

V E N T I L A T I O N

V E N T I L A T I O N

TECNICA

EN

TECNICATM

Efficient Indoor Air Project

EN

TECNICATM

Efficient Indoor Air Project

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



TECNICA™

Efficient Indoor Air Project

The words “**Efficient Indoor Air Project**” reflect the mission of **TECNICA™**: to develop products that are focused on preserve the health of people living in confined spaces and to environmental sustainability in its most complete sense. The constant evolution of our products, as a result of our continuous Research and Development conducted on materials, technologies and production techniques, make us a leading company in the **production of flexible hoses, diffusers and filters** for the air conditioning and ventilation of confined spaces within **executive, commercial, residential, hotel, hospital, automotive and naval** sectors. The **VENTILATION** catalog collects all our production of flexible hoses and highlights their technical peculiarities, their possible range of applications, **the sanitization certifications** and their contribution to the **credits of the main world sustainability ratings in construction: LEED, WELL and BREEAM.**

Welcome to **TECNICA™** - Efficient Indoor Air Project



BREEAM®

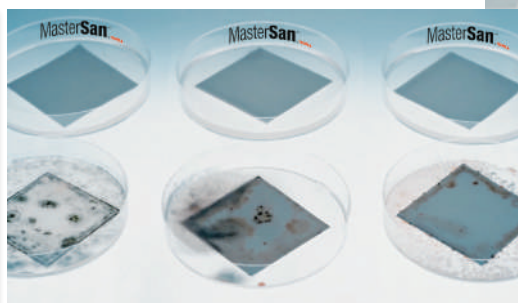
patented, sanitizing products, guaranteed and certified effectiveness for 10 years, which also contribute to the credits of the main world sustainability ratings in the building industry.

Sanitized Air

MasterSan™ by TECNICA™



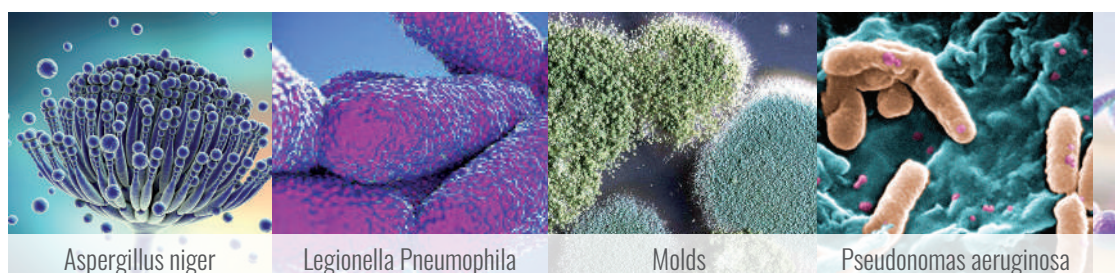
From TECNICA™ research in collaboration with Sanitized®, the MasterSan™ sanitizing flexible hoses line has been developed to prevent the proliferation of bacteria, fungi and molds in the aeraulic duct system. MasterSan™ sanitizing action reduces the introduction of unhealthy air into confined spaces, ensuring high standards of Indoor Air Quality, as requested by the World Health Organization, reducing the arise or aggravation of respiratory diseases such as allergies, asthma, emphysema and chronic lung disease. The sanitizing action of the MasterSan™ hoses does not release chemicals that are harmful to health.



FRIENDLY CHEMISTRY



NON-TOXIC



Aspergillus niger

Legionella Pneumophila

Molds

Pseudomonas aeruginosa



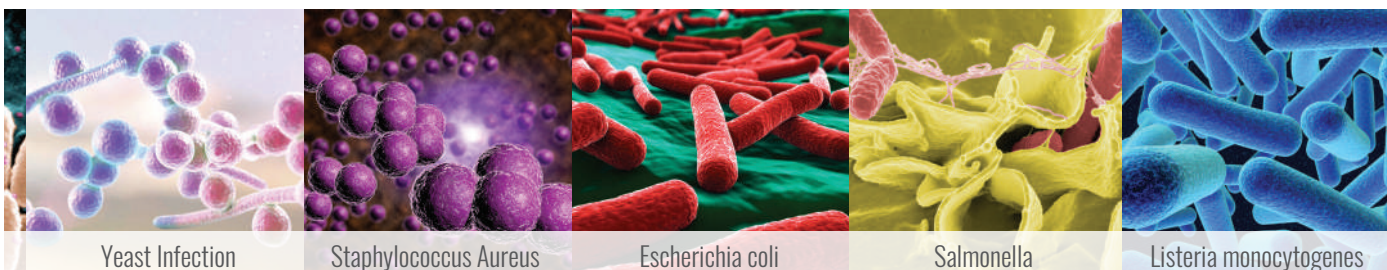
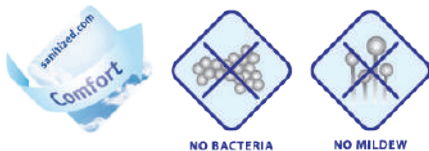
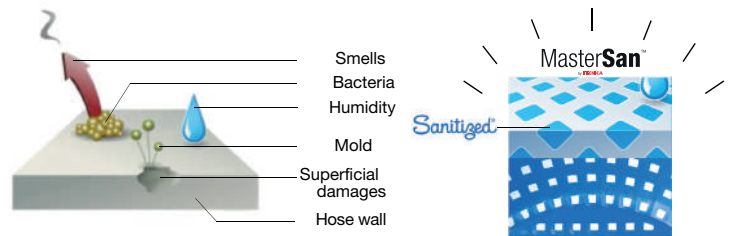
Why MasterSan™ antibacterial ducts?

Because **bacteria**, as well as **fungi, germs and molds** present in the air passing through the aeraulic systems, can easily nest on the walls of the ducts and can multiply extremely quickly if the humidity and temperature conditions are such as to favor their growth and proliferation.



These unwanted microorganisms negatively influence the hygienic conditions of the aeraulic system, giving rise, for example, to unpleasant smells or the accumulation of bacteria, fungi and molds, as well as being the cause of individual allergic reactions.

The sanitizing action of MasterSan™ reduces the introduction of unhealthy air into confined spaces, ensuring **high standards of Indoor Air Quality**. The sanitizing action of the MasterSan™ flexible hoses **does not release chemical compounds that are harmful to health**, including features such as certified **self-extinguishing, flexibility and strength characteristics, suitable to withstand the mechanical and thermal stresses required by the aeraulic systems.**

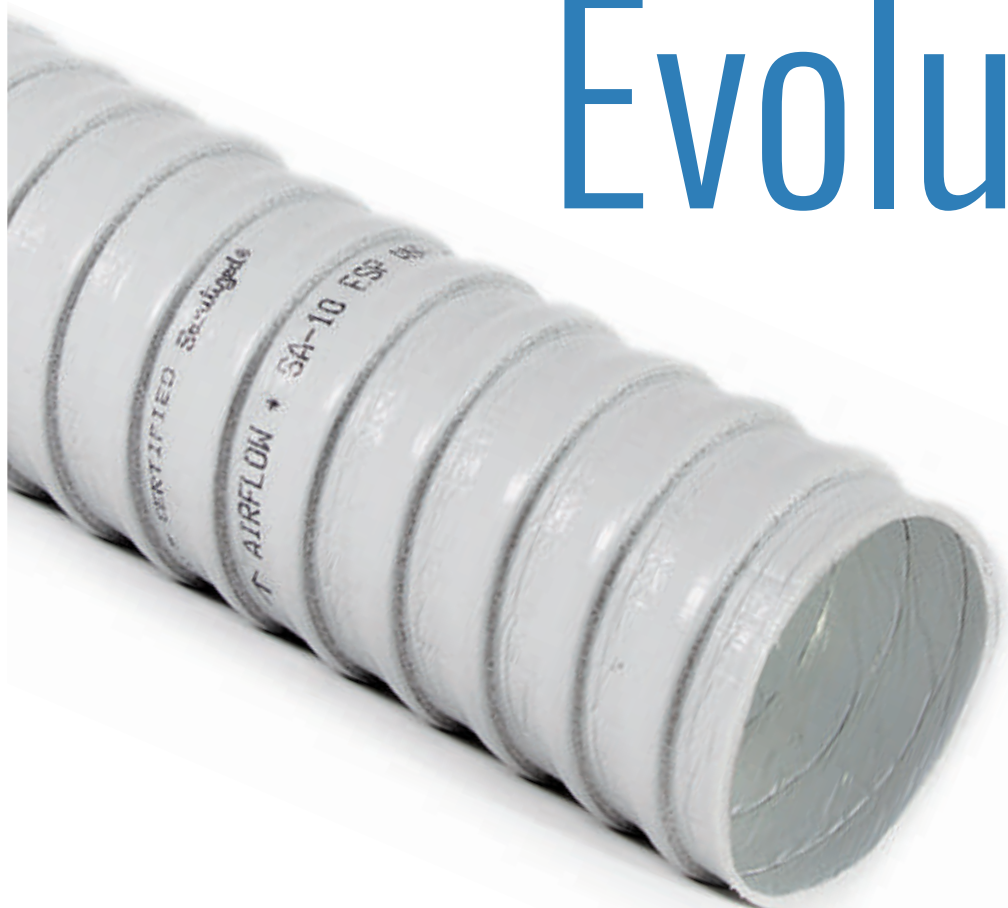


Evolution in

T-EspTM

by **TECNICATM**

the new generation of
single-wall flexible hoses for air conditioning
and ventilation systems in confined spaces



No limitation to degrees of curvature on the products.

Reduced pressure drop as the internal section remains unchanged even in the points of curvature

Single-wall
Th. 4 mm R = 0,12 m²K/W
Th. 8 mm R = 0,24 m²K/W
Insulated Therm R = 0,66 m²K/W

Lightness and self-supporting

Prevents the formation of **mold** and the proliferation of **bacteria** thanks to **Sanitized[®]** technology.



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



efficiency

areas of use for tubes

T-Esp™

directional

commercial

residential

hotel

hospital

automotive

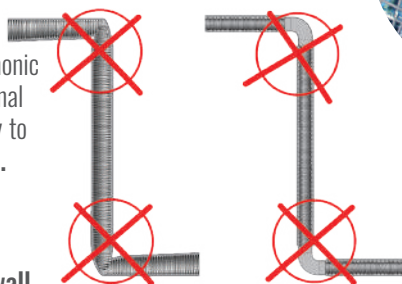
railway

naval

Why **T-Esp™** single-wall hose

FLEXIBILITY

T-Esp™ hoses are **light and self-supporting** with an harmonic steel spiral wire that acts as a rib and allows to keep the internal section **unchanged even in the curves and consequently** to guarantee the **pressure drops as foreseen by the project**.

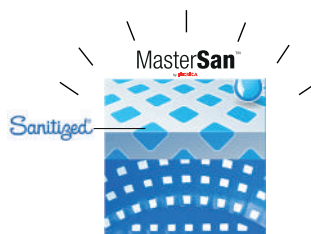
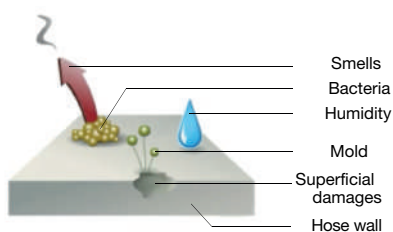


SINGLE-WALL

T-Esp™ HOSES are manufactured **by a single insulating wall with a thickness of 4 or 8 mm**, which allows to **minimize the necessary assembly spaces** for all its fields of applications such as construction, automotive, aeronautical, naval and in all cases where the spaces for the air conditioning or ventilation system are reduced and **high efficiency performances must be guaranteed**.

SANITIZED

Thanks to the MasterSan™ technology, developed and designed by Tecnica™ in collaboration with Sanitized®, **the internal wall of the T-Esp™ hose is additivated** with Sanitized® compound, which **prevents the formation of mold and the proliferation of bacteria** and in the duct system, reducing the risk of introducing unhealthy air into the environment.



INSULATING AND ENERGY EFFICIENT

The wall of the T-Esp™ hoses has an insulating features and a **thermal transmittance of 9,5 Wm2K equal to 8.173 Kcal**.

DOUBLE SAVINGS

T-Esp™ hoses allow double savings: **assembly time and operating costs**.





Green building contribution

by **TECNICA™**

TECNICA™ has focused on **sustainability** as a strategic lever of the company policy, promoting **product innovation** (materials, technologies and production techniques) and the **development of concrete actions**. We have evolved our approach to **resources**, increased the **circularity of the products** life cycle, developed new potentials, promoted awareness of concepts such as sustainability and transparency, and implemented actions for the specific **positioning of our products with respect to the main international sustainability ratings in construction: LEED, WELL and BREEAM**.



FRIENDLY
CHEMISTRY



SUSTAINABILITY



RECYCLABILITY



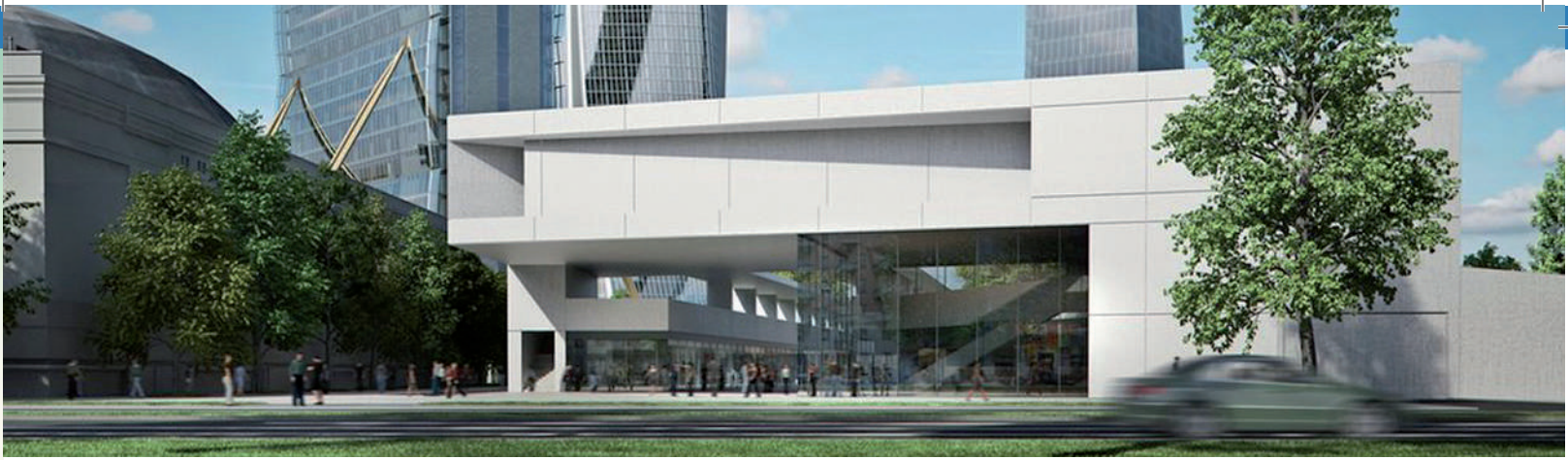
SANITATION



NON-TOXIC



ENERGY
EFFICIENCY



We have verified the contribution of our products and services to the LEED, WELL and BREEAM protocols, adopting the language of architects, designers, builders, investors and buyers, positioning our products according to the selection criteria adopted for the “final product” of the supply chain : the buildings.



