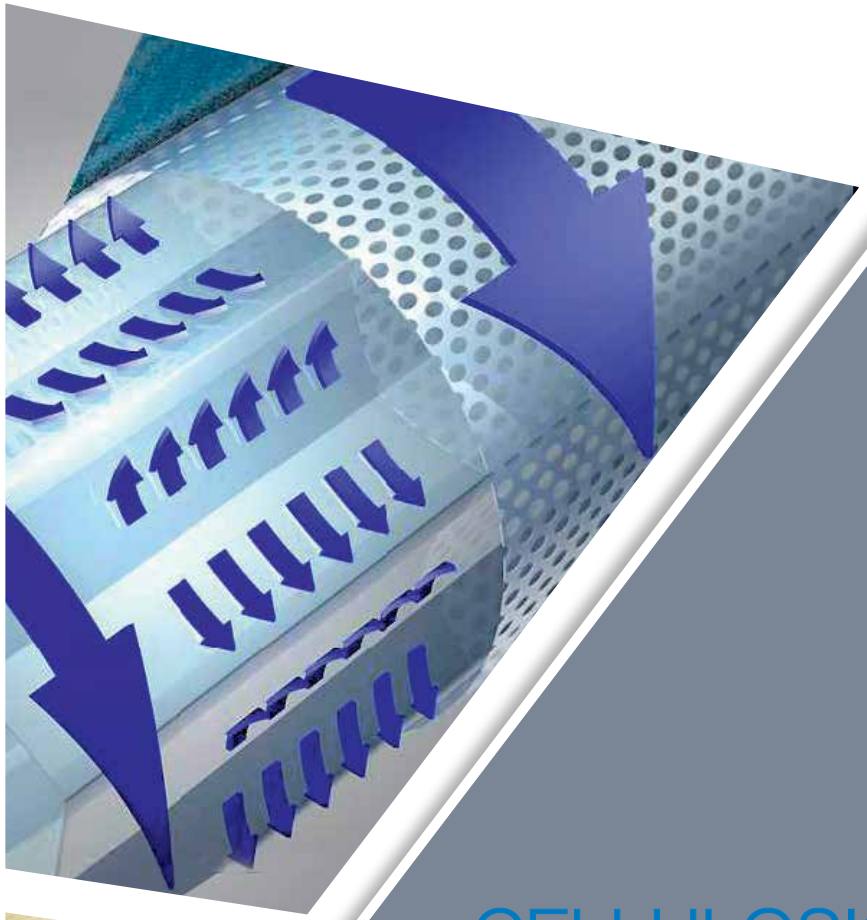


CELLULOSIC FIBRE KNITTED FABRIC

GENTLENESS AND CONSISTENCY -
LOW-TENSION TREATMENT MEETS VERSATILITY

GOLLER

CHTC

FONG'S

COMPANY INTRODUCTION

German Engineering
Innovation Since 1948

Goller was founded by Fritz Goller in Schwarzenbach, Germany in 1899. Since 1948, Goller has been designing, researching and developing, manufacturing and supplying wet finishing ranges to the global market and Goller is one of the major suppliers in the wet finishing sector. In 2006, Goller has become one of the members of CHTC Fong's and its production capability and market share have been kept increasing since then.

With the combination of distinctively-advanced German technology and human-based managed production complex in Germany and China, Goller offers a wide range of meticulously-designed and highly-effective and efficient wet finishing range for woven fabrics and knitted fabrics processing that covers everything from desizing/ spun oil washing to the final stage of washing. Goller's wet finishing ranges enable users to have minimum level of power consuming and optimum level of reproducibility assuring production processes and they have flexibly been tailor-made to meet the specific requirements of each user.

