



Owner's Operation & Installation Manual


WD800/1000 Yacht Davit



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Notice to Boat Manufacturer or Installer

Throughout this publication, Warnings and Cautions accompanied by the International Hazard Symbol  are used to alert the manufacturer or installer to special instructions concerning a particular service or operation that may be hazardous if performed incorrectly or carelessly.

Observe Them Carefully!

These “safety alerts” alone, cannot eliminate the hazards that they signal. Strict compliance to these special instructions when performing the installation and maintenance plus “common sense” operation are major accident prevention measures.

DANGER

Immediate hazards which **WILL** result in severe personal injury or death.

WARNING

Hazards or unsafe practices which **COULD** result in severe personal injury or death.

CAUTION

Hazards or unsafe practices which **COULD** result in minor injury or product or property damage.

NOTICE

Information which is important to proper installation or maintenance, but is not hazard-related.

Yacht Davit Assembly – Equipment Supplied

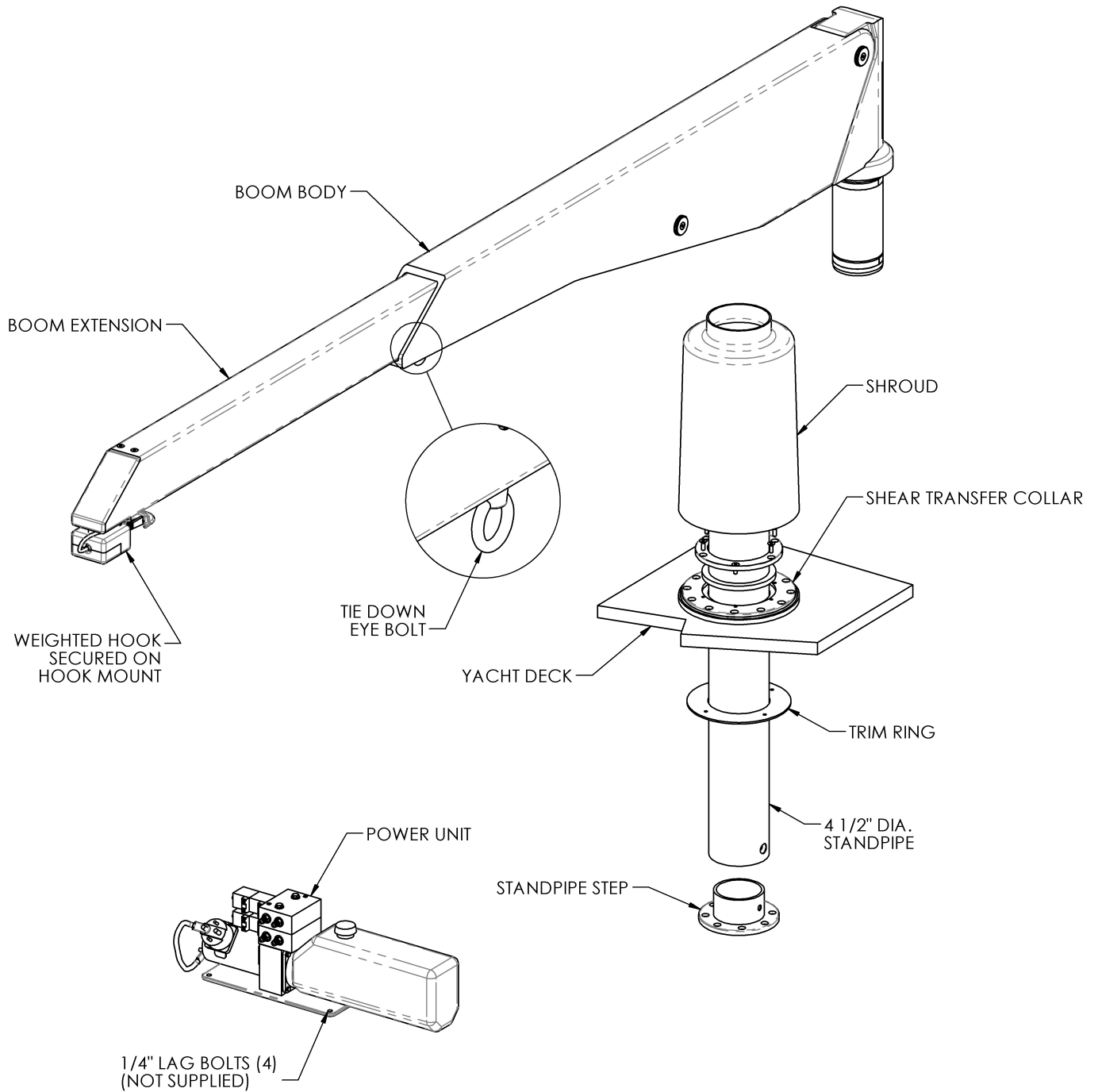


Figure 1: Davit Components

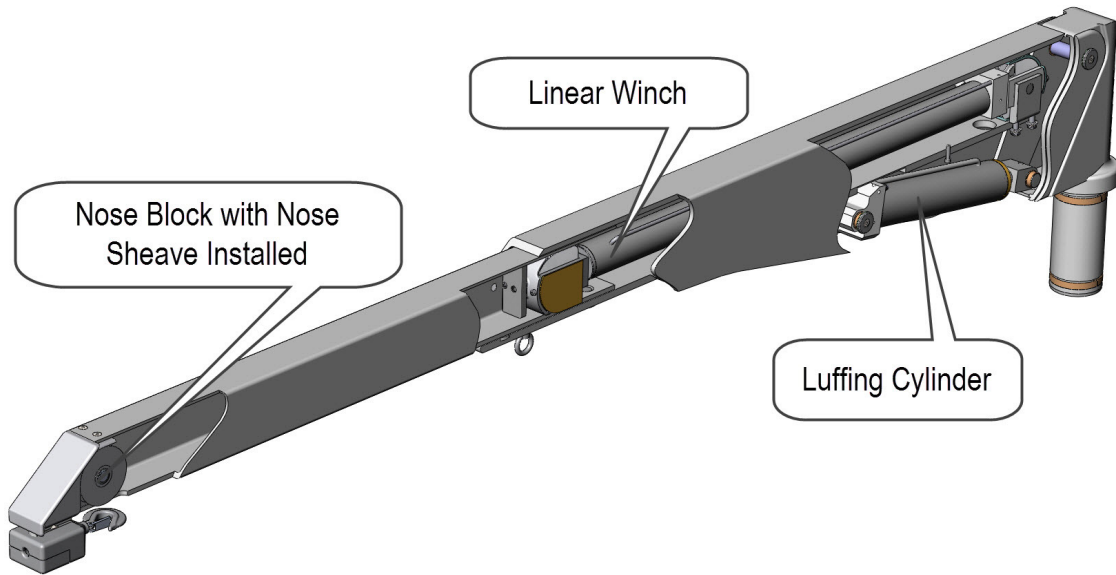


Figure 2a: Yacht Davit cut-away

Shipping Configuration



Figure 2b: Yacht Davit with Boom Collapsed and Locking Pin Removed

After removing the davit from its shipping box, carefully slide the boom extension out to its fully-extended position, aligning the hole in the boom extension with the hole in the boom body, and install the locking pin to lock the boom extension into the permanent operating position.

