



## Technical data sheet

**GEROtherm® FLUX**

The conical, safety and pressure loss-optimised  
geothermal probe, with increased volume

PN14 up to PN38

dn 53 x 4,3 - 9,2

## GERO<sup>®</sup>therm<sup>®</sup> FLUX the conical, safety and pressure loss-optimised geothermal probe, with increased volume PN14 up to PN38 @20°C

Material	Polyethylene PE100-RC (resistance to cracking) and polyamide PA12
Geothermal probe design	<ul style="list-style-type: none"> <li>▪ <b>Two geothermal probe feet, PN40</b>, U-shaped with dirt trap and a minimal pressure drop of &lt;10 mbar at 1.0 m/s, and a fixture for securing weights as an aid to installation, plus a reinforcement brace for the GERO<sup>®</sup>therm<sup>®</sup> PUSH-FIX impact-resistant sleeve.</li> <li>▪ <b>Four conical pipes for double-U probes from pipe series PN14 up to PN38 @20°C</b> made of the material PE100-RC in the pipe outside diameter 53 × 4.3 – 9.2 mm with double metering and flow direction indication (forward/return flow)</li> </ul>
Installation and operation	The part of the geothermal system down in the soil must withstand the pressures and temperatures that occur. The applicable standards must be observed.
Delivery form	Rolls on a pallet covered with protective film: each individual probe foot packed in a protective pouch with a factory certificate and serial number in accordance with EN 10204 2.2.
Regulations	SIA 384/6; SKZ HR3.26 A724; VDI 4640; DIN EN 12201-2; patent: EP 2 706 308
Geothermal probe signing	{Direction of flow} {GERO <sup>®</sup> therm FLUX} {Erdwärmesonde/Geothermal probe} {Swiss made} {EP 2 706 308} {53x4.3-9.2} {PE100-RC} {SDR12.4-5.76} {PN14-38} {Tmax40°C} {DIN EN 12201-2} {SKZ A724} {Part No.} {Maschine No.} {Date} {Production No.} {Double metering}
External monitoring	SKZ (Süddeutsches Kunststoffzentrum, Würzburg/Germany)
<b>Physical properties</b>	
Density	0.95 – 0.97 g / cm <sup>3</sup>
Pipe roughness	0.03 mm
Minimum bending radius at 0°C	50 x dn
Minimum bending radius at 10°C	35 x dn
Minimum bending radius at 20°C	20 x dn
<b>Mechanical properties</b>	
Tensile modulus of elasticity (23°C, v = 1 mm/min, secant)	900 MPa
Yield stress (23°C, v = 50 mm/min)	23 MPa
Tensile deformation (23°C, v = 50 mm/min)	9 %
FNCT (4.0 MPa, 2% Arkopal N100, 80°C)	>/= 8760 h
Failure strain	>/= 350%
Mean thermal coefficient of linear thermal expansion	0.18 mm/m K
<b>Hardness</b>	
Shore hardness (Shore D (3 sec))	63
<b>Thermal properties</b>	
Maximum temperature	+ 40°C
Minimum temperature	- 20°C
Thermal conductivity	~0.4 W/mK
Specific thermal capacity	1.9 J/g K
<b>Chemical properties</b>	
The HakaGerodur GERO <sup>®</sup> therm <sup>®</sup> geothermal systems are resistant to the common heat transfer media. Refer to the Technical Manual for the suitable heat transfer media.	