

Flexalen® 600 Heating

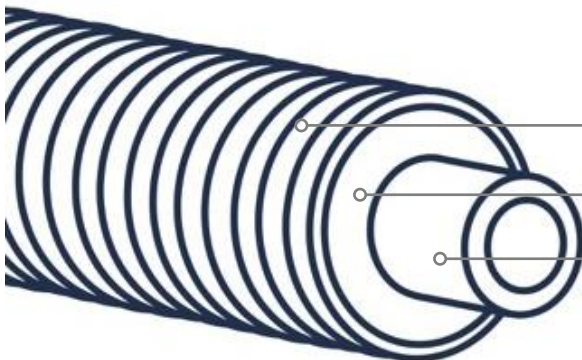
Pre-insulated piping system by Thermaflex®

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
- Island networks
- A to B Connections

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 to BRL KOMO 5609-2 and BRL-K17401.

PB-H service pipe (EN-ISO 15876)	
Max. service temperature	95°C
Max. operating pressure	8bar*(95°C)
*depending on the diameter	

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



Disclaimer

00.021.055 v.1 – 06/13/2023 All recommendations and information provided on this data sheet are based on our knowledge and experience. Product specifications are intended as guidelines. Since conditions of service are beyond our control, users must satisfy themselves that products are suitable for the intended use. No guarantee or warranty is given or implied or that any use of products will not infringe rights belonging to other parties. We reserve the right to change product design and properties without notification.





Flexalen® 600 Heat losses

Heat loss q [W/m] for one Single line								
Flexalen® 600 Single line	Operating temperature T of the flow or return line [°C]							
	20°C	30°C	40°C	50°C	60°C	70°C	80°C	90°C
25 / 90	1.48	2.96	4.44	5.92	7.40	8.88	10.36	11.84
32 / 90	1.82	3.64	5.46	7.28	9.10	10.92	12.74	14.56
40 / 90	2.30	4.60	6.90	9.20	11.50	13.80	16.10	18.40
40 / 125	1.78	3.56	5.34	7.12	8.90	10.68	12.46	14.24
50 / 125	2.19	4.38	6.57	8.76	10.95	13.14	15.33	17.52
50 / 160	1.82	3.64	5.46	7.28	9.10	10.92	12.74	14.56
63 / 125	2.90	5.80	8.70	11.60	14.50	17.40	20.30	23.20
63 / 160	2.22	4.44	6.66	8.88	11.10	13.32	15.54	17.76
75 / 160	2.65	5.30	7.95	10.60	13.25	15.90	18.55	21.20
90 / 160	3.36	6.72	10.08	13.44	16.80	20.16	23.52	26.88
110 / 200	3.54	7.08	10.62	14.16	17.70	21.24	24.78	28.32
125 / 200	4.30	8.60	12.90	17.20	21.50	25.80	30.10	34.40

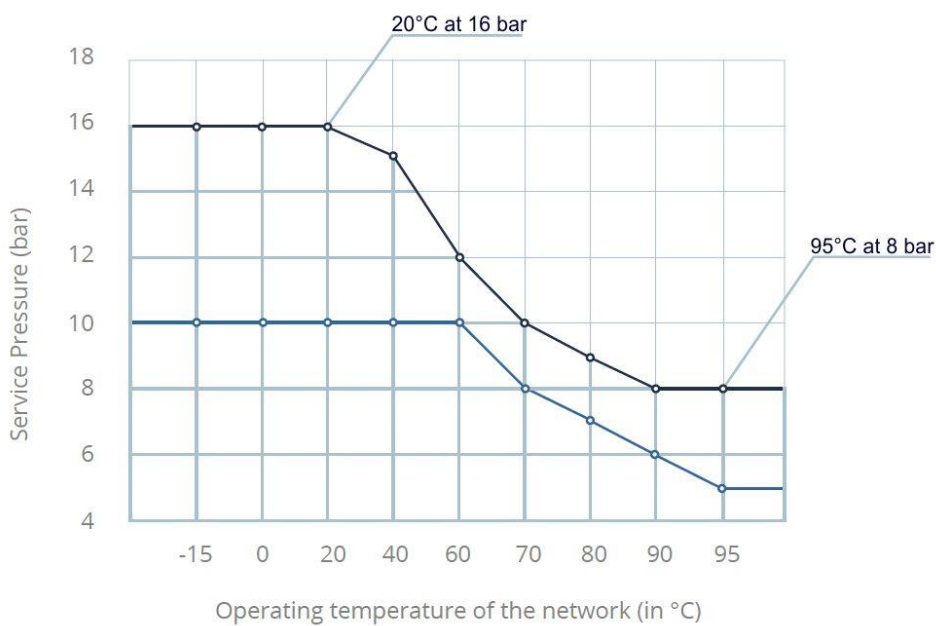
Heat loss q [W/m] for one Double line						
Flexalen® 600 Double line	Average operating temperature T of the flow and return line [°C]					
	30°C	40°C	50°C	60°C	70°C	80°C
25 + 25 / 125	4.42	6.63	8.84	11.05	13.26	15.47
32 + 32 / 125	5.66	8.49	11.32	14.15	16.98	19.81
32 + 32 / 160	4.16	6.24	8.32	10.40	12.48	14.56
40 + 40 / 160	5.10	7.65	10.20	12.75	15.30	17.85
50 + 50 / 160	6.76	10.14	13.52	16.90	20.28	23.66
63 + 63 / 200	7.26	10.89	14.52	18.15	21.78	25.41