Required Equipment and Tools

This section describes the equipment and tools needed or recommended for the yacht davit installation.

Supplied Equipment List

Your yacht davit comes with the following standard equipment:

Davit assembly, complete with:

- Truck assembly with bearing rings installed
- Hydraulic luffing cylinder assembly
- Composite rope, hook and weight assembly installed
- Two-function, hand-held, pendant control c/w 10' cable
- Owner's Handbook and Installation Manual
- Hydraulic hoses (16ft standard length)
- Hydraulic power unit available in 12V or 24V
- Standpipe assembly containing:
 - 9' standpipe
 - Shear Transfer Collar
 - Standpipe Step
 - Trim Ring

Optional Equipment List

- 1/4" Amsteel replacement rope kit c/w eye splices (includes installation instructions)
- Pedestal base instead of standpipe assembly

Recommended Materials (not supplied)

You will need all or most of the following materials for the davit installation:

- (12) x 1/4" FHMS for thru-bolting (sheer transfer collar)
- (8) x 1/4" FHMS for thru-bolting (standpipe step)
- (4) x #10 FHMS screws (trim ring)
- (16) x 1/2" Flat Socket Head screws (base mounting)
- Sikaflex 292, Sikaflex 210T primer
- Anti-corrosion paste (Tef-Gel)
- Marine corrosion control grease
- Heat-shrink-type electrical connectors
- Electrical breakers

Required Tools

You should have the following tools on hand for installation:

- Tape measure
- Masking tape
- Caulking gun
- Drill motor
- Portable band saw, or reciprocating power saw
- Phillips screwdrivers
- Utility knife
- Level
- Hole saw (2" and 4 3/4")
- Assorted drill bits (5/32", 13/64", 1/4", etc.)
- Assorted metal-working files
- Wire strippers/cutters
- Heat shrink tubing and gun
- Wet/dry vacuum
- Safety goggles and/or face shield
- Allen keys

Planning the Installation

Choosing the Installation Method

There are three ways to install the davit:

1. **Standpipe Assembly** – To install the standpipe assembly (see procedure on page 10), you must have a maximum deck-to-deck height of 96". Maximum standpipe length 108".
2. **Pedestal Base Mount** – Your specifications

Locating the Davit System

1. **Choose the best storage location for your tender considering the following factors:**
 - clearance needs to allow for rotation and storage of davit (check walk-around space, hatch, railing, and other clearances)
 - deck strength
 - standpipe base location on lower deck
 - accessibility for easy operation and maintenance
2. **Determine the balance point of the tender, and mark this balance spot on the deck. The reach requirement of the davit is a horizontal measurement from the optimum davit location to the balance point of the tender.**
3. **To ensure the tender does not hit the side of the vessel during a launch and retrieval, allow 9" more than the tender's half beam measurement for clearance (i.e., half the width of the tender).**
4. **Check davit hook height vs. reach table at various luffing angles to ensure at least 8" of clearance between the tender and vessel (railings) during operation.**
5. **Double-check the reach and height requirements against the specifications of the davit to ensure the davit will meet your installation requirements.**

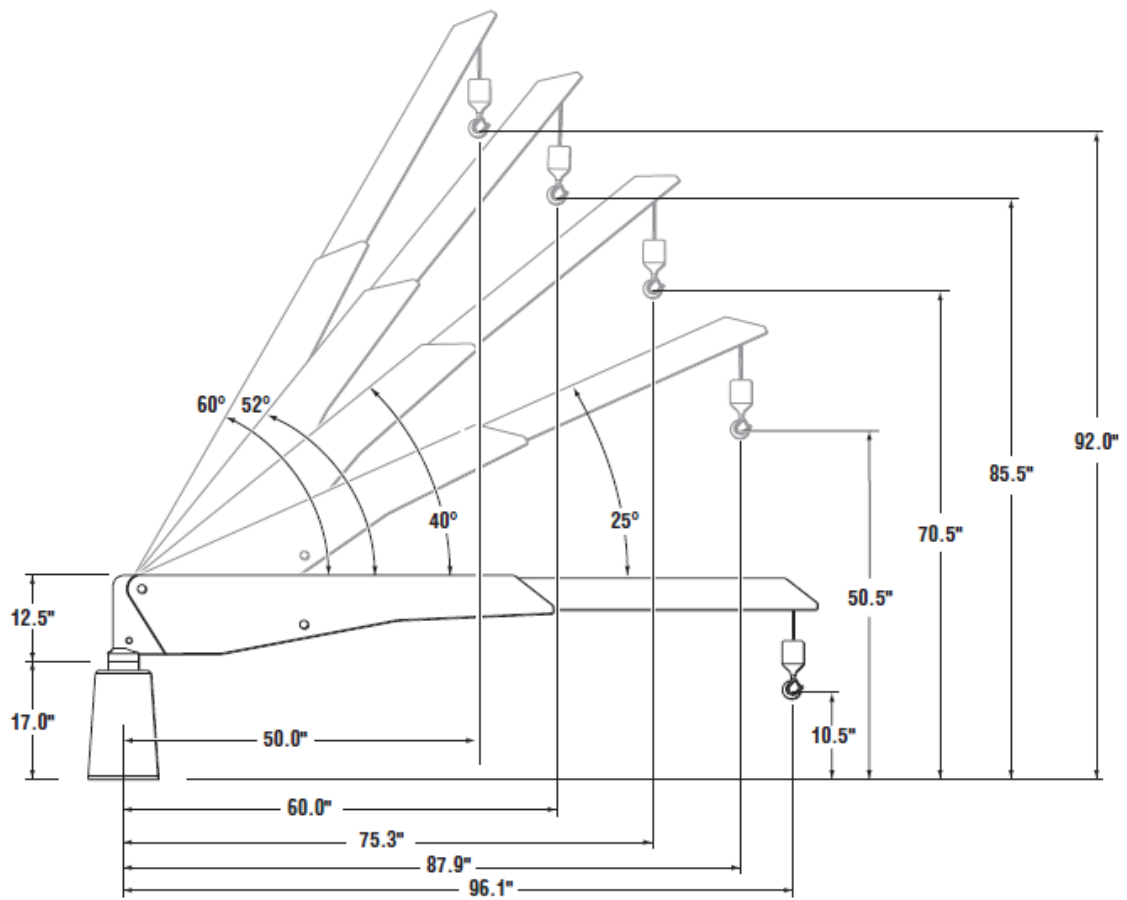


Figure 3: Reach Table

Installation Procedure

Installing the Standpipe

Follow this procedure if you are installing the standpipe assembly.

