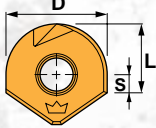
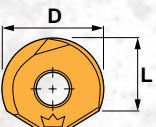
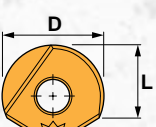
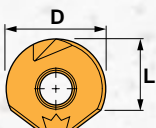
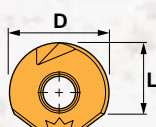


# Copy Milling Program Tools

## Ball Nose Inserts

BS-N	Tool Ordering Number	Dimensions			Grade			Description
		D	L	S	XRN	TLN	HSN	
	BS-0375-N	0.375	0.390	0.154	•	•	•	Sidecutting, non-chipbreaker. Side cutting insert used in cavity and core profiling, for blending of fillets on medium and hard materials.
	BS-0500-N	0.500	0.350	0.100	•	•	•	
	BS-0625-N	0.625	0.421	0.109	•	•	•	
	BS-0750-N	0.750	0.496	0.121	•	•	•	
	BS-1000-N	1.000	0.679	0.179	•	•	•	
	BS-1250-N	1.250	0.828	0.203	•	•	•	
MB	Number	D	L	XRN	TLN	HSN	Description	
	MB-0375	0.375	0.349	•	•	•	Unique cutting edge allows performance in all operations in material below 42 HRc; in semi- & finishing operations above. Significant benefits in chip evacuation. Insert geometry allows smoother cutting motion-diminishing heat build up & tool deflection, reduces vibration caused by cutting action.	
	MB-0500	0.500	0.377	•	•	•		
	MB-0625	0.625	0.443	•	•	•		
	MB-0750	0.750	0.518	•	•	•		
	MB-1000	1.000	0.716	•	•	•		
	MB-1250	1.250	0.865	•	•	•		
MBT	Number	D	L	XRN	TLN	HSN	Description	
	MBT-0375	0.375	0.349	•	•	•	Precision ground, harder grade, for semi-finish and finish milling. Excellent choice for unattended finish milling at small depth and high speeds and feed rates.	
	MBT-0500	0.500	0.377	•	•	•		
	MBT-0625	0.625	0.443	•	•	•		
	MBT-0750	0.750	0.518	•	•	•		
	MBT-1000	1.000	0.716	•	•	•		
	MBT-1250	1.250	0.865	•	•	•		
RB-N	Number	D	L	XRN	TLN	HSN	Description	
	RB-0375-N	0.375	0.390	•	•	•	Precision ground, non-chipbreaker. Best choice for cavity, core and profile milling of pre-hard and fully hard die/mold steels, cast steels and cast iron. Strongest cutting edge design.	
	RB-0500-N	0.500	0.377	•	•	•		
	RB-0625-N	0.625	0.443	•	•	•		
	RB-0750-N	0.750	0.518	•	•	•		
	RB-1000-N	1.000	0.716	•	•	•		
	RB-1250-N	1.250	0.865	•	•	•		
RBT	Number	D	L	XRN	TLN	HSN	Description	
	RB-0375-T	0.375	0.349	•	•	•	Precision ground for semi-finish and finish milling. Excellent choice for unattended finish milling at small depth and high speed and feed rates.	
	RB-0500-T	0.500	0.377	•	•	•		
	RB-0625-T	0.625	0.443	•	•	•		
	RB-0750-T	0.750	0.518	•	•	•		
	RB-1000-T	1.000	0.716	•	•	•		
	RB-1250-T	1.250	0.865	•	•	•		

### NA

Non-coated grade.

### XRN

Multi-layer hybrid coating of AlCrN. This coating has very good heat resistance and also a low friction coefficient. The XRN coating is designed for use in HSM of un-heat treated softer materials such as Titanium, Inconel, Stainless Steels and other gummy materials that require the use of liquid coolant.

### HSN

Millstar's new coating is a multi-layer hybrid Nano coating. This new coating has very good heat resistance and high hardness. The HSN coating is designed for use in HSM of Heat Treated materials up to 72 HRc.

### ALTiN-EXALON (TLN)

Titanium Aluminum Nitride advanced PVD coating. A special, improved ALTiN coating approaching surface hardness of CBN on a tough substrate. Recommended for tough and hard metal machining applications.

