
Gold - Silver	20	40	□	■	Solo
Platinum - Palladium	-	10	-	□	Solo
Superalloys	-	10	-	□	Trio
Titanium	15	-	■	-	-

not adapted - adapted □ highly adapted ■

Tolerances  $d_1 \leq 1 \text{ mm}$  ▶ -0.002/-0.004  $D: h5$   
 $d_1 = D$  ▶  $d_1: e8$

Available uncoated or coated (see page 61)

Z3-4

$\lambda$   
10°

MG10

N

Left helix

Right cut

Art. n°	$d_1$	$l_1$	D	L	Z	Art. n°	$d_1$	$l_1$	D	L	Z
361d0.50Z3	0.50	5.0	3.0	33	3	361d0.78Z3	0.78	6.0	3.0	33	3
361d0.51Z3	0.51	5.0	3.0	33	3	361d0.79Z3	0.79	6.0	3.0	33	3
361d0.52Z3	0.52	5.0	3.0	33	3	361d0.80Z3	0.80	6.0	3.0	33	3
361d0.53Z3	0.53	5.0	3.0	33	3	361d0.81Z3	0.81	6.0	3.0	33	3
361d0.54Z3	0.54	5.0	3.0	33	3	361d0.82Z3	0.82	6.0	3.0	33	3
361d0.55Z3	0.55	5.0	3.0	33	3	361d0.83Z3	0.83	6.0	3.0	33	3
361d0.56Z3	0.56	5.0	3.0	33	3	361d0.84Z3	0.84	6.0	3.0	33	3
361d0.57Z3	0.57	5.0	3.0	33	3	361d0.85Z3	0.85	6.0	3.0	33	3
361d0.58Z3	0.58	5.0	3.0	33	3	361d0.86Z3	0.86	6.0	3.0	33	3
361d0.59Z3	0.59	5.0	3.0	33	3	361d0.87Z3	0.87	6.0	3.0	33	3
361d0.60Z3	0.60	5.0	3.0	33	3	361d0.88Z3	0.88	6.0	3.0	33	3
361d0.61Z3	0.61	5.0	3.0	33	3	361d0.89Z3	0.89	6.0	3.0	33	3
361d0.62Z3	0.62	5.0	3.0	33	3	361d0.90Z3	0.90	6.0	3.0	33	3
361d0.63Z3	0.63	5.0	3.0	33	3	361d0.91Z3	0.91	6.0	3.0	33	3
361d0.64Z3	0.64	5.0	3.0	33	3	361d0.92Z3	0.92	6.0	3.0	33	3
361d0.65Z3	0.65	5.0	3.0	33	3	361d0.93Z3	0.93	6.0	3.0	33	3
361d0.66Z3	0.66	5.0	3.0	33	3	361d0.94Z3	0.94	6.0	3.0	33	3
361d0.67Z3	0.67	5.0	3.0	33	3	361d0.95Z3	0.95	6.0	3.0	33	3
361d0.68Z3	0.68	5.0	3.0	33	3	361d0.96Z3	0.96	6.0	3.0	33	3
361d0.69Z3	0.69	5.0	3.0	33	3	361d0.97Z3	0.97	6.0	3.0	33	3
361d0.70Z3	0.70	6.0	3.0	33	3	361d0.98Z3	0.98	6.0	3.0	33	3
361d0.71Z3	0.71	6.0	3.0	33	3	361d0.99Z3	0.99	6.0	3.0	33	3
361d0.72Z3	0.72	6.0	3.0	33	3	361d1.00Z3	1.00	8.0	3.0	33	3
361d0.73Z3	0.73	6.0	3.0	33	3	361d1.01Z3	1.01	8.0	3.0	33	3
361d0.74Z3	0.74	6.0	3.0	33	3	361d1.02Z3	1.02	8.0	3.0	33	3
361d0.75Z3	0.75	6.0	3.0	33	3	361d1.03Z3	1.03	8.0	3.0	33	3
361d0.76Z3	0.76	6.0	3.0	33	3	361d1.04Z3	1.04	8.0	3.0	33	3
361d0.77Z3	0.77	6.0	3.0	33	3	361d1.05Z3	1.05	8.0	3.0	33	3



