



... more than pipes

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FRESH TASTE OF DRINKING WATER

PE-RT TYP II - RESISTANT TO 95°C

PERFECT BUTT WELD OF ALUMINIUM

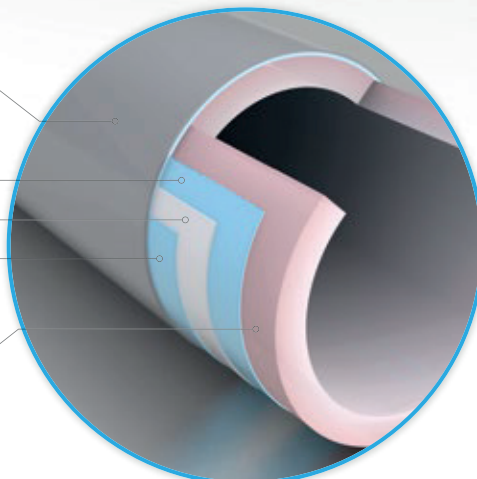
OXYGEN BARRIER FOR RADIATORS

FLEXIBLE TUBES WITH SHAPE STABILITY

# FV MULTIPERT-AL

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

- PE-RT TYP II (outer protective layer)
- ADHESIVE
- ALUMINIUM LAYER
- ADHESIVE
- PE-RT TYP II (Increased temp. resistance)



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

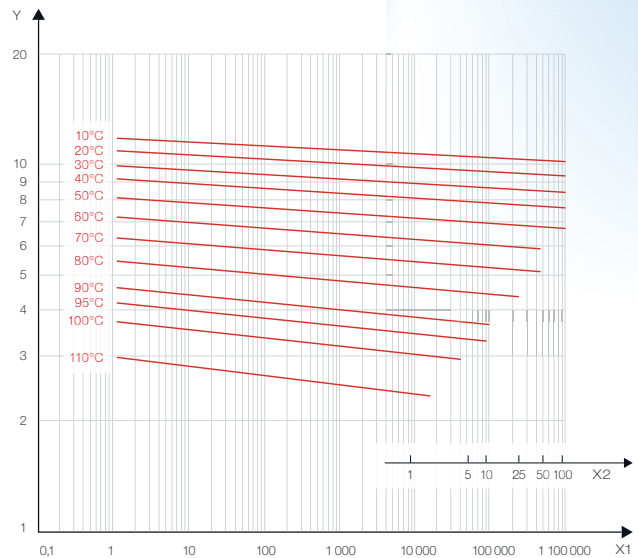
## Areas of application

- 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 +95°C
- Permanent operating pressure 1 MPa
- Lifetime at 95°C - 50 years
- Lifetime at 60°C - 100 years
- Reactivity with oxygen 0 g/m<sup>3</sup>.day
- The coefficient of linear thermal expansion 0,025 mm/mK (Eg. Extension of 30 m risers of hot water: Δl= 37,5mm při ΔT=50°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 MPa

## Hoop stress for application according to ISO 10508

		PE-X*	FV MULTIPERT-AL
Class 1	Hot water of 60°C	3,86 MPa	<b>4,17 MPa</b>
Class 2	Hot water of 70°C	3,55 MPa	<b>3,95 MPa</b>
Class 4	Underfloor heating and low temperature radiators	4,01 MPa	<b>4,02 MPa</b>
Class 5	High-temperature radiators	3,25 MPa	<b>3,41 MPa</b>

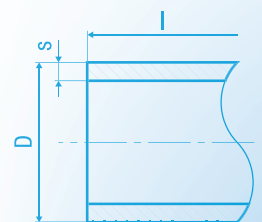
\* The minimum requirement DIN 16892

					#	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 dm<sup>3</sup>/unit

\* also available in lengths of 4 m and 100 m

\*\* also available in lengths of 4 m



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