

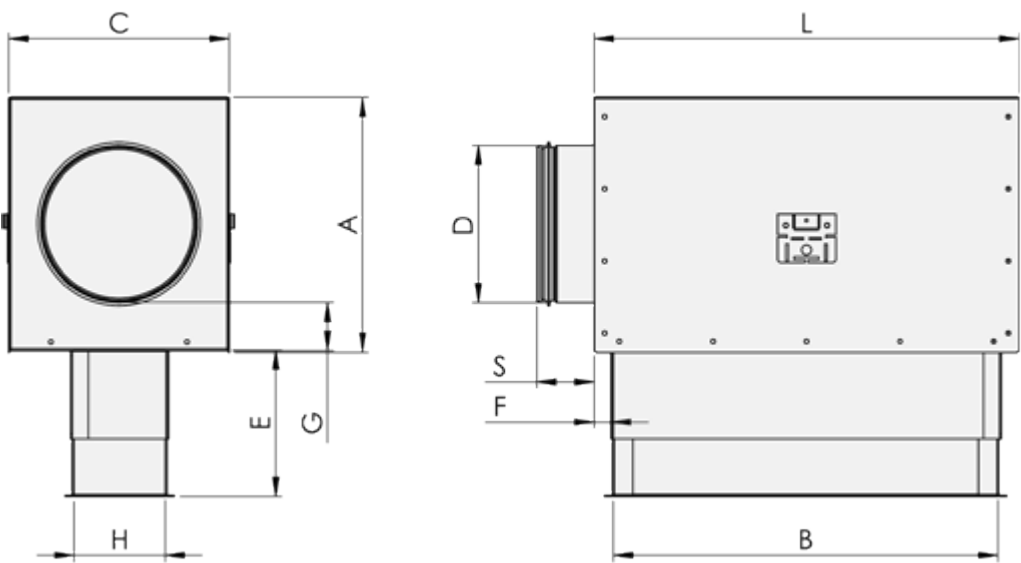
Halton PRL – Plenum for grilles



Overview

- Plenum for connecting supply/exhaust grille to ductwork
- Ensures proper function of the supply air grille
- Robust, airtight construction with aesthetically pleasing design
- Flexibility for grille installation due to telescopic collar
- Detachable measurement (only supply air) and airflow rate adjustment module
- Effective sound attenuation
- Access for ductwork cleaning

Dimensions



NS	A	B	C	D	E	F	G	H	L	S
200×100	208	201	198	124	92..150	9	42	101	230	63
300×100	224	301	226	159	92..150	9	33	101	330	63
400×100	260	401	226	159	92..150	9	51	101	430	63
500×100	287	501	276	199	92..150	9	44	101	530	63
300×150	287	301	276	199	92..150	9	44	151	330	63
400×150	360	401	330	249	92..150	9	56	151	430	63
500×150	360	501	330	249	92..150	9	56	151	530	63
600×150	360	601	330	249	92.. 150	9	56	151	630	63
800×150	413	801	382	314	92..150	9	50	151	830	63
400×200	360	401	330	249	92..150	9	56	201	430	63
500×200	394	501	382	314	92..150	9	40	201	530	63
600×200	413	601	382	314	92.. 150	9	50	201	630	63
800×200	413	801	382	314	92..150	9	50	201	830	63

No special dimensions available.

Material

Part	Material	Note
Casing	Galvanised steel	–
Collar	Galvanised steel	–
Attenuation material	Mineral wool	Alternatively polyester fibre
Spigot with gasket	Galvanised steel	Gasket rubber compound
Measurement and adjustment module (MSM/MEM)	Body: Aluminium Plate: Galvanised steel Brackets: Galvanised steel Plastic parts: Polypropylene (PP) Spindle: Stainless steel	–

Accessories

Accessory	Code	Description
Airflow measurement and adjustment unit	MSM	Adjustment and measurement module for supply airflow rate
Airflow adjustment unit	MEM	Adjustment module for exhaust airflow rate
Sound attenuation	IN	Internal sound attenuation material of mineral wool or polyester fibre

Product models

Model	Supply (with MSM)	Exhaust (with MEM)	Duct connection	Sound attenuation option
PRL/A	Yes	No	left/right	Yes
PRL/B	Yes	No	back	Yes
PRL/C	Yes	No	top/bottom	Yes
PRL/D	No	Yes	left/right	Yes
PRL/E	No	Yes	back	Yes
PRL/F	No	Yes	top/bottom	Yes
PRL/G	No	No	left/right	No
PRL/H	No	No	back	No
PRL/I	No	No	top/bottom	No

When using Halton PRL with Halton EVA exhaust unit, the plenum will delivered without telescopic collar (order code: ES=Y)

