



# Crane Manual



***Operating Instructions and Maintenance Procedures***



## **DAVCO WINCH SYSTEMS**

Unit 3/6 John Lund Drive, Hope Island Qld 4212  
Australia

Ph +61-07 5500 0794

Email [sales@davcowinch.com.au](mailto:sales@davcowinch.com.au)

Web: [www.davcowinch.com.au](http://www.davcowinch.com.au)

## **CRANE MODELS**

- **250 kg** Low Profile Compact with Manual Extension
- **350 kg** Low Profile Compact with Manual Extension
- **350kg** Low Profile Full Hydraulic Compact Crane
- **500 kg** Low Profile Standard Boom Crane
- **500 kg** Low Profile Compact with Automatic Extension
- **500 kg** Low Profile Full Hydraulic Compact Crane

## **12 Month Warranty**

Warranty is void if:

- The warranty period has expired.
- The product failure is due to misuse or lack of proper maintenance.
- Paint warranty is void due to stray current or corrosion problems.



# Crane Post Installation

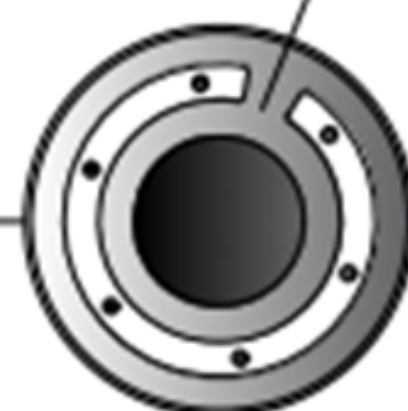
Deck Flange with stop



Stop is located at the back of the crane head

Port

Stb



Typical stop installation of foredeck

Post Size  
250kg 101mm  
350kg 114mm  
500kg 114mm  
500kg Hyd 127mm

## IMPORTANT

- Bond the deck post
- Bond the crane body or motor to the negative
- Do Not use petroleum grease it swells the bearings
- Grease crane head , post , both sides of the thrust washer

Run wiring through spigot base



175



Spigot base

## **CRANE INSTALLATION INSTRUCTIONS**

(Read thoroughly before installation)

### **1. SELECT DECK POSTION**

Base plate models are mounted directly onto a level pad on the deck, relative to tender lifting point. Locate close to a bulkhead or cupboard where maximum support can be Achieved.

### **2. LOCATION OF SUPPORT TUBE**

Determine position for location of the spigot base plate. Cut a hole in the deck to the same outside diameter as the support post. A levelling pad for the deck and support post flange is required.

### **3. FIX SPIGOT BASE IN POSITION**

The spigot takes the weight when lifting and must be thoroughly secured to the hull or bulkhead .Fibre glassing is recommended.

Sit the spigot base in position and slide the support post down through the deck and levelling pad over the base.

Cut the post to the correct length.

Make sure the post is vertical in the horizontal plane. Bolt the spigot base in place.

### **4. FIX SUPPORT POST IN PLACE**

Slide the post into position through the deck, drill and tap holes to suit the post flange.

### **5. BOND THE DECK POST**

It is important to bond the deck post to prevent corrosion.

**IMPORTANT:** set the stop position on the support post to ensure the turning circle of the crane (as per diagram).

Apply an adequate amount of sealant to the deck and post flange.

Bolt the post in place.

**The wiring can be run through the spigot base or drill a 16mm hole in the side of the post near the bottom.**

## 5. INSTALLATION OF THE CRANE

Run a feed wire from the bottom out through the top of the post. Connect the feed wire to the wiring from the crane through the retaining cap and pull them down the post.

**Ensure the large thrust washer is on the flange, grease Thrust washer and the Bearings thoroughly before lifting the crane into place over the support post.**

Screw the retaining cap to the post and water proof the hole with silicone.

## 6. WIRING

Positive and negative cabling is required to the solenoid (supplied) near the entry to the deck post.

CURRENT DRAW FOR

500kg 12 volts is 150 AMPS and 24 volts is 80 AMPS this is on full load.

350kg 12 volts is 75 AMPS and 24 volts is 50 AMPS this is on full load.

250kg 12 volts is 75 AMPS and 24 volts is 50 AMPS this is on full load.

