

Camlok®

TWIN JAW VERTICAL PLATE CLAMPS



TJC CLAMP

WLL 10 - 300 KG (PER PIECE)

EN- OPERATING MANUAL

(ALSO APPLICABLE FOR SPECIAL VERSIONS)

Columbus McKinnon Corporation Limited
Knutsford Way,
Sealand Industrial Estate,
Chester
CH1 4NZ
United Kingdom

CMCO
INTELLIGENT MOTION
Columbus McKinnon

Tel: +44 (0) 1244 375375

Email: sales.uk@cmco.eu

Web: www.cmco.com

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 them 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

TJC Clamp

Model	WLL kg	Jaw capacity Z mm	Weight kg
TJC300	10-300	0-30	3
TJC300L	10-300	30-60	3

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 TJC twin jaw vertical plate clamps have been specifically designed for lifting materials with low minimum weight but large thickness. The main difference between the TJC and the 92 Series (which is our standard vertical plate clamp) is that the TJC has a unique twin moving jaw arrangement. The TJC clamp can lift and turn plate through 180°. The CAMLOK TJC series of plate clamps can be used on all structural steel plates and sections up to a surface hardness of 300 Brinell (32RHC). For other materials consult your supplier before use. The weight of the plate MUST exceed the value for minimum load stamped on the side of the clamp.

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.
- Turn the locking lever clockwise to lock the jaws open.
- Position the clamp on the edge of the plate over the centre of gravity and to the full depth of the mouth.
- Take care not to damage the lifting surfaces.
- Place the fixed jaw onto the plate and turn the lever anticlockwise to the 'LOCK' position.
- 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.

Lifting & Transport:

- 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.

Release:

- Place loads down gently. Fast lowering may release the clamp.
- DO NOT lower if the locking lever is not in the 'LOCK' position.
- The clamp can only be released when the entire load is removed.
- The lifting sling must have sufficient slack to allow the hooking to withdraw into the clamp.
- Push the hooking down and into the clamp shell while turning the locking lever.
- 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 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 nyloc 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	-	-	✓
K	Spring tension	-	-	✓

Table 2

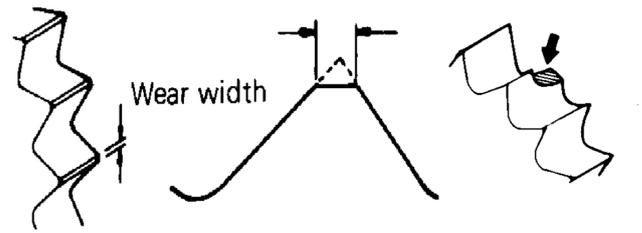


Figure 1 - The maximum wear width as shown above should not exceed the dimensions shown in the table below.

TJC300 and TJC300L
0.5-0.6 mm

0.5-0.6 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.

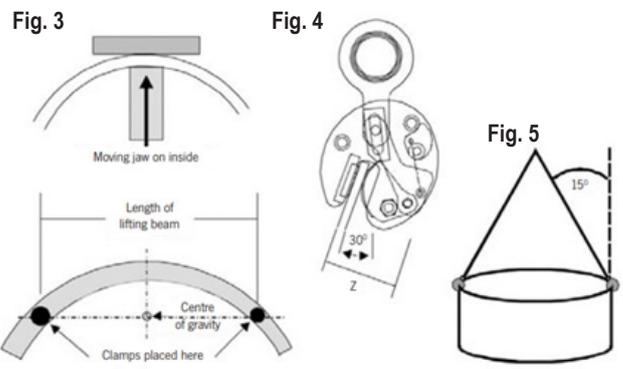
Curved Surfaces:

When using clamps to lift curved objects, the following should be observed:

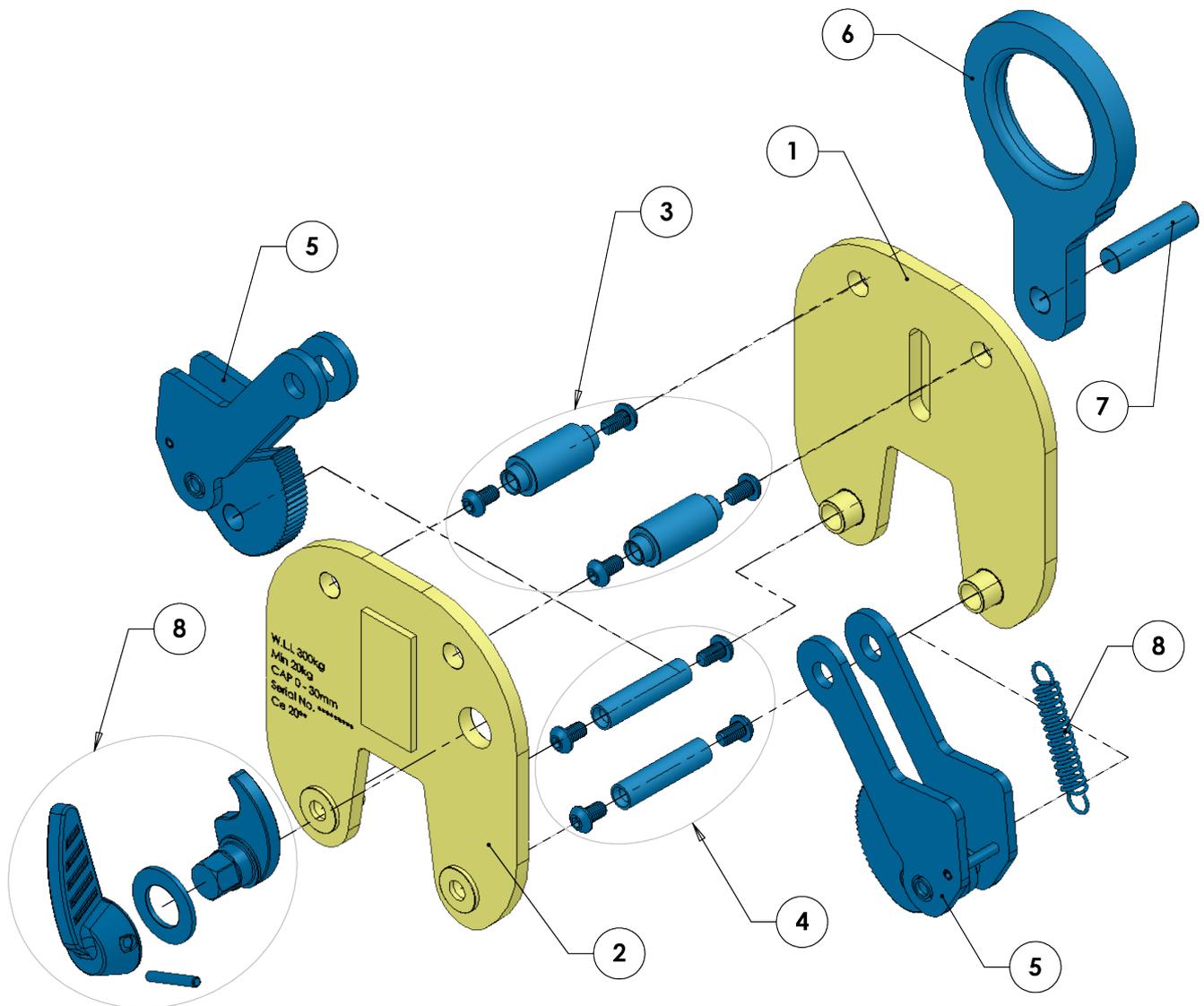
- W.L.L. reduced to 75% of that marked on the clamp. Minimum W.L.L. is unaffected.
- The moving jaw must be placed on the inside of the curve (fig 3).
- The minimum internal diameter is 2.5 times the distance from the fixed jaw to the opposite edge of the clamp

SINGLE CLAMP - The clamp must not exceed 30° tilt from the vertical (fig. 4).

MULTIPLE CLAMPS - When using a multi-leg sling the maximum sling angle from the vertical is 15° (fig. 5).



TJC Spares Breakdown:



REF No.	TJC300	TJC300/L	DESCRIPTION
1 & 2	N4300015265		Shell Plate Assy
3	N4300015268	N4300015268	Spacer Pin C/w Screws
4	N4300013702	N4300013702	Jaw Pins C/w Screws
5	N4300013271		Internal Assy C/w Spring
6	N4300015267		Hookring
7	192042457	192042457	Hookring Pin
8	N4300013777	N4300013777	Cam Assy
9 ONLY	N4300001990	N4300001990	Spring

CHESTER OFFICE

Knutsford Way, Sealand Industrial Estate
Chester, CH1 4NZ
United Kingdom
Telephone: +44 (0) 1244 375375
Email: sales.uk@cmco.eu
www.cmco.com

BELFAST OFFICE

Unit 1A Ferguson Centre, 57-59 Manse Road
Newtownabbey, BT36 6RW
United Kingdom
Telephone: +44 (0) 2890 840697
Email: sales.ni@cmco.eu
www.columbusmckinnon.ie/ni

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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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