

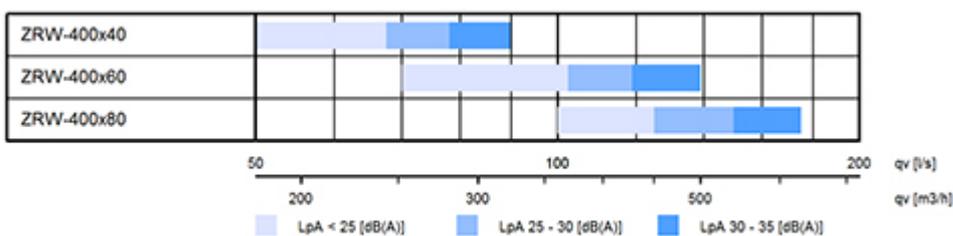
# Halton Zen ZRW – Displacement ventilation unit



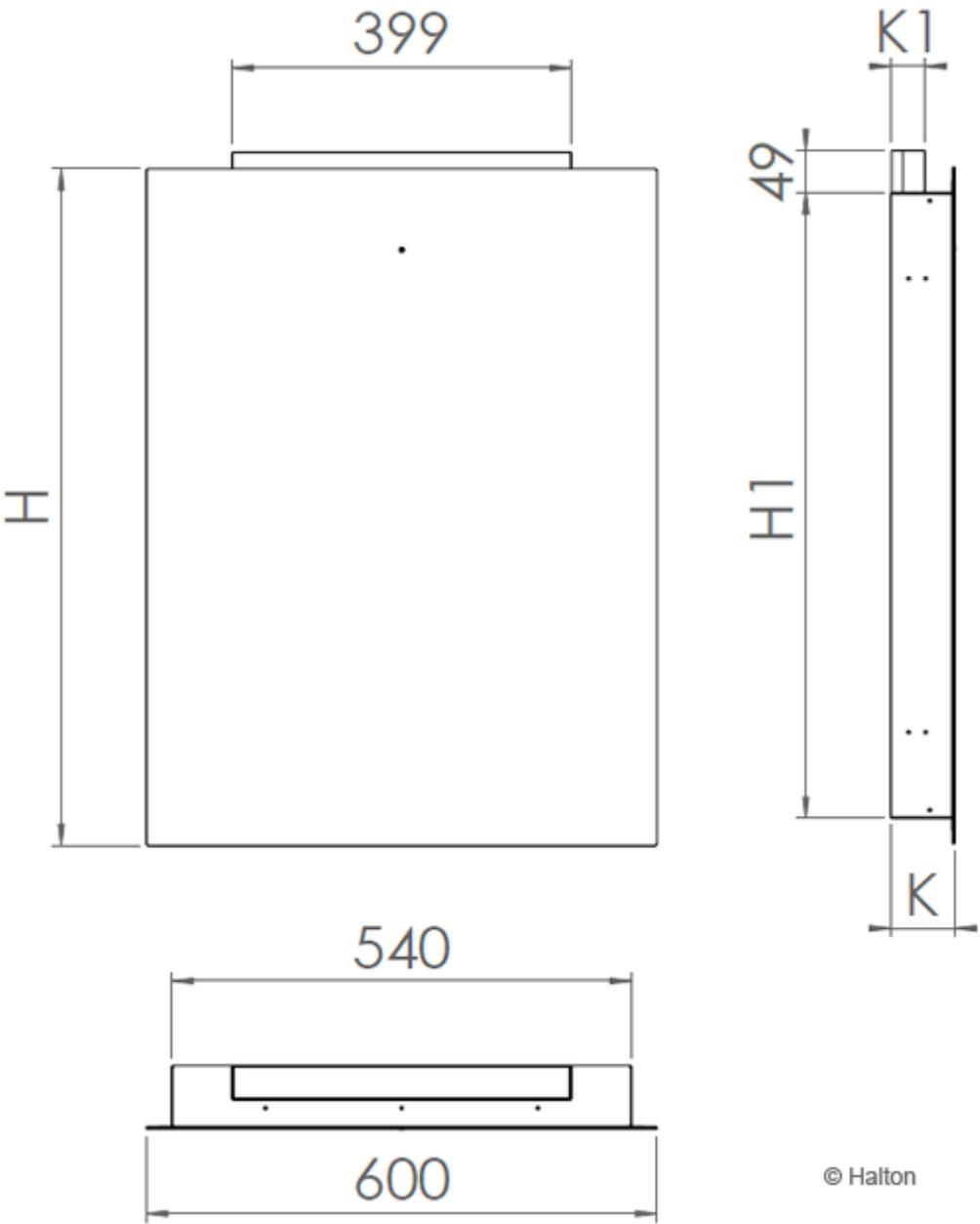
## Overview

- 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



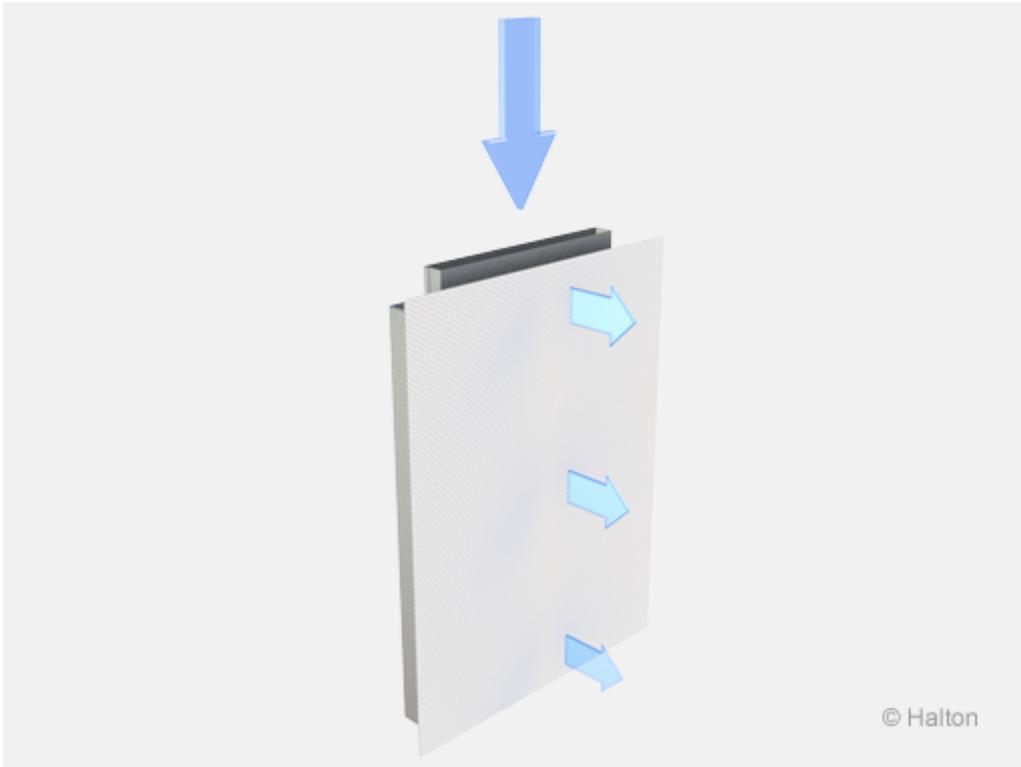
© Halton

NS [mm]	H [mm]	H1 [mm]	K [mm]	K1 [mm]	Weight [kg]
400×40	800	740	75	38	11.1
400×60	1000	940	92	58	13.9
400×80	1200	1140	105	78	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 ZRW, 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.

