

Product Portfolio

High-End LED Inkjet Systems



swissQprint

State-of-the-art large format printers

swissQprint large format printers are versatile in use and make practically any idea a reality. With their modular structure and expandability, they are able to grow along with your business. Solid Swiss mechanical engineering makes them precise and reliable. After all, they contain over 20 years of inkjet printing expertise. Which also explains why they are both user and environmentally friendly, as well as champions at creating added value.

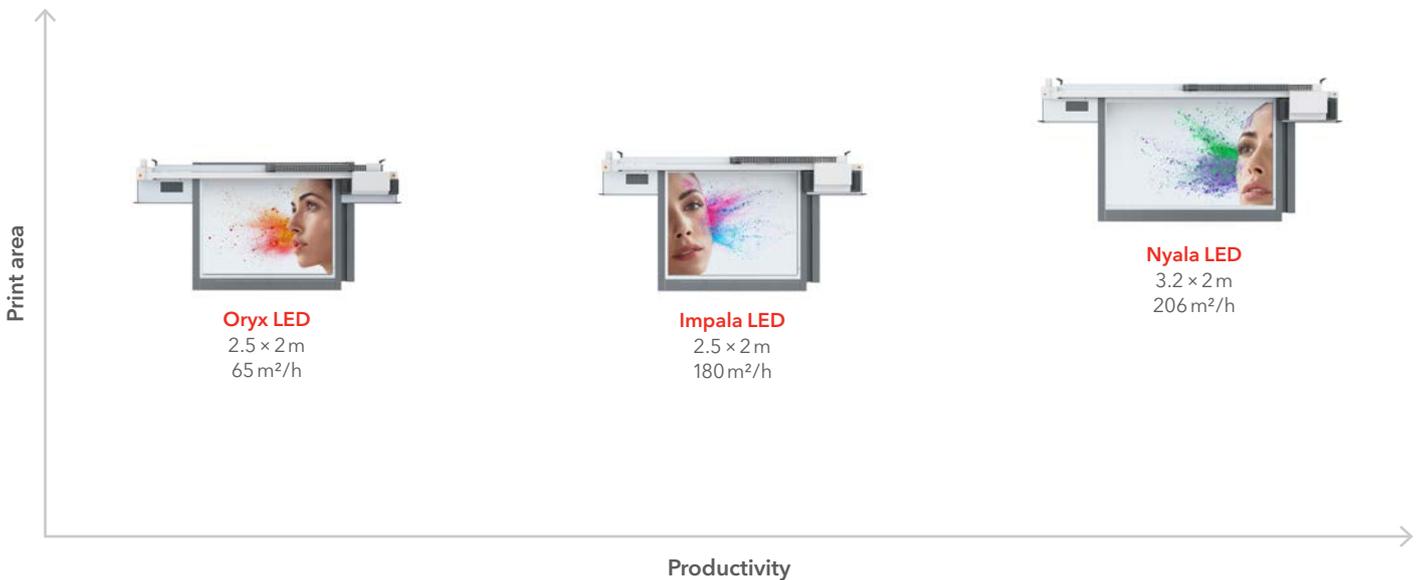
Productivity

Print mode	Oryx LED	Impala LED	Nyala LED
Draft	65 m ² /h	-	-
Speed	40 m ² /h	180 m ² /h	206 m ² /h
Production	20 m ² /h	90 m ² /h	103 m ² /h
Quality	14 m ² /h	48 m ² /h	54 m ² /h
Fine art	9 m ² /h	28 m ² /h	32 m ² /h

Productivity with 1 × CMYK configuration (Oryx LED) or 2 × CMYK (Impala LED / Nyala LED)
Approx. 10% less with roll to roll

Tailor made

Each swissQprint machine is unique. The flatbed forms the basis for building a customised configuration. And the beauty is: the printer stays open to change. If necessary, it can be extended with options so that users always have exactly the solution they need.



Nyala LED

Versatile in terms of formats and media. Hugely capable. Highly economical.



Max. productivity 206 m²/h

Channels maximum 9

Print area 3.2 × 2 m

Impala LED

Compact and efficient. Surprisingly multi-talented. Economical operation and maintenance.



