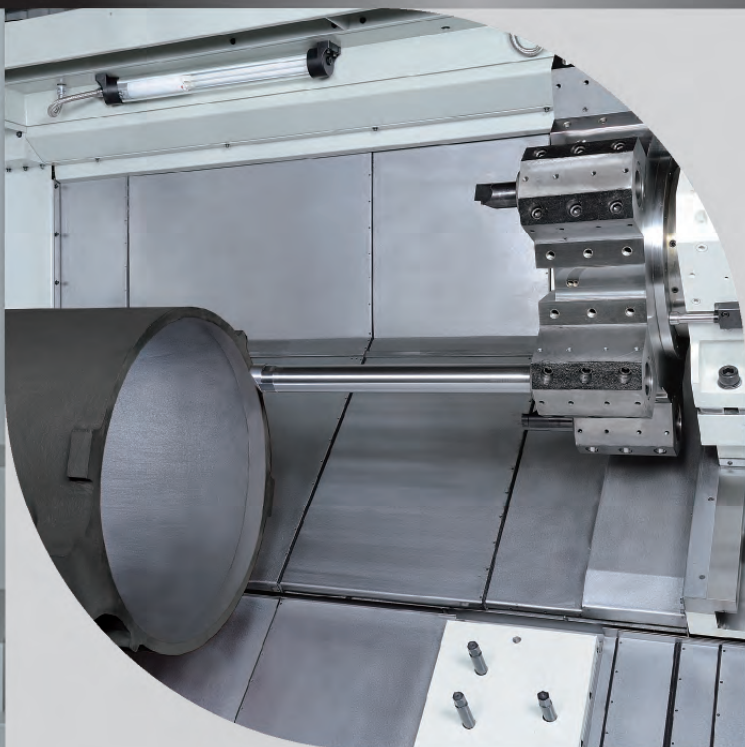




FOCUS*CNC*®

FBL-510/520/530/540
MC Series
Heavy Duty CNC Lathe



Heavy Duty CNC Lathe

FBL-510/520/530/540 MC Series



Contents

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Designed for Easy and Convenient Operations

