TUBE LIFTING DEVICE

USER GUIDE

ALTRAD

DESSA
SCAFFOLD
PRODUCTS
TECHNICAL
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Foreword

DESSA offers efficient lightweight temporary roofing, encapsulation solutions, aluminium lattice girders and safety products. DESSA's unique and distinctive aluminium solutions are suitable for not only grandstands, stages and events but also public utility works, local authorities, government buildings, historic buildings, highways, bridges and industrial market sectors. Time proven on demanding and complex applications across varied climates throughout the UK, Canada, UAE, Australia and Europe, DESSA offer unrivalled span capabilities and alternative configurations. From a choice of roofing solutions and general purpose lattice girders providing unrivalled cost to strength ratio, to high capacity lattice girders complete with a dedicated bracing system, we provide the industry with an ever widening range of cost effective products along with extensive after sales support to the highest professional standards. At DESSA we develop innovative and practical solutions for the support, access and weather protection industries. All of our designs are technically proven and are registered with protected design rights meaning only DESSA can offer superior solutions through our products. Our senior management team at DESSA offer considerable experience in the fields of contracting, engineering, manufacture and customer service. Having introduced a number of class leading products into the UK market, we have worked closely with a number of key clients in developing bespoke solutions to their problems which we manufacture on an exclusive basis.

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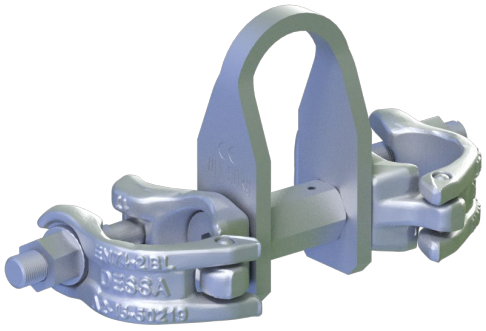
1.0 Intended use

DESSA Tube Lifting Device (and auxiliary equipment) have been designed and developed to alleviate the need for tying knots when lifting or lowering (48.3mm outside diameter) scaffold tubes only, with gin wheels or handlines. Scaffold tube lifting devices provide 'positive' fixing to reduce risks associated with the vertical transfer of scaffold tubes during the erection, dismantling and modification of scaffolding structures.

1.1 Tube Lifting Device

DESSA Tube Lifting Devices are each constructed with two "half swivel" scaffold couplers connected to a central body, which in turn incorporates a lifting lug for the attachment of a gin wheel rope etc. Scaffold tubes can then be securely clamped within the couplers to provide a positive connection when lifting/lowering. (See Figure 1).



Tube Lifting Device

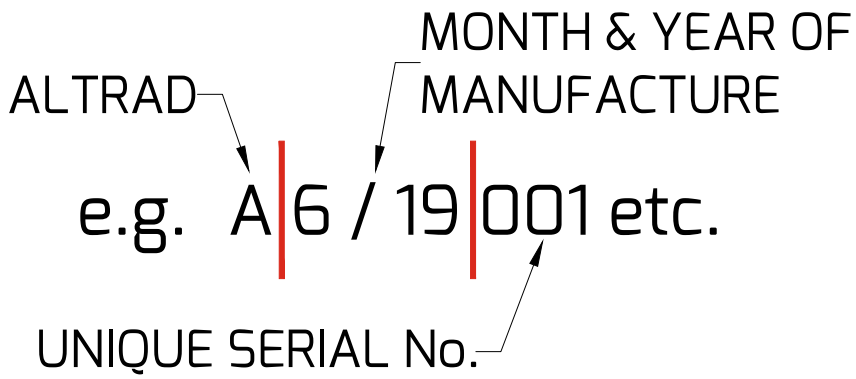
WARNING: This equipment shall not be used for any other purpose than it was originally designed for, otherwise consequential damage or personal injury may result.

2.0 Marking

All scaffold tube lifting devices are uniquely marked thus:

Double tube clamp '**WLL 50kg**'

Each clamp shall also have a unique designation/serial number:



3.0 Safe Use of Equipment

A thorough risk assessment process has been undertaken for the tube lifting device covered in this O&M manual to ensure safety in all aspects of manufacture, testing, operation, maintenance and decommissioning operations.

