



MG

HG
Coating

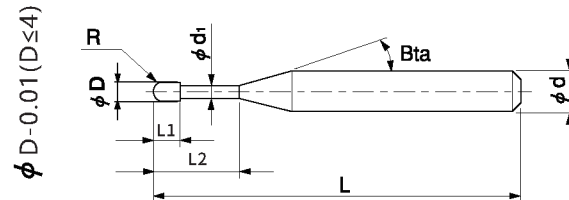
30
SD
0-0.003R
±0.005

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;
- *Excellent surface finishing;
- *The large arc at the clearance avoids cutter damage;
- *The large arc transition in the avoidance position of the deep groove tool is not easy to break the tool.



2 Flutes

Total 77 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
SHHLR2-002005	R0.1	0.2	0.5	12°	50	2	4	○
SHHLR2-002010	R0.1	0.2	1	12°	50	2	4	○
SHHLR2-002015	R0.1	0.2	1.5	12°	50	2	4	○
SHHLR2-003010	R0.15	0.3	1	12°	50	2	4	○
SHHLR2-003015	R0.15	0.3	1.5	12°	50	2	4	○
SHHLR2-003020	R0.15	0.3	2	12°	50	2	4	○
SHHLR2-003030	R0.15	0.3	3	12°	50	2	4	○
SHHLR2-004010	R0.2	0.4	1	12°	50	2	4	○
SHHLR2-004020	R0.2	0.4	2	12°	50	2	4	○
SHHLR2-004030	R0.2	0.4	3	12°	50	2	4	○
SHHLR2-004040	R0.2	0.4	4	12°	50	2	4	○
SHHLR2-005010	R0.25	0.5	1	12°	50	2	4	○
SHHLR2-005020	R0.25	0.5	2	12°	50	2	4	○
SHHLR2-005040	R0.25	0.5	4	12°	50	2	4	○
SHHLR2-005060	R0.25	0.5	6	12°	50	2	4	○
SHHLR2-005080	R0.25	0.5	8	12°	50	2	4	○
SHHLR2-006020	R0.3	0.6	2	12°	50	2	4	○
SHHLR2-006040	R0.3	0.6	4	12°	50	2	4	○
SHHLR2-006060	R0.3	0.6	6	12°	50	2	4	○
SHHLR2-006080	R0.3	0.6	8	12°	50	2	4	○

Long Neck
Ball

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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
SHHLR2-008020	R0.4	0.8	2	12°	50	2	4	○
SHHLR2-008040	R0.4	0.8	4	12°	50	2	4	○
SHHLR2-008060	R0.4	0.8	6	12°	50	2	4	○
SHHLR2-008080	R0.4	0.8	8	12°	50	2	4	○
SHHLR2-009020	R0.45	0.9	2	12°	50	2	4	○
SHHLR2-009040	R0.45	0.9	4	12°	50	2	4	○
SHHLR2-009060	R0.45	0.9	6	12°	50	2	4	○
SHHLR2-009080	R0.45	0.9	8	12°	50	2	4	○
SHHLR2-010020	R0.5	1	2	12°	50	2	4	○
SHHLR2-010040	R0.5	1	4	12°	50	2	4	○
SHHLR2-010060	R0.5	1	6	12°	50	2	4	○
SHHLR2-010080	R0.5	1	8	12°	50	2	4	○
SHHLR2-010100	R0.5	1	10	12°	50	2	4	○
SHHLR2-010120	R0.5	1	12	12°	50	2	4	○
SHHLR2-010140	R0.5	1	14	12°	50	2	4	○
SHHLR2-010160	R0.5	1	16	12°	50	2	4	○
SHHLR2-015040	R0.75	1.5	4	12°	50	2	4	○
SHHLR2-015060	R0.75	1.5	6	12°	50	2	4	○
SHHLR2-015080	R0.75	1.5	8	12°	50	2	4	○
SHHLR2-015100	R0.75	1.5	10	12°	50	2	4	○
SHHLR2-015120	R0.75	1.5	12	12°	50	2	4	○
SHHLR2-015140	R0.75	1.5	14	12°	50	2	4	○
SHHLR2-015160	R0.75	1.5	16	12°	50	2	4	○
SHHLR2-020040	R1	2	4	12°	50	2	4	○
SHHLR2-020060	R1	2	6	12°	50	2	4	○
SHHLR2-020080	R1	2	8	12°	50	2	4	○
SHHLR2-020100	R1	2	10	12°	50	2	4	○
SHHLR2-020120	R1	2	12	12°	50	2	4	○
SHHLR2-020160	R1	2	16	12°	50	2	4	○
SHHLR2-020040-6	R1	2	4	12°	60	2	6	○
SHHLR2-020060-6	R1	2	6	12°	60	2	6	○
SHHLR2-020080-6	R1	2	8	12°	60	2	6	○
SHHLR2-020100-6	R1	2	10	12°	60	2	6	○
SHHLR2-020120-6	R1	2	12	12°	60	2	6	○
SHHLR2-020160-6	R1	2	16	12°	60	2	6	○
								○

