

## KATTSAFE

### Davits

The Kattsafe davit is designed as a cantilevered anchorage device. Used over balustrades, parapets and curtain walls for rope access work where workers are required to maintain building facades and equipment mounted on the external face of a structure.

### HOW IT IS USED

The davit is used where there is a need to project an abseil rope out over the edge of a building without impacting the facade, parapet or possibly a glass balustrade. Davit mounts are permanently fixed in place during construction and the davit arm is moved into position when required.



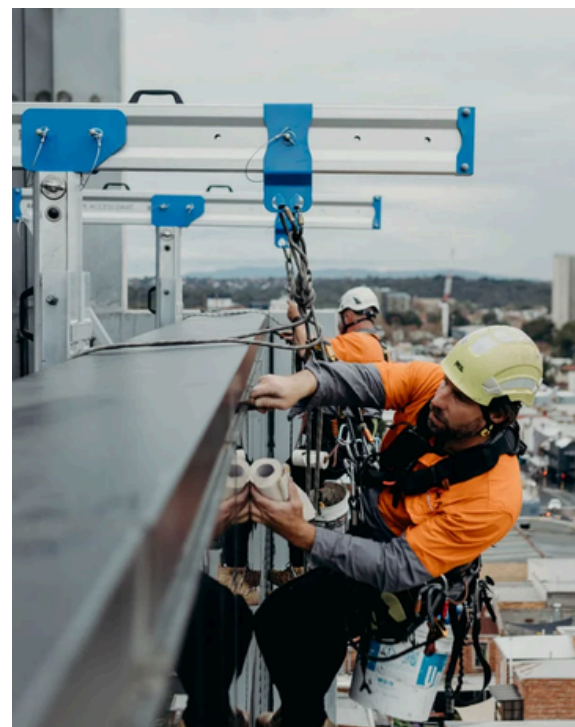
### HOW IT WORKS

The Kattsafe davit is an engineered single person device, designed to withstand a 12kN rope access load or safe working load of 400kg.

The Kattsafe davit mostly connects to the primary structure of the building which includes, wall mount, floor mount and concrete cast-in options, depending on the structure available and the intended use of the system.

Its designed as a cantilevered anchorage device over balustrades, parapets and curtain walls for rope access work where workers are required to maintain building facades and equipment mounted on the external face of a structure.

The davit base is permanently mounted to the structure whilst the davit arm unit is relocated from base to base to access different sections of the structure or facade.



## PERFORMANCE

The Kattsafe 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.

## INSTALLATION

Installation should be carried out by a manufacturer trained technician who is familiar with the parameters of fall arrest and abseil systems.

## MAINTENANCE

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

## WARRANTY

Valid for 3 Years from date of purchase subject to correct installation. Use and maintenance to be in accordance with manufacturer's specifications and recommendations. This excludes worn parts.

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.

## ENVIRONMENTAL

Alta Safety conducts its operations in an environmentally responsible manner in accordance with relevant legislative requirements and associated standards. Alta business operations are committed to eliminate our local impacts and

equally realise our responsibilities towards the environment, as part of our social licence to operate. We are committed to sourcing the products and materials from ethical sources.

Alta ensures, so far as is reasonably practicable that all products being sourced are obtained in a responsible and sustainable way.

This includes understanding the environmental responsibility of those companies which are suppliers to Alta. Alta designs flat pack solutions that use the products to be shipped as the packing structure and therefore significantly eliminating the need for packaging materials.

Actively pursuing renewable energy sources. Kattsafe has installed a commercial solar panel system that now provides the majority of electricity for their operations.

Classification and appropriate disposal of generated waste.

Training and awareness programs are conducted to educate the team on how to dispose of generated waste into appropriate bins based on classification.

Continual environmental improvement with a focus on fuel and energy efficiency.

Striving to continually improve our environmental performance through review, research and development, and consultation with interested parties.

Prototypes are developed using 3D printer to reduce the waste during research process.

Alta looks for opportunities to where current products can be used interchangeably or incorporated into other new designs to reduce the amount of material used for new or upgraded products.

Apply innovative sustainable approaches to create new designs.

Alta meets legal, regulatory and environmental requirements by maintaining certifications / accreditation to:

Quality Management System ISO 9001:2015.

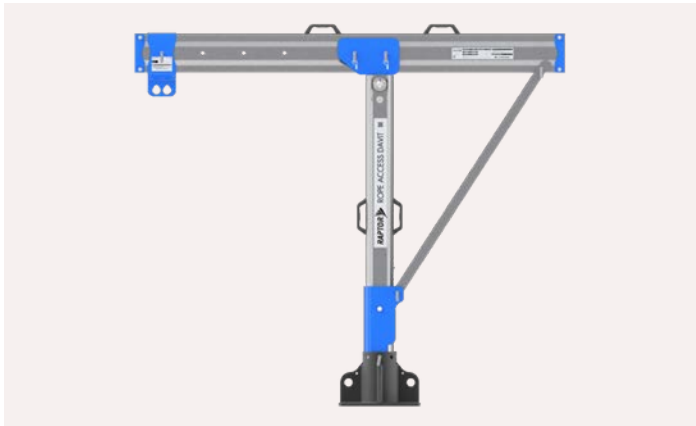
Alta achieves continual improvement by:

- Establishing, monitoring, communicating, and reviewing company environmental objectives to exceed company expectations.
- Reviewing environmental legislation, regulations and other relevant material and implementing measures to ensure compliance.
- Promoting environmental awareness to all levels of the organisation and providing employees with appropriate training.
- Actively working to minimise pollution and manage waste streams.

Alta is proud of the environmentally conscious approach applied to its operations and we continuously look to improve this through innovative and environmentally friendly equipment and techniques.