# Reamer for watchmakers

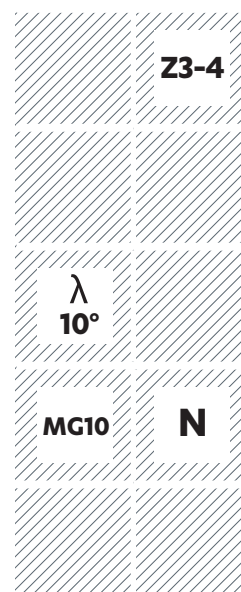
361

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Z	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Z
361d1.06Z3	1.06	8.0	3.0	33	3	361d1.50Z#	1.50	10.0	3.0	33	3-4
361d1.07Z3	1.07	8.0	3.0	33	3	361d1.51Z#	1.51	10.0	3.0	33	3-4
361d1.08Z3	1.08	8.0	3.0	33	3	361d1.52Z#	1.52	10.0	3.0	33	3-4
361d1.09Z3	1.09	8.0	3.0	33	3	361d1.53Z#	1.53	10.0	3.0	33	3-4
361d1.10Z3	1.10	8.0	3.0	33	3	361d1.54Z#	1.54	10.0	3.0	33	3-4
361d1.11Z3	1.11	8.0	3.0	33	3	361d1.55Z#	1.55	10.0	3.0	33	3-4
361d1.12Z3	1.12	8.0	3.0	33	3	361d1.56Z#	1.56	10.0	3.0	33	3-4
361d1.13Z3	1.13	8.0	3.0	33	3	361d1.57Z#	1.57	10.0	3.0	33	3-4
361d1.14Z3	1.14	8.0	3.0	33	3	361d1.58Z#	1.58	10.0	3.0	33	3-4
361d1.15Z3	1.15	8.0	3.0	33	3	361d1.59Z#	1.59	10.0	3.0	33	3-4
361d1.16Z3	1.16	8.0	3.0	33	3	361d1.60Z#	1.60	10.0	3.0	33	3-4
361d1.17Z3	1.17	8.0	3.0	33	3	361d1.61Z#	1.61	10.0	3.0	33	3-4
361d1.18Z3	1.18	8.0	3.0	33	3	361d1.62Z#	1.62	10.0	3.0	33	3-4
361d1.19Z3	1.19	8.0	3.0	33	3	361d1.63Z#	1.63	10.0	3.0	33	3-4
361d1.20Z3	1.20	8.0	3.0	33	3	361d1.64Z#	1.64	10.0	3.0	33	3-4
361d1.21Z3	1.21	8.0	3.0	33	3	361d1.65Z#	1.65	10.0	3.0	33	3-4
361d1.22Z3	1.22	8.0	3.0	33	3	361d1.66Z#	1.66	10.0	3.0	33	3-4
361d1.23Z3	1.23	8.0	3.0	33	3	361d1.67Z#	1.67	10.0	3.0	33	3-4
361d1.24Z3	1.24	8.0	3.0	33	3	361d1.68Z#	1.68	10.0	3.0	33	3-4
361d1.25Z3	1.25	8.0	3.0	33	3	361d1.69Z#	1.69	10.0	3.0	33	3-4
361d1.26Z3	1.26	8.0	3.0	33	3	361d1.70Z#	1.70	10.0	3.0	33	3-4
361d1.27Z3	1.27	8.0	3.0	33	3	361d1.71Z#	1.71	10.0	3.0	33	3-4
361d1.28Z3	1.28	8.0	3.0	33	3	361d1.72Z#	1.72	10.0	3.0	33	3-4
361d1.29Z3	1.29	8.0	3.0	33	3	361d1.73Z#	1.73	10.0	3.0	33	3-4
361d1.30Z3	1.30	8.0	3.0	33	3	361d1.74Z#	1.74	10.0	3.0	33	3-4
361d1.31Z3	1.31	8.0	3.0	33	3	361d1.75Z#	1.75	10.0	3.0	33	3-4
361d1.32Z3	1.32	8.0	3.0	33	3	361d1.76Z#	1.76	10.0	3.0	33	3-4
361d1.33Z3	1.33	8.0	3.0	33	3	361d1.77Z#	1.77	10.0	3.0	33	3-4
361d1.34Z3	1.34	8.0	3.0	33	3	361d1.78Z#	1.78	10.0	3.0	33	3-4
361d1.35Z3	1.35	8.0	3.0	33	3	361d1.79Z#	1.79	10.0	3.0	33	3-4
361d1.36Z3	1.36	8.0	3.0	33	3	361d1.80Z#	1.80	10.0	3.0	33	3-4
361d1.37Z3	1.37	8.0	3.0	33	3	361d1.81Z#	1.81	10.0	3.0	33	3-4
361d1.38Z3	1.38	8.0	3.0	33	3	361d1.82Z#	1.82	10.0	3.0	33	3-4
361d1.39Z3	1.39	8.0	3.0	33	3	361d1.83Z#	1.83	10.0	3.0	33	3-4
361d1.40Z3	1.40	8.0	3.0	33	3	361d1.84Z#	1.84	10.0	3.0	33	3-4
361d1.41Z3	1.41	8.0	3.0	33	3	361d1.85Z#	1.85	10.0	3.0	33	3-4
361d1.42Z3	1.42	8.0	3.0	33	3	361d1.86Z#	1.86	10.0	3.0	33	3-4
361d1.43Z3	1.43	8.0	3.0	33	3	361d1.87Z#	1.87	10.0	3.0	33	3-4
361d1.44Z3	1.44	8.0	3.0	33	3	361d1.88Z#	1.88	10.0	3.0	33	3-4
361d1.45Z3	1.45	8.0	3.0	33	3	361d1.89Z#	1.89	10.0	3.0	33	3-4
361d1.46Z3	1.46	8.0	3.0	33	3	361d1.90Z#	1.90	10.0	3.0	33	3-4
361d1.47Z3	1.47	8.0	3.0	33	3	361d1.91Z#	1.91	10.0	3.0	33	3-4
361d1.48Z3	1.48	8.0	3.0	33	3	361d1.92Z#	1.92	10.0	3.0	33	3-4
361d1.49Z3	1.49	8.0	3.0	33	3	361d1.93Z#	1.93	10.0	3.0	33	3-4



