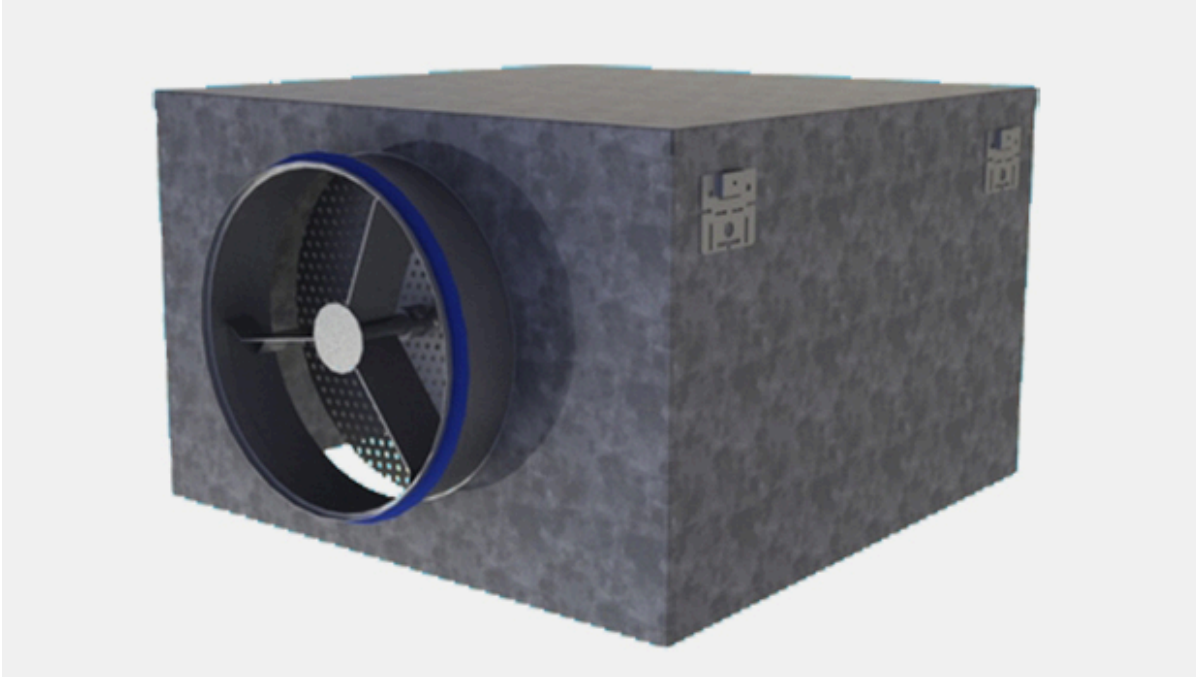


Halton PDA – Plenum for diffusers



Overview

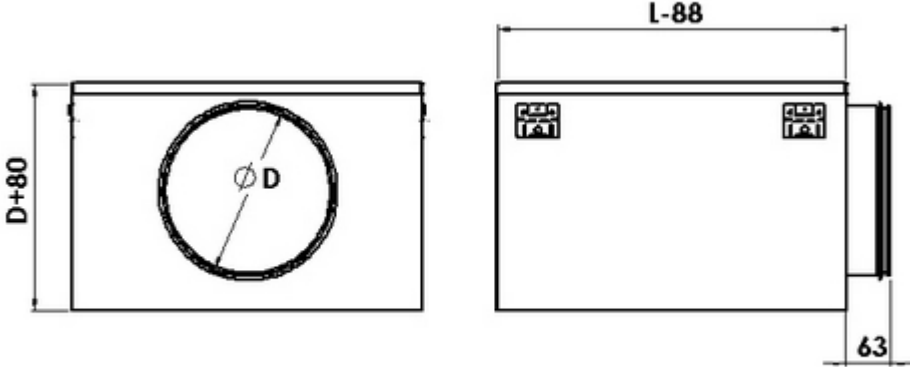
- Plenum for connecting Halton DAC diffuser (supply, exhaust, filtration) unit to ductwork
- Ensures proper function of the supply air diffuser
- Access for ductwork cleaning

Product Models and Accessories

- Model with sound attenuation material
- Detachable airflow rate measurement and balancing module available.

