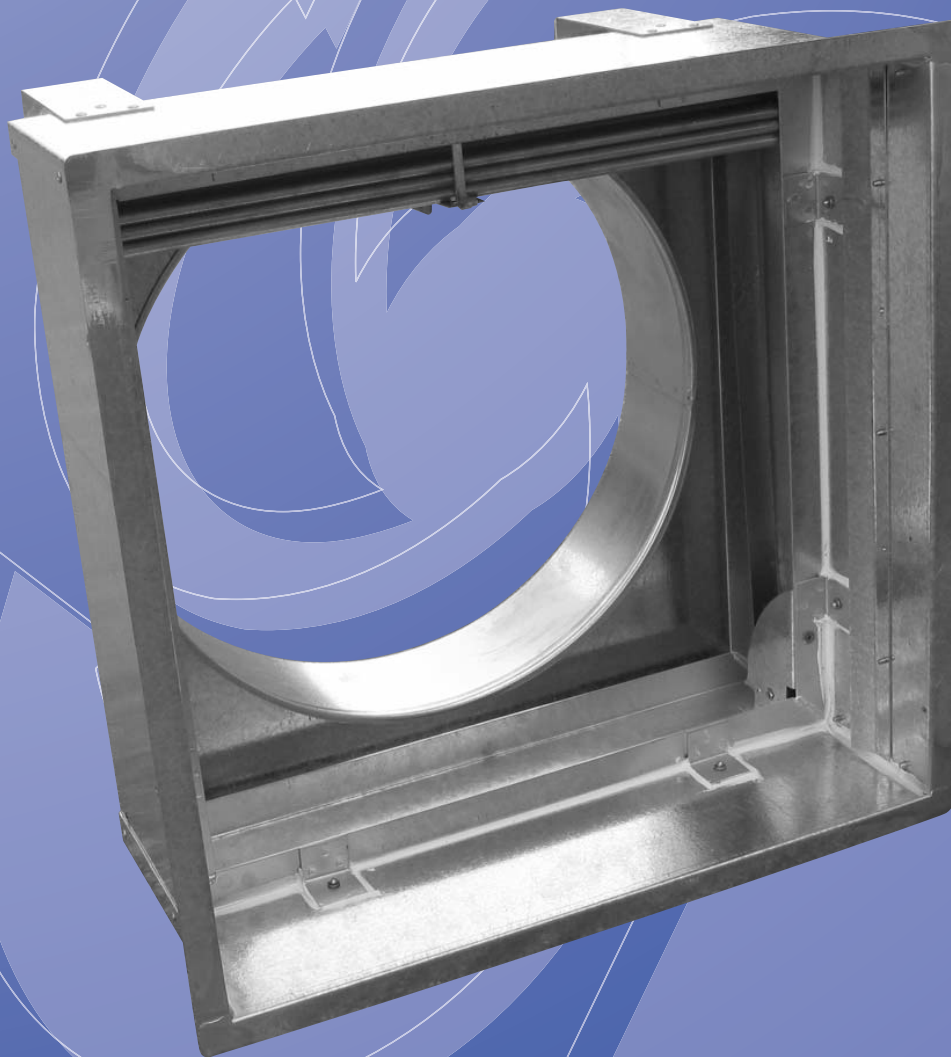


SERIES TCB/F SEB/F

Fire Rated Grille
and Diffuser Connection Box

PUBLICATION
DIFFUSERS 16
AUGUST 2012



Features

- Intumescent or Curtain Fire Damper Protection
- Top or Side Entry Inlet
- Square or Circular Connection
- Galvanised Steel Construction (1.2mm)
- Designed to suit Louvred & Perforated Face Diffusers
- Designed to suit Various Grille Series



GILBERTS

SERIES TCB/F and SEB/F

Fire Rated Grille & Diffuser Connection Box

Introduction

Gilberts TCB-F and SEB-F series are a range of purpose designed plenum/connection boxes with integral fire dampers designed to maintain the fire rated integrity in fire rated ceiling systems when used with a variety of grille and diffuser types. Sidewall applications are possible provided that correct orientation of the fire damper is maintained. Manufactured from 1.2mm galvanised steel with stainless steel sealed rivets the units are available with either top or side entry connection in both square or circular format. The box assembly can be fitted with either an intumescent type fire damper or a curtain type fire damper and provides a one hour rating. The Fire Rated Box has been assessed by Warrington Fire Research to BS476 Pt20 1987 and both the

Intumescent and Curtain Fire Dampers have been fully tested to the same standard. Extra insulation and intumescent sealing is however required during box installation to complete the fire rated assembly.

