

Flexalen® 600 Cooling

Pre-insulated piping system by Thermaflex®

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

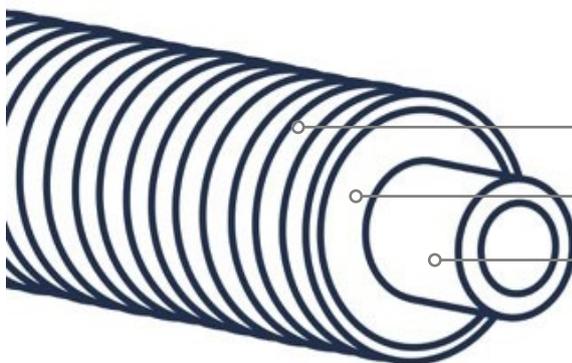


Benefits

- Fast and easy installation; minimum amount of fittings needed
- Safest choice with homogeneous welding and 20°C/16bar pressure rating
- Large network capacity with full compatibility with Flexalen® PU with service pipes up to OD315mm
- The world's only pre-insulated pipe system with Cradle to Cradle certification

Applications

- District cooling networks
- Chilled water networks for hotels and resorts
- Process water distribution for industrial, agricultural and food processes
- Campus cooling for hospitals, schools and business parks



Design

Corrugated PE Casing pipe

Flexibility and mechanical protection

Polyolefin foam

Closed-cell, CFC-free

Polybutene service pipe, PB-H

With EVOH layer





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)		Thermal Insulation	
Service temperature range	-10°C to +95°C	Polyolefin foam	
Max. operating pressure	16bar*(20°C) (see p3)	Closed-cell structure, CFC-free	
SDR-class	SDR11	Water vapor diffusion $\mu \geq 3,500$	

Flexalen® 600 Energy loss/gain

		U	[W/m]						
			5	10	15	20	25	30	35
		[W/mK]	Temperature difference between medium and surrounding soil						
Flexalen 600	25 / 090	0.148	0.74	1.48	2.22	2.96	3.7	4.44	5.18
Flexalen 600	32 / 090	0.182	0.91	1.82	2.73	3.64	4.55	5.46	6.37
Flexalen 600	40 / 090	0.23	1.15	2.3	3.45	4.6	5.75	6.9	8.05
Flexalen 600	40 / 125	0.178	0.89	1.78	2.67	3.56	4.45	5.34	6.23
Flexalen 600	50 / 125	0.219	1.095	2.19	3.285	4.38	5.475	6.57	7.665
Flexalen 600	50 / 160	0.182	0.91	1.82	2.73	3.64	4.55	5.46	6.37
Flexalen 600	63 / 125	0.29	1.45	2.9	4.35	5.8	7.25	8.7	10.15
Flexalen 600	63 / 160	0.222	1.11	2.22	3.33	4.44	5.55	6.66	7.77
Flexalen 600	75 / 160	0.265	1.325	2.65	3.975	5.3	6.625	7.95	9.275
Flexalen 600	90 / 160	0.336	1.68	3.36	5.04	6.72	8.4	10.08	11.76
Flexalen 600	110 / 200	0.354	1.77	3.54	5.31	7.08	8.85	10.62	12.39
Flexalen 600	125 / 200	0.43	2.15	4.3	6.45	8.6	10.75	12.9	15.05

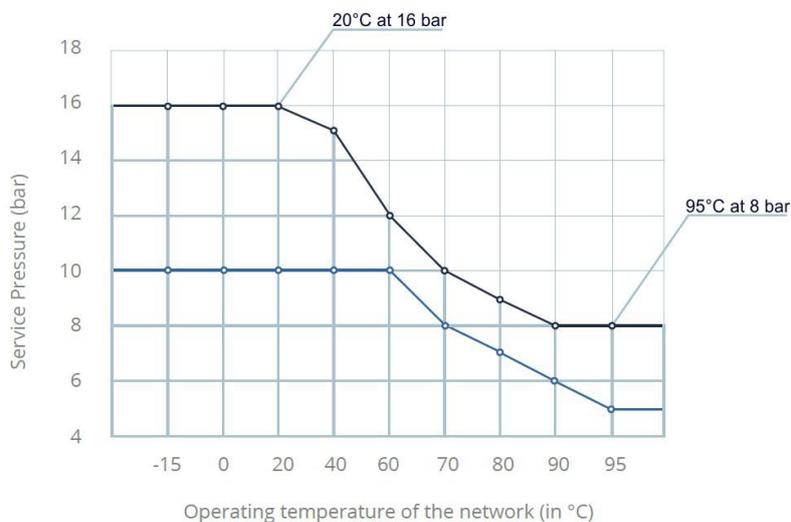
Calculation parameter

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 energy loss characteristics are in accordance with the European standard for flexible heating pipes systems EN15632.



