

Anti-Vibration Typ GSX MILL

GSXVL 4000-2.5D Type

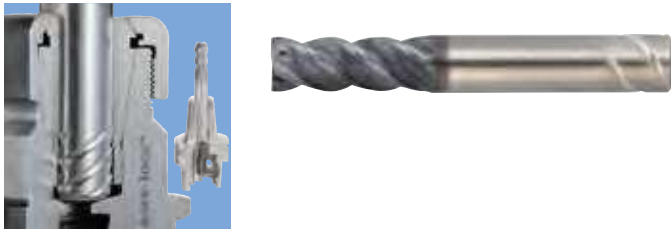


SAFE-LOCK™ Applicable Endmills (4 Flutes)

Coated Carbide	GSX	Structural Steel	Carbon Steel	Alloy Steel	Pre-hardened Steel	Tempered Ductile Steel	Hardened Steel	Stainless Steel	Heat Resistant Alloy	Cast Iron	Al Alloy	Cu Alloy	Graphite
Grades	Coating	○	○	○	○	○	○	○	○	○	○	○	○

Cat. No.	Stock	øD	l ₁	l ₂	L	ød
GSXVL 4020-2.5D	●	2,0	5	6,5	50	4
GSXVL 4030-2.5D	●	3,0	8	9,5	50	6
GSXVL 4040-2.5D	●	4,0	10	11,5	50	6
GSXVL 4050-2.5D	●	5,0	13	14,5	60	6
GSXVL 4060-2.5D	●	6,0	15	-	60	6
GSXVL 4070-2.5D	●	7,0	18	20,0	70	8
GSXVL 4080-2.5D	●	8,0	20	-	80	8
GSXVL 4090-2.5D	●	9,0	23	25,0	90	10
GSXVL 4100-2.5D	●	10,0	25	-	90	10
GSXVL 4110-2.5D	●	11,0	28	30,5	90	12
GSXVL 4120-2.5D	●	12,0	30	-	90	12
GSXVL 4140-2.5D	●	14,0	35	37,5	110	16
GSXVL 4150-2.5D	●	15,0	38	41,0	110	16
GSXVL 4160-2.5D	●	16,0	40	-	115	16
GSXVL 4180-2.5D	●	18,0	45	48,0	120	20
GSXVL 4200-2.5D	●	20,0	50	-	125	20
GSXVL 4250-2.5D	□	25,0	63	-	140	25

SAFE-LOCK™ Applicable Endmills



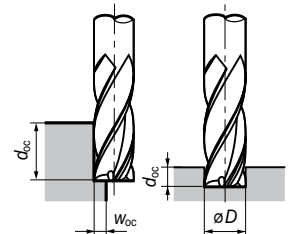
Cat. No.	Stock	øD	l ₁	l ₂	L	ød
GSXVL 4120S-2.5D	□	12,0	30	-	90	12
GSXVL 4140S-2.5D	□	14,0	35	37,5	110	16
GSXVL 4150S-2.5D	□	15,0	38	41,0	110	16
GSXVL 4160S-2.5D	□	16,0	40	-	115	16
GSXVL 4180S-2.5D	□	18,0	45	48,0	120	20
GSXVL 4200S-2.5D	□	20,0	50	-	125	20
GSXVL 4250S-2.5D	□	25,0	63	-	140	25

Recommended Cutting Conditions

1. For stable machining performance use rigid, high-precision machines and holders.
2. Use air blowing when dry machining.
3. Use wet machining for stainless steel, heat resistant alloy, and titanium alloy applications.
4. If the machine cannot achieve the recommended spindle speed, please use the max. spindle speed available.

Shoulder Milling

Work Material Cond.	Carbon Steel, Cast Iron (150 to 250HB)		Alloy Steel (25 to 35HRC)		Tempered Steel, Hardened Steel (40 to 50HRC)		Stainless Steel		Heat Resistant Steel, Titanium Alloy (20 to 45HRC)	
	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)
øD (mm)										
2,0	13.000	1.000	10.000	800	8.000	700	10.000	580	5.000	200
4,0	9.600	1.200	8.000	1.000	6.000	800	5.500	650	3.000	230
6,0	6.800	1.500	5.600	1.200	4.200	900	3.800	680	2.100	240
8,0	5.200	1.600	4.400	1.300	3.200	950	2.800	650	1.600	250
10,0	4.200	1.500	3.500	1.200	2.600	800	2.300	600	1.300	210
12,0	3.500	1.400	3.000	1.200	2.200	700	1.900	550	1.100	180
14,0	3.000	1.200	2.600	1.100	1.800	600	1.600	500	900	150
16,0	2.700	1.100	2.200	1.000	1.600	600	1.400	480	760	130
18,0	2.400	1.000	2.000	900	1.400	570	1.300	450	680	120
20,0	2.200	900	1.700	800	1.200	550	1.100	400	600	100
25,0	1.700	680	1.400	630	1.000	450	890	310	480	82
Shoulder cutting	d_{oc}		$1,5 D$		$0,05 D$		$0,1 D$		$0,05 D$	
	w_{oc}		$0,1 D$		$0,05 D$		$0,1 D$		$0,05 D$	



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	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)	Spindle Speed (rpm)	Feed Rate (mm/min)
øD (mm)										
2,0	13.000	750	10.000	550	8.400	500	6.500	300	4.000	140
4,0	8.200	800	6.000	600	5.200	500	4.000	330	2.000	130
6,0	6.100	1.100	4.000	600	3.500	580	2.700	350	1.350	150
8,0	4.600	1.000	3.000	580	2.600	570	2.000	330	1.000	140
10,0	3.600	1.000	2.400	550	2.100	510	1.600	200	800	130
12,0	3.100	920	2.000	500	1.700	450	1.300	280	660	110
14,0	2.600	750	1.700	450	1.500	400	1.100	250	570	100
16,0	2.300	670	1.500	420	1.300	350	1.000	230	500	90
18,0	2.000	620	1.300	380	1.100	330	900	200	430	80
20,0	1.900	600	1.200	360	1.000	320	800	180	380	70
25,0	1.500	470	1.000	300	790	250	640	140	300	55
Grooving	d_{oc}		$1,0 D$		$0,2 D$		$0,3 D$		$0,2 D$	