

Camlok®

SCREW CLAMPS



TSH CLAMP

WLL 750 - 5000 KG (PER PIECE)

TSZ CLAMP

WLL 500 - 7500 KG (PER PIECE)

EN- OPERATING MANUAL

(ALSO APPLICABLE FOR SPECIAL VERSIONS)

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Introduction

Products of Columbus McKinnon Corporation Limited have been built in accordance with the state-of-the-art and generally accepted engineering standards. Nonetheless, incorrect handling when using the products may cause dangers to life and limb of the user or third parties and/or damage to the hoist or other property.

The operating company is responsible for the proper and professional instruction of the operating personnel. For this purpose, all operators must read these operating instructions carefully prior to the initial operation.

These operating instructions are intended to acquaint the user with the product and enable him to use it to the full extent of its intended capabilities. The operating instructions contain important information on how to operate the product in a safe, correct and economic way. Acting in accordance with these instructions helps to avoid dangers, reduce repair costs and downtimes and to increase the reliability and lifetime of the product. The operating instructions must always be available at the place where the product is operated. Apart from the operating instructions and the accident prevention act valid for the respective country and area where the product is used, the commonly accepted regulations for safe and professional work must also be adhered to.

The personnel responsible for operation, maintenance or repair of the product must read, understand and follow these operating instructions.

The indicated protective measures will only provide the necessary safety, if the product is operated correctly and installed and/or maintained according to the instructions. The operating company is committed to ensure safe and trouble-free operation of the product.

TSH/TSZ Screw Clamps

| Model | WLL kg | Jaw capacity Z mm | Weight Kg |
|---------|--------|-------------------|-----------|
| TSH750 | 750 | 0-30 | 3.1 |
| TSH1500 | 1500 | 0-32 | 7.4 |
| TSH3000 | 3000 | 0-50 | 11.4 |
| TSH5000 | 5000 | 0-80 | 27.6 |
| TSZ500 | 500 | 0-28 | 2.3 |
| TSZ1500 | 1500 | 0-35 | 5.6 |
| TSZ3000 | 3000 | 0-35 | 8.8 |
| TSZ5000 | 5000 | 0-40 | 16.2 |
| TSZ7500 | 7500 | 0-40 | 20.9 |

Table 1

General Safety

- ⚠ ALWAYS wear practical, protective clothing, gloves and footwear as a minimum.
- ⚠ ALWAYS bear in mind your safety and the safety of others while using this equipment.
- ⚠ DO NOT operate this equipment, if you feel ill, tired or are under the influence of alcohol or drugs.
- ⚠ This equipment MUST NOT be used to carry or lift personnel.

General Safety

- ALWAYS** check the operation of your Camlok lifting clamp before use.
- ALWAYS** place the palm of the hand on top of the load.
- ALWAYS** stand clear when lifting or lowering.
- ALWAYS** keep a record of inspections and repairs.
- ALWAYS** transport the load as close to the floor as possible.
- NEVER** use a worn or damaged Camlok lifting clamp.
- NEVER** lift more than one plate/product at a time.
- NEVER** leave a suspended load unattended or place a plate down on edge for a long period of time.
- NEVER** exceed the maximum working load limit
- NEVER** lower fast, **ALWAYS** lift and lower gently.
- NEVER** stand under a suspended load and if guiding a load by hand, **NEVER** grip the load with fingers on the underside.
- NEVER** pull or push the load where the crane cannot reach
- NEVER** force the locking lever.

Product Overview

The TSH 'swivel hook' screw are supplied complete with an alloy safety shackle that allows for pulling at 180° degrees.

The TSZ 'two way' screw clamps offers many possible uses. The unique design of the spindle makes it easy to attach to 'angle' plate. This is achieved by simply turning the handle which applies the pressure to the plate holding it securely. Two lifting points enable it to be pulled in two different directions.

