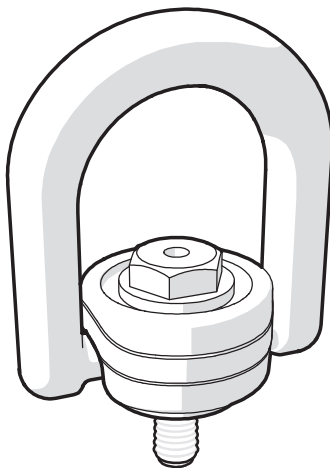


**GUNNEBO**  
Industries

## Rotating Lifting Point (RLP Version 2)

EN	User Manual
DE	Montage- und Bedienungshinweise
ES	Guía del usuario
FR	Manuel de l'utilisateur
IT	Guida utente
SV	Användarmanual



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# User Manual

## General Information

Reference should be made to relevant standards and other statutory regulations. Inspections must be carried out only by people who possess sufficient knowledge.

Before installation and before every use, visually inspect the lifting points, paying particular attention to any evidence of corrosion, wear, weld cracks or deformations. Please ensure compatibility of bolt thread and tapped hole. The Lifting Point RLP consists of several components: Bolt with locking ring, house, bush and D-ring. See picture no 1.

The material construction, to which the lifting point will be attached, should be of adequate strength to withstand forces during lifting without deformation.

### **Minimum thread depth requirements (d refers to bolt diameter):**

- 1 x d for steel (Yield limit >200MPa).
- 1.25 x d for cast iron (Yield limit >200MPa).
- 2.5 x d for aluminum alloy.
- For other metal alloys and other base materials, please consult your Gunnebo Industries distributor.
- The tapped hole depth must take into account the thread length and the internal thread run-out in accordance with SS 1403.

### **Adjusting the bolt length**

If the bolt length needs to be adjusted, the instructions below must be followed:

- The bolt shall be cut in a cold saw or lathe. Since the bolt has been heat treated and hardened, it is of the utmost importance that the temperature is kept as low as possible when cutting.
- After cutting, check the shape of the threads nearest the cut with an appropriately sized die. Bevel if necessary (there must not be any burrs).

### **Nut and washer**

The nut and washer must be the original equipment supplied from Gunnebo Industrier to ensure the correct mechanical properties

### **General assembly instructions:**

The surface facing around the thread hole shall be flat (plane), clear of paint and dirt, and smooth to ensure a perfect contact with the shoulder surface of the lifting point.



1. Constituent parts. Ensure that the locking ring is mounted on the bolt.



2. Place the D-ring on to the bushing.



3. Place the house on the bush. The traceability code should be seen.



4. Put the screw into the bush.



5. Push the bolt until clicking.

### **Conditions for symmetric lifts with 1, 2, 3 or 4 legs**

- For three and four leg lifts, the lifting points should be arranged symmetrically around the center of gravity in the same plane if possible.
- Load Symmetry: The working load limit for Gunnebo Industries lifting points is based on symmetrical loading..
- The lifting points must be positioned on the load in such a way that movement is avoided during lifting.

- For single leg lifts, the lifting point should be vertically above the center of gravity of the load.
- For two leg lifts, the lifting points must be equidistant to or above the center of gravity of the load.

### Conditions for asymmetric lifts with 2, 3 or 4 legs

For unequally loaded chain legs we recommend that the Working Load Limit is determined as follows:

- 2-leg slings calculated as the corresponding 1-leg sling.
- 3 and 4-leg slings calculated as the corresponding 1-leg sling\*.

\* (If 2 legs with full certainty are carrying the major part of the load, the working load limit can be calculated as for the corresponding 2-leg sling.)

### Extreme temperature conditions

Temperature (°C)	Reduction of Working Load Limit
-40° to 200°C	No reduction
200° to 300°C	10% reduction
300° to 400°C	25% reduction
	Temperatures below -40° C or above 400° C not allowed

### Surface treatment

**Note!** Hot-dip galvanising or plating is not allowed without control from the manufacturer.

### Severe environments

Lifting points must not be used in alkaline (> pH10) or acidic conditions (< pH6).

Regular comprehensive examinations must be carried out when used in severe or corrosive environments. In uncertain situations consult your Gunnebo Industries distributor.

