

ISO	VDI 3323	Material Description	HB	HRC	Vc (m/min)							L4272	
					L1211	L1212	L1213	L1214	L4211	L4212	L6215		L4271
P	1	Non-alloy steel	125		80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120
	2		190	13	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
	3		250	25	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
	4		270	28	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
	5	300	32	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120		
	6	180	10	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120		
	7	Low alloy steel	275	29	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
	8		300	32	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
	9		350	38	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
	10		200	15	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
	11	High alloyed steel, and tool steel	325	35	80-120	80-120	80-120	80-120	80-120	80-120	80-120	80-120	
12	200		15	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80		
M	13	Stainless steel	240	23	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80	
	14		180	10	40-80	40-80	40-80	40-80	40-80	40-80	40-80	40-80	
	15		180	10	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	
	16		260	3	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	
K	17	Nodular cast iron	160	3	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	
	18		250	25	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	
	19		130	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	
	20		230	21	50-100	50-100	50-100	50-100	50-100	50-100	50-100	50-100	
N	21	Aluminum-wrought alloy	60		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
	22		100		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
	23		75		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
	24		90		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
	25	130		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300		
	26	110		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300		
	27	Copper and Copper Alloys (Bronze / Brass)	90		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
	28		100		100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
	29				100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
	30				100-300	100-300	100-300	100-300	100-300	100-300	100-300	100-300	
S	31	Non Metallic Materials	200	15	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60
	32		280	30	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60
	33		250	25	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60
	34		350	38	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60
	35		320	34	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60
	36		400Rm		20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60
	37		1050Rm		20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60	20-60
H	38	Hardened steel	550	55							25-60	25-60	
	39		630	60							25-50	25-50	
	40		400	42							25-70	25-70	
	41		550	55							25-60	25-60	

[illegible]

TO CALCULATE SPEED & FEED RATES SCHNITTGESCHWINDIGKEIT & VORSCHUB KALKULIEREN			
Calculate RPM of Cutter	Calculate Feed per Revolution	Finally Calculate Feed at Tool Center Line	
$n = \frac{1000 \times V}{d \times \pi}$	$F_1 = F_z \times Z \times N$	$F_2 = \frac{F_1 \times (D - d)}{D}$	
N RPM		F₂ Feed at Center Line of Cutting	F₁ Feed at Cutting Edge
V Recommended Cutting Speed		D Major Diameter of Component	
d Diameter of Cutter			
F₂ Recommended Feed per Tooth			
Z Number of Teeth			