



Engineering Ltd

T85850 Space Saver Manual



Original Instructions

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1. Safety Notes

BEFORE installing and operating this device, please read this manual carefully and pay attention to the information provided. Use this manual to familiarise yourself with the device, it's proper use and safety regulations.

DANGER

DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

WARNING

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE: address practices not related to personal injury.

SAFETY INSTRUCTIONS

SAFETY INSTRUCTIONS: is used for lists of steps, procedures or instructions that might otherwise substitute a DANGER, WARNING or CAUTION notification. Note that equivalent phrases, such as SAFE OPERATION PROCEDURES or SAFE SHUT DOWN PROCEDURE, can be used in place of the words "SAFETY INSTRUCTIONS".

2. General

The Space Saver is a device used to lift or suspend loads. Space Savers are used in the entertainment market but also for permanent support structures in places of entertainment like museums, event venues, theatres etc.

The use of the Space Saver is solely foreseen for professional use as lifting loads is inherently dangerous.

Only skilled persons are allowed to install and use this device. A skilled person in this respect is an individual with relevant technical education, training and/or experience enabling him or her to perceive risks and to avoid hazards occurring during use of a product.

Space Savers are engraved with the maximum working load corresponding to the 8:1 safety factor in order to meet the German standard for overhead lifting.

Special attention has been taken to safety. Therefore the test certificates indicate multiple Working loads. Depending on the application or local applicable legislation, max working load can be chosen.

Space Savers can be judged as lifting accessories under the EU machine Directive 2006/42/EC as well as German DGUV-BGV-C1 for lifting and holding loads above persons, but also as a joining part in constructions. As for the last application, no harmonised standard is available, therefore no CE Declaration of Performance can be provided.

Doughty has endeavoured to deliver the highest degree of accuracy possible. However continuous improvement of our products is a Doughty Policy. Therefore, product specifications are subject to change without notice.

Readers and users are encouraged to notify Doughty of errors and send in suggestions for improvements. All communications will be carefully considered for future printings of this manual and changes to our products.

Resulting forces in the structure attached shall be verified before applying a load.

3. Scope

The intended use of a Space Saver is to be used as lifting accessory to hang or suspend loads. Loads can be, but not limited to, lighting fixtures, video projectors, sound systems and set pieces.

The Space Saver also enables the clamp / spigot attached to be folded at 90 degrees to the object which it is attached to reducing the storage height. ("Saving Space")

Any use other than that mentioned is considered to be a case of misuse. The user/operator and not the manufacturer shall be liable for any damage or injury resulting from such cases of misuse.

