User-Guide

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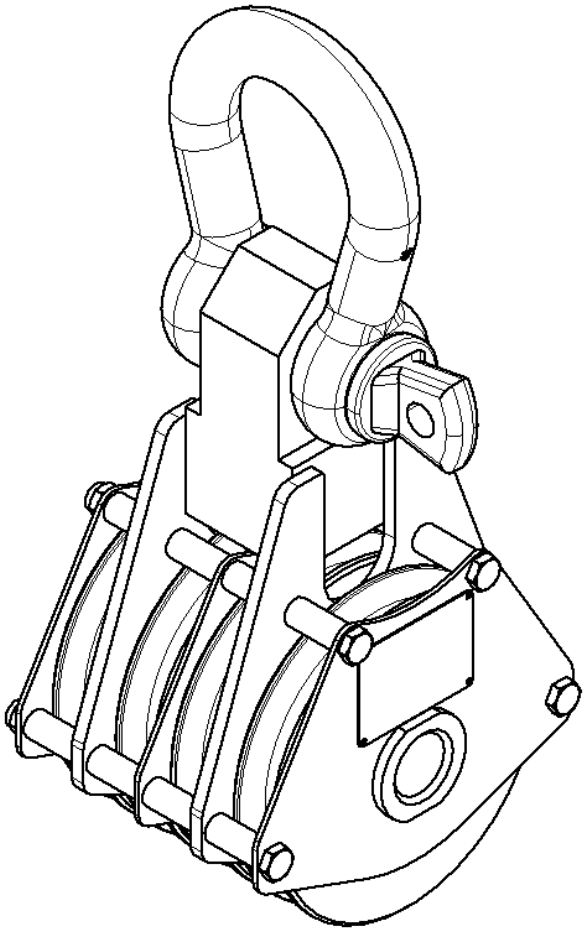
Pulley block 4-roller
128 kN



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Contents

1 General description

The three-roller rope block is used in conjunction with a second rope block of the same type to increase the tensile force of a rope. The maximum force at the shackle of this rope block is 96 kN.

The plastic rope pulleys are mounted on permanently lubricated deep groove ball bearings. All three rope pulleys are completely enclosed by the metal housing so that the rope can never derail. Therefore, the rope must be threaded. The rope pulleys are equipped with a shackle for fastening.

Function:
By threading a rope between two rope blocks, the tensile force on the rope block is increased in proportion to the number of ropes. With two three-roller rope blocks, the tensile force on the shackle of the rope block is therefore six times greater than on the rope.

2 General safety regulations

Jakob Rope Systems products comply with the currently valid safety requirements of the European Union in accordance with Directive 2006/42/EC (Machinery Directive), the relevant standards for rope drives, and product safety requirements.
However, laws, regulations, and safety devices offer no protection against carelessness and inattention! Only use the rope pulley when it is in perfect condition and in accordance with the operating instructions. Before working with the rope pulley, you must carefully read and observe the following safety instructions.
It's about your safety!

2.1 Safety instructions in these operating instructions

The following symbols and descriptions are used for hazards, warnings, and important information:

- Notes are particularly important pieces of information that you must observe for the intended use of the technology described.

- Caution! Note in case of danger to the machine, machine parts, and the environment.

- Danger! Warning of danger to the health and life of the operator and other persons in the work area.

2.2 Intended use

The rope pulley is intended for temporary assembly work to deflect wire and fiber ropes or to double the tensile force. It is not intended for permanent loads or for deflecting ropes that are in continuous motion.

- The rope pulley must not be used for transporting persons.

2.3 Warranty and liability

The warranty and liability are governed by the General Terms and Conditions of Jakob Rope Systems. In particular, sections 10 and 11 of the General Terms and Conditions.

2.4 Behavior in an emergency

Before starting work, always find out whether and where there is a mobile phone network or whether a conventional telephone is available. Check the availability of a first aid kit.

2.5 Preparation

2.5.1 Anchoring

- The anchors must have a sufficient nominal load capacity.

- Always push the anchoring bolts in completely and lock them by turning them.
- Attach the rope block to the tested sling with sufficient nominal load capacity, such as wire rope slings or textile lifting slings, to the anchor bolt.
- Do not use damaged slings.
- Rope couplings and safety devices must not come loose on their own when unloaded.
- The rope pulley must be able to move freely in the direction of pull of the rope. Otherwise, there is a risk of the housing breaking.
- For prolonged use in the same location: Check the anchors regularly.

2.5.2 Load

- The efficiency of deflections must be taken into account when designing the system.

