DIXI polytool

CUTTING TOOLS DEDICATED TO THE MACHINING OF PLASTIC, COMPOSITES AND ALUMININUM

DIXI POLYTOOL SA

COMPANY PROFILE

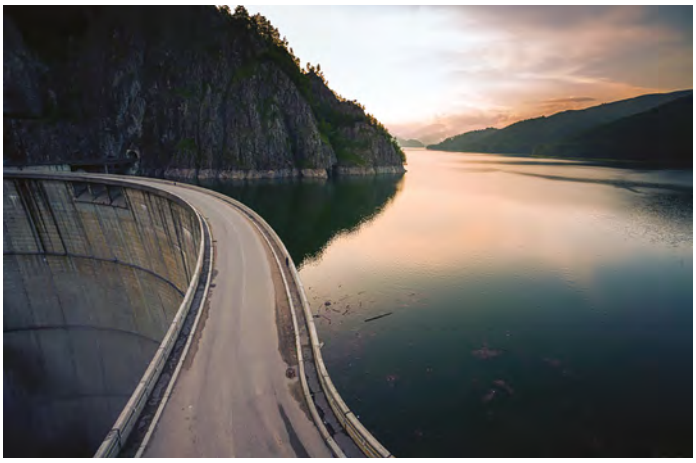
DIXI Polytool S.A. is a company based in Le Locle, Switzerland, that produces tungsten carbide and diamond cutting tools as well as precision reamers. The company was founded in 1946 and has been making investments into its production since then.

DIXI Polytool S.A. has a friendly work environment for its 300 employees and wants to guarantee the quality of its products while preserving the environment by using **ISO 9001** and **ISO 14001** certified management systems.

DIXI Polytool SA is committed to eco-friendly business practices and is powered 100% green electricity produced exlusively from solar panels and hydrpower station.

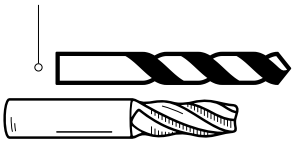
Go Green

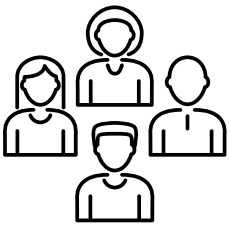
DIXI Polytool is powered 100% green electricity produced exlusively from solar panels and hydrpower station.



KEY FIGURES

+ 18'000
standard references in stock

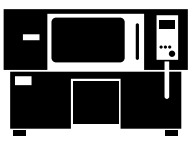




300
employees

9 subsidiaries in
7 countries

140
CNC machines



60 million CHF sales
35% of special tools

ONLINE PLASTIC CATALOG

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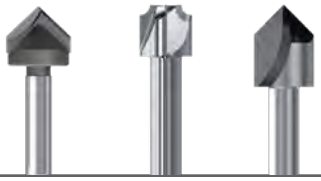
CHAMFERING, SLOTTING, FOLDING END MILLS  21

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DIXI 7305

Z = 1

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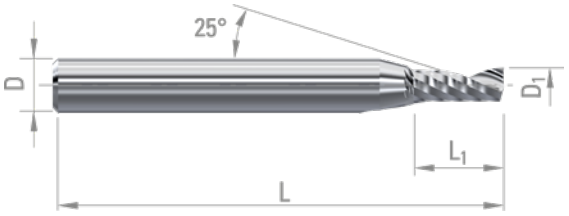
SINGLE FLUTE END MILLS FOR PLASTIC RIGHT HAND HELIX



- right hand end mills, right hand cut, with polished flute and reliefs.
- Tools with high cutting and chip removal abilities. Recommended for excellent surface finishes in plastics, woods and HPL.

Roughing ●●●●○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

$D_{1\ e8}$	D_{h5}	L_1	L	CARBIDE
1.00	3.00	4	30	372568
		4	38	372569
1.50	3.00	6	30	372570
		6	38	372571
1.50	3.00	8	60	372572
2.00	2.00	8	30	372573
2.00	3.00	8	30	372574
		8	38	372575
		8	60	372576
2.00	4.00	8	60	372577
2.00	6.00	8	50	372578
2.50	2.50	8	38	372579
2.50	3.00	8	30	372580
		8	38	372581
		8	60	372582
3.00	3.00	8	60	372583
		10	30	372584
		10	38	372585
		15	50	372586
3.00	4.00	8	60	372587
		10	40	372588
		15	50	372589
3.00	6.00	10	50	372590
		10	60	372591
		12	60	372592
		20	60	372593
3.50	3.50	12	50	372594
3.50	4.00	10	60	372595
		12	50	372596
3.50	5.00	12	50	376933
4.00	4.00	8	50	376934
		12	50	372597
		12	60	372598
		16	60	372599
		22	60	372600
		25	60	376935
		30	70	372601

$D_{1\ e8}$	D_{h5}	L_1	L	CARBIDE
4.00	6.00	12	50	372602
		12	60	372603
		12	80	372604
		12	101	376936
		21	60	372605
5.00	5.00	16	50	372606
		16	60	372607
		30	70	372608
5.00	6.00	12	60	376937
		16	60	372609
		20	60	372610
		25	60	372611
5.00	8.00	25	80	372612
6.00	6.00	12	60	376938
		20	50	372613
		20	60	372614
		24	70	372615
		30	70	372616
		38	80	372617
		42	80	423984
6.00	8.00	20	80	372618
		25	80	372619
		30	80	372620
		32	80	372621
		38	80	372622
8.00	8.00	23	60	372623
		25	80	372624
		32	80	372625
		33	80	372626
		38	80	372627
8.00	10.00	33	75	423985
10.00	10.00	24	75	372628
		30	75	372629
12.00	12.00	30	80	372630
		51	100	372631

DIXI 7315

Z = 1

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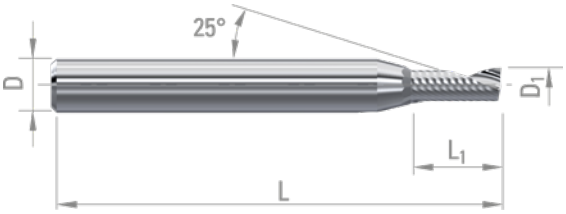
SINGLE FLUTE END MILLS FOR PLASTIC RIGHT HAND HELIX, REINFORCED



- right hand end mills, right hand cut, with polished flute and reliefs.
- Tools with high cutting and chip removal abilities. Recommended for excellent surface finishes in plastics, woods and HPL. The right-hand helix reduces burrs and improves the workpiece stability.

Roughing ●●●●○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX/PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

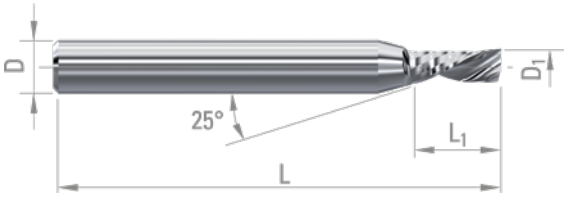
$D_{1\ e8}$	L_1	D_{h5}	L	CARBIDE
2	8	3	30	414392
2	6	6	50	414393
3	9	3	30	414394
3	9	6	50	414395
4	13	4	50	414396
4	13	6	50	414397
5	16	5	60	414398
5	16	6	50	414399
6	16	6	50	414400
6	22	6	60	414401
6	32	6	70	414402
8	12	8	60	414403
8	22	8	60	414404
8	32	8	80	414405
10	23	10	60	414406
10	32	10	75	414407
12	42	12	100	414408

DIXI 7306

Z = 1

P.36

SINGLE FLUTE END MILLS FOR PLASTIC
LEFT HAND HELIX, RIGHT HAND CUTTING



- Left hand end mills, right hand cut, with polished flute and reliefs.
- Tools with high cutting and chip removal abilities. Recommended for excellent surface finishes in plastics, woods and HPL. The left-hand helix reduces burrs and improves the workpiece stability.

Roughing ●●●●○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

$D_{1\ e8}$	D_{h5}	L_1	L	CARBIDE
1.00	3.00	4	30	379705
		4	38	372632
1.50	3.00	6	30	379706
		6	38	372633
1.50	3.00	8	60	372634
2.00	2.00	8	30	372635
2.00	3.00	8	30	379707
		8	38	372636
		8	60	372637
2.00	4.00	8	60	379708
2.00	6.00	8	50	379709
2.50	2.50	8	38	379710
2.50	3.00	8	30	379711
		8	38	372639
		8	60	372640
3.00	3.00	8	60	372641
		10	30	379712
		10	38	372642
		15	50	372643
3.00	4.00	8	60	372644
		10	40	372645
		15	50	372646
3.00	6.00	10	50	372647
		10	60	372648
		12	60	372649
		20	60	372650
3.50	3.50	12	50	372651
3.50	4.00	10	60	372652
		12	50	379713
3.50	5.00	12	50	379717
4.00	4.00	8	50	379718
		12	50	372653
		12	60	372654
		16	60	372655
		22	60	372656
		25	60	379720
		30	70	372657

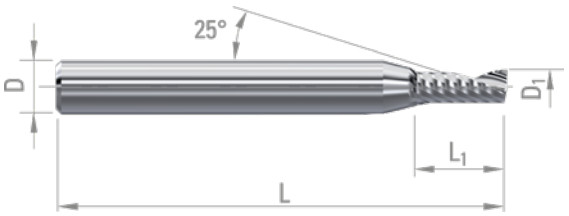
$D_{1\ e8}$	D_{h5}	L_1	L	CARBIDE
4.00	6.00	12	50	372658
		12	60	372659
		12	80	372660
		12	101	379721
		21	60	379723
5.00	5.00	16	50	379724
		16	60	372661
		30	70	372662
5.00	6.00	12	60	379726
		16	60	372663
		20	60	372664
		25	60	379727
5.00	8.00	25	80	372665
6.00	6.00	12	60	379728
		20	50	372666
		20	60	372667
		24	70	372668
		30	70	372669
		38	80	372670
6.00	8.00	20	80	372671
		25	80	372672
		30	80	372673
		32	80	379729
		38	80	379730
8.00	8.00	23	60	372674
		25	80	372675
		32	80	379731
		33	80	372676
		38	80	372677
10.00	10.00	24	75	372678
		30	75	372679
12.00	12.00	30	80	372680
		51	100	379732

DIXI 7307

Z = 1

P.36

SINGLE FLUTE END MILLS



- Right hand end mills with polished flute and reliefs.
- Tools with high cutting and chip removal abilities. Recommended for excellent surface finishes in aluminium, composites (Dibond®, Alucobond®).
- DLC coating improves tool life in non-ferrous materials in case of dry machining or with emulsion.

Roughing ●●●●○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Plastic / Alu	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯					◎											

$D_{1\ e8}$	D_{h5}	L_1	L	CARBIDE	DLC*
1.00	3	3	30	372681	372719
		3	38	372682	372720
1.50	3	4	30	372683	372721
		4	38	372684	372722
2.00	3	5	30	372685	372723
		5	38	372686	372724
2.00	6	5	38	372687	372725
2.50	3	6	30	372688	372726
		6	38	372689	372727
3.00	3	5	38	372690	372728
		8	30	372691	372729
		8	38	372692	372730
3.00	4	8	40	372693	372731
3.00	6	5	50	414409	414415
		10		372694	372732
4.00	4	5	40	372695	372733
		10	50	372696	372734
		20	60	372697	372735
		30	70	372698	372736
4.00	6	5	50	381024	381025
		10	50	372699	372737
		20	60	372700	372738
5.00	5	7	50	414410	414416
		15	60	372701	372739
		30	70	372702	372740
5.00	6	12	50	372703	372741
5.00	8	25	80	372704	372742
6.00	6	9	50	414411	414417
		12	50	372705	372743
		15	70	372706	372744
		21	60	372707	372745
		30	70	372708	372746
		38	80	372709	372747

$D_{1\ e8}$	D_{h5}	L_1	L	CARBIDE	DLC*
6.00	8	12	60	372710	372748
		22	80	372711	372749
		30	80	372712	372750
8.00	8	12	60	414412	414418
		24	60	372713	372751
		38	80	372714	372752
10.00	10	15	60	414413	414419
		24	60	372715	372753
		30	75	372716	372754
		40	100	372717	372755
12.00	12	18	64	414414	414420
		30	80	372718	372756
		38	100	376944	376945

* for non-ferrous material

DIXI 7308-xD

Z = 1

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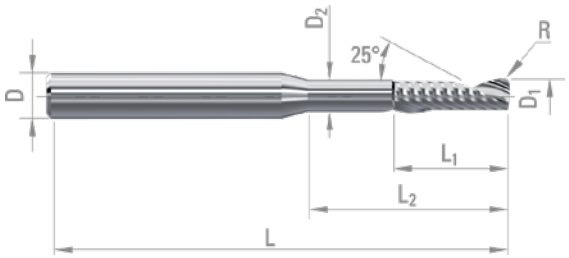
SINGLE FLUTE END MILLS, NECKED DOWN, FOR ALUMINIUM PROFILE



- Necked down right hand end mills with polished flute and reliefs.
- Tools with high cutting and chip removal abilities. Recommended for excellent surface finishes in aluminium profiles.

