

**REID**  
LIFTING



Bruno-Glettenberg.de



# TDAVIT™ For Rope Access

➤ Assembly & Operation Guide

bruno-glettenberg.de

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# Lightweight. Portable. **Safe.**

Please read the following instructions and guidance notes carefully, before using or operating the system. They contain important information about how to handle and use the system in a safe and efficient way, avoiding danger, reducing repair costs and downtime, and increasing the reliability and lifespan of the system.

They apply for:

- Operation, including preparation, troubleshooting during operation and cleaning
- Maintenance, inspection and repair
- Transportation

It is the responsibility of the end user to adhere to the Health & Safety and accident prevention standards and legislation valid in their respective countries and any regions in which the system is being used. It is also incumbent on the user or competent person to ensure that anyone working with the equipment has the necessary medical and physical capabilities. A rescue plan also needs to be in place in the event of an emergency that could occur during the work. This document should form part of the overriding Risk Assessment and Method Statement required for each lift.

# Correct Operation

## Intended Use

This product is intended to be used for; the lifting of personnel, rope access, or providing a safety anchor for the prevention of falls.

It is expected that all users of this product have the necessary medical and physical capabilities, are fully trained and competent in its safe assembly and use.

We would remind users of the equipment to ensure that work is properly planned, risk assessments carried out and as required, method statements for carrying out work provided.

Where required the owner or user of the equipment should ensure that a qualified person has been consulted in respect of the need for structural validation, for example [but not limited to]; calculating structural integrity and the structures ability to resist the moment generated by use of the product both statically and dynamically.

## Inspection Prior to Initial Operation

Each product must be inspected prior to initial operation by a competent person to ensure that the structure is safe and that it has not been damaged by incorrect assembly, transport or storage.

## Inspection Before Starting Work

Before starting work, the product assembly and all load-bearing components should be checked for visual defects as per the inspection checklist on page 8.

## Technical Characteristics

This product has different ratings depending upon the variant you choose. The table below indicates the maximum capabilities for standard range systems only. If unsure about your system consult serial labels, information filled in on page 23 or consult your supplier.

Product Code	Max. Radius [mm]	Max. Allowable Arrest Force [per user]	Max. Rated Mass	Max. System Mass	Capacity [persons]	Rescue Accompanied Descent	Max. Deviation Angle Service load (6kN) Fixed sockets
TDRAC50001	1600	6kN	150	150	1	x	10°
TDRAC50002	1000	6kN	150	150	1	x	25°
			115	230	2	✓	
TDRAC50003	1200	6kN	150	150	1	x	20°

### Maximum Pivot angle

Socket	Socket Type	TDRAC50001	TDRAC50002	TDRAC50003
Side Mount Socket	Concrete rear loading [over the wall] Socket 80mm below edge	±90°	±90°	±90°
	Steel	360°	360°	360°
Top Mount Socket	Concrete [325mm from edge]	±90°	±90°	±90°
	Steel	360°	360°	360°

## Temperature Range

This product can be operated in ambient dry temperatures between –20°C and +55°C (–4°F and 131°F). Consult your supplier in case of extreme working conditions.

## Use as a Rope Access, Work Positioning and Fall Protection Anchor

**This section must not be read in isolation from all other sections of this manual. Read the whole manual before using this product.**

**Rope Access and Work Positioning:** This product is tested to and conforms with the requirements of BS8610:2017 Personal Fall Protection Equipment – Anchor Systems for Type A Non-Load Limiting products. Different product types meet different aspects of the standard and that is defined further in this manual.

- Type A1 – Restraint
- Type A2 – Fall Arrest
- Type A3 – Rope Access & Work Positioning
- Type A4 – Rescue [accompanied descent]
- Type A5 – Rescue [remotely operated or self-operated] – direct attachment
- Type A6 – Rescue [remotely operated] – re-direct attachment
- Type A7 – Evacuation

In addition the product is tested to and meets the requirements of IRATA's International Code of Practice for Industrial Rope Access, being rated a minimum of 15kN.

**Fall Protection:** This product is tested and conforms to the requirements of EN795:2012 Personal Fall Protection Equipment – Anchor Devices for single users. When being used for fall arrest, the operator must use a body harness and a shock absorber that complies with the relevant national standards and regulations and that limits the maximum allowed force (MAF) to 6kN.

Users may only be attached to the system via the designated anchor points. Only the designated number of users should be attached to each anchor point. All ropes should be independently connected to the designated anchor points and must pass over the sheaves at each end of the beam. Use of the equipment must be properly planned, and all user weights clearly known along with a clear understanding of the WLL and constraints of all personal fall arrest system components.

Each product is labelled in accordance with BS8610:2017 and EN795:2012. Labelling in conjunction with this manual defines the parameters for safe use. If unsure about your system consult your supplier.

