



ALÉSAGE

REIBEN

REAMING

ALESATURA

FURAT

SELECTION OF BORING TOOLS AND REAMERS **334**



BORING AND CHAMFERING TOOLS **336**



BORING TOOLS **338**



REAMERS **343**




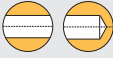

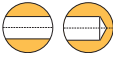



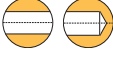






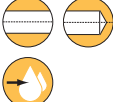

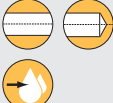
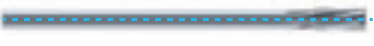
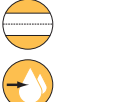
CUTTING CONDITIONS **346**



TOOLS ON REQUEST **349**

SELECTION OF BORING TOOLS AND REAMERS

✓ = item from stock

		Z	Page		<input type="checkbox"/> CARBIDE				
BORING AND CHAMFERING TOOLS									
DIXI 2577 Ø 0.26 - 0.86		-	336		✓				
DIXI 2567 Ø 0.20 - 1.00		-	337		✓				
BORING TOOLS									
DIXI 2578 Ø 0.30 - 1.00		-	338		✓				
DIXI 2579 Ø 0.60 - 3.00		-	339		✓				
DIXI 2580 Ø 0.50 - 20.00		-	339		✓				
DIXI 2581 Ø 0.50 - 18.00		-	341		✓				
DIXI 2764		-	338						
REAMERS									
POLY 4001 Ø 0.40 - 12.02		3 - 6	343		✓				
POLY 4005 Ø 2.97 - 6.50		4 - 6	344		✓				
POLY 4007 Ø 0.37 - 12.02		3 - 6	345		✓				

For other types of reamers, see the POLYTOOL catalogue



○ good ⊙ excellent

Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Steel Hardened cast iron > 45 HRC	Cast iron	Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Graphite	Plastic
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⊙	⊙	○	○		⊙	○	⊙	⊙	⊙	⊙		⊙
⊙	⊙	○	○		⊙	○	⊙	⊙	⊙	⊙		⊙

⊙	⊙	○	○		⊙	○	⊙	⊙	⊙	⊙		⊙
⊙	⊙	○	○		⊙	○	⊙	⊙	⊙	⊙		⊙
⊙	⊙	○	○		⊙	○	⊙	⊙	⊙	⊙		⊙
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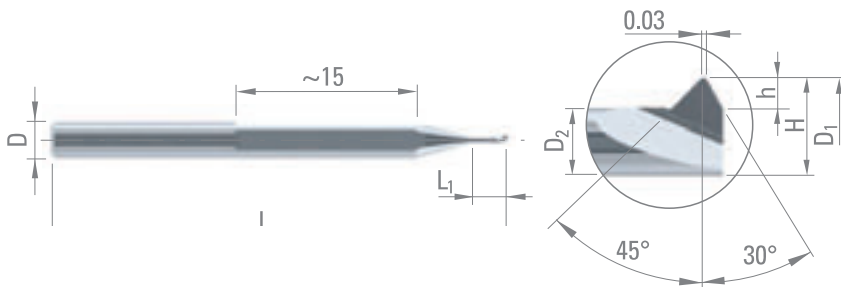
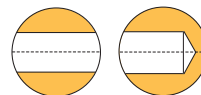
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⊙	⊙	○	○		⊙	○	⊙	⊙	⊙	⊙		⊙
⊙	⊙	○	○		⊙	○	⊙	⊙	⊙	⊙		⊙



BORING AND CHAMFERING TOOLS



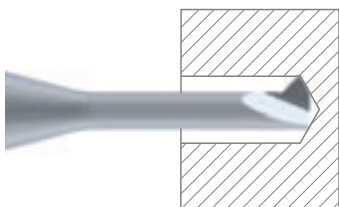
P. 348



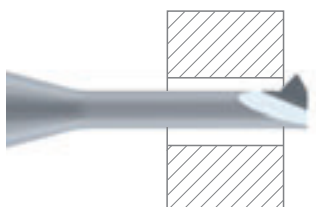
Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

for...	D ₁	L ₁	D ₂	h	H	D _{h5}	L	CARBIDE
S 0.30	0.26	0.84	0.14	0.06	0.20	3	46	968880
S 0.40	0.35	1.04	0.21	0.07	0.28	3	46	969086
S 0.50	0.44	1.35	0.28	0.08	0.36	3	46	969087
S 0.60	0.53	1.66	0.33	0.10	0.43	3	46	969088
S 0.70	0.66	2.04	0.36	0.15	0.51	3	46	969089
S 0.80	0.75	2.30	0.43	0.16	0.58	3	46	969090
S 0.90	0.86	2.72	0.46	0.20	0.66	3	46	969091