Roughing ●●●●○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

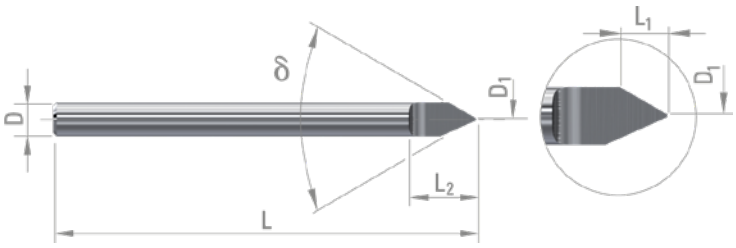
ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯																

$D_{1\ e8}$	L_1	D_2	L_2	D_{h5}	L	R	CARBIDE
6	20	5.6	35	8	80	1.5	372757
8	22	7.6	50	10	90	1.5	372758

DIXI 7017

1/2 ENGRAVING TOOLS

P.38



- 1/2 engraving tools developed for general engraving.
- Easily regrindable.
- DINAC coating improves tool life in ferrous and non-ferrous materials.
- DLC coating improves tool life in non-ferrous materials.

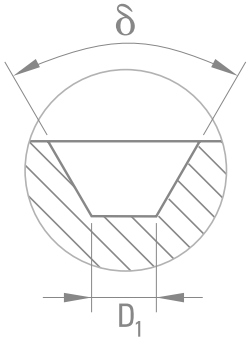
◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX/PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations	◎	◎	◎	◎	◎	◎	◎	◎	◎	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◎	◎			◎		◯	◯	◯	◯	◯				

δ	L_1	L_2	D_{h6}	L	$D_{1\ \pm 0.01}$	CARBIDE	DINAC	DLC *
30°	4.00	4.00	3	38	0.05 0.10 0.15 0.20	961336 961338 961340 961341	962814 962813 962812 962116	961337 961339 961342 961343
50°	3.00	6.00	3	38	0.05 0.08 0.10 0.15 0.20	961326 961328 961329 961330 961331	961327 961333 961332 961334 961335	
60°	2.40	6.00	3	38	0.05 0.08 0.10 0.15 0.20	43536 972400 40939 953721 954292	959712 972401 959713 960610 960611	
60°	3.30	8.00	4	50	0.05 0.10 0.20	43537 45813 45814	959714 959716 959717	
90°	1.45	8.00	3	38	0.05 0.10	961246 961247	961248 961249	
120°	0.84	8.00	3	38	0.05 0.10	961322 961324	961323 961325	

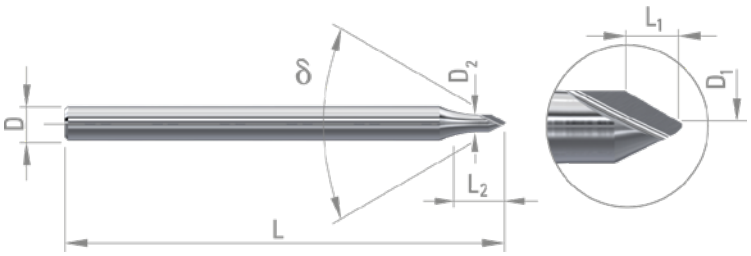
* for non-ferrous material



DIXI 7007

3/4 ENGRAVING TOOLS

P.38



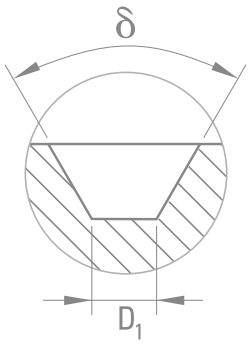
- 3/4 engraving tools developed for general engraving.
- Better rigidity compared to 1/2 geometry. Also recommended for crimping preparations.
- DINAC coating improves tool life in ferrous and non-ferrous materials.

◯ good ◎ excellent

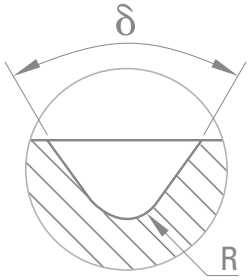
ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX/PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations	◯	◯	◯	◯	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◯	◯	◯	◯	◯	◯

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◯	◯	◎	◎	◎	◎	◎	◎	◎		◯		◎	◎	◯	◎	◎	◯		◯	

δ	L_1	L_2	D_2	D_{h6}	L	$D_{1\ \pm0.01}$	CARBIDE	DINAC
30°	2.50	3.40	1.50	3	38	0.05	976370	976374
						0.08	976371	976375
						0.10	976372	976376
						0.15	976373	976377
35°	2.00	3.40	1.50	3	38	0.05	65846	959722
						0.08	961244	961245
						0.10	65848	959724
						0.15	65850	959725
						0.20	65852	959726
40°	1.70	3.20	1.50	3	38	0.05	961225	961238
						0.08	961242	961243
						0.10	961226	961239
						0.15	961227	961240
						0.20	961228	961241
50°	1.40	2.30	1.50	3	38	0.05	976258	976264
						0.08	976260	976265
						0.10	976261	976266
						0.15	976263	976267
60°	1.10	2.30	1.50	3	38	0.05	976361	976365
						0.08	976362	976366
						0.10	976363	976367
						0.15	976364	976368
90°	0.60	2.30	1.50	3	38	0.10	414120	414121
						0.15	414122	414123



δ	L_1	L_2	D_2	D_{h6}	L	$R_{\pm0.01}$	CARBIDE	DINAC
35°	1.90	3.40	1.50	3	38	0.05	51736	959718
						0.10	51625	959719
						0.15	51734	959720
						0.20	51735	959721

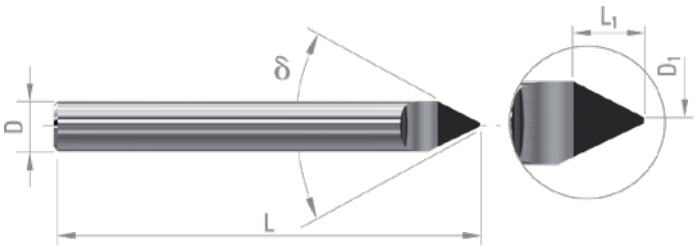


DIXI 70170 PCD

Z = 1

PCD ENGRAVING TOOLS

P.40



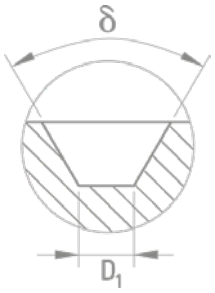
- PCD engraving tools developed for the engraving of non-ferrous materials, precious metals and composites.
- PCD improves tool life and productivity.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

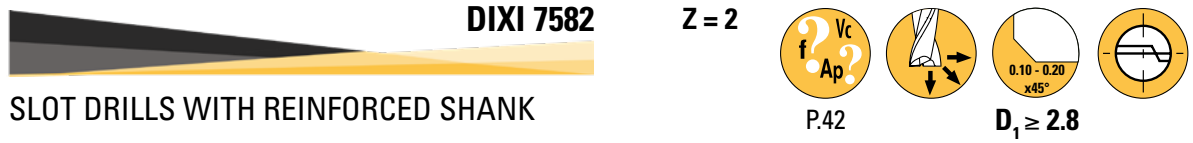
ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◎	◎	◎	◎	◯	◯									

δ	L_1	D_{h5}	L	D_1	PCD
60°	5	6	50	0.10 0.20	303081 303082
90°	3	6	50	0.10 0.20	303083 303084



DIXI 7582

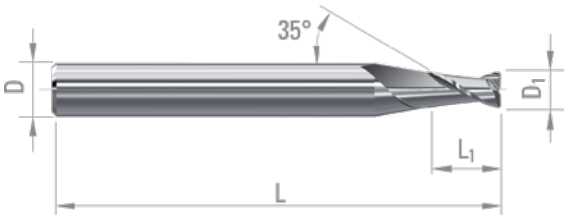
Z = 2



P.42

$D_1 \geq 2.8$

SLOT DRILLS WITH REINFORCED SHANK



- Slot drills with reinforced shank developed for the machining of soft materials.
- TiAlN coating improves tool life in ferrous materials.

Roughing ●●●○○ Finishing ●●●○○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations	◯	◯	◯	◯	◯																		

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◎	◎	◎	◯	◯	◯	◎		◯	◯									

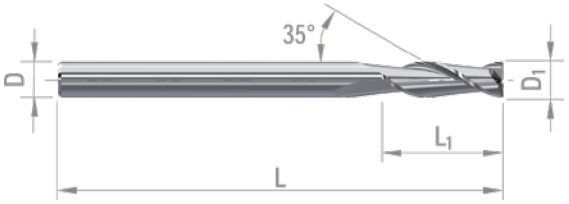
$D_{1\ e8}$ Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBIDE	TiAlN
1.00	2	3	38	47357	56304
1.50	3	3	38	47358	56305
2.00	4	4	50	47359	56306
2.50	5	4	50	47360	56307
2.80	6	6	50	35734	36304
3.00	6	6	50	30298	36305
3.80	8	6	50	34973	36306
4.00	8	6	50	30299	36607
4.50	10	6	50	35709	56983
5.00	10	6	50	30300	36309
5.50	10	6	50	35735	56303
6.00	10	6	50	29100	36299
8.00	15	8	60	29101	36300
10.00	18	10	66	29102	56334
12.00	20	12	73	30521	36302
16.00	25	16	82	30523	56318
20.00	35	20	104	31858	56335

DIXI 7572

Z = 2

P.42

SLOT DRILLS
LONG SERIES



- Long length slot drills developed for the machining of soft materials.
- TiAlN coating improves tool life in ferrous materials.
- DIAMANT coating improves tool life in abrasive non-ferrous materials.

Roughing ●●○○○ Finishing ●●●○○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations	◯	◯	◯	◯	◯																		

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◎	◎	◎	◯	◯	◯	◎	◎	◯	◯									

D_{1e8}	L_1	D_{h5}	L	CARBIDE	TiAlN	DIAMANT*
3	14	3	50	32484	56320	57045
4	16	4	50	32485	56321	57046
5	18	5	60	32486	56322	57047
6	20	6	75	32487	56337	57048
7	22	7	75	32488		
8	25	8	75	32489	56336	57050
10	30	10	90	32491	56341	
12	36	12	100	32492	56342	

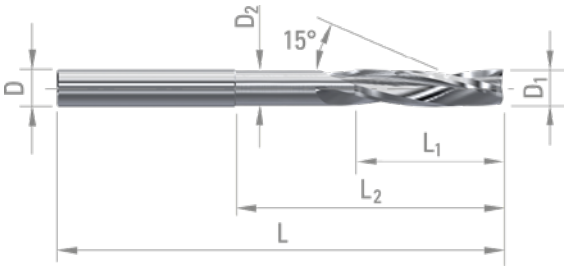
* for non-ferrous material

DIXI 7323

Z = 3

P.44

FOAM MILLING CUTTER



- End mills developed for soft materials machining.
- Recommended tools for obtaining surfaces without tearing of dense foams.

Roughing ●●●●○ Finishing ●●○○○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎										

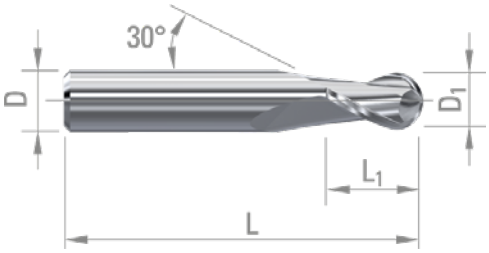
$D_{1\ e8}$	L_1	D_2	L_2	D	L	CARBIDE
3	12	2.40	20	3	50	389845
3	20	2.40	45	3	75	389846
4	30	3.60	45	4	75	389847
6	25	5.60	45	6	75	389848
6	40	5.60	70	6	100	389849
8	25	7.60	45	8	75	389850
8	40	7.60	70	8	100	389851
10	40	9.60	70	10	100	389852
10	50	9.60	85	10	120	389853
12	50	11.60	115	12	150	389854

DIXI 7032

Z = 2

BALL-NOSE END MILLS

P.46



0.006

- Ball-nose end mills developed for general machining.
- TiAlN coating improves tool life in ferrous materials.
- DIAMANT coating improves tool life in abrasive non-ferrous materials.
- DICUT coating improves tool life in copper-based materials.

