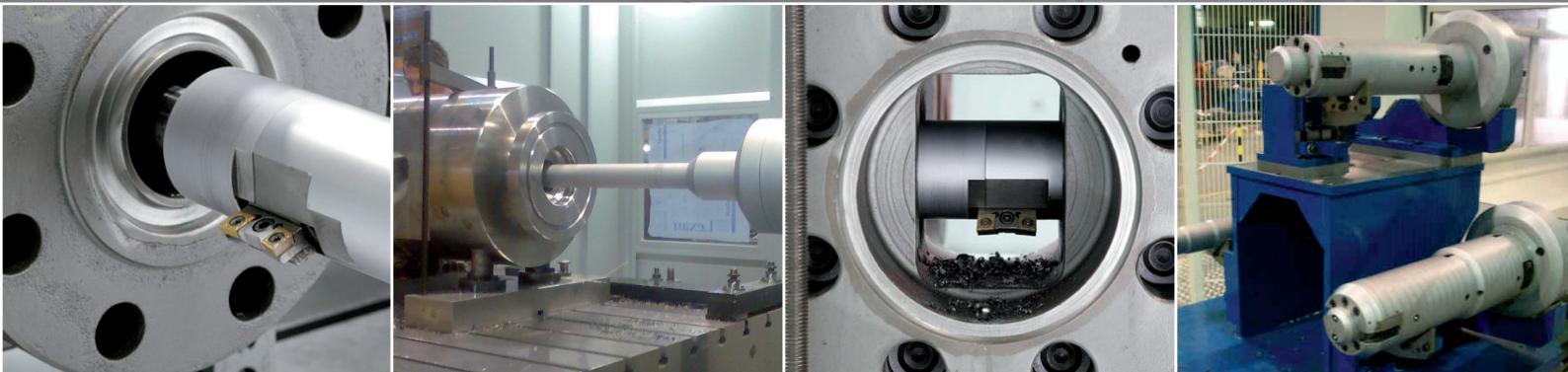




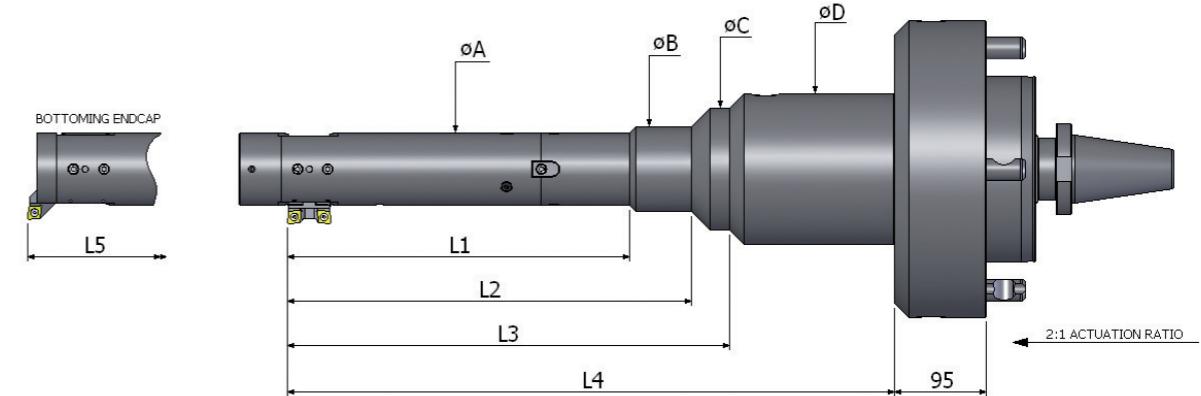
ZX™ - Modular Boring Tools – Single Slide MBT-S





ZX™ - Modular Boring Tools – Single Slide MBT-S

... offer **versatility** and **economy** when machining complex contours inside large components that require multiple operations in one set up.



