EUROklima
The sustainable efficiency

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

EUROTIS
Creating solutions

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EUROTIS EUROKLIMA PLT-CSST FOR HEAT PUMPS AND HYDRONIC CONNECTIONS DN20

EUROklima

Pre-insulated PLT-CSST stainless steel tubing systems for monobloc heat pumps and hydraulic connections

We are proud to present our latest innovation in the heating systems sector: the new EUROKLIMA **PLT-CSST pre-insulated corrugated tubes in AISI 304 stainless steel**. Designed and developed to meet the specific needs of systems with monobloc **heat pumps** and for any type of hydraulic connection for heating or cooling. EUROKLIMA tubes offer an advanced solution to ensure **energy efficiency** and optimal performance.

Main features

304

High-quality materials

The tubes are made of **pliable corrugated AISI 304 stainless steel.** They guarantee corrosion resistance and durability.

Extreme formability

The particular bending radius of the tubes, resulting from Eurotis corrugations and a minimum thickness of 0.3 mm, **allows manual bending** without ovalisation or deformation of the internal diameter, **thus eliminating the need for curved fittings.**

Ultra-performing coating

EUROKLIMA tubes are designed to make installation quicker and more practical. Thanks to their high formability, **the number of fittings and joints is reduced to a minimum**, simplifying installation in any context. **The integrated thermal insulation** eliminates the need for further processing, ensuring efficiency and time savings on site.

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.

Ultra-performing coating

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

Temperature

Temperature

The R&D team evaluated the thermal dispersion of EUROKLIMA tubes under different operating conditions, analysing the effectiveness of the insulation at various water and ambient temperatures. The tests confirm that the tubes offer excellent performance in reducing heat loss, providing stable thermal control in heating, cooling and hot or chilled water systems.

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

EUROKLIMA PLT-CSST AISI 304 tubes, in rolls

A01-0001-**09917**	DN 20	50 m
A01-0001-**10168**	DN 25	25 m
A01-0001-**09918**	DN 25	50 m
A01-0001-**09919**	DN 32	30 m

Heat-shrink sheath

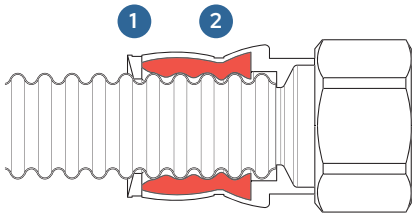
A01-0002-**10194**	Black heat-shrink sheath DN 20	2 pieces, 10 cm
A01-0002-**10195**	Black heat-shrink sheath DN 25	2 pieces, 12 cm
A01-0002-**10224**	Black heat-shrink sheath DN 32	2 pieces, 14 cm
A01-0001-**10400**	Black heat-shrink sheath with adhesive DN 20	1 m
A01-0001-**10401**	Black heat-shrink sheath with adhesive DN 25	1 m
A01-0001-**10402**	Black heat-shrink sheath with adhesive DN 32	1 m

Customised EUROKLIMA kits ready for installation

Kits are available on request in diameters **DN 20, DN 25 and DN 32**, allowing you to freely choose the length of the tube from 5 to 20 metres. **They are ready for installation thanks to the pre-assembled ePRESS Technology press fittings and heat-shrink tubing already applied.** These kits are ideal for connection to heat pumps and can be customised to suit any system requirement. For more information, please write to **vendite@eurotis.it.**

Press fitting system ePRESS Technology

The **patented** 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 twocorrugation 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.

Efficiency and quickness in heat pump connections

The ePRESS Technology press system is perfectly suited for connection to heat pumps, thanks to Eurotis' patented **swivel nut fittings.** The range is completed by female and male threaded fittings, sleeves and T-fittings, available from DN 20 to DN 32.

Resistant and reliable gaskets

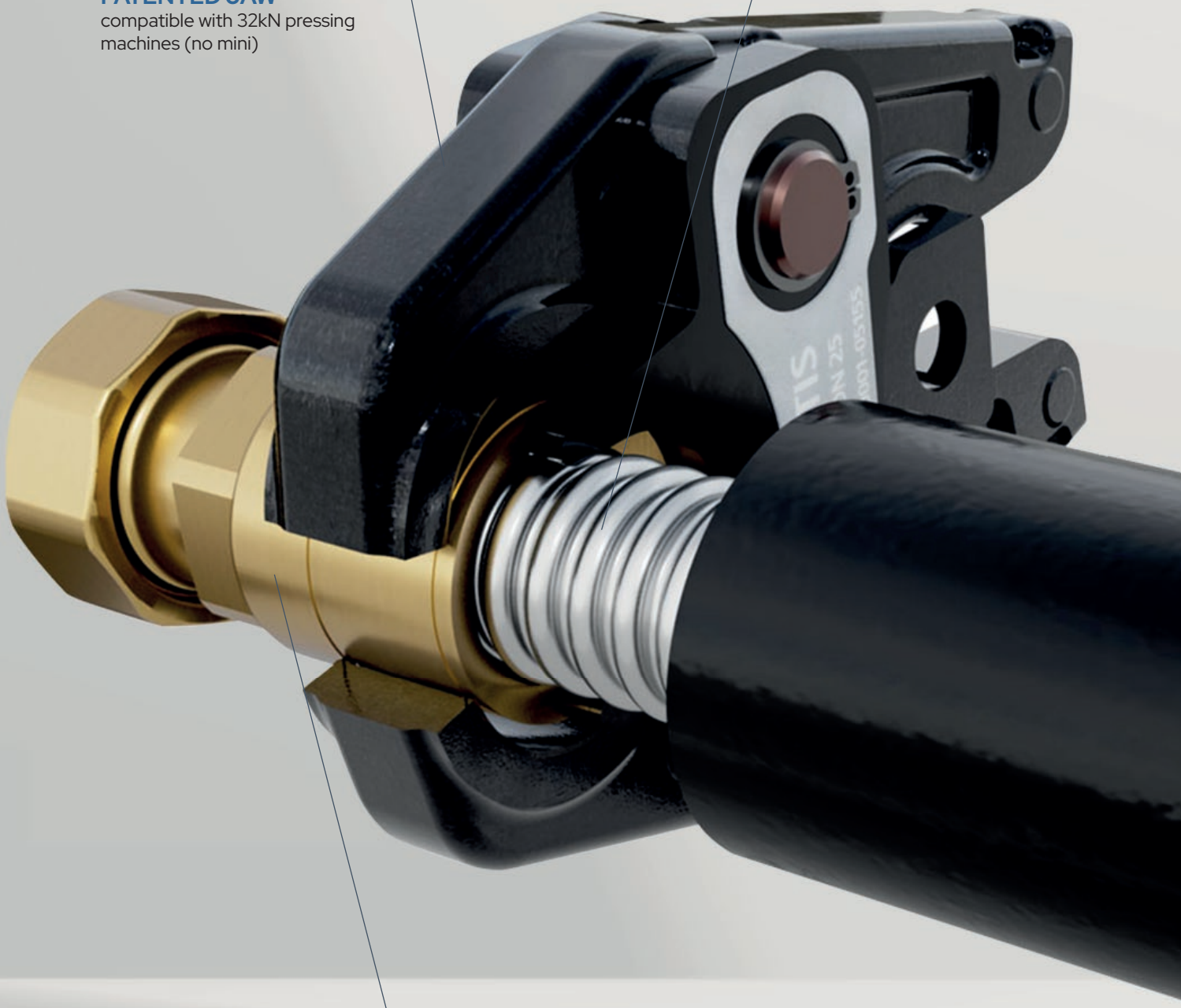
All ePRESS Technology fittings are made in brass. Eurotis proposes a complete range of fittings **with specific gaskets in EPDM-PEROX** suitable to carry drinking water and resistant at continuous operating temperatures of up to 150°C.

PRESS Technology

EUROTIS PATENT EUROTIS

EUROTIS PLT-CSST TUBE
min. 0.3 mm thickness

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



BRASS FITTINGS

Why is EUROKLIMA the right choice for your system?

When designing a heat pump system, attention is often focused on choosing the most efficient machines and correctly sizing the system. However, the tube – **an essential but often underestimated component** – can have a decisive influence both on site, where ease of installation reduces installation time and complexity, and during system operation, affecting overall energy efficiency.

