



aeris

NONWOVEN



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www.aerisgroup.it

Aeris

INDUSTRIAL DIVISION

www.aerisepc.it

Aeris - Alena NW

NONWOVEN DIVISION

www.aerisepc.it

Aeris - Mazziniici

TEXTILE DIVISION

www.aerisepc.it

Edenya

**EVAPORATIVE COOLING
DIVISION**

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

**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

HVAC
Air Humidification and Balancing
Heat Recovery
Filtration
Cooling
Energy Saving
Audits and Efficiency Planning

Our products and their benefits

Products

Dust **filtration**, fibres **separation**, maintain **constant temperature** and **humidity**, guarantee the correct **balancing** of air flows, **recover heat** released from furnaces or other production machines.

Benefits

Every production line must be equipped with highly efficient **filtration, humidification and air treatment systems** to ensure the quality of the product, optimal performance of production machines, and **health and safety** of the workplaces.

Saving energy, reducing water consumption for humidification and heat recovery are our goals to increase the competitiveness of our customers.





Aeris: focused on Nonwoven

SPUNLACE

AIRLAID

SPUNBOND

AIRLAY

ADL

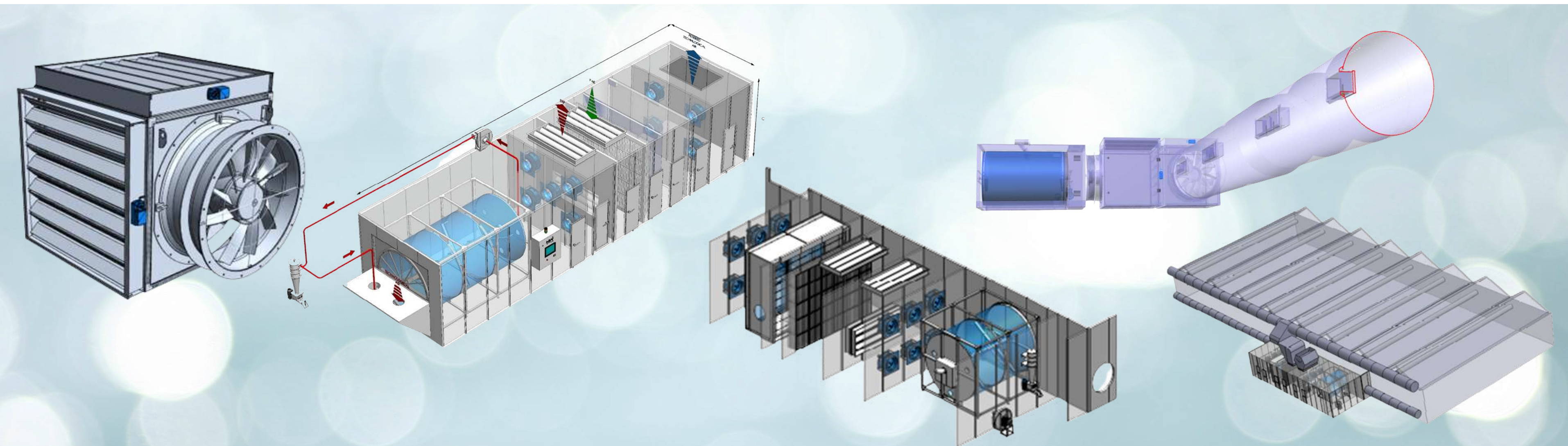
NEEDLE PUNCH

HYGIENIC

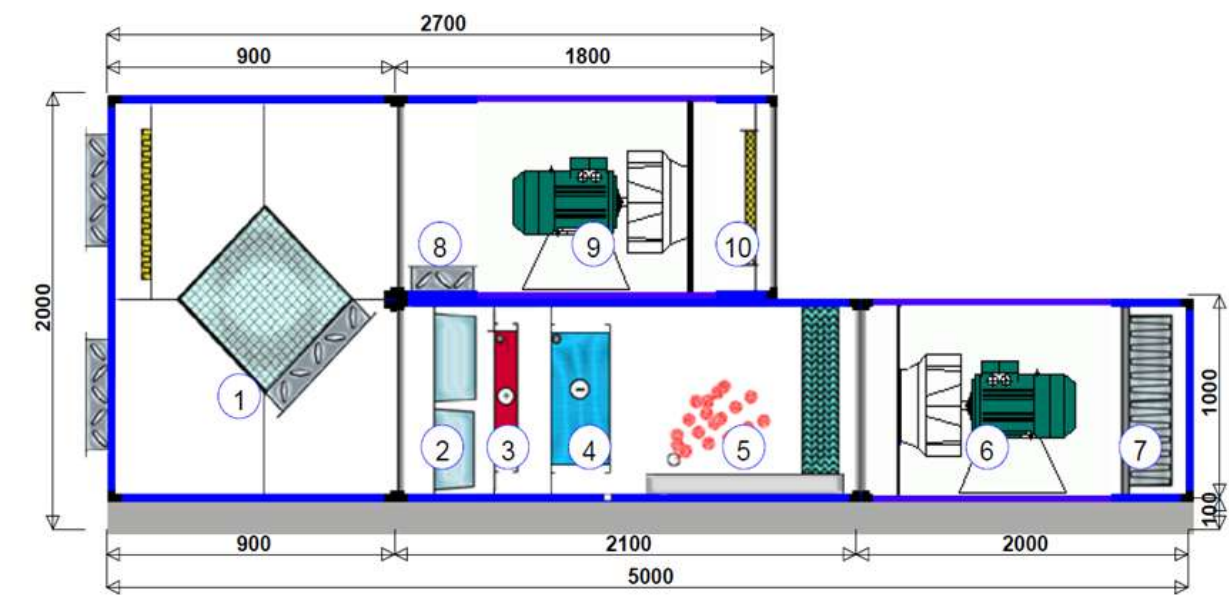
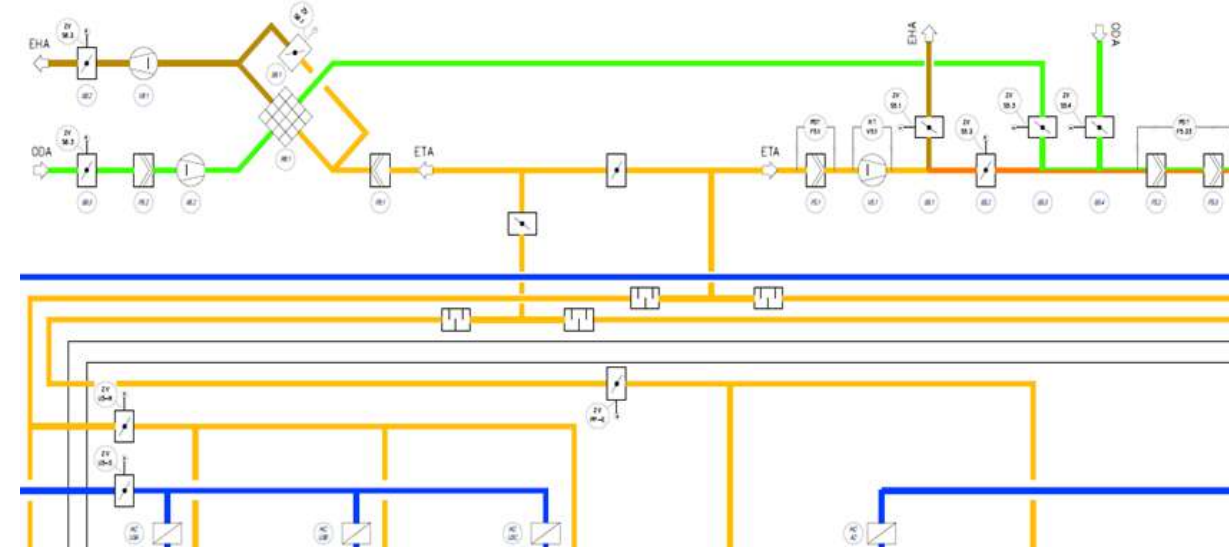
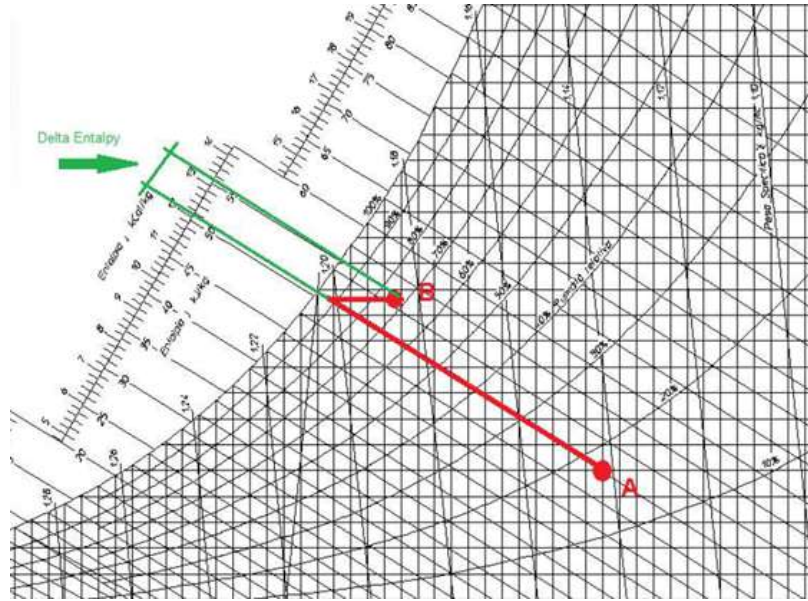
RECYCLING

