

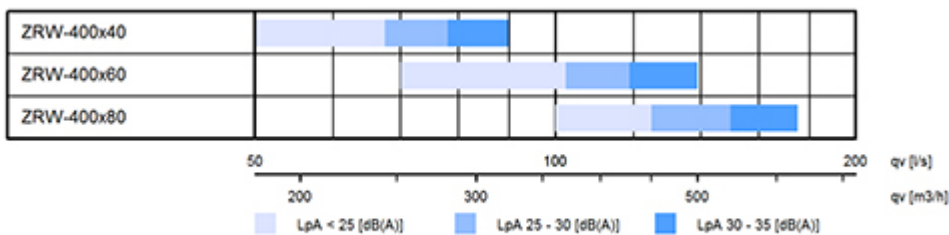
Halton Zen Rectangular in Wall (ZRW) – Displacement ventilation unit



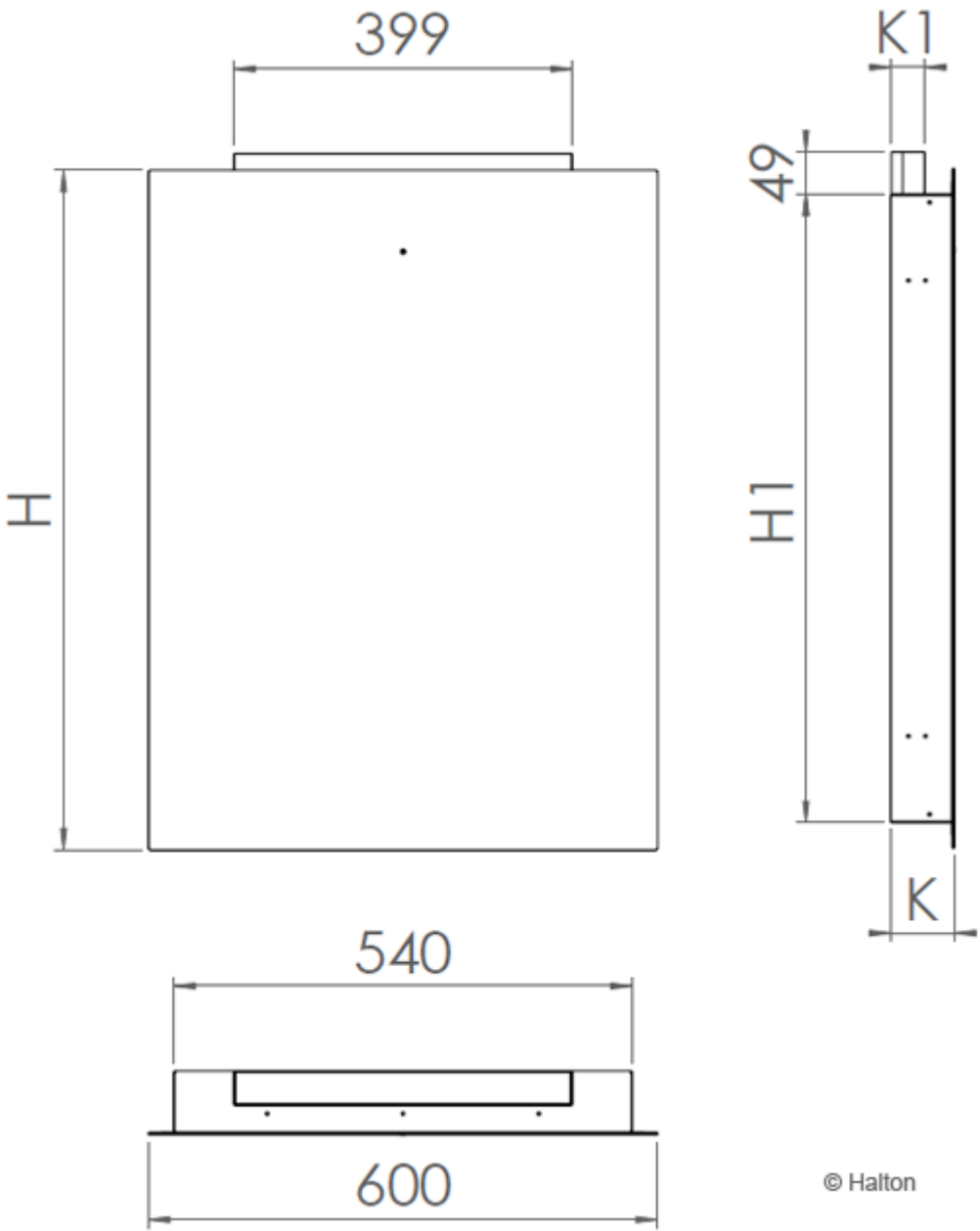
Overview

- Capable of a large supply airflow range
- Uniform supply air distribution is achieved through small perforations, providing optimal conditions in the immediate proximity of the diffuser.
- Low velocity air is supplied horizontally at the floor level
- Suitable for integrated installation into a wall structure.
- The detachable front plate and metallic internal structure enable cleaning of the unit and ductwork
- Rectangular duct connection at top/bottom of the unit.

