



MG

HG
CoatingSD
0-0.003R
±0.005R
±0.007

R ≤ 3

R4 ~ 10

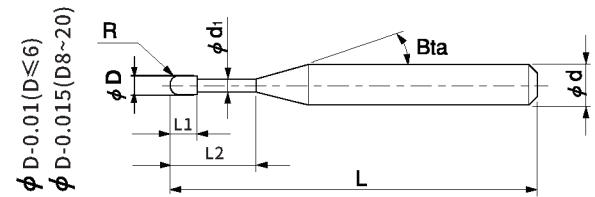
Highly recommend ★ ○ ○
/Recommend/Suggest

Specialty

*2 Flutes Ball End Mills for Mold Steel;

*Unique flute design, to achieve excellent flat surface quality;

*Outstanding milling performance and long tool life, high precision for the full series.



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	

Total 36 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
SHGR2-003003	R0.15	0.3	-	12°	50	2	4	○
SHGR2-004004	R0.2	0.4	-	12°	50	2	4	○
SHGR2-005005	R0.25	0.5	-	12°	50	2	4	○
SHGR2-006006	R0.3	0.6	-	12°	50	2	4	○
SHGR2-008008	R0.4	0.8	-	12°	50	2	4	○
SHGR2-010015	R0.5	1	1.5	12°	50	2	4	○
SHGR2-015025	R0.75	1.35	2.5	12°	50	2	4	○
SHGR2-020040	R1	4	4	12°	50	2	4	○
SHGR2-020020-6	R1	2	4	12°	60	2	6	○
SHGR2-030030-3	R1.5	3	6	-	50	2	3	○
SHGR2-030060-4	R1.5	6	6	12°	50	2	4	○
SHGR2-030030-6	R1.5	3	6	12°	60	2	6	○
SHGR2-040080-4	R2	8	8	-	50	2	4	○
SHGR2-040040-6	R2	4	8	12°	60	2	6	○
SHGR2-050100	R2.5	5	10	12°	60	2	6	○
SHGR2-060120	R3	6	12	-	60	2	6	○
SHGR2-060120-75	R3	6	12	-	75	2	6	○
SHGR2-060120-100	R3	6	12	-	100	2	6	○
SHGR2-080160	R4	8	16	-	60	2	8	○
SHGR2-080160-75	R4	8	16	-	75	2	8	○

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Total 36 models

Unit (mm)

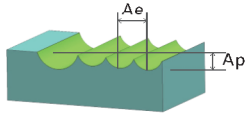
Model Number	D Outside Diameter	L1 Length Of Cut	L2 Effective Length	BTa Shank Taper Angle	L Overall Length	T Number Of Flutes	d Shank Diameter	In Stock
SHGR2-080160-100	R4	8	16	-	100	2	8	○
SHGR2-080160-150	R4	8	16	-	150	2	8	○
SHGR2-100200	R5	10	20	-	75	2	10	○
SHGR2-100200-100	R5	10	20	-	100	2	10	○
SHGR2-100200-150	R5	10	20	-	150	2	10	○
SHGR2-120240	R6	12	24	-	75	2	12	○
SHGR2-120240-100	R6	12	24	-	100	2	12	○
SHGR2-120240-150	R6	12	24	-	150	2	12	○
SHGR2-140280-100	R7	14	28	-	100	2	14	○
SHGR2-140280-150	R7	14	28	-	150	2	14	○
SHGR2-160320-100	R8	16	32	-	100	2	16	○
SHGR2-160320-150	R8	16	32	-	150	2	16	○
SHGR2-180360-100	R9	18	36	-	100	2	18	○
SHGR2-180360-150	R9	18	36	-	150	2	18	○
SHGR2-200400-100	R10	20	40	-	100	2	20	○
SHGR2-200400-150	R10	20	40	-	150	2	20	○

*New size added from this series.

○ Stocked items.

2 Flutes

Ball



Work Material	HRC30-45 Prehardened Steels				HRC45-55 Hardened Steels				HRC55-65 Hardened Steels			
Radius of Ball Nose	(min-1) Speed	(mm/min) Feed	Ap (mm) Axial Depth	Ae (mm) Radial Depth	(min-1) Speed	(mm/min) Feed	Ap (mm) Axial Depth	Ae (mm) Radial Depth	(min-1) Speed	(mm/min) Feed	Ap (mm) Axial Depth	Ae (mm) Radial Depth
R0.15	26000	300	0.01	0	24000	200	0.008	0.008	20000	200	0.005	0.005
R0.2	22000	400	0.015	0.015	22000	300	0.01	0.01	18000	300	0.008	0.008
R0.25	20000	400	0.015	0.015	22000	400	0.015	0.015	16000	400	0.008	0.008
R0.3	20000	800	0.02	0.02	20000	600	0.015	0.015	15000	500	0.015	0.015
R0.4	18000	1200	0.02	0.03	20000	800	0.02	0.02	13000	600	0.02	0.02
R0.5	16000	1200	0.03	0.04	18000	1000	0.02	0.03	12000	700	0.02	0.03
R0.75	16000	1500	0.03	0.05	16000	1200	0.02	0.04	10000	800	0.02	0.04
R1	15000	1800	0.03	0.05	14000	1800	0.02	0.05	9000	1200	0.02	0.04
R1	15000	1800	0.04	0.05	14000	1800	0.02	0.05	9000	1400	0.02	0.04
R1.5	14000	2200	0.04	0.07	13000	2200	0.03	0.06	9000	1200	0.02	0.05
R1.5	14000	2200	0.05	0.07	13000	2200	0.03	0.06	9000	1300	0.02	0.05
R1.5	14000	2200	0.04	0.07	13000	2200	0.03	0.06	9000	1500	0.02	0.05
R2	14000	2400	0.04	0.08	12000	2400	0.03	0.06	8000	1500	0.02	0.06
R2	14000	2400	0.05	0.08	12000	2400	0.03	0.06	8000	1500	0.02	0.06
R2.5	12000	2600	0.05	0.08	12000	2400	0.03	0.06	8000	1500	0.02	0.06
R3	12000	2600	0.05	0.08	10000	2600	0.03	0.08	7000	1800	0.02	0.08
R4	10000	3000	0.05	0.1	9000	2800	0.03	0.1	6500	2200	0.02	0.1
R5	9000	3000	0.05	0.12	8000	2800	0.03	0.12	6000	2200	0.02	0.1
R6	9000	3000	0.05	0.15	7000	2800	0.03	0.12	5000	2000	0.02	0.12
R7	7000	3000	0.08	0.15	6000	2800	0.03	0.15	4000	2000	0.02	0.15
R8	6000	3000	0.08	0.15	5500	2800	0.03	0.15	4000	2000	0.02	0.15
R9	5000	3000	0.08	0.15	4500	2800	0.03	0.15	4000	2000	0.02	0.15
R10	4500	3000	0.08	0.15	4000	2800	0.03	0.15	4000	2000	0.02	0.15

Note:

*The above milling parameters are calculated based on 3xD. Decrease both spindle speed and feed rate proportionally if the overhang length exceeds 3xD;

*Recommend oil coolant for Stainless Steels and Heat Resistance Alloys;

*Decrease both spindle speed and feed rate proportionally when the milling parameters exceed the machine's maximum spindle speed.