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Controller

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Structure and Components

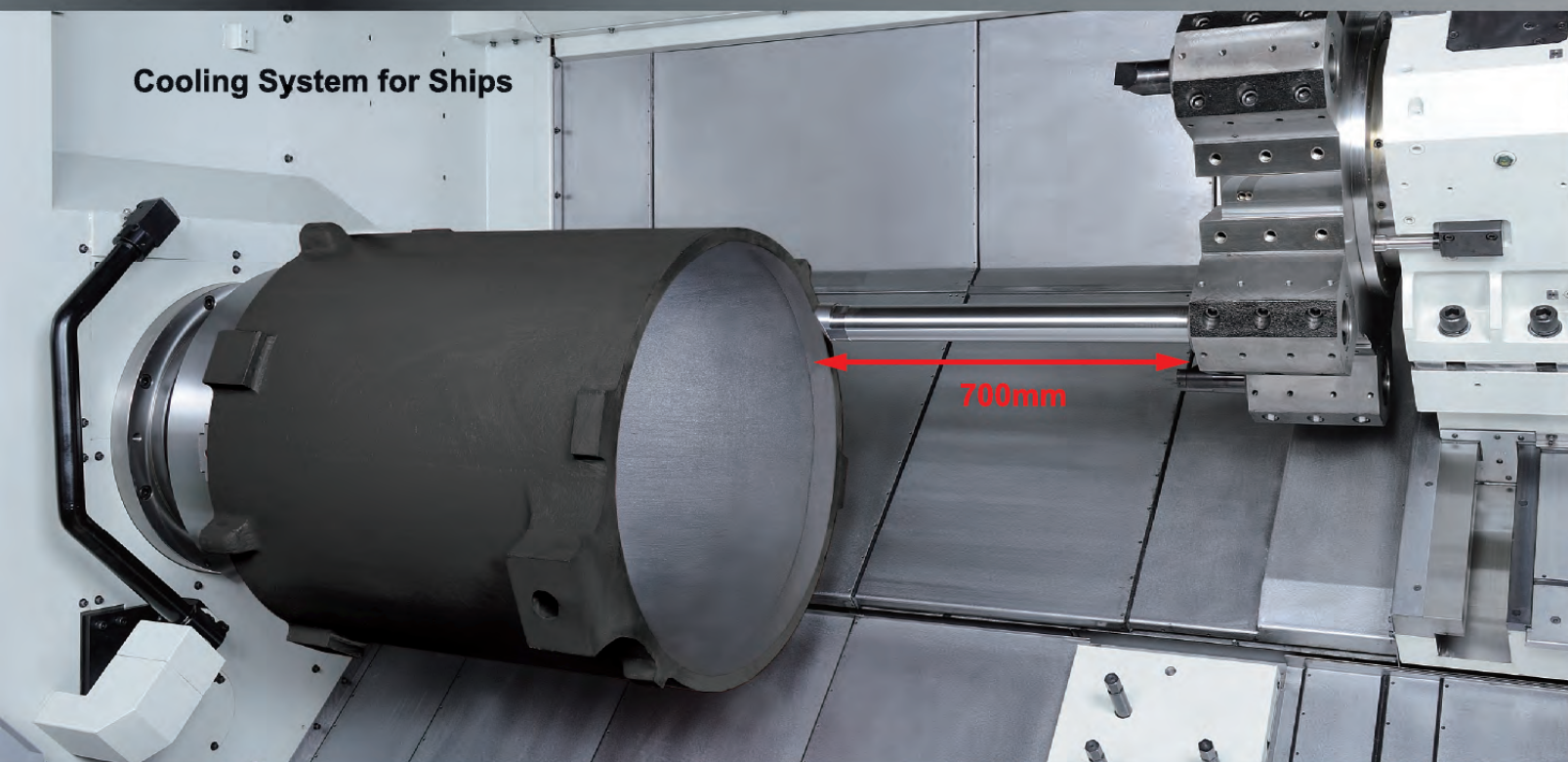
05

Application

06

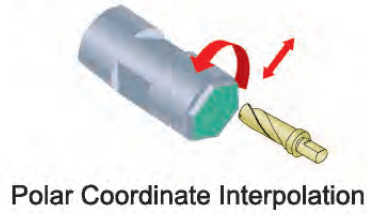
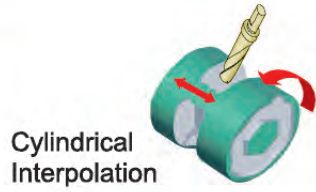
Optional Accessories

Cooling System for Ships



Controller

FANUC

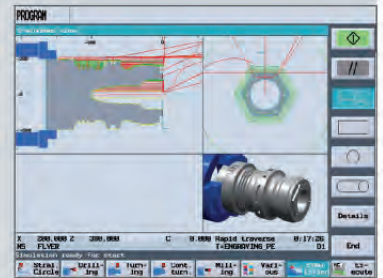


SIEMENS



Uses a 10.4" screen for easy operation. Optional Shop Turn function with integrated operating system. Finish programming without having to use G code.

- 2 window view dynamic simulation
- 3D finished part simulation (Opt.)
- 3D section view (Opt.)



07
Tooling System

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System Diagram

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Specifications

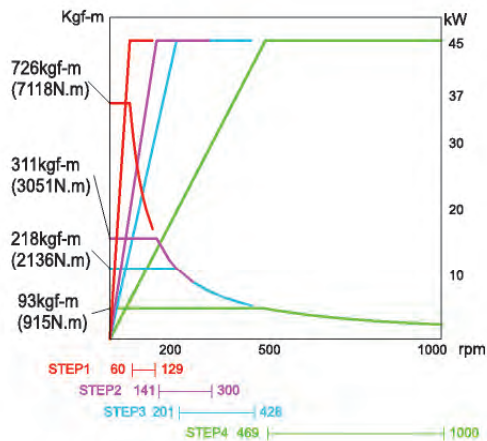
10
Standard & Optional
Accessories

The concave spindle guard prevents any tool interference.

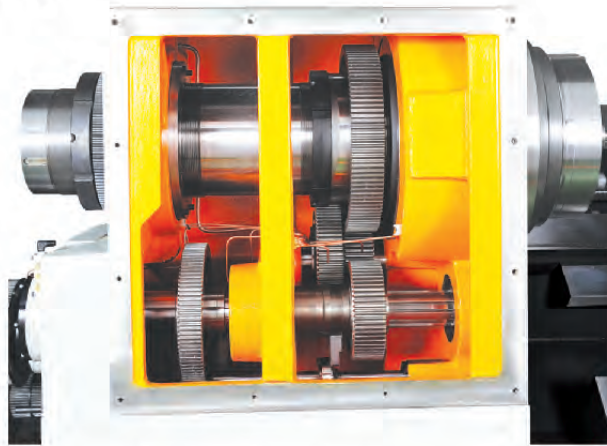
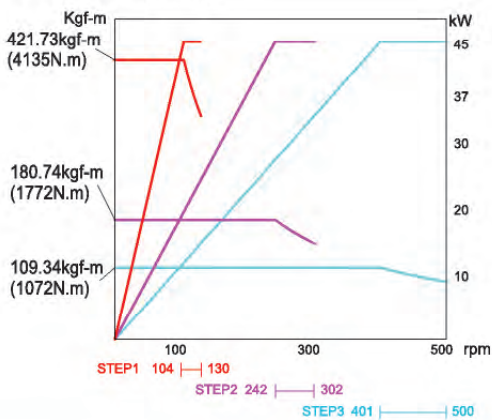
The easy to operate control box makes motion control of the linear guides convenient and almost effortless.

