

SA10/ESP Patented MasterSan™

Flexible hose produced with exclusive technology

- Addivated polyolefin resins film with anti-bacterial, anti-mildew and anti-viral material protection.
- Thermo-insulating coating in netted and closed-cell of polyethylene foam. (sp. 4mm)
- External protection in addivated 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 = 0,12m² 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_2O	1,2 - 1,8 x Ø

PRODUCTION DIAMETERS

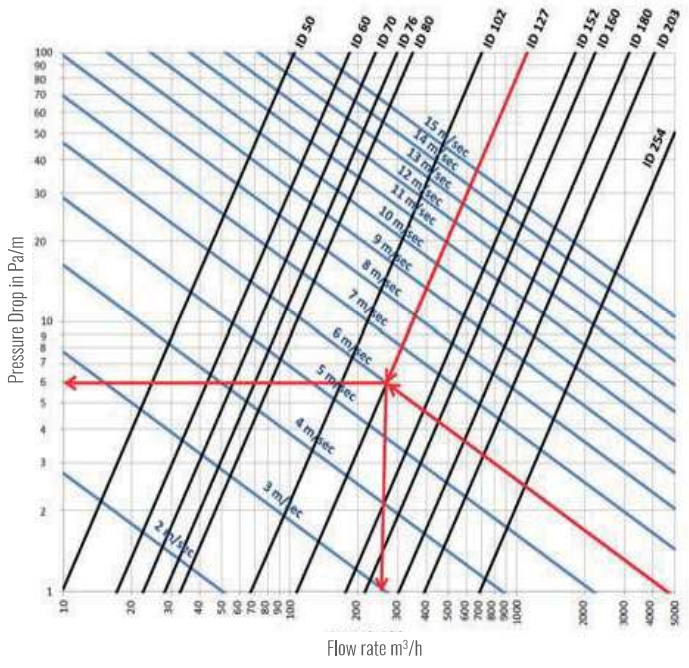
40*	51	63	70	76	80	90*	102	110*	121*
127	133*	140*	152	160	165	180	203	254	

*Diameters available on request

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

PRESSURE DROPS DIAGRAM

(Air Temperature 20°C)



PRESSURE DROPS TABLE WITH CALCULATION EXAMPLES

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

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

CERTIFICATIONS

MATERIAL PROTECTION


Count tests: JIS L 1902

Testing the antibacterial activity and efficacy on textile products

ANTIMICROBIAL PROTECTION

MasterSan™ is produced with new generation polyolefin film with Sanitized® antimicrobial and antiviral technology which protects the internal surface from damages due to microbial load and reduces the formation of potential microbial odors inside the ventilation system for a better IAQ rate.

Sanitized Protection · antiviral performance · Material Protection · Hygiene Function

FIRE REACTION

IT	Class 1 (D.M. 26/06/84) Omologation nr.: RE1205C20D100011
EU	Class B-s1, d0 (EN 13501-1:2019)

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

APPLICATIONS

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

*on request

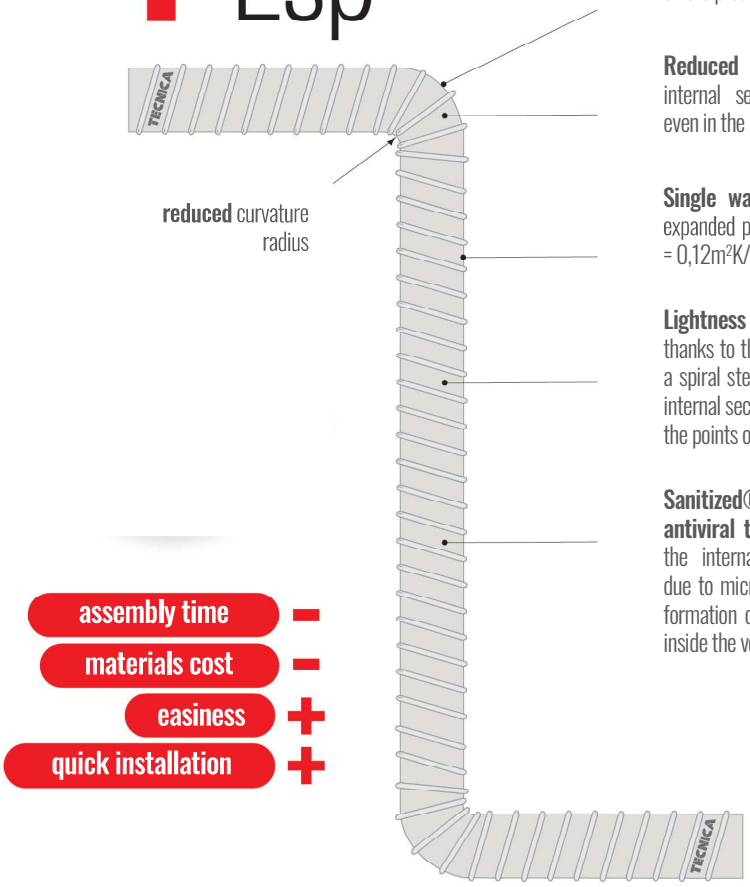
WIRE OPTIONS	ADDITIVE OPTIONS	SERVICE OPTIONS
AM non-magnetic inox wire	UV * anti UV	MP customized marking

TESTS PERFORMED

TEST	METHOD	OUTCOMES
λ Thermal conductivity Coefficient (wall thickness 4mm)	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 damag
		AMMONIA No modification and/or damag
		HIGH CONC. DEGREASER No modification and/or damag
		COOLANT FLUID No modification and/or damag
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™



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 (Coeff. R = 0,12m²K/W - wall thickness 4mm)

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

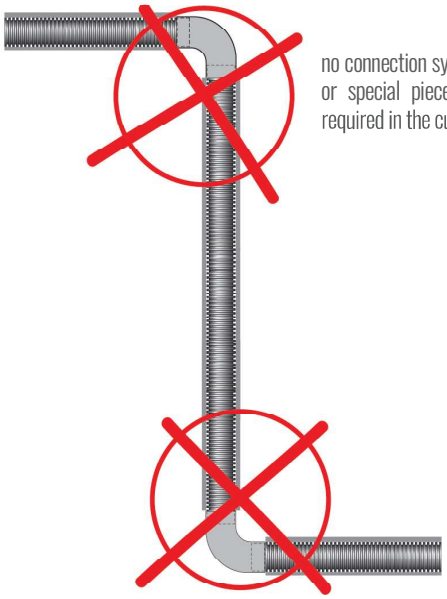
Sanitized® antimicrobial and antiviral technology which protects the internal surface from damages due to microbial load and reduces the formation of potential microbial odors inside the ventilation system

assembly time −
materials cost −
easiness +
quick installation +





no risk of crushing in curves with tight radius



no connection systems or special pieces are required in the curves

corrugated ducts