Kattsafe Height access and fall protection

OPERATION MANUAL

DAVITS

OH500

Kattsafe's lightweight aluminium davit provides safe rope access to building facades for maintenance.

Product brochure
Davits

Installation manual
Davits

Operations manual
Davits

Find all related products and resources on our website kattsafe.com.au

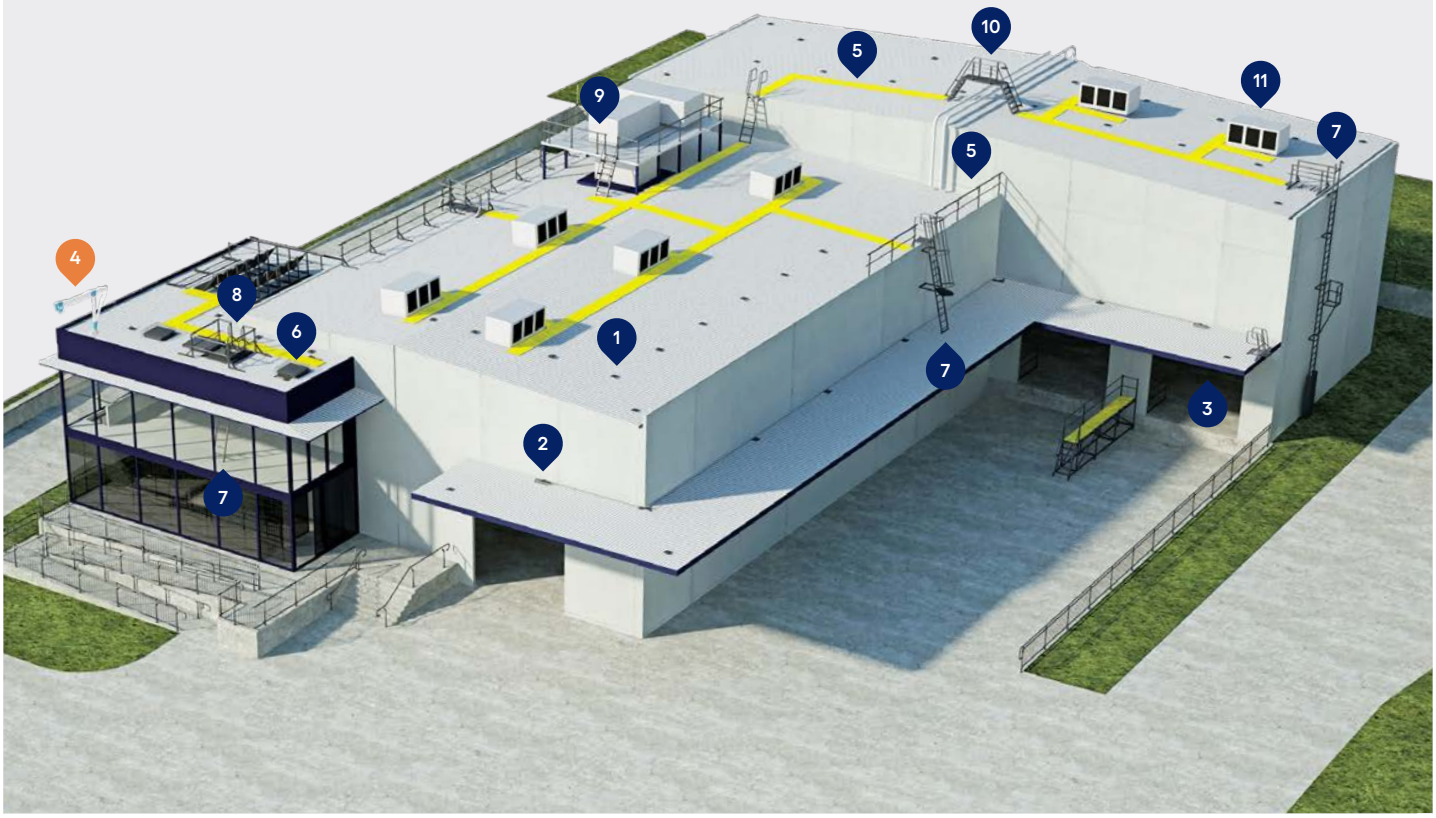
Commercial building height access and fall protection requirements

Kattsafe leads the industry in the design, installation and management of access and fall protection safety systems.

The in-action model demonstrates access and fall protection requirements for a commercial building design. Kattsafe recommendations fulfill current workplace requirements for the safety of building maintenance subcontractors, employees and the general public.

For more information please contact Kattsafe.
kattsafe.com.au

1 Anchor points
2 Static lines
3 Rigid rail
4 Davits and needles
5 Guardrail and walkway
6 Skylight protectors
7 Rung ladders
8 Access hatches
9 Platforms and stairs
10 Step ladders
11 HVAC platforms



DAVIT SYSTEM

A proprietary facade rope access system providing access over non load-bearing parapets, balustrades and curtain walls.