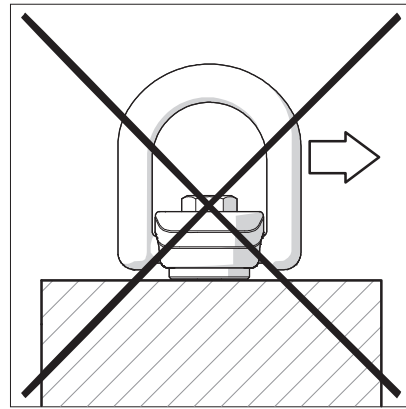
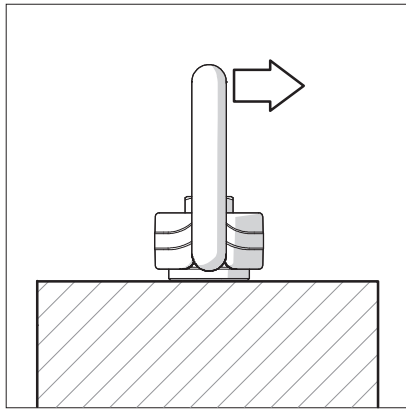
### Protect yourself and others

- Before each use, the lifting point should be checked for obvious damage or deterioration.
- Know the weight of the load and its centre of gravity.
- Ensure the load is ready to move and that no obstacles will obstruct the lifting.
- Check the conformity of the load with the Working Load Limit.
- Prepare the landing site.
- Never overload and avoid shock loading.
- Never use an improper configuration.
- Never use a worn or damaged lifting point.
- Do not ever ride on the load.

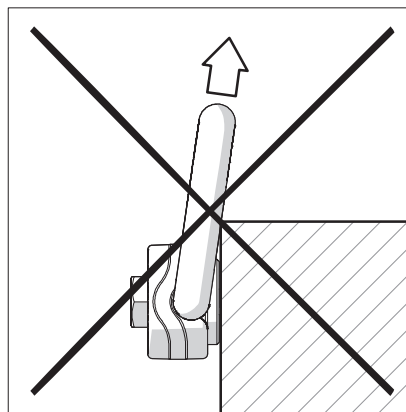
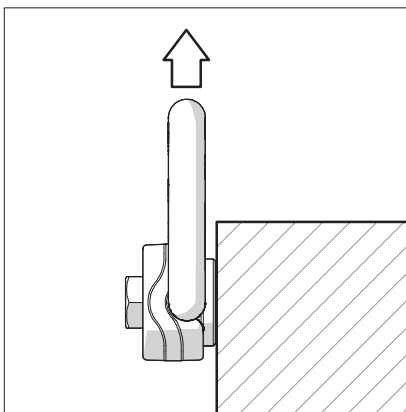
- Do not ever walk or stand under the suspended load.
- Take into consideration that the load may swing or rotate.
- Watch your feet and fingers while loading/unloading.

### Specific Information

- Make sure RLP can rotate 360° and articulate 180° without interfering with other parts.
- RLP should be tightened to torque according to the relevant table (+/- 10%). In case of turning movements the recommended torques must be checked regularly.
- Adjust to the direction of the pull before attaching to the lifting means.



- All fittings connected to the RLP should be free moving. When connecting and disconnecting the lifting means (wire ropes, chain slings, round slings), pinches and impacts should be avoided. Damage to lifting components caused by sharp corners should also be avoided.



- To prevent unintended dismounting through shock loading, rotation or vibration, thread-locking fluid such as Loctite (depending on the application, please refer to the manufacturer's instruction) should be used to secure the bolt.
- Do not fit with larger hook than RLP can accommodate.

### Inspection criteria

- Ensure that the bolt, nut and washer are of the correct size, quality and length, and only Gunnebo Industrier original equipment must be used.
- Ensure compatibility of bolt thread and tapped hole - control of the torque.
- The lifting point should be complete.
- The working load limit and manufacturers stamp should be clearly visible.
- Check for deformation of the component parts such as body, load ring and bolt.
- Check for mechanical damage, such as notches, particularly in high stress areas.
- Wear should be no more than 10% of cross sectional diameter. For measurements of the RLP please see the Gunnebo Industries product catalogue.
- Evidence of corrosion.
- Evidence of cracks.
- Damage to the bolt, nut and/or thread.
- The body of the RLP must be free to rotate.

After fitting, an inspection for suitability should be carried out by a person with sufficient knowledge at least annually or more frequently if conditions merit. Inspections shall also be carried out after any damage or special occurrences.

This safety instruction/declaration of the manufacturer must be kept on file for the lifetime of the product.

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#### **ATTENTION:**

**Please inspect all lifting points prior to use. Damage, incorrect assembly or improper use may result in serious injuries and/or material damage.**

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#### **EC-Declaration of the manufacturer**

According to the Machinery Directive 2006/42/EC, annex II B.

We hereby declare that the design and construction of the equipment detailed within this document, adheres to the appropriate level of health and safety of the corresponding EC regulation.

Any un-authorized modification and/or any incorrect use of the equipment not adhered to within these user instructions waives this declaration invalid.

Failure to carry out the recommended maintenance and testing waives this declaration invalid.