The Best of German Engineering
Das Lexikon des deutschen Maschinenbaus

BLUeCOMPETENCE Alliance Member
Partner of the Engineering Industry Sustainability Initiative

TÜV SÜD ISO 9001:2008

COMPREHENSIVE SERVICES-ORIENTED

As a reliable and quality-conscious supplier of wet finishing range, Goller is not only focusing on technological advancement but also highly committed to providing professional, efficient and reliable services to all of our users, ranging from expert advice on the specification and configuration of the range, proficient range commissioning service, on-site and on-line troubleshooting to timely supply of spare parts.

RESEARCH AND DEVELOPMENT

Goller owns its Research and Development Centre in Germany and China. Goller is dedicated to the sustainable research and development of wet finishing technology and the integration of innovative design and features into Goller's ranges so as to keep pace with the ever-changing needs of users or even exceed the expectations of users.

Thanks to the long-term established relationships with Textile Machinery Associations, renowned chemical suppliers and research institutions and the intensive communication between Goller and the users, Goller is competent in developing the pioneering technology of wet finishing ranges.

ADVANTAGES

GENTLENESS AND CONSISTENCY - LOW-TENSION TREATMENT MEETS VERSATILITY

GOLLER SINTENSA PLUS is a specialised-designed and one-for-all wet finishing solution. It can be applied for technical textile or mass-market textile processing. It has been famed for its high degree of reproducibility, reliability, productivity and durability.

Gentle

GOLLER SINTENSA PLUS processes the light and delicate fabrics in fine yarn counts and gauges with care – pushing the fabric's limits further. Knitted fabrics and woven fabrics ranging from low to medium weight and any fibre or blend can be processed.

Flexible

GOLLER SINTENSA PLUS has been designed to meet standard requirements of users regardless of knitted, woven or elastic fabrics. One system can be applied for different wet finishing applications. Configurations and specifications of any range can be tailored-made to fulfil the specific requirements of users.

Reliable

A well combination of meticulous designed, high quality spare parts and precise craftsmanship makes Goller's range to be a reliable partner for users in wet finishing sector.

User-friendly

GOLLER MULTIDATA is a one-stop platform for range's operation and maintenance and enables Goller' s range to be highly automated and user-friendly.

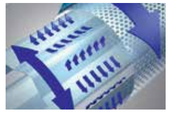
FEATURES

HIGH DEGREE OF AUTOMATION - MULTIDATA

MULTIDATA – process control system is a signature feature of Goller's range as it enables Goller's range to be highly automated, operationally steady and flexible, exceptionally user-friendly and maintenance-friendly. MULTIDATA enables high reproducibility of fabric's finishing and low energy consumption of fabric's processing by the application of recipe pre-setting and recorded in PLC and automatic temperature control, rate of residual liquor control, lye's concentration control, pH value control, water infeed and chemical dosing. MULTIDATA also enables the business operations management system of user to be connected with the PLC of Goller's range for effective and efficient data and range operation management, for instance, the production data of Goller's range can be easily and instantly transferred from Goller's PLC to user's management system for user's production planning, inventory management, cost analysis and sales forecast used. With the adoption of MULTIDATA, the occurrence of human error can be greatly reduced and the production's stability can be immensely enhanced.

LOW TENSION FABRIC TRANSPORT

A remarkable engineering solution consists of drive system to be equipped with individual motor, which is controlled by loadcell. Compensator has been skilfully equipped with the range for adjusting the tension of running fabric from time to time. It creates an opportunity to process the most delicate fabrics in the lowest linear-tension ever. The subsequent use of customised-shaped expanders utterly guarantees the selvedges of fabric to be uncurled.



EFFECTIVE TURBULENCE – KINETIC ENERGY

A perforated washing drum with a specially built-in rotor. The speed and rotating direction of rotor are adjustable to generate the required level of turbulence and cross-flow. The combination of high turbulence and low-liquor content ensures that there is no risk of staining of impurities on fabric. Optimum washing efficiency is guaranteed.

SUPERIOR WASHING EFFECT

GOLLER SINTENSA PLUS provides 3 ways washing for fabric in one compartment. The 3 ways washing includes turbulent washing, under-liquor washing and power-spray washing, which enables users to decide the frequency of washing, ranging from gentle washing to powerful washing, subject to the requirements of users.

