

DUGARD

Machine Tools Since 1939

Dugard 32 - Sliding Headstock CNC Lathes

Twin Spindle, Twin Axis, Y Axis, 11 Driven Tools with 9 Turning Tools



www.dugard.com

Dramatically reduced machining time and improved quality

When it comes to versatility, the Dugard 32 series of CNC lathes will fully meet your expectations. No matter what operation - turning, milling, drilling, tapping, cutting, side turning and back machining, the Dugard 32 does it all in one operation. This means you can get higher efficiency and greater profitability.

- Sliding headstock design
- A combination of main and sub-spindle
- Ø32mm bar capacity
- X, Y, Z axis rapid traverses 30 m/min
- Linear ways on 5 axes
- PC based control
- Fanuc compatibility
- Collet chucking system
- Finished parts catcher and conveyor



Benefits

- Very short bar ends
- Use standard bars, precision ground bar not necessary
- No guide bush needed

Designed to machine all precision parts for a variety of industries

- Automotive
- Electronic
- Instrument
- Pneumatic and hydraulic fittings
- Aerospace
- Medical

User Friendly Syntec PC based CNC control 900TE



- 15" LCD (TFT) screen
- 3D simulation, stepping simulation
- Conversational graphic display
- 2.1GB standard hard disk memory
- Mitsubishi spindle and axis servo drives and motors
- Industry standard PC card slot



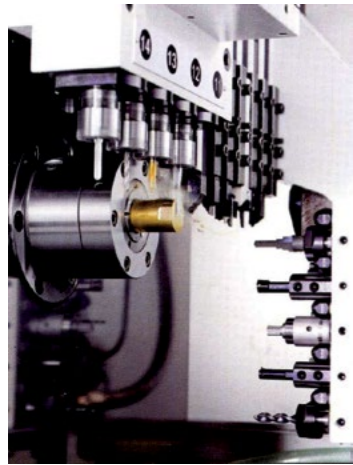
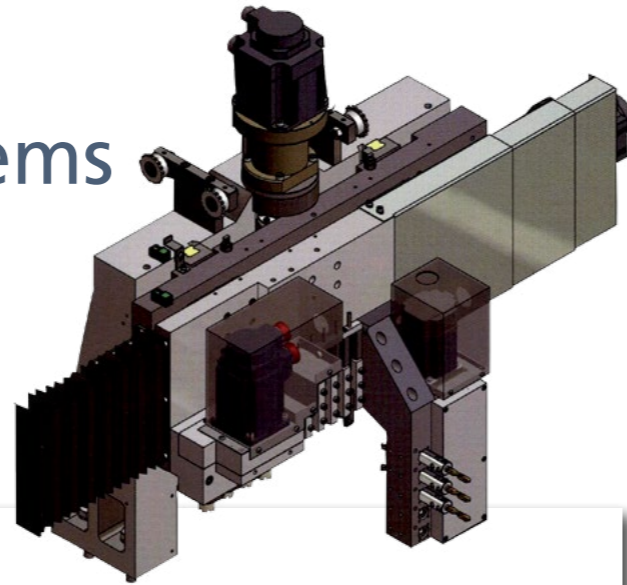
Various interfaces for programme saving, loading and software updating including:



- CF memory card
- RS-232C
- Ethernet

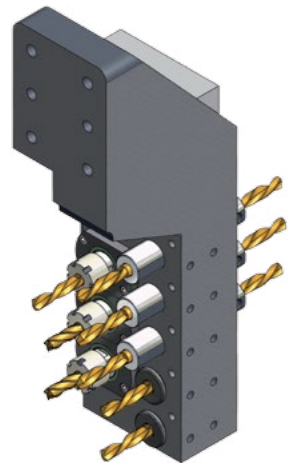


Multiple Tooling Systems for Versatile Cutting Applications



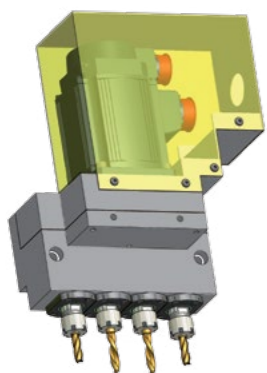
Main Tool Slide

- The main tool slide is mounted at the top of the headstock
- It can be fitted with 6 OD tools with 12mm square tool shank
- The main tool slide is suitable for turning outside diameter of workpieces



