

# Product Portfolio

High-End LED Inkjet Systems



swissprint

# LED large-format printers of the future

Ready for the future? You are with the third generation from swissQprint. You will be capable of handling even the most original ideas and delivering top results with dependable process reliability. And all this at the productivity level that is right for your business. You decide how much to expand your system, while still keeping options open for future developments - both in your business and innovations from our side.

## Productivity

	Oryx 3	Impala 3	Nyala 3	Impala 3S	Nyala 3S
Top speed	65 m <sup>2</sup> /h	180 m <sup>2</sup> /h	206 m <sup>2</sup> /h	317 m <sup>2</sup> /h	370 m <sup>2</sup> /h
Production	20 m <sup>2</sup> /h	90 m <sup>2</sup> /h	103 m <sup>2</sup> /h	170 m <sup>2</sup> /h	196 m <sup>2</sup> /h
Quality	14 m <sup>2</sup> /h	48 m <sup>2</sup> /h	54 m <sup>2</sup> /h	89 m <sup>2</sup> /h	101 m <sup>2</sup> /h
Fine art	9 m <sup>2</sup> /h	28 m <sup>2</sup> /h	32 m <sup>2</sup> /h	51 m <sup>2</sup> /h	57 m <sup>2</sup> /h
	Flatbed productivity with 1 × CMYK configuration (Oryx 3) or 2 × CMYK (Impala 3 / Nyala 3)			Flatbed productivity 4 × CMYK configuration	

