



WIND & YOUR ROOF MOUNT

Monkeytoe

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IN THIS EBOOK WE DISCUSS HOW WIND CAN EFFECT ROOF MOUNTS AND PLATFORMS AND HOW TO AVOID THIS.

After a stretch of good weather, it is easy to forget about storms, cyclones and the potential trampoline flying effect of wind gusts. While the kids' trampoline is often one of the first to suffer in high winds, a lot of buildings and structures including roof mounted platforms can fail if not designed and engineered correctly.

The Trampoline, often the first to suffer in high winds

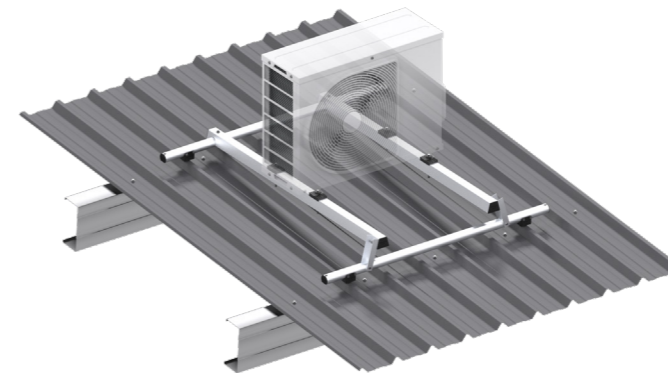


HOW DO I ALLOW FOR WIND IN THE DESIGN OF MY PRODUCTS?

ALL CERTIFIED DESIGNS IN NEW ZEALAND & AUSTRALIA SHOULD BE DESIGNED TO THE STANDARD AS/NZS1170.2.

Unless you are an engineer yourself, you should always check the engineers design certificate or producer statement showing they have confirmed the suitability of the product for that application.

Standard Monkeytoe platforms and condenser mounts are pre-engineered with these for most applications while site specific designs and certificates can be provided when required.



HOW ARE WIND LOADS CALCULATED?

02

The standard AS/NZS1170.2 provides a map showing the different wind zones for areas of New Zealand and Australia. The most severe region in NZ is predictably the Wellington region while for Australia this is the North and North-eastern coastline beginning at Bundaberg and the highest is on the WA coast near Port Headland.

To calculate the force the structure is required to withstand maximum windspeeds based on cyclones we calculate the effect on the structure based on where it is located, the surrounding terrain and the height above ground.

For the speed freaks out there the typical design windspeed in Darwin and Bundaberg is 237.6 Km/hr while in Wellington NZ it is 190.8 km/hr. Using typical calculation factors the wind load on a single condenser unit of 1.2m high by 1m wide is more than 500kg in Darwin/Bundaberg while in Wellington this is nearly 300kg. This means to make sure it doesn't end up like a trampoline in the next storm it pays to have a proven certified product. Next time you see a large 3M high screen on a plant platform think about how much force this needs to withstand in severe weather.

