



# OZXR500DAV Extra Reach Davit Crane Instruction Manual

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**OZXR500DAV Extra Reach Davit Crane**



## Product Information

- Product Name: XR Series Davit Cranes
- Made in: USA
- Models:
  - Model# OZXR500DAV – Working Load: 500 lbs.
  - Model# OZXR1000DAV – Working Load: 1000 lbs.
- Serial Number: [Enter Serial Number]
- Purchase Date: [Enter Purchase Date]
- Manufacturer: OZ Lifting Products

## Two Year Warranty

This product comes with a two-year warranty. The warranty does not cover products that show signs of misuse, overloading, alteration, improper maintenance, or negligence. Normal wear and tear of moving parts is also excluded from the warranty.

## Product Precautions

It is important to read and comply with all the contents of the manual before installing, operating, or maintaining this product. Failure to do so may result in bodily injury, death, or property damage. Only trained and qualified personnel should operate and maintain this product. The owner/user is responsible for installing, testing, maintaining, and operating the product in accordance with OSHA regulations and other applicable federal, state, and local regulations.

## Safety Warnings

Refer to page 4 of the manual for safety warnings.

## Crane Pre-Installation

The pre-installation steps for the crane are as follows:

1. Installing the Base
2. Assembling the Crane
3. Pre-Assembly

### **Assembly**

Follow these steps for assembly:

1. Install the mast into the base. The mast should fit snugly and be properly positioned on the pin at the bottom of the base. Make sure the height adjustment plate is facing forward.
2. To set the boom on the mast, align the middle hole in the boom with the lowest hole in the mast. Insert a long clevis pin into the hole and secure it with a lynchpin.
3. Insert the other long clevis pin through one side of the boom, then through one side of the handle, and lastly through the rear hole in the mast before pushing it through completely. Secure with a lynchpin.
4. Slide the sheave pulley into the boom cap from either the top or bottom. Align the holes on the sheave pulley with those on the boom. Insert the short clevis pin and secure it with a lynchpin.

Please read the Owner's Manual carefully before operating this product. Keep this manual available at all times.



### **Two Year Warranty**

- OZ Lifting Products LLC® guarantees this product to be free of defects in materials and workmanship for two years from the date of shipment.
- This warranty does not apply to products that show signs of misuse, overloading, alteration, improper maintenance or negligence. The normal wear and tear of moving parts is excluded from the warranty. Moving parts are defined as brake discs, wire rope and other wear components that are subject to use conditions. This warranty does not cover any costs related to removal of this product, lost time, or any other incidental or consequential damages/costs resulting from the claimed defects.
- If this product fails during the first two years of operating due to defective materials or workmanship, it will be repaired or replaced at the discretion of OZ Lifting Products LLC®. Any product subject to a warranty claim must be returned, prepaid, to an authorized OZ Lifting Products LLC® warranty depot along with proof of purchase. Upon repair, the product will be returned to the customer free of charge. If no defect is found, the customer will be responsible for return shipping costs. The product's warranty will be effective for the remainder of the original warranty period (two years from shipment date).
- OZ Lifting Products LLC® will not be held liable for the following arising from the use of this product: injuries to persons or property, death, incidental, consequential, or contingent damages, whether negligent or deliberate. It is the sole responsibility of the owner to install and operate the product properly and safely.

- This is OZ Lifting Products LLC®'s only written warranty. This warranty is in lieu of all other warranties implied by law such as merchantability and fitness. The sale of products from OZ Lifting Products LLC® under any other warranty or guarantee, expressed or implied, is not authorized.

**NOTE:** OZ Lifting Products LLC® has the right to alter the design of or discontinue the production of any product without prior notice.

