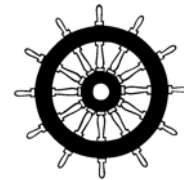




SPECIFICATION HYDRAULIC PIVOTING DAVIT PFH 100 CT Series



A. General data:

- Drawing reference : A-101804
- Safe Working Load (SWL) : 100 kN (50 kN per davit arm)
- Maximum system height : ± 4700 mm
- Lowering height : Approx 30 m
- Trim/list conditions : $5^{\circ}/2^{\circ}$
- Weather conditions : Hostile environment, Beaufort 6, Sea state 5.
- Lowering : Hydraulically, speed approx. 20 m/min
- Hoisting : Hydraulically, speed approx. 20 m/min
- Constant tensioning speed : Hydraulically, speed approx. 2,0 m/s

B. General description:

The NED-DECK MARINE hydraulic pivoting davits have been designed for long time operation under adverse and extreme conditions in a highly corrosive marine environment.

The PFH 100 CT davit is a freestanding deck mounted davit consisting of two davit arms each supported by a base frame, hydraulic power pack unit and two hydraulically operated winches (one per davit arm).

The system has been designed especially for safe and efficient launching/recovery of a fully manned workboat even under severe and adverse weather conditions (wind force 6 on the Beaufort-scale, Sea state 5).

The PFH 100 CT series are all provided with a constant wire tensioning system and hydro-pneumatic shock absorbers.

All system functions are hydraulically controlled and actuated from the davit's operating console which is placed on deck near the railing.

Lowering and recovery of the workboat is realised by means of two independent hydraulic driven winches. These winches are actuated by means of a hand control valve (joy stick). In case this valve is not operated, it will automatically return into '0' position and the multi-disc brakes of the winches become activated and the hoisting or lowering motion stops immediately (dead man's brake).

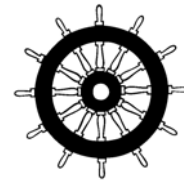
In case of a power failure or malfunctioning of the electric system, hoisting can also be done manually by means of ratchet handles.

C. Recovery procedure:

1. Prior to lifting the boat out of the water, the painter line should be attached to the ship;
2. Turn davit arms into outboard position by operating the push-button "davits out";
3. Pay out the wire ropes (both davit arms) by operating the Joy stick "lowering". Please note that paying out the wire ropes of the winches can be done at the same time as well as independent from each other by setting a selection switch onto the control stand. When operating both winches, this selection switch should be in it's middle position.



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4. Just before the wire ropes reach the boat's lifting hooks, stop paying out of wire ropes.
5. Set the selection switch into position "F'wd" and continue paying out the forward wire rope.
6. Hook in the forward boat hook, and activate constant tensioning by operating the push-button "constant tensioning F'wd".
7. Then set the selection switch into position "Aft" and repeat the same procedure 6 for the aft boat hook.
8. Then set the selection switch into its middle position "both";
9. Start lifting by means of the joy stick and switch off constant tensioning immediately;
10. Two independent switches take care that the boat will be lifted horizontally;
11. As soon as the boat has reached its top position the winches will stop automatically and the command "davits in" can be given

D. Main Components:

Davit arms

The davit system consists of two davit arms of a box welded construction each supported by a base frame.

The davit arms are provided with wire rope sheaves, winch foundations and all necessary provisions for fastening of relevant accessories, such as cylinders and shock absorbers.

Base frames

The davit system consists of two base frames, each supporting a davit arm. These base frames are built up from hollow sections and steel plates to a stiff rigid frame in order to transfer the system forces to the deck structure.

Hydraulic cylinders

Each davit set will be supplied with two high quality double acting hydraulic cylinders provided with dual over-centre valves. The cylinder rods are made of stainless steel (1.4057)

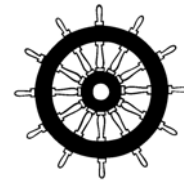
Winches

Each davit arm will be provided with an hydraulic driven winch consisting of the following main components:

- Winch frame
- Closed planetary gear casing;
- Built-on high pressure hydraulic motor
- Fail-safe multi disc brake (dead man's brake);
- Winch drum;
- Hand hoist unit.



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Electric-Hydraulic power unit

Each davit set will be supplied with a sophisticated electric/hydraulic power pack unit which has been fully adjusted in our workshop guaranteeing easy installation onboard. This power unit consists of the following main components:

- Hydraulic tank provided with an integrated hydraulic pump, driven by an electric motor.
 - ✓ Motor types : Squirrel cage induction motors, flange mounted,
 - ✓ Execution : Marine execution
 - ✓ Motor Bearings : Maintenance free, life-time greased
 - ✓ Ambient working temperature : Max. 45 °C
 - ✓ Electric Power Supply : 440V/3ph/60Hz
 - ✓ Enclosure : IP56 TEFC
 - ✓ Power consumption : Approx. 65 kW
 - ✓ Anti-condensation heater : 230V

- Electric Starter box provided with main switch, emergency stop button, anti-condensation heating (230V), “power-on” indicator, running signalling and extra terminal for remote indication and failure signalling indicators.
All external controls will be IP56 rated.

Operating console

Each davit set will be supplied with a stainless steel operating console which should be placed near the railing enabling the operator to have full view over the entire launching and hoisting procedure. From this console all system functions can be controlled.

E. Hydraulic tubing/fittings:

The davit systems will be supplied with stainless steel tubes and standard commercial steel fittings protected with denso tape.

F. Accessories:

Each davit system will be supplied with the following accessories:

Wire ropes

One set galvanised non-rotating steel wire rope falls of sufficient length for lowering the boat into the water;

Shock absorbers

Hydro-pneumatic shock absorbers (one per davit arm)

G. Conservation

As per customer’s requirements