



**aeris**





TEXTILE



D I V I S I O N



[www.aerisgroup.it](http://www.aerisgroup.it)

## **Aeris**

**INDUSTRIAL DIVISION**

[www.aerisepc.it](http://www.aerisepc.it)

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## **Aeris - Alena NW**

**NONWOVEN DIVISION**

[www.aerisepc.it](http://www.aerisepc.it)

## **Aeris - Mazziniici**

**TEXTILE DIVISION**

[www.aerisepc.it](http://www.aerisepc.it)

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## **Edenya**

**EVAPORATIVE COOLING DIVISION**

[www.edenya.it](http://www.edenya.it)





# Our mission

**Innovation** and continuous business **growth**, together with **motivation**, bring a breath of fresh air: these are the shared values of all the companies in our group!

Our team of experts studies and designs the systems, **meeting all the needs and goals of our customers.**

PROGRESS - INNOVATION - VISION - SUCCESS - IDEAS -  
INSPIRATION - CREATIVITY - GROWTH

# Textile Division

Discover our latest generation solutions for air treatment, filtration and much more.

**More than 2500 plants** in the textile field worldwide.

2500

INSTALLATIONS

60

COUNTRIES

30%

GROWTH OF ANNUAL  
TURNOVER

100%

COMPONENTS OF  
EUROPEAN ORIGIN

**Your partner  
for**

- Keeping T and rH constant
- Granting clean and healthy air
- Saving energy
- Saving water
- Reducing maintenance costs
- Tailor made solutions



# **Aeris** experience in

Air Treatment & Humidification  
Dust & Fibre Filtration  
Heat Recovery  
Cooling  
Energy Saving  
Audits & Efficiency Planning



# Our goals and their benefits

Dust **filtration**, fibres **separation**, keep **constant temperature** and **humidity**, guarantee the correct **balancing** of air flows, **heat recovery** from ovens or other production machines.

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## Benefits

Highly efficient **filtration**, **humidification** and **air treatment systems** are essential in every textile factory to ensure the quality of the product, optimal performance of production machines, and healthy environments. **Saving energy, reducing water consumption** for humidification and **heat recovery** are our goals to increase the competitiveness of our customers.





A close-up photograph of a teal-colored fabric, possibly a textile sample, showing its texture and folds. The fabric is draped and folded, creating deep shadows and highlights that emphasize its tactile quality.

# Aeris: focused on Textile

**SPINNING**

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**WEAVING**

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**FINISHING**

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**CONFECTION**

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**HOSIERY**

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**WOOL MILLS**

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**SYNTHETIC &  
MAN MADE FIBRE**

**RECYCLING**



# Humidification and filtration

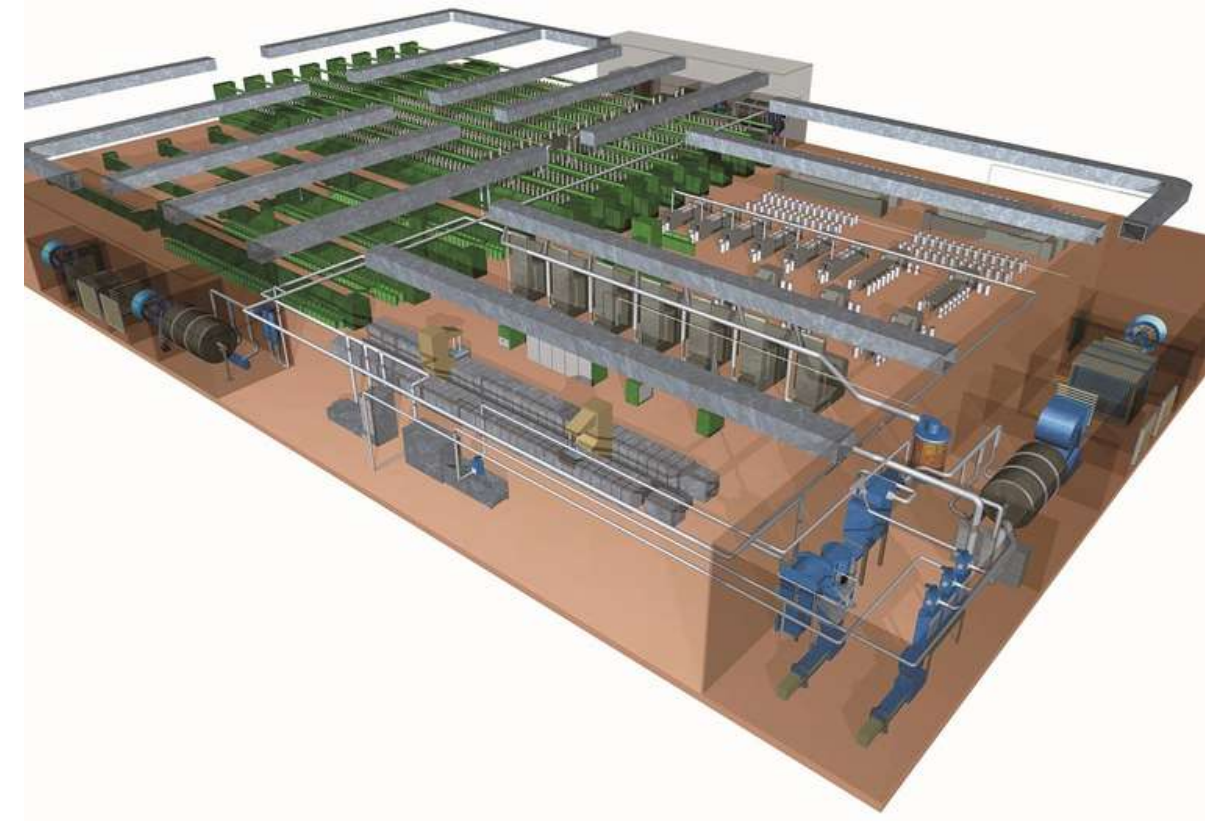
- Plant design in conformity with the **UNI EN 16798-3: 2018 – ex UNI EN 13779 Directive**
- **Erp2018 system conformity** - Eco Friendly Design
- Conformity with **VDI 6022** for the humidification system IHS®





