

ZX Modular Boring Tools (MBT)



ZX Modular Boring Tools (MBT) offer versatility and economy when machining bores, counter-bores, tapers, threads, and complex contours inside components, over a wide range of diameters. These tools offer the highest cutting speeds and material removal rates available. The MBT series is available in single-slide (MBT-S) and twin-slide (MBT-T) versions. All MBT tools feature 2:1 actuation ratio for easy programming

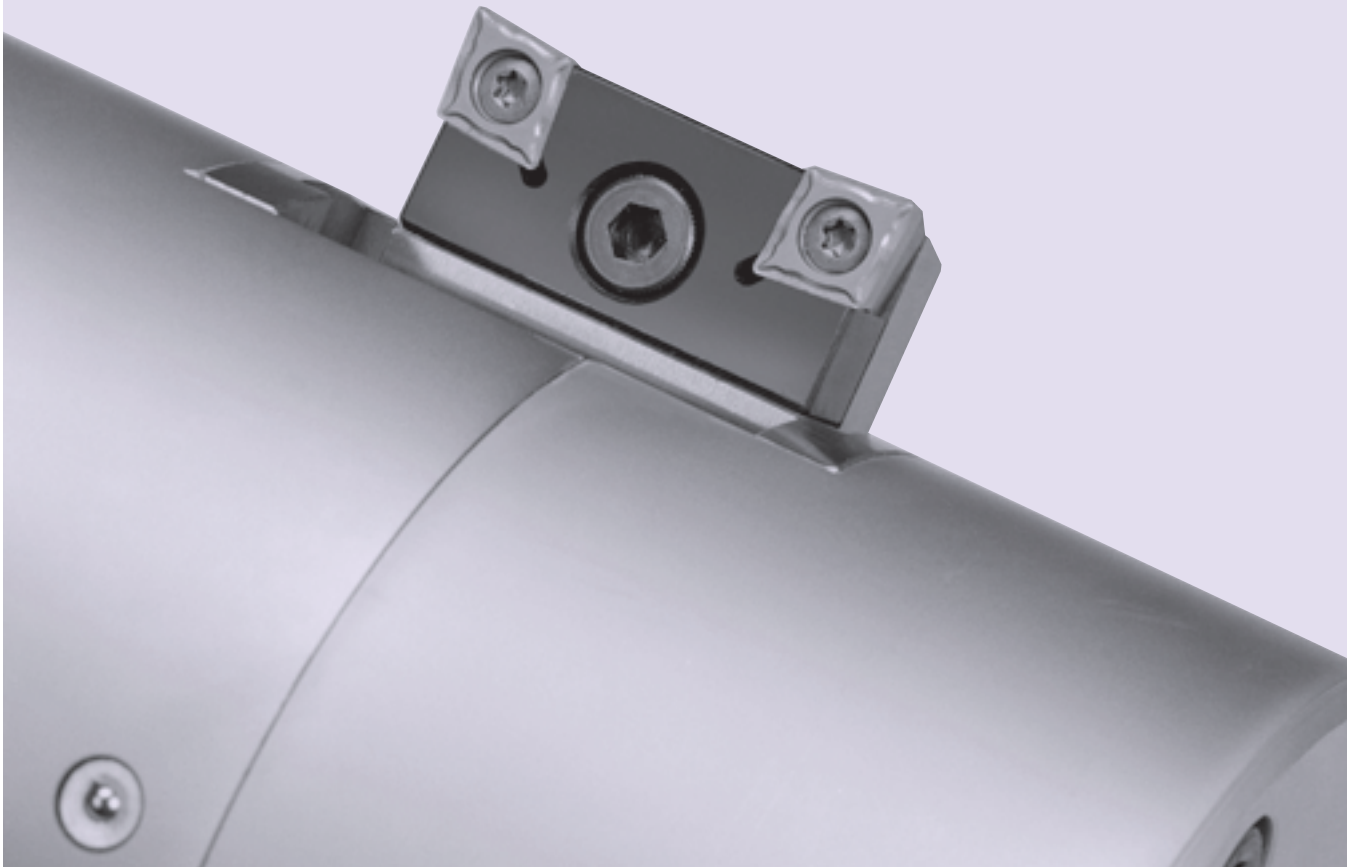


Benefits:

- Broad size range: Each tool has a long tool slide stroke that is supplemented by using different cartridges to cover an even wider diameter range. No need to change the tool slide(s) or remove the head from the machine.
- Versatility: Performs forward and back boring operations (such as back counter-bores). Internal grooves, faces, and bottle bores can also be machined.
- Bottom-facing capability available for blind bores.
- Exceptional concentricity: Stepped and tapered bores are machined without tool changes. Concentricity is maintained as the tool slide(s) adjusts for various diameters while the tool stays on the same bore centerline.

