

The Access 'C' Crane

Installation & Operation Manual

Ideal for the safe and dignified transference of sailors with disabilities from a wharf to the boat.
The crane is also suited to many other lifting applications including small dinghies, outboard motors, anchors.

SWL 120kg

Davit ISO/DIS 10535

7 June 2000

Sling AS 3582-1988

12 Sept 2000

The Access “C” Crane

Manufactured, Supplied and Serviced by:

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The Access “C” Crane was developed to fill the need for an inexpensive transferring aid for the marine environment, not only for transferring disabled sailors, but also for lifting the ballasted Access Dinghy centreboards in and out of boats. The crane is also suited to many other lifting applications including small dinghies, outboard motors, anchors etc.

The C Crane consists of a davit which fits in a socket either sunk below foot level, or elevated above in a bolt on bracket. The above deck support bases and below deck/ground sockets can be fitted to existing pontoons, docks, jetties and shore lines and are fitted standard on all Access Dinghy modular pontoon systems.

The davit is fitted with a reel type brake winch and tested to a Safe Working Load of 120 kg. A winch based system like the C Crane has the advantage (depending on the length of rope fitted), of up to 3 metres of lift which allows it to work effectively on fixed shorelines and jetties, and in tidal areas. Many patient lifters and hydraulic ram based hoists have limited travel and are only suitable on floating pontoons or non-tidal areas.

For transferring people however, regulations require a fall arrester to be fitted between the davit and the spreader bar/person as a secondary breaking device in case of a failure in the main system. Fall arresters have varying length belts and it is important to ensure the one fitted has adequate belt to suit the height of the lift. This height is constant when the crane is fitted to a floating pontoon but will vary with fixed cranes in tidal areas.

The Access C Crane is available in 2 models, either flush mount or elevated base and with a choice of 2 fall arresters to suit either a floating pontoon or a fixed situation with up to 3m from davit head to the water line.

INSTALLATION & ASSEMBLY INSTRUCTIONS

On any Access Dinghy Modular Pontoon the only installation required is to fit the C Crane's davit into the standard socket and attach the spreader bar and fall arrester by their respective karibiners. (fig 1)

Where the crane is to be mounted on existing pontoons, docks, jetties or on a shore line a socket will need to be attached which is capable of withstanding the load.

Access Dinghy Sailing Systems manufacture a socket/bush for grouting inside suitably mounted pipes and tubes sunk into the sea bed and attached to a jetty by a substantial saddle or similar, or sunk into a hole bored into a concrete structure. We require drawings and photographs of the location so we can determine if our equipment is suitable.

We also manufacture a base suitable to mount on certain concrete floating marina modules. We require drawings of your marina and possibly a visual inspection before the equipment can be custom made to suit the particular application. (fig 2 and 3)

Installation instructions would be drawn up to suit each individual application.

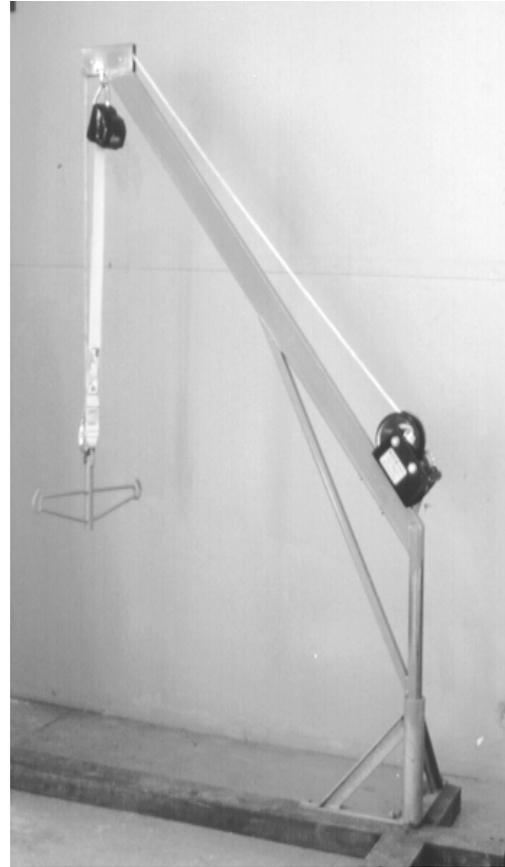


Fig. 1
Access "C" Crane
Standard davit with winch, spreader bar and fall arrester.



