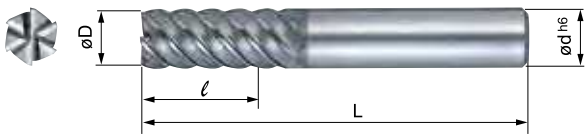
GS MILL Series
GSH 4000/6000/8000 SF Type

TiAlN Coated Fast Helix Endmills

Coated carbide grade: **ACF07C**



Helix angle : 50˚
Corner : Edge with honing

øD	Tolerance (mm)
D ≤ 3,0	0 ~ – 0,015
3,0 < D	0 ~ – 0,030

■ Endmills

(mm)

No. of teeth	Cat. No.	Stock	øD	ℓ	L	ød
4	**GSH 4010 SF**	●	1,0	3	50	6
	GSH 4015 SF	●	1,5	4	50	6
	GSH 4020 SF	●	2,0	6	50	6
6	**GSH 6030 SF**	●	3,0	8	50	6
	GSH 6040 SF	●	4,0	11	50	6
	GSH 6050 SF	●	5,0	12	50	6
	GSH 6060 SF	●	6,0	13	50	6
	GSH 6080 SF	●	8,0	19	60	8
	GSH 6100 SF	●	10,0	22	70	10
	GSH 6120 SF	●	12,0	26	75	12
8	**GSH 8160 SF**	●	16,0	32	90	16
	GSH 8200 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.

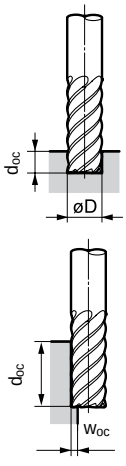
■ Recommended cutting conditions

Conventional Milling Operations

Material / Cutting data / Tool Dia. (mm)		Alloy steel, Prehardened steel (~ HRC35)		Heat treated alloy steel, hardened steel (HRC35~45)		Hardened steel (HRC45~55)		Hardened steel (HRC55~60)		Hardened steel (HRC60~65)		Hardened steel (HRC65 ~)	
		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		20.000	540	20.000	390	15.600	260	12.300	160	11.100	140	7.800	95
2		19.000	1.100	17.200	770	13.400	530	10.500	320	9.500	270	6.700	190
3		15.000	2.150	13.400	1.540	10.400	1.050	8.200	650	7.400	540	5.200	380
4		11.200	2.400	10.000	1.740	7.800	1.180	6.100	730	5.600	600	3.900	420
5		9.000	2.700	8.000	1.930	6.200	1.300	4.900	810	4.400	670	3.100	470
6		7.500	2.700	6.700	1.930	5.200	1.300	4.100	810	3.700	670	2.600	470
8		5.600	2.700	5.000	1.930	3.900	1.300	3.050	810	2.800	670	1.950	470
10		4.500	2.700	4.000	1.930	3.100	1.300	2.450	810	2.200	670	1.550	470
12		3.750	2.700	3.350	1.930	2.600	1.300	2.050	810	1.850	670	1.300	470
16		2.800	2.500	2.500	1.800	1.950	1.220	1.530	760	1.400	630	980	440
20		2.250	2.100	2.000	1.540	1.550	1.050	1.230	650	1.100	540	780	380
Shoulder cutting	d_{oc}	1 ~ 1,5D				1 ~ 1,5D				1 ~ 1,5D			
	w_{oc}	0,1D				0,05D				0,02D			
Slotting	d_{oc}	0,1D				0,05D				~ 0,05D (Max 0,5)			

HSC Machining Centre Operations

Material / Cutting data / Tool Dia. (mm)		Alloy steel, Prehardened steel (~ HRC35)		Heat treated alloy steel, hardened steel (HRC35~45)		Hardened steel (HRC45~55)		Hardened steel (HRC55~60)		Hardened steel (HRC60~65)	
		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		48.000	1.250	48.000	1.250	48.000	1.250	48.000	930	38.000	700
2		48.000	2.850	48.000	2.850	48.000	2.850	36.000	1.600	24.000	1.000
3		32.000	4.900	32.000	4.900	32.000	4.900	24.000	2.740	16.000	1.700
4		24.000	5.200	24.000	5.200	24.000	5.200	18.000	2.900	12.000	1.800
5		19.200	5.800	19.200	5.800	19.200	5.800	14.300	3.200	9.600	2.000
6		16.000	5.800	16.000	5.800	16.000	5.800	12.000	3.200	8.000	2.000
8		12.000	5.800	12.000	5.800	12.000	5.800	9.000	3.200	6.000	2.000
10		9.600	5.800	9.600	5.800	9.600	5.800	7.200	3.200	4.800	2.000
12		8.000	5.800	8.000	5.800	8.000	5.800	6.000	3.200	4.000	2.000
16		6.000	5.400	6.000	5.400	6.000	5.400	4.500	3.000	3.000	1.900
20		4.800	4.600	4.800	4.600	4.800	4.600	3.600	2.580	2.400	1.600
Shoulder cutting	d_{oc}	1 ~ 1,5D		1 ~ 1,5D				1 ~ 1,5D		1 ~ 1,5D	
	w_{oc}	0,1D		0,05D				0,02D		0,12D	



Coated Endmills

● = Euro stock