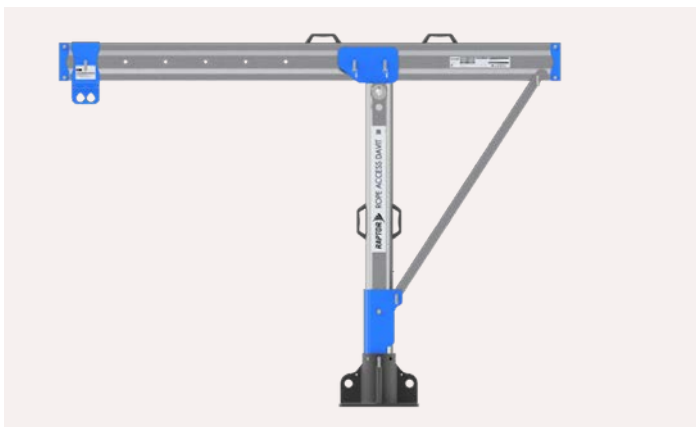
**OH510.1600 Davit 1000mm reach - 1600mm height**



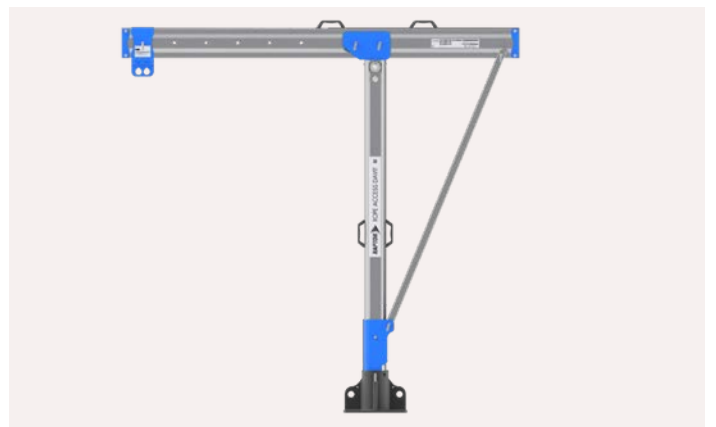
**OH510.2200 Davit 1000mm reach - 2200mm height**



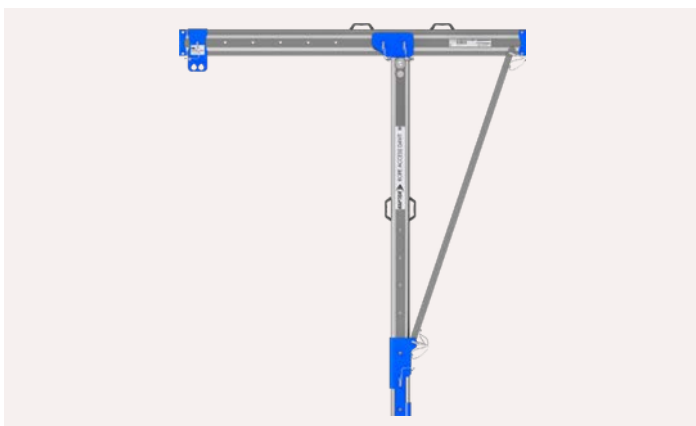
**OH514.1600 Davit 1400mm reach - 1600mm height**



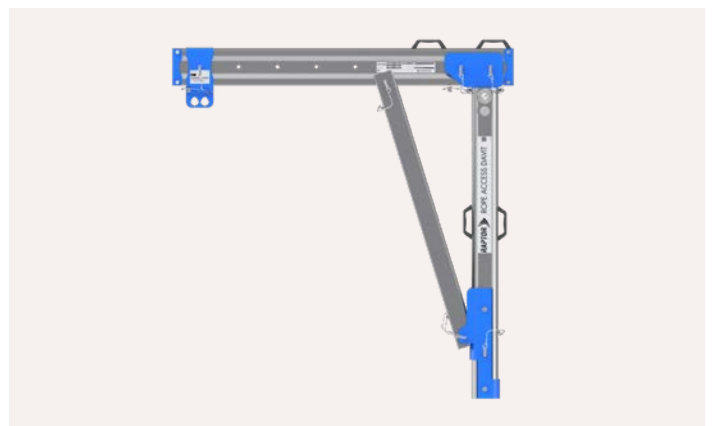
**OH514.2200 Davit 1400mm reach - 2200mm height**



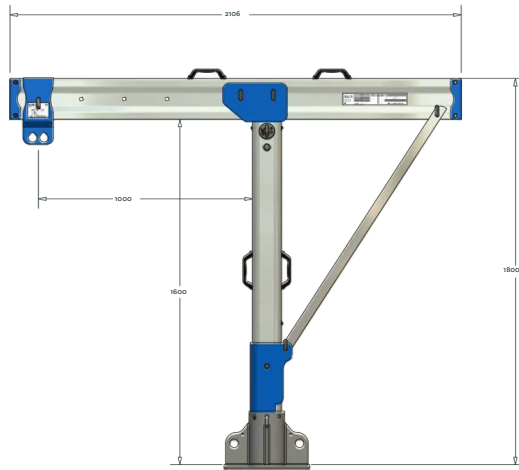
**OH514.2600 Davit 1400mm reach - 2600mm height**



**OH514F.1600 Front brace davit 1400mm reach - 1600mm height**

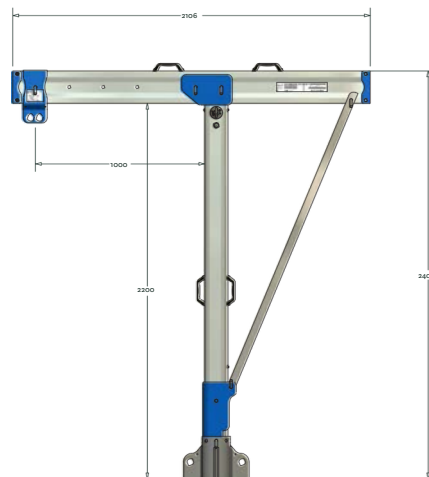


**OH510.1600**



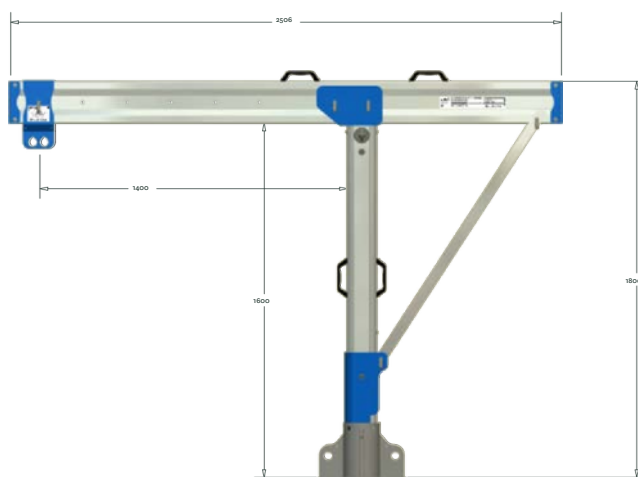
Reach (mm)	1000
Height (mm)	1600
Rating (kN)	12 (Tested to 15)
Safe working load (kg)	400
Operational angle (deg.)	360° with 45° locking pin increments
Mast weight (kg)	22
Boom weight (kg)	15
Brace weight (kg)	4
Total weight (kg)	41 (excluding base)

