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

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.

Technical Specification:

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

Product range:

<p>| FibreFlex Pro DUO |</p>
<table>
<thead>
<tr>
<th>Nominal Dimension</th>
<th>Service Pipe External Diameter (mm)</th>
<th>Service Pipe Wall Thickness (mm)</th>
<th>Jacket Pipe External Diameter (mm)</th>
<th>Maximum Coil Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50+50/162</td>
<td>47.6</td>
<td>3.6</td>
<td>162</td>
<td>149</td>
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<tr>
<td>63+63/182</td>
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<td>182</td>
<td>86</td>
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<tr>
<td>75+75/202</td>
<td>69.5</td>
<td>4.6</td>
<td>202</td>
<td>86</td>
</tr>
</tbody>
</table>

* available soon

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