Roland®

SOLUTIONS FOR THE CLASSROOM

STEM/STEAM Programs and Fab Labs
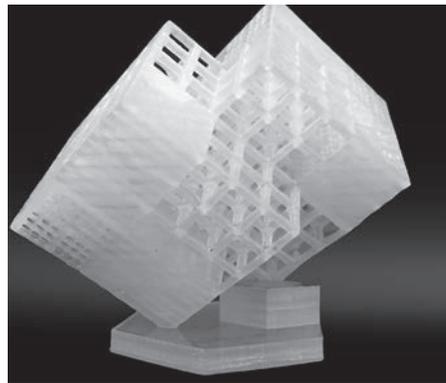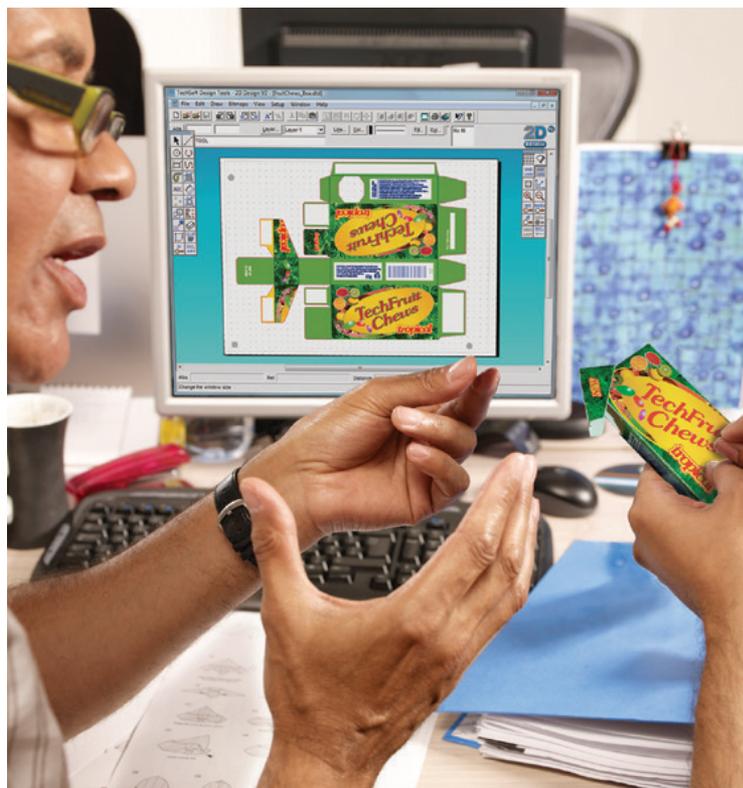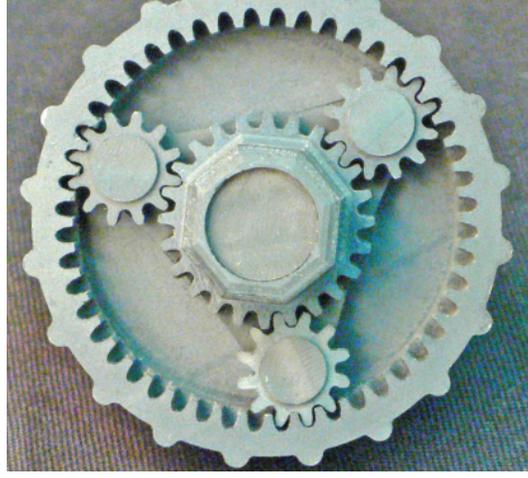
A comprehensive collection of devices with added software and support to give your students a head start in the industry.

Roland inkjet printers, cutters and 3D printing and milling machines allow colleges and schools to use real-world technology for teaching real-world applications. Roland devices come with easy-to-use production software for an out-of-the-box solution that makes learning fun and easy for both students and educators.

