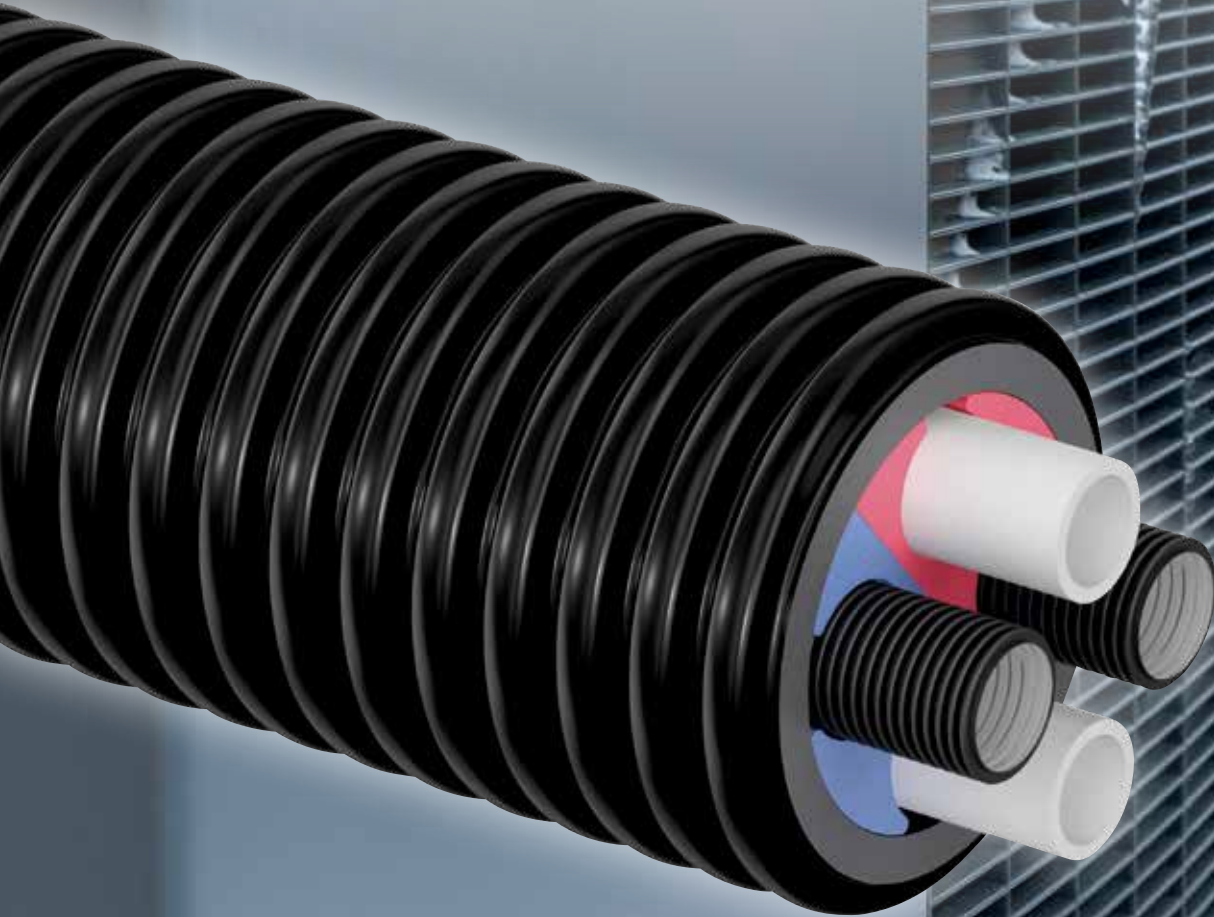




Uponor

Build on Uponor Ecoflex Thermo Twin HP

Pre-insulated pipes for heat distribution, which includes conduits for the cable supply



Uponor Ecoflex Thermo Twin HP – The smart way to connect a heat pump

Combines a heating service and conduit pipe

An ALL-IN-ONE pipe, which is extremely flexible

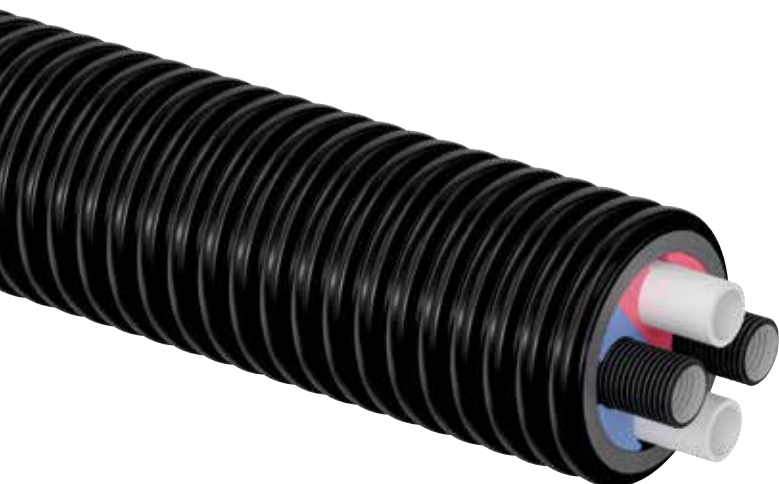
Uponor UK are delighted to announce that the new Ecoflex Thermo Twin HP pipe with two conduits is available to buy.

Ecoflex Thermo Twin HP pipes are developed especially for heat pump applications, as they include all connections in only one pipe i.e. heating pipes and power and sensor cables. They can also be connected to external dwellings and are suitable for many other applications.

Ecoflex Thermo Twin HP provides full compatibility with all standard Ecoflex accessories.



