

FibreFlex Pro

An energy efficient pre-insulated flexible pipe system for heating applications at higher temperatures and pressures



- 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

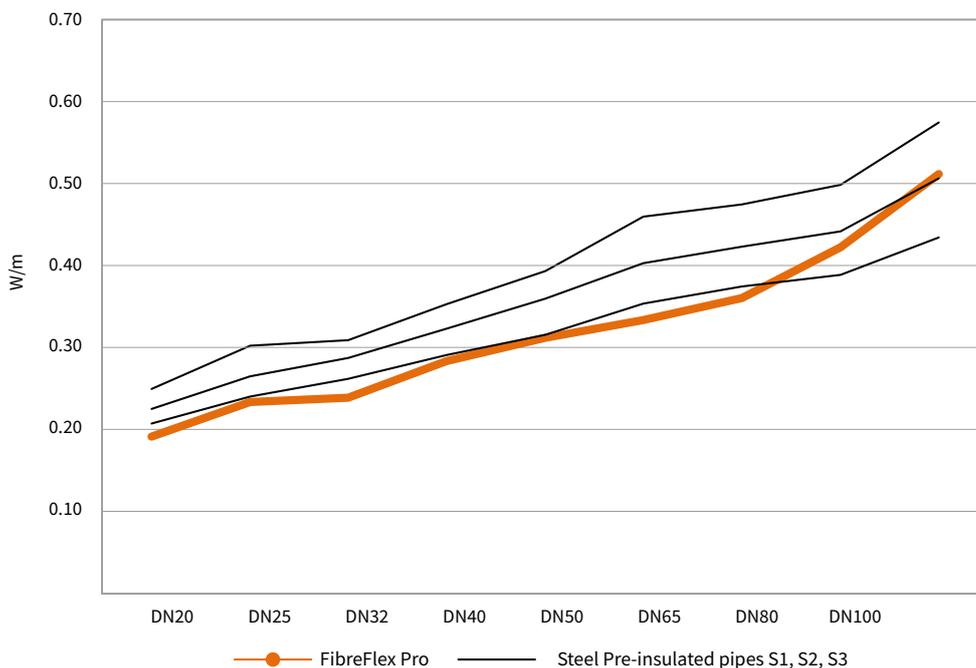
System Overview

based on reinforced concept that utilises a high-modulus aramid mesh, combined with complex multilayer structure consisting of modern polymer materials. This enables flexible pre-insulated plastic pipes to significantly increase both operating pressures up to 16 bar and operating temperatures up to 115°C (up to 95°C continuous with a minimum 30 years' service life) This significant change made it possible to implement all the benefits of flexible pre-insulated plastic pipes to city heat networks, where previously, only rigid pre-insulated steel pipes could be used.

Efficient Insulation

FibreFlex Pro pipes are continuously insulated during the manufacturing process using a CFC-free, bonded polyurethane foam, which has an outstanding thermal conductivity value of ≤ 0.021 W/mK at 50°C. Due to the lower thermal conductivity value of the insulation layer, compared to conventional steel pre-insulated pipes, FibreFlex Pro pipes have heat losses no higher than insulation series IS 3 for the dimensions up to DN80mm (110mm plastic pipe dimension) and no higher than insulation series 2 for the larger dimensions.

Heat loss transfer coefficient calculations (flow and return) for FibreFlex Pro and standard steel pre-insulated pipes ($\lambda=0.027$ W/mK) insulation series S1, S2, S3.



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

Applications:

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

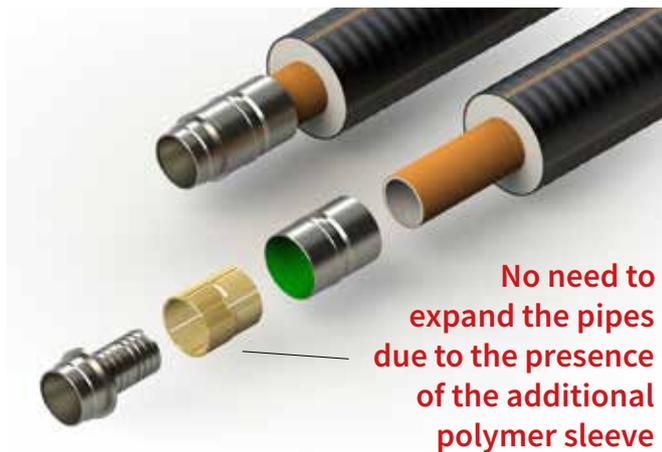
- Biomass district heating networks
- Elevated temperature city heat networks
- Elevated pressure heating networks supplying high buildings
- Elevated pressure heating networks in hilly areas
- Special applications at operating temperatures and pressures up to 115 °C and 16 bar.

On-Site Flexibility

The reduced wall thickness also makes the FibreFlex more flexible to install, significantly increasing its range of use for district heating applications. Furthermore, FibreFlex systems have a full range of fittings and accessories to enable it to be configured to meet the requirements of every project.

Secure Joining System

FibreFlex Pro press connectors have additional polymer sleeve, which is placed between outer sleeve and service pipe, to provide the required compression without the need for pipe end to be expanded before fitting the steel insert into the pipe. This makes installation significantly easier and quicker.



 Energy efficiency	 Quick installation	 More flexible	 Higher Temperature
 Money saving	 Easy to install	 Secure jointing	 Higher Pressure



Authorized Dealer:

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 Toll Free: 877-474-5521
 Office: 530-893-2444
www.BiomassSystemsSupply.com

Technical Specification:

Max continuous operating temperature:	95°C
Max variable operating temperature:	115°C
Max operating pressure:	10/16 bar at 95°C

Product range:

FibreFlex Pro

Dimension	Carrier pipe size OD x s (mm)	Jacket pipe diameter JD (mm)	Max length in coil (m)
50/111	47.6x3.6	111	410
63/126	58.5x4.0	126	300
75/142	69.5x4.6	142	225
90/162	84.0x6.0	162	149
110/182	101.0x6.5	182	86
125/202	116.0x6.8	202	80
140/202	127.0x7.1	202	80
160/225*	144.0x7.5	225	36
125/202	116.0x6.8	202	80
140/202	127.0x7.1	202	80
160/225*	144.0x7.5	225	36

* available soon



FibreFlex Pro DUO

Dimension	Carrier pipe size OD x s (mm)	Jacket pipe diameter JD (mm)	Max length in coil (m)
50+50/162	47.6x3.6	162	149
63+63/182	58.5x4.0	182	86
75+75/202	69.5x4.6	202	80

