

# Karibu

High-End UV-LED roll to roll printer





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# Karibu, the unique roll to roll printer

There are plenty of roll to roll printers around, but Karibu is unique among them. The highest possible usability was a major development consideration: we sought to give users and businesses a tool that will bring them a competitive edge and also be a pleasure to work with.

## Get to your print more efficiently

A printer that is just as intuitive to operate as the new output software. A cassette system for fast loading and changing of rolls. The built-in Light Box for immediate and continuous quality control of backlit prints. Thanks to the Mesh Kit, printing mesh is effortless and clean with no liner necessary. And with the Lory output software, you can also adjust print parameters post RIP.

## Get to your print more reliably

Karibu is precise, robust and durable, as expected of its swissQprint DNA. The same with regard to excellent energy efficiency - although this is only one of the reasons for the exceptionally low total cost of ownership. Another: extremely high system availability thanks to minimal maintenance requirements.

## Get to print more applications

Cool LED technology gives you extensive freedom of choice in materials. The newly developed ink set adds an extra touch: specially made for roll printing, it offers impressive flexibility, adhesion and a large color gamut. With a formulation that is friendly to health and the environment (Greenguard Gold certified), printed products are even allowed into hospitals.



## First-class heritage

swissQprint large format printers contain 100 percent Swiss engineering and machine-building work. Now in Karibu, the latest technologies meet up with over 20 years of development experience. At our headquarters, people with inventive minds have designed and produced the entire system: from the mechanics to the control system and the output software. Each element is carefully matched to the cleverly thought-out whole.

Our internal lines of communication are short, which makes us agile and effective. Working right next door to the development department, our production team assembles each printer by hand. In the case of Karibu, from around 2000 individual parts, over 90 percent of which come from Switzerland.

swissQprint stands for precision, reliability and durability.



## Karibu

Exceptional features make this roll to roll printer the epitome of efficiency and ease of use. Karibu processes virtually any roll material, accurately and reliably, with impeccable print quality. All so typically swissQprint.



Max. productivity 2282 ft<sup>2</sup>/h  
Colors CMYK + 5 colors  
Max. print width 133"  
Max. roll weight 440 lb





## Cassette system

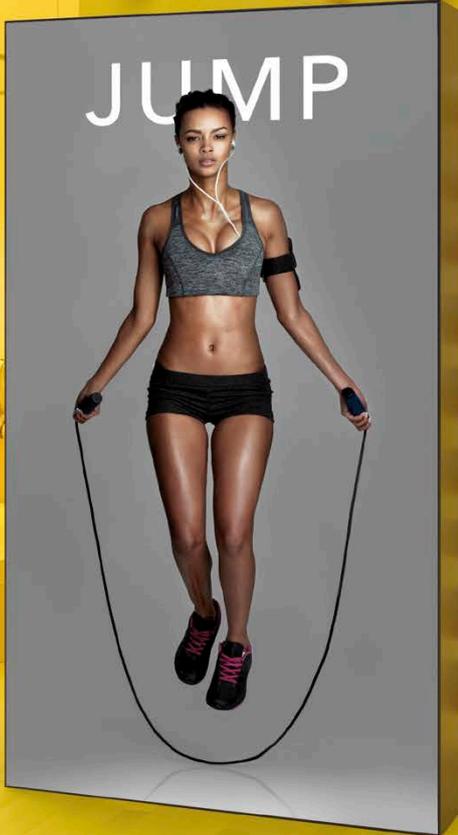
Any roll is loaded and ready to print within minutes, following just a few simple steps. Changing from one job to the next is equally fast, no matter how different they may be. Even novice users can easily operate the cassette system:

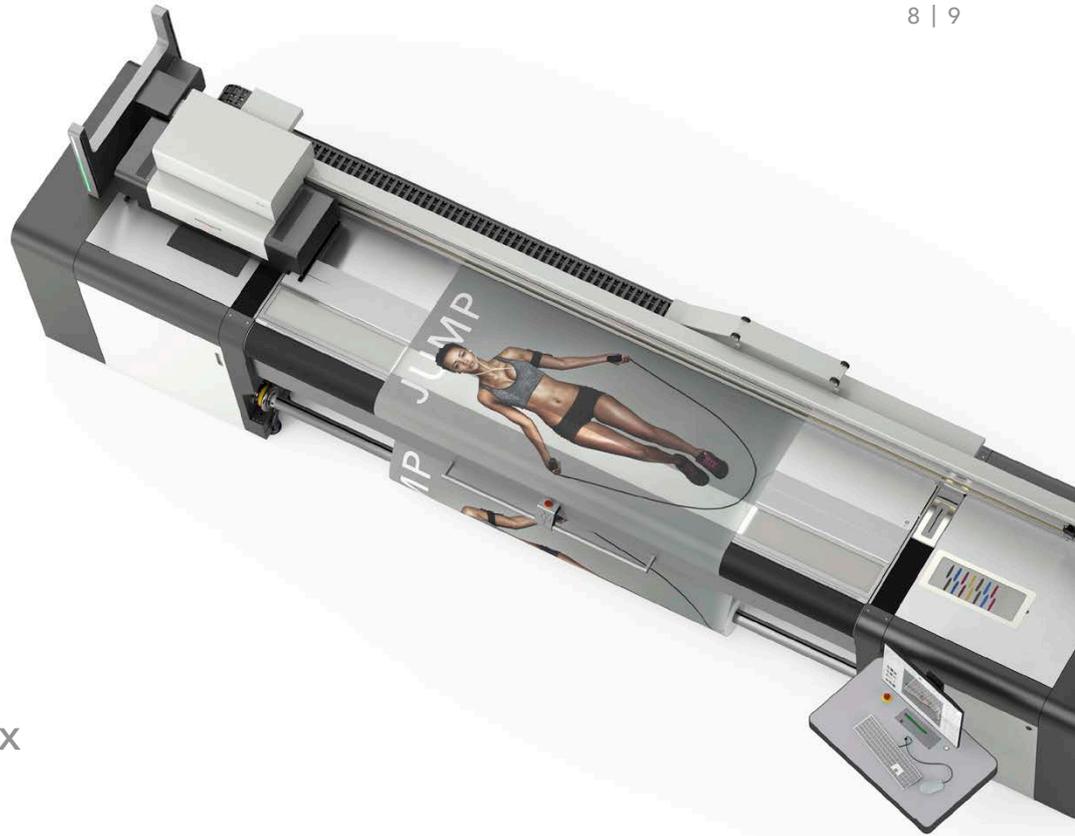
Slide the material onto the pneumatic roll holder, center and secure it. Then pull a length of material over the print bed, secure it to the empty cardboard core at the front and close the cassettes on both sides. Now the only thing left to do is enter printing and material parameters into Lory, the output software, and production can start.

Sensors and controllers inside the cassettes ensure correct web tension from the first to the final inch on the roll. The operator can easily switch to other tasks meanwhile, or simply take a break while counting on Karibu to do a great job.



Karibu - for fast and dependable roll handling





## Light Box

Karibu is a specialist at producing backlit prints. Especially since this roll to roll printer - like all swissQprint machines - is a champion at precise droplet positioning. In addition, it offers high-resolution print modes in various increments.

For quick and convenient quality control of backlits, the Light Box is right next to the printing area. So should optimizations prove necessary, neither much material nor time has been lost.

The Light Box is divided into 48 LED segments. The system illuminates only the exact number required for the defined roll width. And if on occasion that is still dazzling due to the design being printed, they can be dimmed.



Karibu - for convenient,  
on-the-spot inspection of backlits



AQUA  
YOUR FRAGRANCE

The billboard features a clear glass perfume bottle with a gold cap on the left, labeled 'AQUA'. To the right is a close-up portrait of a woman with long, wavy, light brown hair and blue eyes, looking directly at the camera with her hands clasped. The background of the billboard is a plain, light beige color.





## Mesh Kit

Karibu makes it a pleasure for you to include full bleed prints and prints on permeable substrates in your offering. Both are clean and simple, using the Mesh Kit integrated with the print bed. All you need to do beforehand is send the beam from the standard to the mesh position. That's it.

The Mesh Kit contains two rolls of paper that absorb excess ink. Don't worry, the paper will never soil the substrate from below: first, it is slightly recessed and second, the absorbed ink cures during printing. Moreover, the paper moves along in conveyor belt fashion. All you need to do is occasionally change the full paper rolls, at the earliest after 1970 linear foot of production. Cleaning is unnecessary.



