

**INSTRUCTION MANUAL**  
**FOR**  
**COLUMN DAVIT**  
**WITH**  
**VERTICAL MOUNTING RECEPTACLE**

DAVIT P/N \_\_\_\_\_ S/N \_\_\_\_\_

RECEPTACLE P/N \_\_\_\_\_ S/N \_\_\_\_\_



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Rev. B

## **⚠ WARNING**

**READ THESE INSTRUCTIONS AND ALL PRODUCT LABELS CAREFULLY AND COMPLETELY BEFORE USING THIS PRODUCT. WHEN USED AS INSTRUCTED THE DYNA-HOIST WILL ALLOW PERSONNEL OR MATERIALS TO BE RAISED, LOWERED AND POSITIONED. USE OF THIS PRODUCT WITHOUT READING AND FOLLOWING THE INSTRUCTIONS AND LABELS MAY RESULT IN SERIOUS OR FATAL INJURY. IT IS THE RESPONSIBILITY OF THE USER AND THE USER'S MANAGEMENT TO BE CERTAIN THE USER IS THOROUGHLY TRAINED IN AND COMPLIES WITH THE PROPER INSTALLATION, OPERATION AND LIMITATIONS OF THIS PRODUCT AS WELL AS CAREFUL INSPECTION, MAINTENANCE AND STORAGE OF THE PRODUCT BEFORE AND AFTER USE. TRAINING AND INSTRUCTION REVIEW SHOULD BE REPEATED AT REGULAR INTERVALS BY THE USER AND THE USER'S MANAGEMENT. THE BUYERS AND USERS OF THIS PRODUCT ASSUME ALL RESPONSIBILITIES FOR SAFETY AND USE NOT IN ACCORDANCE WITH THE INSTRUCTIONS. IT MAY BE A VIOLATION OF FEDERAL, STATE, OR LOCAL LAWS TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS INSTRUCTIONS AND LABELING.**

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## **1.0            DESCRIPTION OF COLUMN DAVIT WITH VERTICAL MOUNTING RECEPTACLE**

### **1.1            Introduction**

The Rose column davit with vertical mounting receptacle is designed to provide an anchorage to lift, lower, suspend, and arrest potential falls of personnel or materials. The system is intended for confined space entry and retrieval or at the edge of a walking/working surface where men or materials must be moved, or rescue be performed. The davit system consists principally of a davit arm and a vertical mounting receptacle for attaching the davit to a suitable structural anchorage, such as a wall or beam (Refer to **Figure 1**). The system is designed to support a maximum working load of 310 pounds for personnel (total weight including clothing and tools) and 620 pounds for materials. The davit system is designed to be used by only one person at a time. The column davit is compatible with the Rose Dyna-Hoist personnel and materials hoist, and the Dynevac retractable lifeline with emergency rescuer.

### **1.2            Column Davit (P/N 506568)**

The column davit is a rigid steel arm measuring 77 inches tall with a reach of 30 inches from the centerline of the vertical tube to the furthest mounting point on the horizontal arm. The davit loads vertically into the mounting receptacle and can be transported by simply withdrawing the davit from its mount. Once installed within the receptacle, the davit arm may swivel from side to side until a load is applied. The weight of the suspended load holds the davit in position for lifting or lowering. The column davit is fitted with two, moveable utility rings for attaching the Dyna-Hoist and Dynevac. The davit arm is constructed of alloy steel with zinc plating and weighs approximately 55 pounds.

### **1.3            Vertical Mounting Receptacle (P/N 506344)**

The vertical mounting receptacle is the means by which the column davit is attached to the anchoring structure. The receptacle is permanently secured to the anchorage at, or near, ground level by four (4) bolts, 5/8 inch diameter, Grade 5, supplied by the customer. The steel weldment cradles and supports the davit arm on high density polyethylene bearings. The optional clamp is used to fix the davit in the desired position. The optional lock prevents the davit from being removed from the receptacle when a padlock, supplied by the customer, is in place. The optional cap covers the receptacle opening when the column davit has been removed. The vertical mounting receptacle is constructed of carbon steel with zinc plating and weighs approximately 45 pounds.

