



Big Foot Systems Ltd

ANSYS Plus



Big Foot Heavy Duty

By Big Foot Systems Ltd

Detailed description

The Big Foot Systems Heavy Duty range offers a robust cost effective support alternative to on-site concrete constructions. With minimal on-site assembly and easy positioning, the HD Cube and HD Beam products aid load distribution and are non-penetrative – helping to protect the roof finish.

Big Foot HD Cube:

The HD Cube offers a complete, efficient and robust solution for supporting heavier services on flat roofs. Ideal for the support of large plant rooms, chillers and large air handling units. The HD Cube provides a simplistic approach without the necessity of casting traditional concrete plinths early on in the construction project.

Big Foot HD Beam:

The HD Beam was developed as a lighter weight companion to the HD Cube. Typical applications include large chillers, large air handling units and heavy pipes and services. HD Beam is a robust but flexible solution where space may be limited, or there is a requirement to position directly over existing structural roof beams. With M24 stud built into both legs to accommodate roof falls, the requirement for additional adjustment is not usually needed. An optional, 'quick fitting' clamp kit ensures a rigid fix back to the services, or secondary steelwork.

Custom framework:

There are many situations at roof level that direct the designer away from a standard framework approach. Limited space, existing upstands, lightweight roofs and other services may all contribute to detailing an appropriate custom support solution. With the aid of technical surveyors and using ANSYS FEA software, Big Foot can offer custom made one-off solutions to meet the demanding environment present on some of today's roofs.

Wind analysis:

Big Foot Systems are currently using Computational Fluid Dynamics (CFD) software to calculate site specific wind load conditions. Using the industry-leading ANSYS wind profiling program, analysis is run based on the unit size, quantity and mass then calculated to determine over turning moment and destabilizing wind speed. Big Foot Systems CFD modelling is based on customer supplied information and available to customers dependent upon scheme size.

Features/ benefits:

- Optional certified independent warranty.
- In-house computer aided Design (CAD) service.
- Non penetrative high load management system.
- ANSYS Finite element analysis (FEA).
- Load calculation service available.
- Cost and time effective on-site installation.
- Pre-fabricated for consistent and controlled installations.
- Ensures greater project design flexibility.

- Roof can be refurbished around installation.
- Membrane warranty upheld due to no penetrations.

Standards:

Constructed to:

- BS8000-4: Workmanship on building sites. Code of practice for waterproofing.
- BS6229: Code of practice for flat roofs with continuously supported coverings.
- BS EN 1107-1: Flexible sheets for waterproofing. Determination of dimensional stability.
- BS EN 1850-1: Determination of visible defects.
- Building Regulations (E & W) Part L: Conservation of Fuel and Power - Cold Bridging.

Product guidance - As Standard

Components:

- Plastic foot:

Nylon 6 B601L 30% glass fibre filled.

- Anti-vibration mat:

SBR-recycled rubber. Bound using a ratio of high quality moisture curing polyurethane pre-polymer. BS 7188 and BS 5696-3.

- Metal framework:

- Hot dip galvanized carbon steel: BS EN 10219-1. Welding standard: BS EN ISO 15614-1.
- Galvanizing: BS EN ISO 1461.
- Salt mist testing: BS EN 60068-2-52.
- Test Kb severity 1.

Options

Product reference:

- 450HDB, B9423:

- Feet size: 450 x 450 mm.
- Maximum height: 360 mm.
- Overall size (w x l): 486 x 1346 mm.
- Maximum load, per beam: 500 kg.

- 600HDB, B9373:

- Feet size: 600 x 600 mm.
- Maximum height: 360 mm.
- Overall size (w x l): 642 x 1392 mm.
- Maximum load, per cube: 1200 kg.

- 600HDB, B9217:

- Feet size: 600 x 600 mm.
- Maximum height: 303 mm.
- Overall size (w x l): 642 x 1392 mm.
- Clearance height: 800 mm.

- 200HDC, B9378:

- Feet size: 450 x 450 mm.
- Height: 333 mm.
- Footprint: 1136 mm.
- Maximum load, per cube: 1200 kg.

- 200HDC, B9376:

- Feet size: 600 x 600 mm.
- Height: 333 mm.
- Footprint: 1292 mm.
- Maximum load, per cube: 2000 kg.

- 600HDC, B9377:

- Feet size: 450 x 450 mm.
- Height: 583 mm.
- Footprint: 1136 mm.
- Maximum load, per cube: 1200 kg.

- 600HDC, B9375:

- Feet size: 600 x 600 mm.
- Height: 583 mm.
- Footprint: 1292 mm.
- Maximum load, per cube: 2000 kg.

Vertical adjustment:

- HD Cube:

The minimum height, with the adjuster on top of a 600 HD Cube is 640 mm and adjusted up to a maximum of 720 mm (80 mm of adjustment within the adjuster, maximum). 200 HD Cube: 240 mm minimum, up to a maximum of 320 mm.

- HD Beam:

Height adjustment from 255–360 mm. Big Foot feet can interchange with various leg assemblies to offer differing support heights and foot prints to suit.

Product specification

Manufacturer

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Product reference 450HDB, B9423 - Big Foot HD Beam.
 600HDB, B9373 - Big Foot HD Beam.
 600HDB, B9217 - Big Foot HD Beam, non-adjustable.
 200HDC, B9378 - Big Foot HD Cube.
 200HDC, B9376 - Big Foot HD Cube.
 600HDC, B9377 - Big Foot HD Cube.
 600HDC, B9375 - Big Foot HD Cube.

Design As drawing - Insert drawing reference number where applicable.