FBL-510/520/530/540 Spindle Torque Diagram

196mm Capacity



320mm Capacity



Powerful 4 stage spindle gear box provides 45kW horsepower available for large diameter workpieces and heavy duty cutting. Spindle hole diameter \varnothing 196mm suits numerous bar sizes. Double row roller bearing increases stability and rigidity for heavy cutting.

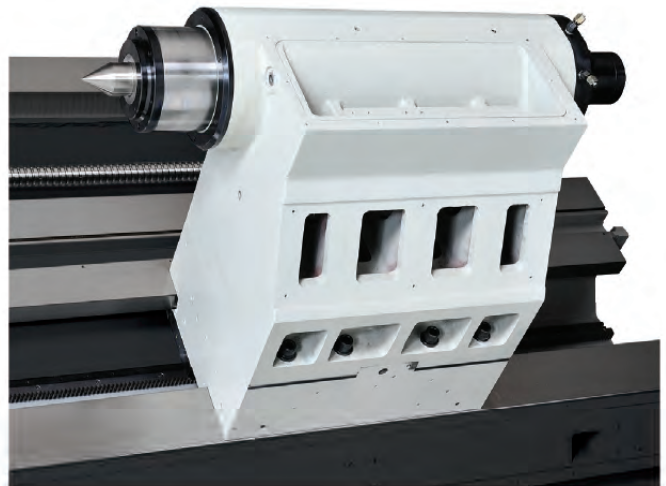
Diameter 320 / 380 mm opt.



Structure and Components



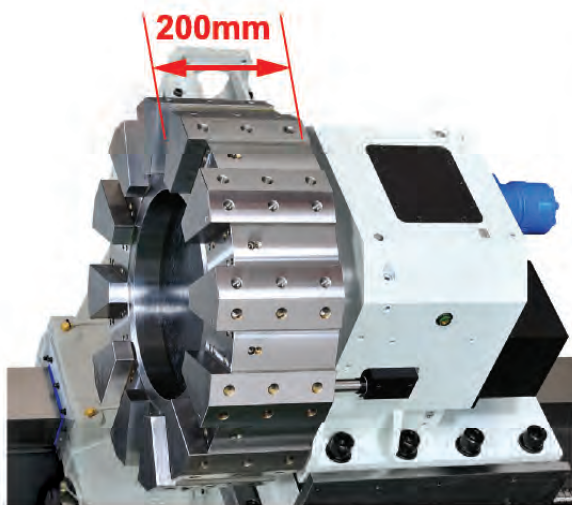
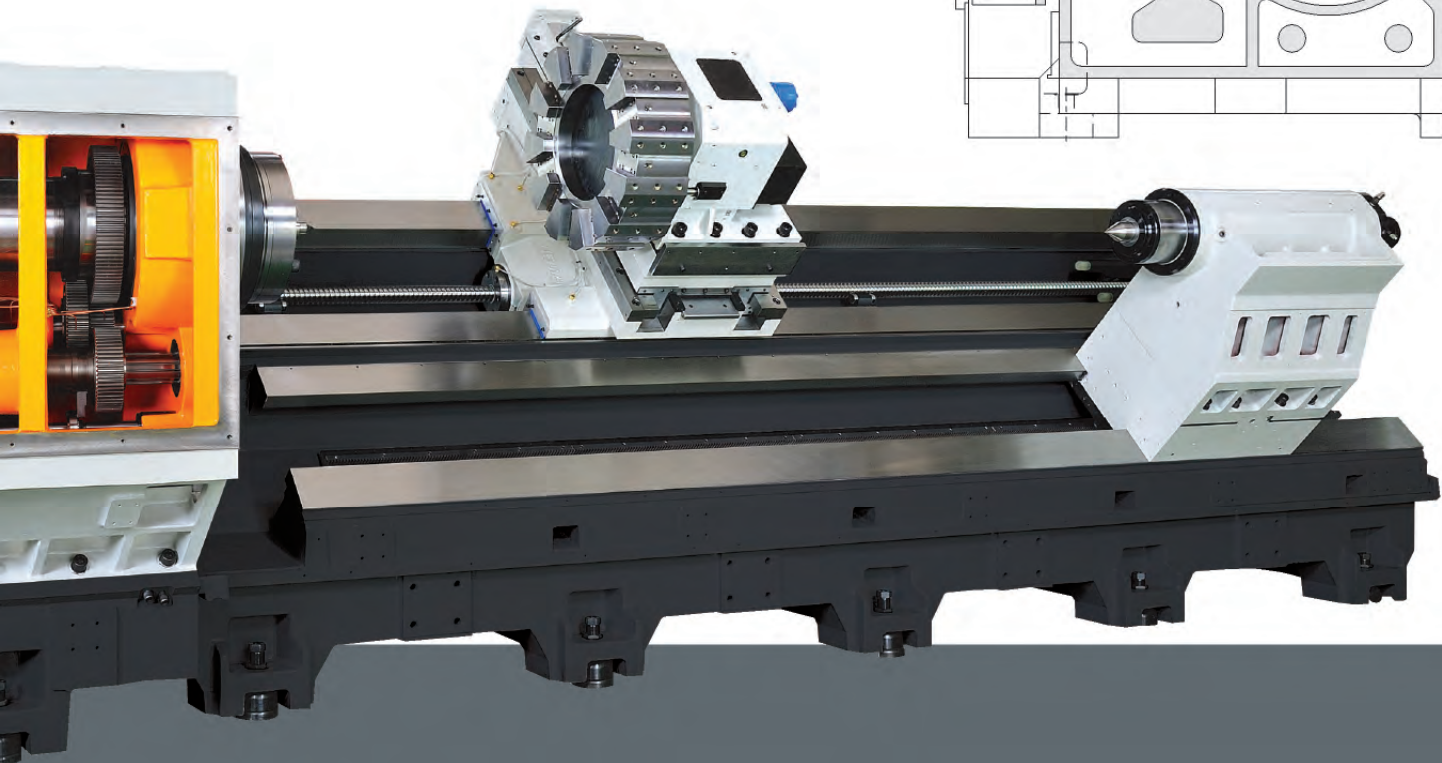
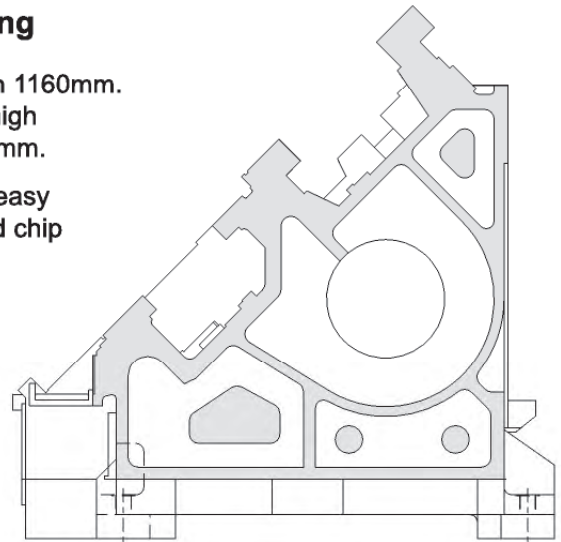
FBL-530/540 Z axis ball screw support maintains high precision and stability.



