

# Halton PLM – Plenum for linear slot diffuser



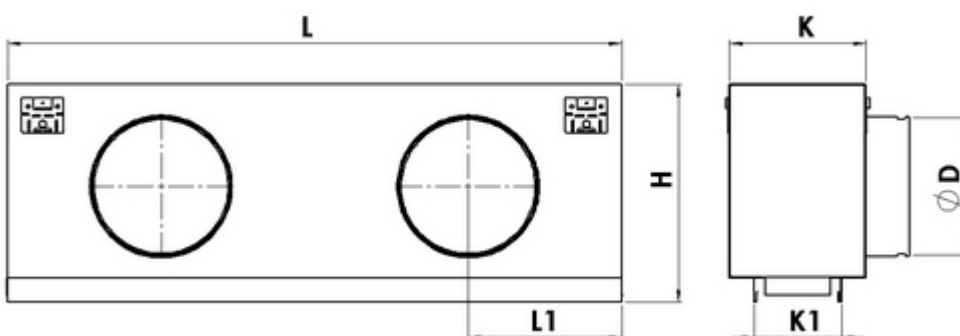
## Overview

- Plenum for connecting Halton SLM linear slot diffuser supply/exhaust unit to ductwork
- Ensures proper function of the supply air diffuser
- Access for ductwork cleaning

## Product models and accessories

- Model with sound attenuation, mineral wool or polyester fibre
- Detachable airflow rate measurement and balancing module

## Dimensions



Slots	H	K	K1	ØD
1	235	130	59	160
2	275	181	110	200
3	275	232	161	200
4	325	283	212	250

## Standard dimensions for Halton SLM+PLM

Diffuser active length (mm)	572	872	1172	1472	1772
L (mm)	571	871	1171	1471	1771
L1 (mm)	286	436	586	368	443
Duct connections (pcs)	1	1	1	2	2

In addition to standard linear slot diffuser sizes, other sizes can be ordered. The maximum length is 2000 mm.

Continuous plenums with modular design are also available for installation lengths greater than 2000 mm.

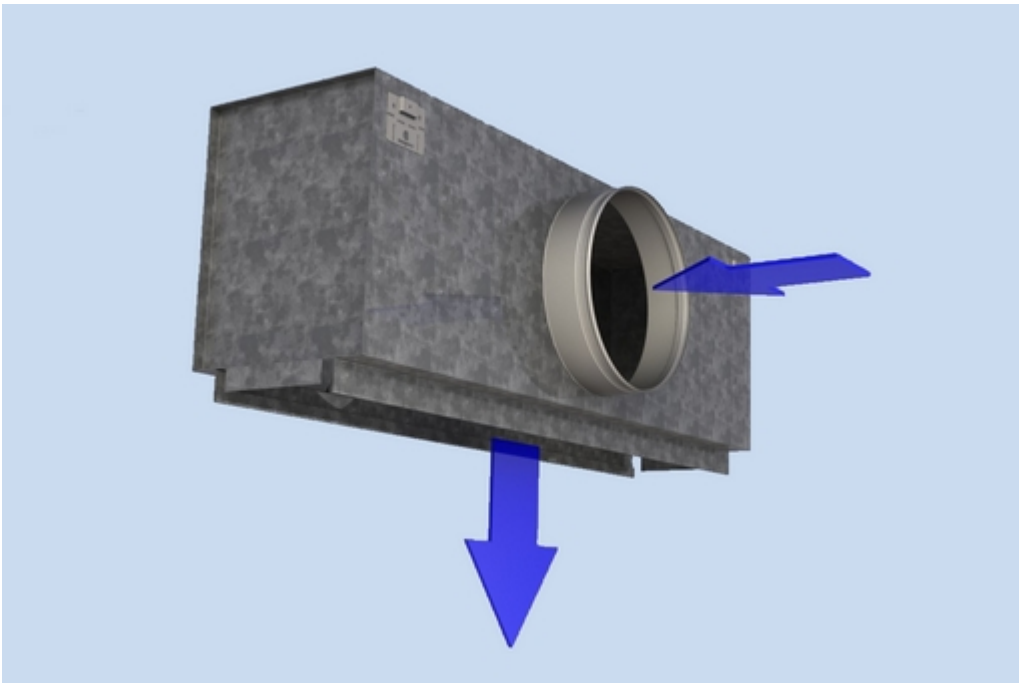
## Material

Part	Material	Note
Plenum box / spigot	Galvanised steel	Spigot equipped with rubber gasket
Sound attenuation material	Mineral wool or polyester fibre	The mineral wool is fixed with nails

# Accessories

Accessory	Code	Description
Sound attenuation material	2W	Mineral wool on 2 sides
Sound attenuation material	5W	Mineral wool on 5 sides
Sound attenuation material	2P	Polyester fibre on 2 sides
Sound attenuation material	5P	Polyester fibre on 5 sides
Airflow measurement and adjustment unit	OM	For supply installation