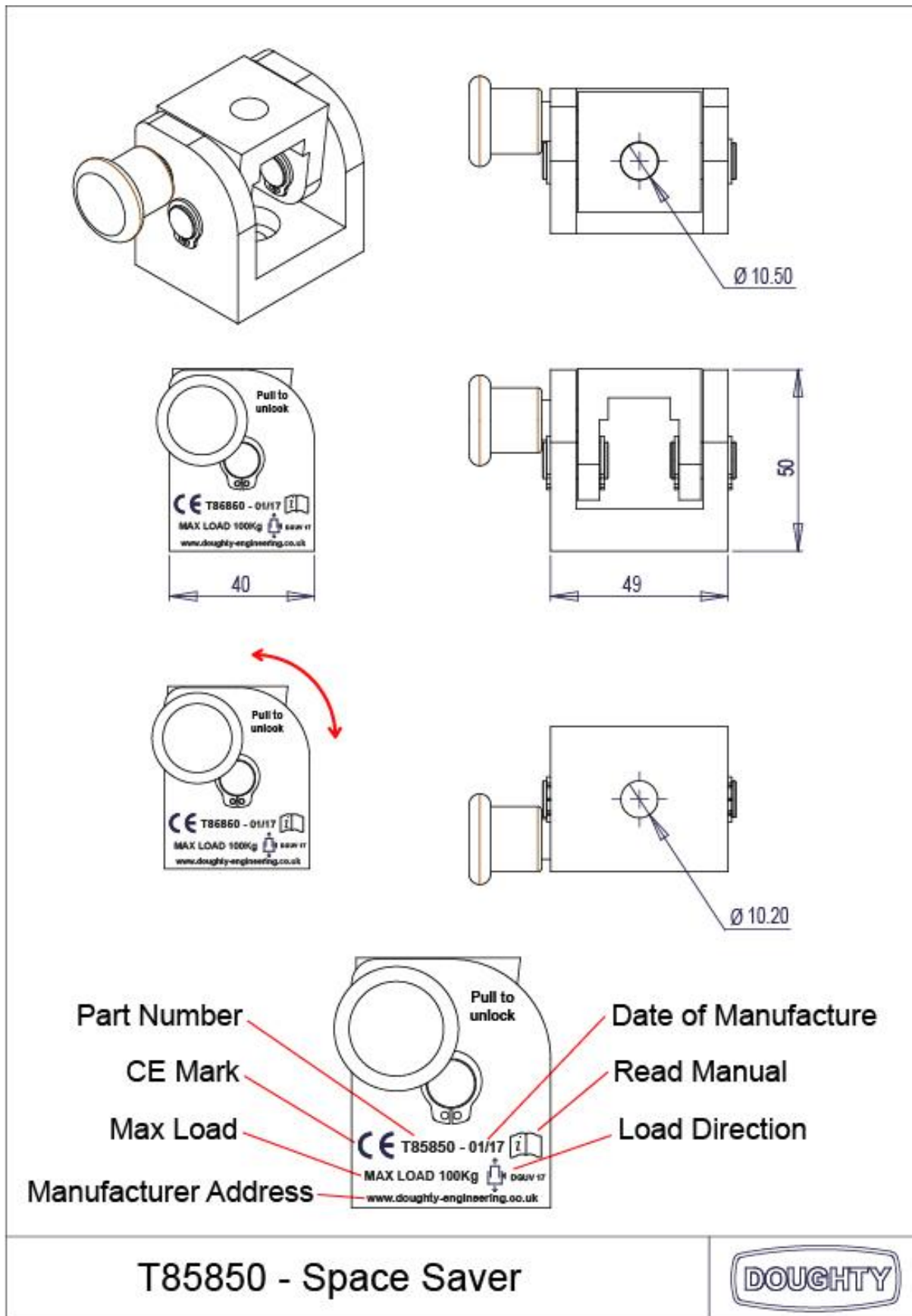


Check local legislation for the application of use and adapt the use where ever necessary