# ➤ Fall Protection Applications

## Notes for Correct Operation

- Ensure that the systems structural anchor is within its period of test in accordance with BS7883:2019.
- Only use sockets that have been supplied by REID Lifting and have therefore been tested and certified to BS8610 and EN795.
- Assemble the system only as instructed ensuring all component parts are present, in good condition and securely fastened.
- Only assemble the product in a safe environment. Protect both personnel and components against the risk of falling.
- Take care when transporting and storing the system to avoid damage.
- The anchor point or re-direct sheaves should always be above the users' head to prevent dangerous free falls.
- Always carry out pre-use checks before using this equipment. It is advised to use a buddy system and inspection must be by a competent person.
- Do not use this product if the kingpin shaft is not seated correctly in the socket.
- Do not use this product if it does not rotate freely in the bearing or the bottom flange is fouled in any way, preventing free rotation.
- Familiarise yourself with the maximum permissible angle of deviation and pivot before using the system.
- Fall arrest devices and ropes must only be attached to the designated anchor points by competent persons.
- Never walk away from the footprint of the product or move outside designated safe zones whilst connected to it where there is a risk of a fall.
- When using the product as a fall arrest anchor ensure there is adequate fall clearance when working at height. A competent person should calculate this considering all of the components of the personal fall arrest system and allowing a safety margin.
- Always consider the potential effects of sharp edges, chemical reagents, electrical conductivity, cutting, abrasion, climatic exposure on all components of the fall protection system, and the effect of offset forces because of pendulum falls.
- If the product has been subjected to a fall arrest or impact force it must be immediately removed from service.
- The substrate of the structure on which the product is placed must be able to sustain the loads specified for the device in all orientations permitted, including a safety factor of at least 2.
- Never exceed the number of allowable users.
- Never adjust the product whilst a person is attached to it.
- Ensure that any fall protection system components being used are compatible and meet the requirements of applicable standards.
- When using this equipment ensure that there is a rescue plan prior to starting work and ensure that users are trained in the correct execution of the plan and have all necessary rescue equipment to hand.
- Where required by regulation, each installation must be approved by a qualified person.
- Always wear appropriate PPE when installing, setting up, dismantling and using this equipment. Gloves, safety boots and a hard hat are recommended.
- Misuse of this product could result in serious injury or death.

## Warning

- Do not exceed the maximum user weight of the davit or the weight allowed by the lowest rated piece of equipment used in the system.
  - This equipment must only be assembled, installed and used by competent persons who have been trained in its correct application and use.
  - Ensure that working procedures prevent individual lifelines from crossing and becoming tangled.
  - When using the product in conjunction with another manufacturers fall protection products, ensure that you have read the instructions for use of those products to ensure their suitability and any restrictions for use.
  - Be aware of hazards when setting up or taking down. Such as trapping fingers in rotating parts.
  - Be aware of adverse weather conditions that may affect safe use of this product, such as high winds, snow or ice.
  - This equipment must not be used outside of its limitations or for any other purpose other than that for which it is intended.
- It is essential for safety that the product is withdrawn from use immediately and not to be used again until confirmed in writing by a competent person should;
    1. Any doubt arises about its condition for safe use or;
    2. It has been used to arrest a fall
    3. It has been used for any other purpose, other than as a component of a personal fall protection system.

# ➤ Inspection, Maintenance & Repair

The following information is based on REID Lifting's recommendations and does not remove the responsibility of the user to comply with the relevant regulations and standards that are valid in the respective countries and regions where the system is being used.

## Inspection Before Use

Before use, the product should be inspected for visual defects using the checklist below:

- Ensure kingpin, beam and column are free from dents or indentations.
- Ensure kingpin, beam and column are not showing any signs of deformation.
- Ensure that there is no elongation of the beam holes and that the inserts have not become loose.
- Ensure that the beam clevis pins are straight and free from damage.
- Ensure that the sheaves rotate freely and that there is no visible damage.
- Ensure no bolts are loose.
- Ensure anchor connection points are free from deformation or any damage

Test the free rotation of the kingpin and ensure that it is fully engaged in the socket. The lower bearing at the bottom of the column needs to be flush with the top of the socket.

## Regular Inspections

To ensure that the product's structure remains in safe working order it must be inspected regularly by a competent or qualified person. We recommend inspections every 6 months for personnel lifting, unless local regulations, adverse working conditions or profile of use and risk dictate shorter periods. The components of the system need to be checked for damage, wear, corrosion or other irregularities. It may be necessary to disassemble the system in order to do this. Particular attention should be paid to checking the profiles for denting, pins and fixings for integrity, making sure there is no wear or elongation on the bolt holes and ensuring that the sheaves rotate freely.

