

# 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](http://www.dugard.com)

## Dramatically reduced machining

When it comes to versatility, the Dugard 32 series of CNC lathes will fully meet your expectations. Back machining, the Dugard 32 does it all in one operation. The

- 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



## User Friendly Syntec PC based CNC co



- 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



# ng time and improved quality

ions. No matter what operation - turning, milling, drilling, tapping, cutting, side turning and is means you can get higher efficiency and greater profitability.



## 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

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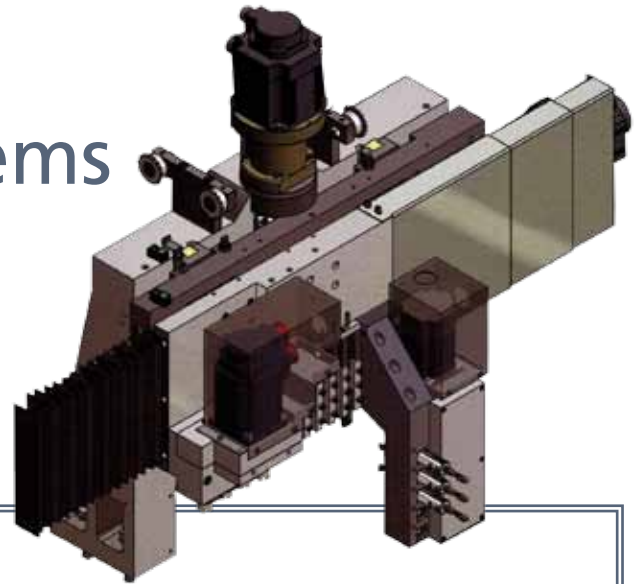
Various interfaces for programme saving, loading and software updating including:



- CF memory card
- RS-232C
- Ethernet

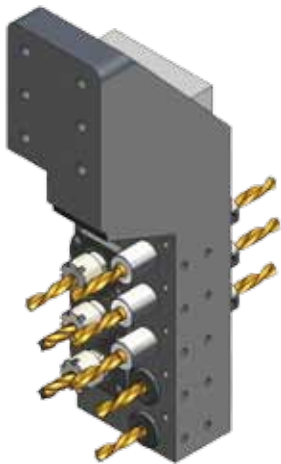


## Multiple Tooling Systems for Versatile Cutting Applications



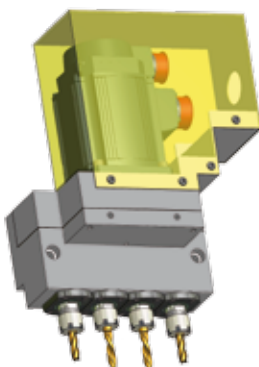
### Main Tool Slide

- 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



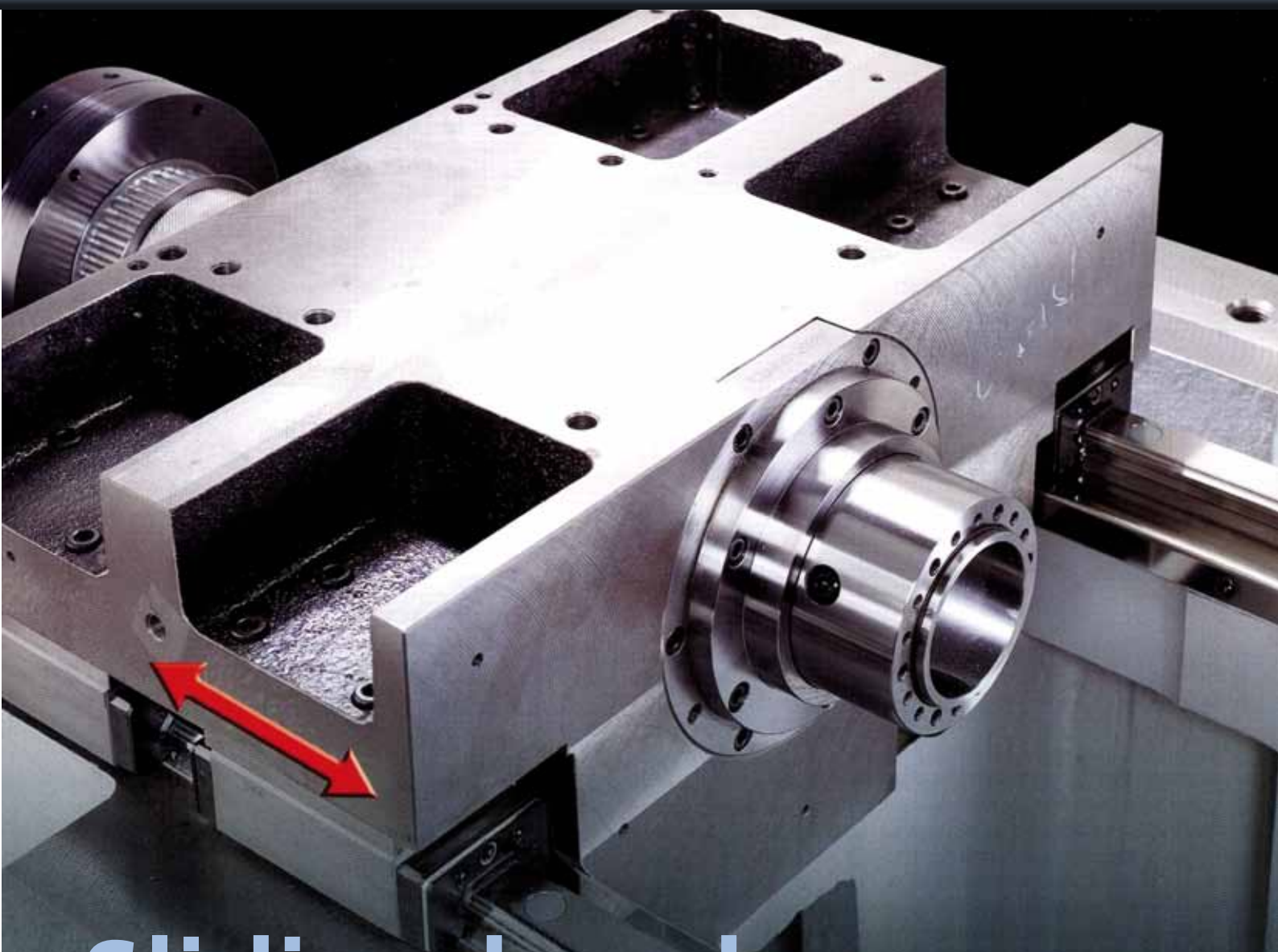
### End Milling Device

- 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



# Sliding head without guide bush

## Reducing your part handling and machining setups

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

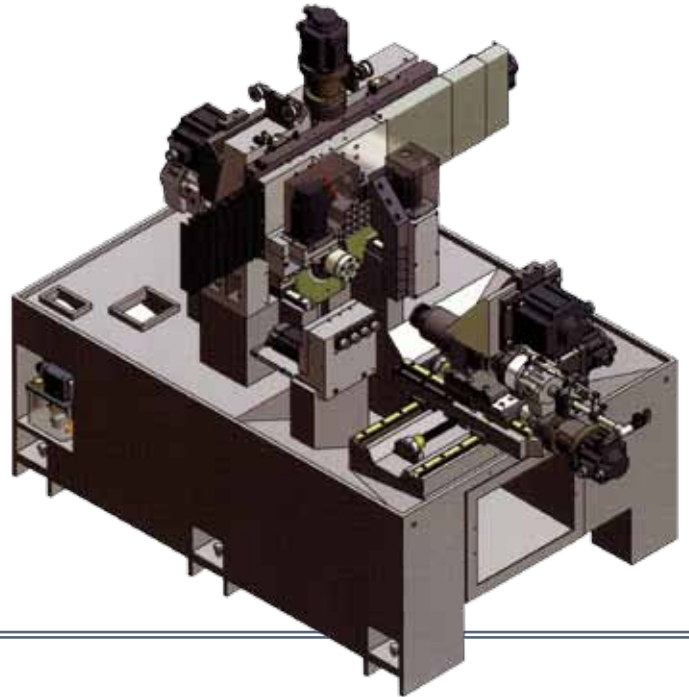
Provides additional costs saving, unlike Swiss-style machines. Savings include:

- 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.



