

C O M P A N Y P R O F I L E



Efficient Indoor Air Project







BREEAM®

In over 30 years of activity, we have replaced the insulating materials, made **non-toxic films enriched with antibacterial additives,** made devices for the self-thermoregulation of the diffusers and patented materials resistant to high operating temperatures.

The **GREEN** frontier is the last major achievement of TECNICA™. We verified all ours range of products in order to document their **compliance with main world ratings for the sustainability certification of buildings: LEED®, WELL ™ and BREEAM®.**

TECNICA™ management is at its second generation and its mission is to continue in the research for the innovation of materials and products, testing and certifying them to ensure the health of people who spend their time in confined environments during their daily life, work, fun and transport.

Welcome in TECNICA™ Efficient Indoor Air Project













VENTILATION SUCTION

DIFFUSION

FILTRATION



Efficient Indoor Air Project

From over 30 years TECNICA™ produces flexible hoses for industry and ventilation. During the years, two complementary production lines have been added: filters and diffusers

TECNICA™ production lines are: **VENTILATION**, **SUCTION**, **DIFFUSIONS AND FILTRATION**.

In each one of those TECNICA™ stands out for materials innovation, operating performances, high quality standards, compliance with the main regulations regarding inner environmental quality, microbial reduction, non-toxicity of materials, food grade, fire reaction, resistance to tear and abrasions.

TECNICA™ products contributes to obtain the **credits from the world's main construction sustainability ratings: LEED®**, WELL™ and BREEAM®.

TECNICA™ is the only Italian company to produce an extensive and complementary range of flexible hoses, diffusers and filters for air conditioning, ventilation and industrial suction.

















SUSTAINABILITY AND CIRCULARITY

TECNICA™ has focused the **sustainability** as a strategic lever of the company policy, promoting **product innovation** (materials, technologies and production techniques) and the development of concrete actions. We evolved our approach to resources, **increased the circularity of our products life cycle**, we developed new potentials, promoted awareness of the principles of sustainability and transparency. **We reduced the use of plastic in our packaging by 30%**, for our boxes we use **FSC** (**Forest Stewardship Council**) **certified cardboard and we reuse 75% of the raw material waste in our production**.



In 2015, the UN launched the "Sustainable Development Goals 2030", an action program for people, the planet and the prosperity, which includes 17 Sustainable Development Goals (SDGs) for a total of 169 "targets" or objects.

Tecnica™ endorsed the directions of the UN 2030 plan since the beginning and oriented its actions towards the Goals listed below.

Goals 2030 - UN SUSTAINABLE DEVELOPMENT



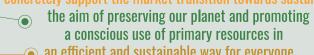
13 CLIMATE ACTION

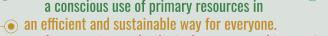
TECNICA™ is a manufacturer company of components for the filtration, distribution and diffusion of air in confined spaces.



We design and manufacture products that reduce diseases from contamination and air pollution.

We concretely support the market transition towards sustainability with











On the equal dignity of people, recognizing diversity as a fundamental resource for the development of humanity and promoting social inclusion.

On the responsibility, integrity and transparency of our actions.



REDUCED INEQUALITIES

We believe in long-term partnerships with the countries and communities that host us to create shared value









GREEN BUILDING CONTRIBUTION

TECNICA™ attention to sustainability, in its broadest sense, involves the entire production chain and contributes to the creation of products according to a conscious use of primary resources, promoting their circularity and directing the stakeholders of the construction chain to enhance the application of certified sustainability in construction and making use of products that contribute to it in a certain way. **We adopted the language of architects, designers, builders,** investors and buyers, positioning our products

according to the metrics and selection criteria adopted for the "final product" of the supply chain: buildings.

TECNICA™ is the first manufacturer of flexible hoses, diffusers and filters for air conditioning and ventilation to have implemented the specific positioning of its products with respect to the main international sustainability ratings in construction: LEED®, WELL™ and BREEAM®.



