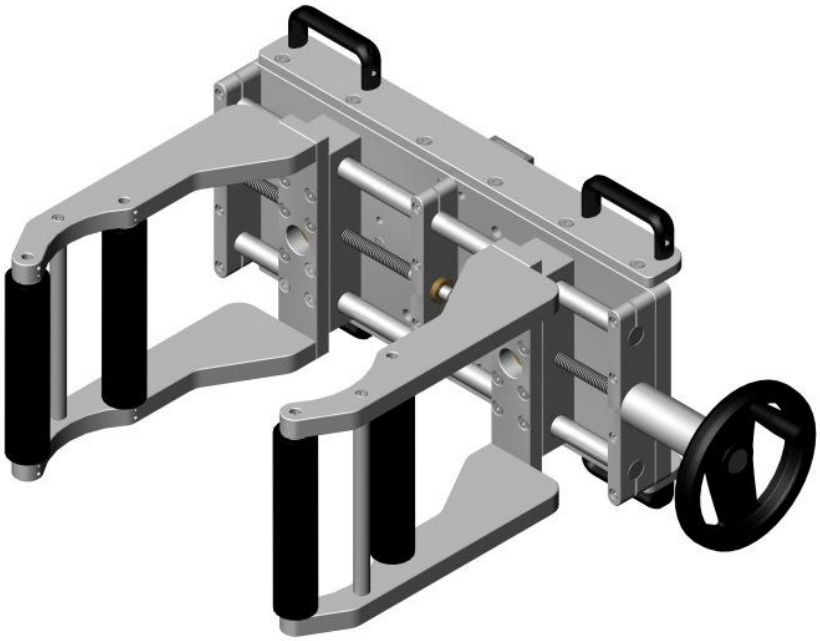
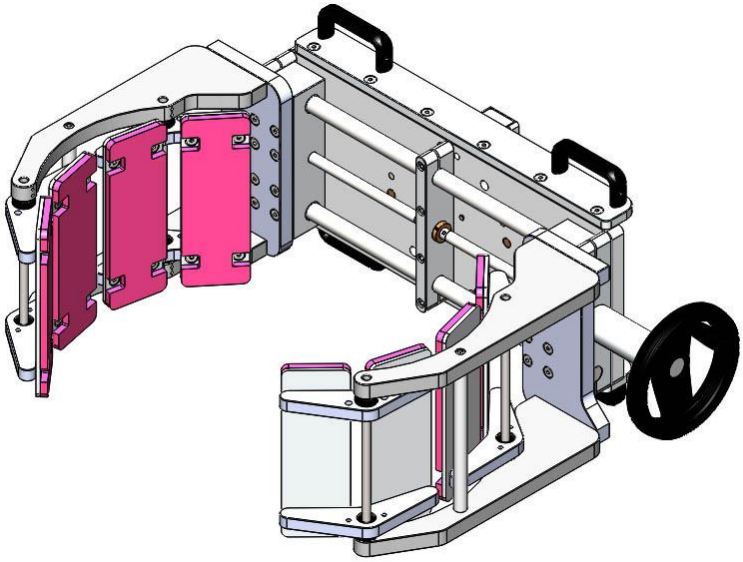
Clamp Attachment





Operator Manual

Read this manual before use

For European models this manual supports the CE Declaration of Conformity

Retain for future reference

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Introduction

Scope of Manual

This manual has been compiled to assist in the operation and maintenance of the Packline Clamp Attachment and in the case of European models to meet regulations stated in the CE Declaration of Conformity.

There are individual datasheets for the Clamp Attachments and their optional features. Please ensure you have the relevant datasheet supplied with this manual. For bespoke solutions, an addendum may be supplied to give specific information on the design.

