# Davit systems for rescueboats (type:SCH 14/Gravity lowering/ Hydraulic slewing)

## General introduction:

The hydraulic slewing davits have been designed for long time operation underadverse and extreme conditions in a highly corrosive marine environment.The hydraulic slewing davits of the SCH-LR series are so-called “plug-in and play units” allguaranteeing easy installation on board.

The SCH-LR davit is a freestanding deck mounted davit consisting of a davit arm, column, winch and built-on hydraulic power pack unit.The system is suitable for safe and efficient handling of a fully manned rescue boat or life raft againstunfavourable conditions of trim of up to 10 degrees and a list of up to 20 degrees either way.

Slewing out the davit arm can be done in two ways, either by means of accumulated power obtainedfrom a self-containing hydraulic power pack unit or manually by using the hand pump.Slewing out the fully manned rescue boat from its stowed position into launch position is realised bymeans of accumulated power. The slewing motion is actuated from within the rescue boat by meansof a remote control pull wire.For life raft handling, the davit arm is slewed into the correct position by using the hand pump.

The lowering procedure can be controlled in two ways, either by means of a remote control wire fromwithin the rescue boat/life raft or by lifting the brake handle of the winch directly.Lowering is realised by means of gravity.Recovery of the rescue boat with its crew is realised by using the electric driven winch.In case of a power failure or malfunctioning of the electric system, hoisting can also be done manuallyby using the crank handle of the winch.

The normal launching procedure - in case of an emergency - is to lower the rescue boat first and thelife raft(s) afterwards. This in order to prevent that the rescue boat will be launched on top of the liferaft.For this purpose, and in order to save valuable time, the winch has been executed with a so-called“Quick-Return Unit” for easy and fast retrieval of the empty hook.

As soon as the rescue boat has become waterborne, the empty hook can be recovered rapidly byusing the hand crank of this quick-return unit and by pulling the hook inboard by means of the jockeypulley lines which are attached to the davit arm and the wire rope.

Since the safe working load and outreach of the davit are normally determined by the size of therescue boat or life raft, EO have chosen for a limited range of standard designswhich can be adapted to some extent in order to meet individual and specific needs.

The SCH-LR series meets the latest IMO/SOLAS requirements and LSA Code as well as theEuropean Council Directive 96/98 EC on Marine Equipment (M.E.D.).

**SCH - LR System: End User Advantages**

1. Compact design with minimum height, width and length.
2. Small footprint, for easy installation onboard.
3. Delivered as one complete pre-assembled and tested davit system, "plug and play", ready for immediate use.
4. Stainless steel for all shafts, piping and bolts and nuts up to M16.
5. Easy access for periodic maintenance, service and repair, support by with clear labelling and detailed manuals.
6. Relatively low davit weight and low deck forces.

## Davit column:

The davit column is an assembly of an inner column, an outer column and a self-braking worm gearunit. The self-braking properties of the worm gear guarantees that the davit is kept in position everunder

extreme list and trim conditions.Standard the SCM-R davit is delivered with a fixed inner column which should be flanged onto acounter foundation/pedestal.Optionally the davit can be delivered with a fixed outer-column. The main advantage of this type ofcolumn is that manual slewing can take place from a fixed position on deck.

## Davit arm:

The davit arm is a welded construction of a hollow section, a pipe, steel plates and a flange and provided with all relevant accessories such as winch foundation, top sheave and lifting eye.

## Winch:

Each davit will be supplied with an electric driven winch built onto the davit arm. The winch is a standard item and consists of the following main components;

- Closed gear casing;
- Built-on electric motor;
- Single winch drum with separate section for remote control wire;
- Speed reducer gear (conventional gear train);
- Centrifugal brake unit for gravity lowering;
- Stop brake of the “dead-man” type;
- Manual cranking gear with safety device;
- Quick-return unit for fast retrieval of empty hook.

## Hydraulic power pack unit (HPU):

The hydraulic power pack unit consists of the following main components:

- Stainless steel hydraulic tank (AISI 316) with drain valve;
- Hydraulic pump;
- Electric motor;
- Pressure switches;
- Pressure relief valve;
- Control valve;
- Accumulator.
- Hand pump.

## Accessoires:

Each davit system will be supplied with the following accessories:

**Electric controls**

- Motor starter built onto the davit arm and provided with main switch, push button and “power on”indicator;
- Limit switch

**Wire rope**

- Galvanised non-rotating steel wire rope provided with thimble at one end and of sufficient lengthfor lowering the rescue boat into the water;

**Remote control parts**

- Stainless steel remote control wires of sufficient length for both slewing and lowering;
- Handgrip for operating from within the rescue boat;
- Remote control sheaves;
- Loose items such as wire rope clips and shackles;

## Conservation:

Unless agreed otherwise, all steelwork will be shot blasted to SA 2,5 and coated with one layer of2-component epoxy primer of brand SIGMA. Dry film thickness 60-80 microns.This conservation is not suitable for outdoor storage for a long period of time.

## Optional accessoires:

The following accessories are to be seen as non-standard but can be supplied optionally:

- Stainless steel automatic release hook (off-load type);
- Counter foundation/Pedestal;
- Cradle for rescue boat

## Spare parts:

Upon request a separate offer for the supply of spare parts can be prepared. A detailed spare parts list with drawings is included in the instruction manual.

## Instruction manual:

The davit is supplied with 3 sets of instruction/operation and maintenance manuals in the English language. The manual contains all required information for installation, start-up, operation,maintenance and spare parts. A set of arrangement drawings, diagrams and part drawings is included.

## Steel construction / design regulations:

All materials used in steel construction of the davit, are certified in accordance with thevarious classification rules and regulations with full traceability.

## Approvals and certificates:

The davit is supplied with the following test certificates:

- Davit type approval certificates are issued by class (if applicable).
- Davit factory acceptance test certificate issued by class.
- Winch factory acceptance test certificate issued by class.
- Wire certificate.
- Shackle certificate.
- Hook certificate (optional)

Copies of the relevant approvals and certificates are included in the instruction, maintenance and operations manual of the davit system.