End Milling Device

- The end milling device is mounted in front of the headstock
- The device is suitable for front end milling, drilling and rigid tapping operations
- Total 8 tools, among which 3 tools are powered and 5 tools are static
- Powered tools are driven by a servo motor
- Max tool speed is 6000rpm



Side Milling Device (standard)

- The side milling device is mounted at the left side of the headstock
- The device is suitable for side milling, drilling and rigid tapping operations
- Total 4 powered tools driven by a servo motor
- Max tool speed is 6000rpm



Spindle head moves on two precision linear ways combined with extra large span between ways, giving outstanding stability and high positioning accuracy

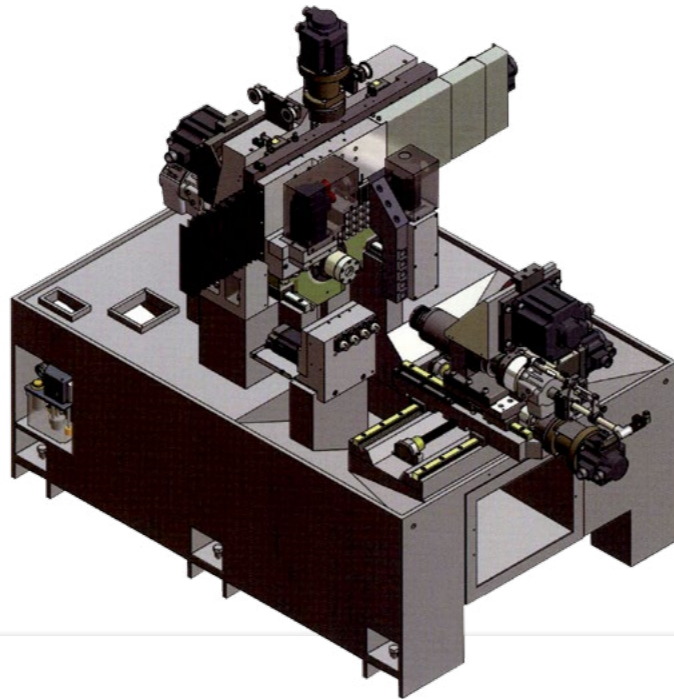
Provides additional costs saving, unlike Swiss-style machines. Savings include:

- Faster setups (no guide bushing to set up)
- Shorter remnants (no guide bushing, remnant limited to collet length)
- No ground stock needed (no guide bush)
- Can run hexagonal bar

Sub Spindle Model

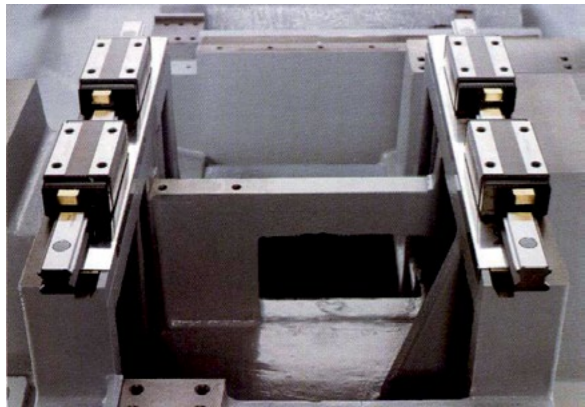
Sliding Headstock

- The head stock is specially designed for extra rigidity, to eliminate vibration
- The headstock movement is driven by a servo motor combined with high rigidity linear guideways for fast, accurate positioning.