Fig 2

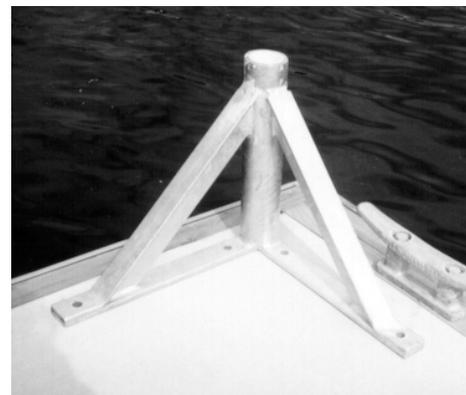


Fig 3

A variety of base design is available depending on marina application.

OPERATING INSTRUCTIONS

Part 1: Hoist Familiarisation.

- 1) Attach the spreader bar and fall arrestor by their respective snap shackles or karibiners. (fig 1)
- 2) Stand behind the davit, with the left hand preventing slewing, and with the right hand unwind the winch to lower the spreader bar over the side till it is at deck level of the boat below (about 300mm above the water).
- 3) Check there are still at least 3 turns of rope left on the winch drum and that the fall arrestor still has play in its system. (fig 4)
- 4) If you are in a tidal situation and operating from a fixed jetty or similar determine the state of the tide and whether there is sufficient rope on the winch and belt on the fall arrestor to allow for a further drop in the water level.
- 5) Wind up the spreader bar taking care to that the rope coils itself evenly on the winch drum.



Fig. 4

Part 1 has familiarized an operator with the basic functioning of the crane and determined its suitability for this given location. Sailors regularly weigh between 30 and 100 Kg so it is advisable for a trainee operator to start with a sailor around 50 Kg seated in a wheelchair, and after fitting the sling as covered in Part 2, raise and lower them above their chair to become familiar with the procedure and force required before slewing the davit and lowering them into the boat.

Part 2: Preparing to Transfer Sailors

WARNING: Any Slings used must have a Safe Working Load of at least 120KG.

Fitting the Access sling.

1) Hold up the sling so that the label sewn to the back of the sling is facing away from the sailor. (fig 5)

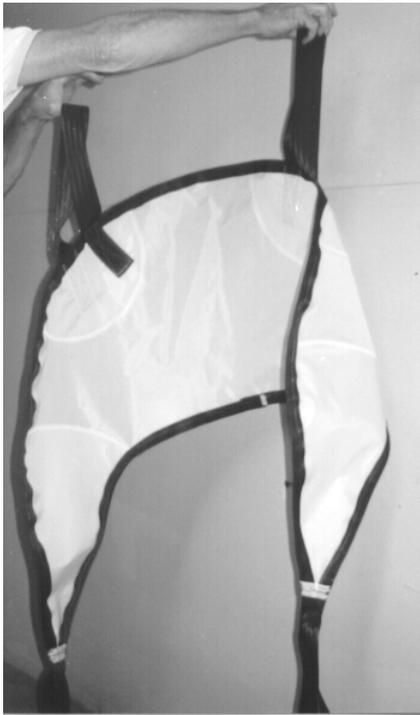


Fig. 5

2) Slide the sling down behind the sailor as far as the seat and under the buttocks if possible. (fig 6)



Fig. 6

3) Pass the leg straps under each leg to support as much of the sailor's thigh as possible. (fig 7)



Fig. 7

4) Wheel the chair under the C Crane and lower the spreader bar in front of the sailor.

5) Cross over the leg straps and hook them onto the opposite sides of the spreader bar, then hook on the shoulder straps outside the arms. (fig 8)



Fig. 8

Practice lifting a sailor.

- 1) Ensure the spreader bar and fall arrester are correctly attached to the Davit.
- 2) Take the strain and check that the straps are firmly hooked on the spreader bar, and that the sling is not folded but wrapped smoothly around the sailor's trunk and thighs.
- 3) Stand behind the davit (as per in Part 1: Hoist Familiarisation) in a well balanced stance and take up on the winch to lift the sailor clear of their wheelchair seat.
- 4) Check that the sling is correctly fitted and the sailor is comfortable, then raise them higher and lower them correctly back into the seat.
- 5) Repeat this procedure of lifting and lowering the sailor above their wheelchair until the trainee is confident and fluent in the hoists operation.

