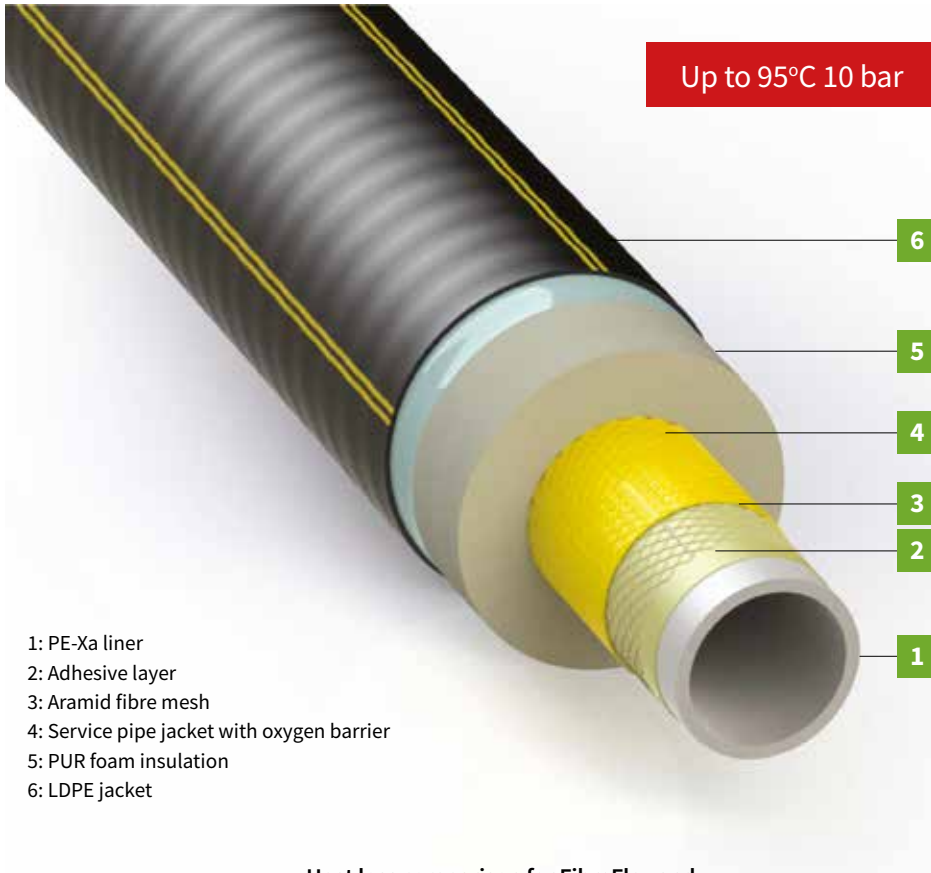


FibreFlex

The next generation of highly energy efficient pre-insulated flexible pipe systems for district heating applications



Up to 95°C 10 bar

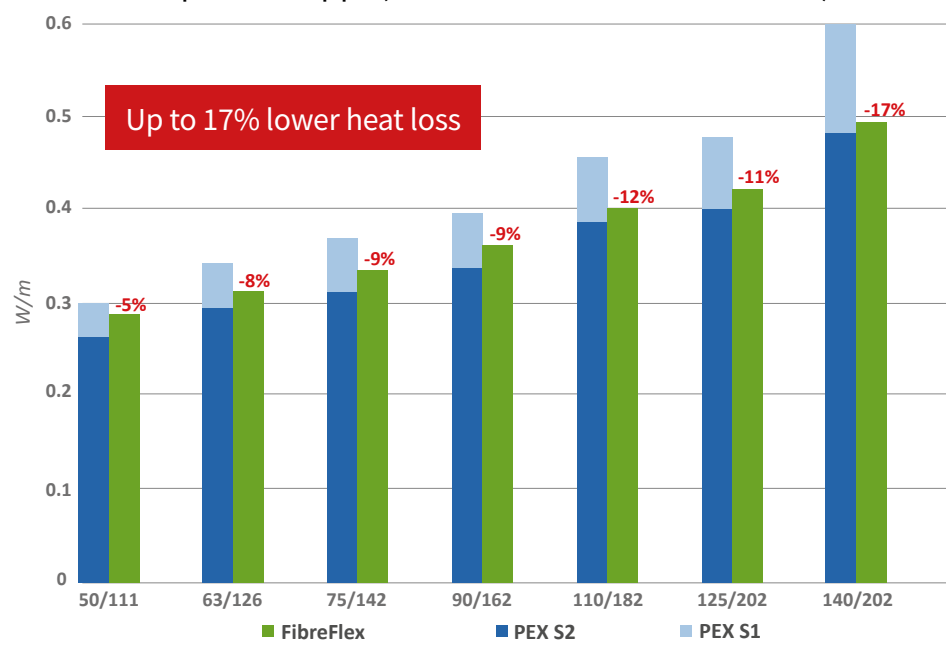
System Overview

FibreFlex is a new class of flexible pre-insulated pipe systems that incorporate Thermoplastic Reinforced Service (TRS) pipes, specifically designed for use in district heating networks with operating pressures up to 10 bar and temperature application up to 80°C continuous and 95°C maximum peak operating temperatures (in accordance with EN 15632-2).

