Zimmer
AUSTRIA

ZIMMER AUSTRIA | Kufstein
DIGITAL PRINTING SYSTEMS

MACHINERY & SERVICES

TEXTILE PRINTING | FLOOR COVERINGS |
NARROW FABRICS | DIGITAL FUNCTIONALIZATION |
SPECIALITIES

CONTENT

Quality since 1874
Factory Franz Zimmer´s Erben KG | Warnsdorf
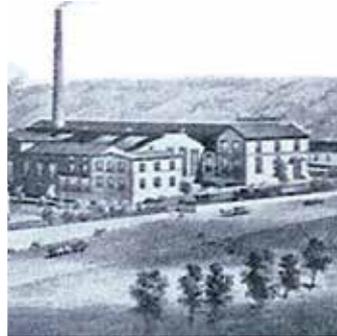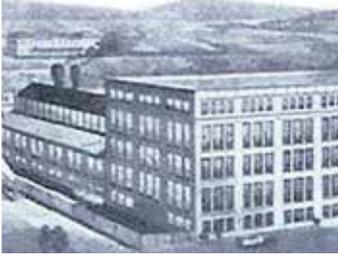
With production sites in Kufstein and Klagenfurt we offer a product portfolio that includes screen printing, digital printing, digital functionalization, coating, drying and steaming systems as well as a broad range of sample, lab and washing machines.

ZIMMER AUSTRIA has formed the textile and carpet manufacturing market with pioneering innovations and revolutionary technologies.

Driven by perfection and committed to the credo – First in Quality & First in Service – the machine manufacturer **ZIMMER AUSTRIA** has become the benchmark for dependable high-class printing and coating machines for the textile- and carpet industry. **ZIMMER AUSTRIA** reaches even the most distant markets and supplies all around the globe owing to a strong and well-developed agent network and cooperation with sales and service companies **ZIMMER AUSTRIA Inc.** and **ZIMMER CHINA**.

ZIMMER AUSTRIA with its know-how and global business partners is the ideal and most competent partner for the total printing process - all elements out of one hand.

FIRST IN QUALITY & FIRST IN SERVICE

ZIMMER AUSTRIA | Kufstein

- ♦ **COLARIS** digital inkjet printer for carpet and textile applications
- ♦ **CHROMOJET** valve jet printer for high pile products
- ♦ Carpet steaming, washing and drying equipment
- ♦ Carpet coating lines
- ♦ PVC coating systems for carpet tiles and mats
- ♦ Digital inkjet printer for special applications

ZIMMER AUSTRIA | Klagenfurt

- ♦ ROTARY SCREEN Printing Machines
- ♦ FLAT SCREEN Printing Machines
- ♦ COATING Systems
- ♦ THERMOCURE DRYER and MODUS STEAMER
- ♦ HEAT TREATMENT Machines
- ♦ CONTRACT MANUFACTURING

ZIMMER AUSTRIA is well known for their flexibility and for building tailor made machines and systems. This is also the reason why we remain one of very few textile machine manufacturers with a deep vertical manufacturing process.

Starting from engineering to mechanical manufacturing, electronic and software development, control cabinet assembly, programming, internal testing, shipping, installation and start-up - and most important: AFTER-SALE SERVICE from **ZIMMER AUSTRIA**.

In addition we offer on-site process development and optimization for a wide range of digital printing and coating applications.

Our TECHNOLOGY CENTER is the heart and source of all our developments and innovations. New technologies and processes are developed and tested on individual textiles, carpets, narrow fabrics and other materials.

We are equipped with all our technologies including **CHROMOJET, COLARIS**, coating systems and a comprehensive range of testing and laboratory equipment. But most important is the staff working there - all of them are specialists in their field.

2.1. DYE / FIBER AND IT'S FIXATION PROCESS

INK TYPE, FIBERS, FASTNESS	PROCESS	APPLICATION	
ACID **polyamide (nylon), wool, silk** light fastness ++ wash fastness ++ crock fastness ++ chlorine fastness + brilliancy ++	**Textile:** • pre-coating > dry • print > dry • steam > wash > dry **Carpet:** • pre-wash > print > steam > wash > dry	swimwear and sports, elastic tapes mats, rugs, carpet tiles, wall-to-wall carpet	
REACTIVE **cotton/ cellulosic fibers** **wool/proteine fibers** light fastness + wash fastness +++ crock fastness ++ chlorine fastness + brilliancy ++	**Textile:** • pre-coat > dry • print > dry • steam > wash > dry **Carpet:** • pre-wash > print > steam > wash > dry	fashion, bedding; upholstery, terry products cotton mats; polyamide carpets	
Low, medium and high energy DISPERSE dye **polyester** light fastness ++ wash fastness ++ crock fastness ++ chlorine fastness + brilliancy +++	**Textile:** • pre-coat > dry • print > dry • steam > wash > dry **Carpet:** • print > dry at 180°C • wash > dry	fashion, outdoor fabric, window fashion, upholstery, automotive nonwoven carpet, mats, rugs	
PIGMENT **all types of fibers** light fastness +++ wash fastness + crock fastness + chlorine fastness ++ brilliancy +++	**Textile:** • pre-coat > dry • print > dry • (opt. post-coat > dry)	outdoor textiles, bedding, upholstery, curtains, camouflage, nonwoven	
VAT **cotton, linen, viscose** light fastness +++ wash fastness +++ crock fastness ++ chlorine fastness ++ brilliancy ++	**Textile:** • pre-coat > dry • print > dry • impregnation with alkali > steam > reduction cleaning > wash > dry	outdoor textiles, terry towels, bedding, upholstery, curtains, camouflage, work-wear, institutional textiles	
CATIONIC **acrylic, cationic dyeable** **polyester** light fastness +++ wash fastness ++ crock fastness ++ chlorine fastness + brilliancy ++	**Textile:** • pre-coat > dry • print > dry • steam > wash > dry **Carpet:** • pre-wash > print > steam > wash > dry	acrylic fashion mats, rugs, wall-to-wall carpet	