Roughing ●●●○○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎	◎	◎	◎

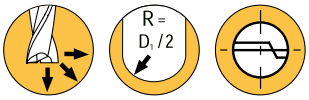
ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	◎	◎				

D_1 Ø<0.30 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥ 3.00 - e8	L_1	D_{h5}	L	CARBIDE	TiAlN	DICUT	DIAMANT *
0.06	0.12	3	38	959060			
0.08	0.16	3	38	959059			
0.10	0.20	3	38	959058			
0.15	0.30	3	38	954665			
0.20	0.30	3	38	952795	952796	952797	952799
0.25	0.40	3	38	952800	952801	952802	952803
0.30	0.50	3	38	952804	952805	952806	58852
0.40	0.60	3	38	952807	952808	952809	952810
0.50	0.80	3	38	952811	952812	952813	952814
0.60	0.90	3	38	952815	952816	952817	952818
0.70	1.10	3	38	952819	952820	952821	950363
0.80	1.20	3	38	952822	952823	950703	950364
0.90	1.40	3	38	952825	952826	952824	950365
1.00	1.50	3	38	952827	952828	952829	952830
1.10	1.70	3	38	952832	952833	952831	950366
1.20	1.80	3	38	952835	952836	952834	950367
1.30	1.90	3	38	952838	952839	952837	950368
1.40	2.10	3	38	952841	952842	952840	950369
1.50	2.30	3	38	952843	952846	952845	952844
1.60	2.50	3	38	55539	955784	956236	956237
1.70	2.50	3	38	60112	956238	956239	956240
1.80	2.75	3	38	48747	956241	956242	956243
1.90	2.75	3	38	57714	956244	956245	956246
2.00	3.00	3	38	44604	56136	64280	59783

* for non-ferrous material

DIXI 7032

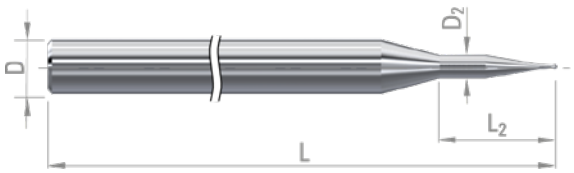
Z = 2



BALL-NOSE END MILLS

D_1 Ø<3.00 - 0/-0.02 Ø≥ 3.00 - e8	L_1	D_{h5}	L	CARBIDE	TiAlN	DICUT	DIAMANT *
2.10	3.00	3	38	55540	956247	956248	956249
2.20	3.50	3	38	48457	956250	956251	956253
2.30	3.50	3	38	66547	62925	956254	956255
2.40	3.50	3	38	60788	62926	956256	956257
2.50	4.00	3	38	44605	56137	64288	60221
3.00	5.00	3	38	43115	56138	63876	59988
3.50	6.00	4	50	44607	56139	64289	950370
4.00	6.00	4	50	34120	56140	64290	59784
4.50	7.00	5	50	44609	56141	64291	950371
5.00	8.00	5	50	34748	36172	64292	60222
5.50	9.00	6	57	44611	56172	64293	950372
6.00	9.00	6	57	34749	56179	63923	46800
7.00	11.00	7	60	34740	56176	64294	66878
8.00	12.00	8	63	43389	36174	64295	58860
10.00	15.00	10	72	42940	56177	63924	36175
12.00	18.00	12	73	32387	56173	64296	60223
16.00	24.00	16	82	32136	56175		

* for non-ferrous material



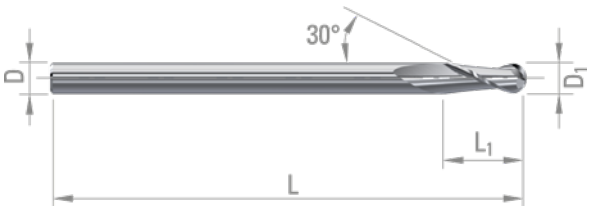
For **$D_1 \leq 0.15$** :
D_2 = 1.20
L_2 = 5.30

DIXI 7042

Z = 2

BALL-NOSE END MILLS

P.46



0.006

- Long length ball-nose end mills developed for general machining.
- TiAlN coating improves tool life in ferrous materials.
- DIAMANT coating improves tool life in abrasive non-ferrous materials.

Roughing ●○○○○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations	◎	◎	◎	◎	◎	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◎	◎	◎	◎	◎	◎

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◯	◯	◯	◯	◯				

$D_{1\ e8}$	L_1	D_{h5}	L	CARBIDE	TiAlN	DIAMANT *
2	10	2	61	41974	56238	60224
3	10	3	61	39512	56239	60225
4	12	4	75	38639	56240	60226
5	14	5	86	38942	56241	60227
6	16	6	93	38623	56242	60228
8	20	8	100	38640	56243	60229
10	24	10	100	38641	56244	58790
12	28	12	110	40728	56245	60230
16	36	16	120	40730	56247	
20	45	20	150	40732	56248	

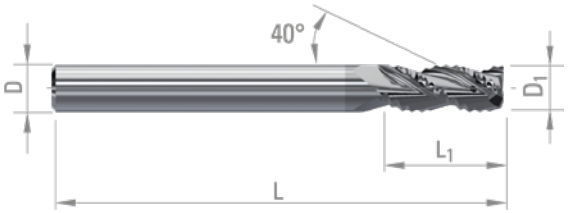
* for non-ferrous material

DIXI 7215 - 7215-FC DAC

ROUGHING END MILLS FOR ALUMINIUM

Z = 3

P.48

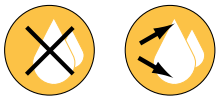


- Roughing end mills with coolant in the flutes developed for non-ferrous materials machining.
- DIXI 7215-FC with coolant in the flutes.
- DAC coating improves tool life in non-ferrous materials and prevents swarf build-up edges.

Roughing ●●●●● Finishing ○○○○○ ◯ good ◎ excellent

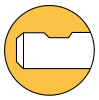
ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◎	◎	◎	◎	◎	◎	◎												



7215 **7215-FC**

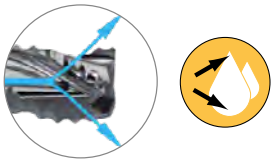
$D_{1\ d12}$	L_1	D_{h5}	L	DAC	DAC
6	14	6	57	993017	995594
8	21	8	63	993018	995595
10	24	10	72	993003	995596
12	28	12	83	990143	995597
16	34	16	92	993019	307320



On request

DIXI 7215

DIXI 7215-FC

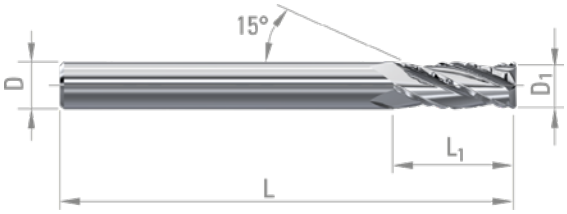


DIXI 7217

Z = 3

P.50

ROUGHING END MILLS FOR PLASTICS



- Roughing end mills developed for plastics machining.

Roughing ●●●●● Finishing ○○○○○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

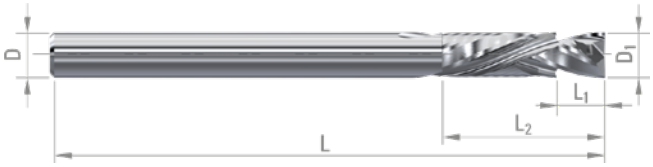
$D_{1\ d12}$	D_{h5}	L_1	L	CARBIDE
6	6	16 25	50 75	381093 381095
8	8	22 33	63 79	381096 381097
10	10	32 42	73 102	381098 381100
12	12	42	102	381101

DIXI 7102

Z = 2

COMPRESSION CUTTERS

P.52



- Compression milling cutters, double helix right and left, developed for machining fibrous composite materials such as wood, MDF and chipboard.
- The double helix reduces delamination on both sides of the material.
- DLC coating improves tool life in non-ferrous materials.

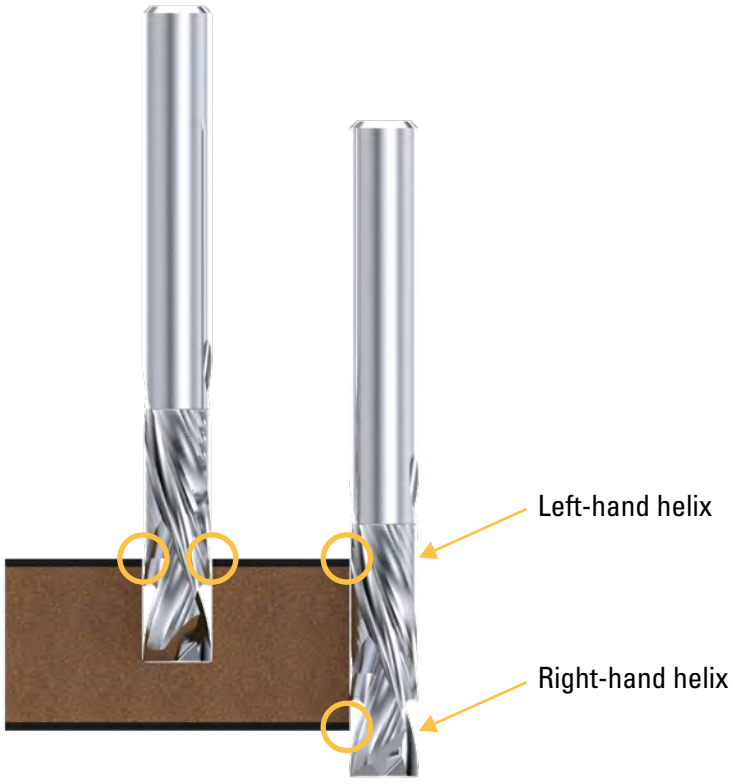
Roughing ●●●○○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

$D_{1\ e8}$	L_1	L_2	D_{h5}	L	CARBIDE	DLC *
6	6.5	22	6	70	414421	414425
8	8.7	22	8	70	414422	414426
10	10.9	22	10	75	414423	414427
12	13.0	28	12	80	414424	414428

* for non-ferrous material

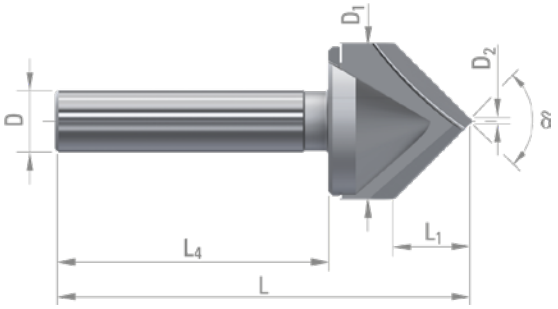


◯ No delamination

DIXI 7626

Z = 2

CHAMFERING TOOLS WITH BRAZED INSERT



- Chamfering tools with brazed insert developed for bevelling operation on plastic materials (PMMA, PET, PVC…), especially for POS applications.
- These tools allow burr-free machining.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

δ	$D_{1\ h6}$	L_1	L_4	D_{h6}	$D_{2\ \pm0.05}^{*}$	L	CARBIDE new	CARBIDE resharpened
60°	20	17.0	35	8	0.30	60	381111	381120
90°	20	9.8	35	8	0.30	53	381112	381121
100°	20	8.2	35	8	0.30	51	381113	381122
110°	20	6.8	35	8	0.30	50	381114	381123
120°	20	5.6	35	8	0.30	49	381115	381124
130°	20	4.5	35	8	0.30	48	381116	381125
140°	20	3.5	35	8	0.30	47	381117	381126
150°	20	2.6	35	8	0.30	46	381118	381127
160°	20	1.7	35	8	0.30	45	381119	381128

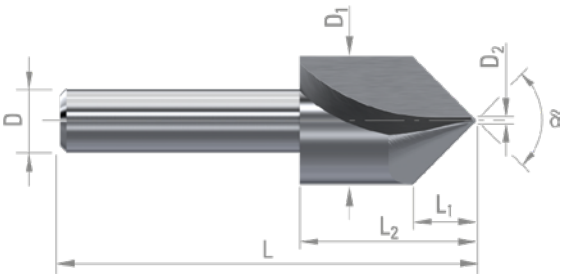
*not-cutting

Cutting conditions **n = 15'000 - 18'000 [rpm]**
Vf = 1'000 - 1'500 [mm/min]

DIXI 7627

Z = 2

FOLDING AND SLOTTING END MILLS



- Folding and slotting end mills developed for bending and grooving operations in plastic materials (PMMA, PET, PVC…), especially for POS applications.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

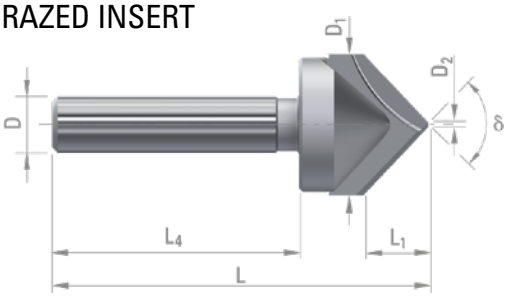
δ	$D_{1\ h5}$	L_1	L_2	D_{h5}	$D_{2\ \pm0.05}$	L	CARBIDE new	CARBIDE resharpened
45°	16	19.0	22	8	0.20	50	381129	381137
90°	8	3.9	22	8	0.20	50	381130	381138
90°	12	5.9	22	6	0.20	50	420802	
90°	12	5.9	22	12	0.20	50	381131	381139
90°	16	7.9	22	8	0.20	50	381132	381140
90°	16	7.9	22	16	0.20	50	381133	381141
90°	22	10.9	22	20	0.20	50	381134	381142
90°	24	11.9	22	20	0.20	50	381135	381143
92°	12	5.6	22	12	0.20	50	381136	381144

Cutting conditions **n = 15'000 - 18'000 [rpm]**
Vf = 2'000 [mm/min]

DIXI 7628

Z = 2

FOLDING AND SLOTTING END MILLS WITH BRAZED INSERT



- Folding and slotting end mills with brazed insert developed for bending and grooving operations in sandwich materials (Dibond®, Alucobond®), especially for POS applications.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX/PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Plastic / Alu	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations										◎											

δ	$D_{1\ h6}$	L_1	L_4	D_{h6}	$D_{2\ \pm0.05}$	L	CARBIDE new	CARBIDE resharpened
92°	20	9.50	35	8	3	53	380752	380759
135°	20	4.00	35	8	2	47	380758	380760