LEED® (Leadership in Energy and Environmental Design)

It is a building assessment protocol that involves the entire life cycle of the building itself, from design to construction. Promotes a sustainability-oriented approach, recognizing the performance of buildings in key sectors, such as energy, water savings, reduction of CO₂ emissions, improvement of the ecological quality of the interiors, materials and resources used, the project and the choice of the site. Developed by the U.S. Green Building Council (USGBC), the system is based on the attribution of “credits” for each requirement.



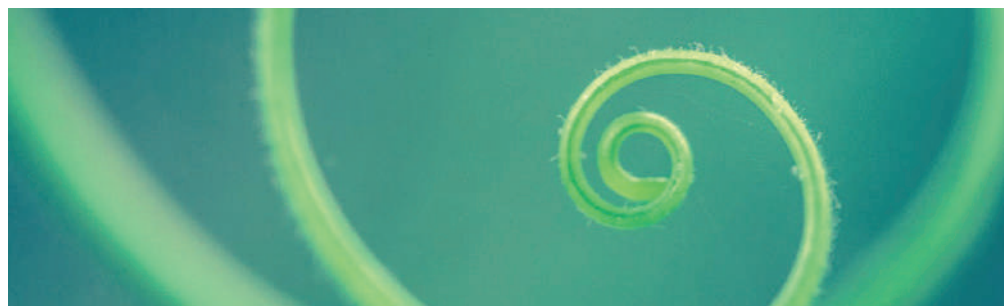
WELL™

It is a building assessment protocol that focuses on the health and mental well-being of those who occupy a given built space. Considering the amount of time spent in closed environments, about 90% of a day, the WELL™ certification can be applied to all construction sectors and to all uses of buildings (residential, school, hospital, etc. ..) but finds its maximum expression especially in workplaces (offices, industries) in which the achievement of a serenity condition can have positive implications also on the productivity of the whole company.

BREEAM®

BREEAM® (Building Research Establishment Environmental Assessment Method)

It is a building assessment protocol, established in the UK, which focuses on the environmental performance of buildings. BREEAM® is based on recognized assessment methods set according to pre-established reference parameters in order to verify the design process and the construction and use of the buildings. The criteria concern different categories, from resource management to ecology, and include aspects related to the use of energy and water, the internal environment (health and well-being), pollution, transport, materials, waste, ecology and management processes.





TECNICA™

Efficient Indoor Air Project

TECNICA™ is the first manufacturer of flexible hoses, diffusers and filters for air conditioning and ventilation to have carried out the verification of its products and highlighted their contribution to the certified sustainability credits according to the **LEED, WELL and BREEAM** protocols. **TECNICA™** policy for sustainability involves the entire economic supply-chain and contributes to the realization of products according to a **conscious use of primary resources**, promoting their circularity and guiding all interested users in the construction **supply chain to enhance the adoption of certified sustainability in construction processes** using products that concretely contribute to it.



COMPLIANCE WITH THE PREREQUISITES AND CREDITS OF THE FOLLOWING BUILDING SUSTAINABILITY RATING SYSTEMS.

PRODUCT	PG.			BREEAM®
SA10 ESP	14	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
SLEEVE SA10/ESP	18	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
SA10/ESP 8MM	20	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
SA10/ESP THERM	24	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
SA10	28	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
SA10 THERM	30	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
AR10	32	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
AR10 THERM	34	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
AL-SA	36	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
F10 ESP	38	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
F10/ESP SLEEVE	42	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
F10/ESP THERM	44	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
F10	48	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
F10 THERM	50	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
F6	52	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
F6 THERM	54	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
AC	56	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
AC THERM	58	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
ALP	60	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
AL-F 10	62	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
AL	64	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
AL THERM	66	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
AL PHON	68	IP, EA, MR	SOUND, MATERIALS, COMMUNITY	MAN, HEA, ENE, WST
AL1	70	IP, EA, MR	MATERIALS, COMMUNITY	MAN, WST
AL1 THERM	72	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST
AL1 PHON	74	IP, EA, MR	SOUND, MATERIALS, COMMUNITY	MAN, HEA, ENE, WST
SLEEVE THERM	76	IP, EA, MR	MATERIALS, COMMUNITY	MAN, ENE, WST

TECNICATM

Efficient Indoor Air Project

TECNICA srl designs, produces and trades the items listed in this catalog by applying the highest quality standards.

The performances of the products depends on a correct and adequate choice and use.

TECNICA srl declines any responsibility for the improper use of the products and is not responsible for any damage that may result from incorrect use, malfunction, or product damage or incorrect interpretation of the information here given.

The warranty offered is limited to the possible replacement of the supplied material which should be found defective at the discretion of the general management, see also the supply conditions listed in this general catalog.

TECNICA srl reserves the right to modify the characteristics of the products listed in this catalog without prior notice. All or part of the documentation reported in this catalog cannot be reproduced, transcribed or translated without written authorization from TECNICA srl as required by law.

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VENTILATION

ANTI-BACTERIAL AND ANTI-MYCOTIC FLEXIBLE HOSES MasterSan™

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SA10/ESP Patented MasterSan™

Flexible hose 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.
- 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

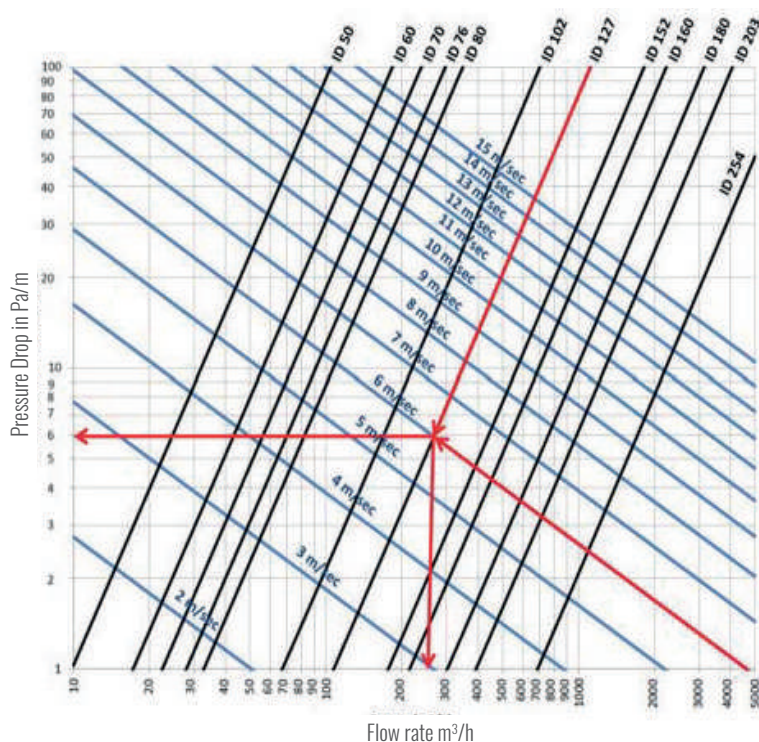
40*	51	63	70	76	80	90*	102	110*	121*
127	133*	140*	152	160	165	180	203	254	

*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 [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	WORKING PRESSURE [bar]	WORKING VACUUM [bar]	CURVATURE RADIUS [mm]	WEIGHT [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

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Fax. +39 0522 650211
www.tecnicasrl.it



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.

Count tests: JIS L 1902



Testing the antibacterial activity and efficacy on textile products

Country: France
Client: TECNO

Test time: 7 days, 4 days pre-treatment

Field of application: Air conditioning for hotels, shops, offices, houses

Sample size: 100 cm² (40 cm x 25 cm) in a standard determination

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

Abstract: Specimens are contaminated with a standard number of a given micro-organism (bacteria), after incubation for 18 hours at 37°C, the discs impregnated on the test material are washed off with a defined amount of water. The number of colony forming units (CFU) is determined and compared. Equivalently, from this number the antimicrobial effect can be calculated.

Test assessment: Evaluation is based on the difference in bacteria count (in terms of log) between control and 18 hours control with the test material.

Test Organisms: Microcococcus aureus ATCC 6539
Escherichia coli ATCC 12228
Staphylococcus aureus ATCC 4322

Explanation of the bactericidal activity: 0%: germ growth, insufficient antibacterial effect

0.1 to 0.9%: no significant germ reduction, insufficient antibacterial effect

100%: Significant germ reduction, great antimicrobial effect.



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®

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

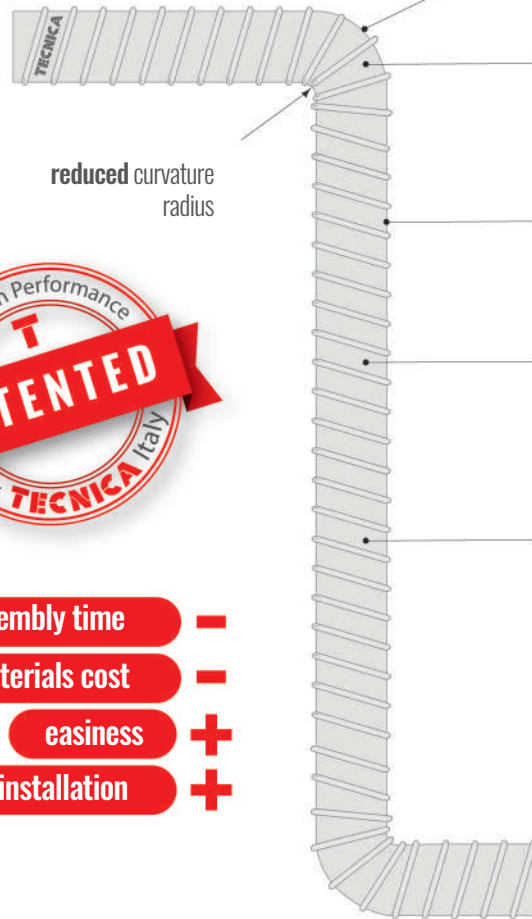
MP customized marking

TESTS PERFORMED

TEST	METHOD	OUTCOMES
λ Coefficient of thermal conductivity	UNI EN 12664:2002	T = 0°C - 0,032 W/mK
		T = 10°C - 0,033 W/mK
		T = 30°C - 0,035 W/mK
		T = 60°C - 0,038 W/mK
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.
Example of use limits in order to avoid the risk of condensation on the external wall	Option 1 Duct Ø 102	Flow rate temperature 15° Room Temperature 34° Room relative humidity 70%
	Option 2 Duct Ø 102	Flow rate temperature 10°C Room Temperature 28°C Room relative humidity 70%
Duct airtightness class	Test performed on non-insulated SA10/ESP duct - EN 12237 - EN 1507 - EN 12599	Class D
	Test performed on non-insulated SA10/ESP duct - EN 13180	Compliant

INSTALLATION FEATURES

T-Esp™



assembly time -

materials cost -

easiness +

quick installation +

No limitation to degrees of curvature on the products

Reduced pressure drop as the internal section remains unchanged even in the points of curvature

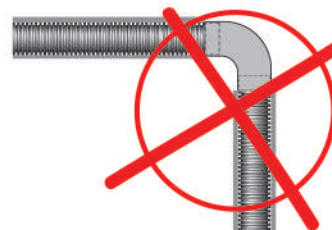
Single wall in netted closed cell of expanded polyethylene foam (R-value 0,12 m²K/W)

Lightness and self-supporting thanks to the reinforced structure with a spiral steel wire that also allows the internal section to remain unchanged at the points of curvature

Prevents the formation of mold and the proliferation of bacteria and viruses inside the air ducting systems thanks to the Tecnica™ polyolefin film with the addition of **Sanitized[®]** technology

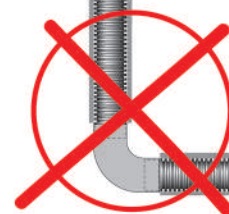


no risk of crushing in curves with tight radius



no connection systems or special pieces are required in the curves

corrugated ducts





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

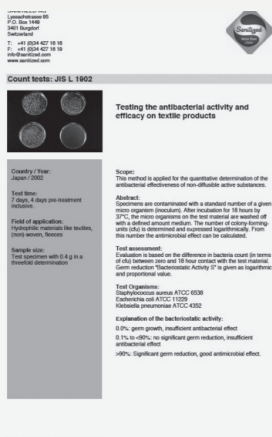
PRODUCTION DIAMETERS

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.

CERTIFICATIONS

SANITIZATION



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.



NO BACTERIA

NO MILDEW

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:



LEED

Contributes to credits:
IP, EA, MR



WELL

Contributes to credits:
MATERIALS, COMMUNITY

BREEAM®

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	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

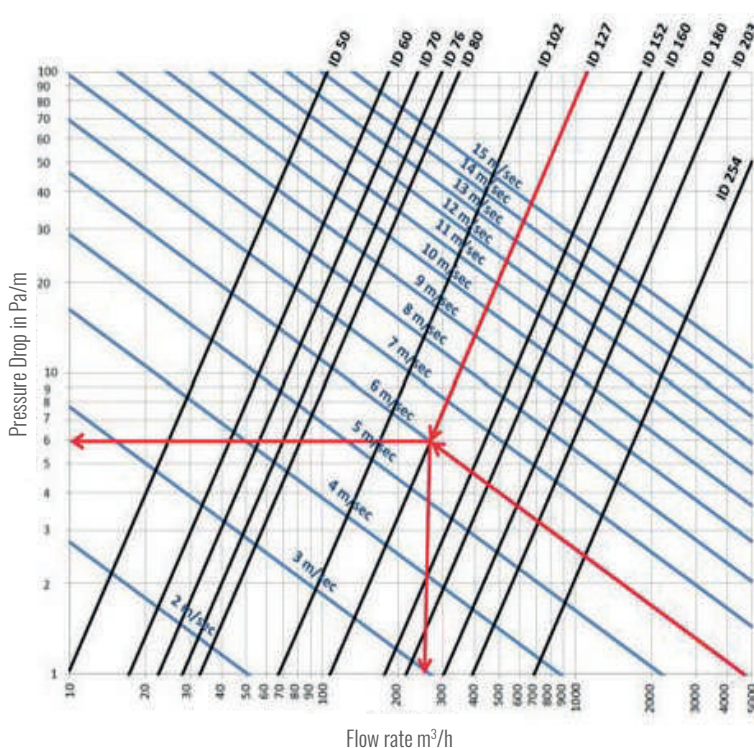
40*	51	63	70	76	80	90*	102	110*	121*
127	133*	140*	152	160	165	180	203	254	

*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



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)

Count tests: JIS L 1902

Testing the antibacterial activity and efficacy on textile products

Country / Year: Japan / 2002

Test time: 7 days, 4 days pre-treatment incubation

Field of application: Hospitals, nurseries, day centres, day care centres, schools

Sample size: Five replicates with 0.4 g in a 100 ml container

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

Abstract: Specimens are contaminated with a standard number of a given micro-organism inoculum. After incubation for 72 hours at 37°C, the micro-organisms on the test material are washed off with a liquid nutrient medium. The number of colony forming units (CFU) is determined and compared quantitatively. From this number the antibacterial effect can be calculated.

Test assessment: Evaluation is based on the difference in bacteria count (in terms of log₁₀ CFU/ml) between the test material and the control material. Germ reduction "Antibacterial Activity" is given as log₁₀ difference and proportional value.

Test organisms: Staphylococcus aureus ATCC 6538, Escherichia coli ATCC 11229, Pseudomonas aeruginosa ATCC 4362

Explanation of the bacteriostatic activity: 0.0% germ growth, insufficient antibacterial effect; 0.75 to 0.99% no significant germ reduction, insufficient antibacterial effect; ≥0.99% significant germ reduction, good antibacterial effect.

