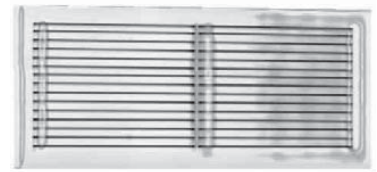


# FIXED BLADE RETURN - FBR

## DESCRIPTION & FEATURES

Fixed Blade Return are suitable for extract/return air in sidewall applications. They are complete with 45° blades pitched 60% free area. Standard flanges are 32mm although 19mm are available with alignment joints to give a continuous appearance.



FBR

Available with Opposed Blade Dampers, Plenum Boxes and Plaster Frame.

FBR Grilles are manufactured from extruded aluminium sections, the mitred corners being fully welded and finished.

Standard finish is RAL9010 or polyester powder coated to the customers colour requirement.

## PLENUM BOXES

Plenum boxes are accessories for use with Grilles and Diffusers. They are designed to equalise the pressure profile within the box and hence provide an even velocity at the face of the Grille or Diffuser without the use of Equalising Grids.

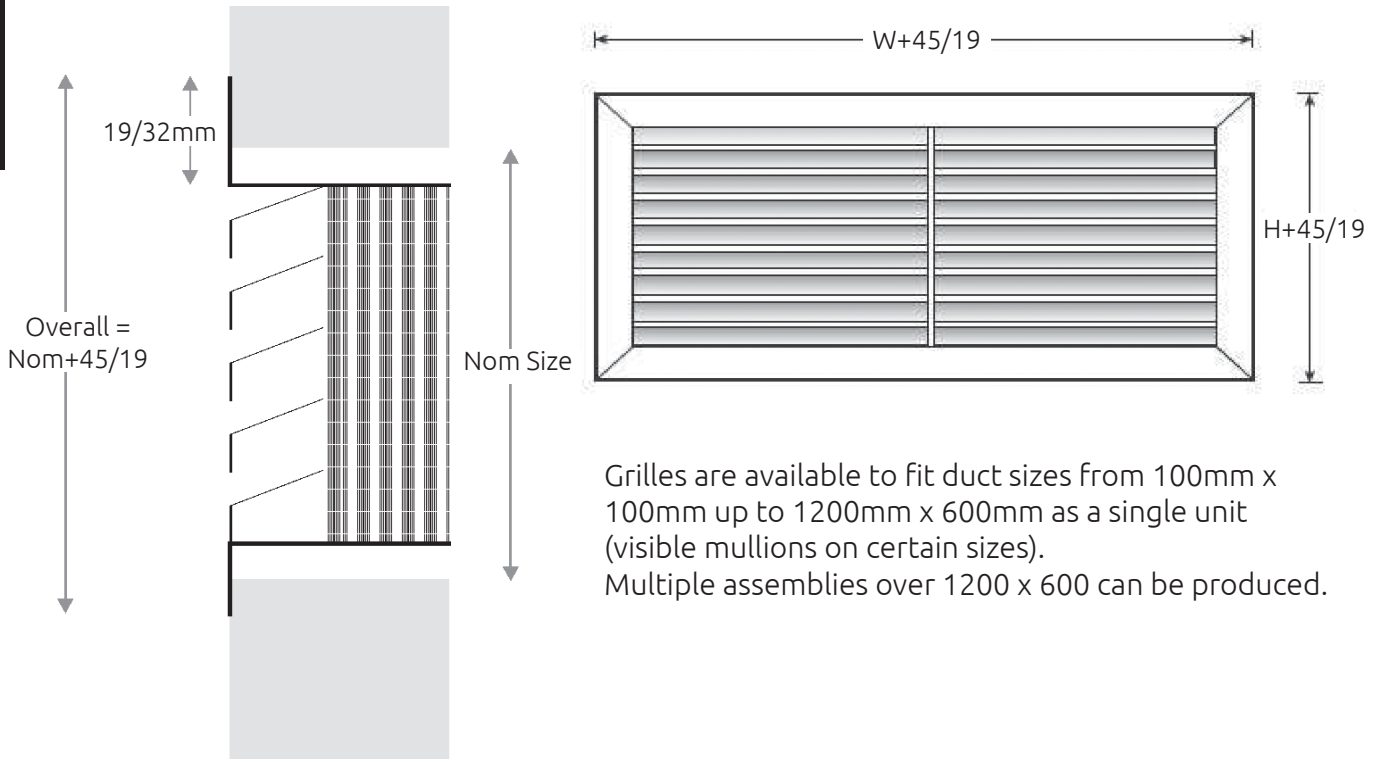
| FBR ORDERING CODE (DIFFUSER)                      |  |
|---|--|
| Series  | <b>FBR</b>   |
| Core  | <b>F</b> - Fixed Core<br><b>R</b> - Removable Core   |
| Frame   | <b>S</b> - 32mm Frame (std)<br><b>N</b> - 19mm Frame<br><b>PF</b> - Plaster Frame<br><b>JF</b> - Joinery Frame   |
| Access  | <b>OB</b> - Opposed Blade Damper<br><b>0</b> - Not Applicable  |
| Fixing  | <b>F0</b> - No fixings<br><b>F1</b> - CSK Flange Fixing Holes<br><b>F2</b> - Spring Clip<br><b>F4</b> - Rear Strap<br><b>F5</b> - Rear Strap & Bracket<br><b>F6</b> - Goal Post Bracket  |
| Finish  | <b>1</b> - (Mill Finish)<br><b>2</b> - RAL9006 (Silver/Grey)<br><b>3</b> - RAL9010 (White)<br><b>4</b> - RAL9005 (Black)<br><b>5</b> - RAL9003 (White)<br><b>6</b> - RAL9016 (White),<br><b>7</b> - Other RAL/BS Code (additional costs may apply)<br><b>8</b> - Chrome Finish - Powder Coated |
| Notes   | Fixed Blade Return Grilles can also be manufactured from various grades of Stainless Steel, please contact Sales Office.   |
| Example: <b>FBR/F/S/F1/3/Nominal Opening Size</b> |  |