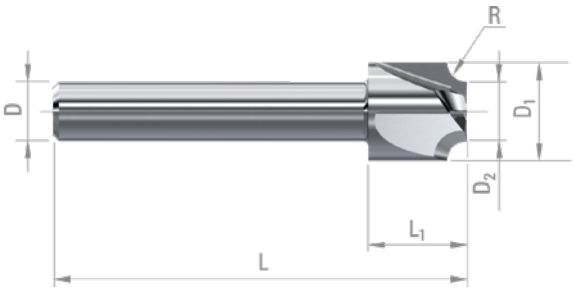
Cutting conditions **n = 15'000 - 18'000 [rpm]**
Vf = 2'000 - 4'000 [mm/min]

DIXI 7658

Z = 4

P.54

CORNER ROUNDING END MILLS



- Corner rounding end mills developed for general machining.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations	◎	◎	◎	◎	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◎	◎	◯	◯	◯	◯

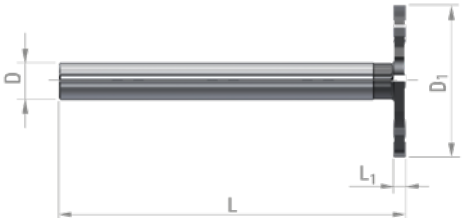
ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◯	◯	◯		◎	◎	◯	◯	◯	◎	◎				

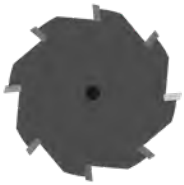
$R_{\pm 0.02}$	$D_{1\ h5}$	L_1	D_2^*	D_{h5}	L	CARBIDE
1	10	10	8	6	42	381167
2	10	10	6	6	42	381168
3	12	10	6	8	42	381169
4	12	10	4	8	42	381170
5	16	10	6	8	42	381171
6	16	10	4	8	42	381172
6	20	10	8	8	42	381173

* not-cutting

DIXI 1550 R + L

T-SLOT CUTTERS
BRAZED INSERTS





- T-slot cutters with brazed inserts for slot machining.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎										

DIXI 1550 R

$D_{1\ js12}$	L_1	D_{h6}	L	Z	CARBIDE
15	1.5	6	80	6	381174
25	1.5	6	80	6	381175
25	2.0	6	80	6	381176
25	2.0	8	80	6	381177
35	2.0	8	80	6	381178
50	3.0	10	80	6	381179

DIXI 1550 L

$D_{1\ js12}$	L_1	D_{h6}	L	Z	CARBIDE
15	1.5	6	80	6	381180
25	1.5	6	80	6	381181
25	2.0	6	80	6	381182
25	2.0	8	80	6	381183
35	2.0	8	80	6	381184
50	3.0	10	80	6	381185

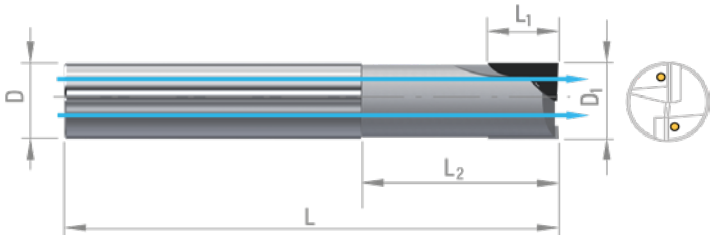
DIXI 72420 - 72420-SH

Z = 1-2

END MILLS, CENTRE CUTTING AND THROUGH COOLANT

P.56

$D_1 \geq Ø\ 6$



- PCD end mills with centre cut and through coolant developed for the general machining of non-ferrous materials, precious metals and composites.
- PCD improves tool life and productivity.
- CVD improves tool life in comparison to PCD. Do not use in case of interrupted cuts.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◎	◎	◎	◎	◯	◯									

$D_{1\ h10}$	L_1	L_2	D_{h5}	L	Z	PCD	CVD
1.00	2.00	-	6	42	1	979179	
1.50	3.00	-	6	42	1	977382	
2.00	3.00	6	6	42	1	66785	
2.00	3.00	20	6	75	1	970175	
3.00	4.00	6	6	42	1	67540	301958
3.00	4.00	15	6	75	2	970176	
3.00	4.00	20	6	75	2	970177	
4.00	4.00	8	6	50	1	957593	
4.00	6.50	10	6	50	1	67541	
4.00	6.50	15	6	75	2	970178	301959
4.00	6.50	25	6	75	2	970179	
5.00	5.00	10	6	50	2	957595	
5.00	6.50	10	6	50	2	53153	
5.00	6.50	35	6	75	2	970166	
6.00	6.00	12	6	57	2	976391	301960
6.00	8.00	34	6	75	2	976392	301961
6.00	8.00	50	6	100	2	976393	
7.00	8.00	34	8	75	2	976394	
8.00	7.00	14	8	63	2	976395	301962

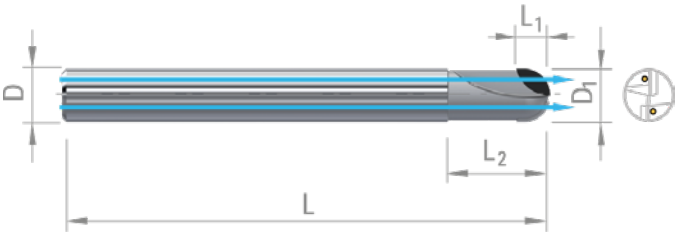
$D_{1\ h10}$	L_1	L_2	D_{h5}	L	Z	PCD	CVD
8.00	10.00	34	8	75	2	976396	301963
8.00	10.00	50	8	100	2	976397	
8.00	10.00	75	8	125	2	976398	
9.00	10.00	35	10	75	2	976399	
10.00	8.00	16	10	75	2	976410	
10.00	12.00	35	10	75	2	976411	301965
10.00	12.00	75	10	125	2	976412	
11.00	12.00	38	12	83	2	976413	
12.00	10.00	20	12	83	2	976414	
12.00	12.00	38	12	83	2	976415	301966
12.00	12.00	75	12	125	2	976416	
14.00	12.00	24	14	83	2	976417	338991
14.00	12.00	38	14	83	2	976418	
14.00	12.00	75	14	125	2	976419	
16.00	14.00	28	16	92	2	976420	338992
16.00	14.00	42	16	92	2	976421	
16.00	14.00	75	16	125	2	976422	
20.00	18.00	36	20	104	2	976423	
20.00	18.00	50	20	125	2	976424	

On request

DIXI 70320-SH PCD

Z = 1-2

BALL-NOSE END MILLS WITH THROUGH COOLANT



P.56

$D_1 \geq Ø\,6$

- PCD ball-nose end mills with through coolant developed for the form machining of non-ferrous materials, precious metals and composites.
- PCD improves tool life and productivity.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX/PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◎	◎	◎	◎	◯	◯									

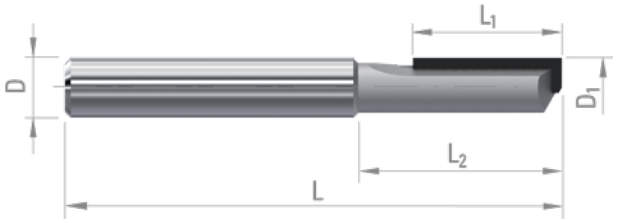
$D_{1\ h10}$	L_1	D	L_2	L	Z	PCD
2	2.00	6	6 25	42 75	1 1	953442 970874
3	2.50	6	6 25 25	42 75 75	1 1 2	953443 970875 970876
4	3.00	6	8 10 10 25 35	50 50 50 75 75	1 1 2 2 2	959468 953444 970877 970878 981585
5	4.00	6	10 25	50 75	2 2	953445 970883
6	4.00	6	12 34 50	57 75 100	2 2 2	976433 976434 976435
8	5.00	8	14 34 75	63 75 125	2 2 2	976436 976437 976438
10	6.00	10	16 35 75	72 75 125	2 2 2	976439 976440 976441
12	7.00	12	20 38 75	83 83 125	2 2 2	976442 976443 976444
14	8.00	14	24	83	2	305821
16	9.00	16	28	92	2	300800
20	11.00	20	36	104	2	305822

DIXI 70630 PCD

Z = 1

P.58

FINISHING END MILLS
CENTRE CUTTING



- PCD superfinishing cutters developed to obtain transparent finishies in plastics.

◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎										

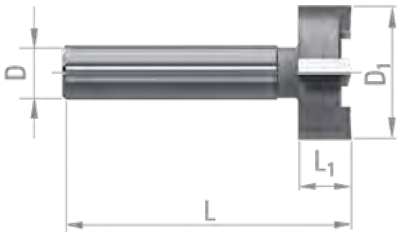
$D_{1 \pm 0.01}$	L_1	L_2	D_{h5}	L	PCD finishing	PCD resharpened
3	6	11.50	6	38	381663	381670
4	10	15.50	6	50	381665	381671
6	15	20.50	6	50	381666	381672
8	19	29.00	8	60	381667	381673
10	22	32.00	10	60	381668	381675
12	26	36.00	12	60	381669	381676

DIXI 7800

Z = 4-6

P.58

FACE MILLING CUTTERS
BRAZED INSERTS



- Face milling cutters with brazed inserts developed for material surfacing work as well as machine tables to ensure flatness

Roughing ●●○○○ Finishing ●●●●○ ◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

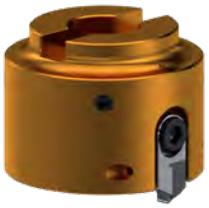
ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations											◎	◎									

$D_{1 \pm 0.05}$	L_1	D_{h6}	L	Z	CARBIDE new	CARBIDE resharpened
12	8	6	43	4	381186	381192
20	8	8	43	4	381187	381193
25	8	8	43	5	381188	381194
30	8	8	43	5	381190	381195
35	8	8	43	6	381191	381196

DIXI 81000

FACE MILLING HEADS FOR MIRROR FINISH

P.60



- Face milling heads developed for mirror finish machining of non-ferrous materials and precious metals.
- The heads are delivered balanced and already assembled with DIXI 20370 PCD for roughing and DIXI 20370 DIA inserts for finishing.

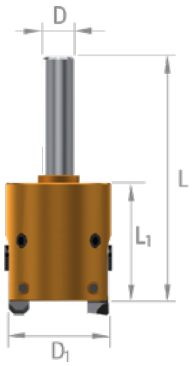
◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◎	◎	◎		◎										

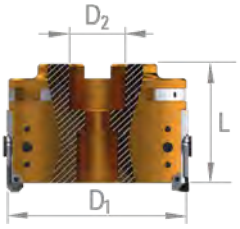
FACE MILLING HEADS WITH SHANK

D_1	L_1	D_{h6}	L	PLASTIC	ALU/COPPER	BRASS
40	45	8	76	423639	423641	423643
40	45	12	76	423640	423642	423644



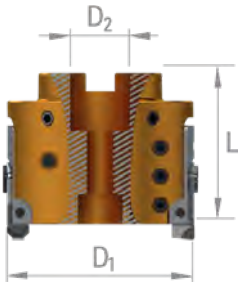
FACE MILLING HEADS

D_1	D_2	L	PLASTIC	ALU/COPPER	BRASS
40	16	45	423645	423648	423651
50	16	45	423646	423649	423652
60	22	45	423647	423650	423653



FACE MILLING HEADS WITH INCLINATION SETTING

D_1	D_2	L	PLASTIC	ALU/COPPER	BRASS
60	22	50	423654	423658	423662
85	27	55	423655	423659	423663
100	27	55	423656	423660	423664
125	40	58	423657	423661	423665



SPARE PARTS DIXI 81000

FACE MILLING HEADS WITH SHANK

D_1	L_1	D_{h6}	L	Art.
40	45	8	76	384364
40	45	12	76	964273

FACE MILLING HEADS

D_1	D_2	L	Art.
40	16	45	970446
50	16	45	971872
60	22	45	962823

FACE MILLING HEADS WITH INCLINATION SETTING

D_1	D_2	L	Art.
60	22	50	996583
85	27	55	962824
100	27	55	964272
125	40	58	994652

ROUGHING INSERTS PCD

Material to be machined	PCD
Non ferrous materials	968117

FINISHING INSERTS DIA

Material to be machined	DIA
Plastic	968111
Aluminium / Copper	969556
Brass	969557

DIXI 82000

SUPERFINISHING MILLS FOR MIRROR FINISH MACHINING WITH CLAMPING SHANK

P.60

- Face milling heads developed for mirror finish machining of non-ferrous materials and precious metals.
- The heads are delivered balanced and already assembled with DIXI 20470 PCD for roughing and DIXI 20470 DIA inserts for finishing.