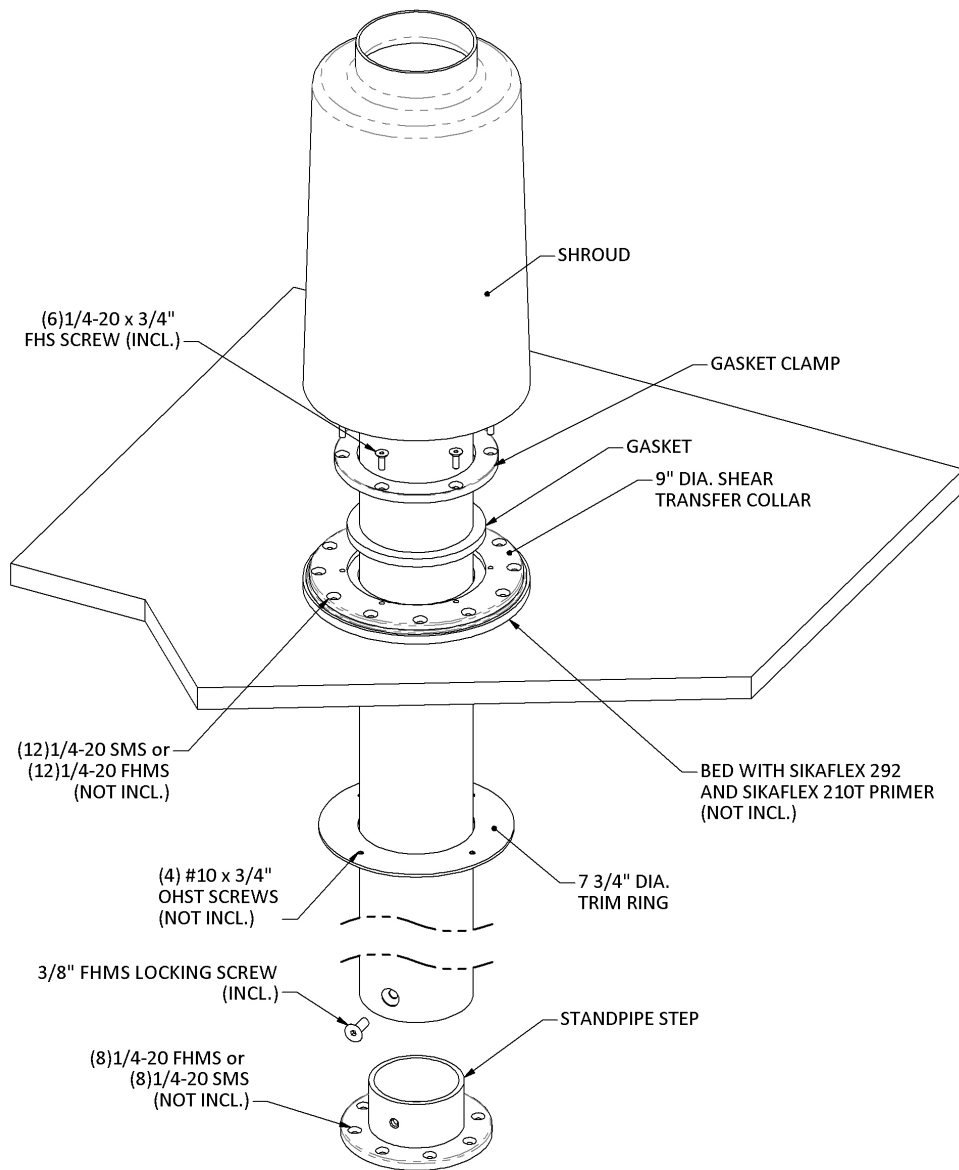


Figure 4: Exploded View of Standpipe

NOTICE

There are three parts to the shear transfer collar: a 9" diameter base, a rubber gasket, and a 6 1/2" diameter gasket clamp.

1. Locate the standpipe in the chosen location for the tender and mark its centerline on both upper and lower decks. The standpipe must be installed vertically plumb without contacting the vessel between decks while flexing under load.
2. Drill 1/4" pilot hole in upper deck and re-check centers for clearance. The shear transfer collar will tolerate up to 3° of deck angle. If the deck to standpipe angle is greater than this, the deck should be leveled to 90° by creating a mounting platform.
3. Drill 4 3/4" hole through upper deck.
4. Mount shear transfer collar to upper deck by drilling through the upper deck:
 - twelve 1/4" clearance holes for thru-bolting, OR
 - twelve 13/64" holes for #14 FHST screws
5. Clean deck surface and mount shear transfer collar by bedding with Sikaflex 292 and Sikaflex 210T Primer and installing fasteners through holes on base of collar (using bolts or screws as per Step 4).
6. Seal deck core material and clean off excess sealant.
7. With assistance from below, lower standpipe through collar to lower deck. Mark location of standpipe step on lower deck.
8. Mark top of standpipe for cutting and remove standpipe.
9. Trim standpipe to length with horizontal bandsaw or reciprocating saw. Protect paint with masking tape while cutting. Deburr the cut.
10. On Lower deck, drill 2" hole through center of standpipe step location for hydraulic hoses.
11. Drill eight 1/4" mounting holes for FHSM, OR eight 13/64" holes for #14 FHST screws.
12. Seal deck core material as directed by shipyard and bed standpipe step with Sikaflex 292 and Sikaflex 210T Primer.
13. Install step fasteners to secure step onto deck floor.
14. With assistance from below, reinstall standpipe, sliding trim ring over bottom of standpipe before placing over step (the trim ring will attach to ceiling of lower deck). Ensure that the standpipe contacts standpipe step evenly all the way around, with outer lip of step protruding.
15. Install 3/8" bolt through standpipe into step to lock standpipe into position.
16. Secure collar clamp and gasket to shear transfer collar by tightening the six bolts evenly. These bolts compress sealing gasket on collar and lock standpipe into position on upper deck.
17. Mount trim ring to ceiling of lower deck using four screws.
18. Fit fiberglass standpipe shroud over top of standpipe, trimming to fit deck contour.
19. Feed four (#4) plastic hoses down standpipe along with pendant control cable and lower truck post into top of standpipe.
20. Lead hoses and control wire through center of standpipe step to power pack and connect hoses to marked ports on power pack. Connect pendant control plug to existing plug on power pack

