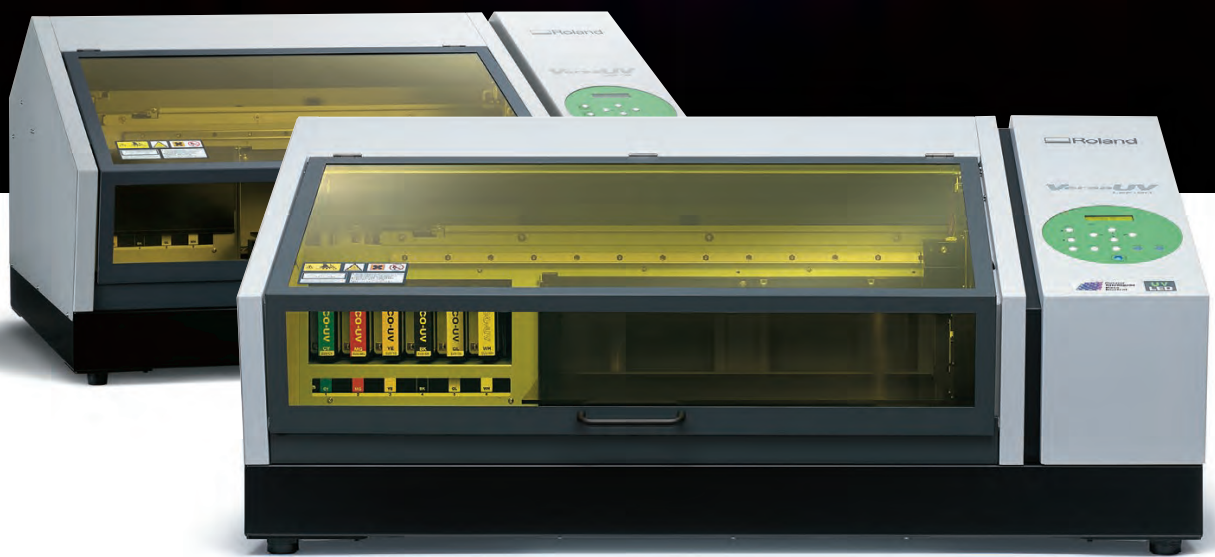




MAGICAL PRINTS. AMAZING PROFITS.



 **Roland®**



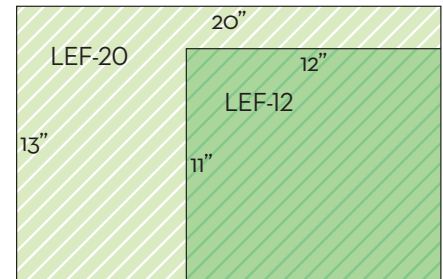
Some call it magic. We call it superior UV-LED technology.

Introducing the amazing LEF benchtop UV flatbed printers. Print directly on dimensional objects such as awards, giftware, packaging and products with spectacular results. With the LEF, you get all the benefits of Roland's award-winning UV-LED technology, which cures inks instantly on just about any surface. Instant drying and flexible ECO-UV inks deliver high color density and a wide gamut for exceptional images print after print. Specialty inks, including white and clear, allow printing on clear, reflective and colored surfaces and finish graphics with dazzling embossing and varnishing effects.



Choose from two models.

The LEF-12 accommodates objects up to 12 inches by 11 inches and 3.94-inches thick. The LEF-20 prints on items up to 20 inches by 13 inches and 3.94 inches thick, and includes a host of advanced features.