# Spinning

- Dust and Fibre suction and separation systems
- Humidification systems



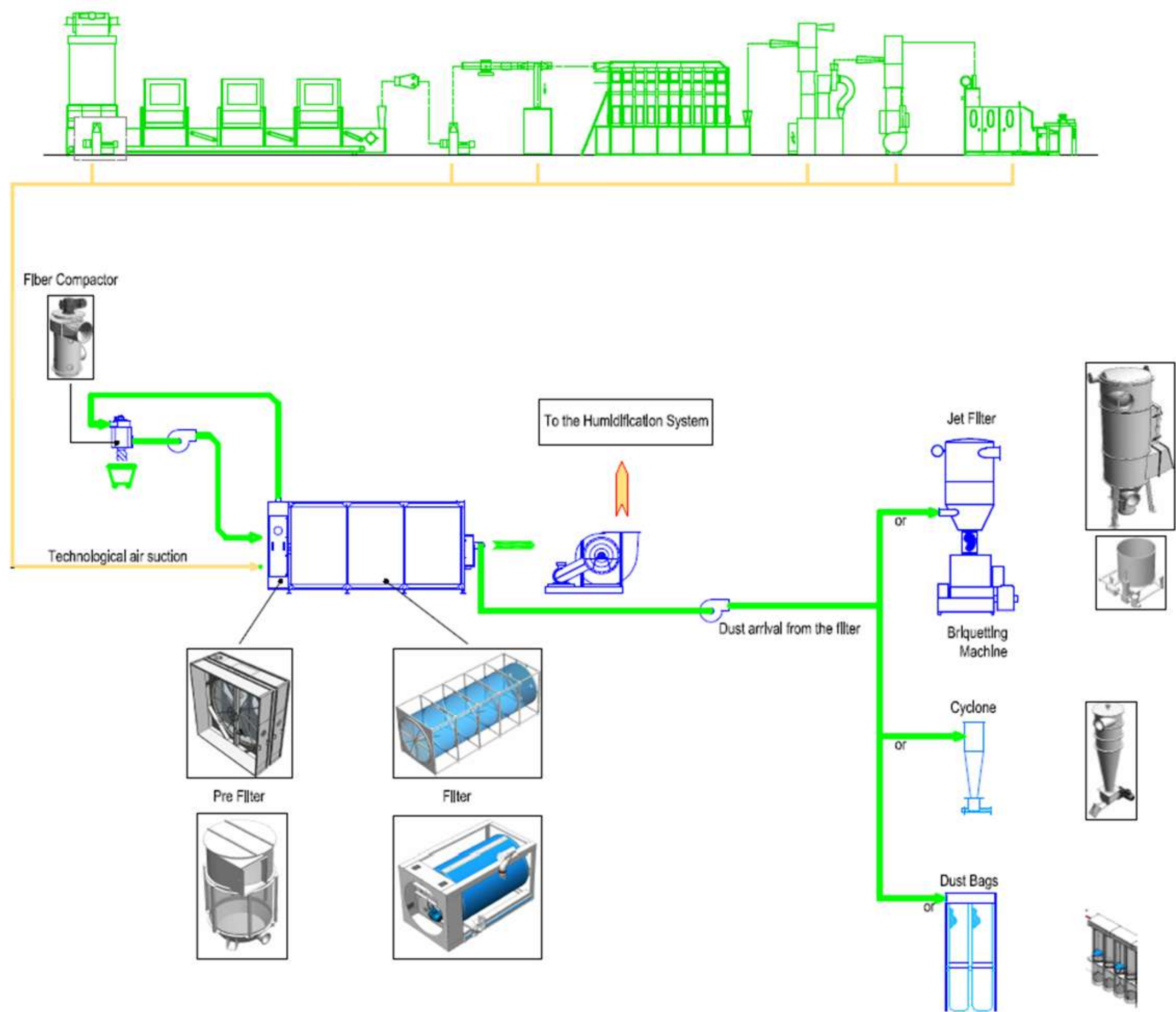


# Spinning applications



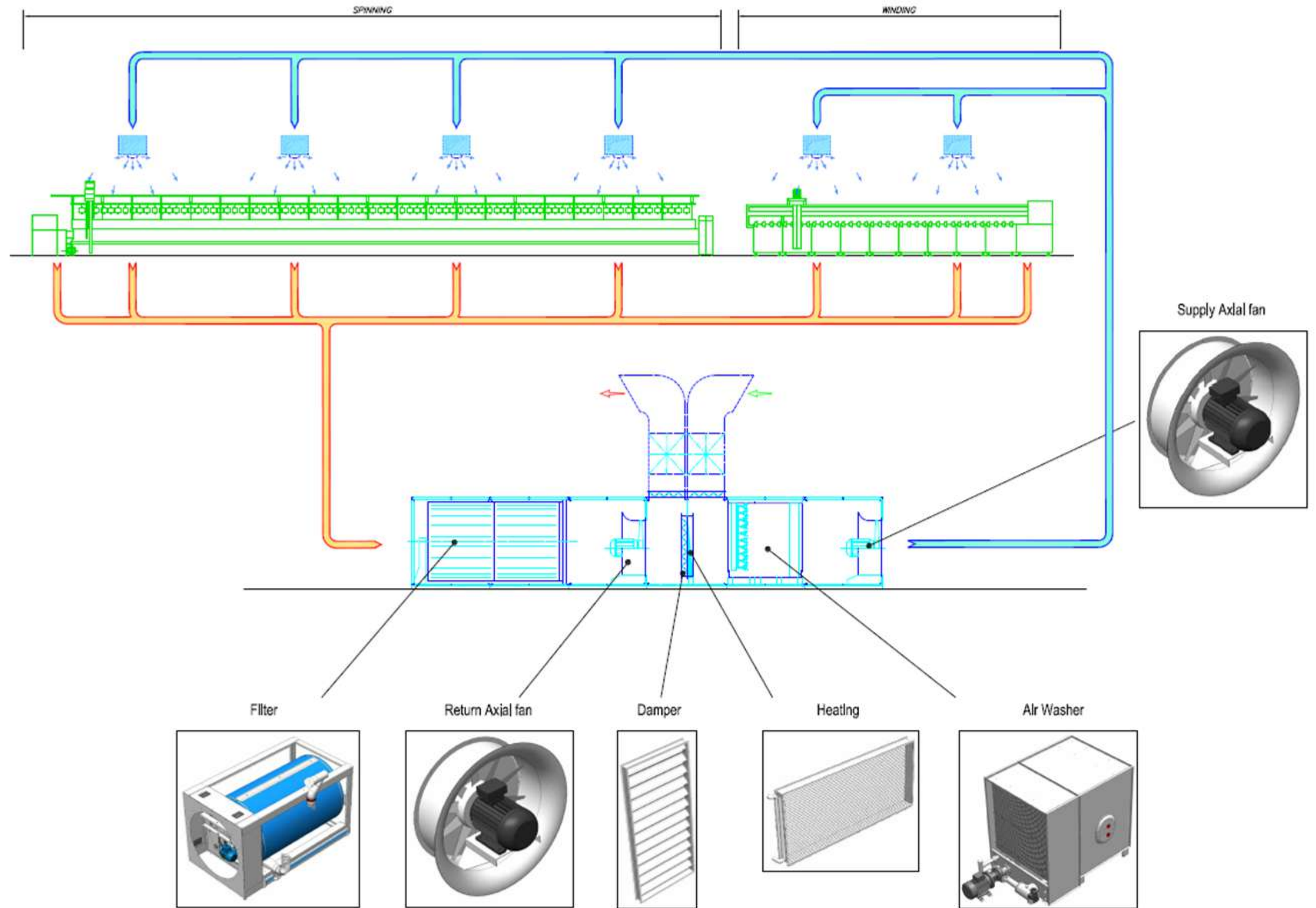


# Spinning flow sheet





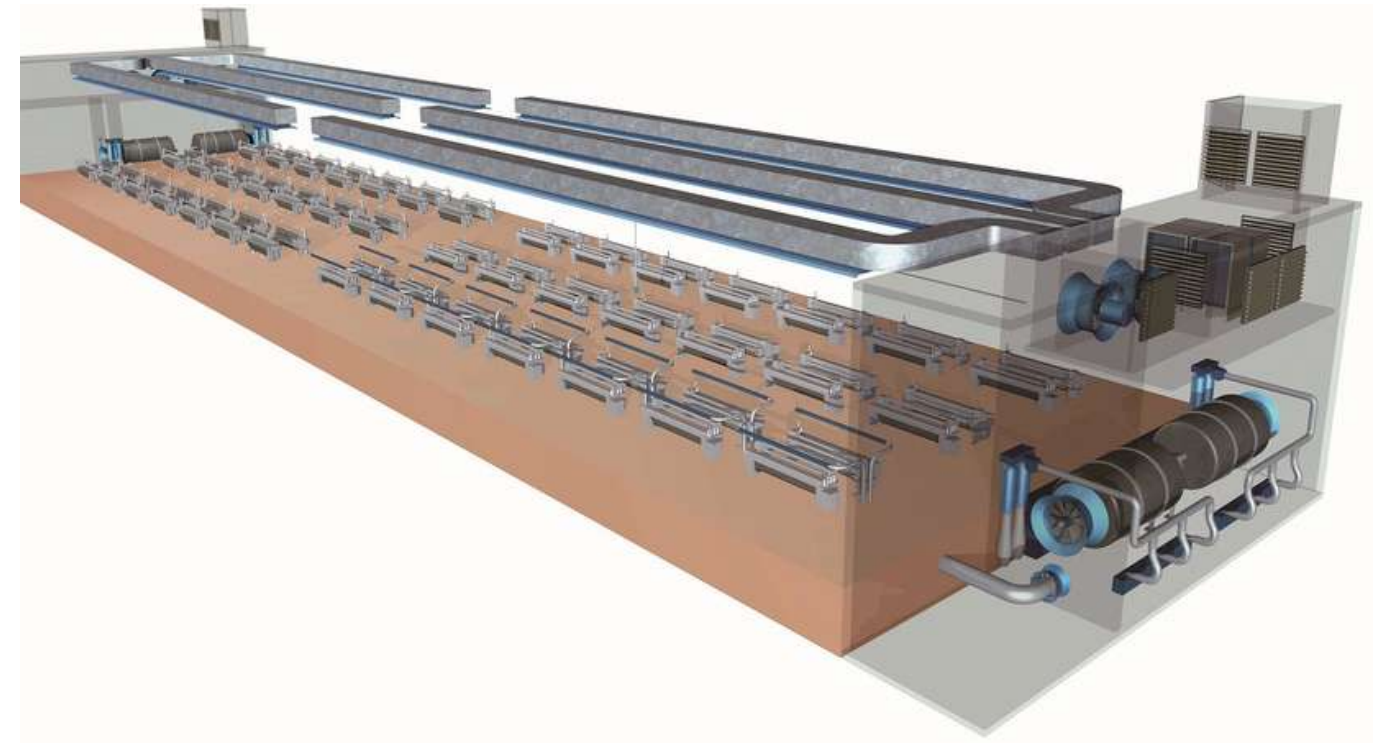