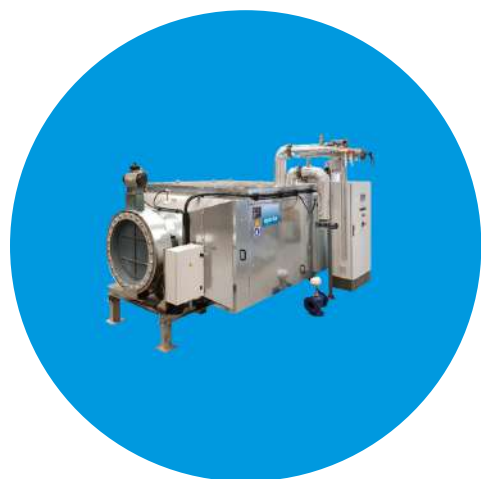
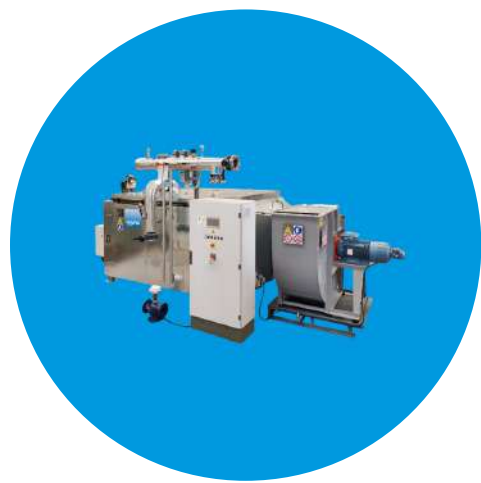
Humidification and filtration

- 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®



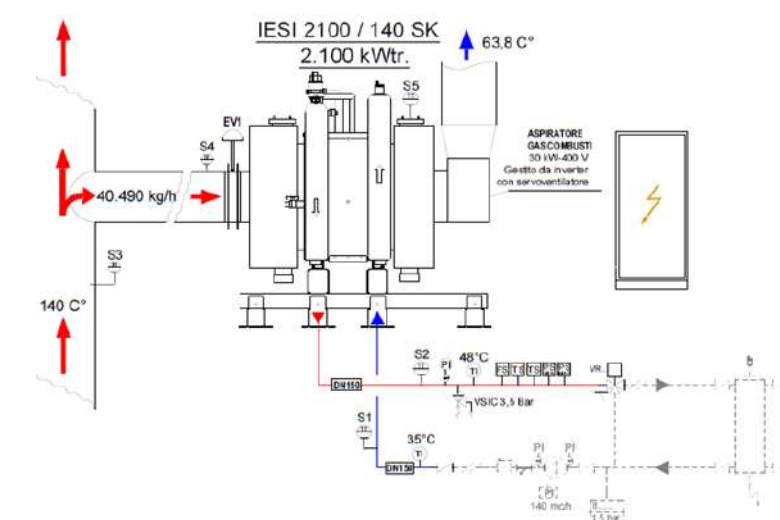
HVAC System





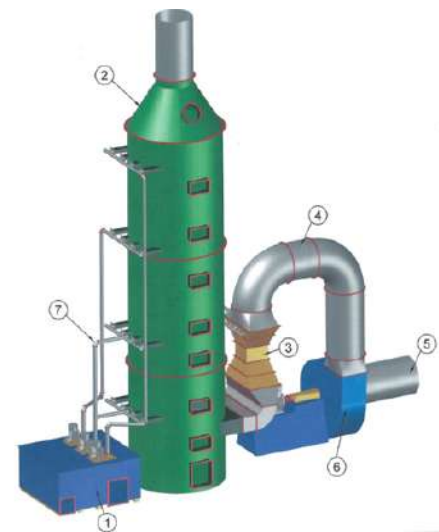
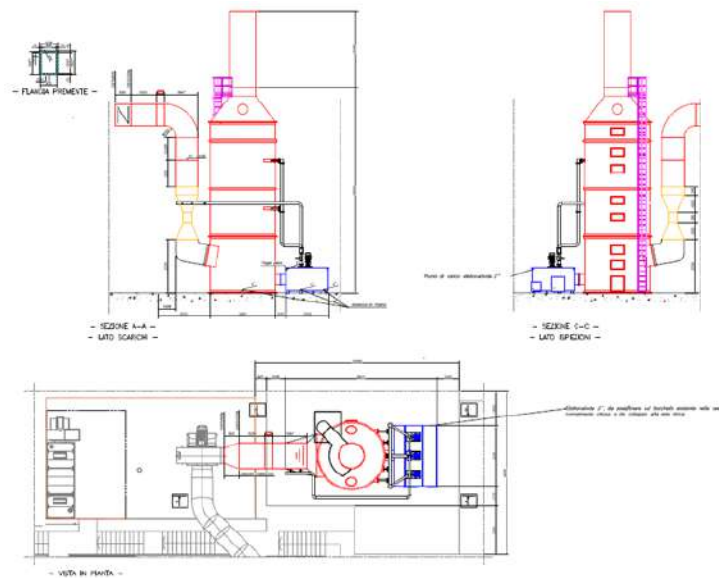
Heat recovery system - HRS

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_H - Coefficient of Performance: > 40

SE_H - Supersaturation Efficiency: 100%

H₂O - Water saving: 65%

ES_H - 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.

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.

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[®]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 and discharge valves.

The process

The water before reaching the nozzles, pass by a system that automatically releases ions which are suitable for sanitizing the complete humidification system.

