



USER MANUAL

# Steel Boom Arms



**Original Instructions**

**Part No's:**

**T30500 - T31700**

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## Loading Table

Part No.	Tube Diameter	Description	Finish	WLL (Kg) Static
T30500	Ø48mm	Steel Boom Arm	BZP	12Kg
T30600	Ø48mm	Steel Boom Arm Straight	BZP	12Kg
T31500	Ø48mm	Steel Boom Arm with safety point	BZP	12Kg
T31600	Ø48mm	Steel Boom Arm Straight with safety point	BZP	12Kg
T31700	Ø48mm	Double Boom Arm Standard	BZP	12Kg

The Steel Boom Arm range consists of various items used to suspend loads in the entertainment market. They can be used for permanent support structures in places of entertainment such as event venues, theatres, museums etc.

Suspending loads is inherently dangerous so Steel Boom Arms are strictly for professional use only. Only competent persons are permitted to install and use Steel Boom Arms. A competent 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 which may occur during use of a product.

The load capacity differs depending on the model and the safety factor required. Steel Boom Arms are suitable to fit steel and aluminium tubes of Ø48mm. Steel Boom Arms are available in powder painted silver or black. Safety has been a critical design parameter throughout the development process, and all components have been rigorously tested, rated, and supplied with a maximum working load limit.

Special care must always be taken with the mounting of Steel Boom Arms to tubes. The correct fixings must always be used and it is important to remember that the bracket is only as strong as the fixings used.



### **Warning**

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

The intended use of Steel Boom Arms is to be used as a suspension accessory to hang loads. Loads can be, but not limited to, lighting fixtures, video projectors, sound systems and stage sets. Structural elements can be pipes and trusses. 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.

All communications will be carefully considered for future printings of this manual and changes to our products.

- Steel Boom Arms can be operated in -20° Celsius up to +60° Celsius.
- Steel Boom Arms are for indoor use only.
- The use of Steel Boom Arms is the sole responsibility of the user.
- To use the Steel Boom Arms the user must also observe safety regulations, the assembly and disassembly instructions to be found in this manual.
- All individuals who use or service this device must familiarize themselves with the user manual to understand the potential hazards associated with the operation of the device.
- It is also imperative to observe the local accident prevention regulations and/or occupational health and safety regulations.
- Care must be taken when used in conjunction with thin wall truss.
- 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.

**The following modifications are allowed to be executed by third parties:**

**Painting:**

- To paint a Boom Arm, cover all bolts and nut with tape.
- Use a wet-paint or powder coating paint system to colour the part.

**Safety Instructions:**

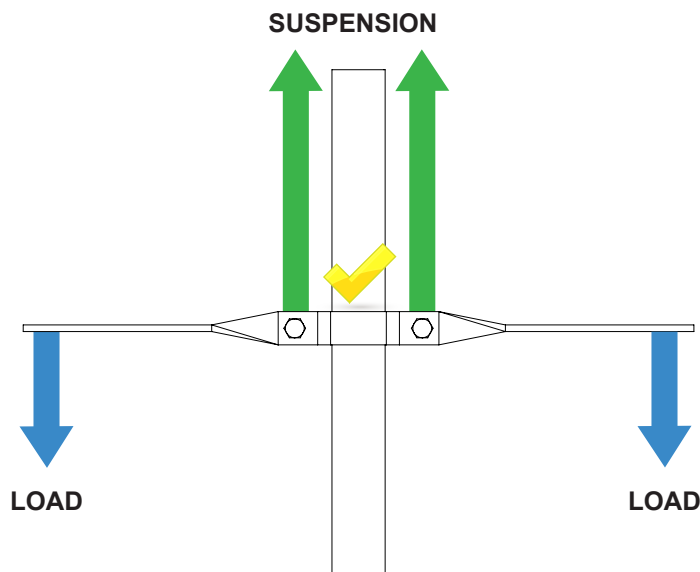
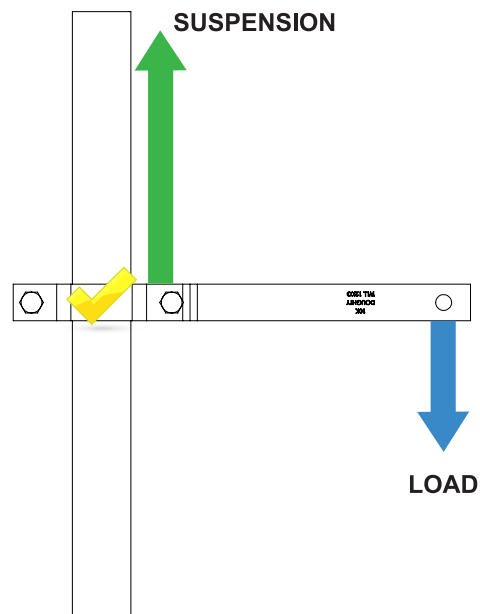
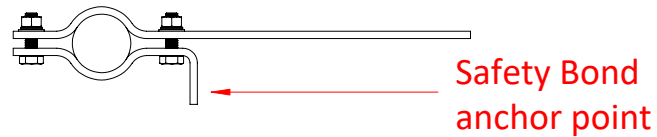
For health and safety reasons people assembling, disassembling, transporting, maintaining and cleaning Steel Boom Arms should wear adequate Personal Protection Equipment such as, but not limited to: gloves, hard hats and safety shoes. In line with the use of PPE organisational measures may need to be implemented to keep the area beneath installations clear of personnel.