# Spinning flow sheet





# Weaving

- Humidification systems



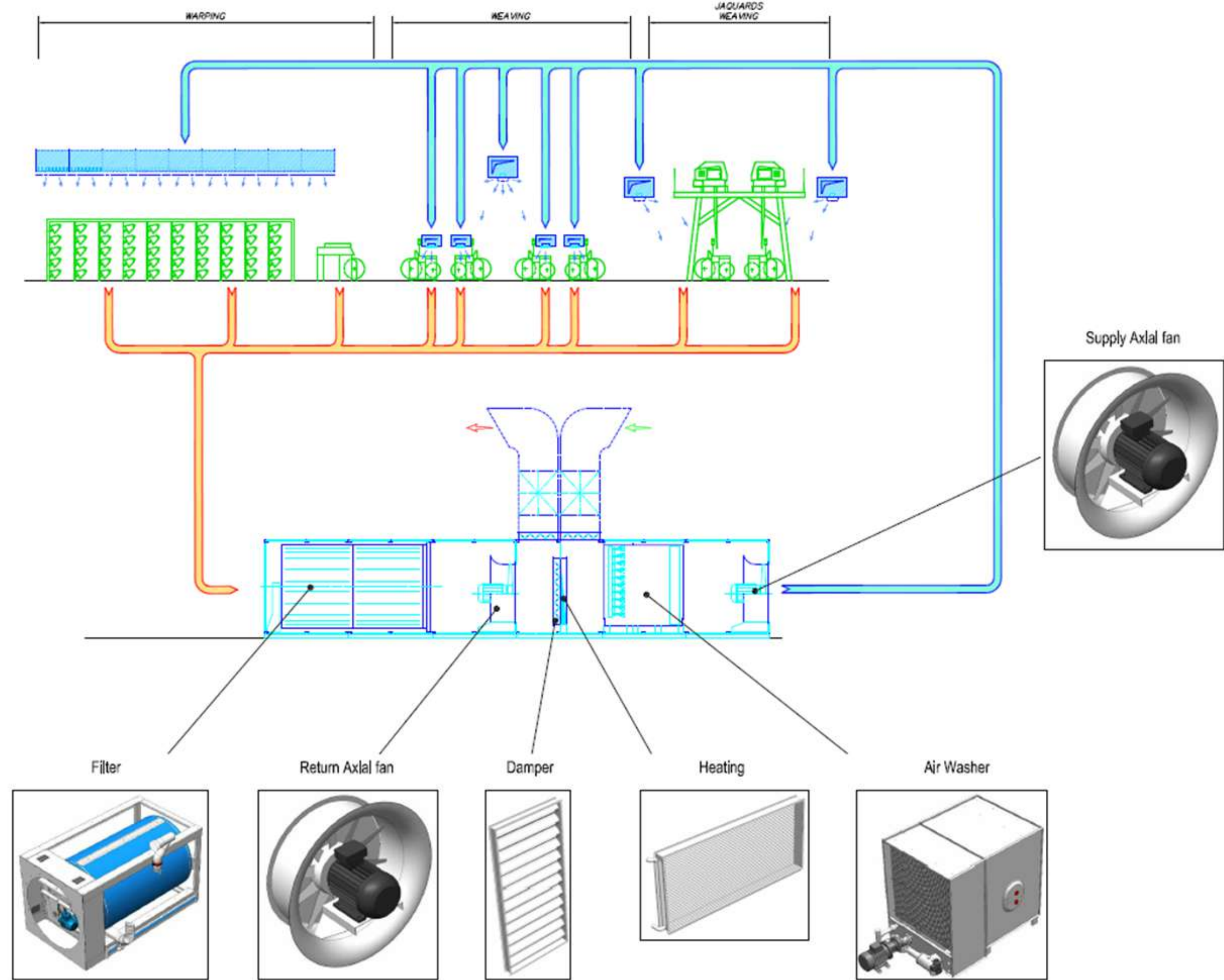


# Weaving applications





Weaving  
flow sheet

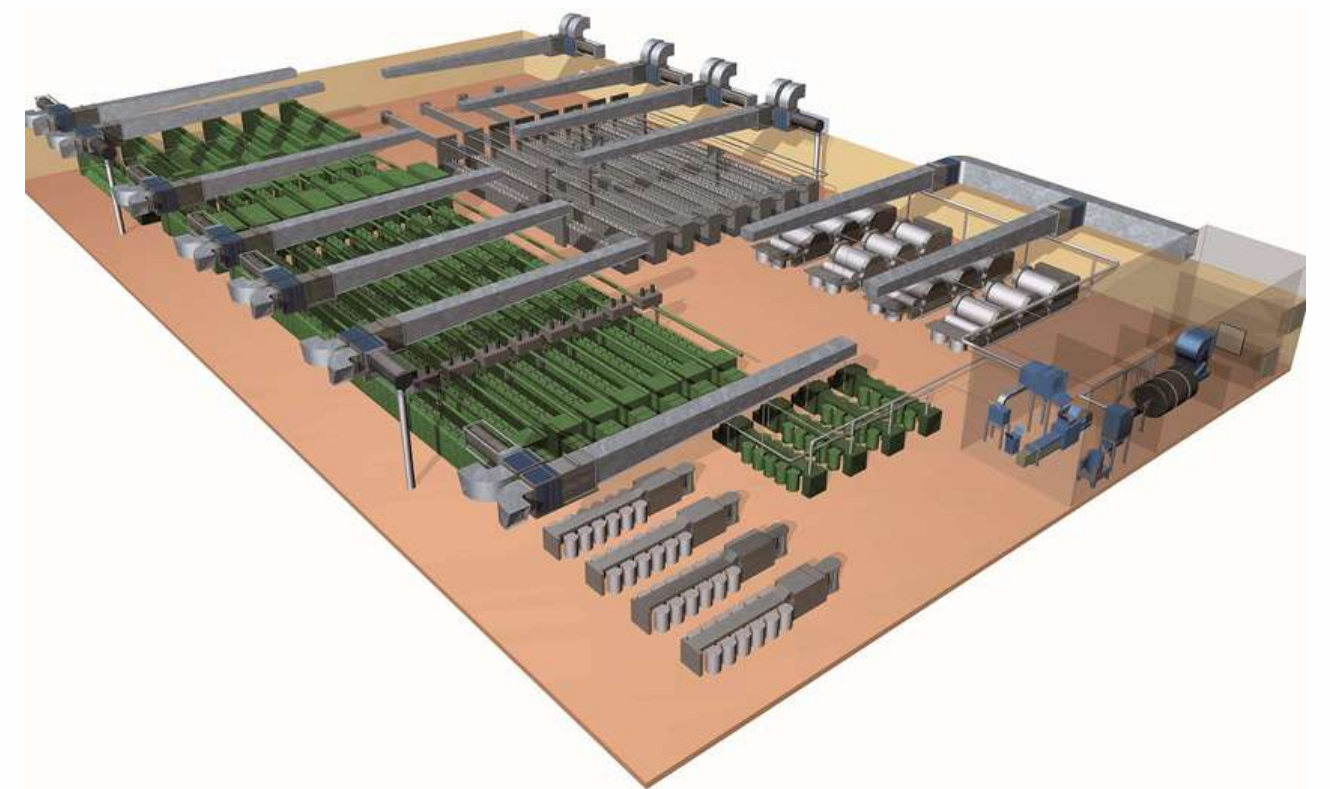






