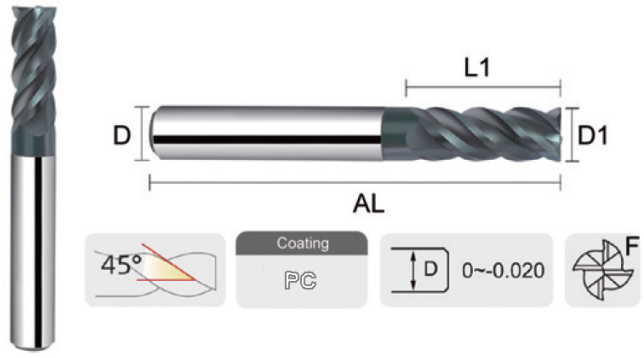
101 series

∞Applicable materials: ≤HRC 45 Steel, cast iron, carbon steel, alloy steel, pre hardened steel, hardened steel, cast iron, ductile iron, etc.

∞Characteristic:Swiss nano coating technology, wear-resistant, high temperature resistant, widely used, cost-effective. High efficiency machining (below HRC 45) from ordinary steel to pre hardened steel can realize finishing from high metal removal to high precision and high surface quality.

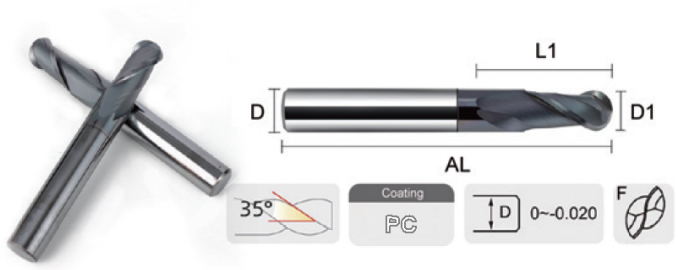
End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
101-EM-1.0	D1.0-50	D1.0	/	3	4F	4D	50
101-EM-1.5	D1.5-50	D1.5	/	4	4F	4D	50
101-EM-2.0	D2.0-50	D2.0	/	6	4F	4D	50
101-EM-2.5	D2.5-50	D2.5	/	8	4F	4D	50
101-EM-3.0	D3.0-50	D3.0	/	8	4F	4D	50
101-EM-4.0	D4.0-50	D4.0	/	11	4F	4D	50
101-EM-5.0	D5.0-50	D5.0	/	13	4F	6D	50
101-EM-6.0	D6.0-50	D6.0	/	16	4F	6D	50
101-EM-8.0	D8. 0-60	D8.0	/	20	4F	8D	60
101-EM-10.0	D10.0-75	D10.0	/	25	4F	10D	75
101-EM-12.0	D12.0-75	D12.0	/	30	4F	12D	75
101-EM-14.0	D14.0- 80	D14.0	/	35	4F	14D	80
101-EM-16.0	D16.0-100	D16.0	/	36	4F	16D	100
101-EM-18.0	D18.0-100	D18.0	/	38	4F	18D	100
101-EM-20.0	D20.0-100	D20.0	/	45	4F	20D	100

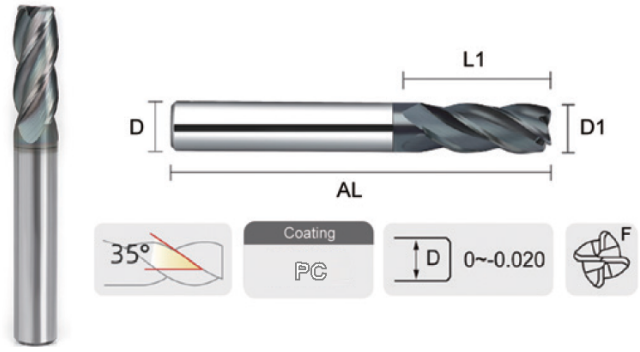
ZETOOL

Ball Nose End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
101-BN-1.0	D0.5-50	D1.0	R0.5	2	2F	4D	50
101-BN-1.5	D1.5R0.75-50	D1.5	R0.75	2	2F	4D	50
101-BN-2.0	D2R1.0-50	D2.0	R1.0	4	2F	4D	50
101-BN-3.0	D3R1.5-50	D3.0	R1.5	6	2F	4D	50
101-BN-4.0	D4R2.0-50	D4.0	R2.0	8	2F	4D	50
101-BN-5.0	DSR2.5-50	D5.0	R2.5	10	2F	6D	50
101-BN-6.0	D6R3.0-50	D6.0	R3.0	12	2F	6D	50
101-BN-8.0	D8R4.0-60	D8.0	R4.0	16	2F	8D	60
101-BN-10.0	D10R5.0- 75	D10.0	R5.0	20	2F	10D	75
101-BN-12.0	D12R6.0- 75	D12.0	R6.0	24	2F	12D	75
101-BN-14.0	D14R7.0- 80	D14.0	R7.0	28	2F	14D	80
101-BN-16.0	D16R8.0-100	D16.0	R8.0	32	2F	16D	100
101-BN-18.0	D18R9.0-100	D18.0	R9.0	36	2F	18D	100
101-BN-20.0	D20R10.0-100	D20.0	R10.0	40	2F	20D	100

Corner Radius End Mill



стандартные радиусы в диапазоне:
R0.2 R0.5 R1 R1.5 R2 R2.5 R3, первый указанный радиус - скорее всего складская позиция (R0.2-R0.5 - тут скорее всего R0.2 складской)

