

MACHINERY MANUFACTURER

Zimmer
AUSTRIA



PIONNERING INNOVATIONS
150 YEARS

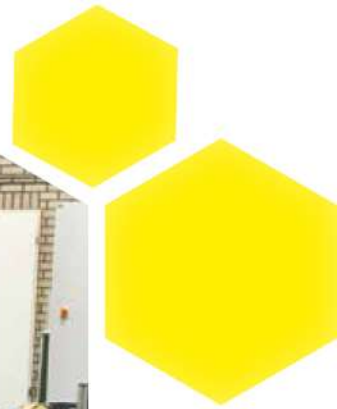
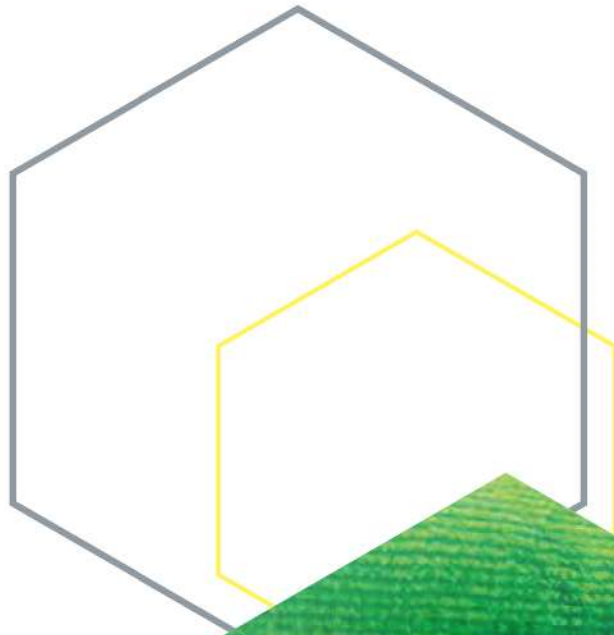
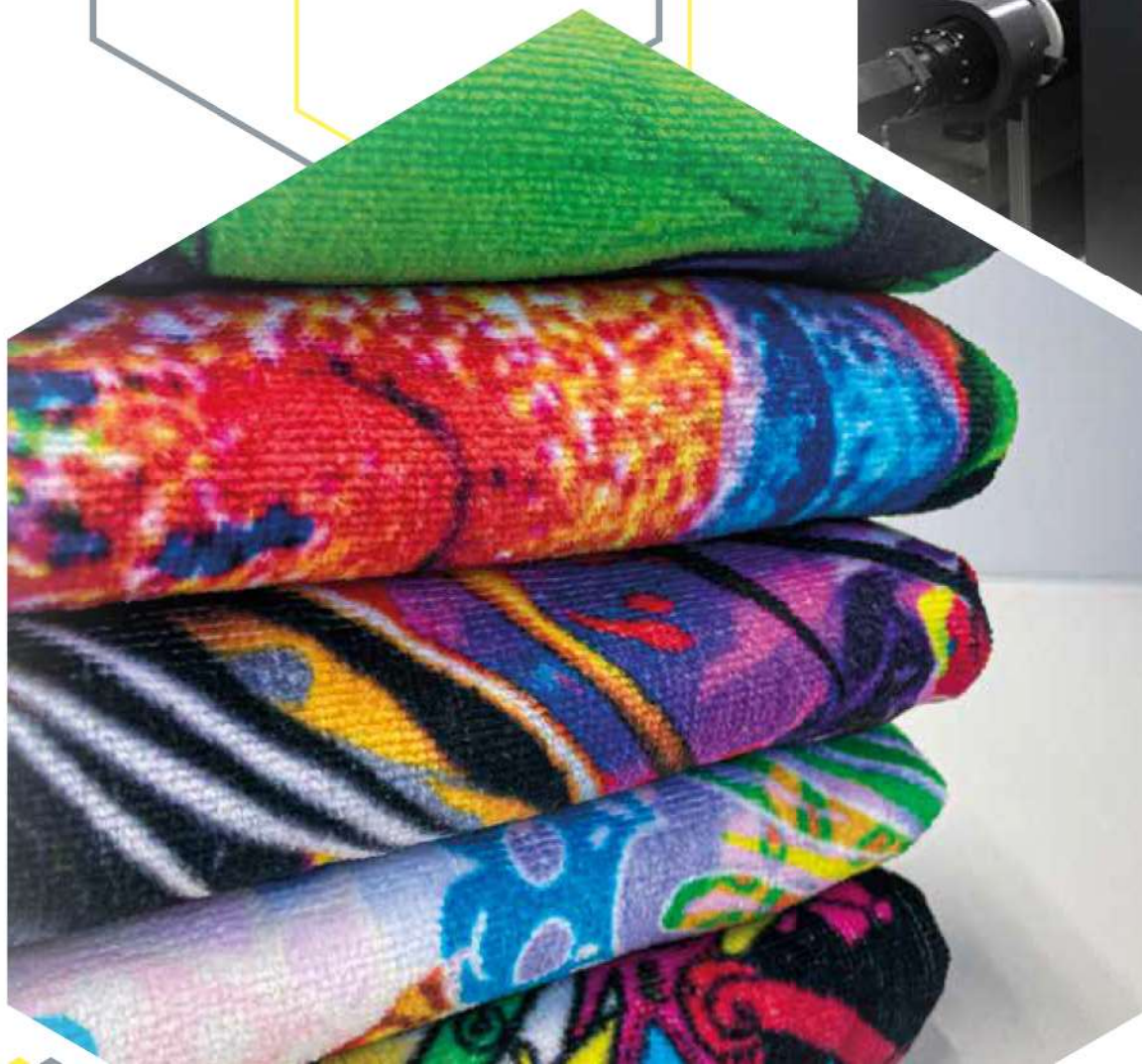


