

DUGARD

Machine Tools Since 1939

Dugard 700L Series Heavy Duty CNC Lathes



www.dugard.com

Dugard 700L

Heavy Duty CNC Lathe 2000, 3000 or 4000mm bed length



Designed for easy and convenient operation



Front valve design for
operator convenience



The concave spindle guard
prevents any tool interference

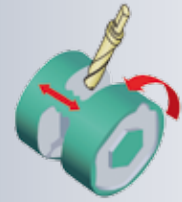


The easy to operate control panel makes motion control of the linear guides convenient and almost effortless

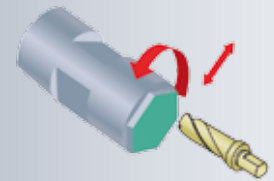


CNC Controls

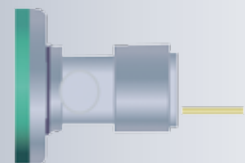
Fanuc 0iTD



Cylindrical Interpolation



Polar Coordinate Interpolation



Manual Guide i
(opt) Conversational editing with 3D simulation available

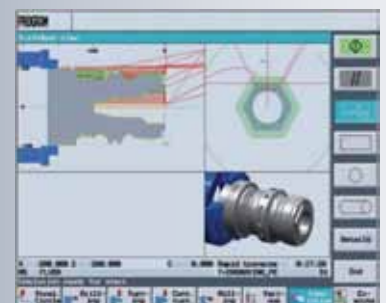
- 8.4" TFT LCD colour monitor
- New D series high speed
- PC flash card storage
- Industry standard programming

Siemens 828D



- 10.4" TFT LCD colour monitor
- Shopmill conversational programming
- Super high speed
- USB/PC card storage

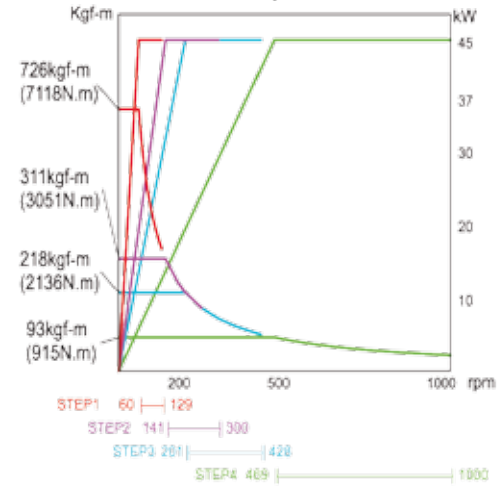
- 2 window view dynamic simulation
- 3D finished part simulation (opt)
- 3D section view (opt)



Dugard 700L

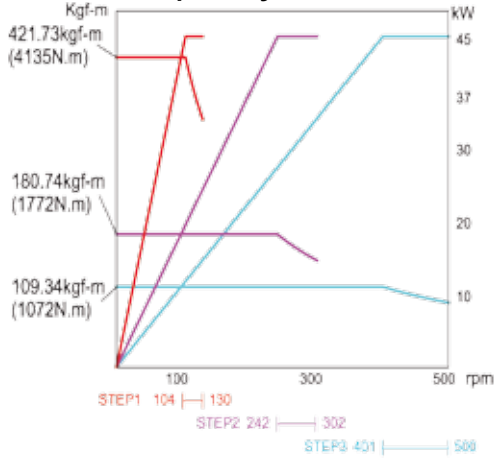
700L Spindle Torque Diagram

196mm Capacity

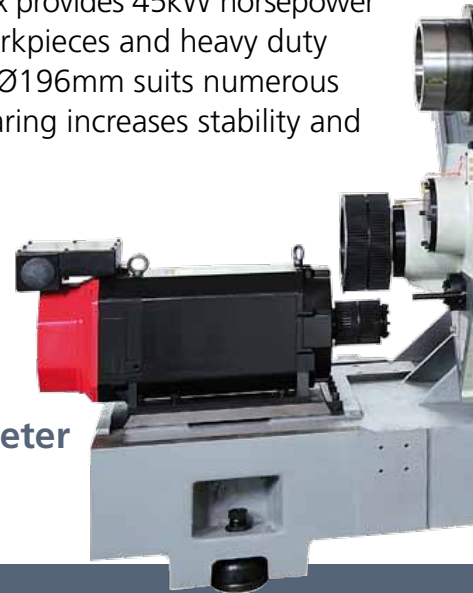


Powerful 4 stage spindle gear box provides 45kW horsepower available for larger diameter workpieces and heavy duty cutting. Spindle hole diameter $\varnothing 196\text{mm}$ suits numerous bar sizes. Double row roller bearing increases stability and rigidity for heavy cutting.

