



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

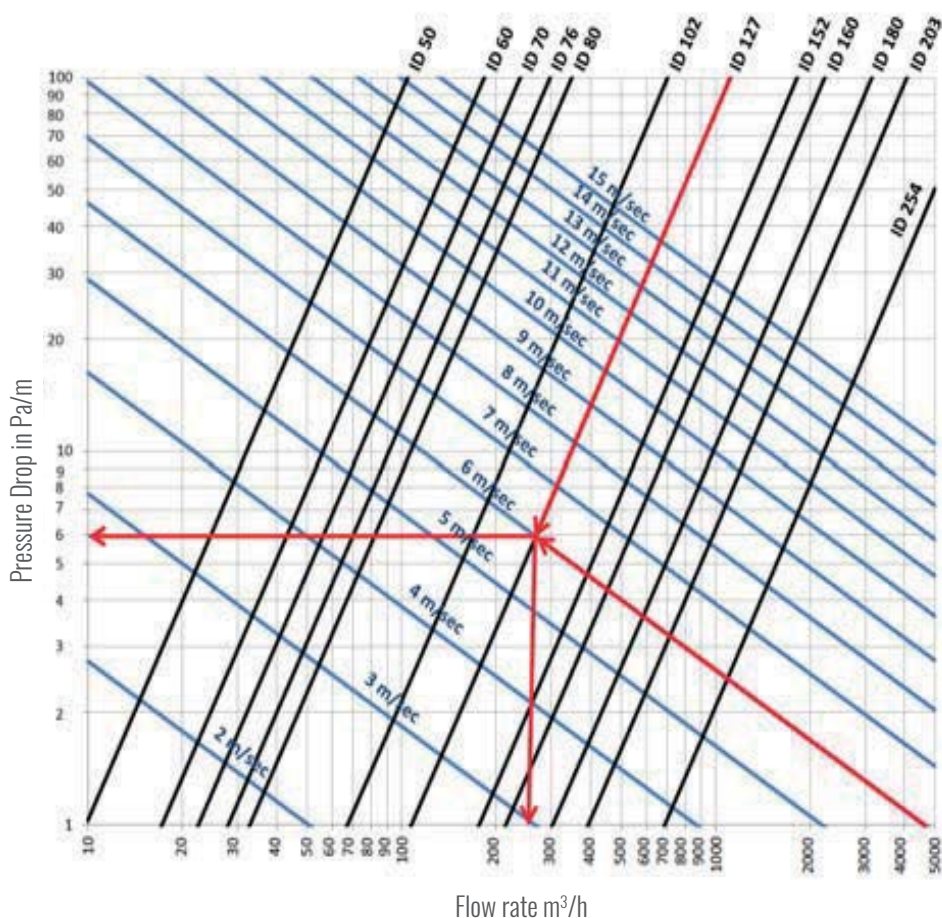
70	76	80	90*	102	127	152	160	165	180	203	254			
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*Diameters available on request

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

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	EasyPack	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

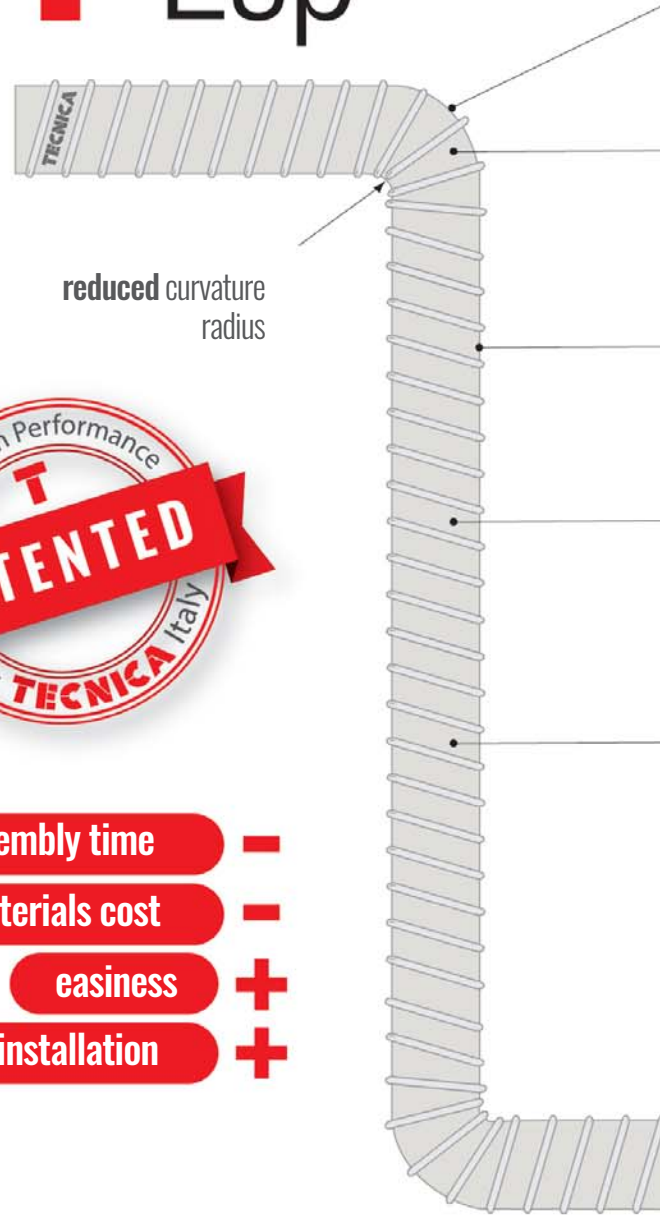
MP customized marking

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™



reduced curvature radius



assembly time -

materials cost -

easiness +

quick installation +

No limitation to degrees of curvature on the products

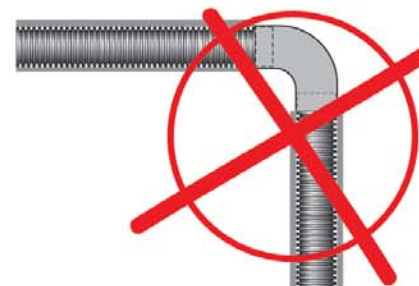
Reduced pressure drop as the internal section remains unchanged even in the points of curvature

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



no risk of crushing in curves with tight radius



no connection systems or special pieces are required in the curves

corrugated ducts

