MODELA MDX-50

Specifications

Cuttable material		Resins such as chemical wood and modeling wax (metal not supported)
Operating range		400 (X) × 305 (Y) × 135 (Z) mm (15.8 (X) × 12.0 (Y) × 5.3 (Z) in.)
Loadable workpiece size		400 (X) × 305 (Y) × 100 (Z) mm (15.8 (X) × 12.0 (Y) × 3.9 (Z) in.)
XYZ-axis drive system		Stepping motor
Operating speed	XY-axis	7 to 3600 mm/min (0.3 to 141.7 in./min)
	Z axis	7 to 3000 mm/min (0.3 to 118.1 in./min)
Software resolution		0.001 mm/step (0.039 mil/step: RML-1), 0.001 mm/step (0.039 mil/step: NC code)
Mechanical resolution		0.01 mm/step (0.39 mil/step: half step)
Spindle motor		Brushless DC motor
Spindle rotation		4500 to 15000 rpm
Number of tools housed		6 (However, one of the tools is also used as the detection pin.)
Attachable tool	"mm" specifications	Shank diameter: 6 mm, tip diameter: 6 mm or less, length: 30 to 90 mm * Tools with shank diameters of 3 mm or 4 mm can be used by installing them in the included tool holder.
	"inch" specifications	Shank diameter: 6.35 mm (0.25 in.), tip diameter: 6.35 mm (0.25 in.) or less, length: 30 to 90 mm (1.18 to 3.54 in.) * Tools with shank diameters of 3.175 mm (0.125 in.) can be used by installing them in the included tool holder.
Interface		USB
Control command sets		RML-1, NC code
Power requirements		AC 100 to 240 V ±10 %, 50/60 Hz (overvoltage category: II, IEC 60664-1), 1.2 A
Power consumption		Approx. 95 W
Operating noise	During operation	60 dB (A) or less (when not cutting)
	During standby	45 dB (A) or less
External dimensions		760 (W) × 900 (D) × 732 (H) mm (29.92 (W) × 35.43 (D) × 28.82 (H) in.)
Weight		122 kg (269 lb.)
Installation environment	Indoor use at altitudes	Up to 2000 m
	Temperature	5 to 40 °C (41 to 104 °F)
	Humidity	35 to 80 % RH (no condensation)
	Ambient pollution degree	2 (as specified by IEC 60664-1)
	Short-term temporary overvoltage	1440 V
	Long-term temporary overvoltage	490 V
Included items		Power cord, USB cable, manual, Roland DG Software Package CD, detection pin, hexagonal screwdriver, hexagonal wrench, wrench, tool holder, tool positioner, Z0 sensor, etc.

System Requirements for Included Software

OS	Windows® 10, 8.1, 7 (32- or 64-bit version) *1 *2 *3
CPU	Minimum required CPU for the operating system
Memory	Minimum amount of required RAM for the operating system
Optical drive	CD-ROM drive
Video card and monitor	A display with at least 16-bit color and a resolution of 1024 × 768 or more is recommended (a video card that supports Open GL is recommended).

*1 This software is a 32-bit application and therefore runs in WOW64 (Windows-On-Windows 64) when running on 64-bit versions of Windows operating systems.
*2 Internet Explorer 8.0 or later is required.
*3 Operations have not been verified in virtual Windows environments such as Hyper-V and Virtual PC.

Accessories

Rotary Axis Unit ZCL-50

Cuttable material	Resins such as chemical wood and modeling wax (metal not supported)
Operating range	363 (X: 37 to 400 [1.46 to 15.75 in.] with machine coordinates) × 305 (Y) × 125 (Z) mm (14.29 (X) × 12.01 (Y) × 4.92 (Z) in.) A: ±2146680 ° (approximately ±5963 rotations)
Loadable workpiece size	Items within the range of a 60 mm (2.36 in.) radius from the center of rotation by a length of 380 mm (14.96 in.)
Workpieces that can be secured by the rotary center vise	Thickness: 10 to 65 mm (0.39 to 2.56 in.) or diameter of 20 to 68 mm (0.79 to 2.68 in.)
Operating speed	A: Maximum 15 rpm
Mechanical resolution	0.0225 °/step (half step)
External dimensions	578 (W) × 190 (D) × 128 (H) mm (22.76 (W) × 7.48 (D) × 5.04 (H) in.)
Weight	7 kg (15.43 lb.)
Included items	Detection bar, Cap screws, User's Manual, etc.

