Intumescent Fire Dampers

Fire tested and for up to 2 hours fire integrity in plasterboard, concrete or masonry and in steel duct spigots walls and floors

Approved to AS1530.4

Technical Data Sheet

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KEY BENEFITS

- 2 hours fire rating
- Rigid zinc-coated rigid steel frame
- Allows high volume air flow
- Suited to steel ducts
- No moving parts to maintain
- Available in square and round shape
- Large and custom sizes available

INTRODUCTION

BOSS Intumescent Fire Dampers allow the bi-directional movement of air through fire rated walls and floors. In a fire situation the slats in the damper intumesces and swells to many times the original size, closing the damper and forming a solid fire barrier. They are simple to install, easy to identify, and economical to maintain.

The BOSS Damper has slats of foil-covered intumescent material with a rigid steel frame.

SIZES & AVAILABILITY

A range of stock sizes is available from 100mm square to 600mm square and any configuration in between. We also make special sizes up to 1200mm.

Sizes quoted are nominal and are 2-5mm undersize to allow easy fitting inside a duct.

Grill dimension: ***(All dimension are nominal)***

Grill: 43mm deep
Slats: 6mm thick and 14mm between slats, giving 70% free area excluding the perimeter frame to allow maximum air flow.

FIRE TEST DATA

Fire tested and AS 1530:4 for up to 2 hours fire integrity in plasterboard, concrete or masonry walls and concrete floors, and in steel duct spigots penetrating those walls or a concrete floor.

Through floors: 2 hours integrity and 1 hour insulation on the duct spigot (-/120/60).

BS476:20-22 tests by convention may be applied to walls, floors being considered the more rigorous orientation in a fire test. Also tested to AS/NZ 1668:1, with closure in less than 120 seconds, and AS 1682:1.

STOCK SIZES

Rectangular

150mm x 150mm	100mm x 200mm
200mm x 200mm	100mm x 300mm
300mm x 300mm	200mm x 300mm
450mm x 450mm	200mm x 600mm
500mm x 500mm	300mm x 600mm
600mm x 600mm	

STOCK SIZES CONTINUES

Round – With Sleeve or Without Sleeve

100mm diameter	200mm diameter
125 mm diameter	250 mm diameter
150 mm diameter	300 mm diameter

Fire Door Damper Kits – complete with 2 x Grills

450mm x 450mm
600mm x 300mm

Other Options

Cased Dampers

Kilargo Hi Flow Dampers

INSTALLATION

The damper should be a neat fit in the aperture and the perimeter sealed with FireMastic-300 intumescent 5hr mastic. Fixing of the unit is easily accomplished by means of screws, rivets, or brackets and FireMastic-300 sealant, depending upon the situation and orientation.

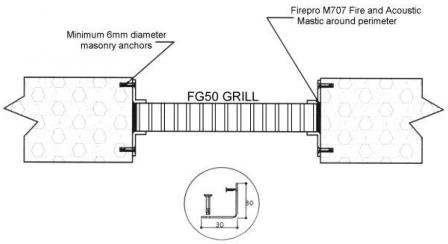
1. Concrete Floors

1.1. Fix the lower mounting brackets to sides of hole, with a minimum of 6mm masonry anchors. Ensure that the mounting bracket is positioned so that when the grill is inserted into the floor that the entire thickness of the grill is within the floor thickness (see section 2 below for flush fit installation).

1.2. Fix upper mounting brackets, using a minimum 6mm masonry anchor above the grill.

1.3. Remove blue strapping if present.

1.4. Apply FireMastic-300 Sealant around the perimeter of the grill on both sides of the floor ensuring that the mastic is applied to a minimum depth of 15mm between the grill and floor. A maximum clearance of 5mm applies.



2. Flush Fit Walls/Floors Installation

For installation where the grill is required to be fitted flush with one face of the floor or wall.

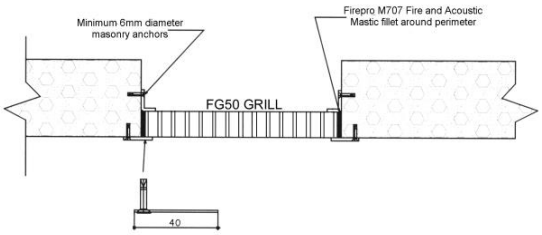
2.1. If required, line the opening in the wall to the same specification as the wall lining.

2.2. Fix the 40mm wide mounting brackets to the face of the wall or floor.

2.3. Position the grill into the opening so that it is flush with the face required.

2.4. Apply a bead of FireMastic-300 sealant around the perimeter of both sides of the grill.

2.5. Install the 30mm x 30mm fixing brackets against the opposite face of the grill.

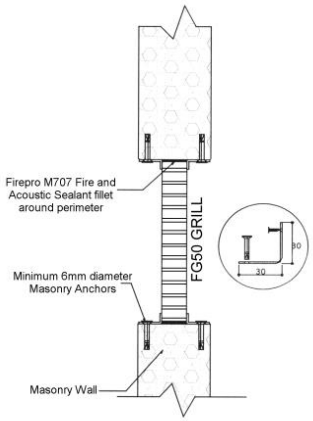


3. *Masonry Walls*

3.1. Position the grill into the opening so that it is central within the wall (see section 2 above for flush fit installation).

3.2. Apply FireMastic-300 sealant around the perimeter of the grill on both sides of the wall ensuring that the mastic is applied to a minimum depth of 15mm between the spigot and wall. Allow a maximum clearance of 5mm around sides.

3.3. (OPTIONAL) Fix the mounting brackets to sides of hole, with a minimum of 10G x 22mm Wafer Head Self Drilling Screws. Ensure that the mounting bracket is positioned so that when the grill is inserted into the wall that the entire thickness of the grill is within the wall thickness.