**OH510.2200**



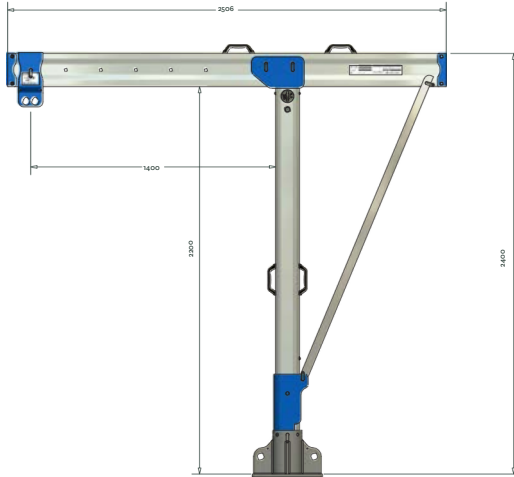
Reach (mm)	1000
Height (mm)	2000
Rating (kN)	12 (Tested to 15)
Safe working load (kg)	400
Operational angle (deg.)	360° with 45° locking pin increments
Mast weight (kg)	26
Boom weight (kg)	15
Brace weight (kg)	7
Total weight (kg)	48 (excluding base)

**OH514.1600**



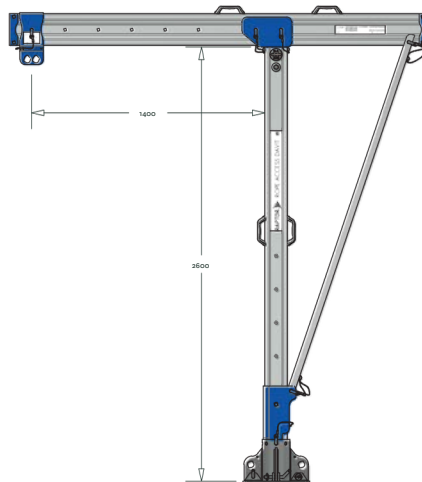
Reach (mm)	1400
Height (mm)	1600
Rating (kN)	12 (Tested to 15)
Safe working load (kg)	400
Operational angle (deg.)	360° with 45° locking pin increments
Mast weight (kg)	22
Boom weight (kg)	17
Brace weight (kg)	4
Total weight (kg)	43 (excluding base)

**OH514.2200**



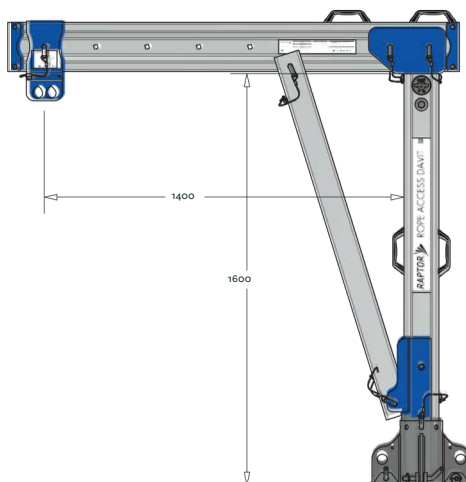
Reach (mm)	1400
Height (mm)	2200
Rating (kN)	12 (Tested to 15)
Safe working load (kg)	400
Operational angle (deg.)	360° with 45° locking pin increments
Mast weight (kg)	26
Boom weight (kg)	17
Brace weight (kg)	7
Total weight (kg)	50 (excluding base)

**OH514.2600**



Reach (mm)	1400
Height (mm)	2600
Rating (kN)	12 (Tested to 15)
Safe working load (kg)	400
Operational angle (deg.)	360° with 45° locking pin increments
Mast weight (kg)	42
Boom weight (kg)	17
Brace weight (kg)	9
Total weight (kg)	68 (excluding base)

**OH514F.1600**



Reach (mm)	1400
Height (mm)	1600
Rating (kN)	12 (Tested to 15)
Safe working load (kg)	400
Operational angle (deg.)	360° with 45° locking pin increments
Mast weight (kg)	22
Boom weight (kg)	18
Brace weight (kg)	8
Total weight (kg)	48 (excluding base)

# DAVIT COMPONENTS

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**Aluminium Boom**



**Mast Super Structure**



**Primary Rigging Anchor**



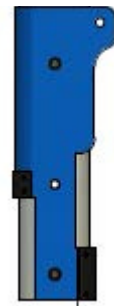
**Davit Base**



**Support Brace**



**Mast Support Bracket**



**Locking Pins**



**Carry Handles**



# MOUNTING OPTIONS

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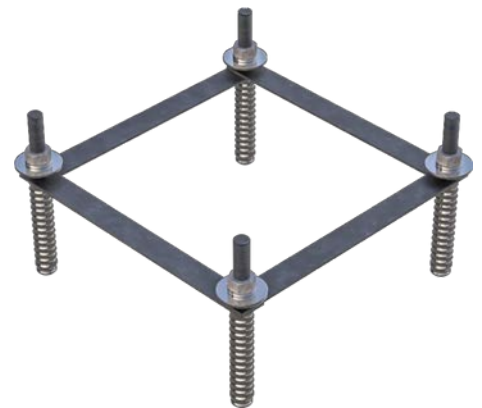
## AP160 Cast-in cage bolt kit

- The cast-in cage bolt option allows the fixings to be cast into the concrete providing a strong connection to the concrete structure.
- No pull testing is required with this fixing method.



## AP161 Epoxy adhesive mounting kit

- Used where there is little to no space for a permanent davit base.
- It can be fastened to the ferrules when needed.
- Pull testing required every 12 months.



## OH520 Davit base - floor mount

- The floor mount base plate attaches directly to the floor slab using cast-in or chemical anchor fixings.
- Galvanised steel finish & incorporates safety anchorage attachment points.
- Certification label included.
- Unit weight: 31kg



## OH521 Davit base - Wall Mount

- The wall mount base plate is designed for vertical parapet connections where the structure has been designed for rope access loads using a cast-in or chemical anchor attachment.
- Galvanised steel finish.
- Certification label included.
- Unit weight: 31kg



## OH522 Davit base - Cast in

- Used in applications where the base is designed to be flush with surface area and is cast into the concrete slab during construction. This method of installation does not require ongoing load testing to the base.
- Minimal slab requirements: 300mm at 32mPa
- Galvanised steel finish
- Certification label included.
- Unit weight: 31kg



## OH523 Davit base - Low profile and OH524 Davit base - Low profile sleeve

- Used in applications where base is required to be mounted beneath removable paving such as balconies, where visual aesthetics are of importance.
- The base plate is connected directly to the floor slab using cast-in or chemical anchor attachment.
- Galvanised steel finish.
- Certification label included.
- Base weight: 23kg
- Tube weight: 10kg
- Note: Used in removable paving type applications. Only one OH524 sleeve required per davit assembly.

