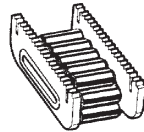


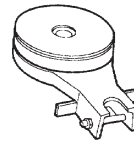
**IMPORTANT RECEIVING INSTRUCTIONS**

Inspect all components for shipping damage. If any shipping damage is found, notify carrier at once. Shipping damage is NOT covered by warranty. The carrier is responsible for all repair or replacement costs resulting from damage during shipment.

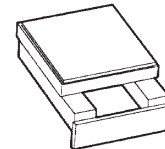
**DESCRIPTION**



**Roller Skate  
ER Models**



**Turntable (swivel)  
ES Models**



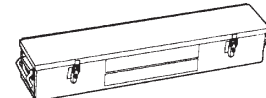
**Leveling Plate  
ELP Models**



**Handle  
ERH-1, ERH-2**



**Link-up Bars  
ELB-1**



**Metal Box  
EMB1**

**SPECIFICATIONS**

Roller skates											
Model No.	ER-1	ER-10	ER-15	ER-30	ER-60	ER-80					
Max. Load lb. [kN]	2248 [10]	22480 [100]	33720 [150]	67440 [300]	134880 [600]	179840 [800]					
Max. load per transport kit lb. [kN]	—	44960 [200]	67440 [300]	134880 [600]	—	—					
Max. admissible gradient	0.5°										
Max. admissible speed ft/min [m/min]	16.4 [5]										
Contact pressure at max. load lb./in. <sup>2</sup> [kN/cm <sup>2</sup> ]	1779 [52]	4448 [130]	4790 [140]	6159 [180]	6501 [190]	5132 [150]					
Weight lb. [kg]	8.8 [4.0]	11.5 [5.2]	16.1 [7.3]	28.6 [13]	70.4 [32]	134.2 [61]					
Weight transport kit lb. [kg]	—	105 [48]	123 [56]	198 [90]	—	—					
Length x width in. [mm]	6.69x3.94 [170x100]	8.27x3.94 [210x100]	8.67x4.45 [220x113]	10.6x5.12 [270x130]	15.0x6.62 [380x168]	20.8x7.17 [530x182]					
Roller chain dia. in. [mm]	0.71 [18]	0.71 [18]	0.95 [24]	1.2 [30]	1.7 [42]	2.0 [50]					
Number of rollers	11	15	13	13	13	17					
Max. temperature °F [°C]	-28 - +158 [-30 - +70]		-22 - +662 [-30 - +350]								
	Turntable (swivel)						Leveling Plate				
Model No.	ES1	ES10	ES15	ES30	ES60	ES80	ELP10	ELP15	ELP30	ELP60	ELP80
Weight lb. [kg]	2.4 [1.5]	9.9 [4.5]	9.9 [4.5]	14.7 [6.7]	30.1 [13.7]	41.6 [18.9]	8.1 [3.7]	8.1 [3.7]	11.7 [5.3]	30.4 [13.8]	41.4 [18.8]
Support Ø resp. length x width in [mm]	3.35 [85]	5.12 [130]	5.12 [130]	5.91 [150]	7.49 [190]	8.67 [220]	4.73x 4.73 [120x 120]	4.73x 4.73 [120x 120]	5.12x 5.12 [130x 130]	7.09x 7.09 [180x 180]	7.88x 7.88 [200x 200]
Max. Temperature °F [°C]	-22 - +158 [-30 - +70]										

## SAFETY INFORMATION

To avoid personal injury or property damage during system operation, read and follow all CAUTIONS, WARNINGS, and INSTRUCTIONS included with or attached to each product. ENERPAC CANNOT BE RESPONSIBLE FOR DAMAGE OR INJURY RESULTING FROM UNSAFE USE OF PRODUCT, LACK OF MAINTENANCE, OR INCORRECT PRODUCT AND/OR SYSTEM APPLICATION. Contact Enerpac when in doubt as to applications and safety precautions.

Keep this manual for future reference.