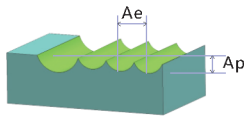
Model Number	D Outside Diameter	L1 Length Of Cut	L2 Effective Length	Bta Shank Taper Angle	L Overall Length	T Number Of Flutes	D Shank Diameter	In Stock
SHHLR2-030060	R1.5	3	6	12°	50	2	4	○
SHHLR2-030080	R1.5	3	8	12°	50	2	4	○
SHHLR2-030100	R1.5	3	10	12°	50	2	4	○
SHHLR2-030120	R1.5	3	12	12°	50	2	4	○
SHHLR2-030160	R1.5	3	16	12°	50	2	4	○
SHHLR2-030200	R1.5	3	20	12°	50	2	4	○
SHHLR2-030060-6	R1.5	3	6	12°	60	2	6	○
SHHLR2-030080-6	R1.5	3	8	12°	60	2	6	○
SHHLR2-030100-6	R1.5	3	10	12°	60	2	6	○
SHHLR2-030120-6	R1.5	3	12	12°	60	2	6	○
SHHLR2-030160-6	R1.5	3	16	12°	60	2	6	○
SHHLR2-030200-6	R1.5	3	20	12°	60	2	6	○
SHHLR2-040080	R2	4	8	—	50	2	4	○
SHHLR2-040100	R2	4	10	—	50	2	4	○
SHHLR2-040120	R2	4	12	—	50	2	4	○
SHHLR2-040160	R2	4	16	—	50	2	4	○
SHHLR2-040200	R2	4	20	—	50	2	4	○
SHHLR2-040080-6	R2	4	8	12°	60	2	6	○
SHHLR2-040100-6	R2	4	10	12°	60	2	6	○
SHHLR2-040120-6	R2	4	12	12°	60	2	6	○
SHHLR2-040160-6	R2	4	16	12°	60	2	6	○
SHHLR2-040200-6	R2	4	20	12°	60	2	6	○

*New size added from this series.

Stocked items.

2 Flutes

Long Neck Ball



Work Material		HRC48-55 hardened steel				HRC56-62 hardened steel				HRC63-70 hardened steel			
Radius	Effective Length(mm)	(min-1) Speed	(mm/min) Feed	(mm) Axial depth	(mm) Radial depth	(min-1) Speed	(mm/min) Feed	(mm) Axial depth	(mm) Radial depth	(min-1) Speed	(mm/min) Feed	(mm) Axial depth	(mm) Radial depth
R0.1	0.5	40000	300	0.01	0.01	40000	280	0.005	0.005	40000	200	0.003	0.003
R0.1	1	40000	250	0.003	0.005	40000	160	0.003	0.005	40000	120	0.003	0.003
R0.1	1.5	40000	150	0.003	0.005	40000	120	0.003	0.003	40000	80	0.002	0.002
R0.15	1	40000	350	0.01	0.015	40000	280	0.005	0.01	40000	200	0.003	0.007
R0.15	1.5	40000	250	0.003	0.005	40000	160	0.003	0.005	40000	120	0.003	0.005
R0.15	2	40000	150	0.003	0.005	40000	120	0.003	0.003	40000	80	0.002	0.002
R0.15	3	40000	100	0.002	0.003	40000	100	0.002	0.003	40000	80	0.002	0.002
R0.2	1	40000	600	0.02	0.05	40000	500	0.02	0.03	40000	400	0.01	0.02
R0.2	2	40000	500	0.02	0.03	40000	500	0.01	0.02	40000	300	0.005	0.01
R0.2	2	35000	300	0.008	0.02	33000	300	0.008	0.015	30000	200	0.005	0.007
R0.2	4	35000	250	0.005	0.01	30000	200	0.005	0.01	25000	150	0.003	0.005
R0.25	1	40000	800	0.02	0.05	36000	700	0.02	0.03	30000	400	0.01	0.02
R0.25	2	40000	800	0.02	0.05	36000	700	0.02	0.03	30000	400	0.01	0.02
R0.25	4	32000	400	0.01	0.02	30000	400	0.01	0.02	24000	200	0.005	0.01
R0.25	6	25000	350	0.005	0.01	24000	250	0.005	0.01	20000	160	0.003	0.005
R0.25	8	25000	150	0.002	0.003	24000	100	0.002	0.002	20000	80	0.001	0.002
R0.3	2	40000	1200	0.03	0.08	36000	1000	0.02	0.08	25000	600	0.02	0.08
R0.3	4	40000	800	0.02	0.05	32000	800	0.02	0.05	25000	400	0.01	0.03
R0.3	6	30000	500	0.01	0.02	26000	400	0.01	0.02	20000	300	0.005	0.01
R0.3	8	25000	300	0.005	0.005	20000	300	0.005	0.005	16000	200	0.003	0.003
R0.4	2	35000	1400	0.04	0.1	30000	1400	0.03	0.08	20000	700	0.02	0.08
R0.4	4	35000	1400	0.04	0.1	30000	1400	0.03	0.08	20000	700	0.02	0.08
R0.4	6	28000	1000	0.02	0.05	25000	800	0.02	0.03	18000	500	0.01	0.02
R0.4	8	22000	700	0.01	0.03	20000	600	0.01	0.02	14000	300	0.005	0.01
R0.45	2	35000	1400	0.04	0.1	30000	1400	0.03	0.08	20000	700	0.02	0.08
R0.45	4	35000	1400	0.04	0.1	30000	1400	0.03	0.08	20000	700	0.02	0.08
R0.45	6	28000	1000	0.02	0.05	25000	800	0.02	0.03	18000	500	0.01	0.02
R0.45	8	22000	700	0.01	0.03	20000	600	0.01	0.02	14000	300	0.005	0.01
R0.5	2	30000	1600	0.08	0.3	24000	1600	0.08	0.3	18000	1000	0.05	0.15
R0.5	4	30000	1600	0.08	0.2	24000	1600	0.06	0.2	18000	800	0.03	0.13
R0.5	6	30000	1200	0.05	0.1	22000	1000	0.03	0.1	18000	600	0.02	0.05
R0.5	8	24000	800	0.02	0.08	18000	500	0.01	0.08	15000	400	0.01	0.03
R0.5	10	22000	600	0.015	0.05	16000	400	0.01	0.05	15000	300	0.01	0.02
R0.5	12	20000	600	0.01	0.03	16000	400	0.01	0.03	15000	300	0.005	0.01
R0.5	14	20000	400	0.005	0.01	16000	300	0.005	0.01	15000	200	0.003	0.005
R0.5	16	18000	300	0.005	0.005	16000	200	0.005	0.005	14000	150	0.002	0.002