COLARIS towel printing

DIGITAL PRINTING SYSTEMS

 04/2024

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highlights

- digital workflow from design through
- open ink system allows free selection of inks from certified ink suppliers
- permanent ink circulation system for
- automatic printhead cleaning system
- integrated printhead calibration system
- printhead recondition center for extended printhead service life

HOW TO PRINT TERRY FABRIC EFFICIENTLY WITH A DIGITAL PRINTER?

Different towel qualities and fabric structures require a flexible printing method. The key to success can only be a digital printing solution. Flexibility in terms of application amount, penetration control, and an efficient process for dye fixation are the challenges.

Heavy and voluminous products can't be printed with conventional digital printers as offered by other manufacturers. Such printers may be suitable for fashion fabric but are not economical for heavy fabric structures.

Terry fabric printed by a ZIMMER AUSTRIA COLARIS will look fresh even after many washes, as the penetration has been controlled precisely and ink has entered deeper into the pile. Improved fastness, strong, vibrant and brilliant colors for a long time are the benefits.



TERRY FABRIC *What does printing need?*

- Fabric should be well prepared for printing. Mercerizing of fabric is strongly recommended for high quality towels with bright colors.
- Nice velour, mostly double sheared and brushed for fine and even surface.
- Well cleaned fabric surface to avoid uneven printing.
- Reactive printing needs inkjet pre-treatment for dye fixation. The same can be applied offline with a padder on a stenter or inline, with a foulard, a MAGNOROLL-GMA or a CHROMOJET-DPT digital pre-treatment applicator.
- Digital inkjet printing
- Hot air or steam treatment to fix the dyes with the fiber of the towel
- Post print washing to remove unfixed dyes and improve rub fastness

The most economical way of printing is the all inline process. It may involve a slightly higher investment, but gives 100% control of penetration, reduces ink consumption and logistical needs and delivers fabrics ready for post print washing and final finishing.

