

“On Everything *That’s On Sea*”

06

Corporation
Anchor Windlass &
Capstan
Steering Gear
Towing Hook
Towing Pin
▼ **Winch**

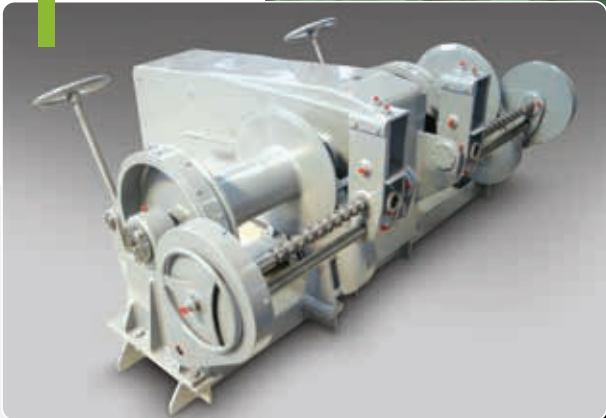


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Double drum aft towing winch



Double drum electric motor driven winch with spooling system

Winches

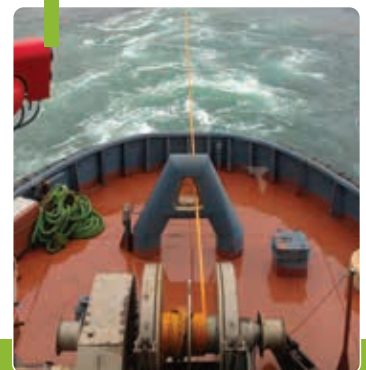
General Features

- :: DATA designs and manufactures various types of marine winches including towing winches, tugger winches, anchor winches and hoisting winches.
- :: DATA winches meet the highest standards to be used in severe marine conditions and serve in long term with minimum maintenance.
- :: Winches can be electric motor driven or hydraulic motor driven.
- :: DATA can produce winches up to 600 kN (60 tons) pull.
- :: Winches are delivered complete with electrohydraulic or main engine driven hydraulic power unit, electric control cabinet and control panel for wheel house and deck.
- :: Every winch is delivered after being tested in the factory. Data service engineers attend to the tests on board if requested.
- :: Winches can be certified by all well known class societies and delivered with class certificate upon customer request.

Function test in the factory



Sea trial test



Towing Winch

- :: DATA towing winches can be rated up to 60 tons of pulling and 180 tons of brake holding capacity.
- :: Towing winches can be hydraulic or electric motor driven
- :: Hardened steel gears work in oil bath.
- :: Drum clutches are friction type and pneumatic operated which enables the operator to engage or disengage the drum easily at any position of the drum. Friction clutch also provides safety against over load. Clutch is engaged by means of pressurized air and disengaged by spring.



Friction clutch

- :: Drum brakes of the towing winches are spring compressed and pneumatic released opposite to the friction clutch mechanism.



Drum brake



Winch pneumatic control panel

- :: Clutch and brake are controlled by means of a single lever on the control panel
- :: Drum surface where brake pad contacts can be stainless steel as an option
- :: Depending on the braking force, there can be 1 or 2 brakes on the drum.
- :: Drum release system is standard for all DATA towing winches.
- :: Brake and clutch can be disengaged by pushing a button on the control panel and drum is released.
- :: Winches with steel wire are equipped with chain driven spooling system.
- :: Aft towing winches can be single or double drum on one shaft.
- :: Fore winches can be combined with one or two wildcat for anchor.



Combined Fore Towing Winch



Towing winch control panel with display unit.

- :: Monitoring system is optional for towing winches. A touch screen monitor on the wheel house control panel displays line load and the length of the rope out of the drum.
- :: Towing winches can be also controlled in automatic tension mode as an option. The required tension is set on the control panel by percentage of max. winch pull.

Hydraulic Motor Driven Towing Winches

:: Hydraulic pumps can be driven by means of main engines or electric motors. In both options, DATA prefers 2 pump units for higher redundancy. When 2 pumps are running together winch can provide full capacity. If one pump is running, winch can provide max. pull but half speed.



