



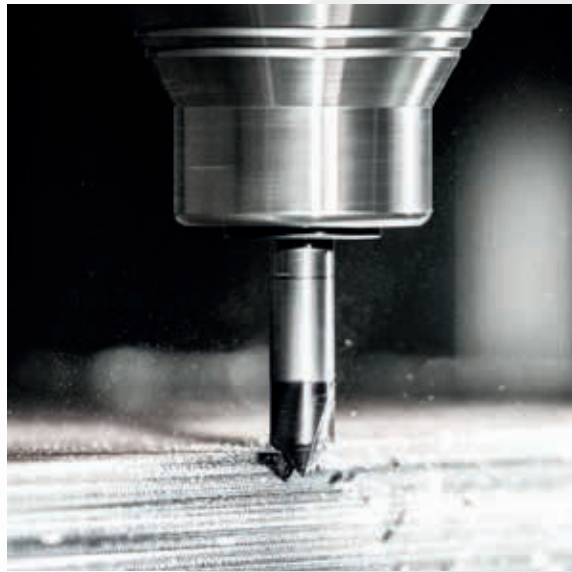
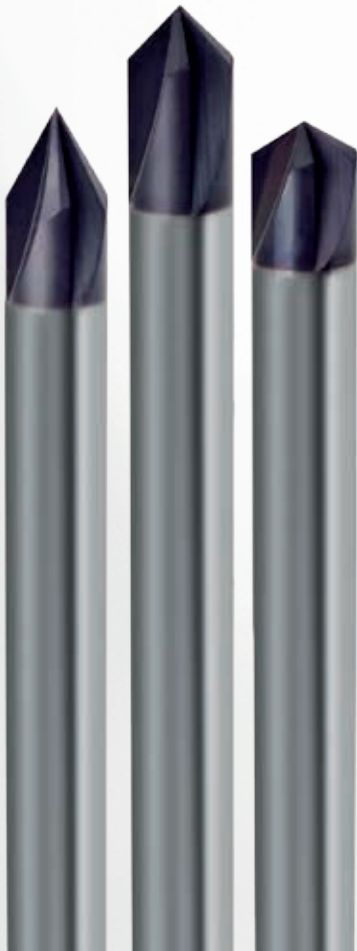
HARTNER

Precision Cutting Tools

LEERING
SINCE 1939 HENGEL

CHAMFER MILLING CUTTERS

MADE OF SOLID CARBIDE



60°



90°



120°



+ Chamfering, de-burring, contour operations



HARTNER

Precision Cutting Tools

SOLID CARBIDE CHAMFERING MILLING CUTTERS

APPLICATION

- ▼ chamfering, de-burring and contour operations
- ▼ universal application in general steels and high-strength materials as well as in aluminium, aluminium alloys and other non-ferrous metals

FEATURES

- ▼ solid carbide ultra fine
- ▼ wear-resistant TiAlN-coating
- ▼ radial relief geometry
- ▼ Hartner standard
- ▼ HA and HB shank to DIN 6535
- ▼ straight fluted

Article no.				84921 84922		84923 84924		84925 84926	
				60°		90°		120°	
									
d1 (js9)	d2 (h6)	l1	Z	l2	Availability		l2	Availability	
mm	mm	mm		mm			mm		
4.000	4.000	50.00	4	3.50	•		2.00	•	
6.000	6.000	57.00	4	5.20	•	•	3.00	•	•
8.000	8.000	63.00	4	7.00	•	•	4.00	•	•
10.000	10.000	72.00	4	8.70	•	•	5.00	•	•
12.000	12.000	83.00	4	10.40	•	•	6.00	•	•

CUTTING RATES

Material/ISO material		Hardness	Cutting speed* (v _c)	f _z (mm/min)				
				4	6	8	10	12
P	Structural/free-cutting steels, unalloyed heat-treat./case hard. steels	up to 850 N/mm ²	130	0.013	0.025	0.032	0.042	0.049
	Free-cutting steels, unalloyed case hardened steels, nitriding steels	850 - 1200 N/mm ²	120	0.013	0.025	0.032	0.042	0.049
	Alloyed heat-treatable, tool and high speed steels	850 - 1400 N/mm ²	90	0.011	0.021	0.028	0.039	0.046
M	Stainless steel - easy to machine	up to 750 N/mm ²	80	0.009	0.018	0.024	0.030	0.036
	Stainless steel - moderately difficult	up to 750 N/mm ²	60	0.009	0.015	0.021	0.027	0.030
	Stainless steel - difficult to machine	above 750 N/mm ²	50	0.007	0.015	0.018	0.024	0.027
K	Cast iron, grey cast iron, spheroidal graphite and malleable cast iron	up to 240 HB 30	120	0.012	0.024	0.030	0.039	0.048
	Grey cast iron, spheroidal graphite and malleable cast iron	above 240 HB 30	100	0.010	0.018	0.024	0.033	0.039
N	Aluminium, Al-wrought alloys, Al-alloys	up to 3% Si	300	0.014	0.028	0.035	0.046	0.056
	Aluminium-cast alloys	above 3% Si	150	0.011	0.021	0.028	0.039	0.046