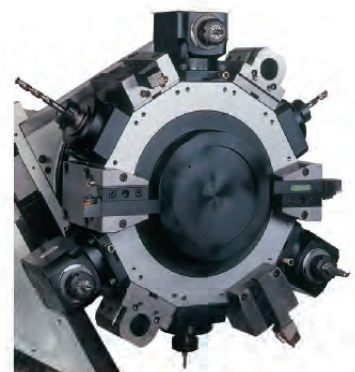
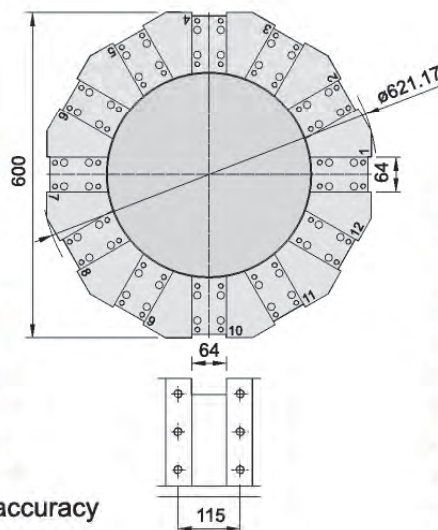
Standard MT6 rotary quill. Increases rigidity for heavy loading and makes optional live centers unnecessary. Upgraded \varnothing 200mm quill offers heavy loading. Hydraulically driven tailstock improves machining efficiency.

45 Degree Slant Bed One Piece Casting

- High rigidity bed design, swing 1030mm, width 1160mm. Box guideway width 130mm x height 80mm, high performance for max workpiece diameter 940mm.
- Slant bed structure with low center of gravity, easy access and workpiece changeovers. Improved chip removal helps prevent thermal deformation.
- High torque 7118NM at low speeds.



