

# GFRP Handrail System

Satisfies BS 4592-0:2006+A1:2012  
Section 5.5.3 (lateral loads heavy duty)

Revision #	Revision Date
# 0	18/01/2023

**Lockinex**<sup>®</sup>  
*great service, great quality*

## INTRODUCTION

The Lockinex GFRP Handrail System provides an alternative to mild steel products. Lightweight, Non Conductive and with low maintenance.

## APPLICATION

The installation of this product lends itself to exterior installations, such as, verandahs, balustrades around raised platforms, extended decking areas.

## COMPOSITION, MANUFACTURE

GFRP (Glass Fibre Reinforced Plastic) is a well proven product, used throughout many industry applications.

The Lockinex system incorporates certain polymers, resins and fibres, to a specific recipe.

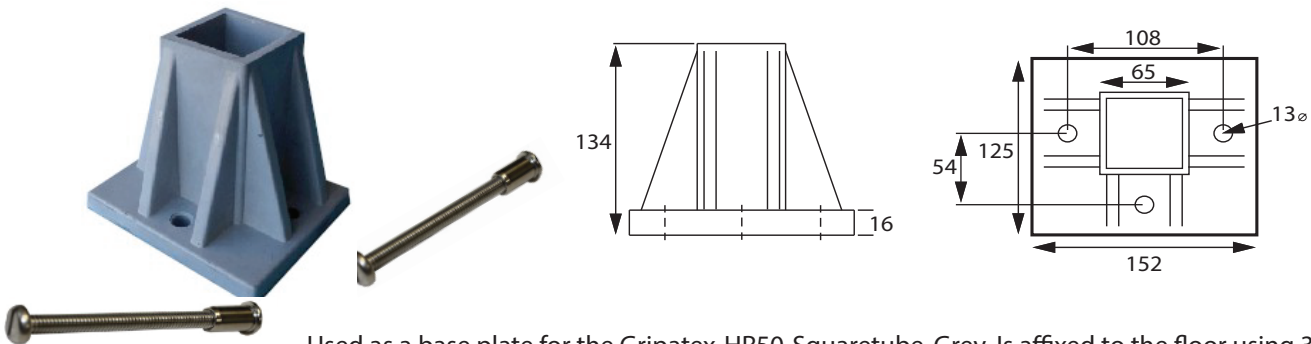
Oxybenzone is added to the resin to help retard UV damage to the pigmentation.

Surface veil techniques are also incorporated in pultruded tube profiles to enhance the appearance, and assist reduce UV damage to the pigmentation.

## DESIGN

The easy to use components are readily available from stock, and an effective safe barrier can be constructed.

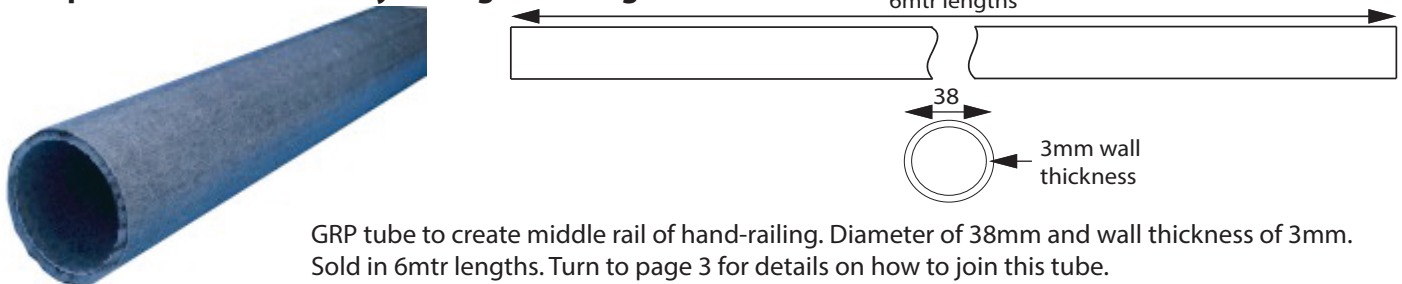
### Gripatex-HR12-Base-Plate-Grey Weight = 1.25Kg



Used as a base plate for the Gripatex-HR50-Squaretube-Grey. Is affixed to the floor using 3 x fixing bolts and secures the upright post using 2 x connection bolts (included). Holding down bolts should be ordered separately.