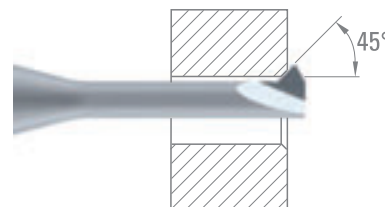
Blind hole reaming



Through hole reaming



Chamfering



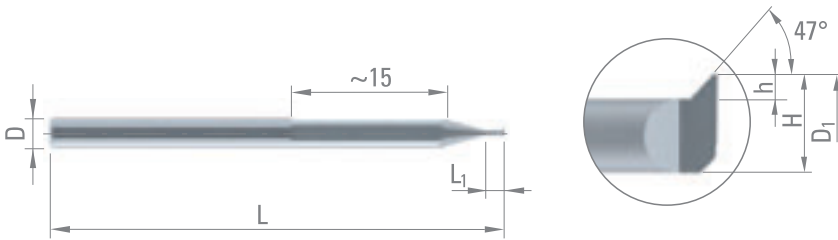
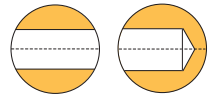
Tools holder p. 338



BORING AND CHAMFERING TOOLS



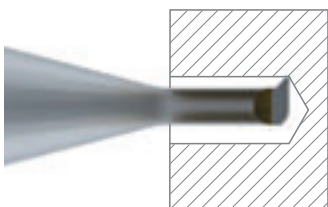
P. 348



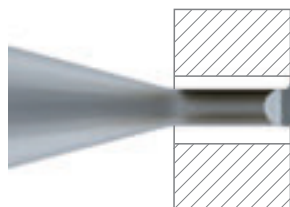
Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

D ₁	L ₁	h	H	D _{h5}	L	CARBIDE
0.20	0.2	0.04	0.16	3	46	997972
	0.4					997973
0.30	0.3	0.06	0.24	3	46	997974
	0.6					997975
0.40	0.4	0.08	0.32	3	46	997976
	0.8					997977
0.50	0.5	0.10	0.40	3	46	997978
	1.0					997979
0.60	0.6	0.12	0.48	3	46	997980
	1.2					997981
0.70	0.7	0.14	0.56	3	46	997982
	1.4					997983
0.80	0.8	0.16	0.64	3	46	997984
	1.6					997985
0.90	0.9	0.18	0.72	3	46	997986
	1.8					997987
1.00	1.0	0.20	0.80	3	46	997988
	2.0					997989

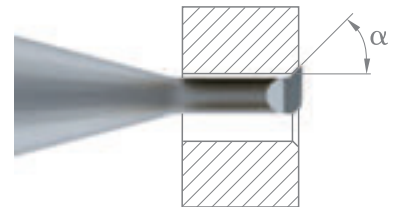
Blind hole reaming



Through hole reaming



Chamfering



Tools holder p. 338

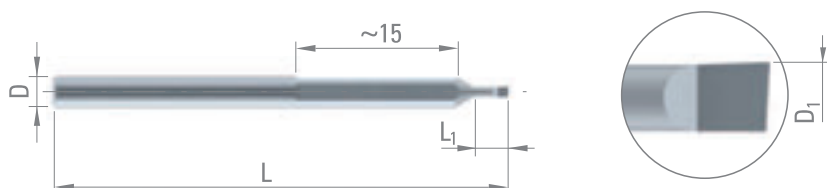
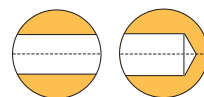


DIXI 2578

BORING TOOLS

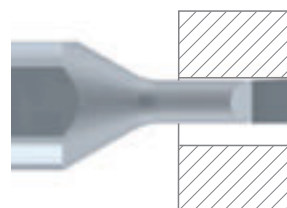
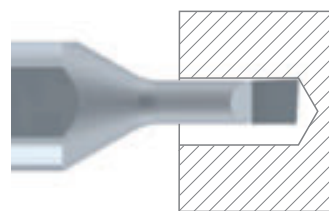


P. 348



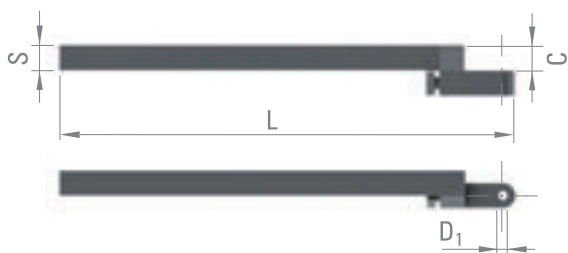
Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