Benefits

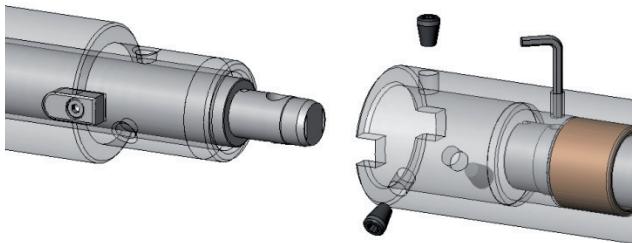
- Versatility:** Performs forward and back boring operations (such as back counter-bores). Internal grooves, faces, and bottle bores can also be machined.
- Exceptional concentricity:** Stepped and tapered bores are machined without tool changes. Concentricity is maintained as the tool slide adjusts for various diameters while the tool stays on the same bore centerline.
- Single-slide tools:** Offer high material removal rates as well as balanced cutting forces for high feeds and speeds.
- Internal through-tool coolant is standard.**
- Fully enclosed actuation mechanism:** No chip packing.
- Internal forward hard stop and anti-torque features:** protect the tool in case of mishaps.

Insert Cartridges and Toolslides

- Broad size range:** Each tool has a long tool slide stroke that is supplemented by using different cartridges and toolslides to cover an ever wider diameter range. No need to change the toolslide(s) or remove the head from the machine
- Other special cartridge designs available on request:** e.g. Burnishing Slide



TECHNICAL DATA	TECHNISCHE DATEN	DATOS TECNICOS	DONNÉES TECHNIQUES	DATI TECNICI	TECHNICKÉ UDAJE		MBT50	MBT75	MBT100	MBT125
'A'	'A'	'A'	'A'	'A'	'A'	mm	50	75	100	125
'B'	'B'	'B'	'B'	'B'	'B'	mm	N/A	86	N/A	N/A
'C'	'C'	'C'	'C'	'C'	'C'	mm	N/A	125	125	N/A
'D'	'D'	'D'	'D'	'D'	'D'	mm	155	155	155	155
Through type End Cap Radial Stroke	Verfahrenswege radial für Wkzg. Durchgang	Capuchon terminal coulant course radiale	Capuchon terminal coulant course radiale	Cappuccio terminale passante corsa radiale	Radiální zdvih koncový kryt pro průchodží díru	mm	23	32	45	54
Bottoming End Cap Radial Stroke	Verfahrenswege radial für Wkzg. Sackloch	Recorrido radial para herramienta ciego	Capuchon terminal fermé course radiale	Cappuccio terminale chiuso corsa radiale	Radiální zdvih koncový kryt pro slepou díru	mm	12	22	23	30
Total Range of tool with Slide and Cartridge change	Total Arbeitsbereich, wechseln von Schlitzen u. Plattenhalter	Gama total con cambio de deslizadera y cartucho	Gamme complète d'outils avec coulisse et cartouche interchangeable	Gamma completa di utensili con slitta e cartuccia intercambiabile	Celkový rozsah nástroje včetně sanich a vymenitelnými kazetami	mm	50–118	75–194	100–230	125–272
L1 max.	L1 max.	L1 max.	L1 max.	L1 max.	L1 max.	mm	305	350	454	524
L2 max.	L2 max.	L2 max.	L2 max.	L2 max.	L2 max.	mm	N/A	414	486	N/A
L3 max.	L3 max.	L3 max.	L3 max.	L3 max.	L3 max.	mm	N/A	454	N/A	N/A
L4 max.	L4 max.	L4 max.	L4 max.	L4 max.	L4 max.	mm	521,3	622	692	
L5 max.	L5 max.	L5 max.	L5 max.	L5 max.	L5 max.	mm	557	658	684	725
Maximum speed	Max. Drehzahl	Max. velocidad	Vitesse maximale	Massimo N° di giri	Max. rychlosť	RPM	800	800	800	800
Stroke ratio	Übersetzung	Ratio desplazamiento	Conversion de mouvement	Rapporto corsa Mandrino/Utensile	Pomer zdvihu		2 to 1	2 to 1	2 to 1	2 to 1
Repeatability accuracy	Wiederholgenauigkeit	Precisión repetididad	Précision de répétabilité	Precisione di ripetibilità	Opakovatelnost přesnosti	mm	0,003	0,003	0,003	0,003
Backlash	Umkehrspiel	Backlash	Reaction violente	Gioco di Ripresa	Zpětný odraz	mm	0–0,025	0–0,025	0–0,025	0–0,025
Boring accuracy	Bohrgenauigkeit	Precisión en mandrinado	Précision d'alesage	Precisione in alesatura	Presnost vrtání	H7	H7	H7	H7	H7
Max. chip removal on 080M46 steel	Max. Materialabnahme bei Stahl 080M46	Cap max. arranque de viruta en acero 080M46	Sect. max. du copeau dans l'acier 080M46	Cap. max. asportazione su Acc. 080M46	max Rez trisek u ocele 080M46					
Facing	Ausdrehen	Refrentado	Surfaçage	Sfaccatura	Planovani	D.O.C./mm	3	3	3	3
Boring	Plandrehen	Mandrinado	Alésage	Alesatura	Vysoustrzeni	D.O.C./mm	3	6	7	7
Rapid traverse	Eilgang	Rápido	Rapide	Rapido	Rychli posuv	M/min	100	100	100	100
Roughness	Rauigkeit	Rugosidad	Rugosité	Rugositá	Drsnost	Ra	0,8	0,8	0,8	0,8



