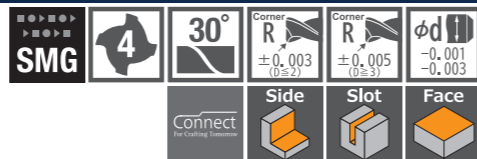


MUGEN COATING PREMIUM Plus 4-Flute Long Neck Corner Radius End Mill with short shank for Hardened Steel and High accuracy cutting Total 205 sizes

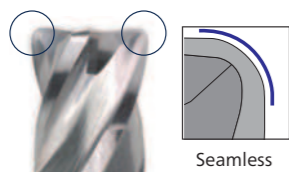
MUGEN COATING PREMIUM Plus 4-Flute Long Neck Corner Radius End Mill with short shank for Hardened Steel and High accuracy cutting

Wiper and seamless shape improve surface roughness  
High accuracy corner R enhance finishing performance on hardened steels



- MUGEN COATING PREMIUM Plus for hardened steels with strong back taper reduce chatter to realize long tool life and excellent finishing surface.
- 4-flute end mill for high efficiency machining.
- 4-Flute end mill has 205 sizes in total that lineup from the smallest diameter  $\phi 0.1$  to  $\phi 6$ .

Enhances accuracy on side machining  
 $R \pm 0.003$  ( $0.1 \leq D \leq 2$ )  
 $R \pm 0.005$  ( $3 \leq D \leq 6$ )

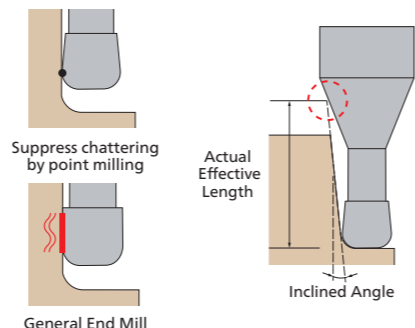


Seamless

Enhances surface roughness on bottom by wiper ( $D \geq \phi 0.4$ )



By adopting wiper at the end tooth, improves the surface roughness on bottom surface machining



Suppress chatter by point milling

General End Mill

Actual Effective Length

Inclined Angle

◆ New Size

Code No.	Dia. (D)	Corner Radius (R)	Under Neck Length ( $\phi 1$ )	Length of Cut ( $\phi$ )	Neck Dia. (dz)	Neck Taper Angle ( $\gamma$ )	Shank Dia. (d)	Overall Length (L)	Actual effective length depending on inclined angle of workpiece				
									30°	1°	1°30'	2°	3°
08-00239-01002	0.1	R0.01	0.2	0.08	0.085	15°	4	35	0.23	0.24	0.25	0.26	0.28
08-00239-01003			0.3	0.08	0.085	15°	4	35	0.33	0.35	0.36	0.37	0.4
08-00239-01503	0.15	R0.01	0.3	0.12	0.135	15°	4	35	0.33	0.35	0.36	0.37	0.4
08-00239-01505			0.5	0.12	0.135	15°	4	35	0.54	0.56	0.58	0.6	0.65
08-00239-01523		R0.02	0.3	0.12	0.135	15°	4	35	0.33	0.34	0.36	0.37	0.4
08-00239-01525			0.5	0.12	0.135	15°	4	35	0.54	0.56	0.58	0.6	0.65
08-00239-02203	0.2	R0.02	0.3	0.15	0.18	15°	4	35	0.34	0.35	0.37	0.38	0.41
08-00239-02205			0.5	0.15	0.18	15°	4	35	0.55	0.57	0.59	0.61	0.66
08-00239-02207			0.75	0.15	0.18	15°	4	35	0.81	0.84	0.87	0.9	0.97
08-00239-02210			1	0.15	0.18	15°	4	35	1.07	1.1	1.14	1.18	1.28
08-00239-02403		R0.05	0.3	0.15	0.18	15°	4	35	0.34	0.35	0.36	0.38	0.4
08-00239-02405			0.5	0.15	0.18	15°	4	35	0.55	0.57	0.59	0.61	0.65
08-00239-02407			0.75	0.15	0.18	15°	4	35	0.81	0.83	0.86	0.89	0.96
08-00239-02410			1	0.15	0.18	15°	4	35	1.07	1.1	1.14	1.18	1.27
08-00239-03205	0.3	R0.02	0.5	0.25	0.28	15°	4	35	0.55	0.57	0.59	0.61	0.66
08-00239-03207			0.75	0.25	0.28	15°	4	35	0.81	0.84	0.87	0.9	0.97
08-00239-03210			1	0.25	0.28	15°	4	35	1.07	1.1	1.14	1.18	1.28
08-00239-03215			1.5	0.25	0.28	15°	4	35	1.58	1.64	1.7	1.76	1.9
08-00239-03405		R0.05	0.5	0.25	0.28	15°	4	35	0.55	0.57	0.59	0.61	0.65
08-00239-03407			0.75	0.25	0.28	15°	4	35	0.81	0.83	0.86	0.89	0.96
08-00239-03410			1	0.25	0.28	15°	4	35	1.07	1.1	1.14	1.18	1.27
08-00239-03415			1.5	0.25	0.28	15°	4	35	1.58	1.64	1.69	1.76	1.89

How to Order

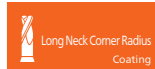
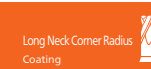
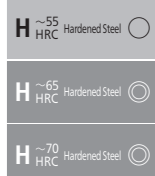
When you order, indicate MHRSH430RSF (D)×(R)×(L). ※( $\gamma$ ) is reference value.

