

Halton TCV – Terminal diffuser



Overview

- Horizontal air supply
- Suitable for supply and exhaust
- Integrated circular balancing plenum with measurement and adjustment functions
- Effective sound attenuation
- Circular duct connection with gasket
- Deflector for direction of flow pattern
- Detachable front plate enables cleaning of the terminal unit and ductwork

Quick selection

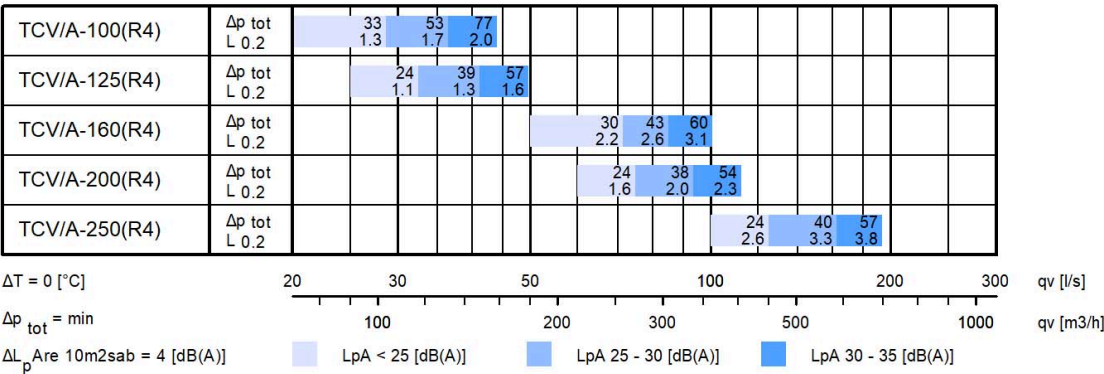


Fig.1. Halton TCV

with MSM module, supply.

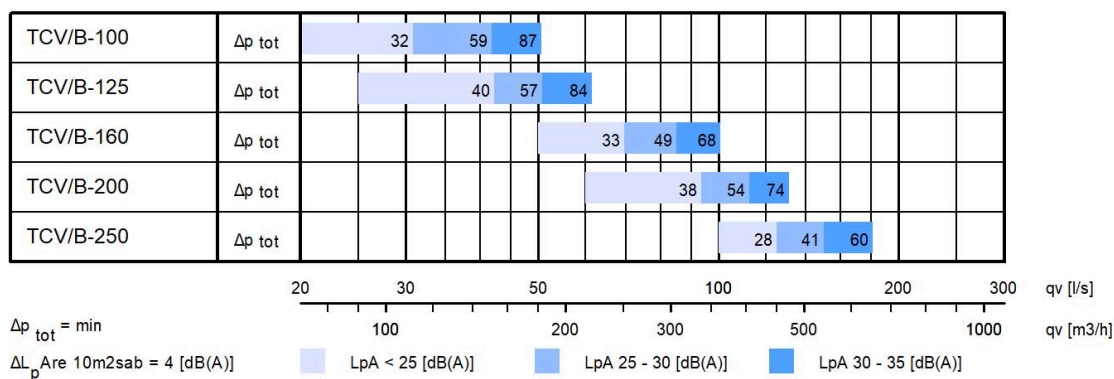
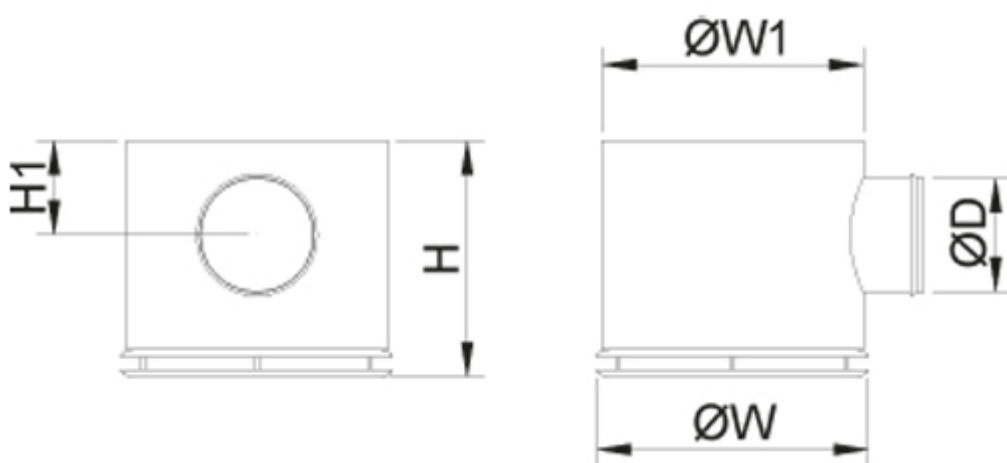


Fig.2. Halton TCV with MEM module, exhaust.