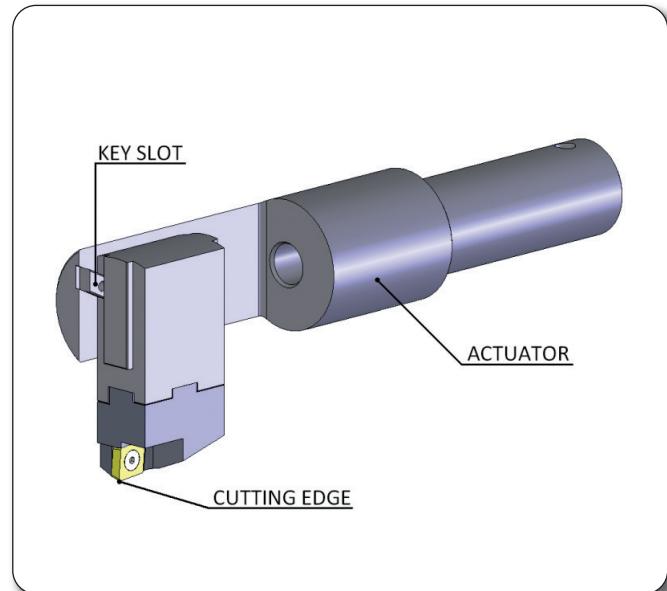
Extension Coupling

- **Modular design and construction:** Makes adjustment of length and configuration fast and easy, greatly enhancing the versatility of the tool. Some sizes can be converted for extended-reach applications with piloted support.

Machine Tool Requirements

- The ZX™ system requires the use of a horizontal boring mill with a programmable inner spindle that rotates in unison with the outer spindle or milling sleeve.

In most horizontal boring mills, the live spindle is referred to as the "W" axis.



Diameter control:

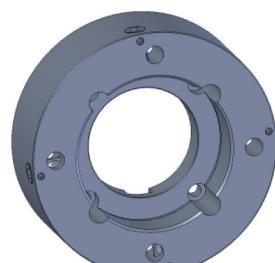
The controlled inner spindle movement is converted within the tool into radial cutter movement.

Axial location:

Movement of the machine's column or table parallel to the spindle controls the axial location of the cutting edge.