LOW ENERGY CONSUMPTION

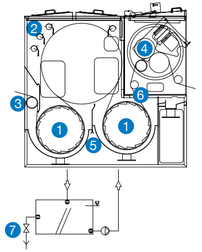
The advanced MULTIDATA programme is the basis of on-demand dosing for all media feeding system. The programmable water feeding is controlled by flow-meter whereas the computerised dosing of chemicals is weight-proportionally based. The design of whole range in closed-execution helps avoiding steam leakage. The design of counter-flow and low-liquor level washing of GOLLER SINTENSA PLUS minimizes the water and chemical usage for fabric washing.

Turbulent
washing effect
is generated by the
interaction of perforated
drum and rotor, in which enabling
the liquor cross-flow of fabric

COMMON PARTS

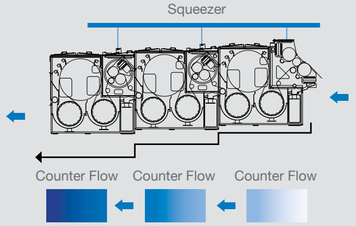
/1 Sintensa Cyclone Tandem – High Efficiency Washing Compartment

- Running Tension can be minimized by the application of Cyclone Rotor

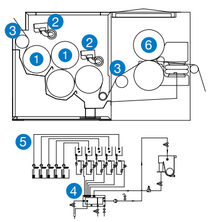


1. Perforated drum with Cyclone Rotor
2. Power spray with circulation
3. Expander
4. Intermediate squeezer
5. Thermplate (Indirect heating)
6. Loadcell
7. Filter (High circulation of liquor)

Counter Flow & Bath Seperation

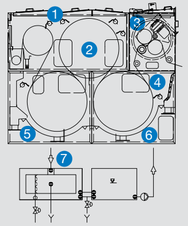


/2 Knit Plus - Chemical Application Compartment



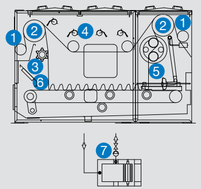
1. Driven guiding drum
2. Overflow cascade
3. Expander
4. Automatic filter
5. Chemical dosing with flowmeter
6. S-wrap squeezer

/3 Oxidator – Chemical Application & Dwelling Compartment



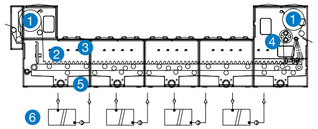
1. Power spray with circulation
2. Perforated drum (1000mm)
3. Intermediate squeezer
4. Large-dimensioned window
5. Low level of liquor required
6. Thermplate (Indirect heating)
7. Filter (High circulation of liquor)

/4 Elasto Dip - Chemical Application & Dwelling Compartment



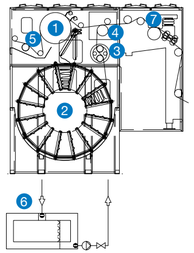
1. Loadcell
2. Perforated drum (295mm)
3. Profile plaiting roller
4. Power spray with circulation
5. Double-expander
6. Conveyor belt
7. Filter (High circulation of liquor)

/5 Universa – Dwelling & Washing Compartment



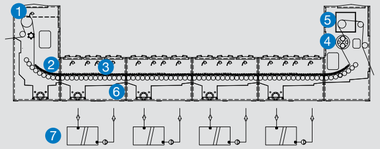
1. Perforated drum
2. Conveyor belt
3. Power spray with circulation
4. Double-expander
5. Sectional drainage
6. Filter (High circulation of liquor)

/6 Startran – Dwelling & Washing Compartment



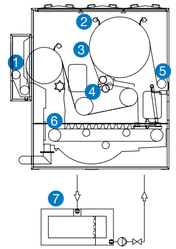
1. Perforated drum
2. 16 plaiting chambers
3. Double-expander
4. Driven roller
5. Expander
6. Filter (High circulation of liquor)
7. 2-bowl squeezer

