

Actionair Photo Storyboard 2: Damper vertical for fixing in an existing drywall partition (+DWFX-F)

GENERAL

This method of installation should only be employed with an Actionair damper that has the DWFX-F™ installation system. (SmokeShield shown, but applicable to FireShield as well)

HEALTH AND SAFETY

This process must be undertaken by competent persons. More than one person may be required to ensure the safe handling of large dampers and sections of wall.

Use must be made of access equipment to ensure unsafe practices are not used to approach walls or difficult access areas.

Standard site PPE should be used (minimum steel toe cap boots, hard hat); together with any protective eyewear, gloves and masks, when drilling or cutting is being undertaken. The latter should also be used when handling the wall construction materials, as defined by the material suppliers. If loud equipment is being used, hearing protection should be used.

All waste materials should be collected and disposed of as defined by the relevant supplier.

EQUIPMENT

Tape measure, pencil, straight edge, square, jigsaw (with fine blade), drill, screwdriver, tin snips, stanley knife, hammer/soft mallet, rasp/surform, float

MATERIALS

Plasterboard grabber screws, various lengths to suit, plasterboard as was used in wall construction, plasterboard joint filler and finish

MEASURE THE DAMPER BODY OVERALL SIZE

This measurement should include the main damper frame and not the peripheral flange. Care should be taken to include the shroud that the PTC interface will be pushed into, where this is fitted.

DETERMINE THE FINISHED HOLE SIZE

Add 25mm ± 5mm to both the width and height dimension measured above. This addition gives the hole into which the damper will be placed and leaves an approximate gap all around the damper and between the shroud casing and the hole of approximately 12.5mm

DETERMINE THE HOLE TO CUT SIZE

The hole that is to be cut into the wall has to be lined with one layer of the board that was used in the building the wall to fully protect the wall construction.

Add two thicknesses of board to each of the finished hole width and height dimensions determined above.

EXAMPLE OF HOLE TO CUT DIMENSION CALCULATION

e.g. SmokeShield Damper Nominal size 1000 x 1000

| | | |
|--------------------------------|---|-------------|
| Measure casing width | ⇒ | 1045 |
| Add shroud dimension | ⇒ | 30 |
| Add gap dimension | ⇒ | 25 |
| Add 2 x typ. board thickness | ⇒ | 25 |
| <u>Gives hole to cut width</u> | = | <u>1125</u> |

| | | |
|---------------------------------|---|-------------|
| Measure casing height | ⇒ | 1070 |
| Add gap dimension | ⇒ | 25 |
| Add 2 x typ. board thickness | ⇒ | 25 |
| <u>Gives hole to cut height</u> | = | <u>1120</u> |

MARK OUT THE HOLE TO BE CUT ON THE SURFACE OF THE WALL

Mark out the hole to be cut on one surface of the wall, using the centre of the duct run as a datum. Check the diagonals of the marked out rectangle to ensure that it is square. It is advisable that vertical edges do not coincide with a stud as this may be hard to cut.



DRILL THE FOUR CORNERS TO PROJECT THE RECTANGLE ON TO THE FAR SIDE OF THE WALL.

Drill through the wall at the four corners. The four resulting holes should then be connected to mark out the hole on the opposite side of the wall. Again the diagonals should be checked to confirm squareness.



CUT THE TOP AND BOTTOM EDGES OF THE HOLE

It is important to cut the horizontal (top and bottom) edges of the hole first, as this keeps the verticals rigid, whilst any studs are cut through. Do one side of the wall and then the other. Use a fine jigsaw blade when cutting through any studs, to prevent “snagging”.



CUT THE VERTICAL (SIDE) EDGES OF THE HOLE

The vertical sides of the hole may now be cut.



REMOVE THE CUT MATERIAL TO LEAVE THE HOLE

The waste wall material should now be removed. Trying to remove some of the board layers first, rather than trying to remove the slug as a whole may ease this.





TIDY UP ALL THE EDGES OF THE HOLE

Tidy up all the edges of the hole to leave in as flat and clean a state as possible, so that it can be easily lined with fresh board material

FRAME OUT TOP AND BOTTOM EDGES OF THE HOLE

Cut some track of the same type and dimension as that which was used in the wall construction. This should be slightly longer than the hole top and bottom edge dimension (up to 25mm longer). One piece is required for the bottom and one for the top of the hole. This track should be carefully be pushed in to gap to face of the cavity. It may be necessary to V-notch the ends of the track to be able to force it in at the ends.



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FRAME OUT THE SIDES OF THE HOLE

Cut some stud of the same type and dimension as that which was used in the wall construction. This should be the same as the hole side edge dimension. One piece is required for each side. This stud should be carefully be pushed in to gap to face of the cavity.



FINISH THE INSTALLATION OF THE TRACK AND STUD

Finish the installation of the track and stud by fastening at 300mm centres with grabber

plasterboard screws of length to suit the board thicknesses used.



LINE THE HOLE WITH BOARD

Cut pieces of board to line all four sides of the hole. These should be of a length to suit the width and then slightly reduced to fill in the sides. The board should be cut to a width to suit the wall thickness. After installation any rough edges should be smoothed back. The board must be held in place with additional grabber plasterboard screws





FINISH THE HOLE

Finish the edges with plasterboard joint filler and finish



DRILL CLEARANCE HOLES IN THE DAMPER FLANGE

Drill clearance holes in the damper flange, marking out such that any fasteners used will pass through the board materials and penetrate the tracking and

studding behind. Centres should be approximately 150mm. This needs to be carefully calculated from wall design, the gap around the damper and the thickness of board used to line the hole

INSTALL THE DAMPER

Place the damper in the hole in the wall. Use some pieces of plasterboard as shims to ensure that the damper is equally positioned in the hole.



Push the flange flush to the face of the wall. Fasten the flange to wall by carefully using plasterboard grabber screws of such a length that a good fastening is made back to the stud and track lining the hole.





BACKFILL WITH MINERAL FIBRE

The gap around the damper between it and the wall structure must be filled with mineral fibre, similar to that forming the structure of the wall.

FINISH OFF WITH PATRESS

Make good the joint with the wall by use of a patress; this has the additional benefit of preventing leakage of the mineral wall infill. Grabber screws at 300 centres.