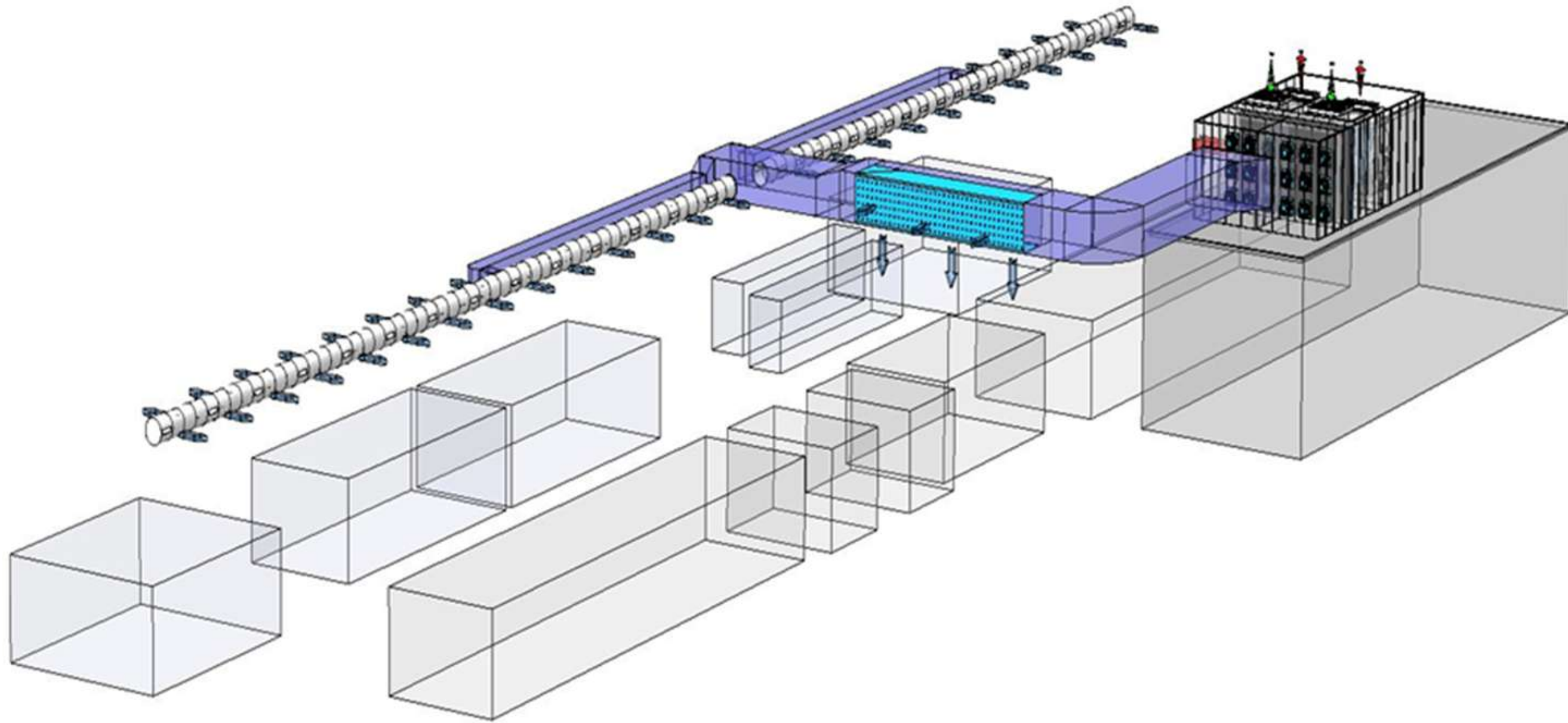
Water pressurization

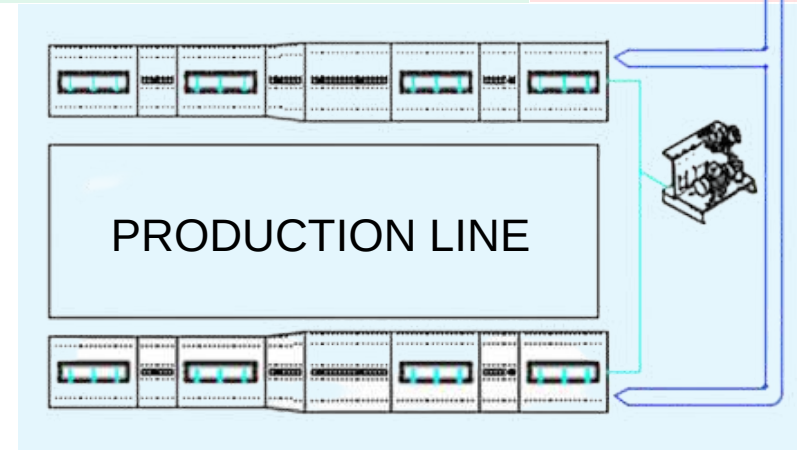
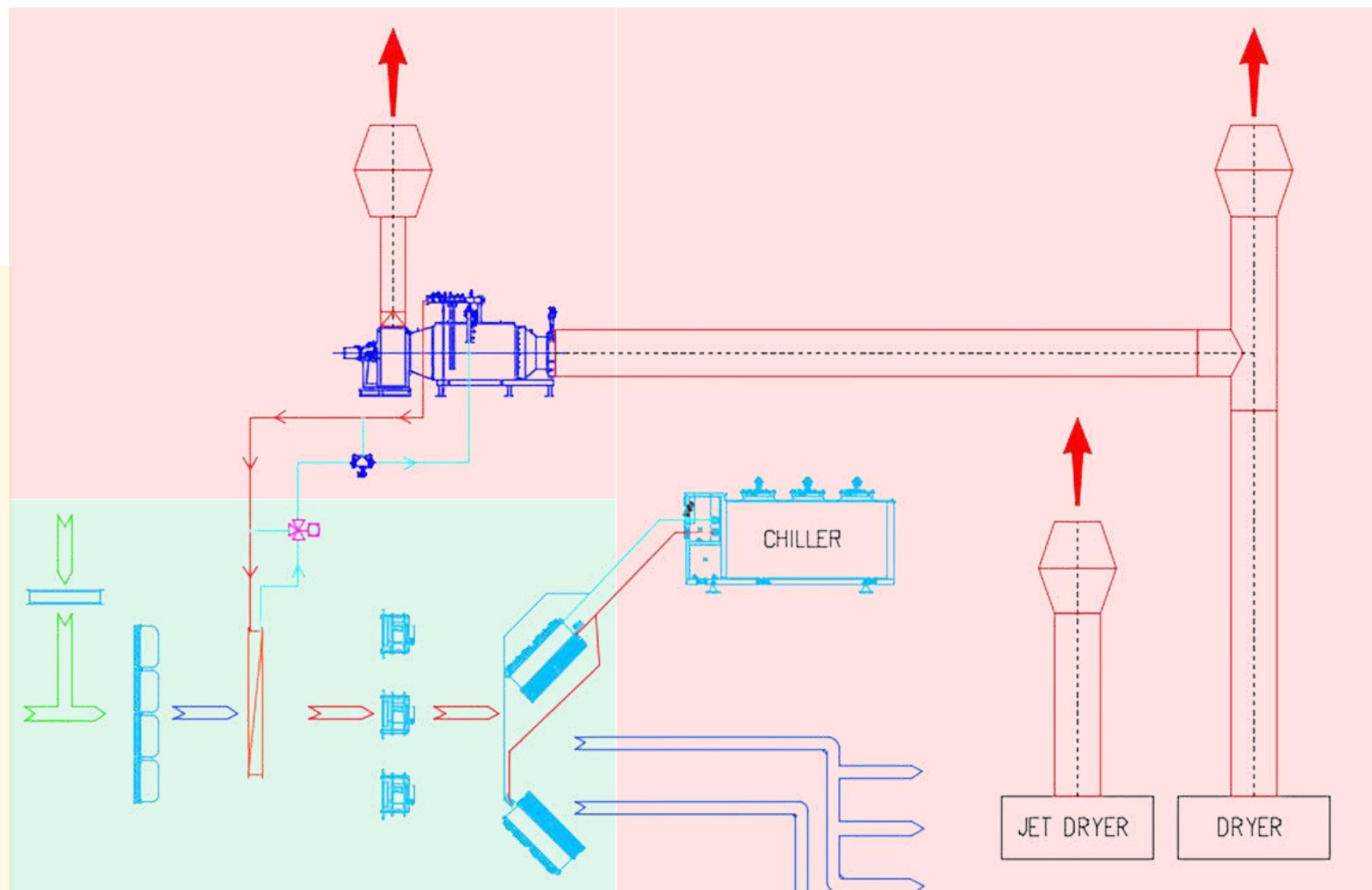
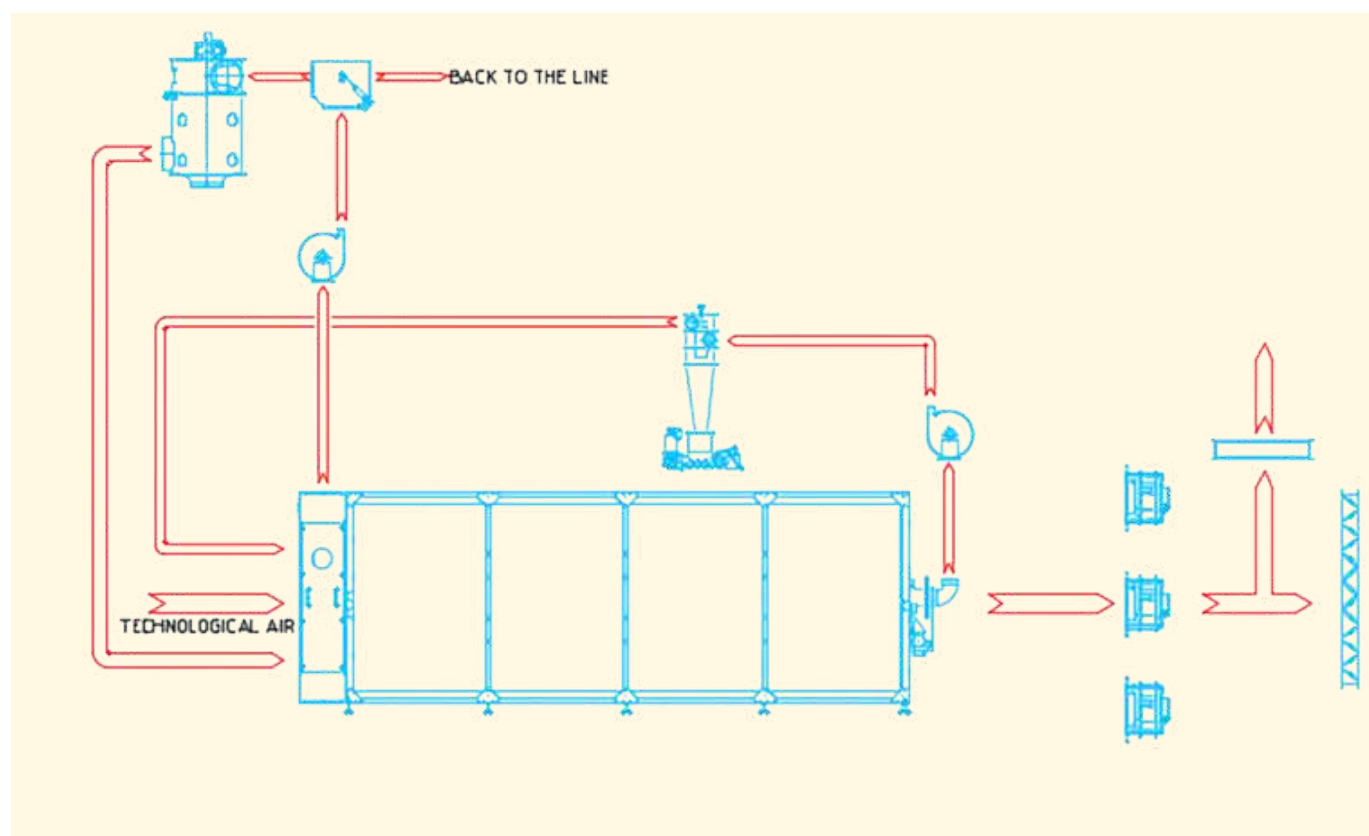
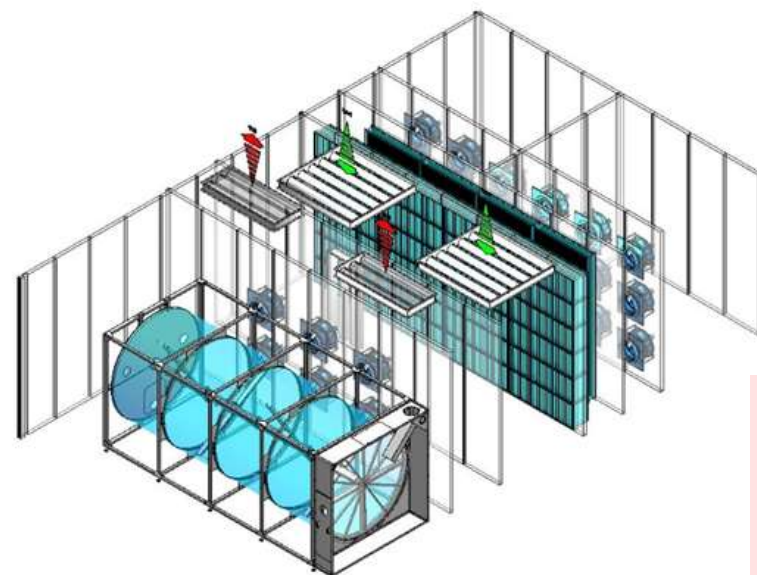