D ₁	L ₁	D _{h5}	L	CARBIDE
0.30	0.6	3	46	997948
	0.9			997949
	1.2			997950
0.40	0.8	3	46	997951
	1.2			997952
	1.6			997953
0.50	1.0	3	46	997954
	1.5			997955
	2.0			997956
0.60	1.2	3	46	997957
	1.8			997958
	2.4			997959
0.70	1.4	3	46	997960
	2.1			997961
	2.8			997962
0.80	1.6	3	46	997963
	2.4			997964
	3.6			997965
0.90	1.8	3	46	997966
	2.7			997967
	3.6			997968
1.00	2.0	3	46	997969
	3.0			997970
	4.0			997971



DIXI 2764

BORING TOOLS HOLDER

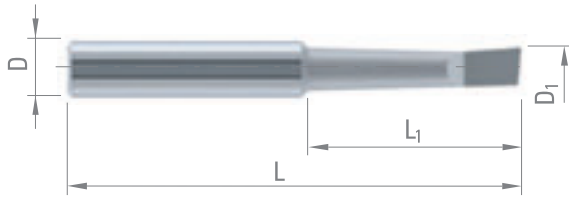


S	L	D ₁	C	Art.
7 x 7	146	3	7	305008
8 x 8	146	3	8	305009
10 x 10	150	3	10	305010

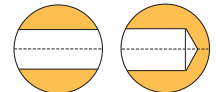


DIXI 2579

BORING TOOLS



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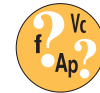
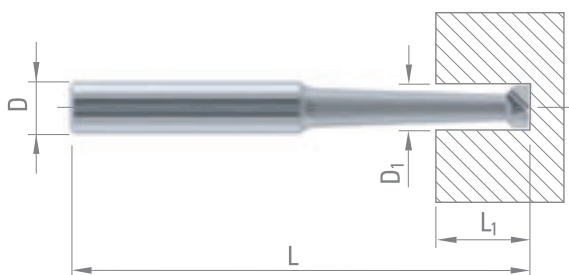


Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

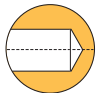
D_1	L_1	D_{h5}	L	CARBIDE
0.60	3	4	25	53197
0.80	4	4	25	53198
1.00	5	4	25	53199
1.20	6	4	25	53200
1.50	8	4	32	53201
1.80	9	4	32	53202
2.00	10	4	32	53203
2.50	12	4	32	53204
3.00	15	4	32	53205

DIXI 2580

BORING TOOLS BLIND HOLE



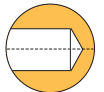
P. 348



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

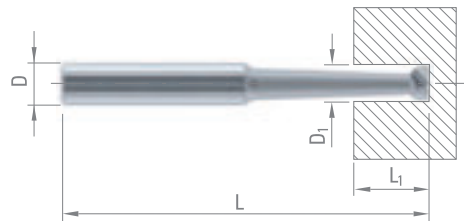
D_1	L_1	D_{h5}	L	CARBIDE
0.50	3	4	25	36091
0.80	4	4	25	36092
1.00	4	4	25	33855
1.20	6	4	25	33856
1.50	7	4	28	33857
1.70	7	4	28	33858





D ₁	L ₁	D _{h5}	L	CARBIDE
2.00	9	4	30	33859
2.20	9	4	30	33860
2.50	12	4	33	33861
3.00	14	4	35	33862
3.50	14	4	35	33863
4.00	17	4	38	33864
5.00	23	4	38	794
2.00	9	6	38	33865
2.50	12	6	40	33866
3.00	14	6	42	33867
4.00	17	6	45	33868
5.00	22	6	52	795
6.00	24	6	52	796
7.00	30	6	52	797
8.00	32	6	52	798
10.00	40	6	60	800
3.00	17	8	47	790
4.00	21	8	51	791
5.00	22	8	52	801
6.00	25	8	55	802
7.00	28	8	60	803
10.00	45	8	65	804
12.00	54	8	70	805
13.00	54	8	78	5603
3.00	17	10	45	792
4.00	21	10	49	793
5.00	22	10	50	806
6.00	25	10	54	807
7.00	28	10	56	808
9.00	32	10	65	809
10.00	32	10	65	810
12.00	45	10	70	811
13.00	55	10	80	812
15.00	75	10	100	813
18.00	75	10	100	814
8.00	30	12	70	815
10.00	40	12	80	816
13.00	60	12	90	817
15.00	70	12	100	818
18.00	70	12	100	819
13.00	60	16	115	820
15.00	60	16	115	821
18.00	75	16	115	822
20.00	75	16	115	824

