



# **PWI 4K72R Frame Rotator**

## **Operation & Maintenance Manual**



**OWNERS RECORDS**

Date purchased \_\_\_\_\_  
Serial Number \_\_\_\_\_  
Order Number \_\_\_\_\_

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# Congratulations!

Congratulations on your purchase of a PWI built frame rotator. Our intentions are to provide smart solutions to our customers. We believe the system we have built for you will provide you with great value & service for many years to come. We want to say thank you for choosing PWI and let you know that we are here to support you after the sale. Our customer support team is available to help you with any questions you may have about your frame rotation system. This manual was developed to give you the information you need to safely operate and maintain your frame rotation system.

Thank you from all of us at PWI!

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### **Product Use**

The PWI Model 4K72R Frame Rotator is a powered manipulator designed to safely lift and rotate steel frames during the manufacturing process.

The PWI Frame Rotator is designed to rotate the frame in a controlled manner. A frame is easily attached to the rotator by standard or custom designed attaching brackets. The attaching brackets can easily be interchanged to meet the demands of changing frame designs as they come down your production line. The frame rotator requires that your frame be supported at the opposite end by a rotatable fixture, overhead crane, or other suitable lifting device to support the weight of the far end of the frame. Any alterations to this unit must be completed or approved by PWI.

### **Capacity**

The 4K72R is designed to lift a maximum of 4,000 lbs. (8,000 lbs. total frame weight.)

### **SAFETY**

The most important reason for the PWI Frame Rotator is the safety of the operator, but as with all equipment, improper use can result in increased risk of injury.

During the lifting and rotation cycle the operator should alert others in the immediate area and make sure that no one is near or under the frame.

Keep the machine properly maintained: keep free of debris, check controls functions, visually inspect operation of chain and lift components.

Do not operate if there are any missing or broken parts

Do not service Frame Rotator without having the supply power locked/tagged out. Relieve pressure in hydraulic lines prior to repair, adjusting, or disconnecting.

Ensure that all hydraulic connections are tight. Use a piece of cardboard or wood when checking for hydraulic leaks. Never use your hand. If ANY fluid is injected into the skin it must be attended to by a doctor immediately.

Where replacement parts are necessary contact PWI for specification to insure original equipment specifications.

## OPERATION

The PWI Frame Rotator is designed to rotate the frame for a Recreational Vehicle in a controlled manner. Make sure the attachment features fit properly and completely capture the frame prior to rotation.

The rotator sits on v-groove casters and rides on two v-tracks; a Drive wheel engages the grip track moving the rotator along the track. This allows the rotator to be safely moved in and out of the production line allowing the frame to bypass when needed.

Rear Frame (bumper attachments) should capture the frame and limit its movement within the attachment while being rotated in either direction. Make sure pins and hitch pin clips (retainers) are securely in place. The Optional Darko Dispenser bolts to the top of rotator mast. Make sure pins and hitch pin clips (retainers) are securely in place.

Two front rotation units are currently available: A Fifth Wheel type front rotation unit which should securely attach to the king pin with a positive locking mechanism. A Travel Trailer type front rotation unit which secures to the travel trailer receiver with a pintle style hitch.

After securing the bumper attachment and front rotation unit to the frame the frame is then lifted with the hydraulic cylinder and rotated hydraulically

**This unit is not designed to hold frames for extended periods and may slowly leak down. Do not leave frames on the Frame Rotator for extended periods. Call PWI for acceptable leak down measurements if you feel the frame rotator is not holding the frame steady during production.**

## INSTALLATION

After identifying the location for the PWI Frame Rotator install the v-tracks and grip track. The rotator itself is then set on the tracks. A qualified electrician should make the final connection between the power supply and the rotator.

The hydraulic fluid levels should be checked and adjusted to make sure of proper fluid levels.

## MAINTENANCE

The PWI Frame Rotator should have power supply turned off and should be locked out and tagged out prior to any service work. **Even with the power off the hydraulic lines may contain fluid under high pressure.** Prior to any repair, adjustment, or disconnection, relieve the line pressure by moving each of the control levers back and forth.

### Service Schedules

<b>Maintenance item</b>	<b>Frequency</b>
Grease Sprocket	Monthly
Grease Carriage Rollers	Monthly
Oil Chain (spray lubricant)	Monthly
Inspect Chain for Wear	Monthly
Grease Casters	Biannually
Replace Oil Filter	Annually
Change Oil	Every 3 yrs.
Grease Rotation Unit (Cascade)	Biannually
Rotation Unit (Nachi) requires no maintenance	

You might notice that there are improvements made to the frame rotator you receive from us. Your new PWI Frame Rotator may not be exactly like the photos on previous pages. PWI is committed to increasing safety and operation by updating the unit with engineering improvements.

If you need parts or service, you can either call or email using the information below.

If you would like a qualified service technician to inspect your unit you can use the email address below.

PWI office 574-646-2015

[inspections@pwiworks.com](mailto:inspections@pwiworks.com)



- Sprocket-  
Grease Monthly

- Chain -  
Oil and Inspect Monthly

-Carriage Rollers-  
Grease Monthly



-Casters-  
Grease Biannually



- Hydraulic Pump -  
Check for proper rotation



- Hydraulic Oil -  
Change Every 3 yrs.