## 2.0

### **INSTALLATION**

#### **⚠ CAUTION**

**Installation of the Column Davit with Vertical Mounting Receptacle should be performed under the guidance of a Qualified Engineer, one with a recognized degree or professional certificate who is capable of design, analysis, evaluation, and specifications of the subject work, project, and this product.**

## 2.1

### **Installing the Vertical Mounting Receptacle**

Begin by selecting a structural anchorage of sufficient strength to bear a rated load of up to 3000 pounds applied at the horizontal end of the davit arm. The structural anchorage must have a flat surface of at least 30 inches against which the back face of the mounting receptacle will rest. The anchorage location should be chosen to allow the davit arm to be placed directly over the confined space opening or the edge of the walking/working surface. Position the mounting receptacle upright, with open end up, in a true vertical alignment. Shim if necessary to achieve the correct vertical alignment side-to-side and front-to-back. The mounting receptacle may rest on the working surface or up to one foot above this surface. Do not raise the mounting receptacle more than one foot above working surface level unless provisions are made for the attendant operating the davit system to reach the hoist and other fall protection equipment attached to the davit arm. Attach the mounting receptacle to the anchorage structure with four (4) bolts, Grade 5, 5/8 inch diameter.

## 2.2

### **Installing the Column Davit**

Lift the column davit over the mounting receptacle and place the vertical tube of the column straight into the receptacle opening. The column davit should seat completely within the receptacle and rotate freely in place.

#### **⚠ CAUTION**

**Inspect the installation to verify each bolt is in correct position and properly tightened, and verify that the davit is fully seated before continuing on to operation of the system.**

### **3.0            OPERATION**

#### **3.1            Attaching the Dynevac Retractable Lifeline with Emergency Rescuer**

Position one utility ring at the desired location toward the end of the horizontal arm of the davit. Secure the utility ring by passing the hitch pin - attached to the ring-through both sides of the davit tube. Press the hair-pin cotter through the end of the hitch pin. Next, pass a steel carabiner, Rose **P/N 506572**, or installation snaphook, Rose **P/N 506308**, through the handle of the Dynevac. Finally, connect the carabiner or snaphook to the lower portion of the utility ring, leaving the Dynevac suspended from the davit arm with the crank handle accessible for use in the event of an emergency rescue.

For more detailed instructions on the proper use of the Dynevac retractable lifeline, refer to the instruction manual provided with each unit.

#### **⚠ CAUTION**

**Read the Dynevac manual before attempting to use the retractable lifeline beyond this point.**

#### **3.2            Attaching the Dyna-Hoist Personnel and Materials Hoist**

Position the other utility ring at the desired location on the horizontal arm of the davit, locating the ring two spaces apart from the ring holding the Dynevac. The boom-mounted Dyna-Hoist is equipped with an swivel hook at the end of the boom. This hook attaches to the utility ring on the davit horizontal arm. To connect the boom to the utility ring, orient the hook so that the spring-loaded gate points away from the cable. Lift the hoist into position and slip the point of the hook through the utility ring. The hoist will hang suspended from the ring until ready for use.

The worker in a full body harness can be suspended from the hoist line by several methods: attachment of the hoist snaphook to the chest D-ring of the Rose Pullover harness, attachment of the hoist snaphook to a spreader bar lanyard which is attached to shoulder D-rings on the user's harness, or attachment of the hoist snaphook to a suspension seat into which the user is strapped. The hoist is operated by a worker at the same level as the davit mount.

Detailed instructions for the operation and maintenance of the hoist is contained in the Dyna-Hoist user manual which is included with each unit.

## **⚠ CAUTION**

**Read the Dyna-Hoist manual before attempting to use the hoist beyond this point.**

### **3.3      Rescue Plan**

Always have a rescue plan when using the davit system for lifting or lowering personnel. The retractable lifeline should always be used in conjunction with the hoist when lifting or lowering personnel, in case disconnection of the hoist line is necessary or in case failure of the hoist or hoist anchorage occurs. If the worker disconnects from the hoist line, the Dynevac retractable lifeline may be used as a back-up to provide immediate rescue capability.