- Steel Boom Arms shall be solely used for the range of pipe diameters as stated in the manual.
- Do not exceed the working load limit marked on the Steel Boom Arms.
- Make sure the resulting forces on the supporting structure are approved by a competent person.
- Steel Boom Arms shall be inspected by a competent person as often as required but with a minimum of once a year.
- Inspect equipment before every use. Damaged Steel Boom Arms shall be taken out of service.
- Maintenance and repairs can be undertaken only by authorised personnel. If in any doubt contact the manufacturer.
- Do not throw Steel Boom Arms.



### Warning

The working load limit stamped on the Boom Arm label is solely for a straight pull between the supporting pipe and connection point on the Boom Arm.



### STEEL BOOM ARMS USED AS A LIFTING ACCESSORY:

**2006/42/EC** - Machinery Directive.

**BS7905-1:2001** - Lifting equipment for performance broadcast and similar applications. Part 1 specifications for the design and manufacture of above stage equipment (excluding trusses and towers).

**BS7906-1:2005** - Lifting equipment for performance broadcast and similar applications. Part 1 specifications for the design and manufacture of above stage equipment.

### TRANSPORT AND STORAGE

- Due to the relatively 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 shall be adhered to.
- Before Steel Boom Arms are put into storage they shall be checked for defects. Defective Steel Boom Arms shall be clearly marked and put aside in such a way they cannot be re-used.
- Ensure the product is stored and kept in a dry, ventilated environment to avoid corrosion.
- Use appropriate packaging to prevent damage to parts and threads when transporting clamps and brackets.



Steel Boom Arms are brackets designed to be used on 48mm diameter tubes to suspend lighting fixtures, small speakers, scenery etc.

1. Undo the two nuts & bolts & remove them from the bracket. Separate the two sides of the bracket.
2. Put each side of the bracket around the tube & put the nuts & bolts back through their holes.
3. Move the Boom Arm to the required position & do the nuts & bolts up hand tight.
4. Tighten the nuts & bolts up using a suitable spanner being careful not to overtighten as this could crush thin-walled tubes or truss.
5. Attach the load to the Boom Arm securely & remember to use a secondary safety bond using the safety point on the T31500 & T31600.

## COMMISSIONING

- Steel Boom Arms are not intended to serve as a means to secure electrical bonding and any fixtures must be grounded in accordance with accepted electrical practices.
- Before applying a load check that all connections are properly made.
- Check if all parts are in good order.

## DISASSEMBLY INSTRUCTIONS

- Ensure all loads are removed prior to disassembly.
- Check if the Steel Boom Arms are in good order.
- If not, mark them clearly and put aside.

**All items are to be checked for corrosion, deformation and cracks, and if found, they are to be removed from service.**

**INITIAL INSPECTIONS** - When first acquired, whether they are new or used, Steel Boom Arms should be inspected and a record of the inspection maintained.