The Air terminal is fitted into the box using a concealed bracket fixing arrangement which allows easy removal for access to the fire damper for inspection and maintenance. All boxes are complete with fixing angles for 8mm drop rod support. Recommended fixing methods for various ceiling layouts are detailed in this brochure.

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Fire Rating

Gilberts fire rated boxes can be fitted with either Curtain type or Intumescent type fire dampers according to preference.

The intumescent option typically features a Gilberts FBL 120 damper design which, safely, has a fire rating far exceeding the 1 hour fire rating for the plenum. Manufactured from high performance intumescent slats in a Galvanised steel frame the damper is moisture resistant and needs little or no maintenance. Temperature reactive the damper will start to close at around 140°C and depending upon the temperature rise, will fully intumesce and close quickly to provide a fully sealed barrier to smoke and flames.

The curtain fire damper option typically features a Gilberts

FG1-FA design which, again, has a fire rating far exceeding the plenums 1 hour limit. With both the casing and blades manufactured from galvanised steel the FG1-FA incorporates a spring loaded blade pack held open by a fusible link. Separation of this link at 72°C allows the damper to close instantly. Removal of the Grille or Diffuser core also allows the link to be released manually and reset from the face for testing and inspection.

Installation

Typical installation methods are illustrated on page 4. All ductwork connections to the plenum must be thermally insulated. To complete the installation the external surfaces of the plenum must be insulated with mineral wool (by others). Minimum specification 60kg/m³, 25 mm thick grade 125W1, Temp range up to 750°C compliant with BS 3958. In order to facilitate this, and to allow easy insertion of the

box into the ceiling grid the spigot on Side Entry models is supplied loose. The spigot is a screw in design and should be sealed with intumescent paste upon fitting.

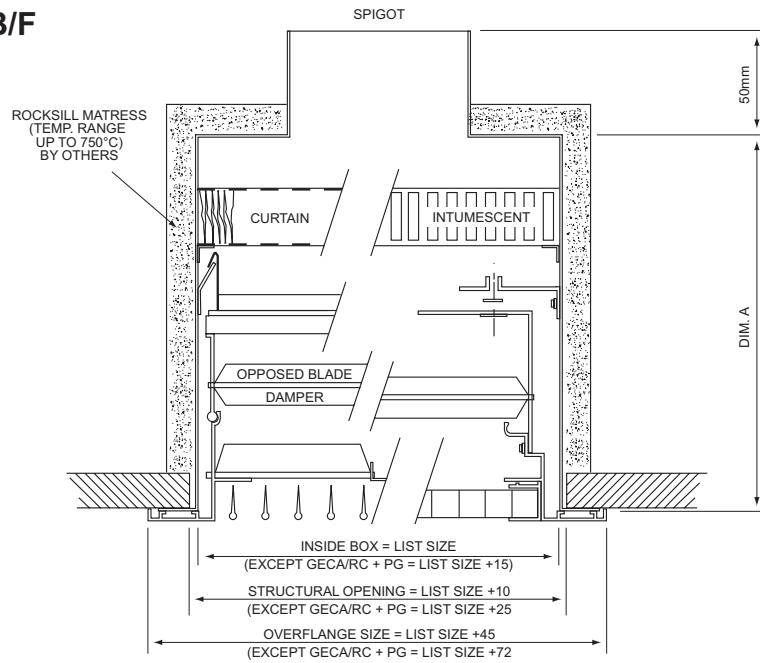
For sidewall installations, the curtain fire damper must be orientated to close vertically downwards or sideways (never upwards).