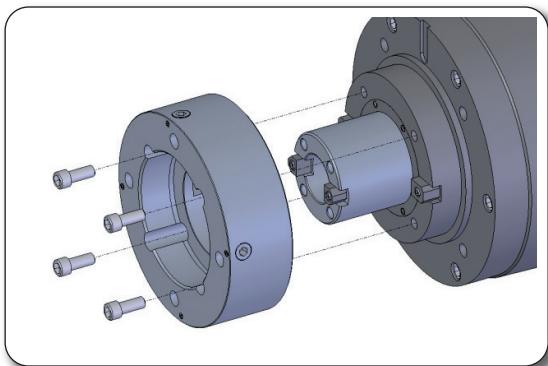


MBT converts axial into radial movement



Camlock bonnet for fast and easy mounting

Installation: Bonnet to Outer Spindle

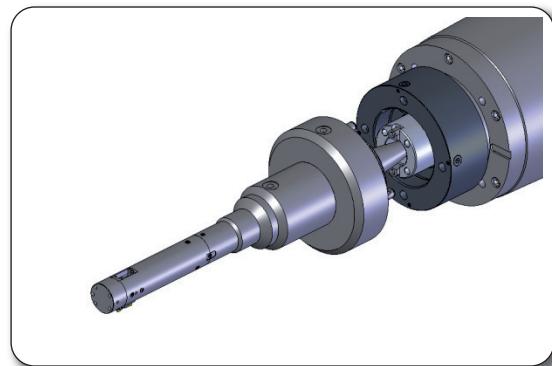


The **Spindle Adaptor (Bonnet)** is bolted onto the **Spindle Nose/Outer Quill** of machine.

The **Spindle Adaptor** remains permanently on the machine.

When secured it rotates in conjunction with the **Spindle** and **Spindle Nose**.

Installation: Facing Head to Bonnet



The **Machine Spindle** is extended and the **ZX Tool Shank** is engaged in the **Spindle Taper**.

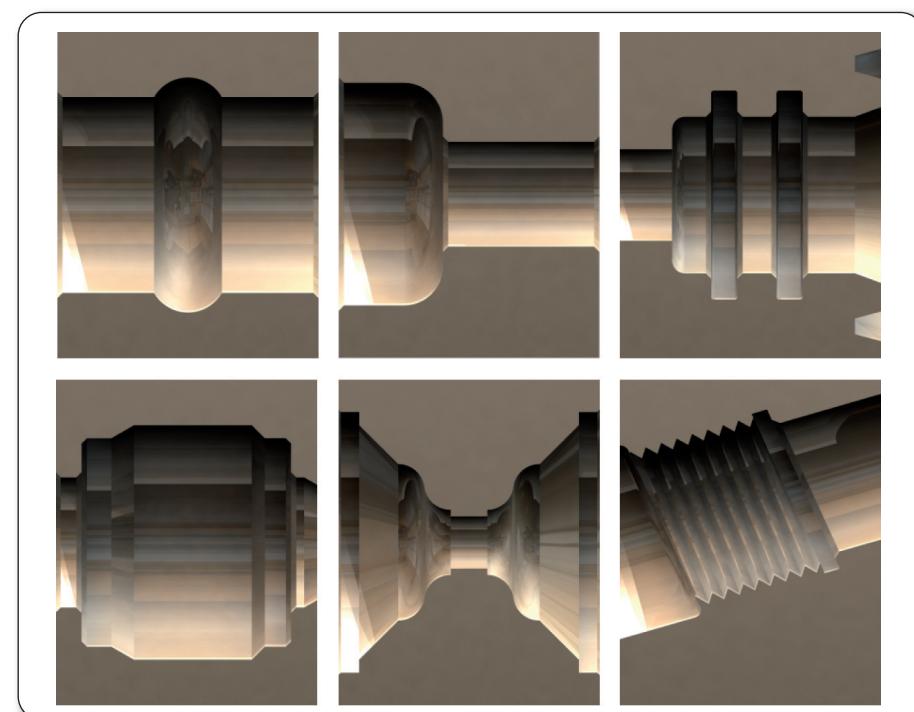
The **Machine Spindle** retracts to a home position and engages the **Camlock Studs** into the **Camlock Adaptors** in the **Spindle Adaptor**.

