

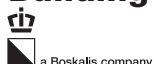
# Cofra

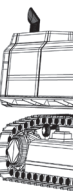
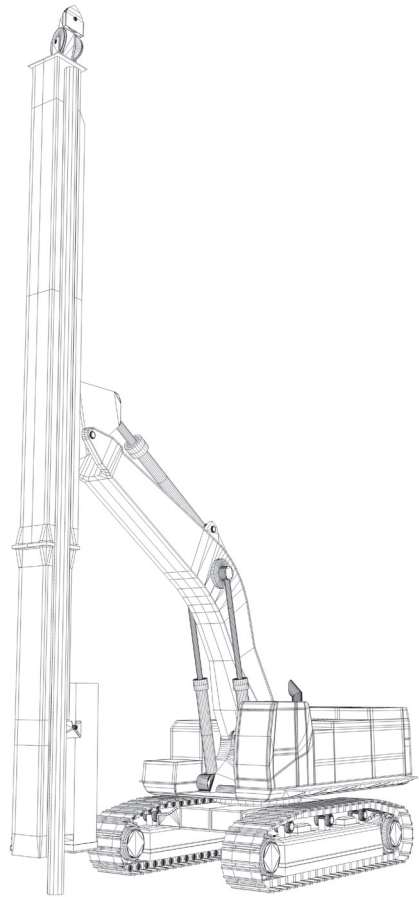
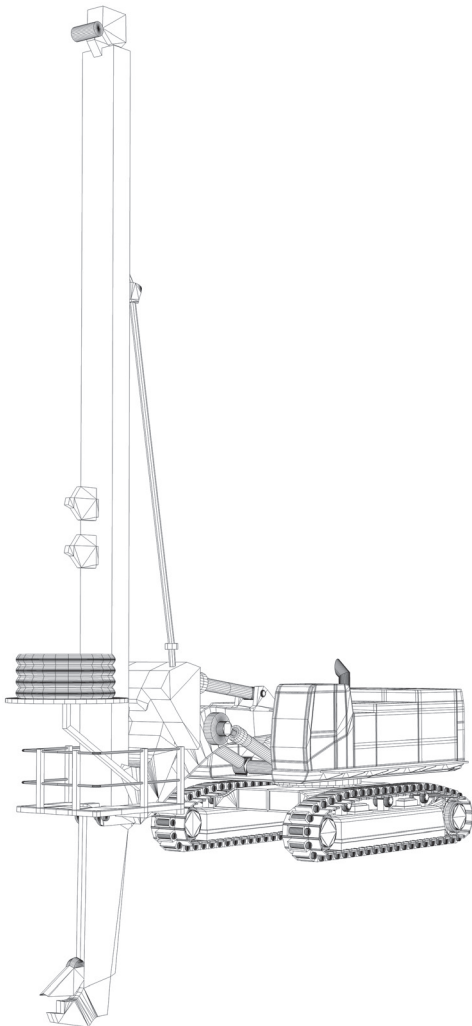
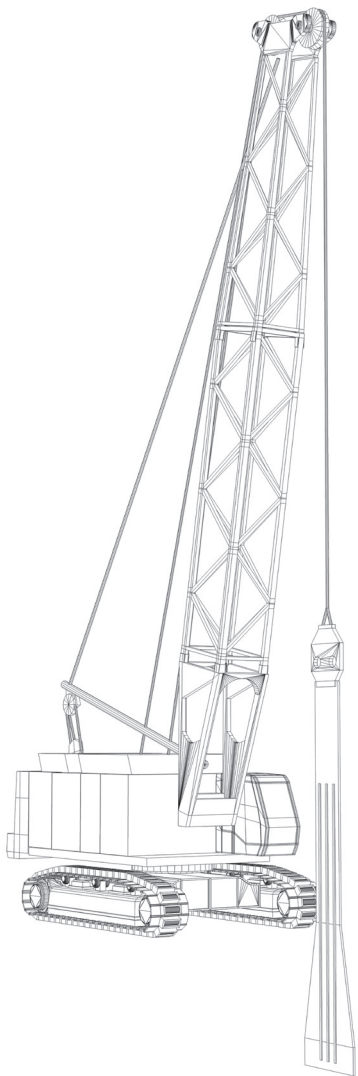