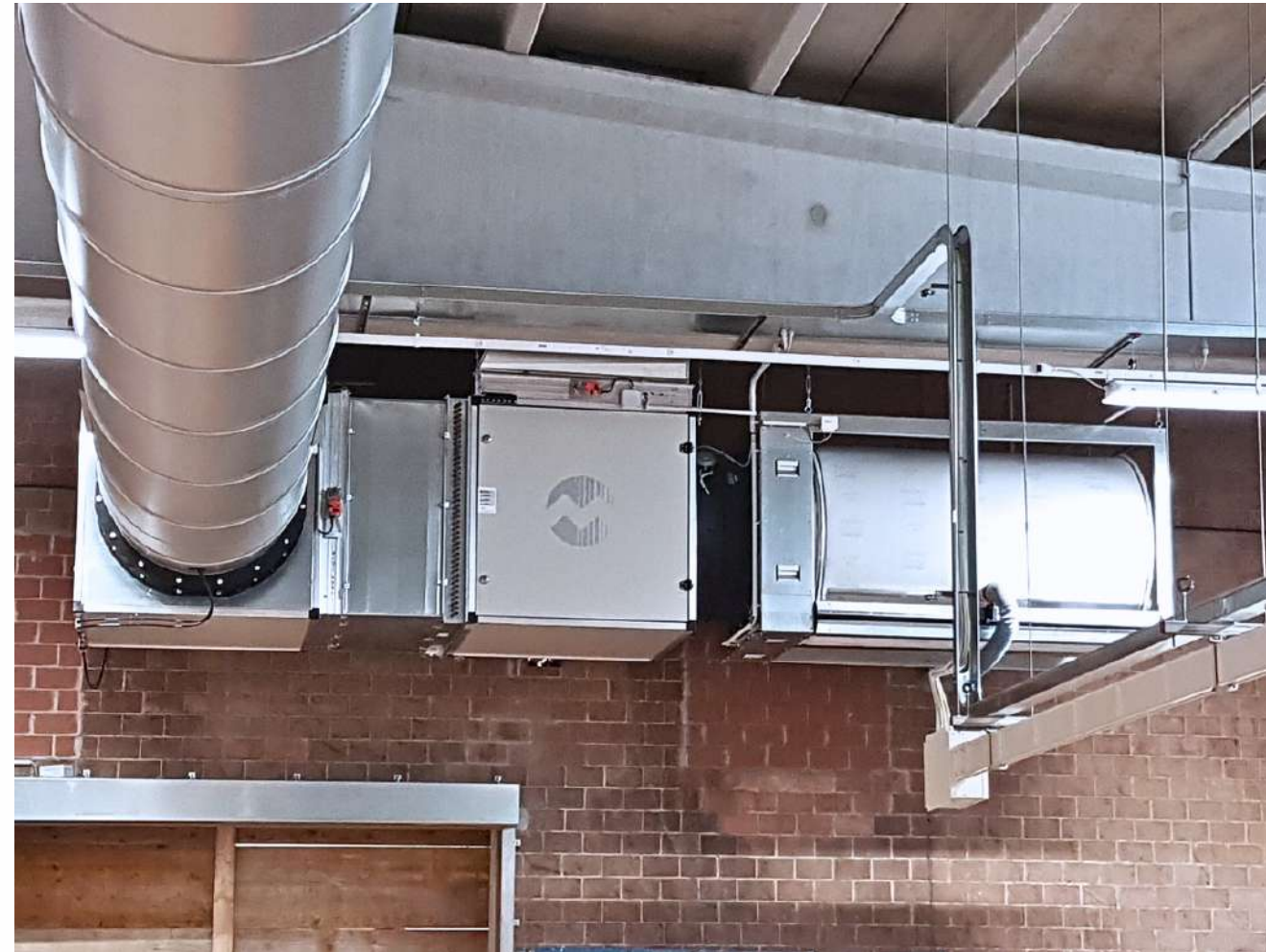
# Wool factories

- Humidification systems





# Wool factories applications

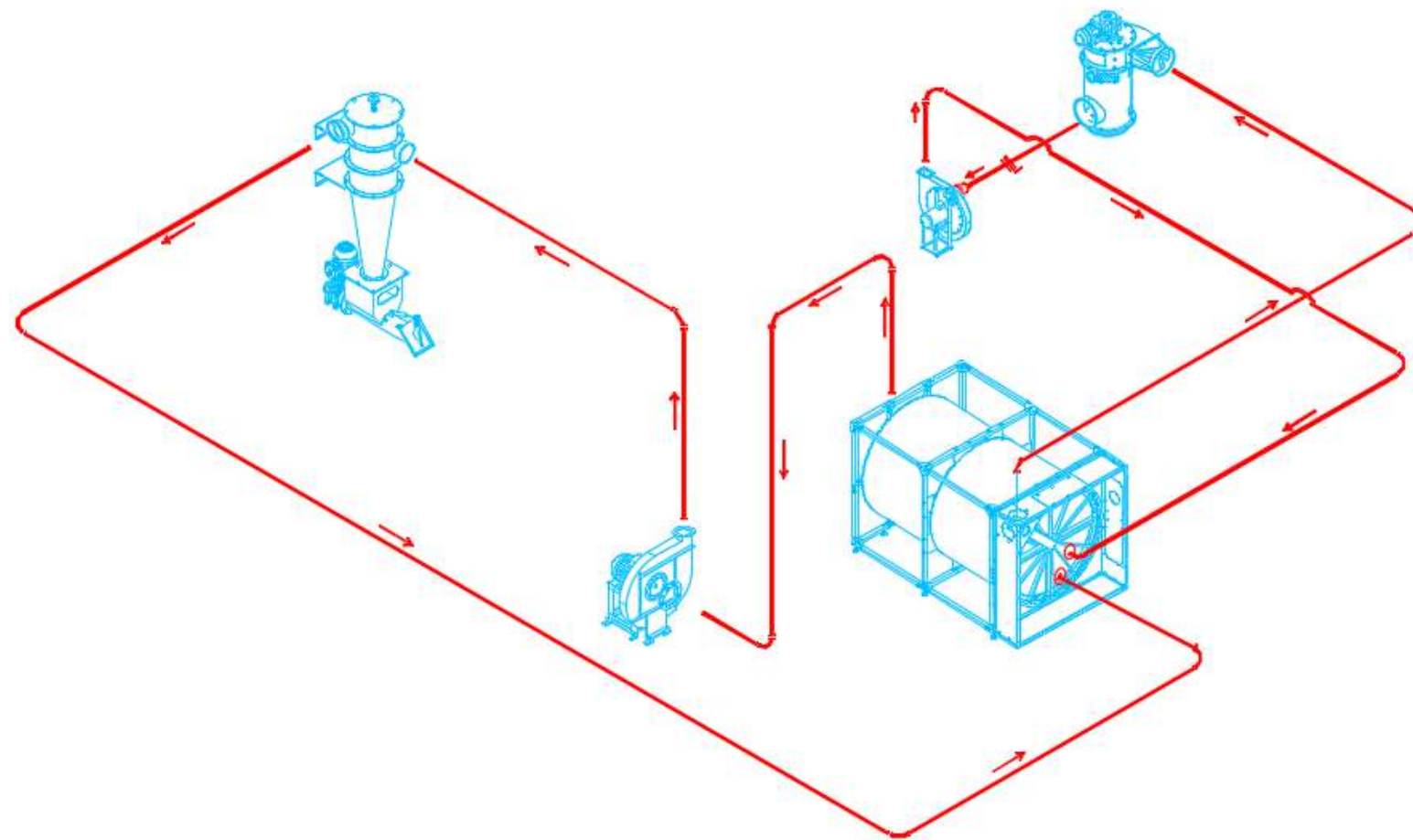




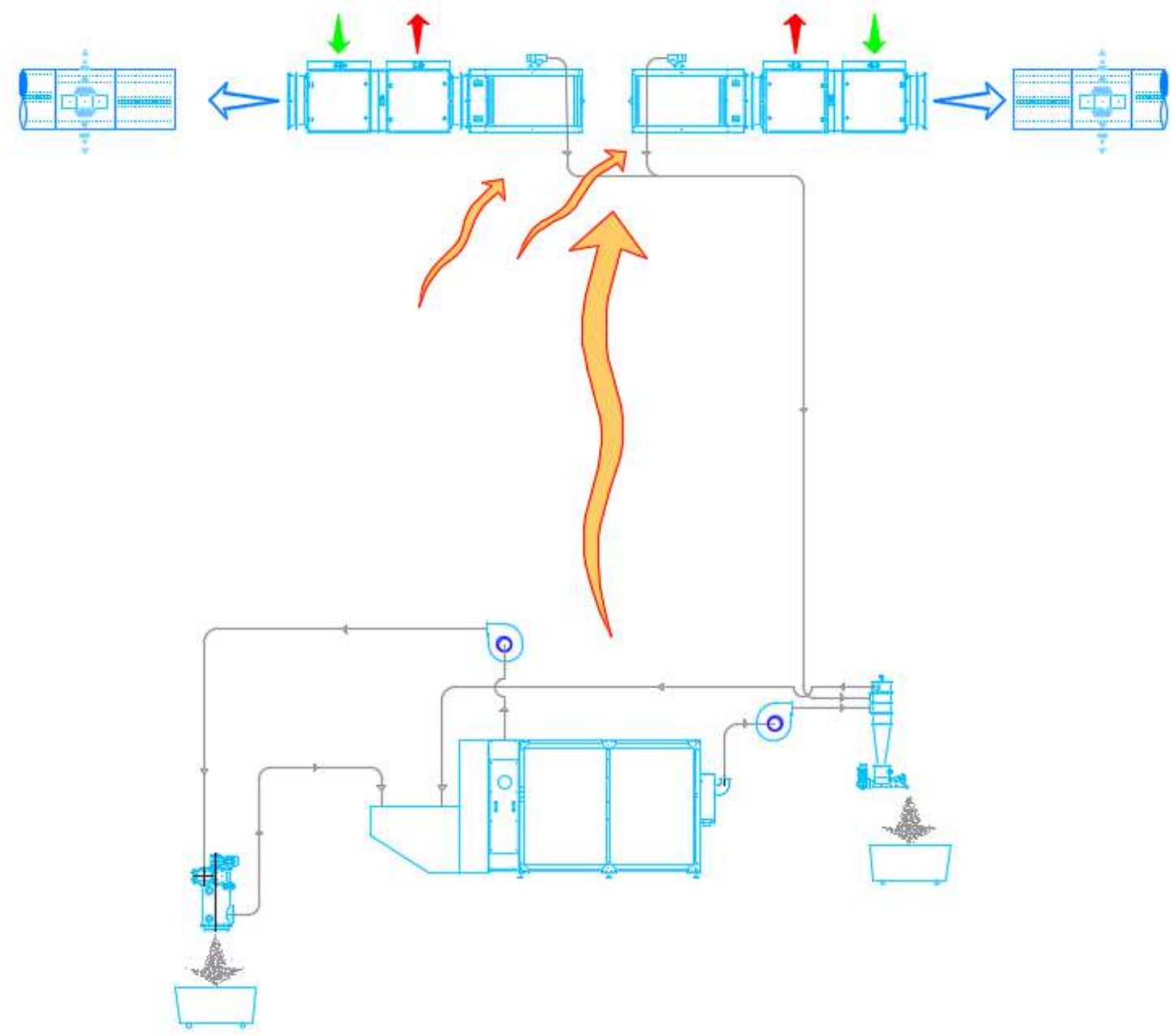
# Recycling

Valuable material from so called "waste"...  