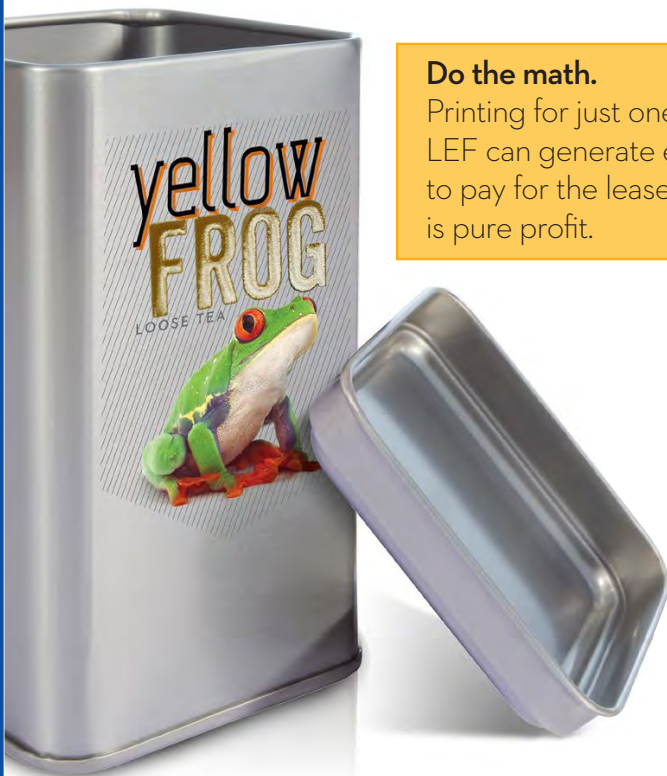


60 Golf Balls (printed on the LEF-20)

Inks	CMYK
Time to print	6 minutes
Blank items cost	\$39.60 (\$0.66 ea.)
Cost of ink	\$0.06
Cost to produce	\$39.66
Retail price	\$124.80 (\$2.08 ea.)
Profit per hour	\$851.40

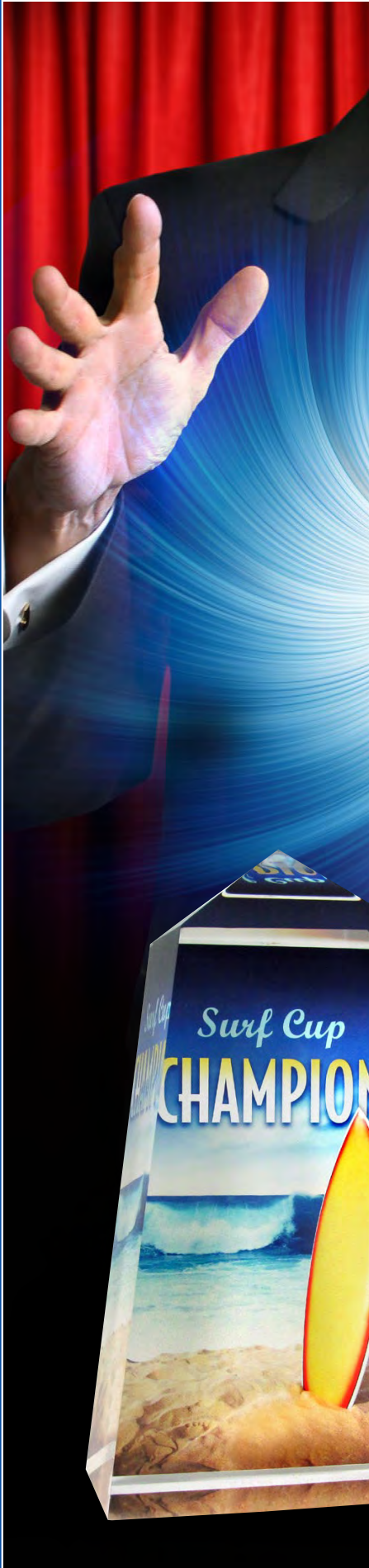
Do the math.

Printing for just one hour on the LEF can generate enough income to pay for the lease price. The rest is pure profit.



For videos of the LEF in action, visit www.rolanddga.com/lef.

 **Roland®**



Advanced LEF-20 Features

The new, larger LEF-20 offers many additional features that make it the most advanced and versatile printer in its class:

- Roland's next generation UV-LED curing system is included, which dramatically increases print speeds and enhances overall performance.
- A distance print mode ensures even more precise results on curved objects.
- Up to 20 job presets, versus 8 included in the LEF-12, allow you to select specific media settings for your most popular applications.
- Stainless height sensor bar allows for printing on magnetic items such as iPad covers.