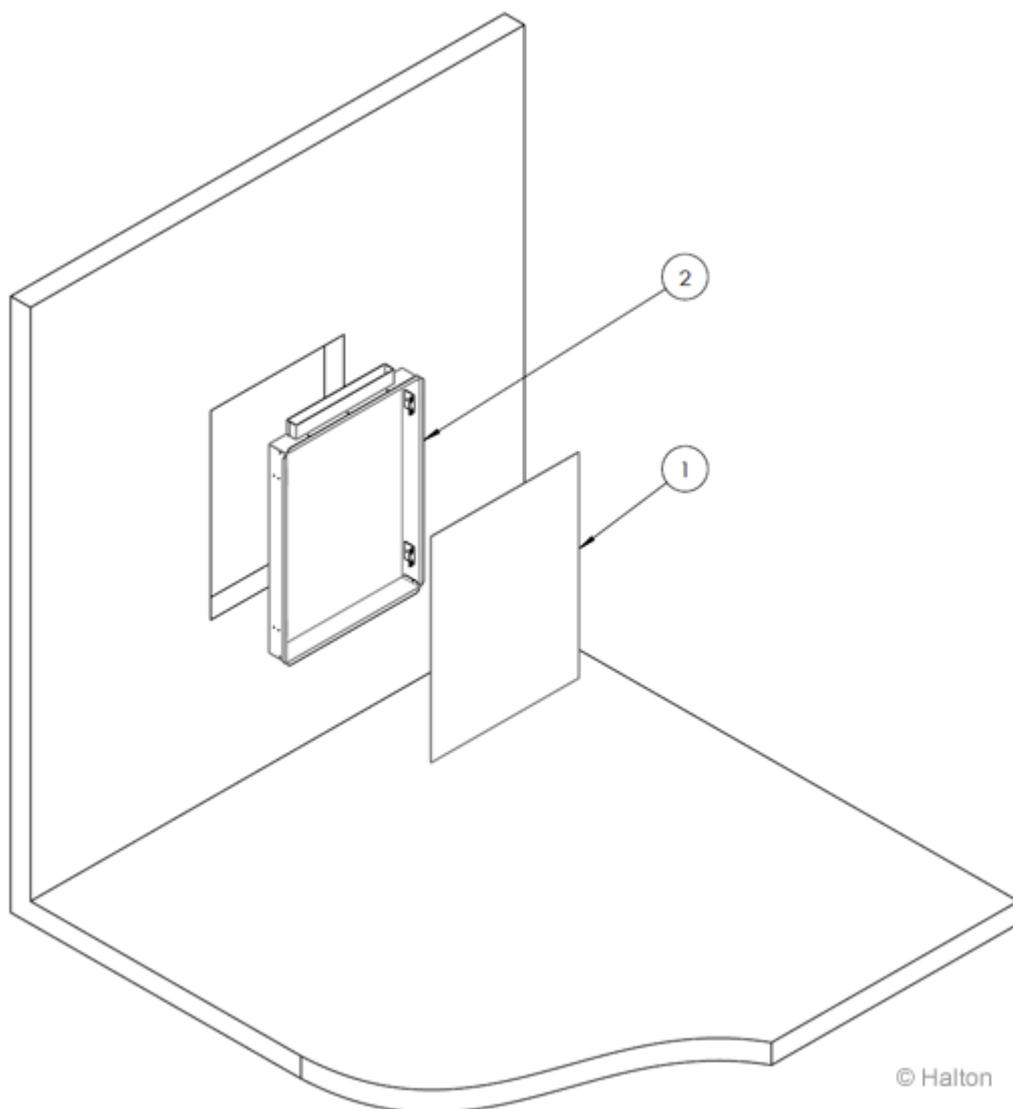
The non-clogging unit can be easily opened and cleaned.

