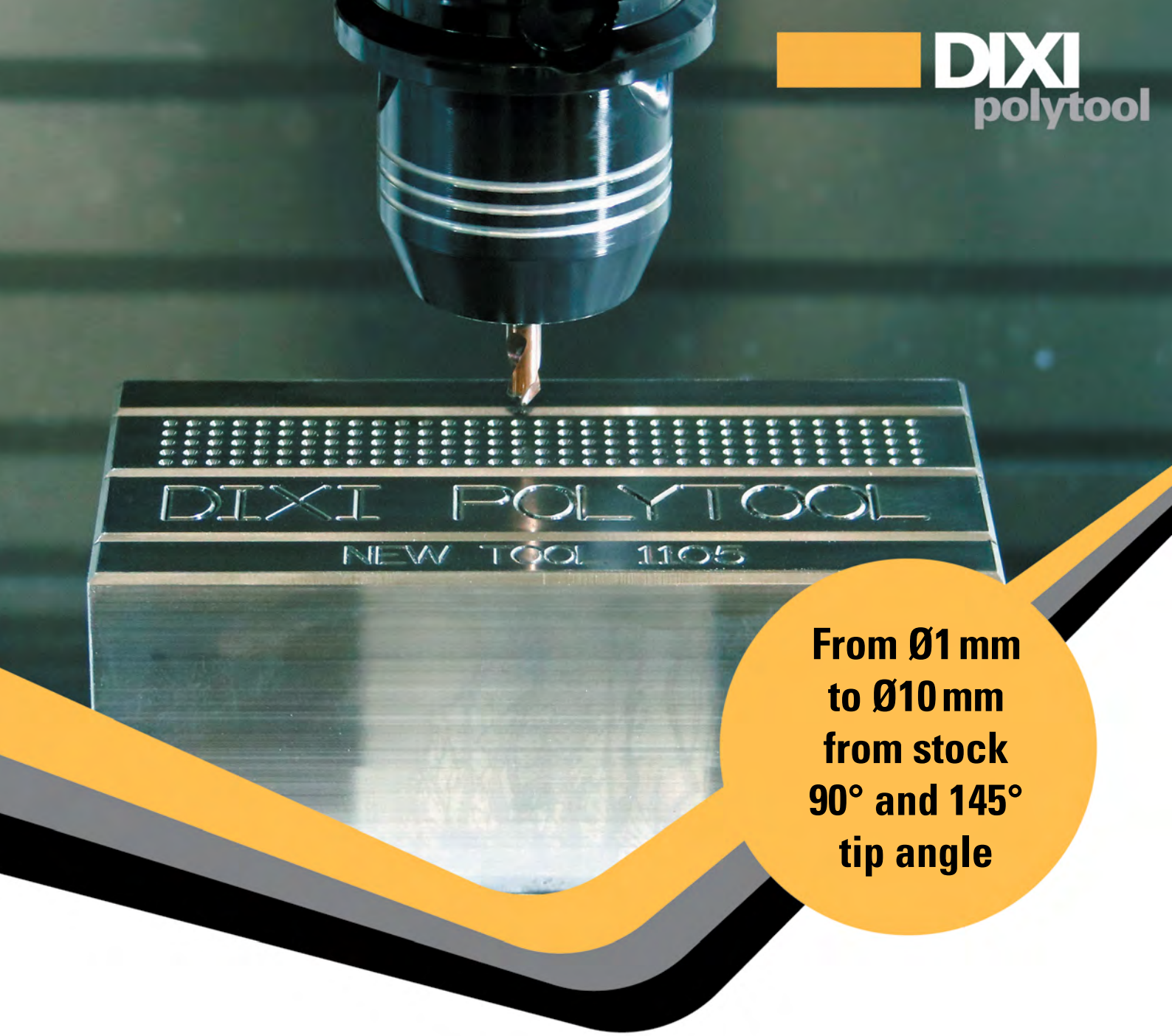
DIXI polytool



From Ø1 mm to Ø10 mm from stock 90° and 145° tip angle

HIGH-PERFORMANCE SPOTTING DRILLS

FOR STAINLESS AND HIGH ALLOYED STEELS

swiss made since 1948

SWISS

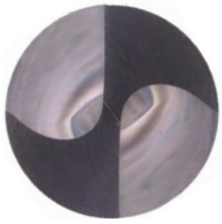
TECHNICAL ADVANTAGES

New generation sharpening

- Reinforced tip to prevent chipping.
- Allows very high feed rates.
- Available with 90° or 145° tip.

