

Technical Data Sheet

COOLFLEX

Flexible District cooling and cold water pipe



February 3, 2026

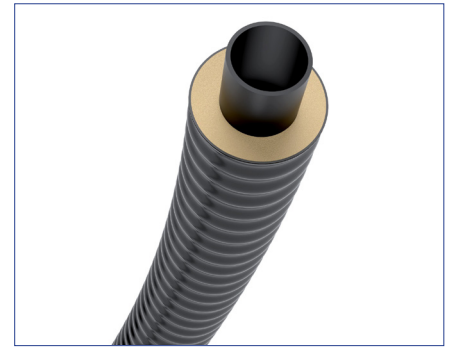
GENERAL PRODUCT INFORMATION

COOLFLEX pipe system for operating temperatures from -40°F to $+140^{\circ}\text{F}$ at a max. operating pressure of 200 psi, consisting of:

- COOLFLEX cooling and cold-water pipes
- COOLFLEX accessories (connection fittings, T-Pieces, wall sealing rings, etc.)

COOLFLEX is a flexible pre-insulated piping system designed for reliable chilled-water and process-cooling applications in demanding environments. Delivered in coils cut to required lengths, the pipes are installation-ready and can be laid underground largely without joints. The system provides excellent thermal efficiency and long-term flexibility for buried cooling or dual-purpose heat-pump lines.

COOLFLEX is designed for operating temperatures from -40°F (-40°C) at 100 psi (6.9 bar) and up to 140°F (60°C) at 200 psi (13.8 bar). Its seamlessly extruded LLD-PE outer jacket protects against mechanical stress and moisture ingress, while the CFC-free PUR insulation minimizes heat loss and moisture absorption.



DESIGN

Carrier pipe

Material	High-Density Polyethylene (PE 4710)
Standard	FM 1613 / ASTM D3035 / F714
Rating	200 psi @ -40°F , 100 psi @ 140°F
Pipe series	SDR 11, IPS
Density	59.4–59.9 lb/ft ³ (952–960 kg/m ³), per DIN 53479
Thermal conductivity	2.78 Btu·in/(h·ft ² ·°F) (0.40 W/m·K)

Outer Jacket

Material	Seamlessly extruded linear low-density polyethylene (LLD-PE), UV-resistant
Density	57.3–57.6 lb/ft ³ (918–922 kg/m ³), ISO 1183
Thermal conductivity	2.29 Btu·in/(h·ft ² ·°F) (0.33 W/m·K) acc. DIN 52612

Insulation

Material	CFC-free polyurethane foam (PUR)
Density	3.1 lb/ft ³ (50 kg/m ³) acc. EN 253
Thermal conductivity	≤ 0.14 Btu·in/(h·ft ² ·°F) @ 122°F (≤ 0.0199 W/m·K) acc. EN 253 and ISO 8497
Water absorption	$\leq 10\%$, EN 15632-1
Structure	Closed cellular structure $\geq 90\%$

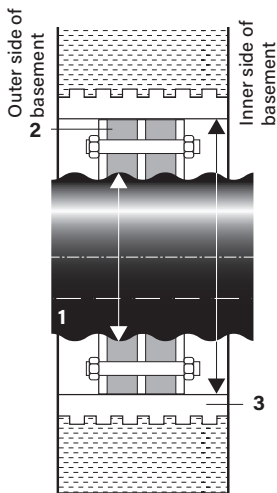
FITTINGS AND ACCESSORIES

- Clip shell or sleeve joints
- Shrink, EPDM or PE end caps
- Wall penetrations with annular or labyrinth seals



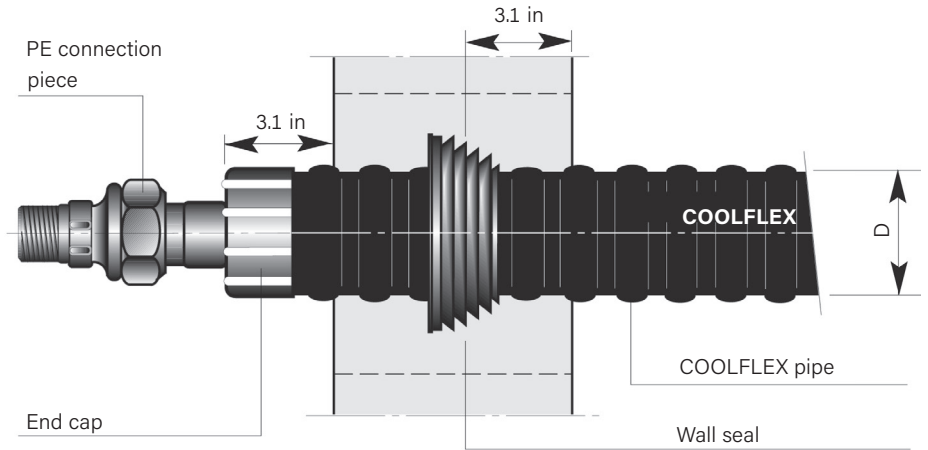
WALL PENETRATION

Standard



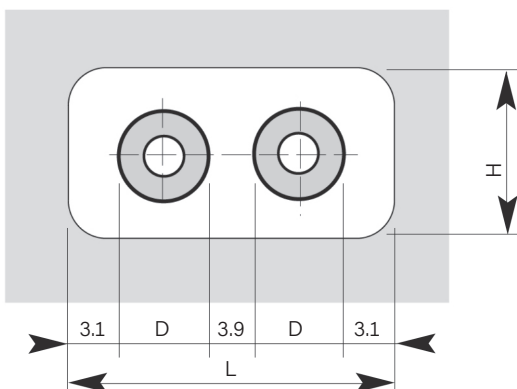
- 1 COOLFLEX Cold Water pipe
- 2 Annular seal, double sealing 2x 40 mm, Shore hardness 35
- 3 Sleeve pipe (fiber cement) or coated core drill hole

