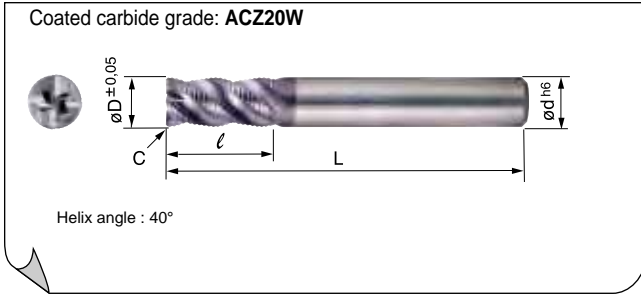


# GS MILL Series GSRE 4000SF Type

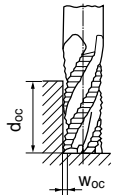


## Endmills (mm)

No. of teeth	Cat. No.	Stock	$\phi D$	$\ell$	L	$\phi d$
4	GSRE 4060 SF	●	6,0	13	50	6
	GSRE 4070 SF	●	7,0	16	60	8
	GSRE 4080 SF	●	8,0	19	60	8
	GSRE 4090 SF	●	9,0	19	70	10
	GSRE 4100 SF	●	10,0	22	70	10
	GSRE 4110 SF	●	11,0	22	75	12
	GSRE 4120 SF	●	12,0	26	75	12
	GSRE 4140 SF	●	14,0	26	90	16
	GSRE 4160 SF	●	16,0	32	90	16
	GSRE 4180 SF	●	18,0	32	100	20
	GSRE 4200 SF	●	20,0	38	100	20

Recommended :

- (1) Cutting performance is improved when using a high rigidity machine.
- (2) Speeds and feeds should be reduced when there is any excessive vibration or strange noise during the operation.



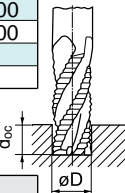
## Recommended cutting conditions

### Shoulder cutting

Material Cutting data Tool Dia. (mm)	Carbon steel ( HB150~250)		Cast iron		Alloy steel, Prehardened steel (HRC25~35)		Hardened steel (HRC40~50)		Stainless steel		Heat resistant alloys Titanium alloy		
	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	
1	4.800	1.200	5.800	1.500	3.200	380	2.600	400	4.300	250	1.600	90	
2	4.100	1.200	5.000	1.500	2.700	380	2.200	400	4.500	250	1.350	90	
3	3.600	1.200	4.500	1.500	2.400	380	2.000	400	4.000	250	1.250	90	
4	3.200	1.200	4.000	1.500	2.100	380	1.800	400	3.500	250	1.050	90	
5	2.800	1.200	2.500	1.500	1.900	380	1.600	400	3.200	250	1.000	100	
6	2.600	1.200	3.000	1.400	1.700	380	1.500	400	2.900	250	900	100	
8	2.400	1.200	2.900	1.400	1.600	400	1.300	400	2.600	250	800	100	
10	2.200	1.100	2.600	1.300	1.300	380	1.100	350	2.200	200	700	100	
12	1.800	900	2.200	1.100	1.200	380	1.000	350	2.000	180	600	100	
16	1.400	700	1.800	900	1.000	380	900	350	1.800	150	550	100	
20	1.400	700	1.700	800	850	380	800	350	1.600	150	500	100	
Shoulder cutting	$d_{oc}$	1,5D						1,5D					
	$W_{oc}$	0,5D						0,3D					

### Slotting

Material Cutting data Tool Dia. (mm)	Carbon steel ( HB150~250)		Cast iron		Alloy steel, Prehardened steel (HRC25~35)		Hardened steel (HRC40~50)		Stainless steel		Heat resistant alloys Titanium alloy		
	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	Speed (rpm)	Feed (mm/min)	
1	3.600	900	4.300	1.100	2.400	300	1.700	260	4.200	250	1.100	60	
2	3.000	900	3.700	1.100	2.000	280	1.500	260	3.600	250	900	60	
3	2.700	900	3.400	1.100	1.800	280	1.350	260	3.200	250	800	60	
4	2.400	900	3.000	1.100	1.600	280	1.200	260	2.800	250	700	60	
5	2.100	900	2.600	1.100	1.400	280	1.100	270	2.500	250	650	65	
6	2.000	900	2.300	1.100	1.300	280	1.000	270	2.300	250	600	70	
8	1.800	900	2.200	1.100	1.200	300	900	270	2.100	250	550	70	
10	1.600	800	2.000	1.100	1.000	290	750	240	1.800	180	450	65	
12	1.350	650	1.650	850	900	280	700	240	1.600	160	400	65	
16	1.200	550	1.500	750	800	280	600	230	1.400	140	350	60	
20	1.050	500	1.350	700	700	280	550	210	1.250	125	300	60	
Slotting	$d_{oc}$	1,0D						0,5D					



Coated Endmills