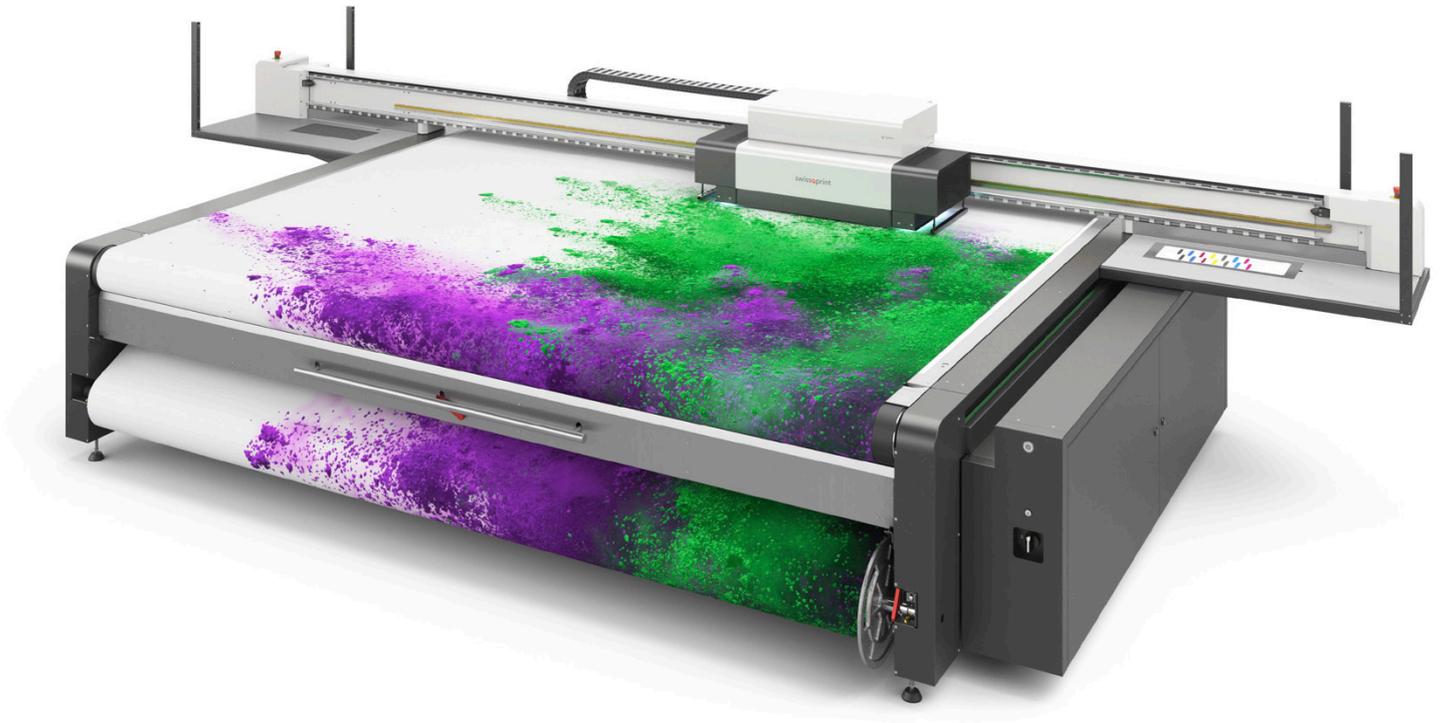
## Scalable

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 3

Hardly any other printer on the market offers better price / performance than Nyala 3, capable of handling a virtually limitless variety of applications, formats and media. Operators praise the printer's user-friendliness that shows itself in the numerous details. Nyala 3 is highly productive and economical at the same time - not least thanks to energy-efficient LED technology.



Nyala has been Europe's best-selling printer model in its class for the past six years.

**Max. productivity** 206 m<sup>2</sup>/h

**Colours** CMYK + 5 colours

**Print area** 3.2 × 2 m

## Impala 3

For its compact size, Impala 3 is a surprisingly multi-talented and powerful flatbed printer. Not only are its space requirements modest, the system is also economical to operate and maintain. Profitability is the name of the game. All the more so when Impala 3 is running at full capacity - thanks to automation, integrated workflows and efficient printing modes.



**Max. productivity** 180m<sup>2</sup>/h

**Colours** CMYK + 5 colours

**Print area** 2.5 × 2 m

## Oryx 3

If there is any machine that does its job with stoic care, it's the Oryx 3. This LED UV printer is the ideal choice for low-volume creative environments. Yet in terms of the variety of applications it can handle, it stands eye to eye with its larger and faster siblings. And is just as reliable, robust and low-maintenance.



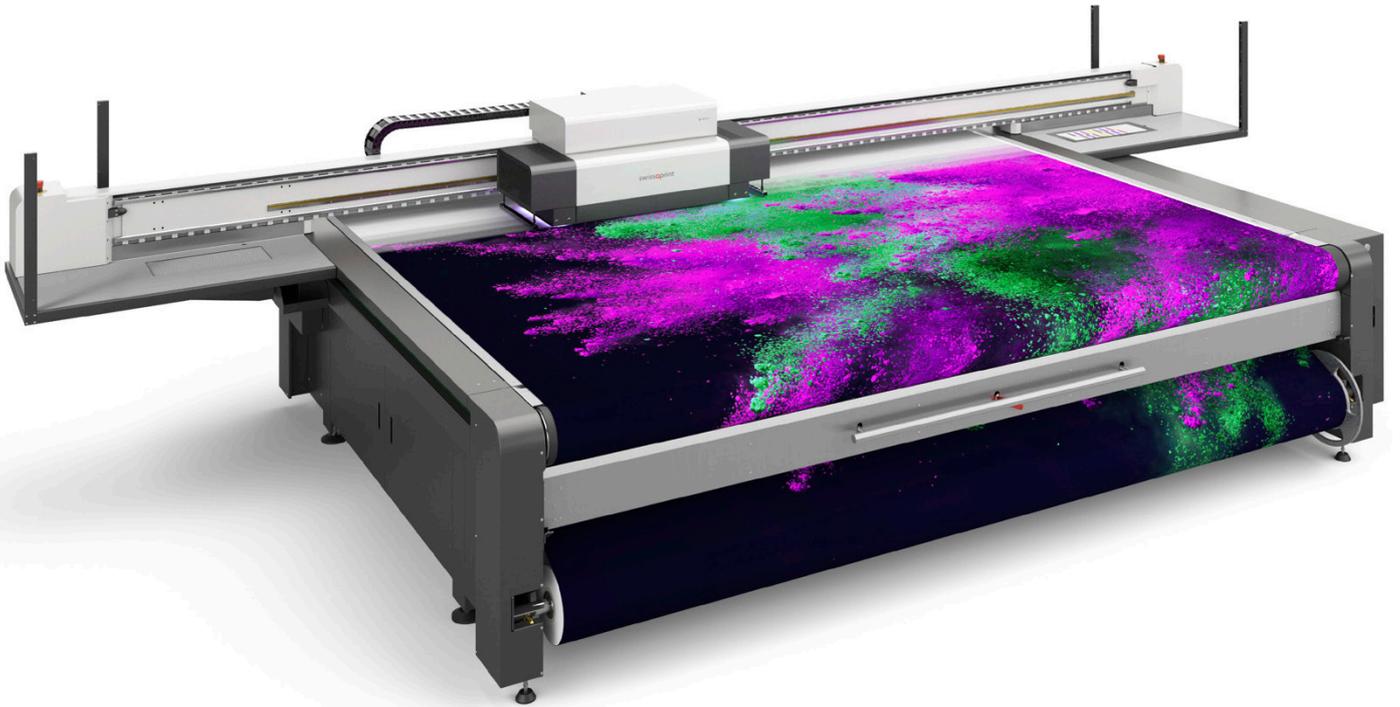
**Max. productivity** 65 m<sup>2</sup>/h