Anchor systems [sockets] should be periodically inspected by a competent person, authorised by the manufacturer in accordance with BS7883:2019.

It is recommended that once inspected or repaired, the device/anchor is marked with the date of the next inspection. Inspections are instigated by the user. If detailed information is required on inspection and test criteria, please contact your supplier's technical department or REID Lifting.

## Maintenance & Repair

In order to ensure correct operation, the conditions for inspection and maintenance must be complied with. If any defects are found, stop using the product immediately.

No alterations or additions to the equipment beyond the replacement of standard parts by an authorised representative should be made without the written consent of the manufacturer. Any necessary repairs identified during inspections should only be carried out by an approved specialist workshop using original spare parts. Any repair must be carried out in accordance with the manufacturer's instructions.

It is recommended to maintain the equipment in a clean and dry manner. Cleaning is suggested using a sponge or cloth with warm, soapy water, rinsing and allowing to dry.

This product must be assembled using metric fixings of the same type and quality as those supplied by the original manufacturer only. Failure to do so could have an impact on the structural performance and stability of the product. REID Lifting and its resellers can supply these spare parts locally.

## Storage & Transportation

When transporting the components, take note of all the manual handling considerations.

Do not throw the product down or stack any items on top of it.

Always place carefully and securely on the ground to avoid damaging the equipment.







## Sockets

REID's davits need to be secured in a socket which is anchored to a suitable structural surface/foundation capable of withstanding the applicable loading. We strongly recommend that a structural engineer validates this prior to installation of the product.

Socket installations should be in accordance with BS7883:2019 Code of Practice for Personal Fall Protection Equipment. Anchor systems. System design, installation, and inspection. For further guidance refer to our installation instructions for our sockets.

This product is normally supplied with one of the sockets specified (only sockets supplied by REID Lifting are approved to be used with this product):

-  The Top Mount socket is for use on flat horizontal surfaces. It can be installed onto concrete using resin bonded anchors or into steel work using bolts. This socket is tested to BS8610:2017 and EN795:2012
-  The Side Mount socket can be installed using resin bonded anchors or mechanical anchors or onto steelwork using bolts. This socket is tested to BS8610:2017 and EN795:2012

-  The Bridge Mount socket is for mounting into steel work and walkways. BS8610 compliance can be proven by engineer calculation.
-  The Cast & Resin Bonded sockets can be cast into new concrete or resin bonded into existing concrete. BS8610 compliance can be proven by engineer calculation.



## Socket Installation




Site specific information regarding the installation of REID davit sockets CANNOT be detailed within this operating manual as each site/structure is different. A qualified engineer MUST design and approve each installation based on the minimum mounting requirements, site information and experience.

When checking socket installations before use, it is important to ensure that the top face is as level as possible, with misalignment of no more than 3 degrees from horizontal.

For further information about our sockets and their installation refer to our technical data sheets for these products.



## Disclaimer

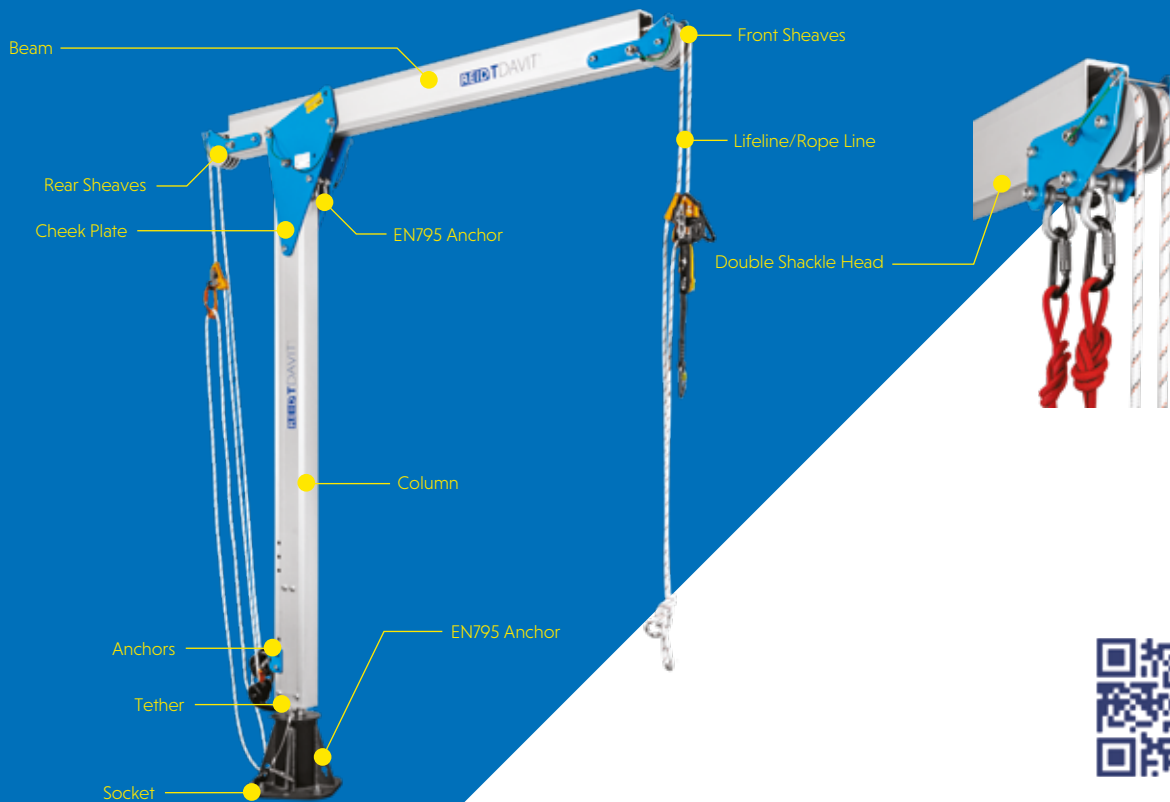
-  REID lifting sockets & extensions have been designed, developed and tested for safe use with REID equipment and form a key part of the integrity of the total system
-  All sockets have a maximum moment based on the maximum reach setting of the Davit, and the socket installation and verification tests performed
-  If non-standard, third-party sockets are used, REID Lifting's Declaration of Conformity & Incorporation and warranty for the products is no longer valid and the system becomes the responsibility of the client

