



**VIKING  
NORSAFE**  
Boats and davits

Enterprise No.: NO940411696  
[www.VIKING-life.com](http://www.VIKING-life.com)

## NRC-25 P – Rescue Boat Davit



TECHNICAL SPECIFICATION

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VIKING Project No.: Standard

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# 1. REGULATION AND CERTIFICATION

**Applicable rules and regulations** In accordance with IMO/ SOLAS requirements, LSA Code and European Council Directive 2014/90/EU on Marine Equipment (MED)

<b>Certificate</b>	MED
<b>Other certificate</b>	Class certificate or flag acceptance on request

# 2. DAVIT SPECIFICATION

## 2.1. GENERAL DAVIT

Type	Rescue Boat Davit
<b>Model</b>	NRC-25 P
<b>Application</b>	Rescue boat & Life raft handling
<b>Drawing reference</b>	G-502163
<b>Execution</b>	Hydraulic slewing arm davit
<b>Boarding position</b>	Inboard / Outboard on deck level
<b>Operating position</b>	From deck side and from inside the boat (Gravity lowering)
<b>Davit system weight (Approx.)</b>	2300 kg, davit incl. winch (dry weight)
<b>Safe Working Load (SWL)</b>	2500 kg (4 m slewing radius) – LSA function 900 kg (3.5 m slewing radius) – Provision function
<b>Trim / list conditions</b>	10° / 20°
<b>Max. lowering height</b>	40 m (LSA function, including 10°/20° trim/list condition) 25 m (Provision function)
<b>Operation temperature</b>	-20°C till +45°C (other range on request)
<b>Hoisting speed</b>	Min. 18 m/min (LSA function), Hydraulically Approx. 10 m/min (Provision function, by electrical)
<b>Lowering speed</b>	Not less than that obtained from the formula $S=0.4+(0.02H)$ , and not exceed 1.3 m/s. (LSA function) Approx. 10 m/min (Provision function, by electrical)
<b>Manual hoisting</b>	By manual hand-cranking
<b>Pivot bearing type</b>	Slewing bearing
<b>Wire sheaves</b>	Galvanized, equipped with ball bearings
<b>Installation</b>	1 (one) deck welding point (reduced installation time)
<b>Deck reinforcement requirements</b>	See general arrangement drawing
<b>Davit system H / W / D</b>	See general arrangement drawing
<b>Deck space required</b>	See general arrangement drawing

The Viking Norsafe NRC-25 P slewing davit system is especially designed for safe and efficient launching and retrieval of Viking Norsafe Rescue Boats and life rafts. The davit system is designed for long time operation in a tough and corrosive marine/offshore environment and to fulfil all requirements as given in latest SOLAS/IMO requirements.

The system will allow:



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- Hoisting and lowering of the fully loaded rescue boat up to 20° list and 10° trim.
- Gravity lowering of the fully loaded boat up to 20° list and 10° trim, completely independent of any power supply.
- Hoisting of the loaded rescue boat by electric motor.
- Dead ship slewing of the rescue boat by the nitrogen accumulator installed on the davit arm.
- Retrieval of the rescue boat by manual hoisting.
- Manual slewing by hand pump.
- Provision function.

The davit system has a hydraulically driven, mechanical slewing jib and an electric driven winch with single wire fall. Slewing and dead ship slewing functions are driven by a small hydraulic power pack. The hydraulic system is equipped with a stored power unit - which allows full operation of the davit in “dead ship” conditions.

The davit is designed to achieve optimum performance in terms of safety and reliability, and minimal maintenance levels. All selected equipment is chosen and installed to ensure the lowest possible emission of sound and for good access for service and repair.

A HPU is included, and is located inside of the davit pedestal. All internal hydraulic piping is properly done and completed on the entire davit system. A remote control for start/stop of el motor on HPU as well as hoisting and slewing control is also included. When the button is released, davit operation will cease immediately. A thermal overload relay in the starter cabinet protects the electrical motor against overheating in case of excessive loads.