Shorter process means less handling, less energy consumption, less work force

OFFLINE PRE-TREATMENT



2

3

4

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A-frame
unwinder

fabric cleaning
device

3
fabric guiding
system

4
COLARIS
printer

5
hot air
nozzle dryer

plaiter

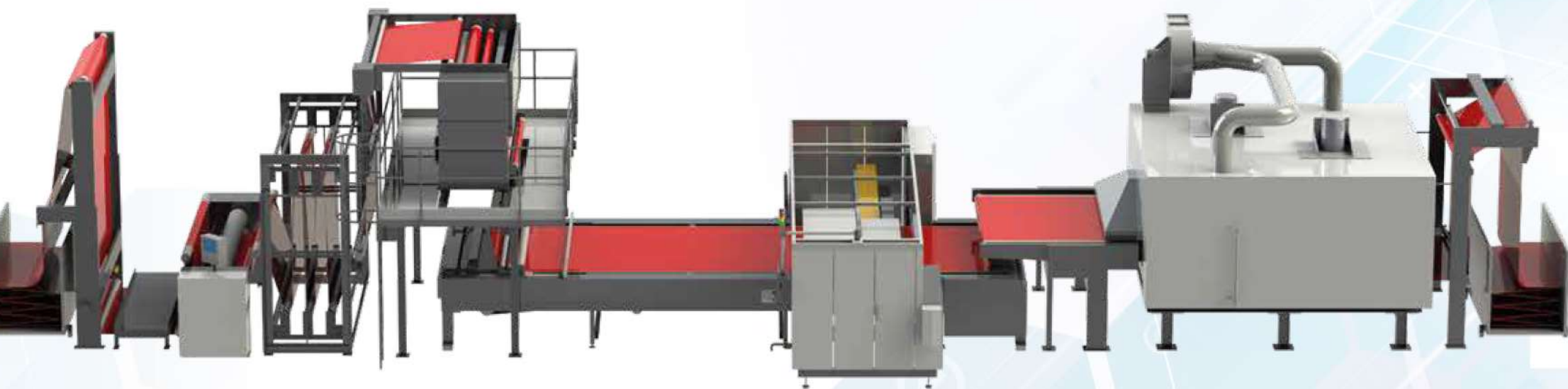
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The offline pre-treatment is a process which is prepared for the fabric to be rolled on A-frames.

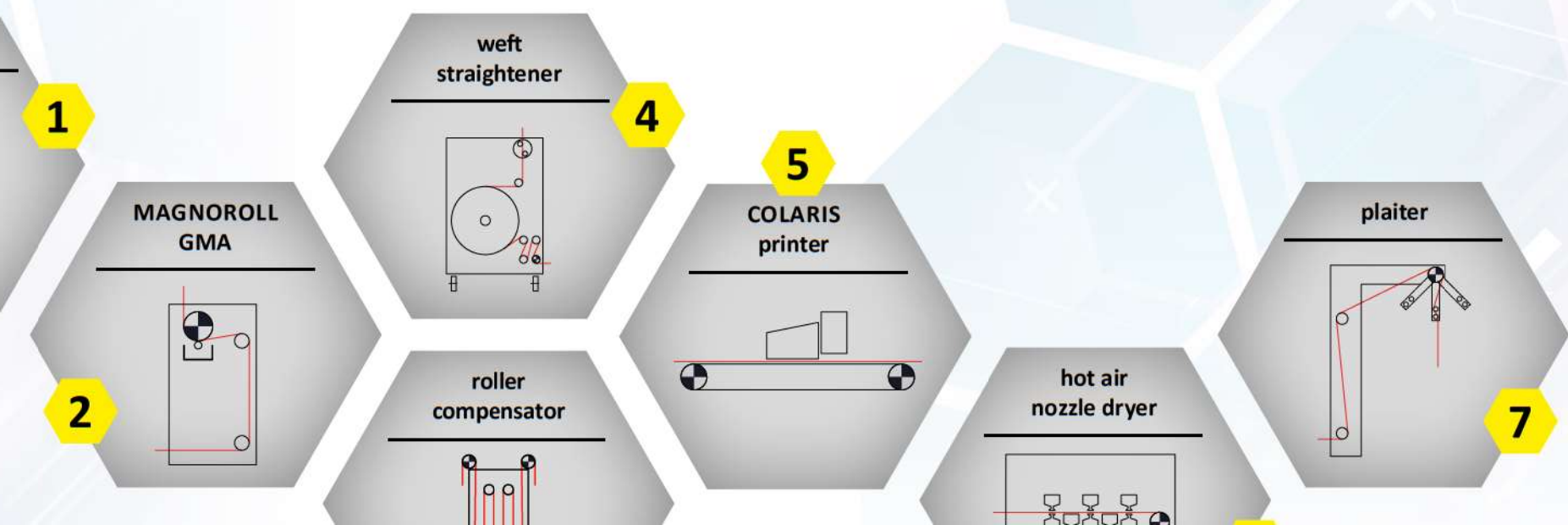
A fabric cleaning system is used to clean the fabric normally. Printing is done with a COLARIS printer system to achieve a good color depth. Right after printing, the fabric is dried with a hot air nozzle dryer for dye fixation into a long-lasting fixation unit.

