



# SERIES GF

## Introduction

Gilberts GF Series is one of the most established and advanced ranges of floor grilles available in the industry today. Designed, principally, to replace 600mm sq tiles in raised access floor systems the units are suitable for both light to medium grade installations such as offices as well as heavy grade installations such as computer floors. The GF Series comprises of 6mm bars set straight on a close 13mm pitch, designed to prevent heel penetration and snagging, with blades fully supported at the sides and across the grille centre for maximum strength and rigidity. Catering for point

loads of up to 4.5kn, each unit can handle air volumes up to 300 l/sec and is available in a variety of frame formats to suit all the popular floor types.

Frame type 4 suits the majority of installations. Frame types 2 & 3 are designed for only limited floor types. Our technical department will be pleased to help identify the correct frame type for the application. Prior to despatch all floor grille corners are machined to match with the floor type and surface covering ensuring that floor level is always maintained.

**TYPE GFX/600:** Extra heavy duty floor grille designed to meet up to and including PSA and IBM Specifications. Units comprise of 6mm bars set straight on a 13mm pitch in housing frame. Frame options 4, 3 and 2 available to suit different floor types.

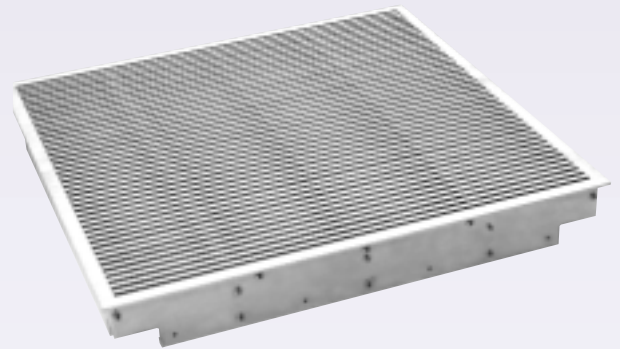
**TYPE GFL/600:** Light duty unit available in frame option 2 and 3 only.

**Loading Restrictions** All units are rated extra heavy duty in accordance with BS EN 13264:2001 specifications. Full static and dynamic load restrictions detailed below.

All GF units are manufactured throughout from robust high grade aluminium extrusions to BS 1470-1474, and are available with screwdriver operated hit+miss dampers (frame type 4 only) or opposed blade dampers. The standard finish is a natural mill finish (brushed on frame type 2 & 3), but shadowline, with internals sprayed matt black and nylon coatings are available upon request.

## Features

- Numerous Frame Formats to suit Floor Types of all Manufacturers.
- Robust Lightweight Design.
- Strong and Rigid Assembly
- Fully Tested to current Floor Grille Specifications.
- All Extruded Aluminium Construction.



### Static Loadings      Min Concentrated Load

**Light Duty**                      1.5 Kn over an area 25 x 25mm  
**Extra Heavy Duty**            4.5 Kn over an area 25 x 25mm

NOTE: This grade is also required to sustain a total load of 11Kn applied equally on four points, each point 25 x 25mm on a 200 x 200mm square configuration at any point of the grille.

### Transient Load      Rolling Load

**Light Duty**                      25 passes at 2Kn in each of 2 directions at right angles to each other  
 25 passes at 3Kn in each of 2 directions at right angles to each other  
**Extra Heavy Duty**            25 passes at 3Kn in each of 2 directions at right angles to each other  
 25 passes at 4.5Kn in each of two directions at right angles to each other

NOTE: Both static and transient load tests were conducted on the GF Series. The Extra Heavy Duty Units meet the structural and Electrical performance requirements of both the PSA MOB 08.801 (Extra Heavy Duty) and the relevant IBM Property Management Guide and BS EN 13264:2001.

## Installation

The Performance data tables that follow indicate the velocities, noise and pressure drop characteristics through the GF/600.

