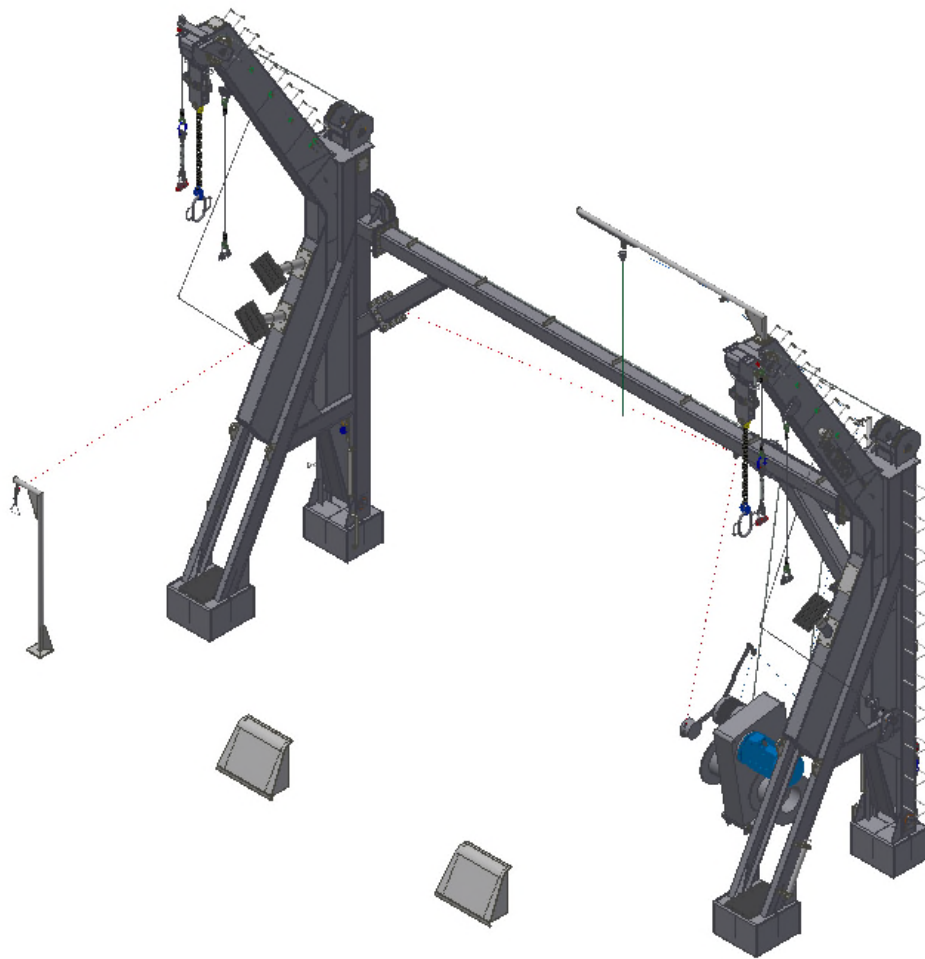




**VIKING  
NORSAFE**  
Boats and davits

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

## E-90 – Single Pivot Gravity Davit



TECHNICAL SPECIFICATION

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VIKING Project No.: TBA

VIKING Doc. No.: TSD-0057

Rev. Date: 15.04.2020

Rev. No: 6

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# 1. REGULATION AND CERTIFICATION

<b>Applicable rules and regulations</b>	<b>In accordance with IMO/ SOLAS requirements, LSA Code and European Council Directive 2014/90/EU on Marine Equipment (MED)</b>
<b>Certificate</b>	<b>MED</b>
<b>Other certificate</b>	Class certificate or flag acceptance on request

# 2. DAVIT SPECIFICATION

## 2.1. GENERAL DAVIT

<b>Type</b>	<b>Single Pivot Gravity Davit</b>
<b>Model</b>	E-90
<b>Application</b>	Conventional Lifeboat handling
<b>Drawing reference</b>	G-500441, G-500443
<b>Execution</b>	Gravity lowering 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>	7950 kg, davit incl. winch (dry weight)
<b>Safe Working Load (SWL)</b>	9174 kg
<b>Trim / list conditions</b>	10° / 20°
<b>Max. lowering height</b>	52 m (including 10°/20° trim/list condition)
<b>Operation temperature</b>	-20°C till +45°C (other range on request)
<b>Hoisting speed</b>	0~5 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, self-lubricating type
<b>Wire sheaves</b>	Galvanized, equipped with ball bearings
<b>Installation</b>	9 (nine) deck welding points
<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 Single Pivot Gravity Davit system is especially designed for safe and efficient launching and retrieval of a Viking Norsafe Conventional Lifeboat. The davit system is designed for long time operation in a tough and corrosive marine/offshore environment. The davit system is designed to fulfil all requirements as given in latest SOLAS/IMO requirements.