Duct connections



Fig.1. Halton PRL/A, PRL/D or PRL/G (side connection)



Fig.2. Halton PRL/B, PRL/E or PRL/H (back connection)

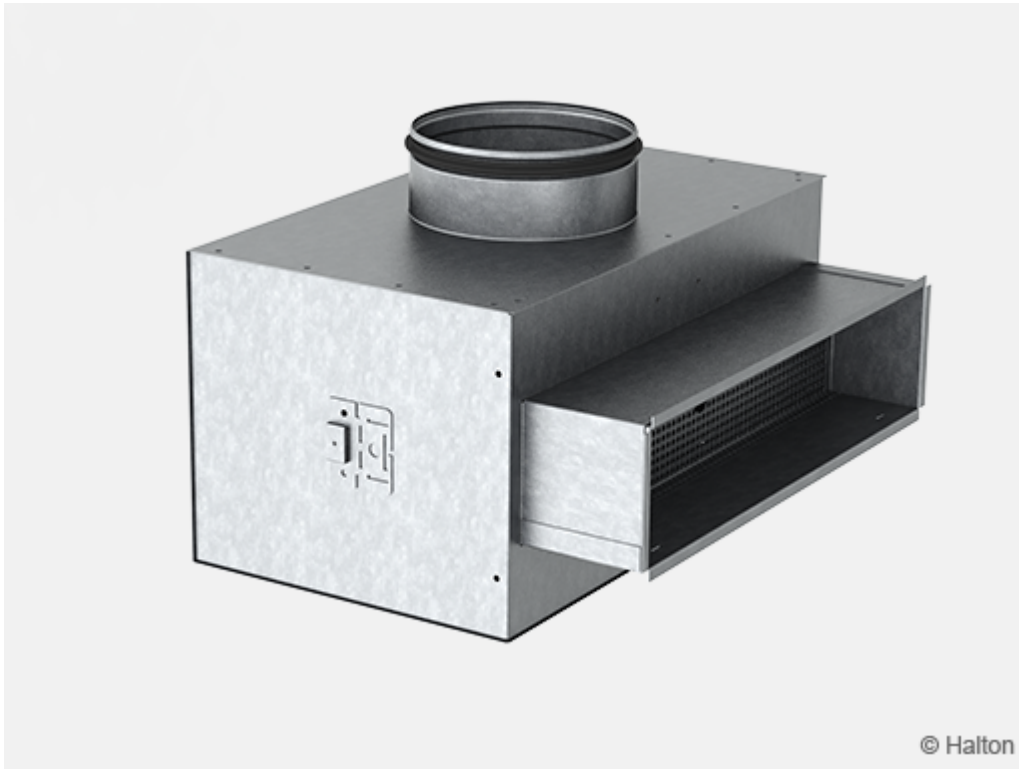
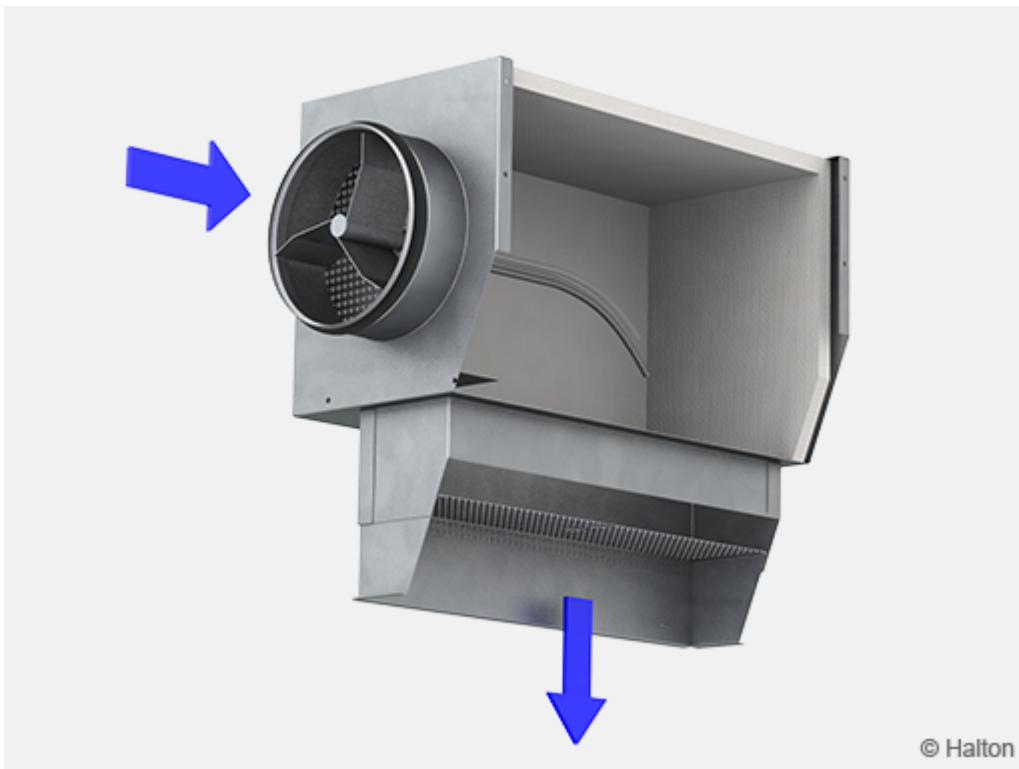