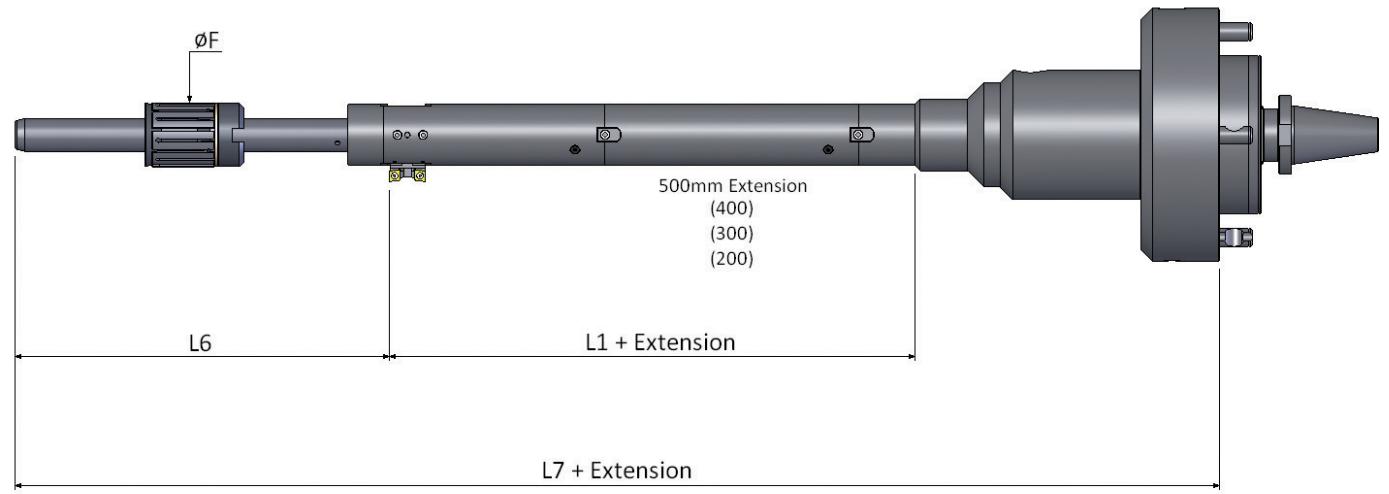
Manually clamp the **Camlock Studs**, effectively locking the head onto the machine.

HBM's with RAM: To accommodate ZX-Tooling on RAM-Type Horizontal Boring Mills without a Live Spindle, a Special Rotary Coupling can be supplied by Cogsdill.

Other Machine types: The ZX-Tooling can also be adapted to different machine tool types like Turning or Deephole Drilling Machines and other large Machining Centres utilising a special Drive Unit that provides the actuation of the internal mechanism.

Examples of internal configurations machined using ZX tools





COLLET SIZE (øF)	COLLET SIZE (øF)		MBT75-S		MBT100-S		MBT125-S	
2.060"	52.32mm	2.050"-2.130"	52.07-54.10 mm					
2.560"	65.02mm	2.550"-2.630"	64.77-66.80 mm					
3.000"	76.20mm			2.990"-3.070"	75.95-77.98mm			
4.060"	103.12mm			4.050"-3.070"	102.87-106.43mm	4.050"-4.190"	102.87-106.43mm	
5.125"	130.18mm			5.110"-5.250"	129.79-133.35mm	5.110"-5.250"	129.79-133.35mm	5.110"-5.250" 129.79-133.35mm
6.375"	161.93mm					6.360"-6.500"	161.54-165.10mm	6.360"-6.500" 161.54-165.10mm
7.060"	179.32mm						7.050"-7.130"	179.07-181.10mm
CARTRIDGE CUT RADIUS								
TOOLSLIDE SLIDE RADIUS	16.5mm	21.0mm	23.0mm	35.5mm	23.0mm	35.5mm	27.0mm	44.0mm
8.5mm	50.0-96.0mm	59.0-105.0mm						
15.0mm	63.0-109.0mm	72.0-118.0mm						
14.5mm								
27.0mm			75.0-139.0mm	100.0-164.0mm				
39.5mm			100.0-164.0mm	125.0-189.0mm	100.0-190.0mm	125.0-215.0mm		
56.5mm			125.0-189.0mm	150.0-214.0mm	125.0-215.0mm	150.0-240.0mm		
35.5mm					159.0-249.0mm	184.0-274.0mm	125.0-233.0mm	159.0-267.0mm
52.5mm							159.0-267.0mm	
62.0mm							178.0-286.0mm	212.0-320.0mm
L6	325mm		448mm		608mm		325mm	
L7	846mm		1070mm		1263mm		846mm	

FOR ADDITIONAL INFORMATION

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