

The new generation
of **sanitized single-wall flexible hoses**,
for air conditioning and ventilation



-Esp™

by **TECNICA**



Contribute to obtain the **credits**
of the main world
sustainability ratings for buildings:
LEED®, **WELL™** e **BREEAM®**



BREEAM®

EN

Goals 2030 - UN

“ “ SUSTAINABLE DEVELOPMENT GOALS

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**.

TECNICA™ promotes the Sustainable Development Goals presented by UN.

TECNICA™

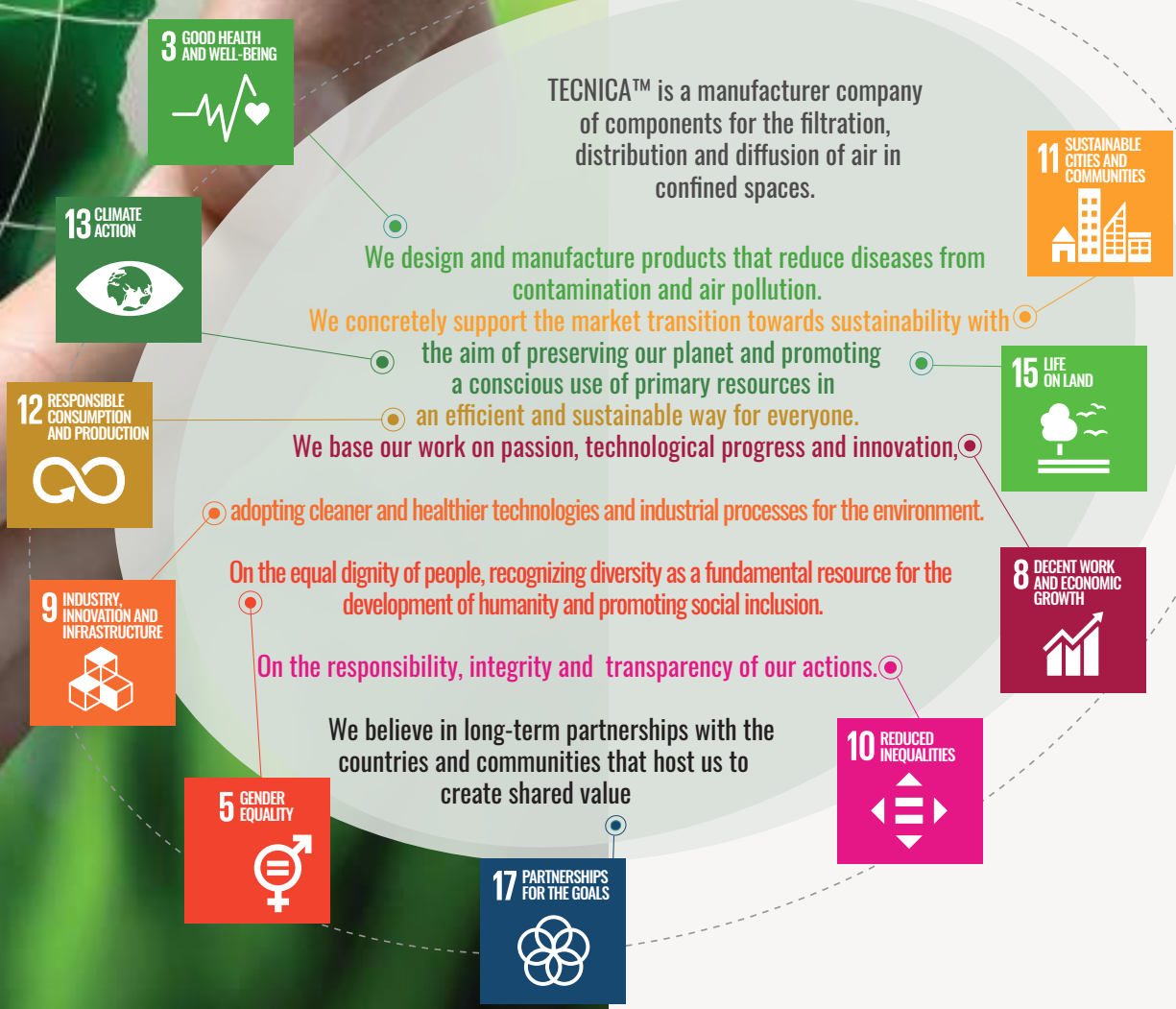
Efficient Indoor Air Project

” ”



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 schedule of the UN 2030 agenda plan since the beginning and focused its actions towards the Goals listed below





ENVIRONMENT, HEALTH, ENERGY

THREE WORDS JOINT BY A SINGLE COMMON DENOMINATOR:
THE CHANGE.



We know everything about our cars: costs, consumptions, performances.

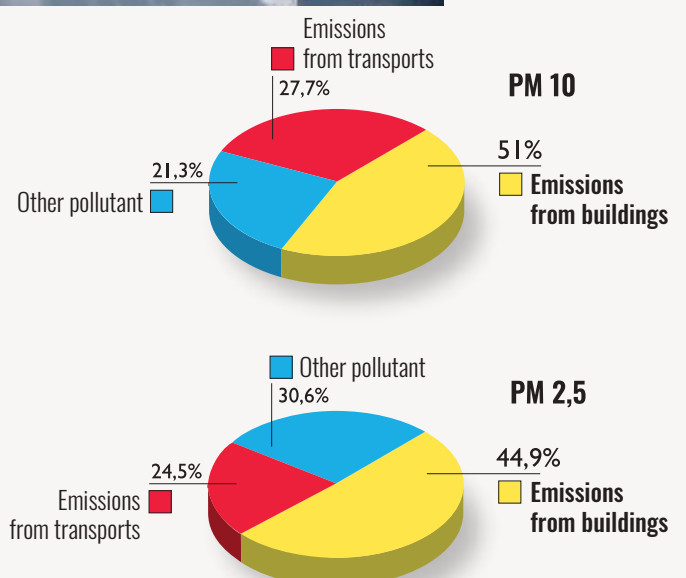
Do we know as much about our houses?