Wall leadthrough



Outer Jacket Ø D in (mm)	Core Drilling Ø K in (mm)
3.07 (78)	5.91 (150)
5.03 (128)	7.87 (200)
6.42 (163)	9.84 (250)

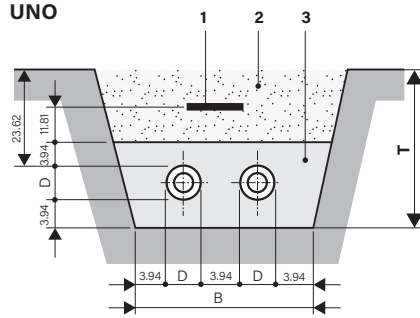
Wall opening



Outer casing Ø D in	L min in	H min in
3.1	17.7	9.8
3.7	19.7	9.8
4.4	19.7	11.8
5.0	21.7	11.8
5.6	23.6	13.8
6.4	25.6	13.8
7.2	26.4	15.0
8.0	28.3	15.7

TRENCH PROFILE AND DIMENSIONS

Trench profile, 2 COOLFLEX pipes



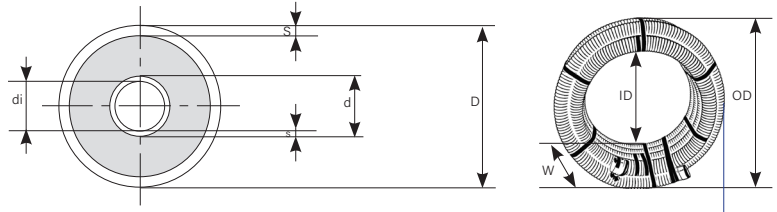
Outer Jacket ØD in (mm)	Width B in (cm)	Depth T in (cm)
3.07 (78)	17.72 (45)	31.50 (80)
3.66 (93)	19.69 (50)	31.50 (80)
4.45 (113)	21.65 (55)	33.46 (85)
5.03 (128)	21.65 (55)	33.46 (85)
5.63 (143)	23.62 (60)	33.46 (85)
6.42 (163)	25.59 (65)	35.43 (90)
7.20 (183)	27.56 (70)	37.40 (95)
8.00 (202)	29.53 (75)	37.40 (95)

BACKFILL MATERIAL

COOLFLEX pipes must be surrounded with sand when installed underground. For calculation purposes, the soil type selection should be based on the properties of the native soil. Rounded, washed sand with a maximum grain size of 0.31" (8 mm) should be used. The pipes must be embedded with at least 4" (approx. 10 cm) of sand on all sides. In addition, COOLFLEX is suitable for H20 traffic load with a minimum cover of 24" (approx. 60 cm) beneath the road surface.

ASSORTMENT

COOLFLEX - Pre-Insulated PE 4710 Pipes



Dimensions SDR 11

Types	Carrier Pipe PE				Outer Jacket		COOLFLEX				
	Avg. Outer Diam. d in (mm)	Min. Wall Thickness s in (mm)	Avg. Inner Diam. di in (mm)	Capacity gal/ft (l/m)	Outer Diam. D in (mm)	Wall Thickness S in (mm)	R value °F·ft·h/BTU	Weight lb/ft (kg/m)	Min. Bend Radius ft (m)	Coil Size ODxW/ID in	Max Coil Length ft
1.00"/3.07"	1.315 (33.40)	0.120 (3.0)	1.06 (27.5)	0.046 (0.394)	3.07 (78.00)	0.08 (1.90)	12.73	0.8 (1.2)	0.8 (1.2)	96 in x 44 in 49 in ID	2300
2.00"/5.03"	2.375 (60.33)	0.216 (5.49)	1.917 (48.69)	0.1499 (1.862)	5.03 (128.00)	0.10 (2.70)	11.33	1.6 (2.4)	3.3 (1.0)	96 in x 47 in 60 in ID	700
3.00"/6.42"	3.500 (88.90)	0.318 (8.08)	2.825 (71.76)	0.3256 (4.0444)	6.42 (163.00)	0.13 (3.20)	9.29	3.0 (4.5)	4.0 (1.2)	96 in x 47 in 71 in ID	300
4.00"/6.42"	4.500 (114.3)	0.409 (10.39)	3.633 (92.28)	0.5385 (6.688)	6.42 (163.00)	0.13 (3.20)	5.81	4.1 (6.1)	4.3 (1.3)	96 in x 47 in 71 in ID	300