

DMC

Displacement unit



DMC

Quick facts

- Semi-circular displacement unit for installation on a wall.
- Fixed radial spread pattern
- Suits all types of rooms where high demands are placed on design and finish
- Short affected area
- Available in alternative colours

Quick guide

AIR FLOW – SOUND LEVEL			
DMC	l/s		
Size	25 dB(A)	30 dB(A)	35 dB(A)
80	30	37	46
200	110	140	165

Technical description

Design

DMC is a complete, semi-circular displacement unit. The unit has a one-piece rear section having a connection spigot with a rubber sealing ring. The front section of the unit is divided into two parts, the upper part being a cover and the lower part being the active surface. Both parts are screwed onto the rear section from the outside.

The lower active surface consists of a fine wire mesh of stainless steel divided into a number of equal sized panels by bands of steel. Distribution media is fixed to the inside of this wire mesh.

Materials and surface treatment

The displacement unit is manufactured in galvanised sheet steel and sheet steel. It is all painted with our white standard colour, RAL 9003/NCS S 0500-N. The unit is also available in other standard colours: Dusty grey 7037, white aluminium RAL 9006, jet black RAL 9005, grey aluminium RAL 9007 and white RAL 9010.

Installation

The hole is cut as illustrated in the figure.

The two semi-circular section front pieces are unscrewed from the rear section. The rear section is then placed against the wall and screwed into place. The front pieces are screwed back onto the rear section. See Figure 1.

Commissioning

We recommend that you equip the connecting duct with a type CRM commissioning damper for measuring and adjusting the airflow.

Maintenance

The displacement unit can be cleaned when necessary, using lukewarm water with dishwashing detergent added or by vacuum cleaning using a brush nozzle. Clean the air distribution fabric whenever necessary or replace it with new fabric. See Figure 1.

Environment

The Declaration of construction materials is available at www.swegon.se.

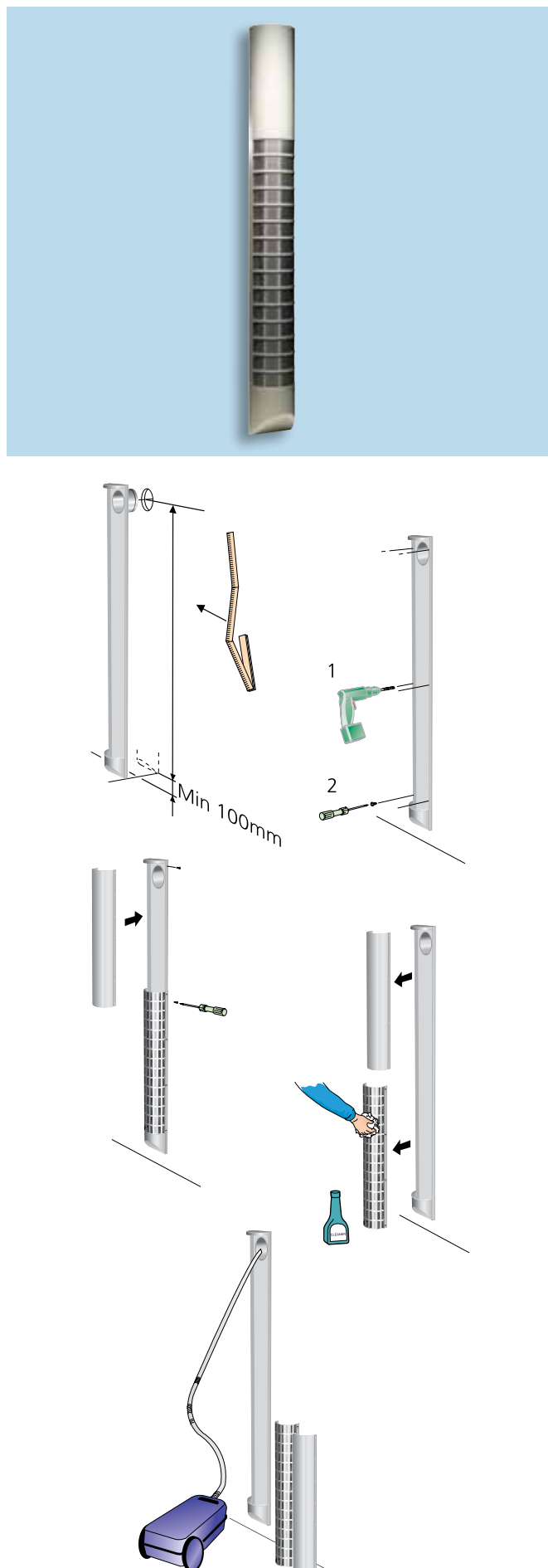


Figure 1. Installation. Maintenance.

Sizing

- Sound level dB(A) applies to rooms of 10 m² equivalent absorption area, which gives 4 dB room attenuation.
- The affected areas $a_{0,20}$ and $b_{0,20}$ are measured at $\Delta t -3$ K and refer to the maximum velocity independence of the distance from the floor.
- Δt is the difference between the room temperature at 1.2 m above the floor and the supply air temperature.

- Recommended maximum under temperature 6 K.
- For calculating the width of the spread pattern, air velocities in the zone of occupation or sound levels in rooms with other dimensions, please refer to our calculation applications ProAir web and ProAc, both available at www.swegon.com.