SOME GUIDELINES AND QUESTIONS YOU SHOULD CONSIDER BEFORE DECIDING FOR A DIGITAL PRINTING SYSTEM:

1. Which market do I want to serve?
   Each market has its own rules, demands and technologies.

2. Which fiber is needed for my market (cotton, silk, wool, polyester, polyamide, ….)?

3. Which fastness levels (light-, wash-, rub-, weather-, chlorine- fastness, etc.) are important for my market?

4. Specify the required print width and production speed based on your realistic sales forecast.

5. Based on fiber and fastness requirements, the dyeing (ink) class and process can be specified.

6. The dye class leads to the preferable print-head system (circulation or non circulation type).

7. Choose the right ink partner based on support, experience, price, logistics. Advantage of an open ink system!

8. Definition of the required number of process colors as a result of color gamut, investment cost, ...

9. Are control system and software suitable for my application? Which particularities do my market and work-flow require?

10. Are quality of my raw-material and process-stability good enough for industrial production?

11. How do I define, measure and communicate colors? Do I have a color measurement system (spectrophotometer)?

12. Which design system do I need (vector or pixel based system)?

13. Which RIP software is best for me? (the RIP provides the digital information to build up a specific color using the process colors used by the printer)

14. Do I have space to install a high-tech printing system with its demand on constant temperature and humidity?

15. Do I have all utilities like fresh-, soft- and RO water, conditioned room for the printer, waste water treatment, steam, gas, compressed air, electricity, ...?

16. Do I have the right people to operate software and print line?
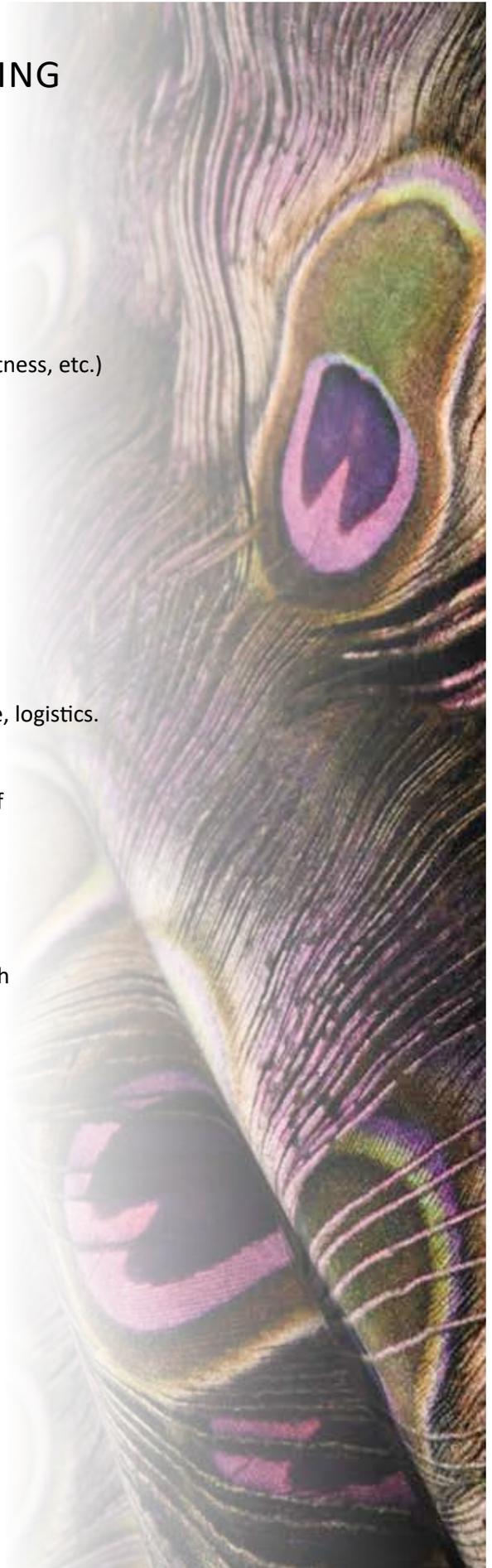
Digital printing is a complex task for which the entire work-flow has to match. From design, color management and communication up to printer calibration - all must be perfect for a superb result.

Essential tools are fast computers and networks and a lot of memory space - and trained specialists who know what they are doing.

PRINTER CALIBRATION:

The basic setup of the process and the print resolution must be set and stable before a calibration is made. Calibration is a software supported process made in several steps (linearization, printing and measuring targets, generating of printer and ICC profiles).
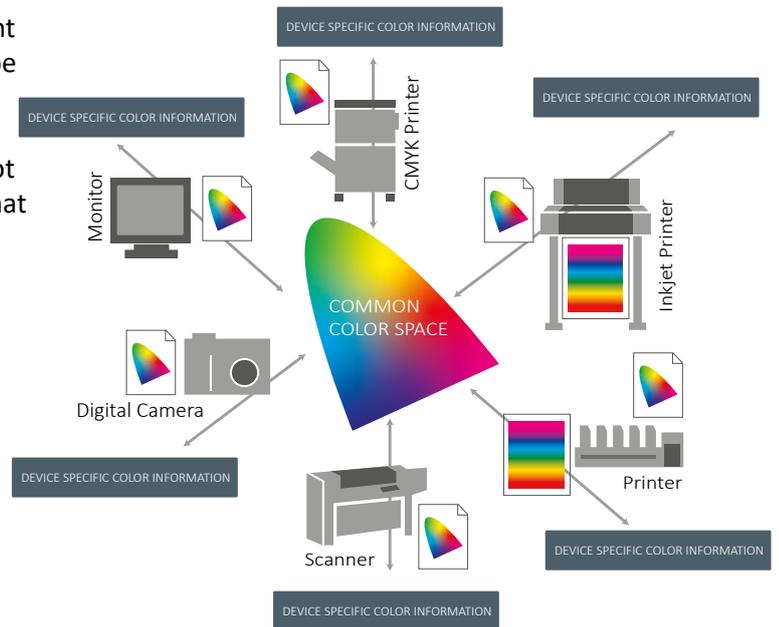
COLOR MEASUREMENT AND COMMUNICATION:

Digital printing needs digital information to communicate. Color measurement is essential. Different measuring devices can be used - depending on substrate and surface. Color is normally communicated within the L*A*B-color-system.

COLOR CALIBRATION:

To communicate and match colors - color calibration is needed. This makes sure that colors appear identical on different devices and printers.
A re-calibration is normally needed if a major parameter (base material, ink, fixation process, ...) is changed in the total process.

DESIGN SOFTWARE:

There are a number of pixel- or vector- based software tools on the market: Photoshop®, Gimp®, Nedgraphics®, Illustrator®, Corel Draw®...
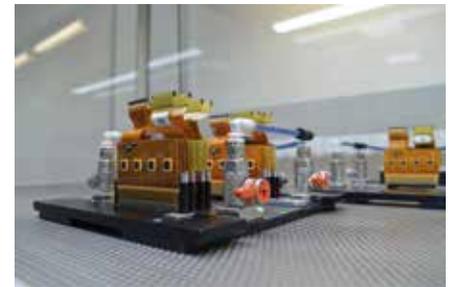
RIP PROCESS:

During the RIP process the color information from the art-work file is transformed and split into channels. For each process color (ink) one channel is used.

PRINTING PROCESS:

Printing is the final process step taking all parameters from previous settings in account.

StarFire™ PRINT HEAD

PRINT HEAD RECONDITION CENTER

TECHNICAL FEATURES

- ◆ Robust and reliable construction
- ◆ Repair Center for reconditioning print heads
- ◆ Coated metal nozzle plate - to withstand abrasion and resist damage
- ◆ High firing frequency - for high productivity
- ◆ High drop velocity - distance between print head and fabric can be up to 6 mm
- ◆ VersaDrop™- incorporated binary and greyscale jetting modes
- ◆ RediJet™- continuous ink recirculation system to avoid nozzle blockage and to reduce ink waste
- ◆ 4 interchangeable print heads with different drop sizes for a wide range of applications

INK SUPPLY & CIRCULATION SYSTEM

print head

reservoir
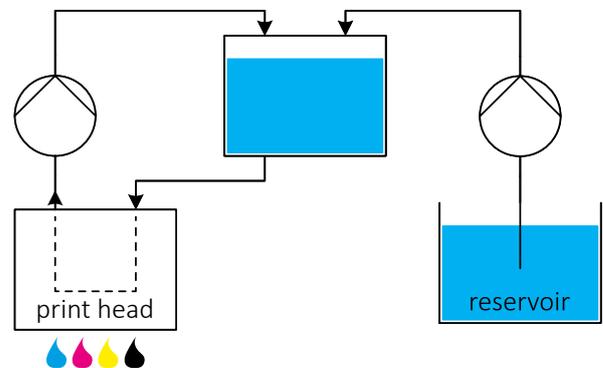
StarFire™ Print head models	1024/XSA	1024/SA	1024/MA	1024/LA
Drop sizes	7 - 21 pl	12 - 35 pl	30 - 75 pl	80 - 240 pl
Applications	**light fabrics** i.e. wash labels, lanyards, deco tapes, fashion	**medium fabrics** i.e. fashion, camouflage, home textiles	**heavy fabrics** i.e. technical webbings, terry towels, velours	**pile production** i.e. carpet, mats, blankets, felts

3. COLARIS - CHARACTERISTICS AND FEATURES

3.1. COLARIS DIGITAL PRINTING - HOW IT WORKS

COLARIS is the family of digital printers from **ZIMMER-AUSTRIA**. The printers are designed and based on 140 years of experience building textile and carpet printing machinery.
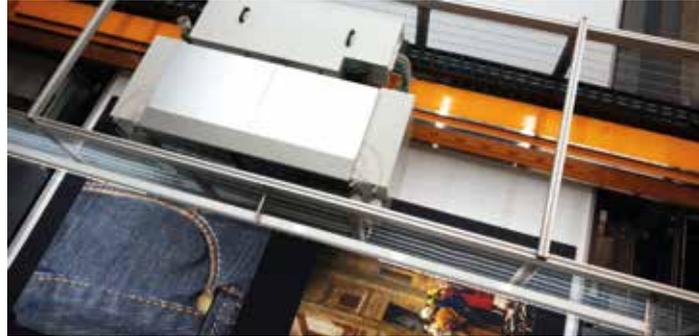
For different markets and applications we have the right printer and process.

One platform and 4 types of StarFire™ printheads (from 7 to 80 pl native drop size) match print quality and speed for individual applications.

Stable and solid base frame to guarantee highest precision - also over long time. Patented belt conveyor positioning system.

Open ink system (several ink suppliers for each type of certified ink)

Open file format and RIP system (any rip can be used; calibration can be made by customers)

ZIMMER AUSTRIA can supply complete print lines for all kinds of applications.

All electronics and software are made in house - this enables us to improve, extend and upgrade functions continuously.

Excellent technicians for installation, support and service.