Empower your students to design and produce prototypes, signs, packaging, apparel, and more with easy-to-use MDX milling machines and other devices from Roland. By giving students the opportunity to work with Roland's industry leading technology, you can better prepare them for Science, Technology, Engineering, Arts and Math related careers.
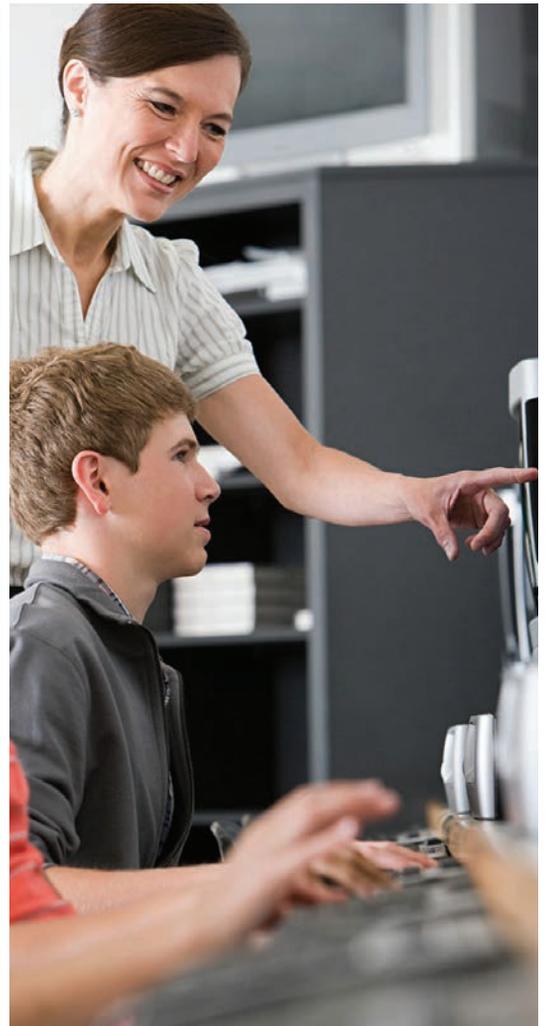
3D MILLING

Widely used in the industry and recognized for ease-of-use and versatility, Roland MDX milling machines offer students a fast learning curve to get them producing finished prototypes that require little to no finishing.
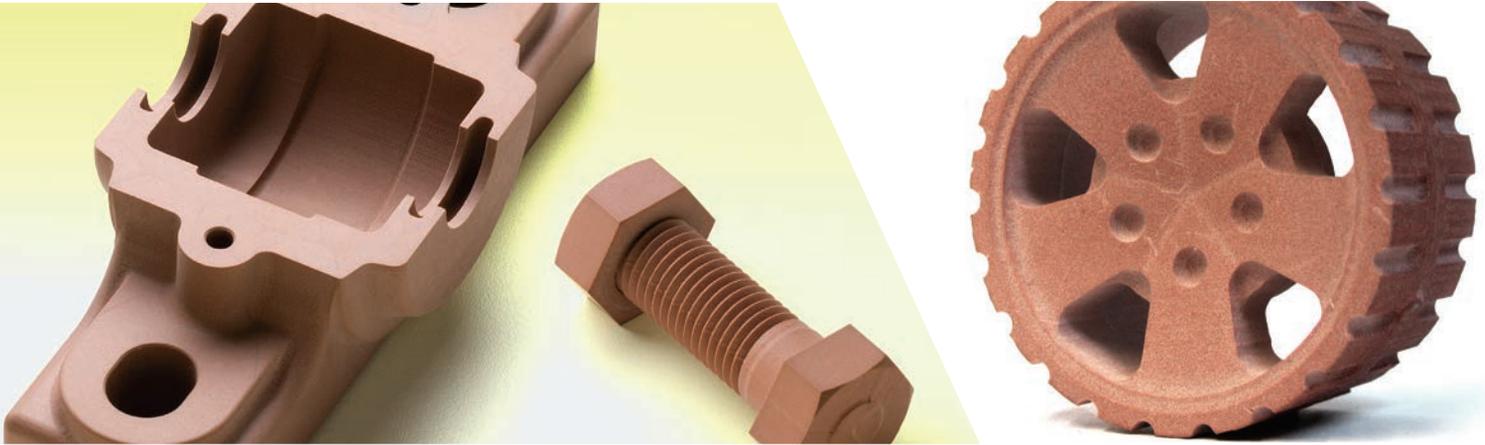
WORLD RENOWNED EDUCATORS RELY ON ROLAND TECHNOLOGY

"The time that students have to complete the manufacturing cycle has been condensed. Having this wide range of equipment – Roland mills, printers, and traditional shop equipment – allows students to fulfill their intent and quickly make models and prototypes."

