

# CLYDESDALE

## Powering the Future

### User Instructions: Heavy Duty Conductor Lifter

#### INTRODUCTION

We want you to be satisfied with your Clydesdale Conductor Lifter.

This instruction manual has been written to help you operate and look after it safely. We ask you to read the manual thoroughly before you start using the equipment so that you are aware of the safety measures you need to take when using it.

#### GENERAL GUIDANCE

This equipment has been carefully designed and developed to eliminate health and safety risks. There are certain risks when working with heavy cable or conductor drums and to avoid these it is important that:

Instructions are studied and observed.

Personnel are regularly trained in maintenance and safety.

The appropriate equipment and tools are available.

The owner and work supervisors take responsibility for ensuring that an effective safety programme and regulations are drawn up and followed by all personnel.

Our instructions contain important information which all users must be aware of and understand before they use the equipment. For your sake and the sake of others please take special notice of the items/sections with the following headings.

#### WARNING.

***This is important information that warns you of a risk of serious personal injury or threat to life if the instructions are not followed.***

#### CAUTION.

***Important information that describes how to prevent damage to the machine and equipment or how to avoid a situation that could cause personal injury.***

#### NOTE.

***Advice regarding operation, care and maintenance of the machine and equipment.***

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#### GENERAL SAFETY PRECAUTIONS

##### Personnel safety

1. Read and remember all safety warnings, precautions and directions in the operation and maintenance instructions, and read and learn the meaning of all signs that are on and around the equipment. If you are in any doubt, make sure you get answers to all your questions before starting work.
2. Do not work with this equipment if you are under the influence of alcohol, strong medication, sedatives or other drugs that could make you less alert or affect your judgement.
3. Take the necessary precautions to avoid loose hair or clothes becoming trapped in moving parts.
4. Whenever possible wear safety gloves to protect your hands and fingers from cuts, grazes and burns.
5. Always wear safety goggles whenever there is a risk of flying particles, splinters, dust or other objects that could damage your eyes, and when safety regulations demand it. Look after your eyes!
6. Always wear a safety helmet and safety shoes when work requires it

##### Safety in the work place

7. Keep your working area clean and uncluttered
8. Keep unauthorised personnel away from the working area. Always keep a good check on who is present.
9. Surfaces that you touch with your hands or feet must be kept clean, dry and free from oil or grease.
10. Store parts and tools in a place appointed for that purpose when they are not in use.
11. Do not stand underneath or allow anyone else to stand underneath any raised or suspended equipment or drum.
12. Find out the weight limits of any lifting equipment and the clearance they require when in use.

##### Equipment safety.

13. Warning signs, prohibition signs and information signs must not be obscured, changed, damaged or removed.
14. Before setting up this lifter make sure that the cross arm is stable and level. Follow the instructions for securing and setting up the equipment where appropriate.
15. Check that there are no loose parts that could fall off during when lifting device into position and using.
16. Check the components of the equipment each time before use to make sure that no parts are damaged or suspected of being damaged. Repair or replace damaged parts or parts that are suspected of being damaged. Use only original spare parts.
17. Before operating the equipment make sure that no person, animal, tool, part or other foreign object is inside, on, under or near the equipment
18. Do not let untrained personnel start or operate any equipment without supervision by a trained operator.
19. Never leave the equipment unsupervised.
20. When operating the equipment watch out for visible defects or unusual noises that could be a warning of an impending fault. Stop the job immediately if you suspect a fault.
21. Carry out all inspections, maintenance, lubrication and adjustments very carefully and in accordance with the manufacturer's recommendations. Always stop the job before carrying out maintenance.