3.2. COLARIS MODELS

COLARIS MODELS (2019-11-28)	12-1200T	12.2200	24.2200	48-2200	48-2600	48-3400	96-2200	96-2600	96-3400	48-4200	96-4200	96-5200
Max. config. (color groups × heads)	12 × 1	12 × 1	12 × 2	6 × 8	6 × 8	6 × 8	12 × 8	12 × 8	12 × 8	6 × 8	12 × 8	12 × 8
Max. print width [mm]	1200 × 1200	2200	2200	2200	2600	3400	2200	2600	3400	4200	4200	5200
Max. number of colors	12	12 or 6	12 or 6	6	6	6	12 or 6	12 or 6	12 or 6	6	12 or 6	12 or 6
Print heads per color	1	1 or 2	2 or 4	8	8	8	8 or 16	8 or 16	8 or 16	8	8 or 16	8 or 16
Booster ink supply system	opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.
Thermoplast glueing device				opt.	opt.	opt.	opt.	opt.	opt.			
PVA wet glueing device				opt.	opt.	opt.	opt.	opt.	opt.			
Integrated unrolling		opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.		opt.	opt.
Moving press roller				opt.	opt.	opt.	opt.	opt.	opt.			
Belt washing device		opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.	
Tile positioning device		opt.	opt.	opt.	opt.	opt.	opt.	opt.	opt.			
CHROMOJET inline application				opt. 256/512	opt. 256/512							
Refillable ink tanks	2 l	5 l	5 l	10 l	10 l	10 l	10 l	10 l	10 l	10 l	10 l with refill-pump	10 l with refill-pump
Print heads	FUJIFILM Dimatix StarFire™	XS with 7 pl; **SA** with 12 pl; **MA** with 30 pl; **LA** with 80 pl (all models)										
Ink circulation system	Permanent ink circulation with 3-stage filtration to avoid blockage and sedimentation – especially needed for pigment,- disperse,- and vat inks (all models)											
Print head temperature control	To keep the temperature of the print head constant to avoid thermal expansion effecting print precision (all models)											
Ink temperature control	Operated at 24°C +/-2°C	Operated at 24°C +/-2°C	Operated at 24°C +/-2°C	The ink and the carriage are kept at a constant temperature to guarantee constant viscosity								
Ink system	From ZIMMER AUSTRIA, certified ink can be used (from different suppliers) (all models)											
Print head cleaning	Automatic cleaning, wiping, spraying and vacuum system (all models)											
Head access	Manual	Access single heads from front								Slide-out frames to access all heads of one color		
Pattern handling	Unlimited number of patterns with any length can be loaded (just limited by memory) (all models)											
File format to print	TIFF layers generated by most commercial RIP's (all models)											
Print server	High performance PC with Windows 10, 10 GB Ethernet; 1TB SSD; 64 GB RAM (all models)											
Conveyor belt	Table	Endless Kevlar belt for highest precision with needles for carpet or thermoplast/permanent gluing system										
Roller diameter [mm]	n.a.	300	300	300	400	400	300	400	400	500	500	500
Head drive	Belt drive	Belt drive	Linear motor drive									
Data transfer	Glass fiber cables between print server and print head driver (all models)											
Online service	Remote access (all models)											
Ink systems	Pigment, VAT, Disperse, Acid, Reactive, Direct Sublimation, Cationic (all models)											

Digital inkjet printing on home textiles becomes more and more popular. Each application on home textiles has its own rules and demands - especially when it comes to different fastness requirements.

APOLO TEXTILE, Mexico

COLARIS terry-towel print line at Loftex, China

Entry into hot air dryer

COLARIS PRODUCTION PRINTER FOR HOME TEXTILES:

print width:	2200 | 2600 | 3400 mm
resolution:	400 x 400 up to 800 x 3200 dpi
number of colors:	4 up to 12
number of print-heads:	1, 2, 4, 8, 16 per color
production speed:	90 - 1000 sqm/hour

TERRY TOWELS

good wash and rub fastness and perfect penetration are needed. Either printed with reactive dyes for promotion towels or VAT dyes for hospitality towels.

WINDOW FASHION

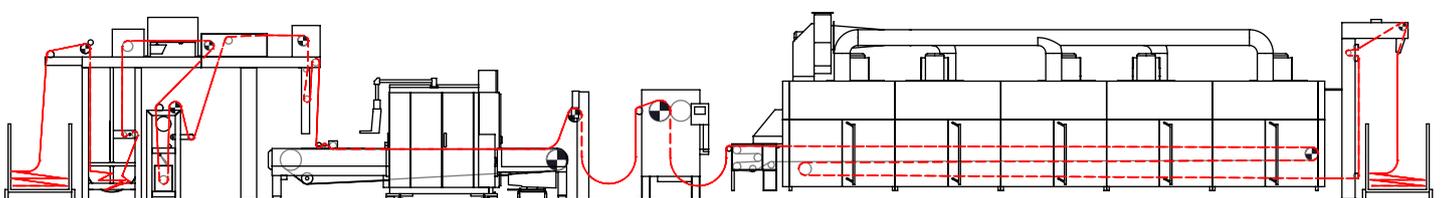is normally printed with pigment inks for highest light fastness.

UPHOLSTERY

needs excellent rub and light fastness - perfect to be printed with VAT or pigment inks.

POLYESTER BLANKETS

and fleece products - good wash fastness and brilliant colors are essential. PES raschel and fleece products are normally printed using disperse inks.

BLANKET PRINTING LINE

COLARIS PRODUCTION PRINTER FOR FASHION PRINTING:

print width:	2200 | 2600 | 3400 mm
resolution:	400 x 400 up to 800 x 3200 dpi
number of colors:	4 up to 12
number of print-heads:	1, 2, 4, 8, 16 per color
production speed:	90 - 1000 sqm/hour

Fashion printing is most popular using inkjet technology. Most of fashion are printed using reactive inks because of the wide color gamut and its good light and wash fastness.