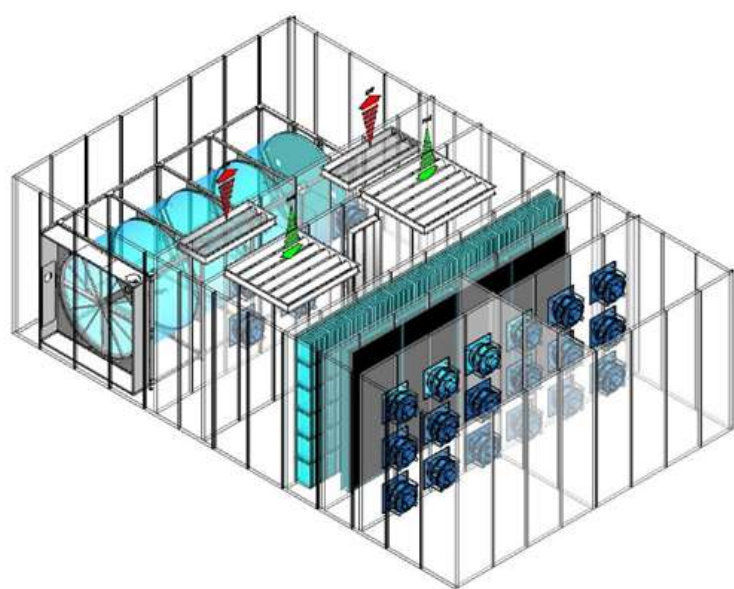
Water pressurization is carried out by a high-pressure pump, with frame entirely made of AISI 316 stainless steel, cooled by the same humidification water and completely maintenance-free.