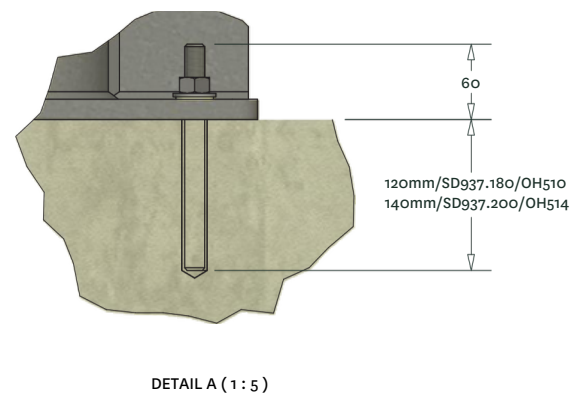
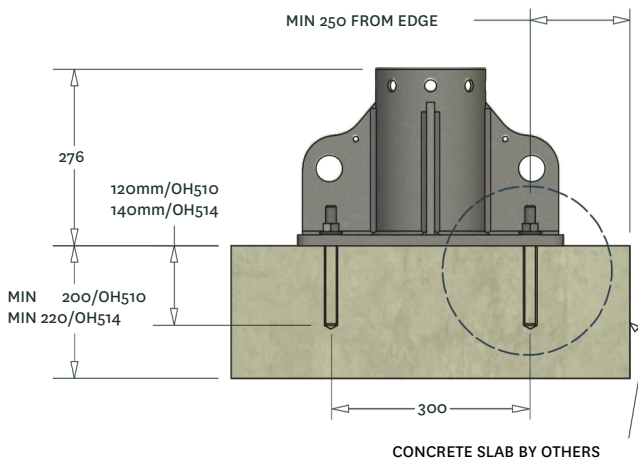
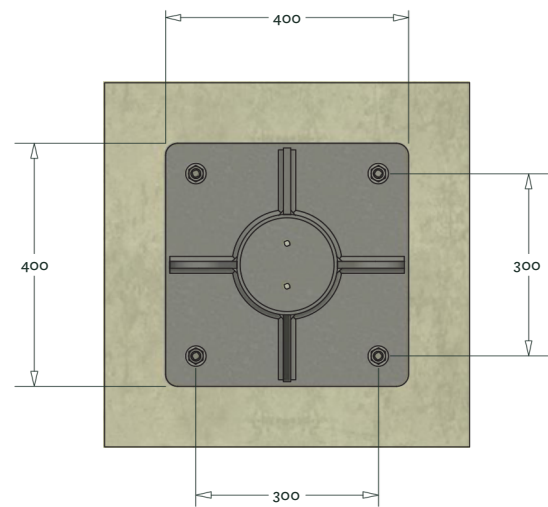
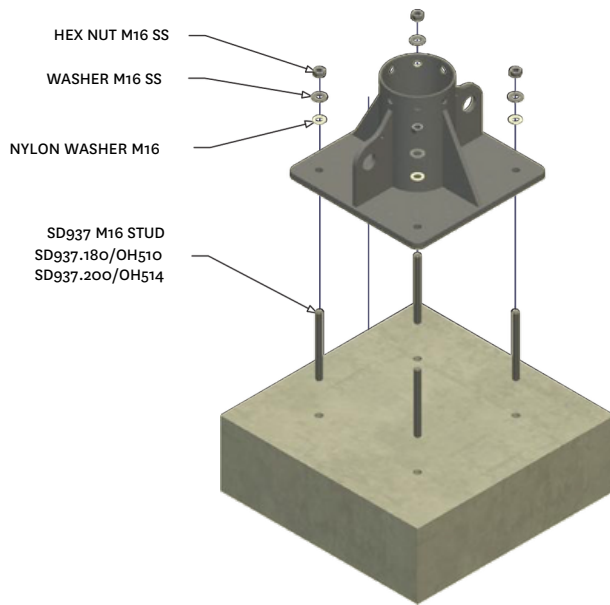




# MOUNTING DETAILS

## Epoxy adhesive mounting kit

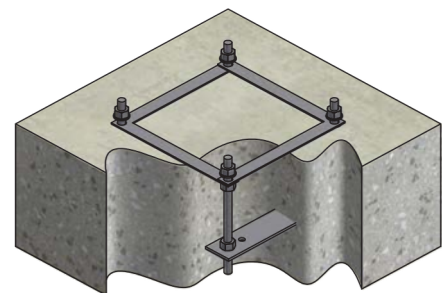
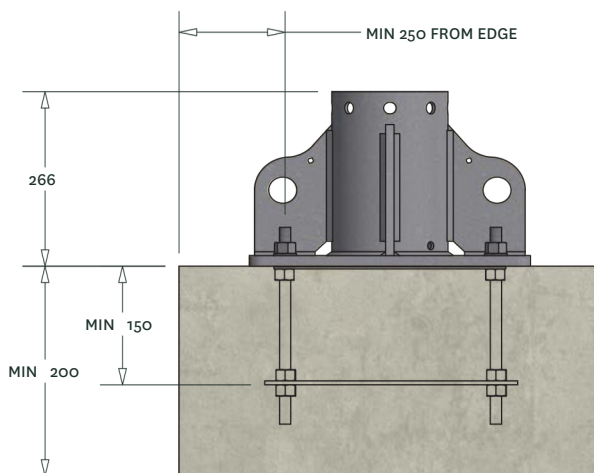
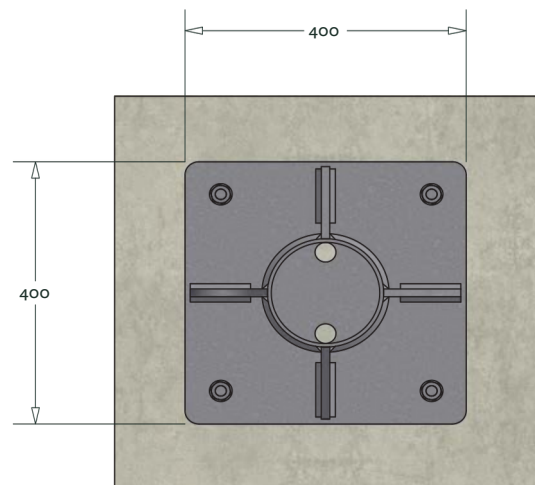
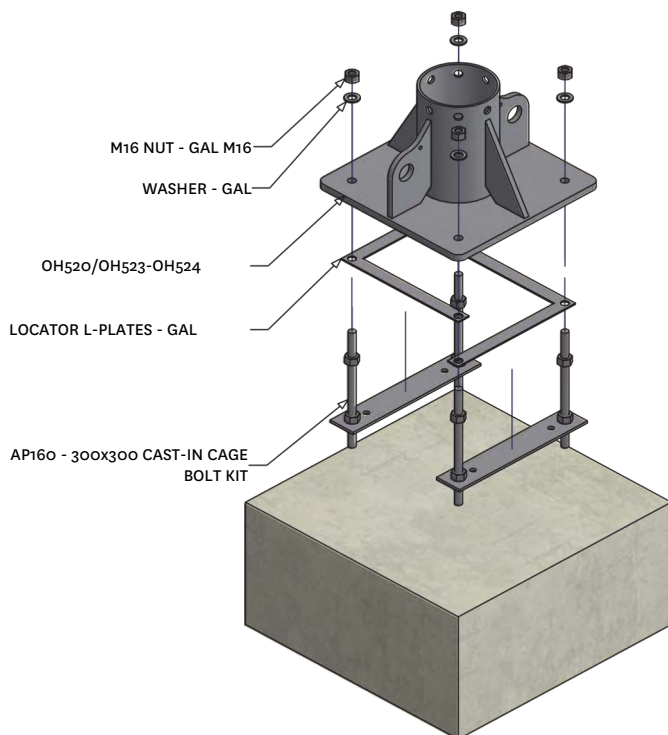
- Installation to existing concrete verified by structural engineer as suitable for required loads.
- Load testing of any friction fit fixing is required every 12 months.
- All floor base types can be fixed to adhesive/epoxy fix studs with a minimum embedment into concrete, see table below.
- Where access to the fixings for pull testing is difficult, it is recommended that the cast-in fixing method is used where possible.



