

Flexalen[®] 600 Heating

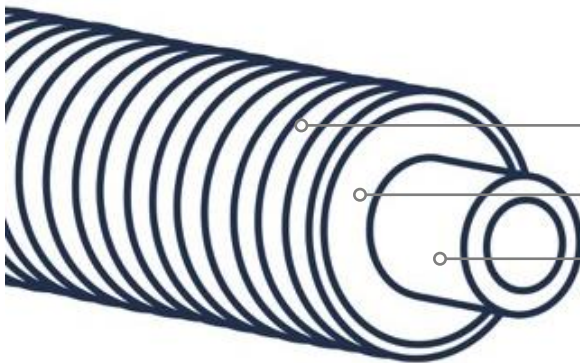
Pre-insulated piping system by Thermaflex[®]

Extremely flexible and easy to install pre-insulated pipe system for heating / cooling



Benefits

- Fast and easy installation
- Safest choice with homogeneous welding and high-pressure rating 95°C/8bar
- Large network capacity with full compatibility with Flexalen[®] PU with service pipes up to OD315mm
- The only Cradle to Cradle[™] certified pre-insulated pipe system in the world
- Thermaflex service: Support with integrated network design, calculation tools, training and on-site support



Design

Polyethylene corrugated pipe, PE
Flexibility and mechanical protection

Polyolefin foam
Closed-cell, CFC-free

Polybutene service pipe, PB-1
With and without oxygen barrier

Applications

- Local district heating and cooling networks
- Biogas / Biomass / Waste heat recovery
- Geothermal distribution lines
- Swimming pool technology
- Island networks

Technical Properties

Flexalen[®] 600 is a pre-insulated flexible plastic pipe system produced conform the European standard EN15632-1,3 and KIWA system certified as well as third-party controlled according BRL KOMO 5609-2 and BRL-K17401.

PB-1 service pipe (EN-ISO 15876)	
Max. service temperature	95°C
Continuous service temperature	80°C
Max. operating pressure	8bar*(95°C)

*depending on the diameter

Thermal Insulation
Polyolefin foam
Closed-cell structure, CFC-free
Water vapor diffusion $\mu \geq 3,500$

Flexalen® 600 Heat losses

Heat loss q [W/m] for one Single line								
Flexalen® 600 Single line	Operating temperature T [°C]							
	20°C	30°C	40°C	50°C	60°C	70°C	80°C	
25 / 90	1.390	2.824	4.302	5.822	7.385	8.990	10.638	
32 / 90	1.713	3.479	5.297	7.167	9.088	11.061	13.084	
40 / 90	2.168	4.401	6.698	9.058	11.480	13.966	16.513	
40 / 125	1.678	3.405	5.181	7.005	8.877	10.796	12.763	
50 / 125	2.072	4.203	6.393	8.641	10.947	13.311	15.732	
50 / 160	1.730	3.506	5.327	7.193	9.105	11.060	13.060	
63 / 125	2.754	5.583	8.488	11.468	14.521	17.647	20.846	
63 / 160	2.109	4.273	6.491	8.764	11.090	13.470	15.904	
75 / 160	2.521	5.106	7.756	10.470	13.248	16.089	18.992	
90 / 160	3.204	6.489	9.855	13.299	16.823	20.425	24.104	
110 / 200	3.386	6.850	10.393	14.012	17.708	21.479	25.326	
125 / 200	4.114	8.323	12.624	17.018	21.503	26.078	30.743	




Heat loss q [W/m] for one Double line								
Flexalen® 600 Double line	Average operating temperature T [°C]							
	20°C	30°C	40°C	50°C	60°C	70°C	80°C	
25 + 25 / 125	2.992	4.987	6.981	8.976	10.971	12.965	14.960	
32 + 32 / 125	3.826	6.377	8.928	11.478	14.029	16.580	19.131	
32 + 32 / 160	2.743	4.636	6.529	8.421	10.314	12.207	14.100	
40 + 40 / 160	3.356	5.680	8.004	10.328	12.652	14.976	17.300	
50 + 50 / 160	4.374	7.476	10.579	13.682	16.785	19.887	22.990	
63 + 63 / 200	4.374	7.800	11.226	14.652	18.078	21.504	24.930	


Calculation parameter

λ_{soil} :	1.00 W/m·K
R soil surface to ambient air:	0.0685 m ² ·K/W
T _{soil} :	10.0 °C
Soil covering:	0.8 m

The heat loss characteristics are in accordance with the European standard for flexible heating pipes systems EN15632. During the expected lifetime of the product these values will increase by 7-10 %.

Availability - Heating / Cooling

Single line			
Product code	Dimension	Service pipe OD x s [mm]	Jacket pipe OD [mm]
1010-090025-001	25 / 90	25 x 2.3	90
1010-090032-001	32 / 90	32 x 3.0	90
1010-090040-001	40 / 90	40 x 3.7	90
1010-125040-001	40 / 125	40 x 3.7	125 
1010-125050-001	50 / 125	50 x 4.6	125
1010-160050-001	50 / 160	50 x 4.6	160 
1010-125063-001	63 / 125	63 x 5.8	125
1010-160063-001	63 / 160	63 x 5.8	160 
1010-160075-001	75 / 160	75 x 6.8	160
1010-160090-001	90 / 160	90 x 8.2	160
1000-200110-001	110 / 200	110 x 10.0 ¹	200
1001-200110-015	110 / 200 SL ²	110 x 10.0 ¹	200
1000-200125-001	125 / 200 ³	125 x 11.4 ¹	200
1001-200125-015	125 / 200 SL ^{2,3}	125 x 11.4 ¹	200

Double line			
Product code	Dimension	Service pipe OD x s [mm]	Jacket pipe OD [mm]
1030-125025-001	25 + 25 / 125 ⁴	25 x 2.3	125
1030-125032-001	32 + 32 / 125 ⁴	32 x 3.0	125
1030-160032-001	32 + 32 / 160	32 x 3.0	160 
1030-160040-001	40 + 40 / 160 ⁴	40 x 3.7	160
1030-160050-001	50 + 50 / 160	50 x 4.6	160
1030-200063-001	63 + 63 / 200	63 x 5.8	200

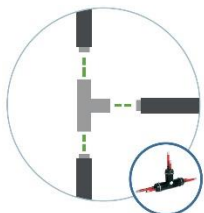
 higher insulation range with increased delivery time

¹ without oxygen barrier

² semi-flexible pipe system, straight lengths (available in 6m sticks)

³ maximum temperature / pressure rating 95°C / 5 bar

⁴ available as complete installation kits (incl. accessories in carton box)



- FlexaLink, prefabricated house connections
- All types of homogenous plastic welded Prefabrications
- Complete installation kits (pipe incl. accessories in carton box)
- Full range of weldable PB fittings
- Compression fitting system
- Full range of accessories and tools

