

# Plenum boxes and pan adaptors

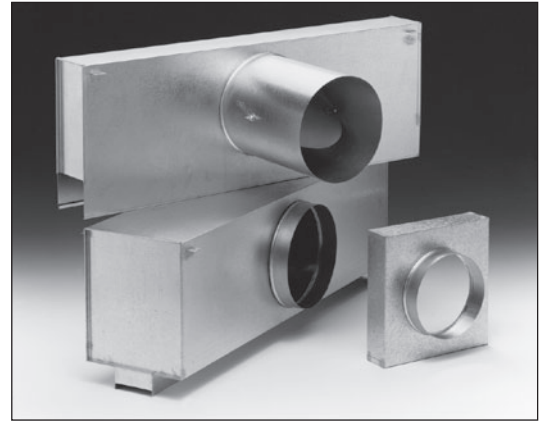
## PLENUM BOXES

### introduction

The PB range of Plenum boxes have been designed to suit a variety of installation conditions and are suitable for use with any Brooke Air linear grille or diffuser.

The boxes are manufactured in 22 swg galvanised steel or Zintec and can be supplied with top or side entry spigots to suit requirements.

Pan adaptors are available to suit most products in the range and can be supplied with either circular or square spigots.



### type

**PHB - PBL - PA**

### control

Spigot mounted flap dampers are available with either cord or quadrant operators. Alternatively, OB dampers can be fitted in the plenum neck with either lever or key operators.

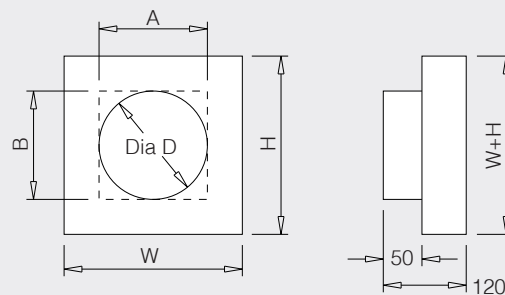
### options

As an option, internal surfaces of plenums and pan adaptors can be finished in matt black or insulated with class "0" acoustic/thermal liner.

### fixings

Grille fixings may be specified as either rivet or yoke backstrap. See **PART L** for details.

### PAN ADAPTORS - PA



### ordering details

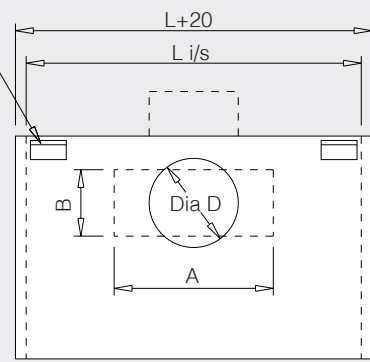
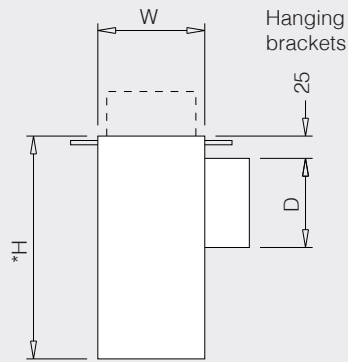
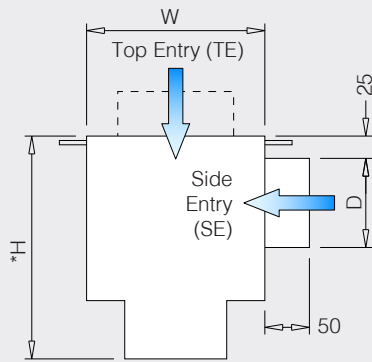
#### example:

type	damper	fixing	liner	length	width	height	spigot	qty
PBH /	FDC /	YB /	AL12 /	1000 /	200 /	400 /	315 Dia S/E	6

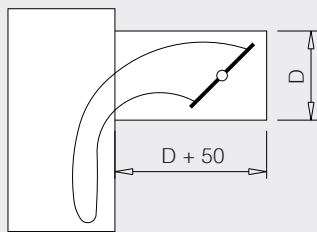
# Plenum boxes and pan adaptors

## DIMENSIONS

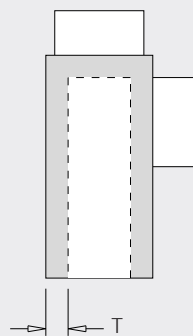
### PLENUMS - PBL & PBH



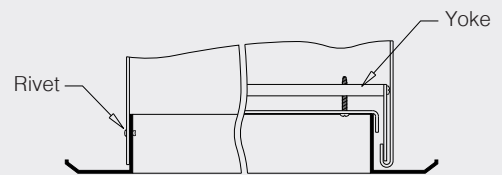
\* Where Plenum height has been selected from Nomogram, overall height must include an additional 50mm for Grille Stack or 125mm for Grille fitted with Damper



Damper options  
 FDC - Cord operated Flap  
 FDQ - Quadrant operated Flap



Optional Acoustic Liner  
 AL12 -  $T = 12\text{mm}$   
 AL25 -  $T = 25\text{mm}$   
 Allow for liner thickness when sizing plenum.