Davit	Fixing	Minimum hole depth (mm)	Minimum slab thickness
OH510.1600	SD937.180	120	200
OH510.2200	SD937.180	120	200
OH514.1600	SD937.200	140	200
OH514.2200	SD937.200	140	200

## Cast-in cage bolt kit

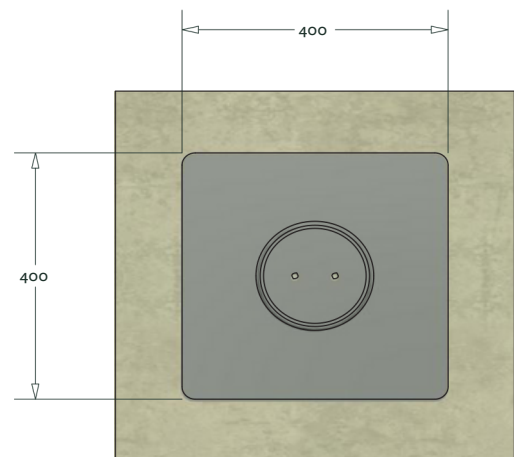
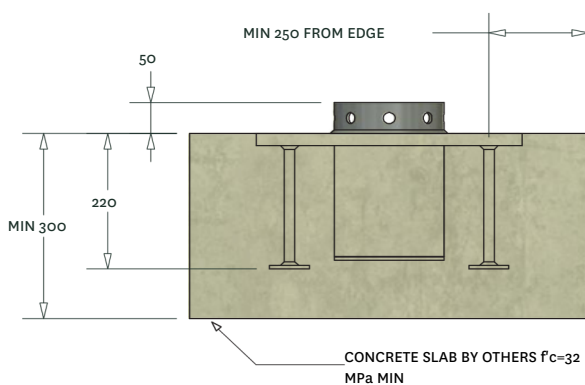
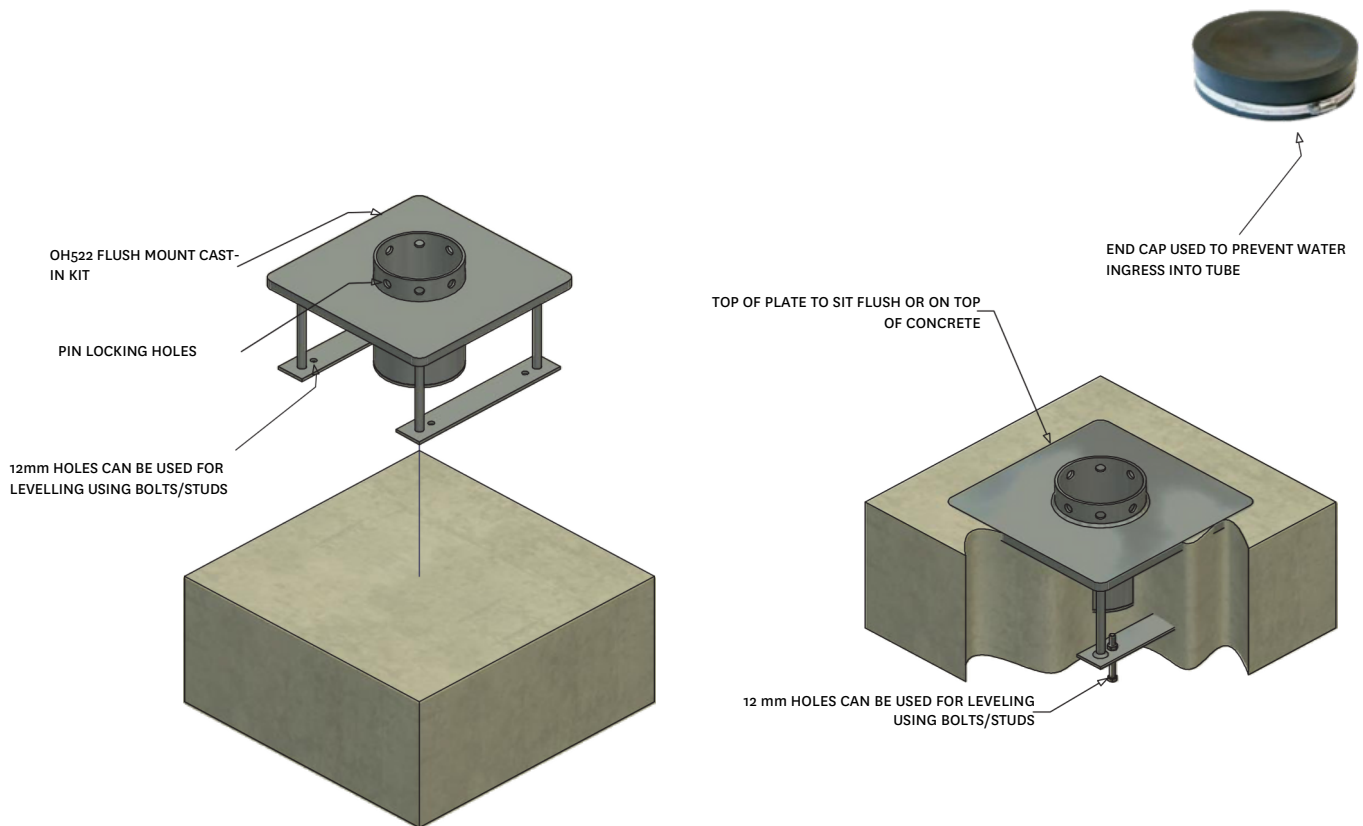
- Concrete slab fixing method using AP160 cast-in cage bolt kit.
- All base types can be fixed to cast-in cage bolt kit.
- No load testing of the cage bolt fixing required.
- Concrete slab to be engineered, suitable for required loads.
- 220mm minimum slab thickness required.



