

# Camlok®

## THIN SHEET HORIZONTAL PLATE CLAMPS

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## THK CLAMP

WLL 750 – 9000 KG (PER PAIR)

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.

**THK Clamp**

Model	WLL kg per pair	Jaw capacity Z mm	Weight kg per pair
THK750	40-750	0-25	3
THK1500	75-500	0-35	6
THK3000	150-3000	0-35	11
THK4500	250-4500	0-45	16
THK6000	300-6000	0-60	23
THK9000	450-9000	0-60	35

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 THK horizontal plate clamps share the same basic design features as the CH range of clamps but have a reversed tooth jaw design. This safety feature is designed for use with thin sheets which may have a tendency to deflect or sag or flex.

Suited to thin plate with a surface hardness less than 300 Brinell/32 Rockwell C.

**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 pairs of clamps and a lifting beam.
- Check the weight of the clamp and ensure the lifting sling is slack.
- Position the clamps on opposite edges of the plates in line with the center of gravity (for single pair operation).
- Take care not to damage the lifting surfaces.
- Check correct fitting and position before lifting.
- Check chain sling for twisting.

**Lifting & Transport:**

- For short plates, a single pair of clamps can be used. For long plates two pair clamps and a lifting beam must be used. For round plates, it is suggested to use three or more clamps to prevent the plate from tilting.
- DO NOT use endless chain slings or 4 leg slings.
- Reposition the clamps if the plate tilts more than 5° to the side.
- 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 & Transport:**

- 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.
- The maximum chain sling angle, shown in following, must not exceed 30°
- It is forbidden to apply lateral tensile forces with an inclination angle of more than 15° to the load lifting attachment

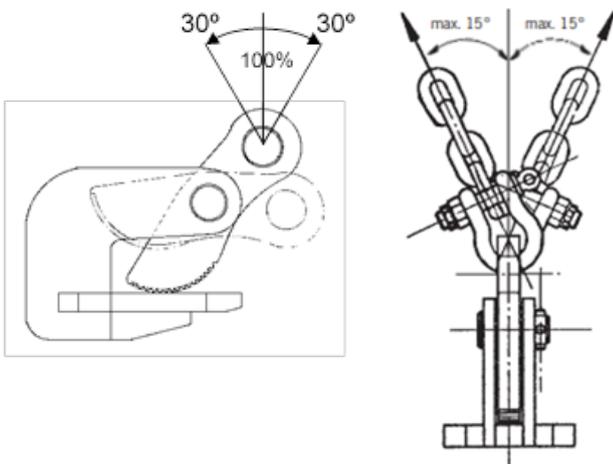


Figure 1

**Release:**

- Place loads down gently. Fast lowering may release the clamp.
- The clamp should only be released when the entire load is removed.

**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 to this load before re-entering service.

**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 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 the table below with correct frequency.

	Check	Daily	Weekly	3 Months
A	Smooth operation	✓	✓	✓
B	Welds for cracks	✓	✓	✓
C	Distortion in the shell plates	✓	✓	✓
D	Obvious signs of damage	✓	✓	✓
E	Clean teeth, remove all grit, dirt & mud	-	✓	✓
F	Lubricate all moving parts with a soft grease	-	✓	✓
G	Fasteners for integrity & tightness	-	✓	✓
H	Distortion in jaw bolt, internal links & spring	-	-	✓
I	Jaw & pad wear	-	-	✓
J	Locking cam handle for wear	-	-	✓