Main engine driven power unit hydraulic tank.



Electrohydraulic power unit

:: Hydraulic pumps are variable displacement type and the valve is proportional which provides stepless speed control and minimum heating.

:: Aft and fore winches can be driven by a common hydraulic power unit. Also other hydraulic systems on the vessel can be powered from this unit.

:: Hydraulic power units are equipped with all necessary valves, filters and sea water type heat exchanger.

:: Hydraulic motors on the towing winches are radial piston type with low speed and high torque for heavy duty. Depending on the size of the winch, it is equipped with 1 or 2 hydraulic motors.



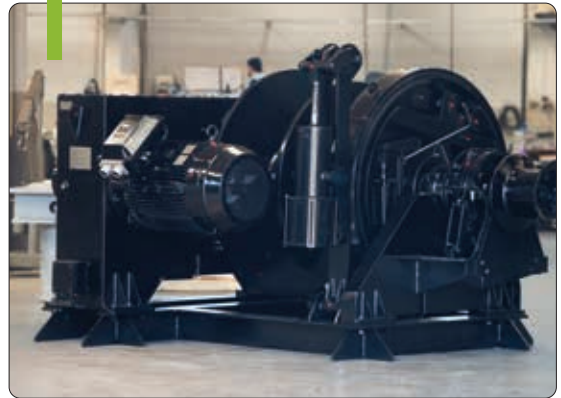
Radial piston type hydraulic motors

:: Hydraulic winches can be 2 speed with dual displacement hydraulic motor. Speed of the winch can be controlled from zero to maximum by means of a proportional joystick on the control panel.

Electric Motor Driven Towing Winches

:: Data uses marine type electric motors with high protection degree on the towing winches.

:: With frequency converter and PLC technology, winch can be controlled very smoothly and with stepless speed by means of a joystick.



Electric motor driven combined fore towing winch



Winch control cabinet with frequency converter

Tugger Winch

- :: DATA tugger winches can be rated up to 20 tons of pulling capacity.
- :: Tugger winches can be hydraulic or electric motor driven.
- :: Mirror image winches are available for port and st.bd. installation.
- :: Dog type clutch and drum brake are manual operated.



Hydraulic Tugger winch

Anchor Winch

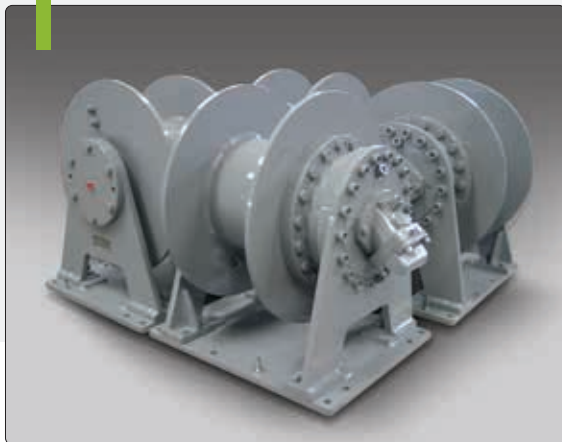
- :: Where there is no place for a chain locker, steel wire can be used instead of chain. In this case, an anchor winch with drum must be used.
- :: DATA anchor winches can be rated up to 20 tons of pulling capacity.
- :: Anchor winches can be hydraulic or electric motor driven.
- :: Mirror image winches are available for port and st.bd. installation.
- :: Dog type clutch and drum brake are manual operated.



Hydraulic anchor winch

Hoisting Winch

- :: Planetary reduction gear is located in the drum and a very compact winch comes out.
- :: DATA hoisting winches can be rated up to 15 tons of pulling capacity.
- :: Hoisting winches can be hydraulic or electric motor driven.
- :: Drum clutch and drum brake are not available. There is hydraulic released brake at gearbox input.



Hydraulic hoisting winches



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