**For more information please contact:**

P.O. Box 845, Winona, MN 55987 Phone (800) 749-1064

(507) 474-6250

Tech Support (507) 457-3346 Fax (507) 452-5217

[sales@ozliftingproducts.com](mailto:sales@ozliftingproducts.com) [www.ozliftingproducts.com](http://www.ozliftingproducts.com)

## **Product Precautions**

- The information in this manual should be used only for the XR DAVIT CRANE by OZ Lifting
- Products LLC®. This manual contains general instructions for normal installation, operation, and maintenance of the product described herein. The information provided should not be expected to prepare the user for all possible circumstances.
- This product should not be installed, operated, or maintained by any person who has not read all the contents of this manual. Failure to read and comply with these instructions, warnings, or limitations may result in bodily injury, death, or property damage.
- It is the responsibility of the owner/user to install, test, maintain, and operate this product in accordance with OSHA regulations as well as all other federal, state, and local regulations. Only trained and qualified personnel shall operate and maintain this product.
- Regularly inspect the XR DAVIT CRANE by OZ Lifting Products LLC® for signs of wear, elongation of holes, surface cracks, gouges, damage or any abnormal conditions.
- Product owners should schedule and keep record of regular inspection and maintenance. Record your XR
- DAVIT CRANE by OZ Lifting Products LLC® serial number and purchase date on the front cover of this manual for reference.
- Do not use the XR DAVIT CRANE by OZ Lifting Products LLC® in conjunction with other equipment unless the necessary safety devices are in place. Modifications to this product should only be authorized by the original manufacturer.

## **Safety Warnings**

- Failure to read and comply with the following warnings may result in a hazardous situation that could lead to death, serious injury, or property damage. Keep this manual near the equipment at all times. Do not remove, alter, or obscure the labels attached to the winch.
- Contact OZ Lifting Products LLC® for replacement manuals and labels.
- Do Not operate a damaged or malfunctioning product.
- Do Not operate if guards are improperly installed or removed.
- Do Not lift more than the rated load of the crane or its attached components.
- Do Not use additional cranes to move a load that is heavier than the load rating of any single crane in use.
- Do Not modify this product in any way.

- Do Not use for other functions except those for which this product is intended.
- Do Not remove, deface, or obscure warning labels.
- Do Not allow the load to swing or jerk. Operate smoothly to avoid shock loads.
- Do Not lift any load that is not located directly below the crane. This product is not intended to drag a load sideways.
- Do Not wrap the load with the wire rope. Use only a sling or another manufacturer-approved device. Do Not operate without 4 anchor wraps of wire rope around the winch drum.
- Do Not operate without assuring the wire rope is securely attached to the winch drum.
- Do Not operate without checking for proper lubrication.
- Do Not put your hands in areas with moving parts such as sheaves, wire ropes, and gears.
- Do Not lift people.
- Do Not lift loads over people.
- Do Not operate until personnel are warned of approaching loads and are cleared from the area. Do Not leave a suspended load unattended.
- Do Not substitute smaller diameter pins. Use only the pins supplied with the crane.
- Do Not use chains, cables, or rigid devices to lift crane. Nylon or other synthetic slings should be used instead.

## Crane Pre-Installation

Check for damage during shipment. Do not install or use a damaged product. Be sure to maintain records of product information and contact your OZ Lifting Products LLC® dealer with any problems

**Before installing, select a location where the crane is:**

- Visible throughout its entire operation.
- Positioned so the operator is clear of both the load and the path of the wire rope.
- Accessible for maintenance.
- Attached to a strong, level foundation that can properly support it under all conditions.

## Installing the Base

**NOTE:** The accompanying bases for the XR DAVIT CRANE by OZ Lifting Products LLC® are sold separately through OZ Lifting Products LLC® dealers. They are necessary for the proper operation of this product.

- The base of the XR 500 – OZX500DAV must be securely fastened to the foundation using 1/2-13-inch coarse thread fasteners of at least grade 5. A torque of 75 ft-lb should be used for grade 5 fasteners without lubrication.
- The base of the XR 1000 – OZX1000DAV must be securely fastened to the foundation using 5/8-11-inch coarse thread fasteners of at least grade 5. A torque of 80 ft-lb should be used for grade 5 fasteners without lubrication.
- Assure that the mounting surface is located directly above a strong, level, solid foundation that supports the crane under all circumstances.
- Non-standard products that have been altered from the original design may require alternative fastening requirements. Contact your OZ Lifting Products LLC® dealer for more information.

