

Product information

FRANK GET-X geothermal probes

Geothermal probes made of cross-linked polyethylene (PE-X) offer ideal protection against point loads, slow tear growth and external damage. Thanks to a homogeneous type of cross-linking, the pipes are resistant to stress cracks. The GET-X probe is perfectly suited for use in heat stores and in connection with solar heat. The higher material flexibility makes it easy to install in low temperatures.

Features:

- Completely factory-assembled, factory-welded geothermal probe in standard lengths as well as special lengths on request
- Highest point load durability – extremely notch-insensitive and tear-resistant
- Injection-moulded probe foot developed specifically for use with geothermal energy
- Wall thicknesses according to SDR 11
- Geothermal energy without cross section contraction, Piggable probe
- Pipe lettering with meter marking
- Made by DVS-certified welders
- Individual test certificate for each probe (available at www.frank-gmbh.de)

Design:

- Duplex geothermal probe with separable probe foot

Temperature range:

- Continuous operating temperature -10°C to +70°C
- Peak temperatures up to +95°C permissible

Operating pressure:

- According to DIN 16893, SDR 11 corresponds to a max. working pressure of 15.0 bar (20°C, 100 years)
- The working pressure is dependent on temperature and time (see page 3)

Thermal conductivity:

- $\lambda = 0.38 \text{ W/mK}$ (at 20°C)

Connection dimensions:

- Pipe dimensions (2 x supply pipes and 2 x return pipes)
- d 32 x 2.9 mm
- d 40 x 3.7 mm

Connection technique:

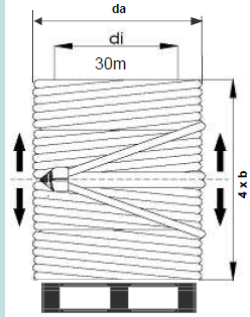
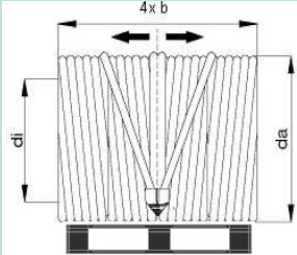
- Electro fusion welding or press-fit connection

Installation:

See FRANK installation instructions for geothermal probes



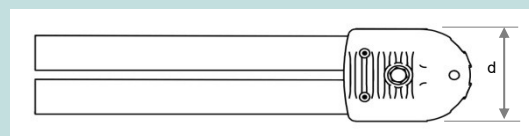
Dimensions of coiled bundles for GET-X geothermal probes

Pipe		Coiled bundle dimensions			Number of coiled bundles	Weight	Mode of delivery
da (mm)	L (m)	da (mm)	di (mm)	4xb (mm)	Pc.	(kg)	
32	50	1111	860 - 960	800	4	58	 <p>* 2 probes on 1 pallet: Total pallet height for L 30/40 m: 1.30 / 1.50 m</p>
	60	1136		732	4	69	
	70	1186		800	4	80	
	80	1210		732	4	92	
	90	1210		800	4	103	
	100	1180		932	4	114	
	110	1180		1000	4	126	
	120	1274		800	4	137	
	130	1299		800	4	148	
	140	1264		1000	4	159	
150	1254	1064	4	171			
40	50	1093	770 - 890	824	4	89	 <p>Example of pallet dimensions 200 m: L x W x H 1.20 x 1.20 x 1.60 m</p>
	60	1153		908	4	106	
	70	1181		824	4	124	
	80	1219		824	4	141	
	90	1171		1072	4	158	
	100	1191		1152	4	176	
	110	1206		1092	4	193	
	120	1219		1152	4	211	
	130	1296		1176	4	228	
	140	1355		988	4	245	
	150	1322		1152	4	263	
	160	1370		1120	4	280	
	170	1370		1180	4	297	
	180	1370		1220	4	315	
	200	1440		1180	4	349	
	220	1500		1180	4	384	
250	1440	1420	4	436			
275	1520	1420	4	480			
300	1580	1420	4	523			

Note: Outer diameter and breadth of the coiled bundle may vary for manual production of above-mentioned dimensions.

* Weights are incl. +1m for horizontal connection

Geothermal probe pipe (mm)	Probe foot diameter d diagonal (mm)
32 x 2.9	110
40 x 3.7	130



Working pressure at continuous load for PE-X in accordance with temperature and service life

Diameter/wall thickness ratio SDR 11		
Temperature [°C]	Service life [years]	Permissible component working pressure ² [bar]
10	5	17.5
	10	17.4
	25	17.2
	50	17.1
	100	17.0
20	5	15.5
	10	15.4
	25	15.2
	50	15.1
	100	15.0
30	5	13.8
	10	13.7
	25	13.5
	50	13.4
	100	13.3
40	5	12.2
	10	12.1
	25	12.0
	50	11.9
	100	11.8
50	5	10.9
	10	10.8
	25	10.7
	50	10.6
	100	10.5

Diameter/wall thickness ratio SDR 11			
Temperature [°C]	Service life [years]	Permissible component working pressure ² [bar]	
60	5	9.7	
	10	9.7	
	25	9.5	
	50	9.5	
70	5	8.7	
	10	8.6	
	25	8.5	
	50	8.5	
80	1	8.0	
	5	7.8	
	10	7.7	
80	25	7.6	
	90	1	7.2
		5	7.0
10		6.9	
95	1	6.8	
	5	6.6	

The entries in the table apply to water as the flow medium. They have been calculated with a safety coefficient of C=1.25 according to DIN 16893 from the long-term hydrostatic strength diagram.