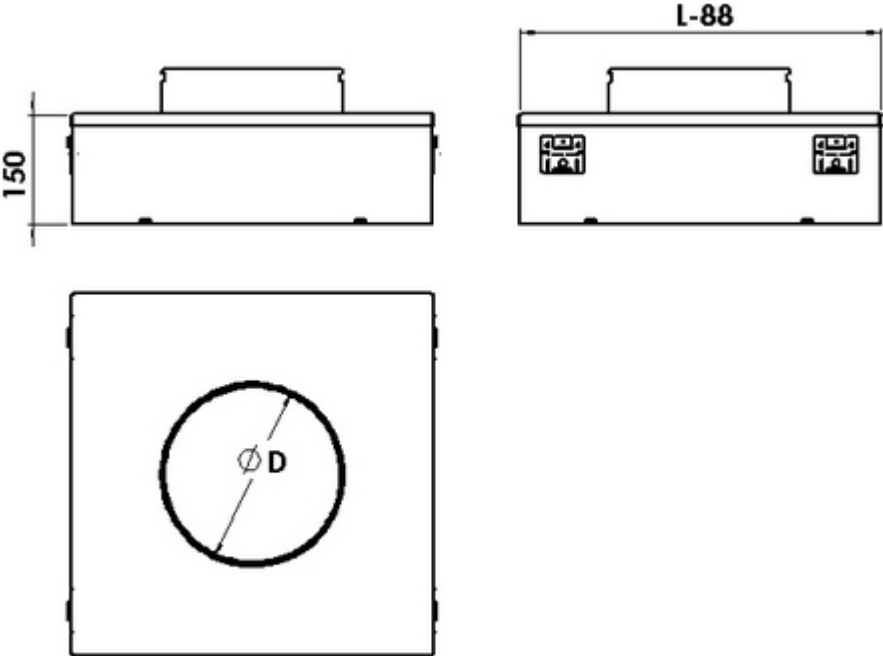
Dimensions

Halton PDA/H



Note: For plenum model without filter (PDA/H-S and PDA/H-R), the height is reduced to $D+50$