The structure

The prefabricated structure to contain IHS[®]ds system, also entirely made of stainless steel, is completely free of points of possible water stagnation

NonWoven Line



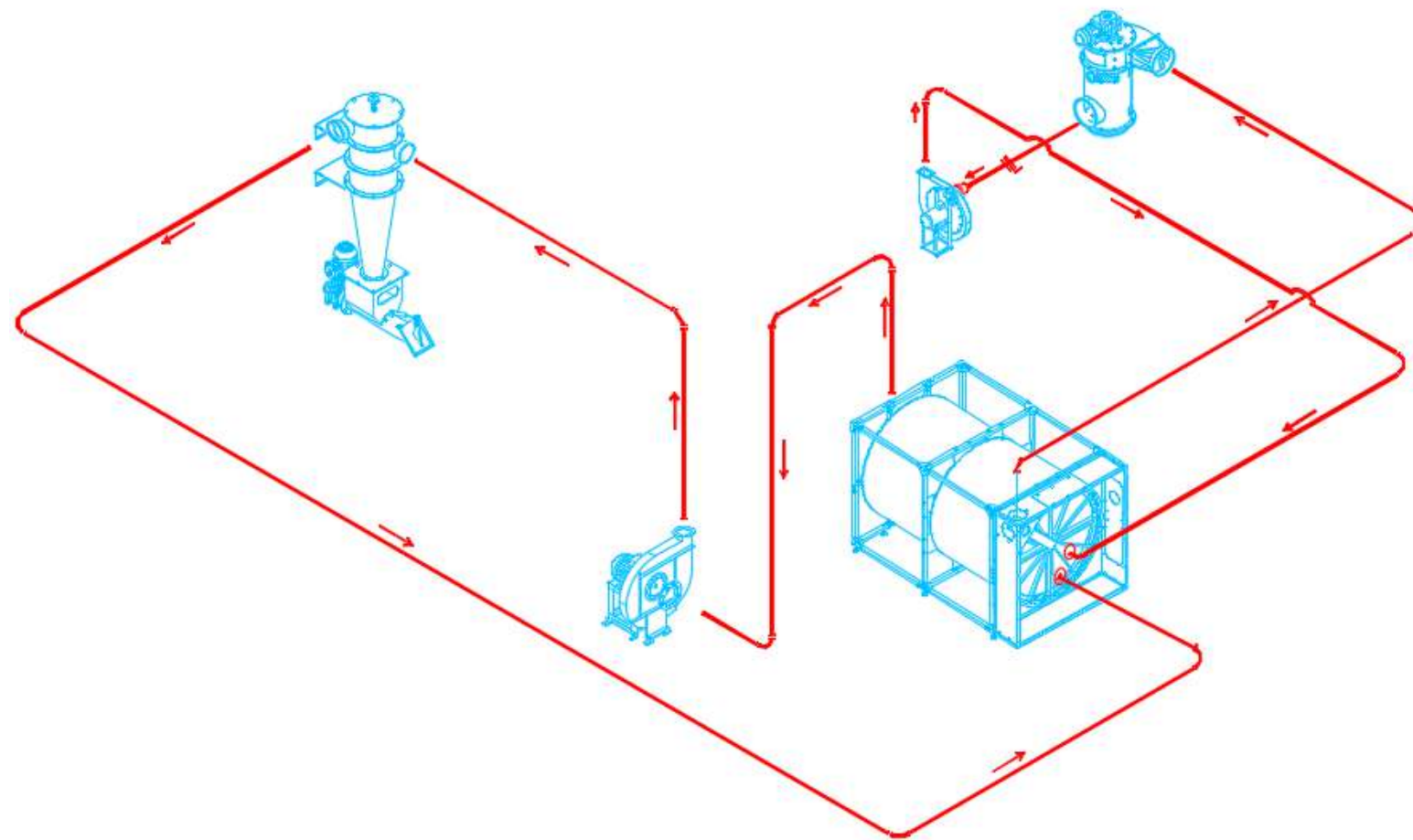


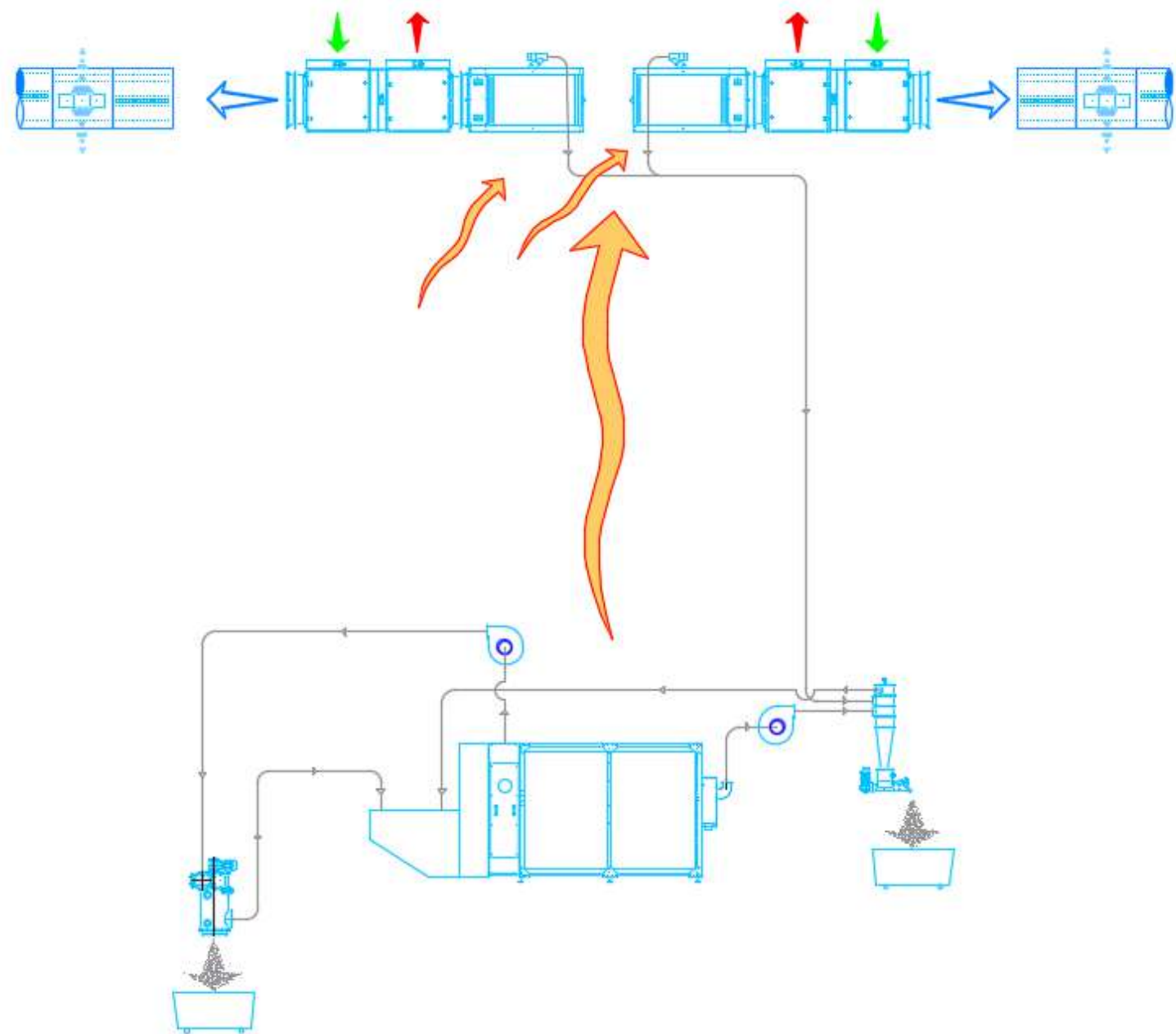


Recycling

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.





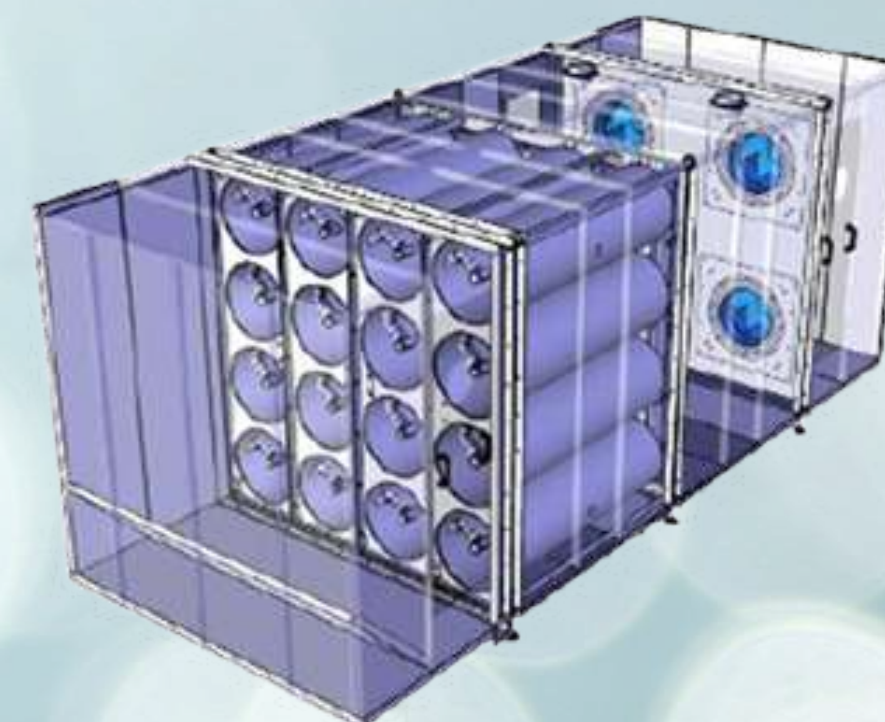
Efficiency for the hygienic market

READY TO RUN FILTER VDF16

Versadrums VDF16 is a modular equipment, made by a set of filtering drums with airflow from inside to outside that keeps the filtration chamber clean.

The wide filtration surfaces and the efficient regeneration system allows the installation of filter media with **filtration efficiency > 99,99%** as per HEPA E10 type, with total absence of maintenance.

VDF is always completed by a ventilating section with **automatic stabilization of the operating pressure.**



The image shows a portion of the European Union flag, featuring a blue field with twelve yellow five-pointed stars arranged in a circle. The flag is waving and occupies the left side of the slide.

UNI EN 16798-3:2018

ErP 2018

VDF16

Filtration efficiency

**>99,99% in only one stage
of filtration**

Energy consumption

**up to 60% less of any
other filtration unit
available in the market**

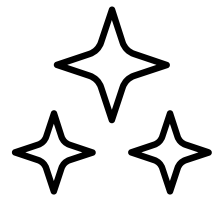
Exhaust dust concentration

**0,2 mg/Nmc never
obtained before with only
one stage of filtration**

Maintenance cost & line stops

**zero maintenance costs
and line stops**

Advantages



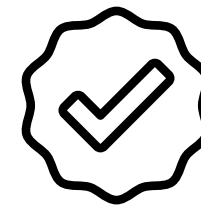
CLEAN FILTER CHAMBER

since air flows from inside to outside



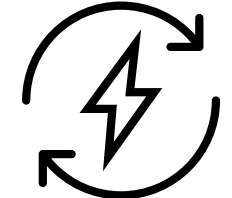
INTERVAL CLEANING

continuous, controlled selective interval cleaning - no pressure fluctuations



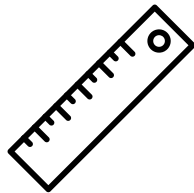
CERTIFIED FILTER

media for long service life



ENERGY-SAVING

operation due to low pressure drops



COMPACT DESIGN



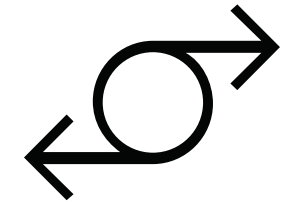
CLEAN AIR SIDE

all drive elements on the clean air side



PREASSEMBLED AND TESTED

ready to run



COMPLETE RECIRCULATION

of the wasted sucked material without interfering with the formation drum

Case history

After two years of running test by one of our italian customer on his Adult Diaper production line

Type: 2 drops medium extra B4x30

Production speed: 200 pcs/min

Production waste: 1,2 gr/pcs

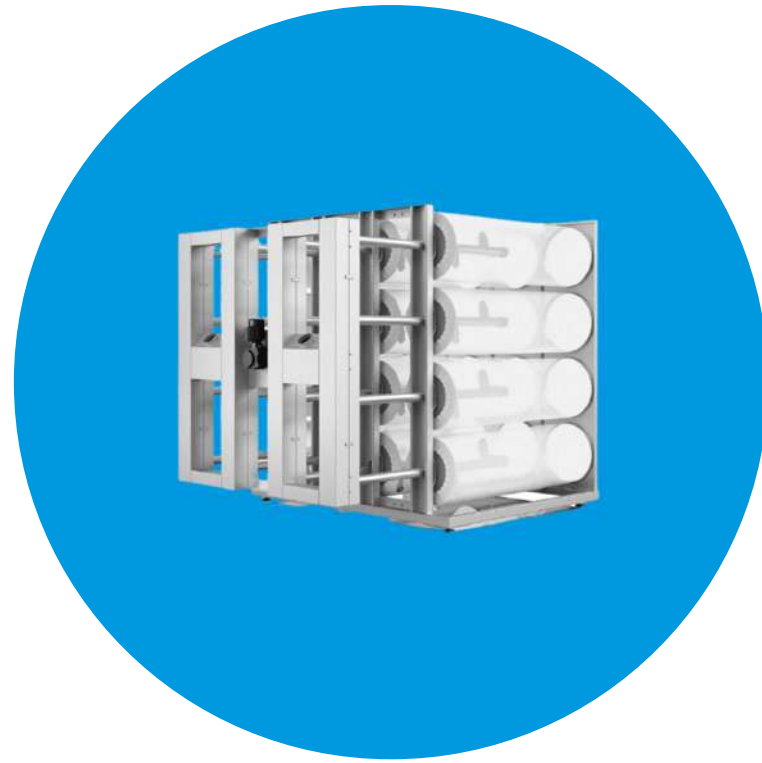
Aeris launching its new filtration system for disposable - **VDF16**