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®

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

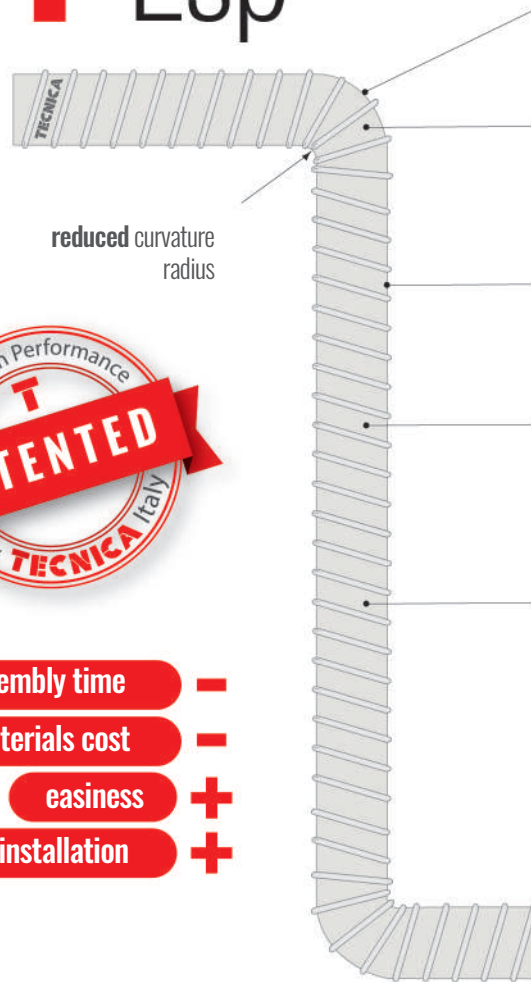
MP customized marking

TESTS PERFORMED

TEST	METHOD	OUTCOMES
λ Coefficient of thermal conductivity	UNI EN 12664:2002	T = 0°C - 0,032 W/mK
		T = 10°C - 0,033 W/mK
		T = 30°C - 0,035 W/mK
		T = 60°C - 0,038 W/mK
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.
Example of use limits in order to avoid the risk of condensation on the external wall	Option 1 Duct Ø 102	Flow rate temperature 10°C Room Temperature 45°C Room relative humidity 70%
	Option 2 Duct Ø 102	Flow rate temperature 5°C Room Temperature 30°C Room relative humidity 80%
Duct airtightness class	Test performed on non-insulated SA10/ESP duct - EN 12237 - EN 1507 - EN 12599	Class D
	Test performed on non-insulated SA10/ESP duct - EN 13180	Compliant

INSTALLATION FEATURES

T-Esp™



reduced curvature radius



assembly time -

materials cost -

easiness +

quick installation +

No limitation to degrees of curvature on the products

Reduced pressure drop as the internal section remains unchanged even in the points of curvature

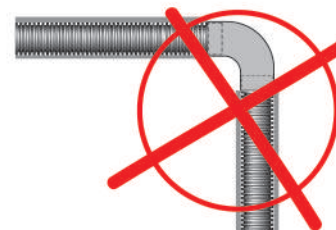
Single wall in netted closed cell of expanded polyethylene foam (R-value 0,24 m²K/W)

Lightness and self-supporting thanks to the reinforced structure with a spiral steel wire that also allows the internal section to remain unchanged at the points of curvature

Prevents the formation of mold and the proliferation of bacteria and viruses inside the air ducting systems thanks to the Tecnica™ polyolefin film with the addition of **Sanitized^R** technology



no risk of crushing in curves with tight radius



no connection systems or special pieces are required in the curves

corrugated ducts





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

PRODUCTION DIAMETERS

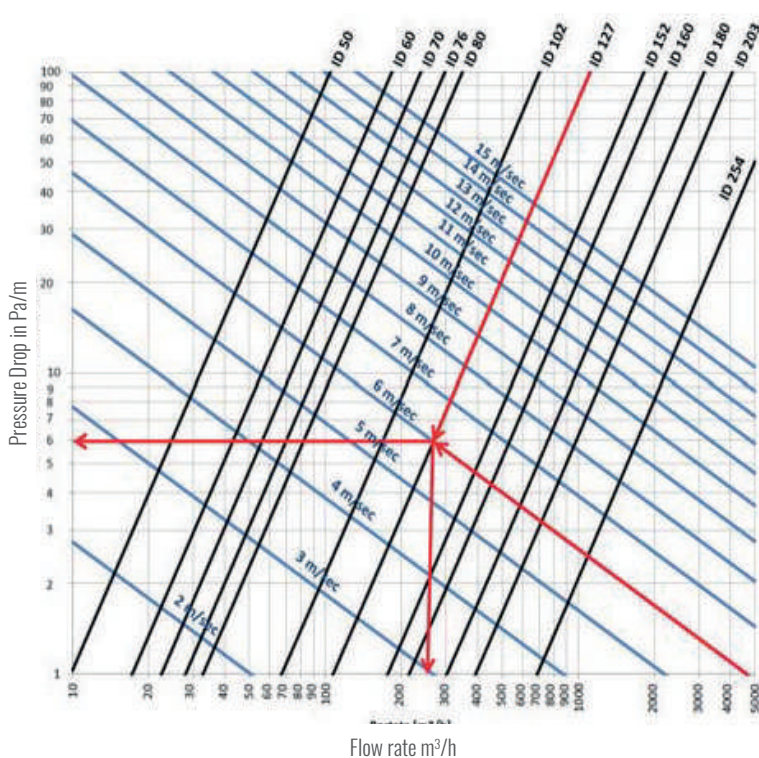
40*	51	63	70	76	80	90*	102	127	152	160	165	180	203	254
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*Diameters available on request

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

2020/04/08
 2020/04/08
 2020/04/08
 2020/04/08
 2020/04/08

Count tests: JIS L 1902



Testing the antibacterial activity and efficacy on textile products

Country / Year
 Japan / 2002

Test item
 7 days, 4 days pre-treatment

Field of application
 Synthetic materials like textiles, (sportswear, fabrics)

Sample size
 Five specimens with 0.4 g in a pre-treatment

Document No. H.E.S.11.01.198_2002/02



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.



EU

FIRE REACTION

Inner tube and vapor barrier:
 class B-s2, d0 (EN 1359-1:2009)

Thermal insulation:
 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

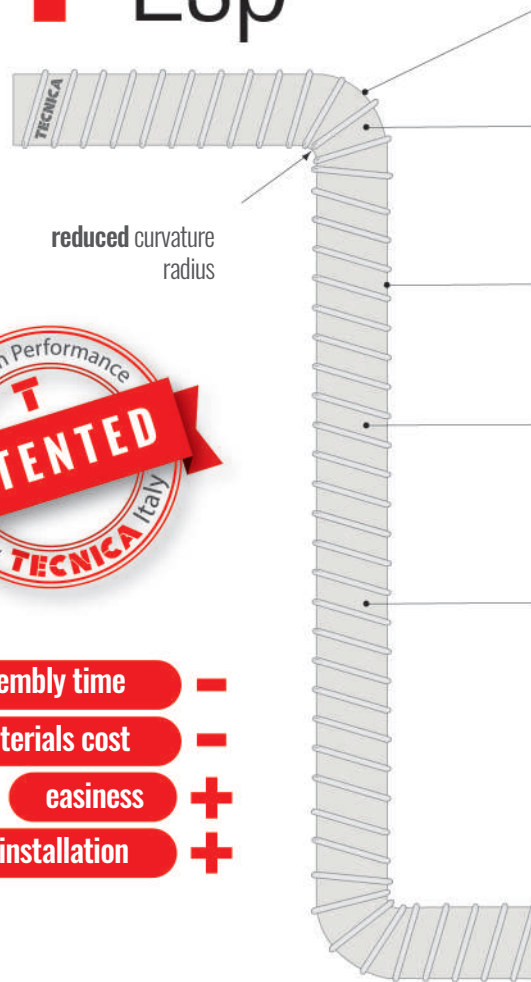
*on request

TESTS PERFORMED

TEST	METHOD	OUTCOMES
λ Coefficient of thermal conductivity	UNI EN 12664:2002	T = 0°C - 0,039 W/mK
		T = 10°C - 0,042 W/mK
		T = 30°C - 0,046 W/mK
		T = 60°C - 0,054 W/mK
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.
Example of use limits in order to avoid the risk of condensation on the external wall	Option 1 Duct Ø 102	Flow rate temperature 5°C Room temperature 45°C Room relative humidity 90%
	Option 2 Duct Ø 102	Flow rate temperature 0°C Room temperature 40°C Room relative humidity 90%
Duct airtightness class	Test performed on non-insulated SA10/ESP duct - EN 12237 - EN 1507 - EN 12599	Class D
	Test performed on non-insulated SA10/ESP duct - EN 13180	Compliant

INSTALLATION FEATURES

T-Esp™



reduced curvature radius



assembly time -

materials cost -

easiness +

quick installation +

No limitation to degrees of curvature on the products

Reduced pressure drop as the internal section remains unchanged even in the points of curvature

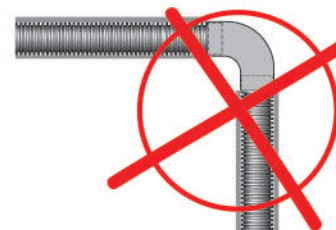
Single wall in netted closed cell of expanded polyethylene foam (R-value 0,66 m²K/W)

Lightness and self-supporting thanks to the reinforced structure with a spiral steel wire that also allows the internal section to remain unchanged at the points of curvature

Prevents the formation of mold and the proliferation of bacteria and viruses inside the air ducting systems thanks to the Tecnica™ polyolefin film with the addition of **Sanitized^R** technology

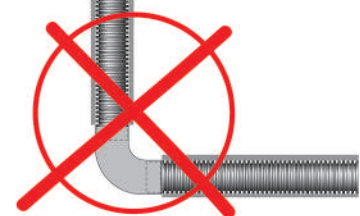


no risk of crushing in curves with tight radius



no connection systems or special pieces are required in the curves

corrugated ducts





SA10 MasterSan™

Flexible hose made of additivated polyolefin resin film, anti-bacterial/anti-mildew master and steel wire helix.

MasterSan™ in collaboration with:



TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Grey	10 m standard	from 80 to 406 mm	-20°C / +90°C (peak +110°C)	0,6 x Ø	max 20 m/sec	max 200 mmH ₂ O

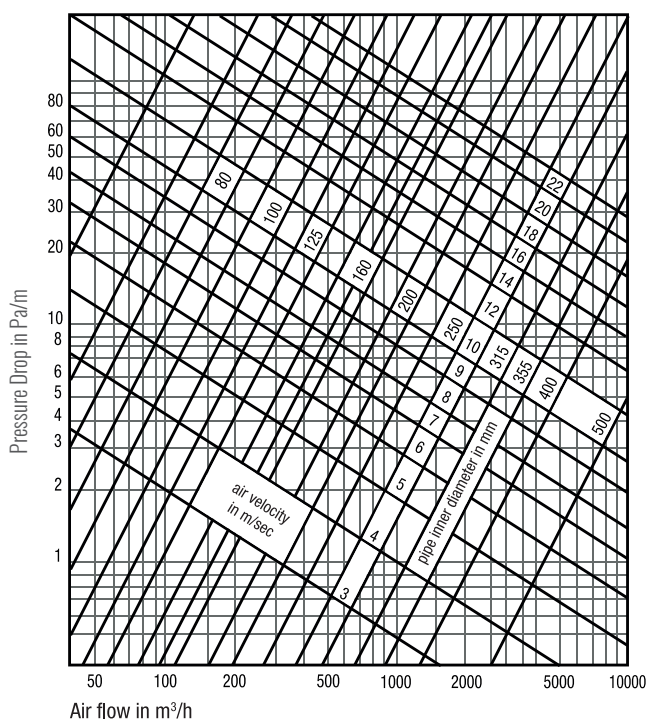
PRODUCTION DIAMETERS

80	102	127	152	160	165*	180	203	254	305	318	356	406
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*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 other diameters, use the beside diagram.

DIAMETERS [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4

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-s1, d0 (EN 13823:2010)
DE	B2-0.095mm (DIN 4102 Teil 1 p.6.2)
FR	Class M1 (AFNOR NF P 92-507 § 3.1.2)

NO BACTERIA NO MILDEW

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®

BREEAM

Contributes to credits:
MAN, WST

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

APPLICATIONS

								
OEM	Residential	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant	Calibrated Diameters*
								
REACH Certified	RoHS Certified	Halogen Free	Compact Version*	Building	Air Conditioning	CMV	Non-magnetic*	CMV mech. means
	*on request							
Recreational Boats								



SA10 Therm MasterSan™

Flexible hose made of additivated polyolefin resin film, anti-bacterial/anti-mildew master and steel wire helix. Thermo-insulating covering in polyester fibre (thickness 25mm/16kg/m³). Outer aluminized film protection (flame retardant).
Insulation: 25mm / 16kg/m³ - standard
50mm / 16kg/m³ - on request

MasterSan™ in collaboration with:



Thermal resistivity at 20°C **R = 0,58m²K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Internal hose Grey - Sheath Aluminium	10 m standard	from 80 to 406 mm	-20°C / +90°C (peak +110°C)	0,8 - 1,5 x Ø	max 20 m/sec	max 200 mmH ₂ O

PRODUCTION DIAMETERS

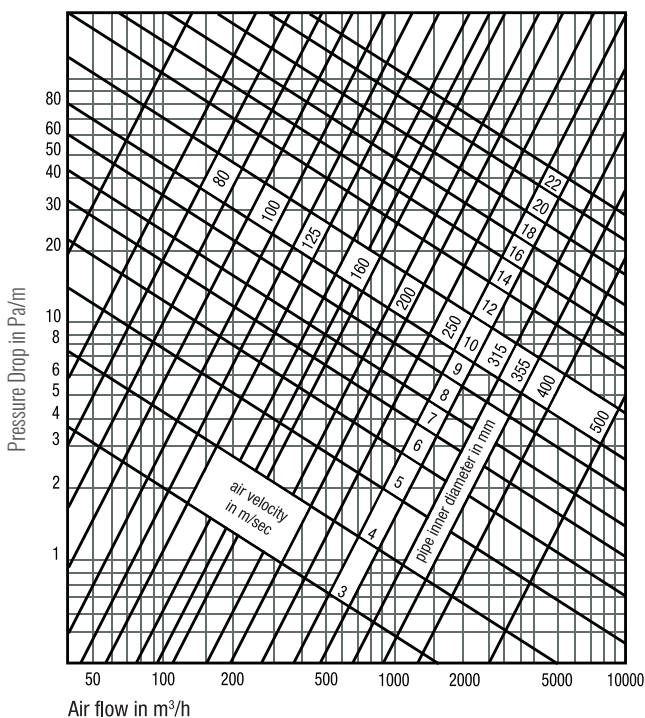
80	102	127	152	160	165*	180	203	254	305	318	356	406
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*Diameters available on request

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 other diameters, use the beside diagram.

DIAMETERS [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4




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.

