

Technical Data Sheet

CITIFLEX

Flexible cold water pipe with integrated heat-trace channel

February 3, 2026

GENERAL PRODUCT INFORMATION

CITIFLEX pipe system for operating temperatures from -40°F up to 140°F at a max. operating pressure of 200 psi, consisting of

- CITIFLEX cold water pipe
- CITIFLEX accessories (T-Pieces, wall sealing rings, etc.)

CITIFLEX is a flexible pre-insulated HDPE piping system with an integrated PEX-channel for heating cables.

With heating cables the system ensures a constant water supply even under sub-zero conditions, preventing freezing down to -22 °F (-30 °C).

CITIFLEX is designed for operating temperatures up to 140 °F (60°C) at 200 psi (13.8 bar). Its seamless LLD-PE outer jacket protects against mechanical damage, while the PUR insulation minimizes heat loss and moisture absorption in municipal applications.



DESIGN

Carrier pipe

Material	High-Density Polyethylene (PE 4710)
Standard	¾ inch to 2 inch: AWWA C901, ASTM D3035, ASTM F714, NSF 61, NSF 14 4 inch: AWWA C906, ASTM D3035, ASTM F714, NSF 61, NSF 14
Rating	200 psi @ -40°F, 100 psi @ 140°F
Pipe series	SDR 9, IPS, AWWA Certified
Density	59.4–59.9 lb/ft ³ (952–960 kg/m ³), per DIN 53479
Thermal conductivity	02.78 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

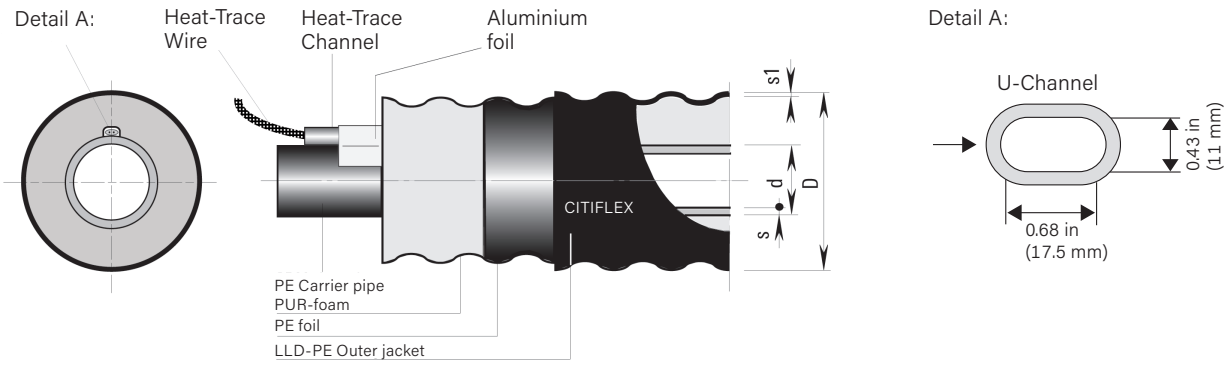
Insulation

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	≤ 10 %, EN 15632-1
Structure	Closed cellular structure ≥90%

HEAT-TRACE CHANNEL FOR HEAT-TRACE-WIRE

The standard option is the PEX channel. For special requests and minimum order quantities, other configurations can be provided, such as:

- U-Channel: 0.20 × 0.35 in (5 × 9 mm) – CITIFLEX



FITTINGS AND ACCESSORIES

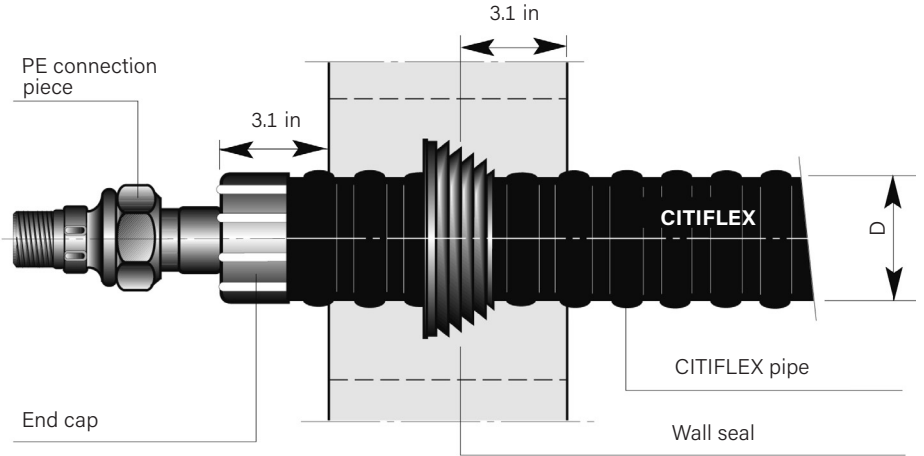
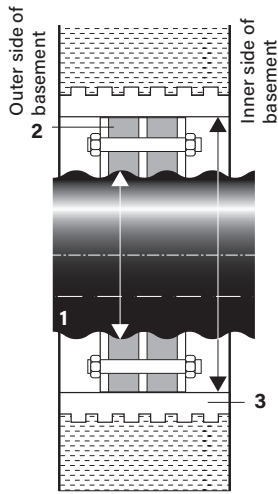
- Sleeve Connection (Heat-Shrink Sleeve SMPE)
- Heat-Shrink End Caps
- Sealing Ring
- Clip Shells for Insulating T-Pieces
- Distribution Chamber



