

# DUGARD

Machine Tools Since 1939

## Dugard ECO 760 Vertical Machining Centres



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

# Superior value in capacity and dependability

- Fanuc OiMD control or Fagor 8055-i
- 900 x 410mm precision fully ground work table with 4 T-slot
- High speed linear ways on 3 axes
- Precision ground ball screws
- Heavy duty fully enclosed guarding compliant with CE regulations
- Fully enclosed splash guard
- Rigidly designed base and column structure for added stability
- ISO 40 spindle (BT, CAT, DIN)
- 16 station carousel type ATC
- Telescopic side way covers for X and Y axes
- 8000rpm rigid spindle
- Low voltage circuit system
- Automatic lubrication
- Wash down device
- CE declaration



## ISO 40, 8000RPM High Rigidity Precision Spindle

The spindle is supported by class 7 (p4) angular contact ball bearings, ensuring high axial thrust and radial loads.

Spindle drive motor is equipped with electronic braking.



## New Base and Column Design to Optimise Structural Rigidity and Stability

The major parts of the machine are constructed of high quality cast iron (FC-30), scientifically rib reinforced and stress relieved for maximum strength and improved vibration absorbing features.

In order to enhance the rigidity of the structure, the column and machine base are box type design obtained from the results of finite element analysis.



## Choice of Digital Controls

Choice of various controls to meet your requirements. Each one features user-friendly operation, powerful functions and maximum dependability



### Fanuc 0iMD

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



### Heidenhain iTNC 530

- 18" TFT LCD colour monitor
- Super high speed
- Huge programme storage
- Conversational programming



### Fagor 8055i Plus

- 11" TFT LCD colour monitor
- High speed function
- Conversational programming



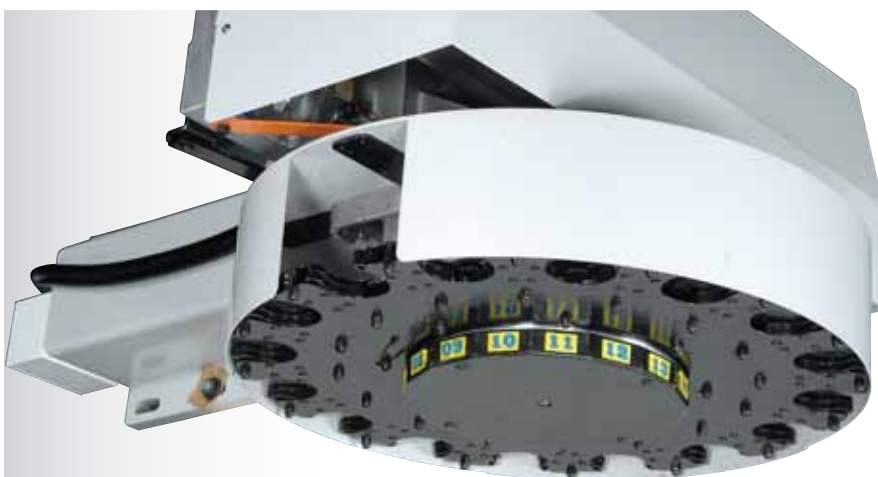
### Siemens 828D

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

Various interfaces for programme saving, loading and software updating including



- CF memory card
- RS-232C
- Ethernet



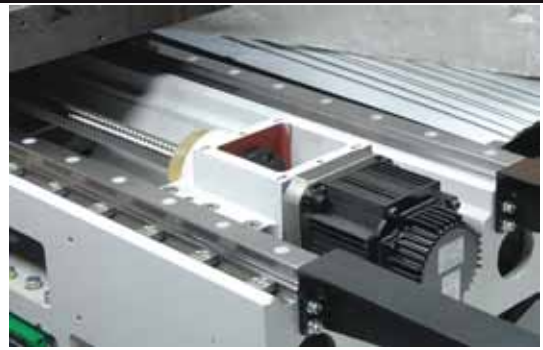
### Fast, Smooth 16-Station Carousel Type Magazine

The carousel type magazine accommodates 16 tools with a choice of CAT40 / BT40 / DIN69871 to choose from. The magazine features bi-directional random tool selection for efficient tool changing