Advanced ECO-UV® Inks for Maximum Performance

The LEF comes configured with CMYK, white and clear ECO-UV inks, specially formulated to deliver high color density and wide gamut for exceptional images print after print. Clear ink can be used to create a broad range of effects, such as simulated embossing and varnishing. By laying down multiple layers of clear ink, you can create truly unique textured effects from water droplets to faux leather and dozens of Roland Texture Library patterns.



Unsurpassed Media Compatibility Comes Standard

Advanced ECO-UV inks combined with low heat, state-of-the-art UV LED lamps enable the LEF to print on virtually any substrate – both treated and untreated – including PVC, PET, ABS, acrylic, wood, boards, metals*, soft fabrics, leathers and much more.

Laser Alignment System for Optimum Registration

The VersaUV LEF features a built-in laser alignment system for quick and easy setup of different materials. Aligning registration by bounding box or center point provides the flexibility to print on objects of all shapes and sizes. Whether it's a flat photo frame, curved golf ball or round coaster, you can automatically capture and process the setup information to ensure proper image placement.

Mist Filters Ensures Quality and Reliability

To ensure outstanding print quality around the curvatures of objects, mist filters are incorporated in the LEF, catching most residual ink that may mist when printing off the edge or curvature of a product. This cuts down on overspray and keeps the ink from settling on the printer's internal components. Filters are designed to be easily replaceable by the end user.

Designed for the Environment and Safety

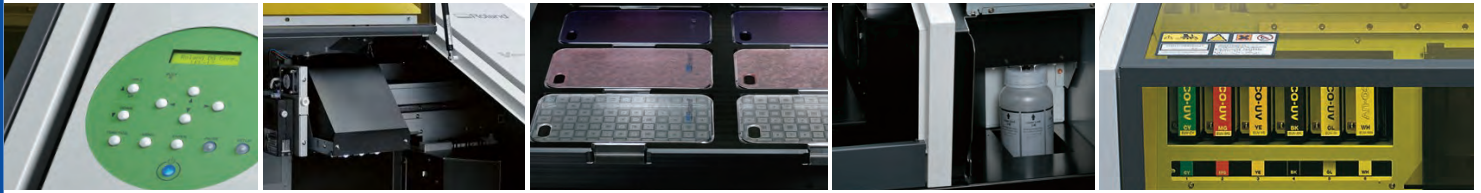
The VersaUV LEF features an LED lamp that is completely ozone-free and emits only UV-A light, making the LEF a safe and energy-efficient alternative to conventional UV printers. In addition, the LEF is fully enclosed, reducing the risk of UV light exposure to the eyes and skin while minimizing odor and limiting dust and debris. To ensure proper ventilation and reduce odor, Roland offers an optional BOFA air filtration system, custom built for LEF printers. This unit also doubles as a cart and storage unit for jigs, fixtures and supplies.

Includes Roland VersaWorks® RIP with Enhanced Productivity Tools

Based on the latest Adobe® CPSI engine 3019, VersaWorks is a true Adobe PostScript 3® RIP and can control up to four Roland devices at once.

VersaWorks comes with advanced features like PANTONE® libraries and the Roland Color System for spot color matching, Variable Data Printing for customized job output, and ink consumption and print time estimation for efficient productivity.

*Materials such as glass, metal, and others may require use of a primer to enhance ink adhesion.