Available  
uncoated or coated  
(see page 61)

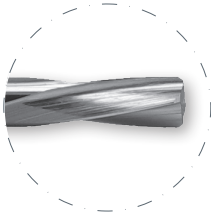


Left helix  
Right cut



## Reamer for watchmakers

Continuation



Available uncoated or coated (see page 61)

Z3-4

$\lambda$   
10°

MG10

N

Left helix

Right cut

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Z	Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Z
361d1.94Z#	1.94	10.0	3.0	33	3-4	361d2.38Z#	2.38	10.0	3.0	33	3-4
361d1.95Z#	1.95	10.0	3.0	33	3-4	361d2.39Z#	2.39	10.0	3.0	33	3-4
361d1.96Z#	1.96	10.0	3.0	33	3-4	361d2.40Z#	2.40	10.0	3.0	33	3-4
361d1.97Z#	1.97	10.0	3.0	33	3-4	361d2.41Z#	2.41	10.0	3.0	33	3-4
361d1.98Z#	1.98	10.0	3.0	33	3-4	361d2.42Z#	2.42	10.0	3.0	33	3-4
361d1.99Z#	1.99	10.0	3.0	33	3-4	361d2.43Z#	2.43	10.0	3.0	33	3-4
361d2.00Z#	2.00	10.0	3.0	33	3-4	361d2.44Z#	2.44	10.0	3.0	33	3-4
361d2.01Z#	2.01	10.0	3.0	33	3-4	361d2.45Z#	2.45	10.0	3.0	33	3-4
361d2.02Z#	2.02	10.0	3.0	33	3-4	361d2.46Z#	2.46	10.0	3.0	33	3-4
361d2.03Z#	2.03	10.0	3.0	33	3-4	361d2.47Z#	2.47	10.0	3.0	33	3-4
361d2.04Z#	2.04	10.0	3.0	33	3-4	361d2.48Z#	2.48	10.0	3.0	33	3-4
361d2.05Z#	2.05	10.0	3.0	33	3-4	361d2.49Z#	2.49	10.0	3.0	33	3-4
361d2.06Z#	2.06	10.0	3.0	33	3-4	361d2.50Z#	2.50	10.0	3.0	33	3-4
361d2.07Z#	2.07	10.0	3.0	33	3-4	361d2.51Z#	2.51	10.0	3.0	33	3-4
361d2.08Z#	2.08	10.0	3.0	33	3-4	361d2.52Z#	2.52	10.0	3.0	33	3-4
361d2.09Z#	2.09	10.0	3.0	33	3-4	361d2.53Z#	2.53	10.0	3.0	33	3-4
361d2.10Z#	2.10	10.0	3.0	33	3-4	361d2.54Z#	2.54	10.0	3.0	33	3-4
361d2.11Z#	2.11	10.0	3.0	33	3-4	361d2.55Z#	2.55	10.0	3.0	33	3-4
361d2.12Z#	2.12	10.0	3.0	33	3-4	361d2.56Z#	2.56	10.0	3.0	33	3-4
361d2.13Z#	2.13	10.0	3.0	33	3-4	361d2.57Z#	2.57	10.0	3.0	33	3-4
361d2.14Z#	2.14	10.0	3.0	33	3-4	361d2.58Z#	2.58	10.0	3.0	33	3-4
361d2.15Z#	2.15	10.0	3.0	33	3-4	361d2.59Z#	2.59	10.0	3.0	33	3-4
361d2.16Z#	2.16	10.0	3.0	33	3-4	361d2.60Z#	2.60	10.0	3.0	33	3-4
361d2.17Z#	2.17	10.0	3.0	33	3-4	361d2.61Z#	2.61	10.0	3.0	33	3-4
361d2.18Z#	2.18	10.0	3.0	33	3-4	361d2.62Z#	2.62	10.0	3.0	33	3-4
