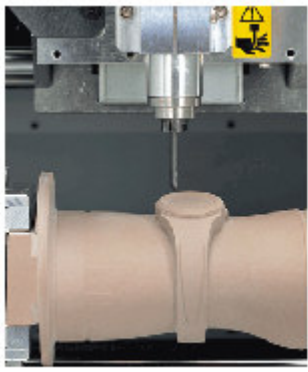


3D Milling Machine **MDX-40R**

*Quickly and Inexpensively Create Prototypes,
Parts and Mock-Ups*
MDX-40 – The Perfect In-House SRP® Solution



MODELA Player4 & on-screen,
operation panel



Introduction

The MDX-40R allows product designers to keep their ideas secure while eliminating the added cost and turn-around time incurred by outsourcing. The MDX-40R comes complete with advanced, easy-to-use software. MODELA Player 4 CAM software accepts IGES, DXF and STL files exported from most popular industrial 3D CAD software programs. Virtual MODELA simulates finished shapes, estimates production time and determines suitable modeling depth to optimize time and materials.

Features:

- In addition to two -and four-sided milling, the included Rotary Axis Unit provides milling at any angle.
- Work area is perfect for midsize jobs -- 305mm(X) x 305mm(Y) x 105mm(Z) (12"x 12"x 4.12")*
- Provides high speed performance with 15,000 rpm spindle
- Includes easy-to-use Roland software -- MODELA Player 4 CAM software, Virtual MODELA simulation software, etc.
- Emergency stop switch and machine cover ensure safety and promote clean, quiet work environment
- *Work area is less with the Rotary Axis Unit

Specifications:

	Rotary Axis Unit
Max. angle of rotation	$\pm 18 \times 105$ (± 5000 rotations)
Loadable workpiece size*	Items within the range of a 42.5 mm (1-11/16 in.) radius from the center of the rotary axis by long 135 mm (5-3/8 in.)
Workpiece thickness holdable by workpiece chuck	12 to 40 mm (1/2 to 1-5/8 in.)
Loadable workpiece weight	0.5 kg (1.1 lb) (Maximum workpiece moment of inertia 6×10^{-4} kgm ²)
Control methods	4-axis control (3-axis simultaneous control)
Feed rate	11.79 rpm
Mechanical resolution	0.0225 deg.
Dimensions	357 (W) x 305 (D) x 129 (H) mm (14-1/16 (W) x 12 (D) x 5-1/8 (H) in.)
Weight	6.2 kg (13.7 lb)
Included items	Y-origin sensors (large and small), Z-origin sensor, Y-origin detection pin, center drill, live center, hexagonal wrench, cap screws (for securing Z-origin sensor), user's manual
*The range that can actually be cut is limited by the amount of tool extension and interference between the loaded workpiece and the tool or spindle.	
	Without Rotary Axis Unit
Acceptable materials	Resins such as chemical wood and modeling wax (metal not supported)
X, Y, and Z operation strokes	305 (X) x 305 (Y) x 105 (Z) mm (12 (X) x 12 (Y) x 4-1/8 (Z) in.)
Distance from spindle tip to table	Maximum 125 mm (4-15/16 in.)
Table size	305 (W) x 305 (D) mm (12 (W) x 12 (D) in.)
Loadable workpiece weight	4 Kg (8.8 lb)
XYZ-axis motor	Stepping motor
Feed rate	XY-axis : 0.1 to 50 mm/sec. (0.0039 to 1.9 in./s) Z-axis : 0.1 to 30 mm/sec. (0.0039 to 1.1 in./s)
Software resolution	0.01 mm/step (0.00039 in./step)
Mechanical resolution	0.002 mm/step (0.0001 mm/step)
Spindle motor	DC brushless motor, Maximum 100W
Spindle type	Modeling spindle
Spindle rotation	4500 to 15000 rpm
Tool chuck	Collet
Interface	USB connector, sensor connector, expansion connector