Adjustable boom anchor

The anchor is designed to be positioned anywhere along the boom, providing flexibility for the operator.

High strength construction

Manufactured from high grade structural aluminium and powder coated stainless steel.

Easy use locking pins

Providing secure connection of the systems assembly.

Multiple configurations

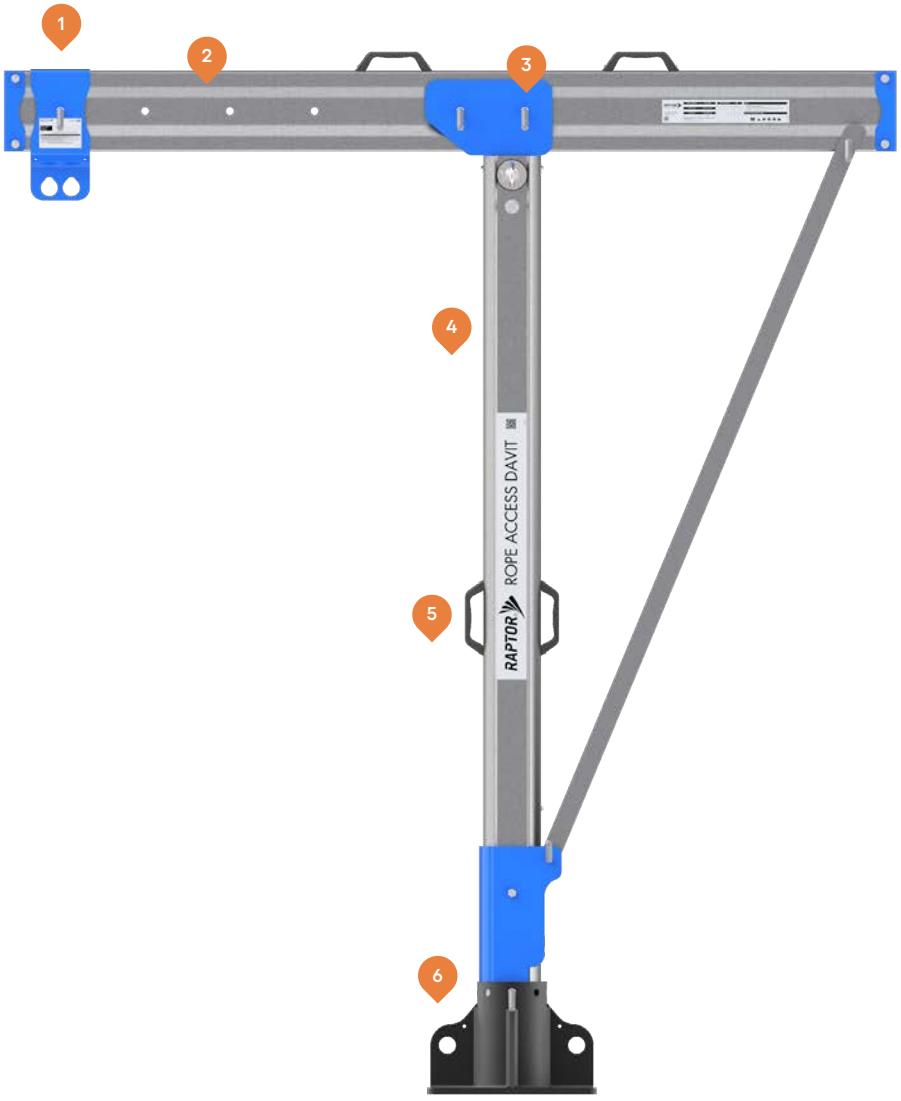
Available in many heights and reaches to suit all facade requirments.

Carry handles

For aid in assembly and transport.

Mounting options

Designed to work with many different davit bases including floor, wall and cast in options.



OPERATION REQUIREMENTS

Must be read prior to use

1. Prior to use, ensure all operating procedures have been read and properly understood.
2. This fall arrest system is only to be used by competent persons who have experience and training in the safe use of the system and associated equipment.
3. Ensure all workplace WHS requirements are identified and understood. A risk assessment with a safe work method procedure must be completed and approved by management prior to work commencing.
4. This system requires periodic inspection and maintenance by a qualified height safety inspector. The system MUST NOT be used if the service date is overdue.
5. A rescue plan must be formulated and ready for implementation prior to using any fall arrest system.
6. Authorisation to access any risk area must be obtained from the person in control of the workplace.
7. Only approved full body harness, gear and equipment with an energy absorber certified to Australian Standard AS/NZS 1891 is to be used with this system.
8. Visually inspect the system for damage prior to use. The system must not be used if there is any deterioration or deformation of components or the structure to which the system is attached.
9. If the safety system is damaged or has arrested a fall, discontinue use until it has been fully inspected and recertified by a competent height safety equipment inspector.
10. Ensure all fixings, fittings and components are securely attached. Any tightening, adjustment or replacement of components must be carried out by a competent height safety inspector.
11. Persons must not be allowed to work alone in fall arrest situations in case emergency rescue assistance or first aid is required.
12. All applicable Australian Standards, OH&S Acts & Regulations, and Codes of Practice & Guidelines must be read and obeyed when using this safety system.
13. The reading of this operation manual does not replace the need for completing a recognised height safety training course by a Registered Training Organisation (RTO).

