



In 2023, Interplast is celebrating its 25th anniversary and is introducing two brand new product series. For the next decades, those products will become milestones and will be part of the company's important products, which have been hugely accepted in both Greek and international market.

A. The new Polypropylene soundproof pipe system, under the trade name "Atlas Plus Echo-silent", expresses the value and depth of the ancient Greek language, as the English word Echo, comes from the ancient Greek word "ēchō".

B. The new five-layer pipe, in which the intermediate layer, contains "made in Greece" Greek high-quality aluminium. The main raw material is PE-Xb which conforms with the Europeans and American regulations, and it has been approved for exports in U.S.A. and Canada under the trade name "ComoPex". The new pipe will be available under the trade name "Como PexALPex" complementing the already successful "Como Pex" series, honouring in this way, the factory headquarters, placed at Komotini in Thrace.

Celebrating our 25th anniversary we would like to remind the following:

Interplast is a **Greek industry**, its factory is located in Komotini and it has o'ces in Athens and in Thessaloniki. The main characteristics of Interplast are innovation, extroversion and high level of technical support. The company's turnover concludes exports of approximately 40%, which until December 2022 were carried out in 65 countries and 5 continents.

In addition to the basic certification of ISO 9001, the company possesses ISO 14001, ISO 50001 as well as EPD (Environmental product declaration), which is an eco-labelling system well established in the international markets, especially in Europe and the United States. EPD is considered as the "International Gold Standard", and is a prerequisite for the classification of buildings according to the requirements of LEED V4, for three categories of its products.

Interplast possesses numerous certifications (over 50) including the certification for PE-X pipes, for PP-RCT, PP-R pipes and fittings as well as for the Aqua-Plus Prins (pre-insulated system) based on ASTM and NSF from the ICC organization of America. Interplast owns more than 25 patents filed in the Industrial Property Organization which, among others, refer to Aqua-Plus Prins pre-insulated system, the FireFighter fire-resistant piping system and the low-profile EcoFloor dry radiant system.

The Managing Director of Interplast

Thermal conductivity

Internal roughness

**UV** Protection

Halogen level

Oxygen transmittance

5-layer strength and durability

Como PexALPex is an innovative pipe able to respond mainly to the distribution of hot and cold drinking water, heating and cooling systems, compressed air installations, industrial installations and various other applications, whose conditions are harmonized with the corresponding European and Greek regulations such as EN 21003 and EN 15875.

Como PexALPex five-layer pipes combine the advantages of synthetic materials and especially cross-linked polyethylene, such as resistance to high temperatures, reduced friction, resistance to oxidizing e^ects, resistance to various corrosive chemicals and suitability for sanitary applications, together with the advantages of aluminium, such as retention of the desired shape after bending, imperm-eability to oxygen and low thermal expansion.

The result is a product consisting of diferent layers of materials that, when connected together, acquire improved properties compared to classic metal pipes.

Interplast's experience in PE-X pipes, the stability of the respective suppliers and its choice of premium raw materials, its long-term specialization in multilayer pipes of large cross-sections combined with the know-how of the subsidiary ELVIOM brass industry, guarantee a product that will contributes to the upgrading of constructions.





at home!





# **Specifications**

Material	Inner layer cross-linked Polyethylene Inner adhesive layer Aluminum layer Outer adhesive layer Outer layer cross-linked Polyethylene
Colour	White
Dimensions	16 ÷ 32mm
Field of applications	Hot and cold drinking water distribution, heating systems with classic heating elements, fan coils, compressed air distribution systems, industrial installments
Fittings	Mechanical wedging fittings, Mechanical compressing fittings
Thermal operating condition	+95°C / +100°C
Maximum pressure	+10bar
Density	> 0,948g/cm³ (PE-Xb)
Softening temperature	135°C
Coefficient of linear expansion	0,026mm/m·K

0,42 ÷ 0,52 W/m·K

0,007mm

Yes, 5-years

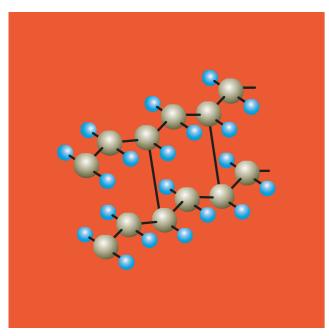
Halogen free

0mg/l

## **Pipe Layers**

#### **Outer layer**

Made of PE-Xb which provides mechanical, electrical and chemical protection of the aluminium layer from impacts, abrasions, cement and other substances contained in the ground.



