

## GEROthem® KIT horizontal earth collector

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Assembly information

# GEROthem® KIT horizontal earth collector

## Components

The components are all delivered together on a pallet (1.20 m × 1.20 m).



### GEROthem® horizontal earth collector pipe

made of PE100-RC PN 16, SDR 11, dn 32 × 3.0 mm, length 125 m, black coil  
 · 2 to 8 coils



### Collectors and distributors SAVE 97

with the corresponding number of dn 32 mm connections  
 · 2 to 8 connections  
 · Main outlet PE pipe socket dn 63 mm  
 · Ball valves +GF+ 375 with removable ball seat  
 · Filling and venting valve R1/2 max. volume flow 7.9 m³/h at 1 m/s



### iJOINT connector sockets dn 63 mm

· 2 pieces

### iJOINT connector sockets dn 32 mm

· 4 to 16 pieces

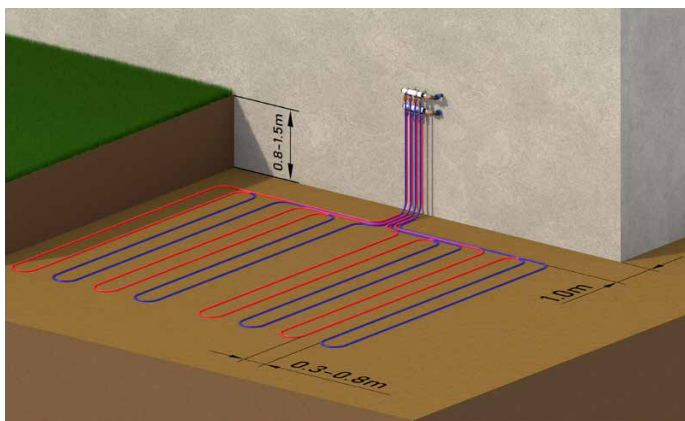


### Mounting set for collector and distributor

## General notes

All installation work should be carried out by qualified specialists in accordance with the applicable standards and the recognised rules of engineering. The planning documents and operating instructions of the relevant heat pump manufacturer also need to be taken into account. Due to regional differences in approval procedures, soil conditions and the like, the conditions applicable to the planned installation site need to be clarified in advance.

The GEROthem® horizontal earth collector pipe is made of the proven PE100-RC (resistance to crack) and is certified according to SKZ certificate No. A 278. PE100-RC has a significantly higher stress-crack and point-load resistance than PE100. PE100-RC is suitable for installation without a sand bed. The excavated material may be used again for backfilling the trench. It is recommended that you mark the path of the pipe with warning tape (approx. 30 cm above the pipeline) to prevent damage to the pipes during subsequent excavation.



<b>Recommended installation depth</b>	0.8 m to 1.5 m
<b>Recommended installation distance</b>	0.3 m to 0.8 m
<b>Minimum bending radius for 0°</b>	50 × dn
<b>Minimum bending radius for 20°</b>	20 × dn
<b>Pipe material</b>	PE100-RC
<b>Temperature range</b>	-20°C/+40°C
<b>Pressure resistance/SDR</b>	PN16*/SDR11

\* At a water temperature of 20°C.

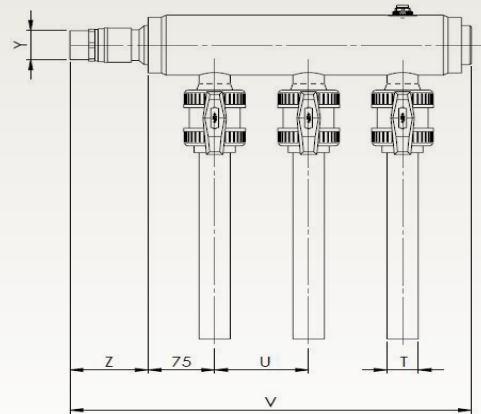
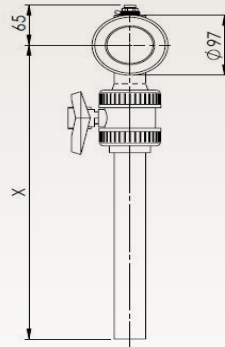
## GEROthem® KIT horizontal earth collector

### SAVE 97 – collector/distributor

GEROthem® SAVE 97 is certified and monitored in accordance with SKZ certificate No. A 278. The welded joints comply with DSV guideline 2207-1, and the flat-sealing joints enable fast and safe assembly.