How many people knows that an **apartment of 100 m², in 6 months of heating, enters in the atmosphere the double of CO₂ compared to a car driving in Milan for one whole Year?**

The European Environment Agency identified how the pollutant emissions of buildings (PM10 and PM2,5) are two or three times higher than the one produced by transports.

It is necessary to act on existing buildings with energetic upgrading projects, which drastically reduce the energetic needing of our houses and, consequently, the pollutant emissions in the environment.

The air pollution caused by fine particles has been valued as one of the main critical element for men's health by the World Health Organization.





DAILY WELL-BEING

An individual's happiness is given by three elements:

50% by Genetics, the character propensity of everyone to be happy and positive in life.

10% by exceptional events, random or occasional, like the birth of a child, the achieving of a bonus at work or in studying, a friend's call, the winning of an amount of money.

40% by the everyday, in which way we live our daily life.

The comfort, health and wellness are part of everyone's life and determine a good quality of life.



BREEAM®

The green frontier is the last big achievement by TECNICA™.

We checked all our products to document the **compliance to the main international rating** for the **sustainability certification of residential, office, commercial, medical, production and services buildings: LEED®, WELL™ and BREEAM®**

TECNICA™, with its policy focused on the environmental sustainability in its most wide meaning, has always fostered the HRV as a good practices to grant people's welfare and to reduce the environment pollution elements caused by obsolete and highly polluting heating systems.



TECNICA™ Efficient Indoor Air Project

In over 30 Years of activity we have changed the insulating materials and **realized non-toxic film** with antibacterial additives, realized devices for the **independent climate control of diffusers** and **patented products**.

Tecnica™'s mission is to proceed in the **research for the innovation of materials and products**, testing and certifying them to assure the health of people, who pass their time in closed spaces, and the environmental sustainability.





DEVELOPMENT IN EFFICIENCY

T-EspTM by TECNICATM

It is the new generation of sanitized expanded foam single-wall flexible hoses, for air conditioning and ventilation systems in confined environments.

All the T-Esp expanded foam flexible hoses contribute to obtain the credits of the main world sustainability ratings for buildings: LEED®, WELL™ and BREEM®.



Residential



Business



Hospitality Industry



Management Centres



BREEM®



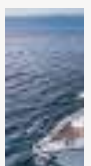
Hospital



Automotive



Railways

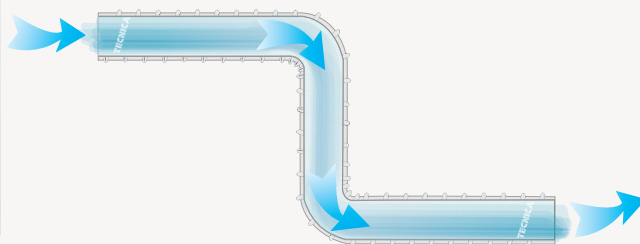


Naval



SINGLE-WALL

T-Esp™ flexible hoses are made of a **single insulating wall with thickness 4 or 8 mm**, which allows to **minimize the installation dimensions** in case of reduced spaces for the air conditioning or ventilation system in which high efficiency performances must be guaranteed.

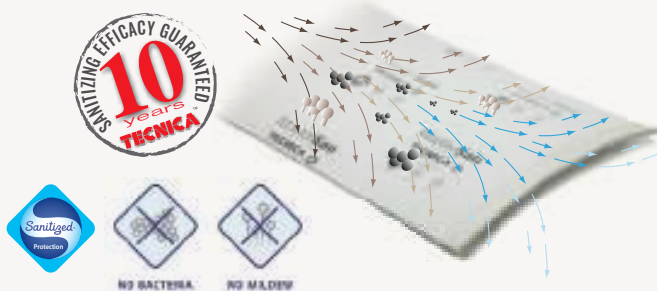


FLEXIBLE

T-Esp™ hoses are **light and self-supporting** with a spiral in harmonic steel, which acts as a rib and allows to keep **the internal section unchanged even in the curves** and consequently keep **unchanged the pressure drop of the project**.

SANITIZING

Thanks to the MasterSan™ technology, conceived and designed by Tecnica™ in collaboration with Sanitized®, **the inner wall the of the T-Esp™ hoses is blended with Sanitized® additive, which prevents the formation of mold and the proliferation of bacteria** in the canalization system, reducing the risk of introducing unhealthy air in the environment.



INSULATING AND ENERGETICALLY EFFICIENT

The wall of the T-Esp™ hoses is made of an **expanded closed-cell resin** which allows to obtain an insulating features and a **thermal transmittance of 9,5 Wm2K equal to 8.173 Kcal**.

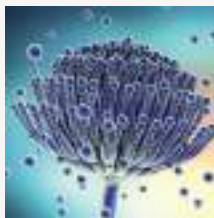
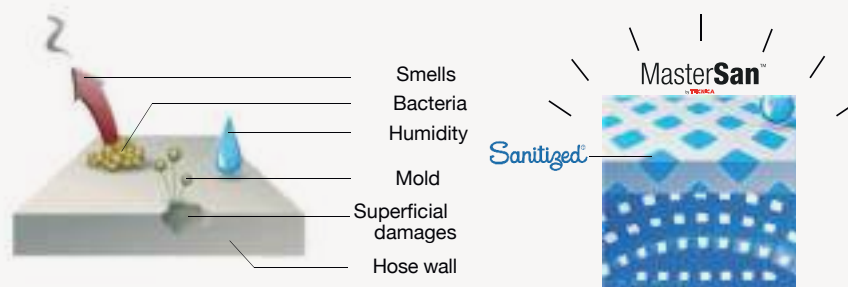
The contribution to the rating LEED®, WELL™ and BREEAM® of each single T-Esp product are indicated in the general catalogue of the range VENTILATION