Here under a comparative chart with other filtration working by the same Customer

MANUFACTURER	AERIS	COMPETITOR 1 Italy	COMPETITOR 2 Italy	COMPETITOR 3 Usa
Filter type	VDF16	Drum filter	Drum filter	Drum filter + Hepa
Normalized Air Volume capacity	40.000 m3/h	40.000 m3/h	40.000 m3/h	40.000 m3/h
Absorbed power	32,0 kW	94,0 kW	72,0 kW	102,0 kW
Quantity possessed dust (*)	15,3 kg/h	8,0 kg/h	11,4 kg/h	6,4 kg/h
Exhaust dust concentration (*)	0,2 mg/Nmc	1,6 mg/Nmc	3,4 mg/Nmc	0,4 mg/Nmc
Stage of filtration	1	1	1	1

(*) Analysis executed by Proveco Lab (Vicenza - Italy)



Versadrum filter VDF

- Clean filter chamber since air flows from the inside to the outside
- Long service life of filter media
- Filter media defined for filtration efficiency as per EN779:2012 maximum efficiency F7
- Energy-saving operation due to low pressure drops
- Very compact design
- All drive elements on the clean air side
- Filter media easy to change



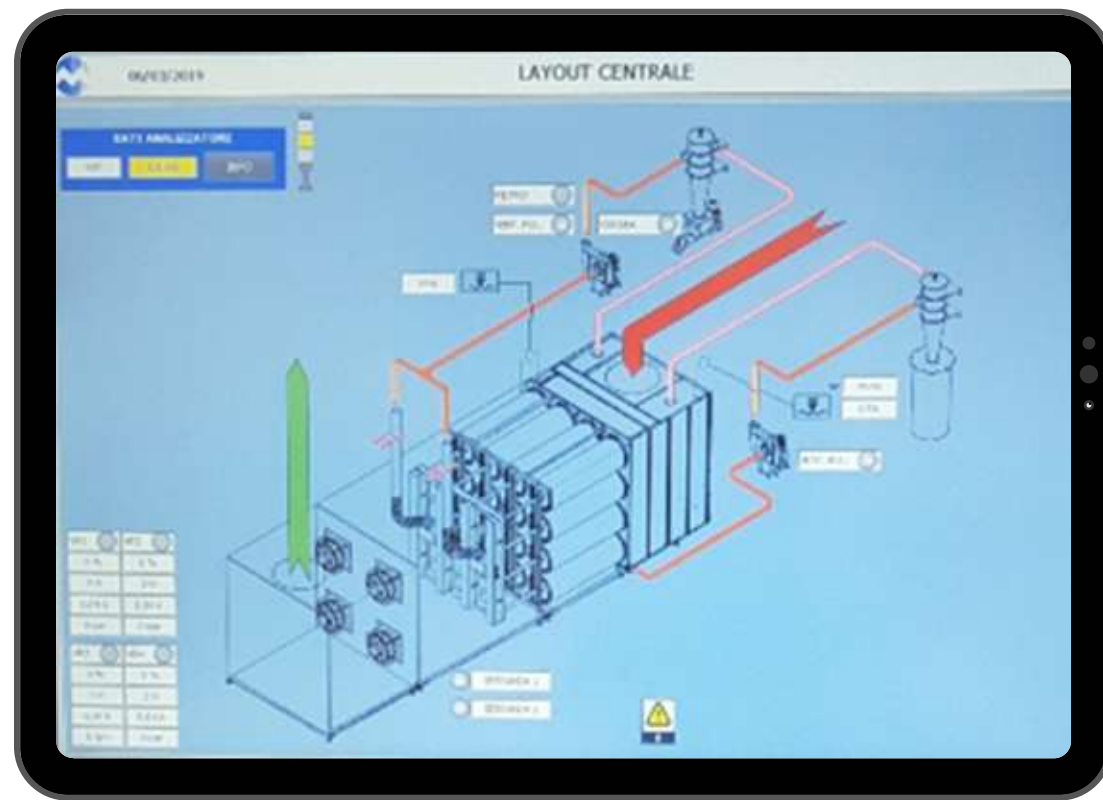
Cyclone

- No rotating or moving parts, ensuring maintenance free operation
- Easy separation of fine and finest particles
- High separation efficiency
- Exact adaptation to any air volume due to an extensive variety of available sizes, with capacity starting from 300 m³/h to 20.000 m³/h