General Safety

The Packline Clamp Attachment should:

- **Be specified to your application** - Considering strength, stability and suitability. Taking into account the Safe Working Load of the Lifter and its fitted Attachment - the load should not exceed the guidelines i.e. max. load and load centre distance.
- **Be tested with the specified load/reel -** Every effort has been made to ensure that the Lifter and Attachment are suitable to most applications however, due to variations in reel construction and type of load, each application should be tested for suitability and safe operation.
- **Only be installed and maintained by competent authorised person(s).**
- **Only be operated by trained authorised personnel -** To aid in-house training, Packline are able to offer training packages.
- **Only be operated according to the instructions set out in this manual -** Ensure all relevant personnel have access to this document. Packline Ltd will not accept responsibility for any consequences arising from misuse of the Lifting Attachments.
- **Only be maintained in accordance with the National regulations -** The Packline Maintenance Schedule supports European LOLER 98 regulations.
- **NOT be operated unless all supplied covers, guards and fail-safe locks are correctly fitted.**
- **NOT be modified without the written permission of Packline Ltd -** The company will not be held responsible for any injuries to personnel or damage caused, due to unathorised modification of equipment.
- **Be disposed of in a responsible manner** - If in doubt, contact Packline Ltd.

Terms used in this manual:

Warning!	This may result in injury if not observed.
Caution	This may cause damage to equipment if not observed.
Note	This highlights correct use of equipment or characteristics of the equipment.

The contents of this publication may not be copied, either whole or in part, without the consent of Packline Ltd.

Due to our policy of continuous improvement, Packline reserves the right to make technical improvements and alterations without notice.

Operational Safety

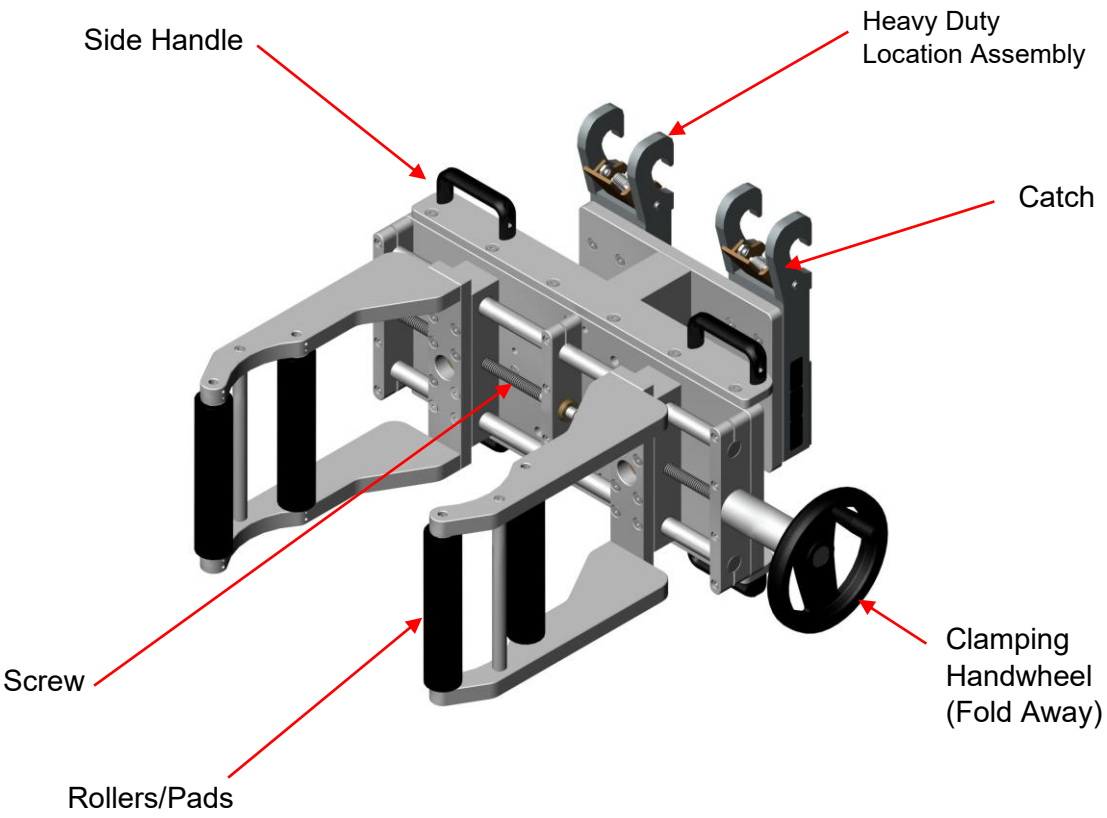
Do Not:

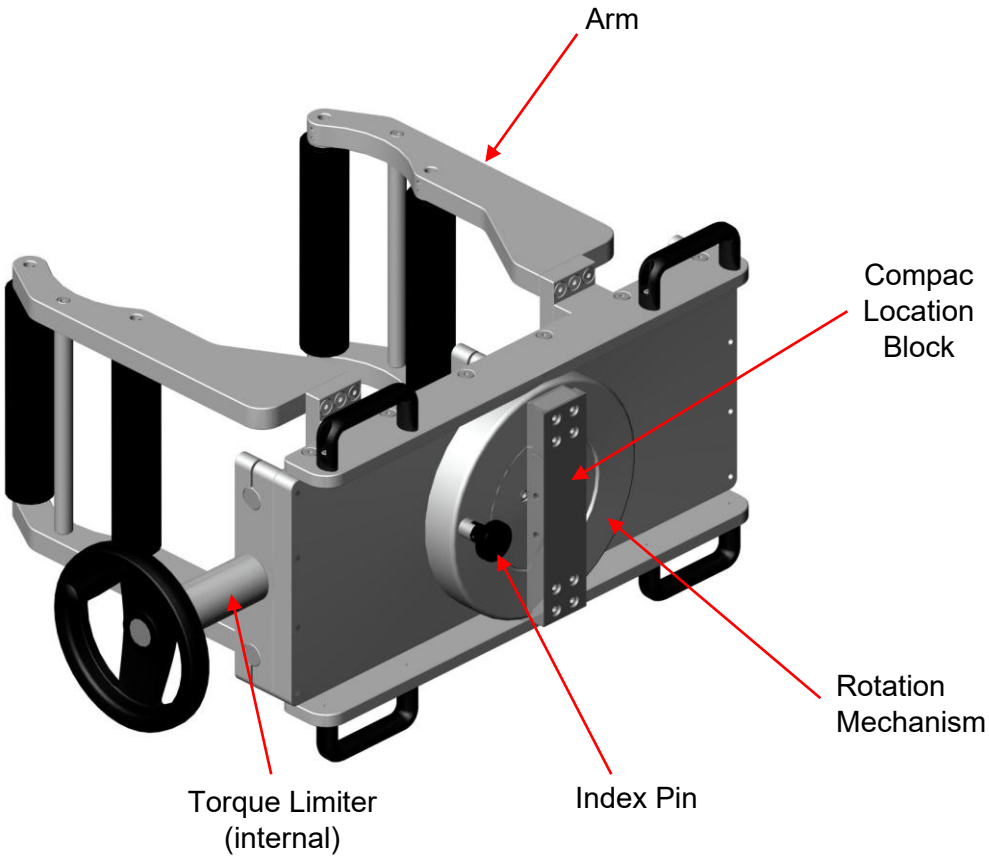
- Attempt to lift loads that exceed the certified **SAFE WORKING LOAD** and load-centre distance of the Lifter or the Attachment.
- Lift objects other than those specified by Packline Ltd.
- Drop loads onto the Attachment, as this can bend or weaken the Attachment or the Lifter.
- Attempt to use the Attachment if damaged or malfunctioning.
- Use in a potentially explosive atmosphere.
- Run near the Lifter or Attachment.
- Operate the Lifter when a person is loading/unloading the Attachment.
- Swing or step on the Attachment - the Attachment is not for lifting personnel.
- Wear loose garments.
- Remove covers, or service Attachment unless trained.
- Allow the Attachment to rest on an obstacle whilst lowering due to the risk of overturning or dropping load.
- Maneuver a Lifter with the Attachment in the uppermost position except for positioning purposes during loading and unloading operations.
- Allow the Attachment to have direct contact with foodstuffs.
- Stand or put body parts under an elevated load.
- Operate the Attachment if the service period has expired.
- Leave equipment loaded for a period longer than required for the application. If leaving the unit, the load should be relieved.

Always:

- Follow HSE guidelines for safe lifting and handling.
- Ensure hands and feet are clear of all moving parts and care is taken not to trap them whilst loading/unloading.
- Transport loads at a safe speed.
- Use the Attachments as specified.
- Check the condition of the Lifter and Attachment before and after use.
- Wear protective footwear when using the Attachment and handling loads. Ensure long hair is tied back
- Wear protective gloves if using constantly.
- Engage/disengage loads properly from Attachment - follow guidelines.
- Locate Attachment with label upwards (when using with Compac Lifter)
- Observe Attachment and load combination and individual ratings.
- If using in a constricted area, operate from unobstructed side.
- Ensure adequate lighting levels and visibility for safe operation.

