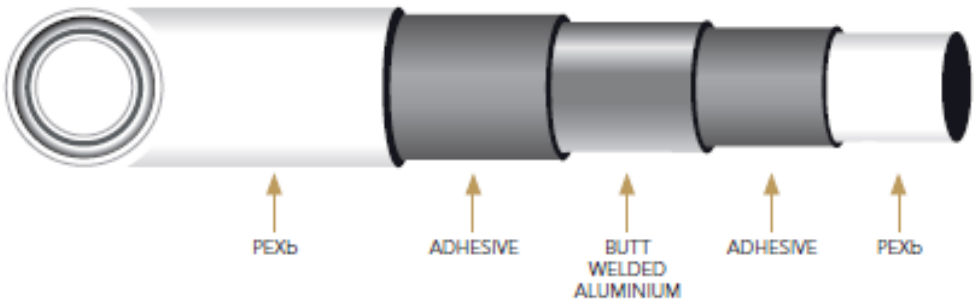
Technical Specification
Instantor®
PE-Xb/ Al/ PE-Xb Pipe



Product Code	IPAP101, IPAP102, IPAP103, IPAP104, IPAP105 (Uninsulated Pipe coils) IPAP111, IPAP112, IPAP113, IPAP114, IPAP115, IPAP116(uninsulated pipe lengths) IPAP201/301/401, IPAP202/302/402, IPAP203/303/403, IPAP204/304/404 (Insulated pipe) IPAP501, IPAP502, IPAP503. (Increased Insulated Pipe) IPAP601, IPAP602, IPAP603 (increased Insulation, BL-S1-d0 Fire rating)
Description	Multilayer Composited pipe, constructed with an inner and outer layer of silane method crosslinked Polyethylene PE-xB, bonded to a longitudinally TIG Butt welded 100% oxygen tight Aluminium layer. Plain and Pre-insulated
Size Range	16mm, 20mm, 26mm, 32mm, 40mm & 50mm (ND)
Max Operating Pressure:	10 Bar @ 20°C 6 Bar @ 95°C *See application table from ISO 21003-1 application class 2/6 Bar & 5/6 Bar*
Min Operating Pressure:	0 Bar
Min/ Max Operating Temp:	-10°C to 95°C (Peak Temperature of 110°C for a maximum of 1 Hour)
Material Specification	Aluminium, Polyethylene crosslinked method 'B', Stainless Steel 304, & HDPE
Manufactured to:	ISEN ISO 21003 Series ISO 9001:2015 ISO14001:2015
Certification:	WRAS REG4UK Cert No #2304341 KIWA REG4Uk Cert No#2303773 NSAI ISEN ISO 21003 Licence No #1.153.001.
Applications:	General Plumbing - Potable water & Hot water, General water-based heating systems. Radiant heating systems - Underfloor/wall, embedded

Application notes:

- Pex–Al–Pex pipe is suitable for installations embedded in concrete/Screed for radiant heating applications, (note: that brass fittings are NOT suitable for direct embedment in concrete, gypsum or similar aggregates. suitable protection measure is required - such as ducting/chase/sleeved/Denso tape or a similar type protective measure from direct contact)
- Pex-Al-Pex pipe can be installed outside, provided that it has an insulation sheath protecting the tube from excess UV ray exposure.
- Pex-Al-Pex pipe is suitable for installation underground provided that the installation conforms to the building regulations. (Note that Instantor Press - brass fittings are NOT suitable for use underground)
- Pex–Al–Pex pipe is prohibited to be installed on an uncontrolled solid fuel heating system primary line.
- Pex–Al–Pex pipe is prohibited to be installed in solar applications.
- Pex-Al–Pex pipe requires 1m of metallic pipe before connection to a high Heat source/Gas/Oil fired Boiler.

Products produced from brass are NOT suitable for use underground.

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INSTANTOR® PEXB/AL/PEXB PIPE TECHNICAL SPECIFICATIONS

UNIT OF MEASUREMENT		IPAP101	IPAP102	IPAP103	IPAP104	IPAP105
Outer Diameter	mm	16	20	26	32	16
Inner Diameter	mm	12	16	20	26	12
Weight	kg	0.110	0.147	0.268	0.355	0.550
Thickness of Aluminium	mm	0.25	0.3	0.35	0.5	0.25
Total Thickness	mm	2	2	3	3	2
Roll Length	M	100	100	50	50	500
Volume of water	l/m	0.113	0.201	0.314	0.531	0.113
Internal roughness	µm	7				
Thermal conductivity at 20°C	W/mk	0.43				
Coefficient of expansion	mm/m°C	0.025				
Degree of crosslinking	°C	≥65°C				
Oxygen permeability	mg/l	0				
Colour		White				
Type		PE-xB/Al/PE-xB multilayer pipe				
Field of application		Plumbing in civil, industrial and commercial applications				
Fluid		Potable water, technical water, and water glycol(*)				
Max peak temperature	°C	110				
Minimum operating temperature(*)	°C	0				
Maximum operating pressure at 95°C	bar	6				
Maximum operating pressure at 20°C	bar	10				
Duration at 95°C and 6 bar		Time duration to be determined by service conditions				
Storage		Avoid prolonged exposure to direct sunlight				
Minimum bend radius		5 times the diameter				

(*) In the case of water glycol, in order to define the minimum operating temperature, it is necessary to know the elements of the mixture and the various concentrations.

APPLICATION CLASS TABLE (ISO 21003-1)

Application Class	Design Temperature T_D °C	Time [b] at T_D Years	T_{max} °C	Time at T_{max} years	T_{mal} °C	Time at T_{mal} h	Typical field of application
1 [a]	60	49	80	1	95	100	Hot water supply (60°C)
2 [a]	70	49	80	1	95	100	Hot water supply (70°C)
4 [b]	20 + Cumulative 40 + Cumulative 60	2.5 20 25	70	2.5	100	100	Underfloor heating and low-temperature radiators
5 [b]	20 + Cumulative 60 + Cumulative 80	14 25 10	90	1	100	100	High-temperature radiators

[a] A country may select either class 1 or class 2 in conformity with its nation regulations.

[b] Where more than one design temperature for time and associated temperature appears for any class, they should be aggregated. "Plus cumulative" in the table implies a temperature profile of the mentioned temperature over time (e.g. the deign temperature profile for 50 years for class 5 is 20°C for 14 years followed by 60°C for 25 years, 80°C for 10 years, 90°C for 1 year and 100°C for 100h).

NOTE: For values of T_D, T_{max} and T_{mal} in excess of those in the table, this International Standard does not apply.In the case of water glycol, in order to define the minimum operating temperature, it is necessary to know the elements of the mixture and the various concentrations.

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