Machining case

S-020, S-021

Unit : mm

Code No.	Dia. (D)	Corner Radius (R)	Under Neck Length ( $\phi 1$ )	Length of Cut ( $\phi$ )	Neck Dia. (dz)	Neck Taper Angle ( $\gamma$ )	Shank Dia. (d)	Overall Length (L)	Actual effective length depending on inclined angle of workpiece					
									30°	1°	1°30'	2°	3°	
08-00239-04205	0.4	R0.02	0.5	0.3	0.37	15°	4	35	0.57	0.59	0.61	0.63	0.68	
08-00239-04210			1	0.3	0.37	15°	4	35	1.09	1.12	1.16	1.21	1.3	
08-00239-04215			1.5	0.3	0.37	15°	4	35	1.6	1.66	1.72	1.78	1.92	
08-00239-04220			2	0.3	0.37	15°	4	35	2.12	2.19	2.27	2.36	2.55	
08-00239-04405			R0.05	0.5	0.3	0.37	15°	4	35	0.57	0.59	0.61	0.63	0.67
08-00239-04410				1	0.3	0.37	15°	4	35	1.08	1.12	1.16	1.2	1.3
08-00239-04415		1.5		0.3	0.37	15°	4	35	1.6	1.66	1.71	1.78	1.92	
08-00239-04420		2		0.3	0.37	15°	4	35	2.12	2.19	2.27	2.35	2.54	
08-00239-05210		R0.02		1	0.4	0.46	15°	4	35	1.11	1.14	1.18	1.23	1.33
08-00239-05215				1.5	0.4	0.46	15°	4	35	1.62	1.68	1.74	1.8	1.95
08-00239-05220			2	0.4	0.46	15°	4	35	2.14	2.21	2.29	2.38	2.57	
08-00239-05225			2.5	0.4	0.46	15°	4	35	2.66	2.75	2.85	2.95	3.19	
08-00239-05410	R0.05		1	0.4	0.46	15°	4	35	1.1	1.14	1.18	1.22	1.32	
08-00239-05415			1.5	0.4	0.46	15°	4	35	1.62	1.68	1.73	1.8	1.94	
08-00239-05420		2	0.4	0.46	15°	4	35	2.14	2.21	2.29	2.37	2.56		
08-00239-05425		2.5	0.4	0.46	15°	4	35	2.65	2.75	2.84	2.95	3.18		
08-00239-05510		R0.1	1	0.4	0.46	15°	4	35	1.1	1.14	1.18	1.22	1.31	
08-00239-05515			1.5	0.4	0.46	15°	4	35	1.62	1.67	1.73	1.79	1.93	
08-00239-05520	2		0.4	0.46	15°	4	35	2.14	2.21	2.28	2.37	2.55		
08-00239-05525	2.5		0.4	0.46	15°	4	35	2.65	2.74	2.84	2.94	3.17		
08-00239-06210	R0.02		1	0.5	0.56	15°	4	35	1.11	1.14	1.18	1.23	1.33	
08-00239-06220			2	0.5	0.56	15°	4	35	2.14	2.21	2.29	2.38	2.57	
08-00239-06230		3	0.5	0.56	15°	4	35	3.17	3.28	3.4	3.53	3.81		
08-00239-06410		R0.05	1	0.5	0.56	15°	4	35	1.1	1.14	1.18	1.22	1.32	
08-00239-06420			2	0.5	0.56	15°	4	35	2.14	2.21	2.29	2.37	2.56	
08-00239-06430			3	0.5	0.56	15°	4	35	3.17	3.28	3.4	3.52	3.81	
08-00239-06510	R0.1		1	0.5	0.56	15°	4	35	1.1	1.14	1.18	1.22	1.31	
08-00239-06520			2	0.5	0.56	15°	4	35	2.14	2.21	2.28	2.37	2.55	
08-00239-06530			3	0.5	0.56	15°	4	35	3.17	3.28	3.39	3.52	3.79	
08-00239-08202		R0.02	2	0.65	0.76	15°	4	35	2.14	2.21	2.29	2.38	2.57	
08-00239-08203			3	0.65	0.76	15°	4	35	3.17	3.28	3.4	3.53	3.81	
08-00239-08204			4	0.65	0.76	15°	4	35	4.21	4.35	4.51	4.68	5.06	
08-00239-08402	R0.05		2	0.65	0.76	15°	4	35	2.14	2.21	2.29	2.37	2.56	
08-00239-08403		3	0.65	0.76	15°	4	35	3.17	3.28	3.4	3.52	3.81		
08-00239-08404		4	0.65	0.76	15°	4	35	4.21	4.35	4.51	4.67	5.05		
08-00239-08502		R0.1	2	0.65	0.76	15°	4	35	2.14	2.21	2.28	2.37	2.55	
08-00239-08503	3		0.65	0.76	15°	4	35	3.17	3.28	3.39	3.52	3.79		
08-00239-08504	4		0.65	0.76	15°	4	35	4.2	4.35	4.5	4.67	5.04		
08-00239-08602	R0.2		2	0.65	0.76	15°	4	35	2.13	2.2	2.27	2.35	2.53	
08-00239-08603		3	0.65	0.76	15°	4	35	3.17	3.27	3.38	3.5	3.77		
08-00239-08604		4	0.65	0.76	15°	4	35	4.2	4.34	4.49	4.65	5.01		
08-00239-10202		R0.02	2	0.8	0.95	15°	4	35	2.16	2.23	2.31	2.4	2.59	
08-00239-10203	3		0.8	0.95	15°	4	35	3.19	3.3	3.42	3.55	3.84		
08-00239-10204	4		0.8	0.95	15°	4	35	4.23	4.37	4.53	4.7	5.08		
08-00239-10205	5		0.8	0.95	15°	4	40	5.26	5.44	5.64	5.85	6.32		
08-00239-10402	R0.05		2	0.8	0.95	15°	4	35	2.16	2.23	2.31	2.39	2.59	
08-00239-10403		3	0.8	0.95	15°	4	35	3.19	3.3	3.42	3.54	3.83		
08-00239-10404		4	0.8	0.95	15°	4	35	4.22	4.37	4.53	4.69	5.07		
08-00239-10405		5	0.8	0.95	15°	4	40	5.26	5.44	5.63	5.84	6.31		
08-00239-10502		R0.1	2	0.8	0.95	15°	4	35	2.16	2.23	2.3	2.39	2.57	
08-00239-10503	3		0.8	0.95	15°	4	35	3.19	3.3	3.41	3.54	3.82		
08-00239-10504	4		0.8	0.95	15°	4	35	4.22	4.37	4.52	4.69	5.06		
08-00239-10505	5		0.8	0.95	15°	4	40	5.26	5.44	5.63	5.84	6.3		



MUGEN COATING PREMIUM Plus 4-Flute Long Neck Corner Radius End Mill with short shank for Hardened Steel and High accuracy cutting

MUGEN COATING PREMIUM Plus 4-Flute Long Neck Corner Radius End Mill with short shank for Hardened Steel and High accuracy cutting