David Cawley, Director of Model Shops and 3D Labs at Art Center College of Design, Pasadena

▶ *Watch the video at www.rolanddga.com/artcenter*

MDX-40A CNC Milling Machine

Affordable rapid prototyping on a convenient 12"x12"x4" (z) work area. Additional features include a rotary axis for unattended milling and a contact-scanning unit for reverse engineering projects.

MDX-540 CNC Milling Machine

Enhanced production on a 19.6"x15.7"x6" (z) work area at less than half the cost of most additive devices. Additional features include an automatic tool changer and a rotary axis for added speed and ease.

For more info on our 3D milling and printing machines, visit www.rolanddga.com/products/3d

3D PRINTING & MILLING SOLUTIONS

Roland DG also offers desktop-sized monoFab series of 3D printing and milling machines that can be combined for the perfect prototyping solution to prepare students for the next generation of design innovation. All our 3D prototyping machines offer user-friendly software to fast-track student knowledge and production abilities.

CASTLE VIEW HIGH SCHOOL EMPOWERS STUDENTS WITH SIMPLE 3D SOLUTIONS

"High school students need the ability to be successful early in the process to stay interested. Roland devices and the SRP software are well designed and very straight forward – they go through the process step-by-step."

Rob Hazlehurst,
Head of Castle View High School Engineering

Aviation model created by a Castle View High School student using easy Roland software and 3D devices.

monoFAB ARM-10 Rapid Prototyping 3D Printer

Simple 3D desktop printing controlled with a single button— uses a Digital Light Processing (DLP) layered projection system and provides multiple object production at the same time.

monoFAB SRM-20 Compact Desktop Mill

Engineer intricate prototypes with the most precise CNC desktop mill in its class— features a simple interface and easy VPanel controls for fast and efficient production.

For more info on our 3D milling and printing machines, visit www.rolanddga.com/products/3d

FLATBED PRINTERS

The LEF Series UV Flatbed Printers offer students countless customization and printing possibilities. They enable direct printing on a wide range of materials that include metal, glass, wood and canvas*. White ink and Clear ink options allow for special embossed finishes.

VersaUV® LEF UV Desktop Flatbed Printers

Available in 20"x13" and 12"x11" sizes, the LEF prints directly on a vast array of substrates – features advanced height sensor, quick curing system, White ink options and Clear ink embossed finishes.

*Some materials may require adhesion promoters for proper ink adhesion.

PRINTERS AND CUTTERS

Roland printers and cutters are real world devices, providing real world graphic applications for your students. From dedicated vinyl cutters for signage and apparel, to wide format inkjet printer/cutters for unique graphics and flawless photographic output, there's a Roland device to suit your classroom and design course needs.

VersaStudio BN-20 Desktop Printer/Cutter

One compact device for apparel, packaging, posters and more – features 8-channel printheads for outstanding photographic and vector output.

VersaCAMM® VSi Series Wide-Format Printer/Cutters

Available in 64-inch, 54-inch or 30-inch models, they produce professional graphics across a wide range of applications and include Metallic, White, Light Black and Clear ink options.

GS-24 Desktop Cutter

Create specialty signs and apparel with the most versatile vinyl cutter ever – cuts thick media and offers perforation options for cutting and prepping individual presentations.

For more info on our inkjet printers and cutters, visit www.rolanddga.com/products/printers

Purchase a Roland and Invest in Superior Reliability and Support

Roland is built on the highest standards of customer service and support. With extensive warranty coverage of your device, free performance upgrades and the absolute best support in the industry, we ensure that your device is always producing and always supporting student education.

