

Halton TRH – Plenum for diffusers (terminated)

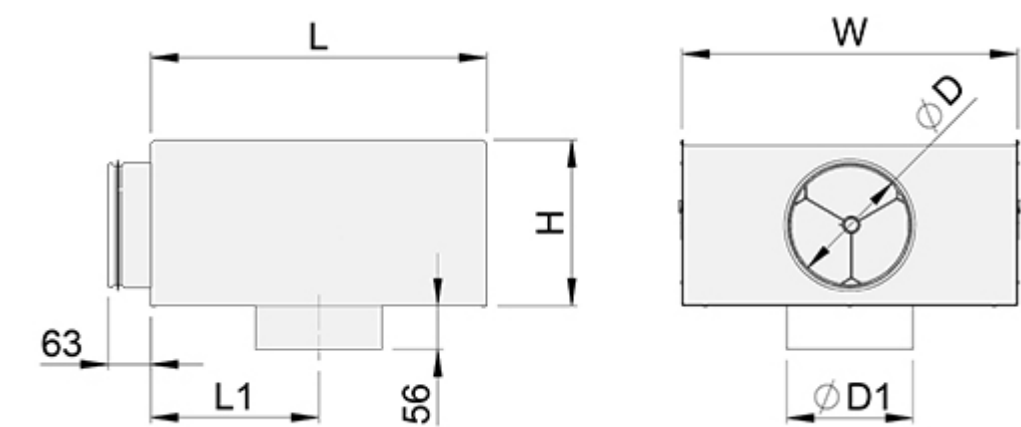


Overview

Terminated as of 1st July 2023
-> replaced with Halton Pop PDI

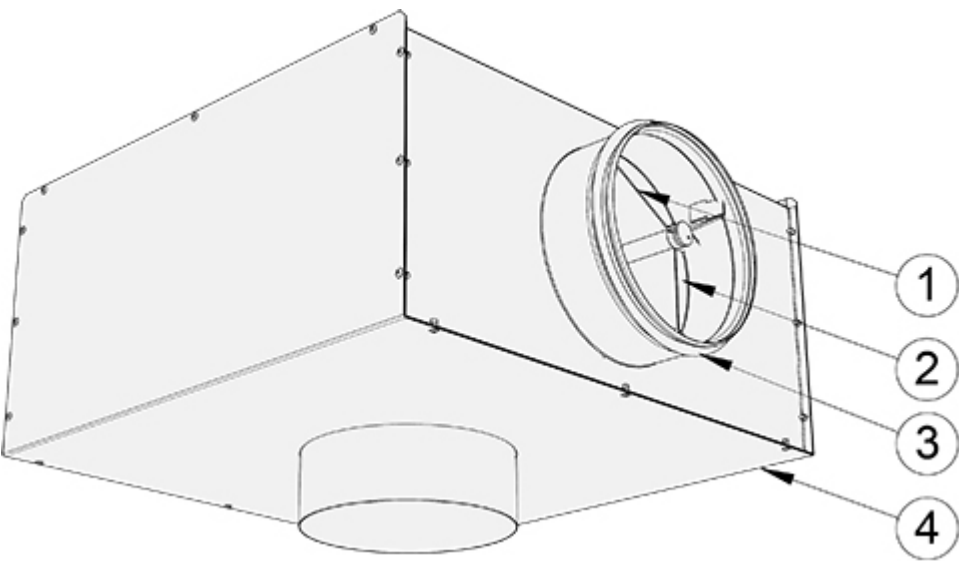
- Plenum ensuring proper function of supply air ceiling diffuser and connecting to ductwork
- Flexibility for levelling diffuser elevation
- Detachable measurement and airflow rate adjustment module
- Effective sound attenuation
- Access for ductwork cleaning

Dimensions



| NS | ØD | ØD1 | L | W | H | L1 |
|---------|-----|-----|-----|-----|-----|-----|
| 100-100 | 99 | 102 | 281 | 281 | 152 | 141 |
| 100-125 | 99 | 127 | 281 | 281 | 152 | 141 |
| 100-160 | 99 | 162 | 281 | 281 | 152 | 141 |
| 125-125 | 124 | 127 | 431 | 431 | 180 | 216 |
| 125-160 | 124 | 162 | 431 | 431 | 180 | 216 |
| 125-200 | 124 | 202 | 431 | 431 | 180 | 216 |
| 125-250 | 124 | 252 | 431 | 431 | 180 | 216 |
| 160-160 | 159 | 162 | 431 | 431 | 212 | 216 |
| 160-200 | 159 | 202 | 431 | 431 | 212 | 216 |
| 160-250 | 159 | 252 | 431 | 431 | 212 | 216 |
| 200-200 | 199 | 202 | 550 | 400 | 245 | 355 |
| 200-250 | 199 | 252 | 550 | 400 | 245 | 355 |
| 200-315 | 199 | 317 | 550 | 400 | 245 | 355 |
| 250-250 | 249 | 252 | 600 | 450 | 295 | 378 |
| 250-315 | 249 | 317 | 600 | 450 | 295 | 378 |
| 250-400 | 249 | 402 | 600 | 450 | 295 | 378 |
| 315-315 | 314 | 317 | 650 | 500 | 360 | 398 |
| 315-400 | 314 | 402 | 650 | 500 | 360 | 398 |

Structure and material



| No. | Description | Material |
|-----|---|--|
| 1 | Measurement and adjustment module (MSM / MEM) | Body: Aluminium Plate: Galvanised steel Brackets: Galvanised steel Plastic parts: Polypropylene (PP) Spindle: Stainless steel |
| 2 | Attenuation | Polyester fibre or mineral wool |
| 3 | Duct seal gasket | IC-polyurethane hybrid |
| 4 | Casing | Galvanised steel |

Accessories

| Accessory | Code | Description |
|---|------|--|
| Airflow measurement and adjustment unit | MSM | Adjustment and measurement module for supply airflow rate |
| Airflow adjustment unit | MEM | Adjustment module for exhaust airflow rate |
| Sound attenuation material | AT | Internal sound attenuation material of mineral wool or polyester fibre |
| Sides of sound attenuation | IN | 3 sides or 5 sides |

Function



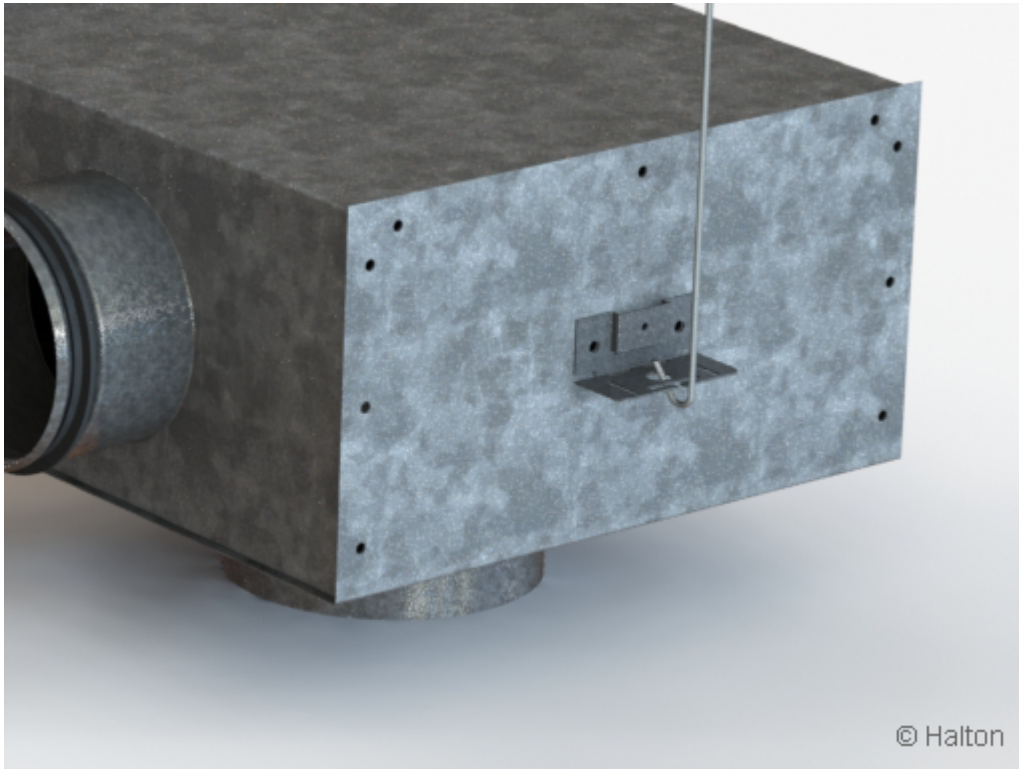
Halton TRH balancing plenum equalizes the supply airflow by reducing the flow velocity .