it is always possible!

To treat the big amount of dust and fibres  
generated by those process it is necessary an  
**efficient filtration and waste recovery system.**









# Synthetic fibres

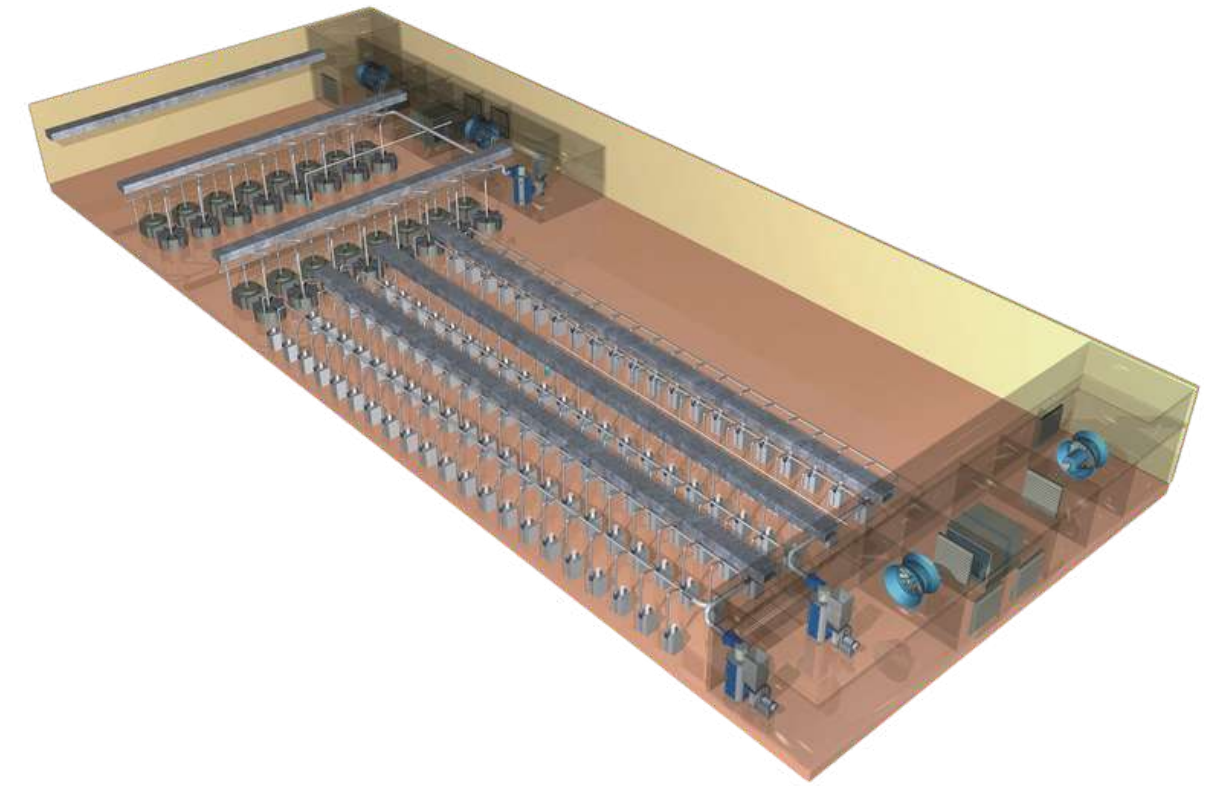