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.

Flexalen® 600 Pressure rating



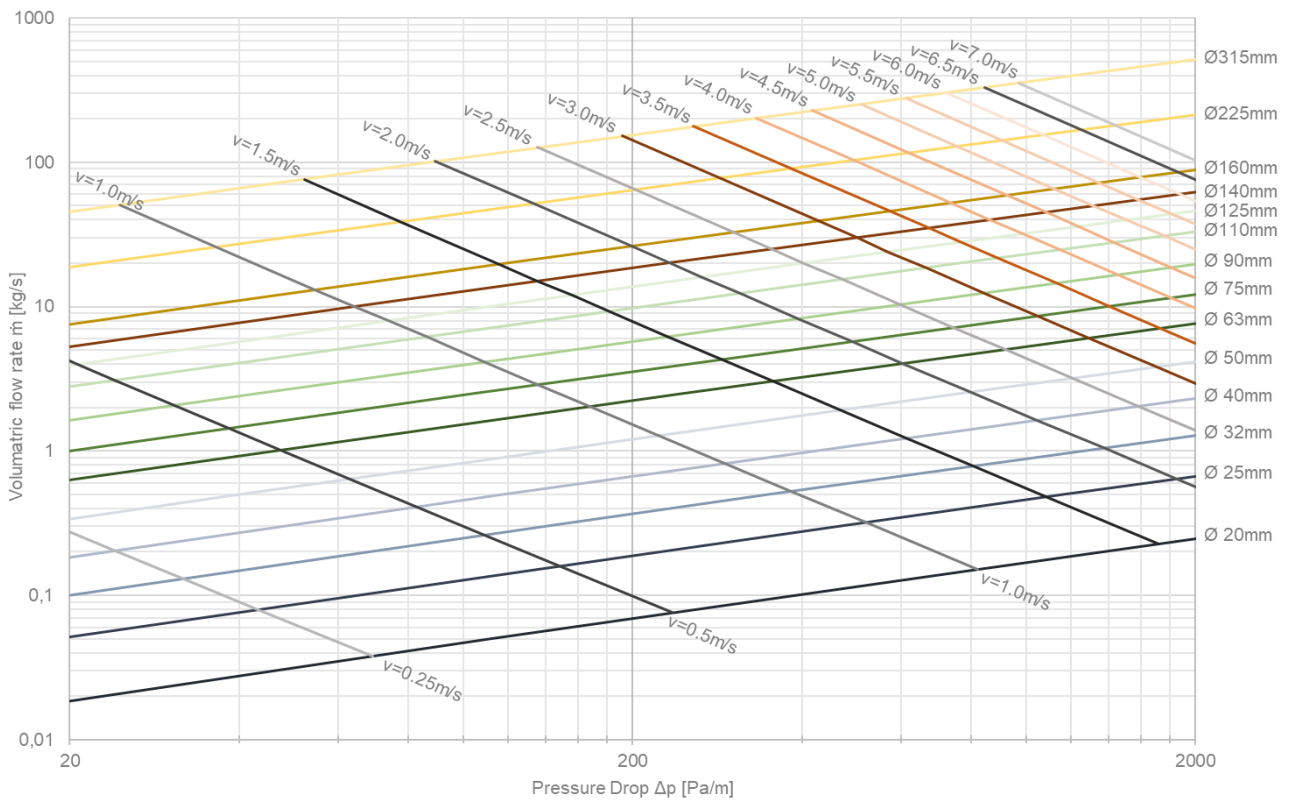
- Up to OD110 20°C/16 bar 95°C/8 bar
- ≥ OD125 20°C/10 bar 95°C/5 bar



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 [mm]	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
1001-200110-035	110 / 200 SL ²	110 x 10.0 ¹	200	5.40	1.25	12
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
1001-200125-030	125 / 200 SL ^{2,3}	125 x 11.4 ¹	200	6.38	1.50	12

Double line						
Product code	Dimension [mm]	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&12m sticks)

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

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