Part Designation





Technical Specification

Capabilities	A technical specification for the individual purchased attachment should be supplied separately detailing overall dimensions and spare parts.
Construction	Mainly constructed from anodised Aluminium 6082/T6, Stainless Steel 303/304, Phosphor Bronze, Brass, Delrin/Acetal and Polypropylene. The Heavy-Duty Location kit contains zinc plated mild steel parts. Depending on the application, the clamping pads may use Nitrile or Neoprene rubber to grip the load.
Rotating Mechanism	This allows the reel to be turned using physical effort through 360 degrees about the centre of mass. As the load increases, the turning motion is more difficult. The centre of mass of the reel should coincide with the axis of rotation, depending on the model. Please see operating instructions. When rotating forces are too great, a heavy-duty rotation mechanism is available, which uses a ball-race to reduce force. When forces need to be minimised, a geared rotation mechanism is available. Optional End-Stops can restrict the rotating mechanism to the required positions. Stop positions can be added to allow the Clamp to be held at a specified angle.
Clamping Mechanism	The clamping capability comes from a precision machined screw. Glacier Linear Bearings are used to support the screw and carriages. Turning the Handwheel moves the Clamp arms. An optional torque limiter can be incorporated in the drive train to control the maximum clamping force, thereby protecting the load/reel and Clamp from damage. The torque limiter is generally set at 10Nm,but can be factory set depending on the requirement of each object to be lifted. In scenarios where there are hard/slippery surfaces, or soft/loosely wound reels, a higher level of torque is required to increase the clamping force. If a torque limiter has not been fitted, the correct number of Handwheel turns should be assessed and tested for each reel used. The lever handle on the clamping handwheel can be folded away to reduce the width of the unit and prevent snagging.
Clamping Pads	To grip the load, various clamp pads can be mounted on the arms. As standard, rubber coated rollers are used to grip a range of diameters of reels or other cylindrical objects. This allows the clamp to self-align around the reel and effectively grip the surface. In other instances, curved or straight rubberised pads can be used to grip drums, barrels, boxes etc.
Location Kits	The location kit can vary to suit the lifting equipment to which the attachment will be mounted, depending on whether it is fixed to the machine or interchangeable. The Packline Location kit works with the Compac range of lifters. This can vary to allow different lift heights to be achieved. Other kits are available for different lifter models.
Reel Information	This attachment is not suitable if the reel is liable to telescope and unravel if picked up externally. Packline recommends the attachment is tested with the load/reel to assess its suitability. Reels less than 300mm wide would need to be picked up from flat with the load off centre, which will cause increased rotation forces - see options previously described. Otherwise, a narrower construction could be an option.

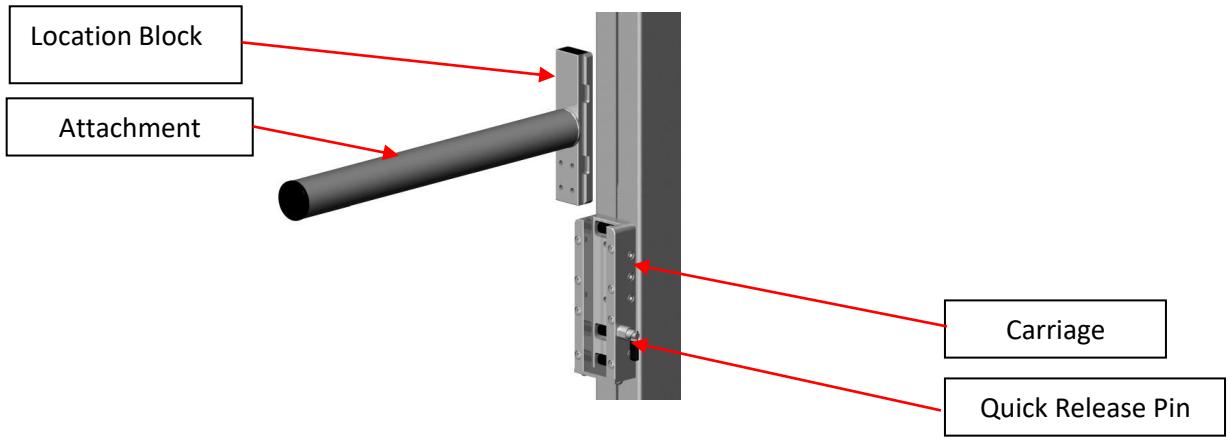
Attachment Fitting

The Attachment and Lifter used will determine the way that the Attachment is fitted. The Attachment can be permanently fixed to the Lifter, or Interchangeable utilising a quick release system incorporated on the Lifter or the Attachment.