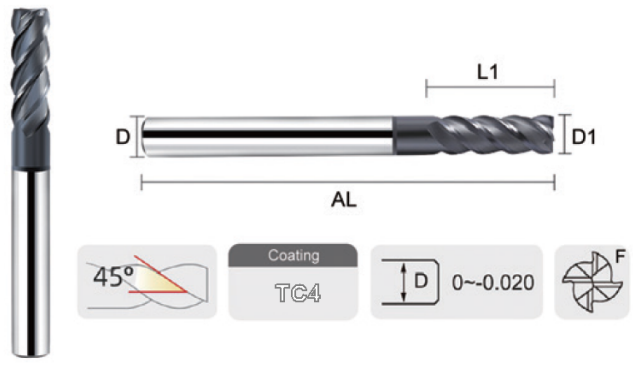
Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
101-CR-1.0	D1.0-50	D1.0	R0.2	3	4F	4D	50
101-CR-2.0	D2.0-50	D2.0	R0.2-R0.5	6	4F	4D	50
101-CR-3.0	D3.0-50	D3.0	R0.2-R0.5	8	4F	4D	50
101-CR-4.0	D4.0-50	D4.0	R0.2-R0.5	11	4F	4D	50
101-CR-5.0	D5.0-50	D5.0	R0.2-R0.5	13	4F	6D	50
101-CR-6.0	D6.0-50	D6.0	R0.2-R0.5	16	4F	6D	50
101-CR-8.0	D8.0-60	D8.0	R0.2-R1.0	20	4F	8D	60
101-CR-10.0	D10.0-75	D10.0	R0.2-R3.0	25	4F	10D	75
101-CR-12.0	D12.0-75	D12.0	R0.2-R3.0	30	4F	12D	75
101-CR-14.0	D14.0-80	D14.0	R0.5-R3.0	35	4F	14D	80
101-CR-16.0	D16.0-100	D16.0	R0.5-R3.0	36	4F	16D	100
101-CR-18.0	D18.0-100	D18.0	R0.5-R3.0	38	4F	18D	100
101-CR-20.0	D20.0-100	D20.0	R0.5-R3.0	45	4F	20D	100

102 series

∞Applicable materials: ≤HRC55,nonferrous alloy, steel, pre hardened steel, quenched and tempered steel, stainless steel and other materials.

∞Characteristic:Realize finishing from high metal removal to high precision and high surface quality.

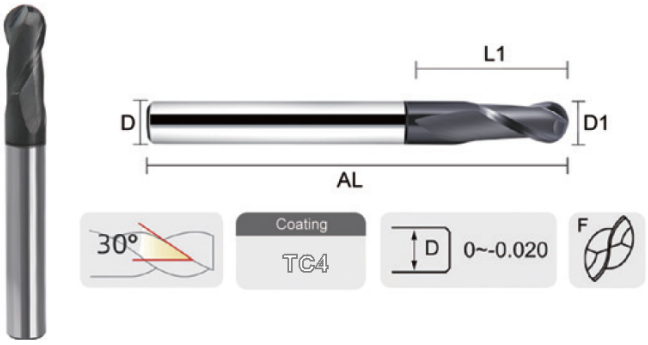
End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
102-EM-1.0	D1.0-50	D1.0	/	3	4F	4D	50
102-EM-1.5	D1.5-50	D1.5	/	4	4F	4D	50
102-EM-2.0	D2.0-50	D2.0	/	6	4F	4D	50
102-EM-2.5	D2.5-50	D2.5	/	8	4F	4D	50
102-EM-3.0	D3.0-50	D3.0	/	8	4F	4D	50
102-EM-4.0	D4.0-50	D4.0	/	11	4F	4D	50
102-EM-5.0	D5.0-50	D5.0	/	13	4F	6D	50
102-EM-6.0	D6.0-50	D6.0	/	16	4F	6D	50
102-EM-8.0	D8. 0-60	D8.0	/	20	4F	8D	60
102-EM-10.0	D10.0-75	D10.0	/	25	4F	10D	75
102-EM-12.0	D12.0-75	D12.0	/	30	4F	12D	75
102-EM-14.0	D14.0- 80	D14.0	/	35	4F	14D	80
102-EM-16.0	D16.0-100	D16.0	/	36	4F	16D	100
102-EM-18.0	D18.0-100	D18.0	/	38	4F	18D	100
102-EM-20.0	D20.0-100	D20.0	/	45	4F	20D	100

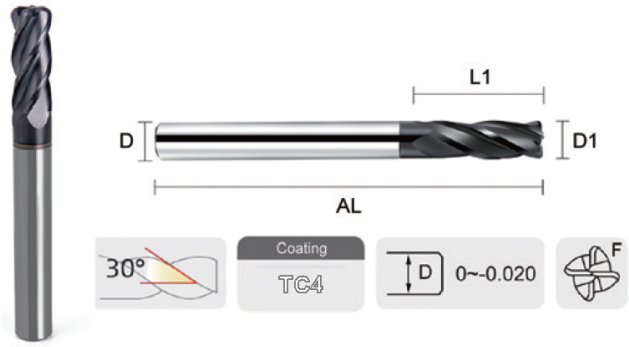
ZETOOL

Ball Nose End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
102-BN-1.0	D0.5-50	D1.0	R0.5	2	2F	4D	50
102-BN-1.5	D1.5R0.75-50	D1.5	R0.75	2	2F	4D	50
102-BN-2.0	D2R1.0-50	D2.0	R1.0	4	2F	4D	50
102-BN-3.0	D3R1.5-50	D3.0	R1.5	6	2F	4D	50
102-BN-4.0	D4R2.0-50	D4.0	R2.0	8	2F	4D	50
102-BN-5.0	DSR2.5-50	D5.0	R2.5	10	2F	6D	50
102-BN-6.0	D6R3.0-50	D6.0	R3.0	12	2F	6D	50
102-BN-8.0	D8R4.0-60	D8.0	R4.0	16	2F	8D	60
102-BN-10.0	D10R5.0- 75	D10.0	R5.0	20	2F	10D	75
102-BN-12.0	D12R6.0- 75	D12.0	R6.0	24	2F	12D	75
102-BN-14.0	D14R7.0- 80	D14.0	R7.0	28	2F	14D	80
102-BN-16.0	D16R8.0-100	D16.0	R8.0	32	2F	16D	100
102-BN-18.0	D18R9.0-100	D18.0	R9.0	36	2F	18D	100
102-BN-20.0	D20R10.0-100	D20.0	R10.0	40	2F	20D	100