### **3.4      Training**

All users must be thoroughly trained in the tasks to be performed, including hands-on training on the equipment actually being used. Training should cover standard work procedures as well as steps to be taken in an emergency. Periodic refresher training should be provided.

## **⚠ CAUTION**

**Read this instruction manual completely and inspect the system before and after each use. Read and heed all labels on the equipment. Failure to observe instructions may result in serious or fatal injury. Keep this instruction manual in a safe place but readily accessible to all who may need to use the system. Insist that anyone who intends to use the system read this manual, and the manuals for the Dyna-Hoist and Dynevac carefully and completely before using this system. Periodically re-read all labels and this manual to reinforce learning.**

### **3.5      Operation of the Column Davit with Vertical Mounting Receptacle**

## **⚠ CAUTION**

**Whenever the hoist operator is exposed to a potential fall hazard by working near a confined space opening or near the edge of a working surface, the operator must be independently tied off to a suitable anchorage by means of a work restraint or fall protection lanyard.**



Secure the utility rings with hitch pin and hair-pin cotter before applying load.

Do not exceed the maximum working load of 310 pounds for personnel (total weight including clothing and tools) or 620 pounds for materials.

Do not attach more than one person to the davit system at one time.

Do not attempt to carry personnel and materials at the same time.

Always maintain a firm grip on the davit when lifting or pivoting. Davit may swing and cause personal injury or property damage.

Always keep hands away from pinch points around load bearing lines.

### **3.5.1 Lowering into a Confined Space or Over the Edge of a Walking\Working Surface**

The person entering the confined space must be attached to both lines of the davit system:

1. To the Dyna-Hoist for lifting, lowering, and positioning.
2. To the Dynevac for fall protection and emergency rescue.

The worker being lowered and the worker topside operating the davit system must be secured for fall protection before opening the confined space portal or approaching the edge of the walking/working surface.

Position the davit over the confined space or the edge of the parapet. Visually check the path of descent to be sure no obstructions are present. Lower the worker using the Dyna-Hoist at a speed less than the Dynevac retractable lifeline locking speed of about 4.5 feet/second. The suspended worker should guide the two lifelines, keeping them separated to prevent twisting.

Do not disconnect from both lifelines inside a confined space without provision for emergency removal.

### **3.5.2 Lifting from a Confined Space or from the Edge of a Walking/Working Surface**

To raise the worker from the confined space or back to the edge of the walking/working surface, operate the Dyna-Hoist to lift. Use care to avoid lifting beyond the hoist lifeline travel limit. As in lowering, the suspended worker should guide the two lifelines to prevent twisting.

**3.6****Disassembling the Davit System After Use**

To disassemble the components of the davit system, reverse the sequence of steps in the operation instructions, Sections 3.1 and 3.2 above. Do not leave the Dyna-Hoist and Dynevac in place for prolonged periods in a corrosive environment. Inspect the system after each use, as described in Section 4, below. Stow the equipment in a clean dry area when not in use.

## **4.0            INSPECTION AND MAINTENANCE**

### **4.1            Mounting Receptacle Inspection**

Inspect the mounting receptacle before each use. Inspect for damaged welds by visually examining each weld area for signs of cracking or breaking. Visually examine the entire assembly for missing, altered, or damaged parts. Inspect labels to verify that they are present and legible. Verify that all bolts are present and properly tightened.

### **4.2            Column Davit Inspection**

Inspect the davit arm before each use. Check the bend angle of the davit tube as follows. Refer to the davit arm caution label illustration in Appendix A. Measure from the top of the welded ring (A) to the bottom of the davit arm (B). The correct distance is stamped on the top of the davit arm directly below the serial number (C). If the measured distance differs from the measurement stamped on the davit arm by more than 1/4 inch, immediately remove the column davit and mounting receptacle from use. This indicates that the davit system has been subjected to an unsafe load, the davit and mounting receptacle may be seriously weakened.

**APPENDIX A**  
**PRODUCT LABELS**

## **DAVIT ARM**

**For personnel use only, not for equipment handling**

P/N 506568

Max.Load (personnel): 310 lbs.

Max Load (material): 620 lbs.

