

# CAPABILITY SHEET

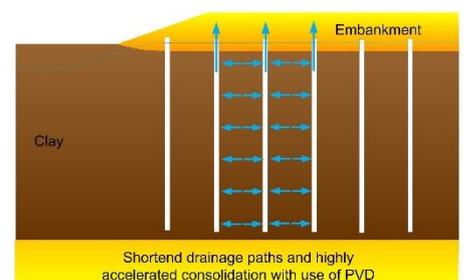
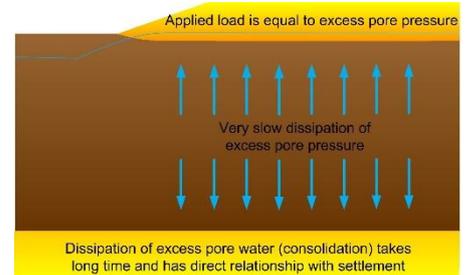
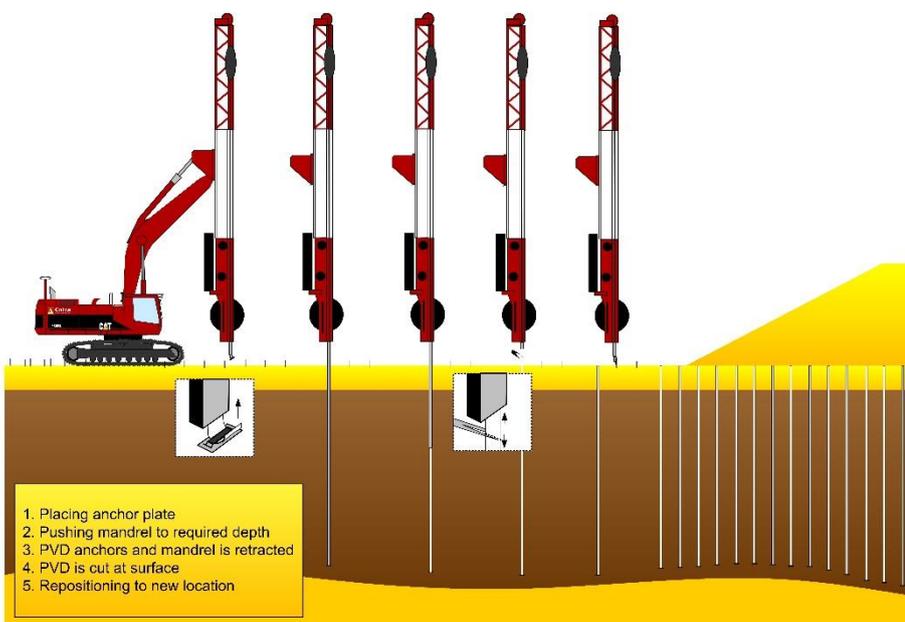
## Vertical Drainage

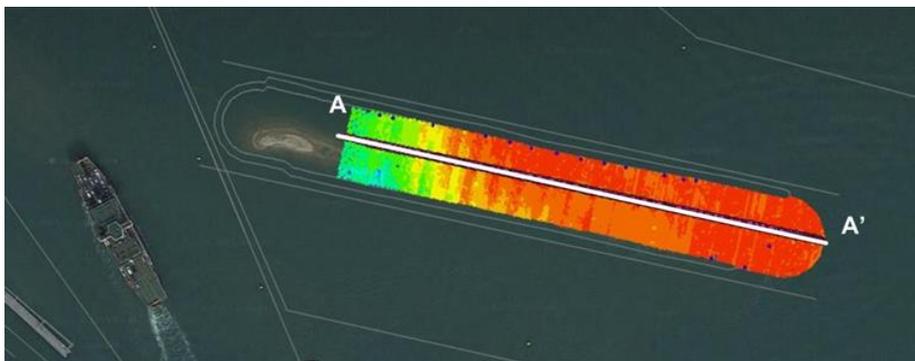


### General

Since the development of the synthetic prefabricated vertical drain (PVD) in the late 1970ties, Cofra is one of the leading contractors in this technique worldwide, with over 60 rigs and several excavator sizes available, ranging from small (30 ton) to larger than 90 ton. With this Cofra has always an installation solution available, no matter the size, depth and complexity of a project.

Cofra has rigs available for each soil type, varying from very soft soils to very stiff intermediate layers. Installing worldwide, we encounter depths of 3 to over 60 meter! For working offshore, we have the necessary experience and equipment. Our installation rigs are designed for containerized transport and thus easy to ship to any project location in the world. Our PVD installation is based on static push force with use of high duty mandrels.





In case needed, Cofra has drilling equipment for extreme hard layers encountered during installation (CPT values above 25-30MPa over thick sections) at its immediate disposal. Specialized equipment for installation work near or below high voltage power lines is available. In large projects we have well-equipped workshops on site.

### Monitoring

During the installation process, Cofra has the ability to use advanced GPS based loggers to not only register, but also to show the installation data and provide digital drawings to the operators for process control.

With these data Cofra is able to provide its clients installation maps showing working progress as well as cross sections through the treated soil showing the push force at intervals in depth.

Cofra is also capable to provide you with a turn key solution for your project with pretender advise, consolidation design, installation, monitoring and hand-over approval. Ask us for the possibilities for your specific project.

### Results

We have our in-house geotechnical department and can provide you with turn key solutions for ground improvement questions in pre-tender advise, do the consolidation design, installation monitoring and hand-over approval. Feel free to ask for your specific project situation and requirements

### Characteristics

We see the following specific PVD related characteristics:

- Slight disturbance of the different soil layers
- Guaranteed water drainage, even at high soil pressures and settlements, due to use of the Mebra-Drain PVD
- Adjustment of the core and filter possible to the local soil conditions by our in-house MebraDrain PVD manufacturing plant
- Rapid installation: 10.000-17.500m per day, per machine
- Multiple units available to accommodate for large projects
- No water required for installation
- Installation to a maximum depth of appr. 60m
- Monitoring of installation with a data logger, if required equipped with GPS

