

# PART-OFF & GROOVING CUTTING DATA

## WIDIA RECOMMENDED DATA FOR PARTING-OFF

DIN ISO 513	Work Material	Condition	Hardness HB	Material Group	Cutting Speeds in SFPM			
					TN7525	TN7535/TPC25	TPC35	
P	Unalloyed steel, cast steel and free cutting steel	< 0.25% C annealed	125	1	650 - 750	455 - 680	390 - 585	
		≥ 0.25% C annealed	190	2	620 - 975	425 - 615	360 - 520	
		< 0.55% C hardened	250	3	520 - 820	360 - 550	295 - 455	
		≤ 0.55% C	annealed	220	4	585 - 910	390 - 585	325 - 485
			hardened	300	5	490 - 780	325 - 520	260 - 390
	Low alloy steel and cast steel	annealed	200	6	585 - 910	390 - 585	325 - 485	
			275	7	455 - 780	325 - 520	260 - 420	
		hardened	300	8	390 - 715	295 - 485	230 - 355	
			350	9	295 - 520	195 - 390	165 - 290	
	High alloy steel, cast steel & tool steel	annealed	200	10	425 - 550	295 - 390	230 - 325	
		hardened	325	11	260 - 420	165 - 260	115 - 195	
M	400 Series Stainless steel and cast steel	ferritic / martensitic	200	12	585 - 780	390 - 615	325 - 520	
		martensitic	240	13	425 - 650	295 - 485	260 - 420	
	300 Series Stainless steel	austenitic	180	14	455 - 680	360 - 550	295 - 485	
DIN ISO 513	Work Material	Condition	Hardness HB	Material Group	Cutting Speeds in SFPM			
					TN7525	THM		
K	Grey cast iron	ferritic/pearlitic	180	15	455 - 650	230 - 325		
		pearlitic	260	16	325 - 520	165 - 260		
	Nodular cast iron	ferritic	160	17	390 - 585	195 - 260		
		pearlitic	250	18	295 - 485	130 - 225		
	Malleable cast iron	ferritic	130	19	490 - 680	260 - 355		
		pearlitic	230	20	360 - 550	195 - 290		
N	Aluminum alloys wrought	non-age-hardenable	60	21		1950 - 2925		
		age-hardened	100	22		1625 - 2600		
	Cast aluminium alloys	≤ 12% Si	non-age-hardenable	75	23		1950 - 2925	
			age hardened	90	24		1625 - 2600	
		> 12% Si	heat resisting	130	25		650 - 1040	
	Copper & copper alloys	> 1% Pb	lead alloy	110	26		650 - 975	
			Brass, red brass	90	27		490 - 780	
		Bronze, electrolyte-Cu	100	28		390 - 585		

### Feed f (inches/rev) for Grooving Width

Insert Width	2mm (.079")	3mm (.118")	4mm (.157")	5mm (.197")	6mm (.236")	8mm (.315")
Feed	.002 - .005	.003 - .008	.004 - .010	.004 - .013	.005 - .014	.005 - .016