VERSAUV® LEF SERIES UV FLATBED INKJET PRINTERS

- Print CMYK plus White and Clear inks directly on a wide variety of substrates, including three-dimensional items
- Long-lasting UV LED lamps are safe, energy efficient and generate minimum heat
- Advanced ECO-UV inks are instant-curing and flexible so they won't crack
- Patent-pending automated ink circulation system minimizes ink usage for cost savings
- Job presets allow you to recall specific settings instantly for your most popular applications: 8 presets for the LEF-12 and 20 presets for the LEF-20
- Roland VersaWorks® RIP software included
 - > Easy-to-use graphical user interface
 - > Roland Color and PANTONE® libraries for spot color matching
 - > Variable Data Printing
 - > Roland Texture Library for unique texture patterns
- Fully enclosed system reduces risks of UV exposure, keeps out dust and debris, and cuts down on residual ink odor
- State-of-the-Art UV LED Curing System
 - > LED lamp lasts up to 10,000 hours
 - > Low heat and highly energy-efficient
 - > Instant On/Off
- Two-Year Trouble-Free Warranty*

LEF-20 advanced features:

- Distance print mode for outstanding quality on curved objects
- Stainless steel height sensor allows printing on magnetic products
- New, advanced UV-LED curing system to expedite production
 - > 2x faster Clear ink and CMYK ink printing



VERSAUV LEF-12
12" UV FLATBED PRINTER
Shown with optional air filtration unit.**

VERSAUV LEF-20
20" UV FLATBED PRINTER

▶ For detailed features and specifications, visit www.rolanddga.com/lef.

PRODUCT SPECIFICATIONS

Model	LEF-20	LEF-12
Printing method	Piezoelectric inkjet / Table feed system	
Acceptable media	Width 21.2 in. (538 mm) Depth 14.2 in. (360 mm) Thickness 3.94 in. (100 mm) Weight 11 lbs (5 kg)	Width 13.2 in. (335 mm) Depth 12.2 in. (310 mm) Thickness 3.94 in. (100 mm) Weight 11 lbs (5 kg)
Printing area	20 x 13 in. (508 x 330 mm)	12 x 11 in. (305 x 280 mm)
Ink cartridges	Type Roland ECO-UV inks Capacity 6 cartridges - 220 ml (± 5 ml) Color 6 colors (Cyan, Magenta, Yellow, Black, White and Clear) Configuration CMYK+White+Clear	
Ink curing unit	Single UV LED Lamp	
Printing resolutions	Maximum 1440 x 720 dpi	
Distance accuracy	Error of less than ± 0.3 % of distance traveled, or ± 0.012 in (0.3 mm), whichever is greater	
Interface	Ethernet (10 BASE-T / 100 BASE-TX, automatic switching)	
Power-saving function	Automatic sleep feature	
Power supply	Voltage and frequency AC 100 to 240 V ± 10%, 50/60 Hz Required power capacity Maximum 1.8 A	
Power consumption	During operation 149 W Sleep mode 13 W	156 W 16.7 W
Outer Dimensions	47.4 (W) x 37.9 (D) x 21.7 (H) in. (1,202 (W) x 962 (D) x 549 (H) mm)	39.3 (W) x 34.2 (D) x 21.5 (H) in. (998 (W) x 867 (D) x 546 (H) mm)
Weight	242.5 lbs. (100 kg)	187.4 lbs. (85 kg)
Environment	Power on Temperature: 68° to 90°F (20° to 32°C) (72°F [22°C] or more recommended) Humidity: 35 to 80% (no condensation) Power off Temperature: 41° to 104°F (5° to 40°C) / Humidity: 20 to 80% (no condensation)	
Included items	Power cord, adhesive sheet, software RIP (Roland VersaWorks), user documentation	

Specifications subject to change. * Continuous exclusive use of Roland inks during the first two years of ownership is required to qualify for the free second year of limited warranty coverage. Additional Terms and Conditions apply. ** Room ventilation and air filtration are required. Please consult the MSDS for more guidance on the proper use and ventilation of ECO-UV inks.

Get social with us.



Imagine. 

FOR COMPLETE PRODUCT SPECIFICATIONS AND FEATURES, OR TO REQUEST A SAMPLE PRINT, CALL 800-542-2307 OR VISIT WWW.ROLANDDGA.COM/LEF
 ROLAND DGA CORPORATION | 15363 BARRANCA PARKWAY | IRVINE, CALIFORNIA 92618-2216 | 800.542.2307 | 949.727.2100 | CERTIFIED ISO 9001:2008
 RDGA-LEF-03 September 2013

Imagine.