Dimensions



NS	$\varnothing W$	$\varnothing W1$	H	H1	$\varnothing D$
100	300	289	258	93	99
125	300	289	258	103	124
160	450	439	294	121	159
200	450	439	318	138	199
250	600	589	377	174	249

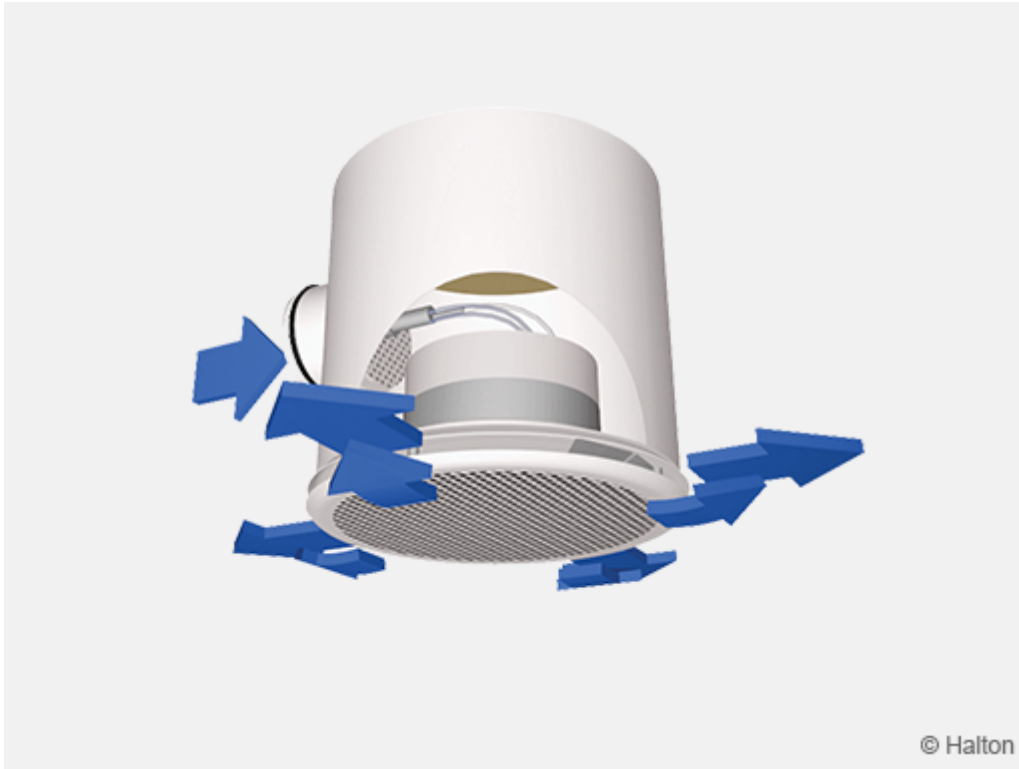
Weight (kg)

NS	Weight
100	3.90
125	3.86
160	7.49
200	7.72
250	12.39

Material

Part	Material	Note
Upper plate	Steel	
Front panel	Perforated steel	
Deflection panels	Steel	
Plenum	Galvanised steel	
Attenuation material	Polyester fibre	Surfaces protection layer
Spigot	Galvanised steel	
Gasket	Rubber compound	
Finishing	Painted White (RAL 9003)	Special colours available

Function



Air is supplied into the space through the side slots and front panel of the diffuser and mixed with the room air outside the diffuser. The throw pattern can be deflected in different (1, 2, 3 and 4) directions with the deflection panels. Recommended maximum air temperature difference between supply and room air in cooling situations is 10 °C.