No fittings!

If, for example, traditional tubes measuring 1" or more are used, manual bending is not always feasible and each bend requires the installation of a fitting. Each fitting involves operations such as cutting, flaring, lubrication and/or pressing, with a processing time of several minutes for each connection. **Eurotis tubes, on the other hand, allow bends to be made manually,** significantly reducing both installation time and the number of fittings required for the system. This makes it possible to create **continuous lengths of tubing without joints**, using only two fittings per line: to connect the end sides.

Pre-insulated tubes

Traditional medium-large tubes are supplied in bars, which must be insulated manually, resulting in longer installation times and higher costs. Eurotis, with its EUROKLIMA line, **offers a ready-to-use solution that is pre-insulated and features a scratch-resistant**, wear-resistant and UV-resistant coating, making it ideal for outdoor installation.

Tubes in convenient rolls

Available in rolls, EUROKLIMA tubes are **easy to transport and lay on site**, offering a unique advantage over traditional bar tubes, which are often bulky and difficult to handle.

Greater flow drops

In heat pump systems, the choice of tube is important: **pressure drops affect efficiency and energy consumption.**
Heat pumps operate at lower temperatures and high flow rates, so water must circulate easily. **Sharp bends or non-full-bore fittings increase resistance** and compromise the overall performance of the system. Contrary to popular belief, the corrugations in Eurotis tubes do not cause significant pressure drops.

The real difference lies in the reduction in fittings and the continuity of flow guaranteed by the full flow rate of Eurotis ePRESS technology.

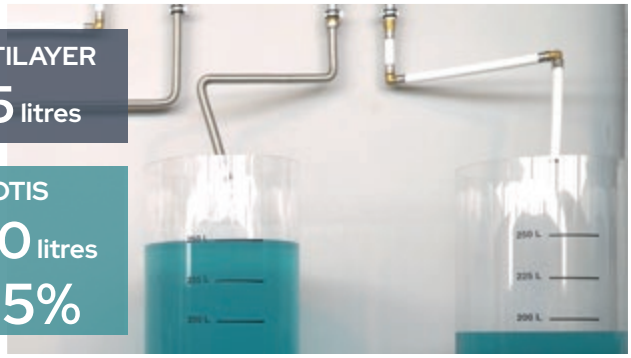
Comparison tests

Tests conducted in our laboratories show that, **with the same internal diameter, inlet flow rate and test time (6 minutes)**, a system made with Eurotis DN 25 tube **guaranteed a 25% higher flow rate** than a system with Ø32 multilayer tube installed with traditional fittings.

Pressure drops are therefore reduced to a minimum:

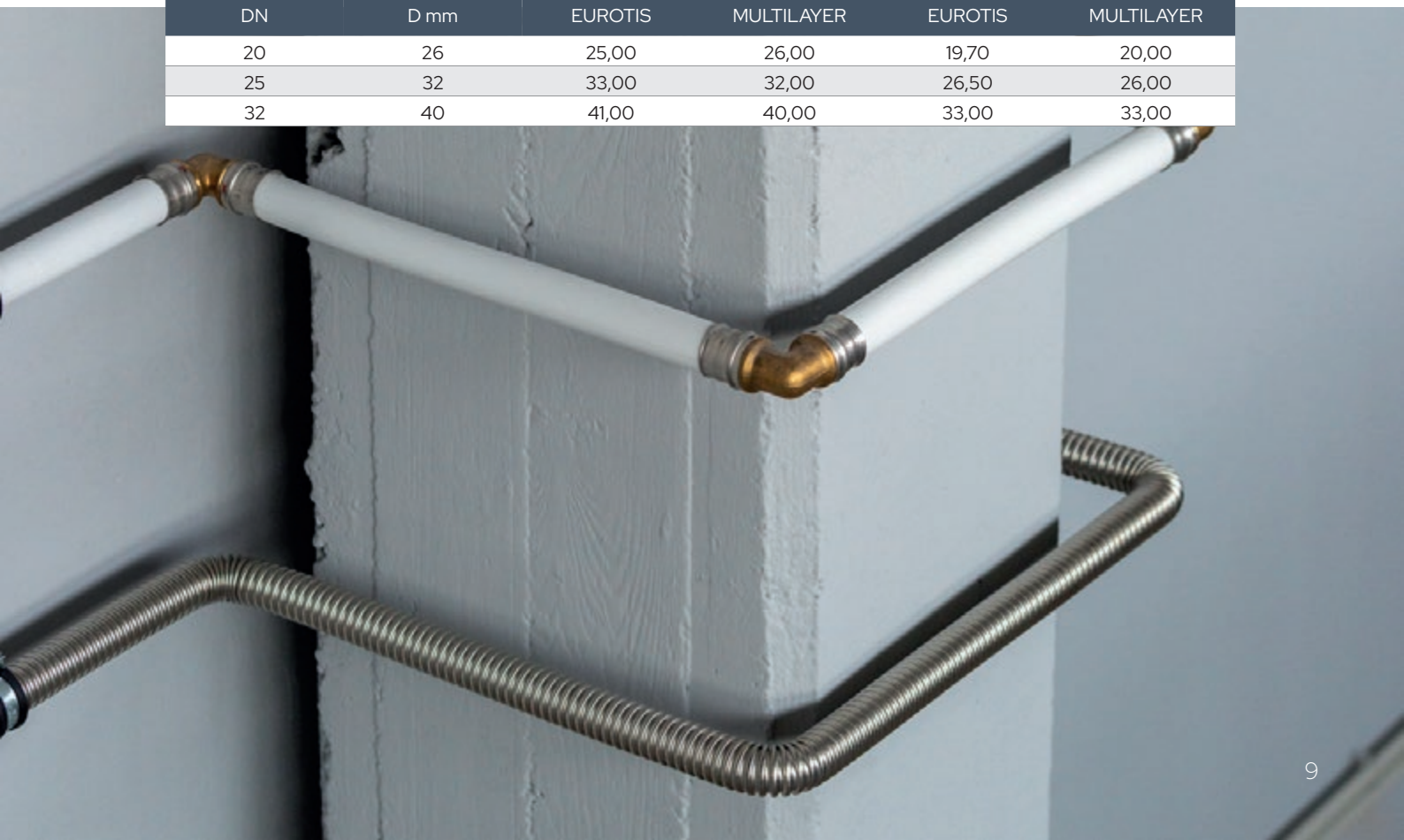
- **fewer fittings and joints,**
- **curves that can be made**
- **manually without ovalisation, more regular and continuous flow.**

The result is a more efficient system, with reduced installation times and optimal performance.



Internal diameter comparison table

EUROTIS	MULTILAYER	Ø exterior mm		Ø interior mm	
DN	D mm	EUROTIS	MULTILAYER	EUROTIS	MULTILAYER
20	26	25,00	26,00	19,70	20,00
25	32	33,00	32,00	26,50	26,00
32	40	41,00	40,00	33,00	33,00



Installation recommendations

Heat-shrinkable sleeves

Eurotis offers black heat-shrinkable sleeves, available with or without adhesive, ideal for protecting connections. Once the connection has been made, **we recommend applying the sleeve** to the joint between the tube and the fitting to ensure complete protection and maintain the integrity of the insulation.

Anti-vibration joints

With EUROKLIMA, **there is no need to install anti-vibration joints.** Eurotis PLT-CSST tubes and the ePRESS Technology press-fit system absorb oscillations and vibrations, ensuring maximum sealing and reliability at all times.

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.

Technical specifications

- Maximum operating temperature: 110°C*
- Minimum operating temperature: -50°C*
- 13 mm thermal insulation made of extruded and expanded elastomer according to EN 14304 free of CFCs, HCFCs and PVC, specially developed for hydraulic connections to heat pumps.
- Scratch and UV-resistant PE outer protective coating..
- External protective coating with water vapour resistance factor $\mu \geq 10.000$.
- Thermal conductivity: ≤ 0.037 W/m K (at 40 °C) according to EN ISO 8497 – EN 12667*.
- Fire reaction class: B_L - s2, d0.

* Value refers to the type of insulating material.

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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MC-1300-10208 12_2025