Corner Radius End Mill



стандартные радиусы в диапазоне:
R0.2 R0.5 R1 R1.5 R2 R2.5 R3, первый указанный радиус - скорее всего складская позиция (R0.2-R0.5 - тут скорее всего R0.2 складской)

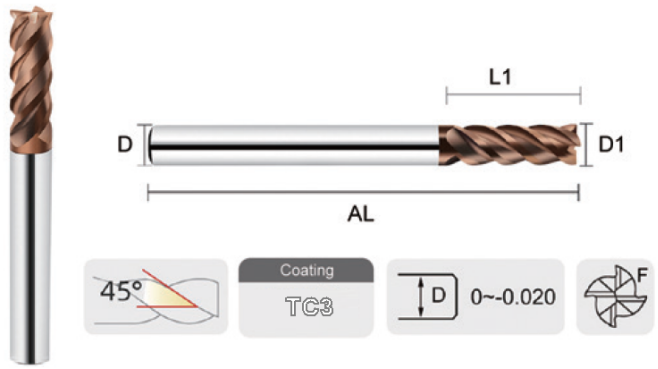
Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
102-CR-1.0	D1.0-50	D1.0	R0.2	3	4F	4D	50
102-CR-2.0	D2.0-50	D2.0	R0.2-R0.5	6	4F	4D	50
102-CR-3.0	D3.0-50	D3.0	R0.2-R0.5	8	4F	4D	50
102-CR-4.0	D4.0-50	D4.0	R0.2-R0.5	11	4F	4D	50
102-CR-5.0	D5.0-50	D5.0	R0.2-R0.5	13	4F	6D	50
102-CR-6.0	D6.0-50	D6.0	R0.2-R0.5	16	4F	6D	50
102-CR-8.0	D8.0-60	D8.0	R0.2-R1.0	20	4F	8D	60
102-CR-10.0	D10.0-75	D10.0	R0.2-R3.0	25	4F	10D	75
102-CR-12.0	D12.0-75	D12.0	R0.2-R3.0	30	4F	12D	75
102-CR-14.0	D14.0-80	D14.0	R0.5-R3.0	35	4F	14D	80
102-CR-16.0	D16.0-100	D16.0	R0.5-R3.0	36	4F	16D	100
102-CR-18.0	D18.0-100	D18.0	R0.5-R3.0	38	4F	18D	100
102-CR-20.0	D20.0-100	D20.0	R0.5-R3.0	45	4F	20D	100

103 series

∞Applicable materials:HRC50−68,pre hardened steel, hardened steel, cast iron, ductile iron, etc.

∞Characteristic:The high coating hardness and excellent high−temperature oxidation resistance are more suitable for high hardness materials and high−speed machining fields. Antique copper dot matrix heterogeneous coating, higher coating hardness and excellent high temperature oxidation resistance, more closely combined with the substrate. Special surface post−treatment can effectively reduce friction, discharge chips more smoothly, and the quality of machined surface is better.

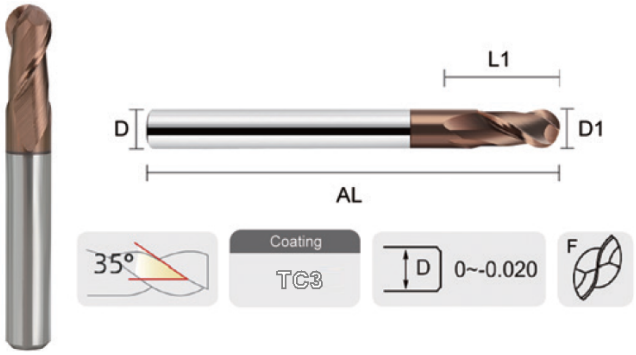
End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
103-EM-1.0	D1.0-50	D1.0	/	3	4F	4D	50
103-EM-1.5	D1.5-50	D1.5	/	4	4F	4D	50
103-EM-2.0	D2.0-50	D2.0	/	6	4F	4D	50
103-EM-2.5	D2.5-50	D2.5	/	8	4F	4D	50
103-EM-3.0	D3.0-50	D3.0	/	8	4F	4D	50
103-EM-4.0	D4.0-50	D4.0	/	11	4F	4D	50
103-EM-5.0	D5.0-50	D5.0	/	13	4F	6D	50
103-EM-6.0	D6.0-50	D6.0	/	16	4F	6D	50
103-EM-8.0	D8. 0-60	D8.0	/	20	4F	8D	60
103-EM-10.0	D10.0-75	D10.0	/	25	4F	10D	75
103-EM-12.0	D12.0-75	D12.0	/	30	4F	12D	75
103-EM-14.0	D14.0- 80	D14.0	/	35	4F	14D	80
103-EM-16.0	D16.0-100	D16.0	/	36	4F	16D	100
103-EM-18.0	D18.0-100	D18.0	/	38	4F	18D	100
103-EM-20.0	D20.0-100	D20.0	/	45	4F	20D	100