TECNICA™ AND SANITIZED®

The inner wall of the single-wall T-Esp flexible hoses is produced with the MasterSan technology as a result of Research and Development carried by TECNICA in collaboration with Sanitized. Thanks to the **exclusive partnership with SANITIZED, TECNICA is the only company in the aeraulic sector to produce a sanitizing film capable of guarantee and certificate the sanitizing efficiency for 10 years.**



Aspergillus niger



Legionella Pneumophila



Molds



Pseudomonas aeruginosa



Yeast Infection



Staphylococcus Aureus



Escherichia coli



Salmonella

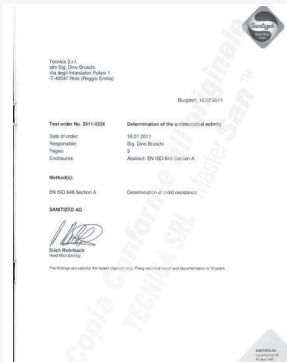
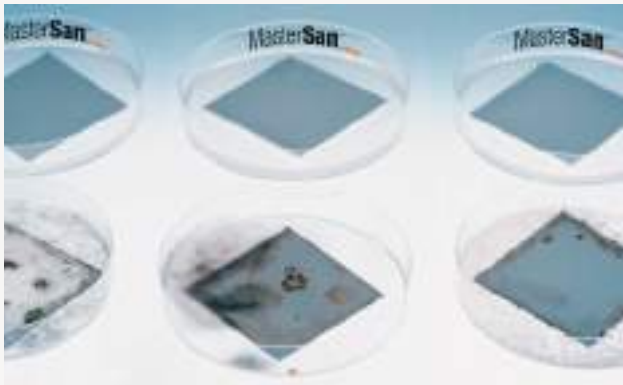
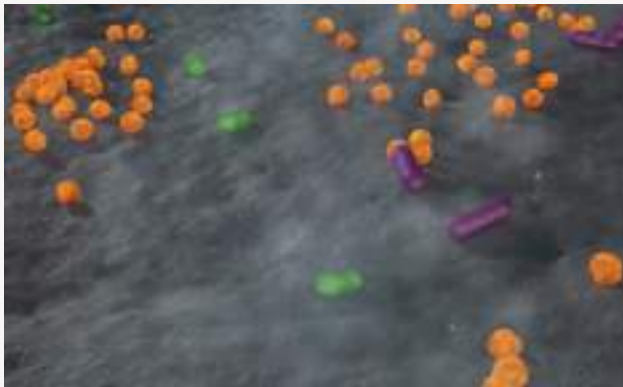


Listeria monocytogenes

The air quality improvement and the internal environmental comfort guarantee **Indoor Air Quality high standards, as requested by the World Health Organization** and contributes to obtain the credits of the **main world sustainability ratings for buildings: LEED®, WELL™ and BREEAM®.**



BREEAM®

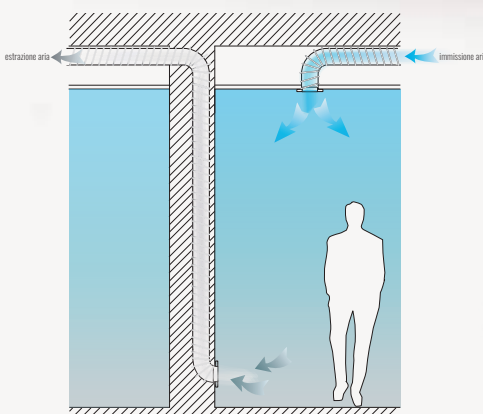


THE T-EspTM PLUS

The T-EspTM sanitized expanded foam single-wall flexible hoses are **patented** and have unique characteristics in the panorama of hoses for the aeraulic systems. In these pages, we list the technological uniqueness, which guarantee efficiency of the system, saving time in its execution and cost savings in its operation.



The T-EspTM expanded foam single-wall flexible hoses **are sanitizing** with the technology Sanitized and their sanitizing **efficiency is guaranteed and certified for 10 years.**



The spiral in harmonic steel acts as a rib and allows to keep **the internal section unchanged even in the curves** and consequently keep **unchanged the pressure drop of the project**



- assembly time -
- materials cost -
- easiness +
- quick installation +



SA10/ESP PATENTED MasterSan™



SLEEVE SA10/ESP Therm MasterSan™



SA10/ESP 8MM PATENTED MasterSan™



SA10/ESP THERM PATENTED MasterSan™

The walls of the T-Esp™ flexible hoses are produced with thickness 4 or 8 mm and this allows to reduce the thermal dispersion of the system and facilitate the total energetic efficiency:



Th. 8 mm
R= 0,24 m2K/W

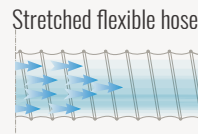


Th. 4 mm (hose)
insulation Therm (Th.25 mm)
R= 0,66 m2K/W

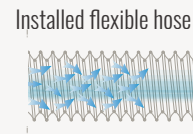
COMPARISON OF REAL PRESSURE DROP ON FLEXIBLE HOSES



Flexible hose compliant to EN13180 to guarantee the pressure drop in stretched position