The FibreFlex service pipes have a multilayer construction, comprising a cross-linked polyethylene PE-Xa inner layer, a high-modulus aramid fibre mesh reinforcement layer, an oxygen diffusion barrier and additional thermoplastic adhesive layers used to bond the individual layers to form the composite pipe structure.

- 1: PE-Xa liner
- 2: Adhesive layer
- 3: Aramid fibre mesh
- 4: Service pipe jacket with oxygen barrier
- 5: PUR foam insulation
- 6: LDPE jacket

Heat loss comparison for FibreFlex and PEX pre-insulated pipes (heat transfer coefficient for flow and return)



Up to 17% lower heat loss

Efficient Insulation

The FibreFlex pipes are continuously insulated during the manufacturing process, using a CFC-free bonded polyurethane foam, which offers an outstanding thermal conductivity value of ≤ 0.021 W/mK at 50 °C



Pre-insulated pipes: FibreFlex (left) and PEX SDR 11 (right)

For easy comparison, FibreFlex service pipe sizes are classified by a nominal outside diameter in the same way as PEX SDR11. Having the same inner diameter as PEX SDR11, the actual OD is significantly smaller and therefore the insulation is thicker and the heat loss reduced. Calculations show this can result in as much as 17% lower heat loss than conventional PEX pipes with the same jacket dimensions S1 and comparable heat losses with PEX pipes insulation series S2 with one dimension larger jacket size (see graph).

On-Site Flexibility

The service pipe's reduced wall thickness makes FibreFlex more flexible and easier to install, significantly widening its range of application in district heating systems. In addition, FibreFlex includes a full range of accessories to meet the design requirements of all district heating pipeline projects.

Secure Jointing System

The FibreFlex pipes can be joined using a fit-and-forget compression fitting for the service pipes, and a simple system of joints for the outer jacket, offering robust connections with maximum joint integrity.

Applications

Available in service pipe diameters from 25mm to 160 mm, FibreFlex is the ideal solution for:

- Local district heating networks
- Low/mid-temperature citywide heat networks
- Higher-pressure heating networks in hilly areas
- Agricultural applications
- Domestic heating applications
- Special applications at temperatures up to 80°C continuous and 95°C peak and 10 bar pressure

Approvals

The FibreFlex pipe system is certified OFI CERT ZG 200-2 Class A Technical Specification (in line with EN 15632-2).



More flexible



Secure jointing



Energy efficiency



Quick installation



Cost Effective



Easy to install



High Pressure



RADIUS
Systems

For more information please visit our website:
www.radius-systems.com or contact us:

UK Head Office
Radius Systems Ltd
t: +44 (0)1773 811112
e: sales@radius-systems.com

Northern Ireland and Republic of Ireland sales
Radius Systems
t: +44 (0)2838 446060
e: info@radius-systems.com

Technical Specification:

Max continuous operating temperature:	80°C
Max peak operating temperature:	95°C
Max operating pressure:	10 bar at 80°C

Pipe product range:

FibreFlex

Nominal Dimension	Service Pipe External Diameter (mm)	Service Pipe Wall Thickness (mm)	Jacket Pipe External Diameter (mm)	Maximum Coil Length (m)
25/91	25.0	2.2	91	550
32/91	32.0	2.5	91	550
40/111	40.0	2.8	111	410
50/111	47.6	3.6	111	410
63/126	58.5	4.0	126	300
75/142	69.5	4.6	142	225
90/162	84.0	6.0	162	149
110/182	101.0	6.5	182	86
125/202	116.0	6.8	202	80
140/202	127.0	7.1	202	80
160/225*	144.0	7.5	225	36

* available soon



FibreFlex DUO

Nominal Dimension	Service Pipe External Diameter (mm)	Service Pipe Wall Thickness (mm)	Jacket Pipe External Diameter (mm)	Maximum Coil Length (m)
25+25/111	25.0	2.2	111	410
32+32/126	32.0	2.5	126	300
40+40/142	40.0	2.8	142	225
50+50/162	47.6	3.6	162	149
63+63/182	58.5	4.0	182	86
75+75/202	69.5	4.6	202	80