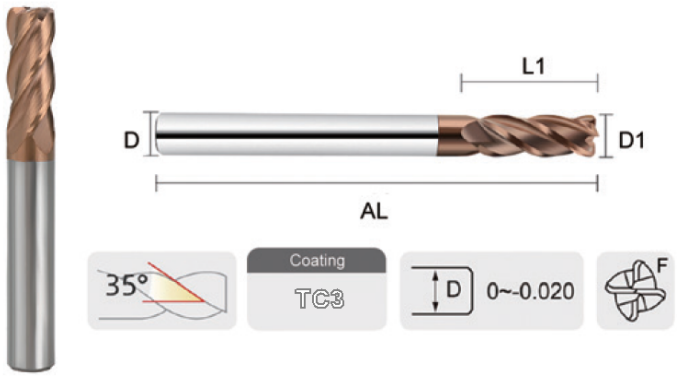
ZETOOL

Ball Nose End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
103-BN-1.0	D0.5-50	D1.0	R0.5	2	2F	4D	50
103-BN-1.5	D1.5R0.75-50	D1.5	R0.75	2	2F	4D	50
103-BN-2.0	D2R1.0-50	D2.0	R1.0	4	2F	4D	50
103-BN-3.0	D3R1.5-50	D3.0	R1.5	6	2F	4D	50
103-BN-4.0	D4R2.0-50	D4.0	R2.0	8	2F	4D	50
103-BN-5.0	DSR2.5-50	D5.0	R2.5	10	2F	6D	50
103-BN-6.0	D6R3.0-50	D6.0	R3.0	12	2F	6D	50
103-BN-8.0	D8R4.0-60	D8.0	R4.0	16	2F	8D	60
103-BN-10.0	D10R5.0- 75	D10.0	R5.0	20	2F	10D	75
103-BN-12.0	D12R6.0- 75	D12.0	R6.0	24	2F	12D	75
103-BN-14.0	D14R7.0- 80	D14.0	R7.0	28	2F	14D	80
103-BN-16.0	D16R8.0-100	D16.0	R8.0	32	2F	16D	100
103-BN-18.0	D18R9.0-100	D18.0	R9.0	36	2F	18D	100
103-BN-20.0	D20R10.0-100	D20.0	R10.0	40	2F	20D	100

Corner Radius End Mill



стандартные радиусы в диапазоне:
R0.2 R0.5 R1 R1.5 R2 R2.5 R3, первый указанный радиус - скорее всего складская позиция (R0.2-R0.5 - тут скорее всего R0.2 складской)

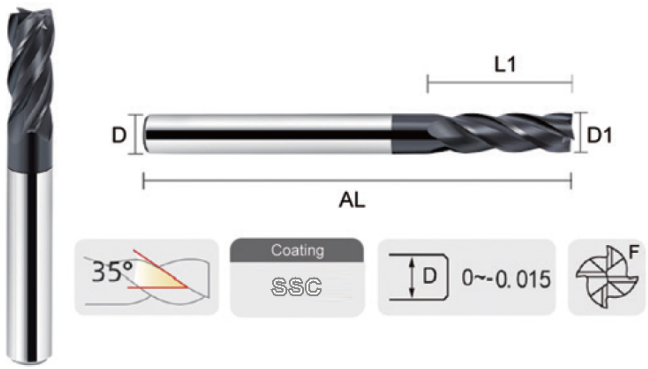
Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
103-CR-1.0	D1.0-50	D1.0	R0.2	3	4F	4D	50
103-CR-2.0	D2.0-50	D2.0	R0.2-R0.5	6	4F	4D	50
103-CR-3.0	D3.0-50	D3.0	R0.2-R0.5	8	4F	4D	50
103-CR-4.0	D4.0-50	D4.0	R0.2-R0.5	11	4F	4D	50
103-CR-5.0	D5.0-50	D5.0	R0.2-R0.5	13	4F	6D	50
103-CR-6.0	D6.0-50	D6.0	R0.2-R0.5	16	4F	6D	50
103-CR-8.0	D8.0-60	D8.0	R0.2-R1.0	20	4F	8D	60
103-CR-10.0	D10.0-75	D10.0	R0.2-R3.0	25	4F	10D	75
103-CR-12.0	D12.0-75	D12.0	R0.2-R3.0	30	4F	12D	75
103-CR-14.0	D14.0-80	D14.0	R0.5-R3.0	35	4F	14D	80
103-CR-16.0	D16.0-100	D16.0	R0.5-R3.0	36	4F	16D	100
103-CR-18.0	D18.0-100	D18.0	R0.5-R3.0	38	4F	18D	100
103-CR-20.0	D20.0-100	D20.0	R0.5-R3.0	45	4F	20D	100

104 series

∞Applicable materials: stainless steel SUS303, SUS304, SUS316L, etc. (<280HB).

∞Characteristic:The high coating hardness and excellent high-temperature oxidation resistance are more suitable for high hardness materials and high-speed machining fields. Antique copper dot matrix heterogeneous coating, higher coating hardness and excellent high temperature oxidation resistance, more closely combined with the substrate. Special surface post-treatment can effectively reduce friction, discharge chips more smoothly, and the quality of machined surface is better.

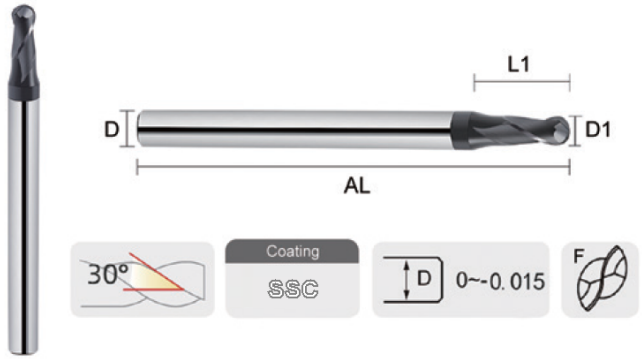
End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
104-EM-1.0	D1.0-50	D1.0	/	3	4F	4D	50
104-EM-1.5	D1.5-50	D1.5	/	4	4F	4D	50
104-EM-2.0	D2.0-50	D2.0	/	6	4F	4D	50
104-EM-2.5	D2.5-50	D2.5	/	8	4F	4D	50
104-EM-3.0	D3.0-50	D3.0	/	8	4F	4D	50
104-EM-4.0	D4.0-50	D4.0	/	11	4F	4D	50
104-EM-5.0	D5.0-50	D5.0	/	13	4F	6D	50
104-EM-6.0	D6.0-50	D6.0	/	16	4F	6D	50
104-EM-8.0	D8. 0-60	D8.0	/	20	4F	8D	60
104-EM-10.0	D10.0-75	D10.0	/	25	4F	10D	75
104-EM-12.0	D12.0-75	D12.0	/	30	4F	12D	75
104-EM-14.0	D14.0- 80	D14.0	/	35	4F	14D	80
104-EM-16.0	D16.0-100	D16.0	/	36	4F	16D	100
104-EM-18.0	D18.0-100	D18.0	/	38	4F	18D	100
104-EM-20.0	D20.0-100	D20.0	/	45	4F	20D	100