CONCRETE SLAB BY OTHERS  $f_c=32$  MPa MIN

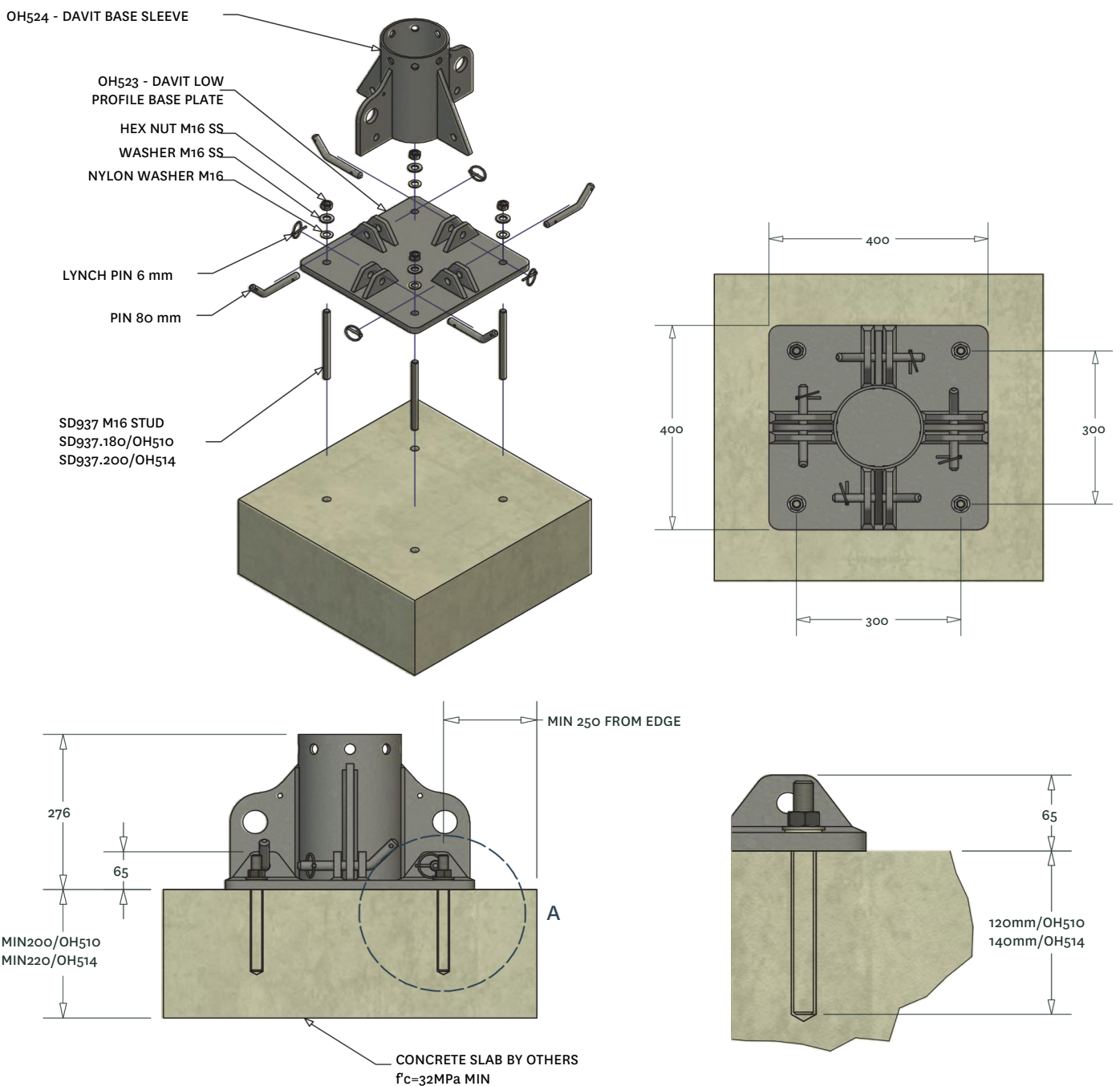
## Davit base - cast-in

- Flush mount concrete cast-in method using 32MPa minimum.
- No load testing to cast-in davit base required, label shall be clearly marked.
- Concrete slab to be engineered to achieve required loads.
- Minimum concrete thickness, 300mm.
- OH533 rubber end cap is required to prevent water ingress.



