

Anchor Handling Winch

Application

The winch is placed onboard of a workboat and is designed to haul in box anchors up to 150t in weight. When the anchor is lifted the winch will hold this anchor steady to be placed on a different location. Because of bad weather conditions the winch is designed to absorb shocks in the wire rope to prevent it from being overloaded.

System Components

The winch consists of frame in which a drum is driven by means of a toothed ring and 5 pinions. The motors are hydraulic radial piston high torque motors with fixed displacement. The drum has 3 compartments on which 3 different wire rope parts are spooled, the floating rope, the leading smaller wire rope and the big working wire rope. The different wire ropes are guided to their compartment by means of a wiper type guide.

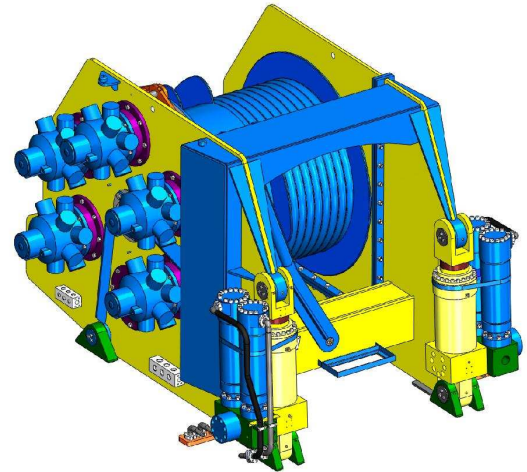
For overload prevention of the wire rope the winch is mounted onto pivoting brackets and hydraulic shock absorbers.



Each shock absorber consist of a oil filled cylinder and 2, with nitrogen filled, accumulators. 1 for low pressure to dampen shocks up to 75t and 1 for high pressure to dampen the high shocks above 175t.

Technical specifications

Safe working load:	150 t
Nom. line pull 1 st layer:	1471kN@10m/min
Motor type:	Hydraulic motor radial piston
Holding brake type:	band brake
Holding brake torque:	200 t



Features / Innovations

The winch is mounted on deck by 2 rotation brackets and 2 shock absorbing cylinders. By making it possible for the winch to tilt and press into the shock absorbing cylinders it prevents the wire rope from overloading at the critical moments of lifting the box anchor of the bottom.

The band brake is spring-loaded by bending a high tensile steel bar just below the winch to make the braking system as compact as possible.



150t anchor handling winch being tested on-site.