

# Flexalen® 600 Cooling

Pre-insulated piping system by Thermaflex®

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

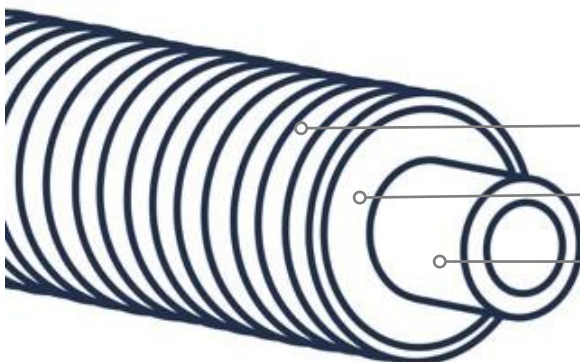


## Benefits

- 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 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

## 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 and without EVOH layer



### Disclaimer

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.

## 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)	
Service temperature range	-10°C to +95°C
Max. operating pressure	16bar*(20°C) (see p3)
SDR-class	SDR11

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

## Flexalen® 600 Heat loss/gain

	Heat loss/gain q [W/m] at 6°C medium temp.				
	Soil temperature T [°C]				
	10°C	15°C	20°C	25°C	30°C
25 / 90	-0,71	-1,60	-2,48	-3,37	-4,25
32 / 90	-0,87	-1,96	-3,04	-4,13	-5,22
40 / 90	-1,09	-2,45	-3,82	-5,18	-6,54
40 / 125	-0,85	1,-91	-2,97	-4,03	-5,09
50 / 125	-1,04	-2,35	-3,66	-4,96	-6,27
50 / 160	-0,88	-1,97	-3,07	-4,17	-5,26
63 / 125	-1,37	-3,09	-4,81	-6,53	-8,25
63 / 160	-1,07	-2,40	-3,74	-5,08	-6,41
75 / 160	-1,28	-2,88	-4,48	-6,08	-7,69
90 / 160	-1,61	-3,63	-5,65	-7,66	-9,68
110 / 200	-1,71	-3,84	-5,97	-8,10	-10,23
125 / 200	-2,06	-4,64	-7,22	-9,80	-12,38

	Heat loss/gain q [W/m] at 12°C medium temp.				
	Soil temperature T [°C]				
	10°C	15°C	20°C	25°C	30°C
25 / 90	0,35	-0,53	-1,42	-2,31	-3,19
32 / 90	0,43	-0,65	-1,74	-2,83	-3,91
40 / 90	0,55	-0,82	-2,18	-3,54	-4,91
40 / 125	0,42	-0,64	-1,70	-2,75	-3,81
50 / 125	0,52	-0,78	-2,09	-3,39	-4,70
50 / 160	0,44	-0,66	-1,75	-2,85	-3,95
63 / 125	0,69	-1,03	-2,75	-4,47	-6,18
63 / 160	0,53	-0,80	-2,14	-3,47	-4,81
75 / 160	0,64	-0,96	-2,56	-4,16	-5,76
90 / 160	0,81	-1,21	-3,23	-5,24	-7,26
110 / 200	0,85	-1,28	-3,41	-5,54	-7,68
125 / 200	1,03	-1,55	-4,13	-6,71	-9,28

### Calculation parameter

$\lambda_{\text{soil}}$ :	1.00 W/m·K
R soil surface to ambient air:	0.0685 m <sup>2</sup> ·K/W
T <sub>soil</sub> :	10.0 °C
Soil covering:	0.8 m

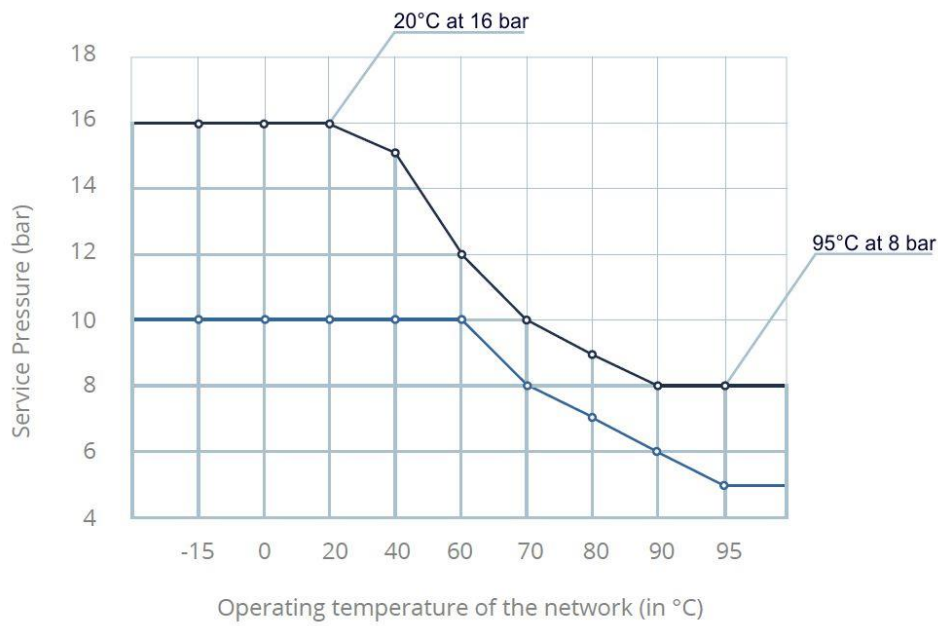
The heat loss characteristics are in accordance with the European standard for flexible heating pipes systems EN15632.