Accessories

Item	Model	Description
Square end-mills	ZHS-100	High speed steel dia. 1 3 (l) × 6 (d) × 50 (L) × 2 NT
	ZHS-200	High speed steel dia. 2 6 (l) × 6 (d) × 50 (L) × 2 NT
	ZHS-300	High speed steel dia. 3 10 (l) × 6 (d) × 50 (L) × 2 NT
	ZHS-400	High speed steel dia. 4 12 (l) × 6 (d) × 50 (L) × 2 NT
	ZHS-500	High speed steel dia. 5 15 (l) × 6 (d) × 55 (L) × 2 NT
	ZHS-600	High speed steel dia. 6 15 (l) × 6 (d) × 55 (L) × 2 NT
	ZHS-3015	High speed steel dia. 3 15 (l) × 6 (d) × 50 (L) × 2 NT, including 2 pcs.
Ball end-mills	ZCB-150	Cemented Carbide R1.5 25 (l) × 2.4 (Lc) × 65 (L) × 6 (d) × 2 NT
	ZCB-200	Cemented Carbide R2 25 (l) × 3.2 (Lc) × 70 (L) × 6 (d) × 2 NT
	ZCB-300	Cemented Carbide R3 30 (l) × 4.8 (Lc) × 80 (L) × 6 (d) × 2 NT

* Unit: mm, dia. = flute diameter, R = flute radius, Lc = cutting length, l = flute length, d = shank diameter, L = overall length, NT = number of flutes.

Item	Model	Description
Modeling wax	ZW-200	10 pcs
Chemical wood	ZSM-SX	5 pcs
Double-side adhesive sheet	AS-10	10 sheets

Item	Model	Description
Spindle unit	ZS-50-6	Incl. Φ 6 mm collet and spindle belt
	ZS-50-1/4	Incl. Φ 1/4 inch (6.35 mm) collet and spindle belt
Collet	ZC-50-6	Φ 6 mm
	ZC-50-1/4	Φ 1/4 inch (6.35 mm)
Tool holder	ZH-6	Tool shank for Φ 6 mm, for ZS-50-6 and ZC-50-6
	ZH-4	Tool shank for Φ 4 mm, for ZS-50-6 and ZC-50-6
	ZH-3	Tool shank for Φ 3 mm, for ZS-50-6 and ZC-50-6
	ZH-1/4	Tool shank for Φ 1/4 inch (6.35 mm), for ZS-50-1/4 and ZC-50-1/4
	ZH-1/8	Tool shank for Φ 1/8 inch (3.175 mm), for ZS-50-1/4 and ZC-50-1/4

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AUTHORIZED DEALER:

MODELA MDX-50

www.rolanddg.com
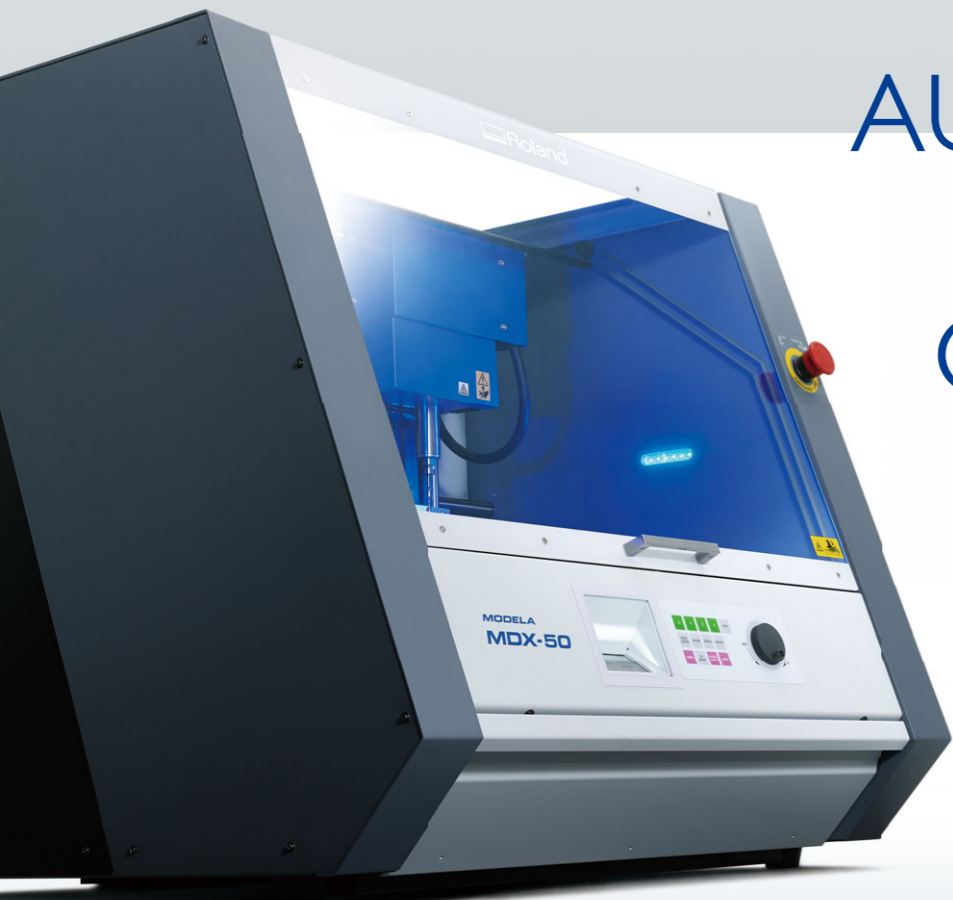
AUTOMATED MILLING ON YOUR DESKTOP