Residual Risks in operation and mitigating actions are listed below

- Tube lifting devices shall have an in-date examination record /load certificate/tag as per LOLER.
- All equipment without a current examination record /load certificate/tag or showing any damage or defects shall be quarantined for re-examination and re-certification or disposal.
- Only lift scaffold tube which is defect free.
- To reduce the risks associated with swinging or snagging of loads, only scaffold tubes of similar lengths shall be lifted (or lowered) together.
- The operative shall take care when placing the scaffold tubes in the clamp and when tightening the clamp of trapping of hand and fingers.
- All tubes shall be properly secured using scaffold tube lifting clamps, with nuts tightened to **50 Nm**.
- When lifting, the load should be paused when just clear of the ground, to check that it is suitably balanced and secure. Once this has been ascertained, lifting may continue.
- Before any lifting or lowering operations commence, suitable barriers and signs should be fixed in position, to exclude unauthorised personnel from the area. A 'stand by man' should be deployed if work zone is in an area of significant personnel or vehicular traffic.
- To avoid manual handling injury, before taking up the strain, operatives should always be aware of the weight of the load to be lifted or lowered.
- When lifting or lowering materials, operatives positioned on the ground must stand a suitable distance clear of the load and **never** directly beneath it.

4.0 Working Load Limit

The maximum working load limit which may be attached to a tube lifting device is **50kg**, which is equivalent to a collective maximum length of scaffolding tube of 11.4 m. When lifting single tubes with this device, the maximum tube length which may be attached to the clamp is **6.4m (21'-0")**.

e.g. (2 x 5.5m) or (2 x 18'-0") etc.

5.0 Instructions of Use

All tubes must be securely fixed to the tube lifting device before attempting any lifting or lowering operation. The tube lifting device shall only be released after safely landing the scaffolding tube(s) on a level, full and firm platform fitted with suitable edge protection (when required), or level ground. Couplers shall be adequately tightened to ensure that tubes are secure (and released) using a 7/16" BSW (21mm AF) 'swing over' 'standard scaffolders' box spanner with 220mm long handle. To ensure that tubes are securely fixed, all parts of the tube lifting devices i.e. couplers, rivets and bolt assemblies etc. should be free from significant rust and nuts should be free running on the thread. Nuts should be suitably tightened ('torqued') by initially 'nipping' them up with the box spanner as described above until firm pressure is felt. An additional quarter turn of the spanner (minimum) should then be applied.

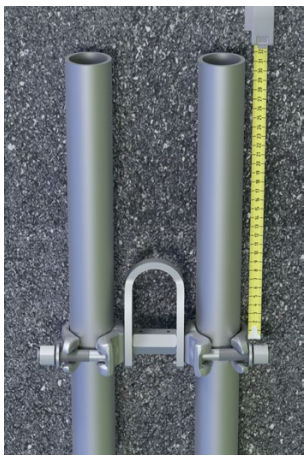
System scaffolding components, which incorporate 48.3mm outside diameter members, may also be lifted as specified above, providing WLL's are not exceeded.

5.1 Attachment/detachment of tubes

5.1.1 The tube lifting device shall be laid on their side with the latch rivets near the floor and the latches open.

5.1.2 48.3mm diameter tubes shall then be placed within the couplers. To facilitate lifting or lowering of tubes in a 'near vertical' arrangement, the clamp should be positioned about 300mm (minimum) from the tube end.

5.1.3 Close the latches by engaging the bolt assemblies within the latch slots .



5.1.4 Ensure the tube is securely clamped by adequately tightening the bolt and latch assemblies with a 'scaffolders' box spanner to torque of 50Nm.

5.1.5 Attach tube lifting device to the lifting lug.

5.1.6 Once the tubes have been transferred to the required level and laid on a suitable surface they can then be unloaded by untightening the bolts.

5.1.7 Disconnecting the latches and remove the scaffolding tube from the couplers.

6.0 Inspection and Maintenance

All lifting equipment and accessories shall be thoroughly examined by a competent person. The frequency of examinations for scaffold tube lifting clamps is every SIX MONTHS in accordance with LOLER.

All examinations shall be recorded in line with current regulations and a copy of the examination report securely filed. These should, at all times, be available for inspection on request by any authorised inspector or auditor. It is the responsibility of the operative to check that all lifting equipment has been thoroughly examined within the previous 6 months and the current examination records are available, before allowing it to be used.

All equipment without a current examination record or showing any damage or defects shall be quarantined for re-examination and re-certification or disposal.

Before use, all tube lifting devices and other associated lifting equipment must be visually inspected to ensure that everything is in good condition and properly connected.