Sound data

DMC

Sound power level L_w (dB)

Table K_{OK}

Size	Mid-frequency (octave band) Hz							
DMC	63	125	250	500	1000	2000	4000	8000
80	5	12	8	3	-5	-16	-27	-23
200	1	2	1	3	1	-6	-22	-25
Tol. \pm	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size	Mid-frequency (octave band) Hz							
DMC	63	125	250	500	1000	2000	4000	8000
80	23	18	13	8	4	1	3	6
200	18	12	7	3	3	2	2	3
Tol. \pm	2	2	2	2	2	2	2	2

Engineering graphs

DMC

Air flow – Pressure drop – Sound level – Affected area

- The affected area is measured at $\Delta t -3$ K.
- The graphs must not be used for commissioning.
- The dB(C) value is normally 6-9 dB higher than the dB(A) value.

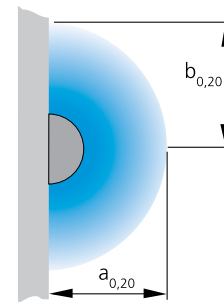
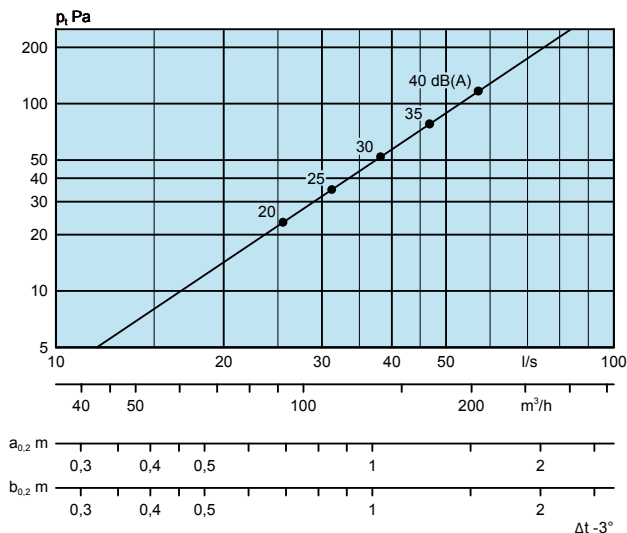
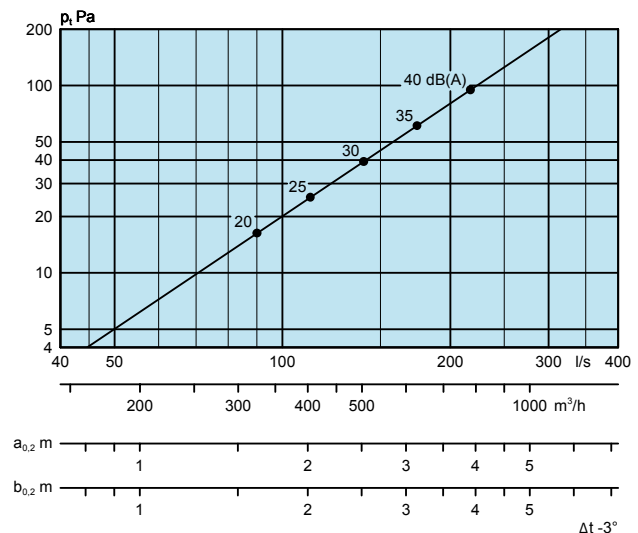


Figure 2. Affected area.

DMC 80



DMC 200



Dimensions and weight

DMC

Size	A	B	C	ØD	G	I	Weight, kg
80	135	1500	83	79	90	835	13
200	270	2100-3000	160	199	150	1670	42

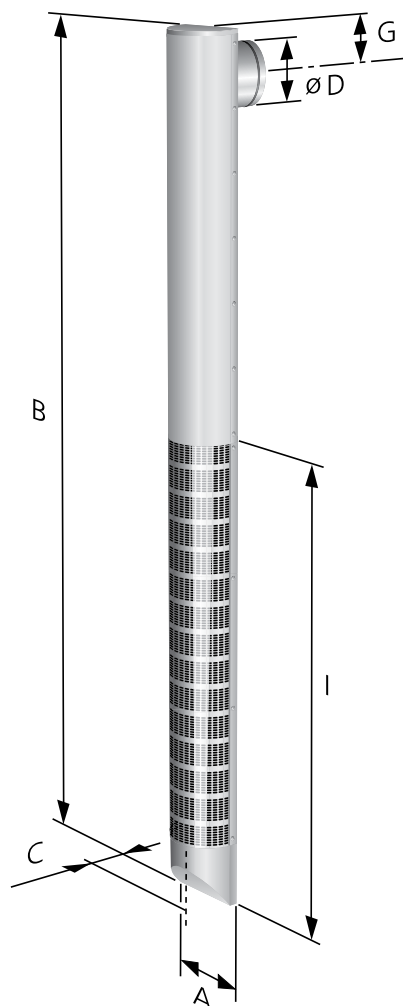


Figure 3. DMC.

Order key

Product

Semi-circular displacement unit DMC a -aaa -b -ccc

Version:

Size: 80, 200

Front connection = 1

Rear connection = 2

Height is specified in mm for size 200

Min: 2100 mm

Max: 3000 mm

Specification example

SD XX

Swegon's semi-circular displacement unit of type DMC, with the following functions:

- Fixed radial spread pattern
- Cleanable
- Powder coated in white, RAL 9003/NCS S 0500-N

Size: DMCa aaa - b - ccc xx items