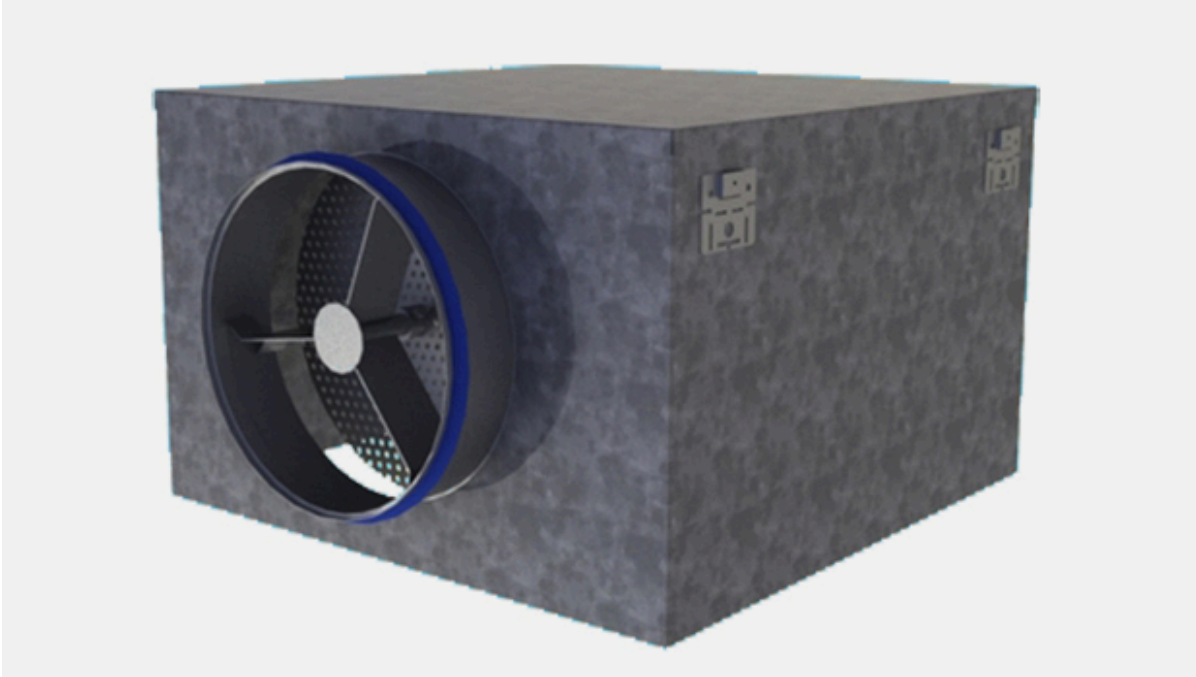


Halton PDF – Plenum



Overview

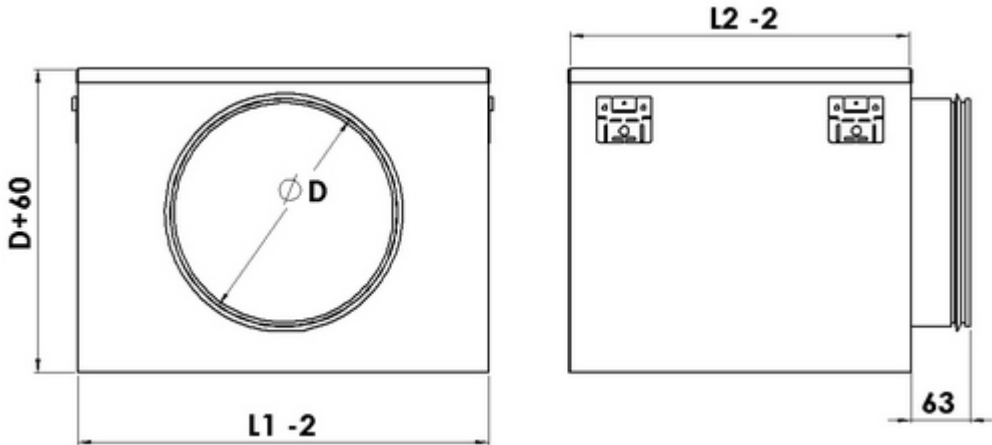
- Plenum for connecting Halton DFB diffuser (supply, exhaust) unit to ductwork
- Ensures proper function of the supply air diffuser
- Access for ductwork cleaning

