



Project specific non-penetrative support frames for large, heavy, irregular shaped & unevenly loaded plant

There are many situations at roof level where our traditional offer may not be suitable in meeting unique heavy duty application requirements. Similarly, limiting factors such as weak roof construction, space constraints, existing upstands / services obstruction, stacked / sectioned unit arrangements and louvre screen supports are typical scenarios that contribute to the need of detailing an appropriate custom support solution. With the aid of our technical surveyors, highly skilled engineering team and use of engineering tools such as ANSYS (FEA/CFD) etc. Big Foot Systems can design and manufacture complete one-off solutions.

The necessary solution can vary from a frame similar in design and configuration to that of a standard LD product but utilising larger and longer sectional bars, typically 50mm x 50mm or 100mm x 50mm, supporting large arrays of VRFs or a large heavy unit such as an AHU.

The solution can also extend to a custom arrangement of HD Cubes or HD Beams in either 450mm or 600mm foot sizes. These can be designed to support the unit, whilst also considering the imposed loads acting on the structure where it sits. Or alternatively, for more complex applications, such as multiples of large and stacked unit layouts with an unusual footprint and uneven loading characteristics, a frame can be designed and fabricated specifically for the project requirements. In all cases, our Engineering Team carefully evaluates and designs each project on its own merit, in order to provide the optimum result.

Our technical capability in line with the breadth of our product versatility enable Big Foot Systems to design a frame specific to your need... we are yet to encounter a scenario under which we haven't been able to design a frame.

Technical Report Submittals

There may be situations where a design feasibility study, and / or a detailed technical analysis demonstrating the validation of a proposal against design parameters may be required.

Typical examples involve wind loading performance, beam deflection and weight distribution etc. This is written by our highly qualified engineers and can be provided to aid and clarify technical understanding, depending on customer supplied information, project size and value.



Finite Element Analysis

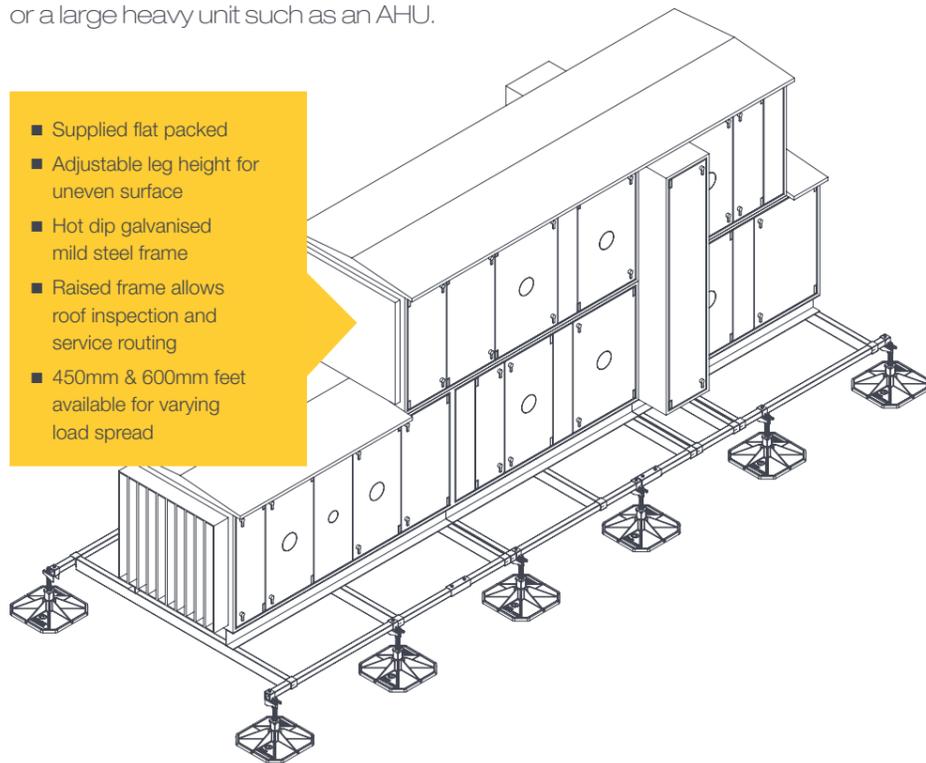
FEA is a powerful tool that achieves numerical test data through means of running a computer simulation to enable close analysis of variable loading conditions on solid elements. With our qualified engineering experts, its application within Big Foot Systems design process is used to validate structural integrity against beam deflection. This enables optimisation of design and application. Written analysis can be provided through our Technical Report Submittal service dependent upon scheme size and complexity.

Computational Fluid Dynamics (CFD)

CFD is a powerful tool used by our engineering team to closely analyse and interpret fluid characteristics within a modelled computer simulation. Typical use for this tool within Big Foot Systems include analysis of Solar Panels, AHUs, Chillers, Packaged Plant and VRFs etc. against extreme imposing wind pressures. Measurements are taken for wind tipping, wind sliding and wind uplift limits, to validate design/ ballast recommendations ensuring safety for application. Written analysis can be provided through our Technical Report Submittal service dependent upon scheme size and complexity.

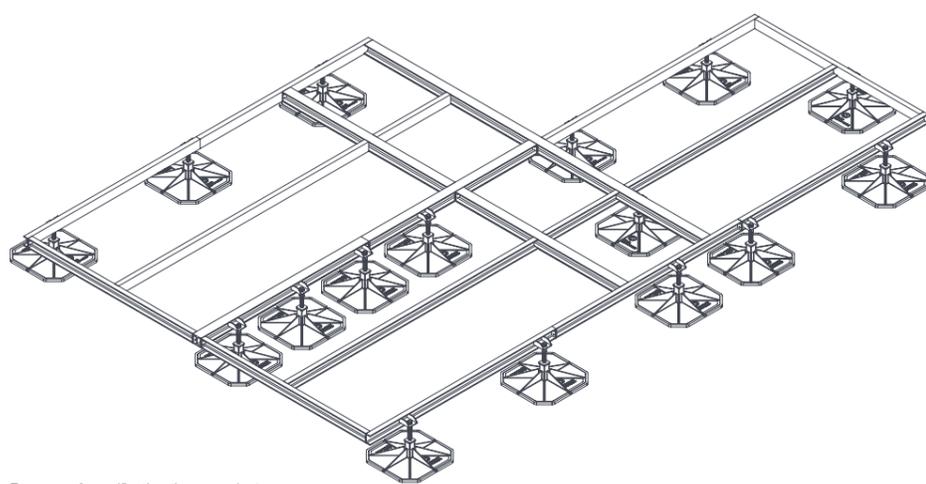


- Supplied flat packed
- Adjustable leg height for uneven surface
- Hot dip galvanised mild steel frame
- Raised frame allows roof inspection and service routing
- 450mm & 600mm feet available for varying load spread



PRODUCT INFORMATION

ANGLED RUBBER MATS	The solution to sloping roofs, 2.5° & 5° rubber mats are available
LEG HEIGHT ADJUSTMENT	Customisable adjustability from floor to top of framework (stepped roof option)
FEEET FLEECEES	Recommended for use on PVC membrane roof surfaces to prevent migration of plasticizers



For ease of specification these products are detailed on the following building product libraries:

