



USER MANUAL

# Aluminium Boom Arms



Original Instructions

Part No's:

T57310 - T57321

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Before installing and using Aluminium Boom Arms, please read this manual carefully and pay attention to the information provided. Use this manual to familiarise yourself with Aluminium Boom Arms, their proper use and safety regulations.

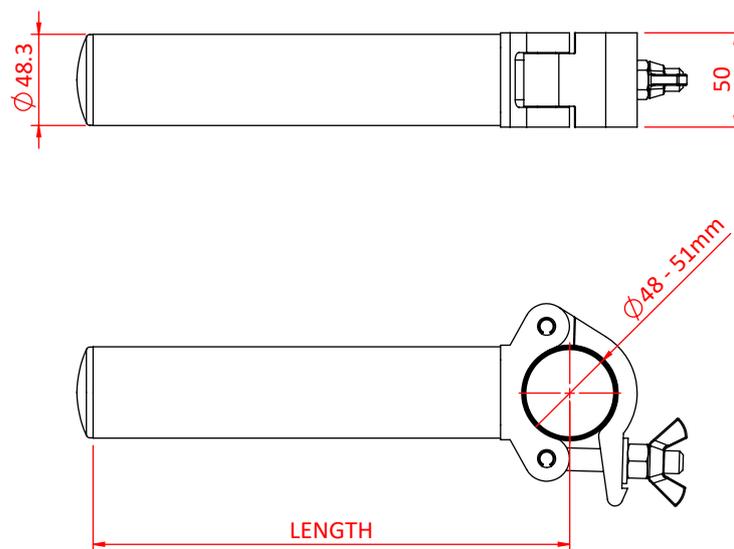
The Aluminium Boom Arm collection is a range of Aluminium Boom Arms designed to fit truss sections with a tube diameter of 48 to 51mm.

Only competent persons are permitted to install and use Aluminium 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 occurring during use of the product.

Aluminium Boom Arms are finished in powder coated silver or powder coated black. 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 improvement. All communications will be carefully considered for future printings of this manual and changes to our products.

Dimensions in mm



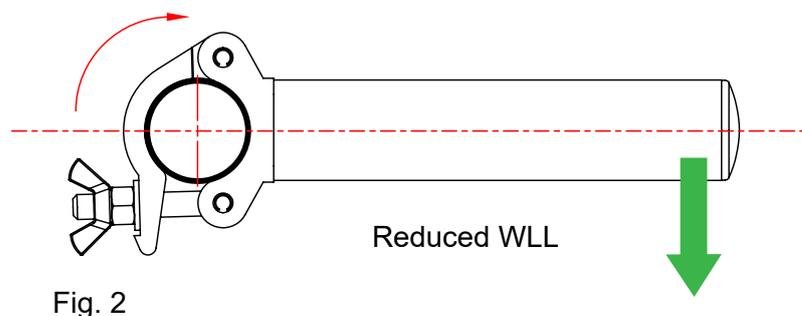
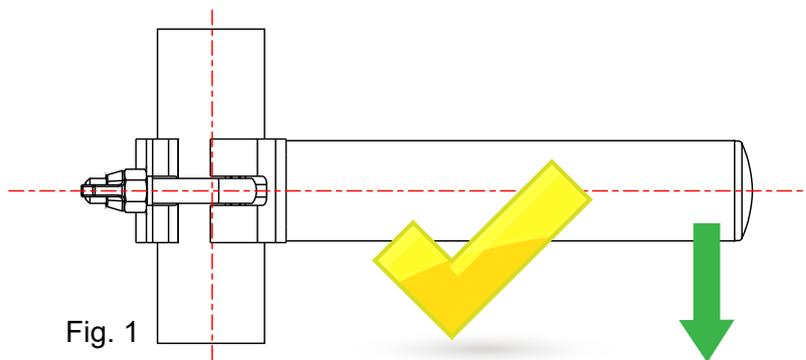
Special length Boom Arms are available on request to Doughty Engineering

## Aluminium Boom Arm Range

Part No.	Length (mm)	WLL (Kg)	Finish	Weight (Kg)
T57310	250mm	100Kg	Powder Painted Silver	0.84Kg
T57311	250mm	100Kg	Powder Painted Black	0.84Kg
T57315	500mm	50Kg	Powder Painted Silver	1.24Kg
T57316	500mm	50Kg	Powder Painted Black	1.24Kg
T57317	750mm	37Kg	Powder Painted Silver	1.65Kg
T57318	750mm	37Kg	Powder Painted Black	1.65Kg
T57320	1000mm	25Kg	Powder Painted Silver	2.50Kg
T57321	1000mm	25Kg	Powder Painted Silver	2.50Kg

The WLL figures given in the table above are for Boom Arms fitted to vertical tubes. See Fig 1.

Boom arms fitted to horizontal or non-vertical tubes will have a reduced Working Load Limit (WLL). This lower WLL should be determined by a competent installer as appropriate for the installation. See Fig.2.