Max. productivity 180m²/h

Channels maximum 9

Print area 2.5 × 2 m

Oryx LED

Precise and reliable. Versatile and expandable. Light on costs and resources.



Max. productivity 65 m²/h

Channels maximum 9

Print area 2.5 × 2 m

Features



Media diversity

Acrylic, aluminium composite panels, wood, tarpaulin, polyester, polycarbonate, polystyrene, (high-density) PVC, flexible foam panels, glass and metal - all routine work with swissQprint. Printing onto difficult, heat-sensitive materials such as textiles, films and paperboard is equally stress-free.



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 colour results.

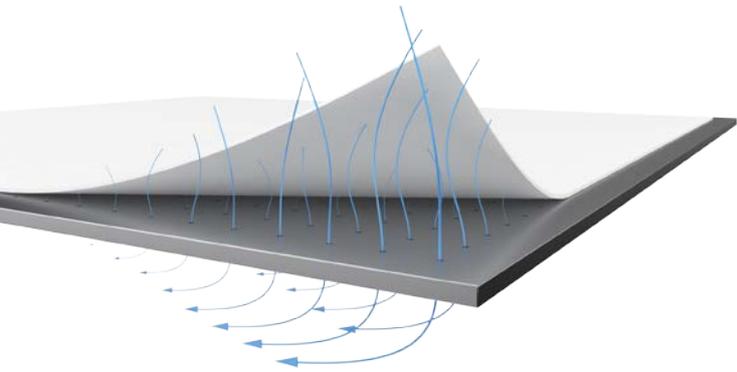


Profitable LED technology

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.

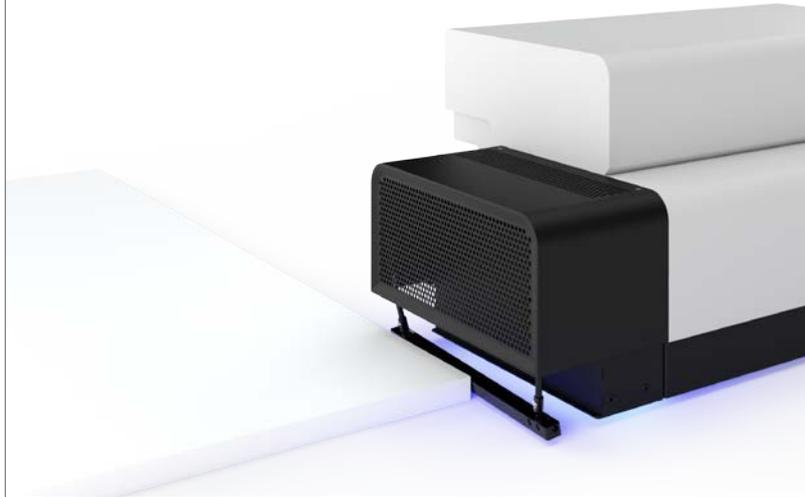
Clever media retention

A powerful vacuum holds substrates flat and firmly in place. The vacuum system is split into two sections and is steplessly adjustable along the width for a minimum of masking. Suction is freely adjustable, yet reduces as soon as there is sufficient negative pressure to cut down on noise and wasted energy. The system can also blow, so heavy media float across the table. This makes for effortless positioning.



