

Flexalen[®] 600 Heating

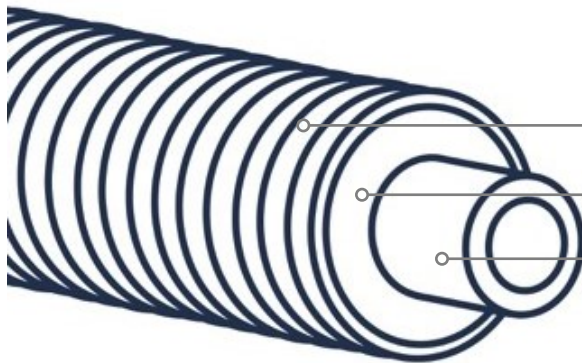
Pre-insulated piping system by Thermaflex[®]

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

- **Corrugated PE Casing pipe**
Flexibility and mechanical protection
- **Polyolefin foam**
Closed-cell, CFC-free
- **Polybutene service pipe, PB-H**
With and without EVOH layer

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 (DOC), QB08 certified (CSTB) and KIWA system certified as well as third-party controlled according BRL KOMO 5609-2 and BRL-K17401.

PB-H 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	1.4	2.8	4.3	5.8	7.4	9.0	10.6
32 / 90	1.7	3.5	5.3	7.2	9.1	11.1	13.1
40 / 90	2.2	4.4	6.7	9.1	11.5	14.0	16.5
40 / 125	1.7	3.4	5.2	7.0	8.9	10.8	12.8
50 / 125	2.1	4.2	6.4	8.6	10.9	13.3	15.7
50 / 160	1.7	3.5	5.3	7.2	9.1	11.1	13.1
63 / 125	2.8	5.6	8.5	11.5	14.5	17.6	20.8
63 / 160	2.1	4.3	6.5	8.8	11.1	13.5	15.9
75 / 160	2.5	5.1	7.8	10.5	13.2	16.1	19.0
90 / 160	3.2	6.5	9.9	13.3	16.8	20.4	24.1
110 / 200	3.4	6.9	10.4	14.0	17.7	21.5	25.3
125 / 200	4.1	8.3	12.6	17.0	21.5	26.1	30.7

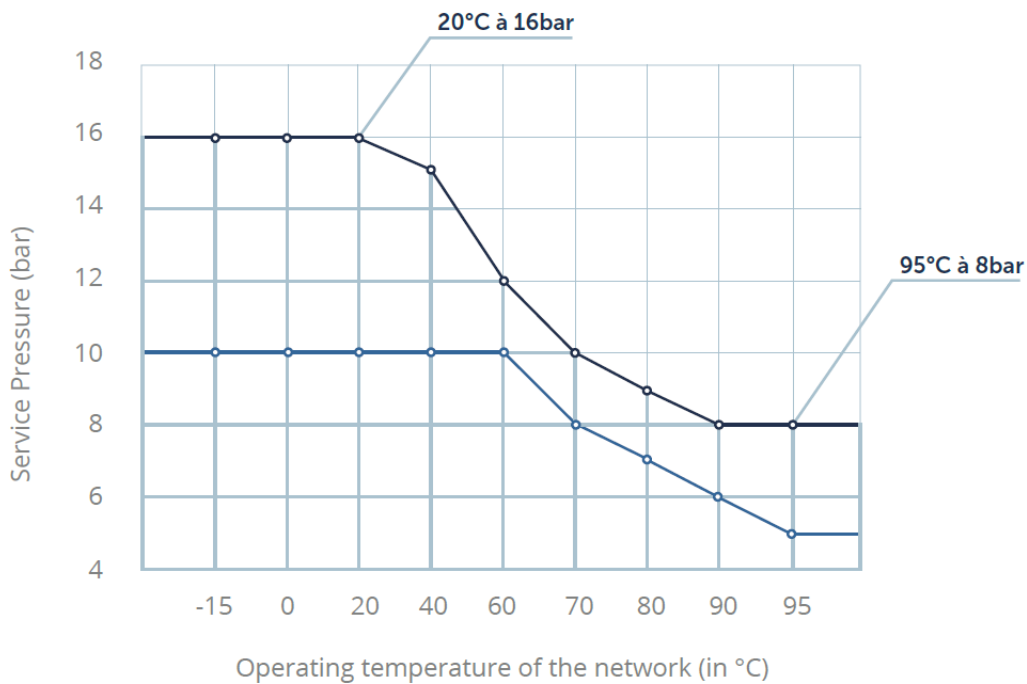
Heat loss q [W/m] for one Double line							
Flexalen® 600 Double line	Average operating temperature T [°C]						
	20°C	30°C	40°C	50°C	60°C	70°C	80°C
25 + 25 / 125	3.0	5.0	7.0	9.0	11.0	13.0	15.0
32 + 32 / 125	3.8	6.4	8.9	11.5	14.0	16.6	19.1
32 + 32 / 160	2.7	4.6	6.5	8.4	10.3	12.2	14.1
40 + 40 / 160	3.4	5.7	8.0	10.3	12.7	15.0	17.3
50 + 50 / 160	4.4	7.5	10.6	13.7	16.8	19.9	23.0
63 + 63 / 200	4.4	7.8	11.2	14.7	18.1	21.5	24.9