Optional Base: Mounting Information

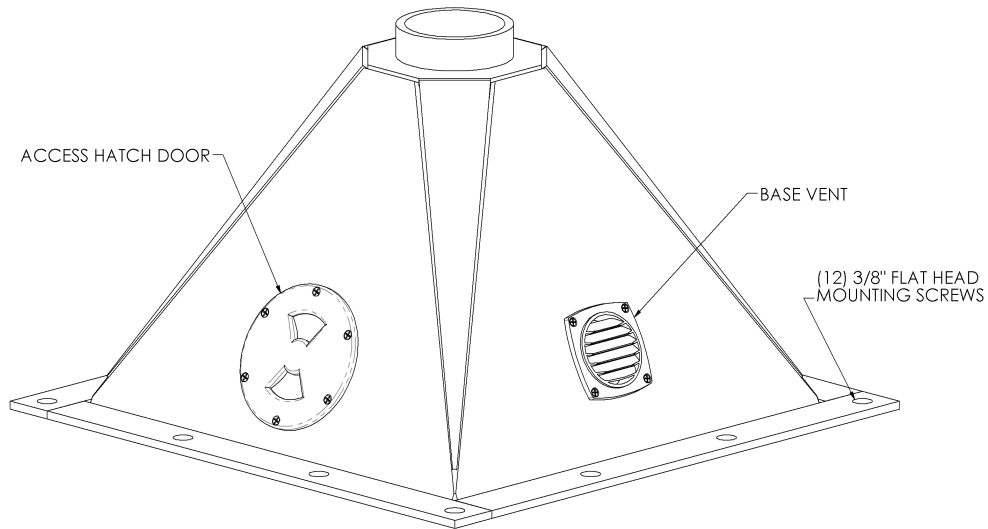


Figure 5: Square Base Installation

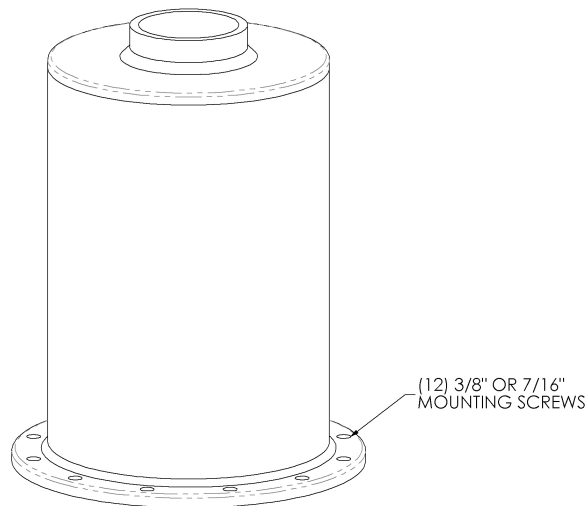


Figure 6: Circular Base Installation

Pedestal Base Installation

To install the davit's hydraulic and/or electrical connections:

1. The davit base can be bolted directly onto the deck if the yacht structure has been designed and built to accommodate the load. As an option, Steelhead can provide a fiberglass base that contains a hydraulic power unit pre-plumbed and wired.
2. Complete electrical connection to the HPU to supply power as per Figure 8 and Figure 9a.
3. Connect pendant hand control by plugging it into connection on the davit (Figure 7).

Hydraulic and Electrical Connections (Pedestal Base)

1. Installation of Pedestal Base:
2. Locate Davit and Base in desired location.
3. **NOTE:** The Yacht deck structure at this location must be designed and built to accommodate this load.
4. Drill mounting holes, bed base with Sikaflex 292 and Sikaflex 210T Primer and then bolt down.
5. Complete electrical connections as per Figure 8 and Figure 9a.
6. Connect pendant hand control by plugging it into connection on truck (Figure 7).
7. Davit is ready to operate.