# Assembling the Crane

## Pre-Assembly

- Please refer to the Assembly Diagram on pg. 6 before assembling the crane.
- Inspect the crane to assure there are no missing or damaged parts. Do not discard the crane's shipping containers as they can be reused if the crane needs to be repackaged. Contact your OZ Lifting Products LLC® dealer if any problems arise.
- Assure that all components, including the pin that the load sheave rides on, are properly lubricated before assembling. Refer to Cleaning & Lubricating the Crane on pg. 8.
- During assembly, perform an inspection according to the procedures found on pg. 10. Document and resolve any issues. This will provide a comparison for later inspections.

## Assembly

**NOTE:** Fasteners should not be over-tightened during assembly as this may strip the threads and lead to damage. For the purpose of assembly three clevis pins, two long and one short, are included. The two long pins are identical. All are necessary for assembly.

Once the OZ Lifting Products LLC® base has been installed, assemble the crane with the following steps:

1. Install the mast into the base. The mast will slide easily down into the base (no tools are necessary). Assure that the mast is properly positioned on the pin at the bottom of the base. This can be confirmed by moving the mast from side to side to check for excessive play. The mast should fit snugly. Assure that the height adjustment plate is facing forward.
2. To set the boom on the mast, align the middle hole in the boom with the lowest hole in the mast. Insert a long clevis pin into the hole. Secure with lynchpin.

**NOTE:** Slowly let go of the boom as it gets to a resting point on the mast.

3. Insert the other long clevis pin through one side of the boom, then through one side of the handle, and lastly through the rear hole in the mast before pushing the pin through the rest of the way. Secure with lynchpin.

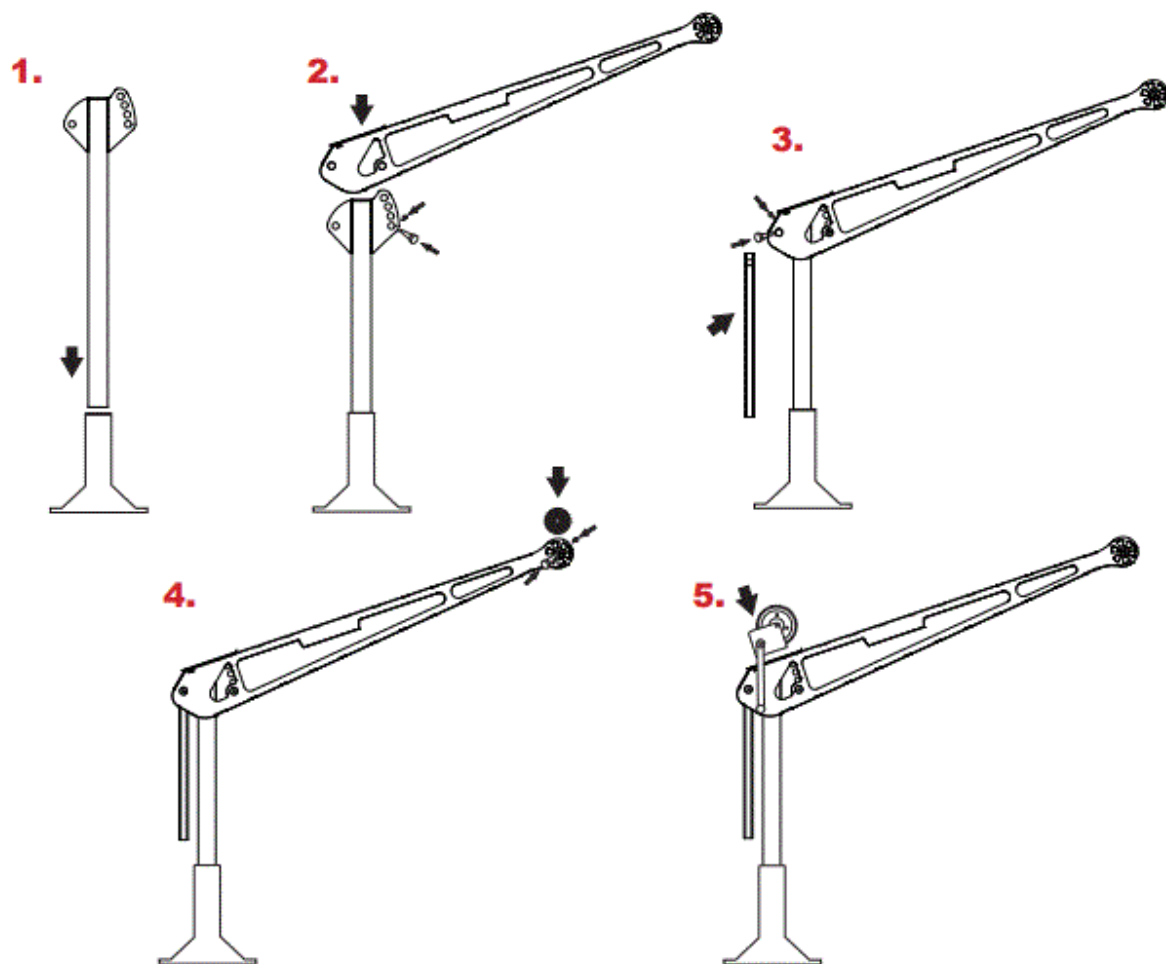
NOTE: May need to lift the boom slightly to align the rear hole before inserting the clevis pin.

