

101850, 102350 (2 Flute Cm Rad Rib Processing)

MATERIAL GROUP	HARDNESS HRC		Size (mm)							
			0.5	0.6	0.8	1.0	1.2	1.5	2.0	
P	13 14	30-45	a_p (mm)	0.0203	0.0179	0.0238	0.0193	0.0473	0.0609	0.0805
			v_c (m/min)	46	52	53	49	52	63	53
			n	29295	27600	21095	15805	13800	13375	8435
			f_z	0.028	0.032	0.045	0.057	0.067	0.094	0.107
			f (mm/min)	7555	1765	1895	1775	1845	2515	1805
H	15 15	45-55	a_p (mm)	0.013	0.0145	0.0143	0.0138	0.0285	0.0332	0.0575
			v_c (m/min)	39	40	40	35	36	36	40
			n	24840	21230	15920	11145	9550	7640	6365
			f_z	0.024	0.026	0.037	0.048	0.055	0.07	0.089
			f (mm/min)	1190	1100	1175	1070	1050	1070	1130
	15 16	55-60	a_p (mm)	0.0077	0.0087	0.0083	0.0102	0.0171	0.0199	0.0345
			v_c (m/min)	25	26	26	22	23	23	26
			n	15920	13800	10350	7005	6100	4880	4140
			f_z	0.015	0.016	0.022	0.03	0.035	0.044	0.053
			f (mm/min)	475	440	455	420	425	430	435

► The data shown is based on medial length tools. Please adjust machining conditions according to length.

v_c - cutting speed (m/min)
 n - RPM (rev/min)
 f_z - feed rate (mm/tooth)
 f - feed rate (mm/rev)
 z - No. of teeth
 a_p - axial depth of cut
 a_r - radial depth of cut

To calculate RPM from cutting speed:
$$n = \frac{v_c \times 1000}{\pi \times \phi}$$

To calculate cutting speed from RPM:
$$v_c = \frac{n \times \pi \times \phi}{1000}$$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

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MATERIAL GROUP	HARDNESS HRc		Size (mm)				
			3.0	4.0	6.0	8.0	
P	13 14	30-45	a_p (mm)	0.08	0.09	0.1	0.1
			v_c (m/min)	65	70	85	100
			n	6900	5570	4510	3980
			f_z	0.114	0.12	0.16	0.19
			f (mm/min)	1570	1335	1440	1510
H	15 16	45-55	a_p (mm)	0.05	0.06	0.07	0.07
			v_c (m/min)	45	50	65	80
			n	4775	3980	3450	3185
			f_z	0.08	0.09	0.12	0.14
			f (mm/min)	760	715	825	890
	15 16	55-60	a_p (mm)	0.03	0.04	0.05	0.05
			v_c (m/min)	30	35	45	60
			n	3185	2785	2385	2385
			f_z	0.06	0.07	0.09	0.12
			f (mm/min)	380	390	430	570

The diagram illustrates a cross-section of a 2-flute radial rib. A horizontal dimension line labeled a_p indicates the axial depth of cut, which is the distance from the start of the rib to the end of the cut.

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To calculate cutting speed from RPM: $v_c = \frac{n \cdot \pi \cdot \phi}{1000}$

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