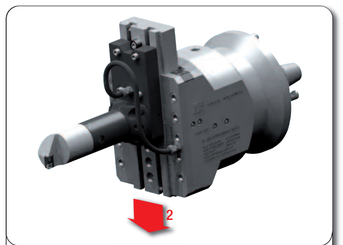
MACHINE TOOL REQUIREMENTS

The ZX™ system requires the use of a horizontal boring mill with a programmable inner spindle (1) that rotates in unison with the outer spindle (3), or milling sleeve.

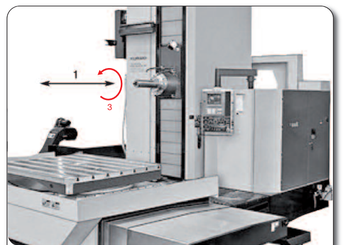
In most horizontal boring mills, the live spindle is referred to as the "W" axis.

Diameter control: The controlled inner spindle movement (1) is converted within tool into radial cutter movement (2).

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



Slide movement ZX 420



Horizontal Boring Mill with live spindle

Installation: Bonnet to outer spindle

Cam-Lock adaptor is bolted onto the spindle nose/outer quill of machine.

The Cam-Lock adaptor remains permantly on the machine.

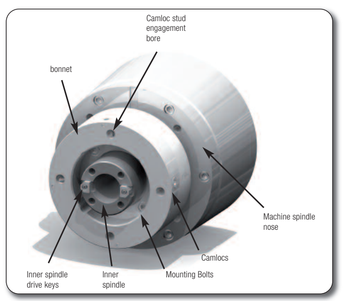
When secured it rotates in conjunction with the spindle and spindle nose.

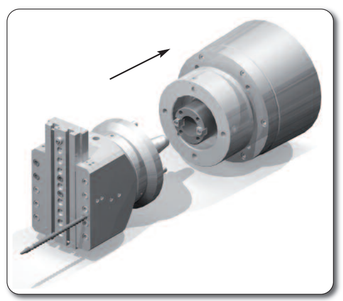
Installation: Contouring head to bonnet

The machine spindle is extended and the Contouring Head's shank is engaged into the spindle taper.

The machine spindle retracts to a home position and engages the Cam-Lock studs into the Cam-Lock adaptors in the bonnet.

Manually clamp the Cam-Lock studs effectively locking the Contouring Head onto the machine.





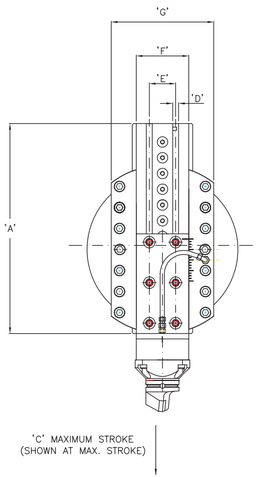
HBM's with RAM: To accomodate the Contouring Head System to RAM-Type Horizontal Boring Mills without live spindle, a Special Rotary Coupling can be supplied by Cogsdill.

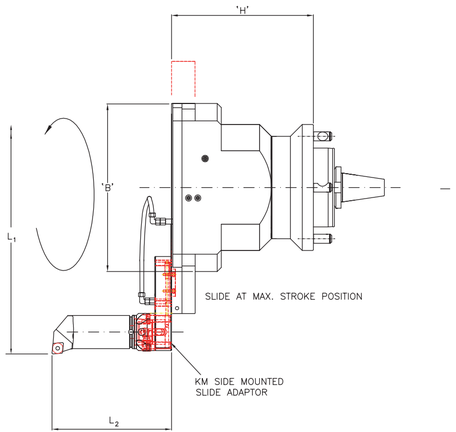
Other Machine types: The Contouring Head System can be also adapted to different machine tool types like Special Purpose Machines and other large Machining Centers utilising a special Drive Unit that provides the actuation of the internal mechanism.

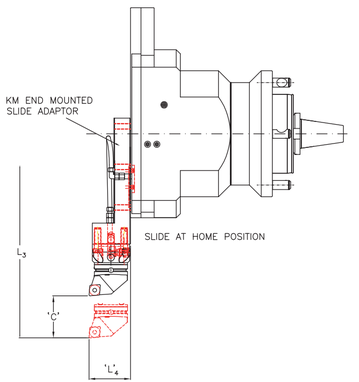
COGSDILL

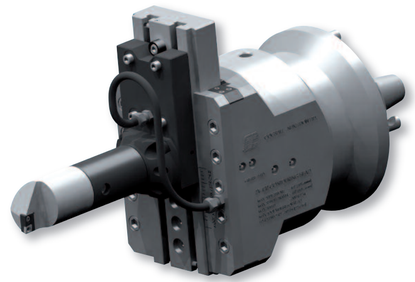
ZX™ Contouring Head System.

