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	Impala LED	Nyala LED
Speed	180 m²/h	206 m²/h
Production	90 m²/h	103 m²/h
Quality	48 m²/h	54 m²/h
Fine art	28 m²/h	32 m²/h

Productivity with 2 × CMYK configuration
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.

Impala LED
2.5 × 2 m
180 m²/h

Nyala LED
3.2 × 2 m
206 m²/h

Print area

Productivity

Features

Greater media diversity

Cool LED curing enables stress-free printing onto difficult materials such as textiles, films and paperboard. Acrylic, aluminium composite panels, wood, tarpaulin, polyester, polycarbonate, polystyrene, (high-density) PVC, flexible foam panels, glass and metal are handled in any case.
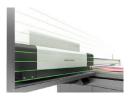
Optimal curing

The output software regulates the UV output power of the lamps according to the material and the printing speed, so the user can concentrate on other things.

Economical and environmentally friendly

LED technology leaves a small environmental footprint. It significantly minimises power consumption, has no harmful constituents and generates zero ozone.

Safety

Should something or someone breach the light curtain surrounding the beam, the print head carriage will slow down to warn as well as protect the operator. Meanwhile, printing continues and there are no rejects.

High availability

The printer is always ready to go, because LED lamps have neither a warm-up nor a cool-down time. In addition, the LED system is mechanically robust and maintenance-free. This practically eliminates interruptions to operation.

Continued printing after a crash

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

Multiple points of origin

The simple, quickly set registration pins are a unique feature. In addition to defining the zero-origin, they also provide additional mechanical attachment points: format-independent, with as many as required to make efficient use of the printing table area.

Swiss Made

swissQprint systems are developed and manufactured in Switzerland and are characterised by precision, long service life, and robust quality down to the very last detail.

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 180 m²/h
Channels maximum 9
Print area 2.5 × 2 m

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 (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.

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.

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.

With tandem:
245 panels/hour

Without tandem:
143 panels/hour

Practical test
Producing 700 × 1000 mm panels on a Nyala LED in speed mode.
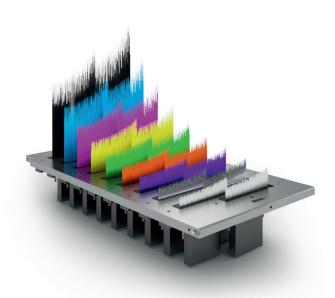Result: 71 % higher productivity with tandem.

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.

Colours

Inkjet printing is as colourful as the world around us. The systems' CMYK standard is expandable to nine colours: they include light colours for reproducing natural skin tones and fine shading, as well as white, special effects varnish and even primer for printing on glass. Special colours such as orange, violet and green expand the colour space further still for even more Pantone colour tones.

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.
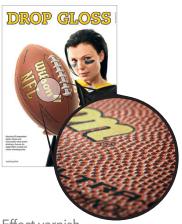

Multilayer
Worth seeing from both sides. Apply an image, then a white coating followed by a blockout layer; recap the white coating and apply another image.

droptix
The eye-catcher par excellence. Lenses printed on transparent media work like a magnifying glass to produce optical 3D effects.

Effect varnish
A stunning 3D effect that is otherwise only accomplishable with screen printing. Apply effect varnish through one of the nine colour channels for visual and tactile enhancement.

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.

	Impala LED	Nyala LED
Flatbed, full bleed	2500 × 2030 mm[1]	3200 × 2030 mm[1]
Clearance	maximum 50 mm	
Substrate weight	maximum 100 kg/m²	
Roll width	2500 mm	3200 mm
Roll weight	maximum 180 kg	
Roll diameter	maximum 360 mm	

Equipment/Options

	Impala LED	Nyala LED
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 18
Print heads per channel	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	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 × 380–400 V, 3L+N+PE 50/60 Hz, 32 A (CEE 32)/ 3 × 480 V, 3L+N+PE 60 Hz/3 × 208 V, 3L+PE 50/60 Hz	
Power consumption	11.2 kVA (effective power draw depending on the print mode approx. 5.3 kVA)	
Temperature range	+15 °C to +30 °C	
Relative humidity	35 % to 80 % non-condensing	

[1] depending on configuration

swiss**Q**print