The inspection should, as a minimum, check the following points:-

- Wear
- Distortion of lifting lug, body or coupler latches
- Loose or freely rotating couplers/studs
- Efficient working of bolts and latches

Any equipment found (or suspected) to be defective in any way, shall be securely and immediately quarantined, to prevent further usage.

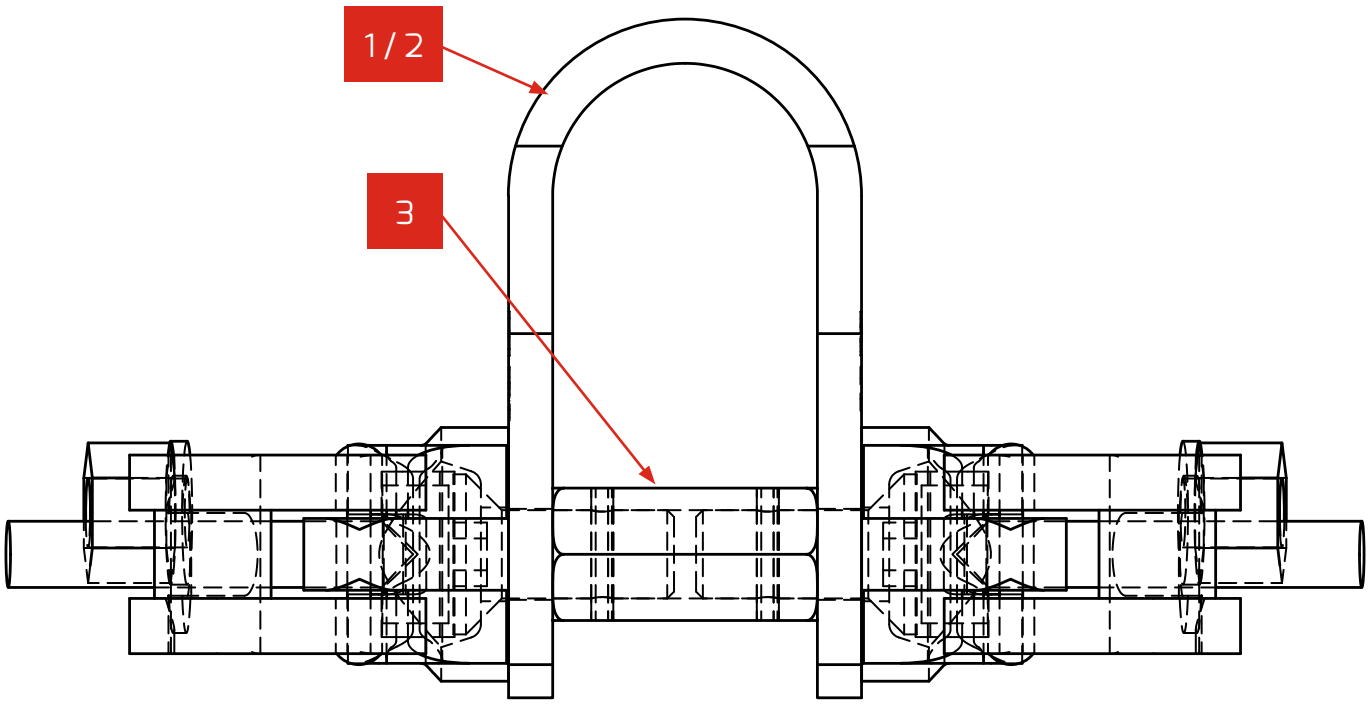
7.0 Disposal

The tube lifting device is metal and can be recycled through the normal recycling routes.

8.0 Appendix A - Inspection and Maintenance Schedule for Tube Lifting Device

ITEM	INSPECTION	RECTIFICATION/REJECTION
1	Check for damage/distortion of main body, lifting lug and couplers (including latches and forks).	Reject to scrap.
2	Check external surface for excessive corrosion or surface debris (cement etc.)	If considered excessively corroded – reject to scrap. Remove surface debris with wire brush or shot blast.
3	Check for damage to spacer	Reject to Scrap
4	Ensure that bolts/studs are tight.	Remove bolts, check for damage then re-coat with Bondlock 240 and re-tighten.
5	Check bolt slots and cups for wear/ distortion. Ensure tee bolts sit evenly in cups and will not pull through slot.	Reject to scrap
6	Check that both nuts are free running. Check tee bolts, nuts and washers for thread damage or excessive corrosion/wear. Check that end of thread is deformed to prevent nut from being removed.	Lubricate or if excessively corroded or damaged, replace nut, bolt and washer. Deform end tread to captivate nut.
7	Check that latches move freely.	Lubricate, wire brush or shot blast.
8	Check that latches do not open further than 110° (See Notes).	Reject to scrap
9	Check rivets for distortion or excessive wear.	Reject to scrap.

