Kattsafe Height access and fall protection

NEEDLES

OH400

Kattsafe needles are a mobile rope access system providing safe access to building facades in multiple configurations.

Product brochure
Needles

Operation manual
Needles

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

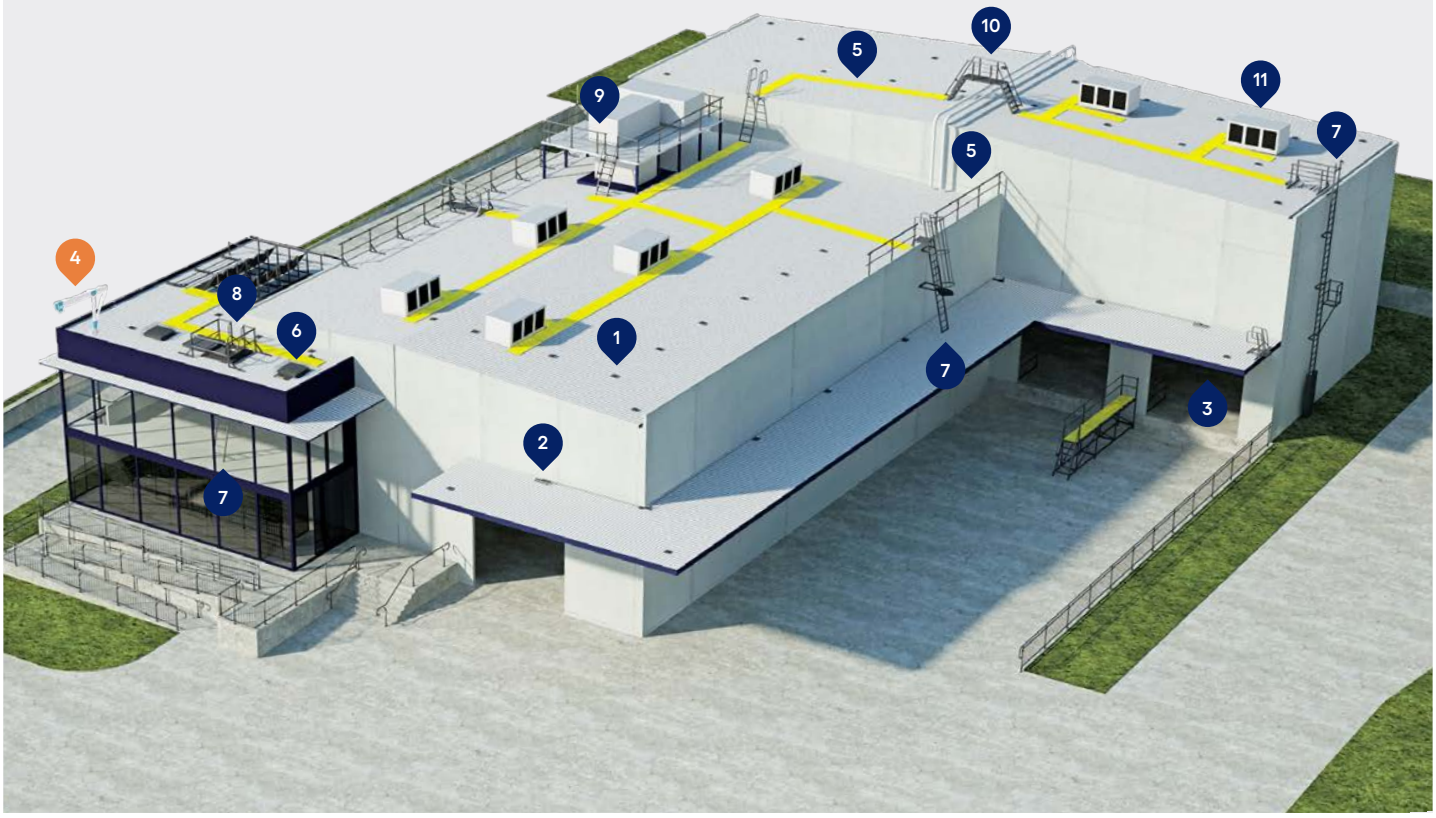
Commercial building height access and fall protection requirements

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



NEEDLE SYSTEM

Needles are a proprietary system designed for rope access loads (12kN) and a serviceability load of 400kg per needle.