### References Used:

**Pressure**                      All pressures are in Pascals (N/m<sup>2</sup>)  
**Velocities**                  All jet velocities are in m/s  
**Volumes**                    All air volumes are in L/s

## Selection Procedure

It is generally preferable to position grilles used for supply air purposes close to the generated heat sources (ie: behind computers etc.) and away from the occupied areas of the rooms. This is basically because of the cooler air supplied at floor level and general comfort conditions for the occupants. A normal supply air jet velocity would be in the region of between 1.5 and 2 m/s, but this would be related to available pressures.

### Example:

**Total volume for computer room is 10 m<sup>3</sup>/s**

TYPE GFX/600/4

Max pressure drop of 3pa is required. Referring to the sizing chart for the GFX/600/4 this pressure limit indicates a unit (no damper) with a max vol. of 350 l/s. The sizing chart

shows that at this volume the unit has a jet velocity 1.6m/s and an NC level less than 15. Therefore:

$$\text{Total No of Grilles} = \frac{10\text{m}^3/\text{s}}{0.35\text{m}^3/\text{s}} = 28.57 \text{ (29 grilles required)}$$

TYPE GFX/600/2 & 3

Max pressure drop of 3pa required. From the GFX/600/2 & 3 sizing chart this indicates a unit with approx Max Vol of 175 l/s. Jet velocity is approx 1.5m/s and NC level less than 15. Therefore:

$$\text{Total No of Grilles} = \frac{10\text{m}^3/\text{s}}{0.175\text{m}^3/\text{s}} = 57.14 \text{ (58 grilles required)}$$



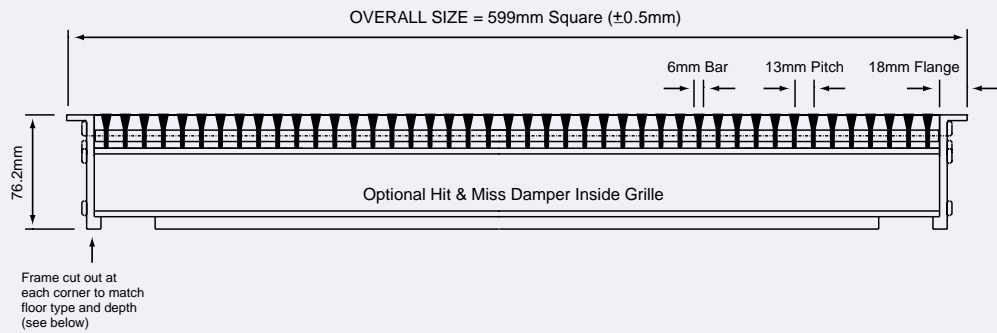
# SERIES GF

## Dimensional Data

### SERIES GFX (Extra Heavy Duty)

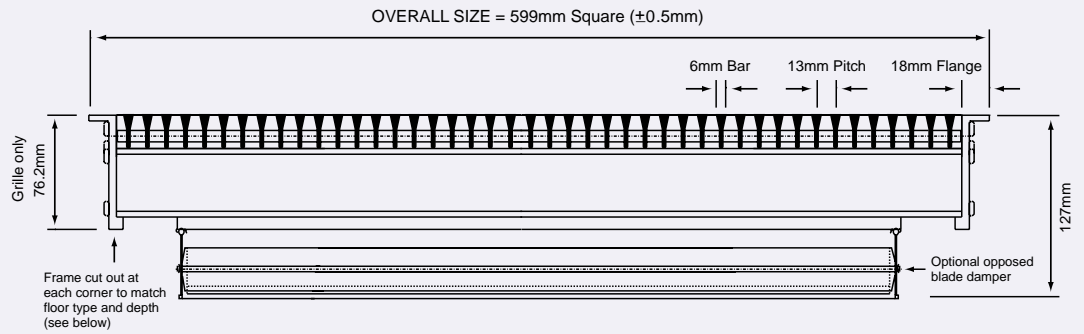
TYPE GFX/600/4: Grille Only  
 TYPE GFX/600/4 - DH: Grille c/w Hit & Miss Damper