- Humidification systems and constant temperature air treatment





# Knitting

- Humidification systems and constant temperature air treatment



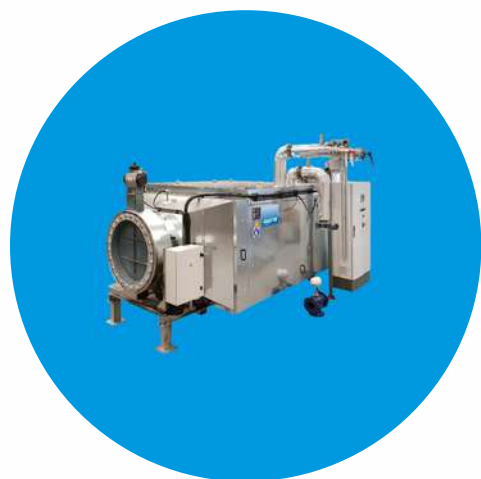
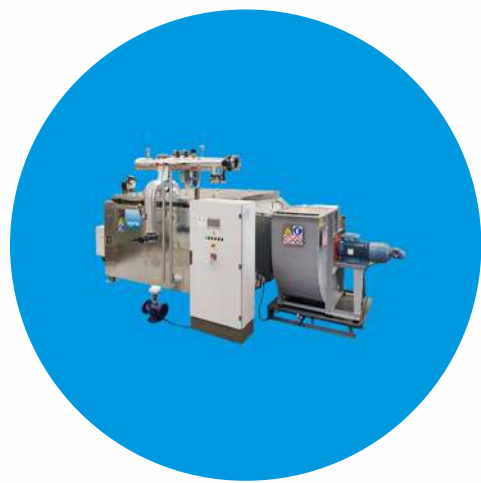


