

Halton AHD – Exhaust grille



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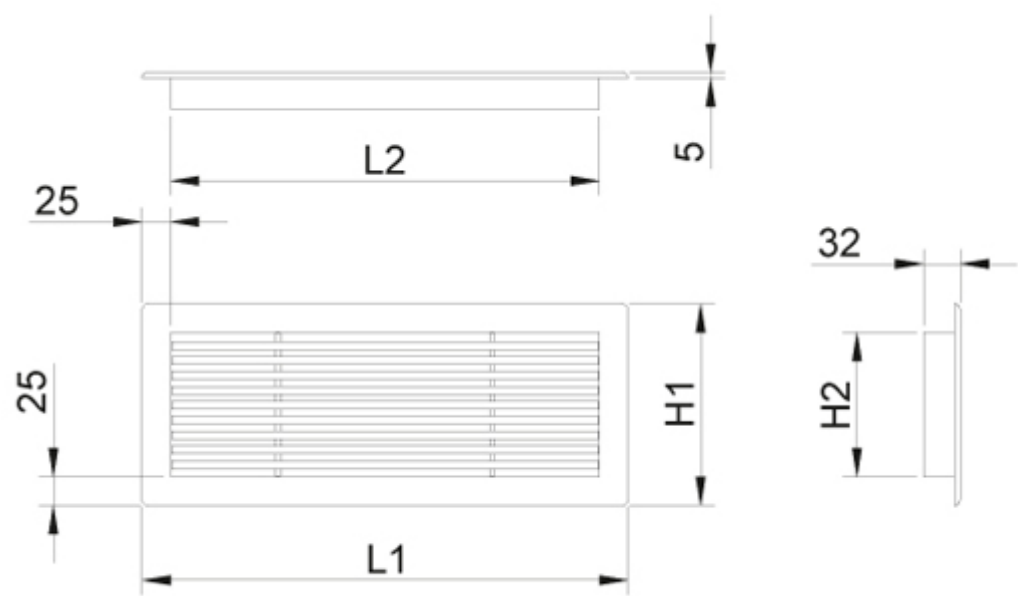
Overview

- Large free area, high airflow rates with minimal pressure drop
- Reduced visibility through grille due to shaped horizontal vanes
- Sizes adapted to suit modular 600×600 suspended ceilings
- Detachable grille allows cleaning of the grille and ductwork
- Spring clip fastening

Product models and accessories

- Airflow adjustment damper
- Installation frame
- Balancing plenum with measurement and adjustment functions
- Sound attenuation for plenum

Dimensions



LxH	L1	L2	H1	H2
200×100	226	176	126	76
250×100	276	226	126	76
300×150	326	276	176	126
200×200	226	176	226	176
400×200	426	376	226	176
300×300	326	276	326	276
600×300	626	576	326	276
400×400	426	376	426	376
600×400	626	576	426	376
800×400	826	776	426	376
1000×400	1026	976	426	376
1200×400	1226	1176	426	376
500×500	526	476	526	476
570×270	296	546	596	246
570×570	596	546	596	546

Square grilles have symmetrically inverted vanes.

With OD/AHD airflow adjustment damper total depth is 32 mm + 45 mm.

The free area of the Halton AHD grille is 75 %.

Special dimensions

In addition to these standard sizes, other dimensions can be specially ordered. The maximum size is 1500×600 mm (L×H).