A safety valve is installed in the hydraulic power unit. This safety valve prevents the davit from slewing loads in excess of the Safe Working Load and protects the system and motor from being overloaded.

The winch is fitted with a one-way clutch. In the event of power loss during hoisting, the brake will automatically activate and davit motion will stop. A centrifugal brake is located on the winch. The brake controls the speed of descent for the lifeboat. The brake is enclosed, and provides reliable operation in all climate conditions.

Electrical limit switches are used to cut power to the winch, if the boat is hoisted above stowage height.

Electrical limit switches will prevent the boat from being hoisted above its upmost position / stowed position. Electrical limit switches on the winch provide failsafe operation of the hand crank.

For launching in dead ship conditions, stored power from accumulator and gravity lowering system in winch provides safe launching.

Starter cabinet is mounted on HPU as standard. All electrical cables for davit control, included 42V AC to rescue boat when that is needed is installed and terminated by Viking Norsafe. Only main power supply is required.

## 2.2 WINCH AND WIRE

**LSA function:**



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<b>Type</b>	DW-25 winch
<b>Drawing reference</b>	DS-00712
<b>Execution</b>	Electrical hoisting and lowering / Gravity lowering / Manually hoisting / Manually fast hoisting
<b>Brakes type</b>	Centrifugal brakes
<b>Wire rope type</b>	Galvanized, rotation resistant (certified item)
<b>Wire rope diameter, MBL and spec.</b>	Ø 16 mm, MBL 150 kN, 1960N/mm <sup>2</sup>
<b>Inner / outer wire end</b>	Secured to drum / Swaged eye
<b>Connection shackle in thimble</b>	Included (certified item)

**Provision function:**

<b>Type</b>	SW05 winch
<b>Drawing reference</b>	DS-02887
<b>Execution</b>	Electrical hoisting and lowering
<b>Brakes type</b>	Electromagnetic brake inside motor
<b>Wire rope type</b>	Galvanized, rotation resistant (certified item)
<b>Wire rope diameter, MBL and spec.</b>	Ø 12 mm, MBL 30 kN, 1960N/mm <sup>2</sup>
<b>Inner / outer wire end</b>	Secured to drum / Swaged eye
<b>Connection shackle in thimble</b>	Included (certified item)

### 2.3. ELECTRICAL

<b>Electric power supply</b>	<b>440V/3ph/60Hz (other on request)</b>
<b>Electrical cabinet</b>	IP56
<b>Remote control</b>	IP56
<b>Limit switch</b>	IP56
<b>Power consumption</b>	11.6 kW (HPU); 11.6 kW (Winch); 4.8 kW (Provision Winch)
<b>Starting method</b>	DOL - Direct on line
<b>Duty rating</b>	S2-10 min
<b>Motor space heating</b>	Included, 40W
<b>Wiring</b>	Included, (only power supply cable required)
<b>Cables type</b>	Marine type, flame retardant halogen free
<b>Transformer</b>	Included, 440/42VAC (other on request)
<b>Emergency stop</b>	Yes, mushroom type

### 2.4. HYDRAULIC

<b>Type</b>	<b>Independent integrated hydraulic system</b>
<b>Oil flow</b>	22.7 l/min (at 50Hz); 27.4 l/min (at 60Hz)
<b>Max. working pressure</b>	230 bar
<b>Oil amount</b>	110 l
<b>Motor type</b>	132M-4
<b>Hydraulic accumulators</b>	1x Bladder type 40L (120 degree slewing angle)
<b>System fittings</b>	ISO 8434-1 (DIN 2353) bite type fittings



<b>Fittings and hose fittings</b>	Zinc chromate Cr(VI)-free, secured with Denso tape
<b>Tubes</b>	AISI 316L

