



MG

HG
Coating

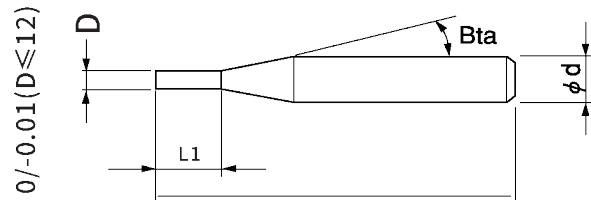
43-45
SD
0-0.003

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

- *Special coating + bar for high hard hardened materials;
- *Very good finish on flat surfaces and side cuts;
- *Long life in cutting high hardness material of HRC48-65.



4 Flutes

Total 24 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
SHHS4-0100300	1.0	3	—	12°	50	4	4	○
SHHS4-0150450	1.5	4.5	—	12°	50	4	4	○
SHHS4-0200600	2.0	6	—	12°	50	4	4	○
SHHS4-0250600	2.5	6	—	12°	50	4	4	○
SHHS4-0300800-3	3.0	8	—	—	50	4	3	○
SHHS4-0300800-4	3.0	8	—	12°	50	4	4	○
SHHS4-0300800-6	3.0	8	—	12°	60	4	6	○
SHHS4-0401000-4	4.0	10	—	—	50	4	4	○
SHHS4-0401000-6	4.0	10	—	12°	60	4	6	○
SHHS4-0401000-75	4.0	10	—	12°	75	4	4	○
SHHS4-0501300	5.0	13	—	12°	60	4	6	○
SHHS4-0601500	6.0	15	—	—	60	4	6	○
SHHS4-0601500-75	6.0	15	—	—	75	4	6	○
SHHS4-0601500-100	6.0	15	—	—	100	4	6	○
SHHS4-0802000	8.0	20	—	—	60	4	8	○
SHHS4-0802000-75	8.0	20	—	—	75	4	8	○
SHHS4-0802000-100	8.0	20	—	—	100	4	8	○
SHHS4-0802000-150	8.0	20	—	—	150	4	8	○
SHHS4-1002500	10.0	25	—	—	75	4	10	○
SHHS4-1002500-100	10.0	25	—	—	100	4	10	○

Square

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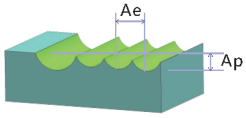
Model Number	D Outside Diameter	L1 Length Of Cut	L2 Effective Length	Bta Shank Taper Angle	L Overall Length	T Number Of Flutes	D Shank Diameter	In Stock
SHHS4-1002500-150	10.0	25	–	–	150	4	10	○
SHHS4-1203000	12.0	30	–	–	75	4	12	○
SHHS4-1203000-100	12.0	30	–	–	100	4	12	○
SHHS4-1203000-150	12.0	30	–	–	150	4	12	○

*New size added from this series.

Stocked items.

4 Flutes

Square



Cutting Parameter

Work Material	HRC48-55 Hardened steels		HRC56-62 Hardened steels		HRC63-70 Hardened steels	
Diameter	(min-1) Speed	(mm/min) Feed	(min-1) Speed	(mm/min) Feed	(min-1) Speed	(mm/min) Feed
1.0	22000	600	20000	500	15000	400
1.5	18000	700	16000	600	12000	400
2.0	15000	900	12000	600	10000	500
2.5	13000	900	10000	600	9000	500
3.0	11000	1000	8000	700	7000	600
4.0	8500	1200	7500	800	6000	600
5.0	7500	1500	6000	1200	5000	600
6.0	6500	1800	5500	1000	4500	600
8.0	5000	2000	4000	1200	3500	700
10.0	4000	2000	3200	1500	2500	800
12.0	3500	2000	2500	1500	2200	800

4 Flutes

Square

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	$a_e=0.07D$ $a_p=2D$	$a_e=0.07D$ $a_p=2D$
Above 45HRC	$a_e=0.03D$ $a_p=1.5D$	$a_e=0.03D$ $a_p=1.5D$

D : Diameter (mm)

 a_p : Axial Depth (mm) a_e : Radial Depth (mm)

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;
- *When the material hardness is greater than HRC58 degrees, it is recommended to use air blow cooling for roughing and oil mist or air blow cooling for finishing.