 Roland®

 DVE
Digital Value Engineering



MAGIC BOX

VersaUV
LEF-20



Photo album



Engine ignition switch



Cosmetics packaging prototypes



Tablet case



Display



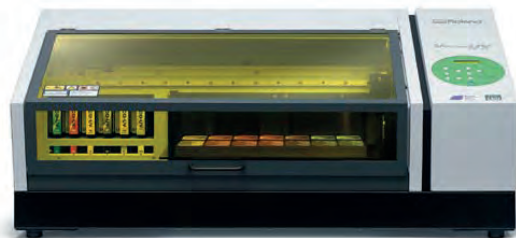
Welcome sign

Faster Production Bigger Print Area Better Return on Investment

Since its introduction, the revolutionary VersaUV LEF series has opened up new creative possibilities, enabling direct printing on an endless variety of substrates and three-dimensional objects. Now we have taken this technology to the next level. In addition to expanding the print area to 508 mm width by 330 mm in length, we have introduced a powerful new UV-LED lamp which dramatically increases productivity and overall performance. With the LEF-20, small-hot printing on demand is now easier than ever to achieve. You can print directly on products and their prototypes, souvenirs, novelty goods, industrial parts, and even consumer electronics items. To further increase your profits, the LEF-20 features a unique ink configuration that includes high-quality full-color printing, plus white and clear inks for premium special effects.

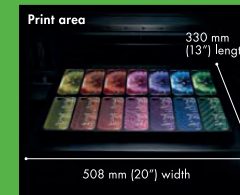
VersaUV

LEF-20



Greater print area and productivity

The LEF-20 features a significantly expanded print area that is approximately twice that of our previous model,* allowing you to print directly on objects up to 508 mm width, 330 mm length, and 100 mm in height. At 20 inches wide, the LEF-20 combines a new, more powerful UV-LED curing system, advanced ECO-UV ink, and optimized print control technology to bring greater productivity. Twenty built-in media settings are available as presets, allowing you to instantly select just the right settings for your most popular jobs. *VersaUV LEF-12



LEF-20's Increased Throughput Speed

CMYK	White	Gloss Varnish
LEF-20	LEF-20	LEF-20
1.37 m ² /h	0.79 m ² /h	0.58 m ² /h
Previous model 0.61 m ² /h	Previous model 0.31 m ² /h	Previous model 0.24 m ² /h

Exceptional print quality

Because the integrated UV-LED lamp instantly cures ink during printing, the LEF-20 can print directly onto materials such as PET, ABS, polycarbonate and TPU, as well as soft materials such as leathers and fabrics. Roland Intelligent Pass Control, our advanced printing technology, enables exceptionally smooth gradations and solid colors with virtually no banding in all print modes to deliver outstanding image quality with sharp images and text.



Premium special effects

The LEF-20 comes equipped with VersaUV's proprietary clear (gloss) ink. This ink allows the LEF-20 to produce premium quality prints with gloss and matte finishes, as well as thick prints with multiple layers of clear ink. For jobs involving transparent or dark colored materials, the LEF-20 features advanced ECO-UV high-density white ink and optimized print control technology which together yield approximately 1.4 times the opacity of our previous model.* *VersaUV LEF-12



Roland Texture System Library
The LEF-20 offers 72 ready-to-use texture patterns.

Ink combinations


 CMYK + Clear + White ink

User-friendly operation

The LEF-20 features an enclosed airtight cover to protect the operator from UV light and prevent dust from settling onto the surface of materials while printing. Also, the LEF-20's flatbed design automatically adjusts the distance between the print head and the surface of the material for optimum results.



Intuitive Roland VersaWorks® print management software

The LEF-20 includes Roland VersaWorks® software, which features an intuitive interface for easy operation and job management. Roland VersaWorks® allows the user to choose from two print modes, generic mode for printing fine detail, and distance mode for printing on curved surfaces. Variable data printing is also available, making it easy to personalize printed objects with serial numbers and names.