1

Telescopic boom

The telescopic boom allows an additional 500mm of boom extension where extra reach is required providing a total cantilevered reach of 1800mm.


2

Reduces roof loads

The extended design of the needle spreads out the load put on the roof when in use.


3

Lightweight

Manufactured from structural aluminium, Kattsafe needles are easy to handle, transport and install.


4

Modular design

The fully modular design allows the needle to be used for access in all requirements, with adjustable components to suit.


5

Multiple configurations

With reaches between 1200 - 1800mm, and heights of 400 - 1200mm Kattsafe needles can fit over most parapet sizes for rope access.


6

Mounting options

The needle can be mounted to various different solutions including concrete mount, metal deck mount and swivel mount using a rigid rail.

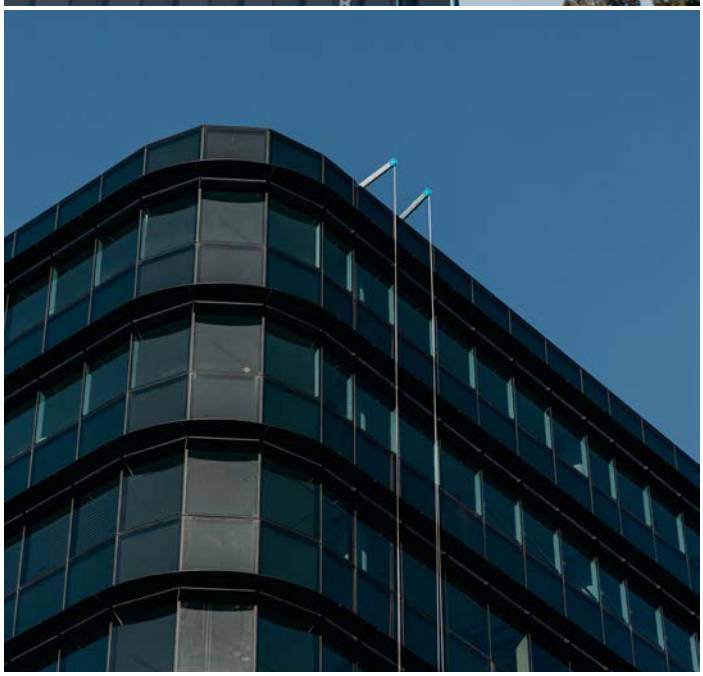
The Kattsafe needle is a lightweight, relocatable rope access system providing safe access over parapets and curtain walls for maintenance of building façades.

Kattsafe needles are designed as a rope access anchorage device where access over non load bearing parapets, balustrades and light weight curtain walls is required.

They are designed to withstand a 12kN rope access load and have a serviceability load limit of 400kg. Each needle is designed to be used by a single operator at any one time.

Needles work well on metal deck roofs where the load on the roof deck needs to be spread to avoid any damage to the roof area. The needle is modular in design and can be configured in length, height and movement providing a fit for purpose solution based on the specific needs of the project.

As these systems are required to safely suspend personnel, the system must only be used by a certified rope access operator. Periodic maintenance and recertification is required at 12 monthly intervals by an equipment inspector to ensure care of the system and compliance to Australian and New Zealand Standards.