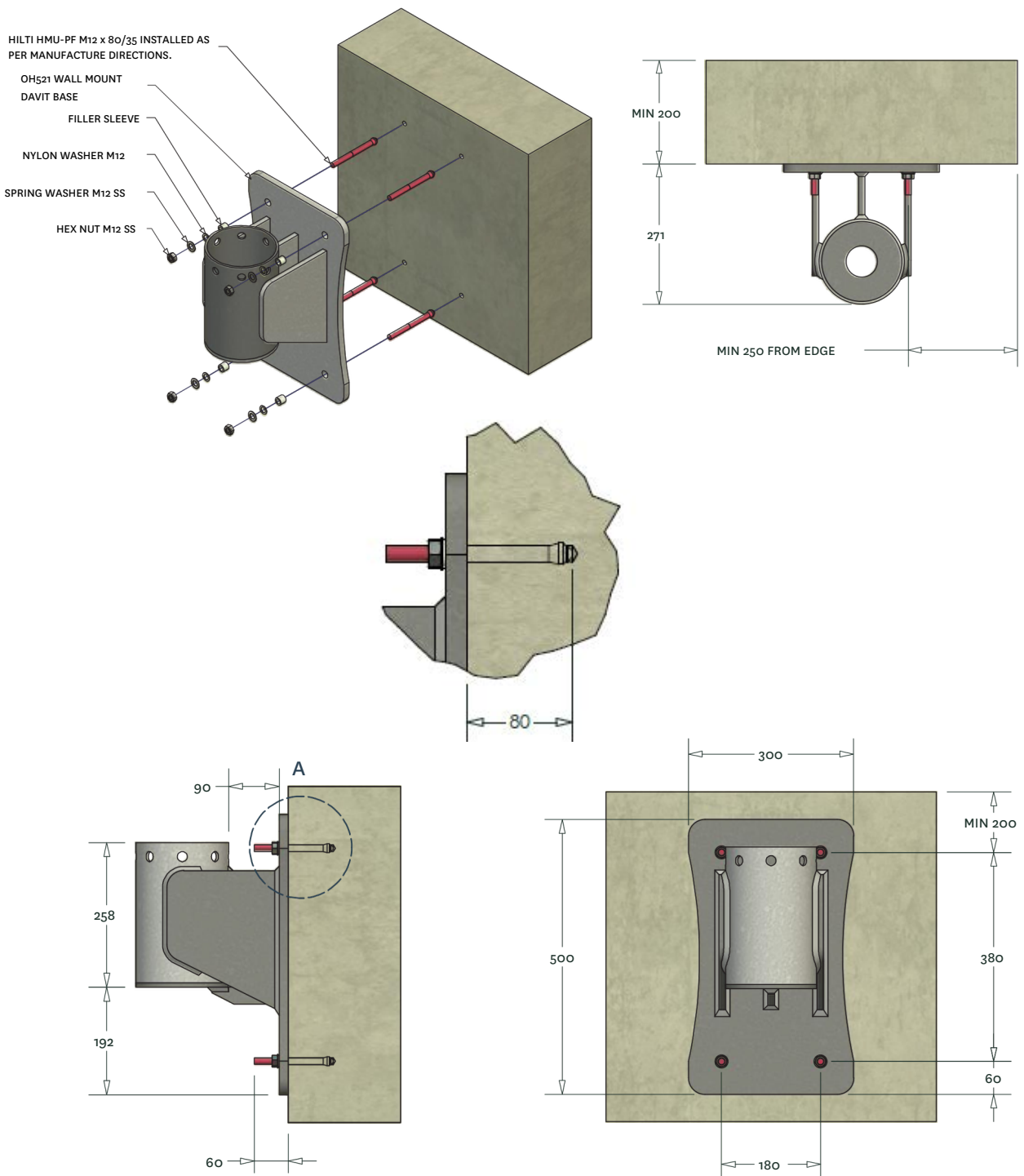
## Davit base - low profile

- Allows for placing under raised tiles.
- Installation to existing concrete using M16 threaded stud or into new concrete slab using the AP160 cast-in cage bolt kit.
- Requires 4 locking pins to secure davit base sleeve to the base plate.
- Load testing of any friction fit fixing is required every 12 months. No load testing is required using the cast-in cage bolt kit.
- Concrete slab to be engineered, suitable for required loads.



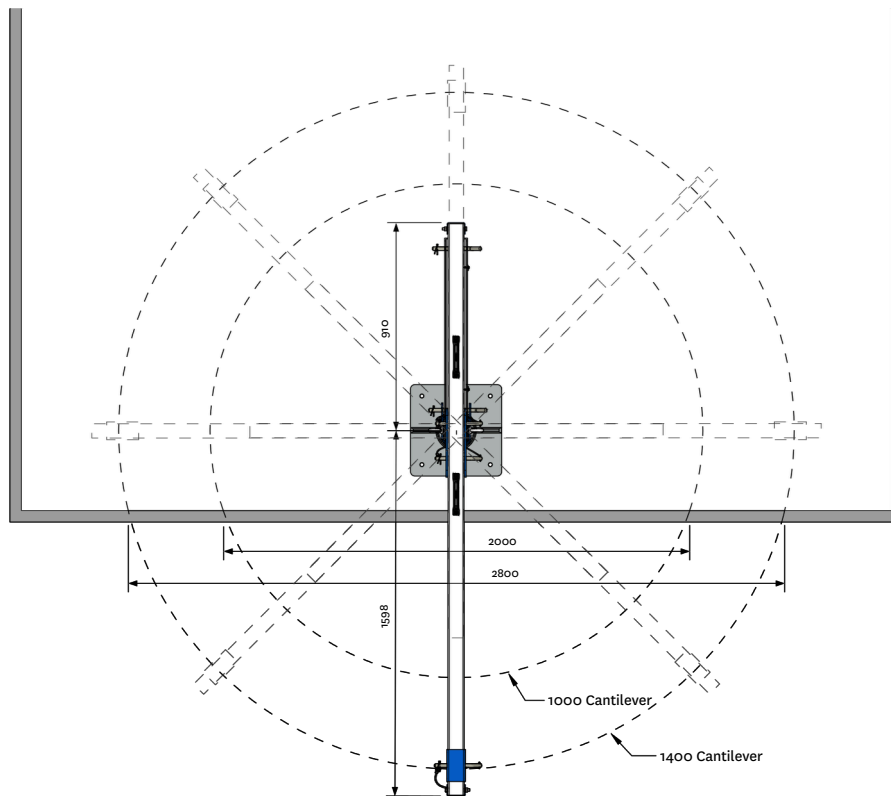
## Davit base - wall mount

- Can be mounted to concrete wall or steel supports engineered to achieve required loads.
- Mounting to concrete - only HMU-PF M12x80 undercut anchor must be used
- Mounting to steel, M16 bolts must be used.

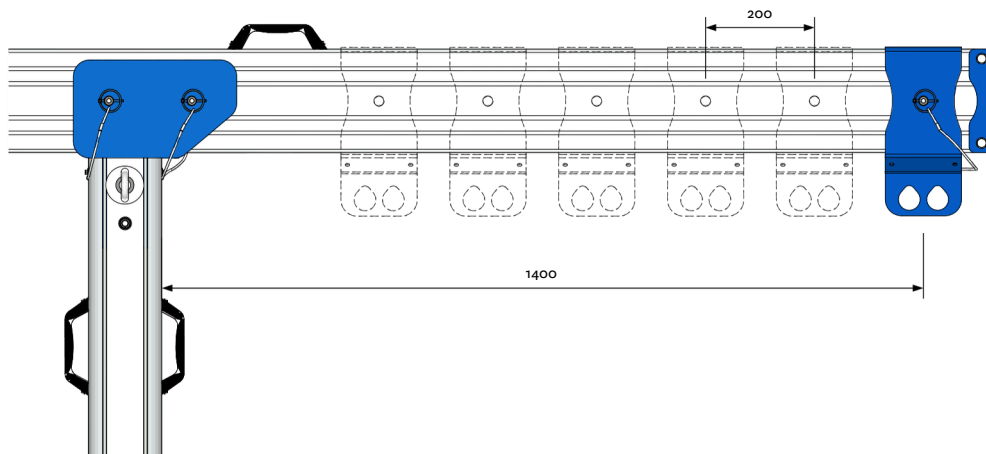


# DAVIT OPERATIONAL RANGE

The davit can rotate and operate 360°, with provision for locking at 45° increments. The operating range (dashed line) is a guide only. Site conditions may vary.