320mm Capacity



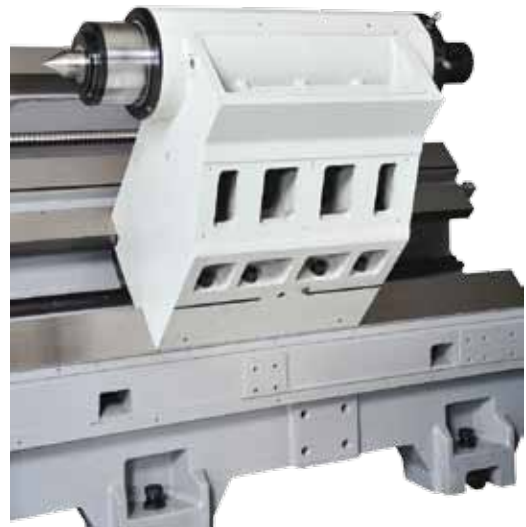
opt 260/320mm diameter



Structure and Components



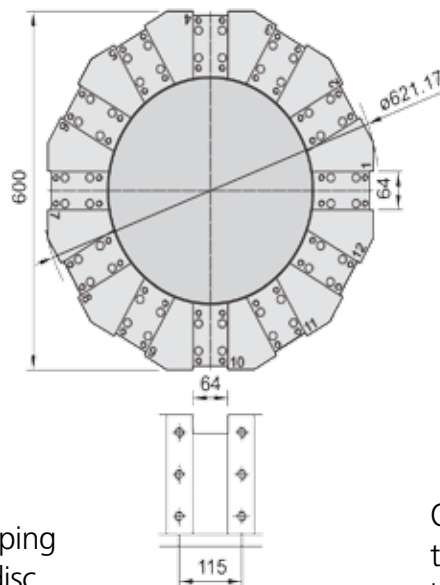
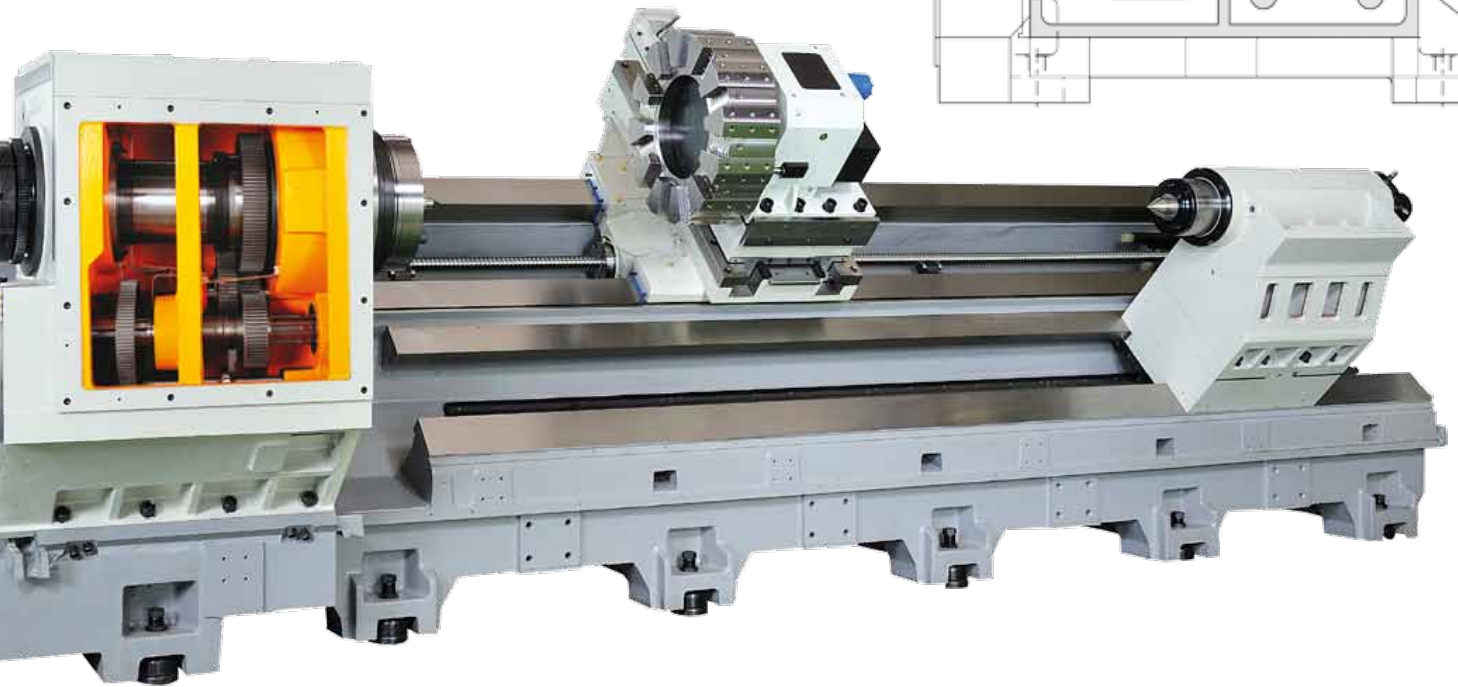
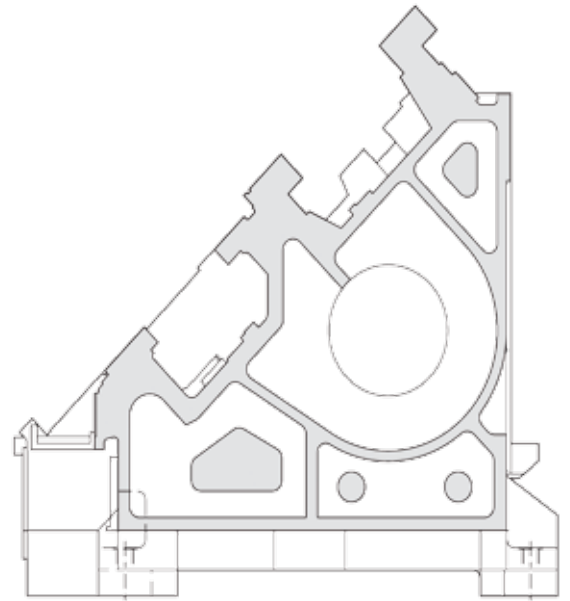
700L Z axis ball screw support maintains high precision and stability