PRODUCT SPECIFICATIONS

GS-24

Driving method	Digital control servo motor
Cutting method	Media-moving method
Loadable material width	2 to 27-1/2 in. (50 to 700 mm)
Maximum cutting area	22.9 (W) x 984.25 (L) in. [25000 mm (W) x 584 mm (L)]
Cutting speed	.4 in. to 19.69 in/s (10 to 500 mm/sec) (all directions)
Blade force	30 - 350 gf
Mechanical resolution	0.000492 in./step (0.0125 mm/step)
Dimensions	33.9 (W) × 12.56 (D) × 9.17 (H) in. [860 (W) x 319 (D) x 235 (H) mm]
Weight	29.77 lbs. (13.5 kg)

BN-20

Print resolution	Maximum 1440 dpi
Printing/cutting width	Maximum 18.9 in. (480 mm)
Ink cartridges	Roland Eco-Sol MAX ink / FPG Aqueous ink
Capacity	5 cartridges: 220 ml ± 5 ml
Color	5 Colors ([Eco-Sol MAX] Cyan, Magenta, Yellow, Black, Metallic Silver), 5 Colors ([Eco-Sol MAX] Cyan, Magenta, Yellow, Black, White), 4 Colors ([Eco-Sol MAX] Cyan, Magenta, Yellow, Black) OR 4 Colors ([FPG Aqueous] Cyan, Magenta, Yellow, Black)
Cutting force/offset	30 to 300 gf / Fixed offset
Dimensions	39.2 (W) x 23 (D) x 11.5 (H) in. [995 (W) x 585 (D) x 291 (H) mm]
Weight	77 lbs. (35 kg)

MDX-540 (base model)

Acceptable material	Plastics (ABS, Delrin/Acetal, Nylon, Acrylic), tooling board, wood, modeling wax and non-ferrous metals.
Maximum work area	19.7 (X) x 15.7 (Y) x 6.1(Z) in. [500 (X) x 400 (Y) x 155 (Z) mm]
Milling area w/optional rotary axis (ZCL-540)	12.7(L) X 7.0 (Dia.) in. [325 (L) x 177.8 (Dia.) mm]
XYZ-axis drive system	AC servo motor 60W
Feed speed	295 in./min (7.5 m/min)
Positioning accuracy	+/-0.004 in. /12 in. (+/-0.1 mm/300 mm), under no-load conditions
Repeat accuracy	+/-0.002 in. (+/-0.05 mm)
Spindle motor	400 W DC Brushless Motor
Spindle speed	400 - 12,000 rpm
Dimensions	29.3 (W) x 37.6 (D) x 33.8 (H) in. [745 (W) x 955 (D) x 858 (H) mm]
Control command set	RML-1, NC-Code
Weight	225 lbs. (102 kg)
Bundled software	VPanel, SRP Player, 3D Engrave, Dr. Engrave

		LEF-12	LEF-20
Printing resolution		Maximum 1440x720 dpi	
Acceptable media	Width	Maximum 13.2 in. (335 mm)	Maximum 21.2 in. (538 mm)
	Depth	Maximum 12.2 in. (310 mm)	Maximum 14.2 in. (360 mm)
	Thickness	Maximum 3.94 in. (100 mm)	Maximum 3.94 in. (100 mm)
Printing area		Maximum 12x11 in. (305x280 mm)	Maximum 20x13 in. (508x330 mm)
Ink cartridges		Roland Eco-UV inks; 6 cartridges - 220 ml (± 5 ml); 6 colors (Cyan, Magenta, Yellow, Black, White and Clear); CMYK+White+Clear	
Printing method		Piezoelectric inkjet / Table feed system	
Dimensions		39.3 (W) x 34.2 (D) x 21.5 (H) in. [998 (W) x 867 (D) x 546 (H) mm]	47.4 (W) x 37.9 (D) x 21.7 (H) in. [1,202 (W) x 962 (D) x 549 (H) mm]
Weight		187.4 lbs. (85 kg)	242.5 lbs. (110 kg)