WALL PENETRATION

Standard

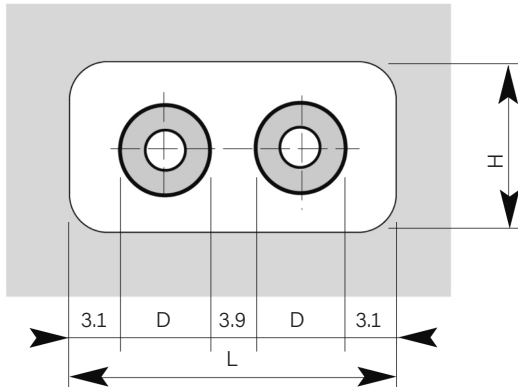
Wall leadthrough



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

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

Wall opening

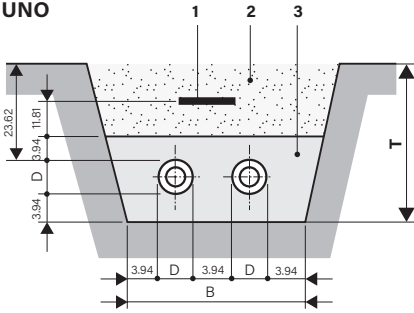


Outer casing Ø D in	L min in	H min in
3.1	17.7	9.8
3.7	19.7	9.8
4.4	19.7	11.8
5.0	21.7	11.8
5.6	23.6	13.8
6.4	25.6	13.8
7.2	26.4	15.0
8.0	28.3	15.7

TRENCH PROFILE AND DIMENSIONS

Trench profile, 2 CITIFLEX pipes

UNO



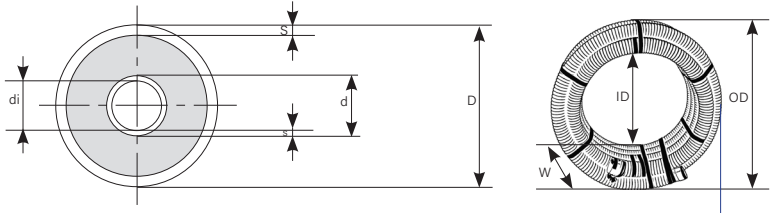
Outer Jacket ØD in (mm)	Width B in (cm)	Depth T in (cm)
3.07 (78)	17.72 (45)	31.50 (80)
3.66 (93)	19.69 (50)	31.50 (80)
4.45 (113)	21.65 (55)	33.46 (85)
5.03 (128)	21.65 (55)	33.46 (85)
5.63 (143)	23.62 (60)	33.46 (85)
6.42 (163)	25.59 (65)	35.43 (90)
7.20 (183)	27.56 (70)	37.40 (95)
8.00 (202)	29.53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

BACKFILL MATERIAL

CITIFLEX 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, CITIFLEX is suitable for H20 traffic load with a minimum cover of 24" (approx. 60 cm) beneath the road surface.

ASSORTMENT

CITIFLEX - Pre-Insulated PE 4710 Pipes



Dimensions SDR 9

Types	Carrier Pipe PE				Outer Jacket		CITIFLEX				
	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 WxD/ID in	Max Coil Length ft
1.00"/3.07"	1.315 (33.40)	0.146 (3.71)	1.003 (25.48)	0.041 (0.51)	3.07 (78.00)	0.08 (1.90)	12.73	0.8 (1.2)	0.8 (1.2)	96 in x 47 in 74 in ID	350
2.00"/5.03"	2.375 (60.33)	0.264 (6.71)	1.816 (46.13)	0.135 (1.67)	5.03 (128.00)	0.10 (2.70)	11.33	1.6 (2.4)	3.3 (1.0)	96 in x 47 in 71 in ID	300
3.00"/6.42"	3.500 (88.90)	0.389 (9.88)	2.722 (69.14)	0.302 (3.75)	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 (114.30)	0.500 (12.70)	3.440 (87.38)	0.483 (6.00)	6.42 (163.00)	0.13 (3.20)	5.81	4.1 (6.1)	4.3 (1.3)	96 in x 47 in 79 in ID	120