

Camlok®

VERTICAL PLATE CLAMPS



TAG CLAMP

WLL 350 - 5,000 KG (PER PIECE)

TWG CLAMP

WLL 750 - 1,250 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 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.

TAG/TWG Clamp

Model	WLL kg	Jaw capacity Z mm	Weight kg
TAG750/100	75-750	0-100	9
TAG750/200	75-750	90-200	15
TAG1250/100	125-1250	0-100	15
TAG1250/200	125-1250	90-200	26
TAG2000/100	200-2000	0-100	22
TAG2000/200	200-2000	90-200	30
TAG3000/90	300-3000	5-90	25.5
TAG5000/90	500-5000	5-90	30
TWG750/100	75-750	30-100	11
TWG750/200	75-750	100-200	16
TWG1250/100	125-1250	30-100	16
TWG1250/200	125-1250	100-200	23

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 TAG vertical clamps are extremely versatile. They have a large jaw capacity that enables them to be used on a multitude of applications such as loading machine tools, steel constructions, welding and numerous assembly functions. The design means that they do not require additional chain slings and are very easy and simple to use.

The automatic gripping force is retained by a positive tension jaw spring, even if there is slack in the chain. The clamps are also fitted with a 'Quick-Open' lever for ease of loading and unloading.

The TWG vertical grab is a variation of the TAG. It is specially designed with a small outside measurement for use on hard-to-reach places such as loading billets on to a lathe etc.

The Camlok TAG series of plate lifting clamps can be used on all structural steel plates and sections up to a surface hardness of 223 Brinell (20RHC).

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.
- To release the jaw, pull the 'quick open lever' and lower the clamp over the plate.
- Position the clamp on the edge of the plate over the centre of gravity and to the full depth of the mouth
- Ensure the clamp is square to the plate and the chain isn't tangled or trapped within the jaw
- Take up the slack in the chain prior to lifting the plate and ensure the chain isn't twisted between the rollers

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.

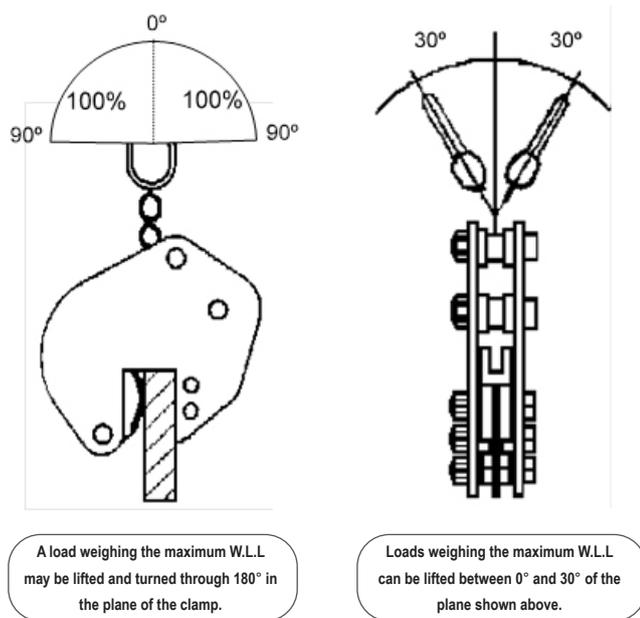


Figure 1 - Load diagram with lifting slings vertical

Release:

- Place loads down gently
- Before attempting to release clamp, ensure there is enough slack in the chain to allow the jaw to open
- To release the jaw, pull the 'quick open lever' and remove the clamp from the plate

Note: For larger TAG/TWG clamps, a lifting sling could be threaded around the chain roller to help lift the weight whilst operating the 'quick open 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

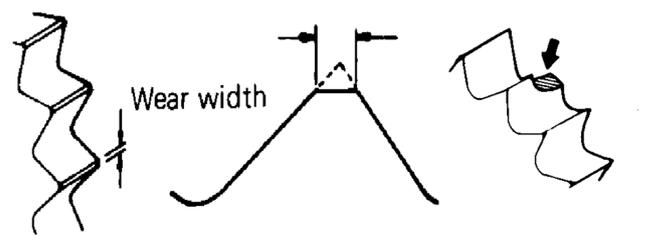


Figure 2 - The maximum wear width as shown above should not exceed the dimensions shown in the table below.

TAG750	TAG1250	TAG2000	TAG3000	TAG5000	TWG750	TWG1250
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	0.6-0.8 mm	0.6-0.8 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.

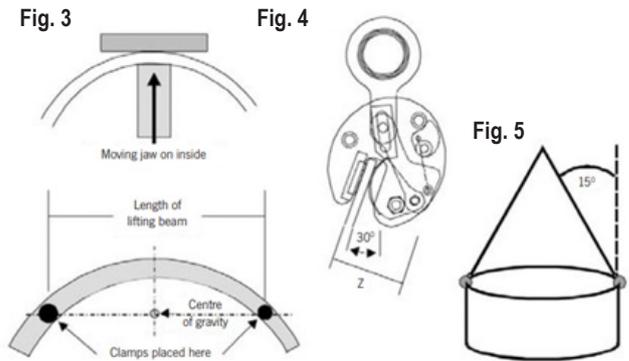
Curved Surfaces:

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).



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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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