Product models and accessories

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

Dimensions

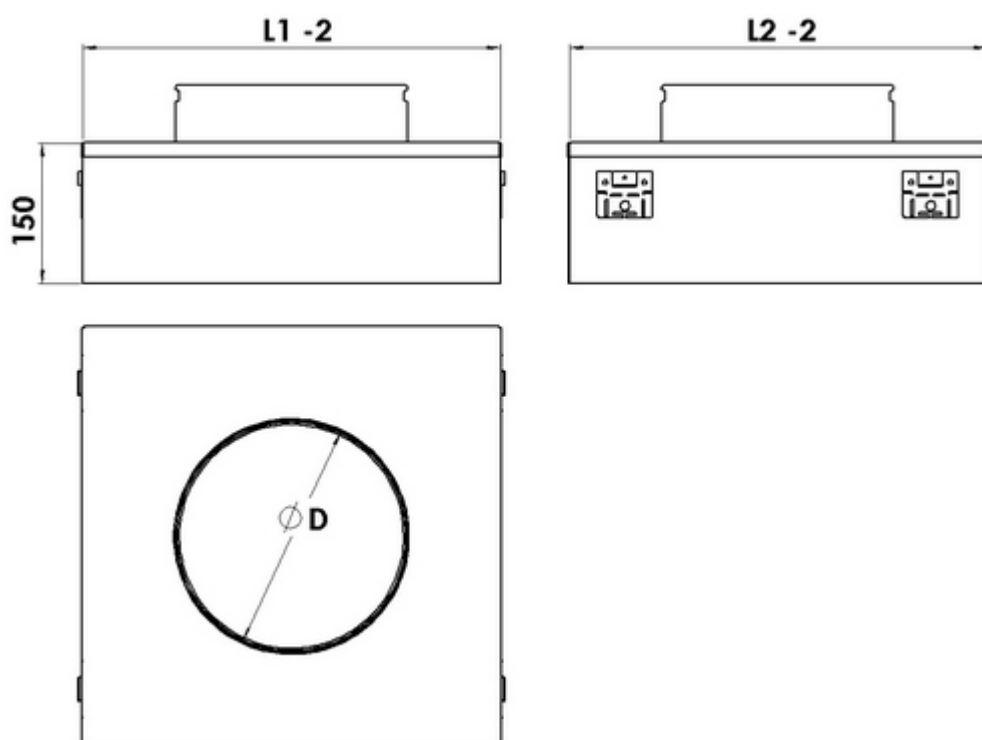
Halton PDF/H



Size	L1	L2	D
6×6	150	150	125
9×6	225	150	160
9×9	225	225	200
12×6	300	150	160
12×9	300	225	200
12×12	300	300	250
15×6	375	150	200
15×9	375	225	250
15×12	375	300	315
15×15	375	375	315
18×6	450	150	200
18×9	450	225	315
18×12	450	300	315
18×15	450	375	355
18×18	450	450	315, 400
21×9	525	225	315
21×12	525	300	315
21×15	525	375	355
21×18	525	450	400
21×21	525	525	450
24×9	600	225	315
24×12	600	300	355
24×15	600	375	400
24×18	600	450	450
24×21	600	525	450
24×24	600	600	500

Plenum sizes for Halton DFB diffusers are shown in grey rows in table above.

Halton PDF/V



Size	L1	L2	D
6×6	150	150	125
12×12	300	300	250
15×15	375	375	315
18×18	450	450	315, 400
21×21	525	525	450
24×24	600	600	500