NO BACTERIA NO MILDEW

IT	Class 1 (D.M. 26/06/84)
EU	Inner tube and vapor barrier: class B-s1, d0 (en 13823:2010) Thermal insulation: class B-s2, d0 (uni en 13501-1:2009)
FR	Inner tube and vapor barrier: class M1 (AFNOR NF P 92-507 § 3.1.2) Thermal insulation: class M1 NF P 92-501/504/505 (2005)



Count tests: JIS L 1802
Testing the antibacterial activity and efficacy on textile products

Quantity / Test:
cappi: 1000

Test time:
7 days, 4 days pre-treatment (optional)

Field of application:
Spare parts, electrical boxes, control boxes, boxes

Sample size:
Five specimens with 0.4 g in a controlled environment

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

Analysis:
Specimens are contaminated with a standard number of a given micro-organism (aerobically, after incubation for 18 hours at 37°C, the micro-organisms on the test material are washed off with a defined amount of water. The number of colony forming units (CFU) is determined and compared quantitatively. From this number the antibacterial effect can be calculated.

Test assessment:
Evaluation is based on the difference in bacteria count (in terms of log) between pre and 18-hour contact with the test material. Germ reduction "Sanitized Activity 5" is given as logarithmic and percentage value.

Test organisms:
Bacterium strain ATCC 4708
Candida cell ATCC 11322
Fusarium strain ATCC 4262

Explanation of the bactericidal activity:
0.9% germ growth, insufficient antibacterial effect
0.1% to 0.9% no significant germ reduction, insufficient antibacterial effect
≥0.9% significant germ reduction, good antibacterial effect.

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®

BREEAM

Contributes to credits:
MAN, ENE, WST

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

APPLICATIONS

								
OEM	Residential	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant	Calibrated Diameters*
		HF						
REACH Certified	RoHS Certified	Halogen Free	Compact Version*	Building	Air Conditioning	CMV	Non-magnetic*	CMV mech. means
								
Recreational Boats								

*on request



AR10 MasterSan™

Flexible hose made of polyester fabric coated with additivated polyolefin resins, anti-bacterial/anti-mildew master and steel wire helix.

MasterSan™ in collaboration with:



TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Grey	10 m standard	from 80 to 610 mm	-20°C / +90°C (peak +110°C)	0,6 x Ø	max 32 m/sec	max 250 mmH ₂ O

PRODUCTION DIAMETERS

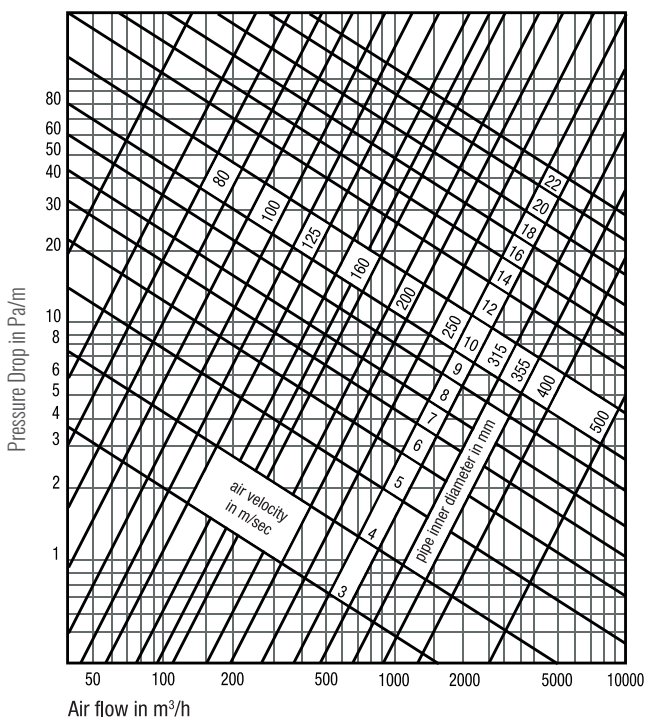
80	89*	102	110*	121*	127	133*	140*	152	160	180	203
228*	254	279*	305	318	356	406	457*	508	559*	610	

*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 other diameters, use the beside diagram.

DIAMETERS	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE	PRESSURE DROP	FLOW RATE	PRESSURE DROP
[mm]	[m³/h]	[Pa/m]	[m³/h]	[Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3




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-s1, d0 (EN 13823:2010)

Count tests: JIS L 1902

Testing the antibacterial activity and efficacy on textile products

Country / Size:
Japan / 70x70

Test film:
7 days, 4 days pre-treatment

Field of application:
Hygiene: medical use, textiles, dairy sector, food

Sample size:
Five replicates with 0.4 g in a sterility determination

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

Abstract:
Specimens are contaminated with a standard number of a given micro-organism inoculum. After incubation for 18 hours at 37°C, the micro-organisms on the test material are washed off with a liquid nutrient medium. The number of colony forming units (CFU) is determined and compared quantitatively. From this number the antibacterial effect can be calculated.

Test assessment:
Evaluation is based on the difference in bacteria count (in terms of log₁₀ CFU/cm²) after 18 hours contact with the test material. Germ reduction "Antimicrobial Activity" is given as logarithmic and proportional value.

Test Organisms:
Staphylococcus aureus ATCC 0581
Candida alb ATCC 10227
Pseudomonas aeruginosa ATCC 4362

Explanation of the bacteriostatic activity:
0.0% germ growth, insufficient antibacterial effect
0.75 to 0.99% no significant germ reduction, insufficient antibacterial effect
≥100%: significant germ reduction, good antimicrobial effect.

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	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant	Calibrated Diameters*
REACH Certified	RoHS Certified	Halogen Free	Compact Version*	Industry	Building	Air Conditioning	CMV	Non-magnetic*
CMV transp. Means	CMV Mech. Means	Recreational Boats						

*on request



AR10 Therm MasterSan™

Flexible hose made of polyester fabric coated with additivated polyolefin resins, anti-bacterial/anti-mildew master and steel wire helix. Thermo-insulating covering in polyester fibre (thickness 25mm/16kg/m³), outer aluminized film protection (flame retardant).

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

MasterSan™ in collaboration with:



Thermal resistivity at 20°C **R = 0,58m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Internal hose Grey - Sheath Aluminium	10 m standard	from 80 to 610 mm	-20°C / +90°C (peak +110°C)	0,8 - 1,5 x Ø	max 32 m/sec	max 250 mmH ₂ O

PRODUCTION DIAMETERS

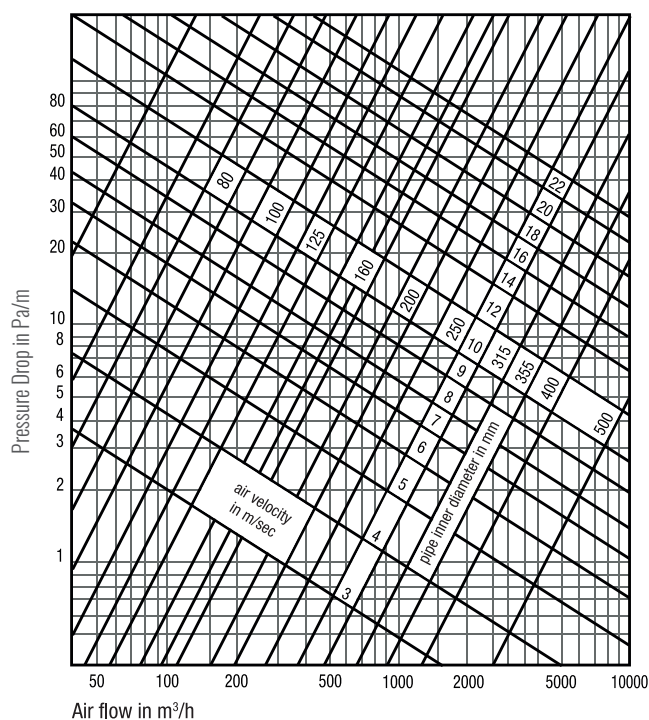
80	89*	102	110*	121*	127	133*	140*	152	160	180	203
228*	254	279*	305	318	356	406	457*	508	559*	610	

*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 other diameters, use the beside diagram.

DIAMETERS	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
[mm]	[m ³ /h]	[Pa/m]	[m ³ /h]	[Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3




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.

NO BACTERIA **NO MILDEW**

IT	Class 1 (D.M. 26/06/84)
EU	Inner tube and vapor barrier: B-s1, d0 (EN 13823:2010) Thermal insulation: B-s2, d0 (UNI EN 13501-1:2009)

Count tests: JIS L 1902

Testing the antibacterial activity and efficacy on textile products

Country / Size: Japan / 7002

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

Field of application: Synthetic materials like textiles, carpet, screen, fabrics

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

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

Analysis: Specimens are contaminated with a standard number of a given micro-organism inoculum. After incubation for 70 hours at 37°C, the micro-organisms on the test material are washed off with distilled water medium. The number of colony forming units (CFU) is determined and compared quantitatively. From this number the antibacterial effect can be calculated.

Test assessment: Evaluation is based on the difference in bacteria count (in terms of log₁₀ CFU) between test and 10 times control with the test material. Germ reduction "Antibacterial Activity 0" is given as logarithmic and proportional value.

Test organisms: Staphylococcus aureus ATCC 0280, Escherichia coli ATCC 11229, Pseudomonas aeruginosa ATCC 0292

Explanation of the bactericidal activity: 0 0% germ growth, sufficient antibacterial effect; 0.3 to 0.6% significant germ reduction, insufficient antibacterial effect; >0.6%: significant germ reduction, good antibacterial effect.

Document No. (R.E.S.) L1902_1902_000070

GREEN BUILDING

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

APPLICATIONS

OEM	Residential	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant	Calibrated Diameters*
REACH Certified	RoHS Certified	Halogen Free	Compact Version*	Industry	Building	Air Conditioning	CMV	Non-magnetic*
CMV transp. Means	CMV Mech. Means	Prolonged anti condensation	Recreational Boats					

*on request



AL/SA MasterSan™

Flexible hose made with AL (aluminium) wall coupled to polyolefin resin film additivated with anti-bacterial/anti-mildew master. Inner helix made of steel wire.
The set 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	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Internal Grey / Outer Aluminium	10 m standard	from 82 to 508 mm	-20°C / +90°C (peak +110°C)	0,6 x Ø	max 32 m/sec	max 250 mmH ₂ O

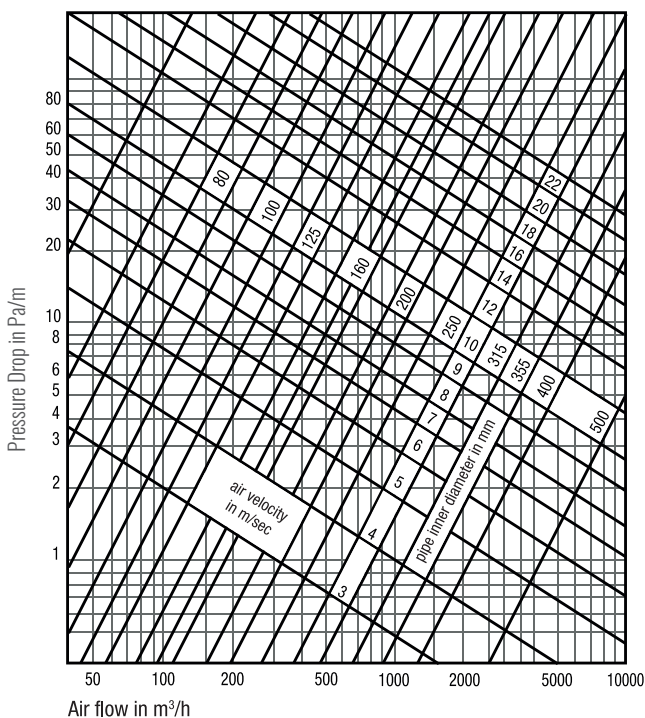
PRODUCTION DIAMETERS

82	102	127	152	160	180	203	228*	254	305	318	356	406	457*	508*
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*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 other diameters, use the beside diagram.

DIAMETERS	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE	PRESSURE DROP	FLOW RATE	PRESSURE DROP
[mm]	[m ³ /h]	[Pa/m]	[m ³ /h]	[Pa/m]
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3

CERTIFICATIONS

SANITIZATION

ALUMINIUM WALL

SA10 WALL

Comunicazione SE
24/06/2019
S&B R&D
Distribuzione
T: +39 0524 67 18 18
F: +39 0524 67 18 18
www.technikasrl.com

Count tests: JIS L 1902



Testing the antibacterial activity and efficacy on textile products

Country / Year:
Japan / 2002

Test Item:
7 days, 8 days pre-treatment
treatment

Test application:
Synthetic materials like textiles,
plastic sheets, PVC

Sample size:
Five specimens with 0.4 g in a
pre-sterilized container

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

Abstract:
Specimens are contaminated with a standard number of a given
microorganism (generally, their incubation for 24 hours at
37°C, the microorganisms on the test material are washed off
with a defined amount of water. The number of colony forming
units (CFU) is determined and compared respectively. From
this number the antimicrobial effect can be calculated.

Test assessment:
Evaluation is based on the difference in bacteria count (in terms
of log reduction) after and before contact with the test material
and the incubation "background activity" of a given test specimen
and pre-treatment time.

Test organisms:
Bacteriophage control ATCC 4929
Escherichia coli ATCC 12228
Staphylococcus aureus ATCC 4322

Explanation of the bacteriostatic activity:
0.0% germ growth, no antibacterial effect
0.1% to 0.9%: no significant germ reduction, no antibacterial effect
1.0% to 1.9%: slight germ reduction, good antibacterial effect
2.0% to 2.9%: significant germ reduction, good antibacterial effect

Document No. (R.2.2.11.1)_1902_200902



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.



