Cutting Parameter Recommendation Table -Negative inserts

Materials								_						_	Turr	ning	g gra	ade	apı	olica	— atio	n ra	ng	— е		_	_		_	_		
					_	Initial value of authing and Malmain																										
ISO	Workpiece material			ness	Tensile strength Rm(N/mm²)	Δ.	2150	np	Δ	AC200P AC250P AC350P AP301M AC150K ACK15A AW100K												nκ	Λ.	P10								
				hard HB)	stre V/mi																								UIX			
				Brinell hardness (HB)	Rm()			_		_			_		_		1	f(n	nm/r	ev)			_									
					🛎	0.1	0.4	0.6	0.1	0.4	0.6	0.1	0.4	0.6	0.1	0.4	0.6	0.1	0.3	0.5	0.1	0.4	0.6	0.1	0.4	0.6	0.1	0.2	0.4	0.1	0.3	0.5
		C ≤ 0.25%	Annealed	125	428	485	360	270	400	310	230	380	260	210	250	170	140															
		0.25 <c 0.55%<="" td="" ≤=""><td>Annealed</td><td>190</td><td>639</td><td>370</td><td>270</td><td>210</td><td>320</td><td>240</td><td>190</td><td>280</td><td>200</td><td>150</td><td>200</td><td>135</td><td>110</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></c>	Annealed	190	639	370	270	210	320	240	190	280	200	150	200	135	110															
P		0.25 <c 0.55%<="" td="" ≤=""><td>Heat-treated</td><td>210</td><td>708</td><td>260</td><td>220</td><td>170</td><td>250</td><td>200</td><td>160</td><td>200</td><td>160</td><td>135</td><td>150</td><td>125</td><td>90</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></c>	Heat-treated	210	708	260	220	170	250	200	160	200	160	135	150	125	90															
		C>0.55%	Annealed	190	639	-					150			_	-	-	-															
		C>0.55%	Heat-treated	300	1013	210	180	150	210	160	150	160	120	110	125	75	65															
		Free cutting steel (short-chip)	Annealed	220	745						210																					
	Low-alloyed steel	Annealed		175	591	-				_	180		_				_															
		Heat-treated		300	1013	_		_		_	140		_		135		-															
		Heat-treated Heat-treated		380 430	1282 1477	90	120 70	_	180 120		120	100	70	55	90	65	45															
		Annealed		200	675	-		_		_	180	210	145	85	180	150	85															
	High-alloyed steel and high-alloyed tool	Hardened and tempered		300	1013	230		_		_	160		_			85	-															
	steel	Hardened and	tempered	400	1361	80	70		130	_	_																					
	Stainless steel	Ferritic/martensit	tic, annealed	200	675				220	170	160	180	150	120	150	120	95															
	Stainless steel	Martensitic, he	at-treated	330	1114				160	130	100	140	100	70	110	80	60															
		Austenitic, queno		200	675													200	160	130										240	190	150
М	Stainless steel	Austenitic, precipitation hardened (PH)		300	1013													160	130	70										150	85	
		Austenitic/ferri	tic, duplex	230	778													180	140	110										170	145	100
	Malleable cast iron	Ferrition		200	400																		150	240	160							
	Walledble dast iron	Pearliti	ic	260	700																				120							
	Grey cast iron	Low tensile strength		180	200																				210							
K		High tensile streng			350																_				150							
	Nodular cast iron Ferritic Pearlitic			155 265	700																				170 120							
		GGV(CGI)		230	400																. 50		.20	.,,	120	100						
	Wrought aluminium	Non-aging	alloy	30	-																											
	alloys	Aged all	loy	100	340																											
	Coot aluminium	≤ 12% Si, non-a	iging alloy	75	260																											
	Cast aluminium alloys	≤ 12% Si, aged alloy		90	310																											
N		> 12% Si, non-aging		130	450																											L
	Magnesium alloys			70	250																											
		Unalloyed, electro	olytic copper	100	340																											
	Copper and copper alloys	Brass, bronze, red brass		90	310																											
	(bronze/brass)		Cu alloys, short-chip		380																											
		High tensile, An		300	1010													0.0	-											105		
		Fe-based	Annealed	200	680 940														50											100	65 55	
	Heat-resistant alloys		Aged																													
		Ni or Co based	Annealed	250	840													70	50											80	55	
			Aged	350	1180													60	40											70		
S		Cast		320	1080													50	30											60		-
_		Pure titanium		200	680																									200	180	140
	Titanium alloys	α and β alloys, aged		375	1260													70	45	40										90	55	45
		β alloys		410	1400													40	35	30										55	35	30
	Tungsten alloys	1177		300	1010																											
	Molybdenum alloys	1262		300	1010														160													
Н	Handan ed et el	Hardened and tempered		50HRC																												
	Hardened steel	Hardened and tempered Hardened and tempered		55HRC																												
Н		Hardened and	tompored	60HRC																						1						

^{*}The recommended cutting data always refer to general cutting conditions. The actual selection should be adjusted according to the factors such as machine rigidity, tool body, workpiece conditions and coolant.