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 %.

Flexalen® 600 Pressure rating

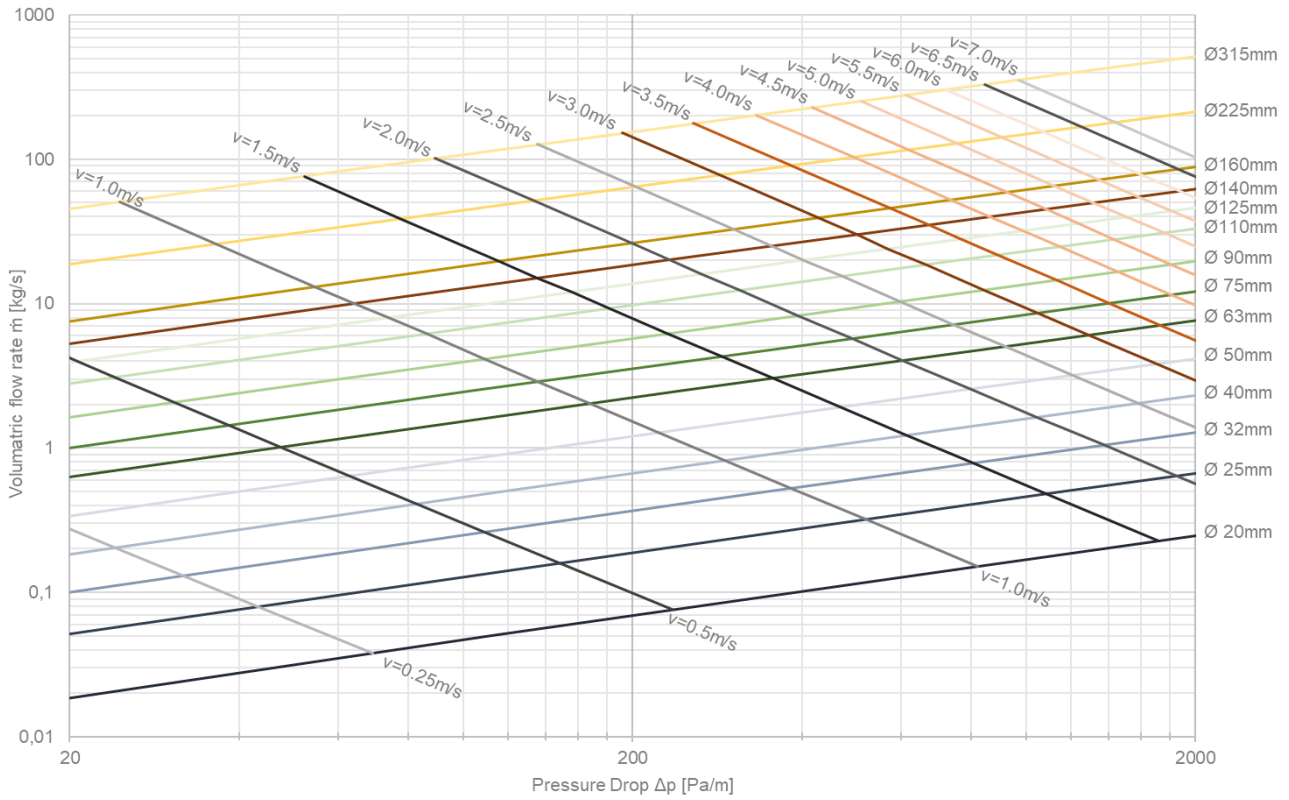


- Up to OD110 20°C/16 bar 95°C/8 bar
- ≥ OD125 20°C/10 bar 95°C/5 bar




Flexalen® 600 Pressure drop PB


Determine the pressure drop using Flexalen pipe systems at a flow temperature of 90°C (Flow line). For lower medium temperatures the pressure drop is higher: e.g. for 60°C 10%; for 10°C 20% higher.

For support on a complete district heating network design please contact your Thermaflex partner!



Availability - Heating / Cooling

Single line						
Product code	Dimension	Service pipe OD x s [mm]	Casing pipe OD [mm]	Weight [kg/m]	min. bending radius [m]	max. length [m]
1010-090025-001	25 / 90	25 x 2.3	90	0.75	0.40	500
1010-090032-001	32 / 90	32 x 3.0	90	0.86	0.40	500
1010-090040-001	40 / 90	40 x 3.7	90	1.00	0.50	500
1010-125040-001	40 / 125	40 x 3.7	125 	1.98	0.50	300
1010-125050-001	50 / 125	50 x 4.6	125	2.08	0.70	300
1010-160050-001	50 / 160	50 x 4.6	160 	2.40	0.70	150
1010-125063-001	63 / 125	63 x 5.8	125	2.43	0.80	300
1011-125063-015	63 / 125 SL ²	63 x 5.8	125	2.43	0.80	6
1010-160063-001	63 / 160	63 x 5.8	160 	2.75	0.80	150
1010-160075-001	75 / 160	75 x 6.8	160	3.03	0.80	150
1011-160075-015	75 / 160 SL ²	75 x 6.8	160	3.03	0.80	6