Failure to follow all warnings, operation and maintenance instructions may result in serious injury or death.

SYSTEM LIMITATIONS

Must be read prior to use

1. The davit is suitable for single (1) person use and rescue in the case of a fall incident or rope access incident.
2. This system is rated to 12kN with a maximum safe working load of 400kg.
3. The davit base may be used for an anchor point, which is rated at 2 x 15kN and can be used for rope access or fall arrest attachment.
4. Harness gear is susceptible to deterioration when exposed to chemicals or hazardous environments and must be approved by the manufacturer for use in these applications.
5. This system is not suitable for glass lifting and replacement unless designed and approved by the manufacturer in writing.
6. Do not tamper with system components.
7. This system is not to be used for tethering or lifting machinery or equipment.
8. The safety system must be recertified by a qualified rope access inspector as recommended:
   - Non corrosive/mild environment - 12 monthly
   - Corrosive/harsh environment - 6 monthly (more frequent inspection may be required)
9. This equipment is only to be used by a trained and qualified rope access technician.

Failure to follow all warnings, operation and maintenance instructions may result in serious injury or death.

DAVIT ASSEMBLY PROCEDURE

Step 1

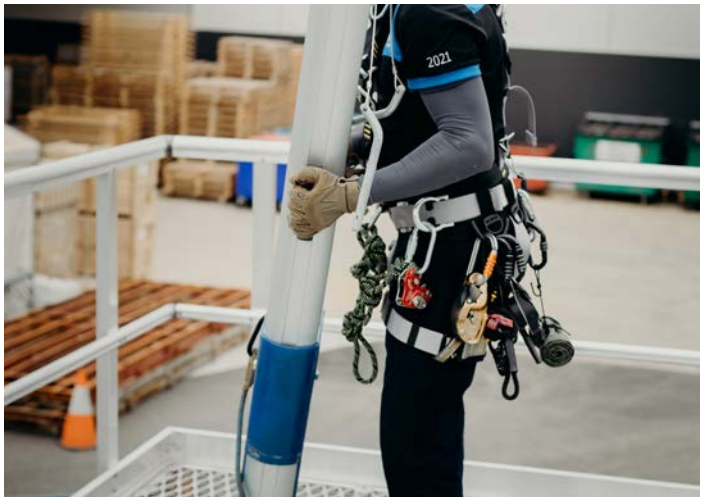
- Always ensure that all risks are taken account of and a method put in place to reduce the risk, especially falls from heights during the assembly of the davit.
- The davit base may be used as a fall arrest anchor point or attachment point or for equipment to prevent falls from heights. Rated at 15kN fall arrest or rope access use.

Step 2

In the case where persons are working close to an unprotected edge, ensure the mast is attached to the base with a short lanyard to prevent any possibility of falling items.

Step 3

Insert the mast into the base as shown ensuring that the mast sits securely in the base.



Step 4

Detach the securing lanyard from the mast.

Step 5

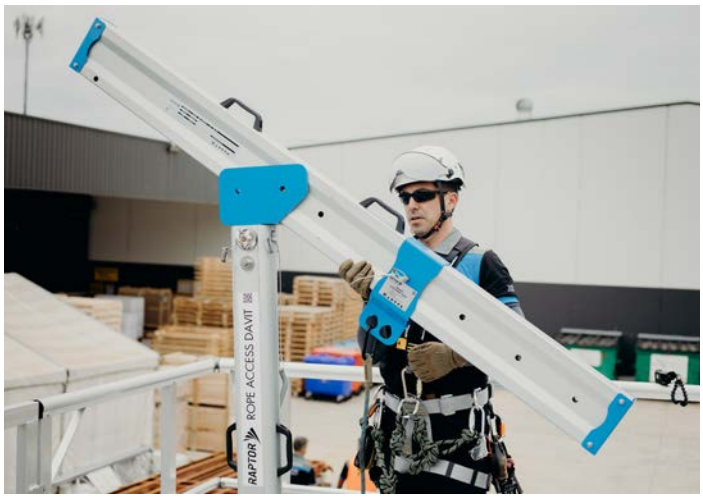
Attach the securing lanyard to the attachment point on the boom.

Step 6

- Make sure the mast is facing away from the fall edge (can be rotated) so that the boom cantilever is inward from the fall edge.
- Lift the boom into place.

Step 7

Ensuring that the boom is inserted on the leading edge at an angle as shown.



Step 8

Align the first hole of the blue mast support with the hole in the boom and insert a locking pin through the mast support bracket and boom.

Step 9

Insert the clevis pin through the small hole in the pin. Ensure it has sprung into locked position.

Step 10

Lift the boom and insert the second locking pin.

Step 11

Insert the clevis pin through the small hole in the pin. Ensure it has sprung into locked position.

Step 12

Attach the brace onto the back hole of the top boom.

