



EUROklima

**The sustainable
efficiency**

Pre-insulated PLT-CSST stainless steel tubing systems for heat pumps and hot or cold water hydronic connections.



EUROTIS
Creating solutions





EUROKLIMA tubes

We are proud to present our latest innovation in the thermal installation sector: the new **PLT-CSST EUROKLIMA corrugated tubes made of AISI 304 pre-insulated stainless steel**. Studied and designed to meet the specific requirements of **heat pump systems**, and for any type of hydronic connection for heating or cooling. EUROKLIMA tubes offer an advanced solution that guarantees **energy efficiency** and optimal performance.

100%

SUITABLE FOR
HYDRONIC HEAT PUMPS

Eurotis: the ideal choice for every type of heat pump

Our tubes are suitable for connection to the following types of heat pumps:

- Air-water
- Water-water
- Geothermal
- Absorption

Main features



High-quality materials

The tubes are made of AISI 304 stainless steel, ensuring resistance to corrosion and durability.



Extreme formability

the special radius of curvature of our corrugations and the minimum thickness of 0.3 mm make for superior formability, simplifying installation even in complicated spaces and reducing the costs associated with the work.



Ultra-performing coating

The micro-cell molecular structure coating has been specially designed and tested for heat pump applications, ensuring reliable and long-lasting performance.



Diameters suited to different needs

Available in DN 20, 25 and DN 32 diameters, EUROKLIMA tubes easily adapt to different system configurations, offering maximum design flexibility.

Tested to overcome every environmental challenge

EUROKLIMA tubes have been subjected to rigorous behavioural tests under extreme conditions, including low and high temperatures, and high humidity levels.



Temperature

Our R&D team focused on ensuring that EUROKLIMA tubes can withstand adverse conditions without compromising performance. Tests at low temperatures confirm the tubes' ability to maintain their structural integrity and ensure reliable operation, even in winter. Similarly, high-temperature tests were conducted to ensure that the tubes maintain their robustness and physical properties in high temperature environments.



Humidity

Our tubes have also successfully passed rigorous tests for condensation formation. The test consists of conveying the fluid inside the tube at 7°C, the tube is then passed through thermostatic chambers at 20°C **with humidity at 60%, 70% and 80%.**

EUROKLIMA tubes have retained their functional characteristics, preventing the formation of condensation and eliminating the risk of degradation or corrosion.



The range

A01-0001-09917	PLT-CSST TUBE AISI304 DN20 1" - 50 m
A01-0001-10168	PLT-CSST TUBE AISI304 DN25 1" 1/4 - 25 m
A01-0001-09918	PLT-CSST TUBE AISI304 DN25 1" 1/4 - 50 m
A01-0001-09919	PLT-CSST TUBE AISI304 DN32 1" 1/2 - 30 m
A01-0001-10194	BLACK HEAT-SHRINK SHEATH DN20
A01-0001-10195	BLACK HEAT-SHRINK SHEATH DN25
A01-0001-10224	BLACK HEAT-SHRINK SHEATH DN32

Technical specifications

Tube

- Tmax of operation: (continuous): 150°C
- Tmax of operation: (short periods): 175°C
- Tmin of operation: -50°C

Insulation

- 13mm thermal insulation made of extruded and expanded elastomer conforming to EN 14304 free of CFCs, HCFCs and PVC, specially developed for hydronic connections to heat pumps.
- Scratch- and UV-resistant PE outer protective coating.
- Outer protective coating with water vapour resistance factor $\geq 15,000$ and certified in accordance with EN ISO 12086.
- Thermal conductivity: 0,038 W/m K (at 40° C).
- Reaction to fire class: EN 13501-1:E / DIN 4102:B2

Dimensioning

Correct dimensioning of the system with PLT-CSST tubes does not lead to a reduction in the flow rate. For example, a multilayer tube DN 26 is comparable to a PLT-CSST DN 20 because the internal diameter of the tube is the same.