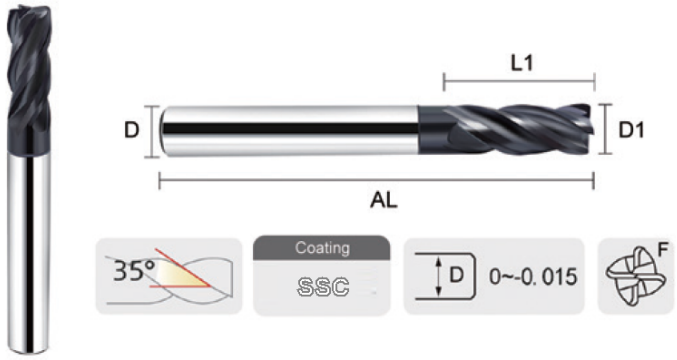
ZETOOL

Ball Nose End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
104-BN-1.0	D0.5-50	D1.0	R0.5	2	2F	4D	50
104-BN-1.5	D1.5R0.75-50	D1.5	R0.75	2	2F	4D	50
104-BN-2.0	D2R1.0-50	D2.0	R1.0	4	2F	4D	50
104-BN-3.0	D3R1.5-50	D3.0	R1.5	6	2F	4D	50
104-BN-4.0	D4R2.0-50	D4.0	R2.0	8	2F	4D	50
104-BN-5.0	DSR2.5-50	D5.0	R2.5	10	2F	6D	50
104-BN-6.0	D6R3.0-50	D6.0	R3.0	12	2F	6D	50
104-BN-8.0	D8R4.0-60	D8.0	R4.0	16	2F	8D	60
104-BN-10.0	D10R5.0- 75	D10.0	R5.0	20	2F	10D	75
104-BN-12.0	D12R6.0- 75	D12.0	R6.0	24	2F	12D	75
104-BN-14.0	D14R7.0- 80	D14.0	R7.0	28	2F	14D	80
104-BN-16.0	D16R8.0-100	D16.0	R8.0	32	2F	16D	100
104-BN-18.0	D18R9.0-100	D18.0	R9.0	36	2F	18D	100
104-BN-20.0	D20R10.0-100	D20.0	R10.0	40	2F	20D	100

Corner Radius End Mill



стандартные радиусы в диапазоне:
R0.2 R0.5 R1 R1.5 R2 R2.5 R3, первый указанный радиус - скорее всего складская позиция (R0.2-R0.5 - тут скорее всего R0.2 складской)

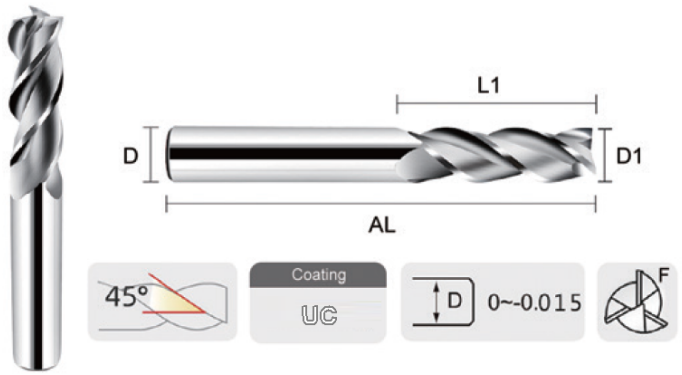
Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
104-CR-1.0	D1.0-50	D1.0	R0.2	3	4F	4D	50
104-CR-2.0	D2.0-50	D2.0	R0.2-R0.5	6	4F	4D	50
104-CR-3.0	D3.0-50	D3.0	R0.2-R0.5	8	4F	4D	50
104-CR-4.0	D4.0-50	D4.0	R0.2-R0.5	11	4F	4D	50
104-CR-5.0	D5.0-50	D5.0	R0.2-R0.5	13	4F	6D	50
104-CR-6.0	D6.0-50	D6.0	R0.2-R0.5	16	4F	6D	50
104-CR-8.0	D8.0-60	D8.0	R0.2-R1.0	20	4F	8D	60
104-CR-10.0	D10.0-75	D10.0	R0.2-R3.0	25	4F	10D	75
104-CR-12.0	D12.0-75	D12.0	R0.2-R3.0	30	4F	12D	75
104-CR-14.0	D14.0-80	D14.0	R0.5-R3.0	35	4F	14D	80
104-CR-16.0	D16.0-100	D16.0	R0.5-R3.0	36	4F	16D	100
104-CR-18.0	D18.0-100	D18.0	R0.5-R3.0	38	4F	18D	100
104-CR-20.0	D20.0-100	D20.0	R0.5-R3.0	45	4F	20D	100

105 series

∞Applicable materials:aluminum alloy AL5052, AL6063, AL6061, AL7075, etc; General processing of aluminum alloy (Si ⩽ 12%) and copper alloy (<200HB).

∞Characteristic:The special cutting edge design effectively prevents vibration and solves the problem of chip sticking on the cutting edge; Water cooling is the best cooling method.