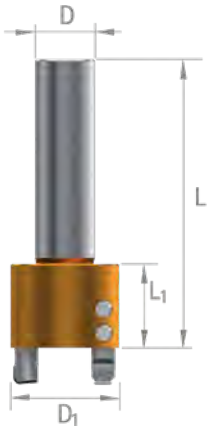
◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N											S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◎	◎	◎		◎										

SUPERFINISHING MILLS FOR MIRROR FINISH MACHINING WITH CLAMPING SHANK

D_1	L_1	D_{h6}	L	PLASTIC	ALU/COPPER	BRASS
18	14	10	48	423666	423669	423672
30	14	10	48	423667	423670	423673
30	14	16	48	423668	423671	423674



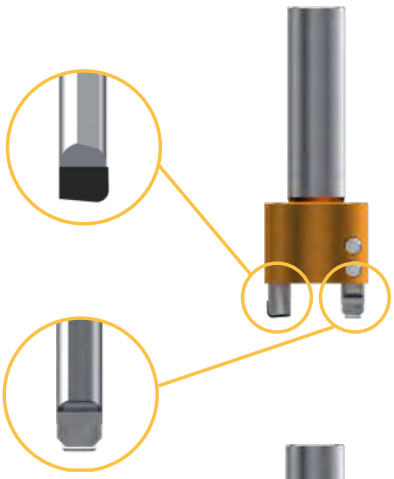
SPARE PARTS

ROUGHING INSERTS PCD

Material to be machined	PCD
Non ferrous materials	398877

FINISHING INSERTS DIA

Material to be machined	DIA
Plastic	391750
Aluminium / Copper	419761
Brass	419763



FACE MILLING HEADS

D_1	L_1	D_{h6}	L	Art.
18	14	10	48	398876
30	14	10	48	427108
30	14	16	48	410354

INSERTS FOR POLISHING MACHINES

- Diamond inserts developed for single pass polishing of plastics and acrylics on dedicated machines.
- A colour code facilitates the choice of inserts according to the desired operations.
- After re-sharpening, DIXI ensures the height adjustment of the insert in its head (if supplied)

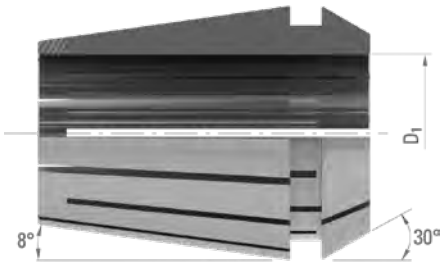
◯ good ◎ excellent

ISO	P													M				K					
Materials description	Unalloyed steel					Low alloyed steel				High alloyed steel		Martensitic stainless steel		Austenitic stainless steel (DUPLEX / PH)				Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14.1	14.2	14.3	14.4	15	16	17	18	19	20
Recommendations																							

ISO	N												S					H			
Materials description	Wrought aluminium alloy		Cast aluminium alloy			Cu + Pb alloy	Cu alloy difficult		Gold, Silver	Graphite	Plastic	Wood	Special alloy Ni / Co			Titanium, titanium alloy		Hardened steel		Hard cast iron	
VDI 3323	21	22	23	24	25	26	27	28	-	-	29	30	31	32	33-35	36	37	38	39	40	41
Recommendations	◎	◎	◯	◯	◯	◎	◎	◎	◎		◎										

Color	Aspect	D	L	Art.	
Black	Roughing	8	31	968179	
Red	Finishing	8	31	968181	
Green	Satined surface	8	31	974193	
Blue	Transparent surface	8	31	968178	

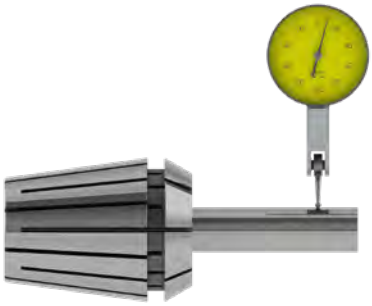
ER TOOL COLLETS
ACCORDING ISO 15488-B



ER	D_1	Clamping range	Art.
11	1.0	-	998086
11	1.5	-	998087
11	2.0	-	998088
11	2.5	-	998089
11	3.0	-	998090
11	3.5	-	998091
11	4.0	-	998092
11	4.5	-	998093
11	5.0	-	998094
11	5.5	-	998095
11	6.0	-	998096
11	6.5	-	998097
11	7.0	-	998098
11	7.5	-	346520
11	8.0	-	306711
16	1.0	1.0-0.5	997589
16	2.0	2.0-1.0	997590
16	3.0	3.0-2.0	997591
16	4.0	4.0-3.0	997592
16	5.0	5.0-4.0	997593
16	6.0	6.0-5.0	997594
16	7.0	7.0-6.0	997595
16	8.0	8.0-7.0	997596
16	9.0	9.0-8.0	997597
16	10.0	10.0-9.0	997598
16	11.0	11.0-10.0	997599
16	12.0	12.0-11.0	997600
20	1.0	1.0-0.5	997601
20	2.0	2.0-1.0	997602
20	3.0	3.0-2.0	997603
20	4.0	4.0-3.0	997604
20	5.0	5.0-4.0	997605
20	6.0	6.0-5.0	997606
20	7.0	7.0-6.0	997607
20	8.0	8.0-7.0	997608
20	9.0	9.0-8.0	997609

ER	D_1	Clamping range	Art.
20	10.0	10.0-9.0	997610
20	11.0	11.0-10.0	997611
20	12.0	12.0-11.0	997612
20	13.0	13.0-12.0	997613
20	14.0	14.0-13.0	997614
20	15.0	15.0-14.0	997615
25	2.0	2.0-1.5	997616
25	2.5	2.5-2.0	997617
25	3.0	3.0-2.0	997618
25	4.0	4.0-3.0	997619
25	5.0	5.0-4.0	997620
25	6.0	6.0-5.0	997621
25	7.0	7.0-6.0	997622
25	8.0	8.0-7.0	997623
25	9.0	9.0-8.0	997624
25	10.0	10.0-9.0	997625
25	11.0	11.0-10.0	997626
25	12.0	12.0-11.0	997627
25	13.0	13.0-12.0	997628
25	14.0	14.0-13.0	997629
25	15.0	15.0-16.0	997630
25	16.0	16.0-15.0	997631
32	2.0	2.0-1.5	997632
32	2.5	2.5-2.0	997633
32	3.0	3.0-2.0	997634
32	4.0	4.0-3.0	997635
32	5.0	5.0-4.0	997636
32	6.0	6.0-5.0	997637
32	7.0	7.0-6.0	997638
32	8.0	8.0-7.0	997639
32	9.0	9.0-8.0	997640
32	10.0	10.0-9.0	997641
32	11.0	11.0-10.0	997642
32	12.0	12.0-11.0	997643
32	13.0	13.0-12.0	997644
32	14.0	14.0-13.0	997645
32	15.0	15.0-14.0	997646
32	16.0	16.0-15.0	997647
32	17.0	17.0-16.0	997648
32	18.0	18.0-17.0	997649
32	19.0	19.0-18.0	997650
32	20.0	20.0-19.0	997651

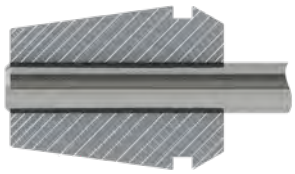
ER TOOL COLLETS
ACCORDING ISO 15488-B

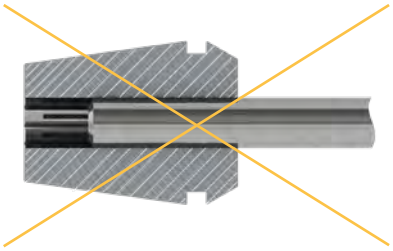


GOOD CONCENTRICITY

- Better tool life
- Surface finish
- Accuracy

D_1	L	
2-3	10	0.01
4-5-6	16	0.01
7-8-10	25	0.01
12.7	40	0.01

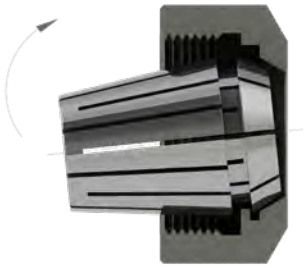




CLAMPING INSTRUCTIONS

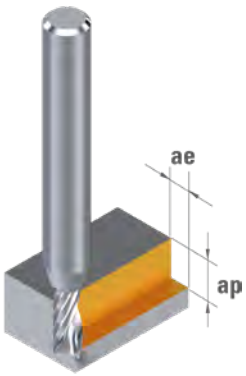
Tighten the tool shank over the entire length of the collet

Extraction groove

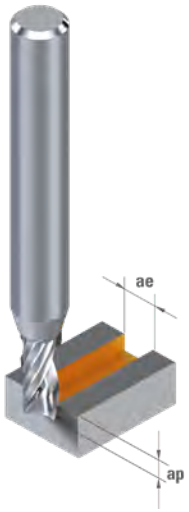


Eccentric ring

ROUTING

		VDI 3323		CARBIDE Vc [m/min]	DLC Vc [m/min]	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si (DIBOND)	21 - 22		**330**	**380**	<0.3×ØD1	<0.5×ØD1
	Plastics with good machinability (expanded PVC)	29		**400**	**460**	<0.5×ØD1	<1.5×ØD1
	Plastics with moderate machinability (PETG, PPH, PC, PE-PP)	29		**400**	**460**	<0.4×ØD1	<1.5×ØD1
	Plastics with difficult machinability (compact PVC, black PMMA)	29		**400**	**460**	<0.3×ØD1	<1.5×ØD1
	Wood	30		**400**	**460**	<0.3×ØD1	<1.5×ØD1
	Glued wood (agglomerated, plywood)	30		**400**	**460**	<0.3×ØD1	<1.5×ØD1

SLOTTING

		VDI 3323		CARBIDE Vc [m/min]	DLC Vc [m/min]	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si (DIBOND)	21 - 22		**330**	**380**	1×ØD1	<0.5×ØD1
	Plastics with good machinability (expanded PVC)	29		**400**	**460**	1×ØD1	<1.5×ØD1
	Plastics with moderate machinability (PETG, PPH, PC, PE-PP)	29		**400**	**460**	1×ØD1	<1.5×ØD1
	Plastics with difficult machinability (compact PVC, black PMMA)	29		**400**	**460**	1×ØD1	<1.5×ØD1
	Wood	30		**400**	**460**	1×ØD1	<1.5×ØD1
	Glued wood (agglomerated, plywood)	30		**400**	**460**	1×ØD1	<1.5×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

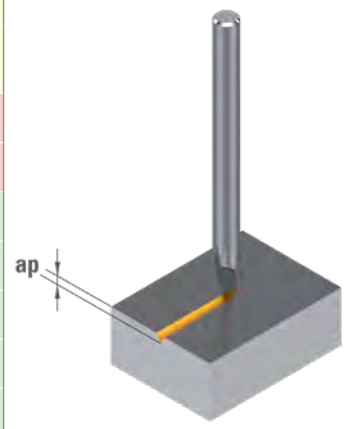
Ø D_1 1 - 1.50	Ø D_1 2.00 - 3.00	Ø D_1 4.00 - 5.00	Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.018 - 0.027	0.036 - 0.054	0.062 - 0.080	0.070 - 0.100	0.110 - 0.130
0.030 - 0.045	0.060 - 0.090	0.104 - 0.130	0.120 - 0.160	0.180 - 0.220
0.027 - 0.041	0.054 - 0.081	0.094 - 0.115	0.110 - 0.140	0.160 - 0.190
0.024 - 0.036	0.048 - 0.072	0.084 - 0.105	0.100 - 0.130	0.140 - 0.170
0.030 - 0.045	0.060 - 0.090	0.104 - 0.130	0.120 - 0.160	0.180 - 0.220
0.021 - 0.032	0.042 - 0.063	0.072 - 0.090	0.080 - 0.110	0.130 - 0.150

Feed per tooth fz [mm]

Ø D_1 1 - 1.50	Ø D_1 2.00 - 3.00	Ø D_1 4.00 - 5.00	Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.005 - 0.007	0.007 - 0.011	0.012 - 0.015	0.017 - 0.023	0.026 - 0.032
0.008 - 0.012	0.012 - 0.018	0.020 - 0.025	0.029 - 0.038	0.044 - 0.053
0.006 - 0.010	0.010 - 0.014	0.016 - 0.020	0.023 - 0.031	0.035 - 0.042
0.006 - 0.008	0.008 - 0.013	0.014 - 0.020	0.020 - 0.027	0.031 - 0.037
0.008 - 0.012	0.012 - 0.018	0.020 - 0.025	0.029 - 0.038	0.044 - 0.053
0.006 - 0.008	0.008 - 0.013	0.014 - 0.020	0.020 - 0.027	0.031 - 0.037

Values based on dry use. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

ENGRAVING

		VDI 3323		CARBIDE Vc [m/min]	DINAC Vc [m/min]	DLC Vc [m/min	D_1 Ø0.05-0.10 ap (mm)	D_1 Ø0.15-0.50 ap (mm)
P	Unalloyed steel, leaded steel	1 - 5		**20** - 35'000	**20** - 35'000		0.05 - 0.30	0.10 - 0.42
	Low alloyed steel < 800 N/mm²	6 - 9			**20** - 35'000		0.05 - 0.25	0.10 - 0.34
	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13			**20** - 35'000		0.05 - 0.20	0.10 - 0.26
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2			**20** - 35'000		0.05 - 0.20	0.10 - 0.34
	Nickel-free stainless steel/DUPLEX >700 N/mm²	14.3-14.4			**20** - 35'000		0.05 - 0.25	0.10 - 0.30
K	Grey cast iron < 250 HB	15 - 16		**20** - 35'000	**20** - 35'000		0.05 - 0.45	0.10 - 0.45
	Ductile, malleable, nodular cast iron > 250 HB	17 - 20		**20** - 35'000	**20** - 35'000		0.05 - 0.40	0.10 - 0.45
N	Wrought aluminium alloy < 12% Si	21 - 22		**20** - 35'000	**20** - 35'000	**20** - 35'000	0.05 - 0.60	0.10 - 0.45
	Cast aluminium alloy >12% Si	23 - 25		**20** - 35'000	**20** - 35'000	**20** - 35'000	0.05 - 0.45	0.10 - 0.50
	Copper alloy good machinability with Pb	26		**20** - 35'000	**20** - 35'000	**20** - 35'000	0.05 - 0.45	0.10 - 0.45
	Copper alloy with difficult machinability	27 - 28		**20** - 35'000	**20** - 35'000	**20** - 35'000	0.05 - 0.40	0.10 - 0.45
	Plastic, wood	29 - 30		**20** - 35'000	**20** - 35'000	**20** - 35'000	0.05 - 0.45	0.10 - 0.45
	Gold, silver	-		**20** - 35'000	**20** - 35'000	**20** - 35'000	0.05 - 0.40	0.10 - 0.45
S	Refractory alloy, Fe, Ni, Co base	31- 35			**15** - 25'000			0.04 - 0.10
	Titanium, titanium alloy	36 - 37		**20** - 35'000	**20** - 35'000	**20** - 35'000	0.05 - 0.35	0.10 - 0.45
H	Hardened steel >45 HRC, hard cast iron	38 - 41			**20** - 35'000			0.02 - 0.06