Selection Procedure

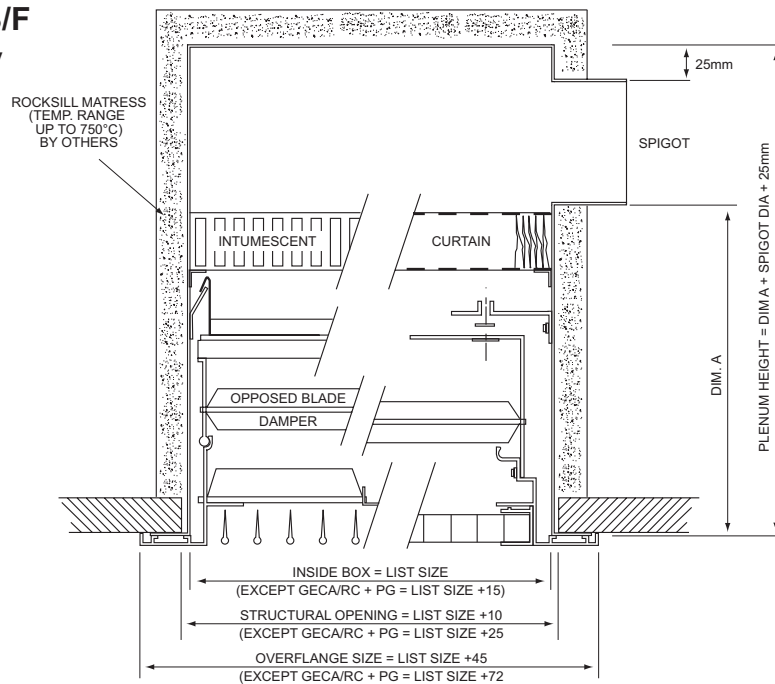
The TCB & SEB/F series of plenum connection boxes have been designed to suit a variety of grille and diffuser types. For sizing and selection information please refer to the datasheet on the grille or diffuser of choice.