In the future we will see more and more pigment prints on fashion products, for good reasons:

- ♦ Pigment is a simple print process
- ♦ Easy fixation using infrared radiators or hot air
- ♦ Brilliant colors
- ♦ Good haptics
- ♦ Relatively low investment
- ♦ No waste-water

For special market segments like accessories or African prints, where perfect penetration and deep colors or special inks are required, **COLARIS** printer is the perfect solution.

FASHION PRINTING LINE
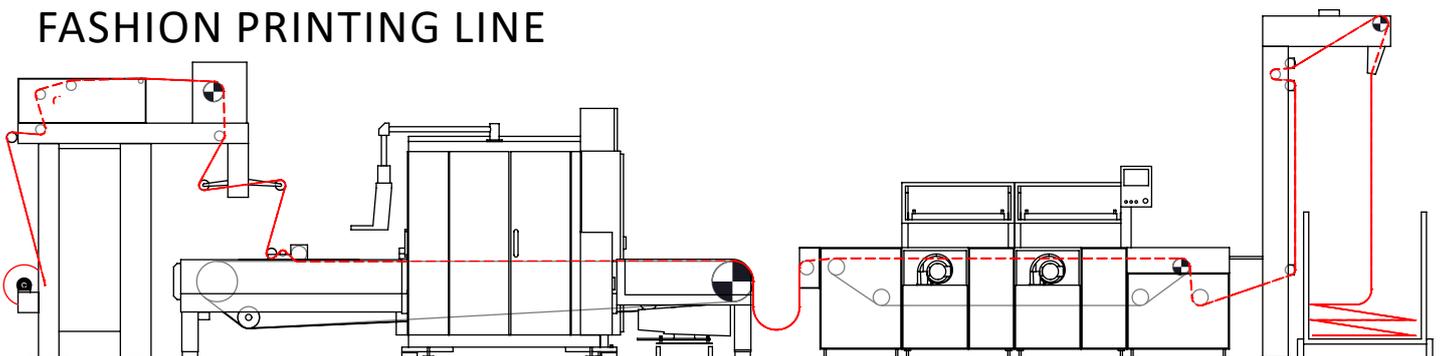
Based on **ZIMMER's** long history in screen and **CHROMOJET** carpet printing we developed the **COLARIS** carpet printing system. Unique process technology and special software features enable us to print carpet pile products with deep penetration, sharpest definition and rich colors. A number of special solutions are available for each product and market.
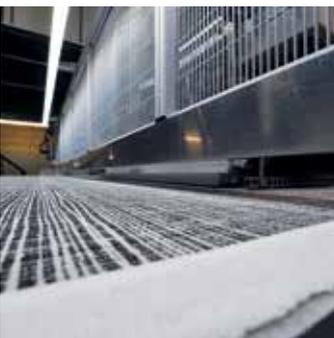
PRODUCTS:

♦ Carpet tiles out of polyamide

♦ Mats out of polyamide, polyester or modified (cationic) polyester

♦ Rugs out of polyester or polyamide

♦ Wall-to wall carpet out of polyamide, wool, polyester

♦ Needlefelt out of polyester

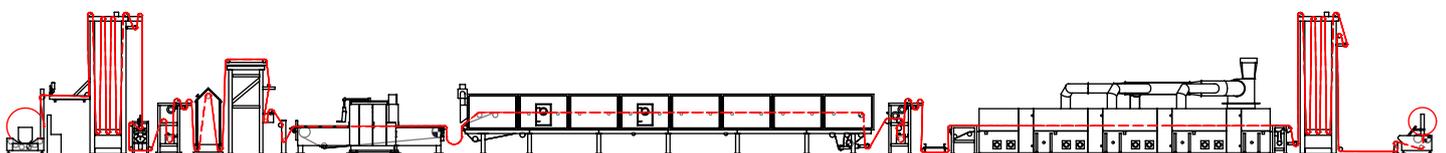**INFLOOR CARPET FASHION**, Germany

4.2 m wide **COLARIS** installation at Tianya, China

Printed carpet tiles

PRINT ON POLYAMIDE, WOOL AND MODIFIED POLYESTER USING SATURATED STEAM TO FIX ACID AND REACTIVE INK (DYE)

CARPET CONSTRUCTIONS:

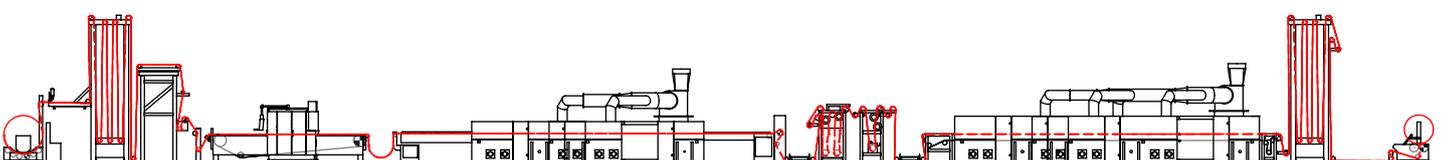Tufted, Woven, Flocked, Needlefelt, Knitted Raschel

INK SYSTEM:

- ♦ Acid for polyamide and wool
- ♦ Disperse for polyester and modified polyester
- ♦ Cationic for modified polyester
- ♦ Reactive for polyamide, wool, cotton, ...