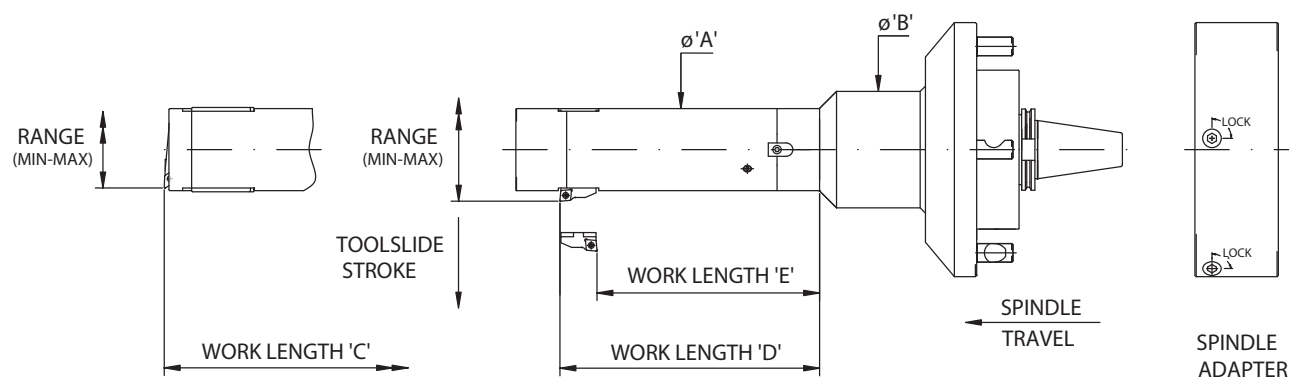
Benefits (continued):

- Twin-slide tools offer balanced cutting forces for high feeds and speeds and high material removal rates.
- Internal through-tool coolant is standard.
- Fully enclosed actuation mechanism: No chip packing.
- Modular design makes adjustment of length and configuration fast and easy. This adds to the versatility of the tool. Some sizes can be converted for extended-reach applications with piloted support.
- Internal forward hard stop and anti-torque features protect the tool in case of mishaps.

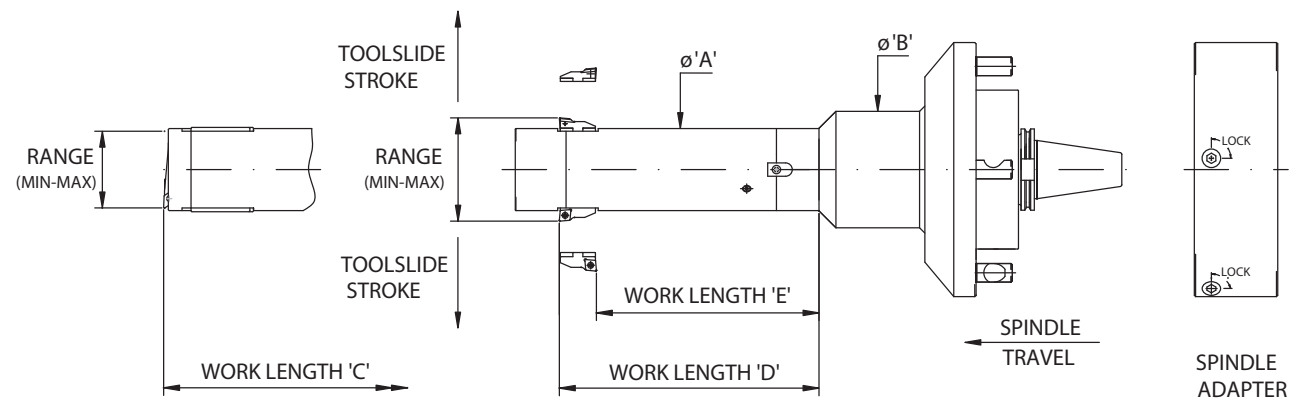


Tool Specifications

ZX MBT SERIES



BOTTOMING TYPE, SINGLE SLIDE | THROUGH TYPE, SINGLE SLIDE



BOTTOMING TYPE, TWIN SLIDE | THROUGH TYPE, TWIN SLIDE

Tool Specifications

INCH PROGRAM

BOTTOMING TYPE							
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) C
MBT 73	Twin	3.000-4.800	.900	1.800	2.875	5.500	15.300
MBT 100	Twin	4.000-5.800	.900	1.800	3.875	5.500	17.300
MBT 125	Twin	6.700-8.950	1.125	2.250	4.875	—	22.000
MBT 175	Twin	8.700-10.950	1.125	2.250	6.875	—	22.000
stated sizes in inch							

BOTTOMING TYPE							
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) C
MBT 45	Single	1.780-2.680	.450	.900	1.750	5.500	9.000
MBT 50	Single	2.032-3.032	.500	1.000	1.960	5.500	11.500
MBT 73	Single	3.000-4.800	.900	1.800	2.875	5.500	15.300
MBT 100	Single	4.000-5.800	.900	1.800	3.875	5.500	17.300
MBT 125	Single	6.700-8.950	1.125	2.250	4.875	—	22.000
MBT 175	Single	8.700-10.950	1.125	2.250	6.875	—	22.000
stated sizes in inch							