**REGULAR INSPECTIONS** - Regular visual inspections should be carried out by a competent person and should be carried out prior to each incident of use.

**PERIODIC INSPECTIONS** - Periodic visual inspections should be carried out and a record of the inspections maintained. Periodic inspections should be performed by a competent person and should be conducted at least once each year or in accordance with an inspection routine established by a qualified person. Steel Boom Arms which are subject to any accident must be inspected according to the requirements per periodic inspection.

### **INSPECTION FREQUENCY**

**STEEL BOOM ARMS IN REGULAR SERVICE** - Steel Boom Arms in regular service should be subjected to regular and periodic inspections.

**PERMANENT INSTALLATIONS, STATIONARY** - Periodic inspections should be carried out on all clamps and brackets that are permanently installed in a stationary (not moving) configuration. The frequency of inspections should be determined on the basis of the prevalent conditions.

**PERMANENT INSTALLATIONS, MOVING** - Periodic inspections should be carried out every three months, or in accordance with an inspection routine established by a qualified person, on all Steel Boom Arms that are installed in a permanent configuration where movement of the truss system is an integral part of use.

**RECORDS** - Records of initial inspections and periodic inspections should be kept by the owner for each Steel Boom Arms and should be signed and dated by the person carrying out the inspections.



## Safety Instructions

Although under normal use and environmental circumstances, Steel Boom Arms need little maintenance, for safety reasons, all parts must be checked regularly for damage, cracks and corrosion.

## NOTICE

Steel Boom Arms shall be checked in compliance with the local law by a competent person. Checking shall take place as often as required but at a minimum of once a year. If in doubt contact the manufacturer.

- Approved personnel must carry out a visual and functional test before every useage.
- Check all components for damage and corrosion. Damaged and corroded parts shall be exchanged with like for like approved replacement parts.
- Burrs and sharp edges shall be removed using fine sandpaper or a file. DO NOT use any mechanical abrasive machine to remove sharp edges from the Steel Boom Arms.
- Maintenance and repairs must only be carried out by a competent person. If in doubt, contact the manufacturer.
- Only use hot water and soap to remove dirt from clamps and brackets – DO NOT use abrasive fluids.
- Do not re-zinc plate steel parts.
- Approved personnel must carry out more detailed inspection and testing of the product on a regular basis depending on the usage of the product.
- Written records should be kept from the date the product was put into operation.



## Warning

- The installer/operator must read and understand the User Manual before using the equipment.
- Operators shall be adequately instructed and fully understand the safe use of the equipment before use.
- Failure to carry out maintenance as necessary, including the replacement of parts to the correct standard could render this equipment unsafe and the manufacturer cannot accept any responsibility in this respect.
- DO NOT modify the equipment as this could lead to a critical failure.
- DO NOT use this equipment for a purpose that it is not intended. This could lead to a failure of the equipment and a risk of falling objects.

## REPAIRS AND REPLACEMENT OF PARTS

If the Steel Boom Arms are damaged, contact the manufacturer.

### DISPOSAL

Products that are no longer needed can be scrapped. Preferably remove all steel parts, store part separately before offering them to a scrapping company. The following materials are used:

- Mild Steel
- Steel 8.8

### 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 agents.
- The guarantee-period begins on 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. Nor 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 or spare part requirements please contact your Doughty service agent.
- The manufacturer is not liable for indirect consequential damage or financial loss.
- The manufacturer is not liable for any changes made to the Steel Boom Arms or for any damage resulting from such changes.