Quick selection



Dimension and weight



NS	H	H1	K	K1
400x40	800	740	75	38
400x60	1000	940	92	58
400x80	1200	1140	105	78

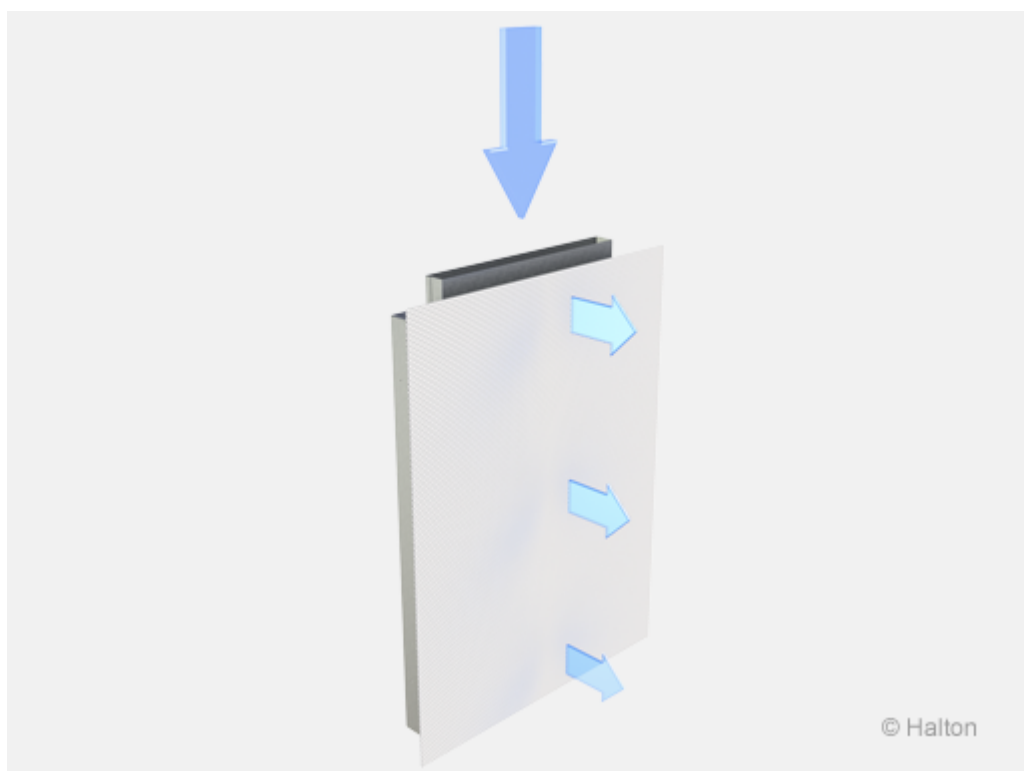
Weight

NS	kg
400×40	11.1
400×60	13.9
400×80	16.6

Material

Part	Material	Note
Front panel	Perforated galvanised steel	–
Casing	Galvanised steel	–
Finishing	Polyester-epoxy-painted White (RAL 9003/30% gloss)	Special colours available

Function



Air is supplied into the space through the front panel of Halton Zen Rectangular in Wall, generally at a slightly lower temperature than the room air. The supply airflows down to the floor level, before gradually pervading the occupied zone at a low velocity. Finally the convection of warm surfaces causes the air to rise out of the occupied zone. The low velocity flow pattern is directed forwards.

