



## COLARIS.INFINITI

HIGH QUALITY PRINTER AT A BUDGET PRICE



**Fashion** **Decoration** **Home Textiles**  
**Technical Textiles** **Flags & Banners**



## ZIMMER.AUSTRIA

140 years of revolutionary innovation and developments with well-known quality and service for the textile industry on a global scale.

### The COLARIS.INFINITI design stands for

- “out-of-the-box” or “of-the-shelf”
- Budget priced
- Entrance level printing solution
- For your start-up business or used as a sampling machine for volume production
- A printer supporting small, medium and high capacity digital textile print houses alike

With the layout concept, special attention has been given to the needs of the rough industrial textile printing environment.

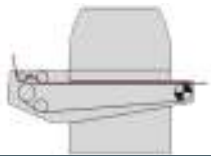
APPLICATIONS		Reactive	Disperse	Acid
Fashion Printing	<i>Fashion clothing</i>	●	●	●
	<i>Underwear</i>	●	●	
	<i>Sportswear</i>	●	●	●
	<i>Swimwear</i>		●	●
	<i>Active wear</i>		●	●
	<i>Bottom wear</i>			●
	<i>Winter jacket</i>			●
	<i>Raincoat</i>			●
Home Textiles	<i>Bed sheets</i>	●		
	<i>Window fashion fabrics</i>	●		
Flags & Banners	<i>Flags</i>		●	
	<i>Graphic designs</i>		●	
	<i>Shop interiors</i>		●	
	<i>Outdoor displays</i>		●	

## COLARIS.INFINITI (ENG)

Technical Data	COLARIS.INFINITI 1800
Printing line	Customized combination of digital textile printing line A-Frame unwinder, Entry, Digital Printer, Infrared Dryer or Hot Air Dryer
Printing width	<b>1,800 mm</b> (maximum width 1,850 mm)
Print head technology	Seiko SPT 1024GS industrial print head
Number of print heads	min. 8, max. 32 print heads
Droplet size	Variable 4 level greyscale of 7, 14 or 21 pl
Print head maintenance system	Auto cap, auto purge with waste ink collection system
Production printing speed (32 print heads)	1 pass - 600 m <sup>2</sup> /h, 2 pass - 300 m <sup>2</sup> /h, 3 pass - 200 m <sup>2</sup> /h, 4 pass - 150 m <sup>2</sup> /h (for 360dpi) 1 pass - 240 m <sup>2</sup> /h, 2 pass - 120 m <sup>2</sup> /h, 3 pass - 80 m <sup>2</sup> /h, 4 pass - 60 m <sup>2</sup> /h (for 508dpi)
Printing resolution	x/360 dpi, <b>x/720 dpi</b> , x/1080 dpi, x/1440 dpi   x = 360, 508
DyStar® colors	min. 4, max. 8 colors DyStar® CMYK, orange, red, blue, grey, etc.
Ink types	Reactive, Disperse or Acid
Ink system	Transparent ink tanks with pumps and filters 8 freely fillable channels with own degassing and filter
Ink capacity	10 liters per color channel
Printing blanket	Endless belt with permanent adhesive and infrared glue activation
Belt cleaning	Industrial washing/drying unit
Power supply	TN-S System, 3/N ~ 50/60 Hz, 400 VAC ± 5 %, 15 kVA, 35 A
Compressed air	6 bar
Temperature control	Heating and cooling system for the heads
Operation environment	Temperature 20 - 28°C, Humidity 55 % - 75 %
Net weight / Dimensions (L x W x H)	4,200 kg / 2,400 x 5,900 x 2,100 mm
RIP software (supplied by customer)	Photoprint, Onyx, NeoStampa, etc.
Printing software	File based communication between RIP and printing software Job manager ready for *.prn and *.prt files
Control functions	Remote diagnostic, nozzle check on paper
Fabric types	Depending on ink type all kinds of woven and knitted fabrics, such as cotton, linen, wool, silk, viscos, nylon, polyester, etc.
Fabric entry system	Heavy duty entry with optional A-frame unwinder
Fabric thickness	Max. 10 mm
Fabric roll diameter / weight entry	Max. 600 mm / max. 200 kg
Dryer	Infrared Dryer with heavy duty winder or Hot Air Dryer