**READ AND HEED USER MANUAL AND ALL INSTRUCTIONS BEFORE INSTALLING OR USING THIS PRODUCT. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.**

### **INSPECTION:**

Inspect the Mounting Receptacle before each use. Inspect for dents, cracks, damaged welds rust; damaged, altered or missing parts. Remove from use if any of these are found. Follow detailed inspection procedures found in Section Section 4 of Instruction Manual before and after each use.

### **TO ERECT:**

- ① Verify that the Mounting Receptacle is free of debris and obstacles which could interfere with installation of the Davit Arm.
- ② Insert the vertical column of the davit into the mounting receptacle.

### **TO STOW:**

- ① Remove companion products such as hoist and retractable lifeline. Remove any davit accessories such as sheaves or mounting brackets.
- ② Lift Davit Arm vertically until davit is clear of the mounting receptacle.
- ③ Insert optional dust cap into mounting receptacle opening to prevent debris or moisture from entering the Mounting Receptacle.
- ④ Stow the Davit Arm and accessories in a clean, dry place. Store off the floor away from moisture.

Use only accessory equipment recommended by manufacturer. Install in accordance with manufacturer's instruction.



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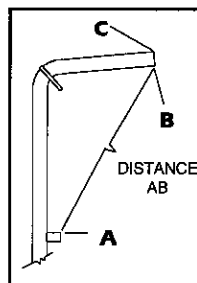
**DAVIT ARM INSTRUCTION LABEL**

# CAUTION

**READ AND HEED USER MANUAL AND ALL INSTRUCTIONS BEFORE INSTALLING OR USING THIS PRODUCT. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.**

- Do not exceed maximum working loads. See Instruction Manual and Davit Arm Label.

- Before each use measure from top of welded stop (A) on tube to bottom radius on boom end (B) (distance AB on figure. Compare with measurement stamped on top of davit tube (C). Remove from use if measurements differ by more than ¼ inch (6.4mm).



- Install and use under supervision of qualified person. **HAVE A RESCUE PLAN.** Users must be trained in fall protection, lifting/lowering, communication, rescue and evacuation procedures.
- Secure Utility Ring(s) with hitch pin and hairpin cotter before applying load.
- Lifelines and load cables **MUST NOT** contact manhole edges.
- **ALWAYS MAINTAIN A FIRM GRIP ON DAVIT WHEN PIVOTING OR ROTATING. DAVIT MAY SWING AND CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.**

**DAVIT ARM CAUTION LABEL**



**Rose Manufacturing Company**

2250 South Tejon Street  
Englewood, Colorado 80110-1000 USA  
1-800-722-1231, FAX (303) 934-9960

**VERTICAL COLUMN  
MOUNTING RECEPTACLE**

for  
Rose Column Davit  
P/N 506344

Max. Working Load (personnel): 310 lbs. (141 kg)

Max. Working Load (material): 620 lbs. (282 kg)

Capacity: 3600 lbf. (16 kN)

Material: Steel, Zinc plated per ASTM B633

Weight (approx.): 45 lb. (20 kg)



**CAUTION**

**READ AND HEED USER MANUAL AND ALL INSTRUCTIONS BEFORE  
INSTALLING OR USING THIS PRODUCT. FAILURE TO DO SO MAY  
RESULT IN SERIOUS INJURY OR DEATH.**

- Do not exceed maximum working loads.
- This device must be mounted on an anchorage with a minimum strength of 5,000 lbf. (22 kN). Install under the supervision of a qualified person.
- Use only with compatible Rose Davit Arm and accessories.
- Do not install near electrical hazards.
- Inspect the Mounting Receptacle before each use. Inspect for dents, cracks, damaged welds, rust; damaged, altered, or missing parts. Remove from use if any of these are found. Follow detailed inspection procedures found in Section 4 of the instruction Manual before and after each use. Formally inspect by a competent person other than the user at least once per year.
- Verify that all mounting bolts are in place and properly tightened before each use.

P/N 622508 rev A

**MOUNTING RECEPTACLE CAUTION LABEL**

Part# 620933	Mfd. _____
	
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Englewood, CO 80110	

**MOUNTING RECEPTACLE I.D. LABEL**