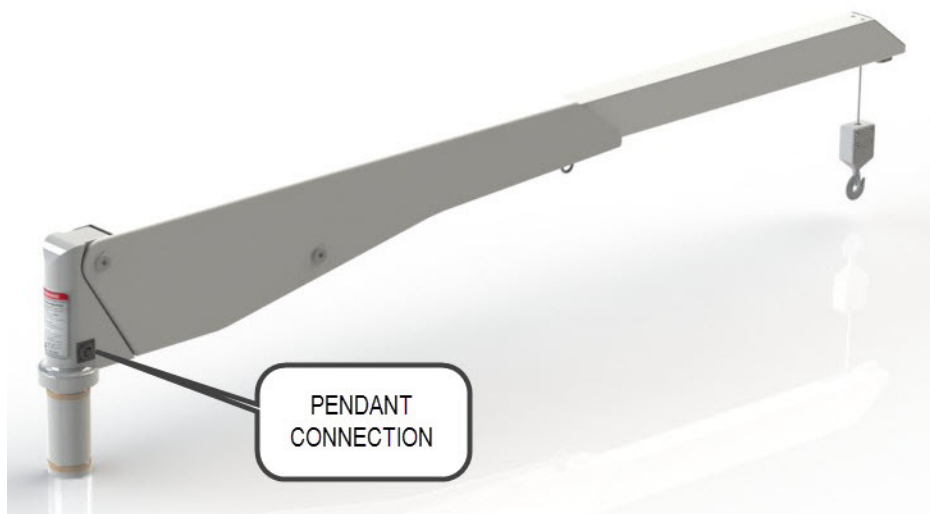


Figure 7

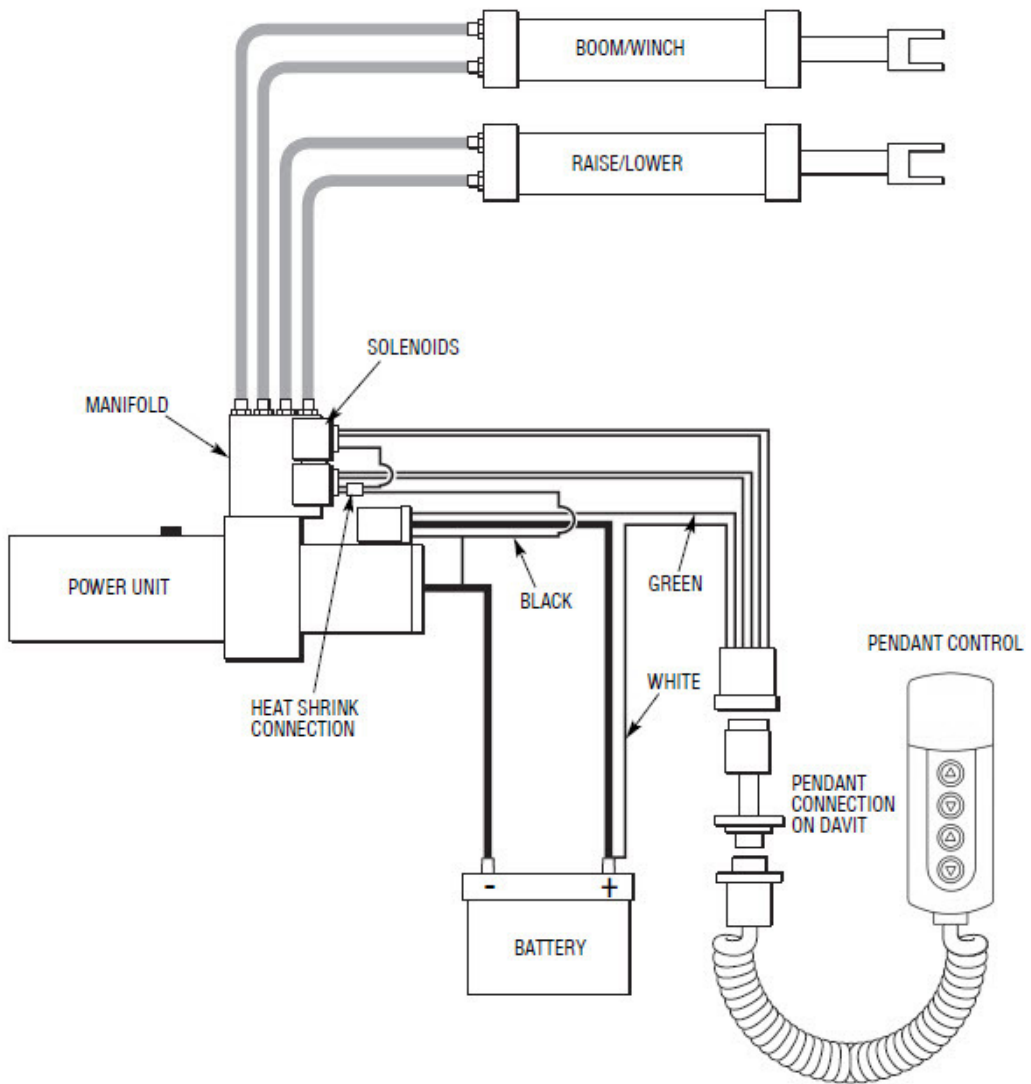


Figure 8: Electrical and Hydraulic Connections

Completing and Testing the Installation

To complete and test the installation of the davit:

1. Retract all hydraulic cylinders. (ie. rope all the way out, boom horizontal.)
2. Fill hydraulic reservoir tank with AW 32 Hydraulic Oil.
Test davit as follows:
 - Turn breakers on.
 - Ensure power unit turns on, by pressing a function on davit.
 - Turn breakers off.
 - Check all wiring.
 - Turn control breaker on.
 - Lightly touch each button on the pendant hand control to make sure davit moves appropriately.
3. Check entire system for leaks and tighten fittings if necessary.
4. During shipment, air may have collected in hydraulic system. To bleed, operate all hydraulic functions through their full travel capacity 3 or 4 times, using pendant hand control. This will remove any air in the system.
5. Recheck oil level in reservoir to ensure 1" from top has been maintained.