PLT-CSST Eurotis tubes

DN	Inch	Ed	In
20	1"	25.0 mm	19.7 mm
25	1" 1/4	33.0 mm	26.5 mm
32	1" 1/2	41.0 mm	33.0 mm

Multilayer tubes

Ed	In
26.0 mm	20.0 mm
32.0 mm	26.0 mm
40.0 mm	33.0 mm

EUROKLIMA PRESSURE DROPS

For correct sizing of the system made with CSST EUROKLIMA corrugated stainless steel tubes, consult the pressure drop table, an essential reference tool for every plumbing and heating professional.

DN20			DN25			DN32		
Flow rate		Δp	Flow rate		Δp	Flow rate		Δp
l/min	m ³ /h	mbar/m	l/min	m ³ /h	mbar/m	l/min	m ³ /h	mbar/m
1.00	0.06	0.08	1.67	0.10	0.04	3.33	0.20	0.08
1.17	0.07	0.11	3.33	0.20	0.18	5.00	0.30	0.18
1.33	0.08	0.14	5.00	0.30	0.41	6.67	0.40	0.32
1.50	0.09	0.18	6.67	0.40	0.73	8.33	0.50	0.50
1.67	0.10	0.22	8.33	0.50	1.14	10.00	0.60	0.72
3.33	0.20	0.89	10.00	0.60	1.65	11.67	0.70	0.98
5.00	0.30	2.02	11.67	0.70	2.26	13.33	0.80	1.28
6.67	0.40	3.62	13.33	0.80	2.96	15.00	0.90	1.62
8.33	0.50	5.68	15.00	0.90	3.75	16.67	1.00	2.00
10.00	0.60	8.21	16.67	1.00	4.64	33.33	2.00	7.93
11.67	0.70	11.21	33.33	2.00	18.83	50.00	3.00	17.75
13.33	0.80	14.69	50.00	3.00	42.72	66.67	4.00	31.44
15.00	0.90	18.64	66.67	4.00	76.39	83.33	5.00	48.98
16.67	1.00	23.07	83.33	5.00	119.91	100.00	6.00	70.38
33.33	2.00	93.74				116.67	7.00	95.61
						133.33	8.00	124.67





Installation recommendations

External installation

It is recommended to avoid shocks and damage to the tube and coating, so that the performance of the system is not compromised

Underground installation

When laying the EUROKLIMA tubes underground, the insulation layer must not be damaged and/or crushed. This requires:

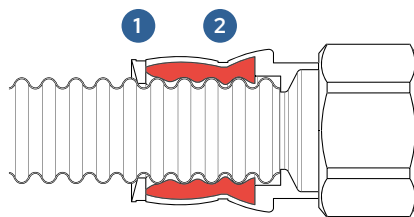
- ensuring a stable, flat-surface installation bedding free of pebbles, stones and any other materials.
- in the upper part, once buried, the tube must be protected by rigid tubular sheaths or artefacts made of concrete or sheet metal or equivalent materials.
- the minimum burying depth must be assessed according to road loads and frost danger.

There is no need to install anti-vibration joints as EUROKLIMA is able to absorb oscillations or vibrations while guaranteeing tightness.



Press fitting system ePRESS Technology

The press fitting system combines the best traditions of reliability, formability and safety of Eurotis PLT-CSST tubes with the practicality and speed of installation of the ePRESS technology.



Mechanical seal: the 1st point deforms the entry of the fitting where there is a "tooth" which, after pressing, blocks the tube inserting itself between two corrugation thus preventing the tube from slipping out. Hydraulic seal: the 2nd point deforms the gasket permitting its penetration inside the PLT-CSST tube corrugations and guaranteeing a safe and durable tightness.

The pressing technique has been entirely designed by Eurotis

The pressing takes place through the "E" profile Eurotis jaw, which allows a controlled fitting and gasket deformation, ensuring the seal. Moreover, thanks to the special "saddle" the correct positioning of the fitting is guaranteed and pressing is extremely simple and immediate, reducing the possibility of errors during installation.