| FBR ORDERING CODE (PLENUM)                          |   |
|---|---|
| Type  | <b>PBU</b> - Un-Lined Side<br><b>PBL</b> - Lined Side<br><b>PBA</b> - Adaptor Top                 |
| Series  | <b>FBR</b>  |
| Mesh  | <b>P</b> - Perforated Equalising Mesh<br><b>0</b> - No Equalising Mesh                            |
| Damper  | <b>LS</b> - Lever Spigot Damper<br><b>CS</b> - Cord Spigot Damper<br><b>0</b> - No Damper         |
| Spigot  | <b>OP</b> - 2 Opposite Spigots<br><b>AD</b> - 2 Adjacent Spigots<br><b>FL</b> - Flat Oval Spigot  |
| Finish  | <b>IN</b> - Black Internal<br><b>EX</b> - Black External<br><b>IE</b> - Black Internal & External |
| Example: <b>PBL/FBR/CS/Nominal Size/Spigot Size</b> |   |

# FIXED BLADE RETURN - FBR

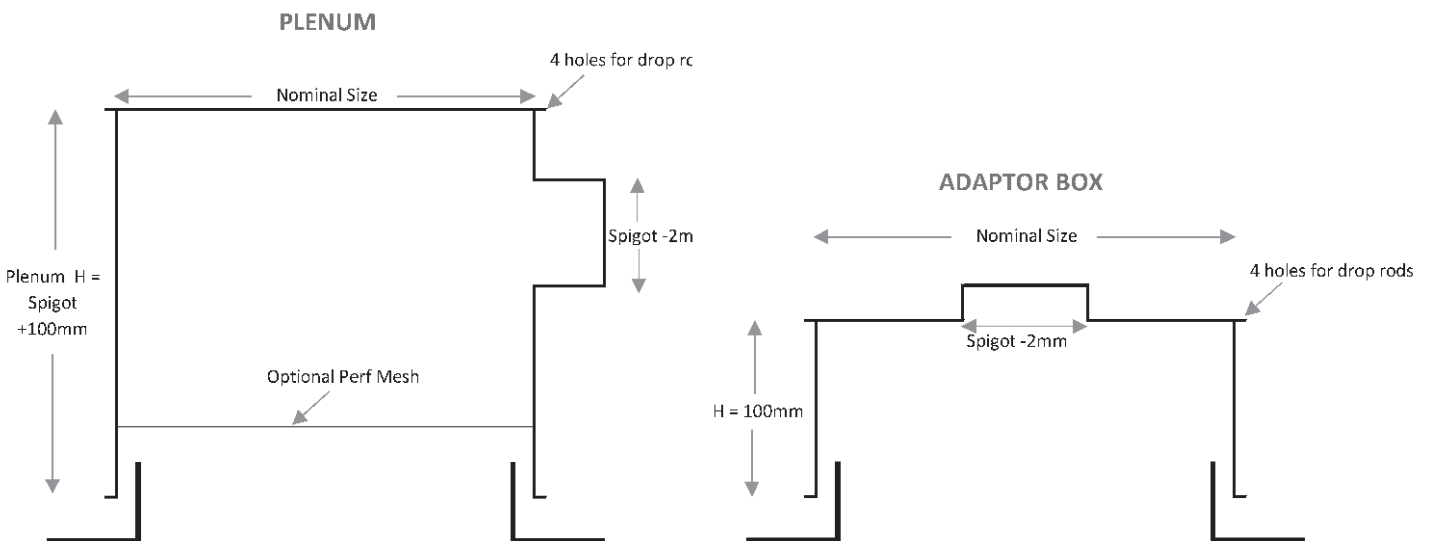
## FBR DIMENSIONS (GRILLE)

