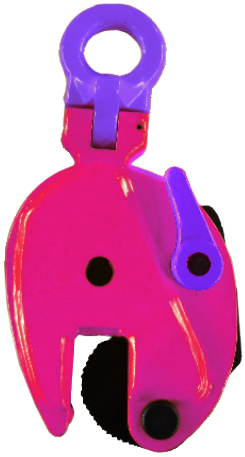
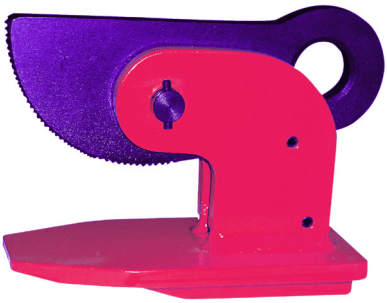
PLATE CLAMPS

INSTRUCTION MANUAL

Imported exclusively by Pacific Hoists Pty. Ltd. & Pacific Hoists Ltd.
In support of cancer charities in Australia & New Zealand



Universal Plate Clamp



Horizontal Plate Clamp

IMPORTANT

PLEASE READ THIS OPERATION MANUAL BEFORE USING THIS PRODUCT. THIS MANUAL CONTAINS IMPORTANT INFORMATION REGARDING SAFETY, OPERATION, INSTALLATION & MAINTENANCE.

INTRODUCTION

Thank you for purchasing your new Challenger Plate Clamp. This lifting device now uses the latest technology to ensure you of a higher quality, robust design with a high level of operator safety which is easier and safer to use, ensuring a longer service life. Choosing the Challenger brand also directly supports cancer charities in Australia & New Zealand.

It is important that this manual be kept in a safe place where any operator of the Challenger Plate Clamp can refer to it and understand the operating principles of this device. All users of this Challenger Plate Clamp should read this manual in full and understand the safe operating principles of the device.

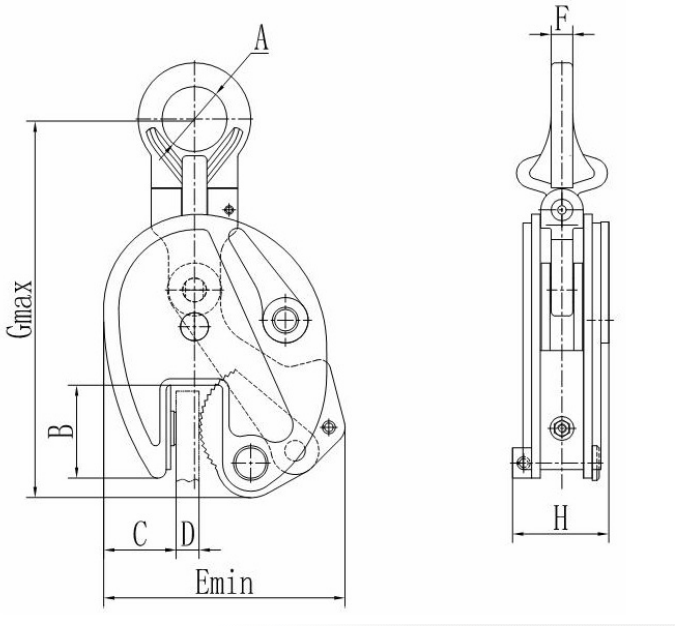
FEATURES

FEATURES OF THE CHALLENGER PLATE CLAMPS INCLUDE THE FOLLOWING

- The Challenger Plate Clamps are manufactured to comply with AS4991.
- Designed for the lifting and transferring of steel plates and other materials in a wide variety of industries such as; shipbuilding, construction, aircraft and offshore applications.
- The Challenger vertical and horizontal plate clamps are suitable for the lifting and transfer in vertical and horizontal position of non-sagging steel plates.
- These plate clamps are manufactured from high quality steel to guarantee the safety and durability required by industrial applications.
- All clamps have been ergonomically designed to be user-friendly (smaller, lighter and more compact) while not sacrificing strength and durability.
- For every model sold, a donation will be made to the McGrath Foundation in Australia and the Child Cancer Foundation in New Zealand.

