Sector Focus
Offshore Renewables

Pile drilling, driving, grouting and handling services or packages for offshore foundations and anchors

LDD is uniquely positioned to provide piling equipment and foundation installation services to its clients in the renewable energy sector.

LDD’s core capability is design, supply and operation of drilling rigs, drilling equipment and temporary works to support mono-pile, jacket and sub-sea mooring pile installations. This capability is enhanced with the availability of pile driving, grouting and lifting and handling equipment, supplied by LDD’s sister companies in the Acteon Group (MENCK, Core Grouting Services and LM Handling) allowing for the provision of integrated service packages to suit our clients’ needs.

MONO-PILES
Mono-pile foundations for offshore wind farms are getting bigger and LDD’s drill range is targeted at supporting anticipated demand. By designing and operating our own drills, we can react to the specific drilling demands of the market, whilst ensuring that production rates are optimised. We also develop our own range of down-hole equipment, including under-reaming drill bits, allowing drill heads to pass through the narrow neck of the mono-pile and then expand to suit the drilling diameter requirements of the installation. Under-reamers are designed around a modular philosophy, allowing for cost effective adaptation to a range of drilling needs.

LDD drilling equipment is available as a pure drilling or relief drilling service or can be combined with hammers for drive-drill-drive installations or with grouting for drilled and grouted piles.
XL Drill rigs and down-hole equipment are available for sale to support our customers’ own drilling aspirations.

**JACKET PILES**

LDD has designed pre-piling templates for the installation of jacket piles, including the design of a template, complete with a smart control system to enable self-levelling of the frame and active adjustment of pile position and verticality. LDD installed and commissioned the control system and operated the frame in the field for the installation of (70 jackets) for the Wikinger Offshore Wind Farm.

LDD designs simple frames where positional tolerances are less stringent, through to more complex, smart systems, enabling a high level of verticality and positional control for tighter tolerance applications for driven piles. We also provide systems to support the installation of drilled and grouted pre-piles, with LDD providing the full template and drilling and grouting package.

Our systems are designed around in-house stability analysis to optimise the design and we can also supply all survey positioning and frame metrology required to achieve and demonstrate installation design has been met.

**TIDAL AND WAVE ENERGY**

LDD understands the specific challenges of both the tidal and wave energy markets and appreciates that specific alternative approaches to standard drilling systems may be required. LDD’s in-house design and build capability and depth of knowledge in foundation drilling technology allows us to develop both subsea and heave compensated drilling systems as options for these challenging environments.

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**Equipment and Services**

- **Drilling services for piles in excess of 8.5m in diameter.**
- **Pile handling tools; internal lifting tools, jacket levelling tools and upending clamps.**
- **Drilled & grouted & drive-drill-drive solutions in variable substrates.**
- **Pile dredging and cleaning tools.**
- **Pre-piling templates for driven and drilled and grouted piles.**
- **Pile-grippers for stabilising jackets during grouting operations.**
- **Multi-rig, simultaneous operation for drilled jacket foundations.**
- **Integrated installation equipment, including common power units & ancillary plant.**
- **Heave-compensated and subsea drilling options.**
- **Multi-disciplined crews for integrated service provision.**