Air is spread evenly into the diffuser ensuring proper function.

A range of diffusers can be connected to the distribution ductwork using TRH-plenum, which improves their functional characteristics considerably.

The balancing plenum also attenuates duct noise.

Installation



The plenum is connected to the ductwork by use of spigot.

Adjustment for the desired airflow rate can be performed after installation.

The recommended safety distance before Halton TRH plenum is at least $3 \cdot D$.

The diameter of installation hole in ceiling tile shall be at least 5 mm larger than the diffuser connection.

Adjustment

The supply flow rate is determined by using the measurement and adjustment module MSM.

The tubes and control spindle are passed through the diffuser. Measure the differential pressure with a manometer. The flow rate is calculated using the formula below.

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

The k-factor for installations with different safety distances

(D= duct diameter)

| NS | > 8xD | min. 3xD |
|-----|-------|----------|
| 100 | 6.5 | 7.5 |
| 125 | 10.8 | 12.6 |
| 160 | 19.4 | 21.9 |
| 200 | 29.7 | 31.0 |
| 250 | 48.8 | 51.5 |
| 315 | 81.3 | 83.1 |

Adjust the airflow rate by rotating the control spindle until the desired setting is achieved. If needed lock the damper position with a screw. Replace the tubes and spindle into the plenum.

Servicing

Open or detach the diffuser. Detach the measurement and adjustment module by pulling gently from the casing (not from the control spindle or measurement tubes). Wipe the parts with a damp cloth, instead of immersing in water.

The measurement and adjustment module is remounted by pushing the body until it meets the stopper.

The sound attenuation material within the plenum can also be removed, to enable cleaning of the inner side of the plenum. Close or replace the diffuser after cleaning.

Specification

The balancing plenum is made of galvanised steel and has a robust and airtight construction.

The airflow rate measurement and adjustment module are available for supply application and adjustment module for exhaust application. The measurement and adjustment module is adjustable without opening the device.

The balancing plenum has a spigot with integral gasket for airtight duct connection.

The balancing plenum attenuates duct noise. The sound attenuation material is made of polyester fibre with a washable surface or mineral wool located on three or five sides of plenum.

Order code

TRH/S-D-E; AT-IN-OM-ZT

D = Diameter of duct connection (mm)

100, 125, 160, 200, 250, 315

E = Diameter of diffuser connection (mm)

100, 125, 160, 200, 250, 315, 400

Other options and accessories

AT = Sound attenuation material

W Mineral wool
D Polyester fibre
N No sound attenuation

IN = Sides of sound attenuation

3 Sound attenuation on 3 sides
5 Sound attenuation on 5 sides
N No sound attenuation

OM = Measurement and adjustment module

YS MSM (Supply)
YE MEM (Exhaust)
NA Not assigned

ZT = Tailored product

N No
Y Yes (ETO)

Code example

TRH-100-125,AT=D, IN=3, OM=YS, ZT=N