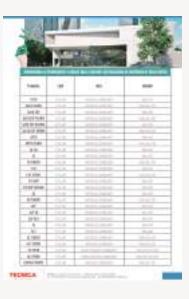












The contribution to the rating of LEED $^{\circledR}$, WELL $^{\intercal M}$ and BREEAM $^{\circledR}$ of each single product are indicated inside the catalogues referring to the production ranges **VENTILATION**, **SUCTION**, **DIFFUSION** and **FILTRATION**.

AIR SANITIZING by TECNICATE

The topic of air quality in confined spaces is one of the largest points of attention of the World Health Organization. The guidelines of WHO for indoor air quality, developed under the coordination of WHO / Europe, face three groups of problems which are the most relevant to public health:

- inner biological air pollutants (moisture and mold)
- **guidelines for pollutants** (chemical pollution),
- inner combustion pollutants of fuels (fine powders).

TECNICA™ products of the ranges MasterSan™, FitraSan™ and PlenuSan™ give concrete answers to issues raised by the WHO, preventing the proliferation of bacteria, fungi, germs and molds, and the filtration of pollutants, such as the particulates, with an ePM1 efficiency up to 85%.











MasterSan™ is the flexible hose line for the air conditioning and ventilation including a complete range of sanitizing tubes, with or without external insulation, and a range of patented single wall tubes th. 4 and 8 mm, with or without external insulation.

TECNICA ™ is the only company in the world, manufacturer of sanitizing flexible hoses, able to certifying for 10 years the effectiveness of the sanitizing action of its hoses

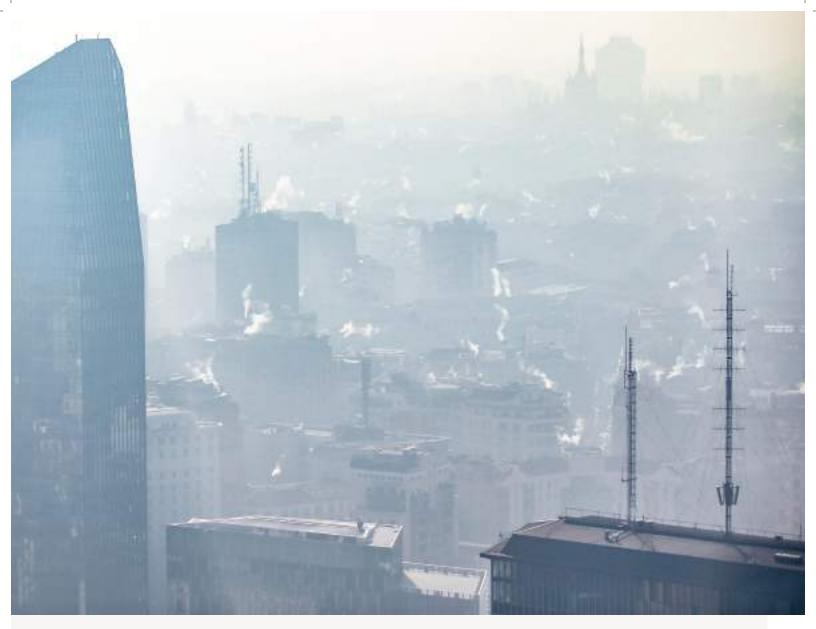


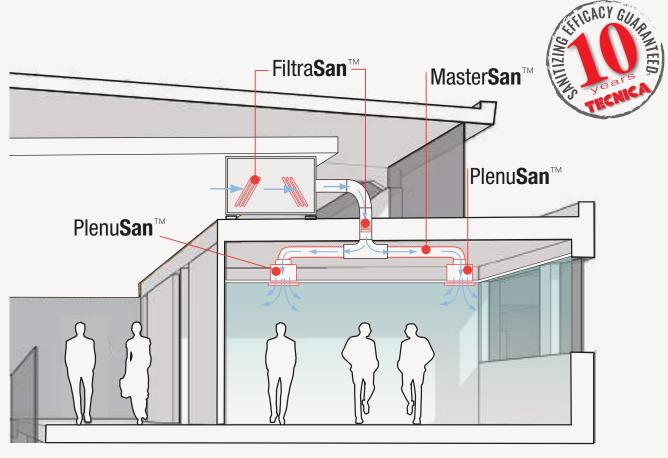
PlenuSan™ is the complete range of sanitizing plenum for diffusers with cones or with adjustable deflectors, internally covered with a protective antibacterial and antimycotic film.