∅	102 mm
V	5 m/s
ΔPa	6,5 Pa

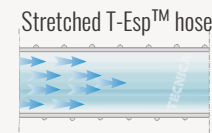


∅	102 mm
V	5 m/s
ΔPa	8,0 Pa

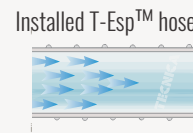
Real increase of pressure drop: +18%



T-Esp™



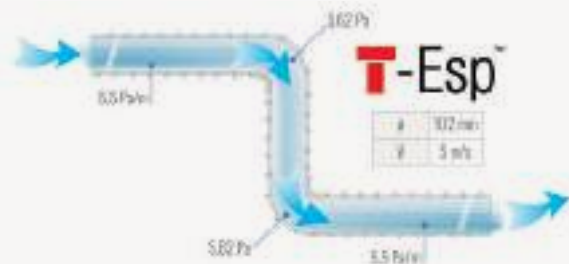
∅	102 mm
V	5 m/s
ΔPa	5,5 Pa



∅	102 mm
V	5 m/s
ΔPa	5,5 Pa

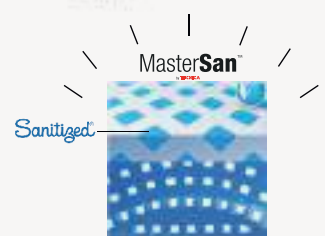
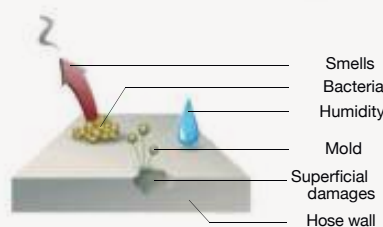
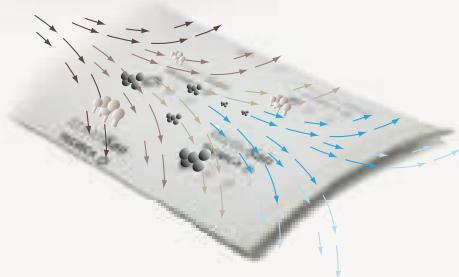
No increase of pressure drop

The airflow section remains unchanged even in the curves and allows to keep unvaried the pressure drop of the project



NO CONDENSATION

The internal part of T-Esp™ flexible hoses is covered with MasterSan sanitizing film and prevents the mold and proliferation of bacteria and germs



T-EspTM AND THE ENVIRONMENT



by **TECNICATM**

The high performances of **energy efficiency and air sanitizing** of the T-EspTM **single-wall expanded flexible hoses** facilitate the adoption of **Controlled Mechanical Ventilation** as a technology that best 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



BREEAM®

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®**.

THE INSTALLATION ADVANTAGES

T-Esp™

The T-Esp™ sanitized expanded single-wall flexible hoses prevent those installation errors that in many cases affect the correct functioning of an aeraulic system. T-Esp™ hoses are easy to install thanks to their lightness and self-supporting and avoid to waste materials and time on construction site because they are not compressible and can be cut to measure on site.



No to additional costs for the hoses insulation since the T-Esp™ hoses are pre-insulated



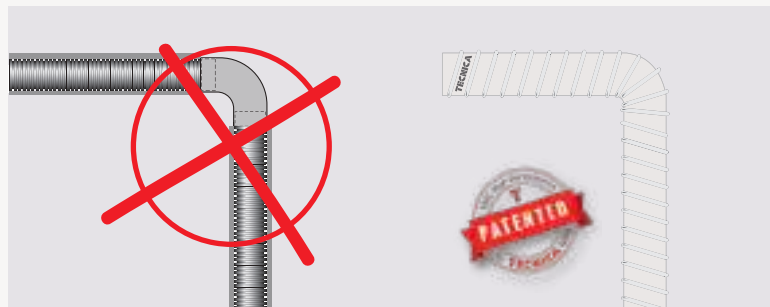
No to axial compressions of the hose thanks to the rib in harmonic steel of the T-Esp™



No to the formation of condensation inside the T-Esp™ hoses



No to crushing in case of narrow radius curvatures



No connection systems, the T-Esp™ flexible hoses can be installed simply with the most common CMV accessories for deviations and branch

SA10/ESP Patented MasterSan™

SA10/ESP Patented MasterSan™ è un sistema di canalizzazione flessibile, igienizzabile e autoportante, studiato per applicazioni in ambienti sanitari e industriali. È composto da un tubo flessibile in acciaio inossidabile con rivestimento in PVC e da un sistema di giunzioni e accessori in acciaio inossidabile.

Caratteristiche tecniche e limiti di impiego:

- Temperatura massima di esercizio: 120°C
- Temperatura massima di stoccaggio: 150°C
- Pressione massima di esercizio: 10 bar
- Pressione massima di stoccaggio: 15 bar
- Resistenza alla trazione: 1000 N/cm²
- Resistenza alla flessione: 1000 N/cm²
- Resistenza alla torsione: 1000 N/cm²
- Resistenza alla compressione: 1000 N/cm²
- Resistenza alla lacerazione: 1000 N/cm²
- Resistenza alla corrosione: 1000 N/cm²
- Resistenza alla ruggine: 1000 N/cm²
- Resistenza alla polvere: 1000 N/cm²
- Resistenza alla muffa: 1000 N/cm²
- Resistenza alla radiazione UV: 1000 N/cm²
- Resistenza alla radiazione gamma: 1000 N/cm²
- Resistenza alla radiazione X: 1000 N/cm²
- Resistenza alla radiazione beta: 1000 N/cm²
- Resistenza alla radiazione alpha: 1000 N/cm²
- Resistenza alla radiazione neutronica: 1000 N/cm²
- Resistenza alla radiazione cosmica: 1000 N/cm²
- Resistenza alla radiazione terrestre: 1000 N/cm²
- Resistenza alla radiazione solare: 1000 N/cm²
- Resistenza alla radiazione lunare: 1000 N/cm²
- Resistenza alla radiazione stellare: 1000 N/cm²
- Resistenza alla radiazione galattica: 1000 N/cm²
- Resistenza alla radiazione cosmica galattica: 1000 N/cm²
- Resistenza alla radiazione cosmica terrestre: 1000 N/cm²
- Resistenza alla radiazione cosmica solare: 1000 N/cm²
- Resistenza alla radiazione cosmica galattica: 1000 N/cm²
- Resistenza alla radiazione cosmica terrestre: 1000 N/cm²
- Resistenza alla radiazione cosmica solare: 1000 N/cm²