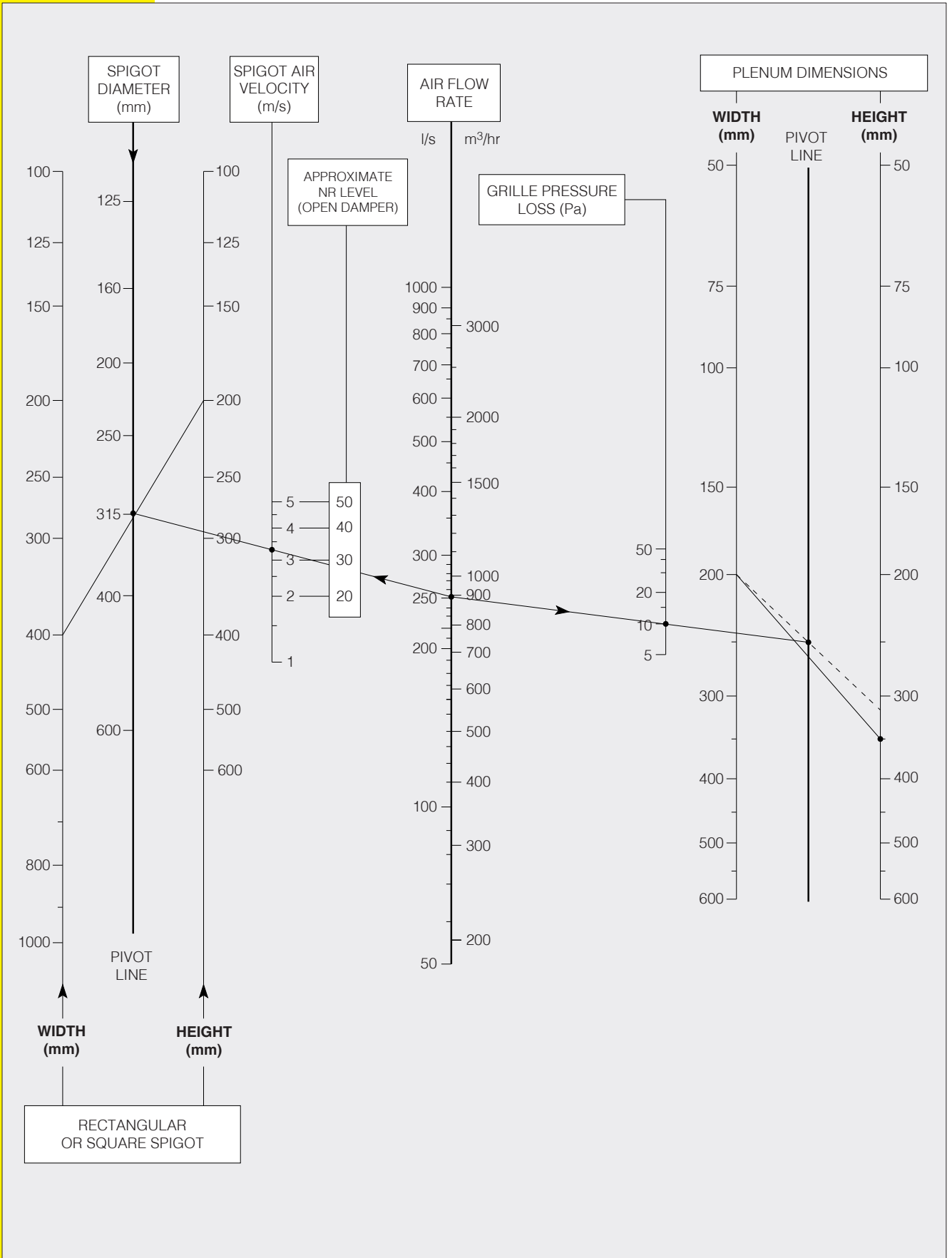


Grille fixing options:

R - Rivet  
 YB - Yoke Backstrap

# Plenum boxes and pan adaptors

## SELECTION NOMOGRAM



# Plenum boxes and pan adaptors

## SELECTION EXAMPLE

If a 1000mm wide, 200mm high grille has a pressure loss of 10Pa at an air flow rate of 250l/s, determine the required plenum height by projecting a line between the flow rate and pressure loss scales to the pivot line of the plenum dimension scale.

From there, project a line from the plenum width (200mm) through the pivot point to the height scale and read off the nearest standard plenum height (350mm).

Allow an additional 50mm for the grille stack, 125mm if the grille is to be fitted with an OB damper.

To determine a suitable spigot size, project a line from the flow rate scale through the required spigot air velocity to the spigot diameter line.

Square or rectangular spigots of the equivalent area can also be selected using the spigot diameter as a pivot point.

**NOTE:** In order to ensure even air distribution at the grille or diffuser face, plenum lengths should be limited to 1500mm.

example