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Work Material		HRC48-55 hardened steel				HRC56-62 hardened steel				HRC63-70 hardened steel			
Radius	Effective Length	(min-1) Speed	(mm/min) Feed	(mm) Axial depth	(mm) Radial depth	(min-1) Speed	(mm/min) Feed	(mm) Axial depth	(mm) Radial depth	(min-1) Speed	(mm/min) Feed	(mm) Axial depth	(mm) Radial depth
R0.75	4	30000	2000	0.1	0.3	24000	2000	0.1	0.2	18000	1200	0.06	0.15
R0.75	6	30000	2000	0.1	0.2	24000	2000	0.1	0.2	18000	1200	0.05	0.1
R0.75	8	24000	1400	0.1	0.15	20000	1000	0.05	0.08	16000	800	0.03	0.05
R0.75	10	24000	1400	0.1	0.1	20000	1000	0.05	0.05	16000	600	0.03	0.03
R0.75	12	20000	600	0.05	0.05	16000	400	0.03	0.05	15000	400	0.02	0.03
R0.75	14	20000	600	0.03	0.03	16000	400	0.02	0.02	15000	400	0.01	0.01
R0.75	16	20000	300	0.01	0.01	16000	200	0.005	0.005	14000	300	0.002	0.002
R1	4	24000	2600	0.15	0.4	22000	2400	0.15	0.3	18000	1400	0.1	0.2
R1	6	24000	2600	0.15	0.4	22000	2400	0.15	0.3	18000	1400	0.1	0.2
R1	8	20000	2400	0.1	0.3	18000	2400	0.1	0.2	16000	1400	0.07	0.15
R1	10	18000	1800	0.07	0.2	16000	1600	0.05	0.2	14000	1000	0.05	0.1
R1	12	16000	1600	0.05	0.15	14000	1400	0.05	0.1	12000	800	0.03	0.05
R1	16	16000	1600	0.05	0.1	14000	1400	0.05	0.05	12000	800	0.03	0.03
R1.5	6	20000	3000	0.2	0.5	18000	2600	0.2	0.4	14000	2000	0.15	0.3
R1.5	8	20000	3000	0.2	0.5	18000	2600	0.2	0.4	14000	2000	0.1	0.3
R1.5	10	20000	3000	0.2	0.5	18000	2600	0.15	0.3	14000	2000	0.07	0.2
R1.5	12	20000	3000	0.2	0.5	18000	2600	0.15	0.3	14000	1800	0.07	0.2
R1.5	16	18000	2400	0.1	0.4	16000	2000	0.1	0.3	12000	1600	0.05	0.1
R1.5	20	18000	2400	0.07	0.25	16000	2000	0.05	0.15	12000	1600	0.03	0.05
R2	8	16000	3000	0.2	1	14000	3000	0.2	0.8	12000	2600	0.2	0.6
R2	10	16000	3000	0.2	1	14000	3000	0.2	0.8	12000	2600	0.2	0.6
R2	12	16000	3000	0.2	1	14000	3000	0.2	0.8	12000	2600	0.2	0.6
R2	16	14000	2600	0.1	0.6	12000	2000	0.1	0.4	10000	2000	0.1	0.2
R2	20	14000	2600	0.07	0.4	12000	1200	0.05	0.3	10000	1600	0.03	0.1

2 Flutes

Long Neck Ball

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 higher than HRC58, it is recommended to use air blow cooling for roughing and oil mist or air blow cooling for finishing.