# ► Assembly Instructions

The **TDAVIT** and its constituent components are described in the image below.

The socket type may vary between a Top Mount, Side Mount or our **PORTABASE** depending on product variant.

The **TDAVIT** shown is variant TDRAC50001



Appropriate PPE should be worn: **► Gloves** **► Protective Footwear** **► Hard Hat**



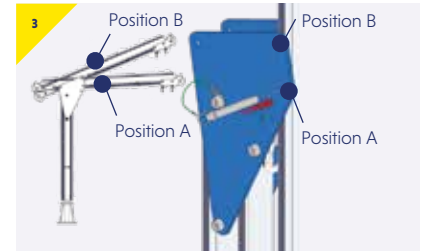
## Assembling the TDAVIT



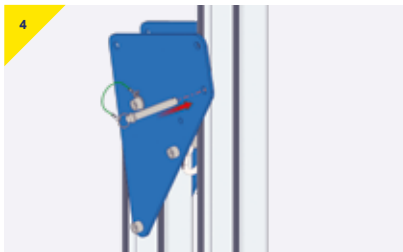
- Insert the T DAVIT into the socket as shown



- Secure the column to the socket by connecting the supplied lanyard to the gusset



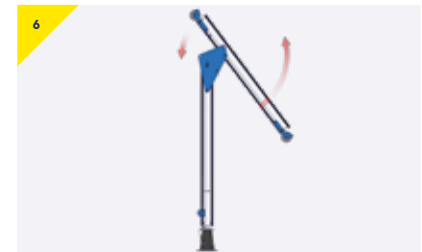
- The T DAVIT beam can be assembled at 2 positions [Position A or Position B] Ensure the correct set-up is chosen before assembling the beam



- Present the beam to the chosen location and insert the clevis pin



- Secure the pin with retaining R-clip



- Rotate the beam as illustrated

# ➤ Assembly Instructions



- Insert the clevis pin to take the weight of the beam



- Secure the pin with the R-clip



- For disassembly, reverse steps 1-7

## Fall Protection Anchors



- Anchor points located at the back of the column



- Anchor point located between the cheek plates



- Indicative image for rope rigging

# Variants & **Options.**



# > Variants & Options

## TDRAC50001



### Suitable Sockets

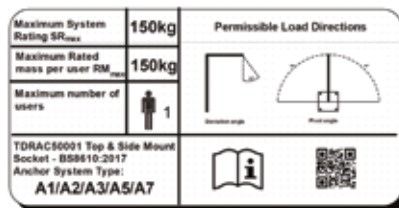


Top Mount



Side Mount

## Compliance Label



## Max Deviation Angle

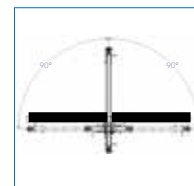


\*Deviation angle applicable to fixed sockets only.