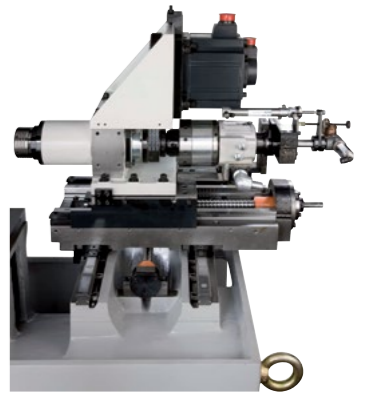
Precision Linear Ways

- The sub-spindle head moves on two THK precision linear ways with extra large span for outstanding stability and positioning accuracy
- Roller type linear ways are optional



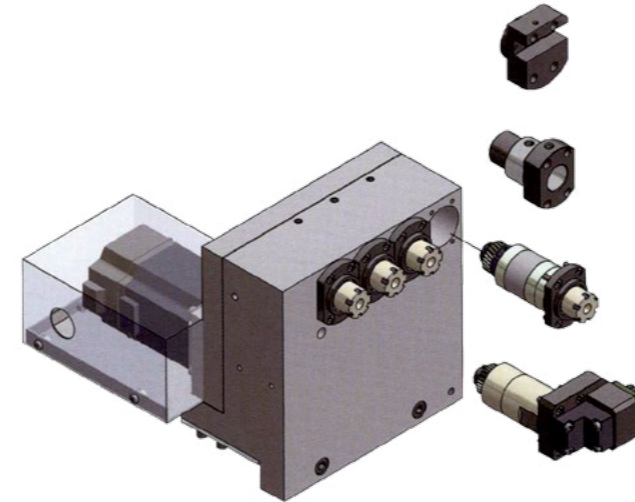
Rear Milling Device

- The rear milling device is mounted between the main and sub-spindle
- The device is capable of performing milling, drilling and rigid tapping operations on the sub spindle
- 4 powered tools driven by a servo motor
- Maximum tool speed is 6000rpm



Maximum Versatility of Rear Milling Device

- Fully interchangeable
- The rear milling device can use OD or ID tools
- Changing tool holders is simple, by loosening 4 lock screws
- Axial machining holder
- Radial machining holders (optional)
- All tool holders can be changed with ease