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:**

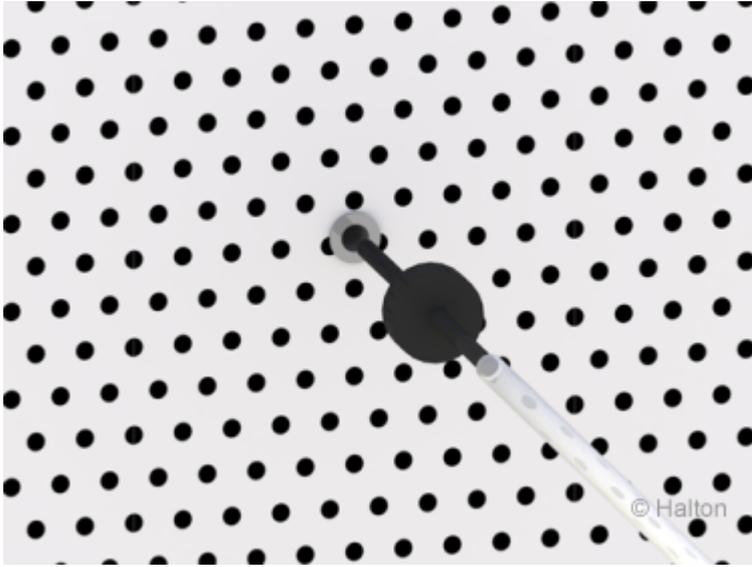
- A) Position the diffuser (2) within the wall space and connect the ductwork.
- B) Fix the diffuser to the wall with screws from inside the casing.
- C) Install front plate (1) of the diffuser.

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.



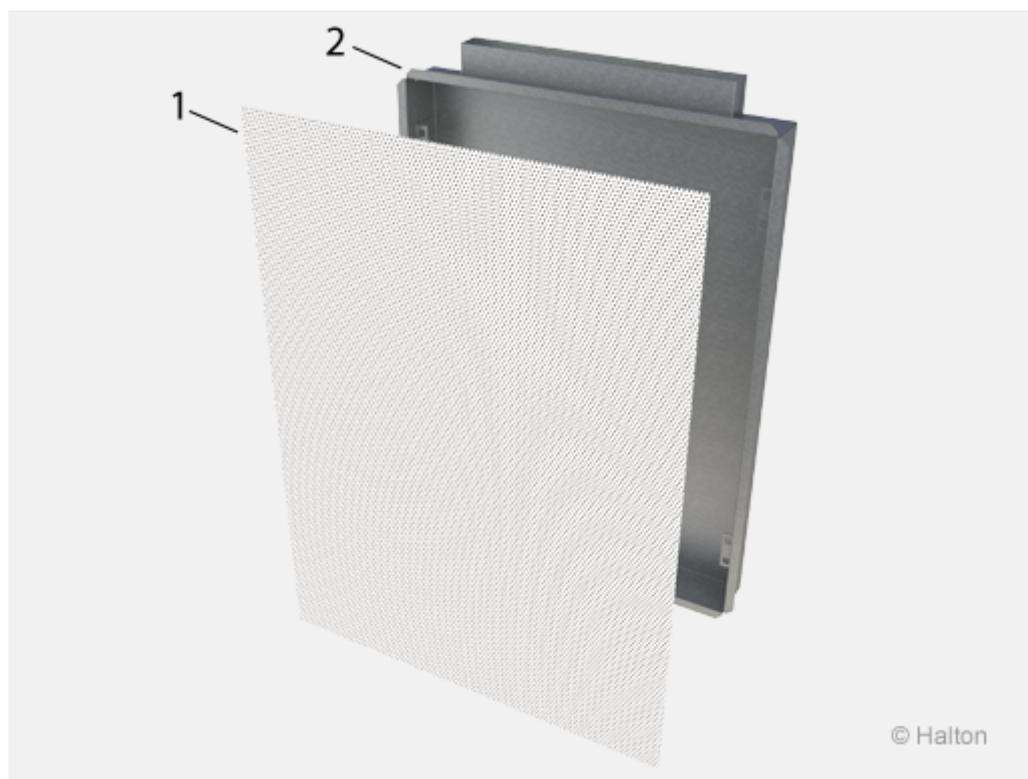
The flow rate is calculated by using the formula below:

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

Values of the k factor for formula

NS [mm]	k factor
400×40	15.2
400×60	21.4
400×80	27.6

# Servicing



## Key

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 ZRW displacement ventilation supply unit is made of galvanized steel, polyester-epoxy-painted with a standard white (RAL 9003) 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)

## Order code example

ZRW-400×40, CO=SW, ZT=N