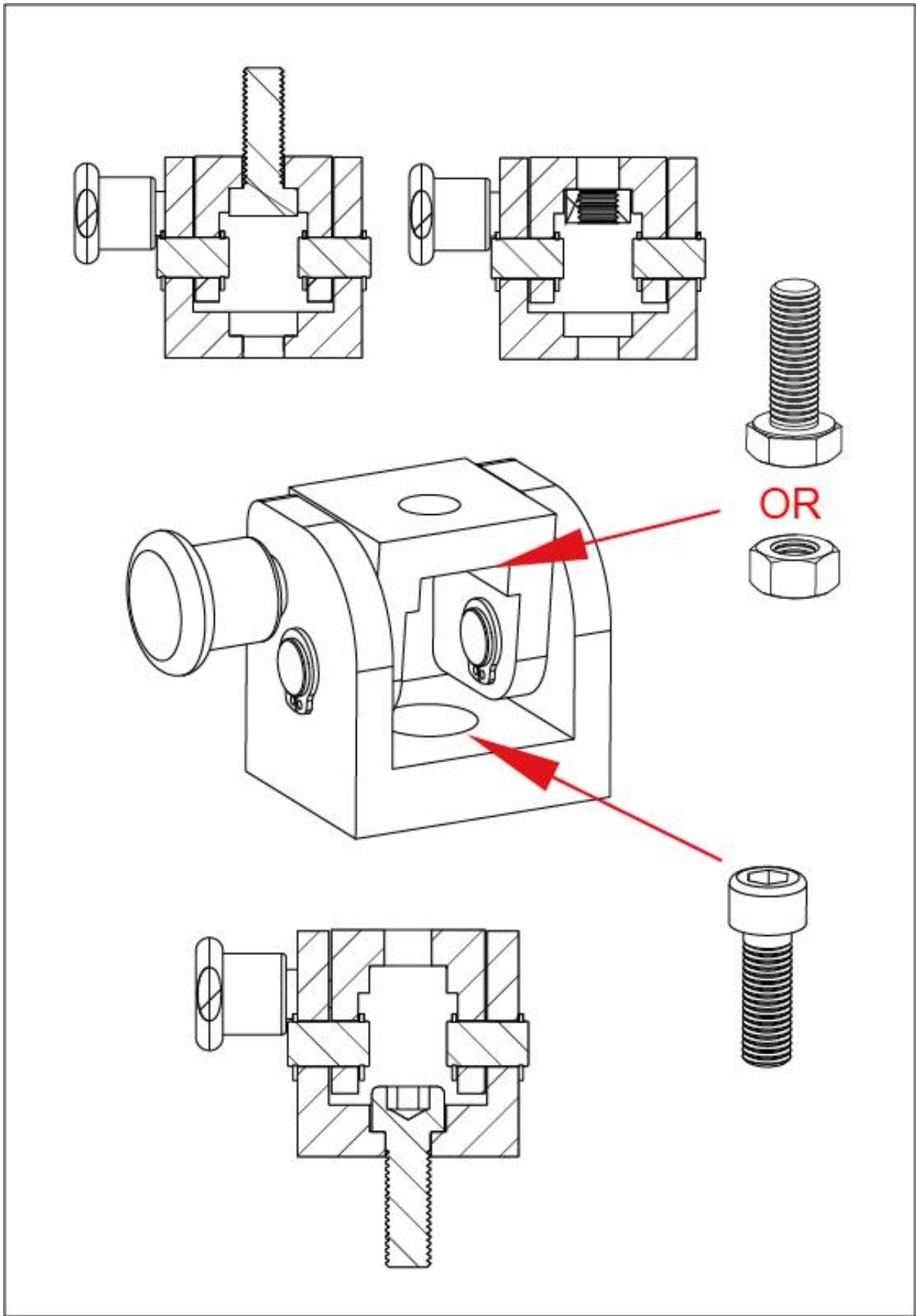
4. LIMITATIONS OF USE

- The Space Saver can be operated in -20dgr Celsius up to +60dgr Celsius.
- When used permanently outdoors, it is advisable to use stainless steel hardware in order to avoid galvanic corrosion.
- Salt water environments require cleaning with fresh water at least once per week.
- The use of the Space Saver is the sole responsibility of the user.
- To use the Space Saver the user must also observe the safety regulation, the assembly and dis-assembly instructions to be found in this manual.
- All persons who use and service this device have to be acquainted with this manual and must be informed about its potential hazards.
- It is also imperative to observe the local accident prevention regulations and/or occupational health and safety regulations.
- The manufacturer is not liable for indirect consequential damage and financial loss. The manufacturer shall not be liable for any changes made to the device nor for any damage resulting from such changes.