NOTES
1. Ensure that all devices are marked with security paint. 2. Approved Oils: • Clip Lube • Arven Industrial • Scaffeze • Forward Chemicals • Spin Off • Ropro • Graphited Penetrating Oil • Batoyle 3. Acid based cleaners should be used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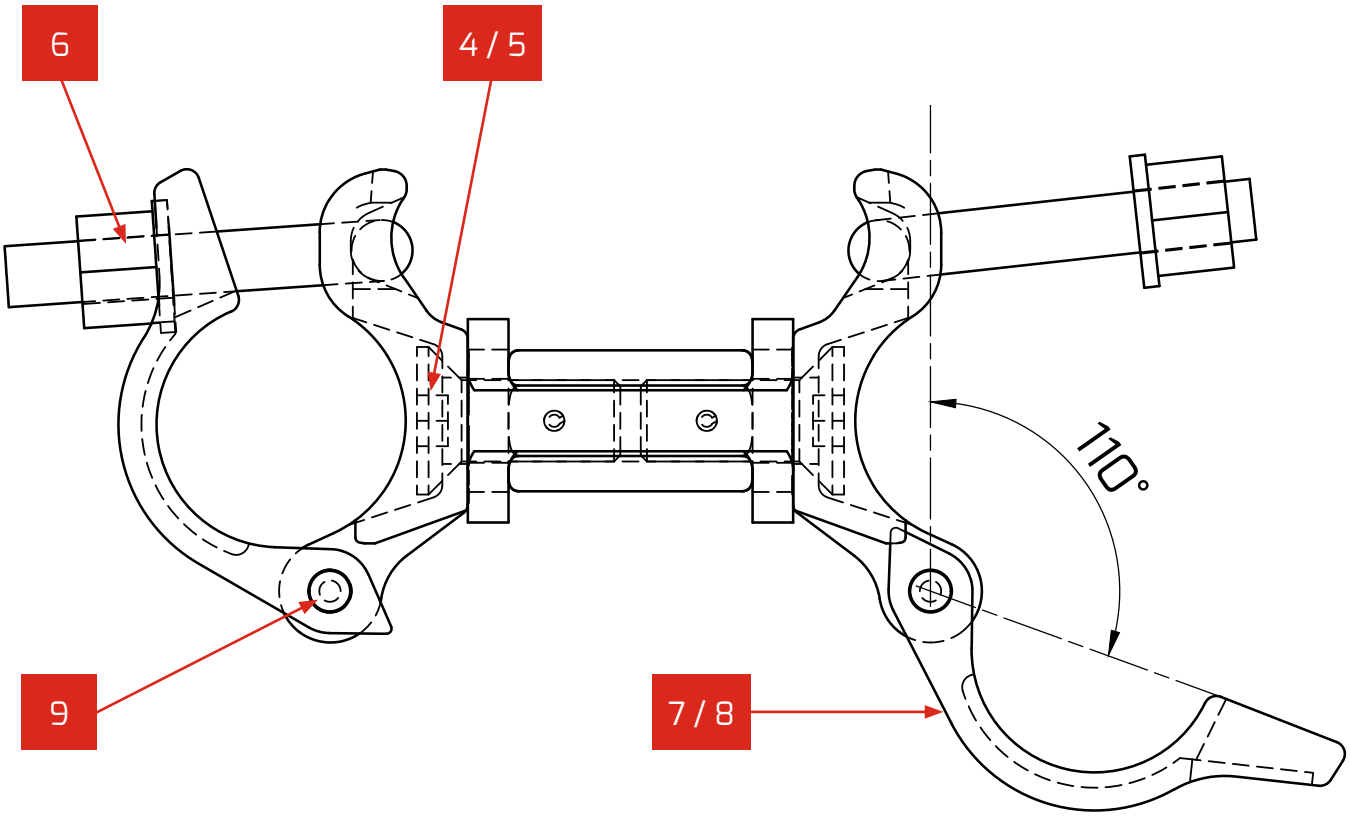
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110°
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DESSA LIMITED
Unit 25 Little End Road, Eaton Socon, St. Neots, Cambridgeshire, PE19 8JH - United Kingdom
Tel +44 (0)1480 475297 - Fax +44(0)1480 215378 - Email: info@altrad-dessa.com
www.altrad-dessa.com