

# Mini-boring bars starting from 4 mm working diameter, shank with clamping flange



## Cutting data recommendations

The cutting data recommendations in the table are guide values and depend to a high degree on the stability of the machine, fixture and workpiece.

Cutting group	Material group	Composition / structure	Tensile strength RM (MPa)	Hardness HB HRC	Cutting speed vc m/min	Recommended cutting grade	feed rate mm/rev. W 7502-....	max. cutting depth ap mm
1.1		C = 0.1 -0.25 annealed, long cutt.	420	125	60-130	P40/H26	0.02-0.03	0.35
1.2		C = 0.1 -0.25 annealed, short chip	420	125	60-130			
2.1	Unalloyed steel	C = 0.25 -0.55 annealed, long cutt.	620	190	50-120			
2.2	Cast steel	C = 0.25 -0.55 annealed, short chip	640	190	60-130			
3	Machining steel	C = 0.25 -0.55 tempered	850	250	50-120			
4		C = 0.25 -0.8 annealed	915	270	40-100			
5		C = 0.25 -0.8 tempered	1020	300	30-90			
6		annealed	610	180	50-110			
7	Low-alloy steel	tempered	930	275	30-80			
8	Cast steel							
8	Machining steel	tempered	1020	300	30-80			
9		tempered	1190	350	30-80			
10	High-alloy steel	annealed	680	200	30-80		0.02	0.25
11	Cast steel							
11	High-alloy tool steel	hardened and tempered	1100	325	30-70			
12-13	Nichtrost. Stahl und Stahlguss	ferritic/martensitic annealed	680	200	30-70			
		martensitic	810	240	30-60			
14.1	Stainless steel	austenitic quenched	610	180	30-60	H26		
14.2		austenitic/ferritic (duplex)	880	260	30-60			
15	Grey cast iron	perlitic/ferritic		180	70-120	K10/H26	0.04	0.5
16		perlitic (martensitic)		260	60-110			
17	Cast iron with	ferritic		160	40-100			0.4
18	nodular cast iron	perlitic		250	30-100			
19	Malleable	ferritic		130	50-120			
20		perlitic		230	40-110			
21	Aluminium	not heat treatable		60	60-180	K10	0.03-0.08	0.5
22	forging alloys	heat treatable/heat treated		100	60-180			
23	Aluminium	<12% Si not heat treatable		75	60-180			
24	casting alloys	<12% Si heat treatable/heat treated		90	60-180			
25		>12% Si not heat treatable		130	60-90			
26	Copper	Machined alloys, Pb >1%		110	60-90		0.03-0.05	
27	Copper alloys	CuZn, CuSnZn		90	60-90			
28	(bronze, brass)	Cu lead free copper/electr. copper		100	60-90			
29	Non metallic materials	Duroplastic	90		-200			
30		Reinforced materials	100		-200			
31	Heat resistant alloys	Fe-based annealed		200	30-50	H26	0.02-0.03	0.35
32		heat treated		230	30-50			
33		Ni- oder Co-based annealed		250	20-40			
34		heat treated		350	20-40			
35		cast		320	20-40			
36	Titanium alloys	Pure titanium	400		20-40	K10	0.03	0.2
37		Alpha-beta alloys	1050		20-40			