Unit : mm

Code No.	Dia. (D)	Corner Radius (R)	Under Neck Length (ℓ1)	Length of Cut (ℓ)	Neck Dia. (d2)	Neck Taper Angle (γ)	Shank Dia. (d)	Overall Length (L)	Actual effective length depending on inclined angle of workpiece					
									30°	1°	1°30'	2°	3°	
									08-00239-10602	1	R0.2	2	0.8	0.95
08-00239-10603	3	0.8	0.95	15°	4	35	3.19	3.29	3.4			3.52	3.79	
08-00239-10604	4	0.8	0.95	15°	4	35	4.22	4.36	4.51			4.67	5.04	
08-00239-10605	5	0.8	0.95	15°	4	40	5.25	5.43	5.62			5.82	6.28	
08-00239-10702	2	0.8	0.95	15°	4	35	2.15	2.21	2.28			2.36	2.53	
08-00239-10703	3	0.8	0.95	15°	4	35	3.18	3.28	3.39		3.51	3.77		
08-00239-10704	4	0.8	0.95	15°	4	35	4.22	4.35	4.5		4.66	5.01		
08-00239-10705	5	0.8	0.95	15°	4	40	5.25	5.42	5.61		5.81	6.26		
08-00239-15203	1.5	R0.02	3	1.2	1.43	15°	4	35	3.23		3.34	3.46	3.59	3.88
08-00239-15204			4	1.2	1.43	15°	4	35	4.26		4.41	4.57	4.74	5.13
08-00239-15206			6	1.2	1.43	15°	4	40	6.33	6.55	6.79	7.04	7.61	
08-00239-15208		8	1.2	1.43	15°	4	40	8.4	8.69	9	9.34	10.1		
08-00239-15403		R0.05	3	1.2	1.43	15°	4	35	3.23	3.34	3.46	3.59	3.87	
08-00239-15404			4	1.2	1.43	15°	4	35	4.26	4.41	4.57	4.74	5.12	
08-00239-15406			6	1.2	1.43	15°	4	40	6.33	6.55	6.78	7.04	7.6	
08-00239-15408		8	1.2	1.43	15°	4	40	8.4	8.69	9	9.34	10.09		
08-00239-15503		1.5	R0.1	3	1.2	1.43	15°	4	35	3.23	3.34	3.45	3.58	3.86
08-00239-15504				4	1.2	1.43	15°	4	35	4.26	4.41	4.56	4.73	5.11
08-00239-15506	6			1.2	1.43	15°	4	40	6.33	6.55	6.78	7.03	7.59	
08-00239-15508	8		1.2	1.43	15°	4	40	8.4	8.69	9	9.33	10.08		
08-00239-15603	R0.2		3	1.2	1.43	15°	4	35	3.22	3.33	3.44	3.57	3.84	
08-00239-15604			4	1.2	1.43	15°	4	35	4.26	4.4	4.55	4.72	5.08	
08-00239-15606			6	1.2	1.43	15°	4	40	6.33	6.54	6.77	7.01	7.57	
08-00239-15608	8		1.2	1.43	15°	4	40	8.39	8.68	8.98	9.31	10.06		
08-00239-15703	R0.3		3	1.2	1.43	15°	4	35	3.22	3.32	3.43	3.55	3.82	
08-00239-15704			4	1.2	1.43	15°	4	35	4.25	4.39	4.54	4.7	5.06	
08-00239-15706		6	1.2	1.43	15°	4	40	6.32	6.53	6.76	7	7.55		
08-00239-15708	8	1.2	1.43	15°	4	40	8.39	8.67	8.97	9.3	10.03			
08-00239-15803	R0.5	3	1.2	1.43	15°	4	35	3.21	3.31	3.41	3.52	3.77		
08-00239-15804		4	1.2	1.43	15°	4	35	4.25	4.38	4.52	4.67	5.01		
08-00239-15806		6	1.2	1.43	15°	4	40	6.32	6.52	6.74	6.97	7.5		
08-00239-15808	8	1.2	1.43	15°	4	40	8.38	8.66	8.95	9.27	9.98			
08-00239-20204	2	R0.02	4	1.6	1.91	15°	4	35	4.3	4.45	4.61	4.78	5.17	
08-00239-20206			6	1.6	1.91	15°	4	35	6.37	6.59	6.83	7.08	7.66	
08-00239-20208			8	1.6	1.91	15°	4	40	8.44	8.73	9.05	9.38	10.14	
08-00239-20210		10	1.6	1.91	15°	4	40	10.5	10.87	11.26	11.68	12.63		
08-00239-20404		R0.05	4	1.6	1.91	15°	4	35	4.3	4.45	4.61	4.78	5.16	
08-00239-20406			6	1.6	1.91	15°	4	35	6.37	6.59	6.83	7.08	7.65	
08-00239-20408			8	1.6	1.91	15°	4	40	8.44	8.73	9.04	9.38	10.14	
08-00239-20410		10	1.6	1.91	15°	4	40	10.5	10.87	11.26	11.68	12.62		
08-00239-20504		R0.1	4	1.6	1.91	15°	4	35	4.3	4.45	4.6	4.77	5.15	
08-00239-20506			6	1.6	1.91	15°	4	35	6.37	6.59	6.82	7.07	7.64	
08-00239-20508	8		1.6	1.91	15°	4	40	8.43	8.73	9.04	9.37	10.13		
08-00239-20510	10	1.6	1.91	15°	4	40	10.5	10.86	11.25	11.67	12.61			
08-00239-20604	R0.2	4	1.6	1.91	15°	4	35	4.3	4.44	4.59	4.76	5.13		
08-00239-20606		6	1.6	1.91	15°	4	35	6.36	6.58	6.81	7.06	7.62		
08-00239-20608		8	1.6	1.91	15°	4	40	8.43	8.72	9.03	9.36	10.1		
08-00239-20610	10	1.6	1.91	15°	4	40	10.5	10.86	11.24	11.66	12.59			
08-00239-20704	R0.3	4	1.6	1.91	15°	4	35	4.29	4.43	4.58	4.74	5.11		
08-00239-20706		6	1.6	1.91	15°	4	35	6.36	6.57	6.8	7.04	7.59		
08-00239-20708		8	1.6	1.91	15°	4	40	8.43	8.71	9.02	9.34	10.08		
08-00239-20710	10	1.6	1.91	15°	4	40	10.5	10.85	11.23	11.64	12.56			
08-00239-20804	R0.5	4	1.6	1.91	15°	4	35	4.29	4.42	4.56	4.71	5.06		
08-00239-20806		6	1.6	1.91	15°	4	35	6.35	6.56	6.78	7.01	7.54		
08-00239-20808		8	1.6	1.91	15°	4	40	8.42	8.7	8.99	9.31	10.03		
08-00239-20810	10	1.6	1.91	15°	4	40	10.49	10.84	11.21	11.61	12.52			