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#### TECHNICAL DATA

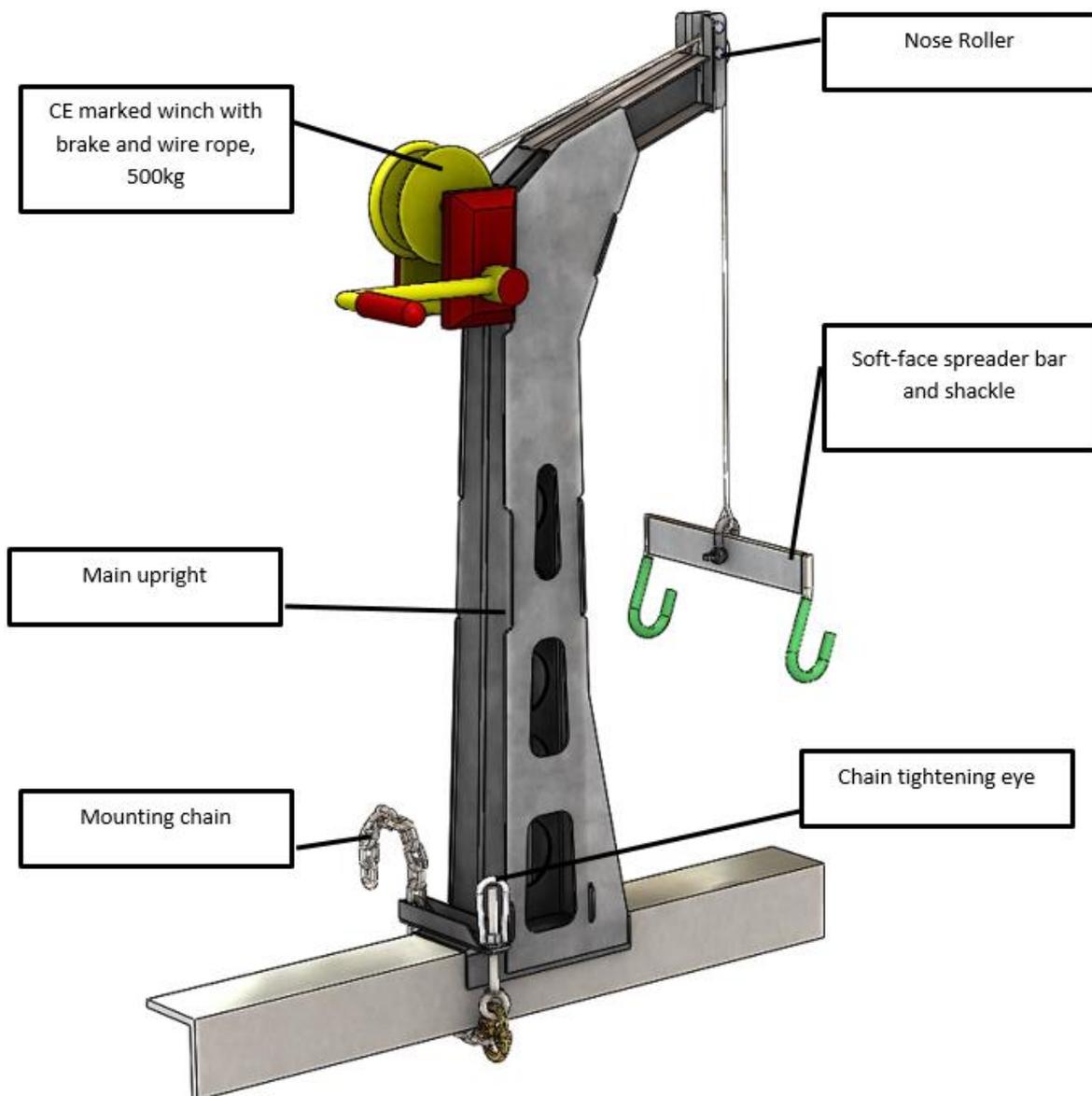
**Description:** The Clydesdale Heavy Duty Conductor lifter is designed to be able to lift up to 500kg safely. It mounts securely to a cross arm using an adjustable length chain mount. It is designed to have enough lifting height to be able to work with a 33kV insulator.

**Working Load Limit:** 500kg

**Safety Factor at WLL:** 4

**Maximum lifting height:** 850mm from face of cross arm

**Weight of complete lifter assembled:** 27kg (with 1.4m of chain attached and 10m of wire rope)



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#### ASSEMBLING AND OPERATING CONDUCTOR LIFTER:

***WARNING: Fully assembled the lifter marginally exceeds recommend weight for a single person lift. Please ensure that consideration is given to safe lifting and handling of the device before installation is attempted. If required the mounting chain can be removed before lifting to reduce weight and increase manageability during lifting. If required Clydesdale can provide a shorter chain and winch wire to reduce weight to 25kg.***

***WARNING: This device is not to be used for live working. Always ensure conductors are dead before commencing any works***

***WARNING: Check conductor spans either side of point of work for potential failure points, fraying or weaknesses before commencing.***

***WARNING: Observe all working at height procedures and no do not attempt to use device in adverse weather conditions***

***CAUTION: Conductor lifter should be inspected and User instructions reviewed at ground level before lifting into position.***

***CAUTION: Calculate weight of conductor to be raised by the lifter and ensure it remains below the device's WLL***

Using company authorised methods, the lifter needs to be safely raised up to the working level of the cross arm.

Seat the lifter's base over the cross arm with the centre line of the spreader bar over the insulator requiring work.

Slacken the chain tightening eye as far as possible

Loop the mounting chain under the cross arm and lift up into the slot in the lifter's foot.