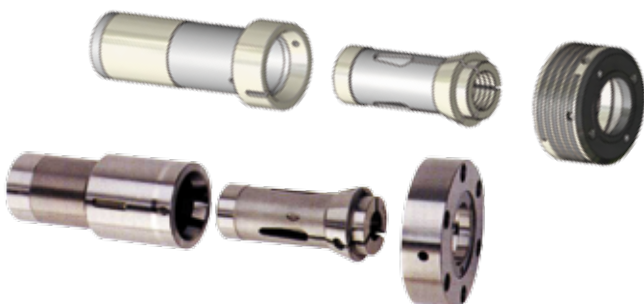
## Precision Linear Ways

- 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

## Sub-Spindle

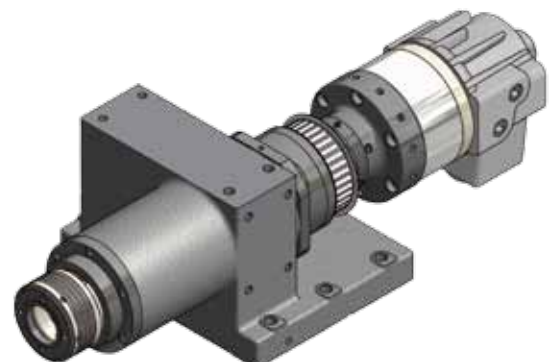
### Collet Chucking System for Sub-Spindle

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



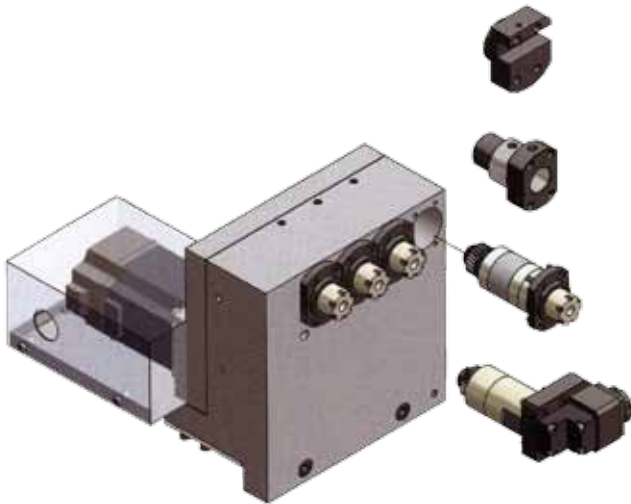
## Rear Milling Device

- 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

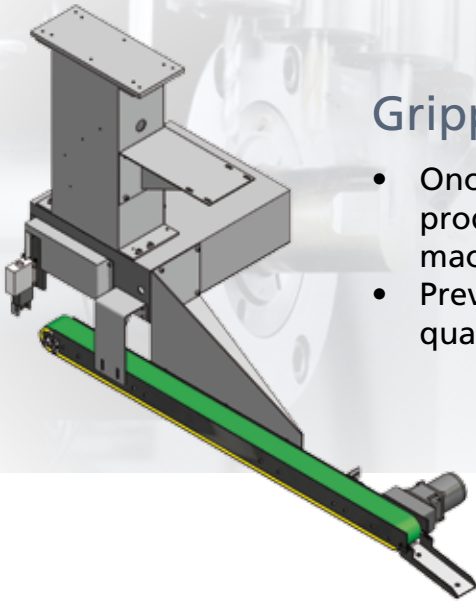


## Maximum Versatility of Rear Milling Device

- 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



## 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

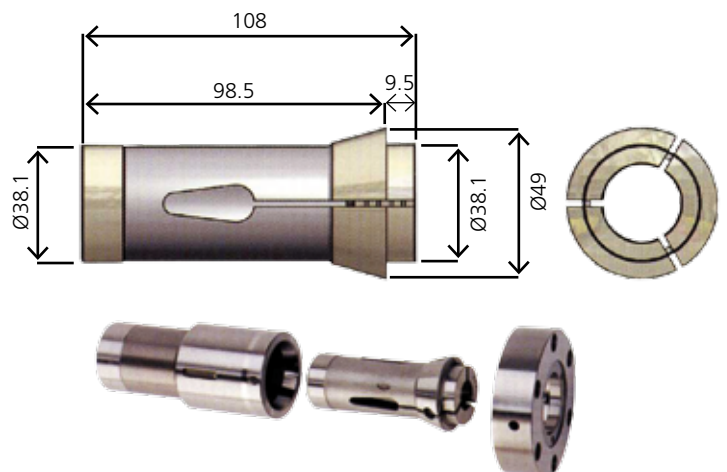
### Built-In Type Spindle (optional)