Unit : mm

コードNo. Code No.	Dia. (D)	Corner Radius (R)	Under Neck Length (ℓ1)	Length of Cut (ℓ)	Neck Dia. (d2)	Neck Taper Angle (γ)	Shank Dia. (d)	Overall Length (L)	Actual effective length depending on inclined angle of workpiece				
									30°	1°	1°30'	2°	3°
									08-00239-30404	3	R0.05	4	2.5
08-00239-30406	6	2.5	2.85	15°	6	45	6.48	6.71	6.95			7.21	7.79
08-00239-30408	8	2.5	2.85	15°	6	45	8.55	8.85	9.17			9.51	10.28
08-00239-30410	10	2.5	2.85	15°	6	50	10.62	10.99	11.38			11.81	12.76
08-00239-30412	12	2.5	2.85	15°	6	50	12.69	13.13	13.60			14.11	15.25
08-00239-30415	15	2.5	2.85	15°	6	55	15.79	16.34	16.92		17.56	18.98	
08-00239-30504	R0.1	4	2.5	2.85	15°	6	45	4.42	4.57		4.73	4.90	5.29
08-00239-30506		6	2.5	2.85	15°	6	45	6.48	6.71		6.94	7.20	7.78
08-00239-30508		8	2.5	2.85	15°	6	45	8.55	8.84		9.16	9.50	10.26
08-00239-30510		10	2.5	2.85	15°	6	50	10.62	10.98		11.38	11.80	12.75
08-00239-30512		12	2.5	2.85	15°	6	50	12.68	13.12	13.59	14.10	15.24	
08-00239-30515	15	2.5	2.85	15°	6	55	15.79	16.33	16.92	17.55	18.97		
08-00239-30604	R0.2	4	2.5	2.85	15°	6	45	4.41	4.56	4.72	4.89	5.27	
08-00239-30606		6	2.5	2.85	15°	6	45	6.48	6.70	6.93	7.19	7.75	
08-00239-30608		8	2.5	2.85	15°	6	45	8.55	8.84	9.15	9.49	10.24	
08-00239-30610		10	2.5	2.85	15°	6	50	10.61	10.98	11.37	11.79	12.73	
08-00239-30612		12	2.5	2.85	15°	6	50	12.68	13.12	13.58	14.09	15.21	
08-00239-30615	15	2.5	2.85	15°	6	55	15.78	16.33	16.91	17.54	18.94		
08-00239-30704	R0.3	4	2.5	2.85	15°	6	45	4.41	4.55	4.71	4.87	5.24	
08-00239-30706		6	2.5	2.85	15°	6	45	6.48	6.69	6.92	7.17	7.73	
08-00239-30708		8	2.5	2.85	15°	6	45	8.54	8.83	9.14	9.47	10.22	
08-00239-30710		10	2.5	2.85	15°	6	50	10.61	10.97	11.36	11.77	12.70	
08-00239-30712		12	2.5	2.85	15°	6	50	12.68	13.11	13.57	14.07	15.19	
08-00239-30715	15	2.5	2.85	15°	6	55	15.78	16.32	16.90	17.52	18.92		
08-00239-30804	R0.5	4	2.5	2.85	15°	6	45	4.40	4.54	4.69	4.84	5.20	
08-00239-30806		6	2.5	2.85	15°	6	45	6.47	6.68	6.90	7.14	7.68	
08-00239-30808		8	2.5	2.85	15°	6	45	8.54	8.82	9.12	9.44	10.17	
08-00239-30810		10	2.5	2.85	15°	6	50	10.60	10.96	11.33	11.74	12.66	
08-00239-30812		12	2.5	2.85	15°	6	50	12.67	13.10	13.55	14.04	15.14	
08-00239-30815	15	2.5	2.85	15°	6	55	15.77	16.31	16.88	17.49	18.87		
08-00239-40508	4	R0.1	8	3.2	3.8	15°	6	45	8.65	8.94			

MUGEN COATING PREMIUM Plus 4-Flute Long Neck Corner Radius End Mill with short shank for Hardened Steel and High accuracy cutting

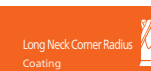
Recommended Milling Conditions

Unit : mm

コードNo. Code No.	Dia. (D)	Corner Radius (R)	Under Neck Length (ℓ1)	Length of Cut (ℓ)	Neck Dia. (d2)	Neck Taper Angle (γ)	Shank Dia. (d)	Overall Length (L)	Actual effective length depending on inclined angle of workpiece					
									30°	1°	1°30'	2°	3°	
◆ 08-00239-60512	6	R0.1	12	5	5.7	-	6	45	Free	Free	Free	Free	Free	
◆ 08-00239-60518			18	5	5.7	-	6	50	Free	Free	Free	Free	Free	
◆ 08-00239-60524			24	5	5.7	-	6	60	Free	Free	Free	Free	Free	
◆ 08-00239-60530			30	5	5.7	-	6	65	Free	Free	Free	Free	Free	
◆ 08-00239-60612			R0.2	12	5	5.7	-	6	45	Free	Free	Free	Free	Free
◆ 08-00239-60618				18	5	5.7	-	6	50	Free	Free	Free	Free	Free
◆ 08-00239-60624		24		5	5.7	-	6	60	Free	Free	Free	Free	Free	
◆ 08-00239-60630		R0.3	30	5	5.7	-	6	65	Free	Free	Free	Free	Free	
◆ 08-00239-60712			12	5	5.7	-	6	45	Free	Free	Free	Free	Free	
◆ 08-00239-60718			18	5	5.7	-	6	50	Free	Free	Free	Free	Free	
◆ 08-00239-60724		R0.5	24	5	5.7	-	6	60	Free	Free	Free	Free	Free	
◆ 08-00239-60730			30	5	5.7	-	6	65	Free	Free	Free	Free	Free	
◆ 08-00239-60812			12	5	5.7	-	6	45	Free	Free	Free	Free	Free	
◆ 08-00239-60818		R1	18	5	5.7	-	6	50	Free	Free	Free	Free	Free	
◆ 08-00239-60824			24	5	5.7	-	6	60	Free	Free	Free	Free	Free	
◆ 08-00239-60830			30	5	5.7	-	6	65	Free	Free	Free	Free	Free	
◆ 08-00239-60912		R1	12	5	5.7	-	6	45	Free	Free	Free	Free	Free	
◆ 08-00239-60918			18	5	5.7	-	6	50	Free	Free	Free	Free	Free	
◆ 08-00239-60924			24	5	5.7	-	6	60	Free	Free	Free	Free	Free	
◆ 08-00239-60930				30	5	5.7	-	6	65	Free	Free	Free	Free	Free



