



PE-Xb/Al/PE-Xb multilayer pipe in coils

► IVAR-APEX R

Five-layer PE-Xb metal-plastic pipe

■ PRESENTATION



The IVAR APEX R pipe has a structure characterized as follows: inner layer of silane cross-linked polyethylene PE-Xb that remains in contact with the fluid to be distributed, high-performance adhesive film, aluminium (Al) layer welded longitudinally and homogeneously by laser technology, high-performance adhesive film, outer layer of silane cross-linked polyethylene PE-Xb that guarantees excellent protection from external agents. The pipe is compliant for applications in heating systems as well as for the transport of drinking water.

■ RANGE

The offer in the IVAR catalogue includes IVAR APEX R pipes in the following thicknesses and packaging:

- Ø 16 x 2 mm - coils of 100, 200 and 400 meters;
- Ø 18 x 2 mm - coils of 50, 100 and 200 meters;
- Ø 20 x 2 mm - coils of 100 meters;
- Ø 25 x 2.5 mm - coils of 50 meters;
- Ø 26 x 3 mm - coils of 50 meters;
- Ø 32 x 3 mm - coils of 50 meters.

■ TECHNICAL DETAILS

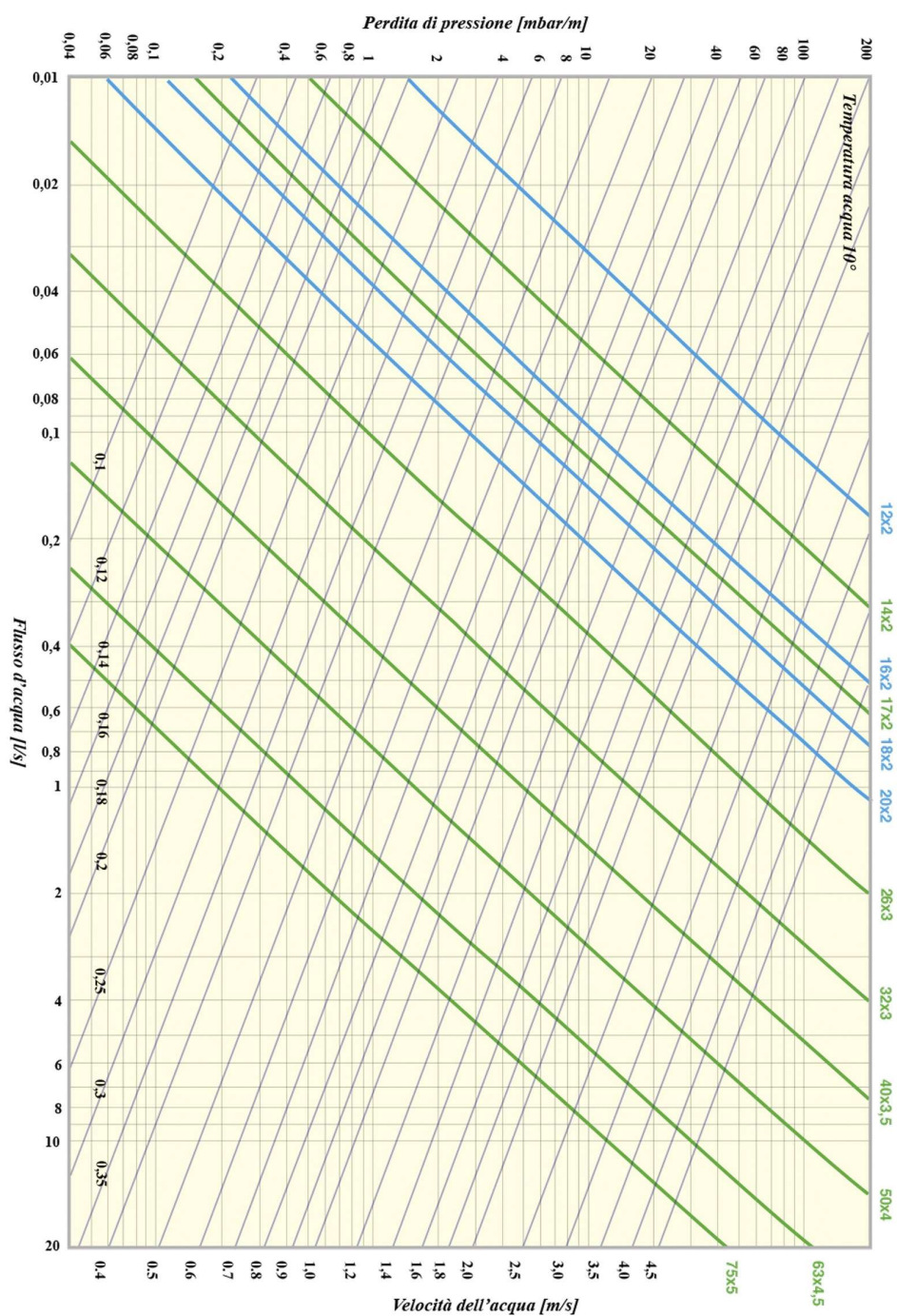
Pipe diameter and thickness (mm)	16 x 2	20 x 2	25 x 2.5	26 x 3	32 x 3
Outer diameter (mm)	16	20	25	26	32
Inner diameter (mm)	11.9	15.9	20	20	26
Aluminium thickness(mm)	0.2	0.24	0.3	0.3	0.5
Linear expansion coefficient (mm/mK)	0.026	0.026	0.026	0.026	0.026
Thermal conductivity (W/mK)	0.4	0.4	0.4	0.4	0.4
Peak temperature (°C)	100	100	100	100	100
Allowable maximum operating pressure (bar)	10	10		10	10
Water volume (l/min)	0.113	0.201	0.314	0.314	0.531
Bending radius without tools (mm)	80	100	110	110	160
Bending radius with bending tool (mm)	45	60		95	125
Internal surface roughness (mm)	0.007	0.007	0.007	0.007	0.007
Density (g/cm ³)	0.942	0.942	0.942	0.942	0.942

