
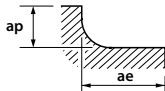



CUTTING CONDITIONS


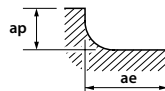

Milling | Endmills | Cutting conditions

WXS-HS-CRE

Regular milling

	GG		30~38 HRC NAK55 • HPM1 • SKT • SKD		38~45 HRC SUS304 • SKD • HPM50 NAK80		45~55 HRC		55~60 HRC		60~ HRC																															
	Ø	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)																													
	2 x R0,5	16.000	5.250	12.500	3.800	11.000	3.350	7.950	2.150	4.750	860	4.270	615																													
	3 x R0,75	10.500	6.250	8.500	4.500	7.450	3.900	5.300	2.600	3.200	995	2.850	715																													
	4 x R1	7.950	6.600	6.350	4.800	5.550	4.200	4.000	2.750	2.400	1.050	2.150	755																													
	6 x R1,5	5.300	7.000	4.250	5.100	3.700	4.450	2.650	2.850	1.600	1.150	1.400	825																													
	8 x R2	4.000	7.000	3.200	5.100	2.800	4.450	2.000	2.850	1.200	1.150	1.050	825																													
	10 x R2	3.200	7.000	2.550	5.100	2.250	4.450	1.600	2.850	955	1.150	860	825																													
	12 x R3	2.650	7.000	2.100	5.100	1.850	4.450	1.350	2.850	795	1.150	715	825																													
Max cutting depth	 						<table><tr><td>ap</td><td></td><td>ae</td></tr><tr><td>RE≤2</td><td>0,2xRE</td><td>0,5D</td></tr><tr><td>2<RE</td><td>0,5mm</td><td>0,5D</td></tr></table>			ap		ae	RE≤2	0,2xRE	0,5D	2<RE	0,5mm	0,5D	<table><tr><td>ap</td><td></td><td>ae</td></tr><tr><td>RE≤2</td><td>0,2xRE</td><td>0,5D</td></tr><tr><td>2<RE</td><td>0,4mm</td><td>0,5D</td></tr></table>			ap		ae	RE≤2	0,2xRE	0,5D	2<RE	0,4mm	0,5D	<table><tr><td>ap</td><td></td><td>ae</td></tr><tr><td>RE≤2</td><td>0,1xRE</td><td>0,5D</td></tr><tr><td>2<RE</td><td>0,2mm</td><td>0,5D</td></tr></table>			ap		ae	RE≤2	0,1xRE	0,5D	2<RE	0,2mm	0,5D
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High speed side milling

	GG		30~38 HRC NAK55 • HPM1 • SKT • SKD		38~45 HRC SUS304 • SKD • HPM50 NAK80		45~55 HRC		55~60 HRC		60~ HRC																							
	Ø	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)	S (min ⁻¹)	F (mm/min)																					
	2 x R0,5	31.850	10.500	32.000	9.550	24.000	7.150	24000	6.450	16.000	2.850	14.400	2.050																					
	3 x R0,75	21.000	12.500	21.000	12.000	16.000	8.400	16.000	7.850	10.500	3.300	9.450	2.370																					
	4 x R1	16.000	13.000	16.000	12.000	12.000	9.000	12.000	8.200	7.950	3.550	7.150	2.550																					
	6 x R1,5	10.600	14.000	10.600	12.700	7.950	9.550	7.950	8.600	5.300	3.800	5.300	3.800																					
	8 x R2	7.950	14.000	7.950	12.700	5.950	9.550	5.950	8.600	4.000	3.800	4.000	3.800																					
	10 x R2	6.350	14.000	6.350	12.700	4.750	9.550	4.750	8.600	3.200	3.800	3.200	3.800																					
	12 x R3	5.300	14.000	5.300	12.700	4.000	9.550	4.000	8.600	2.650	3.800	2.650	3.800																					
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	ap	ae																																
0,1xR	0,3D																																	
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2<R	0,1mm	0,3D																																

1. Use a rigid and precise machine and holder.
2. These milling conditions are based on milling with circular interpolation at corners. For milling without circular interpolation (such as right angle corners), reduce the speed to 50-70% and the cutting depth to 50-80% of the above conditions.
3. We suggest using air blow or MQL (mist).
4. Please adjust the speed, feed and cutting depth according to actual cutting conditions.
5. When WXS(HS)-CRE enters in Z axis, reduce the feed speed to 30-60% of the above conditions with machining incline angle $\beta < 2^\circ$
6. These milling conditions are for a tool extension length: less than $4 \times D$. For a longer tool extension, reduce the speed, feed rate, and the cutting depth in accordance with the respective coefficients, to prevent chattering.