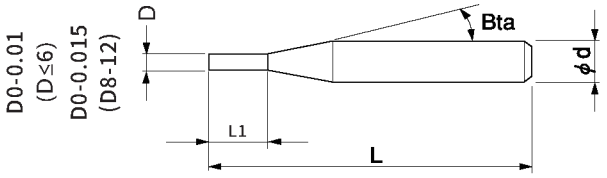
MG | HG Coating | 45 | SD 0-0.003

Highly recommend★ ◯ ◯
/Recommend/Suggest

DIE STEEL	Grade
Carbon steels (S45C/S55C)	◯
Alloy steels (SK/SCM/SUS)	◯
Prehardened steels (NAK/HPM)	◯
Hardened steels (~55/~60/~70HRC)	◯
SPECIAL MATERIAL	
Aluminum alloys	
Graphite	
Copper	◯
Plastics	
Carbon fiber	
Titanium alloys	◯
Heat resistant alloys	
Cemented carbide	
Hard brittle (non-metallic)material	

Specialty

*4 Flutes Square End Mills for Mold Steels.
*Broad application range from Copper to Hardened Steels (HRC60).



The shank taper angle shown is not an exact value and to avoid contact with the workpiece, we recommend the user controls the precise value of this angle. Shank taper angle should not make contact with the workpiece.

Total 32 models

Unit (mm)

Model Number	D Outside Diameter	L1 Length Of Cut	L2 Effective Length	Bta Shank Taper Angle	L Overall Length	T Number Of Flutes	d Shank Diameter	In Stock
SHGS4-0100300	1.0	3	–	12°	50	4	4	◯
SHGS4-0150450	1.5	4.5	–	12°	50	4	4	◯
SHGS4-0200600	2.0	6	–	12°	50	4	4	◯
SHGS4-0250600	2.5	6	–	12°	50	4	4	◯
SHGS4-0300800-3	3	8	–	-	50	4	3	◯
SHGS4-0300800-4	3	8	–	12°	50	4	4	◯
SHGS4-0300800-6	3	8	–	12°	50	4	6	◯
SHGS4-0401000-4	4	10	–	-	50	4	4	◯
SHGS4-0401000-6	4	10	–	12°	60	4	6	◯
SHGS4-0401000-75	4	10	–	-	75	4	4	◯
SHGS4-0501300	5	13	–	12°	60	4	6	◯
SHGS4-0601500	6	15	–	-	60	4	6	◯
SHGS4-0601500-75	6	15	–	-	75	4	6	◯
SHGS4-0601500-100	6	15	–	-	100	4	6	◯
SHGS4-0802000	8	20	–	-	60	4	8	◯
SHGS4-0802000-75	8	20	–	-	75	4	8	◯

Next page

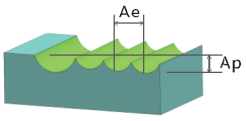
Total 32 models

Unit (mm)

Model Number	D Outside Diameter	L1 Length Of Cut	L2 Effective Length	Bta Shank Taper Angle	L Overall Length	T Number Of Flutes	d Shank Diameter	In Stock
SHGS4-0802000-100	8	20	–	-	100	4	8	○
SHGS4-0802000-150	8	20	–	-	150	4	8	○
SHGS4-1002500	10	25	–	-	75	4	10	○
SHGS4-1002500-100	10	25	–	-	100	4	10	○
SHGS4-1002500-150	10	25	–	-	150	4	10	○
SHGS4-1203000	12	30	–	-	75	4	12	○
SHGS4-1203000-100	12	30	–	-	100	4	12	○
SHGS4-1203000-150	12	30	–	-	150	4	12	○
SHGS4-1403500-100	14	35	–	-	100	4	14	○
SHGS4-1403500-150	14	35	–	-	150	4	14	○
SHGS4-1604000-100	16	40	–	-	100	4	16	○
SHGS4-1604000-100	16	40	–	-	150	4	16	○
SHGS4-1804500-100	18	45	–	-	100	4	18	○
SHGS4-1804500-150	18	45	–	-	150	4	18	○
SHGS4-2005000-100	20	50	–	-	100	4	20	○
SHGS4-2005000-150	20	50	–	-	150	4	20	○

*New size added from this series.

○ Stocked items.



Side Milling

Work Material	HRC30-45 Prehardened Steels		HRC45-55 Hardened Steels		HRC55-65 Hardened Steels	
(mm) Diameter	(min-1) Speed	(mm/min) Feed	(min-1) Speed	(mm/min) Feed	(min-1) Speed	(mm/min) Feed
D1.0	10000	100	8000	60	7000	40
D1.5	8000	120	6000	60	5000	50
D2.0	6000	150	4500	80	4000	55
D2.5	5000	150	4000	80	3500	55
D3	5000	150	4000	80	3000	60
D4	4000	200	3000	150	3000	120
D5	3500	300	3000	200	2500	150
D6	3500	300	3000	200	2500	150
D8	3000	300	2500	200	2000	200
D10	2500	300	2500	200	2000	200
D12	2000	250	2000	200	2000	200
D14	2000	350	2000	300	1800	200
D16	1800	350	1800	300	1600	200
D18	1600	350	1600	300	1400	200
D20	1200	350	1200	300	1200	150

Milling Amount for Side Milling(mm)

Length of Cut / Work Material	2.5D (Length of Cut=Diameter*2.5)	4D (Length of Cut=Diameter*4)
Below 45HRC	ae=0.07D ap=2D	ae=0.07D ap=2D
Above 45HRC	ae=0.03D ap=1.5D	ae=0.03D ap=1.5D

D: Diameter (mm)
ap: Axial Depth (mm)
ae: Radial Depth (mm)

Contour Milling

Work Material	HRC30-45 Prehardened Steels		HRC45-55 Hardened Steels		HRC55-65 Hardened Steels	
(mm) Diameter	(min-1) Speed	(mm/min) Feed	(min-1) Speed	(mm/min) Feed	(min-1) Speed	(mm/min) Feed
D1.0	13000	1000	13000	1000	8000	300
D1.5	13000	1200	13000	1200	8000	300
D2.0	12000	1500	12000	1500	8000	500
D2.5	12000	1500	12000	1500	8000	800
D3	11000	1800	11000	1800	8000	1000
D4	10000	2200	10000	2200	7500	1200
D5	9000	2500	9000	2500	7000	1500
D6	9000	2500	9000	2500	7000	1500
D8	8000	2500	8000	2500	6000	1800
D10	7000	2500	7000	2500	5500	1800
D12	6000	2500	6000	2500	5000	2000
D14	4000	2200	4000	2200	4000	2200
D16	3500	2200	3500	2200	3500	2200
D18	3000	2000	3000	2000	3000	2000
D20	2500	2000	2500	2000	2500	2000

Note:
*Decrease both spindle speed and feed rate proportionally when the milling parameters exceed the machine's maximum spindle speed;
*Recommend oil coolant for Stainless Steels and Heat Resistance Alloys;
*Recommend using a non-contact measuring device to avoid damaging the precision tip point;
*Decrease both spindle speed and feed rate proportionally in case of chattering.