**Wiring installation should only be carried out by qualified persons. See wiring diagram for details.**

**A circuit breaker isolating switch must be used and switched off when the crane is not being used, otherwise it will cause corrosion!**

## Maintenance Procedure

Low maintenance cranes check list every 6 months

- Hose the crane with fresh water after a cruise including the motor area.
- Do not use any solvents on the paint work, soapy water on all parts only.
- Check all the screws in the crane are tight.
- Check the pulley at the end of the crane that the rope runs over is free if not remove and lubricate.
- Polish the crane body and stainless steel strut with car polish.
- Lift the crane up in the air, check around the wiring coming out of the post is still sealed.
- Check the 6 screws in the crane retaining cap are tight.
- Check the rope is coming off the bottom of the winch drum, if not reverse the motor direction by holding the remote control button on letting the rope right out then back in.
- The rope is not frayed, replace if required.
- To replace the rope, run the rope right out remove the larger motor cover by cutting around the silicone.
- Undo the 4 bolts holding in the winch and the 2 wires on the motor, remove the winch from the crane.
- Remove the rope from the drum attaching the new rope the same way.
- Follow the same procedure for replacing the winch and cover.
- The rope is Ronstan Ocean 3000 6mm plasma rope 10m for all the smaller cranes 12m for the 500kg cranes. (**Be sure NOT to add extra rope**)

## Fault finding

- Do not use the crane if parts are faulty or the power supply is low.
- The winch will not operate or lift the load.
- Check the circuit breaker is on.
- Check the battery supply is full load.
- The rope is not jammed.
- The weight of the tender is not beyond the cranes capacity.
- Broken wire to the remote control.
- Remote control faulty (you can eliminate this by using a wire direct into the female plug on the crane and operate the crane).
- If the motor only goes in one direction change the 2 wires over on the motor this will allow you to get the tender onboard.
- Faulty solenoid (replace)
- Faulty winch motor (replace)
- All repairs should be carried out by a qualified trade's person.



Send any enquiries you may have to your service agent or direct to us on [sales@davcowinch.com.au](mailto:sales@davcowinch.com.au) or phone 61 07 5500 0794

# Launch and Retrieval System Instructions

This system is a means of launching and retrieving the tender off and on to the deck.

The advantages are that you do not have to leave the deck for either of these operations, they can be performed safely and efficiently.

## Parts

Snap shackle (attach permanently to the main hook)

1 x braided line with a small hook

1 x braided line with a small ring

## Launching Operation

Fix a line to the tow hook on the front of the tender.

Attach the lifting sling on the tender to the snap shackle hook not the main hook (bottom hook pictured).

Attach the rope with the small hook to the snap shackle pull ring.

Lower the tender into the water pull on the rope to release the tender from the snap shackle and with the fixed line walk the tender down to the back of the boat.

MAKE SURE YOU KEEP A HOLD OF THE ROPE ATTACHED TO THE FRONT OF YOUR TENDER.



### **Retrieving Operation**

The purpose of the retrieval line is to guide the tender bridle ring onto the crane hook.

Leave the tender down the stern of your boat.

Clip the small ring on the long braided line into the main crane hook notch where the spring goes into.

Take the line down to the stern of the boat and put it through the ring on the lifting bridle for the tender.

Walk the tender forward along the braided line lower the hook to the same height as the tender lifting bridle ring.

Continue taking up the slack in the braided line, until the bridle ring snaps onto the crane hook

The tender can now be lifted on board.

**Secure the crane and tender before the vessel gets under way**



## **SAFETY**

### **IMPORTANT PLEASE READ BEFORE OPERATING THE CRANE**

The crane is designed to assist you in safely dispatching and retrieving your tender  
Used incorrectly could result in injury

#### **Important**

Do not lift the tender with people inside

- As the control switch for the winch is not fitted with a limit switch ensure not to overrun the weight into the crane body this could damage the rope.
- Before operating the crane use it first without the tender to familiarise yourself with the workings of the crane.
- Never allow children to operate the crane.
- Do not divert your attention when operating the crane.
- Do not lift more than the stated safe workload of the crane.
- Remove the pin from the strut and place in the desired lift hole.
- Check the rope is sitting in the pulley at the end of the crane.
- Connect the control and lock it in place.
- Untie all hold down straps from the tender.
- Clear the immediate area of operation when lifting or slewing the crane.
- Keep hands clear of the rail when lowering the crane.
- Ensure the tender is emptied of water and non-essential items.
- When dispatching or retrieving
- Before lifting the crane on-board check, the hook is secure in the lifting sling
- After retrieving the tender secure it to the deck before the vessel gets under way

***Turn off the circuit breaker at all times to the crane when not in use***

*Please note all goods are supplied by Davco Winch Systems to the customer for use only in applications and purpose for which they were originally designed*

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