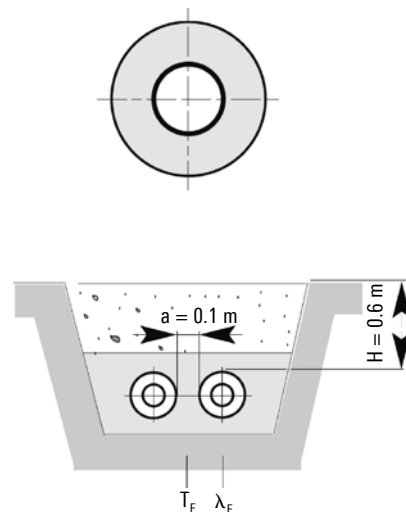


Energy losses

Applications laid in the ground

Dimensions DN 20 - DN 40

Heat losses q [W/m]		Average operating temperature T _B [°C]				
COOLFLEX	U-value [W/mK]	6°	8°	10°	12°	14°
		25/ 76 - SDR 11	0.1254	-0.5	-0.3	0.0
32/ 76 - SDR 11	0.1588	-0.6	-0.3	0.0	0.3	0.6
40/ 91 - SDR 11	0.1657	-0.7	-0.3	0.0	0.3	0.7
50/ 91 - SDR 11	0.2243	-0.9	-0.4	0.0	0.4	0.9
63/126 - SDR 11	0.1941	-0.8	-0.4	0.0	0.4	0.8
75/126 - SDR 11	0.2523	-1.0	-0.5	0.0	0.5	1.0
90/162 - SDR 11	0.2269	-0.9	-0.5	0.0	0.5	0.9
110/162 - SDR 11	0.3287	-1.3	-0.7	0.0	0.7	1.3
125/182 - SDR 11	0.2275	-0.9	-0.5	0.0	0.5	0.9



Installation type CLX: 2-pipe, laid in the ground
 Pipe distance: a = 0.10 m
 Cover above pipe: H = 0.60 m
 Ground temperature: T_E = 10.00 °C
 Soil conductivity: λ_E = 1.2 W/mK
 Conductivity of PUR foam: λ_{PU} = 0.0234 W/mK
 Conductivity of PE pipe: λ_{PE} = 0.40 W/mK
 Conductivity of PE casing: λ_{PE} = 0.33 W/mK

Heat loss during operation:
 $q = U (T_B - T_E)$ [W/m]
 U = Heat transfer coefficient [W/mK]
 T_B = Average operating temperature [°C]
 T_E = Average ground temperature [°C]
 VL = Flow
 RL = Return

On request, we shall be glad to calculate the heat losses for surface mounted pipe systems.