**NOTE:** the XR DAVIT CRANE by OZ Lifting Products LLC® will ship from the factory partially assembled. The following steps are only for reference if the product must be reassembled.

4. Slide the sheave pulley into the boom cap from either the top or the bottom. Align the holes on the sheave pulley with those on the boom. Insert the short clevis pin and secure with a lynch pin.
5. Center the winch over the mounting holes on the top of the boom. The drum should be facing toward the sheave pulley. Secure the winch to the boom in the frontmost mounting position, or the set of three holes closest to the sheave. There are two bolt patterns on the boom. The smaller bolt pattern is for the manual winch.

**NOTE:** Disassembly is the reverse of the assembly. It is not necessary to fully disassemble the crane to transport it.

## Assembly Diagram



## Field Test

- There is no ASME standard for Davit cranes. OZ Lifting Products XR series Davit cranes have a minimum 2.25:1 safety factor. We load test and certify our Davit cranes to 125% of the rated capacity. A test certificate is generated that includes the serial number of the davit.
- If a load test is required on-site, we recommend contacting a civil engineer to determine if the base has been properly mounted to a secure location. We provide the information on the moment a base would pull away from the mounting bolts.

## Installing the Cable

- The OZ Lifting Products LLC® cable assembly that can be ordered with the XR DAVIT CRANE by OZ Lifting Products LLC® will come with a swaged ball on one end to facilitate easy assembly. Standard bare-end cable can also be used. The hardware for bare-end cable installation is included.
- Please refer to the accompanying winch owner's manual for instructions on installing a bare-end cable.

To install the OZ Lifting Products LLC® supplied cable:

1. Lay the cable out on a flat surface to ensure it is not knotted or looped.
2. Locate the ball end of the cable.
3. Locate the "keyhole" in the winch drum that accepts the ball end of the cable.
4. Thread the ball end of the cable over the load sheave pulley and towards the winch.

5. Insert the ball end fitting of the cable into the “keyhole” feature in the winch.
6. Ensure that the ball end of the cable slides into the slot in the “keyhole” and cannot be pulled out.
7. Manually spool at least 4 full wraps of cable onto the winch drum. There must be at least 4 full anchor wraps of cable on the winch drum at all times.
8. Install the cable-retainer pin by inserting it into holes at the tip of the boom.

**NOTE:** To ensure the maximum amount of cable can be spooled onto the winch, the cable must be neatly spooled onto the winch drum. If the cable is not spooled neatly onto the winch drum, the cable capacity will be reduced and handle effort may increase. The cable that is not spooled neatly can consume 30% more space on the winch drum, reducing cable capacity.

