BSD-PW Fire Damper
BSD-PW/M Fire/Smoke Damper

Plasterboard Wall

Installation Instructions

Important:
The following instructions refer to mounting the BSD-PW fire damper in plasterboard (Gib) wall applications. **AS1682.2 requires fire dampers to be installed in the same method as tested**. These installation details are derived from the test.

The Australian & NZ Building Codes require fire dampers to comply with AS 1682 Part 1 & 2, and AS1530.4 as the Acceptable solution. The BSD-PW complies with the Australian & NZ Building Codes as an Acceptable solution. Verification as follows: **Jensen Hughes assessment report FAS200328, results confirm the plasterboard mounting system for the BSD-PW and BSD-PW/M will provide a FRL of -/120/-, -/90/- and -/60/- according to AS1530.4-2014.**

The installation of dampers to the wall structure should be in accordance with the following table:

FRL according to AS1530.4-2014	Model	Minimum Plasterboard Lining
-/60/-	BSD-PW, BSD-PW/M	1 x 13mm
-/90/-	BSD-PW, BSD-PW/M	1 x 16mm
-/120/-	BSD-PW, BSD-PW/M	2 x 13mm

Wall & Hole Preparation Instructions:

- The BSD-PW & BSD-PW/M damper mounts into a wall cavity hole and is secured with **approved** fasteners only. **Supporting framework within the wall cavity is not required**. The BSD-PW&PW/M can also be fastened to both the wall framing and plasterboard. This is recommended where possible to insure a more robust installation.
- The 400 mm dia BSD-PW&PW/M have mounting flanges sized to overlap a 600 mm stud spacing. The damper would then screw directly into the studs with intermediate fasteners into plasterboard.
- When checking the location of the duct penetration, check that there is **adequate space** for the flanges and where the framing is. Refer to the following table for damper, hole and flange sizes.

BSD-PW Size	Hole Diameter	Square Flange Size	**BSD-PW Size**	Hole Diameter	Square Flange Size
125	165	225	**250**	290	350
150	190	250	**300**	340	410
175	215	275	**400**	440	650
200	240	300			

- Use the radius guide provided to mark from the hole centre outwards to the hole diameter. Also mark the diameter of flange corner fastener holes. This is important to ensure the damper can be located in the centre of the hole with a concentric expansion space all around.
- Once the damper centre location is found, use a **long** drill to mark the centre of **both** sides of the wall simultaneously. This damper flange system will not accommodate any misalignment. It is therefore very important that the **centre pilot holes are drilled perpendicular to the wall**.
- Holes must be **cut accurately** with a jig saw or a keyhole saw. The hole sizes listed include suitable clearance for expansion. Holes of excessive size will not comply with Standards as the flange may not overlap the hole sufficiently.
- Remove the loose flange from the unit. Insert the damper through the hole and fit the flange over the spigot protruding from the other side. Mark the flange location and rivet holes on the damper body.
- To **prevent damage** to the wall board, remove the damper from the wall to drill rivet holes.
- It is much easier and cleaner to **check** the holes are correct by refitting the damper to the wall at this stage before the fire mastic sealant is applied.
- You are now ready to apply fire mastic sealant and fix the damper to the wall.

Final Sealing & Installation Detail:

- To prevent fire entering the wall cavity the fire mastic must form a continuous seal by filling the circular cavity between the damper and wall board edge. Apply two beads to the damper prior to installation and two beads on the loose flange side once the damper is in the wall.
- Apply a 15 mm diameter bead to the damper body at the base of the flange. When the damper is installed this first sealant bead cannot be observed for continuity of seal. It is therefore important to apply a further 6 mm diameter bead around the flange 20 mm from the first bead.
- Insert the damper into the hole and gently press while the sealant moves to fill the cavities. Secure the damper with the fasteners ensuring the damper is located with a concentric clearance space all around.
- On the other side of the wall, fill the cavity between the damper body and wall board hole with fire mastic. Apply the second 6 mm bead to the wall 20 mm out from the first bead.
- Fit the loose flange and rivet in place, followed by the wallboard fasteners. Note only **steel** rivets are suitable. **Do not use aluminium rivets** as they can melt in a fire and release the damper from the wall. **Appropriate steel rivets are provided in the kitset**.

Approved Fastener Selection

Approved fastener type: 10 gauge x 38 mm long bugle head needle point coarse thread screw. **The kitset includes these screws.**

1. The fastener length will need to be sized to accommodate the wall board thickness used for each application.
2. **Fastener Length ≥ 1.0 mm** (sheetmetal flange) **+ wallboard thickness + Penetration**
3. Penetrations: Wooden Studs 20 mm, Steel Studs 6 mm, Plasterboard 4 mm

Approved Mastic Sealants

Approved fire rated mastic sealants used during tests (Jensen Hughes assessment report FAS200328 and previous tests) include: Promat Promaseal-A FirePro M707

Ductwork Connections

- When connecting rigid duct to BSD-PW&PW/M, **a slip joint or flexible connector must be used** so the ductwork will easily break away from the damper in advent of the ductwork collapsing or deforming in a fire or earthquake.
- **Rigid ductwork must be seismically restrained.** Otherwise **any** movement in the ducts could apply force to the damper damaging the wall board and destroy the wall fire rating.

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 BSD-PW damper must always be checked **before and after installation**. After installation, set the damper 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 replaced if it will not hold the damper open. This can be done simply by unscrewing the fuse. The standard release temperature for fuses is 74°C. Different release temperature fuses are also available to order: 100°C and special temperatures on request.

For BSD-PW/M check the operation by pressing the centre of thermo-electric tripping device to close the damper.

Balancing Damper

The BSD-PW range of fire dampers are approved for use as a balancing damper. The BSD-PW/M is only activated by an actuator therefore it is not suitable for use as a balancing damper.