

NEW

■ **Geothermal probes made of PE 100-RC**

GEO THERMAL SYSTEM



Geothermal probes made of PE 100-RC

Delivered from the well-proven FRANK Sureline® pipe, the highest quality, vulcanized material PE 100-RC, available at the moment, is used. Geothermal probes with solid walled pipe made of PE 100-RC offers an optimal protection against point loads, crack initiation, slow crack growth and outer damages.

PE 100-RC could be used as efficient solution compared to geothermal probes made of PE-Xa. Besides the high mechanical resistance, PE 100-RC offers also approx. 10% better heat conductance compared to PE-Xa, acc. to DIN 52612.

The in the VDI 4640 mentioned temperature limit for heat input of +17 °C over ground temperature is surely supported. The tests made by independent testing institutes (long term tensile test, Notch test, point load test) prove projecting characteristics of the material PE 100-RC:

FNC-Test

Full Notch Creep-Test (FNCT acc. to DIN EN 12814-3 and DVS 2203-4), Long term tensile with notched specimen

Time to failure result (testing temperature 80 °C):
PE 100 from 360 up to 832 h
PE 100 RC > 8760 h

NC-Test

Notch test (DIN EN ISO 13479), long term tensile test with 4 notches 20% deep minimum time of failure 500 h

Time to failure result (testing temperature 80 °C):
PE 100 1500 h
PE 100 RC > 8760 h

Point load test according to Dr. Hessel

Time to failure result (testing temperature 80 °C):
PE 100 1700 h
PE 100 RC > 8760 h

After reaching a time to failure of more than 8760 h (1 year) it is out of question that the pipe will fail due to overload in point loading before the ageing limit is reached.

Probe foot made of PE 100

Injection moulded fittings made of PE 100 have, in consequence of the production process, verifiably a more favourable allocation of the internal stress than extruded pipes. Thus, the FRANK probe foot has a clearly higher resistance against crack initiation and slow crack growth. Compared to a pipe SDR11, the probe foot is clearly over dimensioned and because of his construction it offers a higher safety than an extruded pipe.



- Factory assembled Duplex-Geothermal probe OD 32mm and OD 40 mm with test certificate
- Injection moulded, separable probe foot
- Pipes made of PE 100-RC acc. to PAS 1075
- Approved for installation without sand embedding
- High point load resistance
- High tension crack resistance
- PE 100-RC pipes could be installed and welded like PE pipes

FRANK GET system:

- Geothermal probes
- Installation tools and weights for geothermal probes
- Spacer
- Modular brine manifold made of plastic and brass
- Manholes for all requirements
- Connecting pipes
- Electro fusion fittings and associated welding technology

..... everything from one source