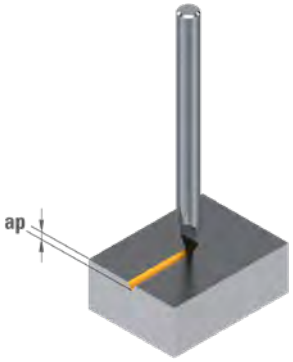
$$n\ [rpm] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed rate **Vf [mm/min]**

Ø D_1 0.05 - 0.10	Ø D_1 0.15 - 0.50
50 - 250	80 - 350
50 - 200	60 - 275
50 - 150	50 - 200
50 - 200	60 - 275
50 - 200	50 - 250
50 - 400	110 - 450
50 - 300	90 - 450
50 - 400	110 - 450
50 - 300	90 - 450
50 - 500	150 - 450
50 - 400	110 - 450
50 - 400	110 - 450
50 - 300	90 - 450
	20 - 100
50 - 300	80 - 375
	10 - 50

ENGRAVING

		VDI 3323		n rpm	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**25** - 45'000	0.05 - 0.10
	Cast aluminium alloy ≤8% Si	23		**20** - 45'000	0.05 - 0.10
	Copper alloy good machinability with Pb	26		**15** - 35'000	0.05 - 0.10
	Copper alloy with difficult machinability	27-28		**10** - 30'000	0.05 - 0.10
	Plastic, wood	29		**15** - 35'000	0.05 - 0.10
	Gold, silver	-		**20** - 45'000	0.05 - 0.10

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

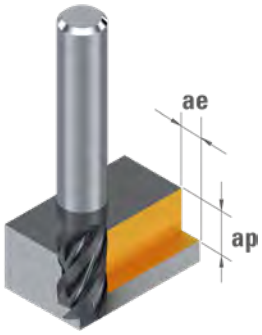
$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth **fz [mm]**

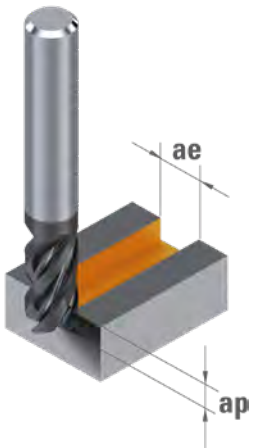
Ø D_1 0.05 - 0.10	Ø D_1 0.10 - 0.20
0.003 - 0.006	0.007 - 0.011
0.003 - 0.005	0.006 - 0.009
0.003 - 0.006	0.007 - 0.011
0.002 - 0.005	0.006 - 0.009
0.003 - 0.006	0.007 - 0.011
0.002 - 0.004	0.005 - 0.007

The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

ROUTING

		VDI 3323		CARBIDE Vc [m/min]	TiAlN Vc[m/min]	DICUT Vc[m/min]	DIAMANT Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5			150			<0.3×ØD1	<1×L1
P	Low alloyed steel < 800 N/mm²	6 - 9			125			<0.25×ØD1	<1×L1
K	Grey cast iron < 250 HB	15 - 16		170	180			<0.4×ØD1	<1×L1
K	Ductile, malleable, nodular cast iron > 250 HB	17 - 20		105	130			<0.3×ØD1	<1×L1
N	Wrought aluminium alloy < 12% Si	21 - 22		175			245	<0.4×ØD1	<1×L1
N	Cast aluminium alloy >12% Si	23 - 25		150			200	<0.4×ØD1	<1×L1
N	Copper alloy good machinability with Pb	26		110		130	150	<0.4×ØD1	<1×L1
N	Copper alloy with difficult machinability	27 - 28		95	115	115	130	<0.3×ØD1	<1×L1
N	Graphite	-					200	<0.3×ØD1	<1×L1
N	Gold, Silber	-		165			230	<0.3×ØD1	<1×L1
S	Titanium, titanium alloy	36 - 37		60	70			<0.3×ØD1	<1×L1

SLOTTING

		VDI 3323		CARBIDE Vc[m/min]	TiAlN Vc[m/min]	DICUT Vc[m/min]	DIAMANT Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5			115			<1×ØD1	<0.25×ØD1
P	Low alloyed steel < 800 N/mm²	6 - 9			95			<1×ØD1	<0.2×ØD1
K	Grey cast iron < 250 HB	15 - 16		100	135			<1×ØD1	<0.5×ØD1
K	Ductile, malleable, nodular cast iron > 250 HB	17 - 20		85	95			<1×ØD1	<0.25×ØD1
N	Wrought aluminium alloy < 12% Si	21 - 22		130			180	<1×ØD1	<1×ØD1
N	Cast aluminium alloy >12% Si	23 - 25		115			160	<1×ØD1	<1×ØD1
N	Copper alloy good machinability with Pb	26		85		100	120	<1×ØD1	<1×ØD1
N	Copper alloy with difficult machinability	27 - 28		70	85	85	100	<1×ØD1	<0.25×ØD1
N	Graphite	-					160	<1×ØD1	<0.25×ØD1
N	Gold, Silber	-		125			175	<1×ØD1	<0.25×ØD1
S	Titanium, titanium alloy	36 - 37		55	60			<1×ØD1	<0.25×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

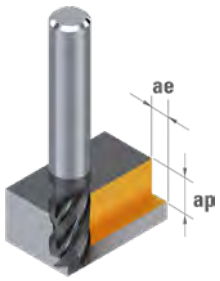
Ø D_1 1.00 - 3.00	Ø D_1 4.00 - 6.00	Ø D_1 8.00 - 12.00	Ø D_1 16.00 - 20.00
0.012 - 0.036	0.048 - 0.070	0.090 - 0.120	0.130 - 0.140
0.011 - 0.033	0.044 - 0.065	0.080 - 0.110	0.120 - 0.130
0.014 - 0.042	0.056 - 0.085	0.100 - 0.130	0.160 - 0.170
0.012 - 0.036	0.048 - 0.070	0.090 - 0.120	0.130 - 0.140
0.019 - 0.057	0.076 - 0.115	0.140 - 0.180	0.210 - 0.230
0.017 - 0.051	0.068 - 0.100	0.120 - 0.160	0.190 - 0.200
0.017 - 0.051	0.068 - 0.100	0.120 - 0.160	0.190 - 0.200
0.014 - 0.042	0.056 - 0.085	0.100 - 0.130	0.160 - 0.170
0.013 - 0.038	0.050 - 0.075	0.090 - 0.120	0.140 - 0.150
0.012 - 0.036	0.048 - 0.070	0.090 - 0.120	0.130 - 0.140
0.014 - 0.042	0.056 - 0.085	0.100 - 0.130	0.160 - 0.170

Feed per tooth fz [mm]

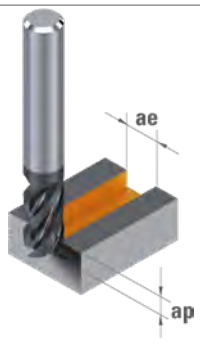
Ø D_1 1.00 - 3.00	Ø D_1 4.00 - 6.00	Ø D_1 8.00 - 12.00	Ø D_1 16.00 - 20.00
0.007 - 0.022	0.028 - 0.040	0.055 - 0.070	0.080 - 0.085
0.007 - 0.020	0.026 - 0.040	0.050 - 0.065	0.070 - 0.080
0.008 - 0.025	0.034 - 0.050	0.060 - 0.080	0.095 - 0.100
0.007 - 0.022	0.028 - 0.040	0.055 - 0.070	0.080 - 0.085
0.011 - 0.034	0.046 - 0.070	0.085 - 0.110	0.125 - 0.140
0.010 - 0.031	0.040 - 0.060	0.070 - 0.095	0.115 - 0.120
0.010 - 0.031	0.040 - 0.060	0.070 - 0.095	0.115 - 0.120
0.008 - 0.025	0.034 - 0.050	0.060 - 0.080	0.095 - 0.100
0.008 - 0.023	0.030 - 0.045	0.055 - 0.070	0.085 - 0.090
0.007 - 0.022	0.028 - 0.040	0.055 - 0.070	0.080 - 0.085
0.008 - 0.025	0.034 - 0.050	0.060 - 0.080	0.095 - 0.100

Values based on cutting oil use. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

ROUTING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
H	Foam	30		**400**	<0.8×ØD1	<1×L1

SLOTTING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
H	Foam	30		**335**	<1×ØD1	<0.80×L1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

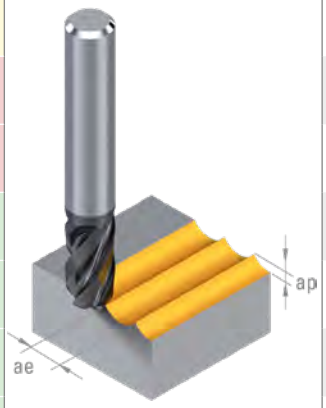
Feed per tooth fz [mm]

Ø D_1 3.00 - 4.00	Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.070 - 0.100	0.140 - 0.190	0.240 - 0.250

Feed per tooth fz [mm]

Ø D_1 3.00 - 4.00	Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.060 - 0.090	0.130 - 0.170	0.220 - 0.230

FACE MILLING

		VDI 3323		CARBIDE Vc [m/min]	DICUT Vc [m/min]	TiAlN Vc [m/min]	DIAMANT Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5				**175**		<0.50×ØD1	<0.15×ØD1
	Low alloyed steel < 800 N/mm²	6 - 9				**150**		<0.50×ØD1	<0.12×ØD1
	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13				**125**		<0.50×ØD1	<0.10×ØD1
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2				**110**		<0.50×ØD1	<0.10×ØD1
	Nickel-free stainless steel/ DUPLEX >700 N/mm²	14.3-14.4				**100**		<0.50×ØD1	<0.08×ØD1
K	Grey cast iron < 250 HB	15 - 16		**225**		**250**		<0.50× ØD1	<0.20×ØD1
	Ductile, malleable, nodular cast iron>250HB	17 - 20		**185**		**205**		<0.50×ØD1	<0.15×ØD1
N	Wrought aluminium alloy < 12% Si	21 - 22		**325**				<0.50×ØD1	<0.20×ØD1
	Cast aluminium alloy >12% Si	23 - 25		**275**				<0.50×ØD1	<0.18×ØD1
	Copper alloy good machinability with Pb	26		**325**	**300**			<0.50×ØD1	<0.20×ØD1
	Copper alloy with difficult machinability	27 - 28		**185**	**300**			<0.50×ØD1	<0.15×ØD1
	Plastic, wood	29 - 30		**250**				<0.50× ØD1	<0.25×ØD1
	Graphite	-					**250**	<0.50×ØD1	<0.25×ØD1
	Gold, silver	-		**200**				<0.50×ØD1	<0.10×ØD1
S	Refractory alloy, Fe, Ni, Co base	31- 35				**55**		<0.25×ØD1	<0.05×ØD1
	Titanium, titanium alloy	36 - 37		**70**		**75**		<0.50×ØD1	<0.12×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

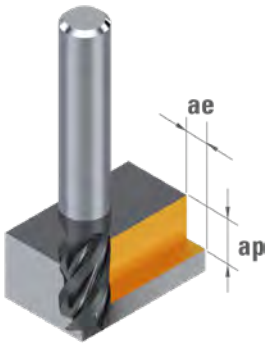
Feed per tooth fz [mm]