2.5.3 Rope

- The wire or fiber rope must be suitable for continuous use and the bending diameter of the pulley.
- The rope diameter must match the groove diameter of the pulley. Observe the maximum rope diameters in § 3. The rope must not get stuck in the groove. Check used rope pulleys for any worn grooves.
- Spiral ropes such as 1x7, 1x19, or 1x37 and locked spiral ropes must not be used in rope blocks.
- Damage to the rope: Do not use crushed, twisted, out-of-round, kinked ropes or ropes with kinks or broken strands. **(ISO 4309)**
- Ropes with broken wires: remove carefully and correctly.
- Do not run rope connections, sleeves, press heads, short splices, etc. through the rope pulley.
- When deflecting the rope over sharp edges, obstacles, etc., protect the rope with suitable floor rollers or wooden or plastic supports.

2.6 Pulling

2.6.1 Pulling and lifting

- Never pull hooks against the rope block.
- In unclear situations: observation by assistants, with radio contact if necessary.
- Never stand inside or underneath the rope strands.
- Never touch the running rope near the rope pulley.

- Observe the rope during movement.
- Observe the movement of the load.

3 Technical data

Rope block	4-roller 128 kN
Item	02036
Load capacity at shackle	128 kN
Max. rope pull force	8 x 16 kN
Number of rollers	4
Diameter at groove base	150 mm
Max. rope diameter	11.2 mm
Max. rope speed	100 m/min
Weight	25 kg
Rope pulley bearing	Ball bearing
Rope pulley material	Plastic
Permissible temperature range for use and storage	-20°C to +50°C

4 Operation

4.1 Preparation

4.1.1 Anchoring

The best anchoring points are:	- Fixed objects and structures - concrete rings - Eyelets or rods
Natural anchors:	- Strong/heavy boulders - Trees - Other suitable objects
Technical anchors:	- Rock anchors, concrete anchors - Round timber anchors in the ground - These anchors depend heavily on the soil conditions.

4.1.2 Load

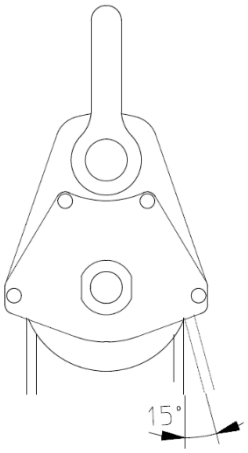
Reduce the tensile force by using rope pulleys.

- The efficiency of the rope pulley must be taken into account when designing the rope system. As a rule, an efficiency of 98% per deflection can be assumed.

- Caution: Icy rollers or stiff bearings in the pulley block can lead to an extreme deterioration in efficiency. The rollers must be checked for smooth running before installation.
- Caution: The choice of sheave angle can influence the alignment of the pulleys under tensile force. If these become misaligned during operation, this can lead to an extreme deterioration in efficiency. In this case, the pulley arrangement must be changed.
- Secure the rope block against twisting.

4.1.3 Operation

- First determine the position of the pulling device and the end attachment of the rope and thus the correct sequence for threading. The rope direction may deviate by a maximum of 15° from the connecting line of the two rope pulleys.
- Attach rope blocks with suitable slings so that they can move freely in the direction of pull.
- The anchor bolt of the shackle must be installed correctly.
- Only a rope with one end, i.e., without fittings, can be attached to these rope blocks.
- Push the rope with the tip from below against the shackle to retract the rope pulley.
- A pulling sock is suitable for easily inserting the rope around the rope pulley.
- Secure the rope tip with a suitable means.



Permissible diagonal pull

4.2 Storage and transport

The device must be stored in a dry place. The device must be covered to protect it from dust during transport and storage.

5 Maintenance

The following inspection and maintenance work must be carried out:

Work	At the start of work	If necessary	Comments
General visual inspection: - Middle section - Shackle - Pulley / rope groove	X	X	
Screw check		X	After initial use or overhaul

The rope pulley must be inspected at least **once a year** (see sticker on the device) by a recognized inspection expert for slings.
The inspections must be arranged by the operator.
In addition, additional inspections by a qualified expert must be arranged at shorter intervals in accordance with local regulations and in the case of heavy-duty use.

6 Spare parts

Spare parts are listed separately. This list can be requested from Jakob AG.

7 Disposal

Observe the regulations for disposal applicable in your country.
Dispose of even the smallest amounts of oil properly or take them to the appropriate facilities.
When dismantling, separate the materials as far as possible to enable recycling: store metal and plastic parts separately or send them for recycling.
Remember that protecting the environment and recycling materials benefits us all.