COLARIS CARPET PRODUCTION PRINTER:

print width:	2200 | 2600 |3400 | 4200 | 5200 mm
resolution:	400 x 400 up to 800 x 3200 dpi
number of colors:	4 up to 12
number of print-heads:	1, 2, 4, 8, 16 per color
production speed:	60 - 1000 sqm/hour

4.2 m wide **COLARIS** installation for woven polyester rugs at **MOHTASHAM CARPET**, Iran

Printed PES woven carpet with perfect penetration

PRINT ON POLYESTER AND MODIFIED POLYESTER USING DRY HEAT TO FIX THE DISPERSE INK (DYE)

Printing on technical textiles, rigid panels, cardboards, nonwovens, felts, wood, ... using waterbased pigment inks is becoming more and more popular.

Nowadays individualization as well as short delivery time are key factors and digital inkjet printing technology is the only way to add value for most applications.

Pigments enable a simple fixation process, brilliant colors, excellent light fastness and a pretty good crock fastness.

Pigment inks require the following technology: ink circulation system, temperature control, individual waveforms, etc.

Rigid polyester nonwoven panels for acoustic or architectural usage. Complete new applications will pop up in future. **COLARIS** is made for printing on rigid tiles and mats!

Pigment printing for automotive applications: headliners, insulation layers etc.

COLARIS pigment printing on sponges, wipes and other consumables.

Individual printed gypsum ceiling tiles for offices, meeting rooms, auditorium halls etc.

Printed vertical window-blinds.

TECHNICAL TEXTILES

Our know-how in jetable fluids, waveform generation, mechanical and electrical engineering and our expertise in software enable us also to build digital inkjet printers for applications outside of the typical textile industry.

VAT PRINT FOR UNIFORMS & WORK-WEAR

Uniforms and work-wear require highest fastness. **COLARIS** digital VAT printing process guarantees super wash- and light fastness on cotton and regenerated cellulose based fibers.

DIGITAL FUNCTIONALIZATION

„Smart textiles" created with digital functionalization have a huge potential. For low viscosity products with little solid content - inkjet technology is the way to go. Starfire™ printheads are perfect. High viscosity products with high solid content may be printed with **CHROMOJET** technology.

www.pireta.co.uk

YARN PRINTING & SPACE DYEING

Our target is to print and dye different type of yarns at a speed up to 200 m/min using **COLARIS** or **CHROMOJET** technology.

CAMOUFLAGE PRINTING

Digital camouflage printing has not yet reached the market - but it has enourmos potential.
Different substrates require different inks and combinations of inks to achieve the required color shade, fastness and selective infrared reflectance.

5.1. COLARIS-NF PRINTING

Automatic print head cleaning system

Heated drums for inline pre-drying


TECHNICAL DATA

Printing width:	Up to 65 or 260 mm
Printing speed:	Up to 50 m/min (depending on resolution)
Number of colors:	Up to 8 mix of different ink classes and head nozzle sizes possible
Print head nozzle sizes:	XS, S, M
Printing resolution:	400 | 800 | 1200 dpi
Print sides:	Single or double-side printing
Ink supply system:	Full circulation & temperature control system

NARROW FABRICS PRINTING LINE
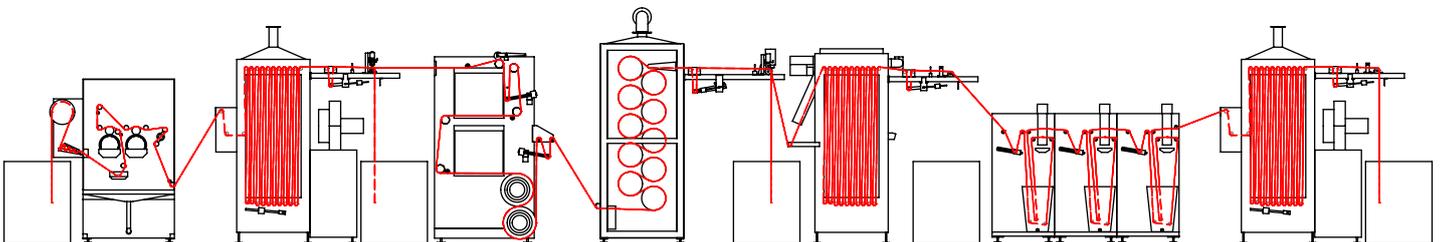
COLARIS-NF ADVANTAGES

Fully digital application of dyes - any shade, any pattern, any time

- ♦ Efficient short and sample production
- ♦ Change of color and design on the fly
- ♦ Printing of solid colors - digital dyeing
- ♦ Mixed colors or patterns processed simultaneously
- ♦ Unique text or information capability
- ♦ Different colors or patterns on front and back
- ♦ Reduction in process complexity –
  any pattern/color combination in one process

Lower capital investment

Improved production efficiency

- ♦ Technical hotline
- ♦ Remote maintenance
- ♦ Small and large lots have the same
  setup and production costs
- ♦ Excellent color fastness
- ♦ Reduced production loss from clean-up
  or pattern/color changes
- ♦ Easy to operate

Service and support via internet available

Green technology – energy and water savings

- ♦ Reduced waste water accumulation
- ♦ No color mixing required
- ♦ Fewer auxiliary chemicals required
- ♦ Reduction in process steps

Open ink system
## Different nozzle sizes

VALVEJET TECHNOLOGY:

CHROMOJET works with high speed valves.
The pre-mixed pressurized spot or process colors are injected with high precision deep into the face of the pile without any machine parts touching the fabric. Deepest color penetration and excellent print definition are the result.

Today the 4th generation (with 50 and 76 dpi) is in operation.

Since its initial introduction more than 300 printers have been installed around the world and about 170 mio sqm of carpet and mats are printed every year with **CHROMOJET**.