/7 Unirelaxa Rollerbed - Dwelling & Washing Compartment



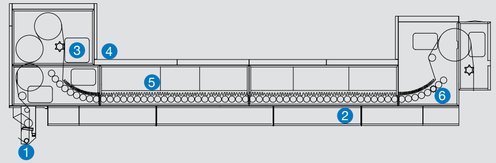
1. Expander
2. Rollerbed
3. Power spray with circulation
4. Double-expander
5. Centring device
6. Sectional drainage
7. Filter (High circulation of liquor)

/8 Unirelaxa – Soaping, Dwelling & Relaxing Compartment



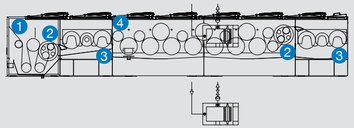
1. Expander
2. Power spray with circulation
3. Perforated drum (1000mm)
4. Double-expander
5. Loadcell
6. Conveyor belt
7. Filter (High circulation of liquor)

/9 Rollerbed Steamer



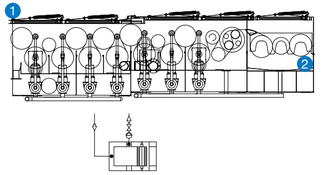
1. Steam-locked entrance
2. Sump heating
3. Large-dimensioned window
4. Heated steamer's roof
   - Built-in heating coil with insulation
5. Rollerbed with driven rollers
6. Sensor limited switch

/10 Optima - Mercerising Unit



1. Wetting trough
2. Fabric expander combination
3. Three-bowl high efficiency squeezer GOLLER-FXT (10 tons)
4. Impregnation section
   - Highly-effective stainless steel rollers facilitate the lye to penetrate to the core of fibre while minimizing the consumption of lye during impregnating process
   - Bottom rollers in each section equipped with individual drive
   - Each section of mercerising unit to be equipped with an individual set of lye distributing pipe
   - Self-cleaning rotary filter SUPER-CLEAN for high circulation of lye
   - Collecting vat underneath rollers for sending lye back to the filter
   - Tension of running fabric controlled by loadcell
   - Automatic regulation of the concentration and temperature of lye

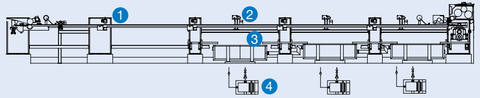
/11 Optima - Stabilising Unit



1. Impregnation section
   - Highly-effective stainless steel rollers facilitate the fixing of fabric width
   - Bottom rollers in each section equipped with individual drive
   - Counter flow from the subsequent washing section and liquor circulation generated by circulating pump facilitate the removal of lye
   - Individual cascade with circulator pump for each pair of roller
   - Self-cleaning rotary filter SUPER-CLEAN for high circulation of liquor
   - Tension of running fabric controlled by loadcell
   - Automatic regulation of the concentration of weak lye
2. Three-bowl high efficiency squeezer GOLLER-FXT (10 tons)

/12 Cadena - Chain Field (Pin Chain)

1. Horizontal pin chain
   - Infeed with overfeeding device and edge sensors
   - Conically adjustable entrance chain field
   - Adjustable stretching force to cope with different width settings
   - Each section of chain-field is controlled by individual drives
   - Tension of running fabric regulated by loadcell
2. Overflow cascade
   - Removal of lye and fixing of fabric's width
3. Liquor collection tank
4. Self-cleaning rotary filter - SUPER-CLEAN



/13 Heat Recovery System

- Energy Saving Unit – apply wasted hot water to heat up fresh water for processing used

/14 Steam Heated Exchanger

- Pre-heat fresh water for processing used
- Stabilize the temperature of washing compartment by supplying pre-heated water

/15 Manual Filter

- User-friendly and efficient filtering system
- Simple cleaning process

/16 Automatic Filter

- Automatic filtering process and cleaning process controlled by PLC
- Precise dosing of chemical controlled by PLC