Curved teeth clutch ensures tool turret clamping accuracy and stability. 200mm thick turret disc delivers stable support and reduced vibration. Optional $\varnothing 80$ mm boring bar holder available.



Optional BMT85 power tool turret available for remarkably improved rigidity and comes with 11kW (15hp) milling motor.

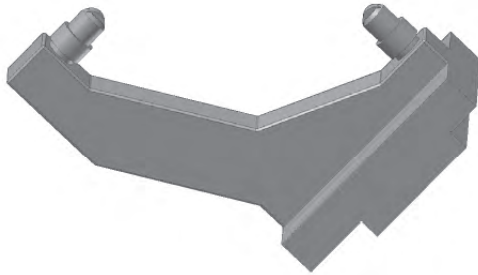
Application



Oil Field



Optional Accessories



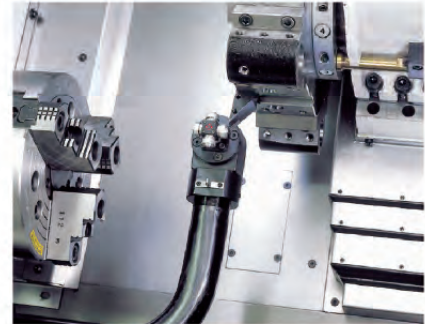
C Type Manual Steady Rest
Max range 700mm (customized)



Manual Steady Rest



Hydraulic Steady Rest
ø30~245mm
ø45~310mm
ø85~350mm



Manual Tool Setter

18", 21", 24" Solid Hydraulic Chuck

18", 20", 21", 24" Hollow Hydraulic Chuck
(Capacity ø115, ø165, ø205mm)

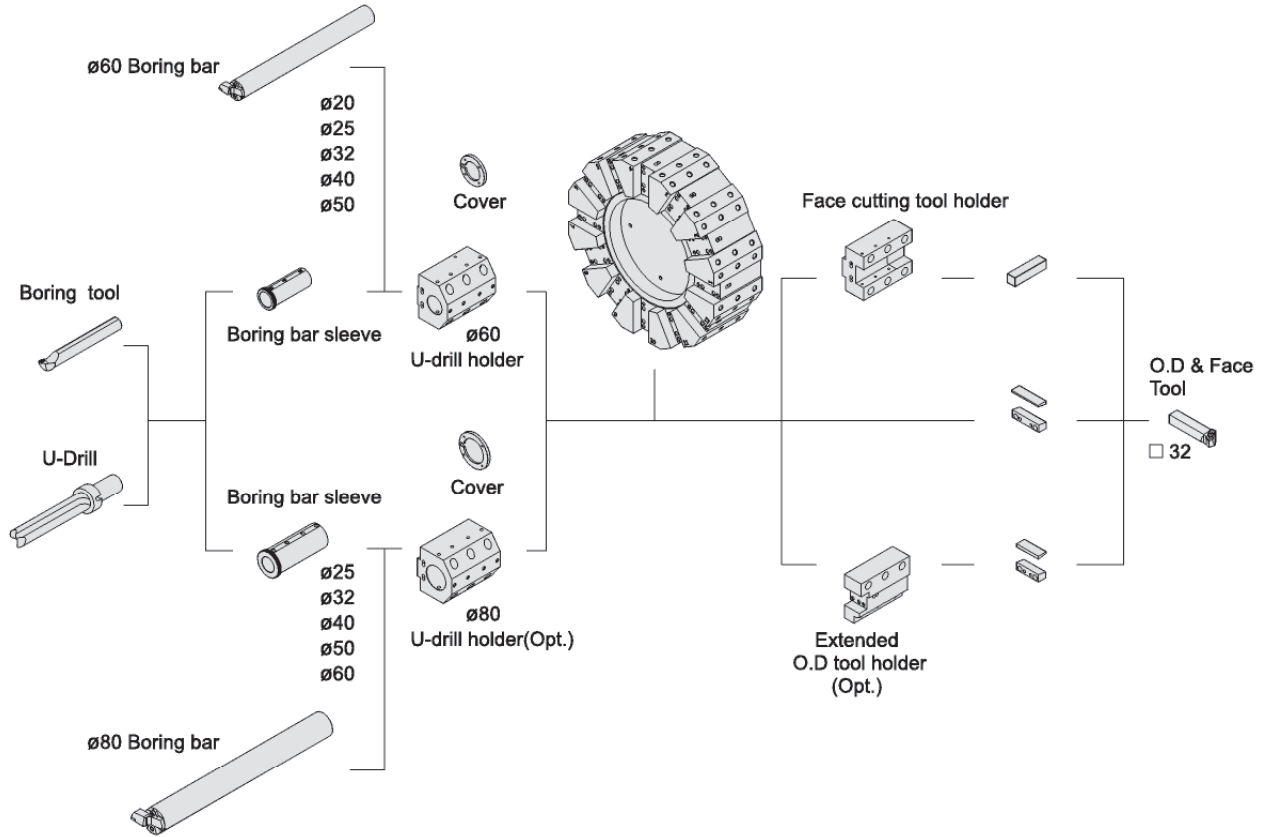
24", 26", 28", 32" Independent 3 or 4 Jaw Chuck