**NOTE:** HMPE-based synthetic cables require 8 anchor wraps at all times

## Operating the Crane

### Warnings & Precautions

- Operators should read and fully comprehend this entire manual and all warnings on the XR DAVIT CRANE by OZ Lifting Products LLC® before beginning crane operation. If this manual is not read and followed completely, injuries and damage may occur. For questions regarding the operation, please contact your OZ Lifting Products LLC® dealer.
- Before operating the crane, be sure all parts are clean and properly lubricated. The crane must be in proper working condition and maintenance records must be up to date to proceed with operation. The area of operation must be clear of all flammable materials.
- It is important to maintain a secure footing while operating the crane. Confirm that the crane is attached securely to a strong, level, solid foundation before operation. Slowly take up a load, verifying that it is well supported and balanced before proceeding with the operation.

### All operators MUST:

- Be trained in proper crane operation and in dealing with potential malfunctions.
- Abstain from use of alcohol, medications, or drugs while operating.
- Avoid operation while tired or distracted.
- Avoid operation if they have a history of seizures or other medical issues that may interfere with crane operation.
- Have proper coordination and vision.

### Operating Guidelines

- The XR 500 by OZ Lifting Products LLC® has a maximum operating load rating of 500 lbs.
- The XR 1000 by OZ Lifting Products LLC® has a maximum operating load rating of 1000 lbs.
- The XR DAVIT CRANE by OZ Lifting Products LLC® is capable of generating forces that are in excess of this maximum load rating, but this should not be attempted.

**NOTE:** It is the responsibility of the user to ensure that the loads being handled are within the operating limits of the XR DAVIT CRANE by OZ Lifting Products LLC® at all times. Shock loads must be minimized as they can lead to higher forces than the rated capacity of the XR DAVIT CRANE by OZ Lifting Products LLC®.



- A load rating table is provided on pg.10 as well as on the XR DAVIT CRANE by OZ Lifting Products LLC® itself. This load rating table is calculated based on both the extension of the crane's boom as well as the amount of cable spooled onto the winch drum. The amount of cable spooled onto the winch will change during a lift (especially long lifts), impacting load capacity.

**NOTE:** It is the responsibility of the user to determine the maximum amount of cable that will be spooled onto the winch at any given time during the lift and size the load to be lifted accordingly.

- The manual winch that is supplied with the XR DAVIT CRANE by OZ Lifting Products LLC® has been specifically chosen to match the rating of the crane. The quick-disconnect handle on this winch has also been specifically designed to operate within the load range of the winch. The effort required to operate the winch at the maximum rated capacity will be significant. This is an intentional design feature and not a defect. The increased effort required when nearing rated capacity (at any percentage of drum capacity) is a sign that the load being lifted may be too heavy.

**NOTE:** Check the weight of the load being lifted and reduce the weight if necessary.

**NOTE:** Never attempt to adjust the angle of the boom while under load. The boom should only be lowered for storage purposes.

- This XR DAVIT CRANE by OZ Lifting Products LLC® has a main structure made from steel. At no time should the crane emit any abnormal noises during use. Any abnormal sounds are cause for removal of load and inspection. There are multiple sources for abnormal noises including, but not limited to:
  - If the cable is not spooled neatly, under tension, when load is applied.
  - If the crane is severely overloaded.
  - If the crane has suffered severe damage from abuse and/or mishandling. **NOTE:** This list is not exhaustive and does not cover all possibilities.

## **Cleaning and lubricating the Crane**

The XR DAVIT CRANE by OZ Lifting Products LLC® should be periodically cleaned to preserve its appearance and to prevent corrosion. The XR DAVIT CRANE by OZ Lifting Products LLC® will last longer and perform better when it is kept clean and lubricated.

**NOTE:** No solvents should be used on any parts of the XR DAVIT CRANE by OZ Lifting Products LLC® for cleaning or any other purpose.

