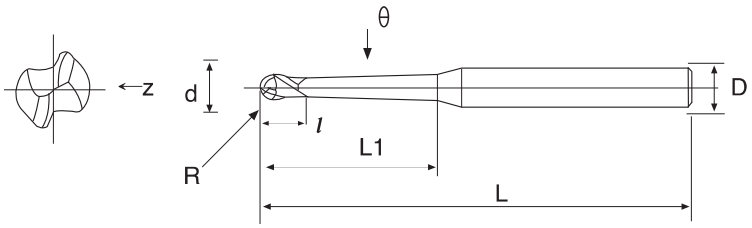
UPBT ▌Taper Neck Ball Nose End Mills

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	Radius of Ball Nose R	Flute Length l	Full Length L	Shank Diameter D	Efficient Length L1	Bevel θ	Packing Quantity	Price
UPBT101520-X TREME	0.5R	2	75	6	20	1.5°	2	
UPBT151520-X TREME	0.75R	3	75	6	20	1.5°	2	
UPBT201025-X TREME	1R	4	75	6	25	1°	2	
UPBT251025-X TREME	1.25R	5	75	6	25	1°	2	
UPBT301030-X TREME	1.5R	6	75	6	30	1°	2	
UPBT401035-X TREME	2R	7	75	6	35	1°	2	
UPBT402545-X TREME	2R	7	150	8	45	2.5°	1	
UPBT502550-X TREME	2.5R	9	150	10	50	2.5°	1	
UPBT603038-X TREME	3R	10	150	10	38	3°	1	
UPBT803038-X TREME	4R	13	150	12	38	3°	1	
UPBT904042-X TREME	5R	16	150	16	42	4°	1	

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.

UPBT Recommended Milling conditions

Working material hardness	HRC45°~52°		HRC52°~62°	
MODE	Rotational speed	Feeding speed	Rotational speed	Feeding speed
	RPM	mm/min.	RPM	mm/min.
UPBT101520	8800	260	7920	234
UPBT151520	6900	190	4950	171
UPBT201025	5600	420	5040	378
UPBT251025	4800	420	4320	378
UPBT301030	7200	380	6480	342
UPBT401035	7200	380	6480	342
UPBT402545	5400	300	4860	270
UPBT502550	9984	1280	7040	768
UPBT603038	9728	1216	6400	704
UPBT803038	5120	1536	3200	832
UPBT904042	2560	1152	2048	640