NEEDLE CONFIGURATIONS

OH404 Needle 400mm a-frame

- Suited for parapet heights of 300mm
- Available in 1200 or 1500mm extensions

OH408 Needle 800mm a-frame

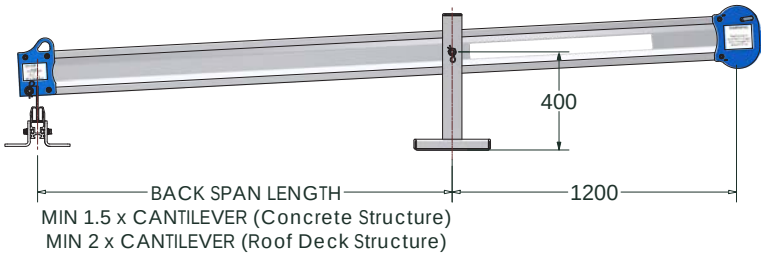
- Suited for parapet heights of 700mm
- Available in 1200, 1500 or 1800mm extensions

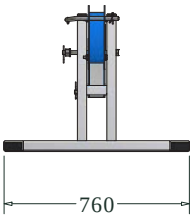
OH412 Needle 1200mm a-frame

- Suited for parapet heights up to 1100mm
- Available in 1200, 1500 or 1800mm extensions

OH404

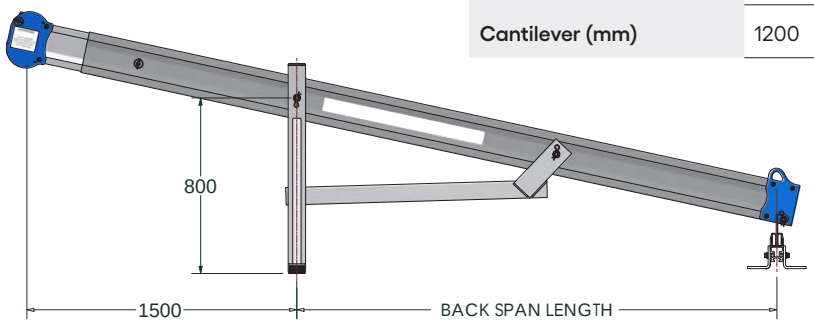
Details	OH404.1200	OH404.1500
Parapet height (mm)	300	300
Frame height (mm)	400	400
Cantilever (mm)	1200	1500

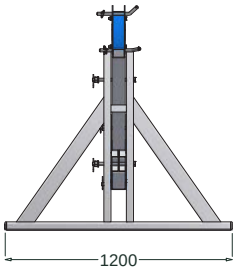




OH408

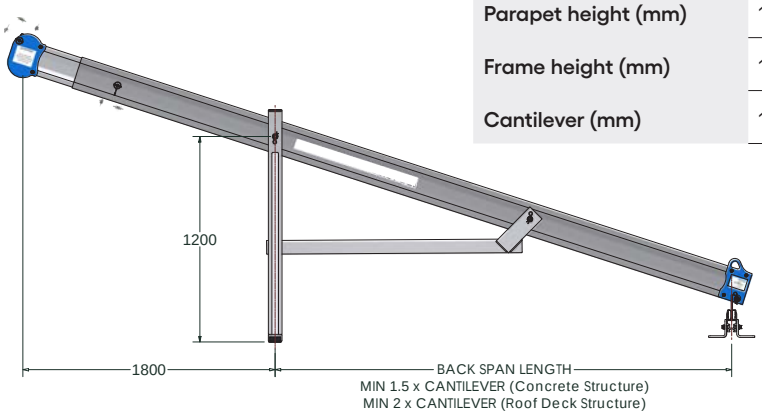
Details	OH408.1200	OH408.1500	OH408.1800
Parapet height (mm)	700	700	700
Frame height (mm)	800	800	800
Cantilever (mm)	1200	1500	1800





OH412

Details	OH412.1200	OH412.1500	OH412.1800
Parapet height (mm)	1100	1100	1100
Frame height (mm)	1200	1200	1200
Cantilever (mm)	1200	1500	1800



NEEDLE COMPONENTS

Needle boom

- The needle boom is designed to reach up to 1800mm depending on the needle model.
- The rope guide, manufactured from stainless steel and powder coated, provides a smooth, safe surface for the rope line to be protected over the rope guide end cap when under load.