Fixed Attachment - the Attachment is permanently fixed on to the Lifter and so requires no fitting. Please note, the attachment should only be removed by authorised personnel.

Interchangeable Attachment - the Attachment can be removed from the lifting equipment incorporating a Quick Release mechanism. This mechanism is to prevent the Attachment from inadvertantly riding out of the Carriage whilst lowering i.e. hitting an obstacle. The mechanism is fitted to the Lifter on Packline Compac Lifters (as well as other types of Lifter) and fitted to the Attachment on Heavy Duty Stackers.

Packline Compac Lifters
Fitting an Interchangeable Attachment



1. Set the carriage at a suitable working height and ensure the Quick Release Pin is disengaged by twisting to the unlock position.
2. Lift the Attachment safely and slot the Location Block into the Carriage ensuring the SWL label is upwards. Once the Attachment is part way into the Carriage assembly slide it down until a positive stop is reached.
3. Ensure the Quick Release Pin is fully engaged by twisting it to the locked position.

Warning! Care should be taken when fitting/removing an Attachment to ensure no injury is caused. Do not place fingers underneath the Attachment Location Block. Always ensure hands and feet are clear of all moving parts and care is taken not to trap them whilst loading, unloading or fitting an attachment, or in adverse conditions.

Removing an Interchangeable Attachment

1. Set the carriage at a suitable working height and ensure the Quick Release Pin is disengaged by twisting to the unlock position.
2. Take the weight of the Attachment Assembly and then lift until the Location Block is clear of the Carriage Assembly; the Attachment can now be removed and replaced with an alternative.

Warning! When the Quick Release Pin is engaged, the operator should ensure that they do not hit any obstacles whilst lowering, or continue lowering when the attachment has deposited the load. This will drive the load into the obstacle, or could cause the Lifter to overturn.

Warning! If the weight of the Attachment falls outside of the guidelines for manual lifting then seek assistance, use a lifting device or a purpose designed Docking Station (available as an option from Packline).

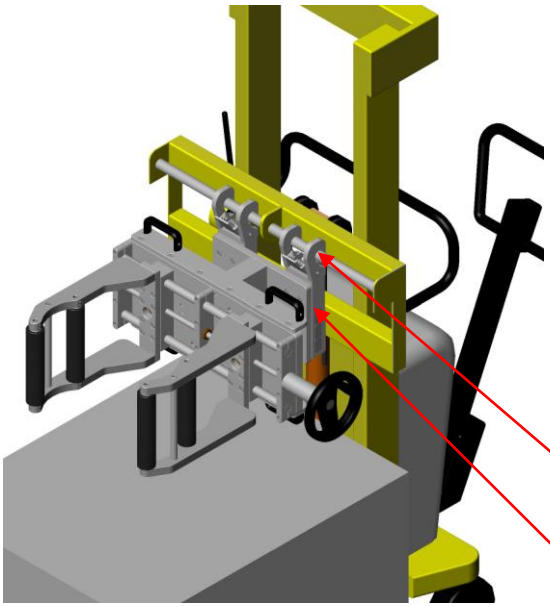
Docking Station Option - Packline can supply custom platforms which are designed to support the attachments whilst fitting/removal. If this has been supplied please consult the relevant manual for information.