Standard MT6 rotary quill. Increases rigidity for heavy loading and makes optional live centres unnecessary. Upgraded $\varnothing 200\text{mm}$ quill offers heavy loading. Hydraulically driven tailstock improves machining

45° 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 centre 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 Ø80mm boring bar holder available

Optional BMT85 power tool turret available for remarkably improved rigidity and comes with 11kW

Dugard 700L

Workpieces



Print Roller



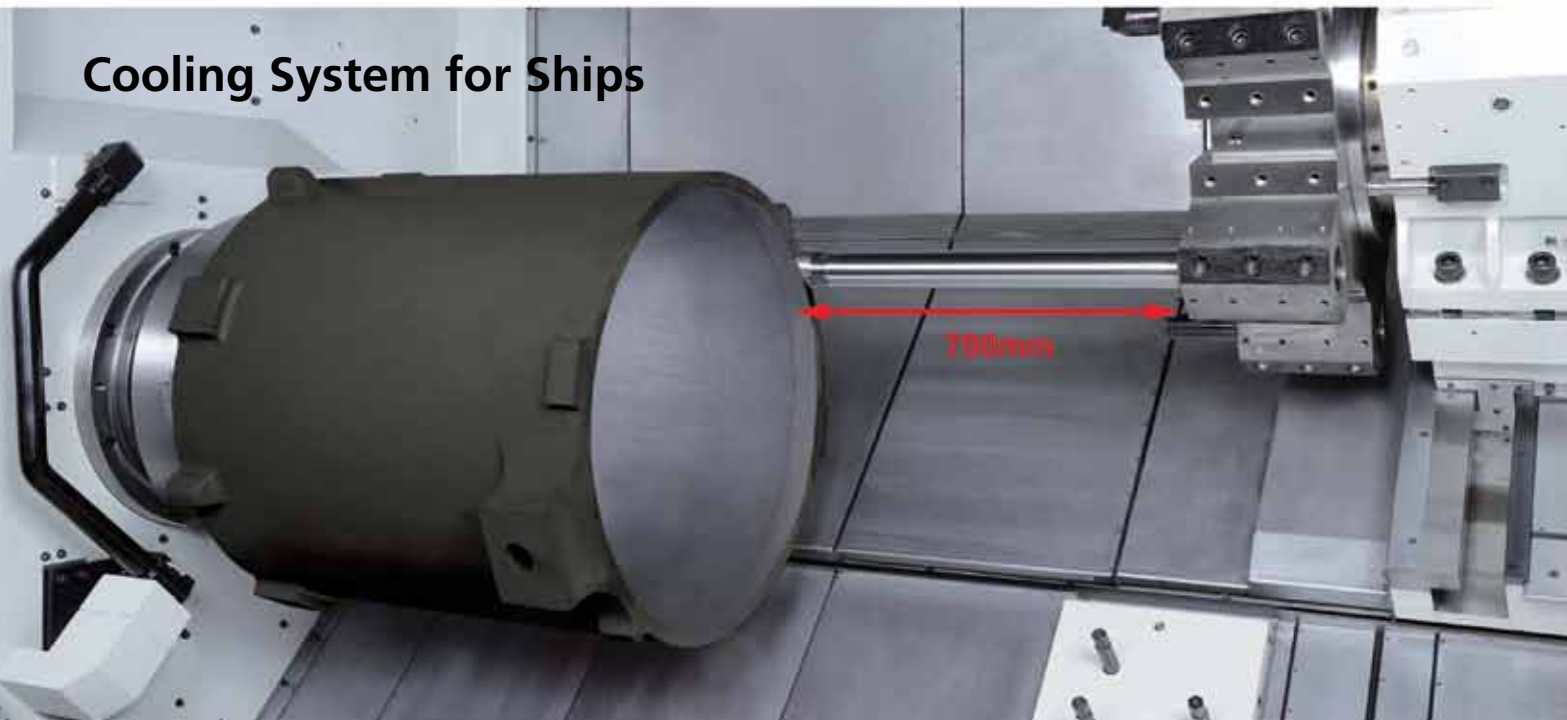
Mandrel

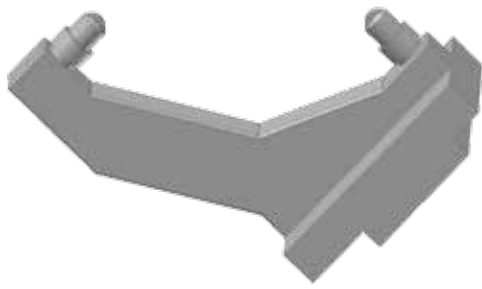


Pipe $\text{\O}6'' \sim 12.5''$



Cooling System for Ships





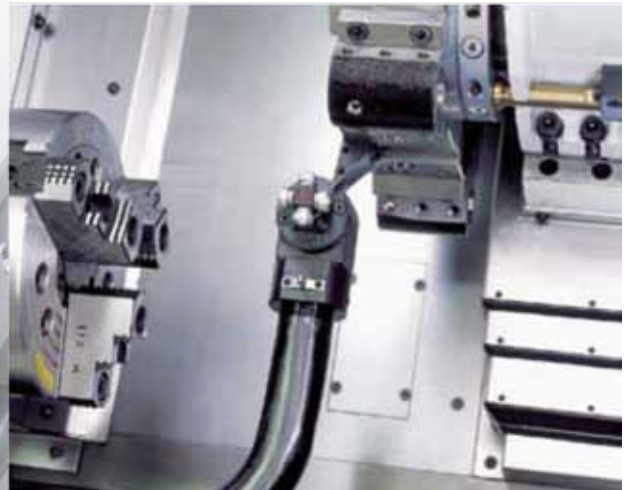
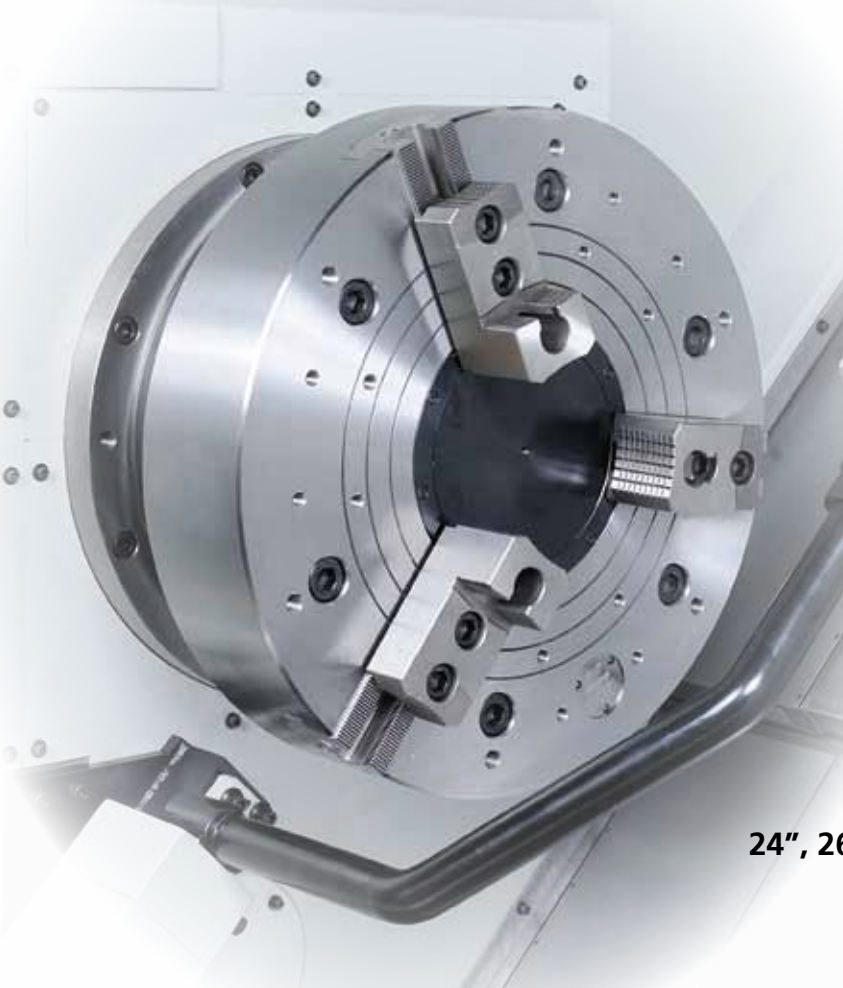
C Type Manual Steady Rest
Max range 700mm (customised)