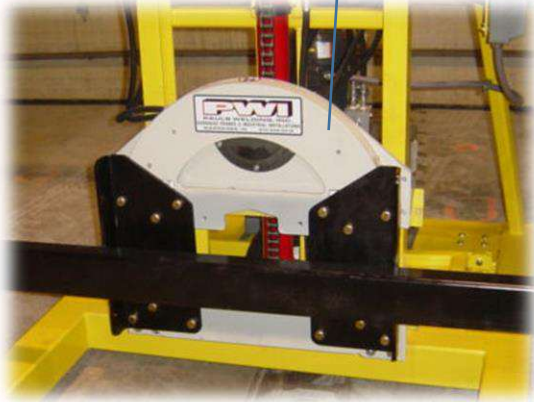
Hydraulic Pump  
Shown with optional guard



-Oil Filter-  
Change Annually



Cascade Rotation Unit  
Grease Biannually



Nachi Rotation Unit  
No Maintenance required



### Basic Parts List

Please call for PWI fabricated parts. We keep parts stocked on the shelf and are here to assist you with any parts you may need for your PWI Frame Rotator.

Description	Qty	Part		
Decal Kit	1	PWI	Per unit sn	
6" V Groove Caster	4	PWI	Per unit sn	
Oil Filter	1	Lenz CP-752-30		
ATF Chevron/ Hyd Fluid	10	Gallons		
PSI Gauge	1	221565		
Control Valve Levers	3	MI63000		
Directional Control Valve	1	MI40770		
Velocity Fuse	1	PWI	Per unit sn	
Fluid Level Gauge	1	PWI	Per unit sn	
Filler/Breather	1	221680		
Hyd Tank Assembly Complete	1	PWI	Per unit sn	
Rotational Drive Unit	1	PWI	Per unit sn	
Lift Cylinder with Sprockets	1	PWI	Per unit sn	
Wheel with Tire	1	PWI	Per unit sn	
Hyd Wheel Drive Motor	1	PWI	Per unit sn	



## **PWI Products Warranty**

### **MECHANICAL: 1 Year (12 Month) Parts & Workmanship Warranty**

Mechanical items include but are not limited to all types of Overhead Cranes, Fall Protection, VRCs, Gates, or other non-stationary PWI products that are designed for specific functional operation.

Unless otherwise specified, PWI guarantees that this mechanical product is free from material defects in design and workmanship under normal use, proper maintenance, and service.

This warranty is strictly limited to 12 months for single shift operation or 2,000 hours after installation, or 14 months after shipment, whichever is shorter. Within ten days after defect is found, warrantee must deliver a written notice to PWI. All requested warranty information must be received promptly by PWI in no more than 5 business days.

All standard non-engineered products including but not limited to hoists, trolleys, wheels, gearmotors, controls, and safety products, will fall under the default warranty of that specific manufacturer.

#### **Start Date for Warrantable Failure**

PWI hereby warrants all workmanship and materials fabricated by PWI to be free of defects commencing with completion of installation of a component or transfer of a product to the original owner.



## **GENERAL:**

This warranty will not apply to any product that has been repaired or altered outside of PWI manufacturing plant, or without specific instructions from PWI to make alterations. PWI will in no case, allow or offer reimbursement for outside sources to perform repairs or make alterations to product in reference. If the product has (in PWI's judgment), had alterations made which adversely affect its serviceability or was subject to misuse, negligence, accident, or operated contrary to instructions or common practice, warranty shall be considered void.

Defective items will be repaired or replaced and returned to PWI at the cost of the owner. If PWI, at its discretion, finds the warranty claims to be justifiable, PWI will compensate by means of replacing or repairing faulty products or components free of charge. The sole liability of PWI for warranty claims is limited by the following. In no event will PWI be liable for damages in excess of the original sale price of the defective product, or for any consequential damages, nor will PWI be liable for any special or other work done unless specifically agreed to in writing. This warranty does not include or apply to fire, natural disasters, or other Acts of God.

Should the warrantee destroy, intentionally or not, any part of the warranted product, or any evidence concerning the origin of an alleged defect, or try to conceal evidence of causation, this warranty is cancelled, and warrantee will have no claim against PWI whatsoever.

This warranty does not cover coatings on any PWI products including paint, powder-coat, zinc, or galvanized coatings. Coating life can vary greatly based on the ambient environment your PWI product is installed in, which is simply out of the manufacturer's control. Touch-up painting or coating repair (after initial installation by PWI or customer) shall be the responsibility of the owner, unless specifically guaranteed in writing on project quotation.

Any interpretation of this warranty shall be done in common pleas court in Indianapolis under Indiana law.

***ALL OTHER REPRESENTATIONS, EXPRESS OR IMPLIED, WARRANTY, OR LIABILITY RELATING TO THE CONDITION OR USE OF THE PRODUCT ARE SPECIFICALLY DISAVOWED, AND IN NO EVENT SHALL PWI BE LIABLE TO BUYER, OR ANY THIRD PARTY, FOR ANY DIRECT OR INDIRECT CONSEQUENTIAL OR INCIDENTAL DAMAGES***

## Optional Double 5<sup>th</sup> Wheel Rotation Unit



## Optional Travel Trailer Rotation Unit