DIXI 1105

Conventional



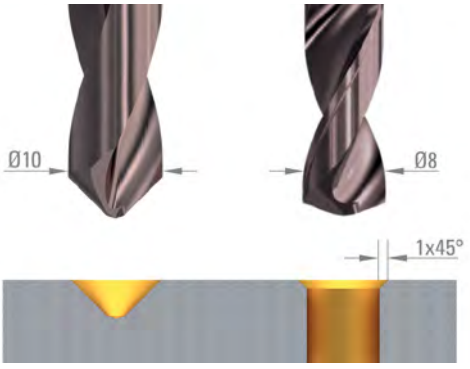
C-TOP coating

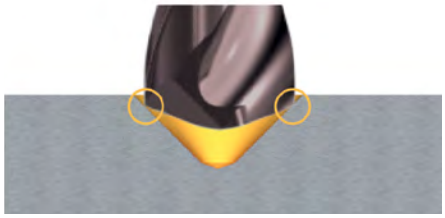
- Ultra-smooth dropless coating.
- Remarkable resistance to wear and oxidation, even at very high temperatures.

Carbide

- An exceptionally versatile grade with high toughness, optimum bending strength and outstanding wear resistance.

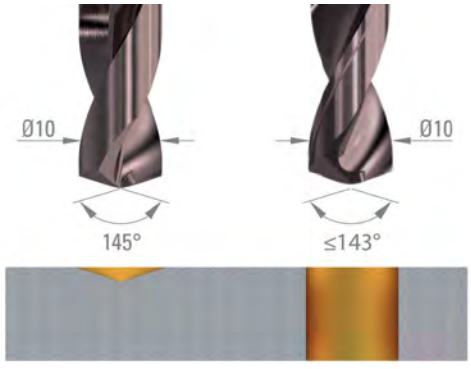
The use of a 90° spotting drill enables chamfering prior to drilling. The point of contact between the drill and the pointing is located on the tool's tips, which can lead to a concentration of stresses in even the toughest materials.

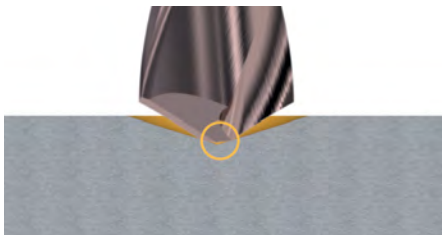




Spout centering

The use of a 145° spotting drill improves location accuracy by centering the drill through the point. The drill tip angle must be less than 143° to avoid damage to the cutting edges.





Tip centering

DIXI 1105 Z = 2

SPOTTING DRILL

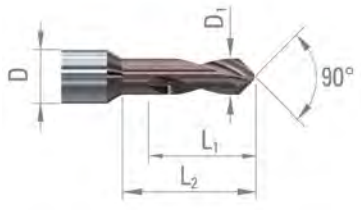
- 90° and 145° spotting drills developed for machining of stainless and high-alloy steels.
- C-TOP coating improves tool life in difficult to machine materials.

◯ 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													◎	◎	◎	◯	◯				

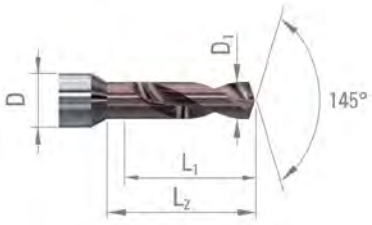
DIXI 1105 - 90°



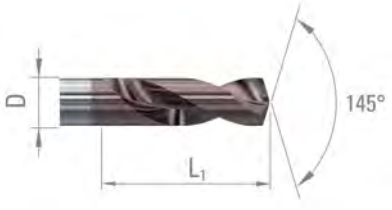
$D_{1\ h5}$	L_1	L_2	D_{h5}	L	C-TOP
1.0	3	4.0	3	38	440055
1.5	3	4.5	3	38	440056
2.0	5	7.0	3	38	440057