Manual Steady Rest
Cutting range 40~400mm



Hydraulic Steady Rest
Ø30~245mm
Ø45~310mm
Ø85~350mm



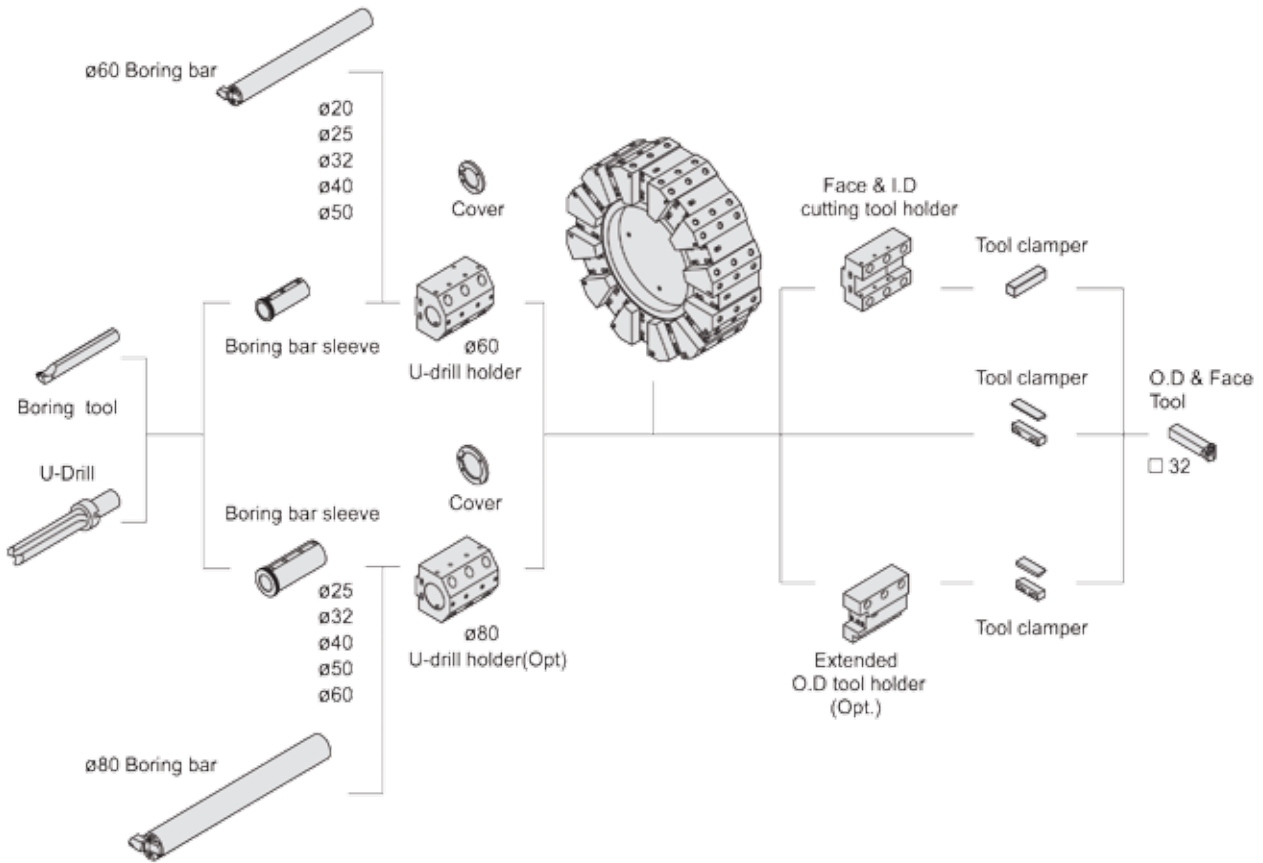
Manual Tool Setter

- 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

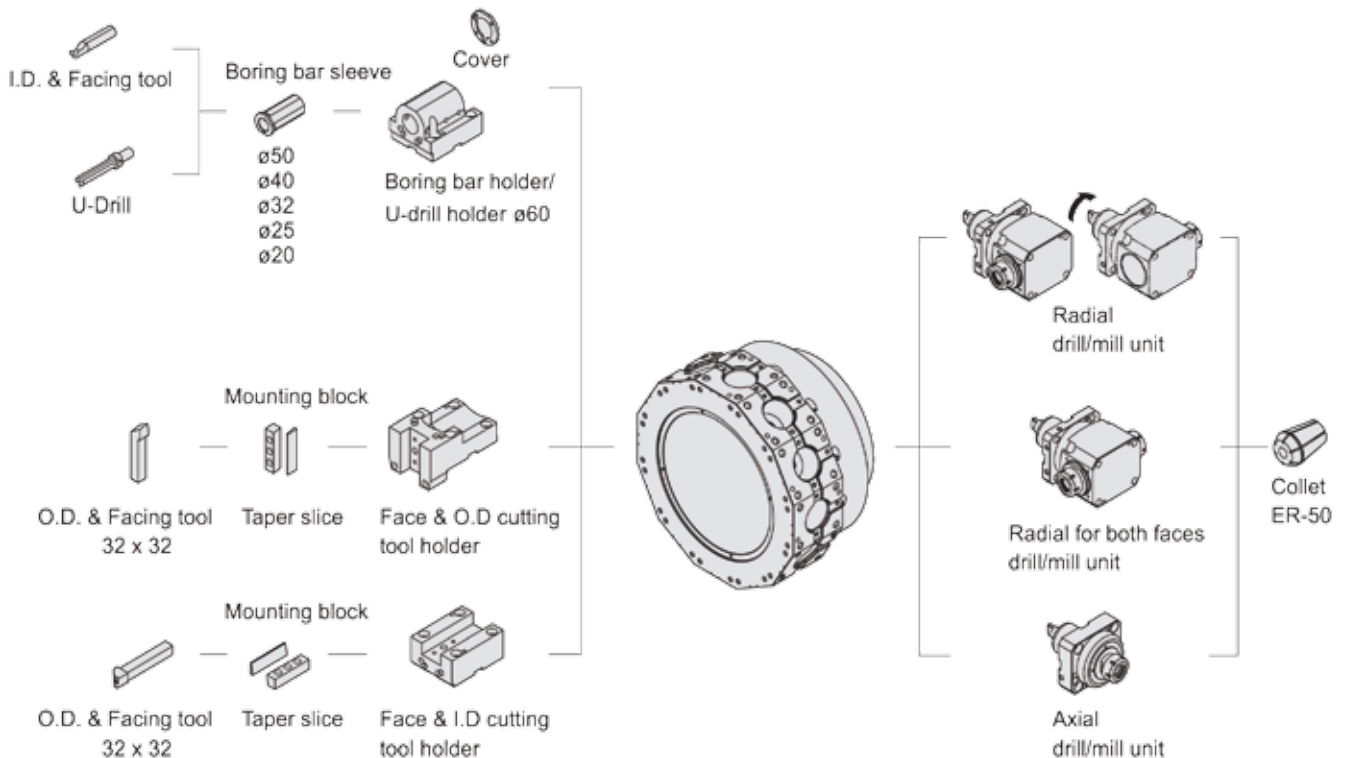


Dugard 700L

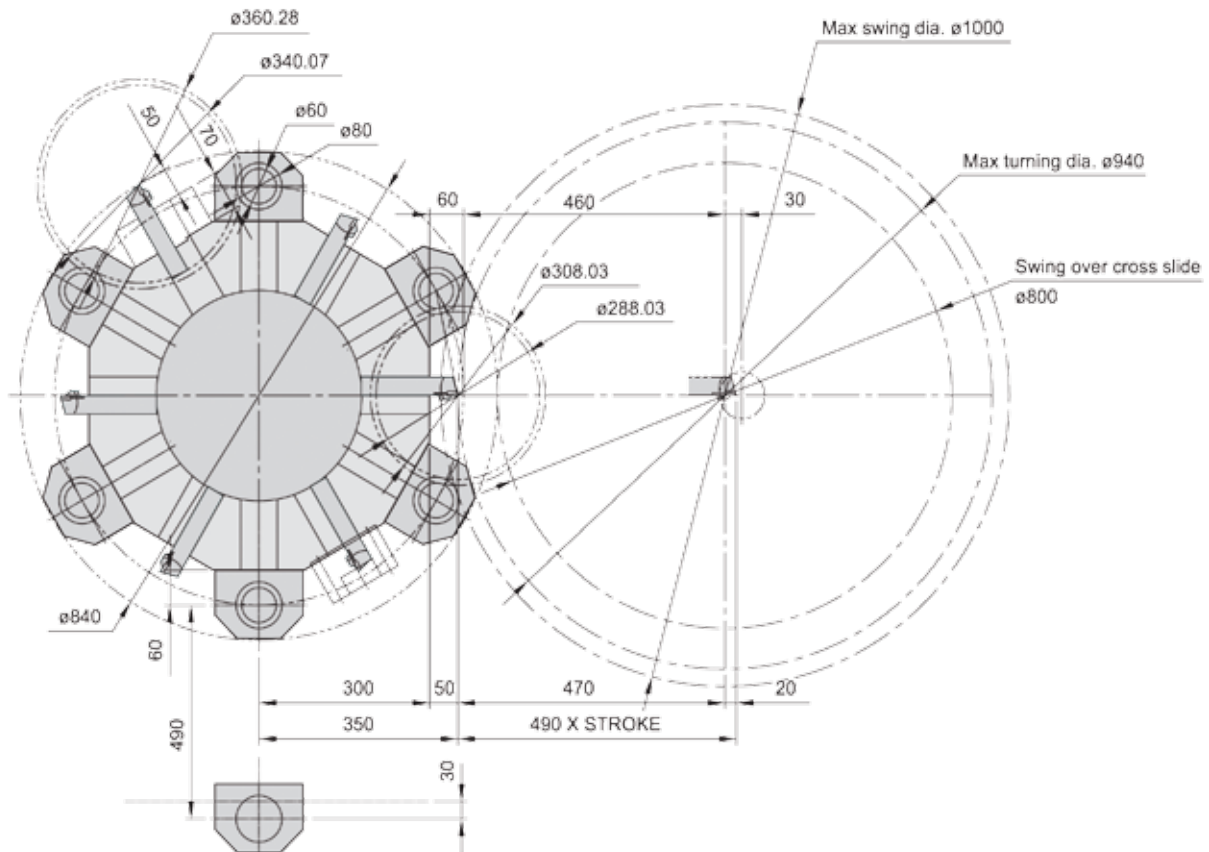
Dugard 700L Tooling System



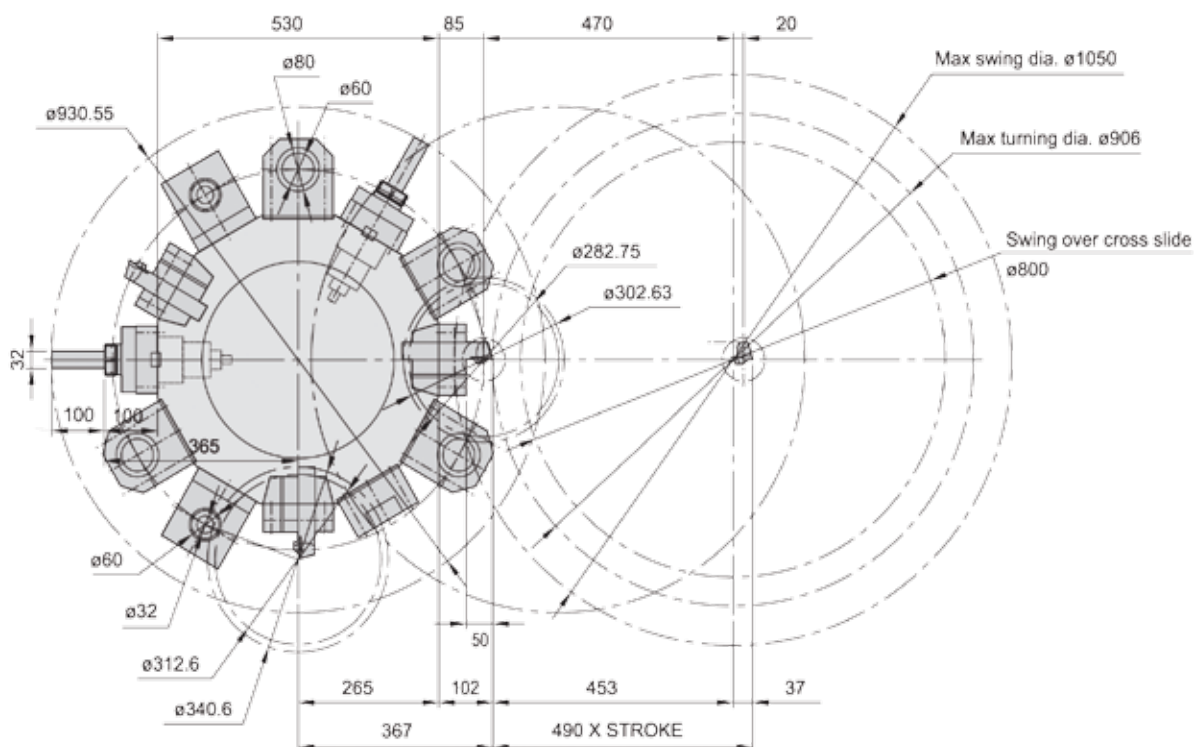
Dugard 700L MC Tooling System



Dugard 700L Tool Interface



Dugard 700L MC Tool Interface



Dugard 700L

Specification	700L			700L MC		
	2000mm	3000mm	4000mm	2000mm	3000mm	4000mm
Control	Fanuc 0iTD α40/ α30B/ α30					
Turning Range						
Swing over bed	Ø1030mm					