PE-X naturally has excellent behaviour at high temperatures pressures, improved impact and chemical resistance as well as a very long-life cycle.

In high-density polyethylene, double bonds are created, so that a large number of them are joined with silane molecules to form a homogeneous three-dimensional lattice structure of high molecular weight.

#### Intermediate layer

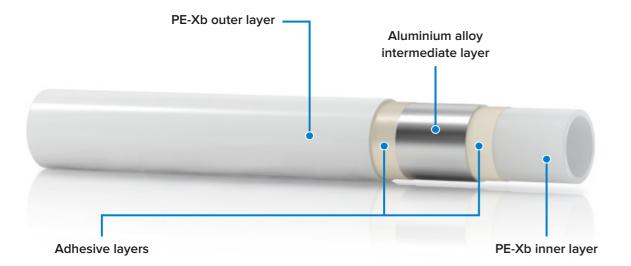
It is made of an aluminium alloy, a complete oxygen barrier providing excellent mechanical strength and flexibility during installation.

#### Adhesive layers

An additive layer which contributes to the connection of the intermediate aluminium layer with the inner and outer PE-Xb layers.

### Inner laver

The inner pipe layer made of **PE-Xb (NSF-approved raw** material), is approved for drinking water according to European and American regulations, which is binding with Interplast in the exports of Como Pex in the United States of America and Canada. PE-Xb material is characterized by an extremely smooth surface that reduces hydraulic resistance.



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#### **Excellent thermal properties**

They are designed for a lifetime of more than 50 years, at temperatures up to 95°C and operating pressures from 6 to 10bar. Temperature peaks of 110°C at an operating pressure of 4bar.

#### **Corrosion resistant**

Como PexALPex pipes show excellent resistance to corrosion, even in areas where the water is in high mineral content, remaining unchanged over time. Unlike metal pipes, they do not show any electrochemical corrosion. Also, the high velocity of the water does not cause damage to the inner surface.

#### Chemical resistance

The material is resistant to most chemicals, even at high temperatures. Chemicals that can cause deterioration, rupture of ordinary plastic pipes do not affect Como PexALPex.

### **Mechanical strength**

Como PexALPex pipes shows high mechanical impact resistance. For example, cross-linked polyethylene is used as a protective cover in bearings for transporting very sharp objects in hard metal industries.

#### Low coefficient of friction

The material's structure and the smooth texture of the surface, ensure low hydraulic resistances resulting in low resistance, and small pressure drop in the **pipelines.** For this reason, water pumps of lower power and energy consumption can be used, compared to metal pipes.

### Flexibility and shape stability

The combination of cross-linked polyethylene and aluminium, guarantees excellent bending behaviour, so that the pipe maintains the desired configuration after bending.

### Thermal expansion

The thermal linear expansion is about 8 times lower than plastic pipes and is completely comparable to that of metal pipes.

#### Low weight

The pipes are extremely light compared to metal pipes: their weight is 1/3 of copper pipe and 1/10 steel pipe.

#### Soundproofing

ComoPexAlPex system works silently. The properties of the plastic and the adhesive layers, prevent the transmission of waves and hydraulic hammer unlike metal pipes.

#### Oxygen barrier

The aluminium layer is a permanent oxygen barrier, hence corrosion of the metal parts in closed heating and cooling systems is avoiding.

#### Thermal conductivity

The thermal conductivity of the tube is 0.42-0.52 W/m·K, about 900 times lower than the copper. This is extremely important to ensure temperature losses. In addition, the insulation ensures water flow speed, up to 1m/sec.

#### Clean and non-toxic

Como PexALPex does not contain toxic substances. Sanitary and toxic analyses, approved that it can be used for drinking water use. The pipes passed tests of o'cial institutes (General State Chemistry, WRAS-NSF Great Britain) regarding taste, smell, growth of microorganisms, extraction of substances and metals of public health concern (cadmium, arsenic, etc.).

## Insulated pipe

Como PexALPex pipes are factory covered with thermal insulation handles and are suitable for all applications that require a high degree of insulation against condensation and energy loss combined. Additionally, they have a very easy installation procedure.