Cogsdill offers a **New and Updated** extensive range of proven, rugged, durable and precision manufactured contouring heads. We can provide a solution for all your manufacturing requirements, from the simple to the very large and complex. Providing adaptors for industry standard tooling as well, expensive tooling set-ups are eliminated.









TECHNICAL DATA	TECHNISCHE DATEN	DATOS TECHNICOS	DONNÉES TECHNIQUES	DATI TECNICI	TECHNICKE UDAJE		ZX200	ZX300	ZX420	ZX500	ZX700	ZX900
'A'	'A'	'A'	'A'	'A'	'A'		200	300	420	500	700	900
'B'	'B'	'B'	'B'	'B'	'B'	mm	200	300	305	400	500	700
'C' radial traverse	'C' Verstellweg radial	'C' carrera radial	'C' course radiale	'C' corsa radiale	Radiální pojezd 'C'	mm	38	75	102	102	127	127
'D'	'D'	'D'	'D'	'D'	'D'	mm	14,29 x 1	14,29 x 2	14,29 x 2	14,29 x 2	14,29 x 2	14,29 x 2
'E'	'E'	'E'	'E'	'E'	'E'	mm	Centre	63,5	63,5	63,5	63,5	63,5
'F'	'F'	'F'	'F'	'F'	'F'	mm	70	127	127	127	127	127
'G'	'G'	'G'	'G'	'G'	'G'	mm	200	248	248	248	250	250
'H'	'H'	'H'	'H'	'H'	'H'	mm	307	343	343	343	370	370
L1	L1 max.	L1 max.	L1 max.	L1 max.	L1 max.	mm	ø 381	ø 650	ø 770	ø 850	1120	1500
L2	L2 max.	L2 max.	L2 max.	L2 max.	L2 max.	mm	210	270	310	310	310	310
L3	L3 max.	L3 max.	L3 max.	L3 max.	L3 max.	mm	ø 500	ø 800	ø 980	ø 1060	ø 1330	ø 1700
KM/Capto Adaptors	**KM/Capto Adapters**	**KM/Capto Adattatori**	**KM/Capto Adapteurs**	**KM/Capto Adaptadores**	**Adapter KM/Capto**							
L4	L4 max.	L4 max.	L4 max.	L4 max.	L4 max.	mm	65	102	102	102	102	102
Maximum speed	Max. Drehzahl	Max. velocidad	Vitesse maximale	Massima velocità	Max. rychlost	RPM	800	500	350	300	250	150
Stoke ratio	Aussteuer Verhältnis	Accarezzare rapporto	Caresser proportion	Acraicie proporcion	Pomer zdvihu		2 to 1	1 to 1	1 to 1	1 to 1	1 to 1	1 to 1
Feed	Vorschubgeschwindigkeit	Avance	Avance	Avanzamento	Posun	mm/Rev	0,4	0,4	0,4	0,4	0,4	0,4
Max. Torque	Max. Drehmoment	Max. Momento de torsion	Max. Couple maxi	Max. Momento torcente	Max. točivý moment	da Nm	100	800	800	800	1000	1000
Weight	Gewicht	Peso	Poids	Peso	Vaha	Kg	107	168	175	205	170	200
Repeatibility accuracy	Wiederholgenauigkeit	Precisión repetividad	Précision de répétabilité	Precisione di ripetibilità	Opakovatelnost přesnosti	mm	0,003	0,003	0,003	0,003	0,003	0,003
Backlash	Umkehrspiel	Reazione sfavorevole	Reaction violente	Contragolpe	Zpetny odraz	mm	0–0,025	0–0,025	0–0,025	0–0,025	0–0,025	0–0,025
Boring accuracy	Bohrgenauigkeit	Precisión en mandrinado	Précision d'alésage	Precisione in alesatura	Presnost vrtání		H7	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	Plandrehen	Refrentado	Surfaçage	Sfacciatura	Planovani	D.O.C./mm	3	4	4	6	6	6
Boring	Ausdrehen	Mandrinado	Alésage	Alesatura	Vysoustruzeni	D.O.C./mm	3	4	4	6	6	6
Rapid traverse	Eilgang	Rápido	Rapide	Rapido	Rychli posuv	M/min	0,4	0,4	0,4	0,4	0,5	0,5
Roughness	Rauigkeit	Rugosidad	Rugosité	Rugositá	Drsnost	Ra	1,6	1,6	1,6	1,6	1,6	1,6

Optional internal coolant supply, special work lengths, tool slide strokes, tool body diameters, and other special modifications can be accomodated; contact us for a quotation.

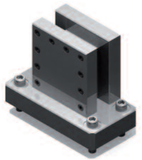
Industry Standard Top Tooling.

ZX™ contouring head system features a single cross-slide onto which various adaptors can be fitted, such as KM, Capto, Square shank, and Cylindrical round shank.