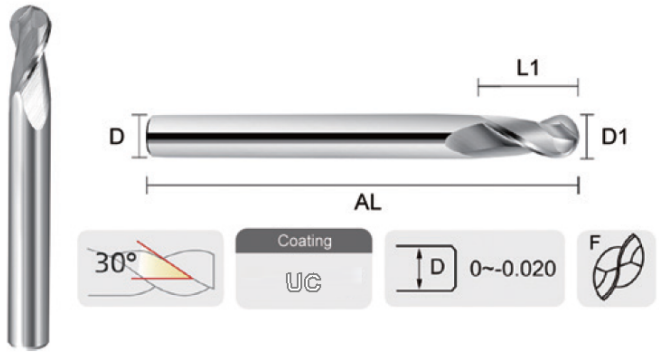
End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
105-EM-1.0	D1.0-50	D1.0	/	3	3F	4D	50
105-EM-1.5	D1.5-50	D1.5	/	4	3F	4D	50
105-EM-2.0	D2.0-50	D2.0	/	6	3F	4D	50
105-EM-2.5	D2.5-50	D2.5	/	8	3F	4D	50
105-EM-3.0	D3.0-50	D3.0	/	8	3F	4D	50
105-EM-4.0	D4.0-50	D4.0	/	11	3F	4D	50
105-EM-5.0	D5.0-50	D5.0	/	13	3F	6D	50
105-EM-6.0	D6.0-50	D6.0	/	16	3F	6D	50
105-EM-8.0	D8. 0-60	D8.0	/	20	3F	8D	60
105-EM-10.0	D10.0-75	D10.0	/	25	3F	10D	75
105-EM-12.0	D12.0-75	D12.0	/	30	3F	12D	75
105-EM-14.0	D14.0- 80	D14.0	/	35	3F	14D	80
105-EM-16.0	D16.0-100	D16.0	/	36	3F	16D	100
105-EM-18.0	D18.0-100	D18.0	/	38	3F	18D	100
105-EM-20.0	D20.0-100	D20.0	/	45	3F	20D	100

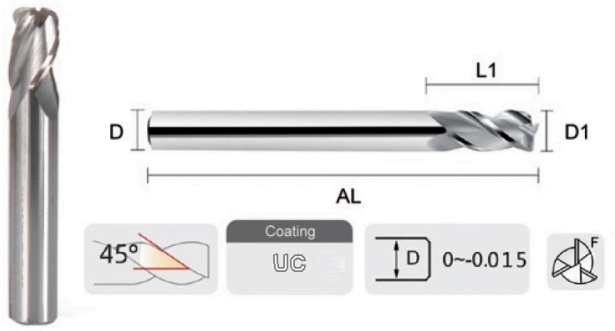
ZETOOL

Ball Nose End Mill



Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
105-BN-1.0	D0.5-50	D1.0	R0.5	2	2F	4D	50
105-BN-1.5	D1.5R0.75-50	D1.5	R0.75	2	2F	4D	50
105-BN-2.0	D2R1.0-50	D2.0	R1.0	4	2F	4D	50
105-BN-3.0	D3R1.5-50	D3.0	R1.5	6	2F	4D	50
105-BN-4.0	D4R2.0-50	D4.0	R2.0	8	2F	4D	50
105-BN-5.0	DSR2.5-50	D5.0	R2.5	10	2F	6D	50
105-BN-6.0	D6R3.0-50	D6.0	R3.0	12	2F	6D	50
105-BN-8.0	D8R4.0-60	D8.0	R4.0	16	2F	8D	60
105-BN-10.0	D10R5.0- 75	D10.0	R5.0	20	2F	10D	75
105-BN-12.0	D12R6.0- 75	D12.0	R6.0	24	2F	12D	75
105-BN-14.0	D14R7.0- 80	D14.0	R7.0	28	2F	14D	80
105-BN-16.0	D16R8.0-100	D16.0	R8.0	32	2F	16D	100
105-BN-18.0	D18R9.0-100	D18.0	R9.0	36	2F	18D	100
105-BN-20.0	D20R10.0-100	D20.0	R10.0	40	2F	20D	100

Corner Radius End Mill



стандартные радиусы в диапазоне:
R0.2 R0.5 R1 R1.5 R2 R2.5 R3, первый указанный радиус - скорее всего складская позиция (R0.2-R0.5 - тут скорее всего R0.2 складской)

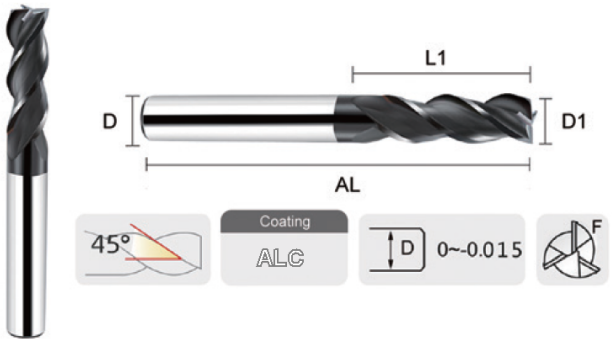
Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
105-CR-1.0	D1.0-50	D1.0	R0.2	3	3F	4D	50
105-CR-2.0	D2.0-50	D2.0	R0.2-R0.5	6	3F	4D	50
105-CR-3.0	D3.0-50	D3.0	R0.2-R0.5	8	3F	4D	50
105-CR-4.0	D4.0-50	D4.0	R0.2-R0.5	11	3F	4D	50
105-CR-5.0	D5.0-50	D5.0	R0.2-R0.5	13	3F	6D	50
105-CR-6.0	D6.0-50	D6.0	R0.2-R0.5	16	3F	6D	50
105-CR-8.0	D8.0-60	D8.0	R0.2-R1.0	20	3F	8D	60
105-CR-10.0	D10.0-75	D10.0	R0.2-R3.0	25	3F	10D	75
105-CR-12.0	D12.0-75	D12.0	R0.2-R3.0	30	3F	12D	75
105-CR-14.0	D14.0-80	D14.0	R0.5-R3.0	35	3F	14D	80
105-CR-16.0	D16.0-100	D16.0	R0.5-R3.0	36	3F	16D	100
105-CR-18.0	D18.0-100	D18.0	R0.5-R3.0	38	3F	18D	100
105-CR-20.0	D20.0-100	D20.0	R0.5-R3.0	45	3F	20D	100

106 series

∞Applicable materials:aluminum alloy AL5052, AL6063, AL6061, AL7075, etc; General processing of aluminum alloy (Si ⩽ 12%) and copper alloy (<200HB).