Power supply	Voltage and frequency	AC100 to 240 ± 10%, 50/60 Hz
	Required power capacity	2.1 A
Power consumption		Approx. 210W
Acoustic noise level		No-load operation : 56 dB (A) or less, standby : 42 dB (A) or less (According to ISO7779)
Dimensions		669 (W) x 760 (D) x 554 (H) mm (26-3/8 (W) x 29-15/16 (D) x 21-13/16 (H) in.)
Weight		66 Kg (146 lb)
Packed dimensions		785 (W) x 885 (D) x 735 (H) mm (31 (W) x 35 (D) x 29 (H) in.)
Packed weight		73 Kg (161 lb)
Operation temperature		5 to 40 °C (41 to 104 °F)
Operation humidity		35 to 80% (no condensation)
Included items		Power cord, collet, sensor, hexagonal wrench, hexagonal screw drivers, spanners, Roland Software Package CD-ROM, MODELA Player4 CD-ROM, user's manual, Roland Software Package installation and setup guide, MODELA Player4 installation and setup guide

Options:

unit: mm dia.= flute diameter, R = flute radius, l = flute length,
dia. = shank diameter, L = overall length, W = blade width

Item	Model	Description
Square end-mills	ZHS-100	High speed steel dia.1 3(l) x 6(d) x 50(L) x 2NT
	ZHS-200	High speed steel dia.2 6(l) x 6(d) x 50(L) x 2NT
	ZHS-300	High speed steel dia.3 10(l) x 6(d) x 50(L) x 2NT
	ZHS-400	High speed steel dia.4 8(l) x 6(d) x 60(L) x 2NT
	ZHS-500	High speed steel dia.5 10(l) x 6(d) x 60(L) x 2NT
	ZHS-600	High speed steel dia.6 15(l) x 6(d) x 55(L) x 2NT
	ZHS-3015	High speed steel dia.3 15(l) x 6(d) x 50(L) x 2NT including 2pcs.
	ZUS-300	Cemented carbide dia.3. 15(l) x 3(d) x 60(L) x 2NT
	ZUS-400	Cemented carbide dia.4. 20(l) x 4(d) x 60(L) x 2NT
	ZUS-500	Cemented carbide dia.5. 25(l) x 5(d) x 60(L) x 2NT
	ZUS-600	Cemented carbide dia.6. 25(l) x 6(d) x 60(L) x 2NT
Ball end-mills	ZUB-150	Cemented carbide R1.5 10(l) x 3(d) x 65(L) x 2NT
	ZUB-200	Cemented carbide R2.0 12(l) x 4(d) x 65(L) x 2NT
	ZUB-250	Cemented carbide R2.5 20(l) x 5(d) x 65(L) x 2NT
	ZUB-300	Cemented carbide R3.0 30(l) x 6(d) x 65(L) x 2NT
Collets (for end-mills)	ZC-23	dia.3mm, dia.4mm, dia.5mm, dia.6mm, including 1pc.each

	ZC-23-3175	dia.3.175mm
	ZC-23-6	dia.6mm
	ZC-23-6.35	dia.6.35mm

dia. = shank diameter, L = overall length, W = blade width

Item	Model	Description
Engraving cutters (for plastic)	ZEC-A4013	Cemented carbide dia.4.36 x 165(L) x 0.127(W)
	ZEC-A4025	Cemented carbide dia.4.36 x 165(L) x 0.254(W)
	ZEC-A4051	Cemented carbide dia.4.36 x 165(L) x 0.508(W)
	ZEC-A4076	Cemented carbide dia.4.36 x 165(L) x 0.762(W)
Engraving cutters, quarter round (for plastic)	ZEC-A4013-QR	Cemented carbide dia.4.36 x 165(L) x 0.13(W)
	ZEC-A4025-QR	Cemented carbide dia.4.36 x 165(L) x 0.25(W)
Engraving cutters (for plastic)	ZEC-A4150	Cemented carbide dia.4.36 x 165(L) x 1.52(W)
	ZEC-A4190	Cemented carbide dia.4.36 x 165(L) x 1.91(W)
	ZEC-A4230	Cemented carbide dia.4.36 x 165(L) x 2.29(W)
	ZEC-A4320	Cemented carbide dia.4.36 x 165(L) x 3.175(W)
	ZEC-A4380	Cemented carbide dia.4.36 x 165(L) x 3.81(W)
	ZEC-A4430	Cemented carbide dia.4.36 x 165(L) x 4.34(W)
Collets (for diamond cutter)	ZC-E436	dia.4.36mm
Adhesive sheet for securing material	AS-10	210mm x 140mm, including 10 sheets

Item	Model	Description
Chemical wood	ZSM-SS	97mm x 147mm x 50mm, including 5pcs.
Wax	ZW-200	75mm x 175mm x 38mm, including 10pcs.

Links

Visit Roland Homepage for more detailed and comprehensive information:

<http://www.rolanddg.com>