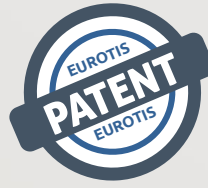
Maximum tightness

With ePRESS Technology, the joint is installed by compressing the fitting onto the tube, ensuring maximum tightness. This process ensures a permanent joint and maximum safety for all types of installations.

Resistant and reliable gaskets

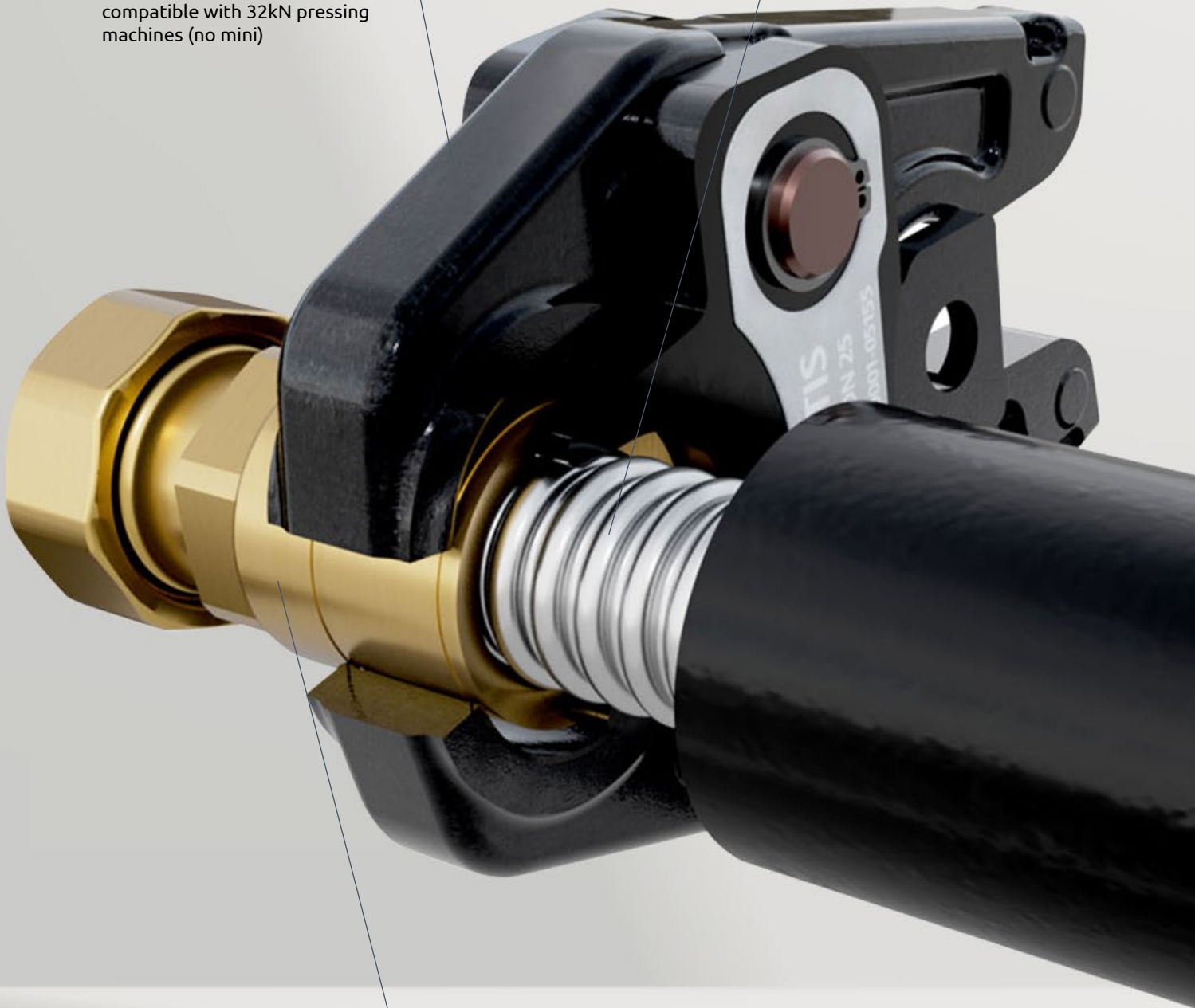
All ePRESS Technology fittings are made in brass. Eurotis proposes a complete range of fittings with specific gaskets in EPDM-PEROX suitable to carry drinking water and resistant at continuous operating temperatures of up to 150°C.