**Max. volume flow 7.9 m<sup>3</sup>/h**

(at 1 m/s flow velocity in the SAVE main body)



Number Connections	Y mm	U mm	V mm	X mm	Z mm	SAVE kg
2 × dn 32	63	120	382	480	120	4.3
3 × dn 32	63	120	502	480	120	5.5
4 × dn 32	63	120	622	480	120	6.6
5 × dn 32	63	120	742	480	120	7.7
6 × dn 32	63	120	862	480	120	8.8
7 × dn 32	63	120	982	480	120	9.9
8 × dn 32	63	120	1,102	480	120	11.1

QR code with link to our  
SAVE assembly film



## GEROthem® KIT horizontal earth collector connecting elements



### Mounting set for SAVE 97

The GEROthem® mounting set is specially designed for the collector/distributor. Adapted for SAVE 97 and guaranteed, with professional installation, you can rely on the secure hold of the SAVE 97.

### Mounting set consisting of

galvanised pipe clamps with sound insulation insert	4 pcs.
Spacer rod 20 mm	2 pcs.
Spacer rod 50 mm	2 pcs.
Mounting plates 80 mm × 30 mm	4 pcs.
Hexagon wood screw, size 13, 8 × 70 mm	8 pcs.
Plastic dowel S10	8 pcs.



### iJOINT connector sockets

The iJOINT clamping fittings made of polypropylene (PP) supplied for the connection can be directly used and installed without special tools. They are DVGW certified for an operating pressure of/up to 16 bar. iJOINT clamping fittings are ideally suited for underground cables. Thanks to the UV-stabilised material, they are also ideal for outdoor use. It is unnecessary to chamfer the pipe ends or disassemble the connector socket. The clamp fittings can simply be pushed onto the end of the pipe (loosen the screw connection slightly if necessary). The lip seal, the pressure ring, and the clamping ring ensure a tight connection with high pull-out resistance after the screw connection is established.

## Filling and pressure test

A qualified specialist company or appropriately skilled personnel must carry out the filling and subsequent pressure test. It is essential that the operating instructions of the respective heat pump be read and followed. Generally, a water-antifreeze mix (with approx. 25% antifreeze) is used to fill the KIT horizontal earth collector in order to ensure the frost resistance of the heat transfer medium. The corresponding antifreeze agents are available from specialist dealers. The collector is usually filled using the fill/drain valve of the heat pump, but the fill/vent valve

of the SAVE 97 can also be used. Before the pressure test, make sure that the system is completely filled and completely vented.

After completion, every pipeline or system must be subjected to a pressure test. DIN EN 805 and DVGW Worksheet W 400-2 apply to the pressure testing of drinking water and pressure pipelines. Attention must also be paid to existing standards, directives and relevant regulations. The pressure test must be recorded and the report must be retained.

### Standards and guidelines

DIN 8074	Polyethylene pipes PE80, PE100 – Dimensions
DIN 8075	Polyethylene pipes PE80, PE100 – General quality requirements, tests
DIN EN 805	Water supply – Requirements for water supply systems and their components outside buildings
DIN 12201	Plastic piping systems for water supply and for drainage and wastewater pressure lines – Polyethylene (PE)
DVGW W 400	Technical rules for water distribution systems (TRWV)
VDI 4640	Thermal use of the subsurface/Sheet 2/Ground source heat pumps
SKZ HR3.26	Pipes and pipeline components made of PE100 for geothermal probes
SIA 384/6	Swiss standard – Geothermal probes

This list serves only as an overview and makes no claim to be complete.

## GEROthem® KIT horizontal earth collector – space requirement

The space requirement for each GEROthem® KIT horizontal earth collector given below is only intended as a guideline and does not indicate the actual area required.

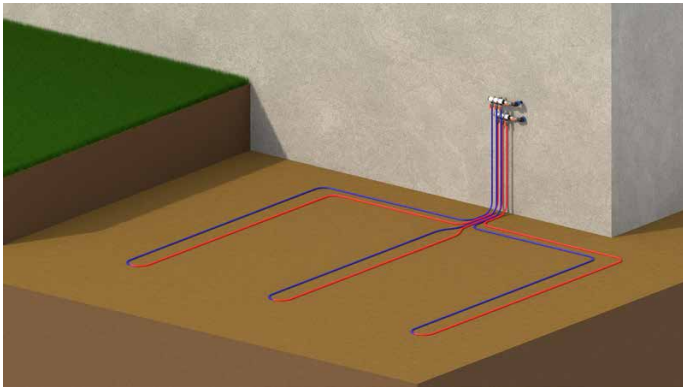
Starting from the assumption of an extraction capacity of 20 W/m<sup>2</sup>, we arrive at the following benchmarks.