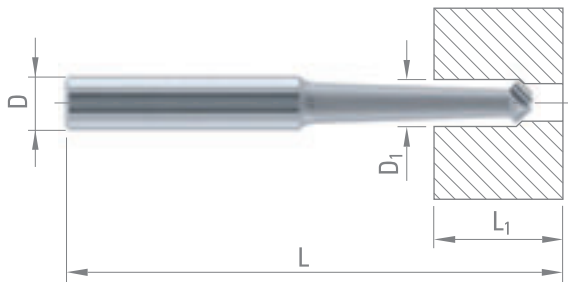
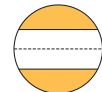
Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				



BORING TOOLS THROUGH HOLE



P. 348



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

D_1	L_1	D_{h5}	L	CARBIDE
0.50	3	4	25	36093
0.80	4	4	25	36094
1.00	4	4	25	33869
1.20	6	4	25	33870
1.50	7	4	28	33871
1.70	7	4	28	33872
2.00	9	4	30	33873
2.20	9	4	30	33874
2.50	12	4	33	33875
3.00	14	4	35	33876
3.50	14	4	35	33877
4.00	17	4	38	33878
5.00	23	4	38	745
2.00	9	6	38	33879
2.50	12	6	40	33880
3.00	14	6	42	33881
4.00	17	6	45	33882
5.00	22	6	52	746
6.00	24	6	52	747
8.00	32	6	52	749
10.00	40	6	60	751
3.00	17	8	47	740
4.00	21	8	51	741
5.00	22	8	52	752
6.00	25	8	55	753
7.00	28	8	60	754
9.00	45	8	65	755
11.00	54	8	70	756
13.00	54	8	78	5661



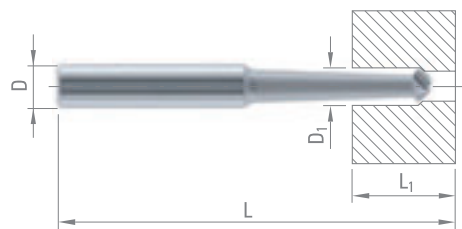


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D_1	L_1	D_{h5}	L	CARBIDE
3.00	17	10	45	742
4.00	21	10	49	743
5.00	22	10	50	757
6.00	25	10	54	758
7.00	28	10	56	759
9.00	32	10	65	760
10.00	32	10	65	761
12.00	45	10	70	762
13.00	55	10	80	763
15.00	75	10	100	764
18.00	75	10	100	765
8.00	30	12	70	766
10.00	40	12	80	767
13.00	60	12	90	768
15.00	70	12	100	769
18.00	70	12	100	770
20.00	80	12	110	825
13.00	60	16	115	771
15.00	60	16	115	772
18.00	75	16	115	773

Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				



POLY 4001

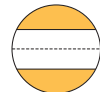
STRAIGHT FLUTE REAMERS IRREGULAR TEETH



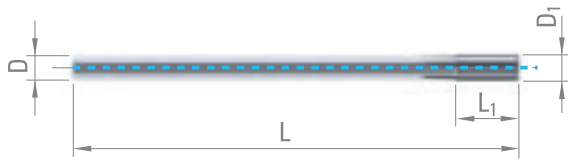
P. 346



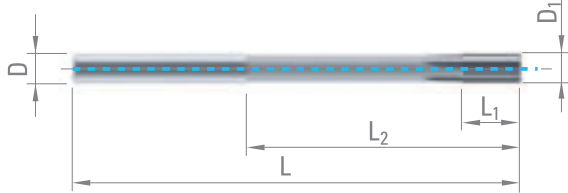
> Ø 2.98



Ref. A



Ref. B

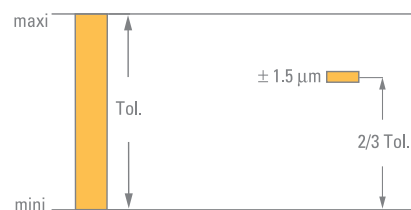


Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

D_{1H7}	L_1	L_2	D_{h5}	L	Z	Ref.	CARBIDE
0.40 - 0.50	3.0	5	3.0	38	3	B	☐
0.51 - 0.60	4.0	6	3.0	38	3	B	☐
0.61 - 0.70	4.0	7	3.0	38	3	B	☐
0.71 - 0.80	4.0	8	3.0	38	3	B	☐
0.81 - 0.90	5.0	9	3.0	38	3	B	☐
0.91 - 1.00	5.0	10	3.0	38	3	B	☐
1.01 - 1.08	5.0	11	3.0	38	3	B	☐
1.09 - 1.20	5.0	12	3.0	38	3	B	☐
1.21 - 1.40	6.0	13	3.0	38	3	B	☐
1.41 - 1.50	7.0	15	3.0	38	3	B	☐
1.51 - 1.60	7.0	15	3.0	50	3	B	☐
1.61 - 1.70	7.0	16	3.0	50	3	B	☐
1.71 - 1.80	7.0	17	3.0	50	3	B	☐
1.81 - 1.90	8.0	17	3.0	50	3	B	☐
1.91 - 2.30	8.0	18	3.0	50	3	B	☐
2.31 - 2.50	10.0	20	3.0	50	3	B	☐
2.51 - 2.60	10.0	20	3.0	61	4	B	☐
2.61 - 2.97	10.0	25	3.0	61	4	B	☐
2.98 - 3.02	10.0	25	3.0	65	4	B	☐
3.03 - 3.08	10.0	25	3.0	70	4	B	☐
3.09 - 3.52	10.0	-	3.0	70	4	A	☐
3.53 - 3.57	10.0	25	3.5	75	4	B	☐
3.58 - 4.02	10.0	-	3.5	75	4	A	☐
4.03 - 4.09	12.0	40	4.0	80	6	B	☐
4.10 - 4.52	12.0	-	4.0	80	6	A	☐
4.53 - 4.57	12.0	50	4.5	86	6	B	☐
4.58 - 5.03	12.0	-	4.5	86	6	A	☐
5.04 - 5.08	12.0	57	5.0	93	6	B	☐
5.09 - 5.79	12.0	-	5.0	93	6	A	☐
5.80 - 6.00	12.0	57	6.0	93	6	B	☐
6.01 - 6.70	14.0	63	6.0	101	6	B	☐
6.71 - 7.30	16.0	69	7.0	109	6	B	☐
7.31 - 7.50	16.0	69	8.0	117	6	B	☐
7.51 - 8.40	16.0	75	8.0	117	6	B	☐
8.42 - 8.50	16.0	75	8.0	125	6	B	☐
8.51 - 9.48	19.0	81	9.0	125	6	B	☐
9.49 - 9.50	19.0	81	9.0	133	6	B	☐
9.51 - 10.60	19.0	87	10.0	133	6	B	☐
10.61 - 11.80	19.0	96	12.0	142	6	B	☐
11.81 - 12.02	19.0	105	12.0	151	6	B	☐

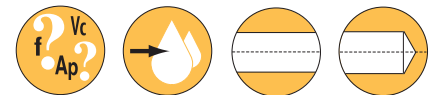
All 0.01 mm from stock

All Ø with tolerance $\pm 2\mu\text{m}$ available
through our express-service

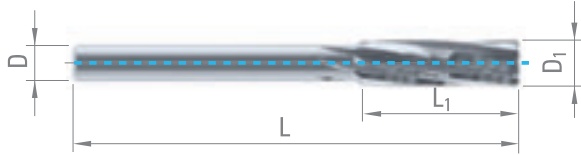


POLY 4005

HELICAL REAMERS, RIGHT-HAND SPIRAL
RIGHT-HAND CUTTING, IRREGULAR TEETH



P. 346

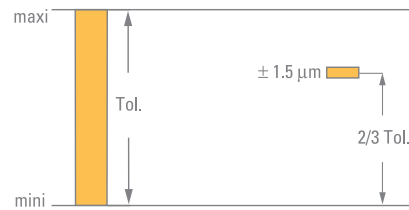


Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

D_{1H7}	L_1	D_{h5}	L	Z	CARBIDE
2.97 - 3.49	20.0	2.5	56	4	<input type="checkbox"/>
3.50 - 4.00	20.0	3.0	56	4	<input type="checkbox"/>
4.10 - 4.40	22.0	3.5	63	6	<input type="checkbox"/>
4.50 - 5.40	22.0	4.0	63	6	<input type="checkbox"/>
5.50 - 6.50	22.0	5.0	63	6	<input type="checkbox"/>

All 0.01 mm from stock

All \varnothing with tolerance $\pm 2\mu\text{m}$ available
through our express-service



