



**VIKING  
NORSAFE**  
Boats and davits

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

## NDA-65 – Rescue Boat Davit



TECHNICAL SPECIFICATION

**VIKING Norsafe Life-Saving Equipment Norway AS**  
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VIKING Project No.: Standard

VIKING Doc. No.: TSD-0182

Rev. Date: 10.03.2022

Rev. No: 6

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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>	NDA-65
<b>Application</b>	Rescue boat handling
<b>Drawing reference</b>	G-501440
<b>Execution</b>	Hydraulic pivoting 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>	7800 kg, davit incl. winch (dry weight)
<b>Safe Working Load (SWL)</b>	6500 kg
<b>Trim / list conditions</b>	10° / 20°
<b>Max. lowering height</b>	58 m (including 10°/20° trim/list condition)
<b>Operation temperature</b>	-20°C till +45°C (other range on request)
<b>Min. hoisting speed</b>	Hydraulically 18 m/min
<b>Min. lowering speed</b>	According to SOLAS regulation ( $S = 0.4 + 0.02H$ )
<b>Manual hoisting</b>	By manual hand-cranking
<b>Pivot bearing type</b>	Bronze bearings
<b>Wire sheaves</b>	Galvanized, equipped with ball bearings
<b>Installation</b>	6 (six) deck welding points (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 NDA luffing davit system is especially designed for safe and efficient launching and retrieval of VIKING Norsafe Rescue Boats. 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.

The davit system consist of a pivoting A-frame that has a hydraulic cylinder and a hydraulically driven winch with single wire fall. The luffing and winch functions are driven by a single hydraulic



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power unit (HPU). The hydraulic system is equipped with a stored power unit (nitrogen accumulator) - 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 must be located close to the davit. Hydraulic hoses are connected directly from HPU to davit. A separate control stand with a hydraulic joystick and remote control for start/stop of el motor on HPU is also included. The joystick is controlling two valves inside HPU by hydraulic remote hoses. The control stand has to be installed on deck in a suitable location where good visibility over the davit and boat is obtained.

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

The winch is fitted with hydraulically operated, fail-safe multi-disc brake, which is fully oil submerged. In the event of hydraulic pressure loss, due to hose or connection failure, the brake will automatically activate and davit motion will stop.

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

All internal hydraulic piping is properly done and completed on the entire davit system. The only installation work of piping required is the connection of the delivered five hydraulic hoses between the hydraulic power unit and the davit.

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

## 2.2 WINCH AND WIRE

<b>Type</b>	<b>Zollern Hydraulic Winch ZR4.24</b>
<b>Drawing reference</b>	DS-03781
<b>Execution</b>	Hydraulically hoisting and lowering / Gravity lowering / Manually hoisting
<b>Brakes type</b>	Negative multi-disk brakes, hydraulically operated
<b>Wire rope type</b>	Galvanized, rotation resistant (certified item)
<b>Wire rope diameter, MBL and spec.</b>	Ø 20 mm, MBL 390 kN, 1960N/mm <sup>2</sup>
<b>Inner / outer wire end</b>	Secured to drum / Open spelter socket
<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



VIKING Project No.: Standard

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Rev. No: 6

<b>Limit switch</b>	IP56
<b>Power consumption</b>	42 kW
<b>Starting method</b>	DOL - Direct on line
<b>Duty rating</b>	S6-40%
<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>	81 l/min (at 50Hz); 97.2 l/min (at 60Hz)
<b>Max. working pressure</b>	240 bar
<b>Oil amount</b>	350 l
<b>Motor type</b>	200L-4
<b>Hydraulic cylinders</b>	DS-02378 (Main cylinder), DS-02379 (Damping cylinder)
<b>Hydraulic accumulators</b>	1x Bladder type 20L & 2x Bladder type 50L
<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 - 190 µm Layer 2 Hardtop XP - 50 µm RAL 9016 (Traffic white)
<b>Total dry film thickness</b>	240 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



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Installation manual

VIKING Norsafe standard

Preservation & storage procedure

VIKING Norsafe standard

### 3. PACKING

Format

Packed for transport in a 40 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

High speed version (Max. hoisting speed: 48m/min)	<input type="checkbox"/>
Support cradle for boat in stowed position	<input type="checkbox"/>
Embarkation platform/ladder for boat in stowed position	<input type="checkbox"/>
Anti-pendulum boat supports	<input type="checkbox"/>
Winterization / cold climate heating / canvas solutions	<input type="checkbox"/>
Commissioning performed by VIKING Norsafe or VIKING Norsafe Service Partners	<input type="checkbox"/>
Other options on request	<input type="checkbox"/>

#### ELECTRIC SYSTEM

Voltage variation	<input type="checkbox"/>
Protection box for remote control	<input type="checkbox"/>
Ex-proof, Zone II 2 G Ex de IIB T3 (other on request)	<input type="checkbox"/>
Star $\Delta$ starting method	<input type="checkbox"/>
Additional electric cabinet heater	<input type="checkbox"/>
Alternative cabinet size / material / surface protection	<input type="checkbox"/>

#### HYDRAULIC SYSTEM

Stainless steel fittings and hose fittings	<input type="checkbox"/>
Alternative HPU size / material / surface protection	<input type="checkbox"/>
HPU heater	<input type="checkbox"/>

#### PAINTING SPECIFICATION

Norsok M-501 system (VIKING Norsafe Doc. No. TSS-0030)	<input type="checkbox"/>
Other painting system and final color	<input type="checkbox"/>

#### SPARE PARTS

Spare parts for Startup / Commissioning	<input type="checkbox"/>
Spare parts for Onboard spare	<input type="checkbox"/>



VIKING Project No.: Standard

VIKING Doc. No.: TSD-0182

Rev. Date: 10.03.2022

Rev. No: 6

- 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
- Hydraulic flushing procedure
- Winch drawing
- Noise test report
- Hydraulic flushing report
- Weight and COG datasheet
- Weighing report/certificate
- Other drawings/documentation/procedures

**5. POSSIBLE BOAT FITTING THIS DAVIT SYSTEM**

*The VIKING Norsafe boats fit the NDA-65 davit types and variants.*

<b>Magnum-780 MKI</b>	<b>Magnum-850 MKI</b>
<b>Maya-850 MKI</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>Hydraulic piping between HPU unit, davit and control stand</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>	