Step 13

Insert the locking pin and clevis pin.

Step 14

Place the brace into the base support bracket.

Step 15

Align the holes and insert the locking pin and clevis pin.

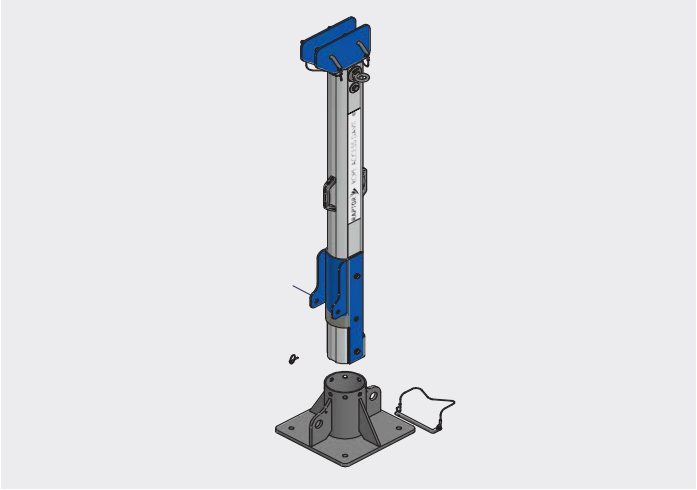
Step 16

Rotate the davit into required position and lock into position by inserting the locking pin through the base and mast then secure with clevis pin.

DAVIT FRONT BRACE ASSEMBLY PROCEDURE

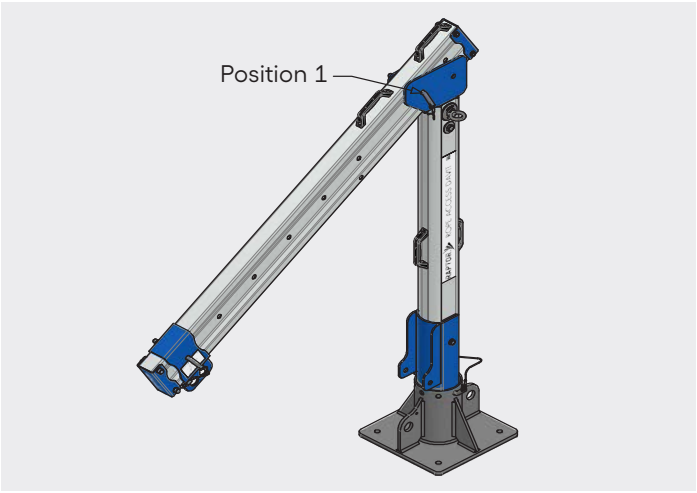
Step 1

- Insert mast into base.
- Position mast so that the boom can be placed into support housing from a safe position (parallel to edge).



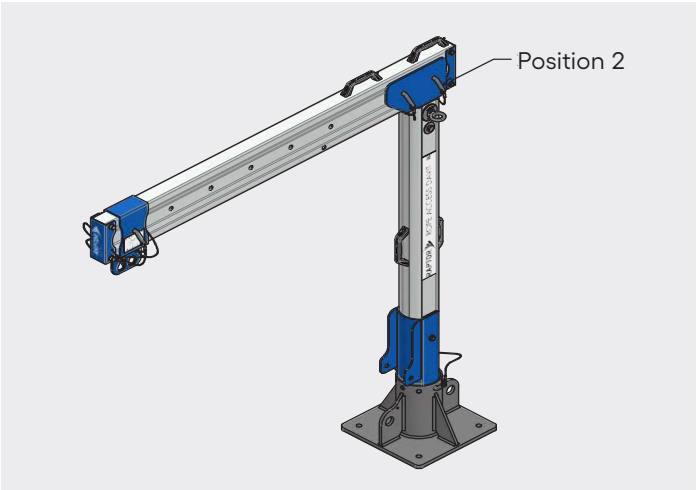
Step 2

- Position boom into support housing.
- Insert locking pin through the front hole (position 1).



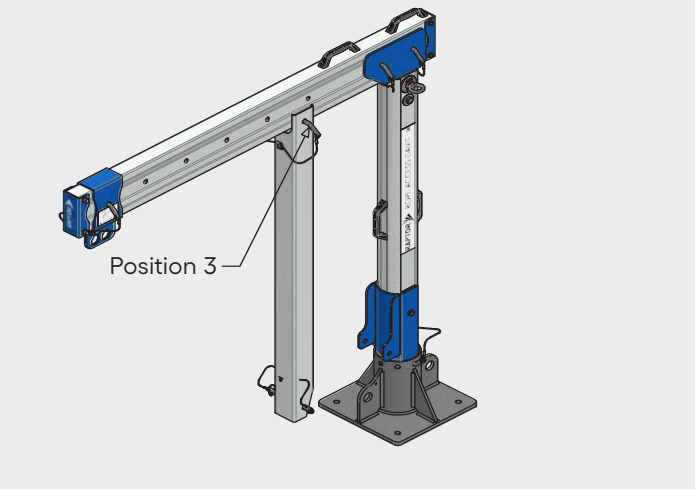
Step 3

- Lift up boom.
- Insert locking pin (position 2).



