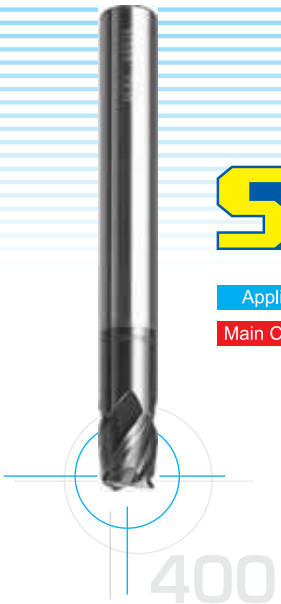


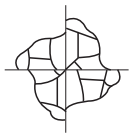
UCRS ▌Corner Radius Short Flute End Mills-4 flutes

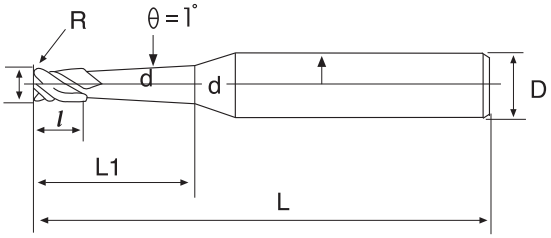
Ultra Fine Micro Grain Carbide

WC = 87 Co = 12 HRA = 92.1 Rupture = 3800N/mm² Grain size = 0.4μm

Application Iron, Carbon steel, Cast Iron, Alloy Steel, Tool Steel, Heat treatment Steel, Welding Steel

Main Character Ultra fine micro grain carbide that has high toughness, coating ALTIN (TiAlN) and wear-resisting, non-general titanium aluminium is specialized in milling on M/C high hardness at a high speed and can carry on rough machining get to detailed process directly for heat treatment mould to reduce change times, improve machine flexible rate and shorten producing time.





MODE	Diameter d	Flute Length l	Full Length L	Shank Diameter D	Efficient Length L1	Corner Radius R	Packing Quantity	Price
UCRS020024-HSC	2	2	50	4	6	0.2R	6	
UCRS020034-HSC	2	2	50	4	6	0.3R	6	
UCRS020054-HSC	2	2	50	4	6	0.5R	6	
UCRS030024-HSC	3	3	50	6	9	0.2R	6	
UCRS030034-HSC	3	3	50	6	9	0.3R	6	
UCRS030054-HSC	3	3	50	6	9	0.5R	6	
UCRS030104-HSC	3	3	50	6	9	1.0R	6	
UCRS040024-HSC	4	4	50	6	12	0.2R	6	
UCRS040034-HSC	4	4	50	6	12	0.3R	6	
UCRS040054-HSC	4	4	50	6	12	0.5R	6	
UCRS040104-HSC	4	4	50	6	12	1.0R	6	
UCRS050034-HSC	5	5	50	6	15	0.3R	6	
UCRS050054-HSC	5	5	50	6	15	0.5R	6	
UCRS050104-HSC	5	5	50	6	15	1.0R	6	
UCRS060024-HSC	6	6	50	6	18	0.2R	6	
UCRS060034-HSC	6	6	50	6	18	0.3R	6	
UCRS060054-HSC	6	6	50	6	18	0.5R	6	
UCRS060104-HSC	6	6	50	6	18	1.0R	6	
UCRS060204-HSC	6	6	50	6	18	2.0R	6	
UCRS080034-HSC	8	8	60	8	20	0.3R	4	
UCRS080054-HSC	8	8	60	8	20	0.5R	4	
UCRS080104-HSC	8	8	60	8	20	1.0R	4	
UCRS080204-HSC	8	8	60	8	20	2.0R	4	
UCRS100054-HSC	10	10	75	10	25	0.5R	2	
UCRS100104-HSC	10	10	75	10	25	1.0R	2	
UCRS100154-HSC	10	10	75	10	25	1.5R	2	
UCRS100204-HSC	10	10	75	10	25	2.0R	2	
UCRS100304-HSC	10	10	75	10	25	3.0R	2	
UCRS120054-HSC	12	12	75	12	30	0.5R	2	
UCRS120104-HSC	12	12	75	12	30	1.0R	2	
UCRS120154-HSC	12	12	75	12	30	1.5R	2	
UCRS120204-HSC	12	12	75	12	30	2.0R	2	
UCRS120304-HSC	12	12	75	12	30	3.0R	2	

Unit：mm

400 nano series

UMG | HRC ▶ 60 | 30° | π-HSC

Attention: In order to get better cutting surface and lengthen the life-time of the end mill, please use high accuracy, high rigidity and dynamic equilibrium of holder.

1. Before using the end mill, please examine the end mill to lean towards and put, when the precision of the leaning towards of end mill exceeds 0.01mm, please cut after correcting.
2. It is better that end mill stretches out shorter from chuck, when the end mill stretches out longer, please adjust the rotational speed, feeding speed or cutting amount.
3. Unusual vibrations or sound happen when cutting, please adjust and lower the rotational speed of the main shaft one by one, feeding speed and cutting amount until improving the situation, or change the high-quality end mill.
4. It is the best way to cool steel material by spraying or air in order to make TiAlN efficiently; we commend to adopt non-water cutting liquid to cool the stainless steel, titanium alloy or heat-resisting alloy liquid.
5. Cutting will be influenced by work piece, machine and software; the above-mentioned data are only for reference, please improve feeding speed by 30%~50% up after cutting situation steadily.

UCRS Recommended Milling conditions

Working material hardness / Corner Radius	HRC30°		HRC50°		HRC60°	
	Rotational speed	Feeding speed	Rotational speed	Feeding speed	Rotational speed	Feeding speed
	RPM	mm/min.	RPM	mm/min.	RPM	mm/min.
D3.0 x 0.1R	10400	1440	7840	960	6000	400
D3.0 x 0.2R	10400	1440	7840	960	6000	400
D3.0 x 0.3R	10400	1440	7840	960	6000	400
D4.0 x 0.2R	10000	1600	7440	840	5440	400
D4.0 x 0.3R	10000	1600	7440	840	5440	400
D3.0 x 0.5R	1040	1600	7840	1200	6000	400
D4.0 x 0.5R	10000	1600	7440	840	5440	400
D6.0 x 0.5R	9200	2400	7040	1600	3680	600
D8.0 x 0.5R	6920	2420	4280	1360	3080	656
D10.0 x 0.5R	4400	2240	2560	880	1320	464
D12.0 x 0.5R	3720	2320	1760	760	1040	424
D3.0 x 1R	11960	1840	9016	1380	6900	460
D4.0 x 1R	11500	1840	8556	966	6256	460
D6.0 x 1R	10580	2760	8096	1840	4232	690
D8.0 x 1R	7958	3128	4922	1564	3542	754
D10.0 x1R	5060	2560	2944	1012	1518	534
D12.0 x 1R	4278	2668	2024	1140	1196	488
D6.0 x 1.5R	11040	2880	8448	1920	4416	720
D8.0 x 1.5R	8304	3264	5136	1632	3696	787
D10.0 x 1.5R	5280	2688	3072	1056	1584	557
D12.0 x 1.5R	4464	2784	2112	912	1248	509
D6.0 x 2R	11960	3120	9152	5080	4784	780
D8.0 x 2R	8996	3536	5564	1768	4004	853
D10.0 x 2R	5720	2912	3328	1144	1716	603
D12.0 x 2R	4836	3016	2288	988	1352	551
D8.0 x 3R	9342	3672	5778	1836	4160	886
D10.0 x 3R	5940	3024	3456	1188	1782	626
D12.0 x 3R	5022	3132	2376	1026	1404	573