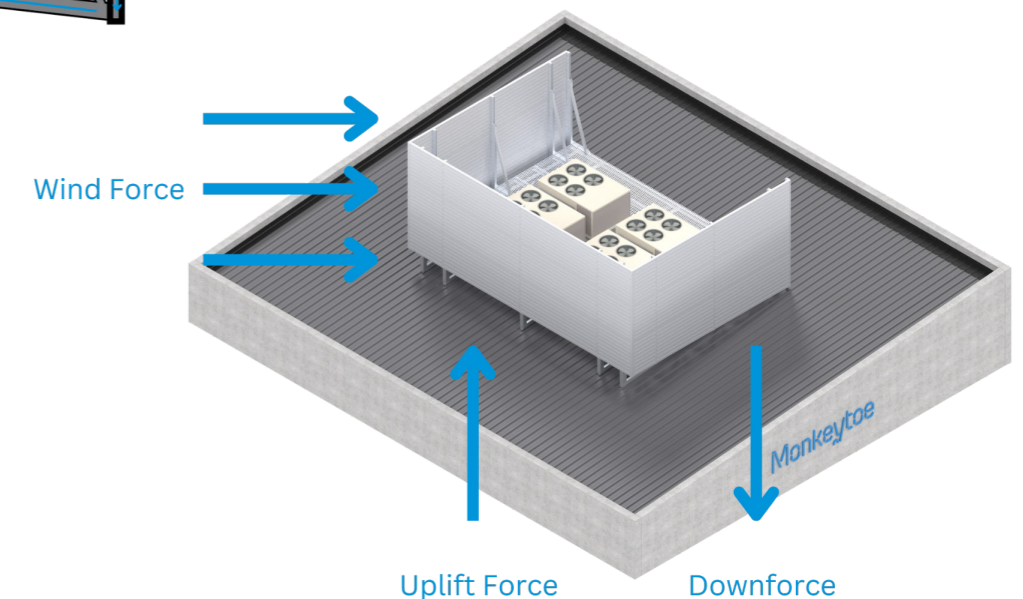
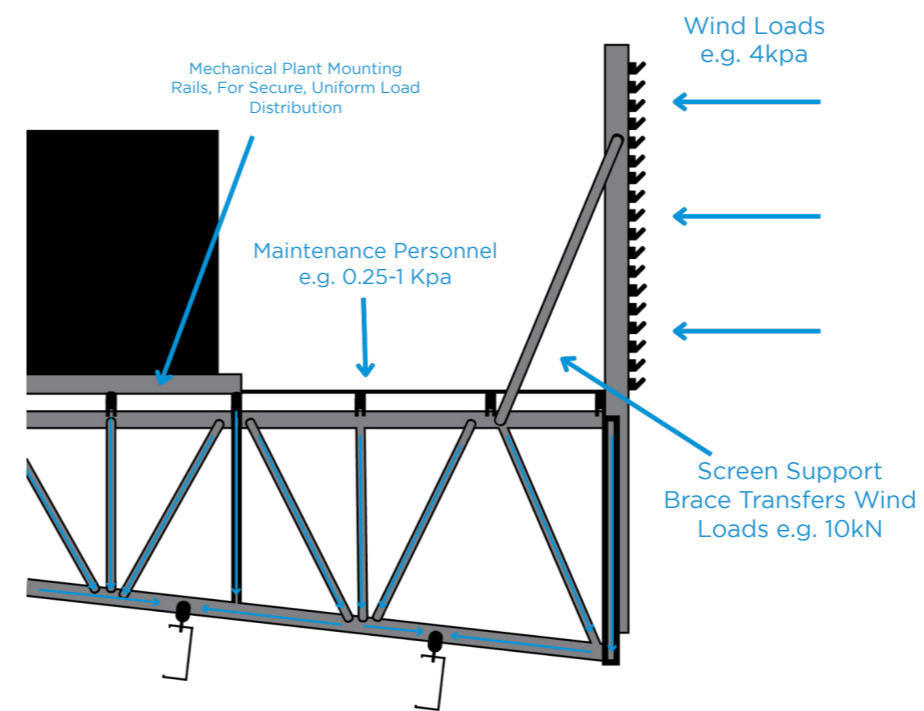


DAMAGE AND PREVENTION

03

Wind pressure on the side of an HVAC unit or screen wall is transmitted downwards through its framing. This generates a downward force on one side and an upward force on the other, and if not properly balanced can overturn and become unsecured. This risk applies mainly to untethered HVAC units and poorly designed maintenance platforms.

