



Made in Poland

Polish manufacturer of internal water transmission and heating systems

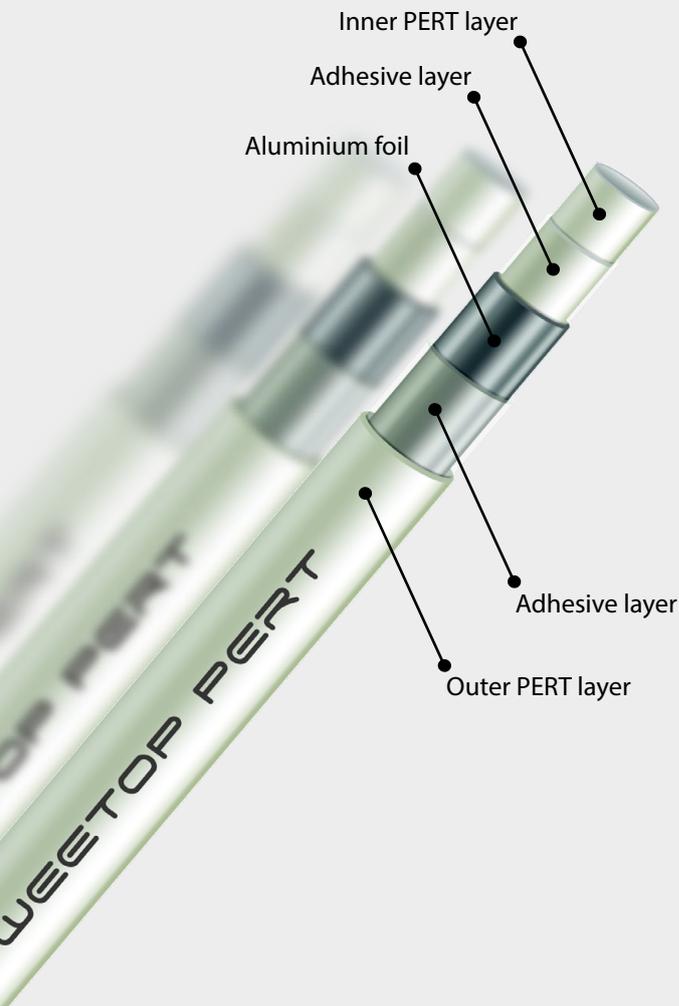
Tweetop system broad range of application includes:

-  **Tap water installations - hot and cold**
-  **Radiator heating installations**
-  **Underfloor and wall surface heating and cooling installations, for every kind of building, including renovation of existing houses and flats**
-  **Cooling installations based on ice water**



The Tweetop System solution includes pipes and fittings in 12-75 mm diameter range, with a set of essential accessories and installation tools dedicated to specific applications of the system.

Tweetop PERT system is based on multilayer pipes joined by pressed connections, is currently one of the most advanced and innovative solutions available on the market. This level of innovation is specified by two factors - the construction of the pipes and the connection technology. Tweetop PERT pipes have a multilayer structure with a core made from ultrasonically welded aluminium pipe. Then, after adding two layers of the raised temperature polyethylene (PERT) material to the inside and outside of the aluminium pipe, we obtain a multilayer pipe capable of simultaneous work under the influence of pressure and temperature rated at 10 bar and 95°C. This unique combination of plastic material and conventional aluminium insert allow Tweetop PERT pipes to keep the advantages of both traditional and plastic pipes while eliminating their disadvantages.



Tweetop System parameters and properties

1. Long life and durability:

- minimum 50 years of service life,
- working parameters: 95°C/3 bar; 90°C/6 bar; 65°C/10 bar with possibility of anti Legionella overheating.

2. Hygienic: made of non-toxic PERT, perfect for drinking water systems.

3. Resistance to corrosion and forming of salt deposits, prevents the development of bacteria.

4. Versatility - Tweetop System can be used in the following types of installations:

- hot and cold tap water supply,
- radiator heating,
- underfloor and wall surface heating plus cooling installations - for every kind of building, including renovation of existing houses and flats,
- cooling installations based on ice water.

5. Long service life: PERT pipe does not wear out in high temperature and during fast water movement.

6. Energy saving: significant heat loss reduction thanks to low thermal conductivity – only 0.43 W/m.K.

7. Flexibility (elasticity): possibility to form bends and loops with small radius.

8. Hydraulic impact resistance: rigidity and at the same time flexibility of the PERT pipe allows it to bear the hy-



draulic impacts in a better way than any other type of pipe.

