

# Milling / Routing / Engraving

## Roland Modela Pro II MDX-540E



### Large, Powerful, Ultra High Speed 3D Capable Miller/Router

#### What is a Modela Pro II MDX-540E?

The MDX-540E is like no other heavy duty CNC milling machine. It has been engineered without compromise to achieve extraordinary levels of smoothness, quietness and speed, to give designers and engineers the ultimate in fast 3D modelling capability. Subtractive Rapid Prototyping (SRP) provides the means to produce models at a cost and in materials not possible with other rapid prototyping systems. When you compare the MDX-540E to its "competition" you will find it to be in a class of its own but at a highly competitive price.

*Roland Miller/Routers are the only milling/routing machines to be DIRECTLY CONTROLLED from 2D Design V2*



#### Ultimate 3D Capability

Schools and colleges wanting to include large or small scale 3D modelling as a routine activity will find no other machine to do the job as quickly or as accurately as the MDX-540E. It will happily machine plastics, timber, modelling materials and light alloy at impressive speed. Capability can be further enhanced with an optional rotary 4th axis unit, self-centering vice, T-slot bars and machine vice.

#### Intuitive Control

Control for 2D work is mainly via the familiar output dialog box in 2D Design V2 with the machine's remote hand controller being used to set basic datums. The machine also has an on-screen Virtual Control Panel mainly for 3D work and for advanced applications including the 4th axis unit. 3D files from SolidWorks, etc., are easily processed through TechSoft Visual Toolpath which is supplied with the machine. Roland's own 3D post processor, SRP Player, is also supplied with the machine and this will be needed for 4th axis work.

#### Total Versatility

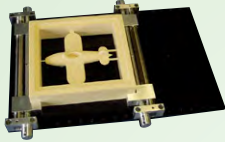
The machine is supplied with TechSoft's unique collet system, as well as a standard 6mm collet, so a vast array of tooling options are available. A MDX-540E will, of course, accept files from 2D PCB, VCarve, PhotoVCarve and 3D Engrave. The technology used to make this the ultimate SRP machine also makes it a superb 3-Axis CNC mill for all the basic routing, profiling and engraving work generated in a busy D&T department. The generous 500 x 400mm bed is likely to accept quite ambitious 2.5D projects at KS4 and class-sets of smaller projects at KS3. The MDX-540E is a large, powerful and ultra high speed machine that will prove to be outstandingly versatile in the most demanding of departments.



### Optional Extras

#### Self-Centering Vice

3D machining one side of an object is easy, but if the object needs to be machined all round how do you hold it? TechSoft have designed a low cost solution to this problem, a special self-centering vice (see page 91).



#### Machine Vice

A simple to use quick release machine vice, with 100mm jaw width. Very useful for machining thick materials in billet form, such as machining plastic or aluminium, where double sided tape would not be sufficient. Two Tee-slot bars are required to fix the vice to the bed of the MDX-540.



#### Tee-Slot Bars

Flat aluminium bars with a tee-slotted profile, allowing for vices, fixtures, or oddly shaped workpieces to be clamped to the bed directly using the 10mm nuts and bolts.



#### Rotary 4th Axis

The self-centering vice is great, but an even more sophisticated option is available for machining complex 3D objects, the rotary 4th axis. This device is like a mini lathe fitted under the cutter and capable of rotating an object through a full 360°. It allows fully automatic machining of full 3D objects (metal work pieces are not supported). Software support is via SRP Player supplied free with the machine.



