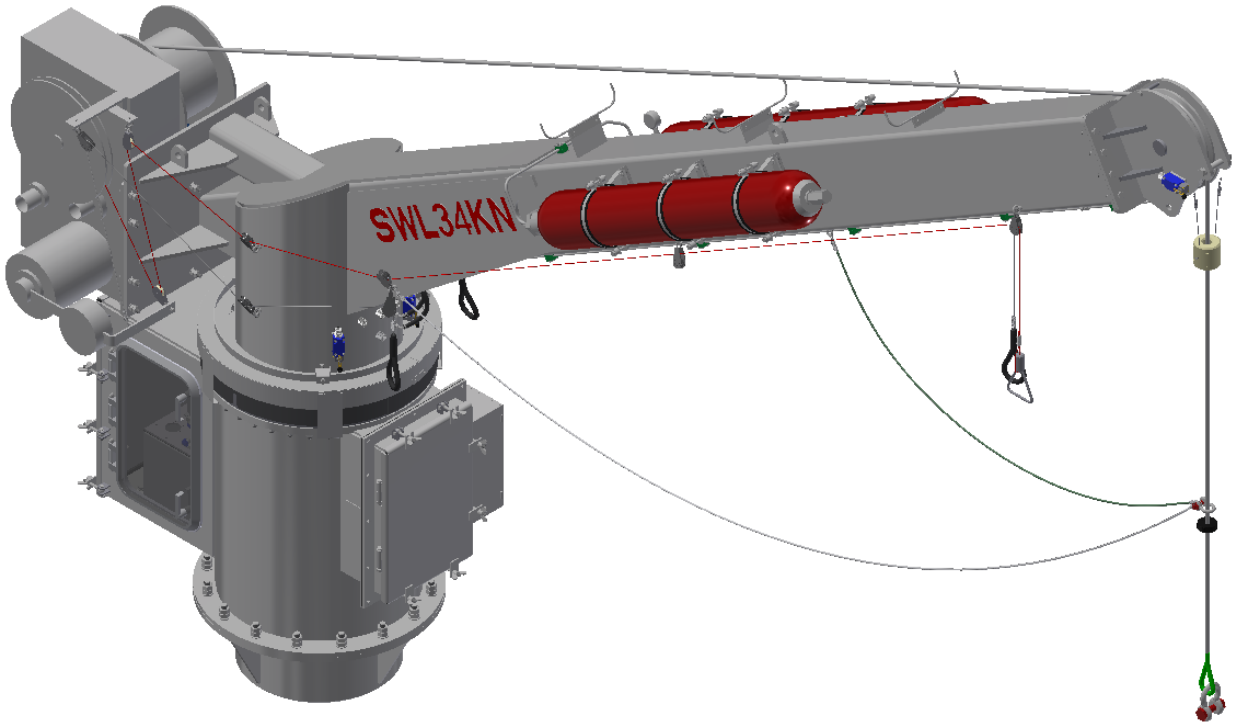
VIKING NORSAFE
Boats and davits

Enterprise No.: NO940411696
www.VIKING-life.com

NDSC-34 – Rescue Boat Davit



TECHNICAL SPECIFICATION

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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)**
Certificate	MED

2. DAVIT SPECIFICATION

2.1. GENERAL DAVIT

Type	**Rescue Boat Davit**
Model	NDSC-34
Application	Rescue boat
Execution	Hydraulic slewing arm davit
Boarding position	Inboard / Outboard on deck level
Operating position	From deck side and from inside the boat (Gravity lowering)
Davit system weight (Approx.)	2800 kg, davit incl. winch (dry weight)
Safe Working Load (SWL)	34 kN (max. 4.5 m slewing radius)
Trim / list conditions	10° / 20°
Max. lowering height	40 m (including 10°/20° trim/list condition)
Operation temperature	-25°C till +45°C (other range on request)
Min. hoisting speed	18 m/min (by electrical power)
Lowering speed	Not less than that obtained from the formula S=0.4+(0.02H), and not exceed 1.3 m/s.
Manual hoisting	By manual hand-cranking
Pivot bearing type	Slewing bearing
Wire sheaves	Galvanized, equipped with ball bearings
Installation	1 (one) deck welding point (reduced installation time)
Deck reinforcement requirements	See general arrangement drawing
Davit system H / W / D	See general arrangement drawing
Deck space required	See general arrangement drawing

The VIKING NDSC slewing davit system is especially designed for safe and efficient launching and retrieval of VIKING 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:

- 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.

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. Only main power supply is required.

2.2 WINCH AND WIRE

Type	**DW-34 winch**
Execution	Electrical hoisting and lowering / Gravity lowering / Manually hoisting / Manually fast hoisting
Brakes type	Centrifugal brakes
Wire rope type	Galvanized, rotation resistant (certified item)
Wire rope diameter, MBL and spec.	Ø 18 mm, MBL 204 kN, 1960 N/mm2, L=42 m
Inner / outer wire end	Secured to drum / Swaged eye
Connection shackle in thimble	Included (certified item)

2.3. ELECTRICAL

Electric power supply	**440V/3ph/60Hz (other on request)**
Electrical cabinet	IP56
Remote control	IP56
Limit switch	IP56
Power consumption	11.6 kW (HPU); 25.0 kW (Winch)
Starting method	DOL - Direct on line
Duty rating	S2-10 min
Motor space heating	Included, 40W
Wiring	Included, (only power supply cable required)
Cables type	Marine type, flame retardant halogen free
Transformer	Included, 440/42VAC (other on request)
Emergency stop	Yes, mushroom type

2.4. HYDRAULIC

Type	**Independent integrated hydraulic system**
Oil flow	22.7 l/min (at 50Hz); 27.4 l/min (at 60Hz)
Max. working pressure	230 bar
Oil amount	47 l
Motor type	132M-4
Hydraulic accumulators	Bladder type 50L+40L (270 degree slewing angle)
System fittings	ISO 8434-1 (DIN 2353) bite type fittings
Fittings and hose fittings	AISI 316L
Tubes	AISI 316L

2.5. PAINTING SYSTEM

Blasting	**SA 2.5**
Specification	ISO 12944-5
System	Marine paint system (As customer request)
Coating Four (4) layers (other on request)	Layer 1 SigmaPrime 200 Series - 150 µm Layer 2 SigmaPrime 200 Series - 150 µm Layer 3 SigmaDur 550 - 50 µm Layer 4 SigmaDur 550 - 50 µm
Total dry film thickness	400 µm

2.6. DOCUMENTATION

Technical specification davit	**According to contract specification**
General arrangement drawing	According to contract specification
Hydraulic flow diagram	According to contract specification
HPU drawing	According to contract specification

Electrical wiring diagram	According to contract specification
Starter cabinet drawing	According to contract specification
Product certificate	According to contract specification
Lubrication oil chart	VIKING standard
Spareparts list	VIKING standard
Operation & Maintenance manual	VIKING standard
Installation manual	VIKING standard
Preservation & storage procedure	VIKING standard

3. YARD SUPPLY / RESPONSIBILITY

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