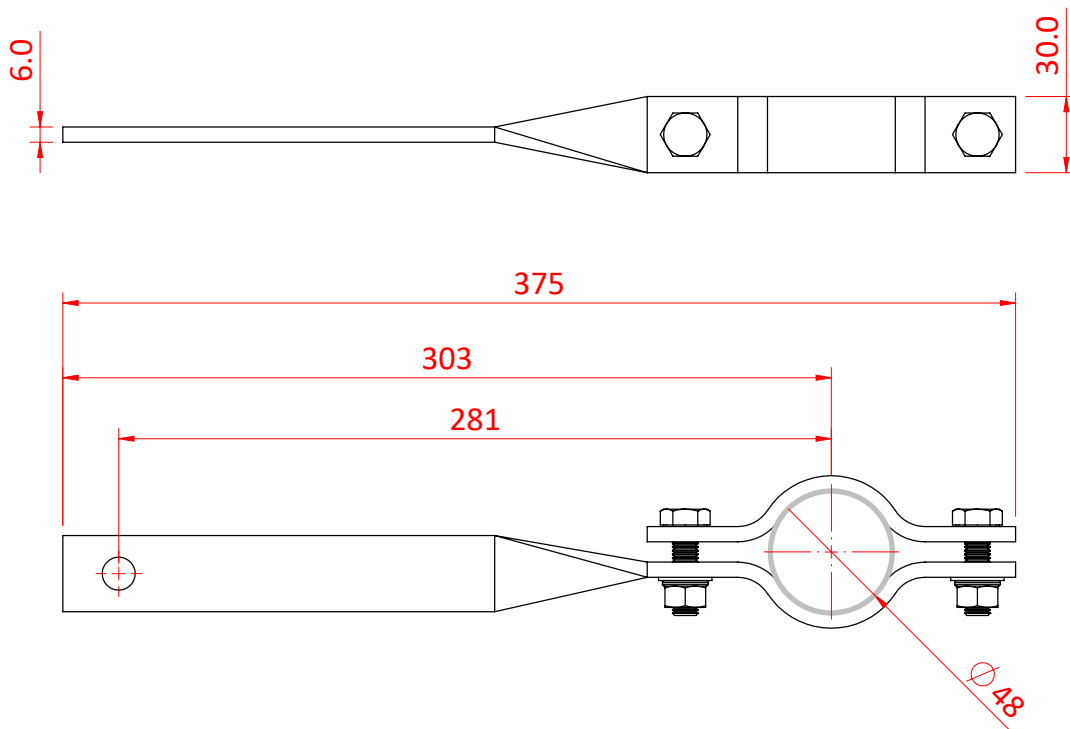
# Steel Boom Arm

## Product Data Sheet



A Steel Boom Arm	
<b>Part Nos</b>	T30500
<b>Tube Diameter</b>	Ø48.3mm
<b>Material</b>	S275 Mild Steel Fixings Grade 8.8
<b>Fixings</b>	To be used with M12 Fixings
<b>Finish</b>	Zinc Plated
<b>Weight</b>	0.83Kg
<b>WLL</b>	12kg
<b>Factor of Safety</b>	5:1

Dimensions in mm



Doughty Engineering Ltd - Crow Arch Lane, Ringwood, Hampshire, BH24 1NZ, UK  
 +44 (0) 1425 478961, sales@doughty-engineering.co.uk - www.doughty-engineering.co.uk