Swing over cross slide	Ø800mm					
Max turning diameter	Ø940mm			Ø906mm		
Max turning length	2000mm	3000mm	4000mm	2000mm	3000mm	4000mm
Distance between centres	2000mm	3000mm	4000mm	2000mm	3000mm	4000mm
Bar capacity	Ø165mm (6")					
Headstock						
Spindle nose	A2-15/A2-20 (Ø260/Ø320)opt			A2-15		
Chuck diameter	18"~24"					
Through spindle hole diameter	Ø196mm (7.5") / Ø260mm (10"), Ø320mm (12.5") opt			Ø196mm (7.5")		
Spindle speed	4 step/3 step (Ø260/Ø320) opt			4 step		
Max spindle speed	Ø196mm - 1000rpm / Ø260mm - 600rpm / Ø320mm - 500rpm			1000rpm		
C axis indexing accuracy	-			0.001°		
Spindle motor	37/45kW (α 40/6000)					
Turret						
Turret tool station	12			12 BMT85		
Shank height of square tool	32 x 32mm					
Shank diameter of boring bar	Ø60mm std (opt Ø80mm)					
Speed	-			3000rpm		
Power	-			11kW (15HP)		
Travel						
X axis travel	490mm					
Z axis travel	2000mm	3000mm	4000mm	2000mm	3000mm	4000mm
Feed motor X/Z axis	7kW (9.4HP)					
Rapid feed rate X/Z axis	X: 10m/min (Ø50 x P10) Z: 12m/min (Ø50 x P16)					
Tailstock						
Tailstock travel (without steady rest)	2000mm	3000mm	4000mm	2000mm	3000mm	4000mm
Quill travel	100mm					
Quill diameter	Ø200mm					
Quill taper	MT#6 rotary quill					
General						
Slideway slant	45°					
Coolant Pump	1.2kW (1.6HP)					
Machine weight	19,000kg	23,000kg	27,000kg	19,000kg	23,000kg	27,000kg