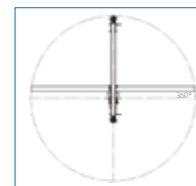
## Max Pivot Angle

Socket	Socket Type	TDRAC50001
Side Mount Socket*	Concrete rear loading [over the wall] Socket 80mm below edge	$\pm 90^\circ$
	Steel	$360^\circ$
Top Mount Socket	Concrete [325mm from edge]	$\pm 90^\circ$
	Steel	$360^\circ$

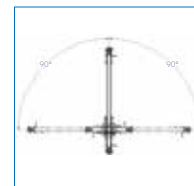
\*For forward loading applications for the Side Mount, please contact your REID representative.



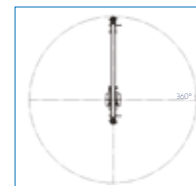
Side Mount - Concrete  
[rear loading]



Side Mount - Steel

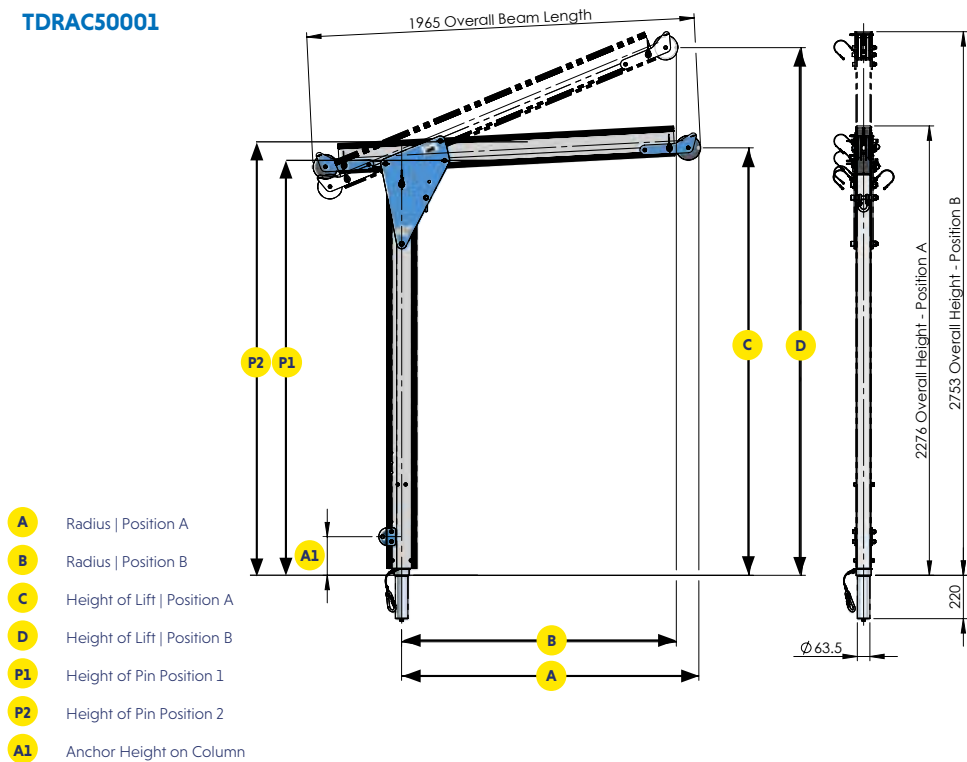


Top Mount - Concrete



Top Mount - Steel

## TDRAC50001



## Part Number

## TDRAC50001

Position	A	B
Radius [mm]	1600	1485
Height Of Lift [HoL] [mm]	1955	2460
Capacity [Persons]	1	
Height of Pin Position 1 [P1] [mm]	2100	
Height of Pin Position 2 [P2] [mm]	2200	
Anchor Height on Column [A1] [mm]	195	
Column Height [mm]	2100	
Column Weight [kg]	28	
Beam Length [mm]	1965	
Beam Weight [kg]	16	

# > Variants & Options

## TDRAC50002



### Suitable Sockets



Top Mount



Side Mount

### Compliance Label

Maximum System Rating SR <sub>max</sub>	230kg	Permissible Load Directions	
Maximum Rated mass per user RM <sub>max</sub>	115kg		
Maximum number of users	 2	 	
TDRAC50002 Top & Side Mount Socket - BSM610-2017 Anchor System Type:			
A1/A2/A3/A4/A5/A7			

### Max Deviation Angle

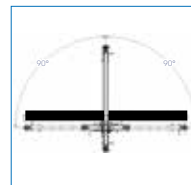


\*Deviation angle is applicable to fixed sockets only.

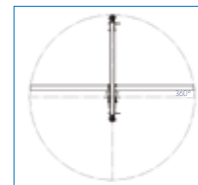
### Max Pivot Angle

Socket	Socket Type	TDRAC50002
Side Mount Socket	Concrete rear loading [over the wall] Socket 80mm below edge	±90°
	Steel	360°
Top Mount Socket	Concrete [325mm from edge]	±90°
	Steel	360°

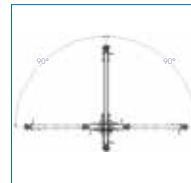
\*For forward loading applications for the Side Mount, please contact your REID representative.



