



Winches and Hire Services

The name Land & Marine is synonymous with pipe pulling. We have been involved in the provision of winches and pulling equipment for over 50 years. With this wealth of experience we can put together a whole range of pulling systems to provide the solutions our clients need.

As well as carrying out landfall or other pipe-pulling contracts and sub-contracts, we also supply winches and equipment on hire for projects around the world. Our skilled operators and technicians will provide a project with all the necessary support it requires.

Provided by the experienced team from Land & Marine

www.landandmarine.com

Did you know?

- Land & Marine designed and built the first linear winches. Driven by the requirement to bring North Sea oil and gas ashore in the early 1970's there was a demand to pull larger and larger loads. Hence the development of the linear winch
- Land & Marine successfully pulled ashore the first North Sea pipeline from the BP Forties field in 1972
- We have continued to design and develop our own linear winches and support equipment in-house ever since
- We now own and operate 8 linear winches with capacities up to 300 Tonnes
- We own 2 capstan winches each with 100 Tonnes capacity
- We operate a range of smaller drum winches with capacities up to 50 Tonnes
- We can provide pulling systems of up to 1200 Tonnes capacity
- Our linear winches are equipped with computerised load monitoring systems which maintain a record of the pull loads and provide a trend indication against predicted loads. From this information we are able to keep a record of the wire load history and determine what usage factor can safely be utilized if the wire is considered suitable to be re-used
- On many projects, it's not the pulling that is overlooked, it is the wire laying

What do we mean by a Linear or Capstan winch?

The linear winch works on the principle of pulling wire using twin reciprocating grip boxes powered by pairs of horizontal hydraulic cylinders to haul the wire using a "hand over hand" principle. Instead of building up the wraps (which reduces the mechanical advantage) as on a drum winch, the wire is spooled on large reels or drums and stored behind the winch.

A twin drum capstan winch also offers a constant pulling force throughout the pulling operation and it too can handle very long lengths of large diameter wire which are stored on a reel or reels mounted on reelwinders behind the winch.

What foundations and reaction anchorage is required?

A simple reinforced concrete foundation is generally all that is required for the linear and capstan winches.

The back anchor design will depend on the availability of materials and on the geotechnical data. A common design is a sheet-piled wall with the reaction being distributed via a heavy duty back anchor beam fitted behind the piles and buried in the ground. In some locations, where sheet piling is not readily available, alternative back anchorage systems can be designed such as a concrete block or rock anchors.

For more details on this and other services visit:

www.landandmarine.com

What access and space do we need to set up a winch spread?

We can advise on winch site layout details to suit even the most difficult locations. So we recommend that our clients talk to us at an early stage. Often the heaviest loads and the trickiest to handle are the reels of wire which may weigh 60 Tonnes or more and need to be delivered to the site for offloading by crane. Access should be available for this as well as delivering the winch equipment.

Similarly we will advise on and design layouts for winch spreads on barges for marine pulling operations. In these cases it is often necessary to specify a spine beam which is fixed to the deck to provide a foundation onto which the winch is mounted.

The space required must be sufficient for the winch or pair of winches and reelwinders to have safe access all round with room for the power packs, control room and other equipment modules.

In general terms, for a land site set up for a 300 Tonne winch spread we would normally require a minimum area of 15m x 35 m and for a 600 Tonne spread using a pair of winches this space would increase to about 25m x 35m.

What can we offer you?

- The winches, wires and all the support equipment
- Engineering and procedures to support all wire laying and pulling operations
- Skilled people who will do the job anywhere in the world
- To undertake to lay the wires and do the pull for you

What are the ingredients for success?

- Our safety awareness and planning
- Our people, know-how and experience
- Competence and professionalism
- The flexibility to work with our clients to offer the solution they need

This is Land & Marine

We are proud of our reputation and flexible approach. Whether a lump sum, direct hire of equipment and operating personnel or on an engineering and project management basis, we will always try to tailor our solutions to meet the Clients' needs, constructing and installing marine pipelines to the very highest standards.

Land & Marine operate to the highest quality, safety and environment standards and is accredited to ISO 9001, ISO 14001 and OHSAS 18001.

Land & Marine

Land and Marine Project Engineering Ltd

Dock Road North, Bromborough,
Wirral CH62 4LN United Kingdom

T. +44 (0)151 641 5600

F. +44 (0)151 644 9990

E. company@landandmarine.com

W. www.landandmarine.com

Products & Services Available From Land & Marine include - DOWNLOAD FROM WEBSITE

Marine Pipelines

Landfalls (or shore pulls)
Outfalls and Intakes
Crossings
Marine loading lines and SPM's

Installation techniques include:

Bottom Pulling and Towing
Off-Bottom Pulling and Towing
Controlled Depth Towing
Flow-Lay®

Engineering

Feasibility Studies
Project Engineering
Detailed Design & Analysis
Tank Engineering Services
Waste Water Engineering

Plant & Equipment Hire

Linear and Drum Winches
Trenching Machines
Pipe Handling Equipment
Work Barge

Other Services

Cross Country Pipelines
Major Process Plant and LNG Pipework
Aviation Refuelling Systems
Tank Fabrication
Tank Seals
Horizontal Directional Drilling
Project Management
Land & Hydrographic Survey