Halton PDA/V



NS	L
600×600	595
675×675	670

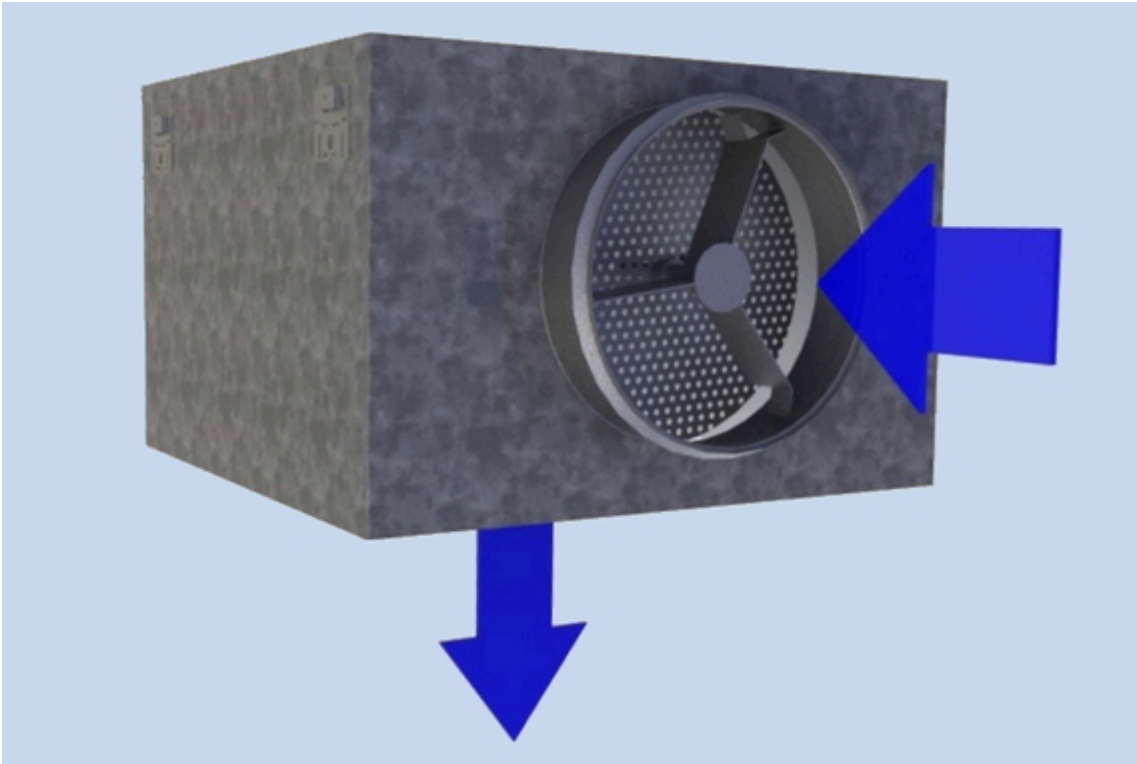
Material

Part	Material	Note
Plenum box / spigot	Galvanised steel	
Sound attenuation material	Mineral wool	The mineral wool is fixed with nails
Filter	Media G3	

Accessories

Accessory	Code	Description
Sound attenuation material	IN	Mineral wool in the Halton PDA/H on 2 sides (IN=2)
Sound attenuation material	IN	Mineral wool in the Halton PDA/H on 5 sides (IN=5)
Sound attenuation material	IN	Mineral wool in the Halton PDA/V on 4 sides (IN=5)
Airflow measurement and adjustment unit	OM	For supply installation