RIP & PRINT MANAGEMENT SOFTWARE
Roland VersaWorks®



VersaUV LEF-20



Specifications		
Printing technology	Piezoelectric inkjet	
Media	Dimensions	Maximum 538 (width) x 360 (length) x 100 (height) mm (21.2 x 14.2 x 3.94 in.)
	Weight	Maximum 5 Kg (11 lbs.)
Printing width and length	Maximum 508 (width) x 330 (length) mm (20 x 13 in.)	
Ink cartridges	Type and capacity	Roland ECO-UV 220 cc cartridge
	Colors	Six colors (cyan, magenta, yellow, black, white, and gloss)
Ink-curing unit	UV-LED Lamp	
Printing resolution (dpi)	Maximum 1440 dpi	
Distance accuracy *	Error of less than ±0.3% of distance traveled, or ±0.3 mm, whichever is greater	
Connectivity	Ethernet (10BASE-T/100BASE-TX, automatic switching)	
Power-saving function	Automatic sleep feature	
Power requirements	AC 100 to 240 V ±10%, 1.8 A, 50/60 Hz	
Power consumption	During operation	Approx. 149 W
	Sleep mode	Approx. 13 W
Acoustic noise level	During operation	60 dB (A) or less
	During standby	49 dB (A) or less
Dimensions	1202 (width) x 962 (depth) x 549 (height) mm (47.4 x 37.9 x 21.7 in.)	
Weight	110 Kg (242.5 lbs.)	
Environmental	Power on	Temperature: 20 to 32°C (68 to 90°F) (22°C/72°F or higher recommended), Humidity: 35 to 80% RH (non-condensing)
	Power off	Temperature: 5 to 40°C (41 to 104°F), Humidity: 20 to 80% RH (non-condensing)
Included items	Power cord, software RIP (Roland VersaWorks), and user's manual, etc.	

* Temperature: 25°C (77°F), humidity: 50%

Options		
	Model	Description
ECO-UV Ink	EUV3-CY	Cyan, 220cc
	EUV3-MG	Magenta, 220cc
	EUV3-YE	Yellow, 220cc
	EUV3-BK	Black, 220cc
	EUV3-WH	White, 220cc
EUV3-GL	Gloss, 220cc	
Cleaning liquid	SL-CL	1 pc.

Roland VersaWorks System Requirements	
Operating system	Windows® 7 Professional or Ultimate (32/64-bit); Windows Vista® Business/Ultimate (32/64-bit); Windows® XP Professional Service Pack 2 or later (32/64-bit)
CPU	Core™2 Duo, 2.0 GHz or faster recommended
RAM	2 GB or more recommended
Video card and monitor	A resolution of 1,280 x 1,024 or more recommended
Free hard-disk space	40 GB or more recommended
Hard-disk file system	NTFS format
Optical drive	DVD-ROM drive

*Roland VersaWorks® is a 32-bit application, which runs on 64-bit Windows® with WoW64 (Windows 32-bit on Windows 64-bit).

Optional deodorising system



An optional deodorising system is available for the LEF-20. This includes an activated carbon filter which effectively removes the odour and volatile substances that occur during printing. This unit can be placed easily underneath the LEF-20.



Vaporized components may slightly irritate the eyes, nose and/or throat during and following printing with this product. If continuously printing in a closed space, the density of volatile compositions will accumulate and may irritate the eyes, nose and /or throat. Roland strongly recommends that you install a ventilation system and use this product in a well-ventilated room. For more information, please contact your local distributor or dealer.

About White Ink Due to the nature of white ink, the pigment will settle in the cartridge and ink flow system, requiring you to shake the cartridge before each use.

Roland DG products that feature this environmental label meet the company's criteria for environmental consciousness, a set of standards based on ISO 14021 self-declaration type II. For more information, please visit www.rolanddg.com.



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