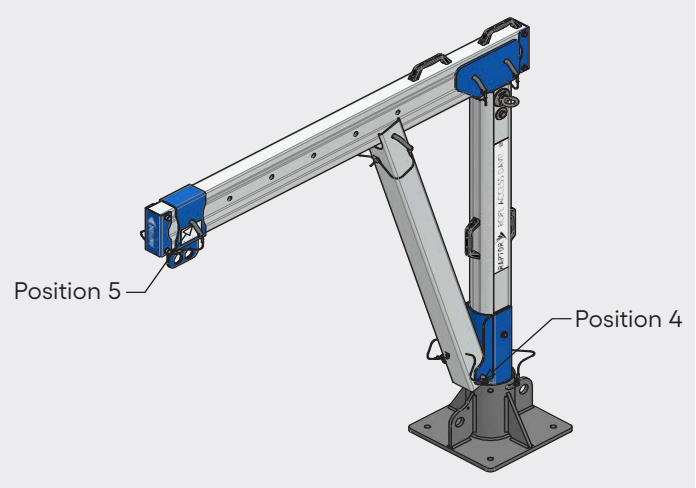
Step 4

Attach brace to boom with locking pin (position 3).



Step 5

- Attach brace to mast support bracket.
- Insert locking pin into base support (position 4).
- Locate rigging anchor in correct location and insert pin (position 5).
- Insert base locking pin.



ROPE CONNECTION PROCEDURE

Step 1

Slide the anchorage point into position to set up ropes.

Step 2

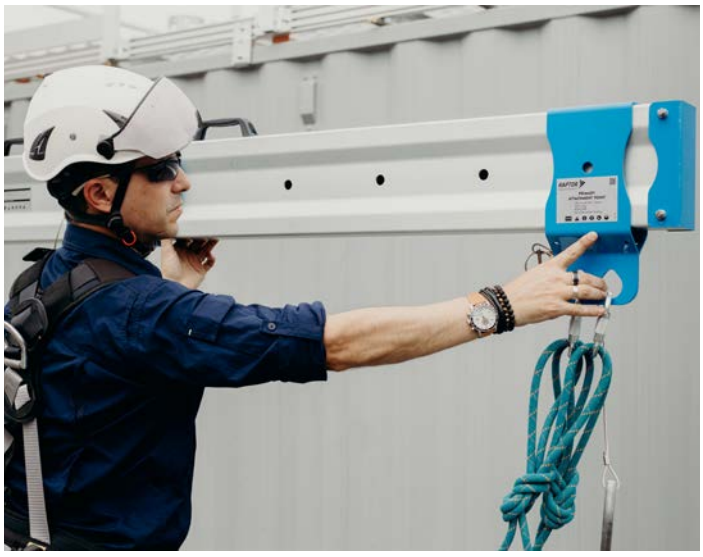
Set up working line and safety line so that each rope load is shared over both attachment points.

Step 3

Continued.

Step 4

Slide anchorage point to required location (depending on outreach).



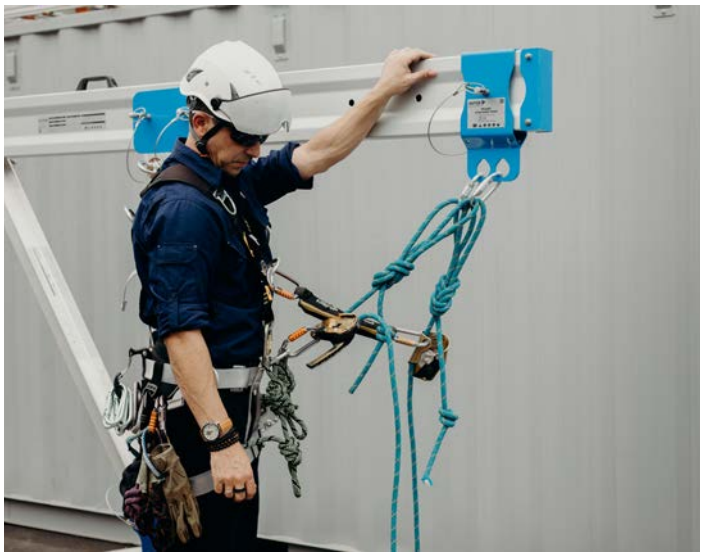
Step 5

Secure into position using locking pin and secure with clevis pin.

Step 6

Operator to inspect all attachments and rope lines to ensure correct fitment before proceeding to descend

This procedure must be done in accordance with local rigging/rope access requirements/regulations and training procedures.