Tabella di caratteristiche tecniche e limiti di impiego:

COLORE	PROTEZIONE	TEMPERATURA SUPERIORE	TEMPERATURA INFERIORE	PRESSIONE	RESISTENZA ALLA TRAZIONE	RESISTENZA ALLA FLESSIONE	RESISTENZA ALLA TORSIONE	RESISTENZA ALLA COMPRESIONE	RESISTENZA ALLA LACERAZIONE	RESISTENZA ALLA CORROSIONE	RESISTENZA ALLA RUGGINE	RESISTENZA ALLA POLVERE	RESISTENZA ALLA MUFFA	RESISTENZA ALLA RADIAZIONE UV	RESISTENZA ALLA RADIAZIONE GAMMA	RESISTENZA ALLA RADIAZIONE X	RESISTENZA ALLA RADIAZIONE BETA	RESISTENZA ALLA RADIAZIONE ALPHA	RESISTENZA ALLA RADIAZIONE NEUTRONICA	RESISTENZA ALLA RADIAZIONE COSMICA	RESISTENZA ALLA RADIAZIONE SOLARE	RESISTENZA ALLA RADIAZIONE LUNARE	RESISTENZA ALLA RADIAZIONE STELLARE	RESISTENZA ALLA RADIAZIONE GALATTICA	RESISTENZA ALLA RADIAZIONE COSMICA GALATTICA	RESISTENZA ALLA RADIAZIONE COSMICA TERRESTRE	RESISTENZA ALLA RADIAZIONE COSMICA SOLARE
Grigio	Con standard	120°C	150°C	10 bar	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²	1000 N/cm²

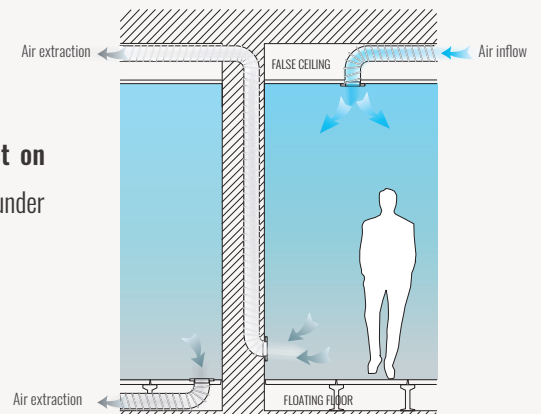
Tabella di caratteristiche tecniche e limiti di impiego (continuazione):

DIAMETRO DI PRODUZIONE	40"	50"	60"	70"	80"	90"	100"	110"	120"	130"	140"	150"	160"	170"	180"	190"	200"	210"	220"	230"	240"																									
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Tabella di caratteristiche tecniche e limiti di impiego (continuazione):

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The T-Esp™ can be installed below duct on the wall or on sight in the false ceiling or under floating floors



T-Esp™ ensures that the pressure drops indicated in the catalog technical sheets are respected once the hoses of the system are installed



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 or **flexible hoses sizing needs** (diameters, lengths, spiral pitch, wire etc.),



It is possible, on request, to measure the diameters of T-Esp™ flexible hoses to adapt them to the construction sites CMV accessories



Our logistic allows to promptly handle the orders execution.

It is possible, on request, to customize the packaging to solve both the warehouses and construction sites needs





SA10/ESP Patented MasterSan™

Flexible hose produced with exclusive technology by TECNICA SRL made of:

- Activated polyolefin resins film with anti-bacterial and anti-mildew master.
- Thermo-insulating coating in netted and closed-cell of polyethylene foam.
- External protection in activated polyolefin resins film.
- Embedded steel wire helix.

The assembly of materials for the construction of the flexible conduit does not require the use of chemical agents, glues or adhesives.

Thermal resistivity at 20°C $R = 0,12m^2 K/W$ (UNI EN 12664-2002)

MasterSan™ in collaboration with:



TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	WORKING TEMPERATURE	PRODUCTION DIAMETERS	AIR SPEED	PRESSURE	CURVATURE RADIUS
Grey	10m standard	-20° + 90°C (peak +115°C)	from 40mm to 254mm	max 20m/sec	max 200 mmH ₂ O	1,2 - 1,8 x Ø

PRODUCTION DIAMETERS

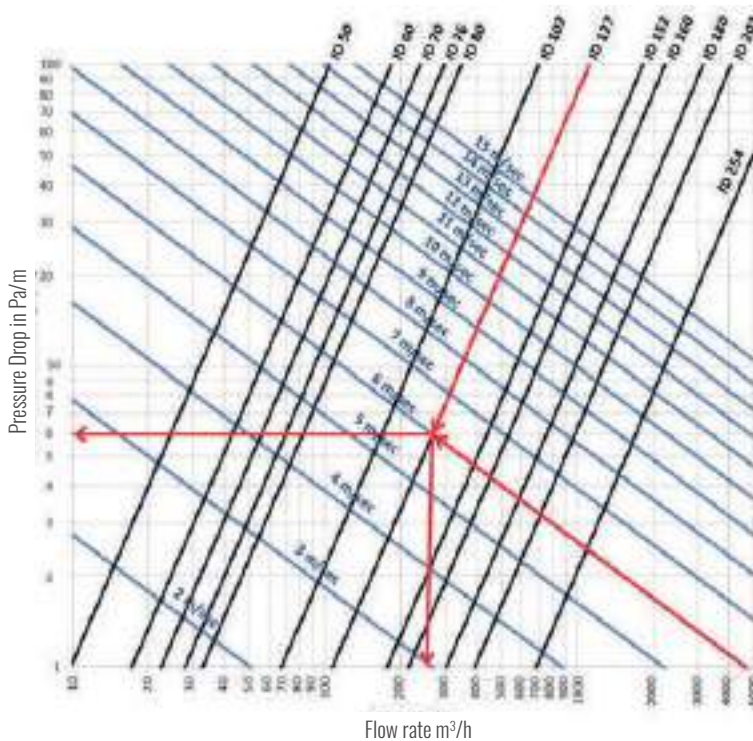
40*	51	63	70	76	80	90*	102	110*	121*
127	133*	140*	152	160	165	180	203	254	

*Diameters available on request

Diameters other than those indicated are available by prior feasibility check.