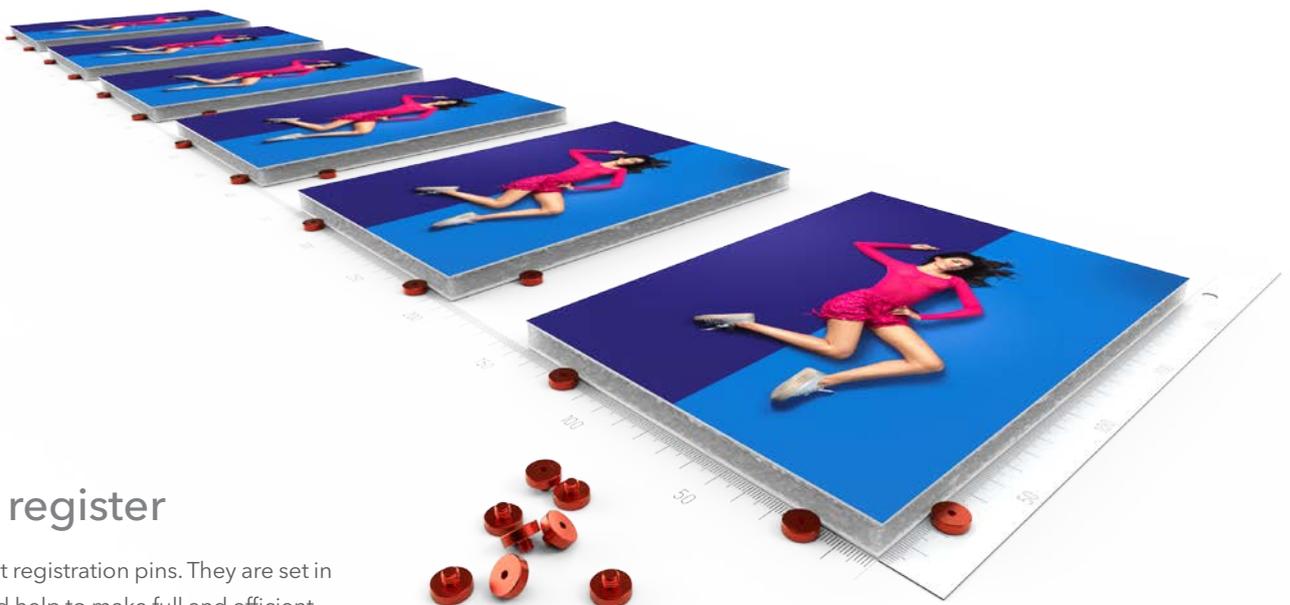
No crushing crashes

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



Exact register

swissQprint registration pins. They are set in no time and help to make full and efficient use of the print bed. Pegged onto a fine grid, they provide precise mechanical anchors for any format. Used in concert with the flip function, they even allow double-sided printing with absolute registration accuracy.



Features



Just repeat

Printing a series of identical or different subjects with no additional RIP process? Nothing could be simpler with the 'step and repeat' and 'shadow files' functions included in the output software. Just select the files, enter the number of repetitions desired, and off it goes.



Safety for people and processes

Should something or someone breach the light curtain at 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.



Print 3D effects

droptix means 3D visual effects using transparent media. Produced by printed lenses that work like a magnifying glass. The eye-catcher par excellence. swissQprint Kea software assists with data preparation.

Worth seeing from both sides

Transparency can be highly effective: multilayer printing comprised of process colours, foundation layer, blocking layer, foundation layer, and process colours again. And it is so easy to achieve. The layers are printed in one pass, by the way. So they overlap exactly - no chance of bleed-through.



Visual and tactile enhancement

Effect varnish lends printed items that certain extra. The scope is vast: printed selectively or across the whole expanse, as a light or heavy layer, with a matte to high-gloss finish - everything is possible. Various printing modes are on hand to assist.