SPECIFICATIONS

Challenger Universal Plate Clamps

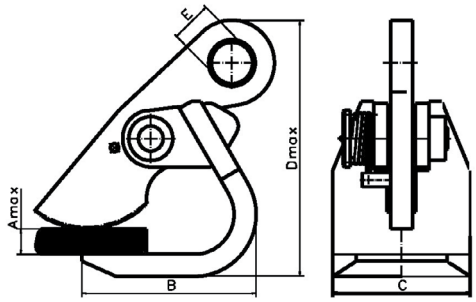


Model	CCL110	CCL111	CCL112	CCL113	CCL115
Capacity (Kg)	500	1000	2000	3000	5000
Jaw (mm)	0 - 15	0 - 20	0 - 25	0 - 30	0 - 50
Dimensions (mm) A	ϕ30	ϕ48	ϕ68	ϕ74	ϕ80
B	43	63	78	85	100
C	34	50	61	57	66
D	0 - 17	0 - 22	0 - 27	0 - 32	0 - 52
Emin	106	145	174	207	240
F	10	12	16	20	24
Gmax	216	292	369	428	481
H	50	66	76	102	110
Net weight (Kg)	2	4.5	7.3	15	21.6

HIGHER CAPACITY AVAILABLE UPON REQUEST

SPECIFICATIONS (CONT.)

Challenger Horizontal Plate Clamps



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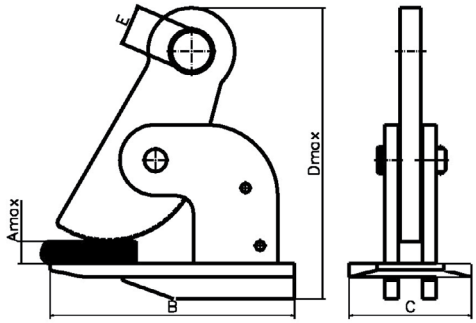

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Model	CCL121	CCL122	CCL123	CCL124
Capacity per unit (Kg)	750	1500	2500	4500
Capacity per pair (Kg)	1500	3000	5000	9000
Jaw (mm)	0 - 50	0 - 50	0 - 60	0 - 100
Dimensions (mm) Amax	50	50	60	100
B	127	220	260	290
C	100	110	130	165
Dmax	218	270	315	425
E	ϕ30	ϕ36	ϕ40	ϕ40
Net weight per unit (Kg)	4.1	7.4	13.8	28.6
Net weight per pair (Kg)	8.2	14.8	27.6	57.2

SAFETY INSTRUCTIONS

THE FOLLOWING SAFETY INSTRUCTIONS OUTLINE THE CARE AND SAFE USE OF UNIVERSAL AND HORIZONTAL PLATE CLAMPS AND ARE BASED ON SECTION 22 OF THE LEEA CODE OF PRACTICE FOR THE SAFE USE OF LIFTING EQUIPMENT.

This information is of a general nature; only covering the main points for the safe use of plate clamps. It may be necessary to supplement this information for specific applications.

SELECTING THE CORRECT PLATE CLAMP

Challenger offers two basic types of plate clamps but the facility they offer may vary with make.

- Universal Plate Clamp – they can be used for either horizontal or vertical plates and to rotate them. They may also permit angular loading in the plane of the plate
  - Suitable for material surface hardness upto 37 HRC

- Horizontal plate clamp – designed to be used in pairs to lift horizontal plates only. Some are in the form of a specially shaped hook without a cam, others have a cam which grips the plate. They are used in conjunction with a sling which must be of the right type to ensure that the geometry and therefore the gripping forces are correct.

GENERAL SAFETY INSTRUCTIONS

- Check the clamp before use – do not use a defective plate clamp.
- Ensure that the clamps are suitable for the thickness of plate to be lifted.
- Never exceed the maximum or minimum thickness for which the clamps are designed.
- Put the clamp onto the plate as far as it will go.
- Do not use clamps at an angle to the edge of the plate or for lowering from vertical to horizontal, or vice-versa, unless they are designed for the purpose.
- Keep oil, grease and similar contaminates away from jaws which use a friction grip material to hold the plate.
- Never use plate clamps on hard or polished plate unless they have been specifically designed for that purpose.
- Take great care to ensure the plate is fully supported before attempting to release the clamp.
- Keep all persons clear of the danger zone and remember that a falling plate can 'glide' sideways. A large thin plate is likely to glide further. Also the higher it falls from, the bigger the danger zone.