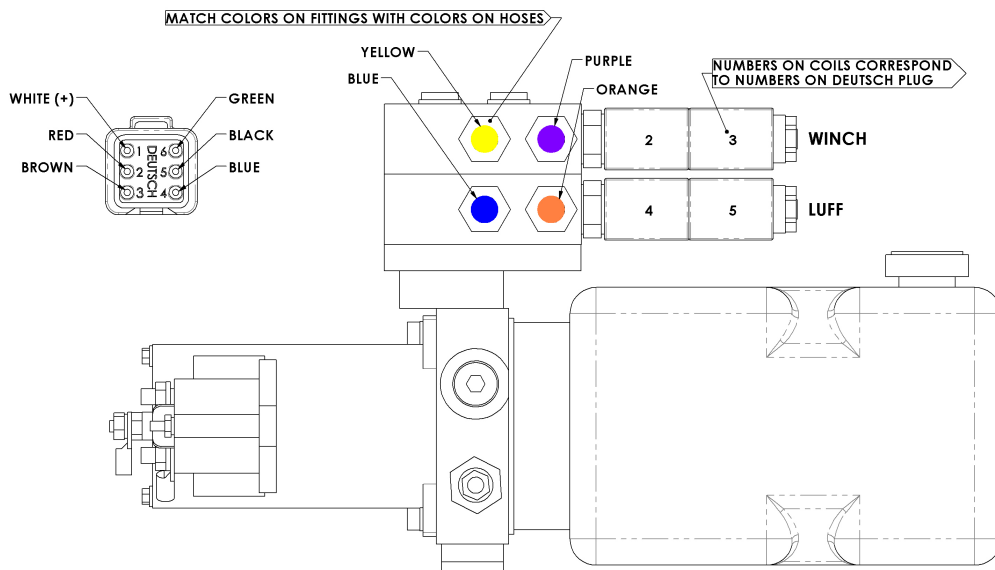


Figure 9a: 2-Function HPU Electrical/Hydraulic

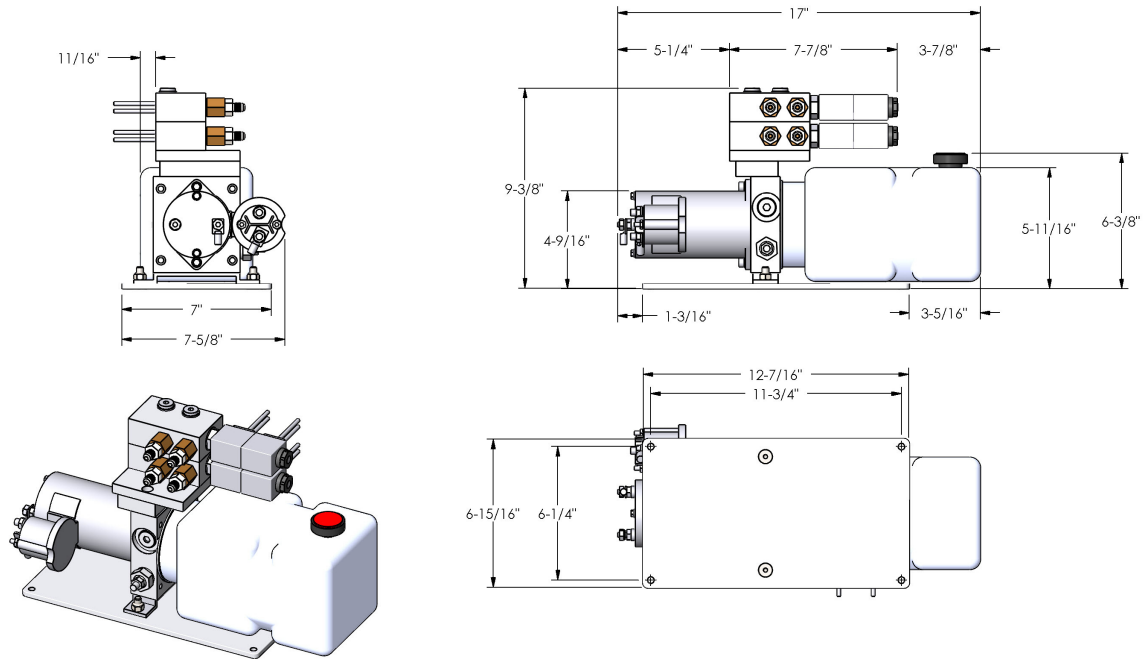


Fig 9b: 2-Function HPU Dimensional Information

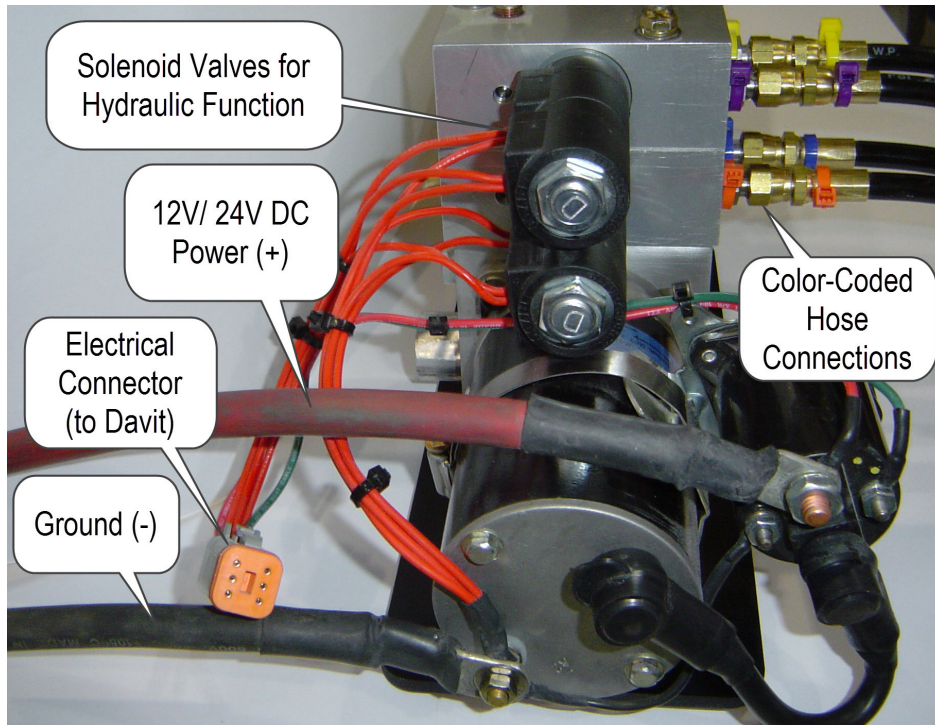


Figure 9c: 2-Function HPU

Operating Instructions

⚠ WARNING

REVIEW BEFORE OPERATING

Misuse of the davit may result in injury or death.

Always follow carefully these safety cautions:

- Never load the davit system beyond its capacity (decal on boom body).
- Be sure the area around and under the tender is clear of people and obstacles before lowering, including lower decks and water level.
- Remove all cargo and excess water from the tender before raising or lowering.
- Ensure all passengers leave tender before raising and lowering—this davit is not a personnel lift.
- Position the davit directly over the load when operating—the davit is designed for vertical hoisting only.
- Do not launch or retrieve a tender in rough sea conditions, or while underway.
- Be aware that yachts tend to list when launching a tender. Use caution when rotating a load.
- Do not allow children to operate the davit.
- Keep hands away from all moving parts.
- Turn the davit's power supply off when not in use.
- Detach davit from tender and secure with tie down, using the tie down eye provided, to stow (Figure 1).
- Detach pendant control when not in use.

Operating Instructions

NOTICE

For maximum operator control while lifting and rotating the tender, the objective is to keep the tender as close to the davit as possible. Maximum control is achieved by having a minimum rope length.

1. Turn on hydraulic supply by turning on the davit's DC breaker to supply the davit's power pack.
2. Remove waterproof plug cap on davit body and plug in pendant control.
3. Slide weighted hook from hook mount and allow it to hang freely. **Weighted hook to keep tension on line at all times, especially during winch operation**
4. Operate the “crane up” function to raise the davit to desired position over the tender.
5. Attach the tender's lifting bridle to the weighted hook. Using the pendant control (Figure 8), position the lifting bridle to enable attachment to the tender.
6. Raise the lifting bridle just enough to remove any slack from the cables. Check all attachments to the tender.
7. Remove the tender's attachments to the deck, and ensure the tender's drain plug is installed.
8. Attach the handling lines to the bow and stern of the tender.
9. Raise the tender high enough to clear all deck obstructions and railings.
10. Rotate the load outboard, controlling the tender position with bow and stern lines.

11. Lower the load to the water. Pay out enough cable so that the tender does not load the cable and davit as it rides waves or swells.
12. Using the load-handling lines, pull the tender to a point near the vessel where it may be boarded. Disconnect the lifting bridle from the tender.
13. Secure the weighted hook so that it does not swing into the side of the vessel.



Figure 10: Pendant Control

Davit Storage

⚠ CAUTION

The davit must be stored with the boom fully retracted to prevent corrosion to the linear winch rod, which would result in damage to the cylinder seals.

To properly store the davit after use

1. Lower davit to horizontal position.
2. Slide weighted hook onto hook mount.
3. Secure davit with a tie down to eye on underside of boom (Figure 1).
4. Detach pendant control and attach waterproof cap.