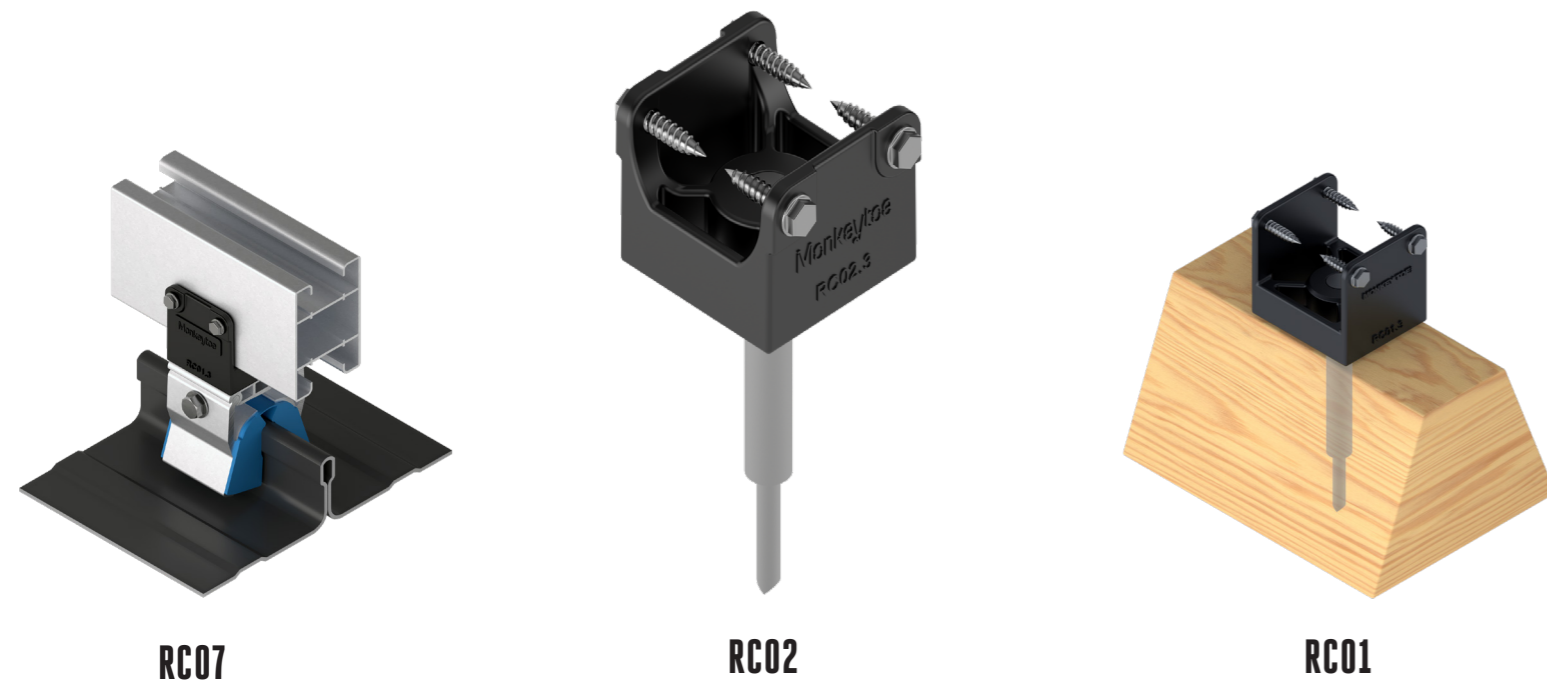
The Monkeytoe Roof Clips assist the structures handling of this load taking some of the pressure off the framing, braces and trusses and transferring onto our roof clips.



HOW DO ROOFING CLIPS KEEP STRUCTURES ON THE ROOF?

04

Monkeytoe developed its patented roof clip system over 10 years ago to create a safe weather tight mounting point that doesn't damage your roof. When the platform or condenser mount comes under load the clips then transfer this to the building and in turn the roofing structure of the building.



RC07

RC02

RC01

To ensure these work Monkeytoe carry out extensive testing of all the mounting systems, in fact to further increase the load capacity of our standard roof clip we have developed a new patent high uplift fixing system that will reduce the amount of fixings needed for windy regions by around 1/3rd. This will have a certified maximum pull-out force of 968kg.

For more information about our Roof Clips.

[CLICK HERE >](#)