		VS-640I	VS-540I	VS-300I
Printing resolution		Maximum 1,440 dpi		
Acceptable media	Width	Maximum 8.25 in. - 64 in. (210 mm - 1625 mm)	Maximum 8.25 in. - 54 in. (210 mm - 1371 mm)	Maximum 7.2 in. - 30 in. (182 - 762 mm)
	Thickness	Maximum 39 mil (1.0 mm) with liner for printing; Maximum 16 mil (0.4 mm) with liner and 9 mil (0.22 mm) without liner for cutting		
Printing area		Maximum 63 in. (1,600 mm)	Maximum 53 in. (1,346 mm)	Maximum 29 in. (736 mm)
Ink cartridges		Roland ECO-SOL MAX 2 INK: Capacity 220 cc for White and Metallic or 440 cc CMYK Lc Lm Lk; Colors CMYKCMYK, CMYKLcLmLk, CMYKLcLmLk+Wh, CMYKLcLmLk+Mt, CMYKLcLm+Wh+Mt		
Printing method		Piezoelectric inkjet		
Dimensions		101.4 (W) x 31.3 (D) x 50 (H) in. [2575 (W) x 795 (D) x 1270 (H) mm]	91.1 (W) x 31.3 (D) x 50 (H) in. [2315 (W) x 795 (D) x 1270 (H) mm]	66.9 (W) x 31.3 (D) x 50 (H) in. 1700 (W) x 795 (D) x 1270 (H) mm)
Weight		308.6 lbs. (140 kg)	286.6 lbs. (130 kg)	220.5 lbs. (100 kg)

ARM-10

Build technology	DLP layer projection system
Build size	5.1 (W) x 2.7 (D) x 2.7 (H) in. [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 in. (0.2 mm)
Z axis resolution	.0004 in. (0.01 mm)
Acoustic noise level	During operation: 55 dB (A) or less, During standby: 49 dB (A) or less
Dimensions	17.0 (W) x 14.4 (D) x 17.8 (H) in. [430 (W) x 365 (D) x 450 (H) mm]
Weight	37.5 lbs. (17 kg)
Bundled software	monoFab Player AM software

SRM-20

Acceptable material	Plastics (ABS, Delrin/Acetal, Nylon, Acrylic), tooling board, wood, modeling wax and PC board.
Maximum work area	8 (X) x 6 (Y) x 2.38 (Z) in. [203.2 (X) x 152.4 (Y) x 60.5 (Z) mm]
Distance from collet tip to table	Maximum 5.15 in. (130.75mm)
Table size	9.14 (X) x 6.17 (Y) in. (232.2 (X) x 156.6 (Y) mm)
Loadable workpiece weight	4.4 lbs. (2 kg)
XYZ-axis drive system	Stepping motor
Feed speed	0.24 – 70.87 in./min (6 – 1800 mm/min)
Software resolution	0.00039 in./step (RML-1), 0.000039 in./step (NC code) (0.01 mm/step (RML-1), 0.001 mm/step (NC code)
Spindle speed	3,000 to 7,000 rpm
Tool chuck	Collet method
Control command sets	RML-1, NC-Code
Dimensions	17.76 (W) x 16.80 (D) x 16.78 (H) in. [451.0 (W) x 426.6 (D) x 426.2 (H) mm]
Weight	43.2 lbs. (19.6 kg)
Bundled software	VPanel for SRM-20, SRP Player, MODELA Player 4, iModela Creator, Virtual Modela, ClickMill and SFEdit2

MDX-40A

Acceptable material	Plastics (ABS, Delrin/Acetal, Nylon, Acrylic), tooling board, wood, and modeling wax
Maximum work area	12 (X) x 12 (Y) x 4.13 (Z) in. [305 (X) x 305 (Y) x 105 (Z) mm]
Distance from collet tip to table	Maximum 4.84 in. (123 mm)
Table size	12 (W) x 12 (D) in. [305 (W) x 305 (D) mm]
Loadable workpiece weight	8.8 lbs. (4 kg)
XYZ-axis drive system	Stepping motor
Feed speed	XY-axis: 0.28 to 118 in./min (7 to 3,000 mm/min) Z-axis: 0.28 to 70.8 in./min (7 to 1,800 mm/min)
Software resolution	NC-code: 0.000039 in./step (0.001 mm/step), RML-1: 0.00039 in./step (0.01 mm/step)(RML-1)
Spindle speed	4,500 to 15,000 rpm
Tool chuck	Collet method
Control command sets	RML-1, NC-Code
Dimensions	26.4 (W) x 30 (D) x 21.9 (H) in. [669 (W) x 760 (D) x 554 (H) mm]
Weight	144 lbs. (65 kg)
Bundled software	VPanel, SRP Player, ClickMill, 3D Engrave, Dr. Engrave

Contact a Dealer for the Best Equipment and Support in the Industry

Roland educational equipment providers support STEM/STEAM programs with tutorials and ready-to-teach projects that make it easy for educators to get students learning immediately.

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