### Safety Terminology

**⚠ WARNING** — describes a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

**⚠ CAUTION** — describes a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury and/or property damage.

### General Safety Instructions

#### **⚠ WARNING**

Always wear proper protective gear when operating equipment.

#### **⚠ WARNING**

Use only roller skates which are capable of supporting the load.

#### **⚠ WARNING**

Follow the installation instructions and use care when placing roller skates under the load to prevent the load from slipping off or tipping over.

#### **⚠ WARNING**

Observe the load closely during transport. If the load shows signs of slipping or tipping, discontinue transport. Move the load only when it has been safely repositioned.

#### **⚠ WARNING**

Do not reach under the load during use of the roller skates. If the load should slip during transport, limbs could be crushed or cut off.

#### **⚠ CAUTION**

Roller skates are intended to move moderately heavy loads on even track surfaces, which are able to withstand the full load. See Specifications on page 1.

#### **⚠ CAUTION**

Roller skates are constructed for movement along their horizontal roller axles only.

#### **⚠ CAUTION**

A minimum of 3 roller skates is necessary for safe transport.

#### **⚠ CAUTION**

Do not make any unauthorized modifications to the equipment. Modifications of the product will invalidate your warranty.

# INSTALLATION

## Preparation of Track Surface

A strong surface capable of supporting the load is required. Enerpac recommends a surface of steel plates a minimum of .40 inches [10 mm] thick. Transport over soft surfaces such as tile or wood is not recommended. Movement on concrete is limited.

## Installing the roller skates

**NOTE:** Transportation is easier when roller skates with larger roller diameters are used.

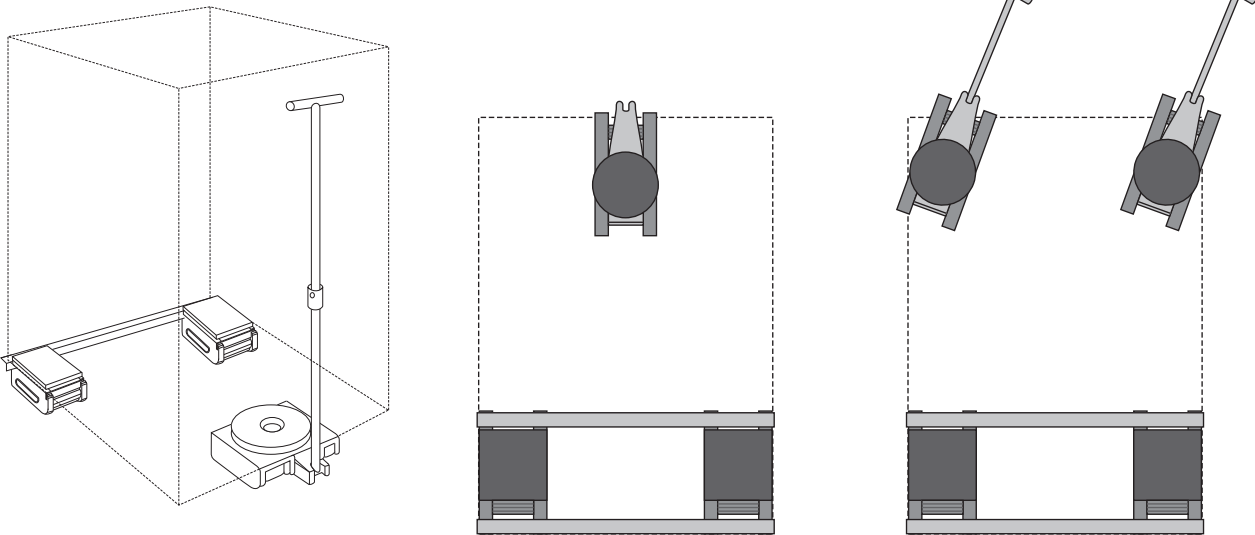
**NOTE:** When transporting loads around corners, use turntables (swivels) and corresponding packing plates on top of the roller skates.