TECNICATM AND SANITIZED®

Thanks to the exclusive partnership between TECNICATM and SANITIZED® we developed three product lines with the aim of sanitize the air: MasterSanTM flexible hoses, FiltraSanTM filters and PlenuSanTM plenums.

These are products capable of **prevent the proliferation of bacteria, fungi, germs and molds** in the air

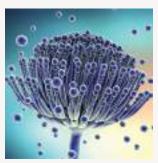
conditioning systems inside the rooms, and **filter the air from possible pollutants such as particulates.**

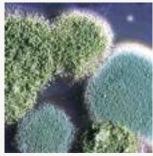
Starting from the air filtration to the distribution and diffusion, TECNICATM offers one-of-a-kind products ranges, able to sanitized the air improving the quality and environmental comfort, ensuring Indoor Air Quality high standards, as requested by the World Health Organization.



















has been approved as a license partner and has the right to cintinguals its.
Sentions' treated another with the Sentions' Quality Seat. Their expection articles false successfully passed all necessary tests in accordance with the Sentions' lawner standard and they are committed to the required regular quality controls.









MasterSan by TECNICA



Master**San™** is the flexible hoses line for air conditioning and ventilation, which has revolutionized the aeraulics world. Thanks to the **exclusive partnership** between **TECNICA™** and **Sanitized®** the polymer

film has been developed thanks to the Master**San™** flexible hoses (free of PVC and phthalates) with the addition of an antibacterial active principle capable of reducing the microbial and bacterial load present inside the duct.

The polyolefin film of the Master**San™** tubes has undergone

severe tests to validate the effectiveness of its antibacterial action on various bacterial strains and its sanitizing efficacy is guaranteed and certified for 10 years.

The product is certified in Class 1 of reaction to fire, and is offered in two versions: Antibacterial and Non-magnetic. Thanks to the Master**San™** hoses it is easier to improve the quality of the air we breathe in offices, laboratories, business centers, shopping centers, banks, hospitals, nursing homes and rest homes, ensuring high standards of Indoor Air Quality, as required by the World Health Organization.







SA10 MasterSanTM











AR10 MasterSan™

AR10 Therm MasterSan™



AL/SA MasterSan™



Yeast

Infection

Staphylococcus

Aureus

Escherichia coli

Salmonella

Listeria

monocytogenes

SINGLE-WALLS T-ESP by THENICAL



All the flexible hoses of the patented line **T-Esp are sanitized** Master**San™** and reduce the introduction of unhealthy air into confined spaces, ensuring high standards of Indoor **Air Quality**, as requested by the World Health Organization, reducing the insurgence or aggravation of respiratory diseases such as allergies, asthma, emphysema and chronic lung diseases.

From TECNICA™ research the new generation of **insulated** single-walled T-Esp flexible hoses for the air conditioning and ventilation systems of buildings has been developed and **patented**. These are high-performance ducts made up of a **single wall in 4** and 8 mm thick insulating foam, which permit to reduce the installation dimensions to the minimum. Due to its characteristics of flexibility, insulation, absence of crushing in the curves and surface resistance, it is suitable for use in construction, automotive, aeronautical, naval and wherever spaces are minimal and high efficiency performances must be guaranteed.