Part No.	Coils	Area
112377	2 × 125 m	220 m <sup>2</sup>
112379	3 × 125 m	330 m <sup>2</sup>
112380	4 × 125 m	440 m <sup>2</sup>
112381	5 × 125 m	550 m <sup>2</sup>
112382	6 × 125 m	660 m <sup>2</sup>
112383	7 × 125 m	770 m <sup>2</sup>
112384	8 × 125 m	880 m <sup>2</sup>

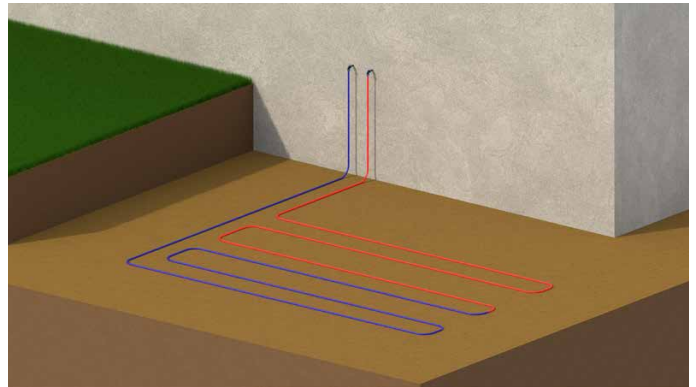
Accessories	Part No.	Length	Piece/set
Ground hook	100224	20 cm	25 pcs.
Warning tape	104684	250 m	1 roll

Ground hooks are optionally available as an installation aid to maintain the necessary pipe spacing or to fix the pipes in their position. It is also possible to fix the pipes in position by piling up the excavated soil at specific points.

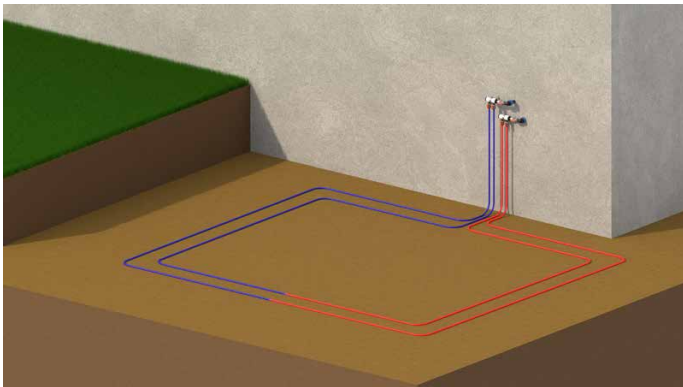
### Variants for installation of GEROthem® KIT horizontal earth collector



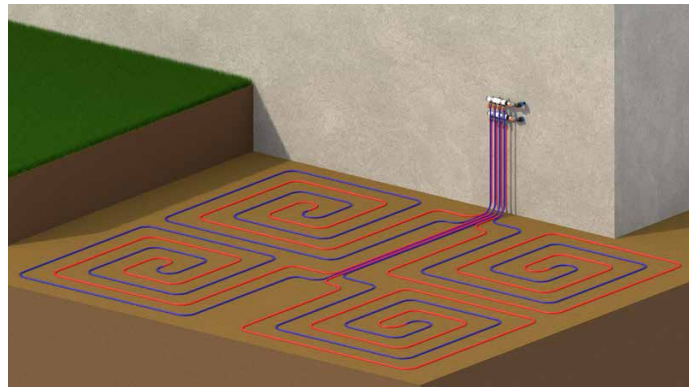
M shape



E shape



O shape



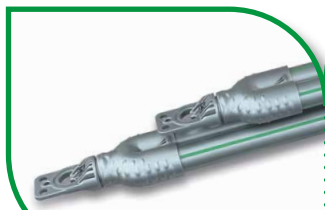
Spiral shape

# Ingenious geothermal system

## Safe, variable and proven: The GEROtherm® geothermal system

Each component must meet the defined quality requirements in order to contribute to the performance of the overall system. That is why we offer all of the components from a single source and have certified them all as a system. Our intelligent modular system offers a variety of high-quality components and can be extended as required.

**GEROtherm®-REX**  
The completely diffusion-resistant geothermal probe



**GEROtherm®-RT**  
The geothermal probe for higher temperature and stress crack resistance



**GEROtherm® VARIO**  
The conical, pressure-optimised geothermal probe



**GEROtherm® FLUX**  
The safety- and pressure-optimised geothermal probe



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