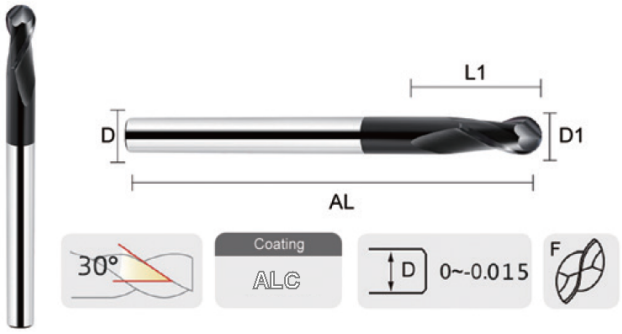
∞Characteristic:The special cutting edge design effectively prevents vibration and solves the problem of chip sticking on the cutting edge; Water cooling is the best cooling method.

End Mill



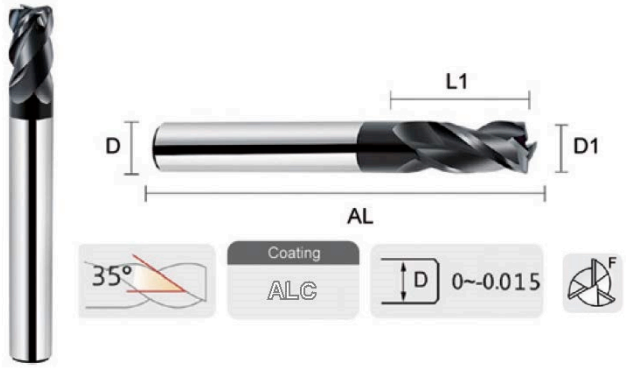
Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
106-EM-1.0	D1.0-50	D1.0	/	3	3F	4D	50
106-EM-1.5	D1.5-50	D1.5	/	4	3F	4D	50
106-EM-2.0	D2.0-50	D2.0	/	6	3F	4D	50
106-EM-2.5	D2.5-50	D2.5	/	8	3F	4D	50
106-EM-3.0	D3.0-50	D3.0	/	8	3F	4D	50
106-EM-4.0	D4.0-50	D4.0	/	11	3F	4D	50
106-EM-5.0	D5.0-50	D5.0	/	13	3F	6D	50
106-EM-6.0	D6.0-50	D6.0	/	16	3F	6D	50
106-EM-8.0	D8. 0-60	D8.0	/	20	3F	8D	60
106-EM-10.0	D10.0-75	D10.0	/	25	3F	10D	75
106-EM-12.0	D12.0-75	D12.0	/	30	3F	12D	75
106-EM-14.0	D14.0- 80	D14.0	/	35	3F	14D	80
106-EM-16.0	D16.0-100	D16.0	/	36	3F	16D	100
106-EM-18.0	D18.0-100	D18.0	/	38	3F	18D	100
106-EM-20.0	D20.0-100	D20.0	/	45	3F	20D	100

ZETOOL



Ball Nose End Mill

Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
106-BN-1.0	D0.5-50	D1.0	R0.5	2	2F	4D	50
106-BN-1.5	D1.5R0.75-50	D1.5	R0.75	2	2F	4D	50
106-BN-2.0	D2R1.0-50	D2.0	R1.0	4	2F	4D	50
106-BN-3.0	D3R1.5-50	D3.0	R1.5	6	2F	4D	50
106-BN-4.0	D4R2.0-50	D4.0	R2.0	8	2F	4D	50
106-BN-5.0	DSR2.5-50	D5.0	R2.5	10	2F	6D	50
106-BN-6.0	D6R3.0-50	D6.0	R3.0	12	2F	6D	50
106-BN-8.0	D8R4.0-60	D8.0	R4.0	16	2F	8D	60
106-BN-10.0	D10R5.0- 75	D10.0	R5.0	20	2F	10D	75
106-BN-12.0	D12R6.0- 75	D12.0	R6.0	24	2F	12D	75
106-BN-14.0	D14R7.0- 80	D14.0	R7.0	28	2F	14D	80
106-BN-16.0	D16R8.0-100	D16.0	R8.0	32	2F	16D	100
106-BN-18.0	D18R9.0-100	D18.0	R9.0	36	2F	18D	100
106-BN-20.0	D20R10.0-100	D20.0	R10.0	40	2F	20D	100



Corner Radius End Mill

стандартные радиусы в диапазоне:
R0.2 R0.5 R1 R1.5 R2 R2.5 R3, первый указанный радиус - скорее всего складская позиция (R0.2-R0.5 - тут скорее всего R0.2 складской)