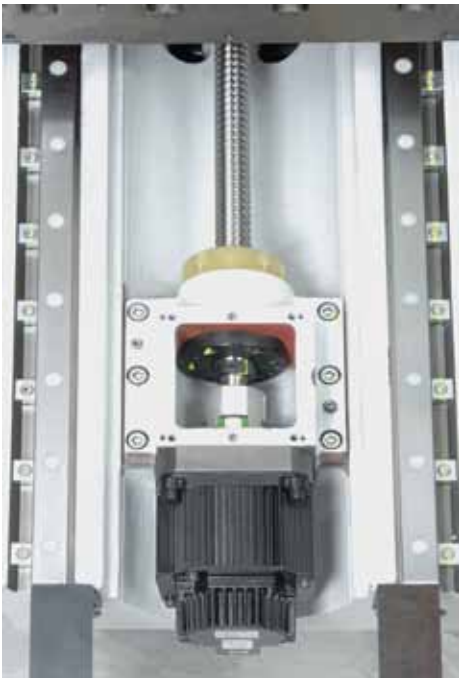
### Quick, Positive Tool Release

The large diameter cylinder provides quick and positive tool releasing



## High Speed and Rigid Linear Ways on X/Y/Z Axis

- Linear ways on three axes with 35mm width for added stability
- Z axis utilises extra long bearing blocks for increased rigidity of spindle head
- Linear ways allow rapid traverse rates up to 24m/min to meet high speed machining requirements



## High Precision Ball Screws on Three Axes

The X, Y, Z axes employ class C3 ball screws. Precise pre-tension is applied to the ball screws. Both backlash and pitch errors are compensated by laser calibration equipment.

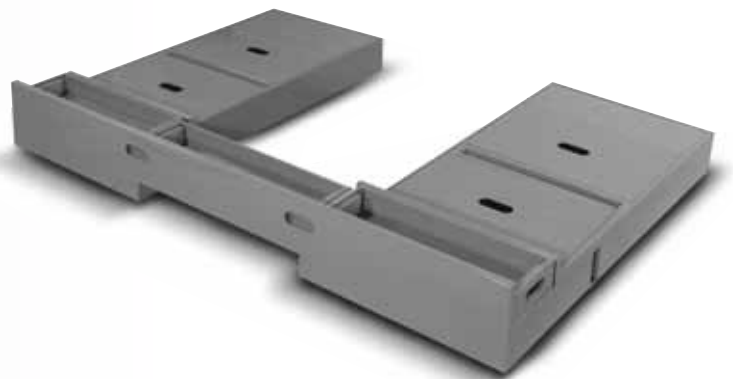
## Direct-Drive Ball Screws

The ball screws on X, Y, Z axes are directly driven by servo motors, which eliminates backlash problems while providing positive transmission performance.



## Wash Down Device

This machine is equipped with a high pressure flushing device to ensure the interior is always clean