1. Lift the load with a suitable lifting device capable of lifting the load.

### **⚠ WARNING**

**NEVER reach under a load.**

2. Place roller skates under load as shown below.



3. Ensure an equal distribution of the load across the individual roller skates. Use leveling plates to compensate for small differences in height.

4. Align the load skates with the direction of movement.

### **⚠ WARNING**

**The load must rest completely on top of the roller skates, turntables (swivels) or packing plates, or the load may tilt, causing serious personal injury.**

5. To prevent the load from slipping, link the roller skates, turntables (swivels), and packing plates to the load using a suitable frame.

### **⚠ WARNING**

**If the load is not secured to the load by welding, bolting, or a suitable frame, the load could slip and fall. Observe the load carefully during transport and stop transport immediately if the load shows signs of slipping or tipping.**

# OPERATION

## Moving the Load

1. Clean the track surface. If the track surface is not even and clean, the chain may become blocked.
2. Move the load by pushing or pulling the load steadily. Avoid jerking the load. Do not push or pull with the handles.

## **WARNING**

**If a roller skate jams, stop movement immediately.**

Do not exceed the maximum speed of 39 in/min [5 m/min].

Allow for a backstop to prevent the load from rolling back on ascending or descending gradients.

## Turning Corners

Use turntables to guide the load while roller skate is moving. The minimum turning circle is 10 ft. [3 m].

Do not turn corners by force.

### **To turn a corner without a turntable (swivel):**

1. Lift the load.
2. Make sure that the load is completely and safely supported.
3. Align roller skates with the new direction of movement.
4. Lower the load onto the roller skates, making sure that the load rests completely and uniformly on the roller skates.

## Trouble

If the roller chain of one or several roller skates is blocked by obstacles, gently push back the load and remove the obstacle.

If a roller skate is twisted under the load by obstacles, unevenness of the track surface or other problem, follow the instructions below:

1. Lift the load.
2. Make sure the load is completely and safely supported.
3. Remove the obstacle and align the roller skates with the direction of movement.
4. Lower the load onto the roller skates, making sure the that the load rests completely and uniformly on the roller skates.

# MAINTENANCE

## Cleaning

Clean the roller skates and accessories regularly with a thin liquid cleaning solution. Protect roller skates and accessories after cleaning with an anti-corrosion agent. Do not grease the chains. Greasing the chains will cause dirt and dust to stick to them.

## Inspection

Inspect the chain rollers every 3 months. If bolt heads or rivets show signs of wear, replace the entire chain. For information on replacing the chain, see *Replacing the Chain* below.

## Replacing the Chain

### ER1 - ER-30 Models

1. Cut the chain bolt using a chisel, angle grinder, or similar tool.
2. Pull out the bolt to free the chain.
3. Place the new chain in position.
4. Rivet the last chain bolt by hand, using a hammer.

### ER-60, ER-80 Models

1. Loosen the spring washer of the locking pin.
2. Pull out the locking pin to free the chain.
3. Place the new chain in position.
4. Slide the new locking pin in place and fasten it with the spring washer.

Model Number	Part Number
ER-1 Chain (11 rollers, Ø .71 in. [18 mm])	3WA1461
ER-10 Chain (15 rollers, Ø .71 in. [18 mm])	3WA1000
ER-15 Chain (13 rollers, Ø .95 in. [24 mm])	3WA2000
ER-30 Chain (13 rollers, Ø 1.2 in. [30 mm])	3WA3000
ER-60 Chain (13 rollers, Ø 1.7 in. [42 mm])	3WA4000
ER-80 Chain (17 rollers, Ø 2.0 in. [50 mm])	3WA5000

## Spare Parts

Entire components and replacement chain assemblies are available as spare parts. Contact your authorized Enerpac distributor to order spare parts. Please provide serial number and model number when ordering. The model and serial numbers are located on the product label.

**NOTE:** The use of spare parts not supplied by Enerpac can negatively affect operation and reduce safety. Enerpac accepts no responsibility for damage resulting from the use of spare parts not supplied by Enerpac.

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