Order NO.	Mode	D1 (Blade diameter)	R (angle)	L1	F(Number of blades)	D	AL
106-CR-1.0	D1.0-50	D1.0	R0.2	3	3F	4D	50
106-CR-2.0	D2.0-50	D2.0	R0.2-R0.5	6	3F	4D	50
106-CR-3.0	D3.0-50	D3.0	R0.2-R0.5	8	3F	4D	50
106-CR-4.0	D4.0-50	D4.0	R0.2-R0.5	11	3F	4D	50
106-CR-5.0	D5.0-50	D5.0	R0.2-R0.5	13	3F	6D	50
106-CR-6.0	D6.0-50	D6.0	R0.2-R0.5	16	3F	6D	50
106-CR-8.0	D8.0-60	D8.0	R0.2-R1.0	20	3F	8D	60
106-CR-10.0	D10.0-75	D10.0	R0.2-R3.0	25	3F	10D	75
106-CR-12.0	D12.0-75	D12.0	R0.2-R3.0	30	3F	12D	75
106-CR-14.0	D14.0-80	D14.0	R0.5-R3.0	35	3F	14D	80
106-CR-16.0	D16.0-100	D16.0	R0.5-R3.0	36	3F	16D	100
106-CR-18.0	D18.0-100	D18.0	R0.5-R3.0	38	3F	18D	100
106-CR-20.0	D20.0-100	D20.0	R0.5-R3.0	45	3F	20D	100

ZETOOL

Applicable Table for Processed Materials

◎ perfect for ○ suitable

Processed material		105,106	104	101	102	103
Carbon Steel			○	◎	◎	
Alloy Steel			○	◎	◎	
Prehardened Steel	~40HRC			◎	◎	
	~50HRC			○	◎	○
Hardened steel	~55HRC				◎	◎
	~68HRC					◎
Stainless Steel			◎	○	○	
Cast iron			○	◎	◎	○
Ductile Iron						
Copper Alloy		◎				
Aluminum alloy		◎				
Titanium alloy			○		○	
Heat-resistant alloys			○		○	

Coating description

General description

Coating	Material	Color	µm	HV	VSNi	OC	Application	Note	characteristic
TC3	ATiSiN	Bronze	1-3	~4500	0,55	~1100°	Alloy, hardened steel	HRC45-65	High hard milling, high temperature
TC4	ATiSiN	iron-gray	1-4	~4500	0,55	~1200°	Alloy, hardened steel	HRC50-70	High hard milling, high temperature
PC	AlCrXN	ash black	1-5	~3600	0,5	~850°	Carbon steel, alloy	≤50HRC	Impact resistance, wear resistance
SSC	AlTiSiN	ash black	1-4	~3500	0,45	~950°	Alloy, 316L stainless steel	45~55HRC	High hardness , lubricity
ALC	Diamond-Like Carbon	Black/rainbow	<=5µm	~3000	0.05~0.15	~500°	Alloy, non-metallic material	HRC65	High hardness , Wear resistance, lubricity

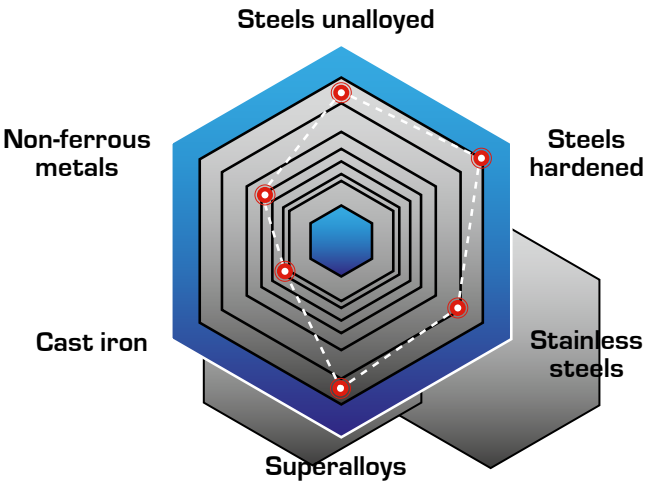
TC3 and TC4

As our hardest nanocomposite, TC3 is especially suitable for hard machining. It can be used at very high temperatures and is therefore suitable for finishing processes in milling and drilling. TC3 also provides excellent performance for finishing turbine parts. TC4 is used for broadband applications.

Highlights:

- TC3:
  - High surface quality
  - Extremely hard and very wear-resistant
  - For super-hard machining
- TC4:
  - Wide range of application and use

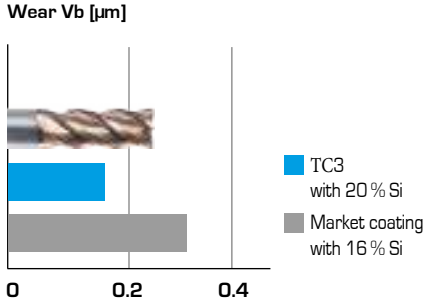
Characteristics in cutting:



Specifications

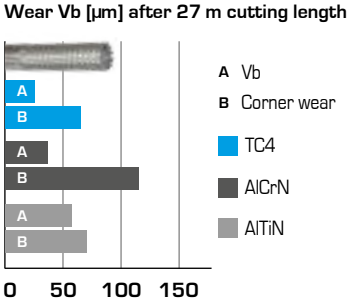
Color	copper with TC3 grey with TC4
Nano-hardness [GPa]	42–44
Coefficient of friction [µ] PoD (at RT, 50 % humidity)	0.4
Coating thickness [µm]	1–4
Max. service temperature [°C]	900
Coating temperature [°C]	450–500

Milling in X210Cr13 with solid carbide end mill D6:



Tool: solid carbide end mill; D6
Workpiece material: X210Cr13; 1.2080; 64 HRC
Cooling: dry air, 5 bar; ap = 0.09 mm; ae = 0.06 mm;
n = 16 820 rpm; f = 0.1 mm / rot
Source: South Korean tool manufacturer

Milling in SKD61 with solid carbide end mill D8:



Tool: solid carbide end mill; D8; cutting length = 27 m
Workpiece material: SKD61; 54 HRC
Cooling with emulsion; ap = 4 mm;
ae = 0.03 mm; vc= 100 m / min
Source: Chinese tool manufacturer

Calo 3 layers

TC3 : TiN → AlTi(Si)N → TiSiN
TC4 : TiN → AlCrTi(Si)N → TiSiN