

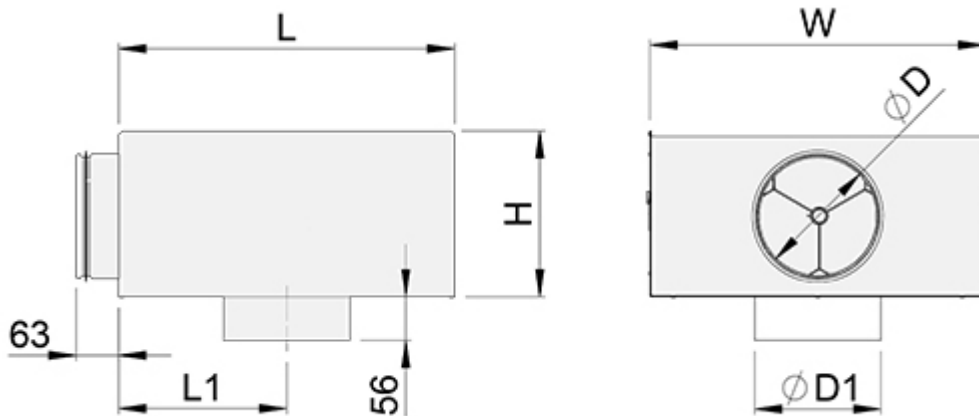
# Halton TRH – Plenum for diffusers



## Overview

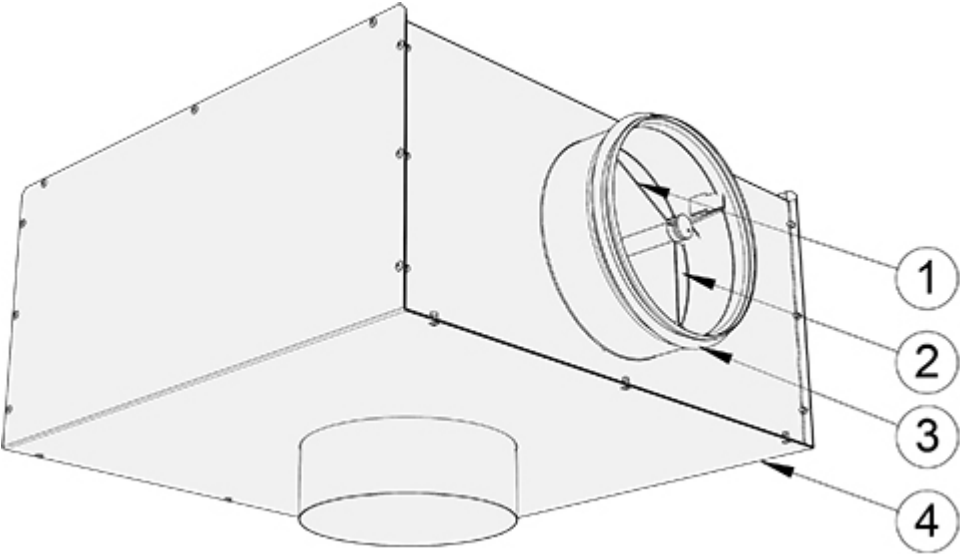
- Plenum ensuring proper function of supply air ceiling diffuser and connecting to ductwork
- Flexibility for levelling diffuser elevation
- Detachable measurement and airflow rate adjustment module
- Effective sound attenuation
- Access for ductwork cleaning

# Dimensions



NS	$\varnothing D$	$\varnothing D1$	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)	<b>Body:</b> Aluminium <b>Plate:</b> Galvanised steel <b>Brackets:</b> Galvanised steel <b>Plastic parts:</b> Polypropylene (PP) <b>Spindle:</b> 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



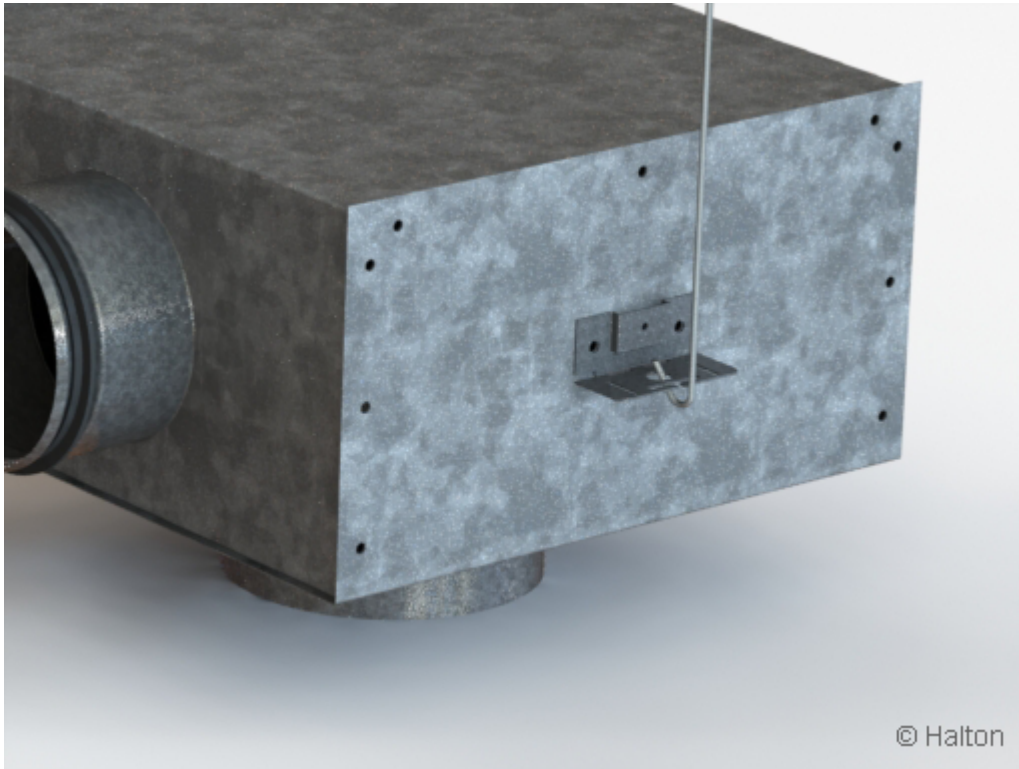
Halton TRH balancing plenum equalizes the supply airflow by reducing the flow velocity .

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