## Limitations of use

- The Aluminium Boom Arms can be operated in -20° Celsius up to +60° Celsius.
- Salt water environments require cleaning with fresh water at least once per week.
- Aluminium Boom Arms shall only be used on steel or aluminium truss.
- When Aluminium Boom Arms are used in an outdoor environment, the support structure must be fitted with earth protection against lightning.
- The use of Aluminium Boom Arms is the sole responsibility of the user.
- 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.
- No modifications are to be carried out by third parties.
- Care must be taken when used in conjunction with thin wall truss.

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



### Warning

- Aluminium Boom Arms must only be installed and used qualified/competent persons. Salt water environments require cleaning with fresh water at least once per week.
- Do not exceed the working load limit indicated for the Aluminium Boom Arm.
- Make sure the resulting forces on the supporting structure are approved by a competent person.
- All loads imposed shall be considered, e.g. dynamic forces caused by lifting machinery.
- Nuts and bolts shall be tightened by means of a tool in such a manner they cannot be released by manpower.
- When loads are using electrical power, equipotential bonding shall be put in place.
- Aluminium Boom Arms shall be inspected by a competent person as often as required but with a minimum of once a year.
- Aluminium Boom Arms must be taken out of service immediately if, during use, repair or maintenance any serious damage is discovered.
- Maintenance and repairs can be undertaken only by authorised personnel. If in any doubt contact the manufacturer.
- Do not throw Aluminium Boom Arms.

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

**2006/42/EC** - Machinery Device

**DGUV Rules 115-002** - 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)

**BS 7906-1:2005** - Lifting equipment for performance broadcast and similar applications. Part 1 specifications for the design.

### **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 the Aluminium Boom Arms are put into storage they shall be checked for defects. Defective Aluminium 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.
- Appropriate packaging or protective measures are to be provided to prevent damage to the Aluminium Boom Arms during transportation.

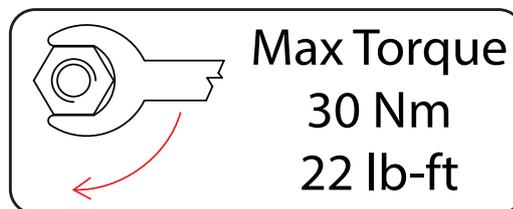


## Warning

**Inspect Aluminium Boom Arms before every use. DO NOT use if damaged.**

- Organisational measures should be implemented to keep the area beneath work operations clear of people during installation
- Ensure that the installation is suitable for the application.
- Never exceed the working load limit (WLL) as indicated in this manual or as instructed by your installer, as installation conditions may alter the working load limit.
- When used in conjunction with any other accessories, care must be taken to ensure the WLL of any component is not exceeded.
- Care must be taken when used in conjunction with thin wall truss.
- When securing the boom arm coupler to a truss, ensure the coupler is seated on the tube correctly and not seated in a weld, as this may cause the coupler to become loose.

The recommended maximum torque for securing the couplers and clamping the truss is 30Nm. Overtightening the couplers will reduce their lifespan and can damage the truss.





## Warning

**Before applying a load, check that all connections are properly made and check if all parts are in good order. If any fault is found, mark product clearly and remove from service.**

## INITIAL INSPECTIONS

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

## REGULAR INSPECTIONS

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

## INSPECTION FREQUENCY

### ALUMINIUM BOOM ARMS IN REGULAR SERVICE

Aluminium Boom Arms in regular service should be subjected to regular and periodic inspections. The frequency of inspections should be determined on the basis of the frequency and intensity of use.

### PERMANENT INSTALLATIONS

Periodic inspections should be carried out in accordance with an inspection routine established by a qualified person, on all Aluminium Boom Arms that are installed in a permanent configuration.

### RECORDS

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



## Safety Instructions

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

## NOTICE

The Aluminium Boom Arm 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.
- Maintenance and repairs must only be carried out by a competent person. If in doubt, contact the manufacturer.
- DO NOT use any mechanical abrasive machines to remove sharp edges from Aluminium Boom Arms.
- Only use hot water and soap to remove dirt from Aluminium Boom Arms – DO NOT use abrasive fluids.

- Maintenance must only be carried out by approved personnel.
- Approved personnel must carry out a visual and a function test before every usage.
- 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.



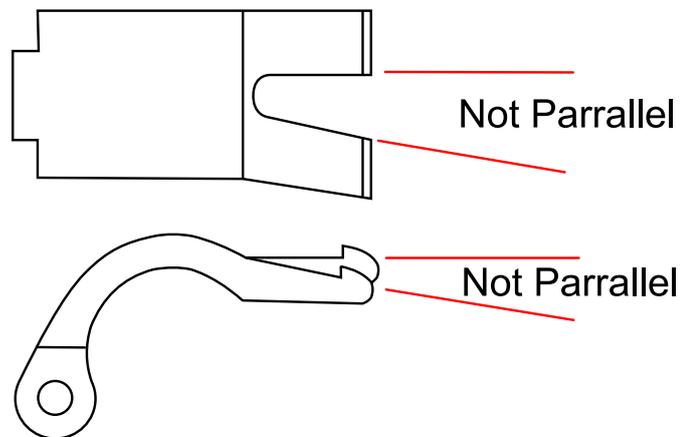
### **Warning**

- 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.
- Only use approved spare parts.
- 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.