POLY 4007

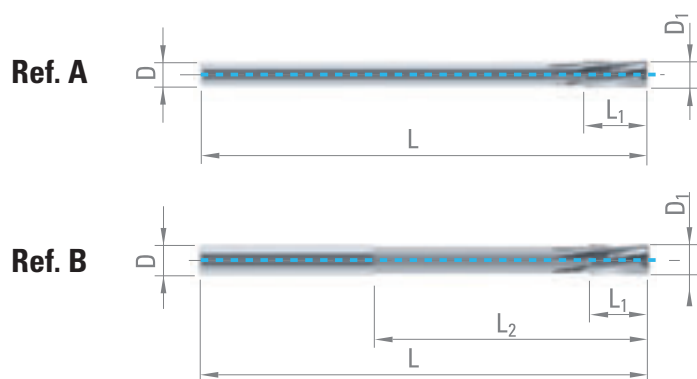
HELICAL REAMERS, LEFT-HAND SPIRAL RIGHT-HAND CUTTING, IRREGULAR TEETH



P. 346



> Ø 2.98



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Plastic				

D_1 0/+0.003	L_1	L_2	D_{h5}	L	Z	Ref.	CARBIDE
0.37 - 0.50	3.0	5	3.0	38	3	B	<input type="checkbox"/>
0.51 - 0.60	4.0	6	3.0	38	3	B	<input type="checkbox"/>
0.61 - 0.70	4.0	7	3.0	38	3	B	<input type="checkbox"/>
0.71 - 0.80	4.0	8	3.0	38	3	B	<input type="checkbox"/>
0.81 - 0.90	5.0	9	3.0	38	3	B	<input type="checkbox"/>
0.91 - 1.00	5.0	10	3.0	38	3	B	<input type="checkbox"/>
1.01 - 1.08	5.0	11	3.0	38	3	B	<input type="checkbox"/>
1.09 - 1.20	5.0	12	3.0	38	3	B	<input type="checkbox"/>
1.21 - 1.40	6.0	13	3.0	38	3	B	<input type="checkbox"/>
1.41 - 1.50	7.0	15	3.0	38	3	B	<input type="checkbox"/>
1.51 - 1.60	7.0	15	3.0	50	3	B	<input type="checkbox"/>
1.61 - 1.70	7.0	16	3.0	50	3	B	<input type="checkbox"/>
1.71 - 1.80	7.0	17	3.0	50	3	B	<input type="checkbox"/>
1.81 - 1.90	8.0	17	3.0	50	3	B	<input type="checkbox"/>
1.91 - 2.30	8.0	18	3.0	50	3	B	<input type="checkbox"/>
2.31 - 2.50	10.0	20	3.0	50	3	B	<input type="checkbox"/>
2.51 - 2.60	10.0	20	3.0	61	4	B	<input type="checkbox"/>
2.61 - 2.97	10.0	25	3.0	61	4	B	<input type="checkbox"/>
2.98 - 3.02	10.0	25	3.0	65	4	B	<input type="checkbox"/>
3.03 - 3.06	10.0	25	3.0	70	4	B	<input type="checkbox"/>
3.07 - 3.52	10.0	-	3.0	70	4	A	<input type="checkbox"/>
3.53 - 3.57	10.0	25	3.5	75	4	B	<input type="checkbox"/>
3.58 - 4.02	10.0	-	3.5	75	4	A	<input type="checkbox"/>
4.03 - 4.05	12.0	40	4.0	80	6	B	<input type="checkbox"/>
4.06 - 4.52	12.0	-	4.0	80	4	A	<input type="checkbox"/>
4.53 - 4.55	12.0	50	4.5	86	6	B	<input type="checkbox"/>
4.56 - 5.03	12.0	-	4.5	86	6	A	<input type="checkbox"/>
5.04 - 5.05	12.0	57	5.0	93	6	B	<input type="checkbox"/>
5.06 - 5.75	12.0	-	5.0	93	6	A	<input type="checkbox"/>
5.76 - 6.00	12.0	57	6.0	93	6	B	<input type="checkbox"/>
6.01 - 6.70	14.0	63	6.0	101	6	B	<input type="checkbox"/>
6.71 - 7.30	16.0	69	7.0	109	6	B	<input type="checkbox"/>
7.31 - 7.50	16.0	69	8.0	117	6	B	<input type="checkbox"/>
7.51 - 8.49	16.0	75	8.0	117	6	B	<input type="checkbox"/>
8.50 - 8.52	16.0	75	8.0	125	6	B	<input type="checkbox"/>
8.53 - 9.52	19.0	81	9.0	125	6	B	<input type="checkbox"/>
9.53 - 10.60	19.0	87	10.0	133	6	B	<input type="checkbox"/>
10.61 - 11.80	19.0	96	12.0	142	6	B	<input type="checkbox"/>
11.81 - 12.02	19.0	105	12.0	151	6	B	<input type="checkbox"/>

All 0.01 mm from stock

All Ø with tolerance $\pm 2\mu\text{m}$ available
through our express-service



CUTTING CONDITIONS

Materials to be machined

			CARBIDE
			Vc [m/min]
P	Unalloyed steel / Low alloyed steel	< 600 N/mm ²	14
			16
			20
P	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm ²	12
			14
			16
P	Lead alloyed cutting steel		25
			50
			70
P	High alloyed steel	700 – 1500 N/mm ²	8
			10
			12
M	Stainless steel	400 – 700 N/mm ²	10
			12
			16
M	DUPLEX stainless steel	> 800 N/mm ²	8
			10
			12
K	Grey cast iron / Nodular pearlitic iron	< 250 HB	20
			30
			40
K	Alloyed cast iron / Nodular pearlitic iron	> 250 HB	12
			18
			24
K	Nodular ferritic cast iron / Malleable cast iron		14
			20
			32
S	Special alloys / Heat resistant stainless steel	Inconel Nimonic Hastelloy	8
			10
			12
S	Titanium, titanium alloys		10
			12
			16
N	Copper alloys - easy to machine (brass - bronze)		20
			30
			40
N	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	16
			24
			30
N	Aluminium alloys	Si < 8%	20
			40
			60
N	Cast aluminium	Si > 8%	20
			36
			50
N	Plastic		20
			40
			60
N	Plastic with fibres		10
			20
			30
N	Gold, silver		20
			30
			40



$$n \text{ [tr/min]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times f \text{ [mm]}$$