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# Flexalen® 600 Pressure rating



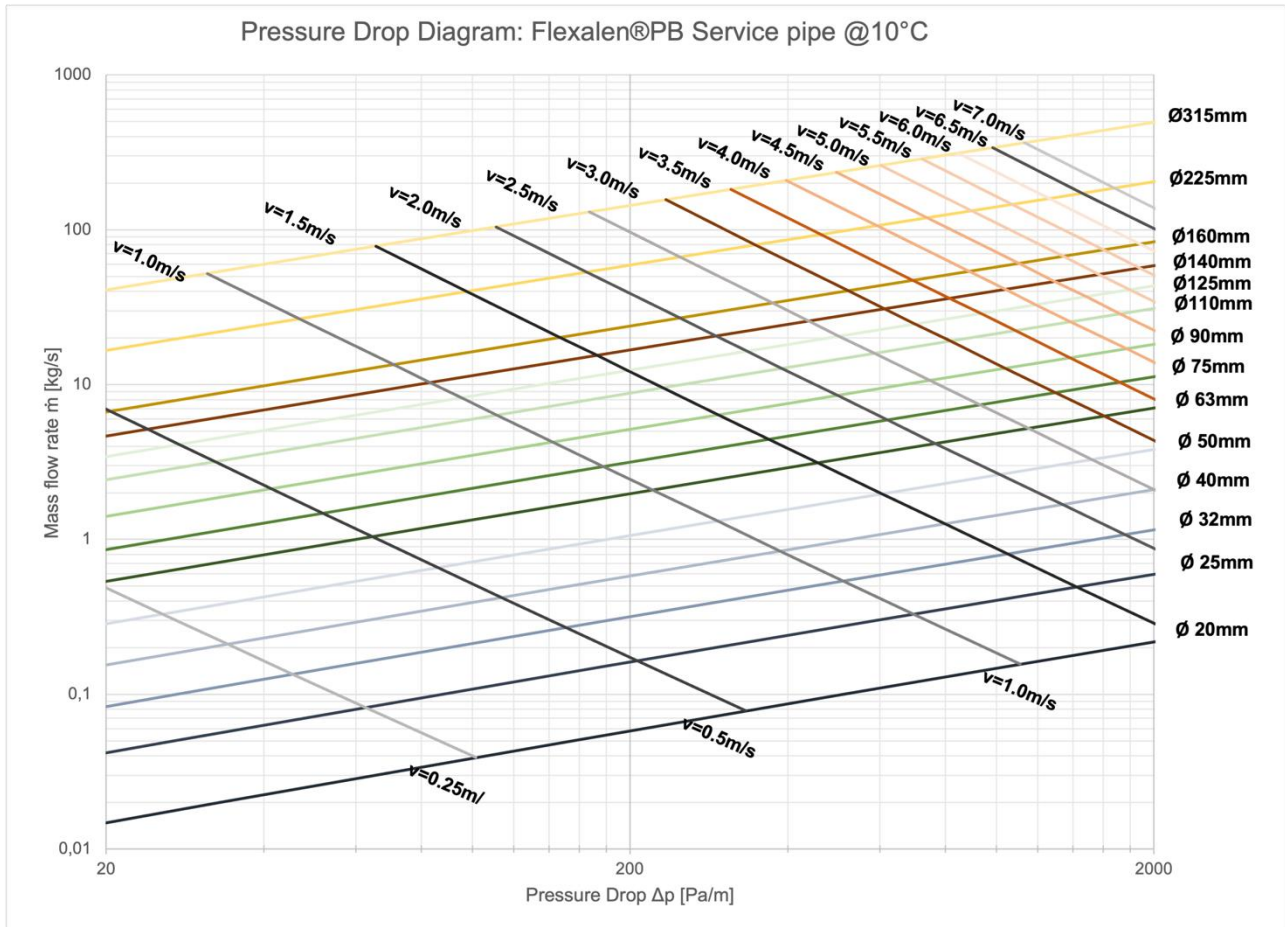
- Up to OD110 20°C/16 bar 95°C/8 bar
- ≥ OD125 20°C/10 bar 95°C/5 bar



# 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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	90 x 8.2	160	3.64	1.00	6
1000-200110-001	110 / 200	110 x 10.0 <sup>1</sup>	200	5.40	1.25	100
1001-200110-015	110 / 200 SL <sup>2</sup>	110 x 10.0 <sup>1</sup>	200	5.40	1.25	6
1000-200125-001	125 / 200 <sup>3</sup>	125 x 11.4 <sup>1</sup>	200	6.38	1.50	80
1001-200125-015	125 / 200 SL <sup>2,3</sup>	125 x 11.4 <sup>1</sup>	200	6.38	1.50	6

Higher insulation range with increased insulation thickness and improved energy efficiency

<sup>1</sup> Without EVOH layer

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

<sup>3</sup> 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