361d2.19Z#	2.19	10.0	3.0	33	3-4	361d2.63Z#	2.63	10.0	3.0	33	3-4
361d2.20Z#	2.20	10.0	3.0	33	3-4	361d2.64Z#	2.64	10.0	3.0	33	3-4
361d2.21Z#	2.21	10.0	3.0	33	3-4	361d2.65Z#	2.65	10.0	3.0	33	3-4
361d2.22Z#	2.22	10.0	3.0	33	3-4	361d2.66Z#	2.66	10.0	3.0	33	3-4
361d2.23Z#	2.23	10.0	3.0	33	3-4	361d2.67Z#	2.67	10.0	3.0	33	3-4
361d2.24Z#	2.24	10.0	3.0	33	3-4	361d2.68Z#	2.68	10.0	3.0	33	3-4
361d2.25Z#	2.25	10.0	3.0	33	3-4	361d2.69Z#	2.69	10.0	3.0	33	3-4
361d2.26Z#	2.26	10.0	3.0	33	3-4	361d2.70Z#	2.70	10.0	3.0	33	3-4
361d2.27Z#	2.27	10.0	3.0	33	3-4	361d2.71Z#	2.71	10.0	3.0	33	3-4
361d2.28Z#	2.28	10.0	3.0	33	3-4	361d2.72Z#	2.72	10.0	3.0	33	3-4
361d2.29Z#	2.29	10.0	3.0	33	3-4	361d2.73Z#	2.73	10.0	3.0	33	3-4
361d2.30Z#	2.30	10.0	3.0	33	3-4	361d2.74Z#	2.74	10.0	3.0	33	3-4
361d2.31Z#	2.31	10.0	3.0	33	3-4	361d2.75Z#	2.75	10.0	3.0	33	3-4
361d2.32Z#	2.32	10.0	3.0	33	3-4	361d2.76Z#	2.76	10.0	3.0	33	3-4
361d2.33Z#	2.33	10.0	3.0	33	3-4	361d2.77Z#	2.77	10.0	3.0	33	3-4
361d2.34Z#	2.34	10.0	3.0	33	3-4	361d2.78Z#	2.78	10.0	3.0	33	3-4
361d2.35Z#	2.35	10.0	3.0	33	3-4	361d2.79Z#	2.79	10.0	3.0	33	3-4
361d2.36Z#	2.36	10.0	3.0	33	3-4	361d2.80Z#	2.80	10.0	3.0	33	3-4
361d2.37Z#	2.37	10.0	3.0	33	3-4	361d2.81Z#	2.81	10.0	3.0	33	3-4



# Reamer for watchmakers

**361**

Continuation

Art. n°	d <sub>1</sub>	l <sub>1</sub>	D	L	Z
361d2.82Z#	2.82	10.0	3.0	33	3-4
361d2.83Z#	2.83	10.0	3.0	33	3-4
361d2.84Z#	2.84	10.0	3.0	33	3-4
361d2.85Z#	2.85	10.0	3.0	33	3-4
361d2.86Z#	2.86	10.0	3.0	33	3-4
361d2.87Z#	2.87	10.0	3.0	33	3-4
361d2.88Z#	2.88	10.0	3.0	33	3-4
361d2.89Z#	2.89	10.0	3.0	33	3-4
361d2.90Z#	2.90	10.0	3.0	33	3-4
361d2.91Z#	2.91	10.0	3.0	33	3-4
361d2.92Z#	2.92	10.0	3.0	33	3-4
361d2.93Z#	2.93	10.0	3.0	33	3-4
361d2.94Z#	2.94	10.0	3.0	33	3-4
361d2.95Z#	2.95	10.0	3.0	33	3-4
361d2.96Z#	2.96	10.0	3.0	33	3-4
361d2.97Z#	2.97	10.0	3.0	33	3-4
361d2.98Z#	2.98	10.0	3.0	33	3-4
361d2.99Z#	2.99	10.0	3.0	33	3-4
361d3.00Z#	3.00	10.0	3.0	33	3-4



Available  
uncoated or coated  
(see page 61)

