CONNECTIONS, SYSTEMS AND REGULATION

MULTILAYER SYSTEM

PIPES PERT/AL/PERT

Minimum 0,25 mm

Certificate UNE-EN ISO 21003

Guarantee 10 YEAR

Standard Hidraulica has a complete range of Pert-Al-Pert pipes, with diameters from 16 mm to 32 mm. They are made of polyethylene with a lighter aluminum core (PERT-Al-PERT), to provide more resistance at high temperatures and pressures and greater flexibility in pipe handling.

- The aluminum layer ensures the oxygen tightness and dimensional stability properties of the pipe.
- By combining the qualities of metal and plastic tube, this pipe is easily deformable, but maintains the given position, a fact that makes it an optimal solution for all types of installations.
- As it is a flexible and easy-to-assemble piping system, labor and installation time is reduced.

Aging and durability tests (carried out according to the UNE-EN ISO 21003 standard) guarantee a life of more than 50 years. The tubes are manufactured and certified according to the UNE-EN ISO 21003 standard.

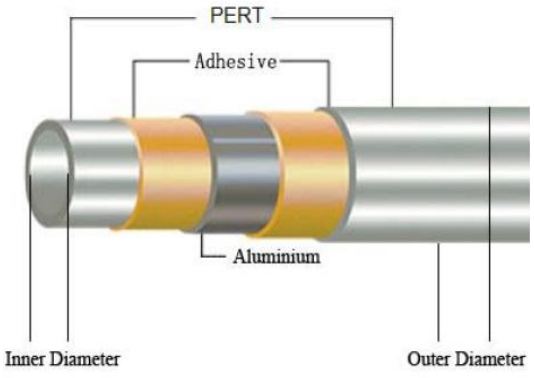
They are available in rolls and bars.

Advantages

- Resistance to high temperatures, high pressures, and corrosion.
- It can be used to transport fluids such as cold and hot water.
- It can be used as a threaded sleeve due to its electrical protection and magnetic protection effects.
- Easy to cut and process, can relate to special fittings without threaded buckles, saving 80% in construction costs.
- Lightweight.
- The inner wall of the pipe is smooth, and resistance is low when transporting fluid. The fluid transport capacity of the pipe is 30% higher than that of pipes of the same diameter.
- It can be buried directly in the ground, using metal detectors to detect the position of the pipe.
- Due to the aluminum core, the oxygen permeability of the pipe is zero, which can effectively inhibit the growth of bacteria.

Characteristics

- Available from 16 mm to 32 mm.
- 5 layers: Cross-linked polyethylene/Adhesive/Aluminum/Adhesive/ Cross-linked polyethylene.
- Aluminum layer welded longitudinally to the end.
- Minimum aluminum thickness 0.25 mm.
- Thermal conductivity: 0.45 W/(mk)
- Thermal expansion coefficient: 0.025 mm/(mk)



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Applications

- BetaSkin-S is suitable for all plumbing and heating applications.
- The tubes can be used in new installations as well as for renovation.
- It can be recessed or exposed.
- System certified according to the UNE-EN ISO 21003 standard in combination with the MultiStandard and MultiStandard Plus accessories.

Application	Operating temperature	Maximum Service pressure
Sanitary water	-10 ºC a +95 ºC	10 bar at 20ºC 6 bar at 95ºC
Heating and cooling		
Rain water		

Pipe Dimensions

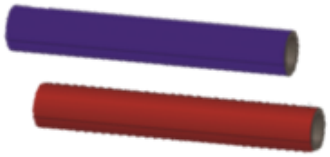
Technical Properties	Value			
Pipe diameter (mm)	16	20	25	32
Inner diameter (mm)	12,0	16,0	20,0	26,0
Wall thickness (mm)	2,0	2,0	2,5	3,0
Aluminum thickness (mm)	0,25	0,3	0,35	0,5
Minimum manual bending radius - Outer Spring (mm)	≥ 5 x D	≥ 5 x D	≥ 5 x D	≥ 5 x D
Weight (g/m)	103	133	228	354
Water volume (l/m)	0,113	0,21	0,314	0,53

Protection for Multilayer Pipe

INSULATED PIPING: According to the RITE (Regulation on Thermal Energy Installations) and its ITC (Technical Construction Regulations) on the insulation of thermal pipe networks, all pipes and fittings must have thermal insulation.

STH supplies pipes with a layer of thermal insulation material. Pre-insulated multilayer pipes are fitted with expanded PE foam thermal insulation to protect them from condensation and heat loss (thermal losses), expansion, and to reduce noise transmission. The PE foam is insulated with a red and blue extruded PE film. The thermal insulation is CFC-free and has the following properties:

Lambda value (ISO 8497): 0.035 W/mK at +10°C
Operating temperature: -30°C to 95°C
Density: 35-45 kg/m3



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Rolls in box

Code	Ø	Roll (m)	Pallet (m)
F67200	16 x 2.0	100	900
F67201	20 x 2.0	100	600
F67202	25 x 2.5	50	250
F67203	32 x 3.0	50	250

Bars in cylinders

Code	Ø	Strip (m)	Nº Cylinder strips	Cylinder (m)
F67210	16 x 2.0	3	50	150
F67211	20 x 2.0	3	35	105
F67212	25 x 2.5	3	18	54
F67213	32 x 3.0	3	12	36

Multilayer Pipe Insulated Blue

Code	Ø	T (mm) insulator	Roll (m)
F67220	16 x 2.0	6	50
F67221	20 x 2.0	6	50
F67222	25 x 2.5	7	25
F67223	32 x 3.0	7	25

Multilayer Pipe Insulated Red

Code	Ø	T (mm) insulator	Roll (m)
F67225	16 x 2.0	6	50
F67226	20 x 2.0	6	50
F67227	25 x 2.5	7	25
F67228	32 x 3.0	7	25

Safety Warnings

- Do not bend the pipe sharply. Forcing the bending radius can damage the inner layers and affect its performance.
- Do not cut with the wrong tools. Only use pipe cutters specifically designed for multilayer pipes; a bad cut can cause leaks.
- Do not install if the pipe has burrs, dents, or deformities. You can use a calibration and reaming tool if necessary.
- Do not drag the pipe across the floor or hit it during handling. This can cause invisible damage that compromises its integrity.
- Do not expose the pipe to direct sunlight or extreme heat sources. Prolonged exposure can deform the material.
- Do not use incompatible fittings. Ensure that connections are specific for multilayer pipes (compression, pressing, etc.).
- Do not install the pipe under tension. It must be positioned without stress or stretching between fixings.
- Do not leave sections hanging or unsupported. Use suitable clamps or fixings to prevent displacement or deformation.
- Do not store incorrectly. Store the pipe in a dry place, protected from the sun, and without any weight on top.