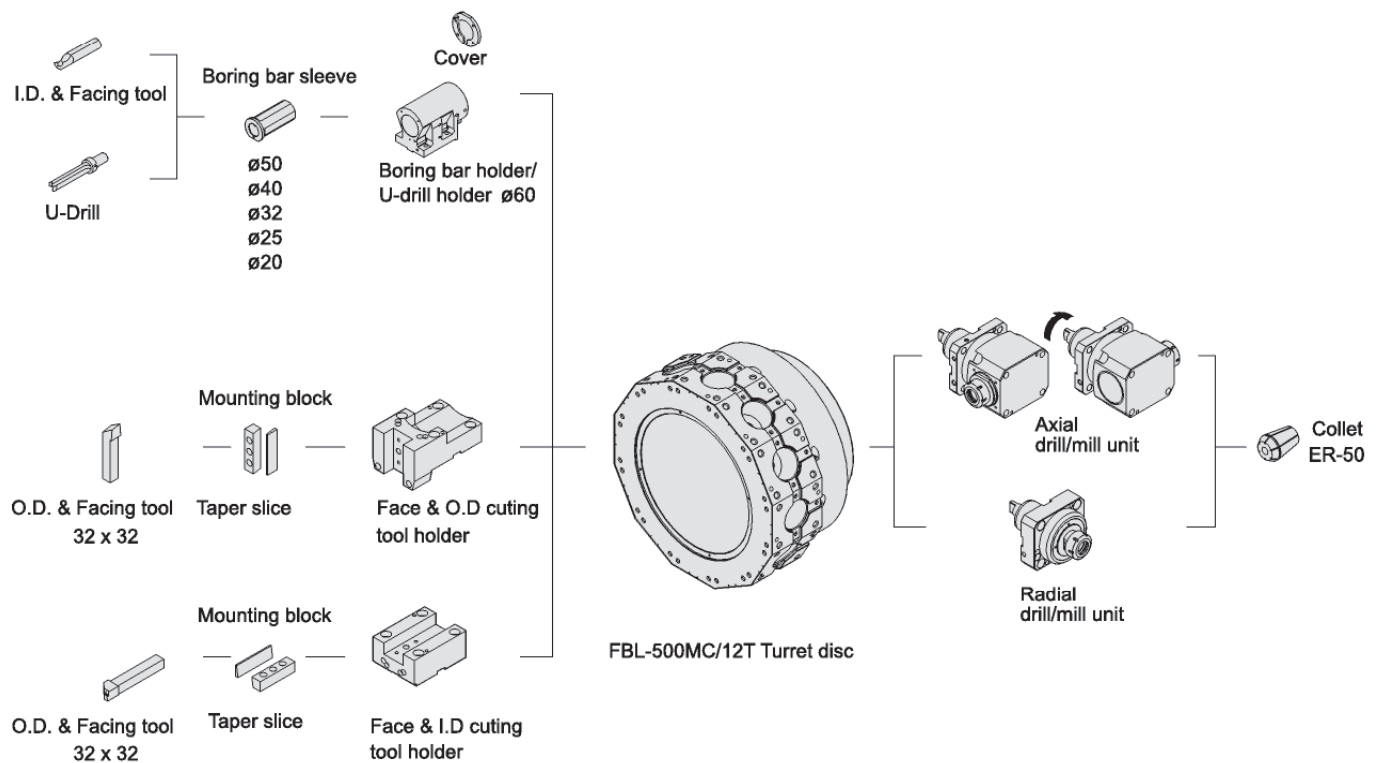
Tooling System

Unit: mm

FBL-510/520/530/540



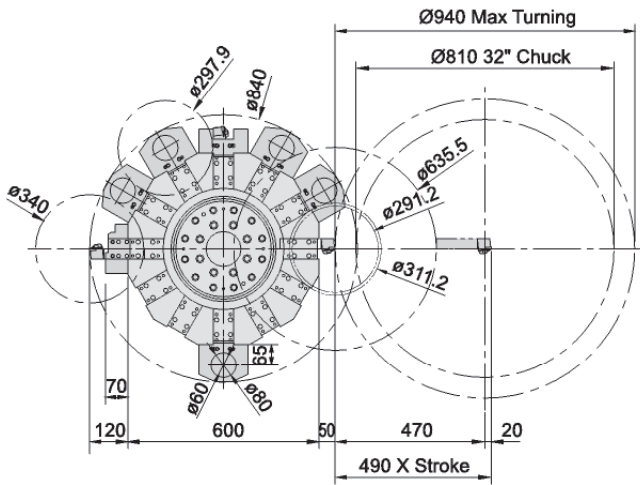
FBL-510/520/530/540MC



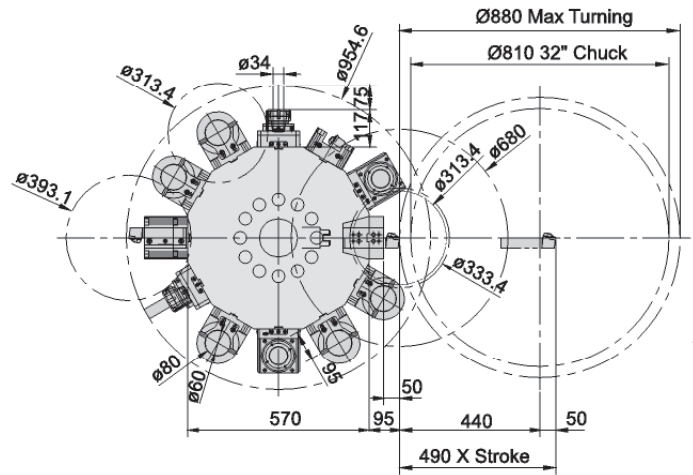
System Diagram

Unit: mm

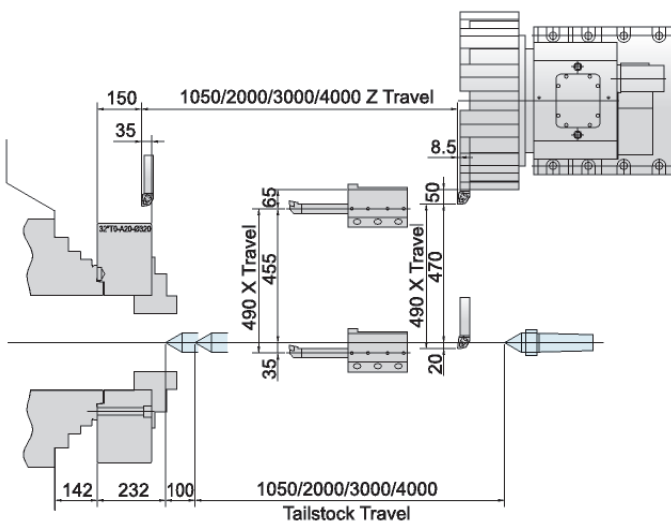
FBL-510/520/530/540 Tool Interference



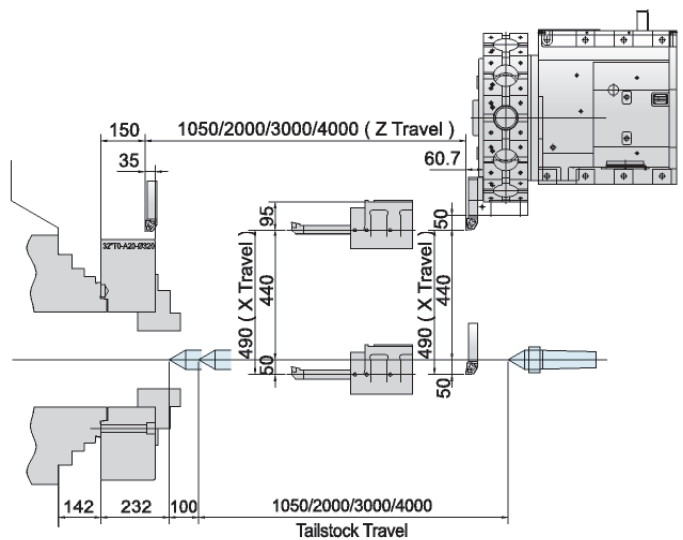
FBL-510/520/530/540MC Tool Interference



FBL-510/520/530/540 Machining Area



FBL-510/520/530/540MC Machining Area



Specifications

MODEL		FBL-510	FBL-520	FBL-530	FBL-540	FBL-510MC	FBL-520MC	FBL-530MC	FBL-540MC
Control		FANUC 0i-T							
Turning range									
Swing over bed	mm	ø1136	ø1000			ø1136	ø1000		
Swing over cross slide	mm	ø816	ø800			ø816	ø800		
Max turning diameter	mm	ø940	ø940			ø880	ø880		
Max turning length	mm	1050	2000	3000	4000	1050	2000	3000	4000
Standard turning diameter	mm	ø60=ø311 (ø80=291 opt.)				ø60=ø333 (ø80=313 opt.)			
Distance between centers	mm	1050	2000	3000	4000	1050	2000	3000	4000
Bar capacity	mm(inch)	ø165 (6")							
Headstock									
Spindle nose		A2-15 / A2-20 (ø320 / ø381 opt.)							
Chuck diameter	inch	18"~24"							
Through spindle hole diameter	mm (inch)	ø196 (7.5") / ø320 (12.5") opt. / ø381 (15") opt.							
Spindle speed	step	4 step / 3 step (ø320 opt.) / 2 step (ø381 opt.)							
Max spindle speed	rpm	ø196 1000rpm / ø320 500rpm / ø381 500rpm							