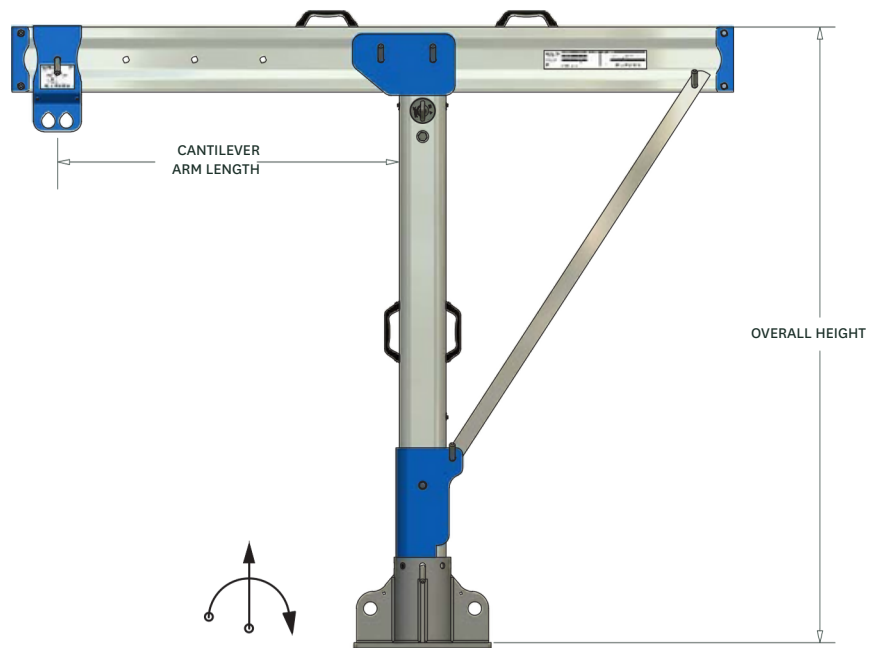


The rigging anchor ultimate load is 12 kN at 1400mm. The rigging anchor is able to be positioned at 200mm increments with a maximum outreach of 1400mm. Locking pin to be inserted once rigging anchor in final location.



# DAVIT BASE REACTION LOADS

Whilst diagrams indicate minimum edge distances and concrete thickness, in some applications these dimensions may be varied if the building engineer uses the reaction loads shown in the table below and designs these loads into the building structure. Any reduction in edge distance or concrete thickness must be verified by a structural engineer.



Reaction load schedule  
(1.2G + Ultimate Q)

Overall Height (mm)	Cantilever Length (mm)	Forces at A (kN)	Moment at A (kN.m)
1600	800	13.00 Py	11.17 Mx
1600	1000	13.01 Py	13.66 Mx
1600	1200	13.03 Py	16.15 Mx
1600	1400	13.04 Py	18.65 Mx
2200	800	13.05 Py	11.16 Mx
2200	1000	13.06 Py	13.66 Mx
2200	1200	13.08 Py	16.15 Mx
2200	1400	13.09 Py	18.65 Mx
2600	1000	13.50 Py	13.65 Mx
2600	1400	13.50 Py	18.65 Mx



Due to the extensive loads the davit will exert on the base attachment, structural suitability of the substructure must be verified by structural engineer prior to installation of the system.

# TECHNICAL STATEMENT

## Components

Criteria	Data
Base	Mild steel grade 350 (galvanised)
Mast	Aluminium grade 6005A-T5 (anodised)
Boom	Aluminium grade 6005A-T5 (anodised)
Boom Mount	Aluminium grade 6005A-T5 (powder coated)
Mast Support Bracket	Steel grade 350 (powder coated)
Support Brace	Aluminium grade 6106A-T6
End Caps	Stainless steel grade 304 (powder coated)
Rigging Anchor	Stainless steel grade 304 (powder coated)
Locking Pins	Mild steel grade 350 (galvanised)
Carry Handle	Nylon GF15

## Loading

Criteria	Data	Note
Ultimate load	12kN ( + rescue)	As per requirements of AS/NZS1891.4
Hoist load	400kg	If davit is used for hoisting loads, max dynamic load is 400kg - refer to AS1418.13
Maximum height	2200mm	Greater heights may be achievable. To be discussed with Alta Safety.
Cantilever length	1400mm	Greater cantilever may be achievable. To be discussed with Alta Safety.
Boom angle of rotation	360° - lockable with pin at 45° increments	
Wind loading	Not to use under severe wind conditions greater than 37kph/23mph (IRATA)	



## Concrete requirements - floor mount, wall mount and low profile bases

Criteria	Data	Note
Concrete grade	F'c = 32 MPa	
Concrete thickness	200/220mm 300mm (Cast-in davit base)	Concrete thickness varies with different anchor type/davit type. Refer to the fastener details for other types of anchors.
Bolt diameter	16mm	
Base fixing stud	120mm/140mm	Varies with davit type OH51--120mm OH514-140mm

## Fastener details - Hilti

Criteria	Data	Note
SD937 Stainless Steel M16 Stud	Bolt size = Ø16 mm SD937.180 - 180mm SD937.200 - 200mm	
Cast-in cage bolt kit	16mm grade 350 steel with 150mm thread	
Hilti HMU-PF M12 x 80/35 Undercut Anchor	Used for attaching the OH521 wall mount davit base to concrete wall.	Sleeves must be used with M12 fixings (hole diameter 18mm)

# TECHNICAL SPECIFICATION

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## 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 & 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

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).

## 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

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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 [design@altasafety.co.nz](mailto:design@altasafety.co.nz)
- or contact technical helpline, 0800 115 396.

## **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.

# Alta Safety

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5028

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## TECHNICAL DRAWINGS KEY



Rate to  
15kN



Person  
Capacity



Abseil



Fall Arrest



Restraint  
Technique