NO BACTERIA

NO MILDEW

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

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

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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WELL

Contributes to credits:
MATERIALS, COMMUNITY

BREEAM®

BREEAM

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MAN, WST

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

APPLICATIONS

OEM	Residential	Flexibility	Easy Pack	Self-extinguishing	Mold Resistant	Microorganism Resistant	Tear Resistant	Calibrated Diameters*
REACH Certified	RoHS Certified	Halogen Free	Compact Version*	Industry	Building	Air Conditioning	CMV	Non-magnetic*
CMV transp. Means	CMV Mech. Means	Recreational Boats						

*on request



F10 ESP Patented

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

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

The set 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 = 0,12m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

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

PRODUCTION DIAMETERS

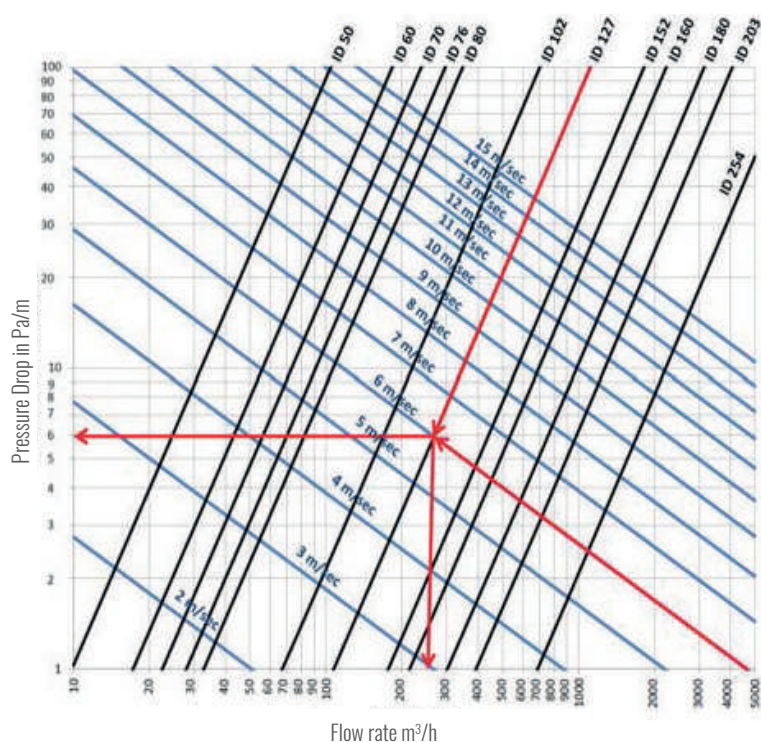
40*	51	63	70	76	80	90*	102	110*	121*
127	133*	140*	152	160	165	180	203	254	

*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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	WORKING PRESSURE [bar]	WORKING VACUUM [bar]	CURVATURE RADIUS [mm]	WEIGHT [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 FOR FIRE REACTION

IT

Internal/external Film: Class 1 (D.M. 26/06/84)
PES foam: Class 1 (D.M. 26/06/84)

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MATERIALS, COMMUNITY

BREEAM[®]

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	Tear Resistant	Calibrated Diameters*	REACH Certified
RoHS Certified	Halogen Free	Building	Transport	Air Conditioning	CMV	Non-magnetic*	Wall Trace	CMV transp. 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

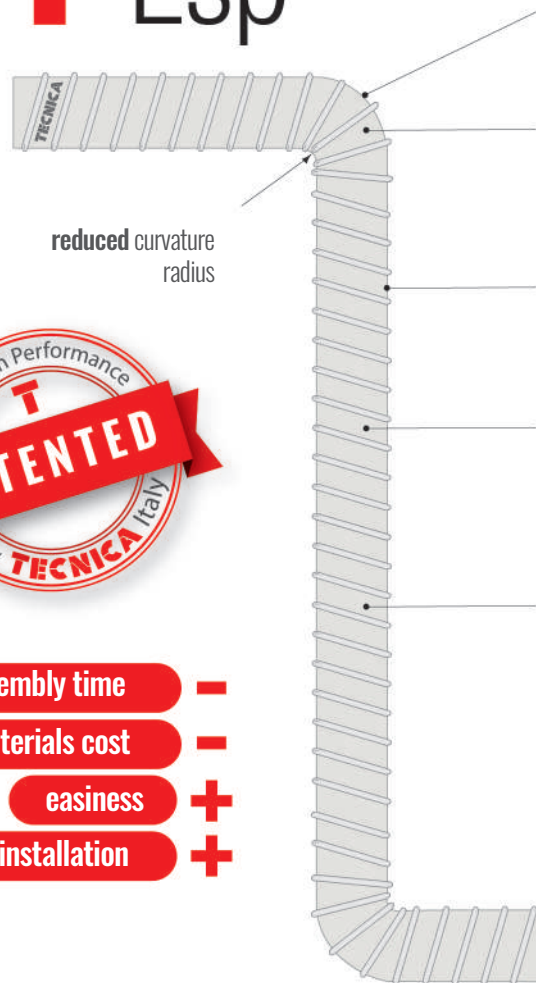
MP customized marking

TESTS PERFORMED

TEST	METHOD	OUTCOMES
λ Coefficient of thermal conductivity	UNI EN 12664:2002	T = 0°C - 0,032 W/mK
		T = 10°C - 0,033 W/mK
		T = 30°C - 0,035 W/mK
		T = 60°C - 0,038 W/mK
Resistance to aggression by chemical agents	Test performed on non-insulated F10/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 F10/ESP duct - Identification of the maximum temperature peak bearable by the duct and all its components.	+115°C no longer than 2min.
Example of use limits in order to avoid the risk of condensation on the external wall	Option 1 Duct Ø 102	Flow rate temperature 15°C Room temperature 34°C Room relative humidity 70%
	Option 2 Duct Ø 102	Flow rate temperature 10°C Room temperature 28°C Room relative humidity 70%
Duct airtightness class	Test performed on non-insulated F10/ESP duct - EN 12237 - EN 1507 - EN 12599	Class D
	Test performed on non-insulated F10/ESP duct - EN 13180	Compliant

INSTALLATION FEATURES

T-Esp™



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

No limitation to degrees of curvature on the products

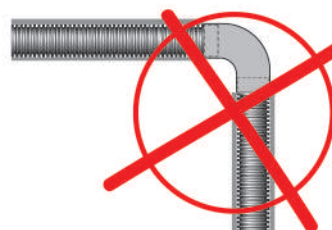
Reduced pressure drop as the internal section remains unchanged even in the points of curvature

Single wall in netted closed cell of expanded polyethylene foam (R-value 0,12 m²K/W)

Lightness and self-supporting thanks to the reinforced structure with a spiral steel wire that also allows the internal section to remain unchanged at the points of curvature

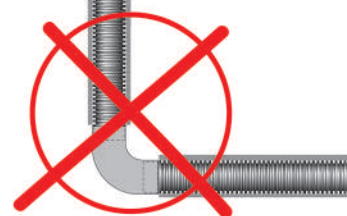


no risk of crushing in curves with tight radius



no connection systems or special pieces are required in the curves

corrugated ducts





Sleeve F10 ESP Patented

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

- Additivated polyolefin resins film.
- 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.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

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

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.

CERTIFICATION FOR FIRE REACTION

IT	Internal/External Film: Class 1 (D.M. 26/06/84) PES foam: Class 1 (D.M. 26/06/84)
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GREEN BUILDING

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MATERIALS, COMMUNITY








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APPLICATIONS

						
OEM	Residential	Smooth surface	Easy Pack	REACH Certified	RoHS Certified	Building

TESTS PERFORMED

TEST	METHOD	OUTCOMES
Resistance to aggression by chemical agents	Test performed on non-insulated F10/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 F10/ESP duct - Identification of the maximum temperature peak bearable by the duct and all its components.	+115°C no longer than 2min.



F10/ESP Therm Patented

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

- Additivated polyolefin resins film.
- Thermo-insulating coating in netted and closed-cell of polyethylene foam.
- External protection in additivated polyolefin resins film.
- Embedded steel wire helix.
- Thermo-insulating covering in polyester fibre (th. 25mm/16kg/m³).
- Outer anti-steam protection in additivated polyolefin resin.

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)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

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

PRODUCTION DIAMETERS

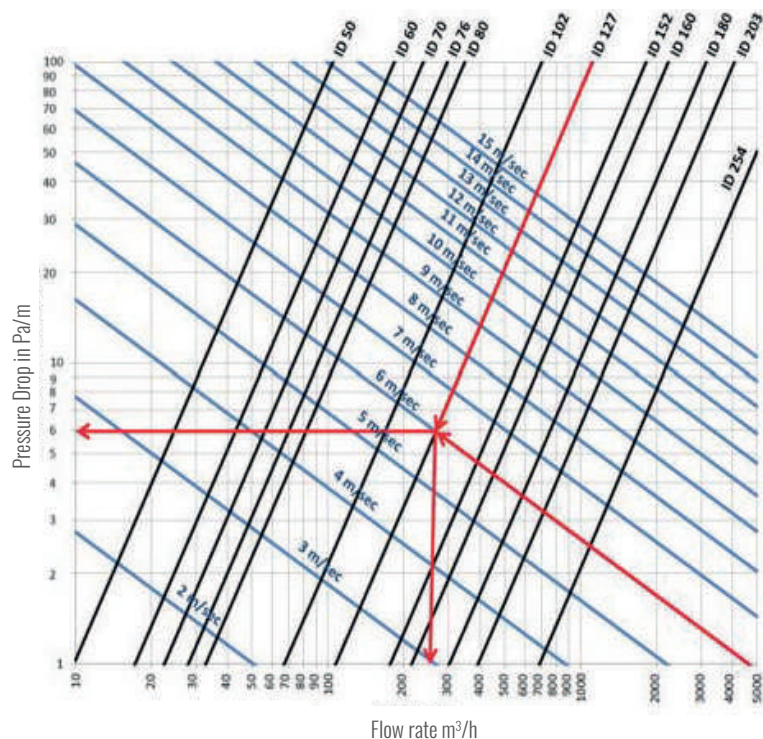
40*	51	63	70	76	80	90*	102	127	152	160	165	180	203	254
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*Diameters available on request

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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	WORKING PRESSURE [bar]	WORKING VACUUM [bar]	CURVATURE RADIUS [mm]	WEIGHT [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 FOR FIRE REACTION

IT	Internal/external Film: Class 1 (D.M. 26/06/84) PES foam: Class 1 (D.M. 26/06/84)
EU	Thermal insulation: class B-s2, d0 (EN 13501-1:2009) Sheath: class B-s1, d0 (EN 13501-1:2009)

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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	Tear Resistant	Calibrated Diameters*	REACH Certified
RoHS Certified	Halogen Free	Building	Transport	Air Conditioning	CMV	Non-magnetic*	Wall Trace	CMV transp. Means
CMV Mech. Means	Prolonged Anti condensation	Recreational Boats						

*on request

WIRE OPTIONS

AM non-magnetic inox wire

ADDITIVE OPTIONS

U V * anti UV

SERVICE OPTIONS

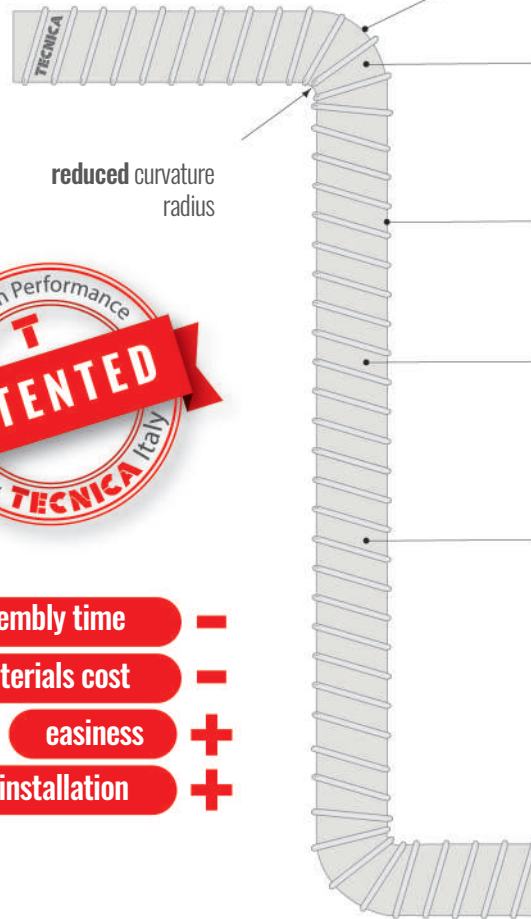
MP customized marking

TESTS PERFORMED

TEST	METHOD	OUTCOMES
λ Coefficient of thermal conductivity	UNI EN 12664:2002	T = 0°C - 0,039 W/mK
		T = 10°C - 0,042 W/mK
		T = 30°C - 0,046 W/mK
		T = 60°C - 0,054 W/mK
Resistance to aggression by chemical agents	Test performed on non-insulated F10/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 F10/ESP duct - Identification of the maximum temperature peak bearable by the duct and all its components.	+115°C no longer than 2min.
Example of use limits in order to avoid the risk of condensation on the external wall	Option 1 Duct Ø 102	Flow rate temperature 5°C Room temperature 45°C Room relative humidity 90%
	Option 2 Duct Ø 102	Flow rate temperature 0°C Room temperature 40°C Room relative humidity 90%
Duct airtightness class	Test performed on non-insulated F10/ESP duct - EN 12237 - EN 1507 - EN 12599	Class D
	Test performed on non-insulated F10/ESP duct - EN 13180	Compliant

INSTALLATION FEATURES

T-Esp™



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

No limitation to degrees of curvature on the products

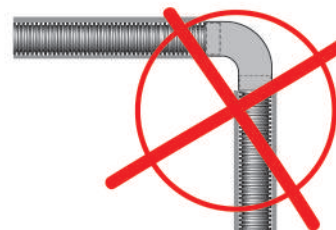
Reduced pressure drop as the internal section remains unchanged even in the points of curvature

Single wall in netted closed cell of expanded polyethylene foam (R-value 0,66 m²K/W)

Lightness and self-supporting thanks to the reinforced structure with a spiral steel wire that also allows the internal section to remain unchanged at the points of curvature



no risk of crushing in curves with tight radius



no connection systems or special pieces are required in the curves

corrugated ducts





F10

Flexible hose made of additivated polyolefin resins film (wall thickness 100 micron) and steel wire helix.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE	OPACITY AND TOXICITY OF FUMES
Black	10 m standard	from 80 to 406 mm	-20°C / +90°C (peak +110°C)	0,6 x Ø	max 20 m/sec	max 200 mmH ₂ O	class F0 (NFF16-101 - Tab. 4)

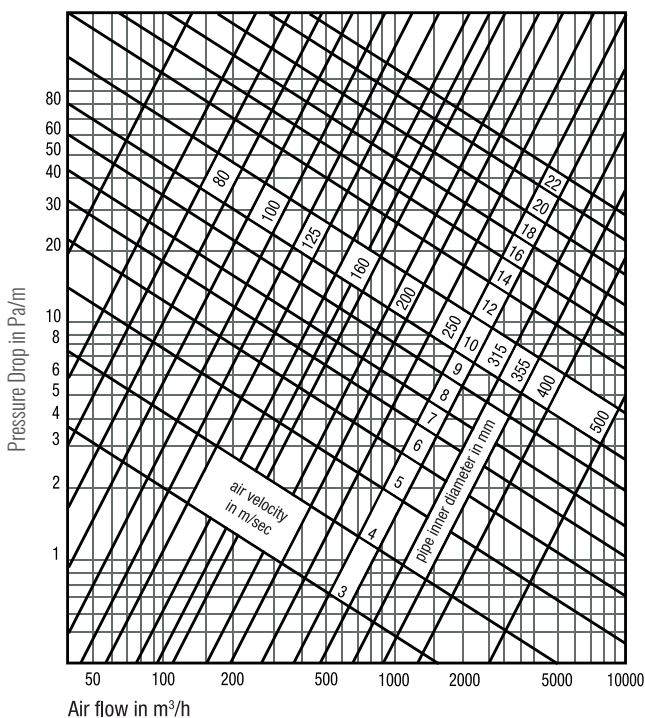
PRODUCTION DIAMETERS

80	102	127	152	160	165*	180	203	254	305	318	356	406
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*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 other diameters, use the beside diagram.