Work Material				High Speed Steels / Hardened Steels SKH51・SKD11 (~62HRC)				High Speed Steels SKH55・HAP40 (~66HRC)				High Speed Steels SKH57・HAP72 (~70HRC)			
Dia.	Corner Radius	Under Neck Length	L/D	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut	
				min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm
0.1	0.01	0.2	2	40,000	200	0.002	0.01	40,000	150	0.002	0.01	40,000	120	0.002	0.01
		0.3	3	40,000	160	0.002	0.01	40,000	120	0.002	0.01	40,000	90	0.002	0.01
		0.15	0.01	0.3	2	40,000	240	0.002	0.015	40,000	180	0.002	0.01	40,000	140
0.5	3.3	40,000		160	0.002	0.015	40,000	120	0.002	0.01	40,000	90	0.002	0.01	
0.15	0.02	0.3	2	40,000	240	0.002	0.015	40,000	180	0.002	0.01	40,000	140	0.002	0.01
		0.5	3.3	40,000	160	0.002	0.015	40,000	120	0.002	0.01	40,000	90	0.002	0.01
		0.2	0.02	0.3	1.5	30,000	360	0.003	0.02	30,000	280	0.003	0.01	30,000	220
0.5	2.5	30,000		320	0.003	0.02	30,000	240	0.003	0.01	30,000	180	0.003	0.01	
0.2	0.05	0.75	3.8	30,000	270	0.003	0.02	30,000	190	0.003	0.01	30,000	150	0.003	0.01
		1	5	30,000	240	0.002	0.02	30,000	160	0.002	0.01	30,000	120	0.002	0.01
		0.3	1.5	30,000	360	0.003	0.02	30,000	280	0.003	0.01	30,000	220	0.003	0.01
0.3	0.02	0.5	1.7	30,000	600	0.003	0.04	30,000	500	0.003	0.03	30,000	400	0.003	0.03
		0.75	2.5	30,000	560	0.003	0.04	30,000	460	0.003	0.03	30,000	360	0.003	0.03
		1	3.3	30,000	500	0.003	0.04	30,000	400	0.003	0.03	30,000	300	0.003	0.03
0.3	0.05	1.5	5	30,000	320	0.003	0.04	30,000	240	0.003	0.03	30,000	180	0.003	0.03
		0.5	1.7	30,000	600	0.003	0.04	30,000	500	0.003	0.03	30,000	400	0.003	0.03
		0.75	2.5	30,000	560	0.003	0.04	30,000	460	0.003	0.03	30,000	360	0.003	0.03
0.4	0.02	1	3.3	30,000	500	0.003	0.04	30,000	400	0.003	0.03	30,000	300	0.003	0.03
		1.5	5	30,000	320	0.003	0.04	30,000	240	0.003	0.03	30,000	180	0.003	0.03
		0.5	1.3	28,000	760	0.005	0.05	25,000	650	0.004	0.04	22,000	480	0.004	0.04
0.4	0.05	1	2.5	28,000	700	0.005	0.05	25,000	600	0.004	0.04	22,000	450	0.004	0.04
		1.5	3.8	28,000	600	0.005	0.05	25,000	520	0.004	0.04	22,000	390	0.004	0.04
		2	5	25,000	500	0.005	0.05	25,000	440	0.003	0.04	22,000	330	0.003	0.04
0.5	0.02	0.5	1.3	28,000	760	0.005	0.05	25,000	650	0.005	0.04	22,000	480	0.005	0.04
		1	2.5	28,000	700	0.005	0.05	25,000	600	0.005	0.04	22,000	450	0.005	0.04
		1.5	3.8	28,000	600	0.005	0.05	25,000	520	0.005	0.04	22,000	390	0.005	0.04
0.5	0.05	2	5	25,000	500	0.005	0.05	25,000	440	0.005	0.04	22,000	330	0.005	0.04
		1	2	23,000	900	0.006	0.1	20,000	800	0.004	0.08	18,000	600	0.004	0.08
		1.5	3	23,000	800	0.006	0.1	20,000	720	0.005	0.1	18,000	540	0.004	0.08
0.5	0.1	2	4	23,000	720	0.007	0.1	20,000	640	0.003	0.08	18,000	480	0.003	0.08
		2.5	5	23,000	680	0.005	0.1	20,000	580	0.003	0.08	18,000	420	0.003	0.08
		1	2	23,000	900	0.007	0.1	20,000	800	0.005	0.08	18,000	600	0.005	0.08
0.5	0.1	1.5	3	23,000	800	0.007	0.1	20,000	720	0.005	0.08	18,000	540	0.005	0.08
		2	4	23,000	720	0.007	0.1	20,000	640	0.005	0.08	18,000	480	0.005	0.08
		2.5	5	23,000	680	0.006	0.1	20,000	580	0.004	0.08	18,000	420	0.004	0.08



Recommended Milling Conditions

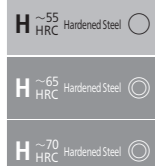
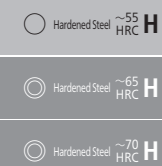
Recommended Milling Conditions