SAFETY INSTRUCTIONS (CONT.)

USING THE UNIVERSAL PLATE CLAMP SAFELY

- Some designs of clamp, particularly those with a moving cam action jaw where the initial grip is provided by a spring, have a minimum load and minimum plate thickness they can safely lift. Wherever possible refer to the manufacturer's instructions but in the absence of specific guidance the load should not be less 10% of the rated capacity. The minimum plate thickness should not be less than 20% of the maximum jaw range. For more information contact Pacific Hoists technical support.
- Some designs of plate clamp are suitable for lifting plates from the horizontal to the vertical and the inclusion of a pendant chain to provide articulation between the clamp and lifting hook is essential. However the use of pendant chains should always be considered to prevent the hook weight being imposed on the clamp as this might cause the clamp to be released.
- Position the clamp correctly. Place the clamp over the centre of gravity of the plate. If the plate is long and has a tendency to bend, use two clamps equally disposed about the centre of gravity in conjunction with a spreader beam.
- Take care to ensure no one clamp takes more than its rated capacity.
- Ensure the clamp is fully locked or tightened onto the plate before lifting.
- Under no circumstances should packing be placed between the plate and the jaws nor any attempt made to lift more than one plate in the clamp.
- When using the universal type, check the manufacturer's instructions for the limitations on the angles they may be used at.

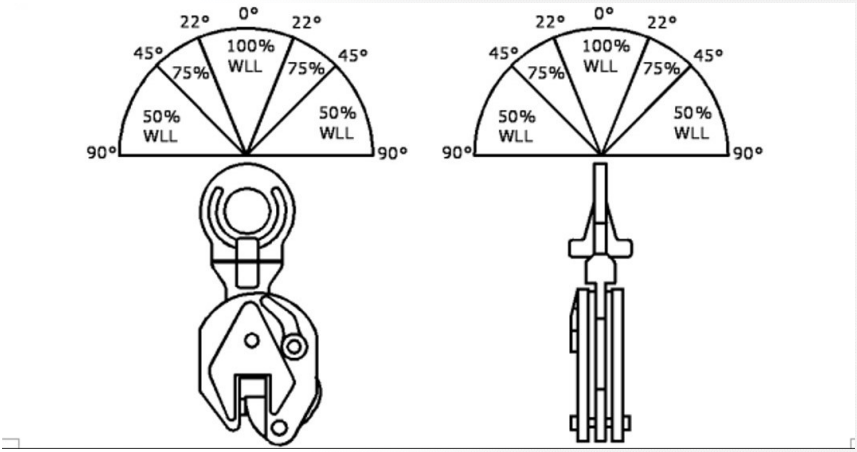
DON'T FORGET!!

- **Never** overload a clamp
  (if more than one is used ensure each can take its share)
- **Never** exceed the permitted maximum or minimum thickness
- **Never** use beyond the permitted angles
- **Never** use on hard or polished plate unless designed for that purpose
- **Never** try to lift more than one plate
- **Never** place packing between the plate and the jaws

SAFETY INSTRUCTIONS (CONT.)

USING THE UNIVERSAL PLATE CLAMP SAFELY

- Universal plate lifting clamps can be used in any orientation but the WLL must be reduced in some cases. See the diagram below to make determination of WLL permitted.



SAFETY INSTRUCTIONS (CONT.)

USING THE HORIZONTAL PLATE CLAMP SAFELY

- Always use horizontal plate clamps in pairs with the correct type, size and length sling and reeved in the manner for which they are designed. Some of these clamps are designed to be used with an endless loop of chain whilst others are for use with a two leg sling. Under no circumstances must an endless loop be substituted for a two leg sling or vice versa as this will alter the geometry and therefore the gripping forces on which the clamps rely for their safe operation.
- If the plates are likely to sag transversely, clamps which grip the plate by a cam must be used.
- Position the clamps correctly. Place the clamps over the centre of gravity of the plate. If the plate is long and has a tendency to bend use two or more pairs of clamps in conjunction with a spreader beam, equally disposed about the centre of gravity, to minimise the sag. Ensure the clamps face each other to balance the horizontal clamping forces.
- Take care to ensure no one clamp takes more than its rated capacity.
- Put the clamps onto the plate as far as they will go.
- If the sling is adjustable to accommodate various widths of plate ensure it is adjusted to give the correct geometry.
- Never attempt to rotate from the horizontal to the vertical or vice versa with this type of clamp.