Sub-Spindle

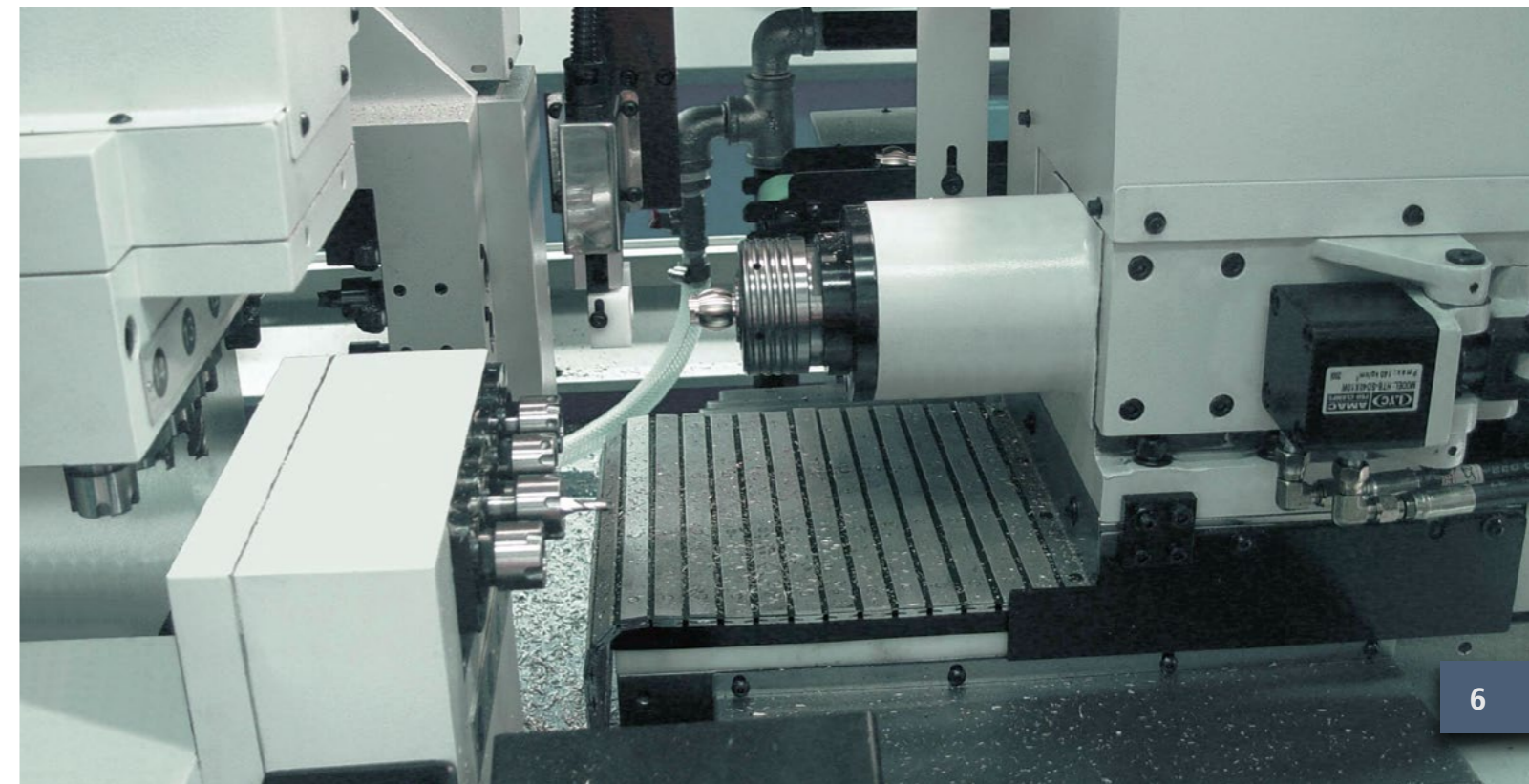
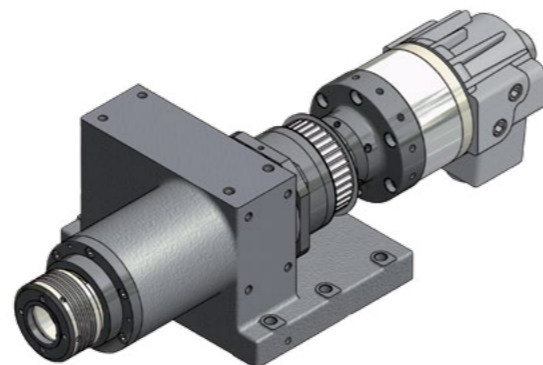
Collet Chucking System for Sub-Spindle

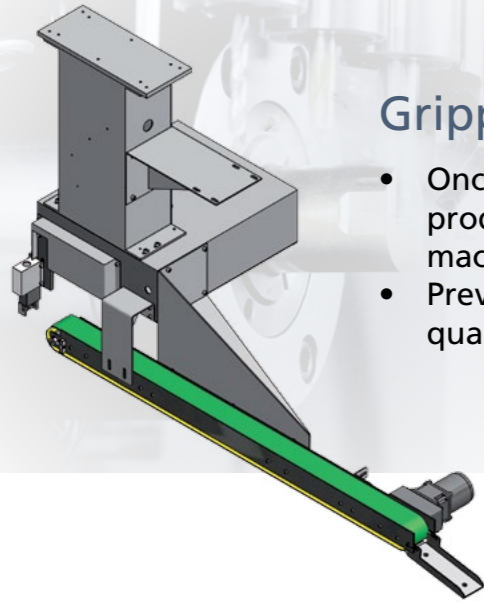
The collet chucking system provides a choice of 164E or 171E collet



Sub-spindle Belt-drive type spindle

- Motor: 3.5kW (standard)
- Spindle speed: 6000rpm
- Clamping system: hydraulic collet





Gripper (optional)

- Once machining is finished, the gripper takes the finished product and moves it to a conveyor to be delivered out of the machine.
- Prevents scratching on product surface while ensuring high quality of product

Main Spindle

Belt-Drive Type Spindle (standard)



- Motor: 7kW (standard)
- Spindle speed: 6000rpm (standard)
- Clamping system: TRB-32 collet