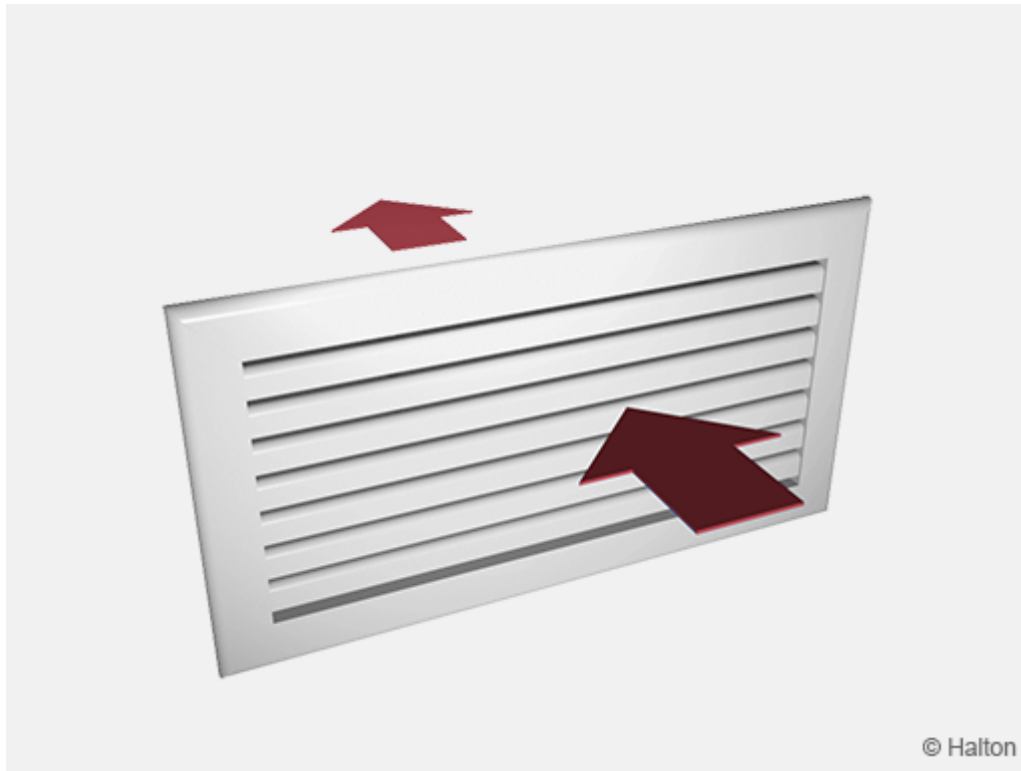
Material

Part	Material	Finishing	Note
Frame	Aluminium	Anodised or Polyester-painted, White (RAL 9003/30%) gloss or mill finished.	Special colours available. 100 % epoxy-painted as an option.
Fixed vanes	Aluminium	Anodised or Polyester-painted, White (RAL 9003/30%) gloss or mill finished.	Special colours available. 100 % epoxy-painted as an option.
Installation frame	Aluminium	–	Option: Concealed screw (CC) fastening – galvanised steel
Plenum box / spigot	Galvanised steel	–	–

Accessories

Accessory	Code	Description
Balancing plenum	PRL	For balancing and equalising the airflow, attenuating the duct noise
Plenum	BDR	Plenum for duct connection (with or without attenuation material)
Airflow measurement and adjustment unit	MEM	For exhaust installation
Sound attenuation	IN	Mineral wool for the BDR plenum box. Polyester fibre or mineral wool for the PRL plenum box.
Flow adjustment damper	OD	Aluminium opposite blade damper for airflow adjustment
Installation frame	IF	For installation without plenum
Visible screw fastening	SF	Screw fastening
Concealed screw fastening	CC	Option / Concealed screw fastening

Function

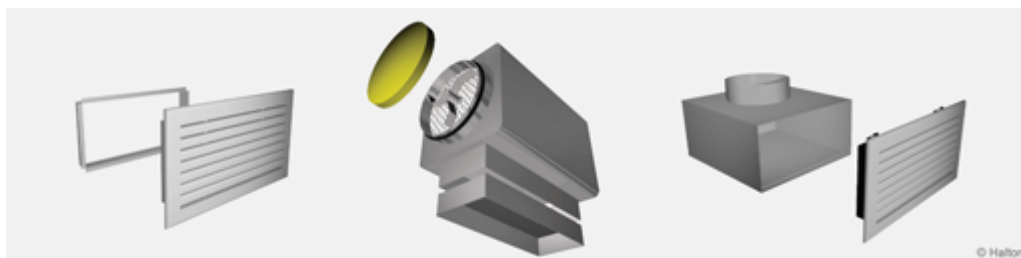


Air is exhausted from the space with a low pressure drop.
Wall or ceiling installation.

Installation

The size of the installation holes is LxH with an installation frame and (L-5)x(H-5) without an installation frame.

The grille is connected either directly to the duct using the installation frame IF/AHD or a Halton PRL balancing plenum or a Halton BDR plenum.