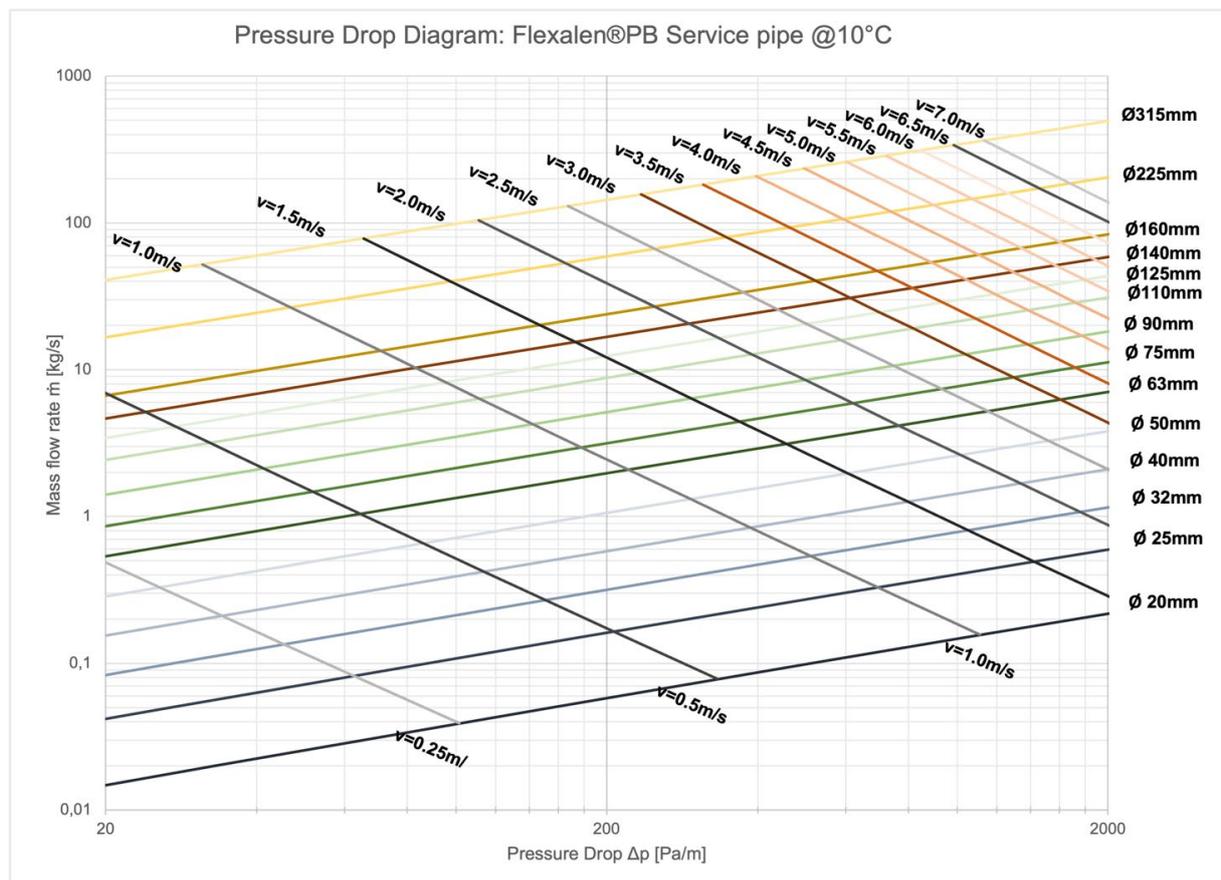
Flexalen® 600 Pressure rating



- 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 PB pipe systems at a temperature of 10°C for District cooling systems. For support on a complete district heating network design please contact your Thermaflex partner!





Flexalen® 600 Availability

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
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

 Higher insulation range with increased insulation thickness and improved energy efficiency

¹ Without EVOH layer

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

³ Maximum temperature / pressure rating 20°C / 16 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