Needle brace

- The needle brace provides the structural connection between the needle boom and the needle a-frame.
- The brace is connected via 2 x high tensile structural bolts with locking pin.
- The needle brace size is determined by the size of the needle used.

Needle a-frame

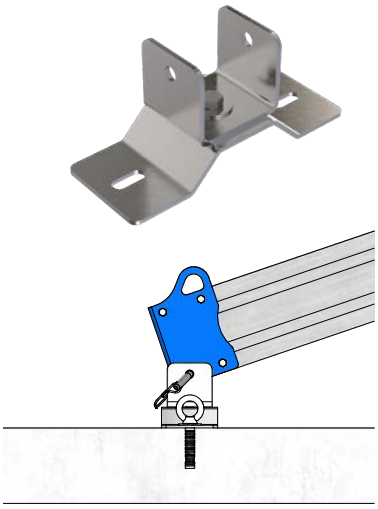
- Available in 400, 800 and 1200mm widths
- The a-frame elevates the needle boom above the parapet or curtain wall.
- The higher the parapet, the higher the a-frame will need to be.
- The height of the a-frame will depend on the parapet height. A minimum of 800mm is recommended for ease of use and setup of the ropes.
- A rubber strip is attached to the underside of the a-frame to protect the roof surface.

MOUNTING OPTIONS

OH443 Needle connection bracket - concrete mount

- Needle mounted to a single connection bracket on a concrete slab application.
- Needle requires manual relocation between consecutive attachment points.
- An attachment bracket fixed to a concrete slab requires 2 insert anchors with removable eyelet to allow for easy attachment of the needle.

Integrity and suitability of the structure must be approved by a structural engineer.

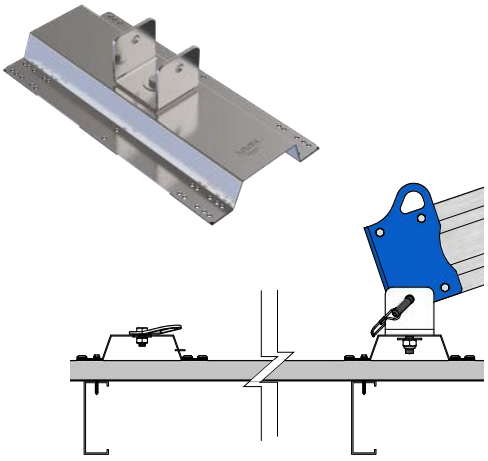


OH444 Needle connection bracket - metal deck mount

- Needle mounted to rigid rail on a metal deck roof application.
- The rail mount system allows for safe and rapid transverse of needle when re-positioning.
- The rigid rail attaches to an OH253 metal deck mount plate at 3.0m spacing.
- OH253 metal deck plate fixed to roof deck using 8mm bulb type rivets and 14g roof screws into the metal purlin structure.

Integrity and suitability of the structure must be approved by a structural engineer. In order to provide a secondary back up should the needle anchorage fail, a secondary or safety rope line must be connected to a secondary connection on the trolley.

In order to provide a secondary back up should the needle anchorage fail, a secondary anchor rated for rope access must be installed within close proximity of the needle to allow easy back up connection for the operator.



OH445A Needle trolley - swivel mount

- Needle mounted to a single trolley on a rigid rail.
- The trolley allows for the needle to swivel, giving more access to the building façade.
- The needle requires manual relocation between consecutive rigid 80 and 130 rail sections.