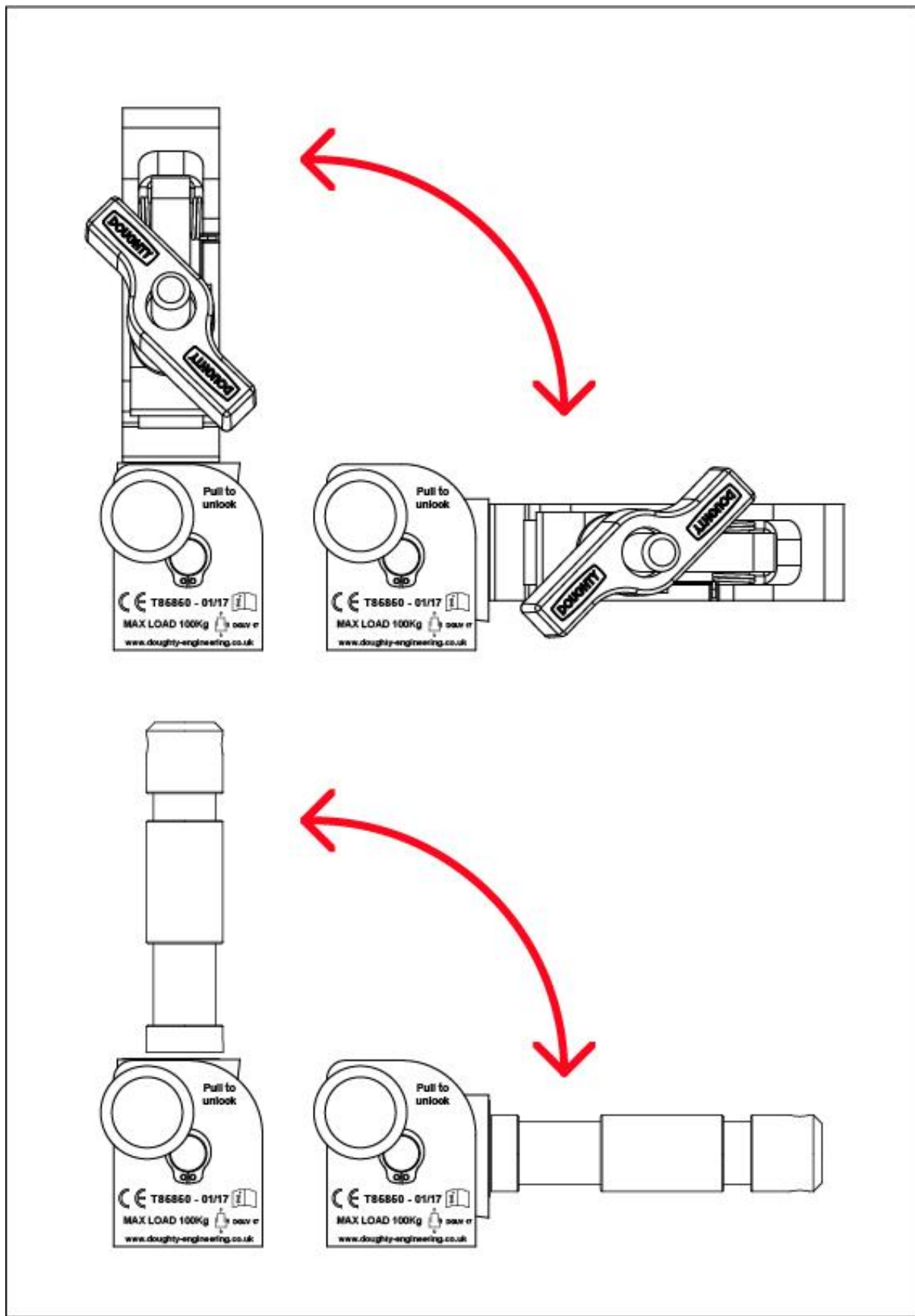
5. Identification of the Product



6. Fixings



7. Examples of use



8. Modification

The Space Saver should not be modified in any way by a third party.

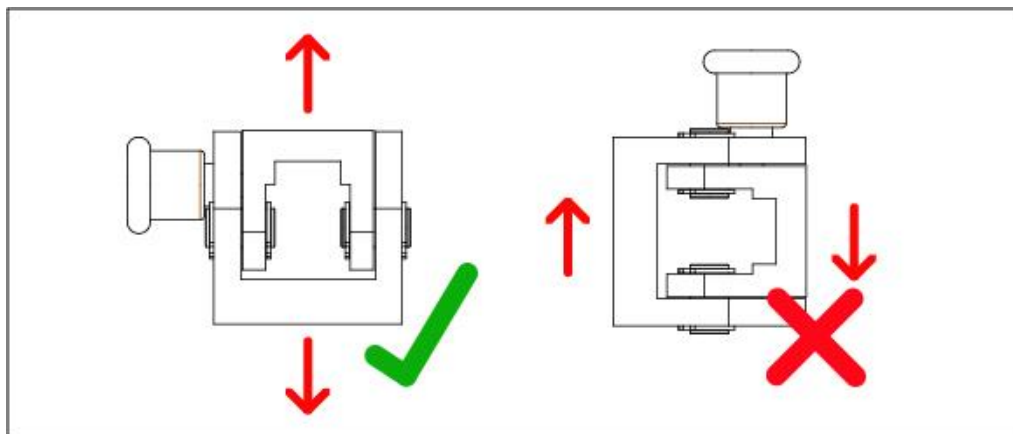
9. Safety Information

SAFETY INSTRUCTIONS

For health and safety reasons people assembling, disassembling, transporting, maintaining and cleaning Space Savers should wear adequate Personal Protection Equipment such as, but not limited to; gloves, hard hats and safety shoes.