Grille Boxes

Type TCB/F Top Entry



Type SEB/F Side Entry



Grille Only

TYPE	DIM.A
GH & HH SERIES	265
GECA/RC & PG	225
GE,GC,K,LG & F	225

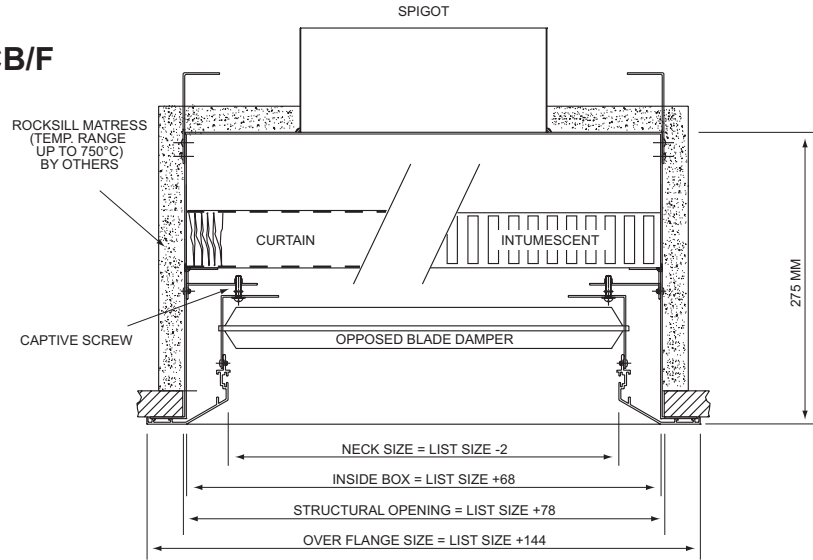
Grille c/w Damper

TYPE	DIM.A
GH & HH SERIES	315
GECA/RC & PG	275
GE,GC,K,LG & F	275

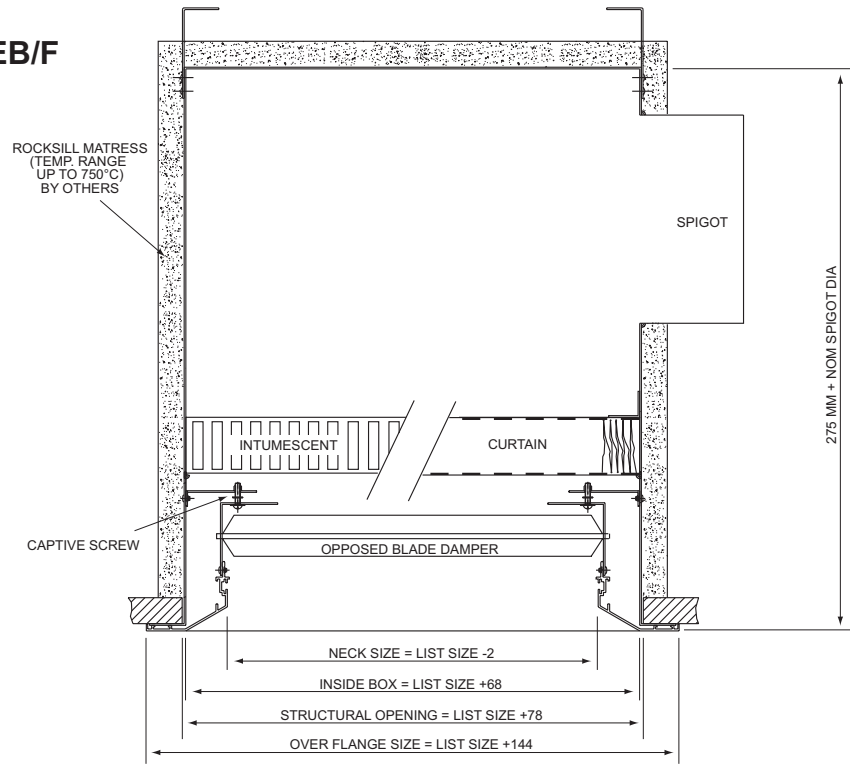


Diffuser Boxes

Type TCB/F

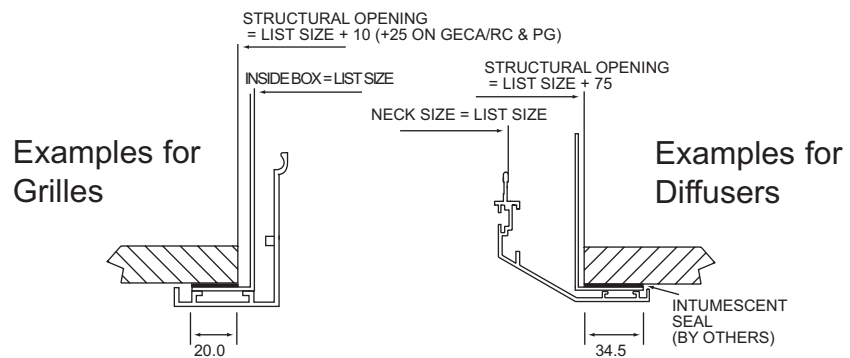


Type SEB/F



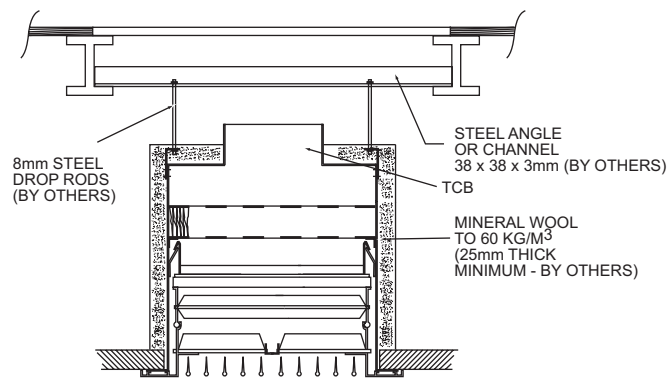


Structural Opening Details

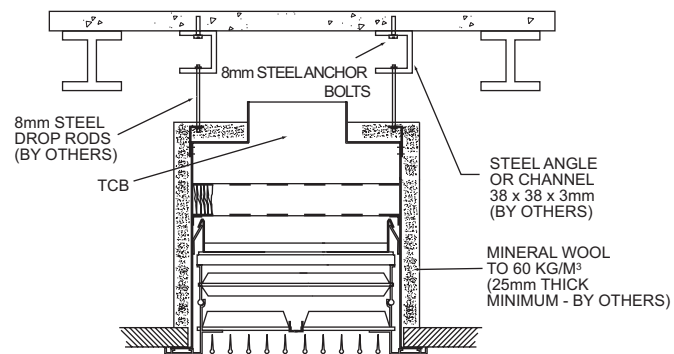


Fixing Methods

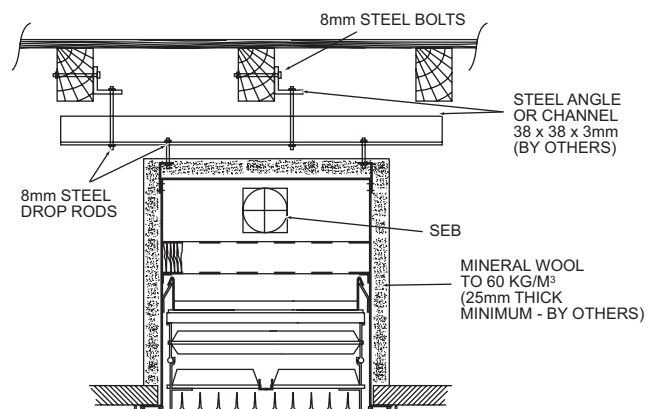
Mezzanine Floor



Concrete Ceiling



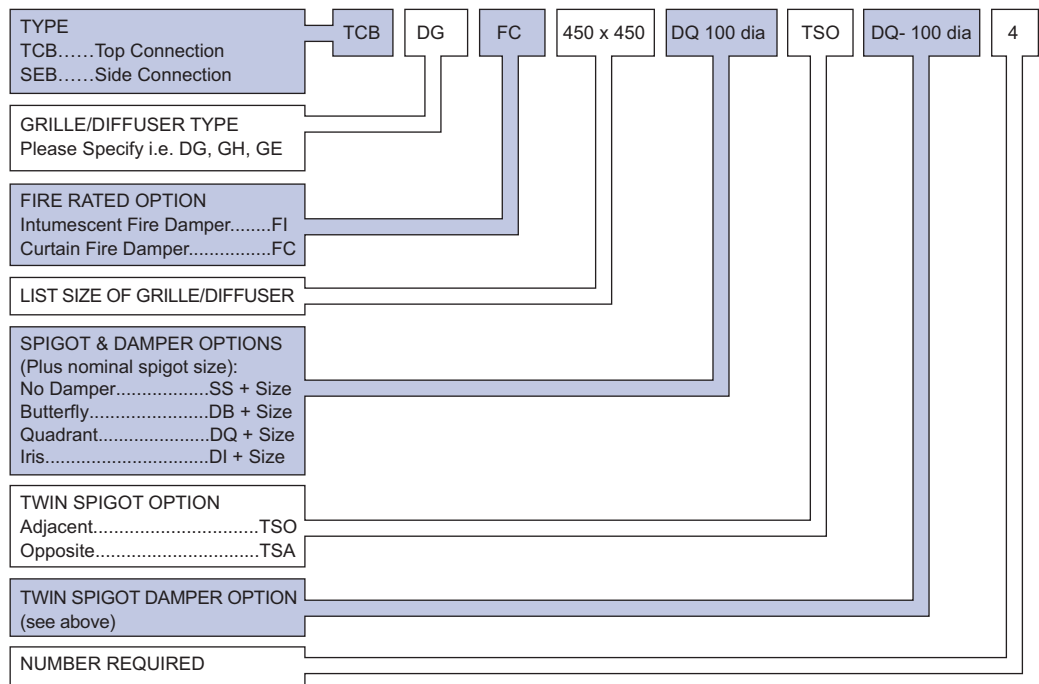
Timber Ceiling



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Ordering Specification



Fixing

Standard fixing is by 8mm Steel drop rods to fixing angles at rear.
Recommended fixing methods as illustrated.

Orientation

For units fitted with intumescent dampers orientation is not important. For units fitted with a curtain fire damper, the damper can only close sideways or downwards. Orientation therefore is important for a sidewall installation. The fire dampers will be factory fitted with the damper top on the spigot side of the side entry box.

Finish

Galvanised Mild Steel

Size Range

Available sizes range from 150 x 150 upto 600 x 600 in 25mm increments.

GILBERTS

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