Frame Type 4



TYPE GFX/600/4 - DO: Grille c/w Opposed Blade Damper

Frame Type 4

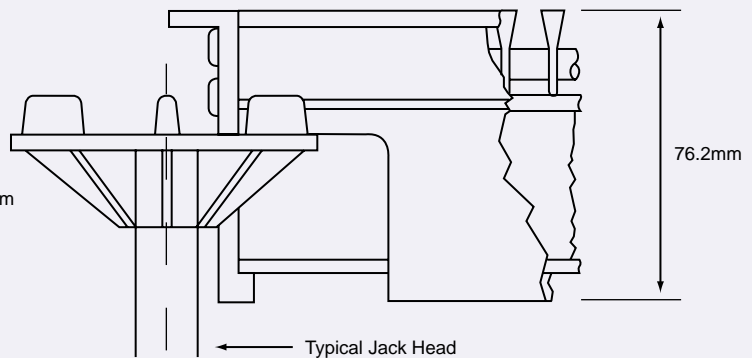


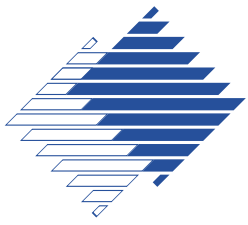
### CORNER DETAIL

Frame Type 4

Grille cut out at corners to match floor type and covering. Please specify depth.

**Note:**  
 Grille may be used with or without stringers. For stringers wider than 25mm please check with office.





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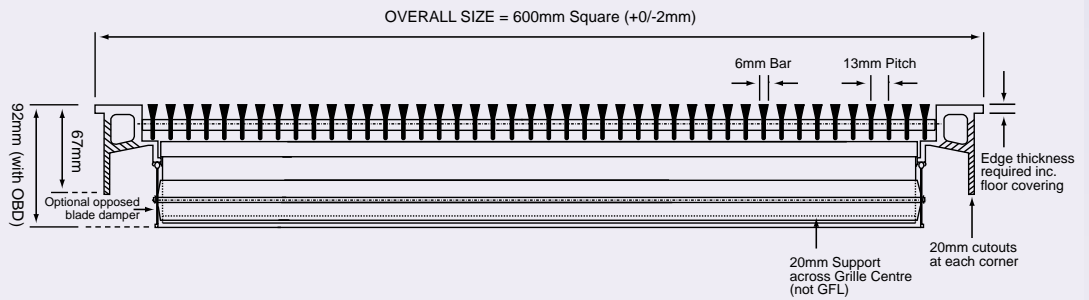
Diffuser  
Boxes

## SERIES GFX (Extra Heavy Duty)

TYPE GFX/600/2: Grille Only

TYPE GFX/600/2 - DO: Grille c/w Opposed Blade Damper

Frame Type 2

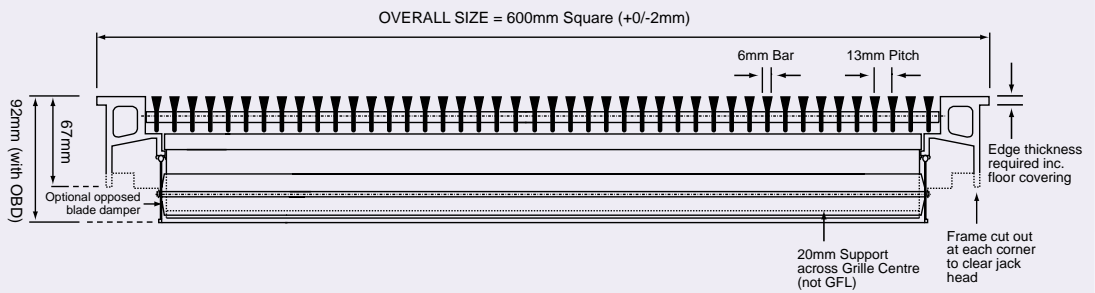


(Type GFL/600/2 - light duty unit as above but 20mm support across the rear of grille omitted)

TYPE GFX/600/3: Grille Only

TYPE GFX/600/3 - DO: Grille c/w Opposed Blade Damper

Frame Type 3



(Type GFL/600/3 - light duty unit as above but 20mm support across the rear of grille omitted)