■ APPLICATION CLASSES ACCORDING TO UNI EN 21003

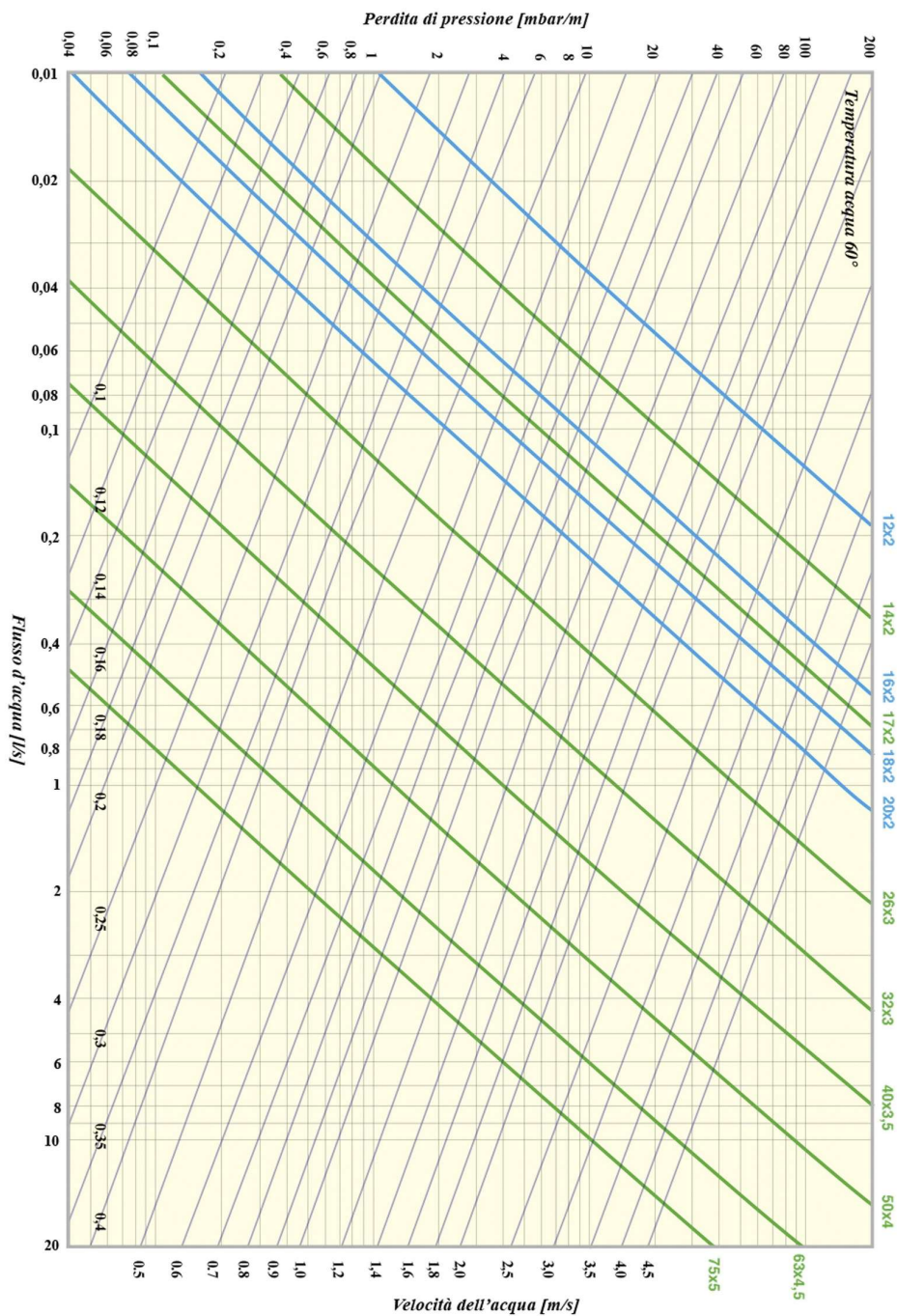
Application class	Operating temperature Td (°C)	Time at Td (years)	Tmax (°C)	Time at Tmax (years)	Tmal (°C)	Time at Tmal (hours)	Application
1 ^a	60	49	80	1	95	100	DHW (60 °C)
2 ^a	70	49	80	1	95	100	DHW (70 °C)
4 ^b	20	2.5	70	2.5	100	100	Underfloor heating and low temperature radiators
	40	20					
	60	25					
5 ^b	20	14	90	1	100	100	High temperature radiator heating
	60	25					
	80	10					