PRESSURE DROPS DIAGRAM

(Air Temperature 20°C)



PRESSURE DROPS TABLE WITH CALCULATION EXAMPLES

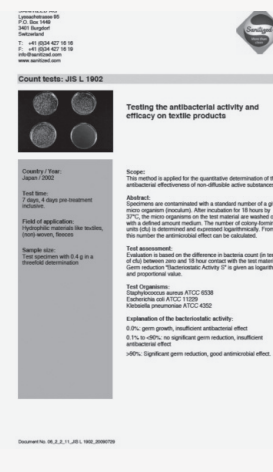
To calculate the flow rates and pressure drops of the other diameters, use the beside diagram.

DIAMETER	AIR SPEED 8m/s		AIR SPEED 10m/s	
	WORKING PRESSURE	WORKING VACUUM	CURVATURE RADIUS	WEIGHT
[mm]	[bar]	[bar]	[mm]	[gr/m]
51	0,7	0,18	35	96
63	0,7	0,15	42	115
70	0,6	0,13	49	128
80	0,5	0,09	56	154
102	0,4	0,08	70	200
127	0,4	0,07	92	254
152	0,2	0,05	105	308
160	0,15	0,05	110	331
180	0,15	0,05	130	438
203	0,15	0,04	140	492
254	0,08	0,03	175	600




CERTIFICATIONS

SANITIZATION

FIRE REACTION



SANITIZED TECHNOLOGY
MasterSan™ is produced with new generation polyolefin film with the addition of "Sanitized Antibacterial" active ingredient capable of reducing the microbial and bacterial load presents inside the ducts and conveyed by the air, for the environment and man's safety.

IT Class 1 (D.M. 26/06/84)

EU Class B-s2, d0 (EN 13501-1:2009)

GREEN BUILDING

Thanks also to the support of GreenMap, products manufactured by Tecnica srl contribute to obtain the credits of the major international rating systems for sustainable buildings:



LEED

Contributes to credits:
IP, EA, MR



WELL

Contributes to credits:
MATERIALS, COMMUNITY



BREEAM

Contributes to credits:
MAN, ENE, WST

For further details regarding the specific contributions to the credits indicated, contact Tecnica Srl

APPLICATIONS

OEM	Residential	Smooth surface	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant
Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free	Building	Transport	Air Conditioning	CMV	Non-magnetic*
Wall Trace	CMV transport means	CMV mech. means	Prolonged anti condensation	Recreational Boats				

*on request

WIRE OPTIONS

AM non-magnetic inox wire

ADDITIVE OPTIONS

UV * anti UV

SERVICE OPTIONS

MP customized marking



Sleeve SA10/ESP Patented MasterSan™

Insulating sleeve produced with exclusive technology by TECNICA SRL made of:

- Additivated polyolefin resins film with anti-bacterial and anti-mildew master.
- Thermo-insulating coating in netted and closed-cell of polyethylene foam.
- External protection in additivated polyolefin resins film.

The assembly of materials for the construction of the flexible conduit does not require the use of chemical agents, glues or adhesives.

MasterSan™ in collaboration with:



TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	WORKING TEMPERATURE	PRODUCTION DIAMETERS	AIR SPEED	PRESSURE	CURVATURE RADIUS
Grey	10m standard	-20° + 90°C (peak +115°C)	from 40mm to 254mm	max 20m/sec	max 200 mmH ₂ O	1,2 - 1,8 x Ø

PRODUCTION DIAMETERS

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127	133*	140*	152	160	165	180	203	254	

*Diameters available on request
Diameters other than those indicated are available by prior feasibility check.

CERTIFICATIONS

SANITIZATION

Count test: JIS S. 1902

Testing the antibacterial activity and efficacy on textile products

Country: Japan 2002

Test line: 2 lines, 4 days pre-treatment

Test of application: Hydrophilic material like textiles, food wrappers, gloves

Sample size: Free specimens with 0.4 g in a standard concentration

Scope: This method is applied for the quantitative determination of the antibacterial effectiveness of non-oxidizable active substances.

Abstract: Specimens are contaminated with a standard number of a given micro-organism inoculum. After incubation for 18 hours by 20°C, the micro-organisms on the test material are washed off with a defined amount of medium. The number of colony forming units (CFU) is determined and expressed logarithmically. From this number the antibacterial effect can be calculated.

Test assessment: Evaluation is based on the difference in colony count in terms of old bacteria case and 18 hour contact with the test material. Germ reduction: "Microbiological Activity 0" is given in logarithmic and proportional value.

Test organism: Staphylococcus aureus ATCC 6038
Escherichia coli ATCC 11229
Klebsiella pneumoniae ATCC 4324

Qualification of the bacteriostatic activity:
0-5%: germ growth, insufficient antibacterial effect
0-5% to 100%: no significant germ reduction, sufficient antibacterial effect
>90%: significant germ reduction, good antibacterial effect.

SANITIZED TECHNOLOGY

MasterSan™ is produced with new generation polyolefin film with the addition of "Sanitized Antibacterial" active ingredient capable of reducing the microbial and bacterial load presents inside the ducts and conveyed by the air, for the environment and man's safety.