### **Instructions:**

1. Wipe the surfaces of the crane with a wet cloth. Detergents are not necessary.
2. The steel surfaces are powder-coated. Wipe surfaces clean of debris.

**NOTE:** No lubricants of any kind should be applied to the brakes in the winch. If the brake pads get contaminated with oil, they may slip.

3. Lubricate the bushing in the load sheave with a light coat of grease.
4. Lubricate the shaft bearing surfaces on the winch with a light coat of grease, taking care not to get any oil or grease on the brake pads of the winch.

## **Inspecting the Crane**

In order to maintain the quality operation of the product, a regular inspection schedule should be followed by each operator. All inspections should be reported and maintained in a dated record log. These records should be available to all personnel involved with the product and should be made available to OZ Lifting Products LLC® when a warranty issue is in question.

## Definitions

- **Designated Person** – The person who is selected or assigned as being competent to perform specific duties.
- **Qualified Person** – The person that—by possession of a recognized degree or certificate of professional standing, or through extensive knowledge, training, and experience—has successfully demonstrated they are able to resolve problems relating to the subject matter and work.
- **Normal Service** – Service that involves operation with randomly distributed loads within the rated load limit, or uniform loads less than 65% of the rated load for not more than 15% of the time.
- **Heavy Service** – Service that involves operation within the rated load limit and exceeds normal service.
- **Severe Service** – Service that involves normal or heavy service with abnormal operating conditions. This also includes a service that involves shock loading.

## Inspection Classifications

- **Frequent Inspections** – Completed by the operator or designated person. Performed by doing a visual examination and listening for unusual sounds during operation. These inspections are usually performed before each operation, every few hours during operation, and if problems arise.
- **Periodic Inspections** – Completed by a designated person. Performed, with more detail than a frequent inspection, by doing visual examinations of internal and external conditions. These inspections are done on the following schedule:
  - **Normal Service** – Semi-annually
  - **Heavy Service** – Quarterly
  - **Severe Service** – Immediately after completion of lift
  - Following prolonged storage or if operation issues arise.

**NOTE:** Label the crane as “Out of Service” if an inspection deems it damaged or if maintenance is required. Do not remove this label until a qualified person has resolved the issue. Discontinue use of wire rope and equipment if damage or overloading occurs.

## Important Inspection Notes

- Brakes require more than audible and visual inspection. Check brakes daily by operating the crane with and without a load and by stopping at various positions to ensure safe operation. If the load coasts or creeps, contact the factory for friction disc replacements.
- Proper inspection may require the disassembly of some parts. Contact the OZ Lifting Products LLC® factory before doing so or the applicable warranty may be voided.
- For wire rope inspections, please contact the specific manufacturer of the rope. The inspection provided in the following chart is for a general inspection only and is in no way the complete inspection required.
- Before the operation, ensure all deficiencies on the inspection chart are resolved and inspections are up to date. Refer to the troubleshooting chart on pg.11 for further assistance.
- Be aware of applicable codes and regulations for crane inspection.
- See the specific winch owner’s manual for instructions and complete inspection instructions.

## Inspection Chart

**NOTE:** Disassemble the crane, including the boom and winch, periodically to inspect each for damage. Use the following chart to determine what type of inspection is necessary. Frequent Inspection (F) and Periodic Inspection

(P).