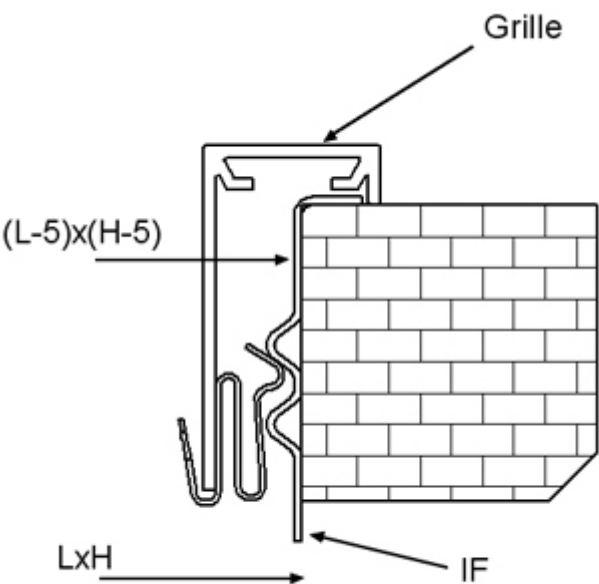
Installation frame, IF

Balancing plenum, PRL

Plenum, BDR

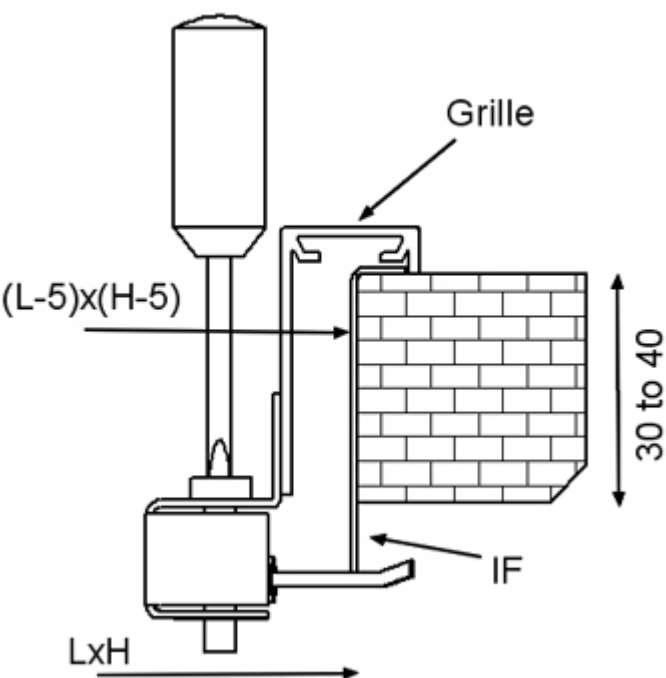
Fastening options

Clips, as standard (CL)



The grilles are supplied with spring fastening as standard. Clips fastening is used with installation frame (IF) or balancing plenums (Halton PRL and Halton BDR).

Concealed screw (CC)



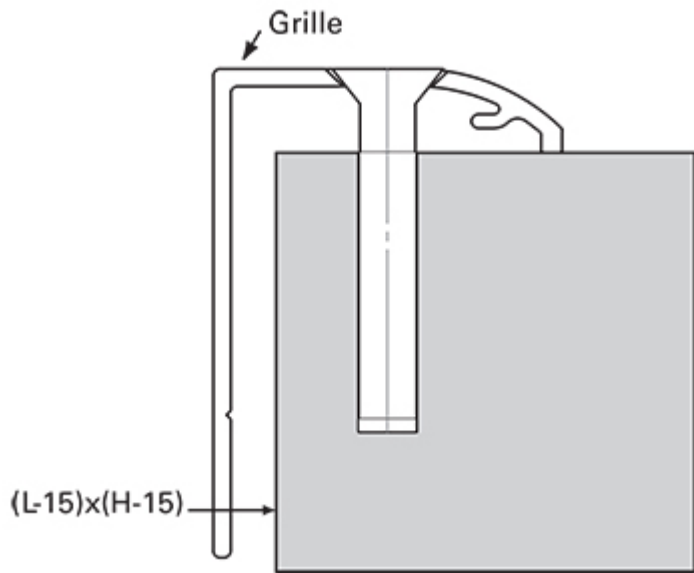
Concealed screw fastening is possible when the grille is installed with an IF installation frame or

with a Halton BDR plenum box.

In such cases, small holes are factory-made in the Halton BDR in front of each concealed screw. Concealed screw fastening is not possible with the Halton PRL balancing plenum.