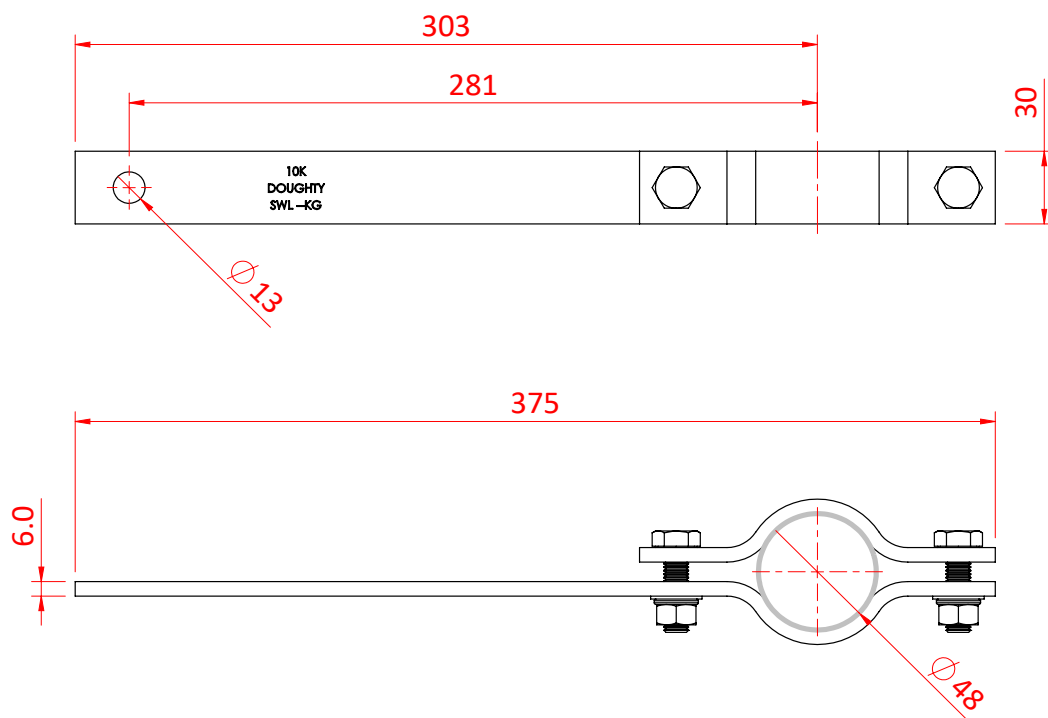
## Product Data Sheet

# Steel Boom Arm (Straight)



A Steel Boom Arm	
<b>Part Nos</b>	T30600
<b>Tube Diameter</b>	Ø48.3mm
<b>Material</b>	S275 Mild Steel Fixings Grade 8.8
<b>Fixings</b>	To be used with M12 Fixings
<b>Finish</b>	Zinc Plated
<b>Weight</b>	0.83Kg
<b>WLL</b>	12kg
<b>Factor of Safety</b>	5:1

Dimensions in mm



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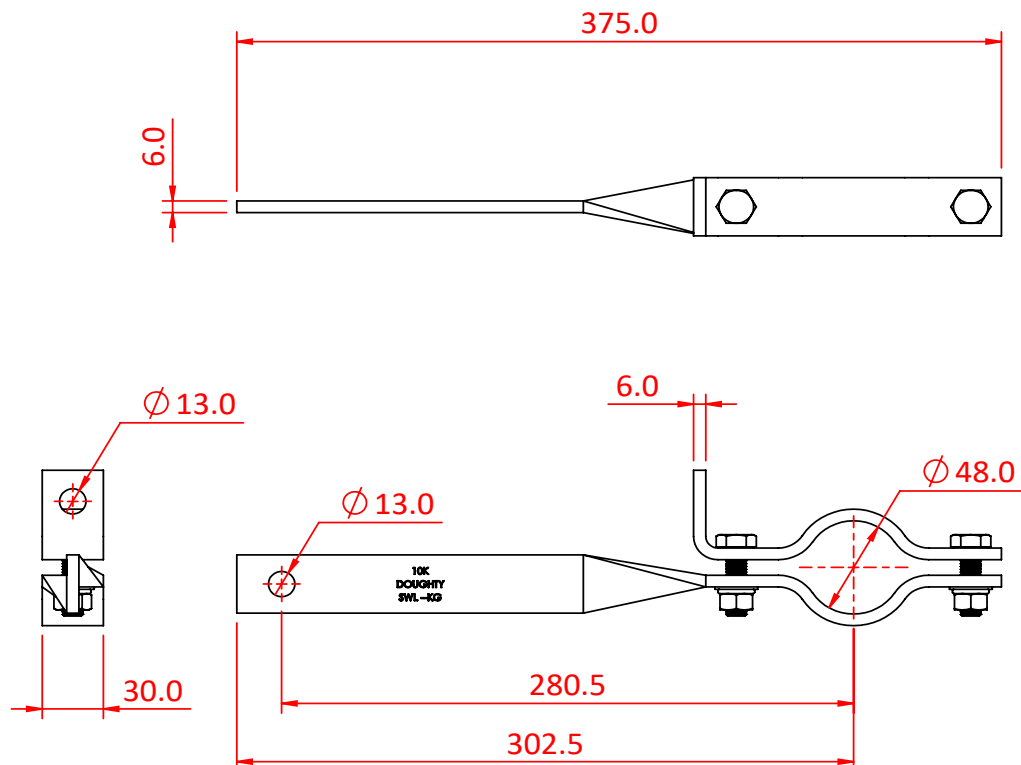
## Product Data Sheet

# Steel Boom Arm with Safety Point



A Steel Boom Arm with attachment point for a safety bond	
<b>Part Nos</b>	T31500
<b>Tube Diameter</b>	Ø48.3mm
<b>Material</b>	S275 Mild Steel Fixings Grade 8.8
<b>Fixings</b>	To be used with M12 Fixings
<b>Finish</b>	Zinc Plated
<b>Weight</b>	0.88Kg
<b>WLL</b>	12kg
<b>Factor of Safety</b>	5:1

Dimensions in mm



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## Product Data Sheet

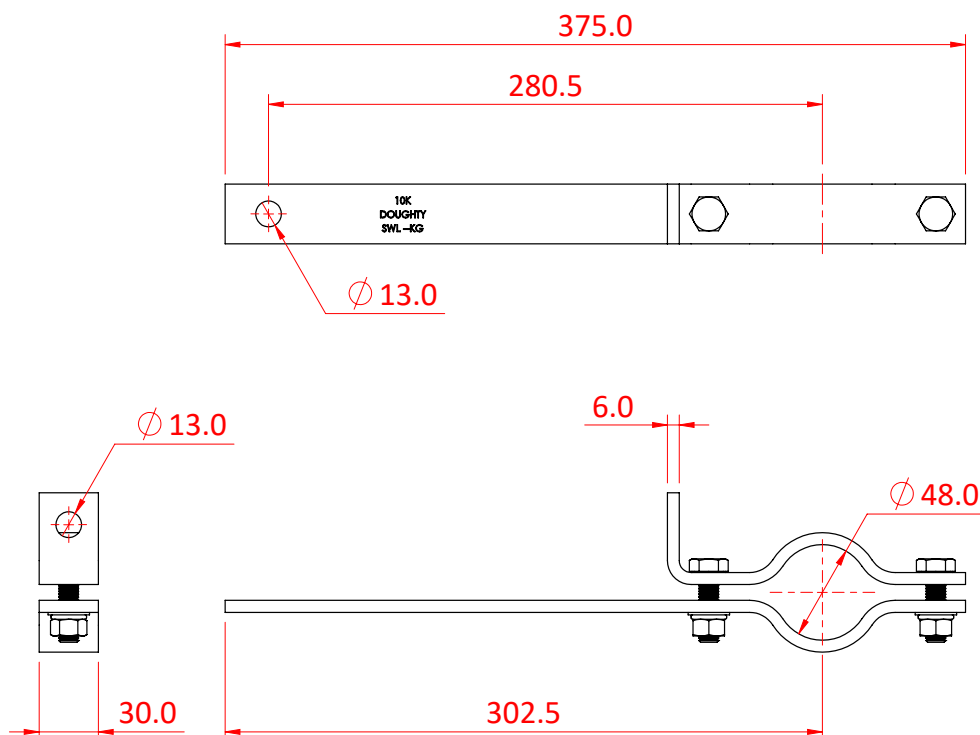
# Steel Boom Arm with Safety Point (Straight)



A Steel Boom Arm with attachment point for a safety bond.

<b>Part Nos</b>	T31600
<b>Tube Diameter</b>	Ø48.3mm
<b>Material</b>	S275 Mild Steel Fixings Grade 8.8
<b>Fixings</b>	To be used with M12 Fixings
<b>Finish</b>	Zinc Plated
<b>Weight</b>	0.88Kg
<b>WLL</b>	12kg
<b>Factor of Safety</b>	5:1