FIRE REACTION

IT

Class 1 (D.M. 26/06/84)

EU

Class B-s2, d0 (EN 13501-1:2009)

GREEN BUILDING

Thanks also to the support of GreenMap, products manufactured by Tecnica srl contribute to obtain the credits of the major international rating systems for sustainable buildings:



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BREEM

Contributes to credits:
MAN, ENE, WST

For further details regarding the specific contributions to the credits indicated, contact Tecnica Srl

APPLICATIONS

OEM	Residential	Smooth surface	Easy Pack	Mold resistant	Microorganism Resistant	REACH Certified	RoHS Certified	Building

TESTS PERFORMED

TEST	METHOD	OUTCOMES
Resistance to aggression by chemical agents	Test performed on non-insulated SA10/ESP duct - Application on the external surface of the specific chemical agent and check for any changes after 48h.	ETHANOL No modification and/or damage
		AMMONIA No modification and/or damage
		HIGH CONC. DEGREASER No modification and/or damage
		COOLANT FLUID No modification and/or damage
Maximum operating temperature peak	Test performed on non-insulated SA10/ESP duct - Identification of the maximum temperature peak bearable by the duct and all its components.	+115°C no longer than 2min.



SA10/ESP 8mm Patented MasterSan™

Flexible hose produced with exclusive technology by TECNICA SRL made of:

- Activated polyolefin resins film with anti-bacterial and anti-mildew master.
- Thermo-insulating coating in netted and closed-cell of polyethylene foam (th. 8mm).
- External protection in activated polyolefin resins film.
- Embedded steel wire helix.

The assembly of materials for the construction of the flexible conduit does not require the use of chemical agents, glues or adhesives.

Thermal resistivity at 20°C **R = 0,24m² K/W (UNI EN 12664:2002)**

MasterSan™ in collaboration with:



TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	WORKING TEMPERATURE	PRODUCTION DIAMETERS	AIR SPEED	PRESSURE	CURVATURE RADIUS
Grey	10m standard	-20° + 90°C (peak +115°C)	from 40mm to 254mm	max 20m/sec	max 200 mmH ₂ O	1,2 - 1,8 x Ø

PRODUCTION DIAMETERS

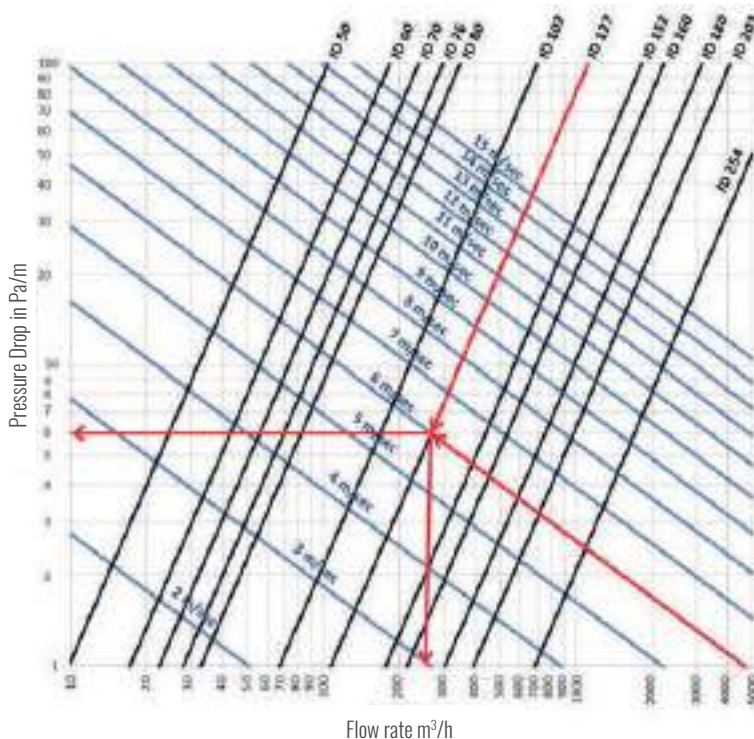
40*	51	63	70	76	80	90*	102	110*	121*
127	133*	140*	152	160	165	180	203	254	

*Diameters available on request

Diameters other than those indicated are available by prior feasibility check.

PRESSURE DROPS DIAGRAM

(Air Temperature 20°C)



PRESSURE DROPS TABLE WITH CALCULATION EXAMPLES

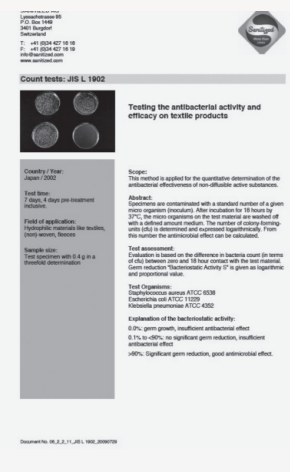
To calculate the flow rates and pressure drops of the other diameters, use the beside diagram.

DIAMETER	AIR SPEED 8m/s		AIR SPEED 10m/s	
	WORKING PRESSURE	WORKING VACUUM	CURVATURE RADIUS	WEIGHT
[mm]	[bar]	[bar]	[mm]	[gr/m]
51	0,7	0,18	35	96
63	0,7	0,15	42	115
70	0,6	0,13	49	128
80	0,5	0,09	56	154
102	0,4	0,08	70	200
127	0,4	0,07	92	254
152	0,2	0,05	105	308
160	0,15	0,05	110	331
180	0,15	0,05	130	438
203	0,15	0,04	140	492
254	0,08	0,03	175	600

CERTIFICATION

SANITIZATION

FIRE REACTION



Count tests: JIS L 1902

Testing the antibacterial activity and efficacy on textile products

Country / Zone: Japan / JIS

Test item: 7 days, 4 days pre-treatment duration

Field of application: Synthetic material like textiles, (sportswear, leisure)

Sample size: Five specimens with 0.4 g in a microbial determination

Test Organisms: Staphylococcus aureus ATCC 0108, Escherichia coli ATCC 11229, Pseudomonas aeruginosa ATCC 4352

Explanation of the bactericidal activity: 0.0% germ growth, insufficient antibacterial effect; 0.75 to 0.95% no significant germ reduction, insufficient antibacterial effect; >95% significant germ reduction, good antimicrobial effect.