Attachment Fitting

Heavy Duty Stackers - Removal/Fitting of Interchangeable Attachment

For Heavy Duty Stackers the procedure for removal of the attachment is as follows:-

Fig.1

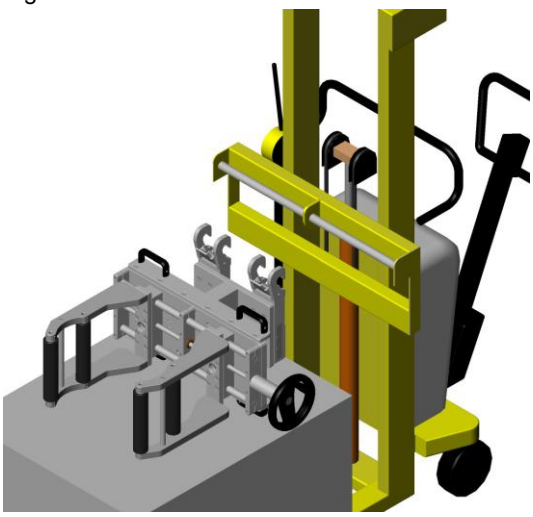


1. Position Attachment over a solid platform or surface.

2. Ensure the Quick Release Catches are pulled forwards (using the uppermost lip).

3. Lower the Attachment onto the surface (fig.1) until the surface has taken its weight. Ensure the flexline bar has moved as low as it can.

Fig. 2



4. Move the Heavy-Duty Stacker away from the attachment. It may be necessary for a second person to ensure that the Attachment is stable whilst performing this operation.

5. Fitting is the reverse of removal. Ensure the Catches are engaged before transporting or lifting to ensure attachment is secure.

Warning! Care should be taken when fitting/removing an Attachment to ensure no injury is caused. Do not place hands/fingers behind the Heavy-Duty Location Assembly or in the Catch/Hook mechanism. Always ensure hands and feet are clear of all moving parts and care is taken not to trap them whilst loading, unloading or fitting an attachment, or in adverse conditions.

Warning! This operation can be performed manually by lifting the attachment off of the Lifter. However, if the weight of the Attachment falls outside of the guidelines for manual lifting then seek assistance, use a lifting device or a purpose designed Docking Station (available as an option from Packline).

Docking Station Option - Packline can supply custom platforms which are designed to support the attachments whilst fitting/removal. If this has been supplied, please consult the relevant manual for information.

Operation

Fig.1

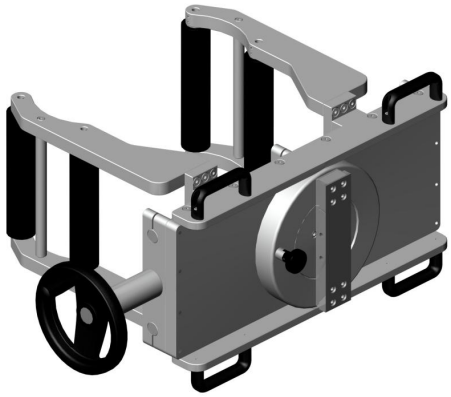


Fig.2

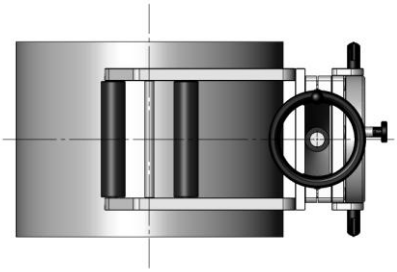
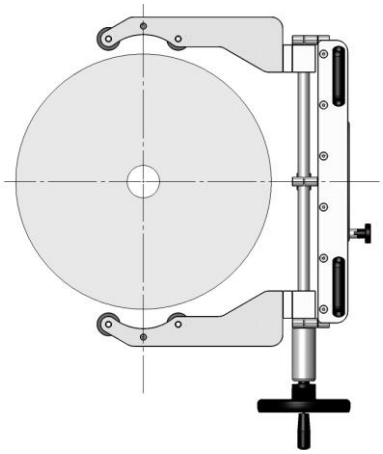


Fig. 3



Some variance may be required to the following procedure given the nature of the application.

1. If relevant, release the battery charger lead and release the brakes on the rear wheels of the lifter.

2. With the attachment at the lowest travelling height, manoeuvre the lifter so that the attachment is near to the reel that is required to be lifted.

3. If necessary, position the Clamp so that the pads are in the correct orientation for lifting the reel/object. To do this, pull and twist the index pin at the rear of the clamp to unlock the rotation mechanism and rotate the Clamp to the required position using the side handles (fig.1). It may be necessary to relieve the weight from the pin by lifting one of the side handles. Ensure the index pin is locked before any lifting is attempted.