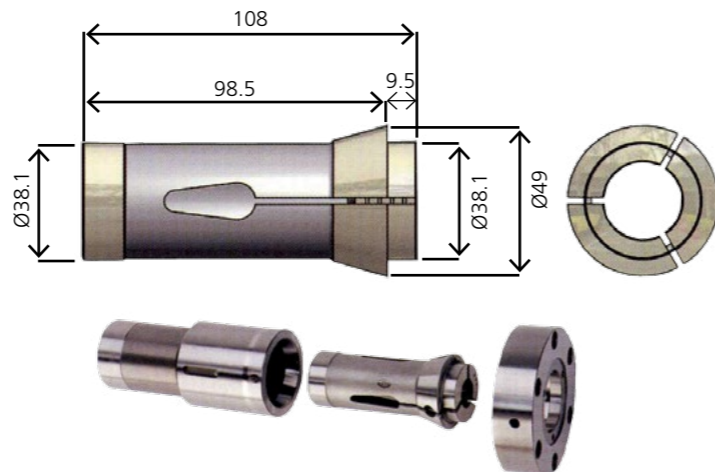
Built-In Type Spindle (optional)



- Motor: 5.5/7.5kW
- A2-4 spindle nose
- Spindle speed 6000rpm (8000 opt)
- Clamping system: TRB-32 collet

Collet Chucking System

The collet chucking system provides a choice of 164E or 171E collet



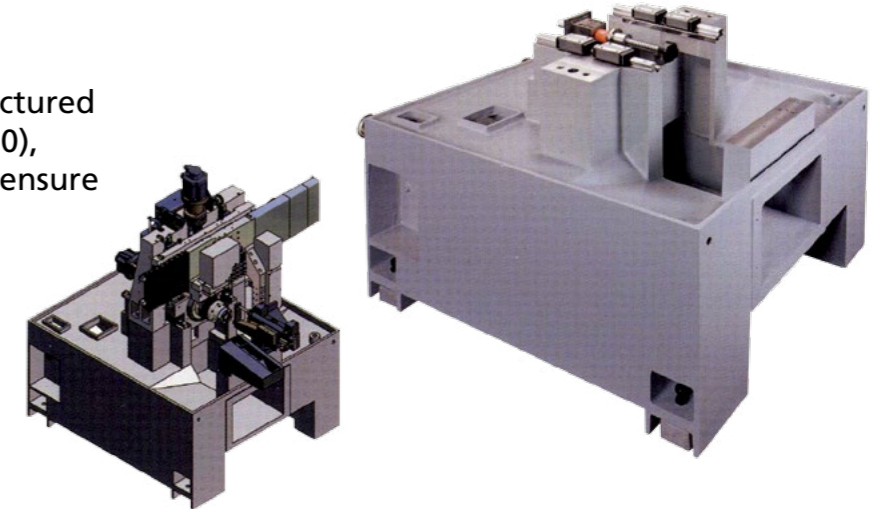
Single Spindle Model

Sliding headstock design combined with PC based CNC control offers extra high efficiency and precision machining



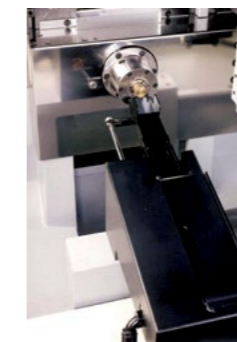
Solid base casting

- The solid base casting is manufactured from high quality cast iron (FC-30), tempered and stress relieved to ensure permanent stability



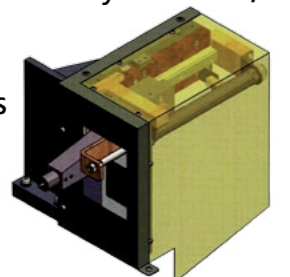
Finished parts catcher and collection box

After parts are machined they are collected in a storage bin for safe and easy removal

