Roland®

The new monoFab™ series

ARM-10
desktop 3D printer

SRM-20
compact 3D milling machine

Two devices, one solution.

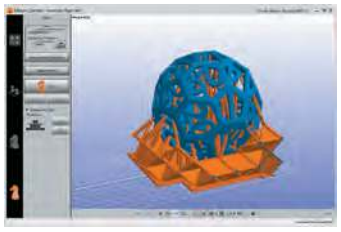
Since 1986, Roland has been at the forefront of 3D fabrication, delivering tens of thousands of milling machines for a wide variety of applications. Now, the tradition continues with the Roland monoFab series, a revolutionary new concept that combines the additive capabilities of 3D printing with the subtractive capabilities of milling. The ARM-10 lets you quickly create conceptual prototypes by layering material into almost any complex shape, including hollow. The SRM-20 allows for validating fit and function by milling from a wide range of inexpensive materials. All from Roland, the company that has supplied 3D technology to turn your ideas into reality for over 25 years.

"Active Speaker" created by Hiroshi Yasutomi

monoFab ARM-10 *desktop 3D printer*

Digital Light Processing (DLP) layered projection system.

The ARM-10 desktop 3D printer features a proprietary projector lens and Roland's imageCure™ resin, creating 3D models cured using UV light. The DLP process creates high quality prints and the projection process allows multiple objects to be produced at the same time. Post-processing, such as support removal, finishing, and adding color are simple to do.



Included Roland software makes 3D printing operation easy, even for beginners.

monoFab Player AM enables layout editing, automatic support generation and data correction, including a healing function to fill in any gaps in 3D data and simplify meshes. The user-friendly software interface makes it ideal even for beginners.

Create complex shapes with minimum resin usage.

With 3D printing, parts which previously required multi-axis milling, such as complex objects with undercuts, can be built quickly and easily. By using a suspended build system, resin usage is kept to a minimum, making model production efficient and affordable.

PROTOTYPING WORKFLOW

Design

3D Modeling

3D CAD data is opened in the included Roland software where it is optimized for either 3D printing or milling.

3D Printing

ARM-10

By using the ARM-10 3D printer, designs milling, such as undercuts, hollows and c just a few steps, allowing you to concept

SRM-20

The SRM-20 milling machine produces b surfaces and accurate, fine details, makir require mechanical checks and confirma range of materials, models will look and f and be ready for validation.

3D Milling

"The monoFab series allows me to create 3D prototypes that validate both my product design and engineering."

– Hiroshi Yasutomi, Product Designer

"I produced the 'active speaker' prototype using the monoFab series. I used the ARM-10 3D printer to produce the external parts since these shapes are complex, and used the SRM-20 milling machine to model the base where added precision and suitable materials were required. I was able to make the most of the capabilities of 3D printing and milling.

By using 3D printers and milling machines together, my designs can quickly progress from conceptualization to validation, significantly reducing my workflow time. For quick prototypes and complex shapes like hollows, the ARM-10 is perfect. The SRM-20 allows me to validate fit and function, as well as use a variety of materials."

monoFab SRM-20 *compact 3D milling machine*

Create functional prototypes from a variety of materials.

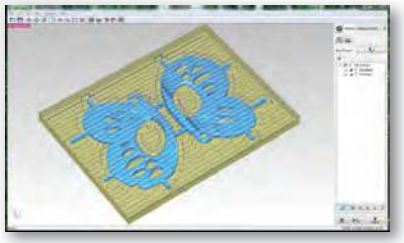
Perfect for milling a variety of non-proprietary materials typically used for prototyping, including chemical wood, acrylic and modeling wax, the SRM-20 is Roland's latest generation compact CNC milling machine for the office, studio and educational environment.

Simple operation for optimum results.

Roland's unique "VPanel" gives you full machine diagnostics, calibration and control over the entire milling process from your computer desktop. Origin point can be set with speed and accuracy. Milling speed and spindle RPM adjustments can made during production.

Software suite included for out-of-the-box productivity and ease of use.

All software can be used individually as needed.



MODELA Player 4 is a CAM software that automatically calculates and displays the cutting tool path from your 3D design file.

iMODELA™ Creator is software for processing 2D data such as text and graphics.

ClickMILL™ is a simple milling solution for surfacing, drilling holes and pocketing without using 3D CAD (Computer Aided Design) software.

which would challenge standard
omplex shapes, can be produced with
ualize designs quickly and easily.

eautiful finishes, including smooth, curved
ng it ideal for creating prototypes which
tion of fit. With the ability to cut a wide
feel closer to the final production run

Inspect

A real prototype can be manufactured at an early stage of the design process, enabling detailed inspection of aesthetics, structure, movement and fit. Modifications to the design can then be made without additional costs.