Table 2

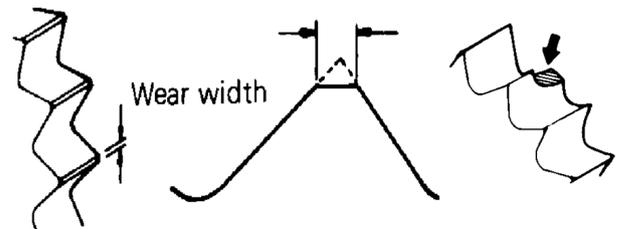


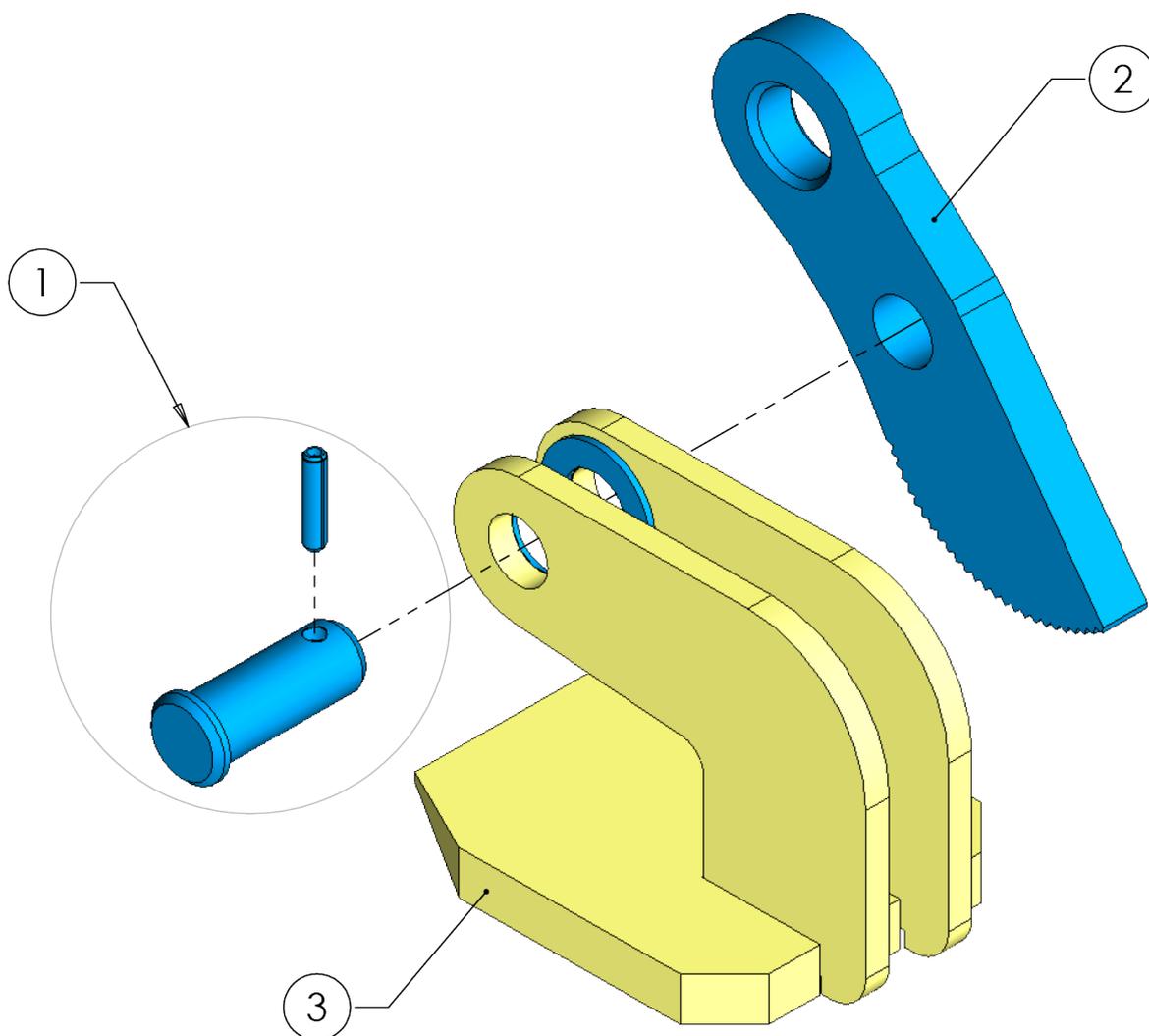
Figure 2 - The maximum wear width as shown above should not exceed the dimensions shown in the table below.

THK750	THK1500	THK3000	THK4500	THK6000	THK9000
0.6-0.8 mm	0.6-0.8 mm	0.8-1.0 mm	0.8-1.0 mm	1.0-1.2 mm	1.0-1.4 mm

Table 3

**Note:** Chipped teeth are only acceptable if the chip is less than half the width of the tooth and the adjoining teeth are undamaged.

THK Spares Breakdown:



MODEL	REF 1	REF 2	REF 3
THK750	N59711762	N59711761	N59711760
THK1500	N59711765	N59711764	N59711763
THK3000	N59711768	N59711767	N59711766
THK4500	N59711771	N59711770	N59711769
THK6000	N59711774	N59711773	N59711772
THK9000	N59711777	N59711776	N59711775
<b>DESCRIPTION</b>	<b>Jaw Pin Assy</b>	<b>Jaw</b>	<b>Body Assy</b>

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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, Dornier, 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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