The characteristics of insulated pipe are:

- It consists of 35kgr/m³ insulation density. This fact, contributes definitely to saving energy and avoiding condensation.
- The insulation is produced in a pre-formed cylindrical shape (tube). Using special equipment to be cut, extruded, applied to the pipe and welded. Finally, the insulator is covered by a polyethylene protective film. This method prevents the phenomenon of delamination at the joint point. That is observed when the insulation is produced in horizontal plates, as a result (due to stresses) an opening at the welding seam. This is happening due to the "memory of initial form of the foam, resulting in the destruction of the insulation in various places.
- The additional protective film, has a textured surface, and the extrusion of Polyethylene carried out from 8 points. The final product is robust, durable and it fits tightly to the pipe, which is important for maintaining the original thermal insulation elements.

Interplast, faithful to the principles of quality demanded by the technical world, inside the country and abroad, continues to detailed design of innovative products.





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#### COMO PexALPex EN ISO 15875-EN ISO 21003

Dimensions	Code	Package (Rolls/pack)	
16*2,0	772000016	100/2.000	
18*2,0	772000018	100/1.800	
20*2,0	772000020	100/1.400	
26*3,0	772000026	50/550	
32*3,0	772000032	50/400	

#### COMO PexALPex LINEAR EN ISO 15875 - EN ISO 21003

Dimensions	Code	Package	
16*2,0	772030016	100	
18*2,0	772030018	100	
20*2,0	772030020	100	
26*3,0	772030026	50	
32*3,0	772030032	50	

#### COMO PertALPert EN ISO 22391

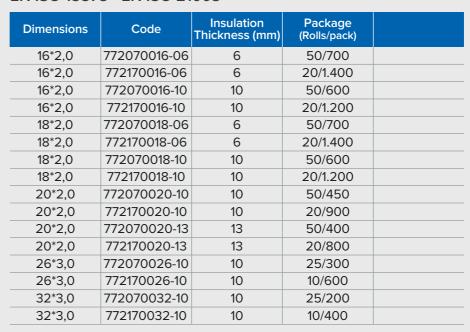
Dimensions	Dimensions Code		
16*2,0*	772010016	100/2.000	
18*2,0*	772010018	100/1.800	

<sup>\*</sup>Upon request

#### COMO Pexalpex ME MON $\Omega\Sigma$ H / BLUE PRINTING EN ISO 15875 - EN ISO 21003

Dimensions	Code	Insulation Thickness (mm)	Package (Rolls/pack)	
16*2,0	772060016-06	6	50/700	
16*2,0	772160016-06	6	20/1.400	
16*2,0	772060016-10	10	50/600	
16*2,0	772160016-10	10	20/1.200	
18*2,0	772060018-06	6	50/700	
18*2,0	772160018-06	6	20/1.400	
18*2,0	772060018-10	10	50/600	
18*2,0	772160018-10	10	20/1.200	
20*2,0	772060020-10	10	50/450	
20*2,0	772160020-10	10	20/900	
20*2,0	772060020-13	13	50/400	
20*2,0	772160020-13	13	20/800	
26*3,0	772060026-10	10	25/300	
26*3,0	772160026-10	10	10/600	
32*3,0	772060032-10	10	25/200	
32*3,0	772160032-10	10	10/400	

## COMO PexALPex INSULATED / RED PRINTING EN ISO 15875 - EN ISO 21003







Dimensions	Code	Insulation Thickness (mm)	Package (Rolls/pack)	
		<b>BLUE PRINTING</b>		
16*2,0*	772080016-06	6	50/700	
18*2,0*	772080018-06	6	50/700	
		RED PRINTING		
16*2,0*	772090016-06	6	50/700	
18*2,0*	772090018-06	6	50/700	

<sup>\*</sup>Upon request

#### Como Pex INSULATED EN ISO 15875

Dimensions	Code	Insulation Thickness (mm)	Package (Rolls/pack)	
15*2,5	770251525	10	50/600	
15*2,5	770251525-20	10	20/1.200	
16*2,0	770251620	10	50/600	
16*2,0	770251620-20	10	20/1.200	
18*2,0	770251820	10	50/600	
18*2,0	770251820-20	10	20/1.200	
18*2,5	770251825	10	50/600	
18*2,5	770251825-20	10	20/1.200	



ertAlPert Insufated UV Protected





#### Como Pex INSULATED EN ISO 15875

Dimensions	BLUE CORRUGATED PIPE Code	RED CORRUGATED PIPE  Code	Insulation Thickness	Package (Rolls/pack)	
16*2,0	770260116	770260216	6	50/400	
16*2,0	770260116-20	770260216-20	6	20/200	
18*2,0	770260118	770260218	6	50/400	
18*2,0	770260118-20	770260218-20	6	20/200	
18*2,5	770260318	770260418	6	50/400	
18*2,5	770260318-20	770260418-20	6	20/200	