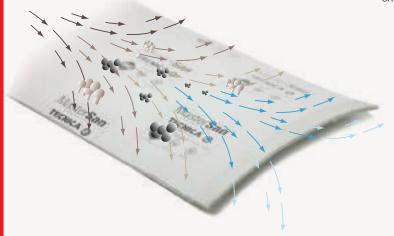
SA10/ESP PATENTED MasterSanTM

SLEEVE SA10/ESP Therm MasterSanTM

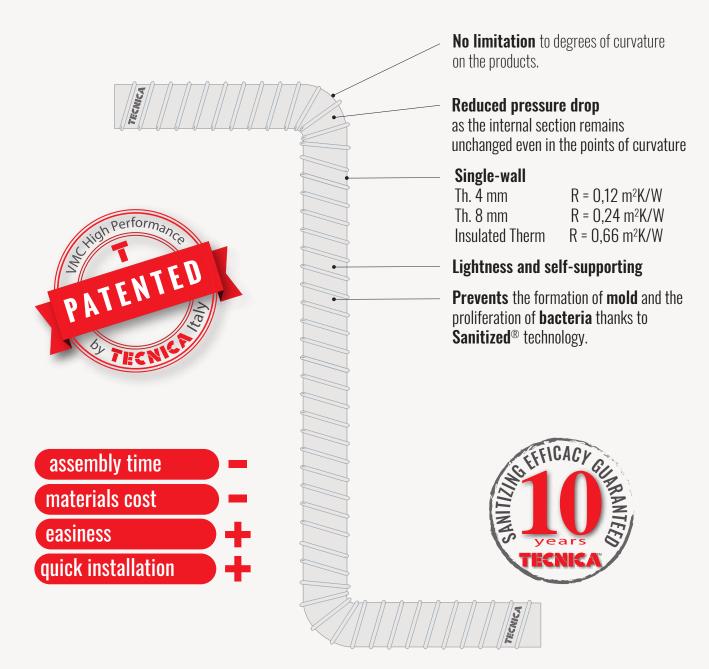


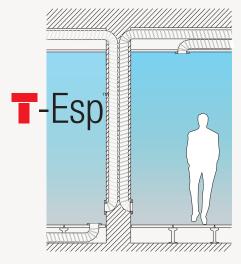


SA10/ESP 8MM PATENTED MasterSanTM SA10/ESP THERM PATENTED MasterSanTM

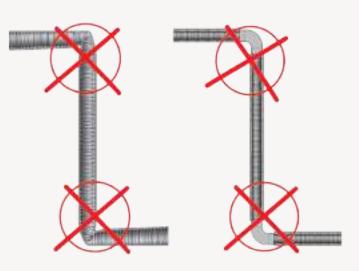








T-Esp $^{\text{TM}}$ single-wall flexible hoses can be installed paired, inside a partition wall



Absence of crushing in the curves

No fittings needed in curves

T-ESP AND ENVIRONMENT









The high performances of **energy efficiency and air sanitization of the T-Esp™ expanded foam single-wall flexible hoses** help the implementation of **Controlled Mechanical Ventilation** as a technology that contributes to the **air quality** inside the confined spaces in which we live, work or we spend our free time.



The reduced electrical consumption of modern ventilation systems with heat recycling, combined with the technical performance of T-Esp™ flexible hoses, represent the future of residential aeraulic systems, but also of stores, offices, laboratories and other confined environments of daily life. In case of dual flow CMV systems, in which is important that the aeraulic hoses guarantee project performance, the T-Esp™ flexible hoses ensure uniformity and balance for the equivalence of the flow rates and extraction flow rates, avoiding pressurize or vacuum areas of the house, ensuring that the air flow rates reached are able to satisfy the ideal conditions of temperature and humidity of the project. This allows a high-energy yield with low energy consumption satisfactory with common renewable energy systems.





TECNICA ™, with its policy focused on **environmental sustainability** in its broadest sense, has always promoted the **CMV** as a good construction practice to ensure the **well-being** of people and decrease the factors of **environmental pollution** caused by obsolete and highly polluting heating systems





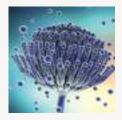


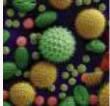


TECNICA™ has always stood out for innovation in materials, operating performances, high quality standards of products, compliance with the main regulations regarding indoor environmental quality, microbial abatement, non-toxicity of materials and reaction to fire. For this reason, the T-Esp™ sanitized expanded foam single-wall flexible hoses contribute to obtain the credits of the main world sustainability ratings for buildings: LEED®, WELL™ and BREEAM®.



FiltraSan by TECNICA



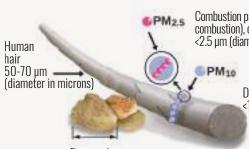




According to the WHO the air pollution is the greatest environmental risk to human health and causes over 3 million deaths worldwide every year. The list of health damage caused by PM, but also by pollen, bacteria, mold and fungi is constantly growing, and includes respiratory, cardiovascular diseases, cancer and other important ones. With FiltraSan™, STOP to harmful particles carried by the air in the ducts of the air conditioning and ventilation systems of everyday life environments. The sanitizing action of FiltraSan™ filters does not release chemical compounds harmful to health.

Relative particle size (PM)





Combustion particles (car exhaust gas, wood combustion), organic compounds, metals, etc ... <2.5 µm (diameter in microns)

Dust, pollen, mold, etc ... <10 µm (diameter in microns)

Fine sand 90 µm (diameter in microns)









Fiber treated with Filtra**San™**

Non-treated fiber

Filtra**San**

Is the fiber for filtering media able to retain and reduce the microorganisms in the air. To the filtering function, it adds the **sanitizing** function eliminating the propagation in the aeraulic system of the particles harmful to human health for the duration of the filter.

FiltraSan™ can conduct for a long time its full



the human body is able to prevent PMs greater than 9.0 - 10 μm from entering. The smaller PM is able to overcome these defenses.

Nose 5,8 - 9,0 μm

Larynx 4,7 - 5,8 μm

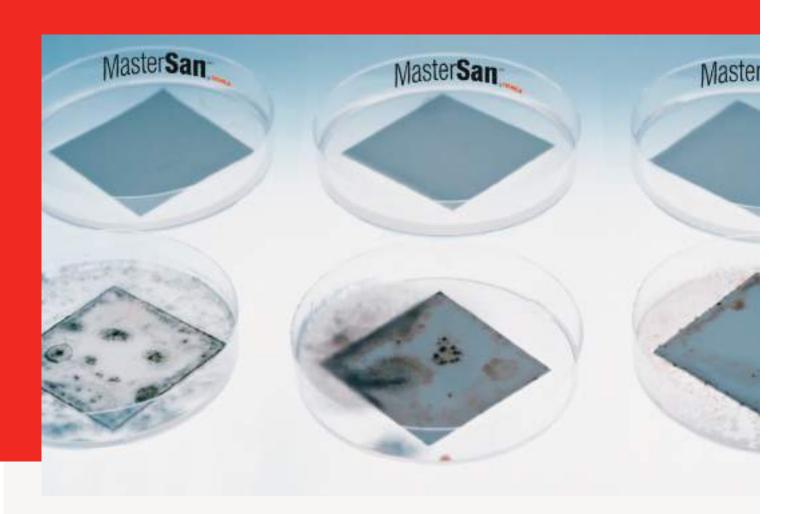
3,3 - 4,7 µm

Secondary bronchi 2,1 - 3,3 µm

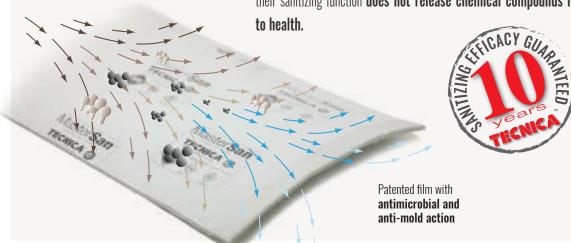
Trachea and primary bronchi

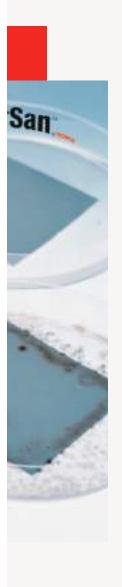


PlenuSan[™] by TIENICA®



PlenuSan™ is TECNICA™ sanitized plenum line for aeraulics systems. The sanitizing function of PlenuSan™ occurs when the air enters and inevitably touches the walls before exiting from the diffuser and propagates in the environment. The PlenuSan™ internal walls are covered with a layer of MasterSan™ sanitized fabric, which reduces by contact the microbes present in the air and releases it into the environment without bacteria, molds, fungis and germs. The PlenuSan™ plenum are available in all dimensions and their sanitizing function does not release chemical compounds harmful









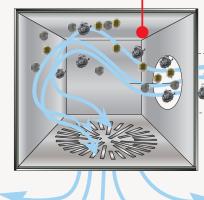






the sanitizing action occurs through the contact of air with the internal walls of the Plenu**SanTM**











From the diffusers design and production know-how of TECNICA™, a range of high induction and adjustable cones diffusers, both circular and square, has been developed, equipped with a thermostatic spring adjustment system that allows to independently change the position of blades and cones based on the air flow temperature. The thermostatic effect allows to autonomously adjust the diffusion components based on the temperature of the air introduced, to obtain the appropriate throw, improving features such as pressure drop, air speed, sound level and energy efficiency.