DIAMETER	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE	PRESSURE DROP	FLOW RATE	PRESSURE DROP
[mm]	[m³/h]	[Pa/m]	[m³/h]	[Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4

CERTIFICATION FOR FIRE REACTION



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

FR Class M1 (NF P 92-503/505 (2005))

EU Class B-s1, d0 (EN 13201-1:209)

GREEN BUILDING

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MATERIALS, COMMUNITY

BREEM[®]

BREEM

Contributes to credits:
MAN, WST

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

APPLICATIONS

Residential	Flexibility	Easy Pack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free
Compact Version*	Building	Air Conditioning	CMV	Non-magnetic*	Temporary air conditioning			*on request



F10 Therm

Flexible hose made of additivated polyolefin resins film (wall thickness 100 micron) and steel wire helix. Thermo-insulating covering in polyester fibre (th. 25mm/16kg/m³). Outer anti-steam protection in additivated polyolefin resin.
 Insulation: 25mm / 16kg/m³ - standard
 50mm / 16kg/m³ - on request

Thermal resistivity at 20°C **R = 0,58m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Black	10 m standard	from 80 to 406 mm	-20°C / +90°C (peak +110°C)	0,8 - 1,5 x Ø	max 20 m/sec	max 200 mmH ₂ O

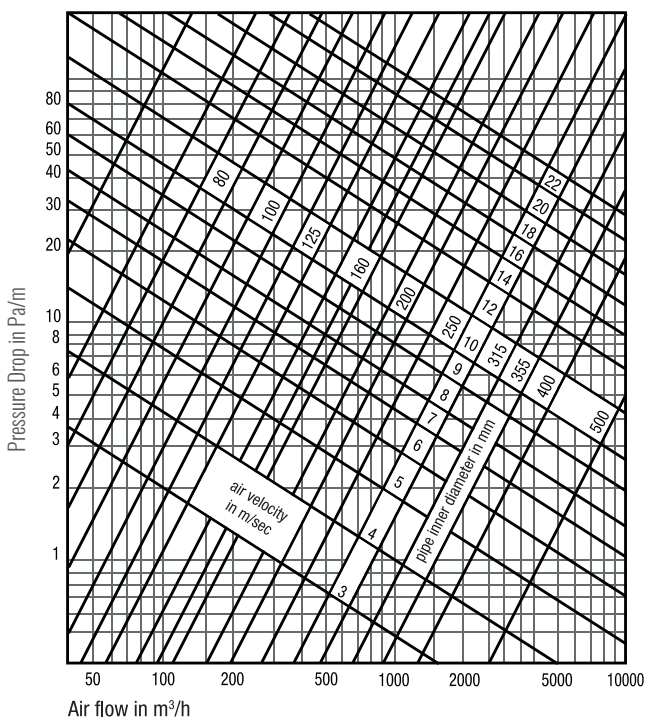
PRODUCTION DIAMETERS

80	102	127	152	160	165*	180	203	254	305	318	356	406
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*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 other diameters, use the beside diagram.

DIAMETER	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE	PRESSURE DROP	FLOW RATE	PRESSURE DROP
[mm]	[m ³ /h]	[Pa/m]	[m ³ /h]	[Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4

CERTIFICATION FOR FIRE REACTION



IT	Class 1 (D.M. 26/06/84)
EU	Inner tube and vapor barrier: class B-s1, d0 (EN 13501-1:2009) Thermal insulation: class B-s2, d0
FR	Inner tube and vapor barrier: Class M1 NF P 92-503/505 (2005) Thermal insulation: Class M1 NF P 92-501/504/505 (2005)

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APPLICATIONS

Residential	Flexibility	Easy Pack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free
Compact Version*	Building	Air Conditioning	CMV	Non-magnetic*	Prolonged anti condensation	Temporary air conditioning		*on request



F6

Flexible hose made of additivated polyolefin resins film (wall thickness 60 micron) and steel wire helix.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Grey	10 m standard	from 80 to 406 mm	-20°C / +90°C (peak +110°C)	0,6 x Ø	max 20 m/sec	max 200 mmH ₂ O

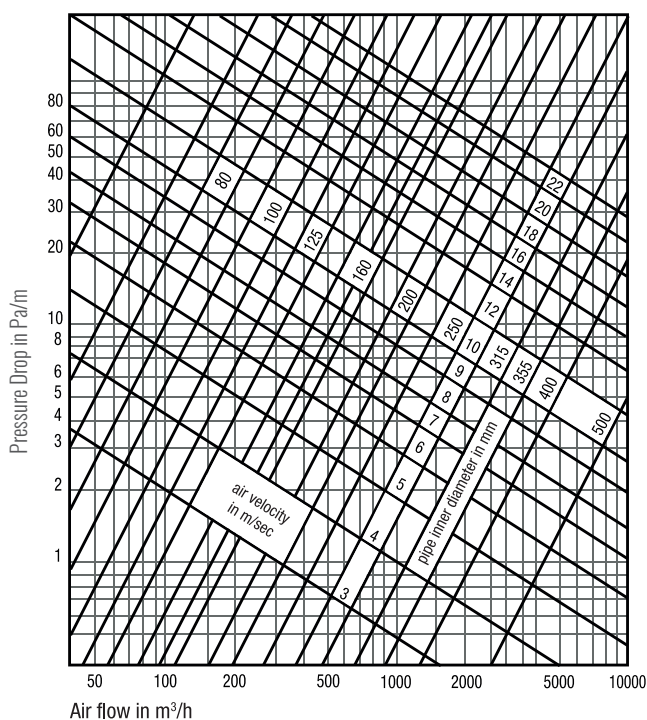
PRODUCTION DIAMETERS

80	102	127	152	160	165*	180	203	254	305	318	356	406
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*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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	6,5	1151	10,5
254	1445	4,7	1843	7,5
318	2278	3,7	3105	6
356	3058	3	3850	5,2
406	3845	2,7	4590	4,4

CERTIFICATION FOR FIRE REACTION



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

FR M1 (NF P 92 507:2004)

EU class B-s1, d0 (EN 13501-1:2009)

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APPLICATIONS

Residential	Flexibility	Easy Pack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free
Compact Version*	Building	Air Conditioning	CMV	Non-magnetic*	Temporary air conditioning			*on request



F6 Therm

Flexible hose made of additivated polyolefin resins film (wall thickness 60 micron) and steel wire helix.

Thermo-insulating covering in polyester fibre (th. 17 mm/11 kg/m³).

Outer anti-steam protection in additivated polyolefin resin.

Insulation: 17mm / 11kg/m³ - standard
 25mm / 16kg/m³ - on request
 50mm / 16kg/m³ - on request

Thermal resistivity at 20°C **R = 0,35m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE	THERMAL TRASMITTANCE
Grey	10 m standard	from 80 to 406 mm	-20°C / +90°C (peak +110°C)	0,8 - 1,5 x Ø	max 20 m/ sec	max 200 mmH ₂ O	λ : 0,064 W/mK

PRODUCTION DIAMETERS

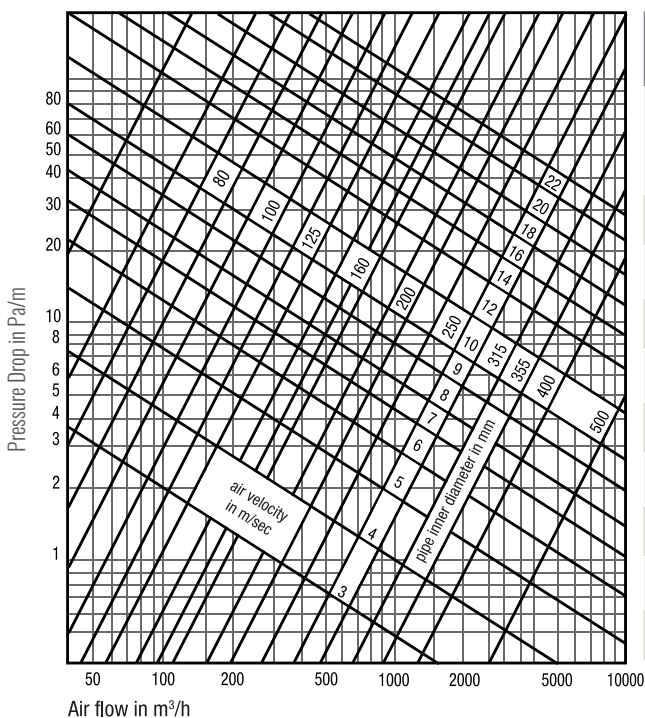
80	102	127	152	160	165*	180	203	254	305	318	356	406
----	-----	-----	-----	-----	------	-----	-----	-----	-----	-----	-----	-----

*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 other diameters, use the beside diagram.

DIAMETER	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE	PRESSURE DROP	FLOW RATE	PRESSURE DROP
[mm]	[m ³ /h]	[Pa/m]	[m ³ /h]	[Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	6,5	1151	10,5
254	1445	4,7	1843	7,5
318	2278	3,7	3105	6
356	3058	3	3850	5,2
406	3845	2,7	4590	4,4

CERTIFICATION FOR FIRE REACTION



IT

CLASS 1 (D.M. 26/06/84)
Approval number: RO3827C20D100002

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MAN, ENE, WST

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APPLICATIONS

Residential	Flexibility	Easy Pack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free
Compact Version*	Building	Air Conditioning	CMV	Non-magnetic*	Temporary air conditioning			

*on request



AC

Flexible hose made of polyester fabric coated with additivated polyolefin resins and steel wire helix.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Black. On request Green or Grey.	10 m standard	from 80 to 610 mm	-20°C / +90°C (peak +110°C)	0,6 x Ø	max 32 m/sec	max 250 mmH ₂ O

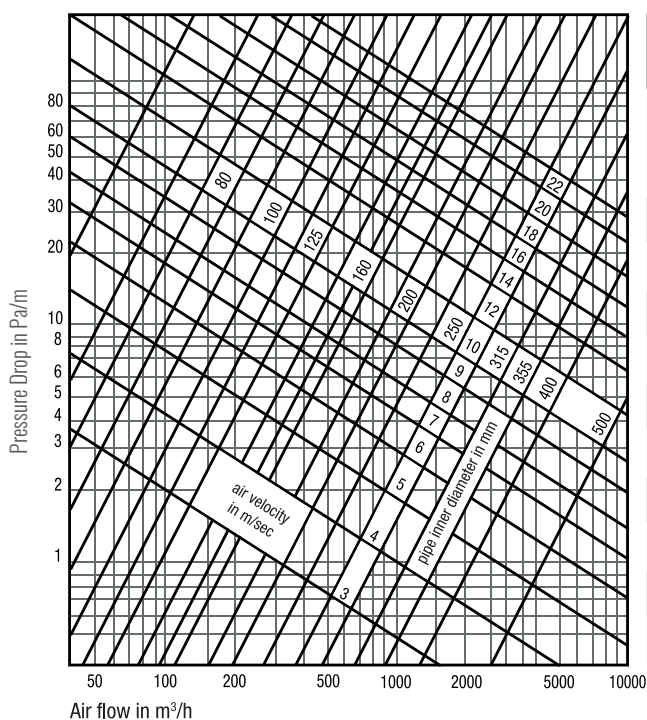
PRODUCTION DIAMETERS

80	89*	102	110*	121	127	133*	140*	152	160	180	203
228*	254	279*	305	318	356	406	457*	508	559*	610	

*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 other diameters, use the beside diagram.

DIAMETER	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE	PRESSURE DROP	FLOW RATE	PRESSURE DROP
[mm]	[m³/h]	[Pa/m]	[m³/h]	[Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3

CERTIFICATION FOR FIRE REACTION

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

GREEN BUILDING

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WELL

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APPLICATIONS

Residential	Flexibility	Easy Pack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free
Compact Version*	Industry	Building	Air Conditioning	CMV	Non-magnetic*	CMV transp. Means	CMV Mech. Means	Recreational Boats

*on request



AC Therm

Flexible hose made of polyester fabric coated with additivated polyolefin resins and steel wire helix.

Thermo-insulating covering in polyester fibre (th. 25mm/16kg/m³).

Outer anti-steam protection in additivated polyolefin resin.

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

Thermal resistivity at 20°C **R = 0,58m²K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Black. On request Green	10 m standard	from 80 to 610 mm	-20°C / +90°C (peak +110°C)	0,6 x Ø	max 32 m/sec	max 250 mmH ₂ O

PRODUCTION DIAMETERS

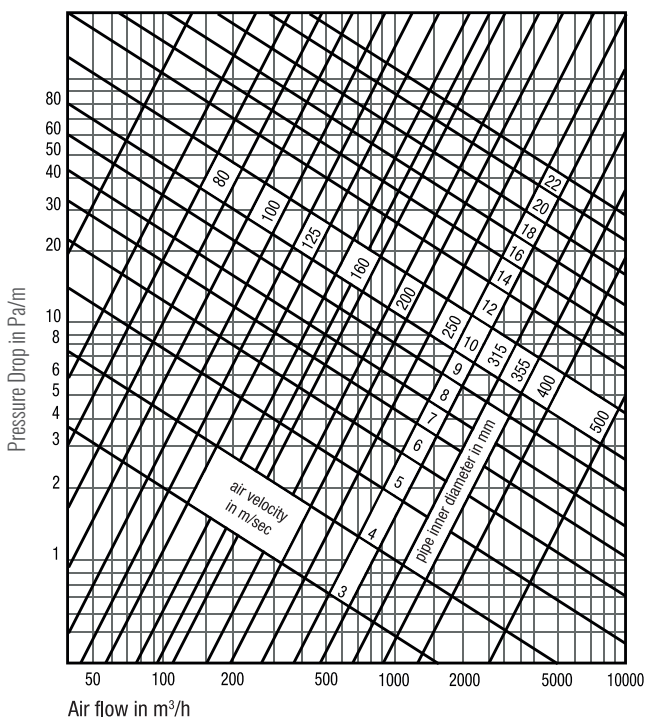
80	89*	102	110*	121	127	133*	140*	152	160	180	203
228*	254	279*	305	318	356	406	457*	508	559*	610	

*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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
80	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3

CERTIFICATION FOR FIRE REACTION

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

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APPLICATIONS

Residential	Flexibility	Easy Pack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free
Compact Version*	Industry	Building	Air Conditioning	CMV	Non-magnetic*	CMV transp. Means	CMV Mech. Means	Recreational Boats

*on request



AL-P

Flexible hose made of AL (aluminium) wall coupled with polyolefin film reinforced with polyester net to ensure a greater mechanical resistance to the aluminium. Inner steel wire helix.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
External Black/ Internal aluminium	10 m standard	from 82 to 508 mm	-30°C / +140°C	0,6 x Ø	max 32 m/sec	max 250 mmH ₂ O

PRODUCTION DIAMETERS

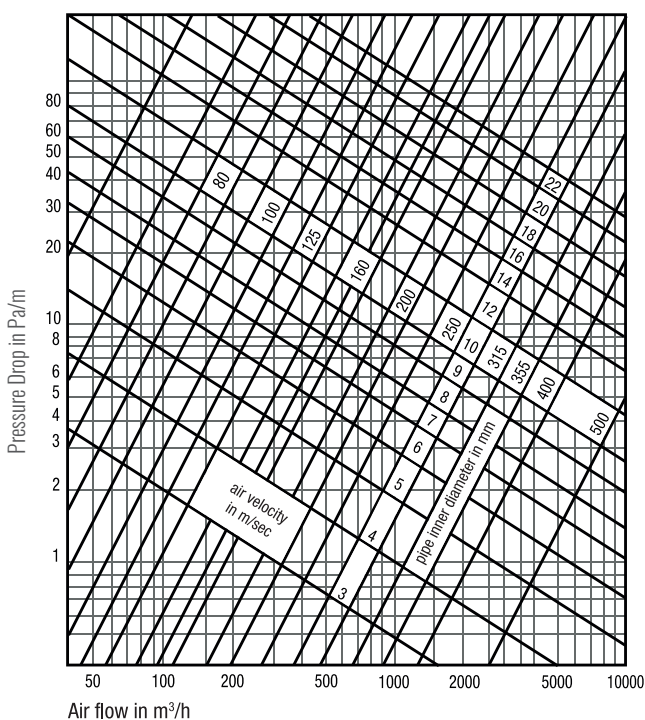
82	102	127	152	160	180	203	228*	254	305	318	356	406	457*	508*
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*Diameters available on request

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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m³/h]	PRESSURE DROP [Pa/m]	FLOW RATE [m³/h]	PRESSURE DROP [Pa/m]
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3

CERTIFICATION FOR FIRE REACTION



IT

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

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APPLICATIONS

Residential	Flexibility	EasyPack	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free	Compact Version*
Industry	Building	Air Conditioning	CMV	Non-magnetic*	CMV transp. Means	CMV Mech. Means	Recreational Boats	