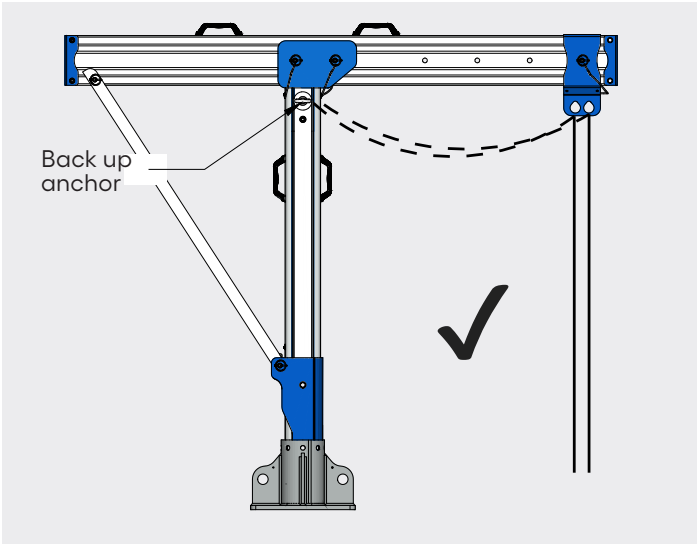
ROPE CONFIGURATIONS

Acceptable

Load directly on end anchorage. Back-up anchors may be used as shown.

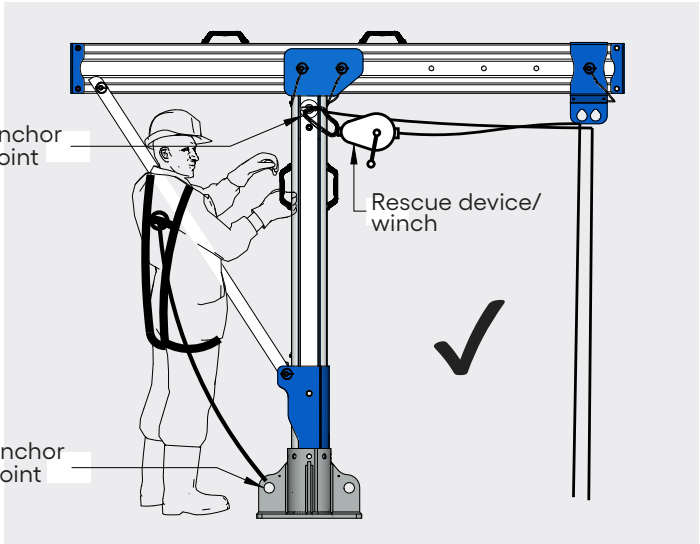
Note: Each line must be load share technique (see steps 1-3 rope connections).

Warning: Care should be taken when ropes are used over glass balustrades



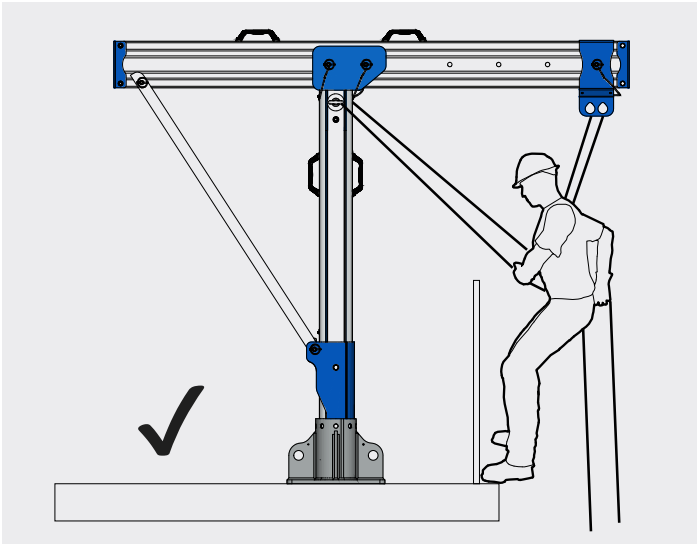
Acceptable

Suggested rescue method using rescue device. Rescue system to be in accordance with IRATA load sharing requirements. Davit base rated at 15kN fall arrest or rope access use.



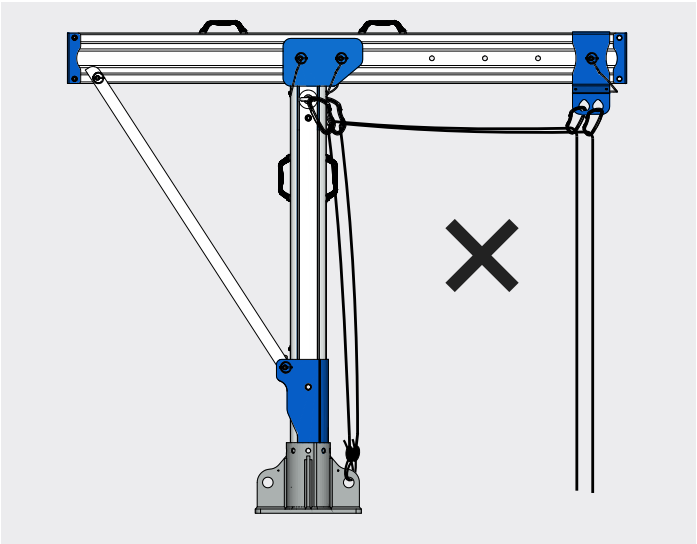
Acceptable

Back-up anchors may be used as main anchor while accessing over glass balustrade to reduce swing when transferring to primary working lines.