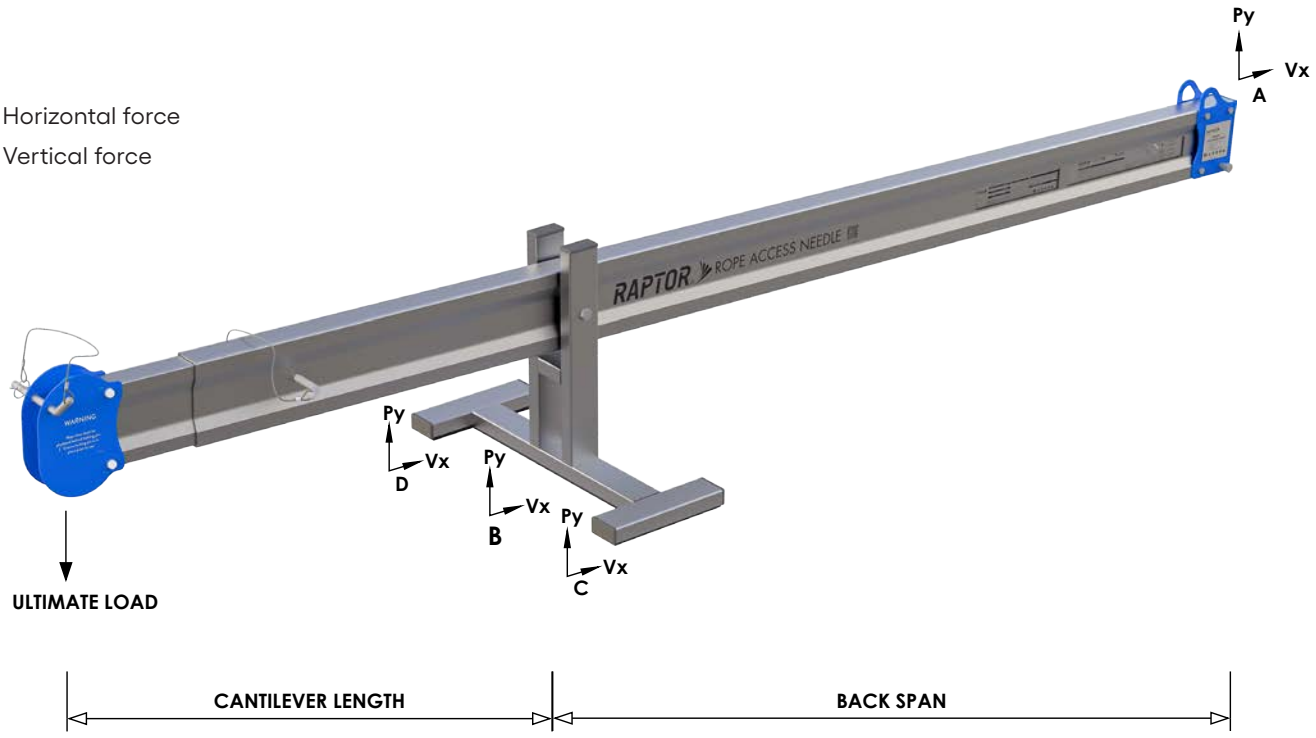
Integrity and suitability of the structure must be approved by a structural engineer.