Plug fan

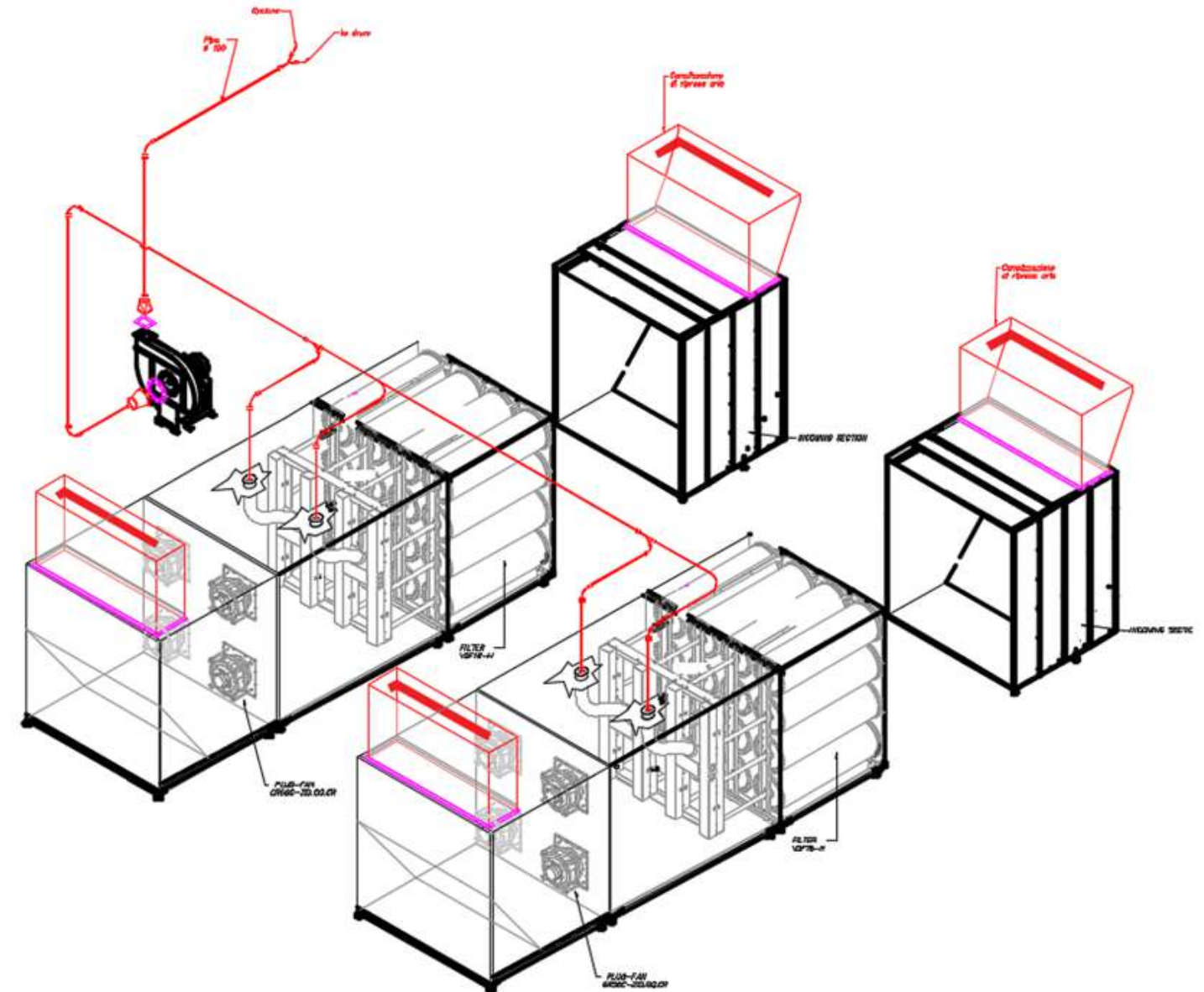
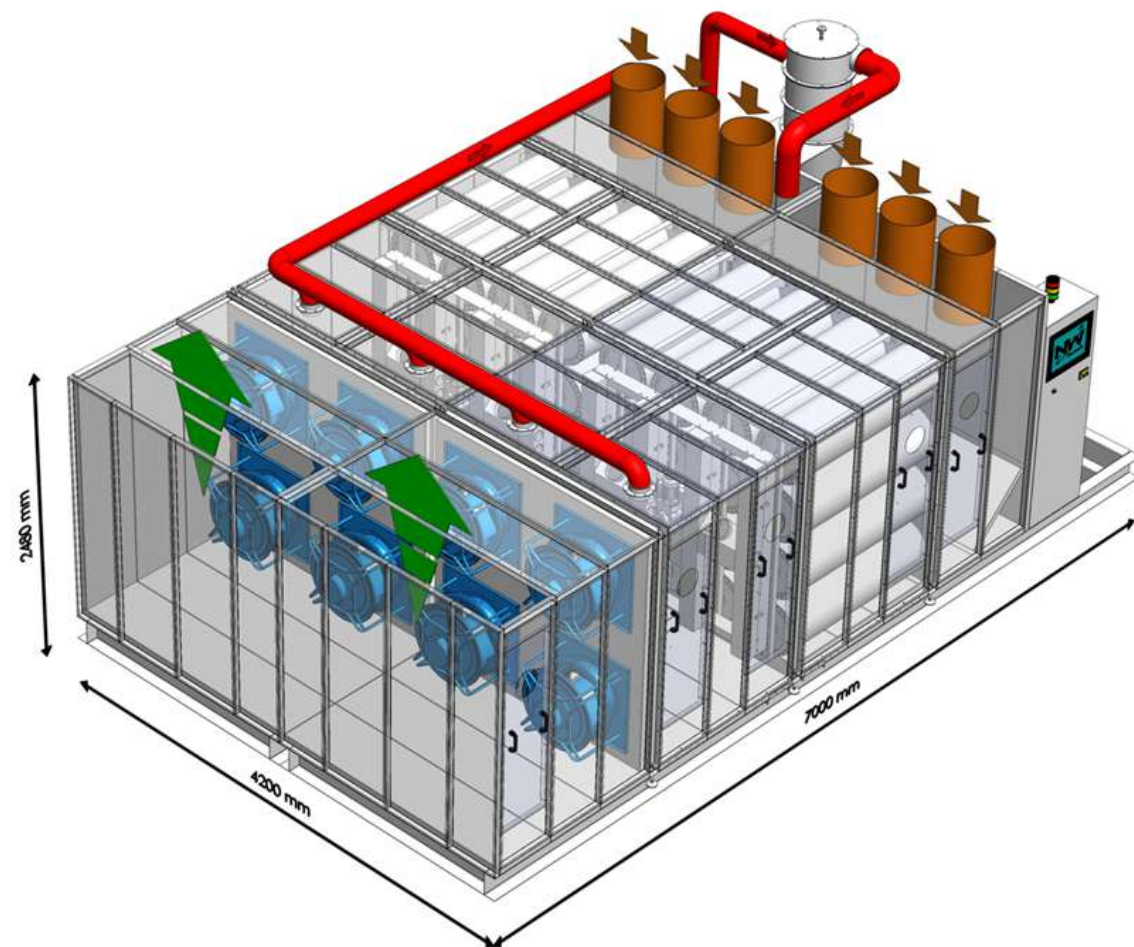
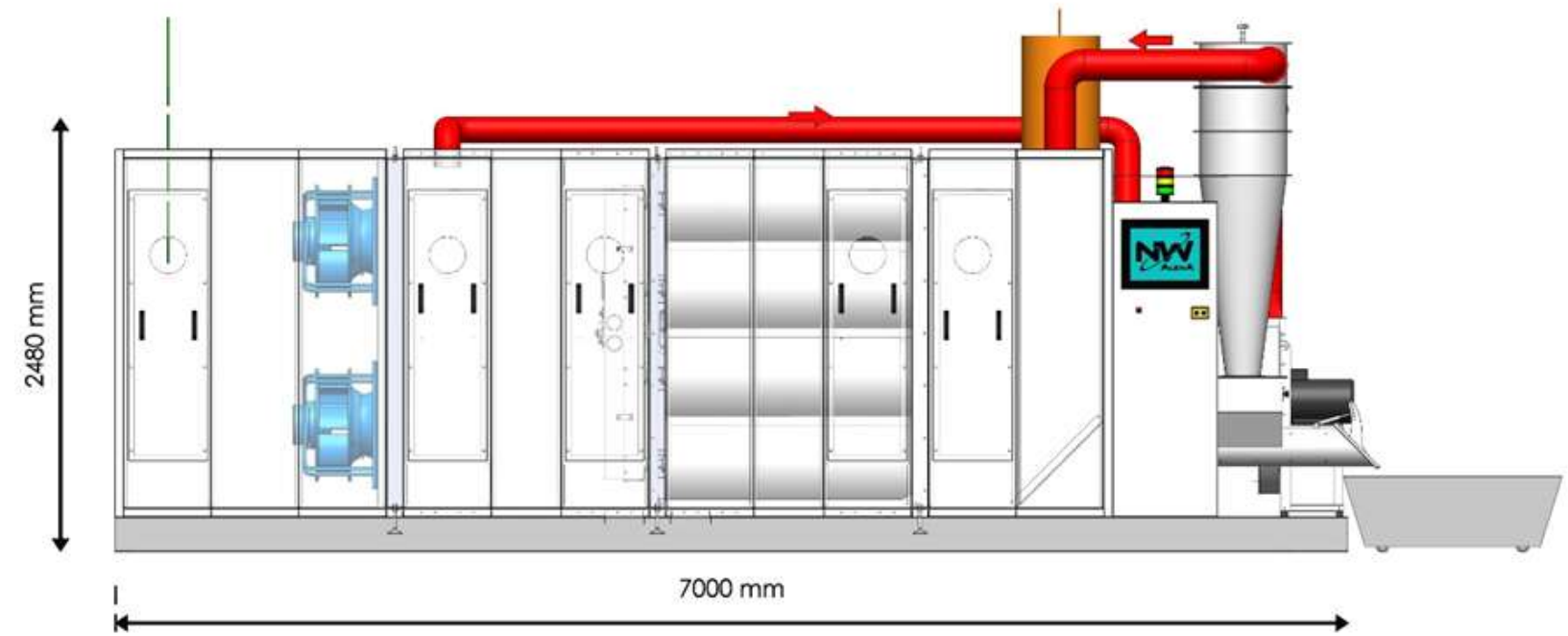
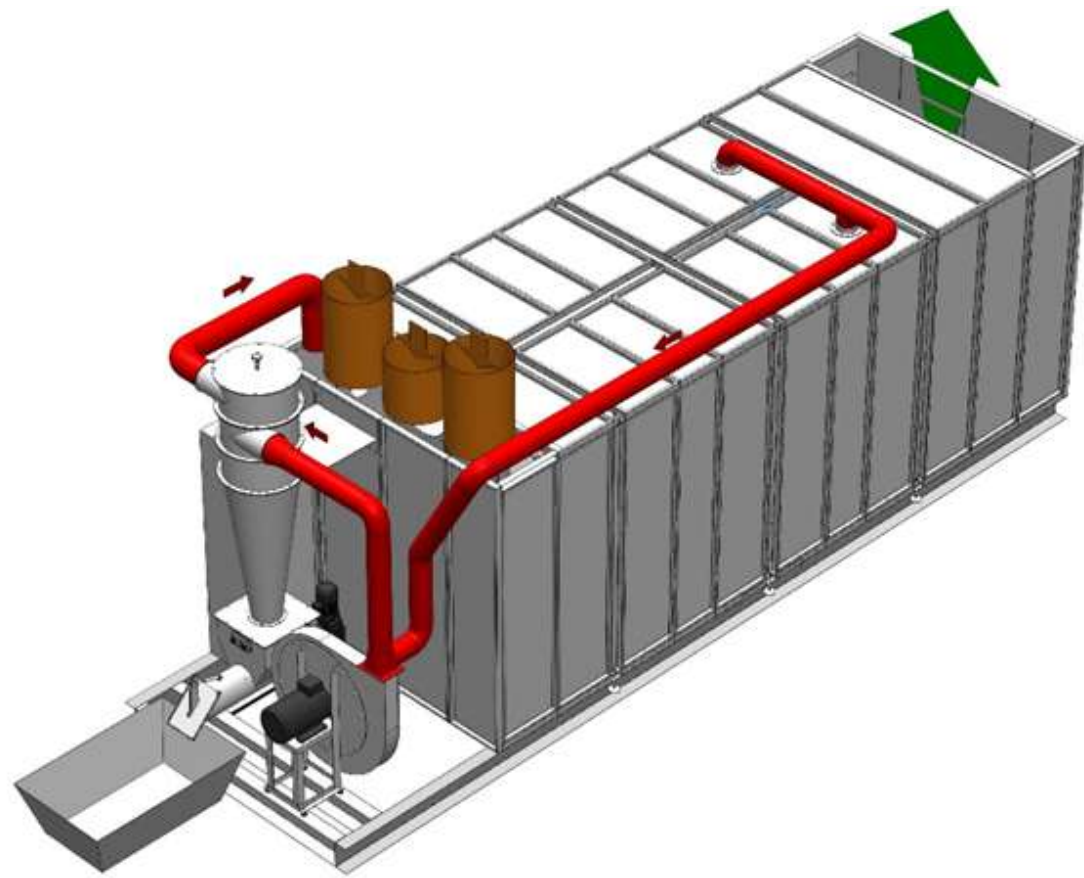
- Space reduction;
- Energy saving of approx 30%/year compared to a centrifugal fan
- High efficiency with recovery of the dynamic pressure
- Permanent magnets motors IE5 with driver on board
- Adjustable capacity depending on the real needs; which means reduction of power consumption
- Low noise level and easy maintenance



Software Digitron 2 Vario

- System based on Siemens S7 platform
- Open platform that makes the complete system Industry 4.0 ready
- A self-adjusting system that always guarantees the correct operation with minimum energy consumption.
- Free of charge remote control from Aeris Technical dpt.