Creating Precision Prototypes and 3D Models Has Never Been Easier
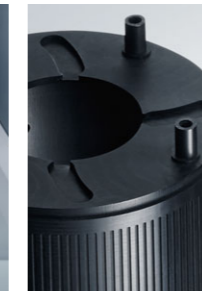
MODELA
MDX-50

QUALITY AND VERSATILITY

Exceptional quality for a superb finish on a wide range of materials

The MDX-50 mills an impressive variety of materials to produce models, vacuum forming molds, jigs, parts, prototypes and more with smooth surface detail. Create prototypes out of materials similar to the end product to test structural and functional operations, and assembly with other parts. With a machining area of 400 (X) x 305 (Y) x 135 (Z) mm, the MDX-50 can produce large single objects or batch produce smaller multiple parts, making it ideal for a host of applications.
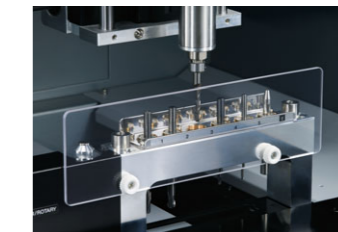

MDX-50
305 mm
Previous model
135 mm
400 mm

Enlarged machining area compares to previous model

Close-up application – great milling finish

INTUITIVE SOFTWARE

User-friendly bundled CAM software delivers exceptional results

Popular in Industry and Education, the intuitive "SRP Player" CAM software has been updated to match the advanced functions of the MDX-50. Milling settings can be configured in five simple steps, making operation straightforward even for those new to milling.

SRP Player

SAFE-TO-USE

Outstanding safety and clean working environment

The MDX-50 has been designed for safe and trouble-free operation, making it ideal for use in studio and educational environments. The cover ensures safe operation and waste is contained in the integrated dust tray to create a cleaner, more comfortable working environment. Current job status can be monitored from a distance with the color-coded LED status lights and the illuminated work area makes mounting materials easier and safer.

Color-coded LED status lights

Dust tray is included as standard.

AUTOMATED PRODUCTION

Unattended operation for efficient workflow

The MDX-50 features an ATC (Automatic Tool Changer) as standard, to allow unattended operation day and night. The auto-sensing function corrects the tool length to ensure milling accuracy for every job. The optional rotary axis rotates materials automatically from 0 to 360 degrees continuously or indexes for 2-sided, 4-sided and custom angles to enable the easy and efficient production of pieces with complex surfaces. Thanks to the ATC and rotary axis units, once milling begins users can leave the device to run unattended with confidence, enabling them to get on with other jobs.
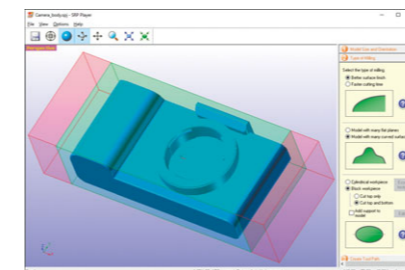
ATC (Automatic Tool Changer)
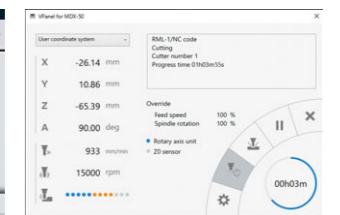
Optional rotary axis unit

EASY OPERATION

Simple control from the MDX-50 Built-In Panel

The integrated control panel on the MDX-50 makes setting up milling jobs a breeze. Adjust spindle and milling speed on the fly and receive instant updates on job status. The on-screen "V-Panel" function aids production by monitoring tool life and notifying users via email when a job is completed or intervention is required.

Built-in Panel

VPanel