Halton BOS, supply air valve - Technical description

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1 Introduction

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1.2 About this document

The purpose of this document is to give technical information and design examples for salespersons, technical support and designers.

1.3 Summary of changes

Release	Date	Description
1.1	09-Nov-2026	Removed special colour option in "Materials" and "Order code" sections.
1.0	05-Oct-2026	First Heretto version

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2 Product description

2.1 Overview



- Supply air valve
- Wall installation
- Adjustable airflow rate
- Ability to measure airflow rate
- Installation without an installation frame.
- Openable front panel for duct cleaning.

2.2 Operating principle

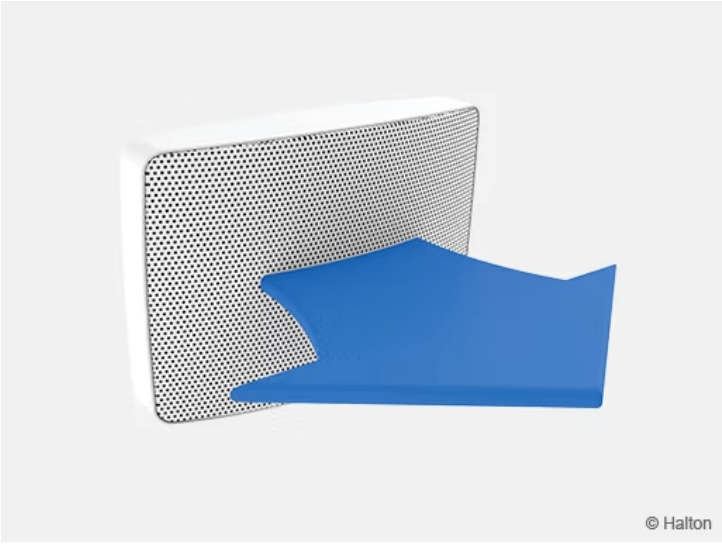


Fig. 1. Halton BOS, operating principle

Halton BOS supply air valve will be suitable in solutions where small airflow rates are required and air supply will be made from wall.

Supply air is discharged through the perforated front panel direct forwards.

Airflow rate can be adjusted by changing the size of the trimming plate.

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2.3 Materials

No.	Part	Material
1	Casing	Steel
2	Front panel	Perforated steel
3	Trimming plate	HD Polyethylene
4	Collar	Galvanized steel
5	Gasket	Rubber compound
6	Finishing	Painted white (RAL 9003/30%) or black (RAL 9005)

2.4 Dimensions and weight

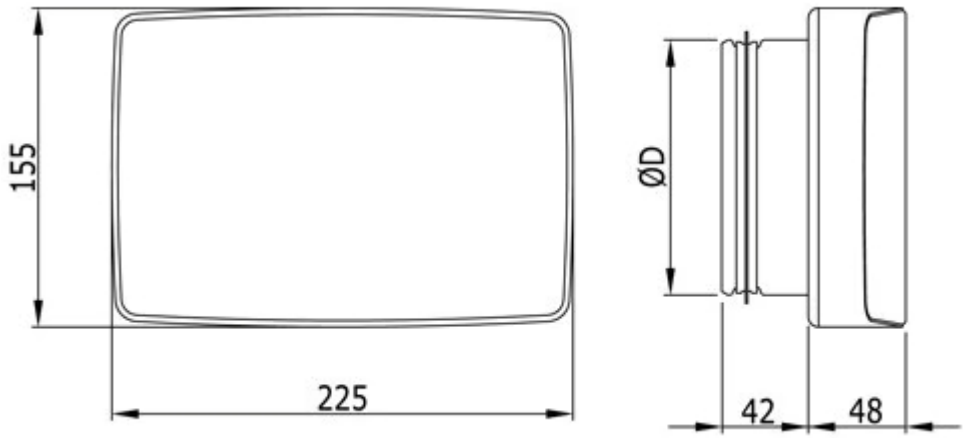


Fig. 2. Halton BOS, dimensions

NS [mm]	ØD
100	99
125	124

2.5 Specification

- The rectangular supply air valve shall have a detachable front plate and casing made of painted steel with a white (RAL 9003) or black (RAL 9005) standard colour.
- The casing shall incorporate a sealing gasket.
- Supply airflow rate and throw length shall be adjusted by adjusting the size of trimming pale in the front panel. Pressure loss shall be selected at the same time as the flow pattern adjustment and balancing.

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2.6 Order code

BOS-D; CO-ZT

Main options	
D = Duct connection size [mm]	100, 125

Other options and accessories	
CO = Colour	
SW	Signal white (RAL 9003)
B	Jet black (RAL 9005)
ZT = Tailored product	
N	No
Y	Yes (ETO)

Order code example
BOS-100; CO=SW, ZT=N

3 Design information

3.1 Installation

Fix the casing to the duct by screwing or riveting from the spigot.



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Or with the screws from the bottom of the casing.



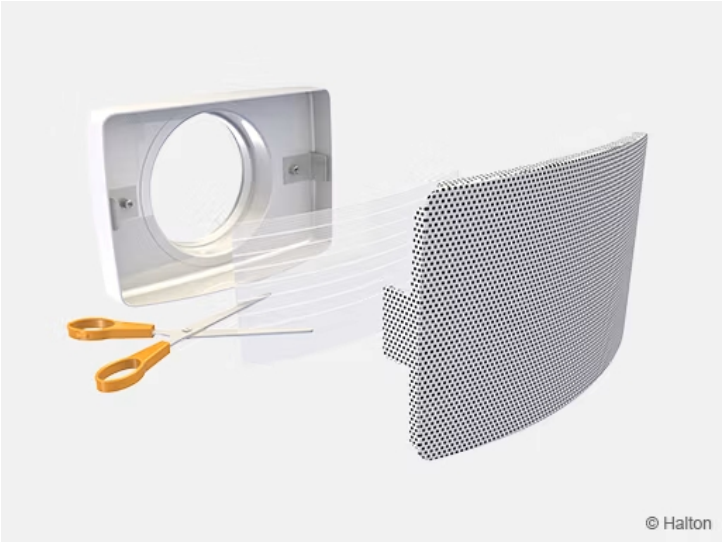
Halton BOS supply air valve will be installed on wall surface to the needed height, it could be installed close to the ceiling surface.