*specifications are subject to change without notice

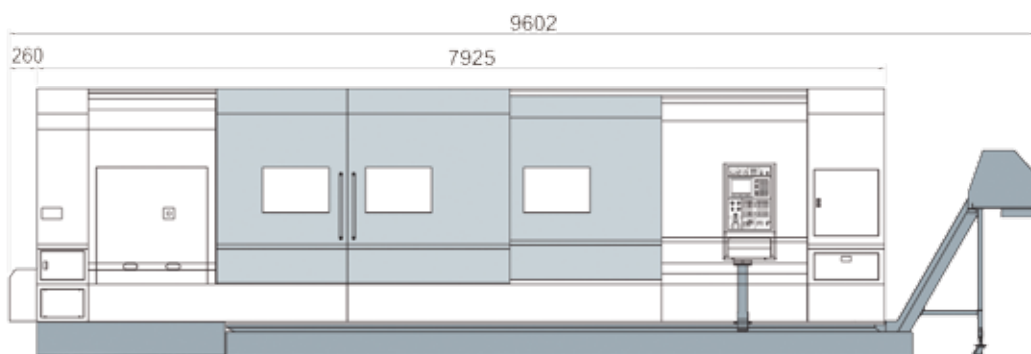
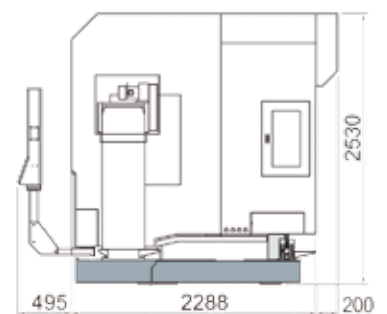
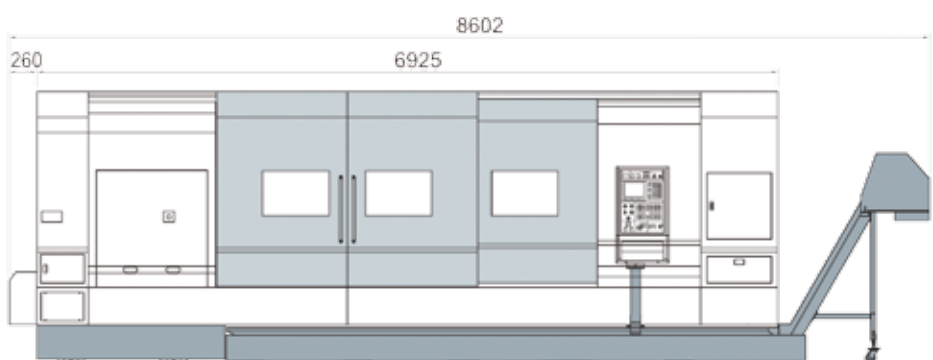
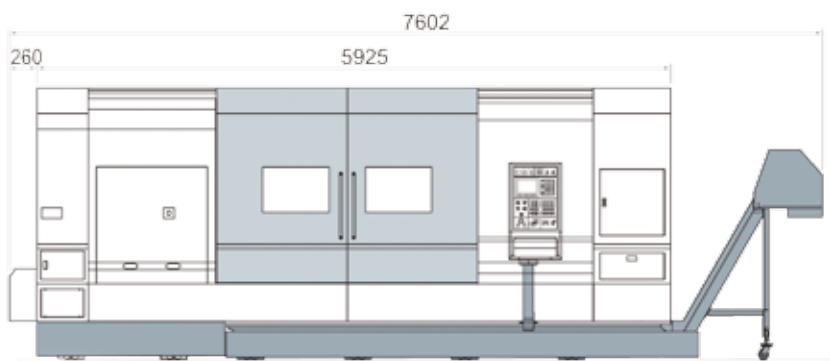
Standard Accessories

1. Hydraulic turret (700L)
2. BMT85 power turret (700L MC)
3. Manual tool setting probe
4. 4 boring bar holders
5. 1 face holder
6. 1 set tool sleeves
7. 1 OD tool holder
8. Hollow chuck and rotary cylinder
9. Coolant system
10. Moveable coolant tank
11. Oil skimmer
12. Transformer
13. Pedal switch for tailstock
14. 1 set leveling bolts and pads
15. Centralised lubrication system
16. Work lamp
17. Foot pedal for hydraulic chuck
18. Tool kit
19. Manual
20. Chip conveyor and bin
21. MT6 rotate centre
22. Programmable tailstock
23. 3 colour warning light

Optional Accessories

1. Servo turret (700L)
2. Radial power tooling holder (700L MC)
3. Axial power tooling holder (700L MC)
4. Auto tool setting probe
5. Oil mist collector
6. CE safety accessories
7. Work blower
8. High pressure cooler
9. Hydraulic steady rest
10. Manual steady rest
11. Manual steady rest C type
12. Pneumatic chuck
13. Solid chuck and rotary cylinder
14. Independant chuck
15. Soft / hard jaw
16. Steady rest base
17. Ø80mm boring bar holder

Dimensions



European headquarters for Dugard CNC Machine Tools

DUGARD.com

www.dugard.com email: sales@dugard.co.uk tel: +44 (0)1273 732286