- 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



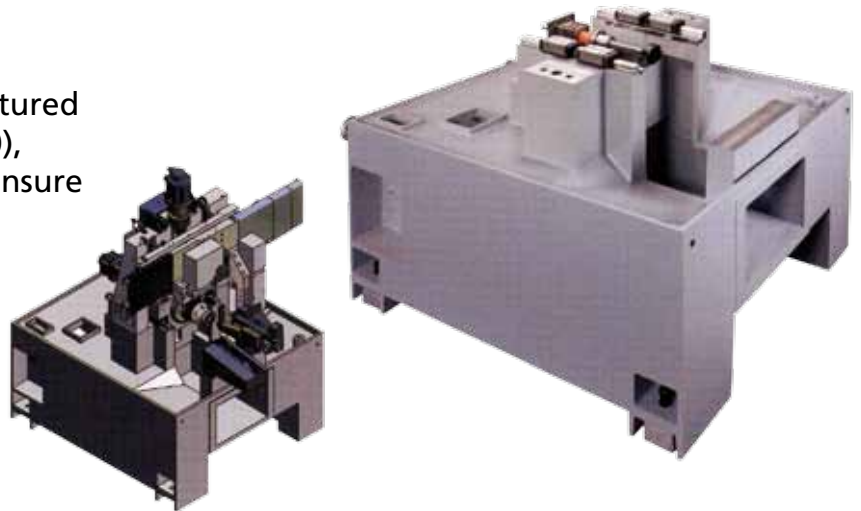
# Single Spindle Model

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



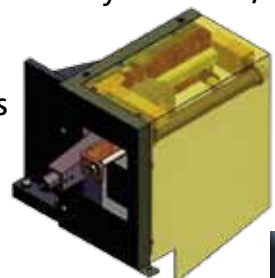
## Finished parts catcher and collection box