Installation



Code description

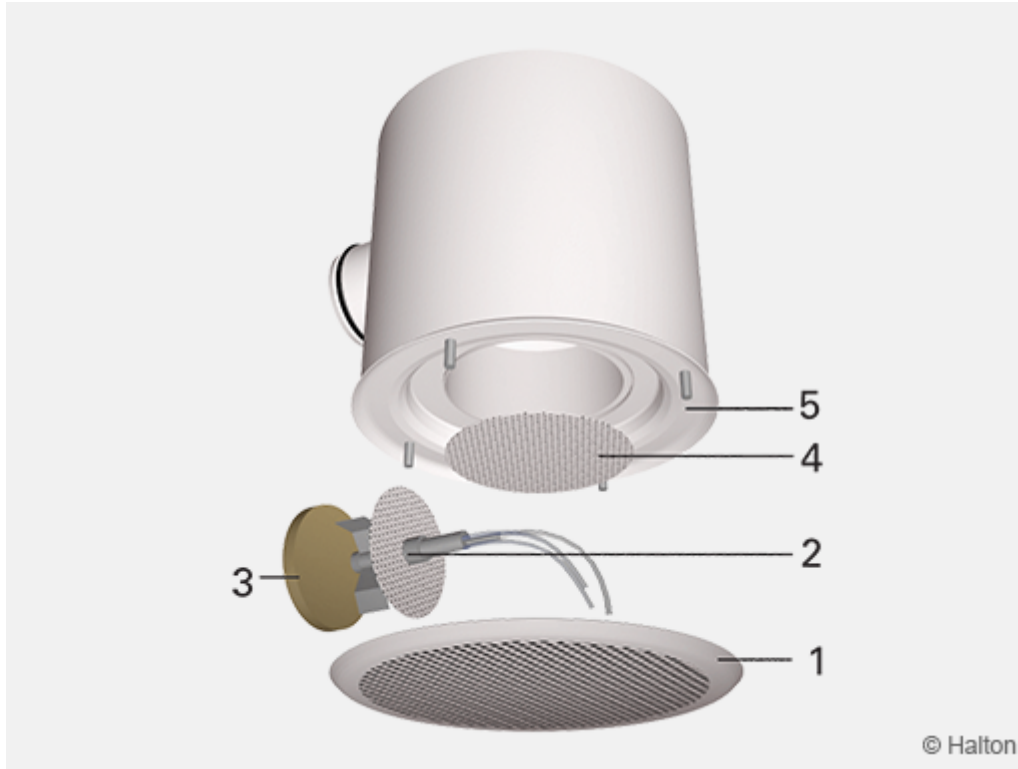
1. Front panel
2. Deflector panel
3. Deflector plate
4. Spring
5. Plenum

The terminal unit is connected directly to the duct by screwing or riveting. The desired flow pattern is selected with the deflector panels during installation.

It is recommended that the minimum safety distance before the terminal unit is $3 \times D$.

In an exhaust application neither deflector panels nor deflector plate are used.

Adjustment



Code description

1. Front panel
2. . Measurement and adjustment module
3. Pressure test plug
4. Equalisation plate
5. Plenum

The supply volume flow rate is determined using the measurement and adjustment module MSM. Open the front panel and equalisation plate, pass the tubes and control spindle through the equalisation plate and side slot of the diffuser. Replace the front panel.

Measure the differential pressure using a manometer. The airflow rate is calculated using the formula below.

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

Adjust the airflow rate by rotating the control spindle until the desired setting is achieved. Lock the damper position with a screw. Reassemble the tubes and spindle into the plenum and replace the diffuser front panel.

The exhaust flow rate is determined by using the separate measurement module located in the equalisation plate.

The k- factor for installations with different safety distances (D = duct diameter)

Supply air

ØD	(>8xD)	min 3xD
100	6.0	8.5
125	10.0	13.0
160	17.1	22.8
200	27.5	32.1
315	47.9	55.5

Exhaust air

ØD	k
100	8.7
125	21.6
160	21.6
200	53.1
250	53.1

Servicing

Open the front panel of the diffuser and clean the parts by wiping with a damp cloth. Remove the equalisation plate, and 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 equalisation plate, and measurement and adjustment module by pushing the shaft back into place until the unit meets the stopper.

Push the front panel back into place so that the springs lock.

Specification

The diffuser and plenum is made of epoxy-painted steel with a white (RAL 9003) colour.

The diffuser diffuses the supply air into the space through the side slot and perforated front panel, ensuring a high mixing rate.

Flow pattern of the diffuser is adjustable in a 1, 2, 3 or 4-way direction by shaping the deflector.

The diffuser is integrated to a balancing plenum equipped with a measurement and adjustment module.

The diffuser has a detachable perforated front panel in order to provide access to the measurement and adjustment module in the plenum.

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

Order code

TCV/S-D, CO-ZT

S = Construction

A Supply air with MSM module

B Exhaust air with MEM module

D = Connection size

100, 125, 160, 200, 250

Other options and Accessories

CO = Colour

SW White (RAL 9003)

X Special colour (RAL xxxx)

ZT = Tailored product

N No

Y Yes (ETO)

Code example

TCV/A-100, CO=SW,ZT=N