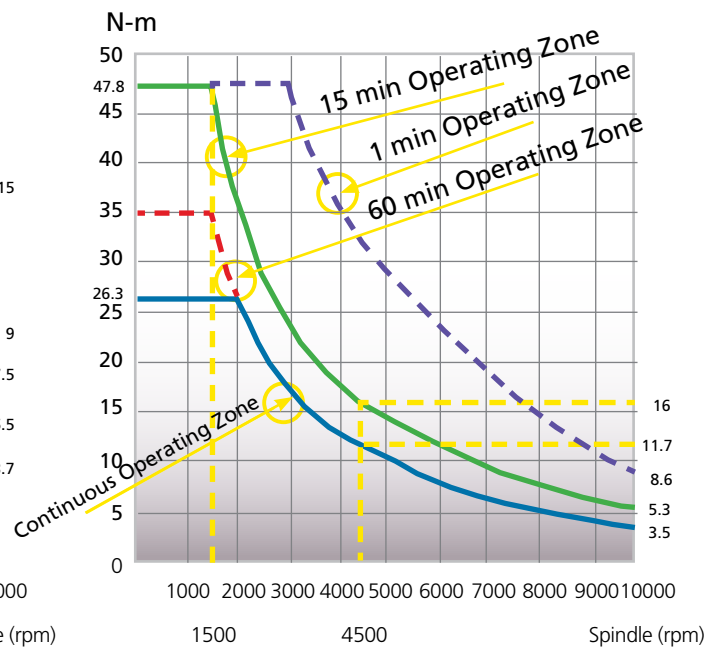
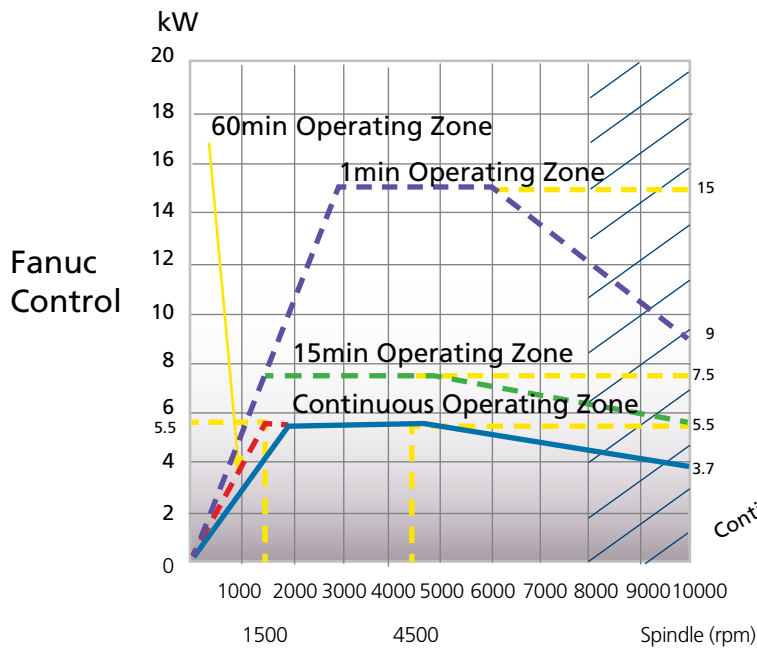
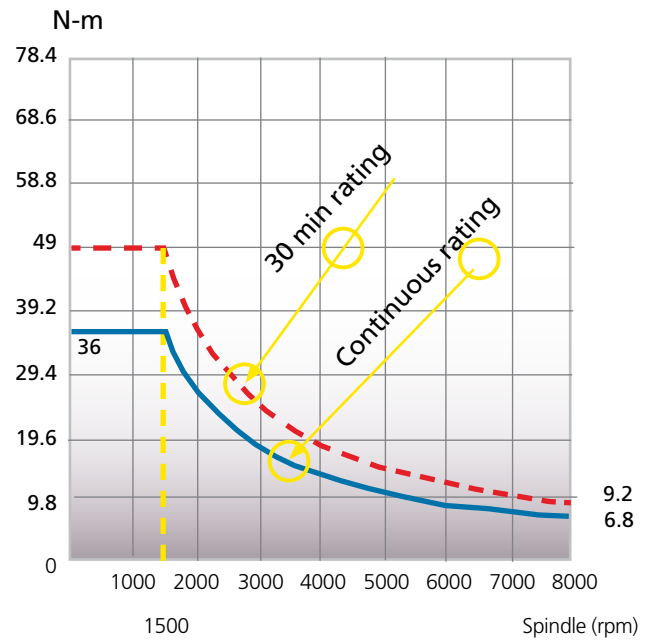
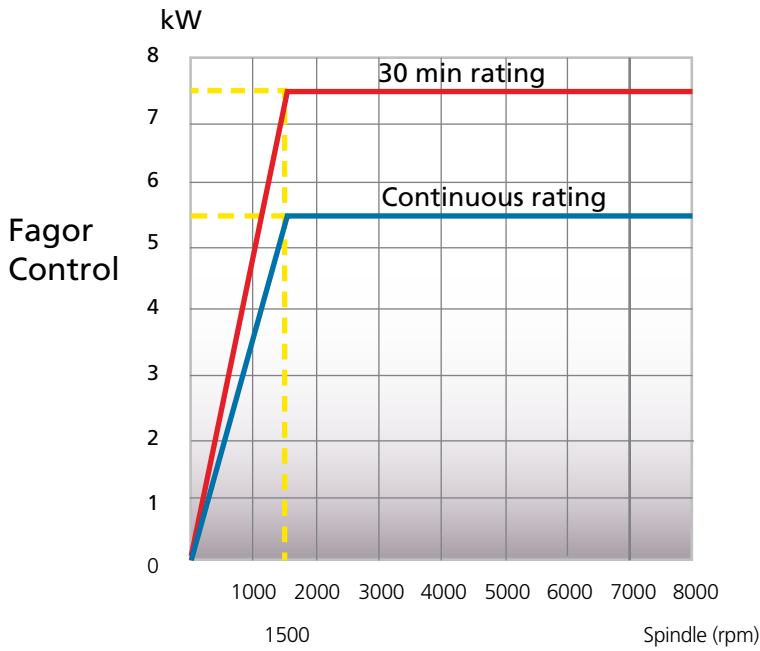