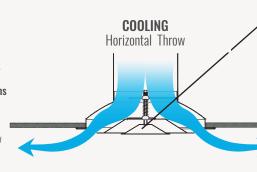




HEATING Vertical Throw

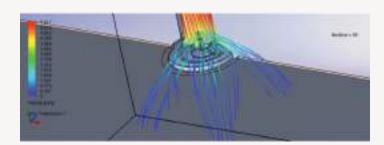
central cone in upper position:

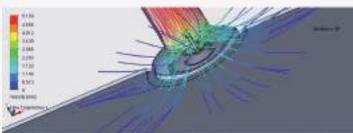
heating optimal
position for rooms
with particularly
high ceiling, up
to 6m in order to
get a vertical throw
which opposes the
convective motion
of the air in the
environment.



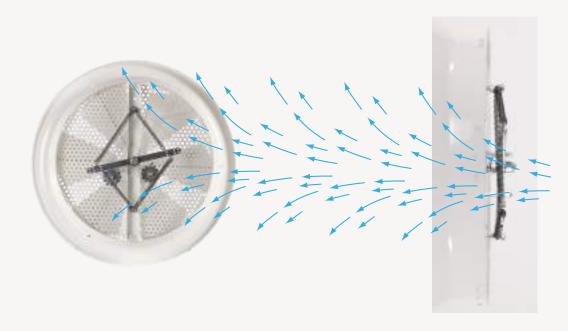
central cone in lower position:

cooling optimal position in order to get an horizontal diffusion radius without creating discomfort in the occupied area in rooms with an ideal height between 3 and 4m. With this configuration is possible to reach the best working conditions as regards for pressure drop, air speed and sound level.









CERTIFICATIONS AND CLASSIFICATIONS ...

by **TECNICA**^M



Railways vehicles



Motor vehicles fumes suction



Pressing processes



Ship building



Welding fumes suction



Metals suction



Suction of quarry materials



Wood suction



Food products

TECNICA™ production of **flexible hoses** is a result of continuous Research and Development on materials, technologies and production techniques **innovative**. The used raw materials are designed to satisfy multiples application requirements from the air conditioning and ventilation of buildings to the conventional rail vehicles to the magnetic levitation one, from the automotive sector to the glass industry, to the machines for industrial extraction of fumes, metals, wood, stone chips, food and plastics. Our flexible hoses, further to respect the main characteristics of **non-toxicity**, **abrasion** and **food grade**, comply with the main international standards of **fire reaction** and are in compliance with the requirements of the European Regulation (EC) 1907/2006 related to registration, evaluation, authorization and restriction of chemicals (REACH) and the limitation of harmful substances according to the European Directive 2002/95/EC (RoHS).