Karibu – for clean and efficient mesh printing





## Single or dual rolls

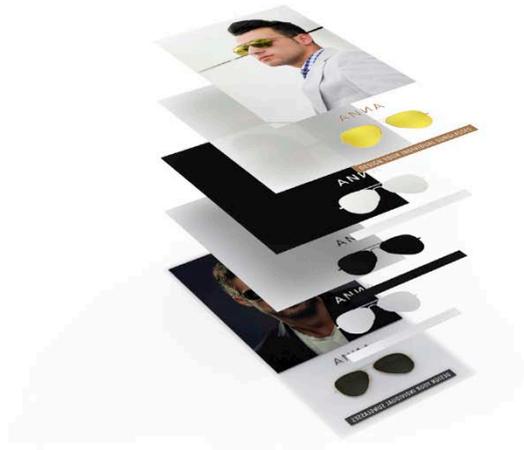
Karibu accepts rolls up to 133 inch wide and processes any job precisely and reliably. It becomes especially interesting if you routinely process narrower rolls up to 64 inch wide. Then you have a simple way to double your output by loading two side by side.

For this, Karibu has a dual roll option that allows parallel production of two identical or different designs. Only the material thickness and print resolution need to be the same. Sensors and the control system continuously ensure optimal tension in both rolls, for impeccable parallel production.



Karibu - for optimum productivity





## Multilayer printing

Do you print window films or other transparent media, maybe with double-sided images and text? Then you will like multilayer mode. Whether mirrored, identical or different, Karibu prints multilayer designs on the medium with accurate registration. There is no chance of bleed-through because all the layers are printed in one go.

White plays a crucial part in multilayer printing: as overprint (color + white) or underprint (white + color), for day and night applications (color, white, color) or for five-layer prints (color, white, blocker, white, color). Karibu easily handles them all.



Karibu – for registration accuracy  
in multilayer printing

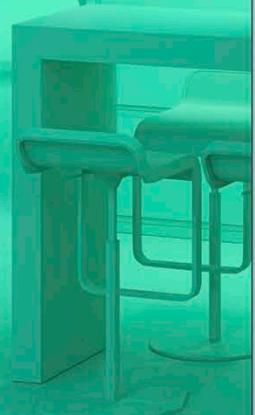
# PRIMA

Print + Material



PRINT  
INTO THE  
FUTURE

CONCEPT  
DESIGNER: [unreadable]  
[unreadable]  
[unreadable]  
[unreadable]  
[unreadable]  
[unreadable]  
[unreadable]





## Tip Switch Vacuum

Operators will become vacuum virtuosos. Because it feels like playing the piano - only you need just one finger: run it over the vacuum tip switches across the print bed width and open all 136 vacuum channels in just four seconds (patent pending). Once the roll is loaded, do the same to shut off channels to its left and right. And in the case of dual rolls, also the channels in the gap between them.

Masking is now a thing of the past as you can switch the vacuum on or off in very small segments to avoid leaks. This allows the vacuum to develop its full force exactly where needed and securely hold down the substrate. To help you keep track, each switch has a green and red indicator to show its open or closed status.

Incidentally, setting the vacuum is just as easy as the mechanical adjustment of it. It is done via Lory, the output software, which also ensures reliable feeding of material in combination with the machine control system.



Karibu - for effortless  
vacuum control



## Lory, the output software

The output software is intuitive, logical and process oriented. Helpful tools and features help you work productively and efficiently. You have a great deal of freedom before pressing the start button. Even settings are possible that would normally require a new RIP run. You constantly keep track of things via the graphical user interface.

Just like Karibu, Lory is a 100 percent swissQprint in-house product. Based on decades of experience, designed and implemented throughout as a state-of-the-art software solution. We worked closely with RIP vendors during development. As a result, Lory integrates with end-to-end workflows and you exploit the full potential of process optimization.

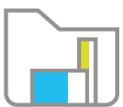
Lory is based on modern software architecture, so it is robust and open for the future. This in turn is a tremendous motivation for our software engineers, priming them to address and implement new market requirements as they arise. That means you as a user have the all-round optimal solution for today and tomorrow.





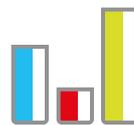
## Graphical user interface

Assemble jobs by drag-and-drop onto a virtual roll. You receive continuous visual feedback to get the most out of your substrates. You also stay flexible: Lory is there to assist should you decide to print a single design multiple times on one roll, or maybe cluster several different designs. And all of this without going back to the RIP.