The Camlok range of pulling clamps offer an easy way of attaching pulling equipment to steel structures. They are used for holding and the correction of alignment problems. The clamps have hardened teeth on the jaw and the clamping screw which give a firm grip on the plate. A mechanism behind the jaw applies a greater gripping force to the plate as the jaw is tilted. A large shackle is fitted to accommodate the hooks of the pulling equipment. This type of clamp is ideal for use on folded and beaded sheet metal.

The surface of the material to be lifted by these clamps must not exceed a hardness level of HRC 50/Brinell 480.

Fitting:

- Check that the plate is free from grease, standing water, oil, scale and is not coated with paint or film.
- For long plates use 2 clamps and a lifting beam.
- Check the weight of the clamp and ensure the lifting sling is slack.
- Push the load lifting attachment – with the spindle wide open – with its mouth up to the stop.
- Tighten the thread spindle by hand.
- Owing to the pad mounted on a pivot bearing, the load is jammed in the clamp as soon as the load lifting attachment is lifted.
- Take care not to damage the lifting surfaces.
- Check correct fitting and position before lifting.
- Check chain sling for twisting.

Lifting & Transport:

- Never lift more than one plate at a time.
- For short plates, a single clamp can be used. For long plates two clamps and a lifting beam must be used.
- Never exceed the maximum working load limit or pick up loads weighing less than the minimum working load limit as marked on each clamp.
- Check position and fitting of clamp as weight is applied
- Check for obstacles prior to lift. Lift slowly and smoothly at all times.
- Lifting slings must be vertical at all times.
- Always keep clear of the area below and surrounding the load while lifting and transporting as the plate may kick or swing as it lifts from the floor.
- Minimise the danger area by moving plates as close to the ground as possible.
- Take precautions to stop the load from swinging.
- Don't sideload the clamp over the permitted angle as shown below.

Release:

- Place loads down gently. Fast lowering may release the clamp.
- Make sure that when depositing the load, there is enough space for freely turning the thread spindle
- The clamp can only be released when the entire load is removed.
- In order to remove the load lifting attachment from the load after the transport process, travel the suspension (e.g. hook, shackle, etc.) downwards until it is unloaded and the shackle moves freely.
- Do not force or hit the lever.

Testing/Service:

All Camlok lifting clamps are tested before sale to a proof load of twice the working load limit. Any clamp that has been repaired must be tested.

Care and Maintenance:

The maintenance schedule is based on normal usage of clamps operating in a workshop environment. Maintenance frequency must be increased if clamps are subject to heavy usage or operated in adverse conditions.

Fasteners fitted to 'Camlok' clamps are retained with Loctite 270 Thread Locking Compound unless the bolt is secured with a nylon nut. DO NOT use any other grade. For maintenance, use heat to loosen locking compound (up to 80°). Always keep a record of inspections and repairs.

The components which need to be inspected are detailed in table 2 with the correct frequency.

| | Check | Daily | Weekly | 3 Months |
|---|---|-------|--------|----------|
| A | Smooth operation of locking screw | ✓ | ✓ | ✓ |
| B | Welds for cracks | - | ✓ | ✓ |
| C | Distortion in the body | - | ✓ | ✓ |
| D | Elongation of the pulling eyes | - | ✓ | ✓ |
| E | Clean teeth, remove all grit, dirt & mud from pad | ✓ | ✓ | ✓ |

Table 2

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COLUMBUS MCKINNON

Columbus McKinnon has a history of over 150 years and is a world leader in lifting and intelligent motion control technology. The innovative portfolio of high-quality brands, including Stahl CraneSystems, Magnetek, Pfaff-silberblau, Duff-Norton, Yale, Dörner, CM and montratec addresses the needs of our customers by enhancing safety and promoting growth and efficiency. Experience, expertise and innovation

combined with a deep understanding of user needs are the formula for success that has long underpinned our portfolio of hoists, material handling equipment and lifting accessories. Columbus McKinnon is a global organization headquartered in Charlotte, USA (North Carolina). Its global presence includes offices and manufacturing facilities in North America, Latin America, Europe, Africa and Asia.



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