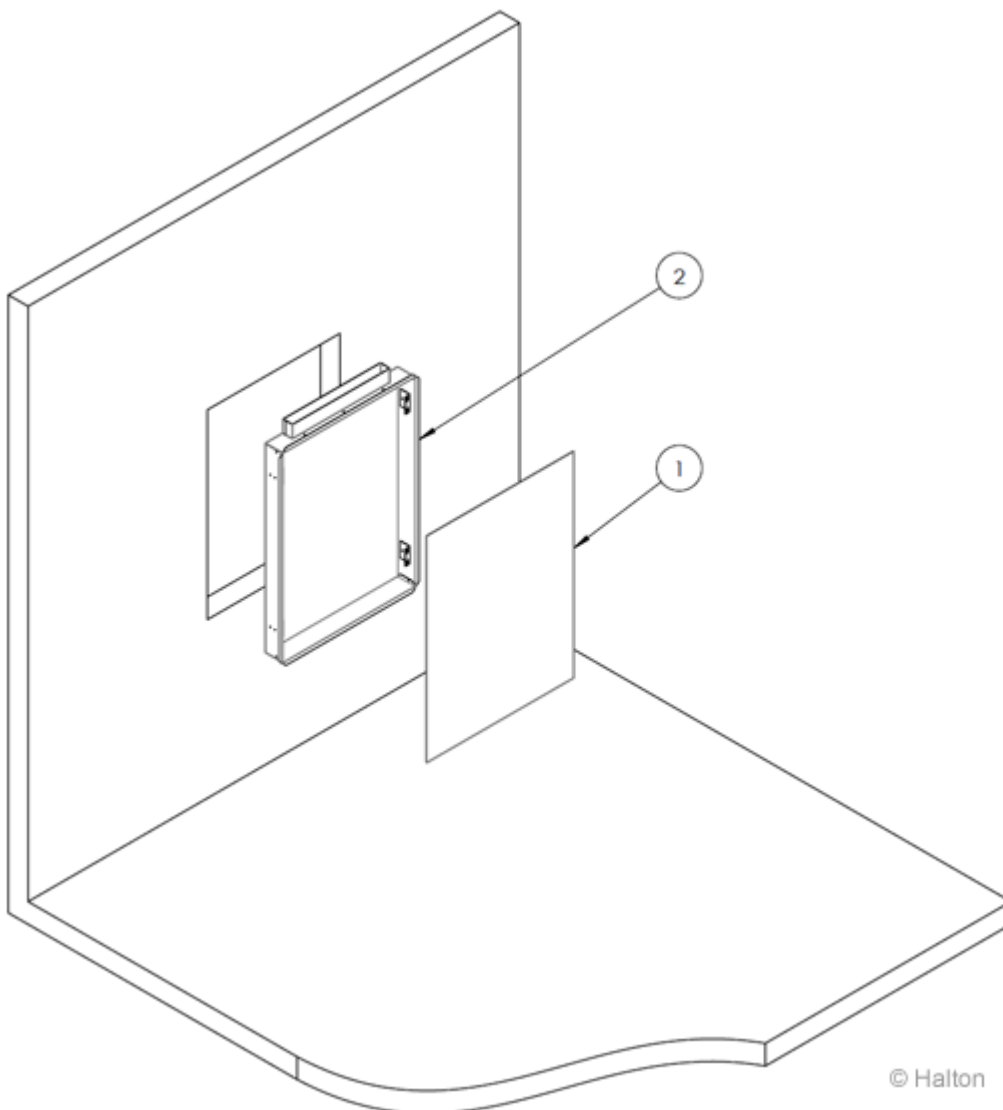
The non-clogging unit can be easily opened and cleaned.

Halton PRA or Halton PTS/C can be used as an airflow adjustment damper in round duct sections. The safety distance for reliable airflow measurement from the displacement unit is 5 duct dimensions between displacement unit and airflow adjustment damper.

If airflow adjustment damper is installed closer to the displacement unit (minimum distance about 3 duct dimensions), supply air throw pattern is correct, but airflow measurement result will not be accurate. When installing airflow adjustment damper close to the displacement unit (minimum $3xD$), attenuator could be needed between the damper and the displacement unit.

Note: The flow pattern data is for a unit installed flush with a wall at floor level.

Installation



Perform the installation in the following order:

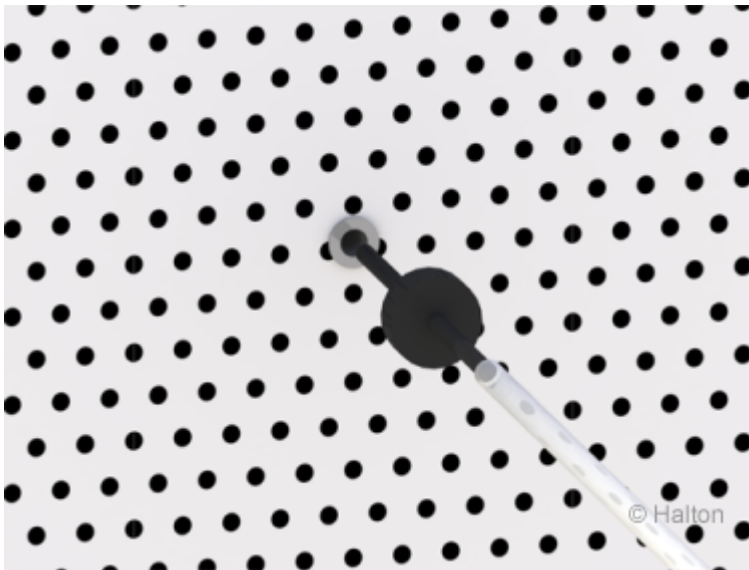
- A) Position the diffuser (2) within the wall space and connect the ductwork.
- B) Fix the diffuser to the wall with screws from inside the casing.