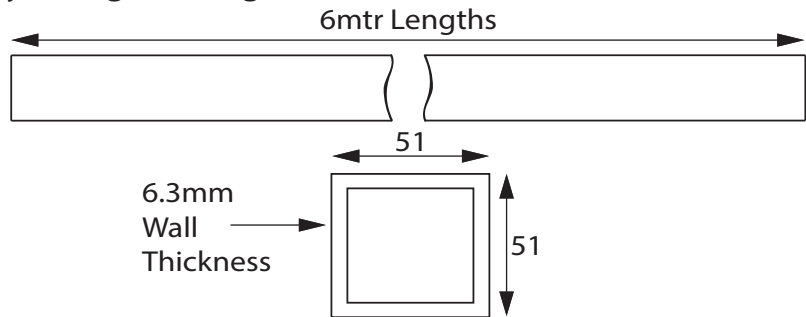
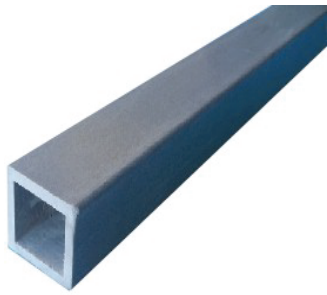
NOTE: This product does not have recessed holes for the connection bolts. The user will need to drill a 10mm Dia hole through the clamp and tube so the bolt can pass through and secure the tube in place.

### Gripatex-HR38-Tube-Grey Weight = 3.1Kg



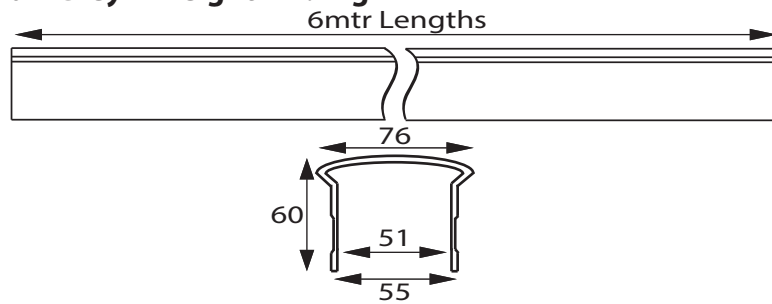
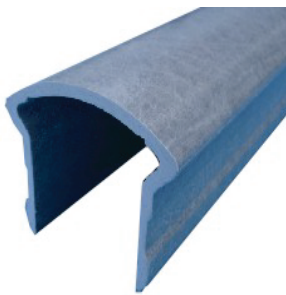
GRP tube to create middle rail of hand-railing. Diameter of 38mm and wall thickness of 3mm. Sold in 6mtr lengths. Turn to page 3 for details on how to join this tube.

**Gripatex-HR50-Squaretube-Grey Weight = 11Kg**



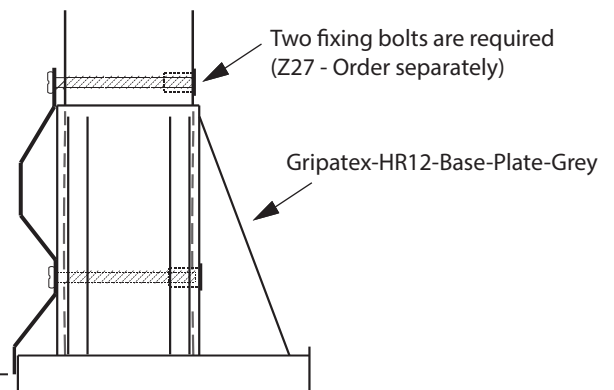
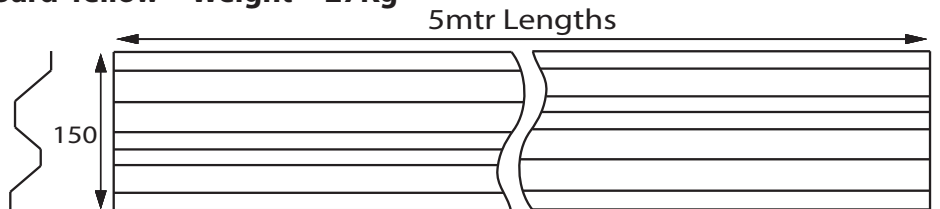
Square section used to form upright posts. Gripatex-HR75-Top-Rail-Grey slots on top of this post and is fixed into place to create a top rail. The Gripatex-HR38-Tube-Grey is used to create a middle rail. A 38mm Dia hole must be drilled out of this post in order for the middle rail to be slotted through and fixed into position.