The next part is slewing the C Crane to swing the sailor out over the water and lower the sailor into the dinghy's seat. Not until the trainee has demonstrated the strength and ability to manage the procedure should the trainee be permitted to slew the crane and sailor from above the wheelchair seat.

Part 3. Transferring a sailor.

- 1) Ensure that the sailor is wearing an appropriate sized lifejacket and prepared to enter the boat.
- 2) Ensure that the boat is correctly rigged with centreboard fitted and locked down and moored alongside the C Crane. Un-shackle the mainsheet from the traveller if the boom is in the way, particularly if the sailor is to swing in over the stern.
- 3) Fit the sling as in Part 2 and follow the steps till the sailor is suspended above their chair (fig 9).
- 4) Determine which is the most appropriate direction, then slew the C Crane and sailor out over the boat and lower them towards the seat, moving the boat till it is correctly positioned.
- 5) Help steady the sailor to prevent them from rotating, and lower them into the dinghy's seat.

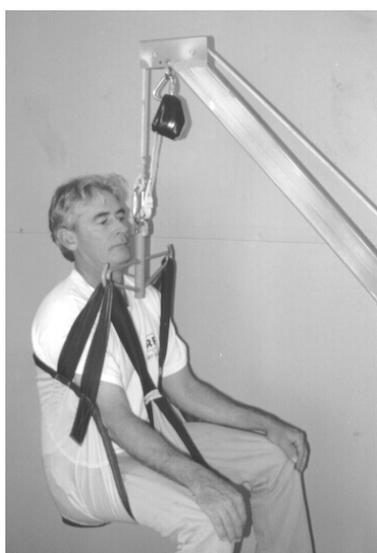


Fig. 9



Fig. 10

6) Unhook the sling from the spreader bar and taking care not to bump the sailor's head, slew the C crane clear of the boat.

7) Either remove the sling or if it is to remain with the sailor, tuck the straps behind and under the sailor to prevent them fouling the steering lines. (fig 11)



Fig. 11

SERVICE, MAINTENANCE & TROUBLE SHOOTING

Lubrication:

- The Access C Crane winch requires regular lubrication.
- Lubricate the PAWL, BUSHES and PINION THREAD monthly with gear oil.
- Do not lubricate the break pads.
- The davit head sheaves should be removed annually and packed with bearing grease.

Regular Inspection:

- Check the rope for chafe and wear. Replace if suspect.
- Check the davit for dints and damage which could result in a lowering of its SWL.

TECHNICAL SPECIFICATIONS

- 1) The Access C Crane is a davit standing 1.8m above foot level, has a fixed reach of 1.1m and a lift range of 2m with the standard 4.5m rope fitted. The range can be extended by fitting a longer rope and an appropriate fall arrester. Contact the manufacturer for details.
- 2) Safe Working Load is tested to 120 kg under ISO/DIS10535.
- 3) The Rope fitted is Double Braid Polyester, 8mm diameter with a SWL of 1320kg.
- 4) The Access C crane has an unladen weight of 22kg.

1) Safety Precautions.

- It is important for operators of this equipment to undergo supervised training before attempting to transfer people in and out of boats. A training schedule is part of this manual.
- Always ensure there are at least 3 wraps of rope around the winch drum when attempting any lift. (fig 12)
- Always check that the Snap Hook or caribener attaching the fall arrester and spreader bar are correctly fitted before undertaking any lift. (fig 13 and 14)
- Regularly check the rope for chafe and wear.
- Keep all meshing gears and all shafts lubricated.
- Do not rotate the primary drive shaft above 60 RPM.
- Serious dents and damage to the davit will result in a lowering of its SWL.



Fig. 12



Fig. 13



Fig. 14

MARKING

Access Dinghy sailing Systems P/L
2-7 Bungaleen Crt
Dandenong South.
Australia 3175

Model: "C" Crane
Date of manufacture: April 2000
Serial No: 00033

Rope – 8mm diameter Polyester double Braid, 4.5m length.
Always maintain at least 3 wraps of rope on the drum.

S. W. L. 120 kg

Winch markings

- 1 Keep all meshing gears adequately greased and all shafts lubricated.
- 2 Lubricate Pawl, Bushes and Pinion Thread monthly with gear oil.
- 3 Do not lubricate break pads.
- 4 Drive pinion must rotate freely.