**Z3-4**

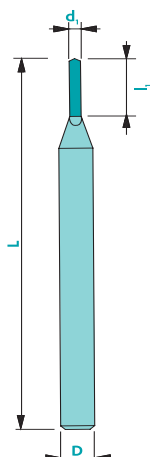
$\lambda$   
**10°**

**MG10**

**N**

Left helix  
Right cut

# Gundrill - right cut



Available uncoated or coated (see page 61)

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	15	20	□	■	Trio
Steel > 700 N/mm <sup>2</sup>	10	15	-	-	Trio
Stainless steel	10	15	-	-	Trio
Cast iron	15	20	-	-	Solo
Copper	20	25	□	■	Solo
Brass - Bronze	20	30	■	□	Solo
Aluminium	25	30	-	-	Nemo
Gold - Silver	25	30	■	□	Solo
Platinum - Palladium	-	-	-	-	-
Superalloys	-	-	-	-	-
Titanium	10	15	-	-	Nemo

not adapted - adapted □ highly adapted ■

Tolerances  $d_1$ : -0.002/-0.004  $D$ : h5  
 $l_1$ : 0.02/-0

Art. n°	$d_1$	$l_1$	D	L
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363d###x###	0.20-0.49	Upon request	3.0	38
363d###x###	0.50-0.99	Upon request	3.0	38
363d###x###	1.00-1.49	Upon request	3.0	38
363d###x###	1.50-3.00	Upon request	3.0	38

**Z1**  
120°

**N**  
λ  
0°

**MG10**

Order

Quotation request

<b>Dimensions :</b> $d_1$ : _____ $l_1$ : _____ D: _____ L: _____ Tolerances $d_1$ : _____		<b>Coating :</b> <input type="checkbox"/> Coated* : _____ <input type="checkbox"/> Uncoated	
<b>Machined material :</b> _____		<b>Quantity :</b> _____	
<b>Order No :</b> _____		<b>Company's stamp &amp; date :</b> _____	
<b>Contact person :</b> _____		_____	

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

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

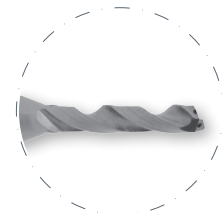
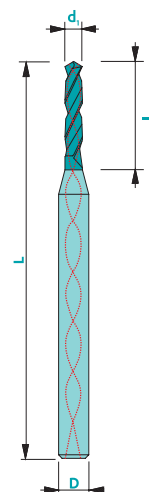
## Twist drill with coolant holes

Material	Vc uncoated	Vc coated	Uncoated	Coated	Rec. Coating
Steel < 700 N/mm <sup>2</sup>	70	80	☐	■	Trio
Steel > 700 N/mm <sup>2</sup>	60	70	☐	■	Trio
Stainless steel	20	40	☐	■	Nemo
Cast iron	60	70	☐	■	Nemo
Copper	100	130	☐	■	Solo
Brass - Bronze	80	120	■	■	Solo
Aluminium	100	120	☐	■	Solo
Gold - Silver	80	100	■	■	Solo
Platinum - Palladium	-	20	-	☐	Solo
Superalloys	-	25	-	■	Trio
Titanium	40	60	☐	■	Rico

not adapted - adapted ☐ highly adapted ■

### Tolerances

$d_1$ : -0.002/-0.004  
D: h5



Available uncoated or coated (see page 61)

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

344d0.70	0.70	6.0	3	38
344d0.75	0.75	6.0	3	38
344d0.80	0.80	6.0	3	38
344d0.85	0.85	6.0	3	38
344d0.90	0.90	6.0	3	38
344d0.95	0.95	6.0	3	38
344d1.00	1.00	8.0	3	38
344d1.10	1.10	8.0	3	38
344d1.20	1.20	8.0	3	38
344d1.25	1.25	8.0	3	38
344d1.30	1.30	8.0	3	38
344d1.40	1.40	8.0	3	38
344d1.50	1.50	12.0	3	38
344d1.60	1.60	12.0	3	38
344d1.70	1.70	12.0	3	38
344d1.75	1.75	12.0	3	38
344d1.80	1.80	12.0	3	38
344d1.90	1.90	12.0	3	38
344d2.00	2.00	12.0	3	38
344d2.10	2.10	12.0	3	38
344d2.20	2.20	12.0	3	38
344d2.30	2.30	12.0	3	38
344d2.40	2.40	12.0	3	38
344d2.50	2.50	12.0	3	38
344d2.60	2.60	12.0	3	38
344d2.70	2.70	12.0	3	38
344d2.80	2.80	12.0	3	38
344d2.90	2.90	12.0	3	38
344d3.00	3.00	12.0	3	38



118°

Z2



MG10

N