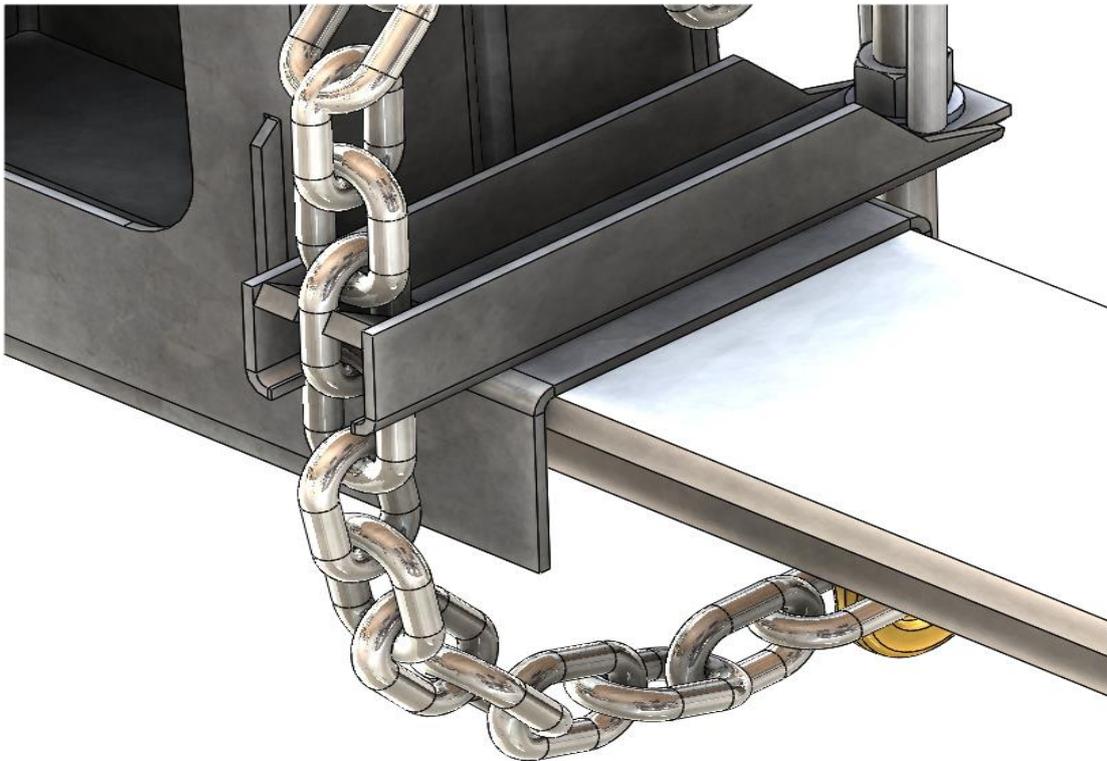
Ensure chain is as tight as possible at this stage. If not, pull a further link through and locate into the slot.

Tighten chain tightening eye as far as possible to secure lifter to cross arm.

At this point the main tackle used to raise the lifter into position may be removed.

Lower spreader bar by rotating winch handle in direction shown on product label.

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Hook both hooks on spreader bar under the conductor and slowly raise by reversing direction of winch handle rotation. Only raise until hooks seat under conductor.

Remove ties / binding wire securing conductor to insulator.

Raise conductor using winch handle to minimum required working height. Winch is braked and so will hold the load from dropping during lifting or lowering.

Replace insulator / complete works as required.

Lower conductor back on to insulator until it just touches.

Apply binding wire / preform tie to secure conductor to insulator.

Lower spreader bar away from conductor.

Before removing chain from around cross arm ensure conductor lifter is secured to main lifting tackle to prevent it falling to the ground accidentally.



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#### Important Information regarding CE marking and the Working Load Limit.

The EU machinery directive contains the following definition of a machine in article 2(a) :

“an assembly of linked parts or components, at least one of which moves and which are joined together, intended for lifting loads and whose only power source is directly applied human effort”

The directive then goes on to give guidance on Safety factors for this machinery as x1.5 static load and x1.1 dynamic load.

Our customer's, however, for this product have asked for a safety factor of 4 which is in line with related equipment described in EN 13157 for blocks and tackle etc.

The lifters chassis has been tested to destruction with a static load > 2000kg and so we are able to offer the device with a Working Load Limit of 500kg at a Safety Factor of 4.

A declaration of conformity is produced and the CE mark is applied

#### MAINTENANCE:

The HD conductor lifter is designed to require little maintenance in use.

The key areas that require input from the user are checks before every use on the condition of the structure, the mounting chains and the lifting wire. Any evidence that any of these items are not in perfect condition and the lifter should be removed from service and quarantined until repairs can be made.

The hand winch is fitted with a brake to prevent uncontrolled lowering of the load. If at any point the user experiences problems with the winch not lowering the load correctly then the brake needs to be serviced. Do not lubricate the winch using spray lubricant of any kind as it may contaminate the brake surfaces causing slippage.

The following parts are available as spares for this device:

Hand winch, ZZ 310 9004

Lifting cable, ZZ 1021B 09

Spreader bar, ZZ 1021 03

Chain, ZZ 1021 01

Chain tensioner, ZZ 1021B 02

Guide wheel, ZZ 1021 04

Main Chassis, ZZ 1021B 01