

The main advantages derived from the implementation of heating and sanitary systems with the Gerpex system are summarised below:

**High temperature resistance**  
Withstands temperatures up to 95°C during continuous operation, in the peak temperature 110°C being.

**High pressure resistance**  
Withstands 10 bar pressure at 95° C during continuous operation.

**Contained linear expansion**  
The linear expansion resulting from temperature changes is similar to that of copper.

**High insulation and sound absorption**  
The material used has the ability to muffle noise and vibrations. The system can also be provided with class "1" fire-resistant insulating cover.

**Low pressure drops**  
The smooth surface of the pipe prevents pipe scale from settling and makes it easier for the fluid to flow, thus considerably reducing pressure drops.

**Possibility to adopt high water speeds**  
The tube is particularly resistant to mechanical erosion from solid particles that water usually drags in its wake

**Bearing strength and abrasion resistance**  
Thanks to the strength of the thick aluminium layer and the reticular polyethylene (PE - X) pipe is therefore crush resistant.

**Oxygen proof**  
The aluminium layer makes the Gerpex pipe gas-proof and consequently, oxygen-proof.

**Outside chemical agents strength**  
In-wall or buried Gerpex pipes withstand acid and basic environmental aggressions.

**Electrochemical corrosion proof**  
This characteristic is the result of the construction materials used to make the pipe and of the addition of an appropriate dielectric element to the union joints, in polycarbonate.

**Reduced weight and ease of installation**  
Thanks to its specific low weight and its being easily foldable, the Gerpex system facilitates all the installation operations.  
Once folded, the pipe remains in the required position, just like a metal pipe.  
Assembling the pipe fittings is easy and fast, increasing the competitiveness of the system over traditional components, and speeding up installations.



Shear  
(for DN 14-26 pipes)



Pipe cutter  
(for all diameters)



Flarer & calibrator  
DN 14, 16, 18, 20 and  
26 DN pipes



Flarer & calibrator  
DN 32 pipe



Hydraulic pipe bender  
for DN 26-32 pipes



Internal spring for  
binding pipe  
DN 14-26 pipes



External spring for  
bending pipe  
DN 14-20



Wire press  
(230V - 50Hz) in a  
metal case



Battery operated  
(12V) press (machine)  
in a metal case



DN 16, 18, 20, 26 and  
32 Gerpex pliers

Due to continuous improvement in technologies and materials, products specifications as well as performances are subject to change without notice.

Rev. 0 06/2001 - Ufficio Pubblicità & Immagine Emmeti Spa - M&L/2000 Arcari



# GERPEX SYSTEM

EMMETI - GERPEX

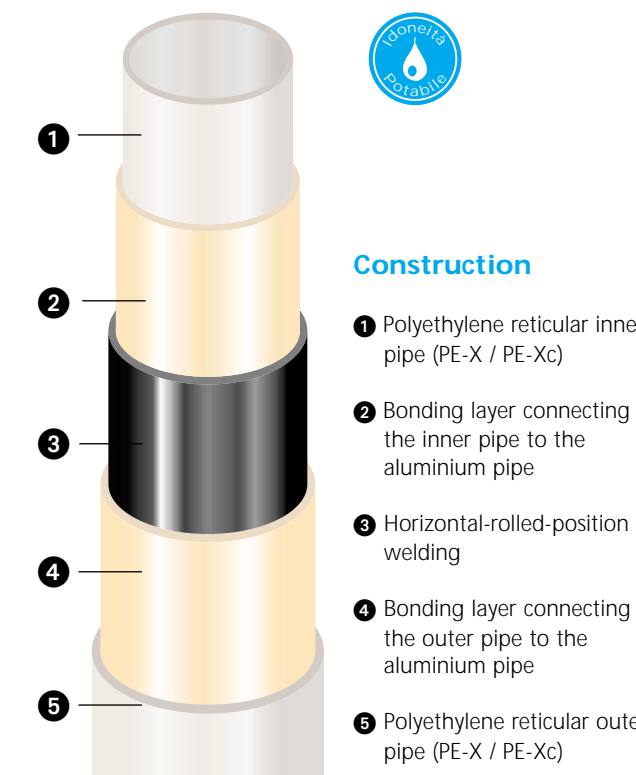


GERPEX is Emmeti's most advanced and efficient system to implement thermal and sanitary systems by using multi-layer pipes and special union joints.  
Piping is made up of multi-layer composite, homogenised and structured thanks to a highly sophisticated technical process, which allows for the construction of a polyethylene reticular pipe, internally reinforced with top-side welded aluminium core.  
A wide range of press as well as screw fitting is available. The wide range of fittings and the various assembly solutions make the Gerpex system truly reliable and complete.