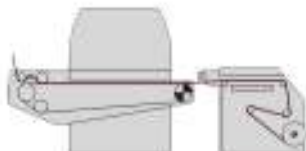
COLARIS.INFINITI (ENG)

# PRINTING.LINES



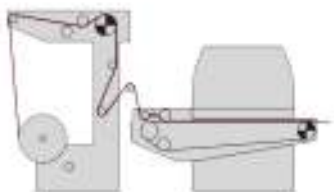
COLARIS.INFINITI 1800

Total length: approx. 2.4 m



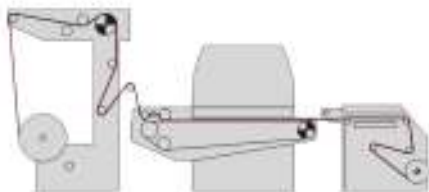
COLARIS.INFINITI 1800 with IR-Dryer

Total length: approx. 3.8 m



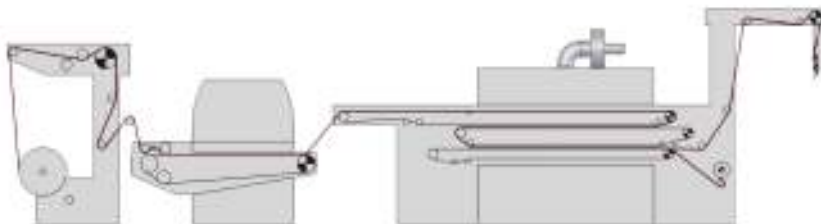
COLARIS.INFINITI 1800 with a Fabric Entry System

Total length: approx. 3.9 m



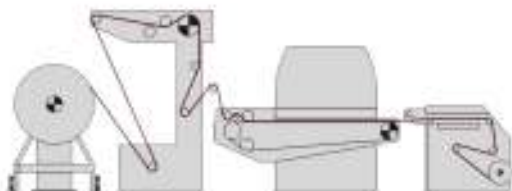
COLARIS.INFINITI 1800 with a Fabric Entry System and IR-Dryer

Total length: approx. 5.3 m



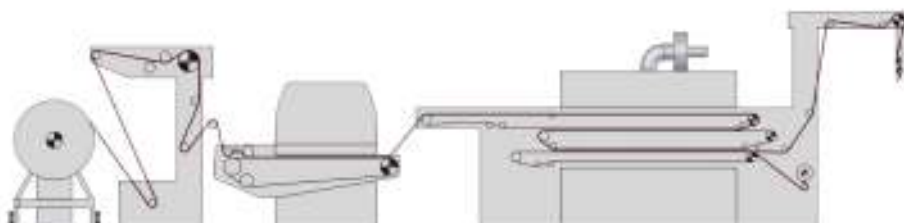
COLARIS.INFINITI 1800 with a Fabric Entry System and Industrial Hot Air Nozzle Dryer

Total length: approx. 10.3 m



COLARIS.INFINITI 1800 with a A-Frame, Fabric Entry System and IR-Dryer

Total length: approx. 6.3 m



COLARIS.INFINITI 1800 with a A-Frame, Fabric Entry System and Industrial Hot Air Nozzle Dryer

Total length: approx. 11.3 m

# HIGH PERFORMANCE INDUSTRIAL INKJET PRINT HEADS

- Seiko SPT1024GS industrial print head
- Up to 32 print heads installed
- 1,024 nozzles in each print head
- Variable 4 level greyscale drop size of 7, 14 and 21 pl
- With stainless steel protection cap



## PRINTING CAPACITY (M<sup>2</sup>/H)

### COLARIS.INFINITI | Color set up with 5 to 8 colors

Number of print heads per color bar	360/360dpi (1 pass)	360/720 dpi (2 pass)	360/1080 dpi (3 pass)	360/1440 dpi (4 pass)
<b>INK LIMIT per COLOR</b>	4 ml/m <sup>2</sup>	<b>8 ml/m<sup>2</sup></b>	13 ml/m <sup>2</sup>	17 ml/m <sup>2</sup>
2 per color bar	300 m <sup>2</sup> /h	<b>150 m<sup>2</sup>/h</b>	100 m <sup>2</sup> /h	75 m <sup>2</sup> /h
4 per color bar	600 m <sup>2</sup> /h	<b>300 m<sup>2</sup>/h</b>	200 m <sup>2</sup> /h	150 m <sup>2</sup> /h

## INK LAY-DOWN

Most people are talking about resolution and dpi only. In textile printing most important is to have the right ink amount to get a good penetration and vibrant colors. The actual ink demand, determined by the fabric is identified by the calibration print.