Unacceptable

Ropes must not be tensioned between main anchor and backup anchors. This will overload the system.



SYSTEM MAINTENANCE

Must be read prior to checklist

1. The anchor system needs to be checked and recertified by a competent height safety inspector every 12 months for non corrosive environments or 6 monthly for corrosive or harsh environments. (To be determined by competent person depending on severity of surrounding conditions.)
2. Never clean using acids or other chemicals that could damage the system components.
3. The energy absorbing eyelet is subject to wear depending on frequency of usage. Any signs of excessive wear will require the anchor to be replaced.
4. The identification label must be completed confirming certification, maintenance and recertification of the system.
5. Harness gear and equipment must be maintained and stored in a dry, protected area, away from acids and ultra violet rays which cause material fibres to break down and reduce their safety and life expectancy.
6. Any deterioration or damage to the system or equipment must be reported to person in control of the workplace and relevant corrective action undertaken.
7. Maintenance inspections must be clearly documented. Any non-conformance must be clearly identified and tagged ‘Do Not Use’ until corrective action by a competent person has been completed.

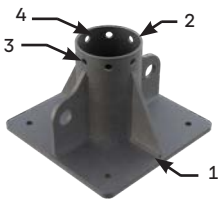
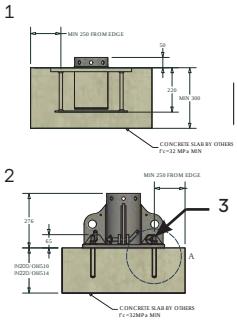
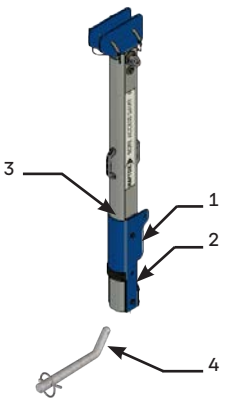
MAINTENANCE CHECKLIST

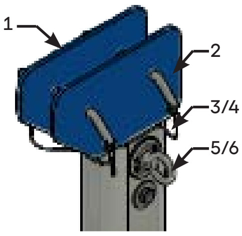
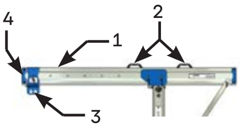
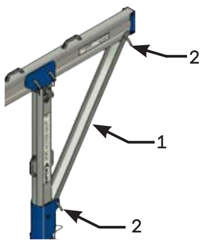
The checklist below outlines key checking criteria required to ensure the safe use of this system. Any item of concern not shown on the checklist must be noted on the maintenance report and brought to the attention of the workplace manager.

Items ticked PASS - YES means they conform with the required checking criteria and are suitable for normal use until the next recertification date. System data plates must be updated showing current check date and next check date.

Item ticked PASS - NO means they do not conform to the required checking criteria. These items must be clearly tagged ' Do Not Use' and the required corrective actions put in place. The maintenance report must clearly document all non-conforming criteria.

This system must be maintained by a competent height safety inspector trained in the safe use and maintenance of this system.

Component	Inspection criteria	Pass Y/N	Corrective action	Completion date
Davit base 	1. Inspect welded components and ensure no visible cracks or weld deterioration.			
	2. Inspect davit socket and ensure no deformation of tube socket due to overload.			
	3. Inspect locking pin location holes and ensure no hole elongation or deformation because of overload.			
	4. Inspect davit socket and ensure it is dry and free from debris. Make sure socket end cap is in place when davit not in use (cast-in base).			
Davit base fixing to structure 	1. If base fixing is cast-in no pull testing of M16 fixing is required.			
	2. If base fixings are friction fit or glued in, each fixing will require a pull test to 15kN and held for 3 minutes with no anchor movement.			
	3. Ensure all M16 fixings nuts are torqued to 60 - 80 Nm.			
	4. Inspect base for any signs of galvanised coating breakdown or evidence of corrosion developing.			
	5. Visually inspect substructure to which base is attached and ensure no breakdown, deformation or deterioration.			
Davit mast 	1. Inspect mast support bracket and ensure no signs of deformation or weld fatigue because of overload.			
	2. Inspect locking pin location hole and ensure no hole elongation or deformation because of overload.			
	3. Inspect mast and ensure no deformation damage because of overload.			
	4. Inspect all locking pin (6x) and ensure no signs of deformation or damage.			
	5. Check cable lanyards are secure and attachment to davit structure is secure.			
	6. Check locking in latch is operating correctly and no chance of pin removal once inserted and locked.			