Spindle motor	kW	37 / 45 (α40 / 6000)							
Maximum CF axis speed	rpm	N/A				33			
Turret									
Turret tool station	tools	12							
Shank height of square tool	mm	32 x 32							
Shank diameter of boring bar	mm	ø60 (ø80 opt.)							
Travel									
X axis travel	mm	490							
Z axis travel	mm	1050	2000	3000	4000	1050	2000	3000	4000
Feed motor X axis	kW	9 (α40)							
Feed motor Z axis	kW	9 (α40)							
Rapid feed rate X / Z axis	m/min	X: 10 / Z: 12							
Tailstock									
Tailstock travel (Without steady rest)	mm	1050	2000	3000	4000	1050	2000	3000	4000
Quill travel	mm	100							
Quill diameter	mm	ø200							
Quill taper	rotary	MT#6 rotary quill							
Slideway slant	degree	45°							
Coolant pump	kW	STD: MTH4-30 / 3A (L/min , 3kg / cm ²) OPT: SPK4-8 (67L/min , 5kg / cm ²)							
Machine weight	kg	15000	19000	23000	27000	15000	19000	23000	27000

■ Specifications are subject to change without notice.

Standard & Optional Accessories

● Standard △ Optional

MODEL	FBL-510	FBL-520	FBL-530	FBL-540	FBL-510MC	FBL-520MC	FBL-530MC	FBL-540MC
Hydraulic turret	●	●	●	●	-	-	-	-
Servo turret	△	△	△	△	-	-	-	-
BMT85 power turret	-	-	-	-	●	●	●	●
Boring bar holder	4	4	4	4	4	4	4	4
Face holder	1	1	1	1	1	1	1	1
Tool sleeve (set)	1	1	1	1	1	1	1	1
O.D. tool holder	-	-	-	-	1	1	1	1
O.D. tool holder (extended)	△	△	△	△	△	△	△	△