Thw connection of Uponor Ecoflex Thermo Twin HP between an external heat pump and residential building



Your advantages:

- Just one installation step for a flow and return pipeline plus cable conduits
- Smaller trench required
- Available with Uponors “Cut to measure” service

Key features:

- Geothermal, heating and cooling application
- Two medium pipe PE-Xa with oxygen barrier, SDR 11
- Max. load 6 bar / 80°C
- Two conduits for cable or sensor
- Coloured centre profile to avoid confusion of flow and return line
- PEX foam, 100% watertight HDPE casing

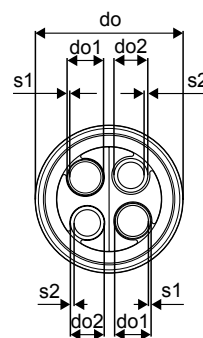
Technical data Uponor Ecoflex Thermo Twin HP

| Item no. | Dimension | do [mm] | do1* [mm] | do2** [mm] | s1 [mm] | s2 [mm] | R*** [m] | Weight [kg] | Qty [m] |
|----------|---------------------------|------------|--------------|---------------|------------|------------|-------------|----------------|------------|
| 1093894 | 2x32x2.9- 2x32x3.5/140 | 140 | 32 | 32 | 2,9 | 3,5 | 0,5 | 1,7 | 200 |
| 1093895 | 2x40x3.7- 2x32x3.5/175 | 175 | 40 | 32 | 3,7 | 3,5 | 0,8 | 2,6 | 200 |

* PE-X medium pipe

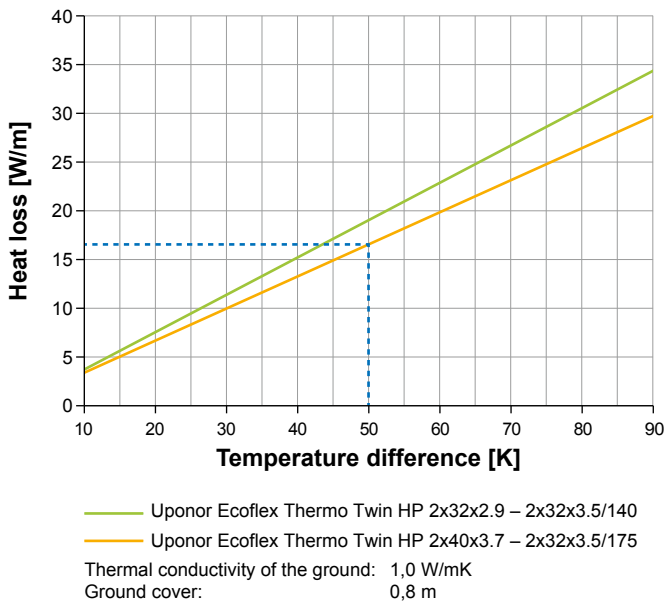
** Conduit pipe

*** Bending radius



Design information

Heat loss Uponor Ecoflex Thermo Twin HP



Example for Uponor Thermo Twin HP 2 x 40/175

θ_V = Flow temperature
 θ_R = Return temperature
 θ_E = Ground temperature
 $\Delta\theta$ = Temperature difference [K]
 $\Delta\theta = (\theta_V + \theta_R) / 2 - \theta_E$
 $\theta_V = 40\text{ }^\circ\text{C}$
 $\theta_R = 30\text{ }^\circ\text{C}$
 $\theta_E = 5\text{ }^\circ\text{C}$
 $\Delta\theta = (40 + 30) / 2 - 5 = 30\text{ K}$
Heat loss: 9,8 W/m

Maximum heat capacity and maximum flow rate

| Item no. | Dimension | max. heat capacity* [kW] | max flow rate [l/h] |
|----------|---------------------------|--------------------------|---------------------|
| 1093894 | 2x32x2.9- 2x32x3.5/140 | 39 | 1692 |
| 1093895 | 2x40x3.7- 2x32x3.5/175 | 65 | 2808 |

* $\Delta T = 20\text{ K}$

Note: Detailed pressure loss table in Ecoflex technical information brochure

Ecoflex Thermo Twin HP (PN 6) dimension table

| Temperature spread between flow and return | | | | | | | Mass flow rate [kg/h] | Pipe type Δp_v | Pipe type Δp_v | Pipe type Δp_v |
|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| $\Delta\theta = 10\text{ K}$ | $\Delta\theta = 15\text{ K}$ | $\Delta\theta = 20\text{ K}$ | $\Delta\theta = 25\text{ K}$ | $\Delta\theta = 30\text{ K}$ | $\Delta\theta = 35\text{ K}$ | $\Delta\theta = 40\text{ K}$ | | | | |
| 10 kW | 15 kW | 20 kW | 25 kW | 30 kW | 35 kW | 40 kW | 860 | | 32/26.2 0.0909 kPa/m 0.449 m/s | 40/32.6 0.0319 kPa/m 0.290 m/s |
| 20 kW | 30 kW | 40 kW | 50 kW | 60 kW | 70 kW | 80 kW | 1720 | 32/26.2 0.3157 kPa/m 0.897 m/s | 40/32.6 0.1106 kPa/m 0.579 m/s | |
| 30 kW | 45 kW | 60 kW | 75 kW | 90 kW | 105 kW | 120 kW | 2581 | 32/26.2 0.6553 kPa/m 1.346 m/s | 40/32.6 0.2294 kPa/m 0.869 m/s | |
| 40 kW | 60 kW | 80 kW | 100 kW | 120 kW | 140 kW | 160 kW | 3441 | 40/32.6 0.3853 kPa/m 1.159 m/s | | |

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