## Technical specifications

Symmetric Load (Tonne)												
	1	1	2	2	2	2	2	2	2	2	2	2
No. of legs	1	1	2	2	2	2	2	2	2	2	2	2
Angle $\beta$	0°*	90°	0°	90°	0-45°	45-60°	0-45°	45-60°	0-45°	45-60°	0-45°	45-60°
RLP -M8x1.25	0.8 T	0.4 T	1.6 T	0.8 T	0.5 T	0.4 T	0.8 T	0.6 T	0.8 T	0.6 T	10 Nm	13 mm
RLP 5/16"-18 UNC	0.8 T	0.4 T	1.6 T	0.8 T	0.5 T	0.4 T	0.8 T	0.6 T	0.8 T	0.6 T	7Ft.Lbs	1/2"
RLP -M10x1.5	1.2 T	0.7 T	2.4 T	1.4 T	0.9 T	0.7 T	1.4 T	1.0 T	1.4 T	1.0 T	15 Nm	13 mm
RLP 3/8"-16 UNC	1.2 T	0.65 T	2.4 T	1.3 T	0.9 T	0.6 T	1.3 T	0.9 T	1.3 T	0.9 T	11Ft.Lbs	1/2"
RLP -M12x1.75	2.0 T	1.2 T	4.0 T	2.4 T	1.6 T	1.2 T	2.5 T	1.8 T	2.5 T	1.8 T	27 Nm	24 mm
RLP 1/2"-13 UNC	2.0 T	1.2 T	4.0 T	2.4 T	1.6 T	1.2 T	2.5 T	1.8 T	2.5 T	1.8 T	20Ft.Lbs	15/16"
RLP -M16x2	3.2 T	2.0 T	6.4 T	4.0 T	2.8 T	2.0 T	4.2 T	3.0 T	4.2 T	3.0 T	60 Nm	24 mm
RLP 5/8"-11 UNC	3.2 T	2.0 T	6.4 T	4.0 T	2.8 T	2.0 T	4.2 T	3.0 T	4.2 T	3.0 T	44Ft.Lbs	15/16"
RLP -M20x2.5	5.6 T	2.8 T	11.2 T	5.6 T	3.9 T	2.8 T	5.8 T	4.2 T	5.8 T	4.2 T	90 Nm	32 mm
RLP 3/4"-10 UNC	5.0 T	2.5 T	10.0 T	5.0 T	3.5 T	2.5 T	5.2 T	3.7 T	5.2 T	3.7 T	66Ft.Lbs	1 5/16"
RLP 7/8"-9 UNC	5.6 T	2.8 T	11.2 T	5.6 T	3.9 T	2.8 T	5.8 T	4.2 T	5.8 T	4.2 T	66Ft.Lbs	1 5/16"
RLP -M24x3	8.0 T	4.6 T	16.0 T	9.2 T	6.4 T	4.6 T	9.6 T	6.9 T	9.6 T	6.9 T	135 Nm	32 mm
RLP 1"-8 UNC	8.0 T	4.6 T	16.0 T	9.2 T	6.4 T	4.6 T	9.6 T	6.9 T	9.6 T	6.9 T	100Ft.Lbs	1 5/16"
RLP -M30x3.5	12.0 T	6.0 T	24.0 T	12.0 T	8.4 T	6.0 T	12.6 T	9.0 T	12.6 T	9.0 T	270 Nm	55 mm
RLP 1 1/4"-7 UNC	12.0 T	6.0 T	24.0 T	12.0 T	8.4 T	6.0 T	12.6 T	9.0 T	12.6 T	9.0 T	200Ft.Lbs	2 3/8"
RLP -M36x4	14.0 T	8.0 T	28.0 T	16.0 T	11.2 T	8.0 T	16.8 T	12.0 T	16.8 T	12.0 T	320 Nm	55 mm
RLP 1 1/2"-6 UNC	14.0 T	8.0 T	28.0 T	16.0 T	11.2 T	8.0 T	16.8 T	12.0 T	16.8 T	12.0 T	236Ft.Lbs	2 3/8"
RLP -M42x4.5	16.0 T	14.0 T	32.0 T	28.0 T	19.6 T	14.0 T	29.4 T	21.0 T	29.4 T	21.0 T	600 Nm	75 mm
RLP 1 3/4"-5 UNC	16.0 T	14.0 T	32.0 T	28.0 T	19.6 T	14.0 T	29.4 T	21.0 T	29.4 T	21.0 T	440Ft.Lbs	3"
RLP -M48x5	20.0 T	16.0 T	40.0 T	32.0 T	22.4 T	16.0 T	33.6 T	24.0 T	33.6 T	24.0 T	800 Nm	75 mm
RLP 2"-4.5 UNC	20.0 T	16.0 T	40.0 T	32.0 T	22.4 T	16.0 T	33.6 T	24.0 T	33.6 T	24.0 T	590Ft.Lbs	3"

### Safety factor 4:1

\* provided only axial loading takes place. ie no bending force applied in the direction of the thread.