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

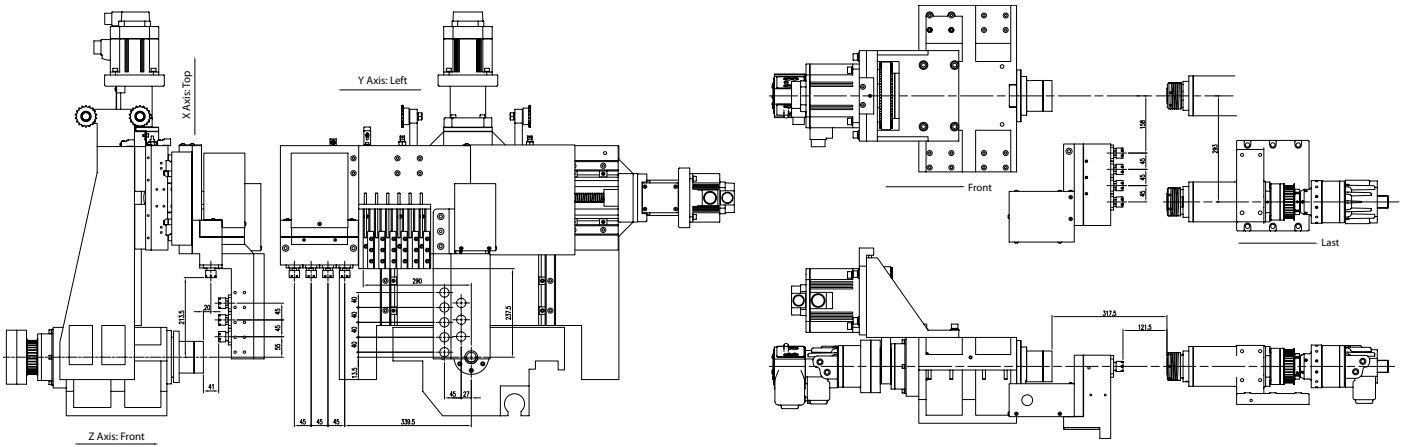


## Auxiliary Tailstock (optional)

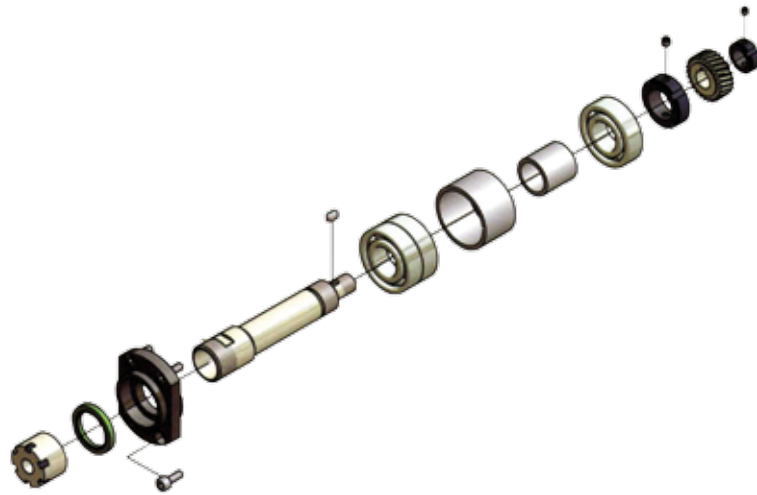
With the optional auxiliary tailstock, the machine can cut longer parts. The solid tailstock holds parts firmly



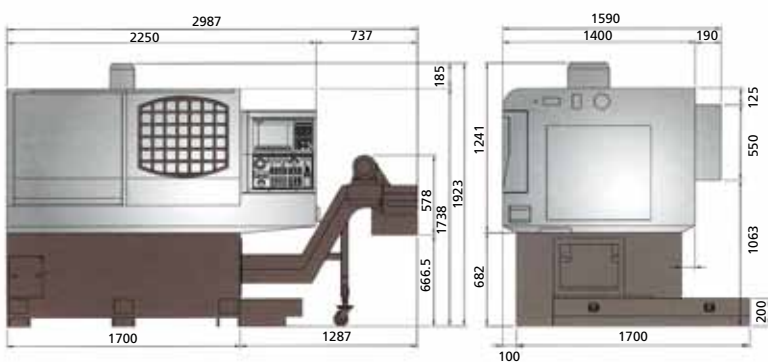
## Interference Diagram



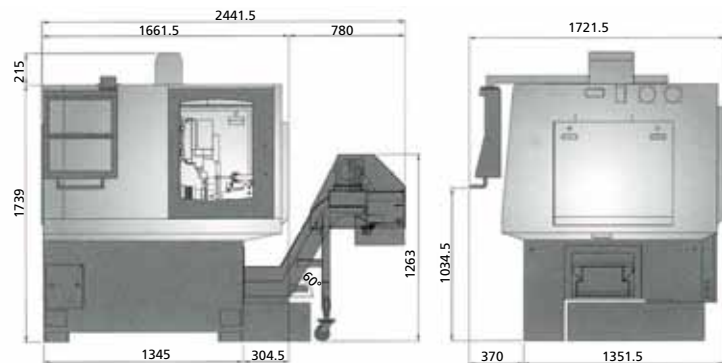
## Tooling System



## Machine Dimensions



Dugard 32 Sub-Spindle



Dugard 32

Specification	Dugard 32	Dugard 32 Sub Spindle
<b>Main Spindle</b>		
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
<b>Spindle Live Tooling</b>		
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	
<b>Sub Spindle</b>		
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
<b>Sub Spindle Live Tooling (option)</b>		
Number of axial live tooling	-	4
Axial live tooling servo motor	-	0.75kW
Axial live tooling maximum speed	-	6000rpm
<b>General</b>		
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

European headquarters for Dugard CNC Machine Tools

**DUGARD.com**

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