# Other applications

- Digital printing
- Labels
- Technical fabrics
- Confection
- Dyeing and finishing

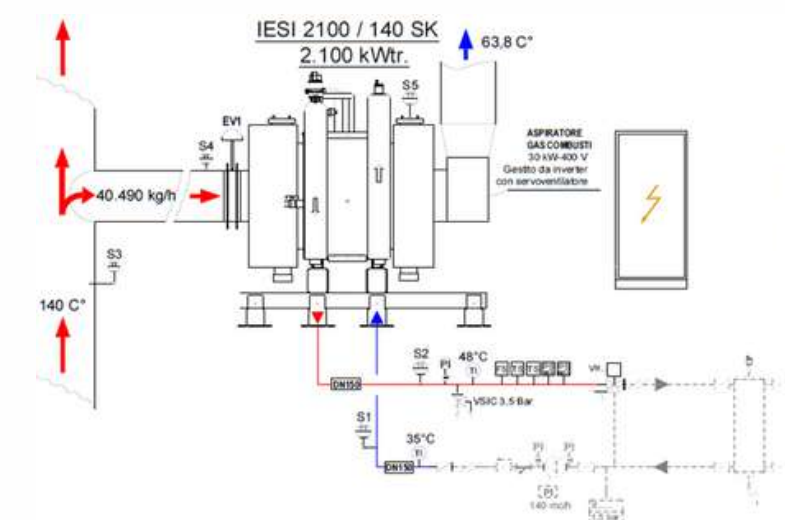






# Heat recovery system - HRS

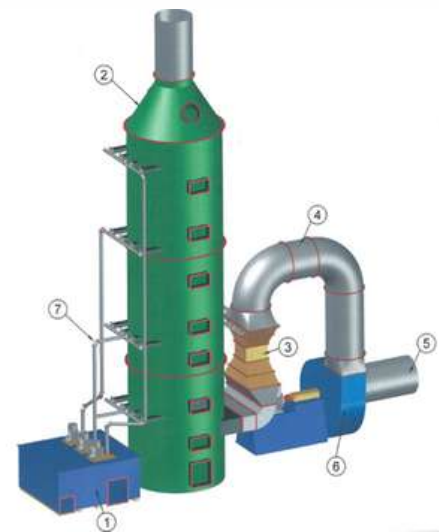
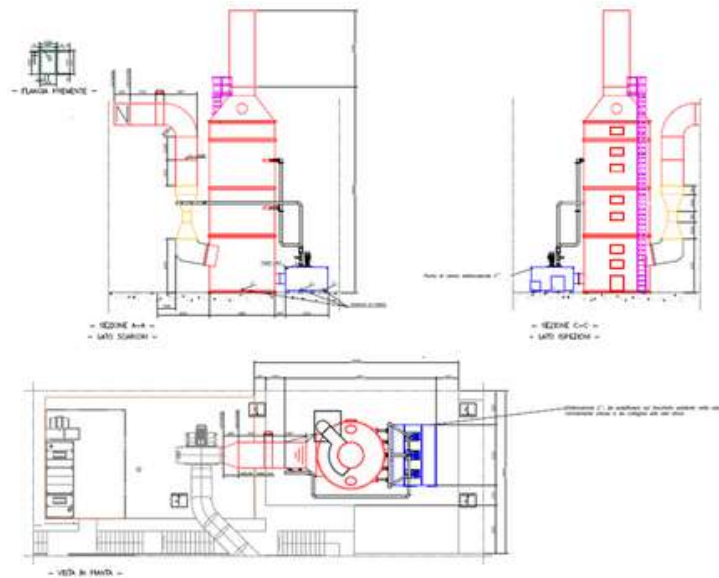
HRS is a modular system designed to recover the thermal energy from overheated air or combustion gases which are usually exhausted into the atmosphere by production processes.





# Wet scrubber system - AWS

AWS are tailor made designed to reduce the concentration of dust and acid micropollutants present in the exhaustions of a lot industrial process.







IHS





# IHS

## EUROPEAN PROJECT

Induction  
Humidification  
System

Inductive Humidification System (IHS) assuring important efficiency, value and cost savings to the industry.

This project received funding from the Horizon 2020 research and innovation Programme of the European Union under grant agreement n° 811349.



# Efficient solutions

We are one of the only 1.000 companies worldwide to have received from "**SOLAR IMPULSE EFFICIENT SOLUTIONS**", an entity of the European Community for sustainability, the **EUROPEAN GREEN LABEL**, another added value for our customers' audits.



THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT NO. 811349

## IHS Induction Humidification System

**COP<sub>H</sub>** - Coefficient of Performance: > 40

**SE<sub>H</sub>** - Supersaturation Efficiency: 100%

**H<sub>2</sub>O** - Water saving: 65%

**ES<sub>H</sub>** - Energy saving: 80%

**PATENT** IT 102018000007680







# IHS® & IHS®ds

## Induction Humidification System & Dual Stage

### CHOOSING IHS® MEANS:

- Reduce water consumption of more than 60%
- Reduce energy consumption of more than 40%
- Remove bacteria and mucilage creation risks
- Remove corrosion problems
- Remove any condensations risks
- Reduce plant sizes from 25% up to 40%







# IHS®

Induction Humidification System

## Special diffusers

The use of special diffusers with laminar flow allows that the water is finely nebulized directly in the ambient and captured by an important flow of air recalled by the inductive ducts.

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## Water evaporation

Already at one meter distance from the diffusers and under normal department load conditions, the water is completely evaporated and absorbed by the ambient, with levels of over-saturation never obtained before and, for the first time, with completely dry air distribution ducts.

## Water pressurization

Water pressurization is carried out by a high-pressure pump, with frame entirely made of AISI 316 stainless steel, cooled by the same humidification water and completely maintenance-free.

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## Induction

Each duct is sized for an inductive factor equal to 10/1, induction which brings the air in continuous circulation in the department to a value 10 times higher than what is conveyed through the supply air fans.





# IHS<sup>®</sup>ds

Dual Stage Induction Humidification System

## The system

The system includes a ramp of nozzles feed with reverse osmosis water, UV lamps, solenoid valves for pressure control, high pressure piping, discharge valves and humidification Pads.

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## The process

Two stages of humidification, combining the micro-spray technology with the evaporative effect; to achieve a level of performance currently unique in the aeraulic sector.

## Water pressurization

Water pressurization is carried out by a high-pressure pump, with frame entirely made of AISI 316 stainless steel, cooled by the same humidification water and completely maintenance-free.