Radial power tooling holder	-	-	-	-	△	△	△	△
Axial power tooling holder	-	-	-	-	△	△	△	△
Coolant system	●	●	●	●	●	●	●	●
Moveable coolant tank	●	●	●	●	●	●	●	●
1 set leveling bolts and pads	●	●	●	●	●	●	●	●
Centralized lubrication system	●	●	●	●	●	●	●	●
Work lamp	●	●	●	●	●	●	●	●
Foot pedal for hydraulic chuck	●	●	●	●	●	●	●	●
Tool kit	●	●	●	●	●	●	●	●
Manual	●	●	●	●	●	●	●	●
Chip conveyor and bucket	●	●	●	●	●	●	●	●
MT 6 rotate center	●	●	●	●	●	●	●	●
Programmable tailstock	●	●	●	●	●	●	●	●
3 color warning light	●	●	●	●	●	●	●	●
Manual Guide Oi	●	●	●	●	●	●	●	●
Manual tool setting probe	△	△	△	△	△	△	△	△
Auto tool setting probe	△	△	△	△	△	△	△	△
Oil skimmer	△	△	△	△	△	△	△	△
Oil mist collector	△	△	△	△	△	△	△	△
Transformer	△	△	△	△	△	△	△	△
CE safety accessories	△	△	△	△	△	△	△	△
Pedal switch for tailstock	△	△	△	△	△	△	△	△
Work blower	△	△	△	△	△	△	△	△
High pressure cooler	△	△	△	△	△	△	△	△
Hydraulic steady rest	△	△	△	△	△	△	△	△
Manual steady rest	△	△	△	△	△	△	△	△
Manual steady rest C type	△	△	△	△	△	△	△	△
Pneumatic chuck	△	△	△	△	△	△	△	△
Solid chuck+rotary cylinder	△	△	△	△	△	△	△	△
Hollow chuck+rotary cylinder	△	△	△	△	△	△	△	△
Independent chuck	△	△	△	△	△	△	△	△
Soft/Hard jaw	△	△	△	△	△	△	△	△
Steady rest base	△	△	△	△	△	△	△	△
ø80mm Boring bar holder	△	△	△	△	△	△	△	△



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Dimensions

Unit: mm