*on request



AL-F10

Flexible hose made of AL (aluminium) wall coupled with polyolefin film to ensure a greater mechanical resistance to the aluminium.
Inner steel wire helix.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
External Black/ Internal aluminium	10 m standard	from 82 to 508 mm	-30°C / +140°C	0,6 x Ø	max 32 m/sec	max 250 mmH ₂ O

PRODUCTION DIAMETERS

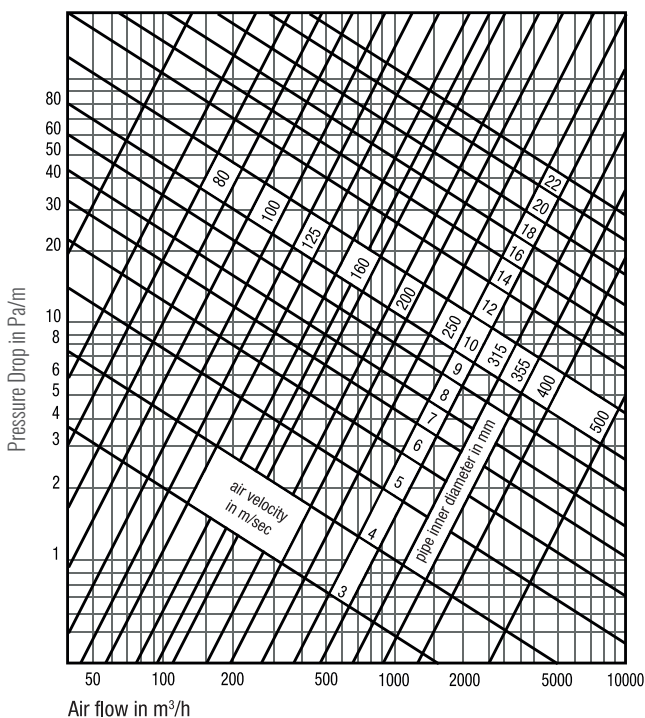
82	102	127	152	160	180	203	228*	254	305	318	356	406	457*	508*
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*Diameters available on request

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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3

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APPLICATIONS

							HF	
Residential	Flexibility	EasyPack	Tear Resistant	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free	Compact Version*
Industry	Building	Air Conditioning	CMV	Non-magnetic*	CMV transp. Means	CMV Mech. Means	Recreational Boats	*on request



AL

Flexible hose made of AL/PET/AL (aluminium/polyester/aluminium) wall and steel wire helix.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Aluminium	10 m standard	from 82 to 630 mm	-30°C / +140°C (peak 180°C)	0,6 x Ø	max 32 m/sec	max 250 mmH ₂ O

PRODUCTION DIAMETERS

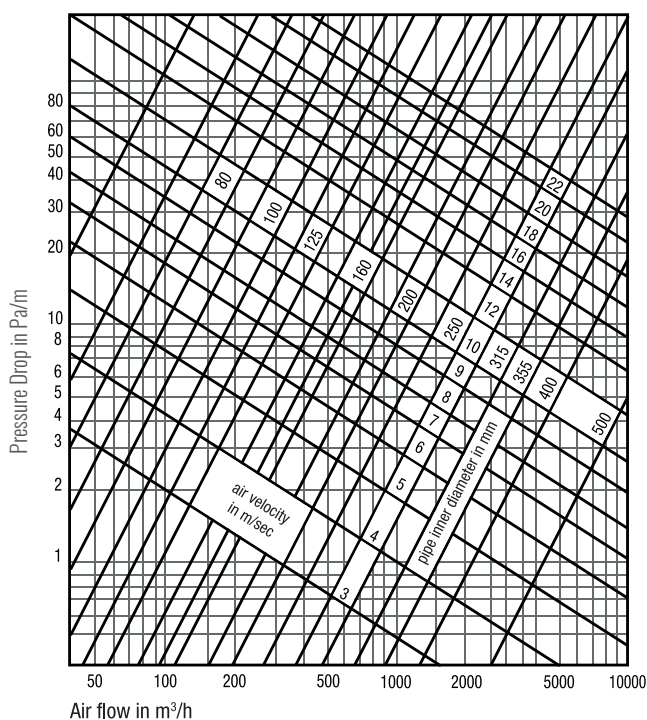
82	102	127	152	160	165*	180	203	228*	254	305	318	356	406	457*	508	630*
----	-----	-----	-----	-----	------	-----	-----	------	-----	-----	-----	-----	-----	------	-----	------

*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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3

CERTIFICATION FOR FIRE REACTION



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

EU B-s1, d0 (EN 13823:2010)

FR Class M0 (H.P. 92-507:2004)

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APPLICATIONS

Residential	Flexibility	EasyPack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	Compact Version*	Building	Air Conditioning
CMV	Non-magnetic*	Extractor Hoods						

*on request



AL Therm

Flexible hose made of AL/PET/AL (aluminium/polyester/aluminium) wall and steel wire helix.

Thermo-insulating covering in polyester fibre (th. 25mm/16kg/m³).

Outer anti-steam protection in aluminized polyolefin film (flame retardant).

The sturdiness of the heat-bonded polyester fibre prevents dispersion of microfibrils during air flow.

Insulation: 25mm / 16kg/m³ - standard

50mm / 16kg/m³ - on request

Thermal resistivity at 20°C **R = 0,58m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Aluminium	10 m standard	from 82 to 630 mm	-30°C / +140°C (peak 180°C)	0,8 - 1,5 x Ø	max 32 m/sec	max 250 mmH ₂ O

PRODUCTION DIAMETERS

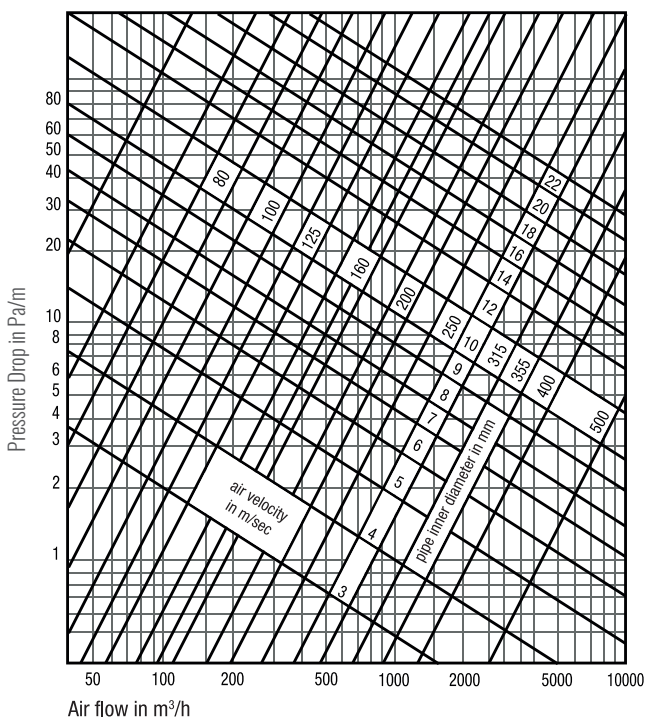
82	102	127	152	160	165*	180	203	228*	254	305	318	356	406	457*	508	630*
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*Diameters available on request

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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3

CERTIFICATION FOR FIRE REACTION

IT	Class 1 (D.M. 26/06/84), In accordance with: UNI CEI11170-3 Ed.2005 + FA 2007
EU	Inner tube and vapor barrier: Class B-s1, d0 (EN 13823:2010) Thermal insulation: Class B-s2, d0 (UNI EN 13501-1:2009)
FR	class M1 (NF P 92-507:2004)

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WELL

Contributes to credits:
MATERIALS, COMMUNITY

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Contributes to credits:
MAN, ENE, WST

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

APPLICATIONS

Residential	Flexibility	EasyPack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	Compact Version*	Building	Air Conditioning
CMV	Non-magnetic*	Extractor Hoods						

*on request



AL-Phon

Flexible hose made of AL/PET/AL (aluminium/polyester/aluminium) micro-perforated walls to reduce air flow noise and steel wire helix. Thermo-insulating covering in polyester fibre (th. 25mm/16kg/m³). Outer anti-steam protection in aluminized polyolefin film (flame retardant).

The sturdiness of the heat-bonded polyester fibre prevents dispersion of microfibrils during air flow and maintains its integrity over the years.

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

Thermal resistivity at 20°C **R = 0,58m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Aluminium	10 m standard	from 82 to 630 mm	-30°C / +140°C (peak 180°C)	0,8 - 1,5 x Ø	max 32 m/sec	max 250 mmH ₂ O

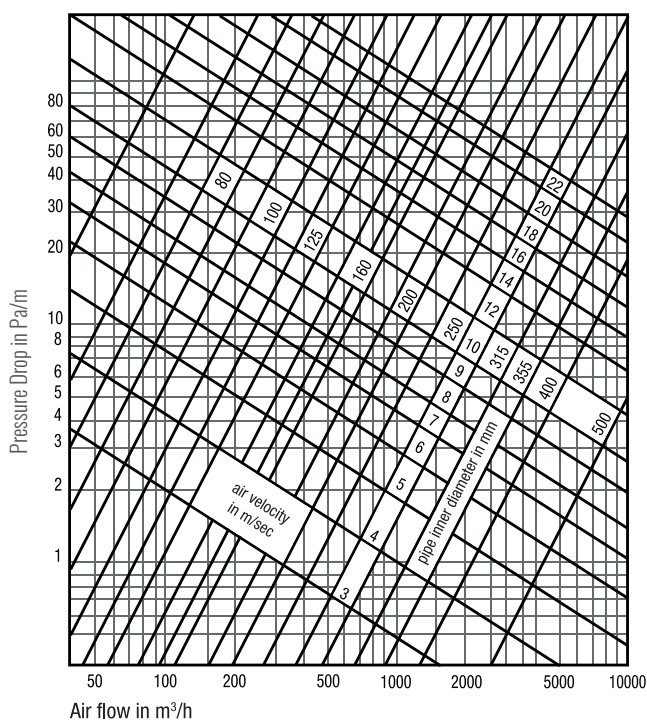
PRODUCTION DIAMETERS

82	102	127	152	160	165*	180	203	228*	254	305	318	356	406	457*	508	630*
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*Diameters available on request

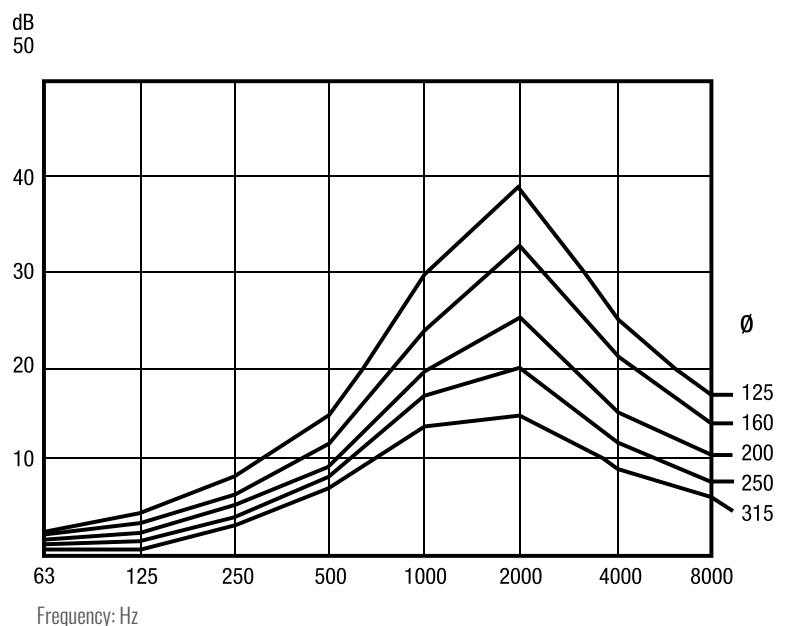
Diameters other than those indicated are available by prior feasibility check.

PRESSURE DROPS DIAGRAM (Air temperature 20°C)



AL-PHON SOUND REDUCTION CURVE

Hose length: 1m



CERTIFICATION FOR FIRE REACTION

IT	Class 1 (D.M. 26/06/84), In accordance with: UNI CEI11170-3 Ed.2005 + FA 2007
EU	Inner tube and vapor barrier: Class B-s1, d0 (EN 13823:2010) Thermal insulation: Class B-s2, d0 (UNI EN 13501-1:2009)
FR	class M1 (NF P 92-507:2004)

GREEN BUILDING

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LEED

Contributes to credits:
IP, EA, MR



WELL

Contributes to credits:
SOUND, MATERIALS COMMUNITY

BREEAM[®]

BREEAM

Contributes to credits:
MAN, HEA, ENE, WST

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

APPLICATIONS

Residential	Flexibility	EasyPack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	Compact Version*	Building	Air Conditioning
CMV	Non-magnetic*	Extractor Hoods						

*on request

PRESSURE DROPS TABLE WITH CALCULATION EXAMPLES

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

DIAMETER	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
[mm]				
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	7	1151	11
254	1445	5	1843	8
318	2278	4	3105	6
356	3058	3	3850	5
406	3845	3	4590	4
508	5111	2	8223	3



AL1

Flexible hose made of AL/PET (aluminium/polyester) wall and steel wire helix.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Aluminium	10 m standard	from 82 to 630 mm	-30°C / +140°C (peak 180°C)	0,8 - 1,5 x Ø	max 20 m/sec	max 200 mmH ₂ O

PRODUCTION DIAMETERS

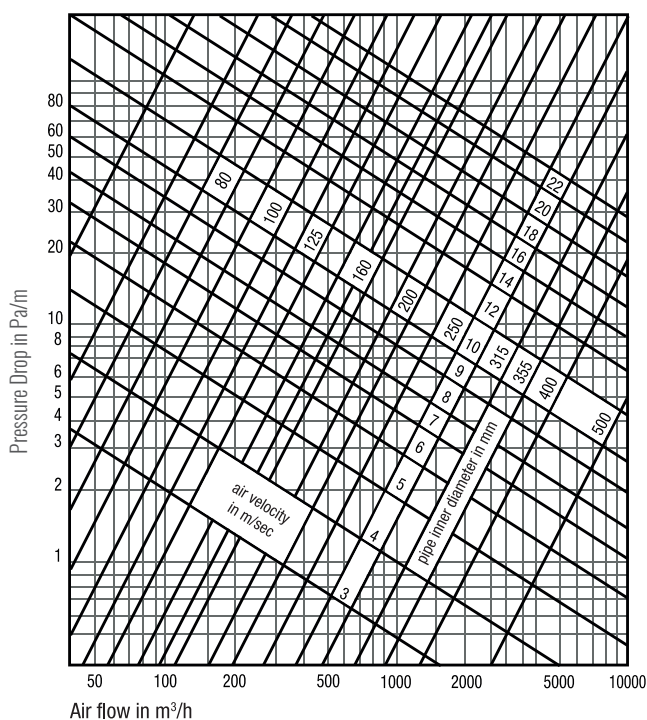
82	102	127	152	160	165*	180	203	228*	254	305	318	356	406	457*	508	630*
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*Diameters available on request

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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	6,5	1151	10,5
254	1445	4,7	1843	7,5
318	2278	3,7	3105	6
356	3058	3	3850	5,2
406	3845	2,7	4590	4,4
508	5111	2	8223	3

CERTIFICATION FOR FIRE REACTION



IT

CLASS 1 (D.M. 26/06/84)
Approval number: RO3827C20D100004

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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Contributes to credits:
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Contributes to credits:
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BREEAM

BREEAM

Contributes to credits:
MAN, WST

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

APPLICATIONS

Residential	Flexibility	EasyPack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	Compact Version*	Building	Air Conditioning
CMV	Non-magnetic*	Extractor Hoods						

*on request



AL1-Therm

Flexible hose made of AL/PET (aluminium/polyester) wall and steel wire helix. Thermo-insulating covering in polyester fibre (th. 17mm/11kg/m³). Outer protection in aluminized polyolefin film (flame retardant). The sturdiness of the heat-bonded polyester fibre prevents dispersion of microfibrils during air flow.