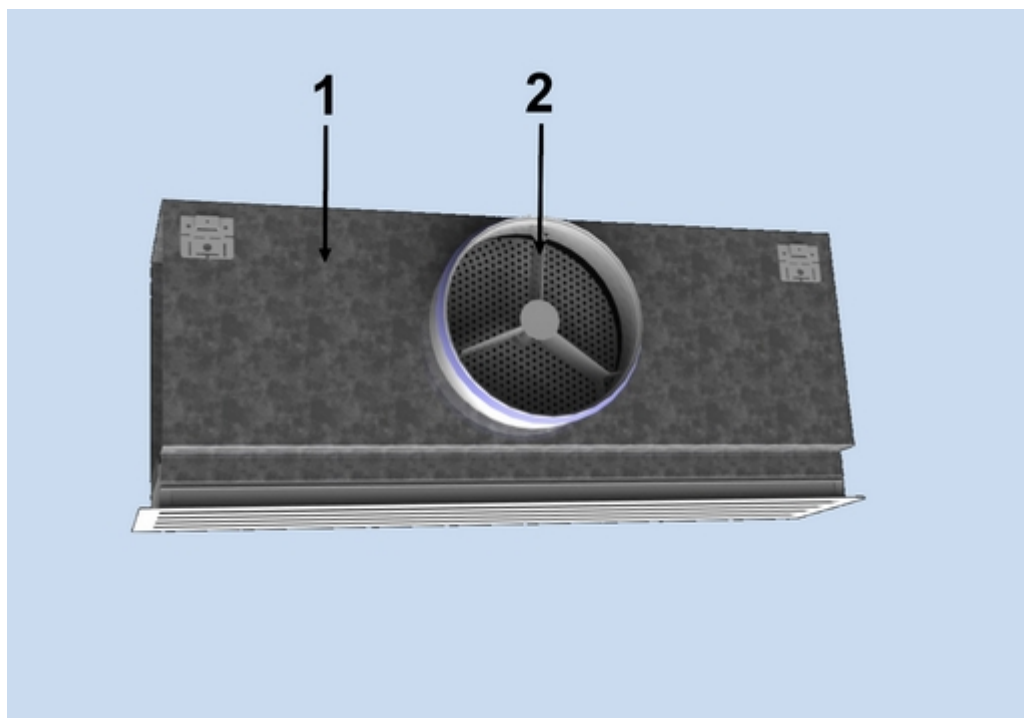
# Function



The duct pressure and air velocity are reduced inside the Halton PLM plenum box. Air is supplied into the space through the diffuser, improving the air distribution quality.

The airflow rate can be adjusted using the optional measurement and adjustment module MSM.

# Installation



## Key:

1. Plenum box
2. Measurement and adjustment module (MSM)

The Halton PLM is installed into the suspended ceiling with M8 drop rods (not supplied in the delivery) and connected to the ductwork with a spigot equipped with an integral rubber gasket.

When equipped with a measurement and adjustment module, the recommended safety distance upstream of the device is at least 3D, in order to ensure a reliable airflow rate measurement.

The units control spindle must not be excessively bent.

## Adjustment

In order to enable airflow adjustment and measurement of airflow rate, it is recommended that the diffuser be connected to the plenum equipped with the MSM module.

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

Detach the diffuser and pass the tubes and control spindle through the diffuser.  
Replace the diffuser.

Measure the differential pressure using a manometer. The flow rate is calculated using the formula below:

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

$\Delta p_m$  Measured pressure [Pa]

$k$  The 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):

PLM	> 6xD	min. 3xD
160	19	22
200	49	32
250	51	51

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 and replace the diffuser.

## Servicing

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 back into place until the module meets the stopper.

## Specification

The plenum is made of galvanised steel.

The plenum comprises an airflow measurement and adjustment module.

The diffuser is detachable in order to provide access to the measurement and adjustment module in the plenum.

The plenum comprises sound attenuation material made of mineral wool or polyester fibre.

The plenum reduces duct pressure and air velocity in order to supply air throughout the entire face area of the linear diffuser and improve the air distribution quality.

# Order code

## PLM/S-L-D-N; IN-OM-ZT

**S = Number of slots**

1, 2, 3, 4

**L = Length (mm)**

372, +1, ..., 50000

**D = Diameter of duct connection (mm)**

160, 200, 250

**N = Number of duct connections**

1, +1, ...,  $((L-30)/(D+30)+1)$

## Other options and accessories

**IN = Sound attenuation material**

N No attenuation material

2W 2 sides, mineral wool

5W 5 sides, mineral wool

2P 2 sides, polyester fibre

5P 5 sides, polyester fibre

**OM = Measurement/adjustment module (MSM)**

N No measurement or adjustment module

Y MSM installed in each duct connection

**ID = Diffuser assembled with plenum**

N No

Y Yes

**ZT = Tailored product**

N No

Y Yes (ETO)

## Code example

PLM/1-400-160-1, IN=N, OM=N, ZT=N