D_{h5}	L_1	L	C-TOP
3.0	9	38	440058
4.0	10	50	440059
5.0	13	50	440060
6.0	13	57	440061
8.0	27	63	440062
10.0	30	72	440063

DIXI 1105 - 145°



$D_{1\ h5}$	L_1	L_2	D_{h5}	L	C-TOP
1.0	3	4.0	3	38	440064
1.5	3	4.5	3	38	440065
2.0	5	7.0	3	38	440066



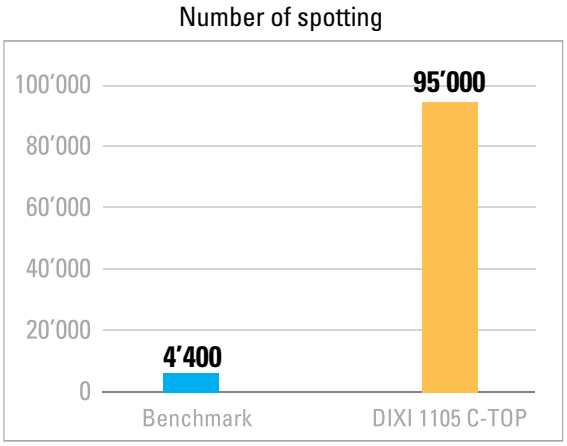
D_{h5}	L_1	L	C-TOP
3.0	9	38	440067
4.0	10	50	440068
5.0	13	50	440069
6.0	13	57	440070
8.0	27	63	440071
10.0	30	72	440072

EXAMPLE OF APPLICATION

Tool : DIXI 1105-90° Ø1mm
Material : Stainless steel 1.4435
Operation : Spotting Ø0.8 mm (ap = 0.4 mm)
Lubrication : Cutting oil
Machine : Willemin Macodel 301 S2
n = 15'916 rpm (Vc = 40 m/min)
Vf = 206.9 mm/min (fz = 0.013 mm/rev)

The conventional pointer starts to chip after 4,000 operations. The new DIXI 1105 performed over 90,000 pointings before showing signs of significant wear.

Conclusion :
Excellent wear resistance, 20 times longer service life.

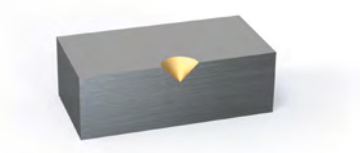


CUTTING CONDITIONS

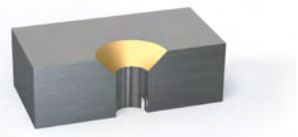
feed per lap f [mm]

		VDI 3323	C-TOP Vc [m/min]	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00
P	Unalloyed steel, leaded steel	1 - 5	**30** - 85	0.010 - 0.030	0.020 - 0.050	0.040 - 0.080	0.060 - 0.090	0.070 - 0.100	0.080 - 0.110
	Low alloyed steel < 800 N/mm²	6 - 9	**20** - 70	0.010 - 0.030	0.020 - 0.050	0.040 - 0.080	0.060 - 0.090	0.070 - 0.100	0.080 - 0.110
	High-alloy steel > 800 N/mm², stainless steel ferr.- marten.	10 - 13	**15** - 70	0.010 - 0.030	0.020 - 0.050	0.040 - 0.070	0.060 - 0.080	0.060 - 0.080	0.060 - 0.090
M	Austenitic stainless steel < 700 N/mm²	14.1 - 14.2	**25** - 40	0.005 - 0.015	0.015 - 0.050	0.040 - 0.060	0.040 - 0.060	0.040 - 0.080	0.040 - 0.080
	Nickel-free stainless steel / DUPLEX > 700 N/mm²	14.3 - 14.4	**20** - 35	0.005 - 0.015	0.015 - 0.050	0.040 - 0.060	0.040 - 0.060	0.040 - 0.080	0.040 - 0.080
K	Grey cast iron < 250 HB	15 - 16	**30** - 85	0.010 - 0.030	0.020 - 0.050	0.040 - 0.080	0.060 - 0.090	0.070 - 0.100	0.080 - 0.110
	Ductile, malleable, nodular cast iron > 250 HB	17 - 20	**10** - 60	0.010 - 0.030	0.020 - 0.050	0.040 - 0.080	0.060 - 0.090	0.070 - 0.100	0.080 - 0.110
S	Refractory alloy, Fe, Ni, Co base	31 - 35	**40** - 70	0.005 - 0.015	0.015 - 0.050	0.040 - 0.060	0.040 - 0.060	0.040 - 0.080	0.050 - 0.090
	Titanium, titanium alloy	36 - 37	**40** - 70	0.005 - 0.015	0.015 - 0.050	0.040 - 0.060	0.040 - 0.060	0.040 - 0.080	0.050 - 0.090

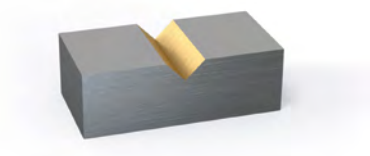
ONE TOOL FOR A MULTITUDE OF OPERATIONS!



SPOTTING



CHANFREINAGE



ENGRAVING

CHAMFERING

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