As standard, rotation is free through 360 degrees. End stops may be fitted to restrict the rotation. Please check if the supplied model has them fitted and in which postions,so that the reel is not mistakenly picked up in the wrong orientation.

3. Rotate the hand-wheel, open/close the clamp arms so that the rollers/pads are wide enough to clear the outer surface of the reel/object to be lifted (Fig 2).

4. Apply brakes and raise or lower the Clamp to the desired height, using the appropriate controls located on the lifting machine.

5. Release the brakes and move the lifter forward therefore positioning the rollers/pads evenly around the sides of the reel. Ensure that the centreline of the reel/object is lined up with the centres of the clamp pads in both directions (Fig.3).

Warning! It is critical to align the reel and pads accurately to ensure that the reel is lifted safely with all rollers/pads in contact.

Operation

6. Using the hand-wheel, the arms should then be closed to hold the reel/object securely. If a torque limiter has been fitted to the Clamp, continue to rotate the handle until you can feel the handle give way and the torque limiter clicks indicating that the arms are tight enough. This is to ensure adequate grip but limit damage to the load - this needs to be assessed and tested for each reel to be lifted. The brakes should be disengaged during this operation to ensure alignment whilst clamping.

Warning! Keep fingers clear of the pads and the clamping mechanism.

Caution The torque mechanism is factory set and must not be adjusted. If a change in setting is required please contact Packline.

7. If a torque limiter has not been fitted, the correct number of hand-wheel turns needs to be assessed and tested for each reel used.

Caution Over-tightening can damage and weaken the Clamp attachment.

8. Once secure, lift/lower the reel and manoeuvre the reel away from the location.

9. With the clamp at a correct working height, reorient the reel if necessary as previously described.

10. Raise/lower the reel to the travelling height and release the brakes.

Warning! When lowering and be careful not to drive attachment or load into the legs of the lifter or the ground.

11. Manoeuvre the lifter to the desired location and raise/lower the reel into position.

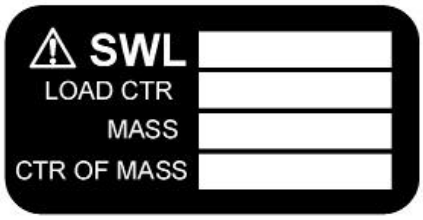
12. Open the clamp using the hand-wheel, ensuring there is clearance to withdraw the clamp.

Warning! Ensure that the full weight of the reel is safely supported before opening the clamp.

13. Unlock the rear wheels of the lifter and manoeuvre the lifter away from the reel.

14. Return Lifter to storage point and connect lead to recharge battery when not in use.

Markings

Label	Location - Meaning
	On Clamp Shows Safe Working Load (SWL) at Load centre distance Mass of attachment and centre of mass
	On Clamp Shows Assembly Part No., Attachment Serial Number and Year of Manufacture
	On Clamp Warning as both the truck/lifter capacity and attachment capacities need to be considered e.g. a high rated attachment could be put on a low rated truck which would exceed the truck capacity and cause damage when loaded
	Optional Warning your hand is near a pinch point
	Optional - Rear of clamp There is potential for a foot trap between the legs or ground and attachment or load. Therefore, feet should not be put under attachment when lowering. If the attachment or load strikes an obstacle, the Attachment may ride out of the location carriage and crush the obstacle if a retention pin is fitted.

Maintenance

Overview

The Clamp Attachment has been manufactured in such a way to ensure that maintenance is kept to a minimum. The materials used should minimise corrosion, however the unit should be regularly wiped down to ensure this. Packline do not recommend that chlorine based cleaners are used on the Clamp Attachments.

Warning! Always remove the Attachment from the lifter before any maintenance is undertaken.

Every Shift

1. Check Attachment condition and function.

Warning! The following tasks should be carried out by skilled personnel.

Every Month

2. Grease spindle screw and Guide Bars. Graphite grease/lubricant is best for this.

Annually

1. Check torque unit setting
2 Check condition of rubber rollers
3. Check main screw

In accordance with the Health and Safety Regulations it is a legal requirement that all lifting equipment is thoroughly and regularly examined and tested if necessary.

Packline provides a full maintenance package for supplied equipment. For details please contact office for details.

A technical specification for the individual purchased attachment should be supplied separately detailing overall dimensions and spare parts.

Providing the Solution

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