

Ravenscroft BSD-C Fire Damper Concrete Wall & Floor Installation Instructions

Important:

The following instructions refer to mounting the BSD-C fire damper in concrete walls, floors and ceilings and refer only to the damper. Consult normal industry sources for details regarding concrete. Other applications such as plasterboard walls incorporate different mounting details, refer to Ravenscroft's for details.

Overseas tests include Warrington Fire Research Centre No. 45434 and VTT PAL 2864a, where the dampers were tested grouted into concrete walls.

*The Australian & NZ Building Codes require fire dampers to comply with AS1682-1990 Part 1 & 2 and AS1530.4-1990 as the Acceptable solution. The BSD-C complies with the Australian & NZ Building Codes as an Alternative solution (incorporating AS1682 as a guide-line). Verification as follows: **The BSD-C is capable of satisfying AS1530.4-1990 for at least 120 minutes under BRANZ Opinion 97/1026 when grouted into a concrete wall or under BRANZ Opinion FAR 3481 when sealed into the wall with Firepro M707 fire rated mastic.***

Damper Installation:

1. Firstly determine the exact damper location on the wall.
2. Make the hole small enough so that the flange of the damper covers the hole (so the flange can act as boxing) but large enough for the damper to fully penetrate the hole. The damper flange must be flush with the wall surface. Bolt the damper to the wall with concrete fasteners. These are temporary fasteners only which allow the damper to be grouted in place.
3. If the damper body does not extend beyond the other side of the wall, a small section of ductwork will be required. Note comments above regarding ductwork connection.
4. Construct temporary supports & boxing and pour a grout of sand & cement into the cavity between the wall and damper. Temporary packing such as polyurethane foam/plastic bag or polystyrene foam within the damper body may be required to prevent grout entering the damper.
5. Once cured, remove boxing and operate the damper to ensure the grout has not obstructed the damper operation.
6. As an alternative to grouting, it is acceptable to use Firepro M707 fire rated mastic. Apply a 10mm diameter bead of M707 to the damper body at the base of the flange. Insert the damper into the hole and secure it with steel concrete fasteners, ensuring the damper is located with a concentric clearance space all around. On the other side of the wall, fill the gap between the damper body and wall with a continuous bead of M707 mastic, up to a maximum depth of 10mm.

Ductwork Installation

- It is very important to prevent damage to a fire damper from deforming or collapsing ductwork. **Ductwork must be secured against seismic movement** to prevent any impact from swaying ducts distorting the fire damper.
- AS1682.2-1990 requires a **slip joint** for ducts connecting to a fire damper. Therefore do not rivet, screw or glue ducts to fire dampers.
- AS1668.1-1998 Clause 3.4 "Openings in Floors" makes particular note of protection via an internally insulated duct when used at the top of a shaft.

Access Panels

Access panels are not required as the damper blade handle and the release mechanism can be serviced from outside the damper.

Damper Operation & Thermal Fuse

The function of the damper must always be checked before and after installation. After installation, clean the damper of all possible construction waste. The fire damper is set by turning the blade to the desired position with the aid of the indicator handle. Lock in position by screwing in the thermal fuse until the blade is just held in position. **Do not use tools on the fuse, finger pressure is adequate.**

The fuse can be reset after a release. The fuse can also be replaced if it will not hold the damper open. The fuse can be replaced by simply unscrewing. The standard release temperature for fuses is 74°C. Different release temperature fuses are also available to order: 50°C, 100°C, and special temperatures on request.

Balancing Damper

The BSD range of dampers are approved for use as a balancing damper.