Central Mount 'KM'

End Mount 'KM'

Side Mount 'KM'



Central Mount
Open Ended Square Shank

Side Mount
Cylindrical Shank

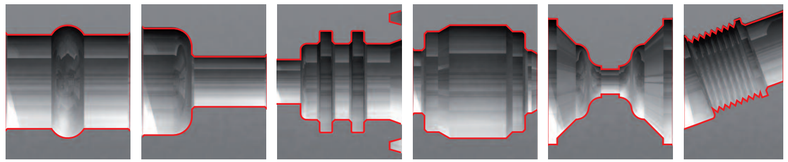
Central Mount
Cylindrical Shank

	Capto		KM tooling			Cylindrical	Cylindrical	Cylindrical	Cylindrical	Square
	C5	C6	KM50	KM63	KM80	32 mm	40 mm	50 mm	60 mm	25 mm
ZX200-TC	•		•			•	•	•		
ZX300-TC		•		•	•			•	•	
ZX420-TC		•		•	•			•	•	•
ZX500-TC		•		•	•			•	•	•
ZX700-TC		•		•	•			•	•	•
ZX900-TC		•		•	•			•	•	•

Special adaptors not stated above can be supplied upon request.

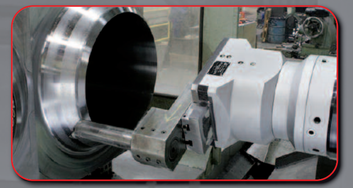
Examples of internal configurations machined using ZX™ contouring head system.

Part geometries shown below are commonly found in parts such as oil valves and blowout preventers, gearboxes, pump housings, compressors, engine housings, aerospace and power generation components, large castings, and heavy equipment components.



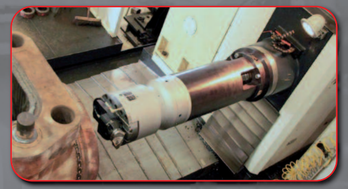
COGSDILL ZX™ Contouring Head System.

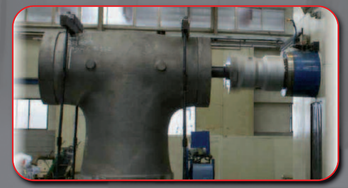
Cogsdill your first choice in manufacturing solutions.

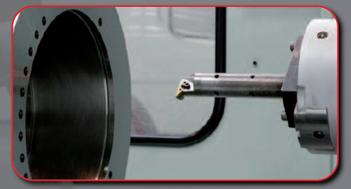


Benefits that will increase your productivity.

- Perform accurate lathe-type operations on horizontal boring mills
- Maximum application flexibility – machine diameters, faces, tapers, radii, and profiles
- High material removal rates
- High quality for long working life
- Extremely rigid and durable design
- Backlash-free operation







FOR ADDITIONAL INFORMATION

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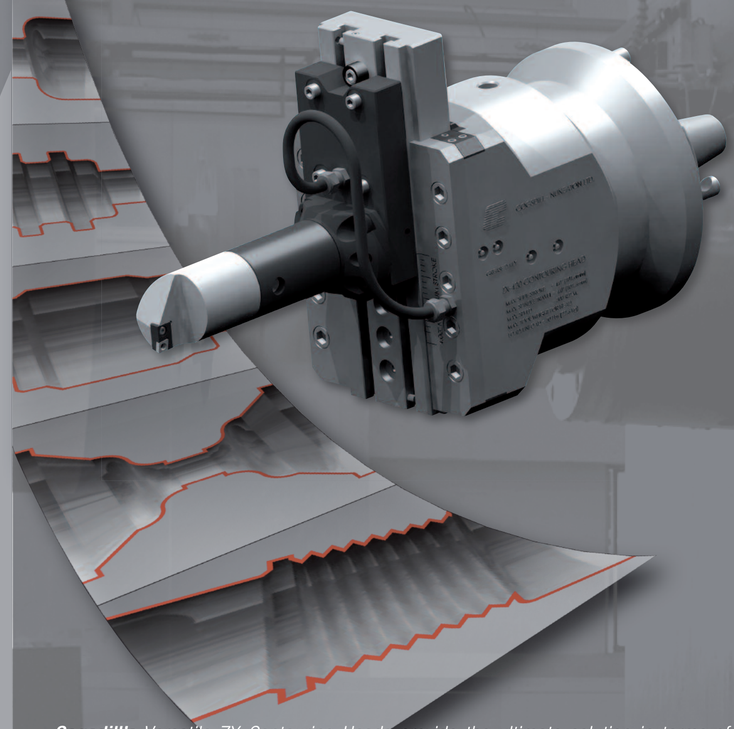
COGSDILL ZX™ Contouring Head System.



Cogsdill's *Versatile ZX Contouring Heads provide the ultimate solution in terms of productivity, flexibility, and accuracy for the machining of complex precision components that require multiple operations. The system can perform a variety of internal and external precision machining operations on horizontal boring mills in one simple set-up, including:*

Boring • Facing • Over-Turning • Contouring • Taper boring
Grooving • Spotfacing • Chamfering • Threading