NEEDLE LOADS & LIMITS

OH404 Needle 400mm a-frame

Key

- Vx: Horizontal force
- Py: Vertical force

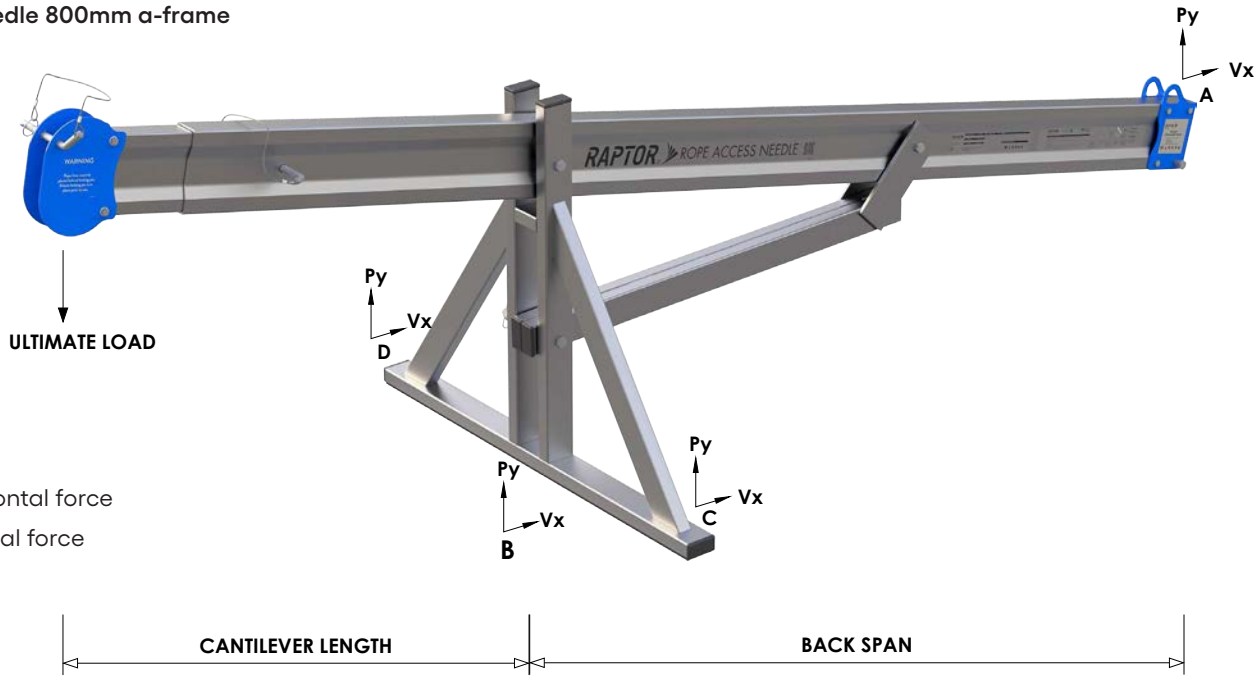


Code	Frame height (mm)	Cantilever length (mm)	Back span (mm)	UTL Load (kN)	A: Py (kN)	B: Py (kN)	C: Py (kN)
OH404.1200	400	1200	2400	12	-5.90	17.50	0.40
OH404.1500	400	1500	3000	12	-6.00	17.30	0.40

Note

- Forces are positive in direction of arrows.
- No wind load has been considered in above calculations.
- Any change in the dimensions of the needle components should be confirmed with engineer.
- This drawing is not a shop drawing and is not drawn to scale.
- Loads are dependant on site conditions and final anchor placement.
- These loads provide a guide only for design purposes.

OH408 Needle 800mm a-frame



Key

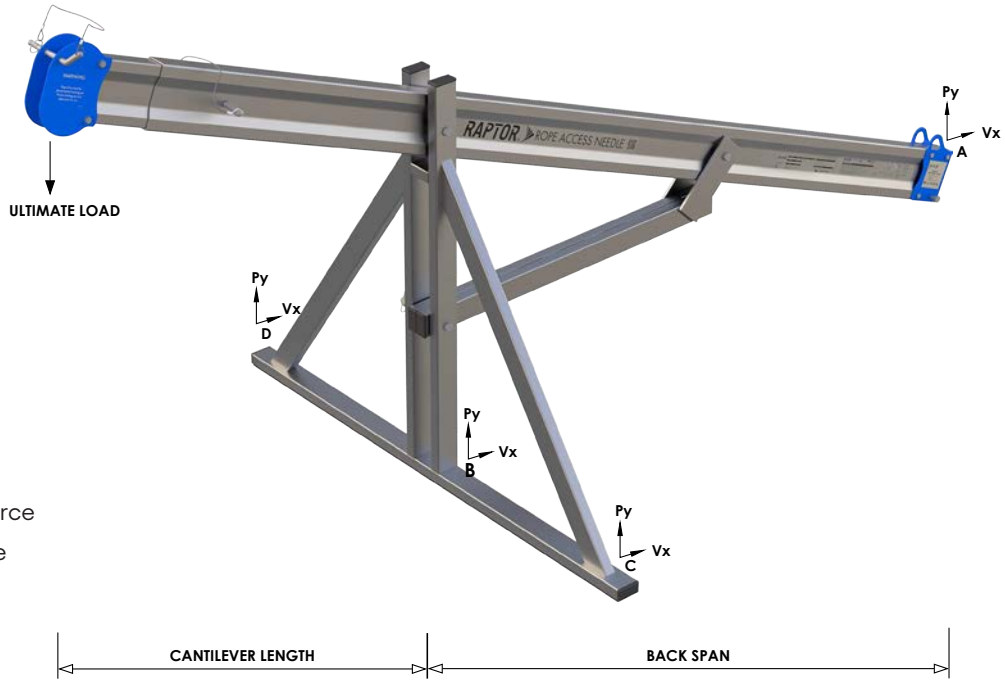
- Vx: Horizontal force
- Py: Vertical force