Fig.3. Halton PRL/C, PRL/F or PRL/I (top/bottom connection)

Function



Halton PRL balancing plenum equalises the airflow by reducing the flow velocity.

Air is spread evenly into the grille, ensuring proper function.

A range of grilles can be connected to the distribution duct with the aid of a Halton PRL, improving their characteristics considerably.

The plenum also attenuates duct noise.

Halton PRL can also be used as an exhaust unit.

Installation



Halton PRL is connected to the duct with a spigot equipped with a gasket. The duct connection can be located on the side, above/below or behind the plenum. Due to the symmetrical structure of the Halton PRL, connections can be made in a number of different ways: by turning the plenum right or left, or by rotating, from above or below.

The telescopic collar of the plenum permits mounting into walls of thickness 90...150 mm. For installation with Halton EVA exhaust unit no telescopic collar is used (not included to delivery).

The recommended safety distance upstream of the plenum in supply installations is minimum 3D.

Dimensions for installation hole are (H+5mm) x (B+5mm).

Adjustment

The supply flow rate is determined by using the measurement and adjustment module MSM.

The tubes and control spindle are passed through the grille. Measure the differential pressure with

a manometer. The flow rate is calculated using the formula below.

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

Δp_m Measured pressure [Pa]

k The k factor given as a function of mounting and diameter

q_v Airflow rate [l/s]

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

PRL	> 8xD	min. 3xD
200×100-125	8.2	12.6
300×100-160	14.1	21.7
400×100-160	17.7	21.7
500×100-200	34.6	33.9
300×150-200	20.1	33.9
400×150-250	30.0	55.5
500×150-250	34.6	50.1
800×150-315	34.6	83.3
400×200-315	55.9	55.5
500×200-315	27.4	83.3
800×200-315	50.0	83.3

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

Servicing

Detach the grille and the perforated plate of the telescopic collar. Detach the measurement and adjustment module by pulling gently from the casing (not from the control spindle or measurement tubes). Wipe the parts with a damp cloth, instead of immersing in water.

The measurement and adjustment module is remounted by pushing the body until it meets the stopper.

The sound attenuation material within the plenum can also be removed (the material is washable), to enable cleaning of the inner side of the plenum. The material is detached by releasing the retaining brackets, which are replaced after washing.

Replace the grille after cleaning.

Specification

The Halton PRL balancing plenum for grilles is made of galvanised steel and has a robust and airtight construction.

Airflow rate measurement and adjustment module are available for supply application. The measurement and adjustment module is adjustable without opening the grille.

The balancing plenum has a spigot with integral gasket for airtight duct connection and a plug for ductwork pressure testing. The Halton PRL plenum has options for duct connection on the side, back or top.

The balancing plenum attenuates duct noise. The sound attenuation material is either mineral wool or polyester fibre with a washable surface.

Order code

PRL/S-W-H-D, AT-OM-ZT

S = Model

- A Supply inlet (Left-Right connection)
- B Supply inlet (Back connection)
- C Supply inlet (Top/Bottom connection)
- D Exhaust outlet (Left-Right connection)
- E Exhaust outlet (Back connection)
- F Exhaust outlet (Top/Bottom connection)
- G No accessories (Left – Right connection)
- H No accessories (Back connection)
- I No accessories (Top/Bottom) connection

W = Width of grille connection (mm)

200, 300, 400, 500, 600, 800

H = Height of grille connection (mm)

100, 150, 200

D = Connection size of duct (mm)

125, 160, 200, 250, 315

Other options and accessories

ES = EVA model

- N No
- Y Yes

AT = Sound attenuation material

P Polyester fibre

W Mineral wool

NA No sound attenuation

OM = Measurement/adjustment modul

YS MSM installed (supply)

YE MEM installed (exhaust)

NA No measurement or adjustment module

ZT = Tailored product

N No

Y Yes (ETO)

Code example

PRL/A-200-100-125, ES=N, AT=P, OM=YS, ZT=N