# 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 crack 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 probe certificate for each probe (available at www.frank-gmbh.de)

**Design:**
- Duplex geothermal probe with separable probe foot
- Simple division into two Single probes possible

**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 depends on temperature and time (see page 3)

**Thermal conductivity:**
- λ = 0.38 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



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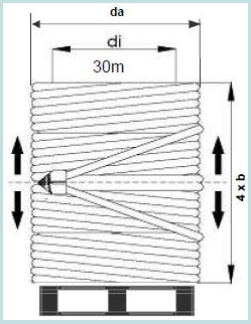
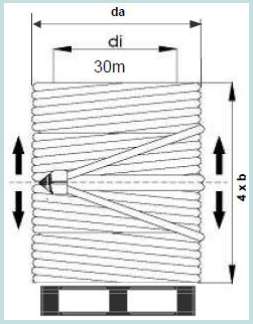
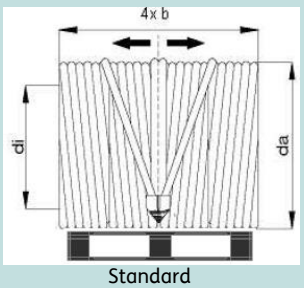
# Dimensions of coiled bundles for GET-X geothermal probes

| Pipe | | Coiled bundle dimensions | | | Number of coiled bundles | Weight | |
|---|---|---|---|---|---|---|---|
| da (mm) | L (m) | da (mm) | di (mm) | 4xb (mm) | Pc. | (kg) | Mode of delivery |
| 32 | 50 | 1111 | 860 - 960 | 800 | 4 | 58 |   |
| | 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 | 87 |   |
| | 60 | 1153 | | 908 | 4 | 105 | |
| | 70 | 1181 | | 824 | 4 | 122 | |
| | 80 | 1219 | | 824 | 4 | 139 | |
| | 90 | 1171 | | 1072 | 4 | 157 | |
| | 100 | 1191 | | 1152 | 4 | 174 | |
| | 110 | 1206 | | 1092 | 4 | 191 | |
| | 120 | 1219 | | 1152 | 4 | 209 | |
| | 130 | 1296 | | 1176 | 4 | 226 | |
| | 140 | 1355 | | 988 | 4 | 244 | |
| | 150 | 1322 | | 1152 | 4 | 261 | |
| | 160 | 1370 | | 1180 | 4 | 278 | |
| | 170 | 1370 | | 1180 | 4 | 293 | |
| | 180 | 1440 | | 1180 | 4 | 313 | up to L = 90 m and on request |
| | 190 | 1440 | | 1180 | 4 | 330 | |
| | 200 | 1440 | | 1180 | 4 | 349 | |
| | 210 | 1440 | | 1180 | 4 | 361 | |
| | 220 | 1500 | | 1180 | 4 | 384 | |
| | 230 | 1500 | | 1180 | 4 | 396 | |
| | 240 | 1580 | | 1180 | 4 | 417 | |
| | 250 | 1440 | | 1180 | 4 | 434 | |
| | 260 | 1510 | | 1420 | 4 | 452 | |
| | 270 | 1580 | | 1420 | 4 | 469 | |
| | 280 | 1580 | | 1420 | 4 | 486 | |
| | 300 | 1580 | | 1420 | 4 | 523 | |
| | 350 | 1650 | | 1420 | 4 | 608 | |



Standard

Note: Outer diameter and width (b) of the coils can deviate from the above mentioned dimensions when manufactured manually.
* Weights are incl. +1m for horizontal connection



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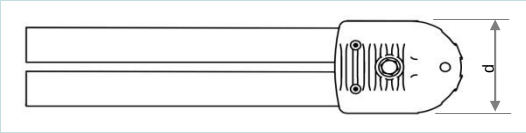
| Geothermal probe pipe (mm) | Probe foot diameter d diagonal (mm) |
|---|---|
| 32 x 2.9 | 110 |
| 40 x 3.7 | 130 |




## 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 pressure² [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 pressure² [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 |
| | 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.



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