Maintenance

Maintenance Schedule (Please refer to Figure 1 and Figure 2a.)

	Monthly	Annually	As required
Inspect main hoist cable. Replace upon first sign of frays, fish hooks, flattening, kinks, corrosion, audible pinging or snapping sounds.	✓		
Inspect all cables and hydraulic hoses and fittings. Replace at first sign of corrosion or excessive wear.	✓		
Inspect davit and its hardware components for signs of damage or malfunctioning parts.		✓	
Touch-up any paint damage to preserve the davit's finish.			✓
Wash davit with soap and water, or after salt spray exposure.	✓		
When cleaning the davit, inspect for hydraulic leaks at the power unit and cylinders. Tighten the fittings as required to stop any leaks.	✓		
Service the hydraulic system annually or after 50 hours of use, whichever comes first.		✓	
Maintain fluid levels at 1" below the top of the reservoir on the davit power unit. Use AW-32 or equivalent non-foaming hydraulic fluid only.			✓

WARNING

Safety Cautions

REVIEW BEFORE COMMENCING MAINTENANCE

Death, injury, or damage may result if the davit's cable is not inspected regularly, and replaced as needed.

Counter balances have been factory set for optimal performance; davit safety may be jeopardized by unauthorized adjustments.

Troubleshooting

PROBLEM	PROBABLE CAUSE	SOLUTION
Boom will not extend	Wrong button pressed	See Figure 8 on Page 17.
Davit will not luff	No power (control)	Turn control breaker on.
Linear winch does not raise or lower	Wrong button pressed	See Figure 8 on Page 17.
	Hook still attached to hook mount.	Disconnect
	Tender not disconnected	Release tender tie downs
	Overload on davit	Check tender for equipment and excess water
	Hook travel exceeded	Max travel 20' hook retracts to within 8" of nose sheave
	Cable jammed inside linear winch	Call Dealer for service or instructions
Winch does not hold weight		Call Dealer for service or instructions

Customer Service

For service, contact the dealer from which you purchased the yacht davit. Contact information is at the end of this manual.

Specifications

Electrical System

- The control system is available in 2 voltages: 12 volt, 3.5 amps 24 volt, 2 amps
- Hand held pendant with 15' extendable cord provides 2-way, 2-function control and connects to davit body with waterproof plug and cap. Low voltage output automatically starts hydraulic power pack or ship's hydraulics.

Hydraulic System

- Operational pressure is 2,500 psi.
- Hydraulic power is supplied by ship's hydraulics or Steelhead Marine power packs, which are available in the following voltages. 12 volt, 75 amps; 24 volt, 40 amps
- Luffing - boom elevation, a counterbalance cylinder locks boom at any angle between 0 and 70 degrees
- Winch - 6 to 1 linear winch provides quiet lowering and hoisting

Fittings, Hardware, and Cables

- The hook and weight are an integrated assembly constructed of 316 stainless steel.
- The hoist rope is 1/4" diameter and made of Amsteel composite.

Equipment Dimensions

	HEIGHT	WIDTH	LENGTH	WEIGHT
Hydraulic power pack 2 Function	10"	7 1/2"	17"	20 lb
Standpipe assembly		4 1/2" diameter	108" std	42 lb
Davit Assembly	11 1/2" at truck	4"	99 1/2"	167 lb
Control cable			10'	
Shipping Box	9"	25"	80"	14 lb

2 Year Platinum Warranty

Steelhead Marine Ltd. (“Steelhead”) warrants to the original end-user (the “Buyer”) only that the yacht davit (the “Davit”) and its components are free from defective materials and workmanship for a period of two (2) years from the date of purchase by the Buyer when purchased from Steelhead or an authorized dealer of Steelhead. In the case of a new vessel, the warranty will be valid from the commissioning date of the vessel.

This Limited Warranty covers the cost of shop labor and materials when the defective Davit or the defective components are delivered to Steelhead.

Examination of the Davit: The Buyer must examine the Davit upon delivery, and must report all defects to Steelhead within ten (10) days of said delivery, failing which it shall be conclusively agreed between Steelhead and the Buyer that the Davit has been delivered as specified in the contract. The Buyer shall report all visible shipping damage to the delivering shipping agent forthwith upon delivery. Failure to report shipping damage as provided above shall result in any and all shipping damage repair costs becoming the responsibility of the Buyer without recourse to Steelhead or the shipping agent.

Making a Warranty Claim: The Buyer shall establish its warranty claim by delivering to Steelhead at its Customer Service Center at 2 – 5367 271 Street, Langley, British Columbia, V4W 3Y7, within the period of this Limited Warranty, a statement in clear and concise terms setting forth the basis of the warranty claim together with proof of purchase, the make and model of the Davit, the date on which the Davit was installed, the name and return address of the party making the claim, and the name of the person or company installing the Davit. Upon receipt of a valid warranty claim, Steelhead reserves the right to either repair or replace the Davit or its components on board the vessel upon which it is installed, or require the Buyer to return the defective Davit or component(s) to Steelhead at its Customer Service Center at 2 – 5367 271 Street, Langley, British Columbia, V4W 3Y7, transportation prepaid.

This Limited Warranty shall include the cost of materials and labor for the repair or replacement of the Davit or its components at Steelhead’s Customer Service Center. This Limited Warranty also includes the Davit or its components to be repaired or replaced on board the vessel upon which it is installed, however, all expenses associated with transportation of product(s), transportation of field service technician(s), and all in-the-field collateral support (Davit service, welding service, painting service) are the Buyer’s responsibility.

Repaired or replaced products are warranted for the remaining portion of this original Limited Warranty period from the date the Davit was purchased by the Buyer.

Installation of Davit: If requested by the Buyer Steelhead will install the Davit or its components on board the vessel using its field service technicians, or at the sole discretion of Steelhead may nominate a third party installer of equivalent qualifications. Such third party installer/technician will be clearly identified in Steelhead’s commercial invoice with respect to the sale of the Davit or any of its components.

Exclusions: This Limited Warranty shall not be effective and shall be void, if the Davit or its components are (i) not installed or used under normal conditions and as recommended by Steelhead; (ii) subjected to abuse, neglect, or carelessness; (iii) altered or repaired by anyone not authorized by Steelhead during the term of this Limited Warranty; (iv) subjected to lift dead weight in excess of rated capacity.; or (v) subjected to persons being the load or part of the load during operation of the Davit.