■ PRESSURE LOSS CHARTS

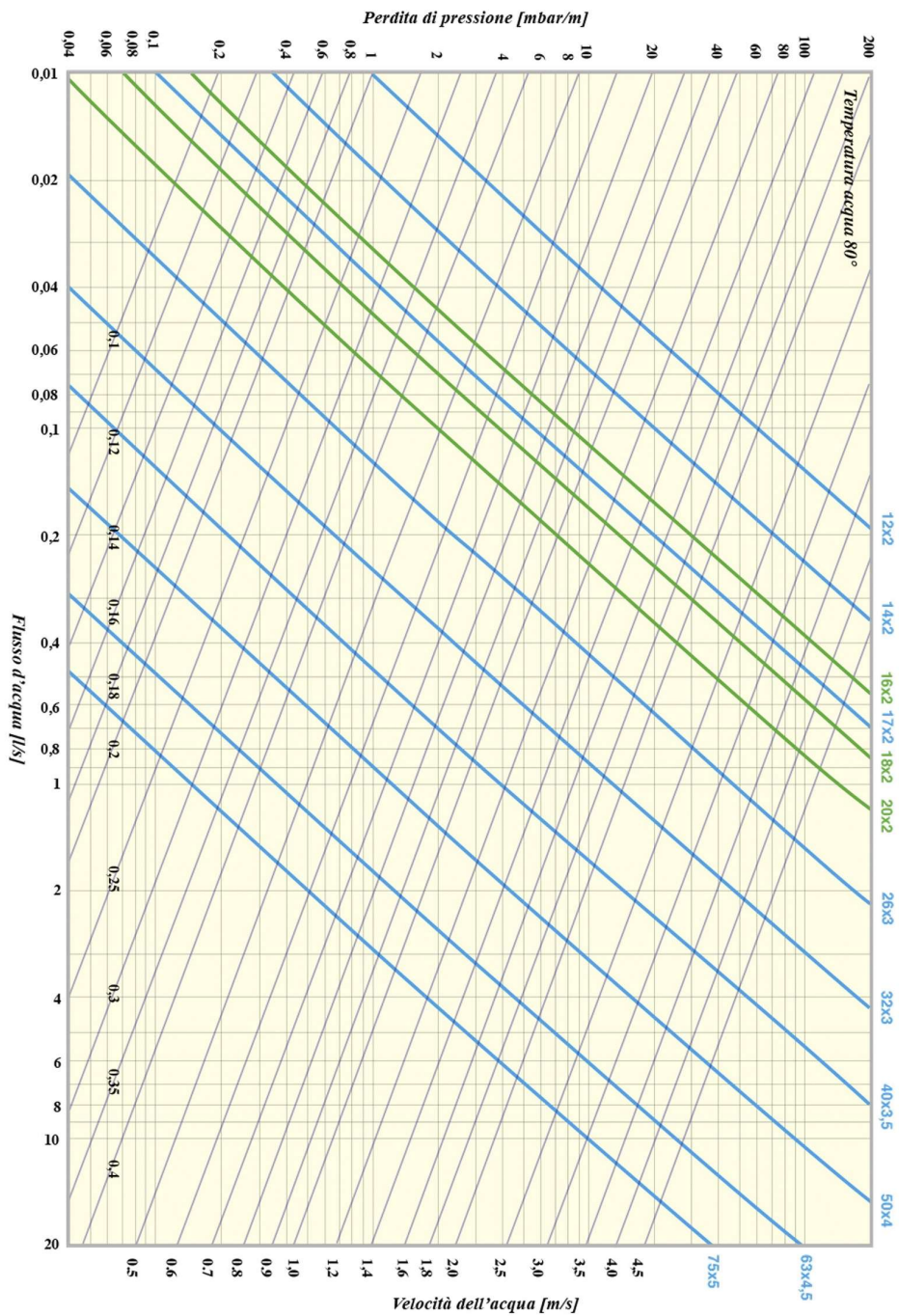
Graph for continuous pressure drops for water transport at 10 °C