VDF Unit



VDF 16



Some of our installation



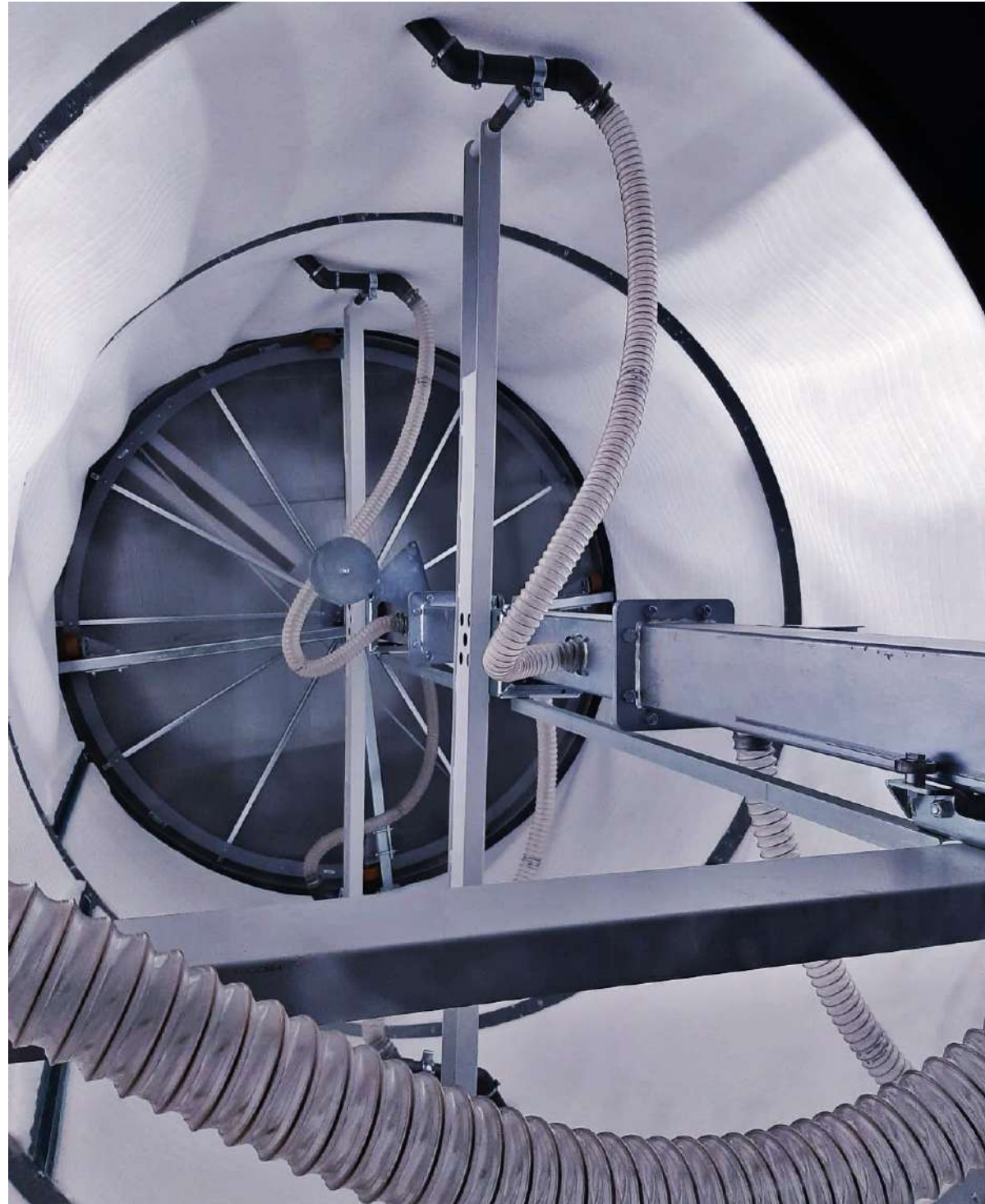
ADL Line



Needle Punch Line



AirLay Line



Spunlace Line



Plug Fans



AHU



AHU



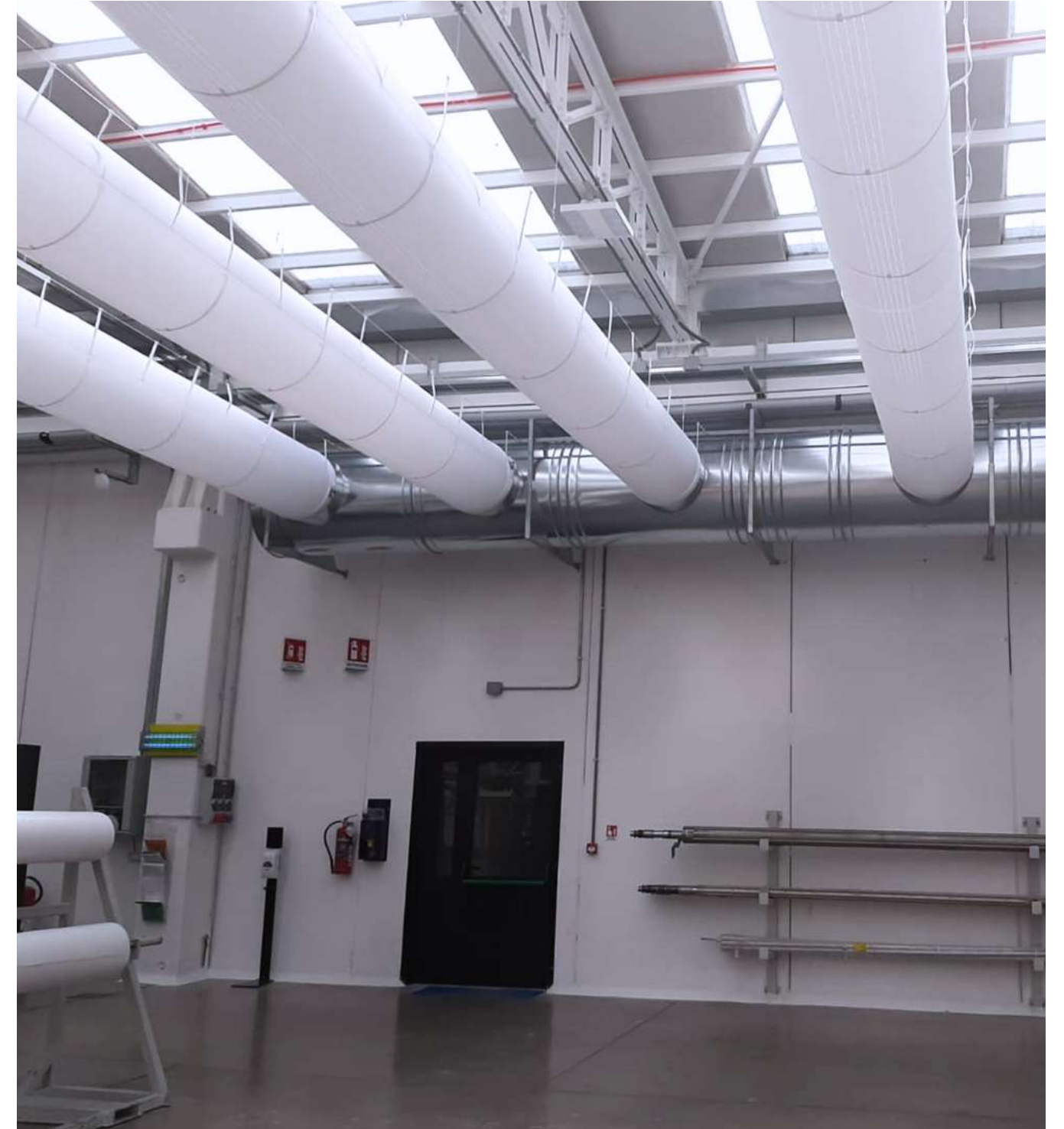
IHS® Humidification



IHS[®]ds Humidification



Textile Diffusers



Scrubber





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