

# BIGFOOT SYSTEMS

## New Zealand Installation Guide

( Includes Material Specifications )

Galco have commissioned an independent consulting Engineer to review and advise how the Bigfoot system shall be installed in New Zealand, with direct reference to the seismic actions standard NZS 1170.5: 2004.

This Installation guide provides a summary of the required installation procedure to affect a seismically restrained support system.

### Installation Specification - Method & Fasteners

The Bigfoot system must be secured to the substrate or support beam by bolting down each foot through a minimum of three 12mm Diameter clearance holes, utilizing a minimum of three M10 class 4.6 or class 8.8 Hex bolts and nuts suitably coated for the exposure environment.

Bolts shall be secured 'snug tight' to NZS3404:1997. Alternatively 10mm expansion anchors such as 'Dynabolt' or 'Powerbolt' may be used, with a minimum typical embedment of 65mm or as required by derating due to edge distance (refer the manufacturer).

Each bolt shall be fastened with a heavy steel washer 35mm Dia x 6mm thick to support the maximum seismic loading of 10kN tension with a combined 3kn shear load .

The metal section that is inserted into the Bigfoot "feet" shall be fixed in place with an adhesive resin, ADOS 'Rapid Resin' or approved equal equivalent may be used ensuring the application effects a 10mm wide bond strip for the full perimeter of the metal section

Please refer to the drawings for the advised example of bolting layout illustrating the most effective/efficient 3 fixing hole locations.

Other hole patterns are acceptable provided the holes are equally spaced on a 210mm pitch circle (for 445mm foot) and 145mm pitch circle (for 305mm foot) maintaining a minimum of 15mm base material from the edge of the hole to the edge of the base.

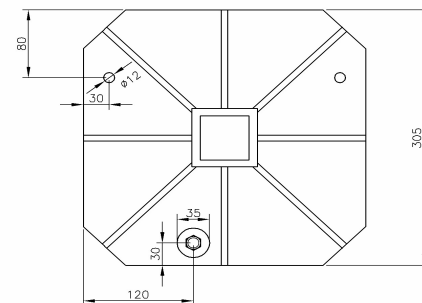
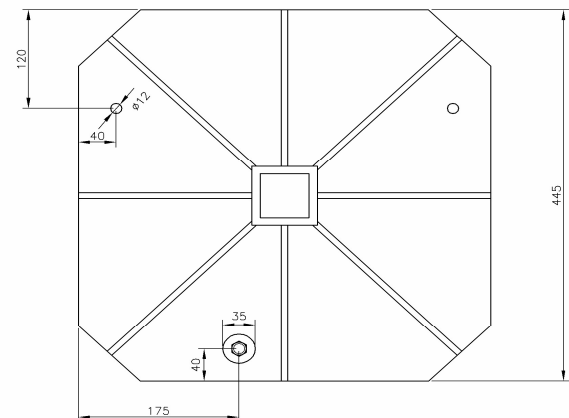
**Note:** Where weatherproof substrates are penetrated, the foot alone will not provide a weather tight seal.

### Maximum Loading of the Bigfoot System

Each 305 x 305 mm Bigfoot system "foot" has a safe working load of 120kg

Each 450 x 450 mm Bigfoot system "foot" has a safe working load of 220kg

### Installation Specifications - Fixing locations



**Note:** The support surface considered for the maximum foot loadings above is based on a ground floor concrete slab on grade. For above ground floors and roofs the maximum point loadings shall be reduced where necessary to suit the capacity allowance of that surface based on NZS4203:1992.



## **Steel work**

Cross Bars and Plain bars  
40 x 40 x 3 & 50 x 50 x 3 SHS (Square hollow section) manufactured to AS 1163 C350/450LO

## **Leg assembly**

Threaded Rod M24  
Nuts M24 Full Nuts

## **The Bigfoot "feet" & Multifoot supports**

Manufactured of Nylon 6 B601L, 30% Glass Fibre filled

## **Fasteners**

Clamp sets are made from mild steel C54 half hard 135-165. HV zinc & clear passivated to 8 microns and include M8 x 70mm

Locking Bolts are M10 Grade 8.8

Fixings required for anchorage bolting the Bigfoot system "feet" are: M10 class 4.6 or class 8.8 with suitable coating for the exposure environment. Refer durability below

## **Durability**

Where installed in general external exposures, the galvanized coating of steel components is considered to afford the 15 year required durability requirements of the New Zealand Building Code Approved document B2. For installations in industrial exposures or within geothermal and coastal areas please contact Galco for recommendations of coating system to NZS2312:2002.

## **Manufacture**

All Bigfoot system leg assemblies, including the Nylon feet are manufactured in the United Kingdom. Galco fabricate the cross and plain bars in New Zealand. All welding is carried out by qualified welders to NZS4711:1984 and the welding procedure to NZS 1554.1:2004 & NZS3404:1997.

## **Rooftop Installations**

Note: The support surface considered for the maximum combined weight foot loading is based on a ground floor concrete slab on grade. For above ground floors and roofs, the maximum point loadings shall be reduced where necessary to suit the capacity allowance of that surface based on NZS4203:1992.

## **Please Note:**

The specifier, installer or buyer shall ensure that the ultimate capacity of the foot supporting surface shall have adequate elastic strength or ductility to absorb the as loaded seismic actions of the installation.