- ⚠ Do not exceed the maximum working load engraved on the device.
- ⚠ Make sure the resulting forces on the supporting structure are approved by a skilled person.
- ⚠ All loads imposed shall be considered, e.g. dynamic forces caused by the lifting machinery.
- ⚠ Bolts and nuts shall be tightened by means of a spanner in such a manner they cannot be released by manpower.
- ⚠ When loads are using electrical power, equip-potential bonding shall be put in place.
- ⚠ When used as lifting accessory, Space Savers shall be inspected by a skilled person as often as required but with a minimum of 1x per year.
- ⚠ Inspect equipment before every use. Damaged Space Savers shall be taken out of service.
- ⚠ A Space Saver has to be taken out of services immediately if, during use, repair or maintenance serious damages are discovered.
- ⚠ Maintenance and repairs can be undertaken only by authorized personnel. In any doubt contact the manufacturer.
- ⚠ Do not throw Space Savers.

The Working Load engraved on the Space Saver is solely for a straight pull between fixing points.



10. Compliance

2006/42/EC	Machinery directive
DGUV regulation 17	Regulations for stages and studios. (Formerly known as BGVc1)
DGUV Information 215-313	Safety at productions and events for television, radio, film, theatre, exhibitions: Loads above persons (Formerly known as BGI 810-3)
CWA 15902-1	European code of practice for lifting and loadbearing equipment for stages and other production areas within the entertainment industry.
BS 7905-1	Lifting equipment for performance broadcast and similar applications. Part 1 specifications for the design and manufacture of above stage equipment

11. Transport and Storage

- Due to the relative high self-weight, it is advised to keep storage bins as small as possible in such a manner they can be lifted by one person. Local legislation for maximum load to be lifted by persons should be adhered to.
- Before Space Savers are put into storage they shall be checked for defects. Defected Space Savers shall be clearly marked and put aside in such a way they cannot be re-used after maintenance
- Ensure the product is stored and kept in a dry, ventilated environment to avoid corrosion
- Do not store aluminium Space Savers in steel bins

12. Installation



1. Determine the bolt size and length needed to connect the Space Saver to an object.
2. Use hexagon socket bolts or standard hexagon bolts. Minimum 8.8 grade.
3. Tighten the bolt connection by means of correct tooling.
4. Use a secondary safety device if legislation requires so.

13. Commissioning

- ⚠ Before applying a load, check if all connections are properly made.
- ⚠ Before lifting check if all connections are still correct.
- ⚠ Check if all parts are in good order.
- ⚠ Repeat after 1 meter of lifting. Vibrations might loosen bolt connections.

14. Indication of Faults

The following faults could be an indication of overload or mis-use. Remove those clamps from service

- Nuts which cannot be turned by hand
- Load is hanging out of plumb while the device is positioned vertically.
- Space Saver does not hinge smoothly.

15. Inspection, discard and rejection criteria

Initial Inspection

When first acquired, whether they are new or used, Space Savers should be inspected and a record of the inspection maintained.

Regular Inspections

Regular inspections should be performed by a skilled person and should be carried out prior to each incident of use.

Periodic Inspections

Periodic visual inspections should be performed by a skilled person and should be conducted at least once each year or in accordance with an inspection routine established by a qualified person. A record of the inspections maintained.

Space Savers which are subject to any accident must be inspected according to the requirements per periodic inspection.

16. Inspection Frequency

Space Savers in regular service

Space Savers in regular service should be subjected to regular and periodic inspections.

Permanent Installations, Stationary

Periodic inspections should be carried out on all Space Savers that are permanently installed in a stationary (not moving) configuration. The frequency of inspections should be determined on the basis of the prevalent conditions.

Records

Records of initial inspections and periodic inspections should be kept by the owner for each Space Saver and should be signed and dated by the person carrying out the inspections.