Feed per revolution **f [mm]**

$\emptyset D_1$ < 2.00	$\emptyset D_1$ 2.00 - 4.03	$\emptyset D_1$ 4.03 - 7.51	$\emptyset D_1$ 7.51 - 12.02
0.05	0.10	0.30	0.40
0.15	0.20	0.50	0.60
0.20	0.30	0.70	0.80
0.05	0.10	0.25	0.30
0.15	0.20	0.40	0.50
0.20	0.30	0.65	0.70
0.05	0.20	0.40	0.60
0.15	0.40	0.60	0.80
0.20	0.50	0.80	1.00
0.05	0.10	0.20	0.30
0.15	0.15	0.30	0.40
0.20	0.25	0.40	0.50
0.05	0.10	0.20	0.30
0.15	0.15	0.30	0.40
0.20	0.20	0.40	0.50
0.05	0.10	0.20	0.30
0.15	0.15	0.30	0.40
0.20	0.25	0.40	0.50
0.05	0.10	0.40	0.60
0.15	0.15	0.50	0.70
0.20	0.25	0.60	0.80
0.05	0.10	0.30	0.40
0.15	0.15	0.40	0.50
0.20	0.20	0.50	0.60
0.05	0.10	0.30	0.40
0.15	0.20	0.40	0.50
0.20	0.30	0.50	0.60
0.05	0.10	0.20	0.30
0.15	0.15	0.30	0.40
0.20	0.20	0.40	0.50
0.05	0.10	0.30	0.40
0.15	0.20	0.40	0.50
0.20	0.30	0.50	0.60
0.05	0.10	0.40	0.60
0.20	0.25	0.60	0.80
0.30	0.40	0.80	1.00
0.05	0.10	0.40	0.60
0.20	0.25	0.60	0.80
0.30	0.40	0.80	1.00
0.05	0.10	0.40	0.50
0.20	0.25	0.50	0.60
0.30	0.40	0.60	0.70
0.05	0.10	0.30	0.40
0.20	0.25	0.40	0.50
0.30	0.40	0.50	0.60
0.05	0.10	0.40	0.60
0.15	0.20	0.60	0.80
0.20	0.30	0.80	1.00

0.05	0.10	0.10	0.10	Reaming allowance \emptyset [mm]
0.10	0.15	0.15	0.15	
0.15	0.20	0.20	0.20	



CUTTING CONDITIONS

$$n \text{ [tr/min]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times f \text{ [mm]}$$

Materials to be machined

			Stationary tool	Rotating tool	Feed
			Vc [m/min]	Vc [m/min]	f [mm/tr]
P	Unalloyed steel / Low alloyed steel	< 600 N/mm ²	100 - 150	70 - 120	0.05 - 0.15
P	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm ²	70 - 120	50 - 90	0.04 - 0.10
P	Lead alloyed cutting steel		120 - 160	90 - 130	0.05 - 0.15
P	High alloyed steel	700 – 1500 N/mm ²	30 - 70	20 - 50	0.03 - 0.10
M	Stainless steel	400 – 700 N/mm ²	60 - 80	40 - 60	0.04 - 0.10
M	DUPLEX stainless steel	> 800 N/mm ²	30 - 70	20 - 50	0.03 - 0.10
K	Grey cast iron / Nodular pearlitic iron	< 250 HB	60 - 150	40 - 120	0.05 - 0.15
K	Alloyed cast iron / Nodular pearlitic iron	> 250 HB	20 - 80	15 - 50	0.04 - 0.10
K	Nodular ferritic cast iron / Malleable cast iron		30 - 90	20 - 60	0.03 - 0.10
S	Special alloys / Heat resistant stainless steel	Inconel Nimonic Hastelloy	10 - 20	8 - 15	0.03 - 0.10
S	Titanium, titanium alloys		15 - 30	10 - 25	0.03 - 0.10
N	Copper alloys - easy to machine (brass - bronze)		150 - 250	120 - 180	0.08 - 0.20
N	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	120 - 160	100 - 140	0.04 - 0.10
N	Aluminium alloys	Si < 8%	200 - 400	150 - 300	0.05 - 0.15
N	Cast aluminium	Si > 8%	180 - 350	150 - 250	0.05 - 0.155
N	Plastic		200 - 300	150 - 250	0.10 - 0.30
N	Gold, silver		150 - 250	120 - 180	0.08 - 0.20