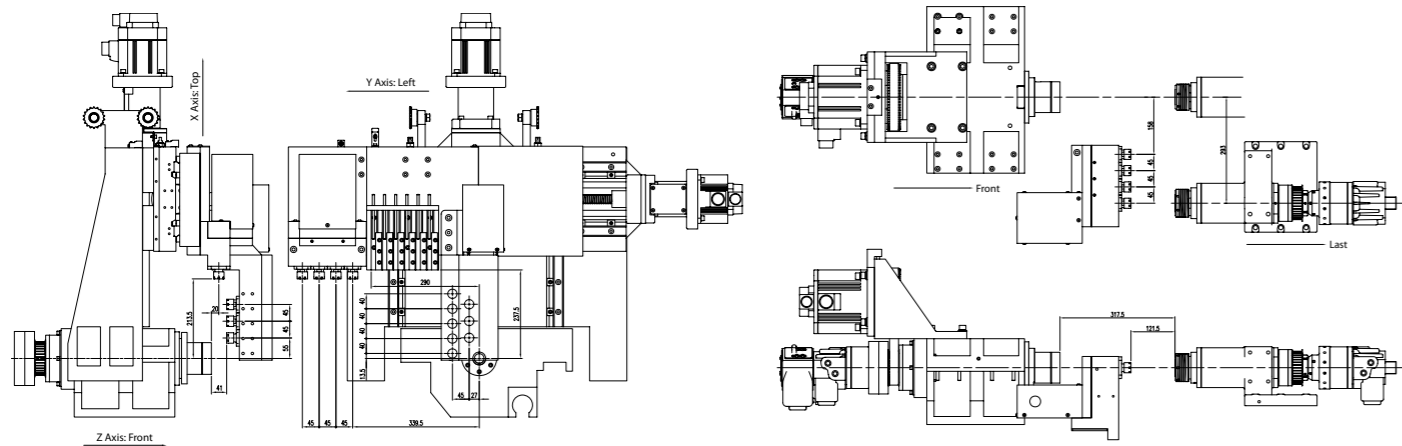


Auxiliary Tailstock (optional)

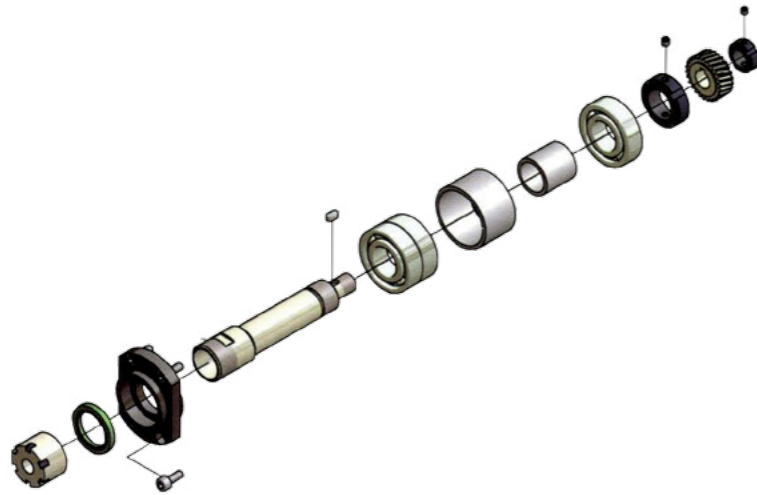
With the optional auxiliary tailstock, the machine can cut longer parts. The solid tailstock holds parts firmly