It will recommend having a minimum disctance of 50 mm to the ceiling surface enabling the opening for front panel.

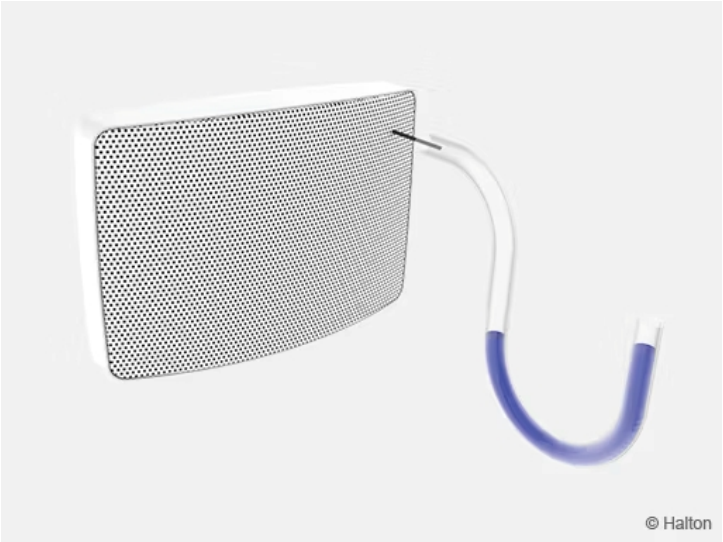
A recommended minimum safety distance before the valve is 3xD.

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3.2 Commissioning



Adjust the airflow rate by cutting the trimming plate according the needs.



Set a probe inside the valve and measure the differential pressure with a manometer. The location for the probe would be about 20 mm from top and side surfaces.

The airflow rate for Halton BOS is calculated using the formula and coefficients from the table below:

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

Δp_m	Measured pressure [Pa]
k	k factor given as a function of mounting and diameter
q_v	Airflow rate [l/s]

A	k
10*	1.60

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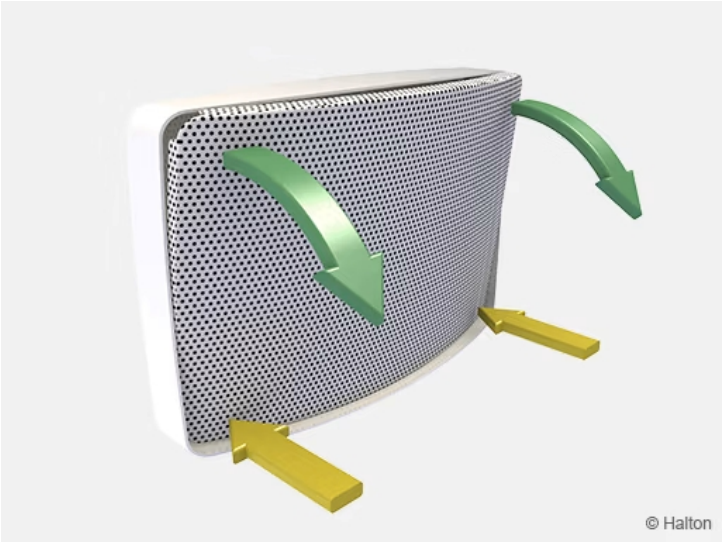
A	k
9	1.80
8	2.11
7	2.39
6	2.66
5	2.91
4	3.22
3	3.45
Open	4.08

These values will be valid for both valve sizes (ØD = 100, 125).

*Uncut trimming plate

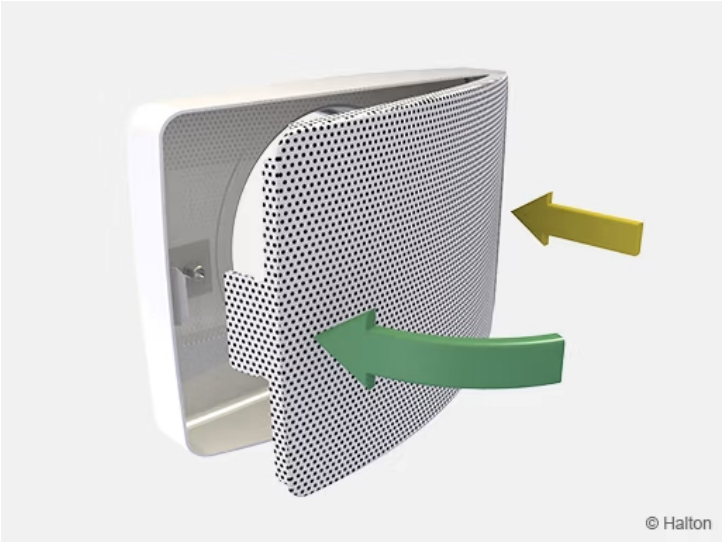
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3.3 Maintenance



Pressing the both corners of the front panel at the same time and release the front panel by pulling carefully from the opened side.

Note the position of the throttle plate. Wipe the parts with a damp cloth, instead of immersing in water.



Reassembly the front panel after cleaning.

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