Code	Frame height (mm)	Cantilever length (mm)	Back span (mm)	UTL Load (kN)	A: Py (kN)	B: Py (kN)	C: Py (kN)
OH408.1200	800	1200	1800	12	-7.20	17.50	1.00
			2400	12	-5.30	15.90	0.90
			3000	12	-4.10	14.90	0.90
OH408.1500	800	1500	2250	12	-7.10	17.60	1.00
			3000	12	-5.30	16.10	0.90
			3700	12	-4.10	15.10	0.90
OH408.1800	800	1800	2700	12	-7.10	17.60	1.00
			3600	12	-5.10	15.80	0.90
			4500	12	-3.90	14.80	0.90

Note

- Forces are positive in direction of arrows.
- No wind load has been considered in above calculations.
- Any change in the dimensions of the needle components should be confirmed with engineer.
- This drawing is not a shop drawing and is not drawn to scale.
- Loads are dependant on site conditions and final anchor placement.
- These loads provide a guide only for design purposes.

OH412 Needle 1200mm a-frame



Key

- Vx: Horizontal force
- Py: Vertical force

Code	Frame height (mm)	Cantilever length (mm)	Back span (mm)	UTL Load (kN)	A: Py (kN)	B: Py (kN)	C: Py (kN)
OH412.1200	1200	1200	1800	12	-6.20	17.00	0.90
			2400	12	-4.70	15.50	0.90
			3000	12	-3.70	14.60	0.80
OH412.1500	1200	1500	2250	12	-7.00	17.80	0.90
			3000	12	-5.40	16.30	0.90
			3700	12	-4.30	15.40	0.80
OH412.1800	1200	1800	2700	12	-7.60	18.40	1.00
			3600	12	-5.60	16.50	0.90
			4500	12	-4.30	15.40	0.90

Note

- Forces are positive in direction of arrows.
- No wind load has been considered in above calculations.
- Any change in the dimensions of the needle components should be confirmed with engineer.
- This drawing is not a shop drawing and is not drawn to scale.
- Loads are dependant on site conditions and final anchor placement.
- These loads provide a guide only for design purposes.

TECHNICAL SPECIFICATION

Needles

OH400

Industrial use, aluminium construction, needles by Kattsafe provide 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

- Boom and a-frame: manufactured from high grade structural aluminium.
- Connection brackets, end caps, supports: powder coated stainless steel
- Locking pins: galvanised coated steel, 16mm.

Rating

- 12kN single person use plus rescue
- 15kN fall arrest
- 400kg safe working load

Code	A-frame height (mm)	Cantilever length (mm)	Backspan (mm)
OH404.1200	400	1200	1800
OH404.1500	400	1500	2400
OH408.1200	800	1200	1800
OH408.1500	800	1500	2250
OH408.1800	800	1800	2700
OH412.1200	1200	1200	1800
OH412.1500	1200	1500	2250
OH412.1800	1200	1800	2700

Compliance

Kattsafe needles are designed to conform with requirements of the Australian and 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 and New Zealand Standards 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).
- 15 year design life.

Inspection and maintenance

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

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.
- Needle connection details and loading to structure must be verified by a structural engineer prior to installation.

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
Needles

Operation manual
Needles

QMS Certification
ISO 9001:2015

Find all related products and resources on our website.
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Kattsafe

Height access
and fall protection

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