PATENTED JAW
compatible with 32kN pressing
machines (no mini)

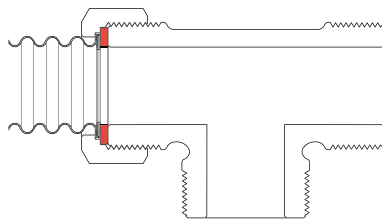
PLT-CSST TUBE
0.3 mm thickness



BRASS FITTINGS

Flanging system

The flanging system is the most widely used in the plumbing sector and is the system that, thanks to Eurotis, has made PLT-CSST tube history.



Mechanical seal: takes place by compression of the last two corrugations of the PLT-CSST tube, this procedure creates a flat stop called a flange. Hydraulic seal: ensured by flat gasket.

Mechanical and hydraulic tightness guaranteed

The mechanical tube/fitting seal is ensured by the high resistance of the flange, due to the 0.30 mm tube minimum thickness and to the compression of the last two corrugations. The hydraulic seal is guaranteed by different types of flat gaskets: KLINGERSIL and EPDM for water. Moreover, the system nuts are built with a special seat, which enhances their hold.



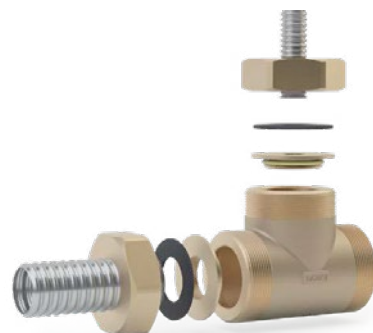
One system for each type of plant

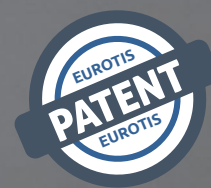
The system initially designed for PLT-CSST tubes from DN10 to DN25 has been subject to further development in recent years, resulting in its XL version.

This latest one is for tubes of larger diameters up to DN50 (2" 1/2) and retains the same quality standards and features that have always distinguished it.

Practical and fast reductions thanks to new patented adapters

With the new Eurotis patented adapters, it is possible to reduce the diameter of fittings, saving time and installation costs. The adapters are available in diameter DN 32 (1" 1/2) and can be applied to any type of Eurotis XL flange fitting.





Perfect flanges with Eurotis tools

To flange the PLT-CSST tubes, Eurotis provides the installer with ADAPTOR (DN10 and DN25) e XL ADAPTOR (DN32 and DN50). Patented by Eurotis, they are semi-automatic flanging tools compatible with major standard pressing machines.

To perform the flanging of CSST small diameters tubes, Eurotis also provides the installer with 2 pieces of tools:

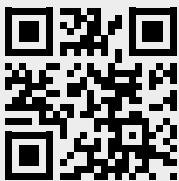
- manual (DN10 and DN25);
- automatic (DN10 and DN25).

ADAPTOR

XLADAPTOR



Eurotis is much more, visit www.eurotis.it



To learn more about who we are and what we do, we invite you to visit our website. You will find a wide range of information about our solutions, our products, and our values. Enter our universe and discover all that Eurotis has to offer.

EUROTIS
Creating solutions

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