## Material database

Lory includes a database of materials tested by swissQprint, and is readily extensible with ones you keep in stock. Once configured, each material can be retrieved again and again. Lory then sends parameters such as web tension, vacuum and material thickness to the machine controller. This reduces setup time and assures process reliability.



## Statistics

Lory logs the complete job history. The data collected provides information for operational and order-related final costing: ink consumption, number of square meters printed, printing time per job or time period, etc. The economist in Lory thus supports you in optimizing added value.

## Colors



## UV inks

Karibu prints using UV inks specially developed for roll printing, with a large color gamut. They are flexible and adhere to all common materials: backlit media, textiles, vinyl films, banners, mesh, wallpaper and many more.

We attached great importance to environmental and health compatibility in their formulation. The inks are low-odor and therefore pleasant to use. They contain no NVC, a toxic compound found in many conventional UV inks.

Karibu ink is Greenguard Gold certified, which means that it meets strict criteria for the safety of susceptible individuals such as children, the elderly and the sick. Accordingly, the printed products are fine for use in schools and healthcare facilities. An opportunity for you to target new segments.





## Process colors

Inkjet printing is as colorful as the world around us. The CMYK that comes as standard with all swissQprint systems is expandable, either when a printer is initially equipped or later when the requirements change. Nine freely configurable color channels are available.



## Light colors

Light cyan, light magenta and light black reproduce natural skin tones, subtle gradients and shading. For fine art productions that live up to their name.



## White

White puts media in the scene. For transparent films where white serves as the base, intermediate or top layer. For colored and dark substrates where white is used as spot color.



## Varnish

Effect varnish creates visual impressions. Both when applied selectively - for example in a wallpaper design - or overall, as a surface finish.

## Special features

### X-Control

Karibu's beam is movable between two defined positions: standard and mesh. With small adjustments, it can also compensate feed errors. Moreover, X-Control facilitates a flatbed-like printing mode for test prints - simply lay the material on the printer, rather than having to load a roll.



### Profitable LED technology

LED curing is cool. This means heat-sensitive media can join the portfolio and open up lucrative markets. LED lamps are always ready to go, with neither a warm-up nor a cool-down time. In addition, they are mechanically robust and maintenance-free. LED also pays dividends due to high system availability and low maintenance requirements.



### Certified energy efficiency

swissQprint LED systems are all proven to be highly energy efficient (ISO 20690:2018). As an owner, you can not only reckon with low operating costs but also look forward to conserving valuable resources.



## Economical and environmentally friendly

With swissQprint, you can print with a clear conscience. Zero harmful constituents and ozone, barely any rejects or waste, and modest maintenance requirements keep the environmental footprint small.



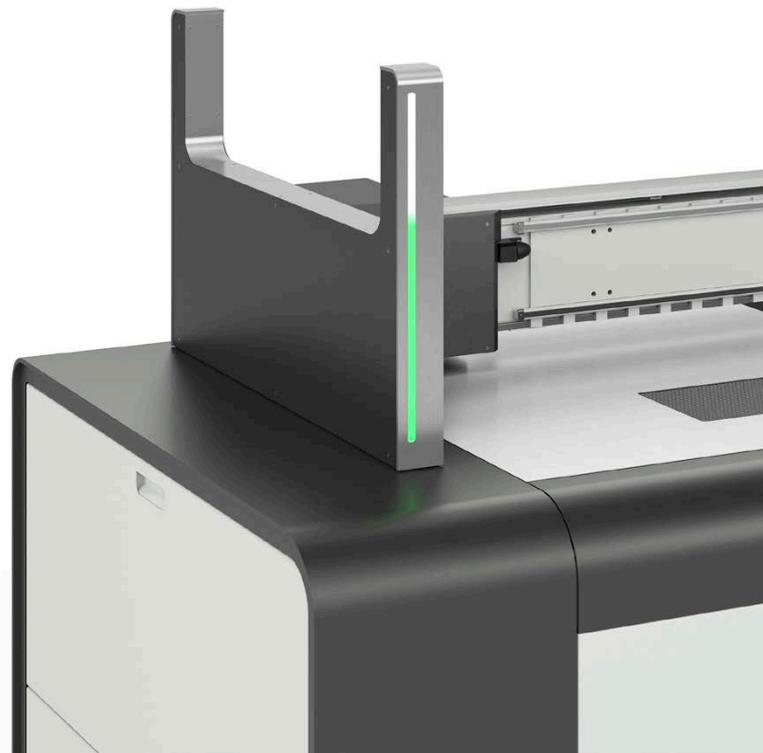
## Constant print quality

swissQprint large format printers comply with the Fogra PSD. They can integrate with a PSD workflow and deliver constant print quality with faithful color results.