Dimensions in mm



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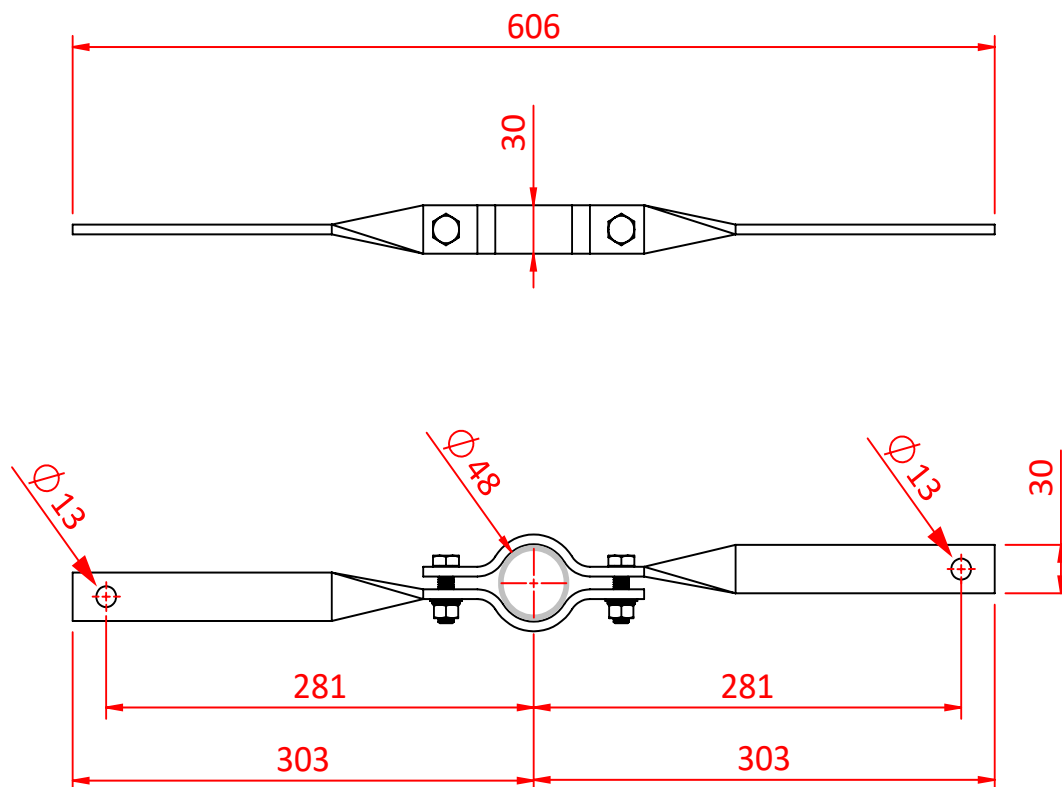
# Steel Double Boom Arm

## Product Data Sheet



A Steel Double Boom Arm	
<b>Part Nos</b>	T31700
<b>Tube Diameter</b>	Ø48.3mm
<b>Material</b>	S275 Mild Steel Fixings Grade 8.8
<b>Fixings</b>	To be used with M12 Fixings
<b>Finish</b>	Zinc Plated
<b>Weight</b>	1.11Kg
<b>WLL</b>	12kg
<b>Factor of Safety</b>	5:1

Dimensions in mm



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## Inspection List

ITEM	FAULT	REPAIR	DATE	SIGNATURE



Engineering Ltd

## EC-DECLARATION OF CONFORMITY

According to the Machinery Directive 2006/42/EEC Annex II

### Doughty Engineering Ltd

Crow Arch Lane

Ringwood

Hampshire

BH24 1NZ

Herewith declares that:

**T30500, T30600, T31500, T31600 & T31700**

### Steel Boom Arms

Are in compliance with the following harmonized standards/standards/regulations.

### Machinery Directive 2006/42/EEC annex II

- Machinery Directive 2006/42/EC;
- BS EN 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 Applications;
- BS 7906-1:2005 - Lifting Equipment for Performance, Broadcast and Similar Applications;
- DGUV 17 – Regulations for Stages and Studios
- DGUV Information 215-313

Signed for and behalf of **Doughty Engineering Ltd**

Name **Dan Phillips**

Position **Company Director** being the person responsible appointed by the manufacturer.

Company Registration No. London 972614

Registered Office: Crow Arch Lane, Ringwood, Hants, BH24 1NZ

Directors: J.C.G. Chiverton. S.C. Wright. D. Phillips. D.M. Chorley



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**Note:** Whilst every effort has been made to ensure that the information contained within this manual is correct, Doughty Engineering does not accept any liability for errors or omissions. Specifications and technical data are intended for guidance purposes only and may vary.