Work Material				High Speed Steels / Hardened Steels SKH51·SKD11 (~62HRC)				High Speed Steels SKH55·HAP40 (~66HRC)				High Speed Steels SKH57·HAP72 (~70HRC)			
Dia.	Corner Radius	Under Neck Length	L/D	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut	
				min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm
0.6	0.02	1	1.7	23,000	1,000	0.006	0.15	20,000	850	0.004	0.1	17,000	640	0.004	0.1
		2	3.3	23,000	800	0.006	0.15	20,000	640	0.004	0.1	17,000	480	0.004	0.1
		3	5	23,000	700	0.005	0.15	20,000	600	0.003	0.1	17,000	450	0.003	0.1
	0.05	1	1.7	23,000	1,000	0.01	0.15	20,000	850	0.01	0.1	17,000	640	0.008	0.1
		2	3.3	23,000	800	0.008	0.15	20,000	640	0.007	0.1	17,000	480	0.006	0.1
		3	5	23,000	700	0.008	0.15	20,000	600	0.006	0.1	17,000	450	0.005	0.1
	0.1	1	1.7	23,000	1,000	0.01	0.15	20,000	850	0.01	0.1	17,000	640	0.008	0.1
		2	3.3	23,000	800	0.01	0.15	20,000	640	0.007	0.1	17,000	480	0.006	0.1
		3	5	23,000	700	0.008	0.15	20,000	600	0.006	0.1	17,000	450	0.005	0.1
0.8	0.02	2	2.5	23,000	1,400	0.006	0.16	20,000	1,000	0.005	0.14	17,000	700	0.005	0.14
		3	3.8	23,000	1,300	0.005	0.16	20,000	900	0.003	0.14	17,000	650	0.003	0.14
		4	5	23,000	1,200	0.005	0.16	20,000	800	0.003	0.14	17,000	600	0.003	0.14
	0.05	2	2.5	23,000	1,400	0.02	0.16	20,000	1,000	0.015	0.14	17,000	700	0.012	0.14
		3	3.8	23,000	1,300	0.015	0.16	20,000	900	0.01	0.14	17,000	650	0.008	0.14
		4	5	23,000	1,200	0.015	0.16	20,000	800	0.01	0.14	17,000	600	0.006	0.14
	0.1	2	2.5	23,000	1,400	0.02	0.16	20,000	1,000	0.015	0.14	17,000	700	0.012	0.14
		3	3.8	23,000	1,300	0.015	0.16	20,000	900	0.01	0.14	17,000	650	0.008	0.14
		4	5	23,000	1,200	0.015	0.16	20,000	800	0.01	0.14	17,000	600	0.006	0.14
	0.2	2	2.5	23,000	1,400	0.02	0.16	20,000	1,000	0.015	0.14	17,000	700	0.012	0.14
		3	3.8	23,000	1,300	0.015	0.16	20,000	900	0.01	0.14	17,000	650	0.008	0.14
		4	5	23,000	1,200	0.015	0.16	20,000	800	0.01	0.14	17,000	600	0.006	0.14
1	0.02	2	2	21,000	2,000	0.01	0.25	17,000	1,400	0.008	0.2	15,000	1,000	0.005	0.2
		3	3	20,000	1,800	0.01	0.25	16,000	1,300	0.008	0.2	14,000	900	0.005	0.2
		4	4	18,000	1,500	0.008	0.25	14,000	1,100	0.005	0.2	12,000	750	0.003	0.2
		5	5	16,000	1,400	0.005	0.25	13,000	1,000	0.003	0.2	11,000	650	0.003	0.2
	0.05	2	2	21,000	2,000	0.04	0.25	17,000	1,400	0.03	0.2	15,000	1,000	0.018	0.2
		3	3	20,000	1,800	0.04	0.25	16,000	1,300	0.03	0.2	14,000	900	0.018	0.2
		4	4	18,000	1,500	0.03	0.25	14,000	1,100	0.02	0.2	12,000	750	0.012	0.2
		5	5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2
		5	5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2
	0.1	2	2	21,000	2,000	0.04	0.25	17,000	1,400	0.03	0.2	15,000	1,000	0.018	0.2
		3	3	20,000	1,800	0.04	0.25	16,000	1,300	0.03	0.2	14,000	900	0.018	0.2
		4	4	18,000	1,500	0.03	0.25	14,000	1,100	0.02	0.2	12,000	750	0.012	0.2
		5	5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2
		5	5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2
	0.2	2	2	21,000	2,000	0.04	0.25	17,000	1,400	0.03	0.2	15,000	1,000	0.018	0.2
3		3	20,000	1,800	0.04	0.25	16,000	1,300	0.03	0.2	14,000	900	0.018	0.2	
4		4	18,000	1,500	0.03	0.25	14,000	1,100	0.02	0.2	12,000	750	0.012	0.2	
5		5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2	
5		5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2	
0.3	2	2	21,000	2,000	0.04	0.25	17,000	1,400	0.03	0.2	15,000	1,000	0.018	0.2	
	3	3	20,000	1,800	0.04	0.25	16,000	1,300	0.03	0.2	14,000	900	0.018	0.2	
	4	4	18,000	1,500	0.03	0.25	14,000	1,100	0.02	0.2	12,000	750	0.012	0.2	
	5	5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2	
	5	5	16,000	1,400	0.02	0.25	13,000	1,000	0.01	0.2	11,000	650	0.006	0.2	
1.5	0.02	3	2	20,000	2,000	0.01	0.4	16,000	1,400	0.008	0.3	14,000	1,000	0.006	0.3
		4	2.7	18,000	1,700	0.01	0.4	14,000	1,200	0.008	0.3	12,000	800	0.006	0.3
		6	4	16,000	1,500	0.008	0.4	13,000	1,100	0.005	0.3	11,000	750	0.004	0.3
		8	5.3	14,000	1,300	0.008	0.4	11,000	900	0.003	0.3	10,000	600	0.003	0.3