/17 Super-Clean – Self-Cleaning Rotary Filter

- Automatic filter with brush for filtering out impurities and fluffs
- Filtering process and cleaning process controlled by PLC
- Precise dosing of chemical controlled by PLC

/18 Thermplate – Indirect Heating System

- Indirect steam heating of compartment through thermplate
- No direct contact between steam and fabric helps avoiding contamination incurred on fabric
- Large-scale, efficient and even heat-up of compartment
- Easy for cleaning
- Possible use of condensate water

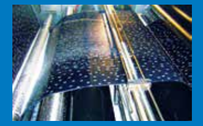
/19 Automatic Dosing System

- Liquid-flow controlled by flowmeter
- Precise chemical dosing controlled by PLC

/20 Neutralization System

- On-line monitoring of pH value
- pH value regulated by PLC automatically

/21 Vacuset – Vacuum Suction Device



- Effective removal of dirts, excessive liquor, printing paste and spun oil; pick-up of fabric can be as low as 20% after processing through Vacuset

/22 Intermediate Squeezer

- Reduce pick-up of fabric as low as to 75%

/23 Goller-FXT – High Efficiency Squeezer

- Reduce pick-up of fabric as low as to 60%

/24 Loadcell

- Effective tension-regulating unit, tension of running fabric is measured and controlled by PLC

/25 Compensator

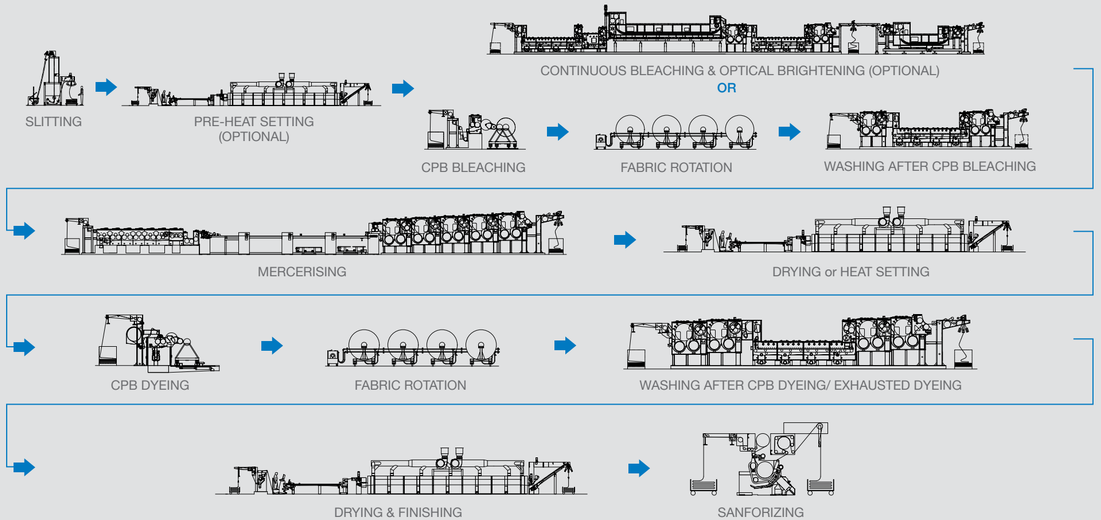
- Effective tension-regulating unit, tension of running fabric is measured and controlled by hydraulic pressure

/26 Process Control System – MULTIDATA

- Visualisation of the whole range, including real-time parameter of driven motor, hydraulic valve, water infeed, temperature of compartment and cylinder dryer
- The whole production process is under operator's control
- Recipe setting and running parameters recording through PLC
- Parameters of production process can be recorded and are traceable
- Recipe management enables high reproducibility of fabric's finishing resulted
- Range's error can be recorded and is traceable
- Different level of users and limit of authority for accessing to PLC can be set on the PLC
- Remote range checking and problem fixing via Team Viewer
- Consumption data recording is available, e.g. consumption of steam, electricity, water and chemical per Kg or meter of fabric (Optional)
- Possible to be connected with the user's business operations management system for effective and efficient data and range operation management

