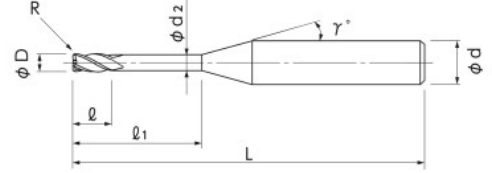
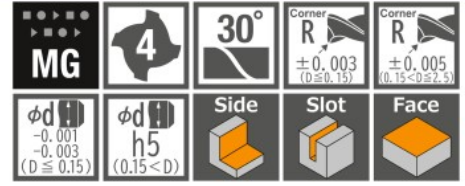


## MUGEN COATING PREMIUM 4-Flute Long Neck Radius End Mill for Hardened Steel

Total 336 sizes

4-flute long neck corner radius end mill for prehardened steels and hardened steels (~65HRC). Maximum L/D=16



Prehardened Steel **P**

Hardened Steel ~55 HRC **H**

Hardened Steel ~65 HRC **H**

Stainless Steel **M**

Titanium Alloy Heat Resistant Alloy **S**

- MUGEN COATING PREMIUM for hardened steels and unique new design excel in chipping prevention and resolve chattering to realize excellent finished surface.
- 4 flutes end mill for higher efficiency.

Beware of stocks because there is no blade to the shaft center of end teeth of  $\phi 0.1$  to  $\phi 0.3$ .

[Neck Shape]

( $\gamma$ ) is reference value. Tool measurement required in order to avoid interference to the work material.

Size	Diameter Tolerance	Corner R Tolerance	Shank Dia. Tolerance
$D \leq 0.15$	0 -0.007	$\pm 0.003$	-0.001* -0.003
$0.15 < D < 0.5$	0 -0.01	$\pm 0.005$	h5
$0.5 \leq D \leq 2.5$	0 -0.02		
$D > 2.5$		$\pm 0.01$	

\*Shank tolerance is h4(JIS), NS TOOL produces within 0.002mm from -0.001mm ~ -0.003mm.

Unit : mm

Code No.	Dia. (D)	Corner Radius (R)	Under Neck Length ( $\phi 1$ )	Length of Cut ( $\phi$ )	Neck Dia. (d2)	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°						
08-00237-01013	0.1	R0.01	0.3	0.08	0.085	12°	4	45	0.34	0.36	0.38	0.39	0.44						
08-00237-01015			0.5					45	0.55	0.58	0.60	0.63	0.70						
08-00237-01512	0.15	R0.01	0.3	0.12	0.135	12°	4	45	0.34	0.36	0.38	0.39	0.44						
08-00237-01513			0.5					45	0.55	0.58	0.60	0.63	0.70						
08-00237-01515			0.75					45	0.81	0.85	0.89	0.93	1.03						
08-00237-01517			1					45	1.07	1.12	1.17	1.23	1.37						
08-00237-01522			0.3					45	0.34	0.36	0.37	0.39	0.43						
08-00237-01523		R0.02	0.5					45	0.55	0.58	0.60	0.63	0.70						
08-00237-01525			0.75					45	0.81	0.85	0.89	0.93	1.03						
08-00237-01527			1					45	1.07	1.12	1.17	1.23	1.36						
08-00237-02021			0.2					R0.02	0.5	0.15	0.18	12°	4	45	0.56	0.59	0.62	0.65	0.71
08-00237-02023									1					45	1.09	1.13	1.19	1.24	1.38
08-00237-02025	1.5	45		1.61	1.68	1.76	1.84		2.04										
08-00237-02027	2	45		2.13	2.22	2.33	2.44		2.71										
08-00237-02051	R0.05	0.5		45	0.56	0.59	0.61	0.64	0.70										
08-00237-02053		1		45	1.08	1.13	1.18	1.24	1.37										
08-00237-02055		1.5		45	1.61	1.68	1.75	1.84	2.03										
08-00237-02057		2		45	2.13	2.22	2.32	2.43	2.70										
08-00237-03021	0.3	R0.02	1	0.25	0.28	12°	4	45	1.09	1.13	1.19	1.24	1.38						
08-00237-03022			1.5					45	1.61	1.68	1.76	1.84	2.04						
08-00237-03023			2					45	2.13	2.22	2.33	2.44	2.71						
08-00237-03024			2.5					45	2.65	2.77	2.90	3.04	3.37						
08-00237-03025			3					45	3.17	3.31	3.47	3.64	4.03						
08-00237-03051			R0.05					1	45	1.08	1.13	1.18	1.24	1.37					
08-00237-03052								1.5	45	1.61	1.68	1.75	1.84	2.03					
08-00237-03053		2						45	2.13	2.22	2.32	2.43	2.70						
08-00237-03054		2.5						45	2.65	2.77	2.89	3.03	3.36						
08-00237-03055		3						45	3.17	3.31	3.46	3.63	4.02						
08-00237-04021		0.4						R0.02	1	0.3	0.37	12°	4	45	1.11	1.16	1.21	1.27	1.41
08-00237-04022									1.5					45	1.63	1.70	1.78	1.87	2.07
08-00237-04023			2						45					2.15	2.25	2.35	2.47	2.74	
08-00237-04024			2.5						45					2.67	2.79	2.92	3.07	3.40	
08-00237-04025	3		45	3.20	3.34	3.49	3.67		4.06										
08-00237-04027	4		45	4.24	4.43	4.63	4.86		5.39										

How to Order

When you order, indicate MHRH430R (D)×(R)×(L1). ※( $\gamma$ ) is reference value.

Machining case

S-025