**Colours** CMYK + 5 colours

**Print area** 2.5 × 2 m

## Nyala 3S

This large-format printer is the output champion of the swissQprint family. Nyala 3S offers the speed solution for impressive mega posters, yet also produces flawless backlits. It delivers printing results of a high standard, adapted to the functional quality requirements of the medium, at a consistently fast tempo and best of all across multiple shifts.



**Max. productivity** 370m<sup>2</sup>/h

**Colours** CMYK+1 colour

**Print area** 3.2 × 2 m

## Impala 3S

It's ingenious how Impala 3S combines speed and print density. Fast delivery times are the speciality of this compact flatbed printer. Output quality is impressive even in the fastest mode. Impala 3S makes a great fit with any digital printing operation that needs high output and fast throughput.



**Max. productivity** 317m<sup>2</sup>/h

**Colours** CMYK+1 colour

**Print area** 2.5 × 2 m

## Colours

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.



### Light colours

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.



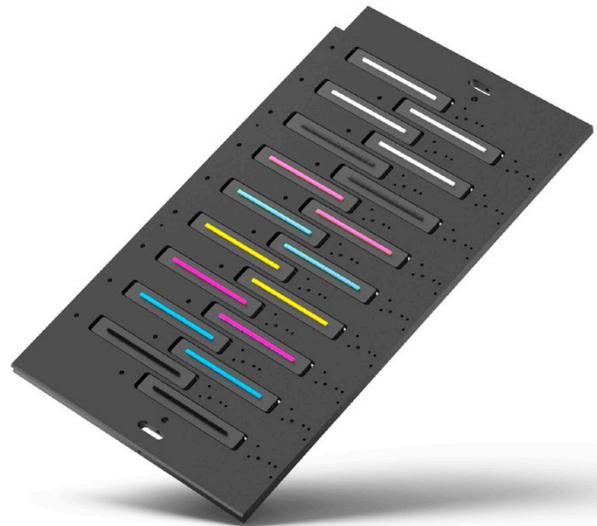
### White, Varnish, Primer

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.



### 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.



### Orange

Orange significantly expands the colour gamut in orange and red tones. It also helps to reproduce corporate colour tones even more accurately.



### Neon

Attention grabbers: neon yellow and neon pink give printed materials that sensational look. And they are fluorescent in black light.