THROUGH TYPE								
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) D	WORK LENGTH (BACK BORE) E
MBT 73	Twin	3.000-5.000	1.000	2.000	2.875	5.500	14.000	12.250
MBT 100	Twin	4.000-6.000	1.000	2.000	3.875	5.500	16.000	14.250
MBT 125	Twin	5.020-7.520	1.250	2.500	4.875	—	20.000	17.500
MBT 175	Twin	6.940-9.440	1.250	2.500	6.875	—	20.000	17.500
stated sizes in inch								

THROUGH TYPE								
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) D	WORK LENGTH (BACK BORE) E
MBT 45	Single	1.780-3.404	.812	1.625	1.750	5.500	8.000	6.820
MBT 50	Single	2.032-3.782	.875	1.750	1.960	5.500	10.500	9.122
MBT 73	Single	3.000-5.000	1.000	2.000	2.875	5.500	14.000	12.250
MBT 100	Single	4.000-6.000	1.000	2.000	3.875	5.500	16.000	14.250
MBT 125	Single	5.020-7.520	1.250	2.500	4.875	—	20.000	17.500
MBT 175	Single	6.940-9.440	1.250	2.500	6.875	—	20.000	17.500
stated sizes in inch								

Special work lengths, tool slide strokes, tool body diameters, and other special requirements can be accommodated; contact us for a quotation.

Tool Specifications

METRIC PROGRAM

BOTTOMING TYPE							
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) C
MBT 73	Twin	76,2-121,9	22,9	45,7	73,03	139,7	388,6
MBT 100	Twin	101,6-147,3	22,9	45,7	98,43	139,7	439,4
MBT 125	Twin	170,2-227,3	28,58	57,15	123,83	—	558,8
MBT 175	Twin	221,0-278,1	28,58	57,15	174,63	—	558,8
stated sizes in mm							

BOTTOMING TYPE							
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) C
MBT 45	Single	45,2-68,07	11,4	22,9	44,45	139,7	228,6
MBT 50	Single	51,6-77,01	12,7	25,4	49,78	139,7	292,1
MBT 73	Single	76,2-121,9	22,9	45,7	73,03	139,7	388,6
MBT 100	Single	101,6-147,3	22,9	45,7	98,43	139,7	439,4
MBT 125	Single	170,2-227,3	28,58	57,15	123,83	—	558,8
MBT 175	Single	221,0-278,1	28,58	57,15	174,63	—	558,8
stated sizes in mm							

THROUGH TYPE								
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) D	WORK LENGTH (BACK BORE) E
MBT 73	Twin	76,2-127,0	25,4	50,8	73,03	139,7	355,6	311,15
MBT 100	Twin	101,6-152,4	25,4	50,8	98,43	139,7	406,4	361,95
MBT 125	Twin	127,5-191,0	31,75	63,5	123,83	—	508,0	454,03
MBT 175	Twin	176,27-239,7	31,75	63,5	174,63	—	508,0	454,03
stated sizes in mm								

THROUGH TYPE								
HEAD SIZE	HEAD TYPE	RANGE (Min-Max)	TOOL SLIDE STROKE	SPINDLE TRAVEL	TOOL BODY ØA	TOOL BODY ØB	WORK LENGTH (BORE) D	WORK LENGTH (BACK BORE) E
MBT 45	Single	45,21-86,46	20,6	41,28	44,45	139,7	203,2	173,2
MBT 50	Single	51,61-96,06	22,2	44,45	49,78	139,7	266,7	231,7
MBT 73	Single	76,2-127,0	25,4	50,8	73,03	139,7	355,6	311,15
MBT 100	Single	101,6-152,4	25,4	50,8	98,43	139,7	406,4	361,95
MBT 125	Single	127,5-191,0	31,75	63,5	123,83	—	508,0	444,5
MBT 175	Single	176,27-239,7	31,75	63,5	174,63	—	508,0	444,5
stated sizes in mm								

Special work lengths, tool slide strokes, tool body diameters, and other special requirements can be accommodated; contact us for a quotation.

Tool Operation

FEEDS AND SPEEDS

The guidelines below are intended as a starting point.

METRIC PROGRAM						
	ROUGHING			FINISHING		
	SPEED	FEED	D.O.C.	SPEED	FEED	D.O.C.
	M/Min	mm/Rev	mm	M/Min	mm/Rev	mm
STEEL (4140)	90-175	0,2-0,3	1,5-3,0	130-240	0,1-0,13	0,4-1,0
INCONEL	18-25	0,1-0,3		25-35		
STAINLESS STEEL	80-180	0,2-0,3		120-250		
ALUMINIUM	160-350	0,3-0,4	3,0	405-570		0,5-1,0

INCH PROGRAM						
	ROUGHING			FINISHING		
	SPEED	FEED	D.O.C.	SPEED	FEED	D.O.C.
	Ft/Min	Inch/Rev	Inch	Ft/Min	Inch/Rev	Inch
STEEL (4140)	295-575	.008-.010	.060-.125	425-780	.004-.005	.015-.040
INCONEL	60-80	.004-.010		80-115		
STAINLESS STEEL	260-590	.008-.010		390-820		
ALUMINIUM	500-1150	.012-.016	.125	1300-1870		.020-.060