- Application field:**  
The Gerpex system is perfectly suited for:
- 1 Heating systems
  - 2 Refrigerated water cooling units
  - 3 Water systems
  - 4 Compressed air systems

*As to the transportation of other fluids, please contact our Technical Desk for further information.*





**Performances**

|   |              |
|---|--------------|
| Max. operating temperature                  | 95 °C*       |
| Temporary peak temperature                  | 110 °C*      |
| Maximum allowable working pressure at 95 °C | 10 bar       |
| Coefficient of linear expansion             | 0,026 mm/m°C |
| Thermal conductivity                        | 0,45 W/m °C  |
| Minimum radius of curvature                 | 5 x Ø pipe   |

\* For water-run systems.

**The product range**

The Gerpex pipe comes in rolls in the following diameters : DN 14-16-18-20-26-32 or in bars for DN 26 and 32 diameters. Rolled pipes are also available pre-insulated with a polyethylene-coated sheath.



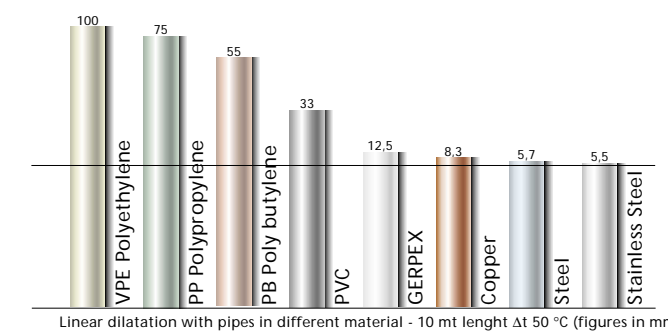
**Dimensions**

| Gerpex pipe outside diameter  | mm   | 16   | 20   | 26   | 32   |
|-------------------------------|------|------|------|------|------|
| Gerpex pipe inside diameter   | mm   | 12   | 16   | 20   | 26   |
| Wall thickness                | mm   | 2    | 2    | 3    | 3    |
| Weight                        | Kg/m | 0,13 | 0,15 | 0,25 | 0,32 |
| Water capacity                | l/m  | 0,11 | 0,20 | 0,31 | 0,53 |
| Insulation thickness*         | mm   | 6    | 6    | 8    | 8    |
| Bare pipe package (roll)      | m    | 100  | 100  | 50   | 50   |
| Insulated pipe package (roll) | m    | 100  | 50   | 25   | 25   |

\*If provided  
Insulation thermal conductivity: 0,037 W/m°C

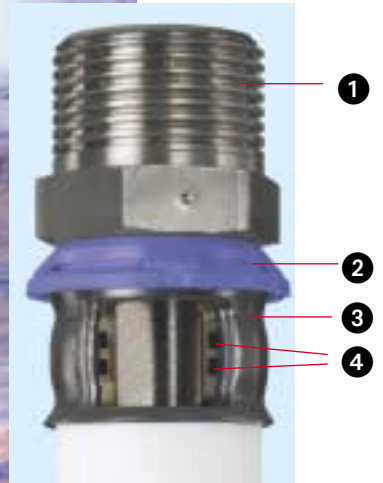
**Expansion**

The following diagram shows the Gerpex coefficient of expansion when compared to other materials used to make thermal and sanitary systems.



**Certification and quality**

Both the characteristics and performances of the Gerpex pipe are confirmed and certified by numerous quality labels and international homologations. More specifically, the Gerpex pipes were awarded the DVGW quality certificate in compliance with the WS42 Technical Regulation by the highly renowned German Institute. It basically means that their ability to carry water for water system (hot and cold) is certified for 50 years at least.



