



... more than pipes

WWW.FV-PLAST.CZ



FRESH TASTE OF DRINKING WATER

PE-RT TYP II - RESISTANT TO 95°C

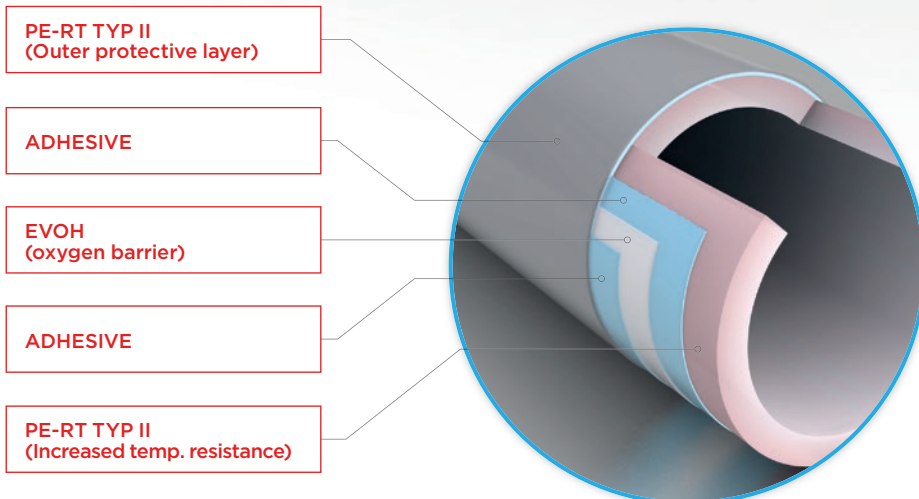
PERFECT BUTT WELD OF ALUMINIUM

OXYGEN BARRIER ⊕ FOR RADIATORS

FLEXIBLE TUBES WITH SHAPE STABILITY

FV MULTIPERT-AL

NEW PIPE PE-RT/AL/PE-RT \varnothing 16-63mm



FV AQUA



FV MULTIPERT-AL

Principle of MULTIPERT AL

Unique 5 layer pipe connecting all of the advantages of polyethylene and metal pipes. The outer and inner layer of modern material PE-RT, modified medium density polyethylene which exhibits excellent thermal and mechanical resistance. Al layer provides thermal and pressure resistance and shapeability of tubes.

Unlike PEX pipe does not need a PE-RT one no additional crosslinking process. Positive consequences are mainly **high inertness, chemical resistance** (for example, to the compounds of chlorine) and the possibility of weld joining.

Main benefits

- The maximum operating temperature +95°C
- Easy formability and shape retention
- Without chemical additives - excellent for drinking water
- Unchanged hardness and impact resistance down to -40°C
- Extremely low thermal expansion
- High resistance to breakage and abrasion
- low surface roughness (0,125 µm) minimizes hydraulic noise
- Minimum pressure drop

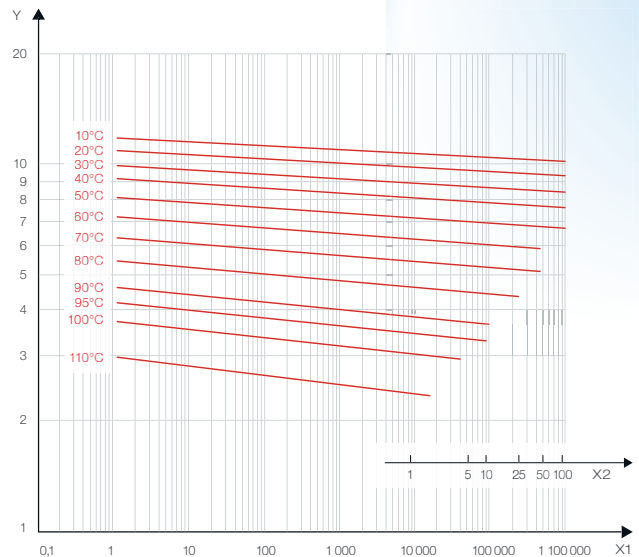
Areas of application

- Potable water and hot water
- Risers
- Heating circuits for supplying of the radiator with temperature up 80°C
- Heating circuits of underfloor and wall heating
- Circuits of ceiling cooling

Technical parameters

- Operating temperature range from -40°C - +95°C
- The maximum temperature of +125°C
- Permanent operating pressure 1MPa
- Lifetime at 95°C - 50 years
- Lifetime at 60°C - 100 years
- Reactivity with oxygen 0 g/m³
- The coefficient of linear thermal expansion $10^{-3}m/mK$: 0,025 (Eg. Extension of 30 m risers of hot water: $\Delta l = 37,5mm$ při $\Delta T = 50^\circ C$)

Lifetime characteristics



X1 time, t, to fracture, expressed in hours
 X2 time, t, to fracture, expressed in years
 Y hoop stress, σ , expressed in megapascal

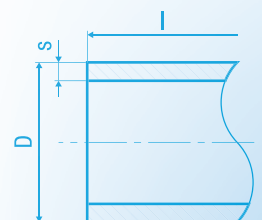
Hoop stress for application according to ISO 10508

| | | PE-X* | FV MULTIPERT-AL |
|---------|--------------------------------------------------|----------|-----------------|
| Class 1 | Hot water of 60°C | 3,86 MPa | 4,17 MPa |
| Class 2 | Hot water of 70°C | 3,55 MPa | 3,95 MPa |
| Class 3 | Underfloor heating and low temperature radiators | 4,01 MPa | 4,02 MPa |
| Class 4 | High-temperature radiators | 3,25 MPa | 3,41 MPa |

* The minimum requirement DIN 16892

| | | | | | # | D [mm] | s [mm] | l [m] |
|----------|---|-----|-------|-------|-------------|--------|--------|-------|
| 16 × 2,0 | m | 200 | 0,097 | 0,200 | AA130016200 | 16 | 2,00 | 200 |
| 18 × 2,0 | m | 200 | 0,118 | 0,250 | AA130018200 | 18 | 2,00 | 200 |
| 20 × 2,0 | m | 200 | 0,142 | 0,310 | AA130020200 | 20 | 2,00 | 200 |
| 25 × 2,5 | m | 50 | 0,271 | 0,490 | AA130025050 | 25 | 2,50 | 50 |
| 26 × 3,0 | m | 50 | 0,296 | 0,534 | AA130026050 | 26 | 3,00 | 50 |
| 32 × 3,0 | m | 50 | 0,373 | 0,800 | AA130032050 | 32 | 3,00 | 50 |

Dimension Unit Amount in a large package kg/unit dm³/unit



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