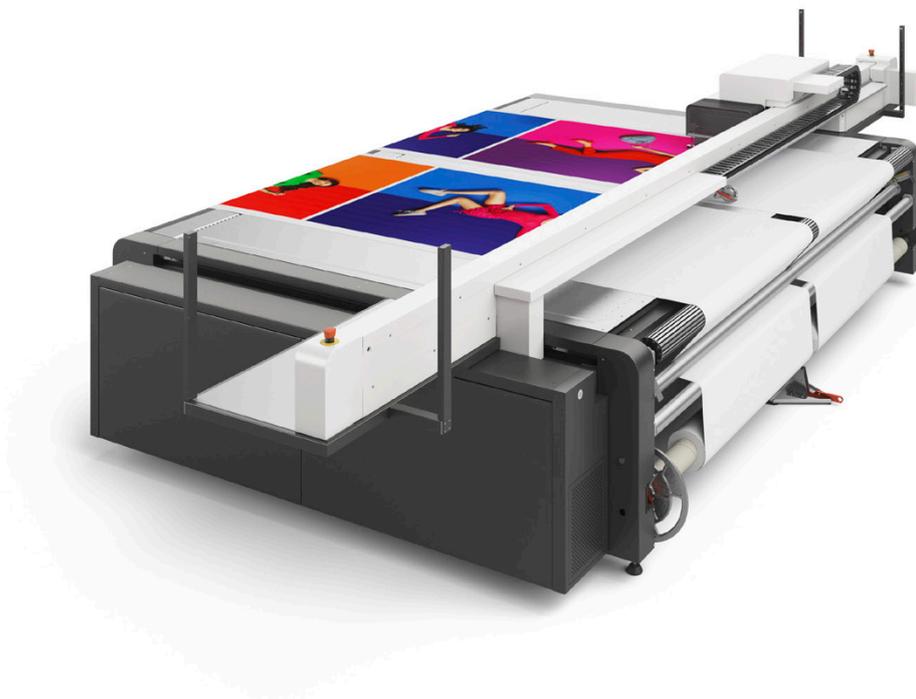


## Roll to roll option

Whether films, tarpaulin, mesh or other roll stock up to 180 kg, swissQprint systems can handle them all - even the heat-sensitive ones thanks to LED curing. 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.

The spreading roller helps prevent crashes. It rests above the unwinding unit and smooths the material before it runs crease-free over the print bed and is rewound cleanly on the opposite side. One part of ensuring a flawless print image is stable system control, which continuously regulates the tension. Meanwhile, the spreading roller dissipates static charge from the material, aiding precise droplet placement. And another thing: when necessary, multiple colour layers can be applied in one pass and are absolutely register-true as a result.

When the dual roll option comes into play, the printer processes two rolls in parallel. You spotted it: this doubles the productivity.



## Board option

swissQprint systems equipped with the ingenious board option hold oversized panels 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 automatically and 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. Compensation mechanisms built into the control system assist the user in this regard.

Help is likewise at hand with positioning and moving: vacuum inversion creates a cushion of air so that materials weighing up to 100 kg literally float over the print bed, making it easy to handle the heavyweights.



## 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.



# Features



## 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.



## Economical and environmentally friendly

With swissQprint, you can print with a clear conscience. Zero harmful components and ozone, barely any rejects or waste, and modest maintenance requirements keep the environmental footprint small. Energy efficiency is demonstrably very high (ISO 20690:2018).



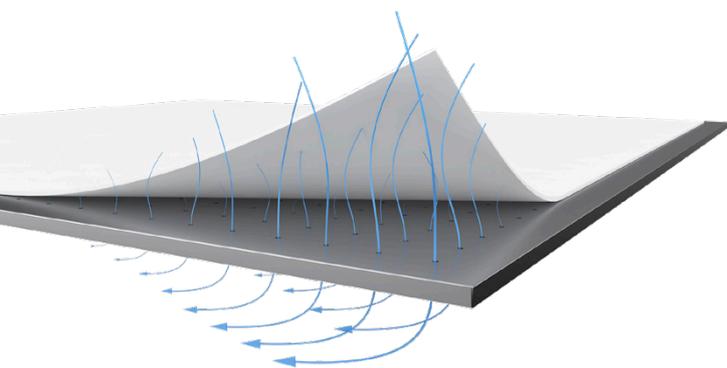
## Targeted vacuum control

Setting the print bed vacuum is child's play. Using the Tip Switch vacuum, each of the 256 vacuum segments is switched on and off in no time at all with just the touch of a finger.



## 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.



## 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.



## Media diversity

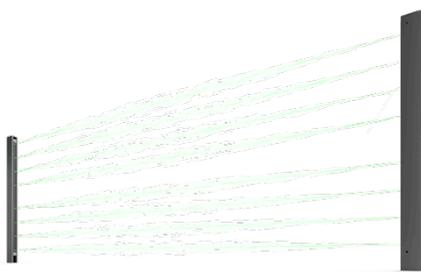
Acrylic, aluminium composite panels, wood, tarpaulin, polyester, polycarbonate, polystyrene, (high-density) PVC, flexible foam panels, glass and metal – all routine work with swissQprint. Printing onto difficult, heat-sensitive materials such as textiles, films and paperboard is equally stress-free.

## 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

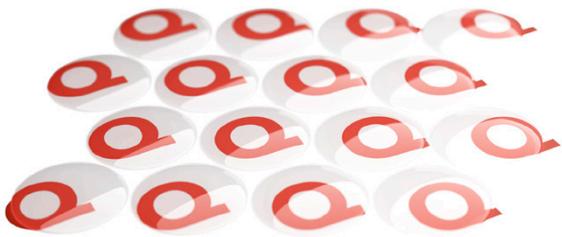
Should something or someone breach the light curtain at the beam, the print head carriage slows down to warn as well as protect the operator. Meanwhile, printing continues. There is no loss of time or material.



## 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.

## Applications



### 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. Besides, ink layering is able to produce Braille text and relief prints.



### 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.

# 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 3 in speed mode.  
Result: 71% higher productivity with tandem.



swissQprint large-format printers contain 100 percent Swiss engineering and machine-building work. At our headquarters, people with inventive minds develop the entire system: from the mechanics to the control system and the output software. Each element is carefully matched to the cleverly thought-out overall concept.

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 from over 2200 individual parts, over 90 percent of which come from Switzerland.

swissQprint stands for precision, reliability and durability.

# Technical specifications

Dimensions	Oryx	Impala	Nyala
Flatbed, full bleed <sup>1</sup>	2500 × 2030 mm		3200 × 2030 mm
Clearance	maximum 50 mm		
Substrate weight	maximum 100 kg/m <sup>2</sup>		
Roll width	maximum 2500 mm		maximum 3200 mm
Roll weight	maximum 180 kg / dual roll 100 kg each		
Roll diameter	maximum 360 mm		

## Equipment/Options

Curing	UV LED		
Roll to roll option	2500 mm × endless		3200 mm × endless
Dual roll option	2 × 1200 mm × endless		2 × 1524 mm × endless
Board option with extension tables	2500 × 4000 mm / max. 100 kg		3200 × 4000 mm / max. 100 kg
Tandem function	standard		
Print area, Tandem each zone <sup>1</sup>	2500 × 1015 mm		3200 × 1015 mm
Tip Switch Vacuum	standard		

## Colours

Colour channels	maximum 9		
Print heads	maximum 9		maximum 18
Print heads per channel	1		1 or 2 / S models: 2
Light cyan, light magenta, light black <sup>2</sup>			✓
White			✓
Varnish <sup>2</sup>			✓
Primer <sup>2</sup>			✓
Orange <sup>2</sup>			✓
Neon <sup>2</sup>	–		✓

## Inks

Integrated ink supply	CMYK, orange in 5 litre containers/white, varnish 5 or 1 litre containers/neon, primer 1 litre container		
UV-curable inks			✓
Solvent-free (no VOCs)			✓
Greenguard Gold certification <sup>3</sup>			✓
White feed and maintenance system	fully automated		
Indoor and outdoor applications <sup>4</sup>			✓

<sup>1</sup> In most print modes

<sup>2</sup> Not for S models

<sup>3</sup> Standard inks

<sup>4</sup> Neon: only for indoor applications

<b>Resolution</b>	<b>Oryx</b>	<b>Impala</b>	<b>Nyala</b>
Addressable resolution	up to 1080 dpi		
Visual resolution	up to 2160 dpi		

#### **Dimensions and weight**

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

#### **Installation environment**

Power supply	3 × 400 V, 3L+N+PE (50/60 Hz) 3 × 480 V, 3L+N+PE (60 Hz) 3 × 208 V, 3L+PE (50/60 Hz) excellent energy efficiency according to ISO 20690:2018
Temperature range	+15 °C to +30 °C
Relative humidity	35 % to 80 % non-condensing

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