17. Maintenance

SAFETY INSTRUCTIONS

Although under normal use and environmental circumstances, Space Savers need little maintenance, for safety reasons, all parts must be checked regularly for damages, cracks, loss and corrosion.

NOTICE

The Space Saver shall be checked in compliance with the local law by a skilled person. Checking shall take place as often as required but with a minimum of 1x per year. In case of doubt contact the manufacturer.

-  Check all components for damage and corrosion. Damaged and corroded parts shall be removed and thrown away.
-  Burrs and sharp edges shall be removed with fine sandpaper or a file.
-  Maintenance and repairs can be executed only by skilled persons. If in doubt contact the manufacturer.
-  Do not use any mechanical abrasive machine to remove sharp edges.
-  Use hot water and soap to clean Space Savers from all kinds of dirt.
-  Do not use abrasive fluids to remove dirt or paint.

18. Repair and Replacement of Parts

Space Savers should only be returned to Doughty for repair or replacement parts.

WARNING

Repairing this device yourself can greatly reduce the loading capacity.

19. Information if the product is no longer required

Products no longer required can be scrapped. Preferably remove all steel parts and store parts separately before offering them to a scrapping company.

The following alloys are used:

- Aluminium 6082 (Main Body Sections)
- Stainless 304 (Pivot Pins & Circlips)
- Mild Steel (Lock)

20.Warranty

- For a period of 12 months we undertake to repair, free of charge any damage attributable to faulty materials or workmanship, provided that the appliance is forwarded, freight paid, to our works or one of the Doughty appointed service organisations.
- The guarantee-period begins with the day of the delivery, proven by a purchase receipt like an invoice or delivery note or their copies.
- The guarantee only is applicable for new equipment.
- The guarantee does not cover damage due to transport damage, negligent handling, overload or parts subject to normal wear and tear. The guarantee does not cover damages that originate from a case of misuse because of non-observance of the instructions in this manual.
- The fitting of non-original replacement parts or modifications of design by third parties invalidates the guarantee.
- Guarantee repairs do not renew nor extend the guarantee-period.
- In case of a claim under the guarantee, a malfunction or spare part requirements please contact your point of sale or Doughty.

21. CE Declaration



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EC Declaration of Conformity according to Directive 2006/42/EC, Annex II 1A

Manufacturer
Doughty Engineering Ltd
Crow Arch Lane
Ringwood
Hampshire
BH24 1NZ

A copy of the Technical File is held at:
Doughty Engineering Ltd
Crow Arch Lane
Ringwood
Hampshire
BH24 1NZ

Description and Identification of Machinery:

Description:- Space Saver

Model:- T85850

Max Load:- 100Kg

Please note: All parts shown with a SWL are tested under factory conditions in a horizontal plane with the load straight down unless specified otherwise.

For parts used in a different orientation we would strongly advise that they are tested after installation by a competent person & a SWL issued by them.

Always remember - Any rigging product or combination of rigging products is only as strong as it's weakest, or lowest SWL rated, parts.

We hereby declare that the above mentioned machinery fulfils all the relevant provisions of EC Directive 2006/42/EC. This declaration relates exclusively to the machinery in the state in which it was placed on the market, and excludes components which are added and/or operations carried out subsequently by the final user.

Harmonised Standards, Standards or specifications

BS EN ISO 12100:2010 Safety of machinery, General principles for design, Risk Assessment and risk reduction

BS 7905-1: 2001 Lifting equipment for performance, broadcast and similar application

DGUV Regulation 17 Regulations for stages and studios. (Formerly known as BGVc1)

DGUV Information 215-313 Safety at productions & events for television, radio, film, theatre, exhibitions: Load above persons (Formerly known as BGI 810-3)

CWA 15902-1 European code of practice for lifting & Loadbearing equipment for stages & other production areas within the entertainment industry

Signed for and behalf of: - Doughty Engineering Ltd

Name: - **Stuart Rodgers** Date: -03-02-2017

Position: - **General Manager**

Being the person responsible appointed by the manufacturer.

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Directors: M.B. Lister. J.C.G. Chiverton. S.C. Wright.