Insulation: 17mm / 11kg/m³ - standard
 25mm / 16kg/m³ - on request
 50mm / 16kg/m³ - on request

Thermal resistivity at 20°C **R = 0,35m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Aluminium	10 m standard	from 82 to 630 mm	-30°C / +140°C (peak 180°C)	0,8 - 1,5 x Ø	max 20 m/sec	max 200 mmH ₂ O

PRODUCTION DIAMETERS

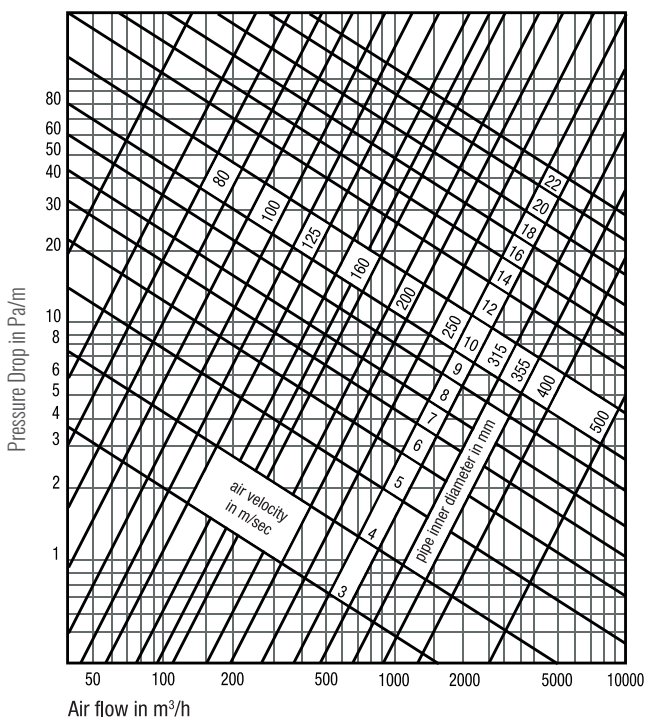
82	102	127	152	160	165*	180	203	228*	254	305	318	356	406	457*	508	630*
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*Diameters available on request

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 other diameters, use the beside diagram.

DIAMETER [mm]	AIR SPEED 8m/s		AIR SPEED 10m/s	
	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]	FLOW RATE [m ³ /h]	PRESSURE DROP [Pa/m]
82	152	19	190	31
102	250	15	333	24
127	383	12	368	18
160	575	8	773	14
203	900	6,5	1151	10,5
254	1445	4,7	1843	7,5
318	2278	3,7	3105	6
356	3058	3	3850	5,2
406	3845	2,7	4590	4,4
508	5111	2	8223	3

CERTIFICATION FOR FIRE REACTION



IT

Class 1 (D.M. 26/06/84),
In accordance with: UNI CEI11170-3 Ed.2005 + FA 2007

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WELL

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BREEAM

BREEAM

Contributes to credits:
MAN, ENE, WST

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

APPLICATIONS

Residential	Flexibility	EasyPack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	Compact Version*	Building	Air Conditioning
CMV	Non-magnetic*	Extractor Hoods						

*on request



AL1-Phon

Flexible hose made of AL/PET (aluminium/polyester) micro-perforated walls to reduce air flow noise and steel wire helix.

Thermo-insulating covering in polyester fibre (th. 17mm/11kg/m³).

Outer protection in aluminized polyolefin film (flame retardant).

The sturdiness of the heat-bonded polyester fibre prevents dispersion of microfibrils during air flow and maintains its integrity over the years.

Insulating: 17mm / 11kg/m³ - standard

25mm / 16kg/m³ - on request

50mm / 16kg/m³ - on request

Thermal resistivity at 20°C **R = 0,35m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	AIR SPEED	PRESSURE
Aluminium	10 m standard	from 82 to 630 mm	-30°C / +140°C (peak 180°C)	0,8 - 1,5 x Ø	max 20 m/sec	max 200 mmH ₂ O

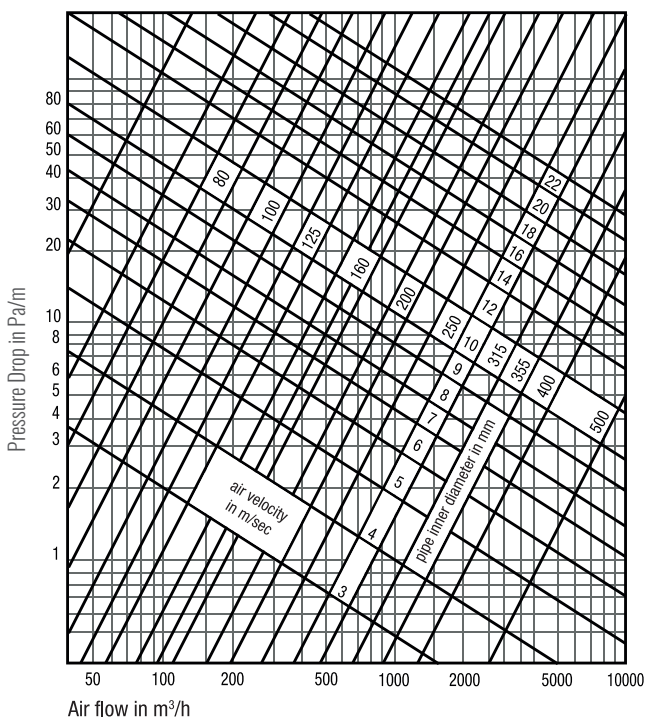
PRODUCTION DIAMETERS

82	102	127	152	160	165*	180	203	228*	254	305	318	356	406	457*	508	630*
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*Diameters available on request

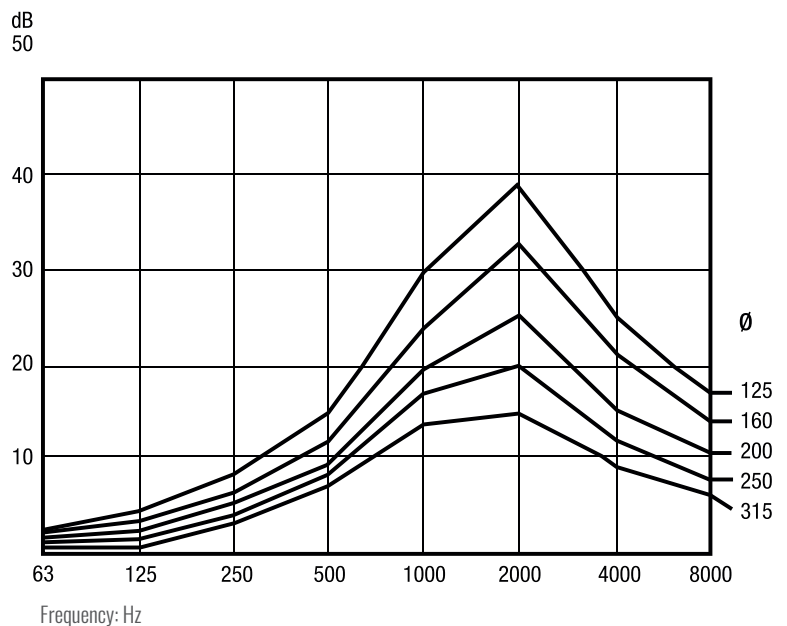
Diameters other than those indicated are available by prior feasibility check.

PRESSURE DROPS DIAGRAM (Air temperature 20°C)



AL-PHON SOUND REDUCTION CURVE

Hose length: 1m



CERTIFICATION FOR FIRE REACTION



IT

CLASS 1 (D.M. 26/06/84)
Approval number: RO3827C20D100005

GREEN BUILDING

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WELL

Contributes to credits:
SOUND, MATERIALS, COMMUNITY

BREEM[®]

BREEM

Contributes to credits:
MAN, HEA, ENE, WST

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

APPLICATIONS

Residential	Flexibility	EasyPack	Self-extinguishing	Tear Resistant	Calibrated Diameters*	Compact Version*	Building	Air Conditioning
CMV	Non-magnetic*	Extractor Hoods						

*on request



Therm Sleeve

Flexible insulating sleeve produced with a light TNT inner coating, thermo-insulating layer in polyester microfibre (th. 25mm/16kg/m³).
Outer protection in aluminized polyolefin film.
The sturdiness of the heat-bonded polyester fibre prevents dispersion of microfibres during air flow.

Thermal resistivity at 20°C **R = 0,58m² K/W (UNI EN 12664:2002)**

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	WORKING TEMPERATURE	PRODUCTION DIAMETERS	CURVATURE RADIUS
Aluminium	10m standard	-30° + 90°C (peak +110°C)	from 82 to 508 mm	0,8 - 1,5 x Ø

PRODUCTION DIAMETERS

82	102	127	152	160	180	203	254	305	318	356	406	457	508
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Diameters other than those indicated are available by prior feasibility check.

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WELL

Contributes to credits:
MATERIALS, COMMUNITY

BREEAM[®]

BREEAM

Contributes to credits:
MAN, ENE, WST

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

APPLICATIONS

Residential	Flexibility	Easy Pack	Self-extinguishing	Tear Resistance	Calibrated Diameters*	REACH Certified	RoHS Certified	Halogen Free
Compact version*	Building	Air Conditioning	CMV	Non magnetic*	Temporary air conditioning			*on request



ALU

Flexible hose made with spiral seamed aluminium lamina.

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	CURVATURE RADIUS	RIBBING DEPTH	FIRE REACTION
Aluminium	3 m standard (packed compressed 0.80m)	from 60 to 300 mm	up to 300°C	1,2 x Ø	0.05mm	Inflammable - Class 0 (being totally mineral)

PRODUCTION DIAMETERS

60	70	80	90	100	110	120	125	130	140	150	160	180	200	220	250	280	300
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Diameters other than those indicated are available by prior feasibility check.

AVAILABLE MODELS

ALU 14: Thickness 0.12mm	ALU MINI SINGLE WALL: Thickness 0.12mm	ALU MINI DOUBLE WALL: Thickness 0.12+0.12mm
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APPLICATIONS

Residential	Working temperature	Chemical resistant	Industry	Building	Extractor Hoods	High Temp. Suction



Flexinox

Flexible hose made with spiral seamed AISI 316 + stainless-steel lamina

TECHNICAL SPECIFICATIONS AND USAGE LIMIT

COLOR	LENGTH	PRODUCTION DIAMETERS	WORKING TEMPERATURE	THICKNESS	FIRE REACTION
Natural Inox	from d. 16 to d. 75 - coils of 25m, from d. 80 to d. 300 - coils of 3m or 30m, from d. 350 to d. 500 - coils of 3m or 6m	from 16 to 500 mm	up to 400°C (peak 700°C)	0,12mm	Inflammable - Class 0 (being totally mineral)

COILS OF 25M

16	18	22	24	26	28	30	32	34	36	38	40	42	44	45	46	48	50	60	70	75
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COILS OF 3M OR 30M

80	85	90	100	110	115	120	125	130	135	140	150	155	160	170	180	190	200	220	230	250	280	300
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COILS OF 3M OR 6M

350					400					450					500				
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Diameters other than those indicated are available by prior feasibility check.

APPLICATIONS

Residential	Working temperature	Chemical resistant	Industry	Building	Extractor Hoods	High Temp. Suction

PAYMENT OF INVOICES

All invoices must be paid to:

TECNICA Srl - VIA DEGLI INTARSIATORI ROLESÌ, 1-42047 ROLO (RE) - ITALY only.

In the event of delayed payments, TECNICA srl shall be entitled to charge interest at the business rate (prime rate plus three percentage points) for each month or, in proportion, for a fraction of the month of delay.

WARRANTIES AND LIABILITIES

TECNICA srl warrants that the products have been made in compliance with the technical specifications indicated on the technical sheets. TECNICA srl disclaims all liability for any damage suffered by the customer's buyers as a result of the inadequate fulfilment of the obligations towards them, with special reference to consumer information entitlements.

CLAIMS

Any claims due to faulty goods must be notified in writing to TECNICA srl - VIA DEGLI INTARSIATORI ROLESÌ, 1 - 42047 ROLO (RE) - ITALY within 8 days from receipt. Only returned goods authorized by TECNICA srl will be accepted and these must be in their original, integral and complete packaging.

MISCELLANEOUS

These general sales conditions shall be deemed known and accepted by effect of the sending of a purchase order by the customer to TECNICA srl and may be changed by Tecnica srl by means of simple written notice.

HOW TO PLACE AN ORDER

Tecnica srl has certified quality. Consequently, all orders must be placed in written form and sent by fax or email. Phone orders must be followed by a written document within the following 2 days.

For each order, Tecnica srl will send an order confirmation showing model and/or technical specifications, quantity and prices quoted for the ordered products.

Whenever, within two days after the sending of such document, this is not returned to us corrected or amended, it shall be deemed tacitly approved and supply shall be regularly made.

Subsequent amendments shall produce a further new order with due charge of the previous one.

GENERAL SUPPLY TERMS

The material is packed in standard wrapping (single or multi-piece). Packs normally contain minimum amount of material that can be supplied. On request, we can supply even lower quantities at differentiated prices; in this case a packaging surcharge may apply.

Tecnica srl, on request, can design and supply its product range made to specific demands.

Goods travel at the customer's risk, unless otherwise agreed.

Tecnica srl shall execute orders which have been placed and accepted, just as quickly as possible, and will notify the customer in case of any delays. Under no circumstance shall the customer be entitled to cancel an order already placed and accepted without the prior agreement of Tecnica srl. By placing the order with Tecnica srl, the customer fully accepts the conditions, the notes and the warnings indicated in this catalogue and also contained in the other documents produced by Tecnica srl (offers, order confirmations, transport documents, etc.).

A number of precautions must be taken as regards the products storage to prevent any possible deterioration of the material. Stored products must be protected against dust and direct sunlight, in dry premises, and the articles must be kept in their original packaging and only opened when they are to be used. Too much damp can damage the plastic materials used and corrode the metal parts. The articles must be stored flat and not crushed by weights. They must never be hung on hooks, wires or nails.

DELIVERY TIMES

For products in stock, prompt delivery as long as stocks last.

For products not in stock, approximate delivery times are 15/20 days from order confirmation date.

The delivery date indicated on the order confirmation documents shall be deemed the Tecnica ex-works delivery date.

PRODUCT DELIVERY

Material will only be dispatched via carrier indicated by TECNICA srl, except in the case of an express request of the customer and with delivery carriage forward.

For goods transport, if required with free-destination with charge, the customer will be charged a contribution with amount indicated on invoice. Any notification of accidents, loss or faults affecting the goods shall be sent by fax to TECNICA srl within 24 hours from receipt of goods.

In the event of such notification not being made within the aforementioned term TECNICA srl disclaims all liability.

TECNICATM

Efficient Indoor Air Project



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

TECNICA™

Efficient Indoor Air Project

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