1010-160090-001	90 / 160	90 x 8.2	160	3.64	1.00	150
1011-160090-015	90 / 160 SL ²	90 x 8.2	160	3.64	1.00	6
1000-200110-001	110 / 200	110 x 10.0 ¹	200	5.40	1.25	100
1001-200110-015	110 / 200 SL ²	110 x 10.0 ¹	200	5.40	1.25	6
1000-200125-001	125 / 200 ³	125 x 11.4 ¹	200	6.38	1.50	80
1001-200125-015	125 / 200 SL ^{2,3}	125 x 11.4 ¹	200	6.38	1.50	6

Double line						
Product code	Dimension	Service pipe OD x s [mm]	Casing pipe OD [mm]	Weight [kg/m]	min. bending radius [m]	max. length [m]
1030-125025-001	25 + 25 / 125	25 x 2.3	125	1.80	0.60	300
1030-125032-001	32 + 32 / 125	32 x 3.0	125	1.90	0.60	300
1030-160032-001	32 + 32 / 160	32 x 3.0	160 	2.14	0.60	150
1030-160040-001	40 + 40 / 160	40 x 3.7	160	2.50	0.80	150
1030-160050-001	50 + 50 / 160	50 x 4.6	160	3.00	0.80	150
1030-200063-001	63 + 63 / 200	63 x 5.8	200	4.50	1.25	100

 Higher insulation range with increased insulation thickness and improved energy efficiency

¹ Without EVOH layer (Not included into the System Certification)

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

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

- FlexaLink, prefabricated house connections
- All types of homogenous plastic welded Prefabrications
- Full range of weldable PB fittings
- Compression fitting system
- Full range of accessories and tools