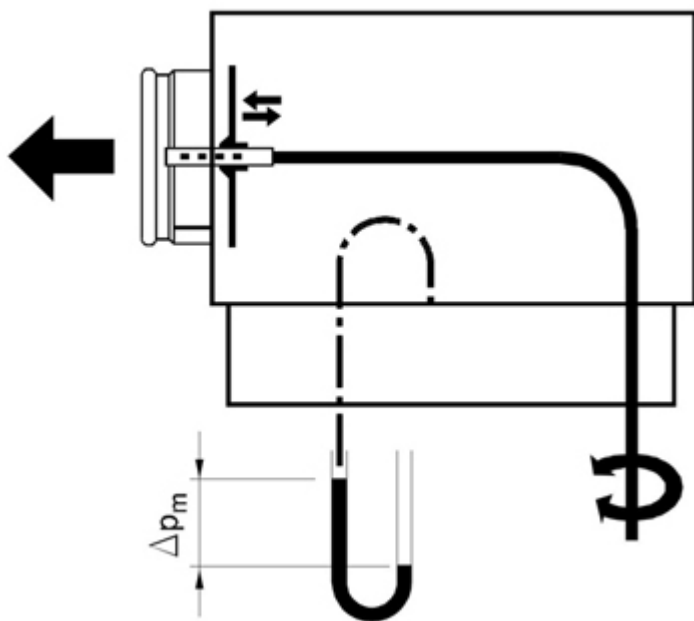
For ceiling installation we recommend the use of concealed screw fastening.

Visible screw (SF)



For ceiling installation, we recommend the use of visible screw fastening. Auto screws, 4.2×25 (bevel headed screw) are supplied.

Adjustment



In order to enable adjustment and measurement of the airflow rate it is recommended that you

connect the diffuser to the Halton BDR or the Halton PRL balancing plenum equipped with the MEM module.

The airflow rate can only be adjusted and measured when the grille is connected to the Halton BDR or Halton PRL plenum.

Define the exhaust airflow rate by measuring the pressure difference between the measurement tap on the Halton PRL or Halton BDR balancing plenum and the room air. The corresponding airflow rate is calculated using the formula below.

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

Adjust the airflow rate by turning the control spindle of the MEM.

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

Halton BDR

D	>6xD	min 3xD
100	6	7
125	10	12
160	19	22
200	28	32
250	49	51
315	77	83

Airflow adjustment damper OD/AHD

The airflow rate is adjusted by turning the damper blades behind the grille with a screwdriver. The measurement is performed when the grille is installed.

Servicing

- Remove the grille by unscrewing the fixing screws.
- Clean the parts by wiping them with a damp cloth.
- Push the grille back into place and screw in the fixing screws.

Option:

With balancing plenum Halton BDR + MEM

Remove the measurement and adjustment module by gently pulling the shaft (not the control spindle).

Wipe the parts with a damp cloth, instead of immersing in water.

Reassemble the measurement and adjustment module by pushing the shaft until the module meets the stopper.

Push the grille back into place and screw in the fixing screws.

Specification

The exhaust grille has a large free area. Pressure loss shall remain minimal, even with high exhaust rates.

Non-clogging lightweight design with fixed curved vanes prevent vision through the grille.

The joints of the outer frame are practically invisible.

The grille is either anodised or polyester-painted with a white (RAL 9003) standard colour.

The exhaust can be adapted for modular 600x600mm suspended ceilings.

The grille can be connected to the duct using an installation frame.

Option

The grille can be connected to the duct using a plenum.

The plenum Halton BDR comprises sound attenuation material made from mineral wool.

The balancing plenum Halton PRL comprises sound attenuation material made from polyester fiber with a washable surface or mineral wool.

The airflow measurement and adjustment unit MEM is available as an accessory.

The grille is removable in order to provide access to the measurement and adjustment module in the plenum.

Order code

AHD-L-H; VA-FS-FI-CO-ZT

L = Length (mm)

200, +1,..., 1500

H = Height (mm)

100, +1,..., 670

Other options and accessories

VA = Orientation of vanes

SD Same direction
IV Symmetric inverted vanes

FS = Fastening

CL Clips
SF Screw fastening
CC Concealed screw fastening

FI = Finishing

AN Anodised
MF Mill finished
PN Painted

CO = Colour

SW Signal white (RAL 9003)
X Special colour (RAL xxxx)
N No color

ZT = Tailored product

N No
Y Yes (ETO)

Sub products

BDR Plenum
PRL Plenum
IF Installation frame
OD Opposed blade damper (Grilles)

Code example

AHD-200-100, FS=CL, FI=AN, CO=N, ZT=N