

Camlok®

HINGED VERTICAL PLATE CLAMPS



CY CLAMP

WLL 100 - 3000KG

EN- OPERATING MANUAL & SPARE PARTS LIST

CAMLOK LIFTING CLAMPS

A TRADING DIVISION OF

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Operating Instructions

Safety

- There is a serious risk of personal injury if you do not follow the instructions as detailed in this booklet.
- DO NOT use this equipment until you have read and fully understood these instructions. This equipment has been designed for use by a competent person who has undergone training and who has read and understood the instructions.
- ALWAYS wear practical, protective clothing, gloves and footwear as a minimum.
- 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.
- ALWAYS bear in mind your safety and the safety of others while using this equipment.

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, reduce downtimes and 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 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.

Product Overview

The CY clamp has a swivelling hook ring enabling the clamp to accommodate side loads and lift irregularly shaped plates. The operator can use a pair of clamps with a two leg chain sling to increase the stability of the lift, which is useful when handling longer plates, plates with an unknown CoG, or when the user cannot use a single plane clamp such as a CZ clamp.

The Camlok CY series of plate clamps can be used on all structural steel plates up to a surface hardness of 300 Brinell (32RHC). For other materials or special operational conditions (high humidity, salty, caustic, alkaline, cold or elevated temperatures) consult your supplier or the manufacturer before use.

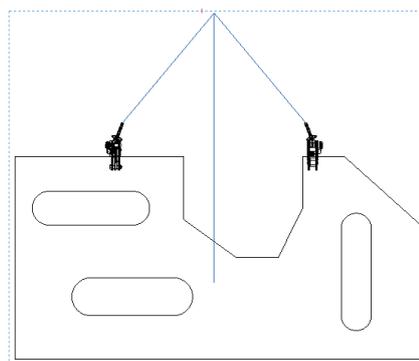


Figure 1

CY Vertical Plate Clamp

Model	W.L.L kg	Plate Thickness mm
CY1	1000	20
CY2	2000	32
CY3	3000	32

Table 1

Correct Operation

For efficient grip, the weight of the plate MUST exceed the value for minimum load stamped on the side of the clamp.

The lifting sling must remain vertical throughout the lifting operation.

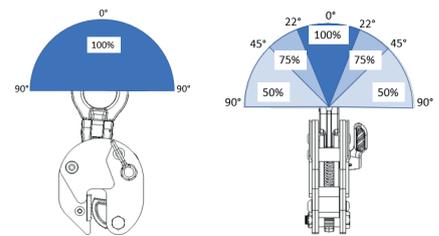


Figure 2

A single CY clamp is not best suited to handling rectangular plates, this is best handled with a CZ or 92 series type clamp.

Camlok Checklist

- Always check the operation of your Camlok lifting clamp before use.
- Always stand clear when lifting or lowering.
- Always keep a record of inspections and repairs.
- Never use a worn or damaged lifting clamp.
- Never lift more than one plate at a time.
- Never exceed the maximum working load limit.
- Never leave a suspended load unattended, or place a plate down on edge for a long period of time.
- Never fast lower. Always gently lift and lower.
- Never force the locking lever.
- Never stand under a suspended load.
- Never grip the load with fingers on the underside. If guiding a load by hand always place the palm of the hand on top of the load.

Clamp Fitting

- Check that the plate is free from grease, oil, scale and is not coated with paint or film.
- 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 square to the edge of the plate to the full depth of the mouth.
- 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.

Note: All fasteners fitted to Camlok clamps are retained with Loctite 270 Thread Locking compound. DO NOT use any other grade.

Use of a Pair with a Two-Leg Sling

When using the CY clamp with a two leg chain sling the maximum load permitted is shown in Table 2.

Use of a Pair with a Two-Leg Sling

Angle	CY1	CY2	CY3
0 - 15°	2000 kg	4000 kg	6000 kg
15 - 45°	1000 kg	2000 kg	3000 kg
45 - 60°	500 kg	1000 kg	1500 kg

Table 2

The clamps must be fitted on the same side of the plate with the body square to the edge as demonstrated in Figure 3.

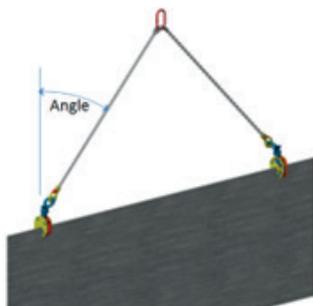


Figure 3

Lifting and Transport

- Check position and fitting of clamp as weight is applied.
- Lift slowly and smoothly at all times.
- Lifting slings, or the plane of a 2-leg sling, must be vertical at all times.
- Check both legs are loaded evenly.
- Take extra care at the transition from horizontal to vertical lifting. The plate may kick or swing as it lifts from the floor.
- Take precautions to stop the load from swinging.
- Take precautions when transporting loads, so the plate will not collide with any objects.
- Minimise load swing.
- Minimise the danger area by moving plates as close to the ground as possible.

Release

Place loads down gently. Fast lowering may release the clamp.

Note: 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.

Inspection/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

- De-grease clamps regularly by removing all grit, dirt and mud
- Lubricate all moving parts with a soft grease
- Inspect every 1-4 weeks, depending on use
- Check for wear in the cam faces, hooking and chain.
- Check for distortion in the shell plates, jaw bolt, internal links and the spring.
- Check any welds for cracks.
- Check for smooth operation
- Check fasteners for integrity and tightness.