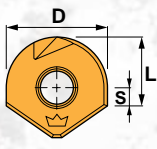
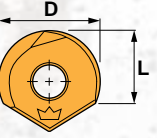
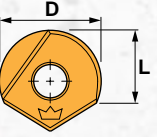
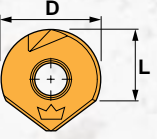
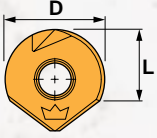
### DMD

Diamond coating. Custom coating for cutting non-ferrous, non-metallic and very abrasive materials at highly elevated speeds. Use on copper, bronze, brass, aluminum-silicon alloys, carbon graphite, solid and fiber-reinforced plastics, ceramics and composite materials.

Custom tool coatings for specific applications are available by request.

# Copy Milling Program Tools

## Ball Nose Inserts

BS-N	Tool Ordering Number	Dimensions			Grade			Description
		D	L	S	XRN	TLN	HSN	
	BS-10-N	10	9,50	3,65	•	•	•	Sidecutting, non-chipbreaker. Side cutting insert used in cavity and core profiling, for blending of fillets on medium and hard materials.
	BS-12-N	12	8,80	2,90	•	•	•	
	BS-16-N	16	10,70	2,85	•	•	•	
	BS-20-N	20	12,75	2,85	•	•	•	
	BS-25-N	25	17,20	4,85	•	•	•	
	BS-30-N	30	20,00	5,10	•	•	•	
	BS-32-N	32	21,00	5,30	•	•	•	
MB	Number	D	L	XRN	TLN	HSN	Description	
	MB-10	10	8,65	•	•	•	Unique cutting edge allows performance in all operations in material below 42 HRC; in semi- & finishing operations above. Significant benefits in chip evacuation. Insert geometry allows smoother cutting motion-diminishing heat build up & tool deflection, reduces vibration caused by cutting action.	
	MB-12	12	9,20	•	•	•		
	MB-16	16	11,25	•	•	•		
	MB-20	20	13,15	•	•	•		
	MB-25	25	18,25	•	•	•		
	MB-30	30	22,15	•	•	•		
	MB-32	32	21,95	•	•	•		
MBT	Number	D	L	XRN	TLN	HSN	Description	
	MBT-10	10	8,65	•	•	•	Precision ground, harder grade, for semi-finish and finish milling. Excellent choice for unattended finish milling at small depth and high speeds and feed rates.	
	MBT-12	12	9,20	•	•	•		
	MBT-16	16	11,25	•	•	•		
	MBT-20	20	13,15	•	•	•		
	MBT-25	25	18,25	•	•	•		
	MBT-30	30	22,15	•	•	•		
	MBT-32	32	21,95	•	•	•		
RB-N	Number	D	L	XRN	TLN	HSN	Description	
	RB-10-N	10	9,50	•	•	•	Precision ground, non-chipbreaker. Best choice for cavity, core and profile milling of pre-hard and fully hard die/mold steels, cast steels and cast iron. Strongest cutting edge design.	
	RB-12-N	12	9,20	•	•	•		
	RB-14-N	14	9,45	•	•	•		
	RB-16-N	16	11,25	•	•	•		
	RB-20-N	20	13,15	•	•	•		
	RB-22-N	22	17,45	•	•	•		
	RB-25-N	25	18,25	•	•	•		
	RB-30-N	30	22,15	•	•	•		
	RB-32-N	32	21,95	•	•	•		
RBT	Number	D	L	XRN	TLN	HSN	Description	
	RB-10-T	10	8,65	•	•	•	Precision ground for semi-finish and finish milling. Excellent choice for unattended finish milling at small depth and high speed and feed rates.	
	RB-12-T	12	9,20	•	•	•		
	RB-16-T	16	11,25	•	•	•		
	RB-20-T	20	13,15	•	•	•		
	RB-25-T	25	18,25	•	•	•		
	RB-30-T	30	22,15	•	•	•		
	RB-32-T	32	21,95	•	•	•		

### NA

Non-coated grade.

### XRN

Multi-layer hybrid coating of AlCrN. This coating has very good heat resistance and also a low friction coefficient. The XRN coating is designed for use in HSM of un-heat treated softer materials such as Titanium, Inconel, Stainless Steels and other gummy materials that require the use of liquid coolant.

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