Economical and environmentally friendly

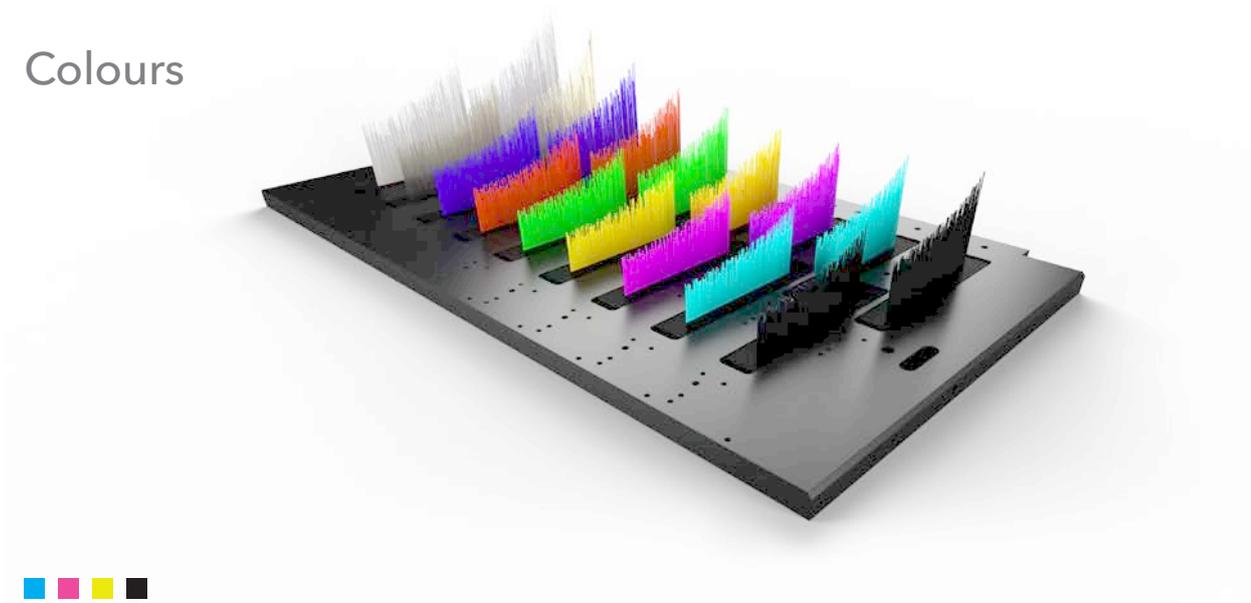
With swissQprint, you can print with a clear conscience. Low power consumption, zero harmful constituents and ozone, barely any rejects or waste, and modest maintenance requirements keep the environmental footprint small.



Swiss Made

swissQprint is packed with 100% Swiss development and mechanical engineering. Inclusive of the control technology and software. Each item is carefully matched to the solid overall system. This explains the printers' extreme operating precision and exceptional durability.

Colours



Process colours

Inkjet printing is as colourful as the world around us. The systems' CMYK standard is expandable, either when a printer is initially equipped or later when the requirements change. Nine freely configurable colour channels are available.



Light colours

Light cyan, magenta and black reproduce natural skin tones, subtle gradients and shading.



Additional colours

Adding orange, violet and green to the mix significantly expands the colour space for extra-vibrant results as well as corporate colours.



Spot colours

White, as a base layer or printed selectively, is a highlight with transparent and dark media. Effect varnish, applied partially or across the whole substrate, produces visual and tactile experiences. Primer applies the foundation for printing onto glass and metal. Placed where the ink will later go, it preserves the character of the substrate.

All of the UV-curing inks are VOC free. They bond on acrylic, aluminium composite panels, wood, tarpaulins, polyester, polycarbonate, polystyrene, (rigid foam) PVC, vinyl films, flexible foam panels and numerous other media. Suitable materials may be stretched after printing without any signs of stress whitening in the colour thanks to the adequately flexible ink.

Tandem

In tandem operation, machine and operator join forces for continuous, non-stop action: maximum productivity by the system, fitness training for personnel. The principle is straightforward: media can be loaded onto the printing table from both the front and rear. While printing is underway on one side, the operator loads the other side, and vice versa - so work continues without interruption.

The vacuum table has front and rear sections, both with the usual continuous adjustment. A side benefit is that vacuum to the rear section can be shut off when normal jobs are being printed on the front section only - no masking needed.



Without tandem:
143 panels/hour

With tandem:
245 panels/hour

Practical test

Producing 700 × 1000 mm panels on a Nyala LED in speed mode.

Result: 71% higher productivity with tandem.

Board option

swissQprint systems equipped with the ingenious board option hold oversized panels and difficult roll media firmly in place under full-power vacuum during the printing process. When the printing beam reaches the end of the table, a sophisticated feed system takes over and advances the substrate automatically. Printing continues seamlessly as soon as the substrate is positioned exactly at the new zero origin.

The appeal of this process lies in a combination of absolute precision and high efficiency. Flawless end-to-end printing on rigid media up to 4 metres long is a standard routine. The system really comes into its own when handling stretchy, heat-sensitive or very slippery substrates. Materials weighing up to 100 kg literally float across the table on an air cushion generated by reversing the vacuum system. Heavyweight substrates are thus effortlessly positioned.