Finish



KEY FEATURES

ARM-10 Highlights

- DLP layered projection system produces semi-transparent models for concept and form testing
- Fully enclosed cabinet for safety
- Easy to use – the ARM-10 can be controlled with a single button
- Build area: 5.1 (W) x 2.7 (D) x 2.7 (H) inches (130 (W) x 70 (D) x 70 (H) mm)
- Material: imageCure photopolymer resin
  - Semi-transparent
  - Easy post-processing – removal of supports, finishing and painting
  - Short post curing times
- Software: monoFab Player AM included
  - Automatic support building
  - Automatic healing and mesh simplification
  - Simulation of resin volume
  - Move, scale, duplicate, rotate
  - Preview layer function
- Roland OnSupport for drivers and software updates
- 1-Year Trouble-Free Warranty plus industry-leading service and support

SRM-20 Highlights

- Easy to use interface and open access to the work area
- Powerful spindle motor
- Independent collet system
- Fully enclosed cover for dust prevention and reduced noise
- User-friendly VPanel controller
- Bundled Modela Player 4 CAM software, iModela Creator, ClickMill and Virtual MODELA software
- G-Code compatible
- Roland OnSupport for drivers and software updates
- 1-Year Trouble-Free Warranty plus industry-leading service and support

Roland OnSupport® included with ARM-10 and SRM-20

With Roland OnSupport included with the purchase of the monoFab SRM-20 and ARM-10, you get access to the latest manuals, drivers, software downloads and updates. In addition, notifications of completed jobs and production reports are sent to your smart phone or computer.

Roland OnSupport

SPECIFICATIONS

ARM-10	
Build technology	DLP layer projection system
Build size	5.1 (W) x 2.7 (D) x 2.7 (H) inches (130 (W) x 70 (D) x 70 (H) mm) (Job volume of resin is up to 0.7 lbs (300 g)
Build speed	.393 in. (10 mm)/h (Layer pitch = .0059 in. (0.15 mm)
Light source	UV-LED (ultraviolet light emitting diode)
XY resolution	.0079 inches (0.2 mm)
Z axis resolution	.0004 inches (0.01mm)
Power	Machine: DC 24 V, 0.6 A, Dedicated AC adapter: AC 100 V to 240 V±10%, 50/60 Hz
Power consumption	15 W
Acoustic noise level	During operation: 55 dB (A) or less, During standby: 49 dB (A) or less
Dimensions /weight	17.0 (W) x 14.4 (D) x 17.8 (H) inches (430 (W) x 365 (D) x 450 (H) mm)/37.5 lbs (17 kg)
Interface	USB
Installation environment	During operation: Temperature of 68 to 86°F (20 to 30°C), 35 to 80% relative humidity (no condensation) Not operating: Temperature of 41 to 95°F (5 to 40°C), 20 to 80% relative humidity (no condensation)
Accessories	AC adapter, Power cord, USB cable, Liquid material tray, Printing and washing tools (Metalic spatula, Plastic spatula, Tweezers, Washing container x 2, Hexagonal wrench, Spanner, Rubber gloves, Work tray, etc.), Start-up page information card.

SRM-20	
Cuttable material	Resins such as Modeling Wax, Chemical Wood, Foam, Acrylic, Poly acetate, ABS, PC board
X, Y, and Z operation strokes	8 (X) x 6 (Y) x 2.38 (Z) inches (203.2 (X) x 152.4 (Y) x 60.5 (Z) mm)
Distance from collet tip to table	Maximum 5.15 inches (130.75mm)
Table size	9.14 (X) x 6.17 (Y) inches (232.2 (X) x 156.6 (Y) mm)
Loadable workpiece weight	4.4 lbs (2 kg)
X-, Y-, and Z-axis drive system	Stepper motor
Operating speed	0.24 – 70.87 inches/min (6 – 1800mm/min)
Software resolution	0.00039 inches/step (RML-1), 0.000039 inches/step (NC code) (0.01 mm/step (RML-1), 0.001mm/step (NC code)
Mechanical resolution	0.0000393 inches/step (0.000998594 mm/step)
Spindle motor	DC motor Type 380
Maximum spindle rotation	7,000 rpm
Cutting tool chuck	Collet method
Control command sets	RML-1, NC code
Power	Machine: DC24V, 2.5A, Dedicated AC adapter: AC 100V±10%, 50/60Hz
Power consumption	Approx. 55W
Accustic noise level	During operation: 65 dB (A) or less (when not cutting), during standby: 45 dB (A) or less
Dimensions /weight	17.76 (W) x 16.80 (D) x 16.78 (H) inches /43.2 lbs (19.6 kg) (451.0 (W) x 426.6 (D) x 426.2 (H) mm)
Interface	USB
Installation environment	Temperature of 41 to 104°F (5 to 40°C), 35 to 80% relative humidity (no condensation)
Accessories	AC adapter, Power cord, USB cable, Cutting tool, Collet, Set screw, Spanners (0.28, 0.39 inches / 7,10mm), Hexagonal wrench (0.08, 0.12 inches / size 2,3 mm), Positioning pins, Double-sided tape, Start-up page information card

ARM-10 AND SRM-20 SYSTEM REQUIREMENTS

Operating system	(OS Windows 7/8/8.1 (32-bit/64-bit edition))
CPU	Intel® Core 2 Duo or more (Core i5 or more recommended)
Memory (RAM)	1GB (2GB or more recommended)
Video card and monitor	A resolution of 1,280 x 1,024 or more recommended
Free hard-disk space as a working space	100 megabytes or more recommended
Other requirements	Internet connection and web browser, Internet Explorer version 10 or more recommended

Resin safety precautions before and after curing: The main intended purpose of PRH35-ST resin is design verification and prototyping applications. Refer to published safety data sheets and the included user's manual for the handling of uncured resin. Although completely cured resin* is harmless when used for its main intended purpose, no biocompatibility assessment has been conducted. This resin is not suitable for applications where direct contact with food will occur or applications where extended contact with skin or human body will occur. * *Completely cured resin* refers to the state where curing reaction has occurred to the point that uncured reactive components have been eliminated.

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