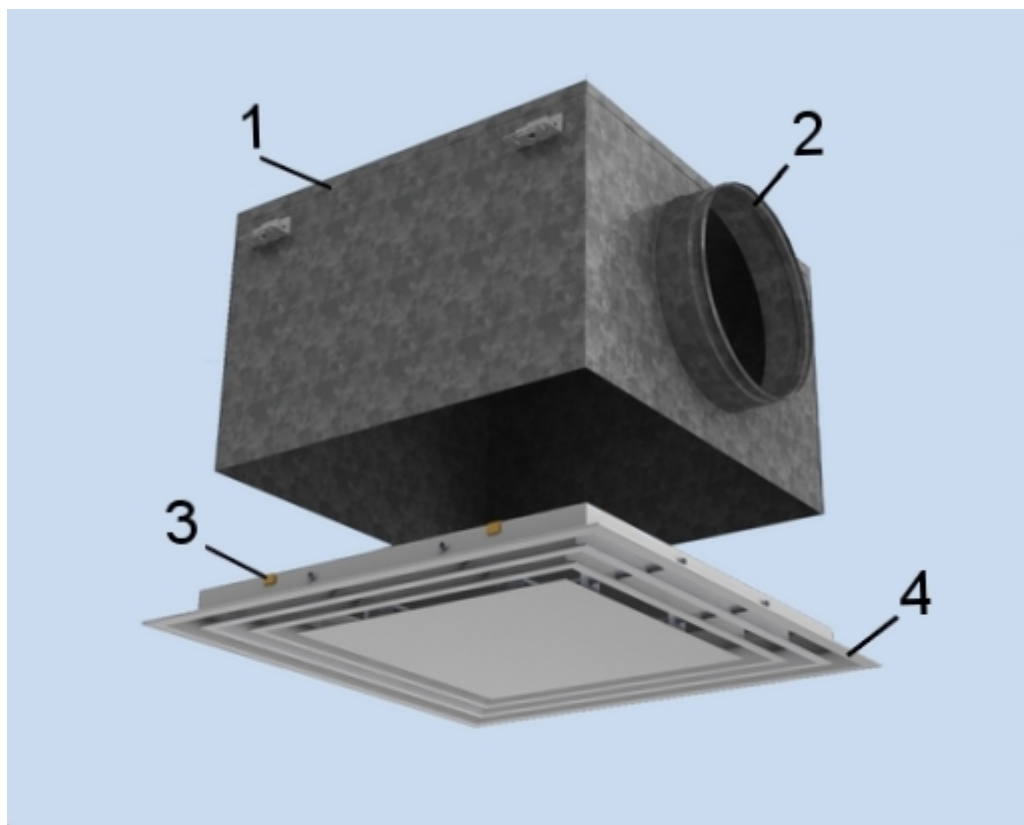
Function



The duct pressure and air velocity are reduced inside the Halton PDA plenum box. Air is supplied into the space through the diffuser, improving the air distribution quality and the noise level.

The airflow rate can be adjusted using the optional measurement and adjustment module MSM.

Installation



Key:

1. Plenum
2. Spigot
3. Clips
4. Front plate

Plenum installation

The plenum is installed into the suspended ceiling with M8 drop rods (not supplied in the delivery) and connected to the ductwork with a spigot.

When equipped with a measurement and adjustment module, the recommended safety distance upstream of the device is at least $3xD$, in order to ensure a reliable airflow rate measurement.

The units control spindle must not be excessively bent.

Diffuser installation

For integral diffusers with 600×600 tiles, the diffuser is attached to the plenum via clips.

For integral diffusers with 675×675 tiles, the diffuser is attached to the plenum with screws or pop rivets (not supplied).

Adjustment

To aid in adjusting and measuring the airflow rate, it is recommended that the diffuser is connected to a plenum equipped with a MSM.

The supply airflow is determined by measuring the pressure difference with a measurement

module.

Measure the differential pressure with a manometer. The airflow rate is calculated according to the following formula:

$$q_v = k * \sqrt{\Delta p_m}$$

Δp_m Measured pressure [Pa]

k k factor given as a function of mounting and diameter

q_v Airflow rate [l/s]

The k factor for installations with different safety distances
(distance of other items from the MSM):

Spigot Diameter	Safety distance	
	> 6xD	min 3xD
200	28	32
250	49	51
315	78	–

Adjust the airflow rate by rotating the control spindle until the desired setting is achieved.
Lock the damper in position with a screw.

Replace the tubes and spindle in the plenum, and return the diffuser to its position.

Servicing

Supply and exhaust without filter

Detach the diffuser, clean the parts by wiping with a damp cloth.
Push the diffuser back into place by clipping the plenum.

Exhaust with filter

Activate the push-pull system by pressing on the diffusers' front panel.
Open the front panel and rotate 90°.
Rotate the brackets 90°, and pull out the filter.
Install a new filter in the same position, close the front panel by pressing the push-pull release.

Option: MSM

Remove the measurement and adjustment module by gently pulling the shaft; (not the control spindle or measurement tubes!).

Wipe the parts with a damp cloth, instead of immersing in water.

Reassemble the measurement and adjustment module by pushing the shaft back into place until the module meets the stopper.

Push the diffuser back into place.

Specifications

The plenum is made of galvanised steel.

The plenum comprises an airflow measurement and adjustment module.

The plenum comprises sound attenuation material made of mineral wool.

The plenum reduces duct pressure and air velocity in order to supply air throughout the entire face area of the Halton DAC diffuser and improve the air distribution quality and the noise level.

Order Code

PDA/S-C-XXX-D; IN-OM-ZT

S = Configuration

V Vertical

H Horizontal

C = Application

S Supply

R Return

F Filtration (opening front)

XXX = False ceiling dimensions

600 600×600

700 675×675

D = Diameter of duct connection

200, 250, 315

Other Options and Accessories

IN = Insulation

2 2 face insulation (PDA/H)

- 4 4 face insulation (PDA/V)
- 5 5 face insulation (PDA/H)

OM = MSM

N No

Y Yes

ZT = Tailored product

N No

Y Yes

Code Example

PDA/V-S-600-200,IN=4,ON=Y,ZT=N