Ø D_1 0.06 - 0.20	Ø D_1 0.30 - 0.60	Ø D_1 0.70 - 1.50	Ø D_1 1.60 - 2.50	Ø D_1 3.00 - 6.00	Ø D_1 7.00 - 10.00	Ø D_1 12.00 - 20.00
0.0005 - 0.0020	0.003 - 0.006	0.007 - 0.015	0.016 - 0.025	0.030 - 0.060	0.070 - 0.100	0.120 - 0.200
0.0004 - 0.0018	0.003 - 0.005	0.006 - 0.014	0.014 - 0.023	0.028 - 0.055	0.060 - 0.090	0.110 - 0.180
0.0004 - 0.0016	0.002 - 0.005	0.006 - 0.012	0.013 - 0.020	0.024 - 0.050	0.060 - 0.080	0.100 - 0.160
0.0004 - 0.0016	0.002 - 0.005	0.006 - 0.012	0.013 - 0.020	0.024 - 0.050	0.060 - 0.080	0.100 - 0.160
0.0003 - 0.0014	0.002 - 0.004	0.005 - 0.011	0.011 - 0.018	0.022 - 0.040	0.050 - 0.070	0.080 - 0.140
0.0006 - 0.0024	0.004 - 0.007	0.008 - 0.018	0.019 - 0.030	0.036 - 0.070	0.080 - 0.120	0.140 - 0.240
0.0005 - 0.0020	0.003 - 0.006	0.007 - 0.015	0.016 - 0.025	0.030 - 0.060	0.070 - 0.100	0.120 - 0.200
0.0007 - 0.0030	0.005 - 0.009	0.011 - 0.023	0.024 - 0.038	0.046 - 0.090	0.110 - 0.150	0.180 - 0.300
0.0006 - 0.0026	0.004 - 0.008	0.009 - 0.020	0.021 - 0.033	0.040 - 0.080	0.090 - 0.130	0.160 - 0.260
0.0007 - 0.0030	0.005 - 0.009	0.011 - 0.023	0.024 - 0.038	0.046 - 0.090	0.110 - 0.150	0.180 - 0.300
0.0006 - 0.0024	0.004 - 0.007	0.008 - 0.018	0.019 - 0.030	0.036 - 0.070	0.080 - 0.120	0.140 - 0.240
0.0007 - 0.0030	0.005 - 0.009	0.011 - 0.023	0.024 - 0.038	0.046 - 0.090	0.110 - 0.150	0.180 - 0.300
0.0010 - 0.0040	0.006 - 0.012	0.014 - 0.030	0.032 - 0.050	0.060 - 0.120	0.140 - 0.200	0.240 - 0.400
0.0006 - 0.0026	0.004 - 0.008	0.009 - 0.020	0.021 - 0.033	0.040 - 0.080	0.090 - 0.130	0.160 - 0.260
0.0002 - 0.0010	0.002 - 0.003	0.004 - 0.008	0.008 - 0.013	0.016 - 0.030	0.040 - 0.050	0.060 - 0.100
0.0005 - 0.0020	0.003 - 0.006	0.007 - 0.015	0.016 - 0.025	0.030 - 0.060	0.070 - 0.100	0.120 - 0.200

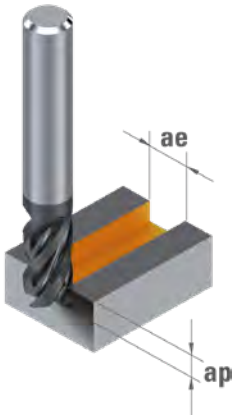
Values based on cutting oil use. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

DIXI 7215 - 7215-FC

ROUTING

		VDI 3323		DIXI 7215 Vc [m/min]	DIXI 715 - FC Vc [m/min]	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**475**	**620**	<0.4×ØD1	<1×L1
	Cast aluminium alloy >12% Si	23 - 25		**200**	**260**	<1×ØD1	<1.3×ØD1
	Copper alloy good machinability with Pb	26		**200**	**260**	<0.4×ØD1	<1×L1
	Copper alloy with difficult machinability	27 - 28		**140**	**180**	<0.4×ØD1	<1×L1
	Gold, silver	-		**200**	**325**	<0.4×ØD1	<1×L1

SLOTTING

		VDI 3323		DIXI 7215 Vc [m/min]	DIXI 715 - FC Vc [m/min]	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**380**	**490**	1×ØD1	<1.5×ØD1
	Cast aluminium alloy >12% Si	23 - 25		**160**	**210**	1×ØD1	<1.3×ØD1
	Copper alloy good machinability with Pb	26		**160**	**210**	1×ØD1	<1.5×ØD1
	Copper alloy with difficult machinability	27 - 28		**110**	**150**	1×ØD1	<1×ØD1
	Gold, silver	-		**200**	**260**	1×ØD1	<1×ØD1

RAMPING

		VDI 3323		DIXI 7215 Vc [m/min]	DIXI 715 - FC Vc [m/min]	max. depth (mm)	Ramp angle α
N	Wrought aluminium alloy < 12% Si	21 - 22		**380**	**490**	<1×ØD1	<1.5×ØD1
	Cast aluminium alloy >12% Si	23 - 25		**160**	**210**	<1×ØD1	<1.3×ØD1
	Copper alloy good machinability with Pb	26		**160**	**210**	<1×ØD1	<1.5×ØD1
	Copper alloy with difficult machinability	27 - 28		**110**	**150**	<1×ØD1	<1×ØD1
	Gold, silver	-		**200**	**260**	<1×ØD1	<1×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

Ø D_1 4.00 - 6.00	Ø D_1 8.00 - 10.00	Ø D_1 12.00 - 16.00
0.058 - 0.086	0.115 - 0.140	0.170 - 0.230
0.048 - 0.072	0.095 - 0.120	0.140 - 0.190
0.048 - 0.072	0.095 - 0.120	0.140 - 0.190
0.038 - 0.058	0.075 - 0.100	0.120 - 0.150
0.038 - 0.058	0.075 - 0.100	0.120 - 0.150

Feed per tooth fz [mm]

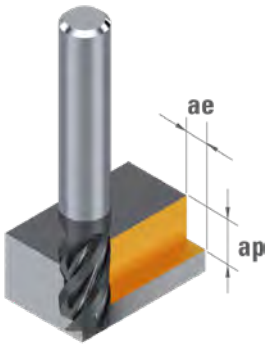
Ø D_1 4.00 - 6.00	Ø D_1 8.00 - 10.00	Ø D_1 12.00 - 16.00
0.044 - 0.064	0.085 - 0.110	0.130 - 0.170
0.036 - 0.054	0.070 - 0.090	0.110 - 0.140
0.036 - 0.054	0.070 - 0.090	0.110 - 0.140
0.029 - 0.044	0.055 - 0.080	0.090 - 0.110
0.029 - 0.044	0.055 - 0.080	0.090 - 0.110

Feed per tooth fz [mm]

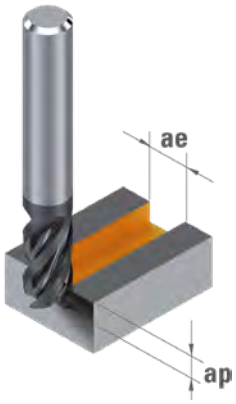
Ø D_1 4.00 - 6.00	Ø D_1 8.00 - 10.00	Ø D_1 12.00 - 16.00
0.044 - 0.064	0.085 - 0.110	0.130 - 0.170
0.036 - 0.054	0.070 - 0.090	0.110 - 0.140
0.036 - 0.054	0.070 - 0.090	0.110 - 0.140
0.029 - 0.044	0.055 - 0.080	0.090 - 0.110
0.029 - 0.044	0.055 - 0.080	0.090 - 0.110

Values based on cutting oil use. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

ROUTING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
N	Plastics with good machinability (expanded PVC)	21 - 22		**400**	<0.70×ØD1	<1×L1
	Plastics with moderate machinability (PETG, PPH, PC, PE-PP)	23 - 25		**300**	<0.70×ØD1	<1×L1
	Plastics with difficult machinability (compact PVC, black PMMA)	26		**250**	<0.40×ØD1	<1×L1

SLOTTING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
N	Plastics with good machinability (expanded PVC)	21 - 22		**400**	1×ØD1	<1.5×ØD1
	Plastics with moderate machinability (PETG, PPH, PC, PE-PP)	23 - 25		**300**	1×ØD1	<1.5×ØD1
	Plastics with difficult machinability (compact PVC, black PMMA)	26		**250**	1×ØD1	<1.5×ØD1

RAMPING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
N	Plastics with good machinability (expanded PVC)	21 - 22		**400**	<12°	<1.5×ØD1
	Plastics with moderate machinability (PETG, PPH, PC, PE-PP)	23 - 25		**300**	<10°	<1.5×ØD1
	Plastics with difficult machinability (compact PVC, black PMMA)	26		**250**	<8°	<1.5×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.230 - 0.260	0.290 - 0.310
0.180 - 0.210	0.230 - 0.250
0.150 - 0.180	0.190 - 0.210

Feed per tooth fz [mm]

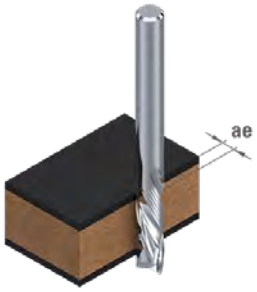
Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.170 - 0.200	0.220 - 0.230
0.140 - 0.160	0.180 - 0.190
0.110 - 0.140	0.150 - 0.160

Feed per tooth fz [mm]

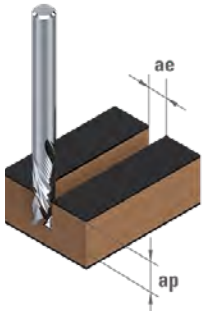
Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.140 - 0.160	0.180 - 0.200
0.110 - 0.130	0.140 - 0.160
0.090 - 0.011	0.120 - 0.140

Values based on dry use. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

ROUTING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)
N	Plastics	29		**400**	<0.4×ØD1
	Wood	30		**350**	<0.6×ØD1

SLOTTING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
N	Plastics	29		**350**	1×ØD1	<1.5×ØD1
	Wood	30		**325**	1×ØD1	<2×ØD1

RAMPING

		VDI 3323		CARBIDE Vc [m/min]	Ramp angle α	Depth (mm)
N	Plastics	29		**350**	<10°	<1.5×ØD1
	Wood	30		**325**	<15°	<2×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.085 - 0.105	0.120 - 0.130
0.070 - 0.090	0.100 - 0.110

Feed per tooth fz [mm]

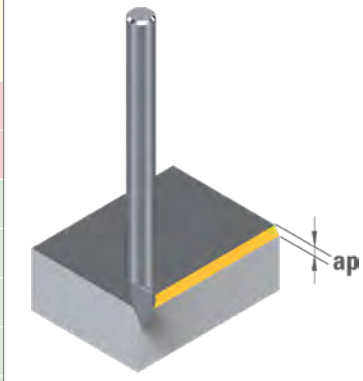
Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.070 - 0.085	0.095 - 0.105
0.055 - 0.070	0.080 - 0.090

Feed per tooth fz [mm]

Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00
0.045 - 0.055	0.060 - 0.065
0.035 - 0.045	0.050 - 0.055

Values based on dry use. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

CHAMFERING

		VDI 3323		CARBIDE Vc [m/min]	TiAlN Vc [m/min]	ae (mm)	ap (mm)
P	Unalloyed steel, leaded steel	1 - 5		**85**	**120**	<0.5×ØD1	<0.5×ØD1
	Low alloyed steel < 800 N/mm²	6 - 9			**105**	<0.5×ØD1	<0.5×ØD1
	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13			**95**	<0.5×ØD1	<0.5×ØD1
M	Austenitic stainless steel < 700 N/mm²	14.1-14.2			**80**	<0.5×ØD1	<0.5×ØD1
	Nickel-free stainless steel/DUPLEX >700 N/mm²	14.3-14.4			**55**	<0.25×ØD1	<0.25×ØD1
K	Grey cast iron < 250 HB	15 - 16		**85**	**100**	<0.5×ØD1	<0.5×ØD1
	Ductile, malleable, nodular cast iron > 250 HB	17 - 20		**55**	**80**	<0.5×ØD1	<0.5×ØD1
N	Wrought aluminium alloy < 12% Si	21 - 22		**220**		<0.75×ØD1	<0.75×ØD1
	Cast aluminium alloy >12% Si	23 - 25		**150**		<0.75×ØD1	<0.75×ØD1
	Copper alloy good machinability with Pb	26		**150**		<0.75×ØD1	<0.75×ØD1
	Copper alloy with difficult machinability	27 - 28		**130**		<0.5×ØD1	<0.5×ØD1
	Plastic, wood	29 - 30		**250**		<0.75×ØD1	<0.75×ØD1
	Gold, silver	-		**150**		<0.5×ØD1	<0.5×ØD1
S	Refractory alloy, Fe, Ni, Co base	31- 35			**35**	<0.25×ØD1	<0.25×ØD1
	Titanium, titanium alloy	36 - 37		**40**	**70**	<0.5×ØD1	<0.5×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

