



**GEOKOAX**<sup>®</sup>  
geothermal systems

# Handling the GEOKOAX GSHE

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## Handling the GEOKOAX Ground Source Heat Exchanger (GSHE)

The national standards of DVGW (Deutscher Verein des Gas- und Wasserfaches e.V.: German Technical and Scientific Association for Gas and Water), DIN and the KRV (Deutscher Kunststoffrohrverband e.V.: German Association of Plastic Pipe Manufacturers) provide information on how to store and handle pipes correctly to avoid material damage which can considerably reduce pipe life.

Pipes, pipe fittings and other components must be transported, handled and stored with great care to protect material properties and to avoid damage and deformation of the GSHE. Additionally, PE piping protection against environmental impacts – UV exposure – must be addressed.

When storing PE pipes and pipe fittings, it is important to reduce the possibility of material damage caused by external force or sharp-edged objects that can cause direct damage. PE pipes must be stacked on a flat surface without sharp-edged objects, stones or other protruding objects to avoid damage, particularly on active construction sites.

### Transport

Protect the GEOKOAX GSHE from damage during transport or when loading and unloading. Check for any damage caused during the transport before unloading the GEOKOAX GSHEs; also check that the delivery is complete and in accordance with the bill of lading.

When using lifting devices, use appropriate lifting straps rated for pipe length and weights. Store and secure non-palletised GEOKOAX GSHEs to prevent spillage and intrusion damage.

### Storage

- 🔧 Protect all GEOKOAX GSHEs from dirt or any other contamination during storage.
- 🔧 Keep the storage area on level and free of any sharp-edged objects.
- 🔧 Stack non-palletised GEOKOAX GSHEs on stacks with a maximum height of 1 meter.
- 🔧 Prevent the GEOKOAX GSHE from coming into contact with fuels, solvents, oils, greases or heat sources.
- 🔧 Do not drag the GEOKOAX GSHE over the ground – use proper lifting and moving procedures.
- 🔧 Protect the GEOKOAX GSHE from exposure to direct sun light during storage and on the construction site.

## Processing

The individual GEOKOAX GSHE parts are joined together by means of butt welding. For guidance please refer to national PE Pipe Butt Fusion guidelines. In Germany, butt welding may only be performed adhering to DVS Guidelines (DVS: German Welding Society), in specific DVS Standard 2208-1 and 2207-11 (2017) Edition - Deutsches Institut für Normung E.V. (DIN)

## Installation

If requested, a geoKOAX GmbH specialist staff can be present at the construction site to assist with installing the GEOKOAX GSHEs.

Training procedures will instruct on – site drilling firms in best practises and will provide guidance on:

- Defining standards
- Detecting errors and risks during the installation process, eliminating these errors and risks and assessing the effectiveness of the measures taken to correct or prevent them.
- Improving the quality of the systems and processes.
- In practice, the training measures focus on the following aspects:
  - Avoid errors that cause damage to the GSHE.
  - Effective use of the GEOKOAX tools for installing/inserting the GEOKOAX GSHE.
  - Instruction on the installation process