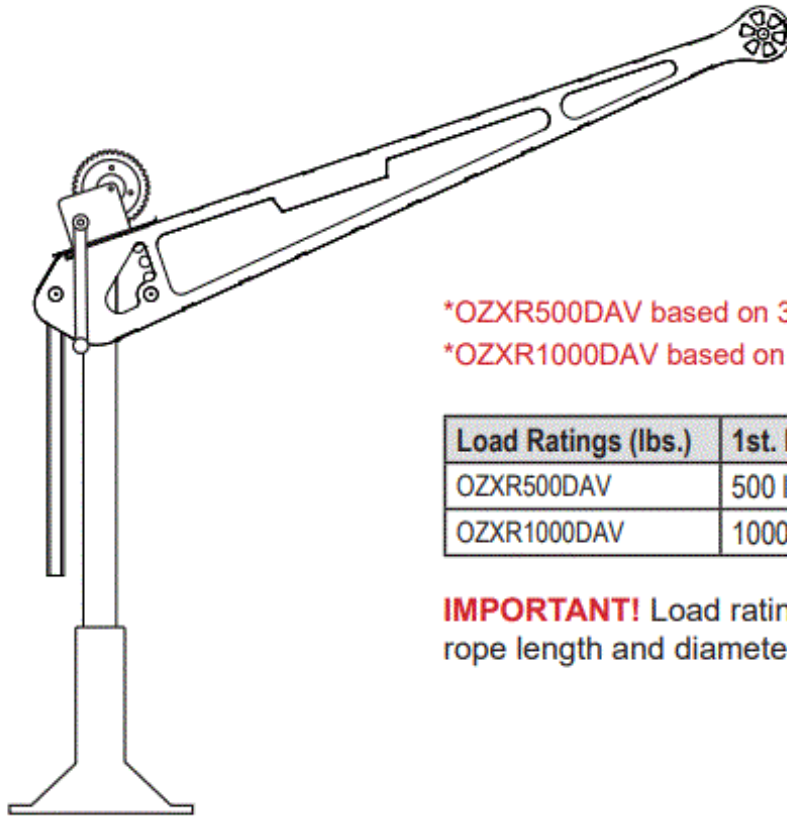
Location	Check For	F	P
Crane	Damage, cracks, rust, chipping, dents excess wear, or corrosion.	X	
	Unusual sounds	X	
	Smooth load movements	X	
	Equipment properly lubricated	X	
	Signs of overloading (cracks, dents, or damage)		X
	Proper function when operated with a load equal to the load rating		X
Foundation	Good condition/supports the crane under all conditions	X	
	Level, no swerving of boom	X	
	Cracks, corrosion, damage (check by removing crane base from foundation)		X
Fasteners (including mounting fasteners)	Firmly installed	X	
	Properly tightened	X	
	Stripped threads, bent, or damaged (check by removing crane from the foundation)		X
Handle	Rotates freely in both directions	X	

**NOTE:** Please refer to the winch owner's manual for the winch inspection chart.

## Repairs

All repairs must have factory authorization. Contact OZ Lifting Products LLC® to prevent voiding of the two-year limited warranty and potential damage. Perform recommended inspections to identify which parts should be replaced. Only use OZ Lifting Products LLC® replacement parts. To order replacement parts, contact your local OZ Lifting Products LLC® dealer. Please have the serial number, part number and a description available when calling.

## Load Rating



\*OZXR500DAV based on 3/16" Wire Rope

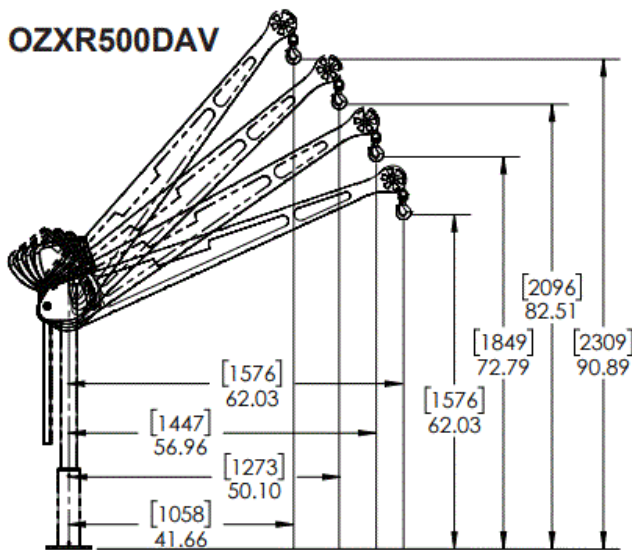
\*OZXR1000DAV based on 1/4" Wire Rope

Load Ratings (lbs.)	1st. Layer	Mid Drum	Full Drum
OZXR500DAV	500 lbs.	500 lbs.	500 lbs.
OZXR1000DAV	1000 lbs.	875 lbs.	550 lbs.