This Limited Warranty does not cover, and Steelhead is in no way responsible for any supporting or structural elements of the vessel upon which the Davit is installed, or any hoses, hydraulic fluids, filters, paint, or anodized finishes not supplied by Steelhead Marine. Except as expressly provided in this Limited Warranty, Steelhead is not responsible for the proper installation of the Davit or its

supporting elements. It is the responsibility of the Buyer to ensure that the supporting and structural elements, and the Davit's connection thereto, are properly engineered and can withstand the loads of the Davit while in operation. The Buyer shall periodically inspect all structural and supporting elements of the vessel and Davit, and all hoses and hydraulic assemblies for signs of wear, corrosion, and/or visible deterioration. The Buyer shall cease operation of the Davit at the first indication of deterioration.

This Limited Warranty shall not be valid except when delivered by an authorized representative of Steelhead or installing shipyard, and the Buyer shall not be entitled to rely on any other representations or warranties, whether oral or written, except as provided in this limited warranty.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. ANY WARRANTY IMPLIED BY STATUTE AND NOT EXCLUDED HEREIN, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS IN EFFECT ONLY DURING THE DURATION OF THE EXPRESS WARRANTY SET FORTH HEREIN.

This warranty gives the Buyer specific legal rights, and the Buyer may also have other rights which may vary from country to country or state to state. This warranty shall be construed pursuant to the laws of the Province of British Columbia.

Steelhead Marine Distributors

For distribution enquiries, please contact Steelhead Marine.

Worldwide/Canada/USA

Steelhead Marine

5367 271st Street

Unit #2 Langley BC V4W 3Y7

Canada

Tel: 1-800-770-0455 in NA or (604)

607-0091

Cell: (604) 855 5822

Fax: (604) 607-0092

Email: [\[ologies.com\]\(http://ologies.com\)](mailto:bmurphy@advancedmarinetech</p></div><div data-bbox=)

www.advancedmarinetechologies.co

m

California

Revolution Marine Outfitting

2390 Shelter Island Drive #217

San Diego CA 92106

USA

Tel: 619-403-1148

Email: revolutionmarineoutfitting@yahoo.com

hoo.com

Florida

Bullhead Marine

Sales, Service & Installation

10 SW 23rd Street

Fort Lauderdale, FL 33315

USA

Tel: (772) 812-8303

Fax: (954) 524-5118

Email: bullheadmarine@gmail.com

Sterling Marine

3700 Hacienda Blvd, Suite F

Fort Lauderdale FL 33314

USA

Tel: (954) 584-3039

Tel: (954) 584-9898

Email: operations@sterlingmarine.com

www.sterlingmarine.com

Germany

Sailtec GmbH

Hasselbinnen 28

D-22869 Schenefeld

Germany

Tel: +49-(0)40-8229940

Fax: +49-(0)40-8304279

Email: info@sailtec.de

www.sailtec.de

Netherlands

Belship

Krommewtering 61A

3543 AM Utrecht

The Netherlands

Tel: (+31) 030 240 8040

Fax: (+31) 030 240 8041

Email Sales: j.jeltes@belship.nl

Email Service: melle@belship.nl

www.belship.nl

UK

MDS Marine Ltd.

Hamble Point Marina

Workshop 7, Firefly Road School Lane

Hamble, Southampton SO 31 4NB

United Kingdom

Tel: 44 (0) 2380 457656

Mobile: 44 (0) 7712 645551

Email: info@mdsmarine.co.uk

www.mdsmarine.co.uk

Eastern Australia

Marine Cranes Australia Pty Ltd.

15/75 Waterways Drive
Coomera Qld 4209
Tel: +61 7 5573 0888
Fax: +61 7 5665 6266
Cell: + 61 0407 757 677
Email: info@marinecranesaustralia.com.au
www.marinecranesaustralia.com.au

Western Australia

Logic Cranes

66 Dowd St.
Welshpool 6106
Western Australia
Tel: +61 8 93534477
Fax: +61 8 93535433
Email: logiccranes@wanet.com.au
www.logiccranes.com.au

New Zealand

Lusty & Blundell Ltd.

38 Tawa Drive Albany

Private Bag Takapuna
Auckland 9 New Zealand
Tel: 09 415 8303
Fax: 09 415 8304
Email: grantm@lusty-blundell.co.nz
www.lusty-blundell.co.nz

So-Pac Marine

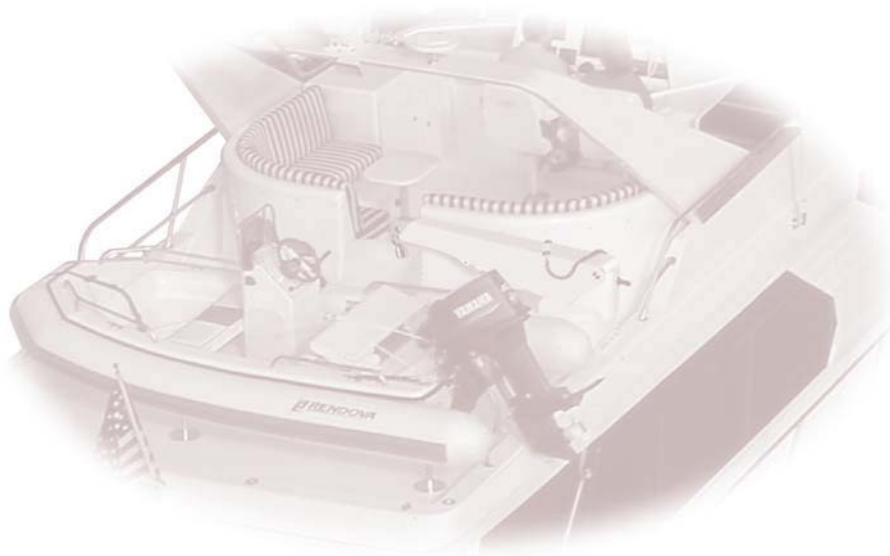
PO Box 303-180 North Harbor
North Shore 0751
New Zealand
Tel: +64 (9) 448 5900
Email: mhall@sopac.co.nz
www.sopac.co.nz

Turkey

Ova Marine Ltd.

Setur Yalova Marina
Cekek Yeri, No: 45
Yalova, Istanbul
Tel: +90 226 813 0015
Fax: +90 226 813 0025
Email: info@ovamarine.com
www.ovamarine.com

Notes



**STEELHEAD
MARINE**

Steelhead Marine Ltd.

Unit #2

5367 271st Street

Langley, British Columbia

Canada, V4W 3Y7

Tel: 604-607-0091

Fax: 604-607-0092

Email: sales@steelheadmarine.net

www.steelheadmarine.net

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