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## The structure

The prefabricated structure to contain IHS<sup>®</sup>ds system, also entirely made of stainless steel, is completely free of points of possible water stagnation.



**Some of our installation**



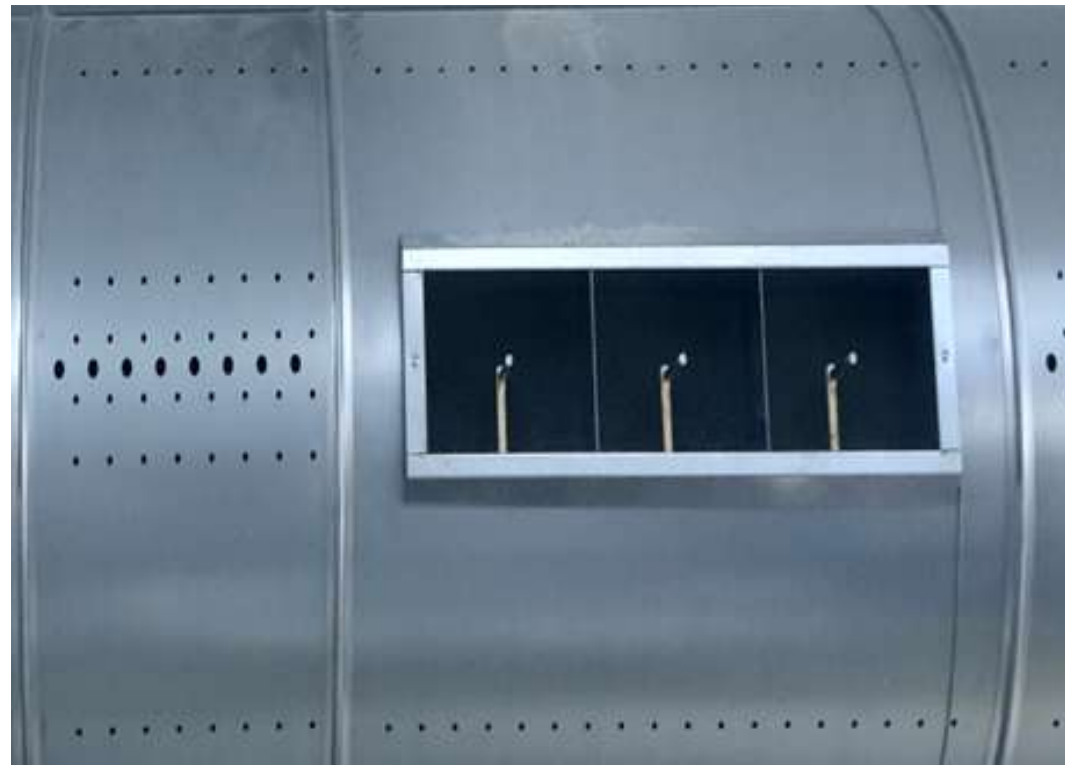














# Plug Fans





# AHU





# IHS® Humidification



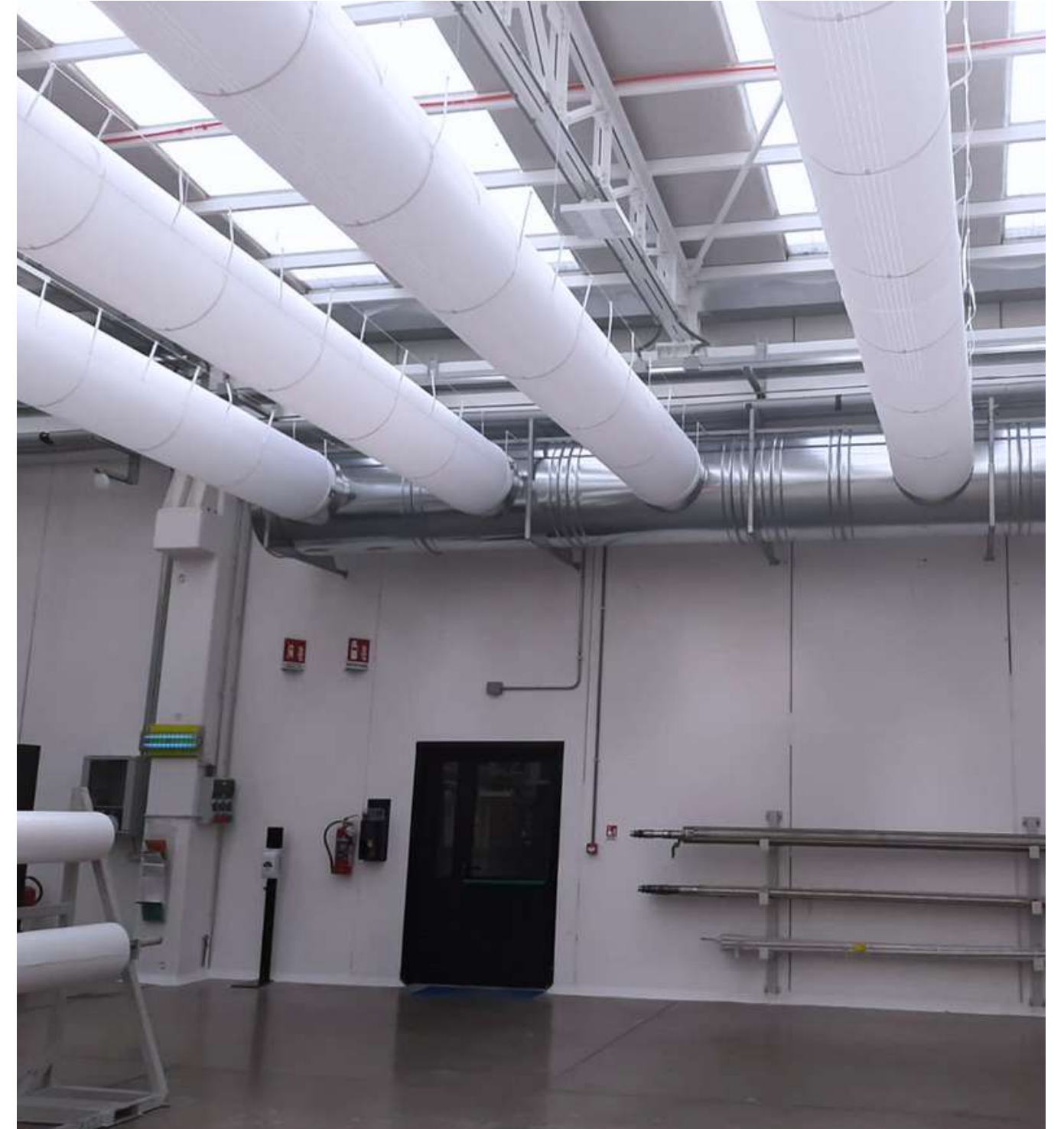


# IHS®ds Humidification





# Textile Diffusers





# Scrubber







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# Note