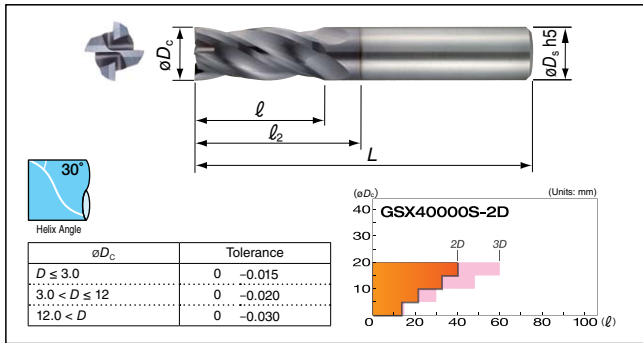




# GSX MILL 4 Flute Endmills Sharp Edge GSX4000S-2D Type



Coated Carbide	Carbon Steel	Alloy Steel	Tempered Steel	Hardenable Steel	Hardened Steel	Stainless Steel	Ti Alloy	Cast Iron	Al Alloy	Copper Alloy	Graphite	CFRP
○	○	○	○	○	○	○	○	○	○	○	○	○



## Endmill Identification (GSXMILL Series Only)

# GSX 4 0100 S - 2D - S3

①	②	③	④	⑤	⑥
Series Code	No. of Teeth	Diameter	Cutting Edge (S: Sharp Edge C: Gash Land)	Cutting Edge Length	Shank Diameter

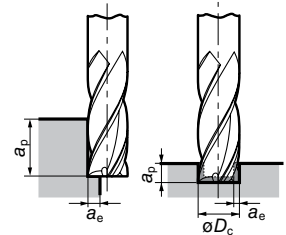
## Body

Cat. No.	Stock	Dimensions (mm)				
		$\phi D_c$	$l$	$l_2$	$L$	$\phi D_s$
GSX 40100S-2D	●	1.0	2.5	3.5	40	4
40100S-2D-S3	●	1.0	2.5	3.5	38	3
40150S-2D	●	1.5	3.8	4.8	40	4
40200S-2D	●	2.0	5.0	6.0	40	4
40200S-2D-S3	●	2.0	5.0	6.0	38	3
GSX 40250S-2D	●	2.5	6.3	7.3	40	4
40300S-2D	●	3.0	7.5	9.0	45	6
40300S-2D-S3	●	3.0	7.5	—	38	3
40350S-2D	●	3.5	8.8	10.0	45	6
40400S-2D	●	4.0	11.0	14.0	45	6
GSX 40400S-2D-S4	●	4.0	11.0	—	45	4
40450S-2D	●	4.5	11.3	12.8	50	6
40500S-2D	●	5.0	13.0	19.6	50	6
40550S-2D	●	5.5	13.0	19.6	50	6
40600S-2D	●	6.0	13.0	—	50	6
GSX 40700S-2D	●	7.0	16.0	21.1	60	8
40800S-2D	●	8.0	19.0	—	60	8
40900S-2D	●	9.0	19.0	24.1	70	10
41000S-2D	●	10.0	22.0	—	70	10
41200S-2D	●	12.0	26.0	—	75	12
GSX 41600S-2D	●	16.0	32.0	—	90	16
42000S-2D	●	20.0	40.0	—	100	20

Grade: ACF20

## Recommended Cutting Conditions

- For stable machining performance use rigid, high-precision machines and holders.
- Use air blow when dry machining.
- Use wet machining for stainless steel, heat resistant alloy, and titanium alloy applications.
- If chattering is a problem, reduce the spindle speed and feed rate indicated in the table below by the same ratio, or reduce the depth of cut.
- This series is not recommended for groove milling.
- If the machine cannot achieve the recommended spindle speed, please use the max. spindle speed available.



## Side Milling

Work Material	Structural Steel SS		Carbon Steel SC (150 to 250HB)		Cast Iron FC		Alloy Steel SCM (25 to 35HRC)		Tempered Steel, Hardened Steel NAK, HPM (35 to 45HRC)		Hardened Steel (45 to 55HRC)		Stainless Steel SUS304, SUS316		Heat Resistant Steel Titanium Alloy	
	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)
1.0	22,000	360	22,000	360	22,000	360	19,000	220	13,000	140	9,500	90	11,300	90	9,500	65
2.0	11,500	440	11,500	440	11,500	440	11,000	290	7,500	180	5,400	110	6,500	120	5,400	85
4.0	6,000	560	6,000	560	6,000	560	5,800	370	4,000	230	2,900	150	3,400	160	2,900	100
6.0	4,200	600	4,200	600	4,200	600	4,000	400	2,700	240	2,000	160	2,400	170	2,000	120
8.0	3,000	600	3,000	600	3,000	600	2,800	400	2,000	240	1,450	160	1,800	170	1,450	120
10.0	2,500	600	2,500	600	2,500	600	2,350	400	1,600	240	1,200	160	1,450	170	1,200	120
12.0	2,100	600	2,100	600	2,100	600	2,000	400	1,350	240	1,000	160	1,200	170	1,000	120
16.0	1,500	500	1,500	500	1,500	500	1,450	320	1,000	210	750	130	900	140	750	90
20.0	1,200	460	1,200	460	1,200	460	1,150	290	800	200	600	110	700	120	600	75
Standard $a_p$	2.0D <sub>c</sub>															
Depth-of-cut $a_e$	0.03D <sub>c</sub>												0.01D <sub>c</sub>			

## Groove Milling

Work Material	Structural Steel SS		Carbon Steel SC (150 to 250HB)		Cast Iron FC		Alloy Steel SCM (25 to 35HRC)		Tempered Steel, Hardened Steel NAK, HPM (35 to 45HRC)		Hardened Steel (45 to 55HRC)		Stainless Steel SUS304, SUS316		Heat Resistant Steel Titanium Alloy	
	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)	Spindle Speed (min <sup>-1</sup> )	Feed Rate (mm/min)
1.0	22,000	360	22,000	360	22,000	360	19,000	220	13,000	140	9,500	90	11,300	90	9,500	65
2.0	11,500	440	11,500	440	11,500	440	11,000	290	7,500	180	5,400	110	6,500	120	5,400	85
4.0	6,000	560	6,000	560	6,000	560	5,800	370	4,000	230	2,900	150	3,400	160	2,900	100
6.0	4,200	600	4,200	600	4,200	600	4,000	400	2,700	240	2,000	160	2,400	170	2,000	120
8.0	3,000	600	3,000	600	3,000	600	2,800	400	2,000	240	1,450	160	1,800	170	1,450	120
10.0	2,500	600	2,500	600	2,500	600	2,350	400	1,600	240	1,200	160	1,450	170	1,200	120
12.0	2,100	600	2,100	600	2,100	600	2,000	400	1,350	240	1,000	160	1,200	170	1,000	120
16.0	1,500	500	1,500	500	1,500	500	1,450	320	1,000	210	750	130	900	140	750	90
20.0	1,200	460	1,200	460	1,200	460	1,150	290	800	200	600	110	700	120	600	75
Standard $a_p$	1.5D <sub>c</sub>															
Depth-of-cut $a_e$	Below 0.02D <sub>c</sub>															

I Coated Endmills Square 2 Flutes 3 Flutes 4 Flutes 6 Flutes 8 Flutes Radius Ballnose DLC SUMIDIA Coat Long Neck Uncoated CBN PCD