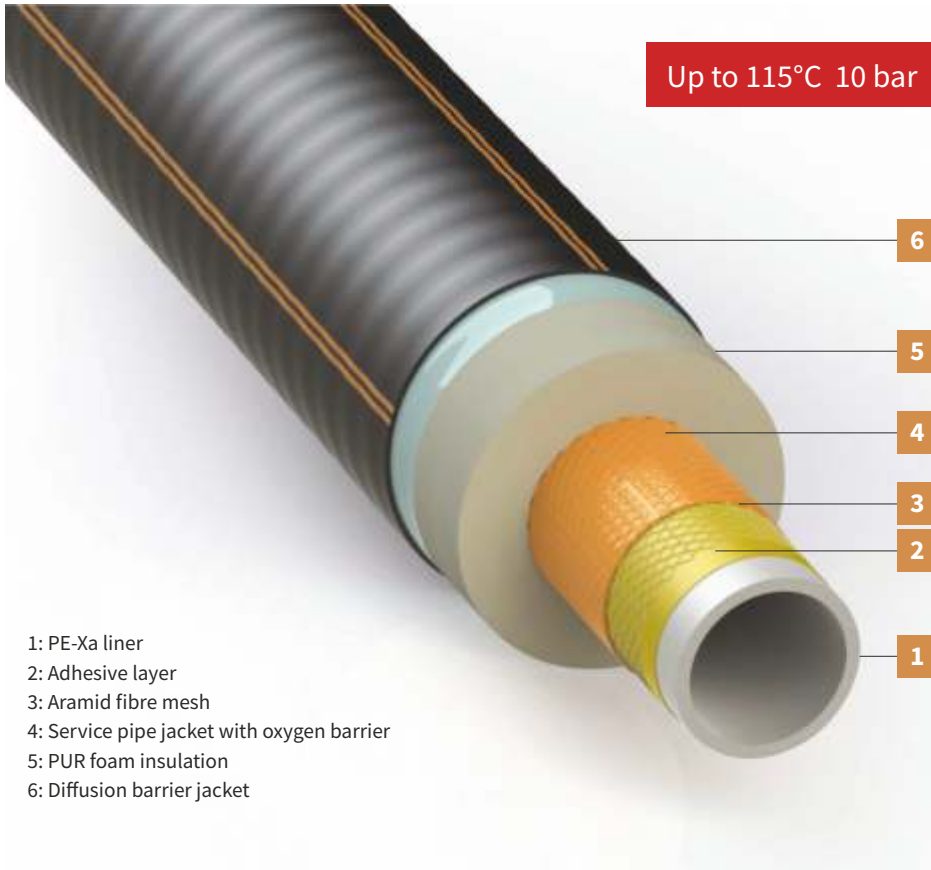




FibreFlex Pro

The next generation of pre-insulated flexible pipe systems for high temperature and high pressure district heating applications