9. **Shape-memory:** pipe can be bended multiple times and retains its shape after bending.
10. **Low thermal elongation:** very low coefficient of linear thermal elongation (0.025mm/m[°]K), similar to the metal and copper pipes and much lower in comparison to PEX pipe.
11. **Oxygen impenetrability:** thanks to aluminum layer, the oxygen diffusion is impossible – pipes and fittings allow for 100% elimination of oxygen penetration into the system.
12. **Absolute tightness** of connections in the system, while using press, push or screw fittings from the Tweetop range.

13. **Resistance to chemical compounds and corrosion:** accordingly to ISO/TR10358 standard, plastic pipes, in comparison to metal pipes, have bigger resistance to chemical compounds and can be used with corrosive heat carriers.
14. **Smoothness:** PERT pipes are much smoother in comparison to metal pipes, which leads to significant energy savings during water flow through the system. Smoothness coefficient (absolute roughness) of the pipe wall is 0.0004mm.
15. **Easy and fast installation:** simplicity of pipes calibrating and fittings crimping, makes installation easy and economical, without the need of using devices that can generate the risk of injury (welding machines, soldering irons).
16. **Minimum noise:** inner and outer layer of PERT lower the noise level during the flow of water.
17. **Fire resistant:** class B2.
18. **Ecological:** pipes are fully recyclable.
19. **Low weight:** PERT-AL-PERT pipes weigh approx. 7 times less than copper pipes and approx. 13 times less than steel pipes with the same diameter.

Tweetop fittings

The body of Tweetop fittings is made of CW617N type high quality brass - a material that complies the EN1652-1998 norm. Thanks to this kind of alloy, deterioration of material – corrosion or salt deposition – is nearly impossible. The second important feature of this alloy is its extraordinary hygiene, thanks to which Tweetop fittings meet the hygiene requirements contained in the 4MS Common Approach, applicable in most Western European countries. Press rings are made of stainless steel, while o-rings responsible for tightness are manufactured out of EPDM rubber by the German company Bode. Press connections of pipes and fittings are based on mechanical fusion of plastic with fitting brass and are performed using a manual or electric pressing tools, equipped with adjustable U profile clamping jaws. Hermetic connections are guaranteed by two rubber oil seals (o-rings) made of EPDM rubber, which are ideally integrated into connection area. Press connections of this kind can be covered with concrete or screed. In case of screw or push type connections, the way of making the joints is similar, but the connections of pipes with fittings must remain visible.

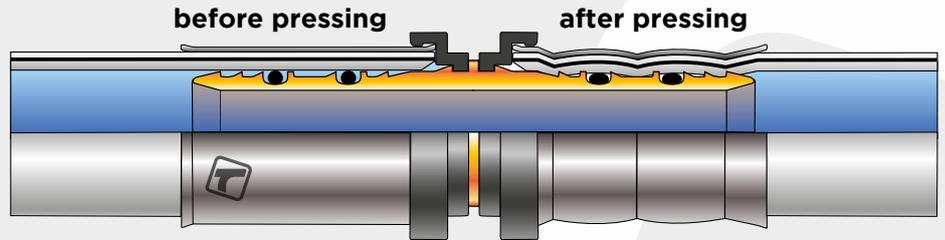




Tweetop fittings

Tweetop press fittings are designed to connect PERT-AL-PERT and EVOH-PERT multilayer pipes.

The unique construction of Tweetop press-fittings is conditioned by the number of advantages like high mechanical durability, temperature and pressure resistance, reliability and long life of connections. Fittings are available in a broad range of sizes – from 12 up to 75mm.



The high, consistent quality of the Tweetop system is confirmed during routine inspection checks. The inspections are carried out continuously in our factory laboratory, where we are able to check purchased raw materials as well as produced pipes and fittings. The tests comply with the latest directives and standards, such as PN EN ISO 21003 and the WRAS and SKZ guidelines. Thanks to this, customers have a 100% guarantee of safety while using Tweetop pipes and fittings. In addition, the Tweetop system is covered by an insurance up to 1,000,000 €, which is valid throughout the whole Europe, signed by one of the largest insurance companies - Ergo Hestia S.A.

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Certificates

Tweetop system is made in accordance to PN-EN-ISO21003 (part 1, 2, 3 and 5). Furthermore, company holds numerous certificates such as:

