

# Halton DAC – Square diffuser



## Overview

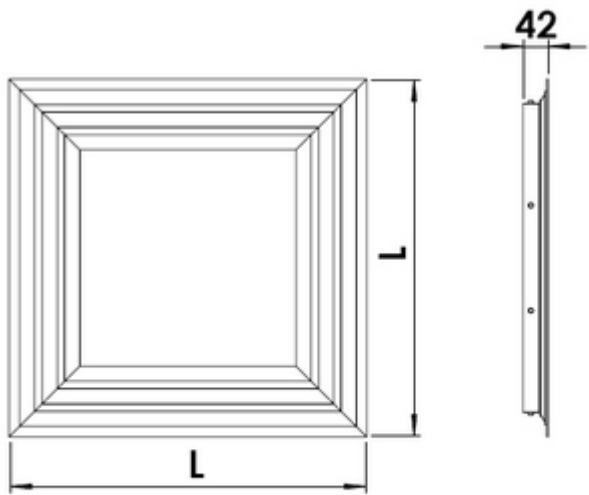
- Diffuser adapted for variable air flow
- Supply air pattern in four directions, number of slots alternatively 1-3
- Three models; supply model, exhaust model and integrated supply and exhaust model
- Special profile diffuser blade creates a Coanda effect which enables wide range of air flow rates
- Installation to modular ceilings 600 x 600 or 675 x 675 mm
- Circular duct connection with rubber gaskets

## Product models and Accessories

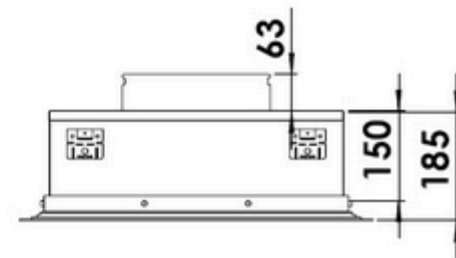
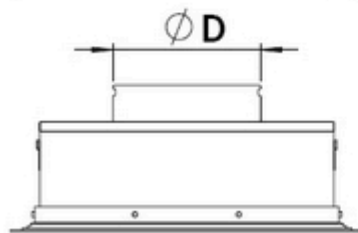
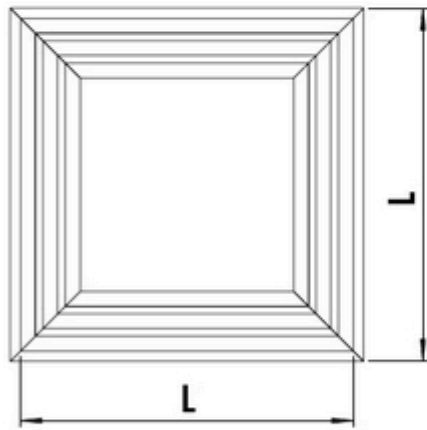
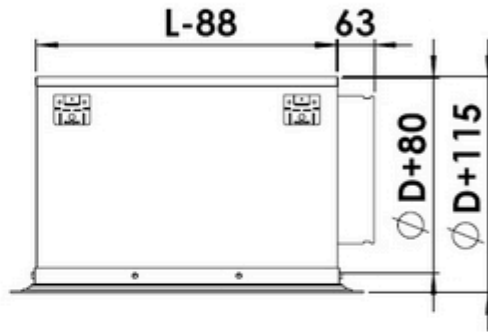
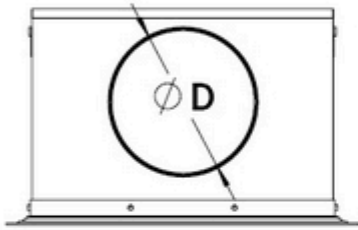
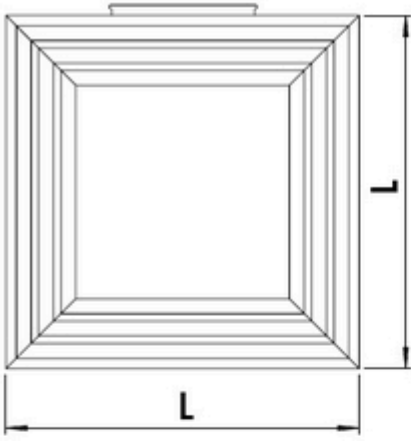
- Openable version for exhaust with filtering option
- Installation on Fineline profiles
- Plenum with horizontal or vertical duct connection (rubber gasket on spigot)

## Dimensions

DAC only



DAC mounted on PDA plenums : horizontal and vertical connection



NS	L
600x600	595
675x675	670

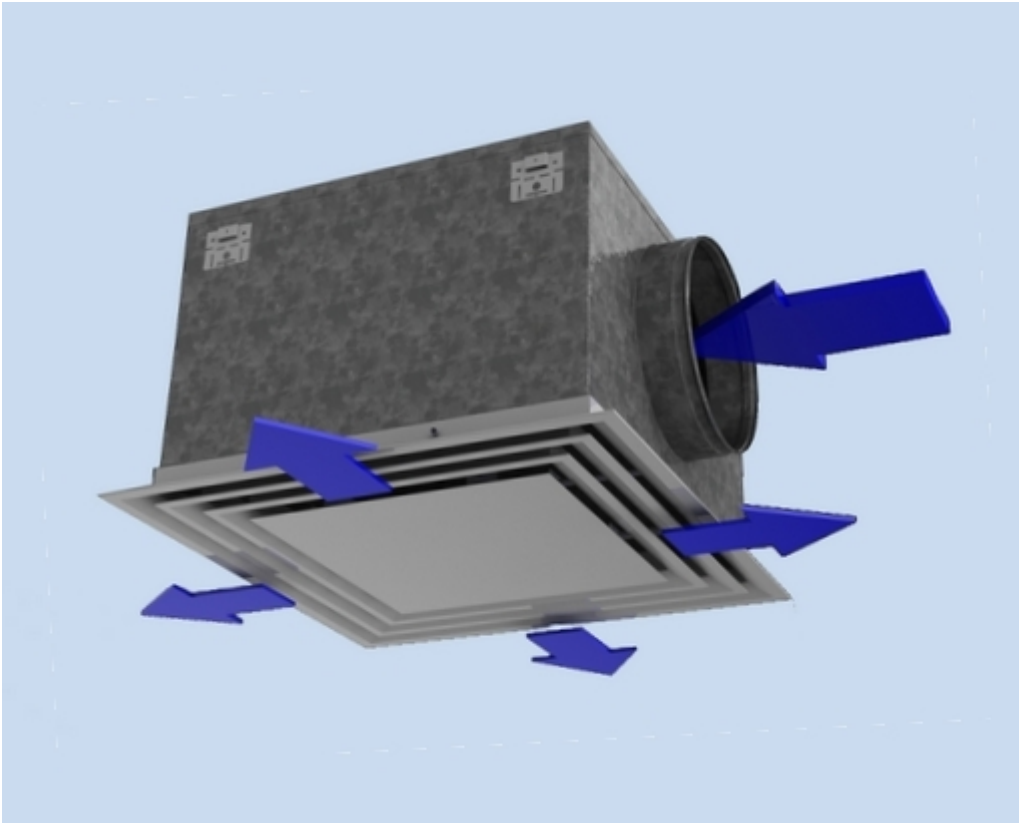
# Material

Part	Material	Finishing	Note
Front Plate	Aluminium	Epoxy-polyester painting, RAL 9003 / 30% gloss	Special colours available
Plenum	Galvanised steel		Horizontal or vertical duct connection
Spigot	Galvanised steel		
Gasket	Rubber compound		

# Accessories

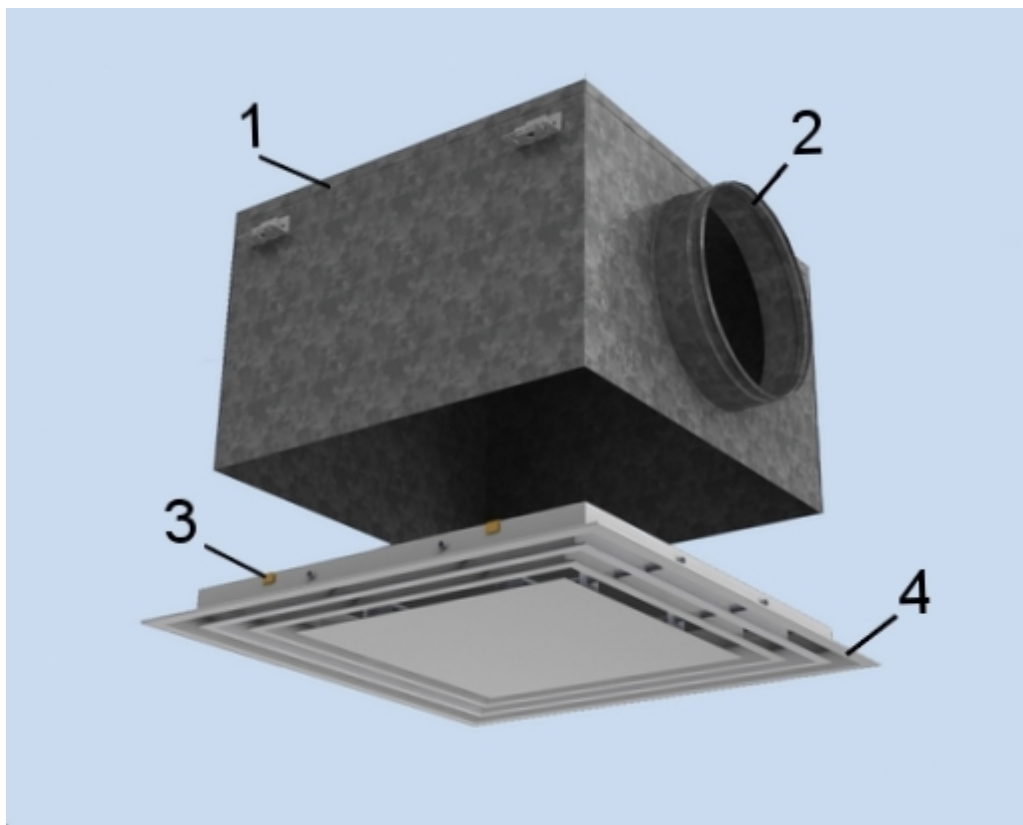
Accessory	Code	Description	Note
Plenum	PDA/H-S	Plenum with horizontal connection: Supply application	Insulation with mineral wool and airflow adjustment with MSM available for this configuration
Plenum	PDA/V-S	Plenum with vertical connection: Supply application	Insulation with mineral wool and airflow adjustment with MSM available for this configuration
Plenum	PDA/H-R	Plenum with horizontal connection: Exhaust application	Insulation with mineral wool available for this configuration
Plenum	PDA/V-R	Plenum with vertical connection: Exhaust application	Insulation with mineral wool available for this configuration
Plenum	PDA/H-F	Plenum with horizontal connection: Exhaust application with filter	Insulation with mineral wool available for this configuration
Plenum	PDA/V-F	Plenum with vertical connection: Exhaust application with filter	Insulation with mineral wool available for this configuration

# Function



Air is supplied to the room horizontally through (one to three) slots in the unit's front panel. The vane profile, with its low discharge angle of diffusion, ensures that the air jet spreads along the ceiling and mixes smoothly with the ambient air when it falls down in the occupied space (Coanda effect). This provides excellent comfort conditions in the occupied zones, with a wide range of airflow rates.

# Installation



1. Plenum
2. Spigot
3. Clips
4. Front plate

## Plenum installation

The plenum is installed into the suspended ceiling with M8 drop rods (not supplied in the delivery) and connected to the ductwork with a spigot.

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

The units control spindle must not be excessively bent.

## Diffuser installation

For integral diffusers with 600×600 tiles, the diffuser is attached to the plenum via clips.

For integral diffusers with 675×675 tiles, the diffuser is attached to the plenum with screws or pop rivets (not supplied).

# Adjustment

To aid in adjusting and measuring the air flow rate, it is recommended that the diffuser is connected to a plenum equipped with a MSM.

The supply air flow is determined by measuring the pressure difference with a measurement module.

Measure the differential pressure with a manometer. The air flow rate is calculated according to the following formula:

$$Qv = k \times \sqrt{\Delta Pm}$$

Where:

$\Delta Pm$  is the measured pressure (Pa)

$k$  is a factor given as a function of mounting and diameter

$Qv$  is the airflow rate

The  $k$  factor for installations with different safety distances (distance of other items from the MSM):

Sigot Diameter	Safety distance	
	> 6XD	min 3XD
200	28	32
250	49	51
315	78	–

Adjust the air flow rate by rotating the control spindle until the desired setting is achieved.

Lock the damper in position with a screw.

Replace the tubes and spindle in the plenum, and return the diffuser to its position.

# Servicing

## Supply and exhaust without filter

Detach the diffuser, clean the parts by wiping with a damp cloth.

Push the diffuser back into place by clipping the plenum.

## Exhaust with filter

Activate the push-pull system by pressing on the diffusers' front panel.

Open the front panel and rotate 90°.

Rotate the brackets 90°, and pull out the filter.

Install a new filter in the same position, close the front panel by pressing the push-pull release.

## Option: MSM

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

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.

Push the diffuser back into place

## Specification

Halton-brand ceiling diffuser, type DAC, with one to three slots, suitable for variable air flow.

Extruded aluminium blade profile with a distribution angle of 30° (specially designed to retain a Coanda effect with a wide range of airflow rates).

Extruded aluminium external frame.

RAL 9003 finish (or another RAL value as an option).

Aesthetic uniformity whether used in supply or exhaust mode.

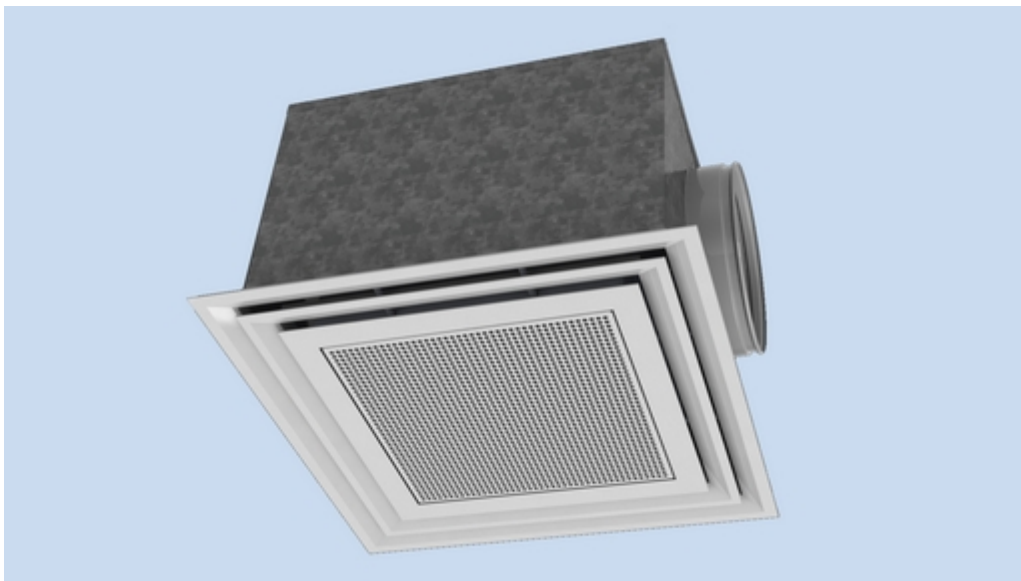
Adjustability due to the possibility of positioning a seal on each of the slots.

Diffuser delivery with a horizontal (or vertical) plenum with spigots with a 200, 250 or 315 mm diameter, depending on air flow.

Integration into modular ceilings of 600 x 600 or 675 x 675 mm, on T-frames or Fineline profiles.

## Special Application

### **DAC/SR : Halton DAC diffuser combining side supply and central exhaust**

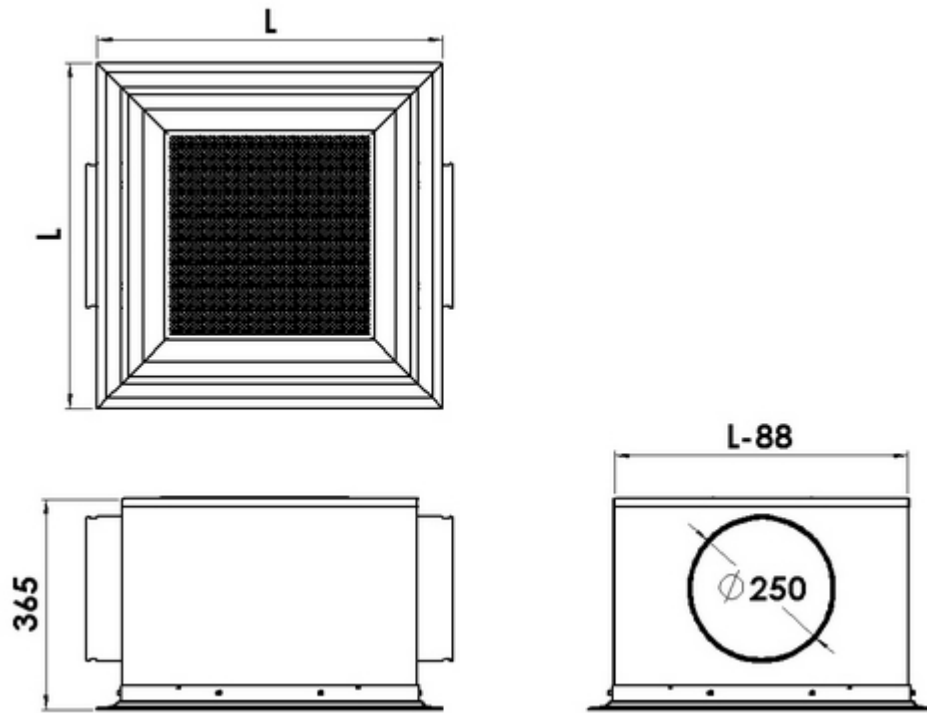


- Halton DAC diffuser is combining side supply and central exhaust.



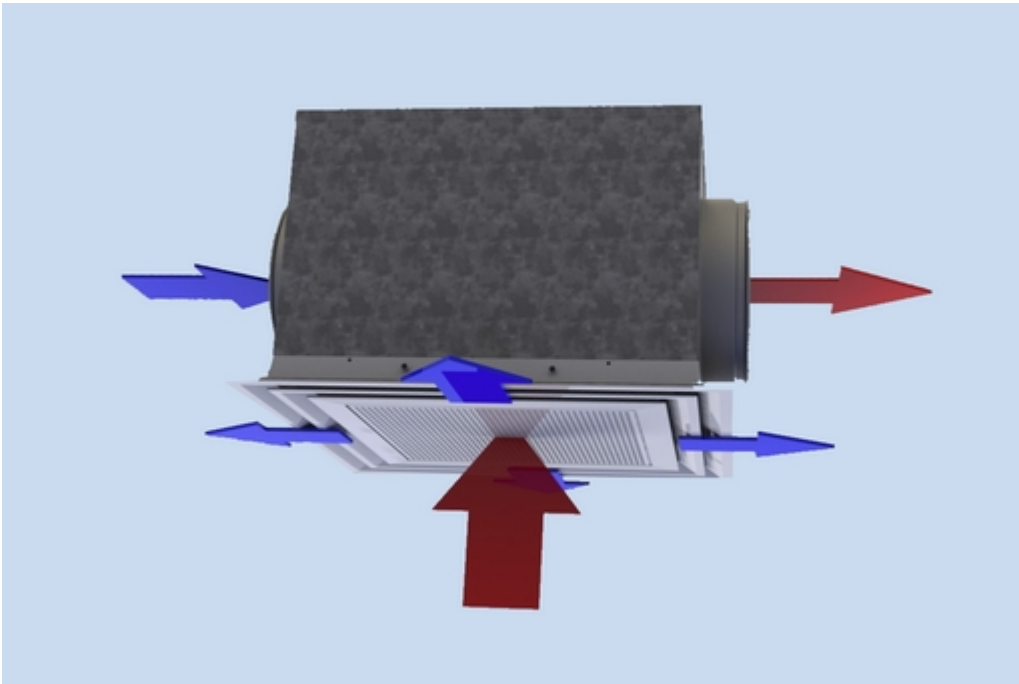
- Supply in four directions (two slots diffuser) with good coanda effect.
- The central exhaust part is equipped with a filter.
- A push/pull type opening closing make the change of the filter very easy.
- Installation flush with a suspended modular ceiling 600×600 or 675×675

## Dimensions



Nominal Dimensions	L
600×600	595
675×675	670

## Function



Air is supplied through the slots of the diffuser. The vane profile ensures an excellent Coanda effect. This provides excellent comfort conditions in the occupied zones, with a wide range of airflows. The air is exhausted through the perforated central part, and is filtered thanks to a G3 media (optional).

## Specifications

- Halton-brand ceiling diffuser, type DAC
- Extruded aluminium blade profile with a distribution angle of 30° (specially designed to retain a Coanda effect with a wide range of air flow rates).
- Extruded aluminium external frame.
- RAL 9003 finish (or another RAL value as an option).
- Diffuser delivery installed on horizontal plenum (supply connection, exhaust connection).
- Push-pull-type opening/closing system for the central part of the diffuser.
- Diffuser supplied with its G3 filter.
- Diffuser integration into modular ceilings of 600 x 600 or 675 x 675 mm, on T-frames or Fineline profiles.

## Product code

**DAC/S-C-XXX; CO-ZT**

**S = Outlook**

D Design Diffuser (without central plate)

A Diffuser with central plate

**C = Model**

S Supply

R Return

F Filtration (opening front)

**XXX = Dimensions & Number of slots**

601 (false ceiling dimensions : 600×600 ; 1 slot)

602 (false ceiling dimensions : 600×600 ; 2 slots)

603 (false ceiling dimensions : 600×600 ; 3 slots)

701 (false ceiling dimensions : 675×675 ; 1 slots)

702 (false ceiling dimensions : 675×675 ; 2 slots)

703 (false ceiling dimensions : 675×675 ; 3 slots)

## Other options and accessories

**CO = Colour**

SW White (RAL 9003)

X Special colour

**ZT = Tailored product**

N No

Y Yes (ETO)

## Sub products

PDA Plenum for DAC

## Code example

DAC/A-S-602 CO=SW, ZT=N