*Ground improvement and liner structures*



**Building worldwide on our strength**





# Cofra

## Ground improvement and liner structures

### Our history

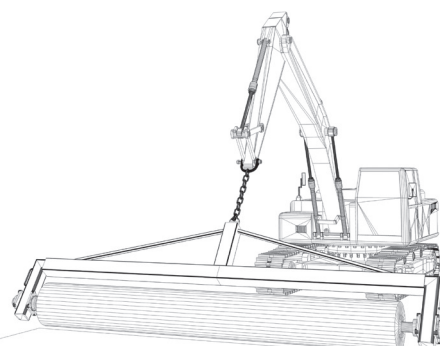
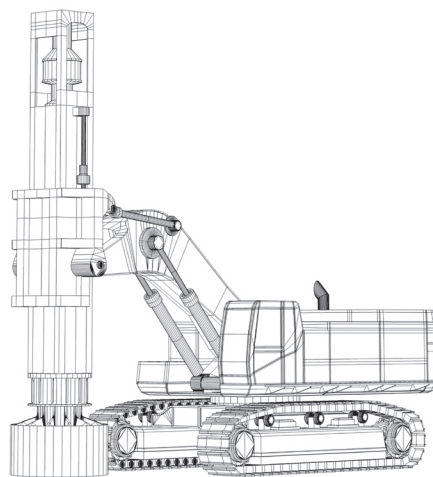
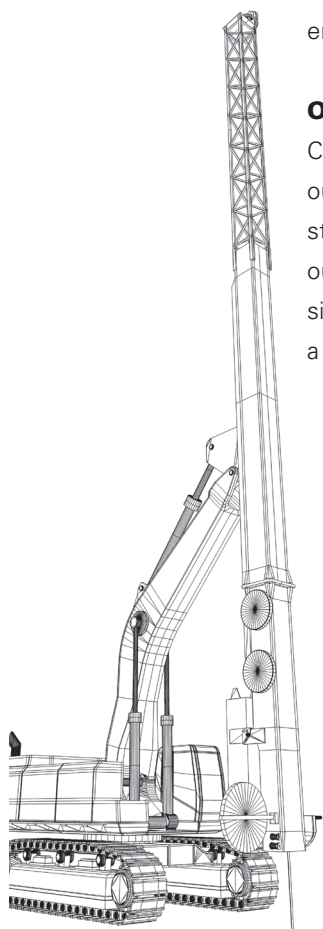
Cofra is an experienced and sound partner in soil improvement techniques, founded in 1923 in the Netherlands. Originally acting as an Amsterdam based contractor with local operations, the company has evolved into a respectable international ground improvement specialist with several branch offices and an extensive network of agents. Cofra's 2006 join with Royal Boskalis Westminster, a leading dredging and marine expert with international operations, has strengthened its position worldwide.

### Our core values

Innovation, reliability and professionalism are Cofra's primary core values. The Cofra 'Way of Working' stands for focus on quality and safety standards, compliant with oil and gas industry. Its proactive approach, and in-house designed advanced equipment, among other things, have earned Cofra a leading position as a ground improvement specialist. Its long track record and in-house Geotechnical department make Cofra a reliable international knowledge partner in civil engineering.

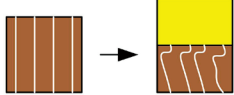
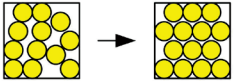
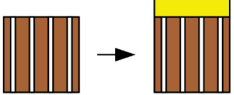

### Our techniques

Cofra specializes in ground improvement and environmentally-protective barrier techniques. With our consolidation-, element based- and compaction techniques we provide the solution for construction site preparation in, amongst others, infrastructure- and land reclamation projects. With our water barrier techniques we provide solutions in infrastructure projects as well as on landfill sites. With our state-of-the-art equipment and geotechnical engineering department, we provide a customer driven service to fit within your schedule and expectations.