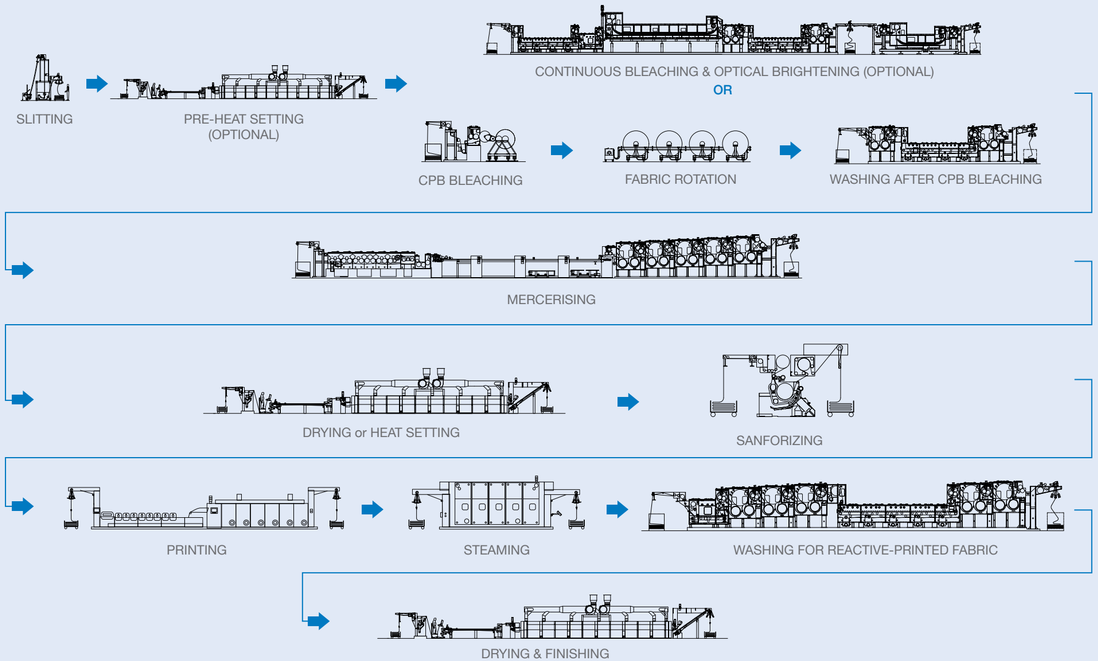
PROCESS FLOW CHART OF CELLULOSIC FIBRE KNITTED FABRIC

Pretreatment, Dyeing and Post-treatment Processes of Cellulosic Fibre Knitted Fabric



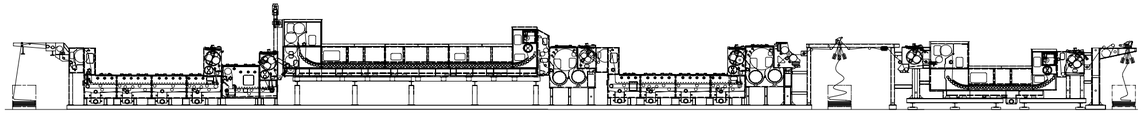
POST-TREATMENT PROCESSES OF YARN-DYED FABRIC

Pretreatment, Printing and Post-treatment Processes of Cellulosic Fibre Knitted Fabric



CONTINUOUS BLEACHING RANGE & OPTICAL BRIGHTENING APPLICATOR

Goller Continuous Bleaching Range and Optical Brightening Applicator have been specifically designed for bleaching and optical brightening of cellulosic fibre knitted fabric in continuous open-width form