**The ink amount or (ink lay-down) is specified by the following parameters**

- Resolution in X and Y axis
- Drop size in pico liters
- Number of passes (used to increase the x-dpi and therefore to increase ink amount)

The maximum ink lay-down on a single color can be calculated as follows:

$$\text{Ink lay-down (ml/m}^2\text{)} = \text{X-dpi} * 1,000 \text{ mm} / 25.4 \text{ mm} * \text{Y-dpi} * 1,000 \text{ mm} / 25.4 \text{ mm} * \text{dropsize (pl)} / 1\text{E}9$$

**Simplified: Lay-down (ml/m<sup>2</sup>) = x-dpi \* y-dpi \* dropsize / 645,000**

### Example

2 passes with smallest drop size at 360 \* 720 dpi:  $360 \text{ dpi} * (2 * 360 \text{ dpi}) * 7\text{pl} / 645,000 = 2,8 \text{ ml/m}^2$

4 passes with biggest drop size at 360 \* 1,440 dpi:  $360 \text{ dpi} * (4 * 360 \text{ dpi}) * 21\text{pl} / 645,000 = 17 \text{ ml/m}^2$





## COLARIS.INFINITI COMPONENTS



Print head carriage with easy access for service and maintenance. Easy print head replacement by the operator, without need of support by a service engineer.



Test pattern printed on a paper strip allows a quick nozzle check. Ink and fabric saving, increased efficiency, ensuring print quality at any time.



Ink reservoir in front of the print heads with active ink pressure control. Gravity ink flow from ink reservoir through inline degassing system to the print heads.

COLARIS.INFINITI (ENG)



Auto-capping and auto-purging integrated into the print head capping and cleaning station, with ink collection system for reduced ink wastage, to ensure perfect print head condition and economic printing.



Purged ink is collected individually for each color, resulting in a reduction of ink loss, reduction of wash water and reduction of pollution.



Stable print head carriage moving on linear bearings, mounted on a solid beam. Carriage movement is operated by a servo-motor, controlled through an inductive linear encoder. This guarantees highest precision in printing and a sharp and clear print image.

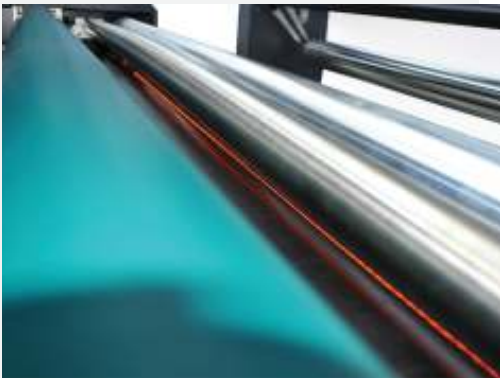
Print carriage is height adjustable through a servo-motor, controlled and positioned through an inductive linear encoder to ensure precise height setting for accurate uni- and bi-directional printing.

COLARIS.INFINITI (ENG)



Fabric seam detection by a laser sensor to protect the print heads from high seams or other obstacles on the conveyor belt that could cause risk of damage to the print heads.

Additionally the print head carriage is equipped with analog sensors to minimize the risk of fabric collision with the print heads carriage.



Thermic activated glue creates a sticky belt for fabric fixation throughout the printing process. Glue application and stripping devices are included in the scope of supply. Infrared heating system permits control of stickiness of belt according to different fabrics needs.



Traversing fabric press roller with pneumatically adjustable pressure. Soft rubber surface ensures perfect fabric fixation onto the sticky transport belt.



COLARIS.INFINITI (ENG)



Printing blanket drive and control system by a servo drive with reduced backlash gear torque transmission for accurate printing blanket transport. Printing blanket transport controlled by an inductive linear encoder for permanent measuring and control of actual printing blanket movement. High precision, dimension stable printing blanket with Kevlar fiber base and TPU (Thermoplastic Polyurethane) coated surface, for perfect fabric transport throughout the printing process.



Heavy duty printing blanket washing device incl. pre washer, driven brush rollers and pneumatically operated drying doctor blade. Additional textile covered roller ensures dry printing blanket.