The system will allow:

- Launch of lifeboat in maximum load condition
- Gravity lowering of the loaded lifeboat independent of external power supply
- Retrieval of lifeboat with a crew of three persons using electric power
- Retrieval of the lifeboat by manual hand-cranking
- Optional approval for rescue function, according to latest SOLAS regulations



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The davit system comprises of two davit arms, a davit structure and an electrically powered winch operating two wire falls. The winch is deck mounted. The davit is intended for lifeboats placed onboard vessels, where swing out davit arms offer the best solution. The lifeboat is normally boarded in the stowed position.

The Single Pivot Gravity (SPG) Davit is based on a well known concept. Swing out and lowering is in one continuous movement and the lifeboat is launched in the minimum time. The winch brake is being released by the operator, on deck or from within the lifeboat. When the brake is released, the davit arms will swing out and the boat will be lowered to the water line in one continuous movement.

The davit is designed to achieve optimum performance in terms of safety and reliability, and minimal maintenance levels. The davit is designed to minimize noise emission and provide straightforward service access.

To activate the davit, push and hold down the appropriate button to activate winch hoisting. When the button is released, hoisting will cease immediately.

A thermal overload relay in the starter cabinet prevents the electrical motor against overheating in case of excessive loads.

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 located on the davit arms are used to cut power to the winch when the retrieved boat reaches its stowed height and the davit arms are correctly located. Electrical limit switch on the winch provide failsafe operation of the hand crank.

## 2.2 WINCH AND WIRE

<b>Type</b>	<b>NW-85 winch</b>
<b>Drawing reference</b>	G-500978
<b>Wire rope type</b>	Galvanized, rotation resistant (certified item)
<b>Wire rope diameter, MBL and spec.</b>	Ø 16 mm, MBL 181 kN, 1960N/mm <sup>2</sup>
<b>Inner / outer wire end</b>	Secured to drum / Wedge socket and safety wire clamp
<b>Wedge socket</b>	Included
<b>Master link w/handle</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>	27 KW
<b>Starting method</b>	DOL - Direct on line
<b>Duty rating</b>	S2-10min



<b>Motor space heating</b>	Included, 40W
<b>Electrical cabinet heating</b>	Heat loss from 42V transformer
<b>Wiring</b>	Included, (only power supply cable required)
<b>Wiring</b>	Included, (only power supply cable required)
<b>Transformer</b>	Included, 440/42VAC (other on request)
<b>Emergency stop</b>	Yes, mushroom type

## 2.4. 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>Davit Body (Steel)</b>	Layer 1 Penguard universal, Alu - 220 µm Hardtop XP - 80 µm RAL 9016 (Traffic white)
<b>Total dry film thickness</b>	300 µm

## 2.5. DOCUMENTATION

<b>Technical specification davit</b>	<b>According to contract specification</b>
<b>General arrangement 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 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.

<b>GENERAL DAVIT</b>	
<b>Combined Life-/Rescue boat davit function</b>	<input type="checkbox"/>
<b>Hoisting fully loaded boat</b>	<input type="checkbox"/>
<b>Damping system for main wire fall</b>	<input type="checkbox"/>
<b>Additional lowering height</b>	<input type="checkbox"/>
<b>Additional shock absorber on winch</b>	<input type="checkbox"/>



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Additional manual handling crane for electric motor on winch	<input type="checkbox"/>
Additional supports for lights, lanterns, starter cabinet etc.	<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"/>

#### 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"/>
Spare parts for 1 year	<input type="checkbox"/>
Spare parts for 2 years	<input type="checkbox"/>

#### DOCUMENTATION

Factory acceptance test procedure	<input type="checkbox"/>
Factory acceptance test report	<input type="checkbox"/>
Inspection and test plan	<input type="checkbox"/>
Shipping, handling and lifting procedure	<input type="checkbox"/>
Packing & unpacking procedure	<input type="checkbox"/>
Commissioning procedure	<input type="checkbox"/>
TAG list	<input type="checkbox"/>
Winch drawing	<input type="checkbox"/>
Noise test report	<input type="checkbox"/>
Weight and COG datasheet	<input type="checkbox"/>
Weighing report/certificate	<input type="checkbox"/>
Other drawings/documentation/procedures	<input type="checkbox"/>

## 5. POSSIBLE BOAT FITTING THIS DAVIT SYSTEM

The VIKING Norsafe boats fit the E-90 davit types and variants.



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JYN-74

JYN-80

(Others on request)

## 6. YARD SUPPLY / RESPONSIBILITY

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