Roll to Roll option

Whether vinyl, tarpaulin, mesh or other roll stock, swissQprint systems can handle them all. And that across the full printing width of 2.5 metres (Oryx/Impala) or 3.2 metres (Nyala). Setting up and changing rolls is easy, and once the job is started the machine continues working without supervision.

A well-designed, stable roller system conveys the material across the printing table and winds it up cleanly on the other side. An integrated control system regulates the tension and guarantees a perfect print image every time. When necessary, multiple colour layers can be applied in one pass and are absolutely register-true as a result.

In addition, roll stock can be used as a conveyor for oversized rigid sheets of up to 4 metres in length. Roller tables dock on as extensions to the printing table for extra length. The control system ensures an accurate and steady feed even when printing heavy panels.



Rob

The robot loads and unloads media onto swissQprint flatbed printers. Practically any sufficiently rigid material with a non-porous surface can be handled. Just a few simple steps and within ten minutes Rob is docked to the printer and ready to go. Another few mouse clicks to set up the job and then things can get started - without headaches or additional effort. Because this is where the output software takes over. It communicates both with trainable Rob and the printer.

The operator can easily switch to other tasks in the meantime, or even go home for the evening. Rob and the printer handle the extra shift all by themselves. Rob is ready for action 24 hours a day, 7 days a week. He takes care of routine work uncomplainingly - with consistent precision and high efficiency.

Rob gets even higher utilisation out of every swissQprint machine. Customers benefit from shorter delivery times, while providers earn higher returns.



Equipment and options

Inkjet machines from swissQprint are built on modular lines. The flatbed construction provides a stable foundation for every model, from economy to top-of-the-line. Options can be added as required. That includes the continuous addition of newly developed features. Whichever machine is purchased, it will be a future-proof investment.

	Oryx LED	Impala LED	Nyala LED
Flatbed, full bleed	2500 × 2030 mm ¹		3200 × 2030 mm ¹
Clearance	maximum 50 mm		
Substrate weight	maximum 100 kg/m ²		
Roll width	2500 mm		3200 mm
Roll weight	maximum 180 kg		
Roll diameter	maximum 360 mm		

Equipment/Options

Tandem function	standard		
Print area, Tandem each zone	2500 × 1015 mm ¹		3200 × 1015 mm ¹
Vacuum pumps ²	2 pcs integrated		
Roll to roll option ³	2500 mm × endless		3200 mm × endless
Board option with extension tables	2500 × 4000 mm		3200 × 4000 mm

Colours

Colour channels	maximum 9		
Print heads	maximum 9		maximum 18
Print heads per channel	1		1 or 2
Light Cyan, light Magenta, light Black	✓		
White	✓		
Varnish	✓		
Primer	✓		
Orange, Green, Violet	✓		

Software

Kea/droptix ⁴	✓		
Step and Repeat/Shadow files	✓		
Multilayer	✓		
Material and Quality database	✓		
Statistics/ink consumption	✓		

¹ in most print modes

² optional sound absorber boxes

³ with a conveyor belt and extension tables boards up to 2500/3200 × 4000 mm can be printed

⁴ if varnish channel is configured

Technical specifications

Resolution	Oryx LED	Impala LED	Nyala LED
Variable drop size		9-42 picolitre	
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

Inks

Integrated ink supply	CMYK in 5 litre containers/OGV, white, varnish 5 or 1 litre containers/primer 1 litre container
White feed and maintenance system	fully automated
Low-odour UV-curable inks	✓
Optimized for flexible & rigid media	✓
Indoor and outdoor applications	✓
Solvent-free (no VOCs)	✓

Dimensions and weight

Dimensions (L × W × H)	2.35 × 5.04 × 1.42 m	2.51 × 5.72 × 1.42 m
Weight ¹	1300 -1600 kg	1400 -1800 kg
Safety standards	meets or exceeds industry standards	

Installation environment

Power supply	3 × 380 -400V, 3L+N+PE 50/60Hz, 32A (CEE 32)/ 3 × 480V, 3L+N+PE 60Hz/3 × 208V, 3L+PE 50/60 Hz
Power consumption	13 kVA (effective power draw depending on the print mode approx. 5.3 kVA)
Temperature range	+15 °C bis +30 °C
Relative humidity	35 % to 80 % non-condensing

¹ depending on configuration

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