Graph for continuous pressure drops for water transport at 60 °C



Graph for continuous pressure drops for water transport at 80 °C



For more information and continuous pressure drop table formats of IVAR APEX B piping, contact IVAR Linea Arancio.

■ SPECIFICATION SUMMARY

IVAR IVAR-APEX R **cod. I-APEX16R100**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 16 mm. Thickness: 2 mm . Coil: 100 m.

IVAR IVAR-APEX R **cod. I-APEX16R200**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 16 mm. Thickness: 2 mm . Coil: 200 m.

IVAR IVAR-APEX R **cod. I-APEX16R400**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 16 mm. Spessore: 2 mm . Coil: 400 m.

IVAR IVAR-APEX R **cod. I-APEX18R50**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 18 mm. Spessore: 2 mm . Coil: 50 m.

IVAR IVAR-APEX R **cod. I-APEX18R100**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 18 mm. Thickness: 2 mm . Coil: 100 m.

IVAR IVAR-APEX R **cod. I-APEX18R200**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 18 mm. Thickness: 2 mm . Coil: 200 m.

IVAR IVAR-APEX R **cod. I-APEX20R100**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 20 mm. Thickness: 2 mm . Coil: 100 m.

IVAR IVAR-APEX R **cod. I-APEX25R50**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 25 mm. Thickness: 2.5 mm . Coil: 50 m.

IVAR IVAR-APEX R **cod. I-APEX26R50**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 26 mm. Thickness: 3 mm . Coil: 50 m.

IVAR IVAR-APEX R **cod. I-APEX32R50**: Multilayer pipe with the following structure: inner layer of silanese-crosslinked polyethylene PE-Xb, adhesive film, intermediate layer of longitudinally and homogeneously butt welded aluminium, outer layer of silanese-crosslinked polyethylene PE-Xb. Coefficient of linear thermal expansion: 0.026 mm/mK. Thermal conductivity: 0.4 W/mk. Permissible peak temperature: 100 °C. Maximum allowable pressure: 10 bar. Internal roughness: 0.007 mm. Diameter: 32 mm. Thickness: 3 mm . Coil: 50 m.

■ CODES

I-APEX16R100	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 16 mm. Packaging: 100 metres.
I-APEX16R200	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 16 mm. Packaging: 200 metres.
I-APEX16R400	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 16 mm. Packaging: 400 metres.
I-APEX18R50	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 18 mm. Packaging: 50 metres.
I-APEX18R100	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 18 mm. Packaging: 100 metres.
I-APEX18R200	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 18 mm. Packaging: 200 metres.
I-APEX20R100	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 20 mm. Packaging: 100 metres.
I-APEX25R50	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 25 mm. Packaging: 50 metres.
I-APEX26R50	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 26 mm. Packaging: 50 metres.
I-APEX32R50	PE-Xb/Al/PE-Xb multilayer pipe in coils. Diameter: 32 mm. Packaging: 50 metres.

IVAR S.p.A.

Via IV Novembre, 181
25080 Prevalle (BS), Italy
T. +39 030 68028 – F. +39 030 68 01 329
info@ivar-group.com – www.ivar-group.com

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