

ST[®] 200NaNo Series



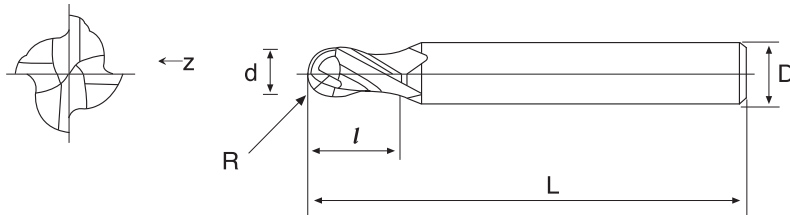
Ball Nose End Mill - 4 flutes

Super Ultra Fine Micro Grain Carbide

WC = 91 Co = 9 HRA = 93.2 Rupture = 4000N/mm² Grain Size = 0.2μm

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

Main Character Super 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	Flute No. Z	Radius of Ball Nose R	Packing Quantity	Price
SFUBT0104	1	2.0	50	4.0	4 Z	0.5R	6	
SFUBT0154	1.5	3.0	50	4.0	4 Z	0.75R	6	
SFUBT0204	2	4.0	50	4.0	4 Z	1R	6	
SFUBT0254	2.5	5.0	50	4.0	4 Z	1.25R	6	
SFUBT0304	3	5.5	50	4.0	4 Z	1.5R	6	
SFUBT0404	4	6.0	50	4.0	4 Z	2R	6	
SFUBT0504	5	9.0	50	6.0	4 Z	2.5R	6	
SFUBT0604	6	9.0	60	6.0	4 Z	3R	4	
SFUBT0614	6	9.0	75	6.0	4 Z	3R	2	
SFUBT0804	8	16.0	75	8.0	4 Z	4R	2	
SFUBT1004	10	20.0	75	10.0	4 Z	5R	2	
SFUBT1014	10	20.0	100	10.0	4 Z	5R	2	
SFUBT1204	12	24.0	75	12.0	4 Z	6R	2	
SFUBT1214	12	24.0	100	12.0	4 Z	6R	2	
SFUBT1404	14	28.0	100	16.0	4 Z	7R	2	
SFUBT1604	16	32.0	100	16.0	4 Z	8R	2	
SFUBT2004	20	40.0	150	20.0	4 Z	10R	1	
SFUBT2504	25	50.0	150	25.0	4 Z	12.5R	1	



! 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.

SFUBT 4 Flutes Recommended Milling conditions

Working material hardness	Below HRC30°		HRC30°~HRC45°		HRC45°~HRC65°	
	Rotational speed	Feeding speed	Rotational speed	Feeding speed	Rotational speed	Feeding speed
	RPM	mm/min.	RPM	mm/min.	RPM	mm/min.
R0.5	23040	864	18720	576	15120	547
R1.0	21312	1008	16056	835	12960	720
R1.5	17280	1584	12960	1152	11232	720
R2.0	16560	2304	12240	1080	10080	979
R2.5	14400	2880	11232	1440	7920	864
R3.0	14400	2880	10944	1368	7200	792
R4.0	9360	3168	5760	1728	3600	936
R5.0	5472	2736	2880	1296	2304	720
R6.0	4608	2592	2880	1440	1728	648