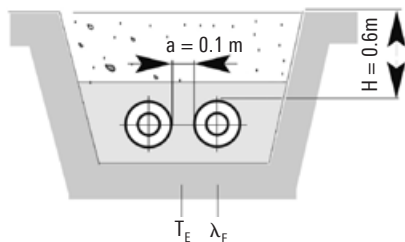
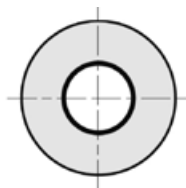


Heat losses



FLEXWELL® district heating cable

Heat losses q [W/m] for one UNO pipe											
FHK type	U-value [W/mK]	Average operating temperature T _B [°C]									
		40°	50°	60°	70°	80°	90°	100°	110°	120°	130°
30/ 91	0.1983	5.95	7.93	9.92	11.90	13.88	15.86	17.85	19.83	21.81	23.80
39/116	0.1998	5.99	7.99	9.99	11.99	13.99	15.98	17.98	19.98	21.98	23.98
60/148	0.2384	7.15	9.54	11.92	14.30	16.69	19.07	21.46	23.84	26.22	28.61
75/171	0.2748	8.24	10.99	13.74	16.49	19.24	21.98	24.73	27.48	30.23	32.98
98/171	0.4177	12.53	16.71	20.89	25.06	29.24	33.42	37.59	41.77	45.95	50.12
98/220	0.2643	7.93	10.57	13.22	15.86	18.50	21.14	23.79	26.43	29.07	31.72
127/220	0.4043	12.13	16.17	20.22	24.26	28.30	32.34	36.39	40.43	44.47	48.52
147/220	0.5587	16.76	22.35	27.94	33.52	39.11	44.70	50.28	55.87	61.46	67.04
200/310	0.5585	16.76	22.34	27.93	33.51	39.10	44.68	50.27	55.85	61.44	67.02

Type of installation, FHK UNO: 2-pipe, laid in the ground
 Pipe distance: a = 0.10 m
 Coverage height: H = 0.60 m
 Ground temperature: T_E = 10 °C
 Soil conductivity: λ_E = 1.2 W/mK
 Conductivity of PUR foam: λ_{PU} = 0.032 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]