C) Install front plate (1) of the diffuser.

If ceiling installation (not recommended) is required, please contact sales.

Adjustment

The supply flow rate for the displacement unit is determined by measuring the differential pressure from the measurement nipple with a manometer. Use a measurement probe thin enough fit into the nipple. Then use tape or another gasket to create a seal in the nipple in order to get an accurate reading.



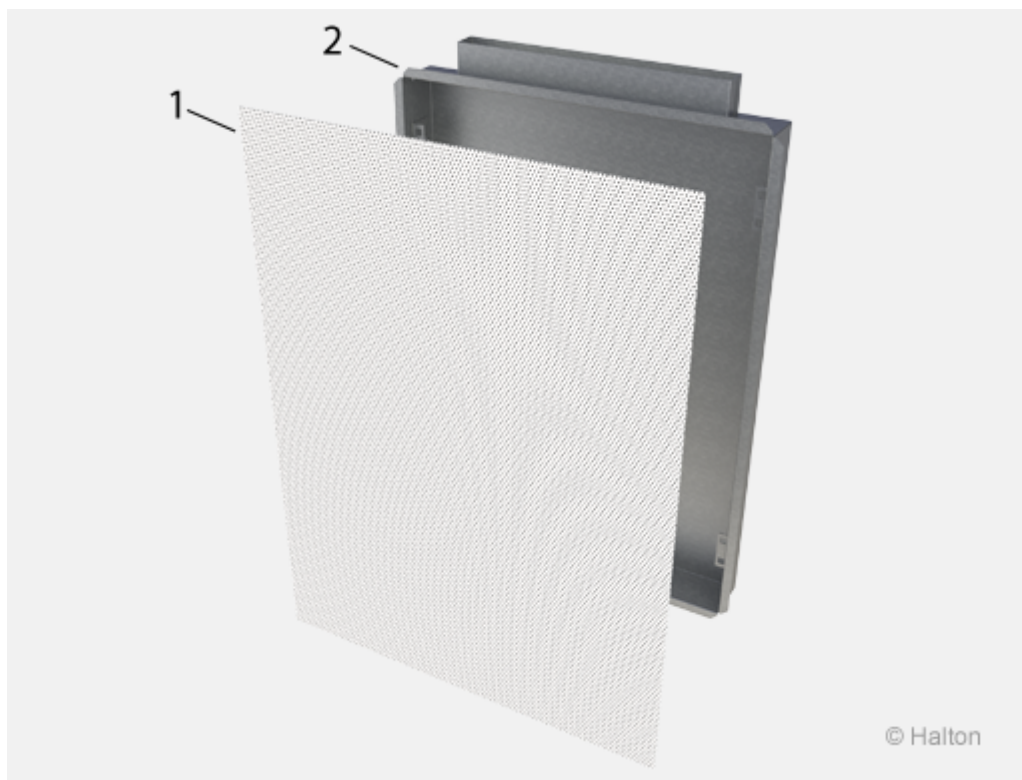
The flow rate is calculated by using the formula below:

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

Values of the k factor for formula

NS	k
400x40	15.2
400x60	21.4
400x80	27.6

Servicing



Code description

1. Front panel
2. Casing

Open the front panel (1) by carefully pulling the spring connections out.

Clean the parts using a brush or damp cloth. Do not immerse in water.

Reassemble in reverse order.

Specification

The Halton Zen Rectangular in Wall displacement ventilation supply unit is made of galvanized steel, polyester-epoxy-painted with a standard white (RAL 9003/30%) colour.

The unit has a robust, maintenance free, non-clogging design.

The unit is comprised of a detachable perforated front panel, a flow equalization plate, and casing.

The unit has a rectangular duct connection at the top or bottom depending on where the unit is located.

Order code

ZRW-D,CO-ZT

D = Size of duct connection (mm)

400×40, 400×60, 400×80

Other options and accessories

CO = Colour

SW Signal white (RAL 9003)

X Special colour (RAL xxxx)

ZT = Tailored product

N No

Y Yes (ETO)

Code example

ZRW-400×40, CO=SW, ZT=N