Ink tank station on wheels for easy movement, with transparent ink containers, refillable without machine stop. Ink pumps with inline ink filtration transporting the inks to the ink reservoirs in front of the print heads.



Computer workstation used as a print server for queuing the print jobs and for setting the print parameters. Side by side installation of a touch screen to control and set machine parameters including supervision of all technical parameters incl. service and maintenance functions.

Printer is accessible online for remote diagnostics.



## FABRIC.FEEDING AND GUIDING SYSTEM

*For a perfect alignment and fixation of the fabric on the printing blanket.*

- The fabric feeding system is a stand-alone unit
- With a lattice guiding roller incl. drive and synchronization unit, enables feeding of any textile substrate
- The fabric edge is detected by a photocell that is controlling and signaling side positioning of the fabric for a precise fabric alignment

Technical Data	Feeding and Guiding System
Technology	System with fabric feeding roller and slat roller for all woven fabrics
Production speed	Synchronized with printer
Fabric roll diameter / weight	Max. 600 mm / max. 200 kg
Expander shaft diameter	75 mm
System weight / Dimensions (L x W x H)	1,100 kg / 1,600 x 2,400 x 2,300 mm
Power supply	TN-S System, 3/N ~ 50/60 Hz, 400 VAC ± 5 %, 0.5 kVA, 0.5 A

## A-FRAME.UNWINDER (OPTIONAL)

*For large fabric bales*

- With an integrated drive and control system for synchronization of speed with the printing line
- It includes auto detection for the drive in case the A-Frame isn't connected with the unwinder by the universal joint cardan shaft



Technical Data	A-frame unwinder
Technology	Industrial unwinder for jumbo media rolls
Production speed	Synchronized with printer
System weight / Dimensions (L x W x H)	110 kg / 600 x 300 x 1,300 mm
Power supply	TN-S System, 3/N ~ 50/60 Hz, 400 VAC ± 5 %, 0.7 kVA, 1.5 A

## ELECTRICAL HEATED IR (INFRARED) DRYER



- Mounted on wheels for easy transport and positioning according to the needs of operation such as sampling or continuous production
- Electronic control for drying on demand
- Fabric tension control through a pneumatically controlled pendulum roller
- Pneumatically operated expander shaft for take-up of cardboard rolls for re-rolling of fabrics
- Quick release system for expander shaft with safety lock during printing operation
- Geared motor for automatic re-rolling of fabric after drying

Technical Data	Infrared Dryer
Technology	3-field infrared dryer with winder (max. 120°C)
Production speed	Synchronized with printer
Fabric roll diameter / weight	Max. 300 mm / max. 200 kg
Expander shaft diameter	75 mm
System weight / Dimensions (L x W x H)	540 kg / 1,750 x 2,700 x 1,200 mm
Power supply	TN-S System, 3/N ~ 50/60 Hz, 400 VAC ± 5 %, 30 kVA, 45 A

## INDUSTRIAL HIGH CAPACITY HOT AIR NOZZLE DRYER (GAS, STEAM, ELECTRICITY)



- High performance insulation
- Guide and support rollers for transport conveyor and fabric guidance
- High performance conveyor belt for fabric transport
- Fabric pulling roller with geared motor and plating device including speed synchronization

Technical Data	Hot Air Nozzle Dryer
Technology	High capacity hot air dryer with winder and plaiter (max. 150°C)
Production speed	Synchronized with printer
Heating media (consumption)	Natural gas (6 m <sup>3</sup> /h), Steam (60 kg/h); Electricity (60 kVA, 57 A)
System weight / Dimensions (L x W x H)	4,230 kg / 6,200 x 3,900 x 2,800 mm
Power supply	TN-S System, 3/N ~ 50/60 Hz, 400 VAC ± 5 %
Gas/Steam	6.6 kVA, 10 A
Electricity	60 kVA, 57 A

FIRST. IN QUALITY | FIRST. IN SERVICE



All machines and components from **ZIMMER.AUSTRIA** are strictly inspected and tested before shipping to customers to ensure efficient installation and best performance with 100% satisfaction.

**COLARIS.INFINITI** on-site customer support is guaranteed by service partners and **ZIMMER.AUSTRIA** engineers and technologists.

This setup guarantees a short response time on a service call from a customer.



INNOVATION

QUALITY

SERVICE

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