TOOLS ON REQUEST

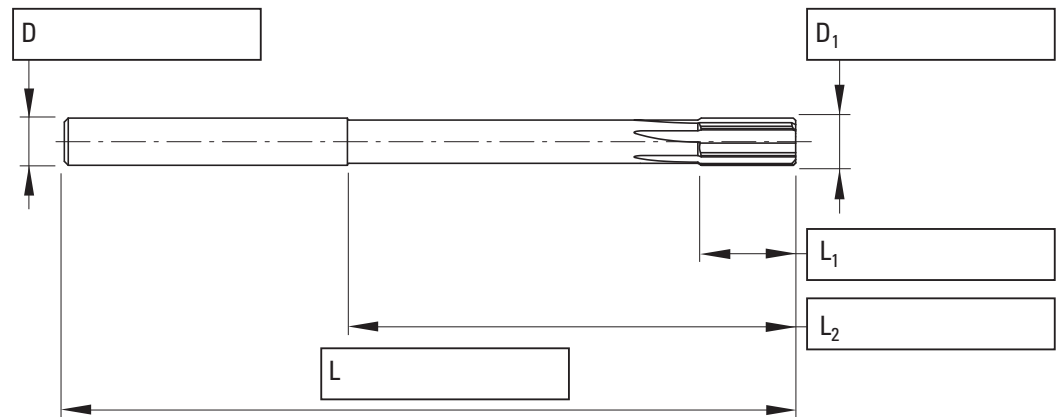
POLY 4001 SP

Z =

Quantity

Dimension and tolerance
of the hole to be machined

Material to be machined



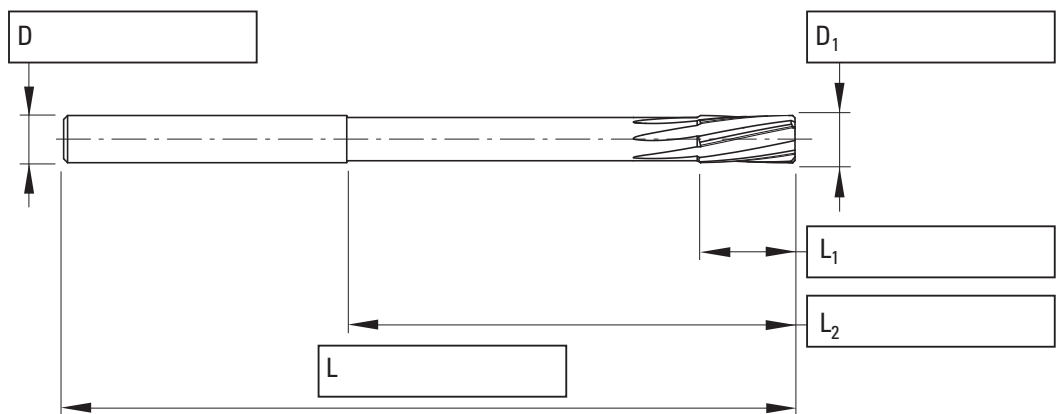
POLY 4007 SP

Z =

Quantity

Dimension and tolerance
of the hole to be machined

Material to be machined



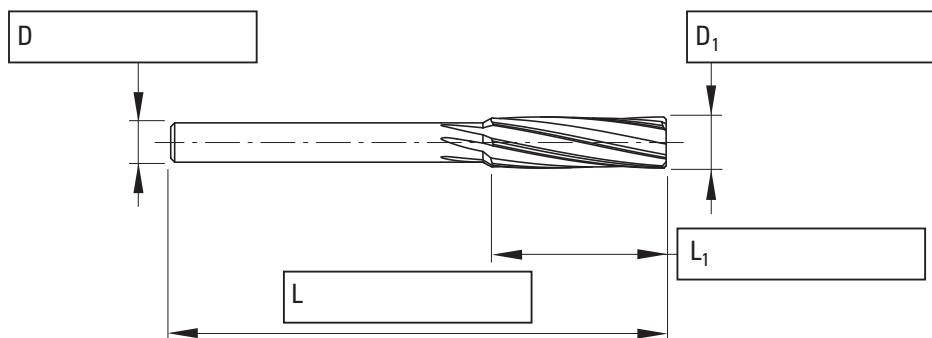
POLY 4005 SP

Z =

Quantity

Dimension and tolerance
of the hole to be machined

Material to be machined



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