SUSTAINABILITY





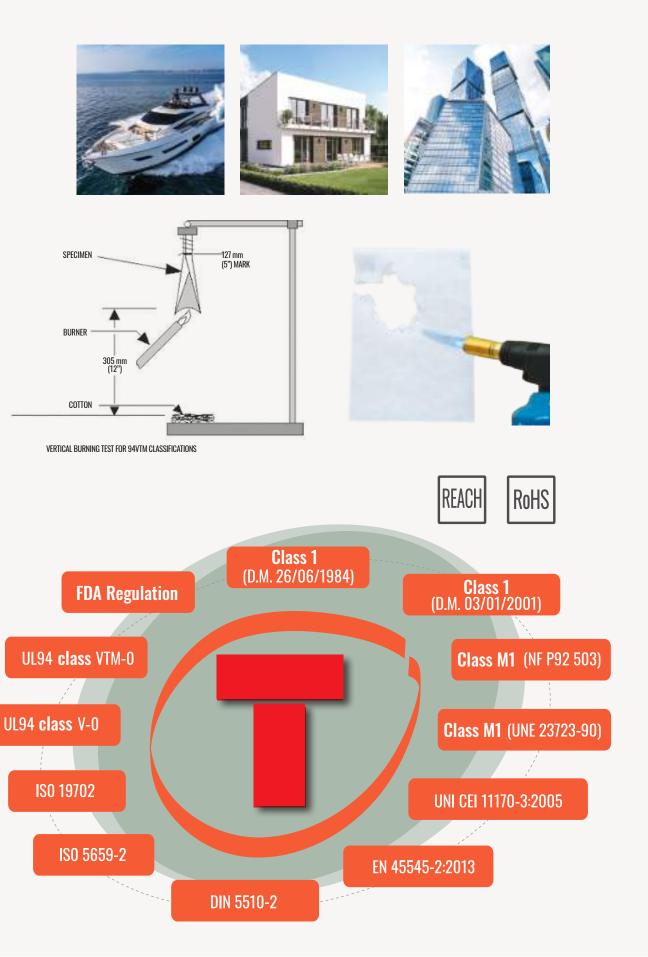
NON TOXIC ENERGY EFFICIENCY









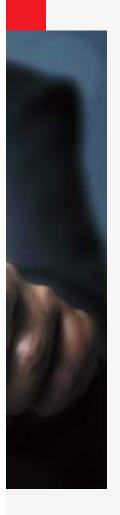




CUSTOMER SERVICE

TECNICA™ 's approach towards its customers is to ensure assistance in finding the most suitable technical solutions to meet specific needs and in the production choices that permit to create highly customized products. The decades of experience of TECNICA™ technical and production staff is available for customers to solve special needs which may concern the composition of the raw materials, the possible blend with particular anti-bacterial, antistatic, flame retardant additives; flexible hoses sizing needs (diameters, lengths, spiral pitch, wire

etc.) marking customization, filters sizing needs (frame dimensions, thicknesses, filtering media, etc), diffusers sizing and finishing needs (ceiling diffuser panels, linear diffuser lengths, plenum sizes and characteristics, RAL painting and finishing), and the packaging which can be customized in order to solve both warehouses and constructions sites necessities. The customizations do not implicate any delivery times extension.







We optimize the packaging dimensions in order to solve our customer warehouse or constructions sites needs.

Our boxes are made of **cardboard certified FSC** (Forest Stewardship Council) and **we reduced of the 30% the plastic employment in our packaging materials.**















Our logistic policy allows to promptly handle the orders execution

I R

Copper plated steel wire helix Galvanizedplated steel wire helix Food grade

Antibacterial

AM

A-magnetic Antistatic

1.11-

Customized hose marking

Conductive

Flame Retardant Covering color

Trans

Translucid



TECNICATION PRODUCTION

TECNICA™ is the only Italian company manufacturing an extended and complementary range of flexible hoses, diffusers and filters for air conditioning, ventilation and industrial suction.

TECNICA™ production lines are: **VENTILATION**, **SUCTION**, **DIFFUSIONS AND FILTRATION**.

In each one of those TECNICATM stands out for **materials innovation**, **operating performances**, **high quality standards**, compliance with the **main regulations** regarding **inner environmental quality**, **microbial reduction**, **non-toxicity of materials**, **food grade**, **fire reaction**, **resistance to tear and abrasions**.

TECNICA™ is the first company manufacturing flexible hoses, diffusers and filters for air conditioning and ventilation to have implemented the specific positioning of its products with respect to the main international sustainability ratings in construction: LEED®, WELL™ and BREEAM®.