**Construction**

- 1 ST-UNI EN 12165 CW617N / ST-UNI EN12164 nickel brass body
- 2 Dielectric Polycarbonate sleeve ring
- 3 AISI 304 annealed stainless steel sleeve
- 4 EPDM dual O-ring ISO 7/1 (DIN 2999) Threads

The Gerpex Emmeti press-fitting have been specifically designed for installation by means of a technique based on the use of electrical presses. Thanks to its ease and rapidity of installation, together with the implementation of highly safe temperature and pressure seals, this type of junction has become increasingly successful. The pliers, uniquely engineered for each union joints diameter, compresses a stainless alloy sleeve which locks the pipe to the union joint core. Hydraulic and mechanical packing is ensured by the specific profile of the union joint and the dual O-Ring. Once pressed, the union produces a junction featuring highly stable and durable characteristics which make it suitable for in-wall installations.

**Manufacturing details**

Each sleeve has its diameter embossed. The plastic ring carries out three essential tasks:

- prevents electrical contact between the pipe aluminium layer and the brass body of the union joint, avoiding corrosion effects.
- thanks to appropriate openings, one can check whether the union joint has reached the seat.
- guide the right positioning of the jaws around the sleeve.



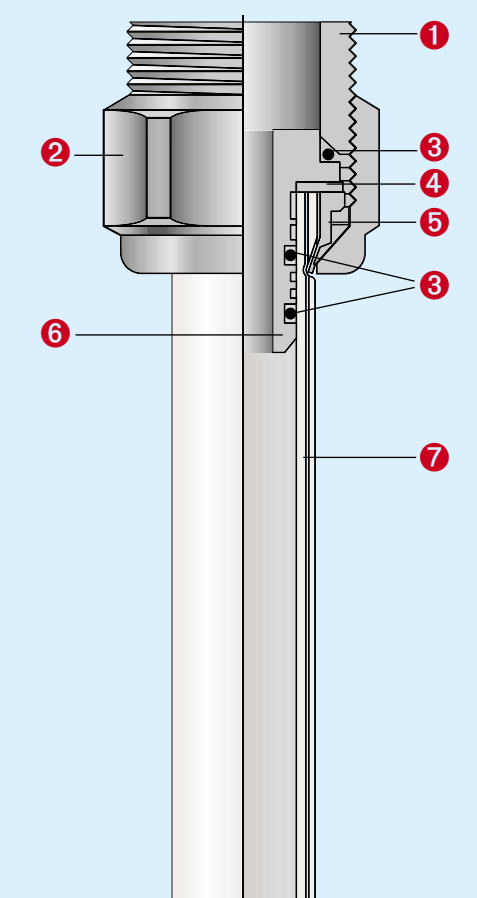
The use of screwed pipe fitting makes the installation of the Gerpex pipe simple and above all, it requires virtually no equipment. Made from OT 58 brass, they ensure high hydraulic packing standards thanks to the O-ring system mounted on the pressure cone. All the union joints are fitted with an appropriate dielectric ring to protect the integrity of the pipe.

**The product range**

Adapters for the DN 16, 20, 26 and 32 pipes are available from our extensive Emmeti and Giacomini product range



- 1 Union joint body
- 2 OT 58 brass nut
- 3 O-ring
- 4 Dielectric ring
- 5 OT 58 brass fastening ring
- 6 OT 58 adapter
- 7 Gerpex pipe



**SCREWED FITTING**

**Cut**

Cut the Gerpex pipe with the shear, making sure that the cut is perpendicular with the pipe axis.



**Sizing**

Size the cut end by using the appropriate tool designed to calibrate and flare the end of the pipe. Although easy to perform, the operation is important in that it determines the right inside diameter of the pipe and creates the blunt which enables the perfect insertion of the union joint.



**Insertion of the screw fitting**

Insert first the nut, then the fastening ring and the adapter all the way into the seat inside the pipe.



**Screwing**

Screw the nut and tighten with an Allen wrench, without exerting any excessive pressure.



**PRESSED FITTING**

**Cut**

Cut the Gerpex pipe with the shear, making sure that the cut is perpendicular with the pipe axis.



**Sizing**

Size the cut end by using the appropriate tool designed to calibrate and flare the end of the pipe. Although easy to perform, the operation is important in that it determines the right inside diameter of the pipe and creates the blunt which enables the perfect insertion of the union joint.



**Insertion of the press fitting**

Insert the union joint in the pipe until reaching the seat, checking the right positioning through the openings on the plastic ring.



**Pressing**

Place the jaws around the sleeve, making sure that the plastic ring collar and the jaws throat match. Start the press and run it until the completed pressing process signal is generated.



**Installation completed**

Remove the press and open the jaws.