UNIVERSA
Demineralization

ELASTO DIP
Chemical Application

ROLLERBED STEAMER
Fabric steaming with relaxation

SINTENSA CYCLONE TANDEM
Pre-washing

UNIVERSA
Washing

SINTENSA CYCLONE TANDEM
Neutralization

DIPPING TROUGH
Chemical Application

ROLLERBED STEAMER
Fabric steaming with relaxation

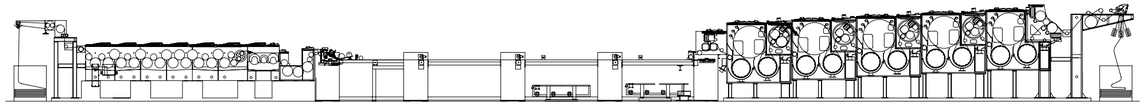
ADVANTAGES

- Even Bleaching Effect (Left, Middle, Right)
- High Degree of Whiteness (80 Berger or Above)
- High Degree of Permeability & Hygroscopicity
- Fine & Soft Handling
- Smooth Fabric Surface (Anti-Pilling)
- Crease Mark-Free Bleaching Process
- Well-Prepared for Dyeing in Chromatic Colours
- MULTIDATA – High Reproducibility
- Fabric Evenly Heated by Saturated Steam
- Low-Tension Fabric Transport
- Low Energy Consumption

GOLLER - CADENA

Chain Mercerising Range

Goller - Cadena has been specifically designed for mercerising of cellulosic fibre knitted fabric in chain and continuous open-width form



OPTIMA – MERCERISING UNIT
Mercerising

CADENA – CHAIN FIELD
Fabric width fixing & lye removal

SINTENSA CYCLONE TANDEM
Washing

SINTENSA CYCLONE TANDEM
Neutralization

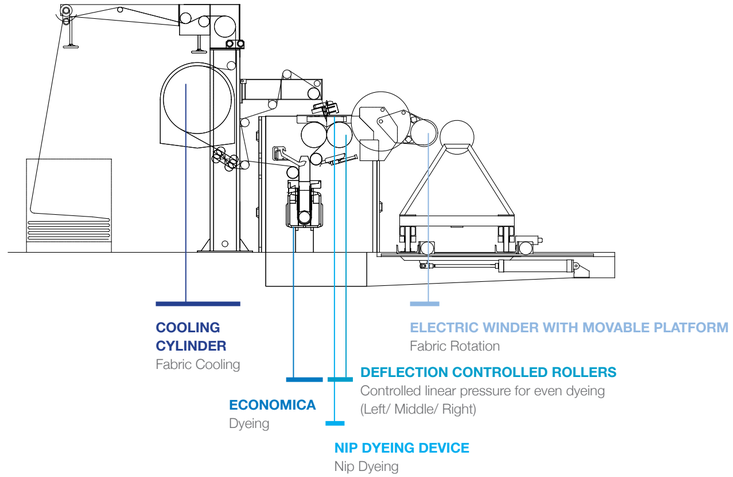
ADVANTAGES

- Highly-Effective & Efficient Impregnation
- Automatic Control for Lye Concentration & Temperature
- Optimal Level of Lustre
- Smooth Fabric Surface (Anti-Pilling)
- Dyestuff Saving in the Subsequent Dyeing Process
- MULTIDATA – High Reproducibility
- Low-Tension Fabric Transport
- Low Consumption of Lye
- Low Energy Consumption

GOLLER – ECONOMICA

Cold Pad Batch Dyeing Range

Goller – Economica has been specifically designed for cold pad batch dyeing of cellulosic fibre knitted fabric in continuous open-width form

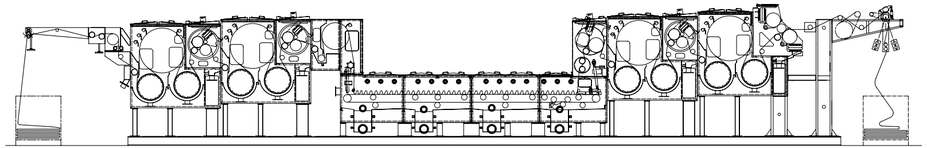


ADVANTAGES

- Even Dyeing Over the Width of Fabric
- High Reproducibility of Shade
- Precise Dosing System
- Constant Level of Dyestuff Pick-up
- Quick Colour Change
- Applicable for Various Type of Dyestuff
- MULTIDATA – High Reproducibility
- Automatic Self-Cleaning System
- Low-Tension Fabric Transport
- Low Consumption of Chemical
- Low Energy Consumption