Work Material				High Speed Steels / Hardened Steels SKH51·SKD11 (~62HRC)				High Speed Steels SKH55·HAP40 (~66HRC)				High Speed Steels SKH57·HAP72 (~70HRC)			
Dia.	Corner Radius	Under Neck Length	L/D	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut	
				min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm
1.5	0.05	3	2	20,000	2,000	0.04	0.4	16,000	1,400	0.03	0.3	14,000	1,000	0.018	0.3
		4	2.7	18,000	1,700	0.04	0.4	14,000	1,200	0.03	0.3	12,000	800	0.018	0.3
		6	4	16,000	1,500	0.03	0.4	13,000	1,100	0.02	0.3	11,000	750	0.012	0.3
		8	5.3	14,000	1,300	0.025	0.4	11,000	900	0.01	0.3	10,000	600	0.006	0.3
	0.1	3	2	20,000	2,000	0.04	0.4	16,000	1,400	0.03	0.3	14,000	1,000	0.018	0.3
		4	2.7	18,000	1,700	0.04	0.4	14,000	1,200	0.03	0.3	12,000	800	0.018	0.3
		6	4	16,000	1,500	0.03	0.4	13,000	1,100	0.02	0.3	11,000	750	0.012	0.3
		8	5.3	14,000	1,300	0.025	0.4	11,000	900	0.01	0.3	10,000	600	0.006	0.3
	0.2	3	2	20,000	2,000	0.04	0.4	16,000	1,400	0.03	0.3	14,000	1,000	0.018	0.3
		4	2.7	18,000	1,700	0.04	0.4	14,000	1,200	0.03	0.3	12,000	800	0.018	0.3
		6	4	16,000	1,500	0.03	0.4	13,000	1,100	0.02	0.3	11,000	750	0.012	0.3
		8	5.3	14,000	1,300	0.025	0.4	11,000	900	0.01	0.3	10,000	600	0.006	0.3
0.3	3	2	20,000	2,000	0.04	0.4	16,000	1,400	0.03	0.3	14,000	1,000	0.018	0.3	
	4	2.7	18,000	1,700	0.04	0.4	14,000	1,200	0.03	0.3	12,000	800	0.018	0.3	
	6	4	16,000	1,500	0.03	0.4	13,000	1,100	0.02	0.3	11,000	750	0.012	0.3	
	8	5.3	14,000	1,300	0.025	0.4	11,000	900	0.01	0.3	10,000	600	0.006	0.3	
0.5	3	2	20,000	2,000	0.04	0.4	16,000	1,400	0.03	0.3	14,000	1,000	0.018	0.3	
	4	2.7	18,000	1,700	0.04	0.4	14,000	1,200	0.03	0.3	12,000	800	0.018	0.3	
	6	4	16,000	1,500	0.03	0.4	13,000	1,100	0.02	0.3	11,000	750	0.012	0.3	
	8	5.3	14,000	1,300	0.025	0.4	11,000	900	0.01	0.3	10,000	600	0.006	0.3	
2	0.02	4	2	17,000	2,000	0.012	0.5	14,000	1,400	0.008	0.35	12,000	1,000	0.006	0.35
		6	3	15,000	1,800	0.012	0.5	12,000	1,200	0.008	0.35	11,000	900	0.006	0.35
		8	4	14,000	1,500	0.01	0.5	11,000	1,100	0.005	0.35	10,000	750	0.004	0.35
		10	5	12,000	1,300	0.01	0.5	10,000	1,000	0.003	0.35	9,000	650	0.003	0.35
	0.05	4	2	17,000	2,000	0.05	0.5	14,000	1,400</						

Recommended Milling Conditions

Recommended Milling Conditions



Work Material				High Speed Steels / Hardened Steels SKH51·SKD11 (~62HRC)				High Speed Steels SKH55·HAP40 (~66HRC)				High Speed Steels SKH57·HAP72 (~70HRC)			
Dia.	Corner Radius	Under Neck Length	L/D	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut	
				min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm
3	0.05	4	1.3	13,000	2,000	0.05	0.7	10,000	1,400	0.05	0.6	8,000	1,100	0.03	0.6
		6	2	11,500	1,700	0.05	0.7	9,500	1,300	0.05	0.6	7,500	1,000	0.03	0.6
		8	2.7	10,500	1,500	0.05	0.7	8,000	1,100	0.05	0.6	6,000	800	0.03	0.6
		10	3.3	10,000	1,350	0.05	0.7	7,500	1,000	0.05	0.6	6,000	750	0.03	0.6
		12	4	10,000	1,350	0.04	0.7	7,500	1,000	0.04	0.6	6,000	750	0.024	0.6
		15	5	9,000	1,200	0.03	0.7	7,000	900	0.03	0.6	5,500	650	0.018	0.6
		4	1.3	13,000	2,000	0.07	0.7	10,000	1,400	0.05	0.6	8,000	1,100	0.03	0.6
		6	2	11,500	1,700	0.07	0.7	9,500	1,300	0.05	0.6	7,500	1,000	0.03	0.6
		8	2.7	10,500	1,500	0.07	0.7	8,000	1,100	0.05	0.6	6,000	800	0.03	0.6
		10	3.3	10,000	1,350	0.07	0.7	7,500	1,000	0.05	0.6	6,000	750	0.03	0.6
		12	4	10,000	1,350	0.06	0.7	7,500	1,000	0.04	0.6	6,000	750	0.024	0.6
		15	5	9,000	1,200	0.05	0.7	7,000	900	0.03	0.6	5,500	650	0.018	0.6
		4	1.3	13,000	2,000	0.07	0.7	10,000	1,400	0.05	0.6	8,000	1,100	0.03	0.6
		6	2	11,500	1,700	0.07	0.7	9,500	1,300	0.05	0.6	7,500	1,000	0.03	0.6
		8	2.7	10,500	1,500	0.07	0.7	8,000	1,100	0.05	0.6	6,000	800	0.03	0.6
	10	3.3	10,000	1,350	0.07	0.7	7,500	1,000	0.05	0.6	6,000	750	0.03	0.6	
	12	4	10,000	1,350	0.06	0.7	7,500	1,000	0.04	0.6	6,000	750	0.024	0.6	
	15	5	9,000	1,200	0.05	0.7	7,000	900	0.03	0.6	5,500	650	0.018	0.6	
	4	1.3	13,000	2,000	0.07	0.7	10,000	1,400	0.05	0.6	8,000	1,100	0.03	0.6	
	6	2	11,500	1,700	0.07	0.7	9,500	1,300	0.05	0.6	7,500	1,000	0.03	0.6	
	8	2.7	10,500	1,500	0.07	0.7	8,000	1,100	0.05	0.6	6,000	800	0.03	0.6	
	10	3.3	10,000	1,350	0.07	0.7	7,500	1,000	0.05	0.6	6,000	750	0.03	0.6	
	12	4	10,000	1,350	0.06	0.7	7,500	1,000	0.04	0.6	6,000	750	0.024	0.6	
	15	5	9,000	1,200	0.05	0.7	7,000	900	0.03	0.6	5,500	650	0.018	0.6	
	4	1.3	13,000	2,000	0.07	0.7	10,000	1,400	0.05	0.6	8,000	1,100	0.03	0.6	
	6	2	11,500	1,700	0.07	0.7	9,500	1,300	0.05	0.6	7,500	1,000	0.03	0.6	
	8	2.7	10,500	1,500	0.07	0.7	8,000	1,100	0.05	0.6	6,000	800	0.03	0.6	
	10	3.3	10,000	1,350	0.07	0.7	7,500	1,000	0.05	0.6	6,000	750	0.03	0.6	
	12	4	10,000	1,350	0.06	0.7	7,500	1,000	0.04	0.6	6,000	750	0.024	0.6	
	15	5	9,000	1,200	0.05	0.7	7,000	900	0.03	0.6	5,500	650	0.018	0.6	
4	0.1	8	2	8,500	1,800	0.08	1	7,000	1,300	0.06	0.8	5,500	1,000	0.036	0.8
		12	3	8,500	1,800	0.07	1	7,000	1,300	0.05	0.8	5,500	1,000	0.03	0.8
		16	4	7,500	1,500	0.06	1	5,500	1,000	0.05	0.8	5,200	900	0.03	0.8
		20	5	6,000	1,200	0.06	1	4,500	800	0.05	0.8	4,000	650	0.03	0.8
		8	2	8,500	1,800	0.08	1	7,000	1,300	0.06	0.8	5,500	1,000	0.036	0.8
	12	3	8,500	1,800	0.07	1	7,000	1,300	0.05	0.8	5,500	1,000	0.03	0.8	
	16	4	7,500	1,500	0.06	1	5,500	1,000	0.05	0.8	5,200	900	0.03	0.8	
	20	5	6,000	1,200	0.06	1	4,500	800	0.05	0.8	4,000	650	0.03	0.8	
	8	2	8,500	1,800	0.08	1	7,000	1,300	0.06	0.8	5,500	1,000	0.036	0.8	
	12	3	8,500	1,800	0.07	1	7,000	1,300	0.05	0.8	5,500	1,000	0.03	0.8	
	16	4	7,500	1,500	0.06	1	5,500	1,000	0.05	0.8	5,200	900	0.03	0.8	
	20	5	6,000	1,200	0.06	1	4,500	800	0.05	0.8	4,000	650	0.03	0.8	
	8	2	8,500	1,800	0.08	1	7,000	1,300	0.06	0.8	5,500	1,000	0.036	0.8	
	12	3	8,500	1,800	0.07	1	7,000	1,300	0.05	0.8	5,500	1,000	0.03	0.8	
	16	4	7,500	1,500	0.06	1	5,500	1,000	0.05	0.8	5,200	900	0.03	0.8	
20	5	6,000	1,200	0.06	1	4,500	800	0.05	0.8	4,000	650	0.03	0.8		