DON'T FORGET!!

- **Never** overload a plate clamp
- **Never** use a single clamp – always in pairs
- **Never** exceed the permitted maximum or minimum thickness
- **Never** substitute an endless loop for a two-leg sling or vice versa
- **Never** exceed the permitted range of sling leg angles
- **Never** use the cam-less type if the plate can sag
- **Never** attempt to rotate from the horizontal to the vertical with this type of clamp

SERVICE & MAINTENANCE

IN-SERVICE INSPECTION

Regularly inspect the plate clamp. If any of the following defects are found, refer to a Competent Person:.

- Wear, damage or distortion to fixed and moving jaws.
- Frame opening out or cracked.
- Insecure, worn or bent pins, bolts etc.
- Worn friction grip material.
- Damaged, bent or unsatisfactory action locking lever.
- Tight, bent or damaged clamping threads etc.
- Corrosion.
- Illegible marking.

MAINTENANCE

Plate clamps should be cleaned and any moving parts lubricated at appropriate intervals, unless the suppliers specific instructions indicate otherwise. In the case of clamps with smooth jaws lined with a friction material, care must be taken to ensure no lubricant comes into contact with the friction material.

WARNING: Teeth of jaws must not be re-sharpened or re-cut unless this has been specifically approved by the maker.

OPERATING INSTRUCTIONS

- Commence to open the plate clamp by pulling the latch lever towards the jaw
- Continue to place the plate clamp securely to the to-be lifted material and make sure that the jaw of the place clamp rests on the material.
- The plate clamp will close by pulling the latch lever towards to lifting eye. The clamp will now stay attached to the to-be lifted material in the pretensioned position.
- The lifting application can begin.
- After the lifting application is completed, make sure the clamp is fully free of load by decending the crane hook. The lifting eye of the plate clamp can now move freely and you are able to open the clamp by pulling the latch lever towards to jaw.
- When storing the plate clamp, please leave the clamp in an opened position. This position will protect the teeth from damaging.

WARRANTY

Pacific Hoists Pty Ltd (ABN 88 000 631 032) warrants that all products distributed by the company are guaranteed against any apparent fault arising from manufacturing defects caused by faulty materials and / or workmanship.

Should any part fail due to the above within 24 months, Pacific Hoists Pty Ltd will repair or replace the defective part free of charge. To make a claim pursuant to this warranty, the equipment must be delivered to Pacific Hoists Pty Ltd. Freight charges both ways are payable by the claimant and no liability is accepted for loss or damage during transit. The claimant is required to produce the original invoice or other purchase documents as proof of purchase when making a claim pursuant to this warranty.

The warranty does not cover the purchaser or any other person for damage, loss, normal wear or faults caused from misuse or incorrect installation of the equipment.

To be eligible under this warranty, the equipment is required to have been installed and operated correctly by qualified personnel and has not been subject to abuse, neglect or adjustment carried out by an unauthorized person.

This warranty may only be varied with the written approval of the Directors of Pacific Hoists Pty Ltd.

In the following statement 'Our' means 'Pacific Hoists Pty Ltd' and 'You' means the 'claimant.'

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

The benefits given to the claimant in this warranty are in addition to other rights and remedies under a law in relation to the goods or services to which this warranty applies.

INSPECTION LOG

INITIAL SERVICE DATE: **SERIAL NO:**

DATE	NOTES	AUTH SIGNATURE

Imported exclusively by Pacific Hoists Pty. Ltd. and Pacific Hoists Ltd.
For further information in relation to this product,
please contact the branch where the product was purchased.

HEAD OFFICE
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www.pacifichoists.com.au

Thank you for choosing the Challenger brand. Not only are you choosing a quality and reliable brand but you are also helping to support cancer charities in Australia & New Zealand.