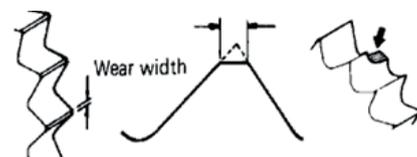


Figure 4

The maximum wear width as shown in Figure 4 above should not exceed the dimensions shown in the table below.

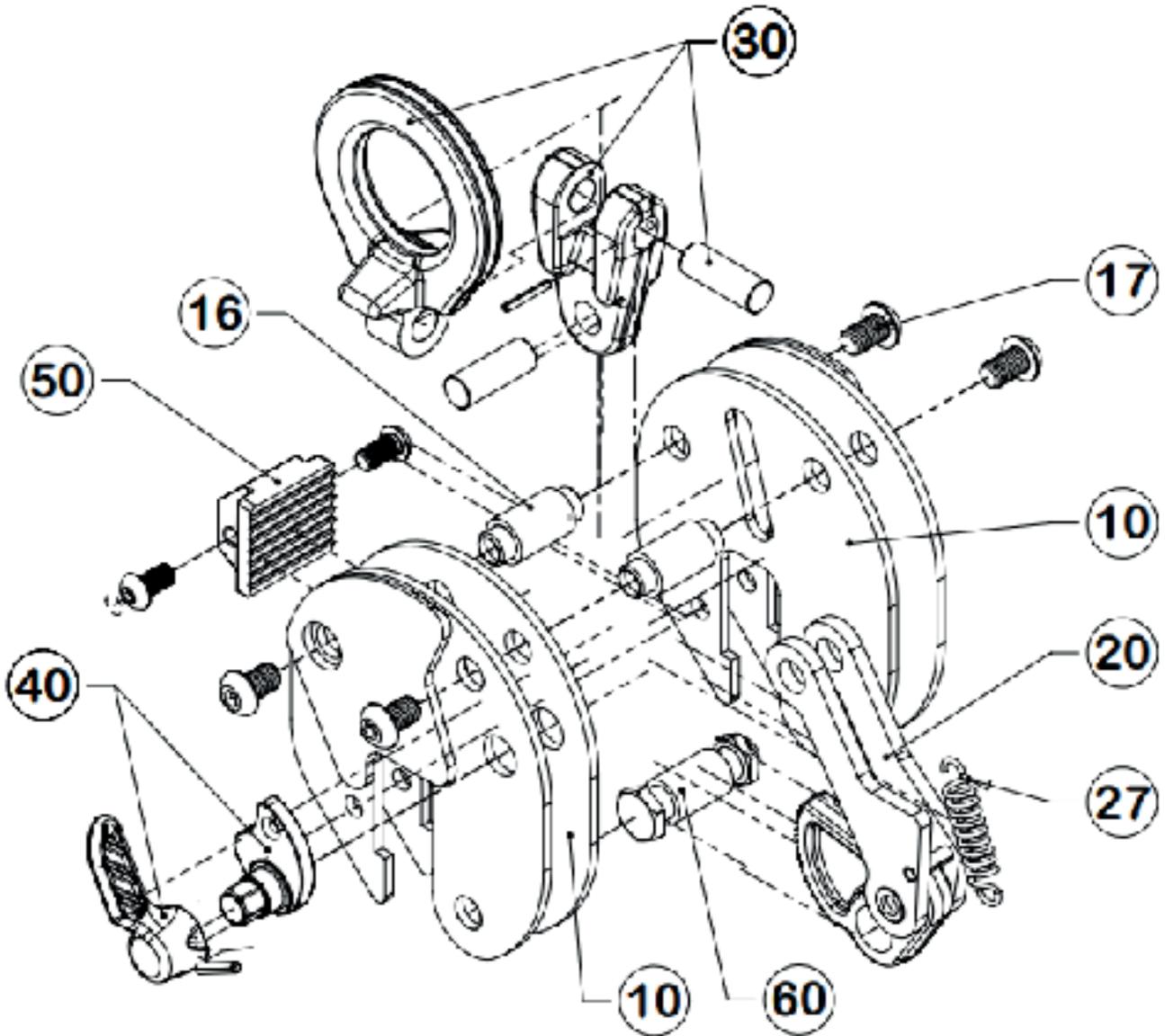
Maximum Wear Width Dimensions

CY1	CY2	CY3
0.6 - 0.8 mm	0.8 - 1.0 mm	0.8 - 1.0 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.





Spare Parts List

Ref. No	Description	CY1	CY2	CY3
10	Shell plates (set of 4)	N4300001276	N4300001283	N4300001285
16	Shell pins (set of 2)	N4300004902	N4300001288	N4300001288
17	Shell screws (set of 4)	N4300008258	N4300008317	N4300008317
20	Internal assembly c/w spring	N59210356	N59210376	N59210376
27	Spring only	N59210362	N59210382	N59210382
30	Swivel hook ring assembly comp.	192097480	192097481	192097481
40	Cam assembly	N59000737	N59000285	N4300001268
50	Pad assembly	N59210357	N59210377	N59210377
60	Jaw bolt assembly	N5911127	N4300001286	N4300001286

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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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