## 2.5. PAINTING SYSTEM

<b>Blasting</b>	<b>SA 2.5</b>
<b>Specification</b>	ISO 12944-5
<b>System</b>	Marine paint system (Jotun paint system)
<b>Coating Two (2) layers (other on request)</b>	Layer 1 Penguard universal, Alu - 220 µm Hardtop XP - 80 µm RAL 9016 (Traffic white)
<b>Total dry film thickness</b>	300 µm

## 2.6. DOCUMENTATION

<b>Technical specification davit</b>	<b>According to contract specification</b>
<b>General arrangement drawing</b>	According to contract specification
<b>Hydraulic flow diagram</b>	According to contract specification
<b>HPU drawing</b>	According to contract specification
<b>Electrical wiring diagram</b>	According to contract specification
<b>Starter cabinet drawing</b>	According to contract specification
<b>Product certificate</b>	According to contract specification
<b>Lubrication oil chart</b>	Viking Norsafe standard
<b>Spareparts list</b>	Viking Norsafe standard
<b>Operation &amp; Maintenance manual</b>	Viking Norsafe standard
<b>Installation manual</b>	Viking Norsafe standard
<b>Preservation &amp; storage procedure</b>	Viking Norsafe standard

## 3. PACKING

**Format** Packed for transport in a 20 ft standard container

## 4. OPTIONS

*Note: Some options influence davit weight and performance, some option combinations may be incompatible. Maximum SWL must not be exceeded.*

marking means to be supplied by maker,  marking means not supplied by maker.

### GENERAL DAVIT

<b>Combined rescue / raft davit function (maximum handling of rescue boat and 2 rafts)</b>	<input type="checkbox"/>
<b>Rescue boat release hook</b>	<input type="checkbox"/>
<b>Automatic release raft hook (including triangle plate)</b>	<input type="checkbox"/>
<b>Combined raft-/rescue hook</b>	<input type="checkbox"/>
<b>Winterization / cold climate heating / canvas solutions</b>	<input type="checkbox"/>
<b>Commissioning performed by Viking Norsafe or Viking Norsafe Service Partners</b>	<input type="checkbox"/>



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Other options on request

#### **ELECTRIC SYSTEM**

Voltage variation

Protection box for remote control

Ex-proof, Zone II 2 G Ex de IIB T3 (other on request)

Star  $\Delta$  starting method

Additional electric cabinet heater

Alternative cabinet size / material / surface protection

#### **HYDRAULIC SYSTEM**

Stainless steel fittings and hose fittings

Stainless steel HPU tank

Alternative HPU size / material / surface protection

HPU heater

Increased accumulator capacity (increased stored power slewing angle, up to max.300 degree)

#### **PAINTING SPECIFICATION**

Norsok M-501 system (Viking Norsafe Doc. No. TSS-0030)

Other painting system and final color

#### **SPARE PARTS**

Spare parts for Startup / Commissioning

Spare parts for Onboard spare

Spare parts for 1 year

Spare parts for 2 years

#### **DOCUMENTATION**

Factory acceptance test procedure

Factory acceptance test report

Inspection and test plan

Shipping, handling and lifting procedure

Packing & unpacking procedure

Commissioning procedure

TAG list

Winch drawing

Noise test report

Weight and COG datasheet

Weighing report/certificate

Other drawings/documentation/procedures



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## 5. POSSIBLE BOAT FITTING THIS DAVIT SYSTEM

*The Viking Norsafe boats fit the NRC-25 P davit types and variants.*

<b>Matrix-450 MKI</b>	<b>Midget-500 MKII</b>
<b>Midget-530 MKII</b>	(Others on request)

## 6. YARD SUPPLY / RESPONSIBILITY

<b>Transport</b>	<b>Depending on contract</b>
<b>Deck foundations / reinforcement</b>	
<b>Assembly, erection and welding to deck</b>	
<b>Wire routing on davit and termination</b>	
<b>All cables to starter cabinet and agreed interface</b>	
<b>Hydraulic oil filling</b>	
<b>Testing according to regulation after installation onboard</b>	
<b>Preservation and maintenance after davit arrived yard and installed</b>	