#### Specification

Max. Billet Size: 180mm diameter by 371mm  
 Max. Cutting Area: 180mm diameter by 285mm  
 Max. Revolution: 20rpm  
 Weight: 6.5kg

### MDX-540AE



shown on optional stand

#### Specification

Axis Travel: 500 x 400 x 155mm  
 Max. Machinable: 500 x 400 x 125mm  
 Maximum Feedrate: 125mm/sec (7500mm/min)  
 Max. Acceleration: 0.2G  
 Motors (X, Y, Z): AC Servo  
 Spindle Motor: 400W  
 Spindle Speed Range: 400-12,000rpm  
 Resolution: 0.001mm  
 Interface: USB  
 Weight (with case): 170kg  
 Dimensions: 1060(W)x1100(D)x978(H)mm

### What's Included

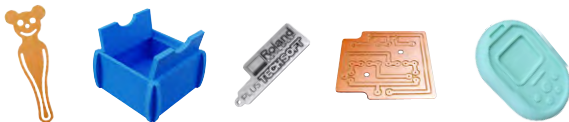
#### Z0 Sensor

The sensor gives an easy and precise way to set Z0.



#### Free Education Training Pack €11993

The Training Pack gives you everything you need to get the machine unpacked, assembled and earning its keep in the shortest time possible. We have distilled key information into a series of tutorials that will guide you through setting-up and then a series of projects that illustrate the full potential of the machine for simple 2D profiling, PCB isolation engraving and full 3D modelling. Each pack contains a project CD, a booklet to guide you and a comprehensive selection of tools, collets and materials. This includes TechSoft's own tooling and collet system to make tool set-up and tool changing a breeze. Completing the Training Pack is not onerous; it will provide a sample set of project ideas - such as the ones shown below - and the confidence to develop your own ideas.



#### Includes Tools and Accessories €11998

Slot Drill (TA-SD4MP-2); Ball Nosed Cutter (TA-BN4MP-2); Engraving Tool (TA-ECT4MP-40); Tool adaptor (TA-ADAPT1-M4); 6-7mm Collet (TA-COLLET-D67); Locating Rings (2 x TC-M4-LOCRING); Table Spacers (TA-MDX540-SPACER); Hex Tool (TA-HEXT00L20); USB Cable (CB031); Sacrificial Bed (TC-MDX540-BED); Tape (TA-TAPE)

#### Warranty

UK Mainland & Ireland: 1 Year On-Site  
 Elsewhere: 1 Year Return and Collect

\* N.B. Extraction only required if cutting fine dust materials eg., foam, MDF, etc.

### Prices £\*

\*See Pricing Information on page 2

<b>MP-MP-MDX540E</b>	Roland Modela Pro II, MDX-540E (inc. TechSoft Training Pk & Visual Toolpath Software)	
<b>MP6-MP-MDX540E</b>	Modela Pro II, MDX-540E Standalone Package. Includes Machine, TechSoft Training Pk, Visual Toolpath Software, Stand, Self-Centering Vice, Machine Vice, Tee-Slot Bars and Extractor with attachment.	

#### Optional Extras

<b>RL-MP-540STAND</b>	Optional Stand for MDX-540E	
<b>RL-MP-MDX540ROT</b>	Optional Rotary 4th Axis for MDX-540E	

#### Recommended Extras

<b>RL-ROTO-VICE</b>	Self-Centering Vice (MDX-540AE)	
<b>TA-MDX-TSLOTS</b>	Tee-Slot Bars (Pack of 2)	
<b>TA-MDX-VICE</b>	Machine Vice (Quick Release, 100mm jaw)	
<b>RL-MP-540VAC</b>	Extraction Attachment for MDX-540E	
<b>MM-EXTRACTION36</b>	Numatic Standard Extractor, Single Motor. See page 190.	

#### Recommended Tooling For details of these packs and other tooling see page 83

<b>TP-MIX-540E</b>	Mixed Tool Pack (General set of tools) Save £5	
<b>TP-3D-540E</b>	3D Tool Pack (Specialist 3D tools) Save £7	
<b>TP-PCB-540E</b>	PCB Tool Pack (Specialist PCB tools) Save £5	

#### Recommended Materials

See details of this pack on page 91 and our full range of materials on pages 87-91

<b>TPM2-MDX540</b>	Mixed Pre-Cut Materials Pack Save £27	
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#### Recommended Software

2D Design V2 (page 12), 2D PCB (page 14) and SOLIDWORKS (page 18)