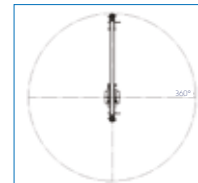
Side Mount - Concrete  
[rear loading]



Side Mount - Steel



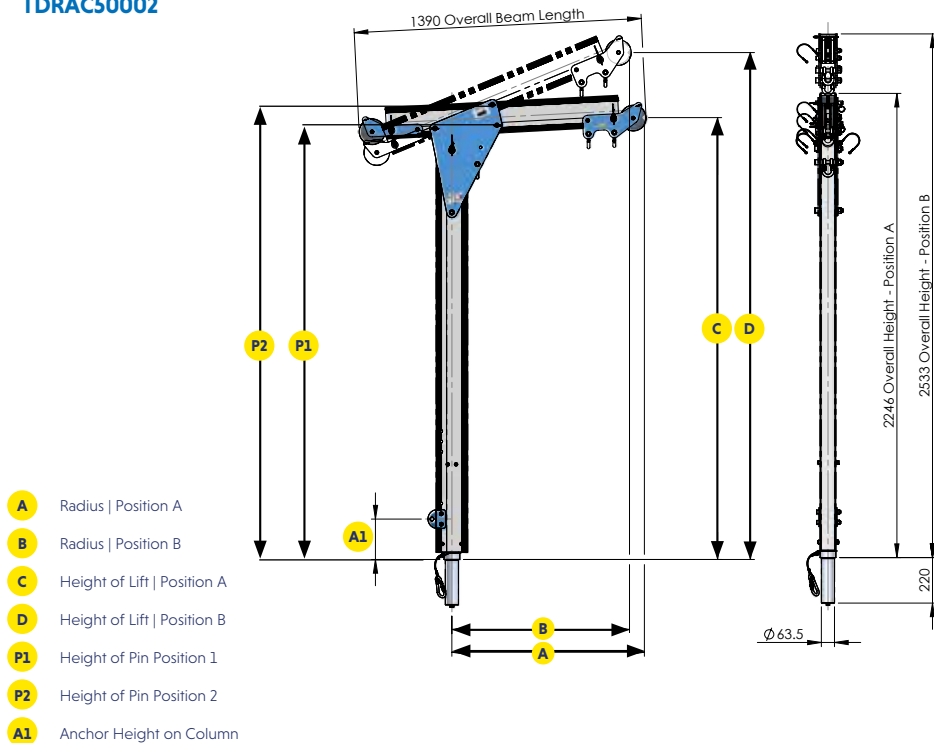
Top Mount - Concrete



Top Mount - Steel



## TDRAC50002



## Part Number

## TDRAC50002

Position	A	B
Radius [mm]*	1000	925
Height Of Lift [HoL] [mm]	1925	2240
Capacity [Persons]	2	
Height of Pin Position 1 [P1] [mm]	2100	
Height of Pin Position 2 [P2] [mm]	2200	
Anchor Height on Column [A1] [mm]	195	
Column Height [mm]	2100	
Column Weight [kg]	28	
Beam Length [mm]	1390	
Beam Weight [kg]	12	

# > Variants & Options

## TDRAC50003



## Suitable Sockets & Bases



Top Mount



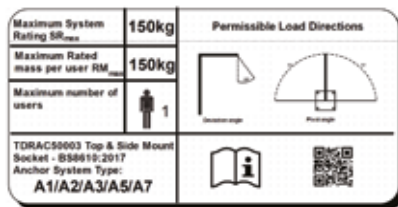
Side Mount



Counterbalance\*

\*When using with Counterbalance, read both our Assembly and Operation Guides

## Compliance Label



## Max Deviation Angle



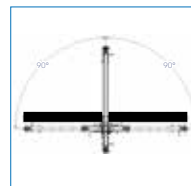
\*Deviation angle applicable to fixed sockets only.

**\*Max Deviation angle when used with Porta Base Counterbalance is 10°, Counterbalance weight must be increased to 500kg.**

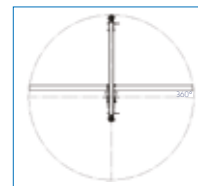
## Max Pivot Angle

Socket	Socket Type	TDRAC50003
Side Mount Socket	Concrete rear loading [over the wall] Socket 80mm below edge	±90°
	Steel	360°
Top Mount Socket	Concrete [325mm from edge]	±90°
	Steel	360°

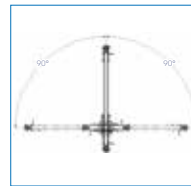
\*For forward loading applications for the Side Mount, please contact your REID representative.