Singapore



SEGMENT	CONSOLIDATION	COMPACTION	ELEMENTS	BARRIERS
PURPOSE	<ul style="list-style-type: none"> <li>- Accelerate settlement</li> <li>- Increase strength of subsoil</li> <li>- Reduce residual settlement</li> </ul> 	<ul style="list-style-type: none"> <li>- Increase density</li> <li>- Increase bearing capacity</li> <li>- Increase safety against liquefaction</li> </ul> 	<ul style="list-style-type: none"> <li>- Transfer load to bearing strata</li> <li>- Increase bearing capacity</li> <li>- Increase safety against liquefaction</li> <li>- Reduce residual settlements</li> </ul> 	<ul style="list-style-type: none"> <li>- Obstruct waterflow</li> <li>- Obstruct sediment erosion</li> <li>- Non-structural elements</li> <li>- Prevent spreading pollution</li> </ul> 
ACTIVITIES	<ul style="list-style-type: none"> <li>- Prefabricated Vertical Drains (PVD)</li> <li>- Vacuum Consolidation (BeauDrain)</li> </ul>	<ul style="list-style-type: none"> <li>- Cofra high impact Roller Compaction (CRC)</li> <li>- Cofra Dynamic Compaction (CDC)</li> <li>- Cofra Vibro Compaction (CVC)</li> </ul>	<ul style="list-style-type: none"> <li>- Geotextile Encased Columns (GEC)</li> <li>- Cofra Stone Columns (CSC)</li> <li>- Concrete columns (AuGeo)</li> </ul>	<ul style="list-style-type: none"> <li>- HDPE vertical barrier (up to 30m depth) (Geolock)</li> <li>- Vertical Sand Barrier (anti piping) (VZG)</li> <li>- Trenched MIP walls</li> <li>- Trenched liner barrier (up to 5m depth)</li> <li>- Liners</li> </ul>
MARKETS	<ul style="list-style-type: none"> <li>- Infra (roads, railroads, airports, ports)</li> <li>- Dredging (Reclamations, breakwaters)</li> <li>- Mining (Tailing ponds)</li> <li>- Construction (Housing and industrial estates)</li> </ul>	<ul style="list-style-type: none"> <li>- Infra (roads, railroads, airports, ports)</li> <li>- Dredging (Reclamations, breakwaters)</li> <li>- Mining (roads, remediation)</li> <li>- Construction (Housing and industrial estates)</li> </ul>	<ul style="list-style-type: none"> <li>- Infra (roads, railroads, airports, ports)</li> <li>- Dredging (Reclamations, breakwaters)</li> <li>- Construction (Housing and industrial estates)</li> </ul>	<ul style="list-style-type: none"> <li>- Waste management (landfills)</li> <li>- Mining (Tailing ponds)</li> <li>- Infra (Aqueducts)</li> <li>- Flood protection (anti piping)</li> <li>- Environmental</li> </ul>

## Cofra: Building Worldwide on Innovation

**Building Worldwide on our Strength has been Cofra's appropriate motto for many years. Innovation, reliability and professionalism are embedded in our DNA. All techniques we use have been developed and/or improved in-house, together with our partners. Geotechnical- and operational challenges result in new techniques and working methods, always based on our pragmatic approach and quality and safety standards.**

**This brochure has provided you with an overview of current operational techniques. Nonetheless, Cofra never sits still. New ideas are already being developed.**

***Cofra builds worldwide on Innovation!***



T +31 (0)20 693 45 96, F +31 (0)20 694 14 57  
[www.cofra.com](http://www.cofra.com), [info@cofra.com](mailto:info@cofra.com)  
 Cofra BV, P.O. Box 20694, 1001 NR Amsterdam  
 The Netherlands