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

- Deformation of the lid (see diagram).
- Nuts which cannot be turned by hand.
- Eyebolts which do not swivel properly.
- Lids which do not swivel properly.
- Clamp does not fit around the pipe.

### Typical Deformation Examples



### REPAIRS AND REPLACEMENT OF PARTS

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

### DISPOSAL

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

- Boron BS3111 TYPE 9/2
- Aluminium 6082 T6
- Mild Steel

### 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 is only 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 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 Aluminium Boom Arm or for any damage resulting from such changes.



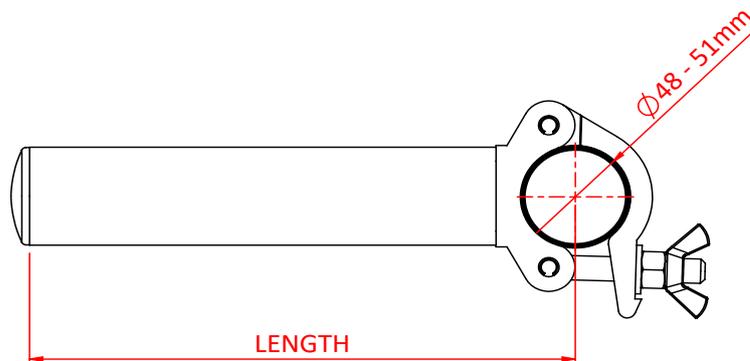
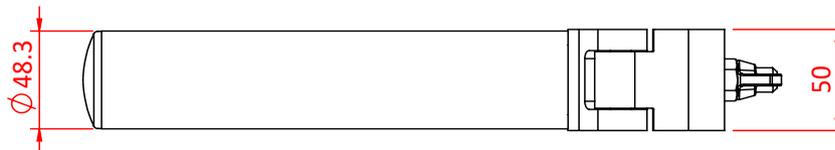
Product Data Sheet

# Aluminium Boom Arms - Silver



Aluminium Boom Arms	
<b>Part Nos</b>	T57310 - 250mm - 0.84Kg T57315 - 500mm - 1.24Kg T57317 - 750mm - 1.65Kg T57320 - 1000mm - 2.50Kg
<b>Tube Diameter</b>	Ø48 - 51mm
<b>Materials</b>	Main Body - 6082 T6 Aluminium Roll Pins - Stainless Steel
<b>Finish</b>	Powder coated silver
<b>Max Tightening</b>	30Nm
<b>WLL</b>	T57310 - 100Kg T57315 - 50Kg T57317 - 37Kg T57320 - 25Kg
<b>Factor of Safety</b>	5:1
<b>Approval</b>	TÜV Approved

Dimensions in mm



DIMENSIONS ARE A GUIDE ONLY AND MAY VARY

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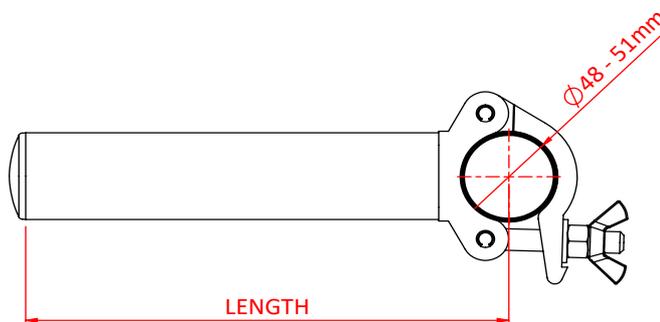
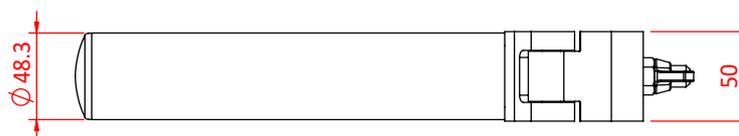
Product Data Sheet

# Aluminium Boom Arms - Black



Aluminium Boom Arms	
<b>Part Nos</b>	T57311 - 250mm - 0.84Kg T57316 - 500mm - 1.24Kg T57318 - 750mm - 1.65Kg T57321 - 1000mm - 2.50Kg
<b>Tube Diameter</b>	Ø48 - 51mm
<b>Materials</b>	Main Body - 6082 T6 Aluminium Roll Pins - Stainless Steel
<b>Finish</b>	Powder coated satin black
<b>Max Tightening</b>	30Nm
<b>WLL</b>	T57311 - 100Kg T57316 - 50Kg T57318 - 37Kg T57321 - 25Kg
<b>Factor of Safety</b>	5:1
<b>Approval</b>	TÜV Approved

Dimensions in mm



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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:

**T57310, T57311, T57315, T57316, T57317, T57318, T57320 & T57321**

**Aluminium 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 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**

A handwritten signature in black ink, appearing to be "DP" or similar initials.

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

Company Registration No. London 972614  
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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.