Finally, the fabric needs to be finished with a good fastness level.

ONLINE PRE-TREATMENT



- 1
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Terry towels are preferred for the on-wet process. The chemical active printing are applied by MAGNOROLL-GMA after printing the design and then the dye is applied on to the hot air nozzle.

Finally, the dyes need to be washed in a steamer or in a thermoset. The fabric is washed for good fastness.

WITH DIGITAL INLINE PRE-TREATMENT AND INLINE FIXATION



3

4a

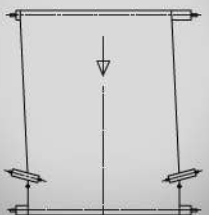
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fabric guiding
system



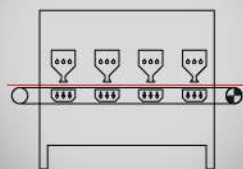
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SUPRAPRESS
penetration enhancer

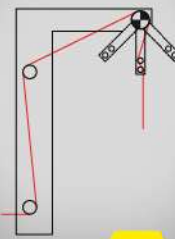


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SHS
steamer/dryer



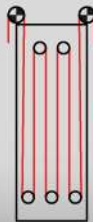
plaiter



7

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roller
compensator



CHROMOJET
inline pre-treatment
and COLARIS printing

Well prepared and ne
plied from an A-frame
used as a buffer for bat
ding system aligns the
pre-treatment is appli
MOJET applicator and
by a traversing press ro
COLARIS printer. Option
tration enhancer can be
and dye fixation unit in
substrates. Dye fixation
SUPRAPHIX-SHS fixation

This layout reduces the

2

MAGNOROLL-GMA APPLICATOR

MAGNOROLL-GMA or alternatively a foulard are used for application of pre-treatment chemicals, when printing wet-on-wet for optimized penetration results.



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PRINT CARRIAGE

The COLARIS print carriage can be laid out with up to 12 color groups. The print capacity can be tuned by flexible installation of 2 up to 8 print-heads per color group.



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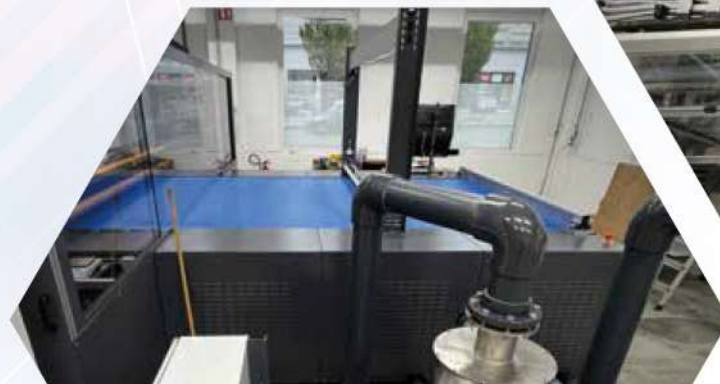
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CHROMOJET-DPT APPLICATOR

The CHROMOJET-DPT is a digital pre-treatment applicator directly mounted



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WEFT STRAIGHTENER

For printing of towel fabric from plait, we recommend to install the optionally available weft straightening system to correct alignment and possible bow and skew.



STEM

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detection
position
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MODUS LOOP STEAMER

In case of high-capacity towel printing, the MODUS loop steamer is the best option as its capacity can easily be tuned to serve several digital and screen printing installations.



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SUP

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SUPRAFX

The SUPRAFX-SHS fixation unit is a flow through steam curing system for inline dye fixation. It allows to fix the



COLARIS



**MACHINERY
MANUFACTURER**

chromoJET



**DIGITAL PRINTING
SYSTEMS**



INNOVATION | QUALITY | SERVICE

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DIGITAL PRINTING SYSTEMS

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