HALBMOND, Germany
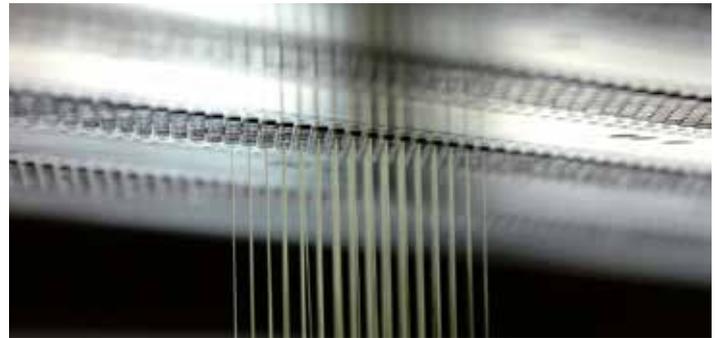
CHROMOJET
PRODUCTION PRINTER:

print width:	2200 | 2700 | 3200 | 4200 | 5200 mm
print resolution:	25 | 50 | 75 dpi
number of colors:	2 up to 16
number of jets per color:	32 | 64 | 128 | 256 | 512 | 1024
production speed:	100 - 3000 sqm/hour

DYE CLASSES:

♦ **Acid and pre-metalized** - to print polyamide (nylon) and wool
♦ **Disperse** - to print polyester based carpets
♦ **Cationic** - to print modified (cationic) polyester and acrylic fibers
♦ **Reactive** - to print polyamide, wool and cotton based carpets and mats

6. CHROMOJET

6.2. CHROMOJET - INSTALLATIONS AND APPLICATIONS

Ranging from 2200 mm up to 5200 mm in production width and from 4 to 16 colors - **CHROMOJET** is available for different application.

APOLO TEXTILE, Mexico


MILLIKEN, Great Britain

**NURTEKS,** Turkey

MILLENNIUM, USA

CARPET BACK COATING SYSTEMS FOR SECONDARY AND GEL-FOAM BACKING

We offer carpet backing lines for secondary backing and also for gel foam backings or combined lines:
From feeding to foam mixer and applicator, laminator, infrared pre-dryer, embossing station,
split-zone dryer to accumulator and roll-up unit.

LAYOUT OF A LATEX PREPARATION INSTALLATION:

face yarn
primary backing
SBR latex coat
secondary backing
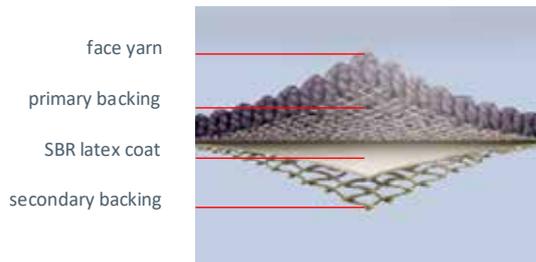
LAYOUT OF A COMPLETE CARPET BACK COATING LINE:
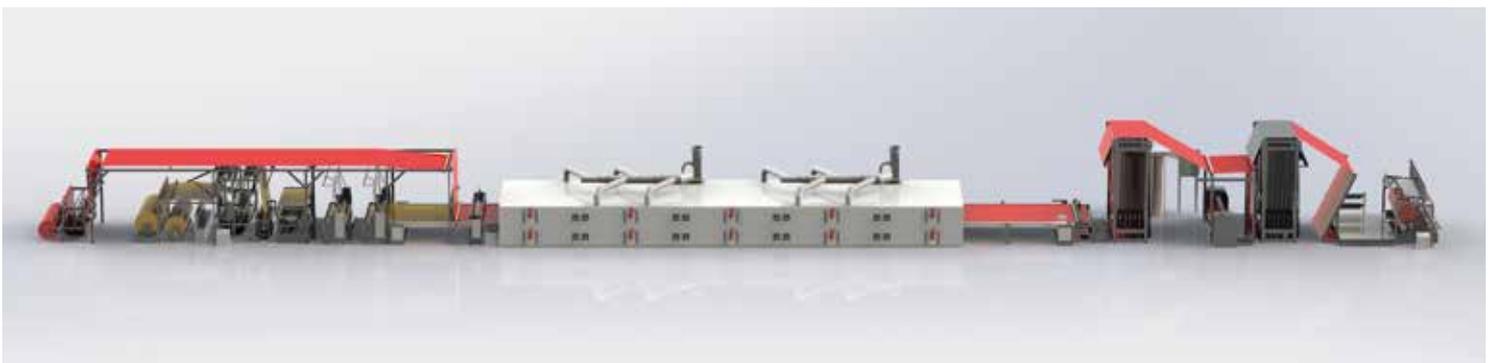
THE SMART WAY OF PVC BACKING

- ◆ Carpet tiles
- ◆ Entrance mats
- ◆ Runners and 2 m/6 ft wide Broadloom Carpet

Process:
- ◆ Tufting of a carpet
- ◆ Pre-coating the tufted carpet with EVA or NBR pre-coat
- ◆ Back coating on a tile back-coating line
- ◆ Tile punching or cutting

INFRARED CURING - COMPACT, EFFICIENT AND MORE ECONOMIC

4 times more energy-efficient than the classical hot-air oven, resulting in a lower energy bill.

IR waves are heating up the medium and not the air or housing of the oven.

A shorter line is sufficient at a given production capacity.

No investment in boiler, thermal oil and piping. No waiting time during start-up and shut-down.