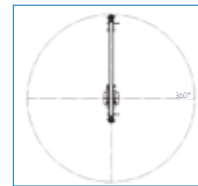
Side Mount - Concrete  
[rear loading]



Side Mount - Steel

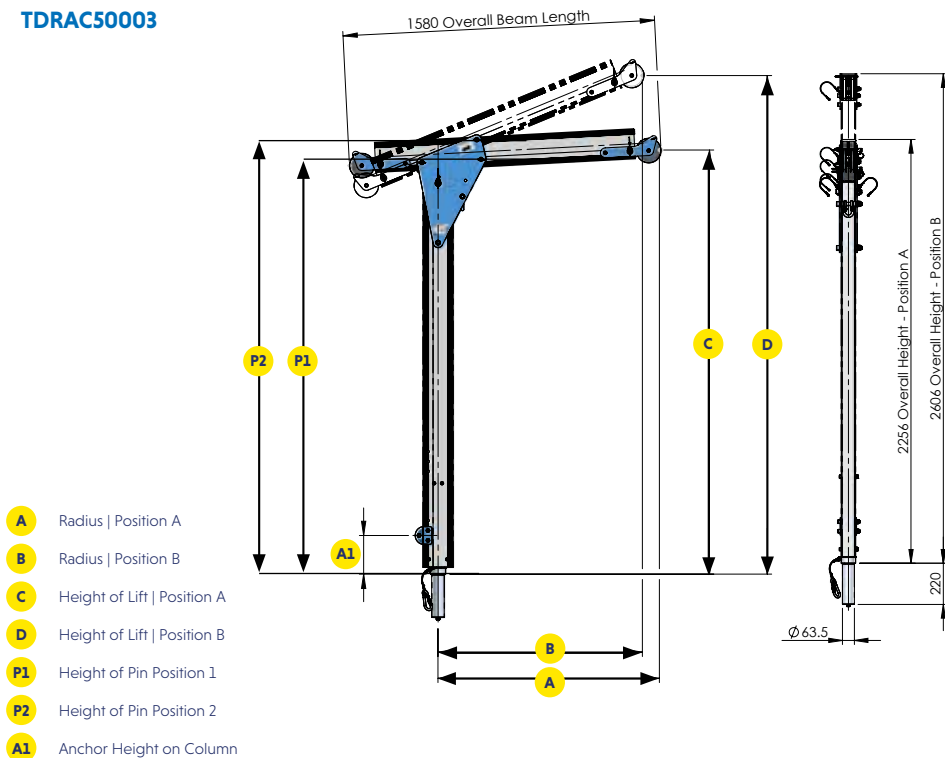


Top Mount - Concrete



Top Mount - Steel

## TDRAC50003



## Part Number

## TDRAC50003

Position	A	B
Radius [mm]*	1200	1100
Height Of Lift [HoL] [mm]	1935	2315
Capacity [Persons]	1	
Height of Pin Position 1 [P1] [mm]	2100	
Height of Pin Position 2 [P2] [mm]	2200	
Anchor Height on Column [A1] [mm]	195	
Column Height [mm]	2100	
Column Weight [kg]	28	
Beam Length [mm]	1580	
Beam Weight [kg]	13	

# ➤ Quality & Safety

## Regulations, Standards & Directives

This product complies with the following:

- Machinery Directive 2006/42/EC & Supply of Machinery (Safety) Regulations 2008
- PPE Regulation (EU) 2016/425 & The Personal Protective Equipment Regulations
- The Provision and Use of Work Equipment Regulations 1998 (S.I. 1998 No. 2306)
- The Lifting Operations and Lifting Equipment Regulations 1998 (S.I. 1998 No. 2307)
- In conformity with EN795:2012 & BS8610:2017

It is essential to adhere to the safety regulations of the respective country for using manual lifting equipment.

## Accreditations

Quality and Safety are at the heart of the REID Lifting ethos and we are committed to maintaining the very highest standards. With this in mind, we have undertaken external accreditations to ensure we stay focused on what is important to our clients and users, and ahead of market trends and developments.

REID Lifting is continuously audited by Lloyds Register Quality Assurance (LRQA) for approval of its Integrated Management System combining quality systems management, environmental issues and the health and safety practices within the company.

- ISO 9001:2015 - Quality management system which assesses an organization's ability to consistently provide products that meet customer and applicable regulatory requirements and aims to enhance customer satisfaction.
- ISO 14001:2015 - Specifies the requirements for implementing environmental management systems throughout all areas of the organization.
- ISO 45001 – Health & Safety Management System

- LEEA Membership - REID Lifting is a full member of the Lifting Equipment Engineers Association (LEEa membership 000897). REID Lifting conforms to the main aims of the association which is to achieve the highest standards of quality and integrity in the operations of members. Entry qualifications are demanding and strictly enforced through technical audits based on the Technical Requirements for Members.
- IRATA - REID Lifting is an associate member of the Industrial Rope Access Trade Association (IRATA International membership number 148). REID Lifting works in accordance with the IRATA Code of Practice and, in doing so, contributes to promote the development of safe systems.