## Total control

The operator can keep an eye on Karibu from anywhere in the printing room, thanks to two status indicators at each end of the print beam. Bar displays light up in various colors to communicate the machine status and printing progress.

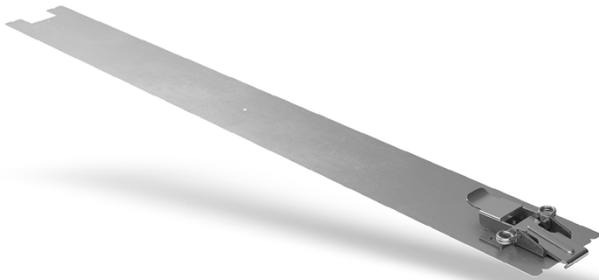


## Special features



## Safety for people and processes

Should something or someone breach the light curtain surrounding the beam, the print head carriage slows down to warn as well as protect the operator. Meanwhile, printing continues. There is no loss of time or material.



## Edge restraints

Stainless steel edge holders prevent crashes and interruptions to operation by keeping wavy material edges flat, with both single and dual rolls.



## No crushing crashes

Crash Sensor Technology prevents damage and rejects if the material thickness was entered incorrectly or edges of the material are sticking out, for instance. The print head carriage stops if there is a hazard, and later continues at the exact pass position.



## Clean cut

The print bed incorporates a cutting channel that provides a defined trimming edge. So, out with the cutter and slice it through. The printed roll is cleanly detached, ready for finishing and delivery. And the rest is ready for the next job.



## Precise droplet placement

The material and the environment together generate an electrostatic charge. Antistatic units on the machine neutralize it, so that the tiny ink droplets land exactly where they should and produce an impeccable overall image.

## Resume printing after a crash

Despite all precautions, there has been a crash, and that on the final few inches? It's not the end of the world. Via the output software, the operator resumes printing at the exact point where it stopped - and saves the day.



# Technical specifications

## Print dimensions

Print area	133"
Material thickness	maximum 0.12"
Roll width	maximum 133" / dual roll 2 × 64"
Roll weight	maximum 440 lb <sup>1</sup> / dual roll 400 lb each
Roll diameter	maximum 15" pneumatic roll holder for 3" core diameter

## Resolution

Variable drop sizes	9 - 42 picoliters
Addressable resolution	360 dpi - 1080 dpi
Visual resolution	up to 2160 dpi

## Print technology

Piezoelectric inkjet technology (DOD)	✓
Binary or greyscale	✓

## Software / RIP

Output software on integrated PC	✓
Caldera RIP server (Linux or macOS), other RIPs available	✓
Interface (data)	Fast Ethernet 1000 Base-T

## Software features

Step and Repeat/Shadow files	✓
Multilayer	✓
Material & Quality database	✓
Statistics / Ink consumption	✓

## Colors

Color channels	maximum 9
Print heads	maximum 18
Print heads per channel	1 or 2
Light cyan, magenta, black	✓
White	✓
Varnish	✓

<sup>1</sup> Optional carbon roll holder for heavy rolls >220 lbs or narrow rolls >2.8 lbs/inch roll width

**Inks**

Integrated ink supply	CMYKcmk in 5 liter containers / white and varnish in 5 or 1 liter containers
White feed and maintenance system	fully automated
Low-odor UV-curable inks	✓
Optimized for flexible media	✓
Indoor and outdoor applications	✓
Solvent-free (no VOCs)	✓
NVC-free	✓
Greenguard Gold certified	✓

**Dimensions and weight**

Dimensions (L x W x H)	53.5 x 250.4 x 65"
Weight	4409 - 4630 lb (depending on configuration)
Safety standards	complies with applicable directives

**Installation environment**

Power supply	3 x 400V, 3L+N+PE (50/60 Hz) 3 x 480V, 3L+N+PE (60 Hz) 3 x 208V, 3L+PE (50/60 Hz) Excellent energy efficiency according to ISO 20690:2018
Compressed air	DIN ISO 8573-1 class 3.4.2, 0.7 ft <sup>3</sup> /s @ 87 psi
Temperature range	+59 °F to +86 °F
Relative humidity	35 % to 80 % non-condensing

**swissQprint**

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