This solution allows unlimited stops and restarts without affecting the quality of jellification.
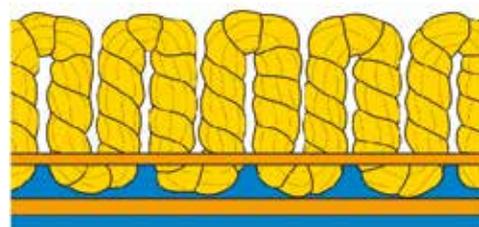
Primary Backing
Polymer layer No.1
Fibreglass layer No.1
Polymer layer No.2

8. LINE COMPONENTS

8.1. TEXTILE AND CARPET - STEAMING, WASHING, DRYING, ENTRY, EXIT-UNIT

ZIMMER AUSTRIA offers in addition to **COLARIS** and **CHROMOJET** printers a wide range of carpet manufacturing equipment - from 2200 mm up to 5200 mm in width.

Unrolling, accumulators, J-boxes, lint suction, pre-steaming, pre-washing, center guiding units, horizontal and vertical steamers, washing units, foam applicators, foam mixers, stenter-, conveyor and combined dryers, cutting and roll-up units.

All of these lines are controlled by servo drives, PLC's and remote serviced equipment.

Accumulator & pre-washing

Accumulator with electric tension control

Horizontal steamer

Super-heated steamer

Sandwich washer

Sandwich washer

Vacuum pump

Combined carpet stenter and conveyor belt dryer for backed and unbacked carpet

Foam-applicator & steamer

Foam applicator

Roll-up unit

Roll-up unit with foil dispenser

SUPRA**PRESS**

to improve penetration on high pile carpets and polyester blankets. Available in widths of 1200 | 2200 | 2700 | 3200 | 4200 |5200 mm.

SUPRA**FOAM**

SUPRA**FOAM** Generator & Applicator - to impregnate carpet with stain-blockers, stain-release products, softener and other functionalization chemistry.

GUM- AND DYE APPLICATOR

to create light/dark effects in level-cut-loop carpet construction.

KISS-COATER

to apply latex or PVC on to the back-side of carpet constructions.

COLOR KITCHEN

Mixing, preparation and storage tanks for dye and chemicals.

9. LAB EQUIPMENT

9.1. CARPET LAB EQUIPMENT

We offer the complete range of lab equipment necessary for product development, sampling, but also for basic R&D development at ink-, dyestuff-, yarn- and chemical companies.

♦ Mixers for dye preparation
♦ Viscotester
♦ Sample steamer
♦ Sample sandwich washer for individual tiles and carpets
♦ Sample dryer
♦ **COLARIS** sample printer with 1200x1200 mm table size
♦ **COLARIS** small production printer with a print width of max. 2200 mm
♦ **CHROMOJET**800 sample printer with a table size of 1200x1200 mm
♦ **CHROMOJET** TABLE**TOP** printer with a table size of 300x300 mm

LAB- STEAMER-WASHER-DRYER

Compact carpet finishing unit (1300 mm wide)
which can handle individual samples printed on
COLARIS or **CHROMOJET**.
The sample is put onto the conveyor belt which runs
through the complete line.
Steaming, washing and drying the sample is
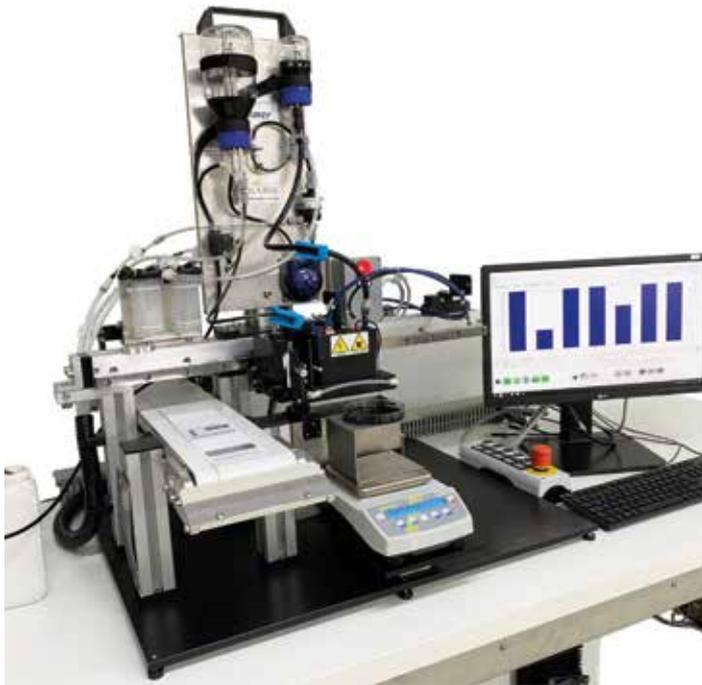completed within 20 minutes.

COLARIS SAMPLE PRINTER

♦ up to 12 colors with 1 StarFire™ print head
♦ table size of 1200x1200 mm (4 ft*4 ft)
♦ for lab-, sampling- and product development work.

The **COLARIS** INK Performance Tester is designed for development purposes in combination with the **COLARIS** INKJET Technology.
The **COLARIS** INK Performance Tester is the ideal tool for the development or evaluation of inks and other jetting fluids. With the replaceable ink supply unit, you can change between inks quickly.
In addition to ink testing there is also the option to test the performance and function of print-heads.

- ♦ INK DEVELOPMENT
- ♦ INK EVALUATION
- ♦ StarFire™ PRINT HEAD PERFORMANCE TEST
- ♦ StarFire™ PRINT HEAD FLOW RATE TEST

Ink Filtration Tester -
to check filterability of ink. The decrease of flow rate is measured over time to see how an ink performs during filtration.

CHROMOJET TABLETOP PRINTER is perfect to develop new applications, processes and recipes in the field of **CHROMOJET** pile product printing and digital functionalization using valve jet technology.

OEM products and developments based on **CHROMOJET** valve or **COLARIS** inkjet technology.

INNOVATION | QUALITY | SERVICE

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