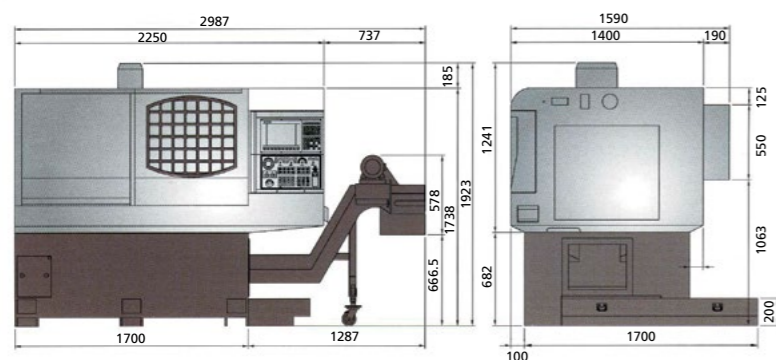
Interference Diagram



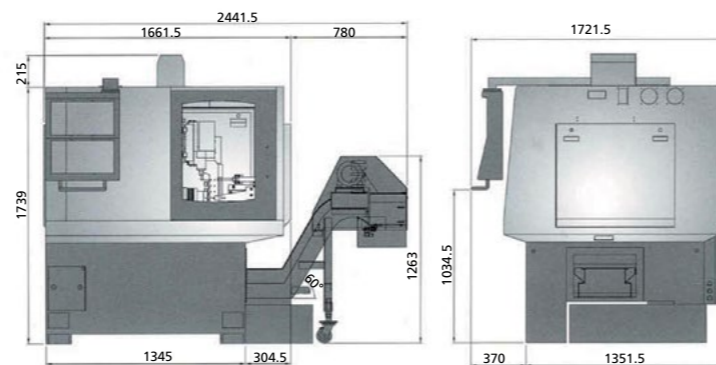
Tooling System



Machine Dimensions



Dugard 32 Sub-Spindle



Dugard 32

Specification	Dugard 32	Dugard 32 Sub Spindle
Main Spindle		
Max turning diameter	Ø32mm	Ø32mm
Spindle speed range	4000rpm (6000rpm)	4000rpm (6000rpm)
X axis travel (vertical)	190mm	185mm
Y axis travel (cross)	490mm	490mm
Z axis travel (longitudinal)	165mm	165mm
Max bar feeding diameter	Ø26/32mm	Ø32mm
Spindle collet	TRB-32	TRB-32
Rapid travel speed (X, Y, Z axis)	30 m/min	30 m/min
Min input unit	0.001mm	0.001mm
No of OD turning tools	6 (5)	6
OD turning tool size	12 x 12 x 120 (16 x 16 x 120)	12 (16 opt)
No of ID turning tools	5	5
ID turning tool size	Ø25mm	Ø25mm
Spindle servo motor	7kW	5kW (7kW opt)
X axis servo motor	1kW / 1.5kW	1.5kW
Y, Z axis servo motor	0.5kW/1kW	1.0kW
Centre height	965mm	965mm
Spindle Live Tooling		
Number of radial live tooling		4
Radial tooling size		ER-20
Radial live tooling servo motor		1.5kW
Radial live tooling max speed		6000rpm
Number of axial live tooling		3
Axial tooling size		ER-20
Axial live tooling servo motor		0.75kW
Axial live tooling max speed		6000rpm
Sub Spindle		
Maximum turning diameter	-	Ø32mm
Sub spindle max rpm	-	4000rpm (6000rpm opt)
X axis travel	-	293mm
Z axis travel	-	295mm
Spindle collet	-	TRB-32
X, Z axis rapid travel	-	30 m/min
Minimum input unit	-	0.001mm
Number of turning tools	-	4
ID turning tool size	-	Ø25mm
Sub spindle servo motor	-	3.5kW
Y, Z axis servo motor	-	1kW
Sub Spindle Live Tooling (option)		
Number of axial live tooling	-	4
Axial live tooling servo motor	-	0.75kW
Axial live tooling maximum speed	-	6000rpm
General		
Machine size (L x W x H)	1611 x 1858 x 1919mm	2420 x 1500 x 1935mm
Machine weight	2500kg	3800kg

Standard Equipment

- C axis – Y axis
- 6 OD tools (12mm shank)
- 4 radial milling/drilling tool holders
- 3 axial milling/drilling tool holders
- 5 boring/drilling holders
- 3m hydrostatic magazine bar feed
- 32mm capacity hydraulic collet chuck
- Auto parts catcher with outfeed conveyor
- Swarf conveyor and bin

Additional Standard Equipment for (Sub Spindle)

- Sub spindle 32mm capacity
- 32mm capacity hydraulic collet chuck
- C axis
- End milling unit 4 tools

Options

- Tailstock (single spindle only)
- Air blast
- 200 bar coolant system
- Parts gripper (for delicate parts)
- 36mm bar capacity on main spindle is possible with end preparation of bar

*Specifications are subject to change without prior notice

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