## Conformité Européenne [CE]

REID Lifting's products have been designed, tested and approved (as appropriate) by the Conformité Européenne. This certifies that REID Lifting's products meet the demands of the European Directives and Regulations regarding Health and Safety requirements. The EC type-examination for this device has been carried out by SGS United Kingdom Ltd, 202b, Worle Parkway, Weston-super-Mare, BS22 6WA, United Kingdom (CE body no.0120) in accordance with Module B of the PPE Regulation. The EC quality assurance system for this device has been carried out by SGS Fimko Oy, Takomotie 8, FI-00380 Helsinki, Finland. (CE body no. 0598) in accordance with Module D PPE Regulation (EU) 2016/425.

## Testing

Testing and technical file review are integral parts of our design and manufacturing process. External verification of products is undertaken where appropriate, using government approved Notified Bodies.

All products have been thoroughly type tested. Each product is supplied with a certificate of conformance and individual record of thorough examination or test.

## Language

It is essential for the safety of the user that if this product is re-sold outside of the original country of destination, the reseller shall provide instructions for use, maintenance, inspection and repair in the language of the country where it will be used.

## Product IPR

Intellectual property rights apply to all REID Lifting Ltd products. There are patents in place, or pending, for:

**PORTAGANTRY™** | **PORTAGANTRY<sup>RAPIDE</sup>™** | **PORTADAVIT<sup>QUANTUM</sup>™** | **TDAVIT™**

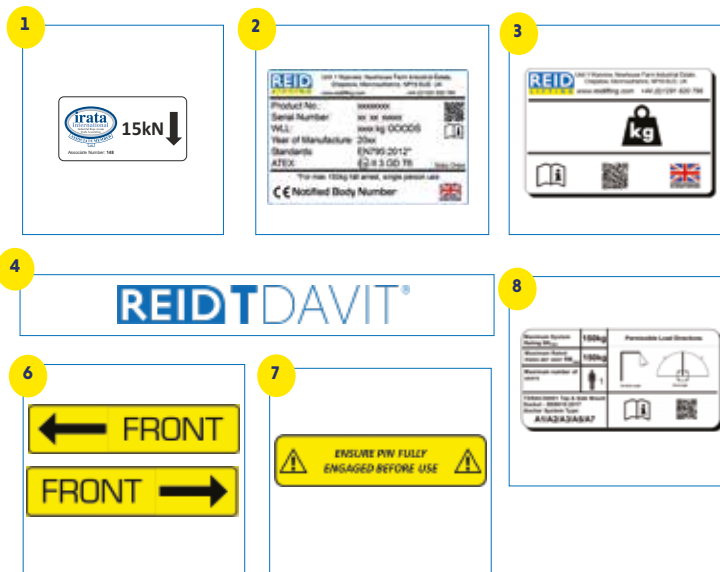
All product names are trademarks of REID Lifting Ltd:

**PORTAGANTRY™** | **PORTAGANTRY<sup>RAPIDE</sup>™** | **PORTADAVIT™** | **PORTABASE™** | **TDAVIT™** | **PORTAQUAD™**

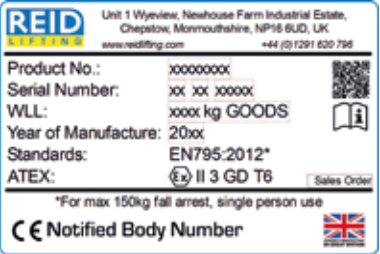
A diagram of the Light Tower assembly with numbered callouts 1 through 8. The callouts point to the following components:

- 1: Blue triangular mounting bracket on the horizontal arm.
- 2: Vertical support post.
- 3: Lower section of the vertical support post.
- 4: Two locations: the lower section of the vertical support post and the horizontal arm.
- 5: Horizontal arm.
- 6: Yellow pin/bush at the joint between the bracket and the arm.
- 7: Yellow pin/bush at the joint between the bracket and the post.
- 8: Upper section of the vertical support post.

The following labels must be present on the product and must be legible.



# > Inspection Record



Insert data from serial numbers found on product into table here:

## Marking

The serial labels indicate:

- > The product identification number
- > The product's unique serial number
- > The year of manufacture
- > The standards to which the device is approved
- > CE Marking
- > Minimum braking load (MBL)

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## Periodic Examination & Repair History

Date	Inspected by	Pass/Fail	Comments

# > Contact Us

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