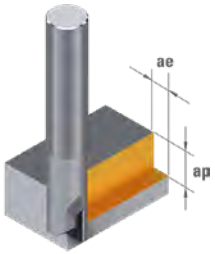
Feed per tooth **fz [mm]**

Ø D_1 0.20 - 0.30	Ø D_1 0.40 - 0.70	Ø D_1 0.80 - 1.00	Ø D_1 1.20 - 3.00	Ø D_1 4.00 - 5.00	Ø D_1 6.00 - 8.00	Ø D_1 10.00 - 12.00	Ø D_1 16.00 - 20.00
0.002 - 0.003	0.004 - 0.007	0.008 - 0.010	0.012 - 0.030	0.040 - 0.050	0.060 - 0.080	0.090 - 0.100	0.120 - 0.160
0.001 - 0.003	0.004 - 0.006	0.007 - 0.009	0.011 - 0.027	0.036 - 0.045	0.054 - 0.070	0.080 - 0.090	0.100 - 0.150
0.001 - 0.002	0.003 - 0.006	0.006 - 0.008	0.010 - 0.024	0.032 - 0.040	0.048 - 0.065	0.070 - 0.080	0.090 - 0.130
0.001 - 0.002	0.003 - 0.006	0.006 - 0.008	0.010 - 0.024	0.032 - 0.040	0.048 - 0.065	0.070 - 0.080	0.090 - 0.130
0.001 - 0.002	0.003 - 0.005	0.006 - 0.007	0.008 - 0.021	0.028 - 0.035	0.042 - 0.055	0.060 - 0.070	0.080 - 0.110
0.002 - 0.004	0.005 - 0.008	0.010 - 0.012	0.014 - 0.036	0.048 - 0.060	0.072 - 0.095	0.110 - 0.120	0.140 - 0.190
0.002 - 0.003	0.004 - 0.007	0.008 - 0.010	0.012 - 0.030	0.040 - 0.050	0.060 - 0.080	0.090 - 0.100	0.120 - 0.160
0.002 - 0.005	0.006 - 0.011	0.012 - 0.015	0.018 - 0.045	0.060 - 0.075	0.090 - 0.120	0.140 - 0.140	0.170 - 0.240
0.002 - 0.004	0.005 - 0.009	0.010 - 0.013	0.016 - 0.039	0.052 - 0.065	0.078 - 0.105	0.120 - 0.120	0.150 - 0.210
0.002 - 0.005	0.006 - 0.011	0.012 - 0.015	0.018 - 0.045	0.060 - 0.075	0.090 - 0.120	0.140 - 0.140	0.170 - 0.240
0.002 - 0.004	0.005 - 0.008	0.010 - 0.012	0.014 - 0.036	0.048 - 0.060	0.072 - 0.095	0.110 - 0.120	0.170 - 0.240
0.002 - 0.005	0.006 - 0.011	0.012 - 0.015	0.018 - 0.045	0.060 - 0.075	0.090 - 0.120	0.140 - 0.140	0.150 - 0.210
0.002 - 0.003	0.004 - 0.007	0.008 - 0.010	0.012 - 0.030	0.040 - 0.050	0.060 - 0.080	0.090 - 0.100	0.090 - 0.100
0.001 - 0.002	0.002 - 0.004	0.004 - 0.005	0.006 - 0.015	0.020 - 0.025	0.030 - 0.040	0.050 - 0.050	0.050 - 0.050
0.002 - 0.003	0.004 - 0.007	0.008 - 0.010	0.012 - 0.030	0.040 - 0.050	0.060 - 0.080	0.090 - 0.100	0.090 - 0.100

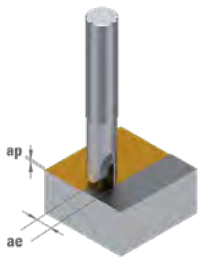
Values based on use of cutting oil and emulsion. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

DIXI 72420 PCD

ROUTING

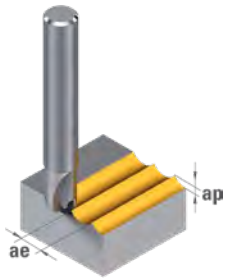
		VDI 3323		n rpm	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**25** - 40'000	**0.10** - 1.00	<0.9×L1
	Cast aluminium alloy ≤8% Si	23		**20** - 40'000	**0.10** - 1.00	<0.9×L1
	Copper alloy good machinability with Pb	26		**15** - 35'000	**0.10** - 1.00	<0.9×L1
	Copper alloy with difficult machinability	27-28		**15** - 35'000	**0.10** - 1.00	<0.9×L1
	Plastic, wood	29		**15** - 30'000	**0.10** - 1.00	<0.9×L1
	Gold, silver	-		**20** - 40'000	**0.10** - 1.00	<0.9×L1

FACE MILLING

		VDI 3323		n tr/min	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**25** - 40'000	**0.10** - 1.00	<0.9×L1
	Cast aluminium alloy ≤8% Si	23		**20** - 40'000	**0.10** - 1.00	<0.9×L1
	Copper alloy good machinability with Pb	26		**15** - 35'000	**0.10** - 1.00	<0.9×L1
	Copper alloy with difficult machinability	27-28		**15** - 35'000	**0.10** - 1.00	<0.9×L1
	Plastic, wood	29		**15** - 30'000	**0.10** - 1.00	<0.9×L1
	Gold, silver	-		**20** - 40'000	**0.10** - 1.00	<0.9×L1

DIXI 70320-SH PCD

FACE MILLING

		VDI 3323		n rpm	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**25** - 50'000	<0.10×ØD1	<0.10×ØD1
	Cast aluminium alloy ≤8% Si	23		**20** - 50'000	<0.10×ØD1	<0.10×ØD1
	Copper alloy good machinability with Pb	26		**15** - 40'000	<0.10×ØD1	<0.10×ØD1
	Copper alloy with difficult machinability	27-28		**10** - 35'000	<0.10×ØD1	<0.10×ØD1
	Plastic, wood	29		**15** - 40'000	<0.10×ØD1	<0.10×ØD1
	Gold, silver	-		**20** - 50'000	<0.10×ØD1	<0.10×ØD1

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

Ø D_1 1 - 2	Ø D_1 3 - 6	Ø D_1 7- 12	Ø D_1 13 - 20
0.009 - 0.018	0.027 - 0.054	0.063 - 0.108	0.098 - 0.150
0.008 - 0.016	0.023 - 0.047	0.055 - 0.064	0.085 - 0.130
0.009 - 0.018	0.027 - 0.054	0.063 - 0.108	0.098 - 0.150
0.007 - 0.014	0.022 - 0.043	0.050 - 0.086	0.078 - 0.120
0.009 - 0.018	0.027 - 0.054	0.063 - 0.108	0.098 - 0.150
0.006 - 0.012	0.018 - 0.036	0.042 - 0.072	0.065 - 0.100

Feed per tooth fz [mm]

Ø D_1 1 - 2	Ø D_1 3 - 6	Ø D_1 7- 12	Ø D_1 13 - 20
0.008 - 0.016	0.023 - 0.047	0.055 - 0.094	0.085 - 0.130
0.007 - 0.013	0.020 - 0.040	0.046 - 0.079	0.072 - 0.110
0.008 - 0.016	0.023 - 0.047	0.055 - 0.094	0.085 - 0.130
0.006 - 0.012	0.018 - 0.036	0.042 - 0.072	0.065 - 0.100
0.008 - 0.016	0.023 - 0.047	0.055 - 0.094	0.085 - 0.130
0.005 - 0.010	0.014 - 0.029	0.034 - 0.058	0.052 - 0.080

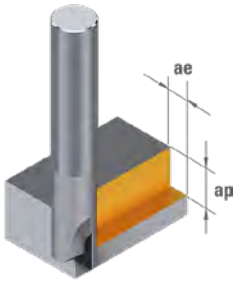
Feed per tooth fz [mm]

Ø D_1 2 - 4	Ø D_1 5 - 8	Ø D_1 10 - 20
0.014 - 0.027	0.034 - 0.054	0.060 - 0.120
0.012 - 0.023	0.029 - 0.047	0.052 - 0.104
0.014 - 0.027	0.034 - 0.054	0.060 - 0.120
0.011 - 0.022	0.027 - 0.043	0.048 - 0.096
0.014 - 0.027	0.034 - 0.054	0.060 - 0.120
0.009 - 0.018	0.023 - 0.036	0.040 - 0.080

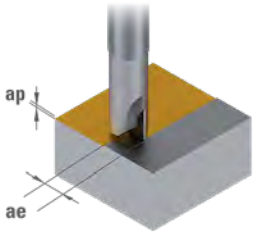
Values based on use of cutting oil. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

DIXI 70630 PCD

ROUTING

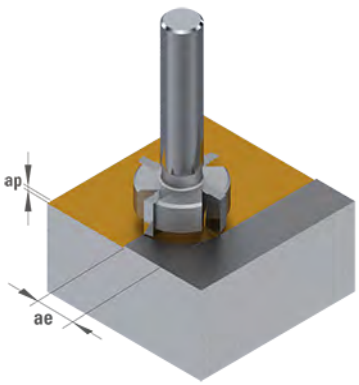
		VDI 3323		n rpm	ae (mm)	ap (mm)
N	Plastic	29		**17** - 25'000	0.05 - 0.10	<1×ØD1

FACE MILLING

		VDI 3323		n rpm	ae (mm)	ap (mm)
N	Plastic	29		**7** - 15'000	<1×ØD1	0.05 - 0.10

DIXI 7800

FACE MILLING

		VDI 3323		CARBIDE Vc [m/min]	ae (mm)	ap (mm)
H	Plastics with good machinability (expanded PVC)	29		**750**	<1×ØD1	<1 mm
	Plastics with moderate machinability (PETG, PPH, PC, PE-PP)	29		**700**	<1×ØD1	<1 mm
	Plastics with difficult machinability (compact PVC, black PMMA)	29		**650**	<1×ØD1	<1 mm

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

Ø D_1 3 - 6	Ø D_1 8 - 12
0.027 - 0.045	0.060 - 0.090

Ø D_1 3 - 6	Ø D_1 8 - 12
0.024 - 0.041	0.054 - 0.081

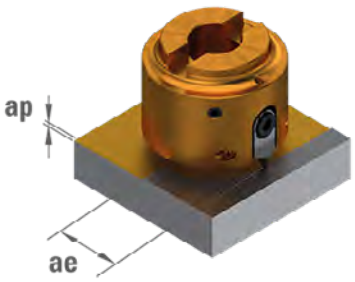
Feed per tooth fz [mm]

Ø D_1 12.00 - 20.00	Ø D_1 25.00 - 35.00
0.040 - 0.060	0.060 - 0.070
0.030 - 0.050	0.050 - 0.060
0.030 - 0.040	0.040 - 0.050

Values based on use of cutting oil. The cutting parameters are very strongly influenced by external parameters, such as tool and workpiece stability, etc.
The cutting conditions must be adapted to the operating conditions !

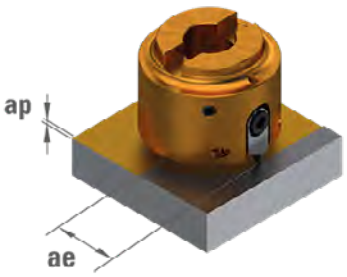
DIXI 81000

FACE MILLING

		VDI 3323		n rpm	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**2** - 7'000	<1×ØD1	0.10 - 0.50
	Cast aluminium alloy≤8% Si	23		**2** - 7'000	<1×ØD1	0.10 - 0.50
	Copper alloy good machinability with Pb	26		**2** - 6'000	<1×ØD1	0.10 - 0.50
	Copper alloy with difficult machinability	27-28		**2** - 5'000	<1×ØD1	0.10 - 0.50
	Plastic, wood	29		**2** -5'000	<1×ØD1	0.10 - 0.50
	Gold, silver	-		**2** - 7'000	<1×ØD1	0.10 - 0.50

DIXI 82000

FACE MILLING

		VDI 3323		n rpm	ae (mm)	ap (mm)
N	Wrought aluminium alloy < 12% Si	21 - 22		**5** - 7'000	<1×ØD1	0.10 - 0.50
	Cast aluminium alloy≤8% Si	23		**5** - 7'000	<1×ØD1	0.10 - 0.50
	Copper alloy good machinability with Pb	26		**4** - 6'000	<1×ØD1	0.10 - 0.50
	Copper alloy with difficult machinability	27-28		**4** - 5'000	<1×ØD1	0.10 - 0.50
	Plastic, wood	29		**4** - 5'000	<1×ØD1	0.10 - 0.50
	Gold, silver	-		**5** - 7'000	<1×ØD1	0.10 - 0.50

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

$$Vf\ [mm/min] = n\ [rpm] \times fz\ [mm] \times Z$$

Feed per tooth fz [mm]

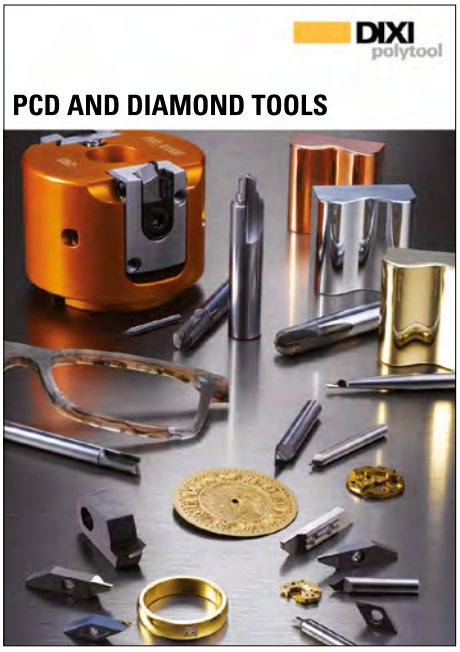
Ø D_1 40 - 60	Ø D_1 85 - 125
0.018 - 0.027	0.032 - 0.056
0.016 - 0.023	0.028 - 0.049
0.018 - 0.027	0.032 - 0.056
0.014 - 0.022	0.026 - 0.045
0.018 - 0.027	0.032 - 0.056
0.012 - 0.018	0.021 - 0.038

Feed per tooth fz [mm]

Ø D_1 18 - 30
0.008 - 0.014
0.007 - 0.012
0.008 - 0.014
0.006 - 0.011
0.008 - 0.014
0.005 - 0.009

NOTICE

OTHER SPECIFIC CATALOGS



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