WASHING RANGE FOR DYED FABRIC

Goller Washing Range for Dyed Fabric has been specifically designed for washing of cellulosic fibre knitted dyed fabric in continuous open-width form



SINTENSA CYCLONE TANDEM
Washing

UNIVERSA
Soaping

SINTENSA CYCLONE TANDEM
Washing

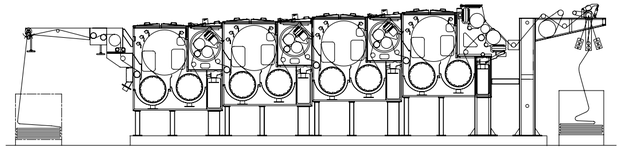
SINTENSA CYCLONE TANDEM
Neutralization

ADVANTAGES

- High Reproducibility of Fabric's Finishing
- Even Washing Effect (Left, Middle & Right)
- Smooth Fabric Surface (Anti-Pilling)
- MULTIDATA – High Reproducibility
- Low-Tension Fabric Transport
- Low Energy Consumption

WASHING RANGE FOR YARN-DYED FABRIC

Goller Washing Range for Yarn-Dyed Fabric has been specifically designed for washing of cellulosic fibre knitted yarn-dyed fabric in continuous open-width form

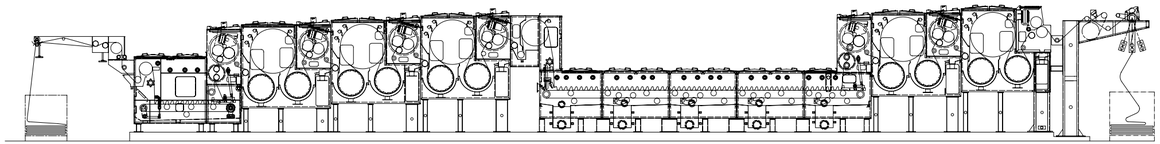


SINTENSA CYCLONE TANDEM
Washing

SINTENSA CYCLONE TANDEM
Neutralization

WASHING RANGE FOR PRINTED FABRIC - REACTIVE-PRINTED FABRIC

Goller Washing Range for Reactive-Printed Fabric has been specifically designed for washing of knitted reactive-printed fabric in continuous open-width form



ELASTO DIP
Printing paste swelling

SINTENSA CYCLONE TANDEM
Printing paste washing-off

UNIVERSA
Soaping

SINTENSA CYCLONE TANDEM
Washing

SINTENSA CYCLONE TANDEM
Neutralization

ADVANTAGES

- High Reproducibility of Washing Effect & Capillary Effect
- Even Washing Effect (Left, Middle & Right)
- No Batch Deviation
- Low Energy Consumption
- Water Consumption: 75% Less Than the Traditional Pretreatment Process
- Low-Tension Fabric Transport
- Tailing-Prevention Fabric Transport
- Low Elongation Rate
- High Degree of Fastness
- Staining-Free

GOLLER

Environmental Consciousness

Goller cares for the environment. Goller's wet finishing ranges have been specially designed for the environmentally friendly production of fabrics, such as minimum consumption of water, auxiliary agents, steam and electricity. Recycling the wasted hot water to heat up the fresh water is also a unique feature of Goller's ranges which plays a crucial role in fostering the environmentally friendly production of fabrics

Easily Contactable

Goller has 65 agents all over the world and all of them are ready to listen to your specific requirements of the wet finishing solutions. So please come and talk to us!

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FONG'S LATIN AMERICA LIMITTADA

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