VENTILATION

- ANTIBACTERIAL AND ANTIMICOTICS FLEXIBLE HOSES MasterSan™
- FLEXIBLE HOSES



FILTRATION

- SANITIZED FILTRATION FIITraSan FOR ANTIBACTERIAL AND ANTIMICOTICS FILTERING CELLS
- SYNTHETIC FLAT FILTERS CELLS FOR FAN COILS
- SYNTHETIC FLAT FILTERS CELLS
- SYNTHETIC PLEATED FILTERS CELLS
- METAL FLAT FILTER CELLS
- METAL PLEATED FILTERING CELLS
- DISPOSABLE FLAT FILTER CELLS
- DISPOSABLE PLEATED FILTER CELLS
- SPARE PARTS FOR ROTARY FILTERS
- POCKET FILTERS IN SYNTHETIC FIBER SOFT POCKET
- POCKET FILTERS IN SYNTHETIC FIBER
- RIGID POCKET FILTERS
- (COMPLETELY INCENERABLE)
- FILTERING PANELS WITH PLASTIC FRAME
- FILTERING PANELS WITH STEEL FRAME
- ADSORBENT FILTERS
- PRIMARY FILTRATION STAGE INERTIAL COLLECTOR FOR PAINTS
- PRIMARY FILTRATION STAGE -MULTILAYER PAINT COLLECTION FILTER
- FILTERS WITH COALESCING EFFECTS
- FILTERS ACCESSORIES AND SPARE PARTS
- SYNTHETIC FILTERING MEDIA
- FILTERING MEDIA IMPREGNATED WITH ACTIVE CARBONS
- FILTERING MEDIA IN GLASS FIBER
- FILTERING MEDIA IN GLASS FIBER
- FOR SPECIFIC APPLICATIONS
- FILTERING MEDIA FOR HIGH TEMPERATURES
- ABSOLUTE FILTERS



SUCTION

FLEXIBLE HOSES FOR INDUSTRIAL PURPOSES:
SUCTION, PURIFICATION AND HIGH TEMPERATURES



DIFFUSION

- SANITIZED DIFFUSION PlenuSan FOR ANTIBACTERIAL AND ANTIMICOTICS PLENUM
- ADJUSTABLE DEFLECTORS
- ADJUSTABLE CONES DIFFUSERS
- NOZZLES DIFFUSERS
- DIFFUSERS WITH/WITHOUR ADJUSTABLE DEFLECTORS
- HIGH-INDUCTION CIRCULAR DIFFUSERS WITH MANUAL BLADES
- LINEAR DIFFUSERS WITH SLOTS
- CALIBRATION DAMPERS
- PLENUM FOR ADJUSTABLE CONES AND/ OR DEFLECTORS

THE APPLICATIONS

Products of **VENTILATION**, **SUCTION**, **DIFFUSION** and **FILTRATION** lines can be used in several APPLICATIONS. In order to make them easily identifiable we represented them in the form of icons, with their own caption. We collected, in these pages, the complete legend of all the APPLICATIONS icons and add a small description referring to the utilization.

Inside the technical catalogues of each line, we indicated in each product the APPLICATIONS to which it can be used.



OEM



RESIDENTIAL



SMOOTH SURFACE



FLEXIBILITY



WORKING TEMPERATURE



CHEMICAL RESISTANCE



WARNING



EASY PACK



ANTISTATIC



SELF-EXTINGUISHING



OIL RESISTANT



MOLD RESISTANT



CALCULATION METHODS



OZONE RESISTANT



CHLORINE RESISTANT



HYDROLYSIS RESISTANCE



MICROORGANISM RESISTANT



TEAR RESISTANT



ABRASION RESISTANCE



FOOD Compliant



CALIBRATED DIAMETERS



CONDUCTIVE



REACH CERTIFIED



RoHS CERTIFIED



COMPACT VERSION



INDUSTRY



BUILDING



NAVAL



TRANSPORT



AIR CONDITIONING



CMV



GRILLES AND DIFFUSERS



NON-MAGNETIC



INTERIOR DESIGN



AVIATION



WALL TRACE



EXTRACTOR HOODS



HIGH TEMP. SUCTION



CMV TRANSPORT MEANS



CMV MECH. MEANS



CORROSION RESISTANT



PROLONGED ANTI CONDENSATION



TEMPORARY AIR CONDITIONING



RECREATIONAL BOATS

TECNICA

EUROPE

Portugal Norway Italy Hungary Finland Germany Romania Swisse The Netherlands Bulgaria Poland Austria France United Kingdom Czech Republic Lituania Sweden Slovakia Spain



WORLDWIDE

WORLD

USA Lebanon Canada Russia

Mexico Latvia

Uruguay India Turkey China South Corea MENA Countries South Est Asia







Efficient Indoor Air Project

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