Component	Inspection criteria	Pass Y/N	Corrective action	Completion date
Davit mast 	1. Inspect davit boom connection bracket ensuring no signs of deformation or weld fatigue as a result of overload.			
	2. Inspect locking pin location holes and ensure no hole elongation or deformation because of overload.			
	3. Inspect locking pins and ensure no signs of deformation or damage because of overload.			
	4. Inspect locking pin attachment lanyard and ensure fixing to mast and locking pin is secure.			
	5. Inspect the transfer/rescue anchors and ensure no sign of deformation or damage because of overload.			
	6. Ensure transfer/rescue anchors are correctly tensioned.			
Davit boom 	1. Inspect boom for deformation or damage due to overload.			
	2. Inspect locking pin location holes and ensure no hole elongation or deformation due to overload.			
	3. Inspect primary rigging anchor and ensure no deformation or excessive wear to rigging connection points.			
	4. Check boom ends and ensure fixings to boom are secure.			
Davit rear support brace 	1. Inspect brace for deformation or damage due to overload.			
	2. Inspect locking pin location holes and ensure no hole elongation or deformation because of overload.			
Davit recertification plate 	1. Ensure all text on plate is clearly visible.			
	2. Ensure installer details and install date is recorded.			
	3. Ensure recertification details and any system limitations are clearly visible.			
	4. Ensure next recertification date is clearly shown.			

TECHNICAL SPECIFICATION

Davit

OH500

The Kattsafe davit is an industrial use, aluminum construction system with rescue and adjustable rigging anchor for access over non load-bearing areas for window cleaning and facade maintenance. System design, supply, layout, installation and certification by a Kattsafe approved installer, as per the manufacturer's installation instructions and current standards.

Materials

- Arm and mast: manufactured from high grade structural aluminium.
- Connection brackets, end caps, supports: powder coated stainless steel.
- Davit base: G350 grade steel, galvanised finish.

Dimensions

Refer to pages 7-8

Substructure requirements

- Minimum concrete thickness
  - OH510, Adhesive fix - 200mm
  - OH514, Adhesive fix - 220mm
  - AP160 Cast-in cage bolt kit - 220mm
- OH522 Flush mount cast-in base - 300mm
- Minimum concrete strength – minimum 32 mPa
- Concrete may need to be verified by engineer regarding reaction loads
- Minimum 250mm edge distance

Fixings (refer to installation manual)

Epoxy adhesive

- Stainless or HDG M16 x 180mm allthread stud fixing for 1000mm reach OH510 davit range, min 120mm embedment. Requires 18mm hole size.
- Stainless or HDG M16 x 200mm allthread stud fixing for 1000mm reach OH514 davit range, min 140mm embedment. Requires 18mm hole size.
- Recommended epoxy adhesive - Hilti HIT RE-500

Cast-in

- 300mm x 300mm cage bolt kit
- Minimum concrete thickness - 200mm*
- Minimum 150mm embedment

(Refer installation manual.) *Concrete specifications depends on davit type.

Rating

- 12kN single person use + rescue
- 400kg safe working load

Compliance

Kattsafe's davit is designed to conform with requirements of the Australian & New Zealand Standards AS/NZS 5532:2013 AS/NZS/ISO22846, AS/NZS1891 and relevant codes of practices and guidelines.

Testing

Testing and performance based on requirements of Australian Standard AS/NZS 1891 and AS/NZS 5532.

- Dynamic load test - 15kN
- Static load test - 12kN

Product warranty

10 Years from date of purchase subject to correct installation. Use and maintenance to be in accordance with manufacturer's specifications and recommendations. (This excludes wearing parts).

Inspection and maintenance

Inspection and certification required every 12 months by competent person in accordance with manufacturer's specifications and requirements of Australian Standards AS/NZS 1891 and AS/NZS 5532. (Refer installation manual)

Important note

Failure to supply and/or install proprietary product in accordance with above standards and codes, specifications and instructions voids complete system certification and/or warranty.

WARRANTY INFORMATION

Warranty period on this system:
10 years from date of purchase

Should you have a warranty claim as a result of a defect the following procedure must be followed:

Identify the following information:

- The product/system name and code number.
- The date of purchase/installation.
- Installation company details.
- The installation identification number.
- The name of the company using this system.
- A description of the defect/warranty claim.
- The periodic system maintenance report.

Forward the above information to sales@kattsafe.com.au or contact technical helpline, 1300 301 755.

Terms and conditions

All warranty claims must be made in writing within 14 days of the appearance of the defect.

Incorrect installation or work done by a non accredited Kattsafe system installer will void all warranty rights.

Systems that have been installed using non proprietary equipment will void all warranties.

System roof/cladding and concrete penetration seals are not covered in this warranty.

Systems/components that have not been maintained in accordance with manufacturer's/legislative requirements will void warranty.

Systems used by incompetent persons or use with non compatible accessories ie. harness gear, lanyards, travellers, fall arrestors etc. will void warranty.

Systems/components used for purposes other than their intended use will void warranty.

General wear and tear is expected and will depend on the frequency of use and is not covered by warranty.

Product brochure
Davits

Installation manual
Davits

Operations manual
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QMS Certification
ISO 9001:2015

Find all related products and resources on our website.
kattsafe.com.au

Kattsafe

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and fall protection

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