Work Material				High Speed Steels / Hardened Steels SKH51·SKD11 (~62HRC)				High Speed Steels SKH55·HAP40 (~66HRC)				High Speed Steels SKH57·HAP72 (~70HRC)			
Dia.	Corner Radius	Under Neck Length	L/D	Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut		Spindle Speed	Feed	Depth of Cut	
				min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm	min <sup>-1</sup>	mm/min	a <sub>p</sub> mm	a <sub>e</sub> mm
5	0.1	15	3	7,000	1,700	0.08	1.6	5,500	1,300	0.06	1.2	4,400	900	0.036	1.2
		20	4	6,000	1,400	0.07	1.6	5,000	1,100	0.05	1.2	4,000	750	0.03	1.2
	0.2	15	3	7,000	1,700	0.08	1.6	5,500	1,300	0.06	1.2	4,400	900	0.036	1.2
		20	4	6,000	1,400	0.07	1.6	5,000	1,100	0.05	1.2	4,000	750	0.03	1.2
	0.3	15	3	7,000	1,700	0.08	1.6	5,500	1,300	0.06	1.2	4,400	900	0.036	1.2
		20	4	6,000	1,400	0.07	1.6	5,000	1,100	0.05	1.2	4,000	750	0.03	1.2
	0.5	15	3	7,000	1,700	0.08	1.6	5,500	1,300	0.06	1.2	4,400	900	0.036	1.2
		20	4	6,000	1,400	0.07	1.6	5,000	1,100	0.05	1.2	4,000	750	0.03	1.2
	0.1	12	2	5,500	1,800	0.08	2	4,500	1,400	0.06	1.5	3,600	1,000	0.036	1.5
		18	3	5,000	1,500	0.08	2	4,000	1,100	0.06	1.5	3,000	800	0.036	1.5
		24	4	4,500	1,300	0.07	2	3,500	900	0.05	1.5	2,700	700	0.036	1.5
		30	5	3,000	800	0.07	2	3,000	650	0.05	1.5	2,300	500	0.03	1.5
		12	2	5,500	1,800	0.08	2	4,500	1,400	0.06	1.5	3,600	1,000	0.036	1.5
	0.2	18	3	5,000	1,500	0.08	2	4,000	1,100	0.06	1.5	3,000	800	0.036	1.5
		24	4	4,500	1,300	0.07	2	3,500	900	0.05	1.5	2,700	700	0.036	1.5
30		5	3,000	800	0.07	2	3,000	650	0.05	1.5	2,300	500	0.03	1.5	
0.3	12	2	5,500	1,800	0.08	2	4,500	1,400	0.06	1.5	3,600	1,000	0.036	1.5	
	18	3	5,000	1,500	0.08	2	4,000	1,100	0.06	1.5	3,000	800	0.036	1.5	
	30	5	3,000	800	0.07	2	3,000	650	0.05	1.5	2,300	500	0.03	1.5	
0.5	12	2	5,500	1,800	0.08	2	4,500	1,400	0.06	1.5	3,600	1,000	0.036	1.5	
	18	3	5,000	1,500	0.08	2	4,000	1,100	0.06	1.5	3,000	800	0.036	1.5	
	30	5	3,000	800	0.07	2	3,000	650	0.05	1.5	2,300	500	0.03	1.5	
1	12	2	5,500	1,800	0.08	2	4,500	1,400	0.06	1.5	3,600	1,000	0.036	1.5	
	18	3	5,000	1,500	0.08	2	4,000	1,100	0.06	1.5	3,000	800	0.036	1.5	
	24	4	4,500	1,300	0.07	2	3,500	900	0.05	1.5	2,700	700	0.036	1.5	
	30	5	3,000	800	0.07	2	3,000	650	0.05	1.5	2,300	500	0.03	1.5	

Notes

- ※1 Depth of Cut : a<sub>p</sub> = Axial Depth of Cut / a<sub>e</sub> = Radial Depth of Cut.
- ※2 Adjust milling condition according to machine rigidity and clamp condition of work material.
- ※3 In case of chattering etc., please adjust cutting conditions if necessary.
- ※4 At point where cutting load is high such as at corners, pay attention to setting cutting conditions and tool paths particularly.
- ※5 Recommend to apply helical or ramping for approaching into axial direction.
- ※6 For slotting, recommend reciprocating milling by adjusting feed & a<sub>p</sub> in below 50% of recommended milling condition.
- ※7 Adjust both spindle speed and feed at the same rate.
- ※8 A shrink fit type is recommended for tool holder. When using collet type or others, strictly adhere to minimum gripping length.
- ※9 We recommend using oil mist coolant.

Neck taper angle ( γ ) of MHRSH430RSF is 15°. Our other products have a neck taper angle ( γ ) of 12°.