FBR



Grilles are available to fit duct sizes from 100mm x 100mm up to 1200mm x 600mm as a single unit (visible mullions on certain sizes). Multiple assemblies over 1200 x 600 can be produced.

## PLENUM BOX DIMENSIONS



Side entry as drawn. Top entry 250 high.

FBR Return Grilles

| AIR VOL<br>(l/s) | HEIGHT | WIDTH |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|------------------|--------|-------|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|------|----|------|----|------|----|
|                  |        | 100   |    | 200 |    | 300 |    | 400 |    | 500 |    | 600 |    | 700 |    | 800 |    | 900 |    | 1000 |    | 1100 |    | 1200 |    |
|                  |        | Pa    | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa   | NR | Pa   | NR | Pa   | NR |
| 10               | 100    | 9     | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
|                  | 25     | 55    | 37 | 11  | 20 | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
| 50               | 100    |       |    | 44  | 38 | 18  | 28 | 10  | 21 | 7   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
|                  | 200    |       |    | 9   | 20 | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
| 75               | 100    |       |    |     |    | 41  | 38 | 22  | 32 | 14  | 27 | 10  | 23 | 7   | /  | 6   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
|                  | 200    |       |    | 20  | 30 | 8   | 21 | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
| 300              | 100    |       |    |     |    | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
|                  | 200    |       |    |     |    |     |    | 39  | 39 | 25  | 34 | 17  | 30 | 13  | 27 | 10  | 24 | 8   | 21 | 6    | /  | 5    | /  | 5    | /  |
| 100              | 200    |       |    | 35  | 38 | 15  | 28 | 8   | 22 | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
|                  | 300    |       |    |     |    | 6   | 20 | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
| 150              | 100    |       |    |     |    |     |    | 38  | 41 | 28  | 37 | 21  | 34 | 17  | 32 | 14  | 29 | 11  | 27 | 10   | 25 | 10   | 25 | 10   |    |
|                  | 200    |       |    |     |    | 32  | 39 | 18  | 32 | 11  | 27 | 8   | 23 | 6   | 20 | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
| 300              | 100    |       |    |     |    | 14  | 29 | 8   | 23 | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
|                  | 200    |       |    |     |    |     |    | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5   | /  | 5    | /  | 5    | /  | 5    | /  |
| 400              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 200              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 300              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 400              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 500              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 250              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 300              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 400              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 500              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 600              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 300              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 400              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 500              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
| 600              | 100    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |
|                  | 200    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |

FBR Return Grilles (continued)

| AIR VOL<br>(l/s) | HEIGHT | WIDTH |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
|------------------|--------|-------|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|-----|----|------|----|------|----|------|----|--|
|                  |        | 100   |    | 200 |    | 300 |    | 400 |    | 500 |    | 600 |    | 700 |    | 800 |    | 900 |    | 1000 |    | 1100 |    | 1200 |    |  |
|                  |        | Pa    | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa  | NR | Pa   | NR | Pa   | NR | Pa   | NR |  |
| 800              | 300    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
|                  | 400    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
|                  | 500    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
|                  | 600    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
| 1000             | 300    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
|                  | 400    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
|                  | 500    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
| 2000             | 600    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |
|                  | 600    |       |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |     |    |      |    |      |    |      |    |  |

Sound Power Levels (NR) and Pressure Drops (Pa) applies to a fully opened Damper. The assumed room absorption is between 8-10dB.

Selection and tests are based on +/- 10°C.

/ indicates a value of less than 20.