## Large Capacity Coolant Tank

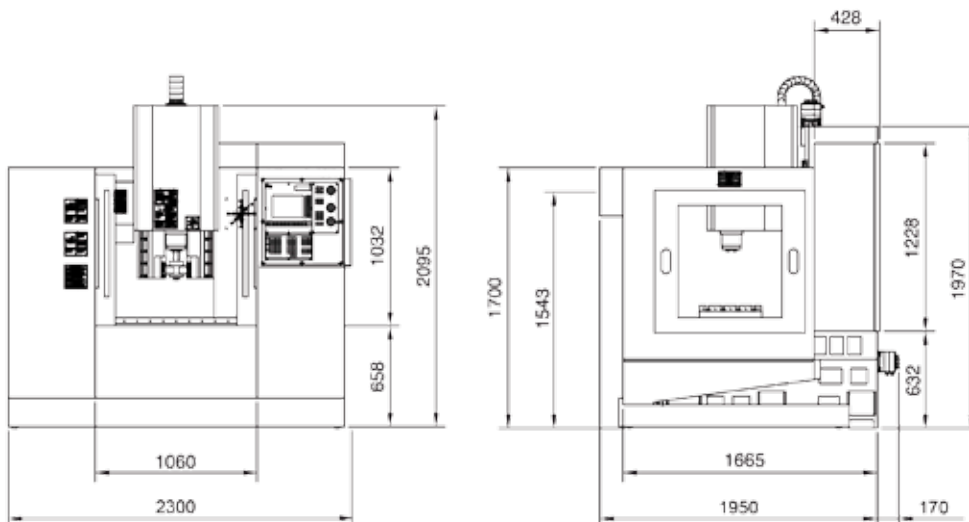
The large capacity coolant tank is equipped with wheels providing convenient moving for cleaning

# Dugard ECO 760 VMC

## Spindle Motor Output



## Dimensional Drawings



Specification	Dugard ECO 760
Table	
Table size	900 x 410mm
T-slots (no x wid x dis)	4 x 16 x 100mm
Table load	350kg
Travel	
X travel	760mm
Y travel	460mm
Z travel	460mm
Spindle	
Spindle nose to table	102~562mm
Spindle centre to column	480mm
Spindle taper	BT40, CT40 or DIN40
Spindle speed	8000rpm (opt 10,000rpm)
Spindle diameter	128mm
Feedrates	
Rapid on X / Y / Z axes	24 / 24 / 24 m/min
Cutting feedrate	10m/min
Accuracy	
Positioning	± 0.005mm
Repeatability	± 0.005mm
Tool Changer	
Tool capacity	16 station
Tool shank	BT40, CT40 or DIN40
Pull stud	MAS P40T
Max tool diameter with adjacent tool	100mm
Max tool weight	8kg
Motor	
Drive motor X, Y, Z digital	1.2 x 1.2 x 1.8 kW
Coolant pump	850w, 130L/min
General	
Power required	35kVA
Air required	5kg/cm <sup>2</sup> , 200L/min
Floor space (L x W x H)	2040 x 2200 x 2400mm
Machine weight (approx)	3000kg

\* Specifications are subject to change without notice

## Standard Accessories

- CNC control
- BT40 spindle
- 8000rpm spindle speed
- One each piece cast iron base & column
- Easy set up and operation
- Coordinate rotation, scaling, mirror image
- 16 tools carousel type ATC
- Fully enclosed guarding
- Wash down system
- 210L coolant tank for fully enclosed guarding
- Work light
- Rigid tapping

European headquarters for Dugard CNC Machine Tools

**DUGARD.com**

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