4. *Plasterboard Walls*

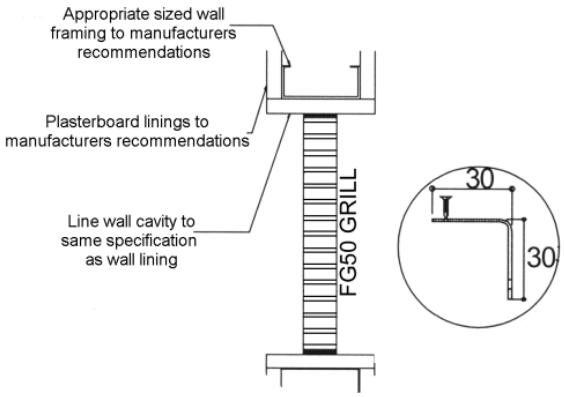
4.1. Line the opening in the wall to the same specification as the wall lining (see section 2 above for flush fit installation).

4.2. Position the grill into the opening so that it is central within the wall.

4.3. Remove blue strapping if present.

4.4. Apply FireMastic-300 Sealant around the perimeter of the grill on both sides of the wall ensuring that the mastic is applied to a minimum depth of 15mm between the spigot and wall. Allow a maximum clearance of 5mm around sides.

4.5. (OPTIONAL) Fix the mounting brackets to sides of hole, with a minimum of 10G x 22mm Wafer Head Self Drilling Screws. Ensure that the mounting bracket is positioned so that when the grill is inserted into the wall that the entire thickness of the grill is within the wall thickness.



5. *Steel Duct Spigots in Floors & Walls*

5.1. The steel duct spigot penetrating the concrete floor or fire-rated plasterboard, concrete, brick, or masonry wall should fit with a gap of not more than 10mm. No insulation is required between the duct and the wall or floor.

5.2. Position the grill in the duct spigot so that the grill is positioned centrally in the wall or with the bottom of the grill flush with the bottom of the floor.

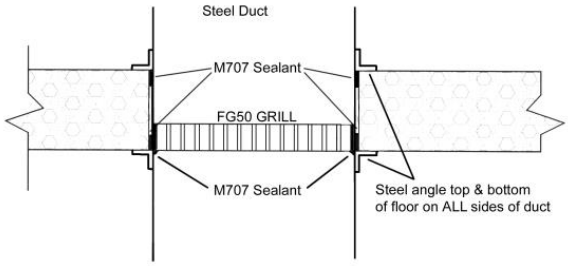
5.3. Remove blue strapping if present.

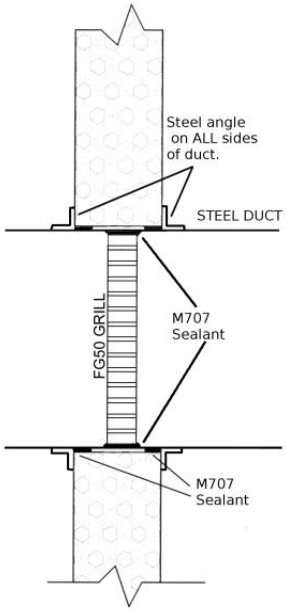
5.4. Seal any gap between the grill and the inside of the duct spigot with FireMastic-300 Sealant and apply a 10mm coving to one side. In floor situations the coving should be on the bottom side.

5.5. Fix the grill into place with steel screws or rivets from the outside of the duct spigot into the grill casing.

5.6. Seal the gap between the wall/floor and the outside of the duct spigot on both sides with FireMastic-300 at least 15mm deep.

5.7. Attach the duct spigot to the wall/floor with steel brackets or angles as set out in local installation standards requirements, such as AS1682.2, allowing for break-away-connection requirements.





FIRE MASTIC SEALS

FireMastic-300 is to be used to seal around the perimeter of intumescent dampers, fixed either to the face of a wall or in line with the wall. In both situations, FireMastic-300 may be used to fill any gaps.

Face-fixed Dampers: apply FireMastic-300 to the section of damper in contact with the wall and to any steel brackets attached to the wall. The damper must overlap the wall by at least 50mm and any gaps must not exceed 5mm.

In-line fixed Dampers: where the damper is fixed in line with the wall, apply FireMastic-300 all around the edge of the damper. The gap between the edge of the damper and structural opening should not exceed 25mm and the sealant must be filled to the full depth of the damper. This is significantly in excess of any linear gap seal and is therefore able to maintain the fire resistance of the damper.

MAINTENANCE

BOSS Dampers are made from permanent materials. The intumescent material is inert until a fire occurs, and the frame is zinc coated steel, similar to that used for most steel ducting.

There are no moving parts or fusible link to require operational checks or maintenance. Fire Dampers should be maintained and periodically inspected in accordance with AS1851.

Notwithstanding the damper application specification, the manufacturer's installation instructions must be followed. However, FireMastic-300 may be used in place of the specified sealant as per FireMastic-300 Test Report to AS1530.4:2005.

For detailed information on Damper maintenance, please contact the Tech Services Team at BOSS Fire (see Further Technical Information for contact number).

LIMITATION

BOSS Fire & Safety Pty Ltd has provided the above technical information in good faith and to be best of its knowledge. This information was deemed to be correct at the time of publication. Should any data come to BOSS Fire & Safety's attention relating to the fire resistance or performance of the product described, BOSS Fire & Safety reserve the right to amend this report.

BOSS Fire & Safety strive to constantly improve and developed products so this information may change without notice.

FURTHER TECHNICAL INFORMATION

For any additional technical information on the performance of Intumescent Fire Dampers maintenance or FireMastic-300 please contact our Technical Services team