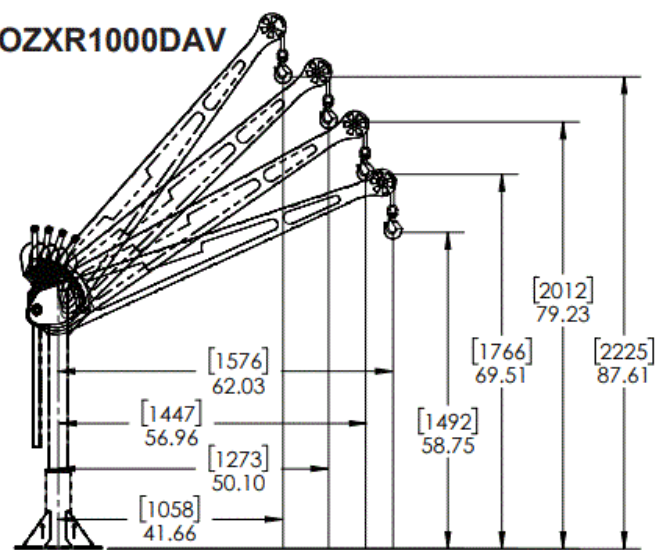
**IMPORTANT!** Load ratings will vary depending on rope length and diameter.

## Specifications

**OZXR500DAV**



**OZXR1000DAV**



Dimensions above are based on the use of a pedestal base. Use of socket or wall mount base will reduce height

- OZXR500DAV – socket base (OZSOC3) reduces height 14", wall mount (OZWALL3) reduces height 15.75".
- OZXR1000DAV – socket base (OZSOC1-TP) reduces height by 13.25", and wall mount (OZWALL1-TP) reduces height 14".

Weight	Boom	Mast	Net
OZXR500DAV (lbs)	26	26	57
OZXR1000DAV (lbs)	46	41	95


## Troubleshooting Chart

Contact OZ Lifting Products LLC® if disassembly of the crane is required. The warranty will be voided if this is not done.

Problem	Possible Cause	Correction
Brake distance too long	Discs are worn,damaged, or over lubricated	Replace
	Disc brake ratchet pawl damaged or worn	Replace
Excess wear on gears or bearings	Overloaded	Reduce load
	Improper lubrication	Relubricate
High pitched squeak	Improper lubrication	Relubricate
Grinding noise	Poorly spooled cable, cable diving Into drum	Re-spool cable evenly under tension
	Dirty brakes or gears	Clean
	Broken gears or bearings	Replace
Rattling noise	Loose bolts, screws, fasteners	Tighten
Boom turns on its own	Foundation unlevel or unsecure	Repair
	Mast bent or damaged	Repair
Boom bounces	Overloaded	Reduce load and inspect crane for damage
	Loose mounting bolts	Tighten to correct torque
	Foundation unlevel or unsecure	Repair
	Winch gears worn or damaged	Repair
	Sheave worn or damaged	Repair

Contact OZ Lifting Products LLC® if disassembly of the crane is required. The two-year limited warranty will be voided if this is not done.

P.O. Box 845, Winona, MN 55987 Phone (800) 749-1064  
(507) 474-6250  
Tech Support (507) 457-3346 Fax (507) 452-5217  
[sales@ozliftingproducts.com](mailto:sales@ozliftingproducts.com) [www.ozliftingproducts.com](http://www.ozliftingproducts.com)

	<p><a href="#">XR OZXR500DAV Extra Reach Davit Crane</a> [pdf] Instruction Manual</p> <p>OZXR500DAV Extra Reach Davit Crane, OZXR500DAV, Extra Reach Davit Crane, Reach Davit Crane, Davit Crane, Crane</p>
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References

- [OZ LIFTING PRODUCTS: Lifting & Material Handling Equipment](#)
- [OZ LIFTING PRODUCTS: Lifting & Material Handling Equipment](#)
- [User Manual](#)