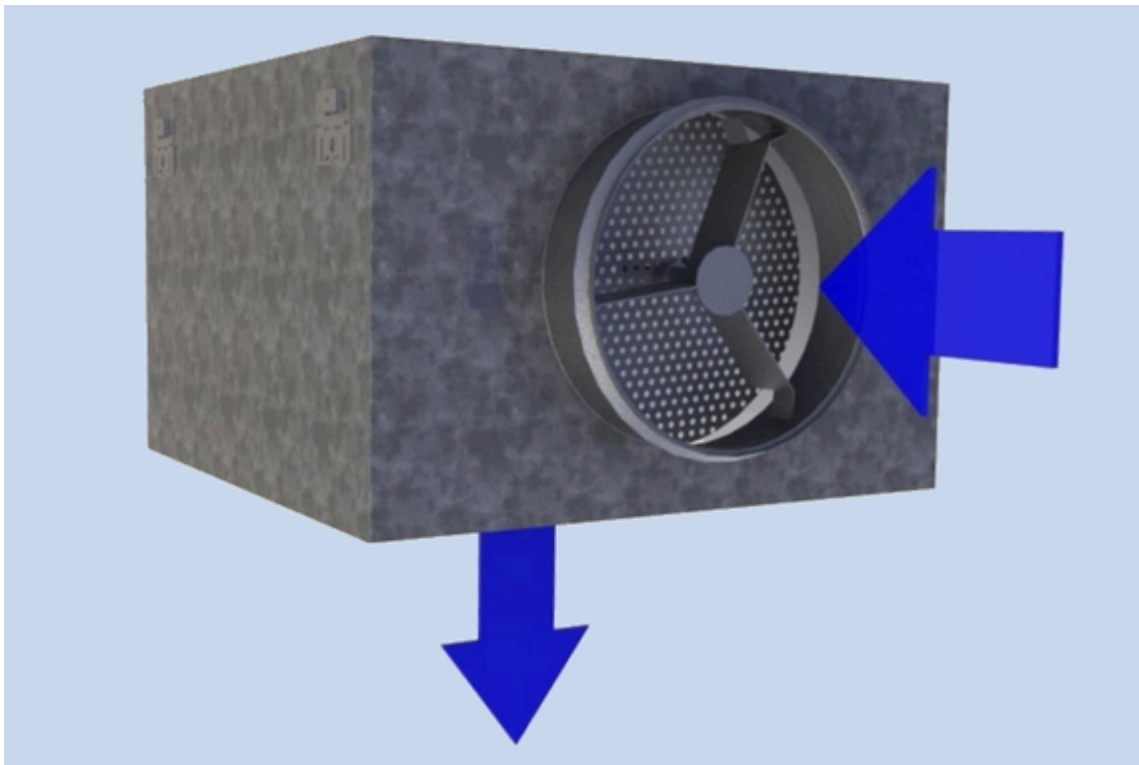
Material

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

Accessories

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

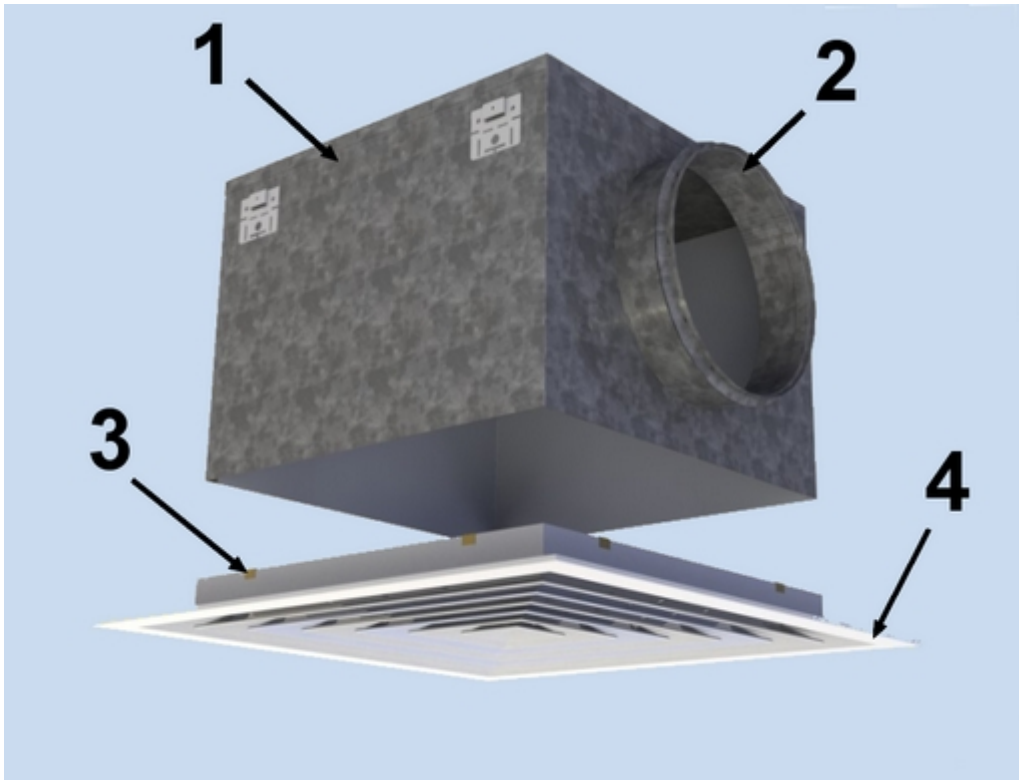
Function



The duct pressure and air velocity are reduced inside the Halton PDA plenum. 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. Halton DFB diffuser

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

The diffuser is attached to the plenum via clips.

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

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

Spigot diameter (mm)	Safety distance	
	> 6xD	min. 3xD
100	6	7
125	10	12
160	19	22
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

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

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.

Specification

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 DFB or DFC diffuser and improve the air distribution quality and the noise level.

Order Code

PDF/S-L-H-D, IN-OM-ZT

S = Model

V Vertical

H Horizontal

L = Length

6, 9, 12, 15, 18, 21 or 24

H = Height

6, 9, 12, 15, 18, 21 or 24

D = Duct connection (mm)

125, 160, 200, 250, 315, 355, 400, 450, 500

Other options and accessories

IN = Insulation

Y Yes

N No

AD = Adjustment device

NA Not assigned

ZT = Tailored product

N No

Y Yes (ETO)

Code example

PDF/V-6-6-125, IN=Y, OM=Y, ZT=N