SANITIZED TECHNOLOGY




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IT

Class 1 (D.M. 26/06/84)

EU

Class B-s2, d0 (EN 13501-1:2009)

GREEN BUILDING

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WELL

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MATERIALS, COMMUNITY



BREEAM

Contributes to credits:
MAN, ENE, WST

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APPLICATIONS

OEM	Residential	Smooth surface	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant
Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free	Building	Transport	Air Conditioning	CMV	Non-magnetic*
Wall Trace	CMV transport means	CMV mech. means	Prolonged anti condensation	Recreational Boats				

*on request

WIRE OPTIONS

AM non-magnetic inox wire

ADDITIVE OPTIONS

UV * anti UV

SERVICE OPTIONS

MP customized marking



SA10/ESP Therm Patented MasterSan™

Flexible hose produced with exclusive technology by TECNICA SRL made of:

- Activated polyolefin resins film with anti-bacterial and anti-mildew master.
- Thermo-insulating coating in netted and closed-cell of polyethylene foam.
- External protection in activated polyolefin resins film.
- Embedded steel wire helix.
- Thermo-insulating covering in polyester fibre (th. 25mm-16kg/m³).
- Outer aluminized polyolefin film protection (flame retardant).

The assembly of materials for the construction of the flexible conduit does not require the use of chemical agents, glues or adhesives.

Insulation: 25mm / 16kg/m³ - standard
50mm / 16kg/m³ - on request

Thermal resistivity at 20°C **R = 0,66m² K/W (UNI EN 12664:2002)**

MasterSan™ in collaboration with:



TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	WORKING TEMPERATURE	PRODUCTION DIAMETERS	AIR SPEED	PRESSURE	CURVATURE RADIUS
Grey	10m standard	-20° + 90°C (peak +115°C)	from 40mm to 254mm	max 20m/sec	max 200 mmH ₂ O	1,2 - 1,8 x Ø

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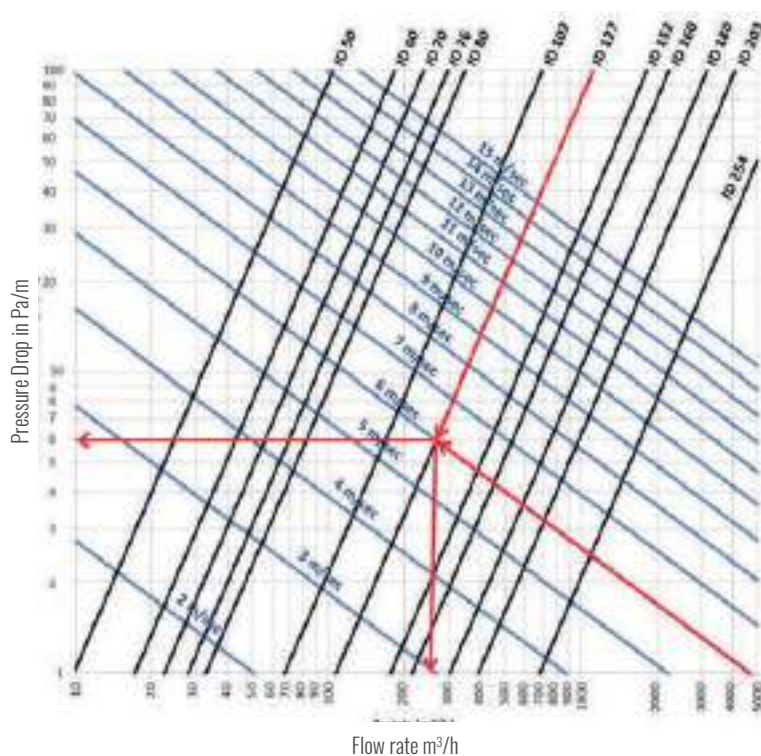
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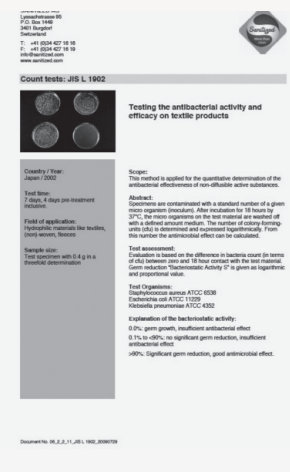
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CERTIFICATIONS




SANITIZATION

FIRE REACTION



SANITIZED TECHNOLOGY
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EU

Vapor barrier:
class B-s1, d0 (EN 13823:2010)

Thermal insulation + inner hose:
class B-s2, d0 (EN 13501-1:2009)

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WELL

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MATERIALS, COMMUNITY



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OEM	Residential	Smooth surface	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant
Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free	Building	Transport	Air Conditioning	CMV	Non-magnetic*
Wall Trace	CMV transport means	CMV mech. means	Prolonged anti condensation	Recreational Boats				

*on request

WIRE OPTIONS

AM non-magnetic inox wire

ADDITIVE OPTIONS

UV * anti UV

SERVICE OPTIONS

MP customized marking

*on request



TECNICA srl
is a company certified
UNI EN 9001:2015
issued by TUV ITALIA.
Certificate number 50100 15241

TECNICATM

Efficient Indoor Air Project

TECNICA S.R.L.

Head Office:
I-42047 ROLO (RE)
Via degli Intarsiatori Rolesi, 1

Production Sites:
I-42047 ROLO (RE)
I-42042 FABBRICO (RE)
300136 TIMISOARA (RO)

TEL / FAX

t +39 0522.665129
f +39 0522.650211

VAT

01321110353

NATIONAL SALES

info@tecnicasrl.it
info2@tecnicasrl.it
tecnico@tecnicasrl.it

EXPORT SALES

export3@tecnicasrl.it
export@tecnicasrl.it