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

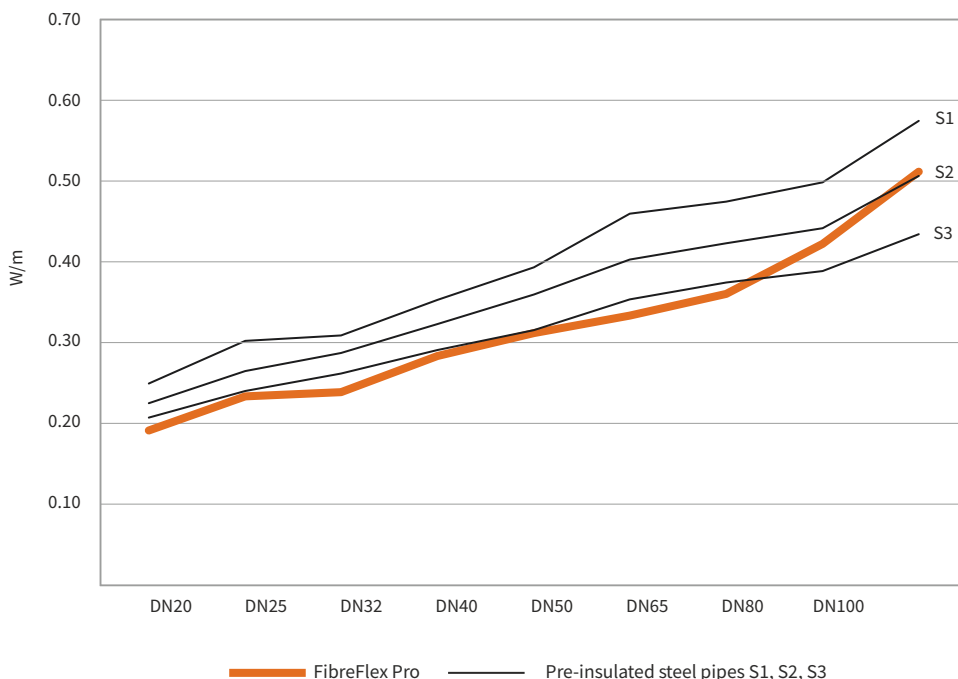
System Overview

FibreFlex Pro is a cutting-edge pre-insulated, flexible pipe which combines a high modulus aramid mesh reinforcement with modern polymer materials in a multi-layer pipe construction. This significantly improved structure allows plastic pipes to be used at high operating pressures of up to 10 bar (16 bar option available) and operating temperatures of up to 115°C peak, making FibreFlex Pro the ideal alternative pipe solution to rigid pre-insulated steel pipes commonly found in city heat networks.

Efficient Insulation

The FibreFlex Pro pipes are insulated in one continuous manufacturing process using a CFC-free bonded polyurethane foam with an outstanding thermal conductivity value of $\lambda \leq 0.021 \text{ W/mK}$ at 50°C. As the insulation layer has a lower thermal conductivity than conventional pre-insulated steel pipes ($\lambda = 0.07 \text{ W/mK}$), in diameters up to 80 mm, FibreFlex Pro heat loss is lower than insulation series S3 pipes and in larger diameters, FibreFlex Pro heat loss is lower than series S2 pipes.

Heat loss comparison for FibreFlex Pro and standard pre-insulated steel pipes with insulation series S1, S2, S3 (heat transfer coefficient for flow and return)



Pre-insulated pipes:
FibreFlex Pro (left) and Steel (right)

Applications:

Available in service pipe diameters from 50 to 160 mm, FibreFlex Pro is the ideal solution for:

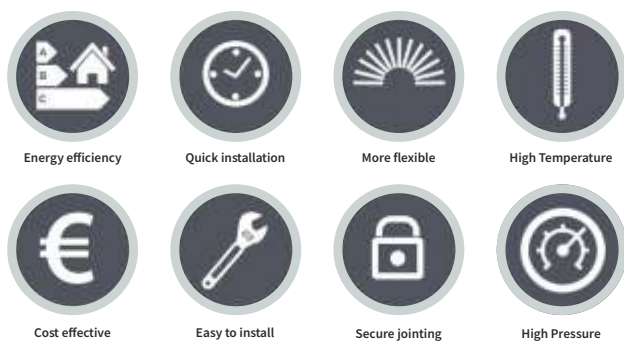
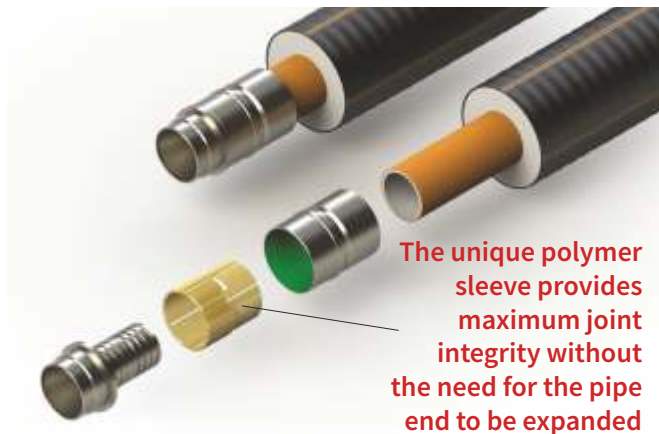
- Biomass district heating networks
- High-temperature city heat networks
- High-pressure heating networks supplying high buildings
- High-pressure heating networks in hilly areas
- Special applications at operating temperatures up to 115°C and pressures up to 10 bar

On-Site Flexibility

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

Secure Joining System

FibreFlex Pro is quick and easy to join using specially designed compression fittings, incorporating a unique polymer sleeve, which is inserted between the fitting's outer sleeve and the service pipe. A steel insert is then easily fitted inside the pipe, without the need for the pipe end to be expanded before fitting the steel insert into the pipe. This provides a robust connection with maximum joint integrity.



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 peak operating temperature:	115°C
Max operating pressure:	10 bar (16 bar option available)

Product range:

FibreFlex Pro

Nominal Dimension	Service Pipe External Diameter (mm)	Service Pipe Wall Thickness (mm)	Jacket Pipe External Diameter (mm)	Maximum Coil Length (m)
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	225

* available soon



FibreFlex Pro DUO

Nominal Dimension	Service Pipe External Diameter (mm)	Service Pipe Wall Thickness (mm)	Jacket Pipe External Diameter (mm)	Maximum Coil Length (m)
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	86

