

Application values 90° solid carbide deburring tool (Art. no. 1016571 101-107)



Material groups for cutting values	Strength Class [N/mm ²]	Description regarding DIN	Vc [m/min]	fz [mm/T] at diameter						
				1-2	2-4	4-8	8-12	12-16	16-20	
1. Steels										
1.1	Free machining steel	< 900	9 S 20	90-100	0.012-0.015	0.015-0.02	0.02-0.028	0.028-0.045	0.045-0.06	0.06-0.08
1.2	Structural steel	<500	ST 37-2	120-140	0.032-0.038	0.038-0.04	0.04-0.045	0.045-0.08	0.08-0.1	0.1-0.12
1.3	Structural steel	> 500	ST 60-2	100-120	0.032-0.038	0.038-0.04	0.04-0.045	0.045-0.08	0.08-0.1	0.1-0.12
1.4	Heat-treated steel	<1000	42 CrMo 4	75-85	0.018-0.02	0.02-0.023	0.023-0.028	0.028-0.045	0.045-0.06	0.06-0.07
1.5	Cast iron	<1000	GS-45	75-85	0.018-0.02	0.02-0.023	0.023-0.028	0.028-0.045	0.045-0.06	0.06-0.07
1.6	Case-hardened steel	<1200	16 MnCr 5	65-75	0.018-0.02	0.02-0.023	0.023-0.028	0.028-0.045	0.045-0.06	0.06-0.07
1.7	Ferritic/martensitic stainless steel	<1100	X 10 Cr 13	70-75	0.018-0.02	0.02-0.022	0.022-0.025	0.025-0.045	0.045-0.06	0.06-0.07
1.8	Heat-treated steel	>1000	43 CrMo 4	90-100	0.018-0.02	0.02-0.023	0.023-0.028	0.028-0.045	0.045-0.06	0.06-0.07
1.9	Nitriding steel	<1300	31 CrMoV 9	60-75	0.01-0.012	0.012-0.018	0.018-0.025	0.025-0.03	0.03-0.055	0.055-0.07
1.10	Tool steel	<1300	X 38 CrMoV 5 1	55-70	0.01-0.012	0.012-0.018	0.018-0.025	0.025-0.03	0.03-0.055	0.055-0.07
2. Stainless steels										
2.1	Austenitic stainless steel	<1100	G-X 2 CrNiMo 18 15	55-60	0.018-0.02	0.02-0.022	0.022-0.025	0.025-0.045	0.045-0.06	0.06-0.07
3. Non-ferrous metals										
3.1	Long-chipping aluminium	<500	Al99.9	280-300	0.025-0.03	0.03-0.035	0.035-0.04	0.04-0.07	0.07-0.09	0.09-0.1
3.2	Short-chipping aluminium	<500	G-AlSi12	260-280	0.025-0.03	0.03-0.035	0.035-0.04	0.04-0.07	0.07-0.09	0.09-0.1
3.3	Copper alloy bronze, long-chipping	<1200	CuSn4	110-130	0.025-0.03	0.03-0.035	0.035-0.04	0.04-0.07	0.07-0.09	0.09-0.1
3.4	Copper alloy bronze, short-chipping	<850	CuNi12Zn24	130-150	0.025-0.03	0.03-0.035	0.035-0.04	0.04-0.07	0.07-0.09	0.09-0.1
3.5	Copper alloy brass, long-chipping	<600	Cu Zn 20	130-150	0.025-0.03	0.03-0.035	0.035-0.04	0.04-0.07	0.07-0.09	0.09-0.1
3.7	Thermoplastic	<600	Cu Zn 39 Pb 3	150-170	0.025-0.03	0.03-0.035	0.035-0.04	0.04-0.07	0.07-0.09	0.09-0.1
		<100	PVC, Acrylglas							
3.8	Duroplast	<150	Bakelit, Melamin							
3.9	Fibre-reinforced plastics	<1500	CFK, GFK							
3.10	Graphite	<60	C8000							
3.11	Composite materials									
4. Cast metal										
4.1	Grey cast iron	<260 HB	GG10	90-110	0.02-0.025	0.025-0.03	0.03-0.04	0.04-0.06	0.06-0.08	0.08-0.1
4.2	Spheroidal graphite iron	<310 HB	GGG 40	80-90	0.02-0.025	0.025-0.03	0.03-0.04	0.04-0.06	0.06-0.08	0.08-0.1
4.3	Ductile iron	<280 HB	GTW-55	85-95	0.02-0.025	0.025-0.03	0.03-0.04	0.04-0.06	0.06-0.08	0.08-0.1
5. Special alloys										
5.1	Titanium alloy	<1200	TiAl5Sn2,5	20-30	0.005-0.008	0.008-0.01	0.01-0.02	0.02-0.03	0.03-0.04	0.04-0.05
5.2	Nickel-based alloy	<1400	NiCr21Mo	20-30	0.005-0.008	0.008-0.01	0.01-0.02	0.02-0.03	0.03-0.04	0.04-0.05
5.3	Super alloys	<1400	X45CrSi 9 3	20-30	0.005-0.008	0.008-0.01	0.01-0.02	0.02-0.03	0.03-0.04	0.04-0.05
6. Hard materials										
6.1	Hardened steel -55 HRC	-55HRC	x40CrMoV5-1	30-40	0.01-0.015	0.015-0.02	0.02-0.04	0.04-0.06	0.06-0.08	0.08-0.09
6.2	Hardened steel -65 HRC	<65HRC	90MnCrV8	25-35	0.01-0.015	0.015-0.02	0.02-0.04	0.04-0.06	0.06-0.08	0.08-0.09