**Gripatex-HR75-Top-Rail-Grey Weight = 7.4Kg**



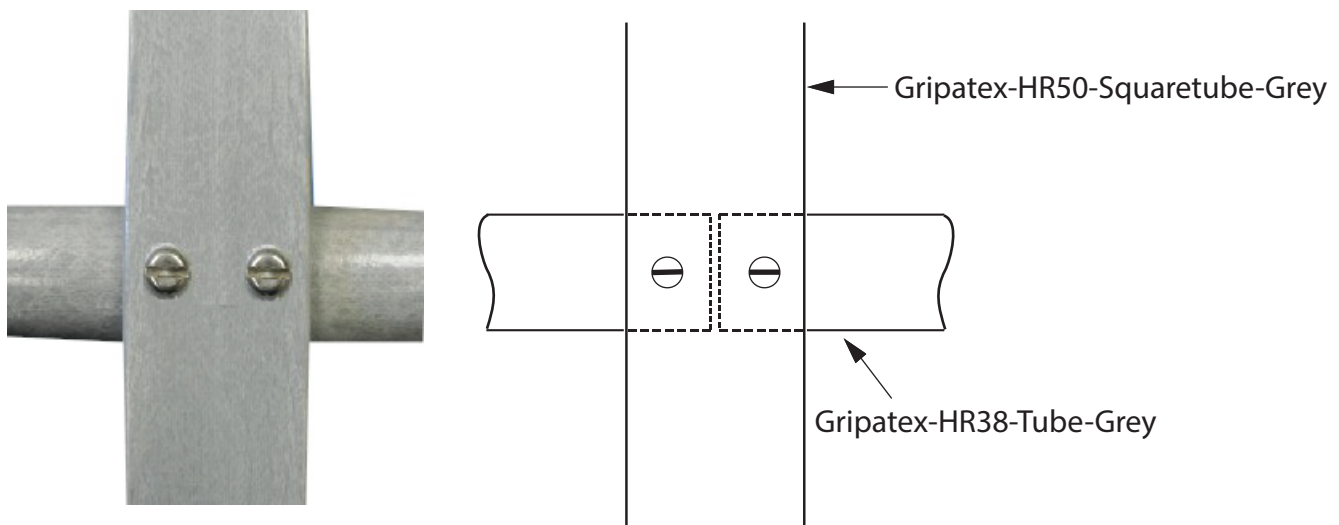
Used to create a top rail. It is slotted and fixed onto the Gripatex-HR50-Squaretube-Grey. Use 4 x connection bolts to create a strong, sturdy joint. Connection bolts should be ordered separately

**Gripatex-Kickplate/Toeboard-Yellow Weight = 27Kg**



Gripatex GRP Kickplate/Toeboard. Used with the Gripatex-HR12-Base-Plate-Grey, to create a Kickplate/Toeboard system. The gap between the bottom of the kickplate/toeboard and the floor should be no more 10mm to comply with BS:14122-3 2012. A minimum gap of 6mm is recommended to assist with the drainage. Two fixing bolts (Z27) are required to make the connection to the upright post, (Order separately).

### Gripatex-HR38-Tube-Grey Joint details



Tube is secured by using 2 x connection bolts. Connection bolts are not included and should be ordered separately.

## Applied Load

When using the Gripatex-HR12-Base-Plate-Grey, posts should be spaced at no more than 1.25mtr centres to obtain 0.74kN/m.

## Handling

GFRP (Glass Fibre Reinforced Polymer) contains small fibres within it's structure.

Care should be taken when handling and cutting the material. To prevent GFRP fibres causing irritation to skin/eyes, personal protective equipment should be worn.