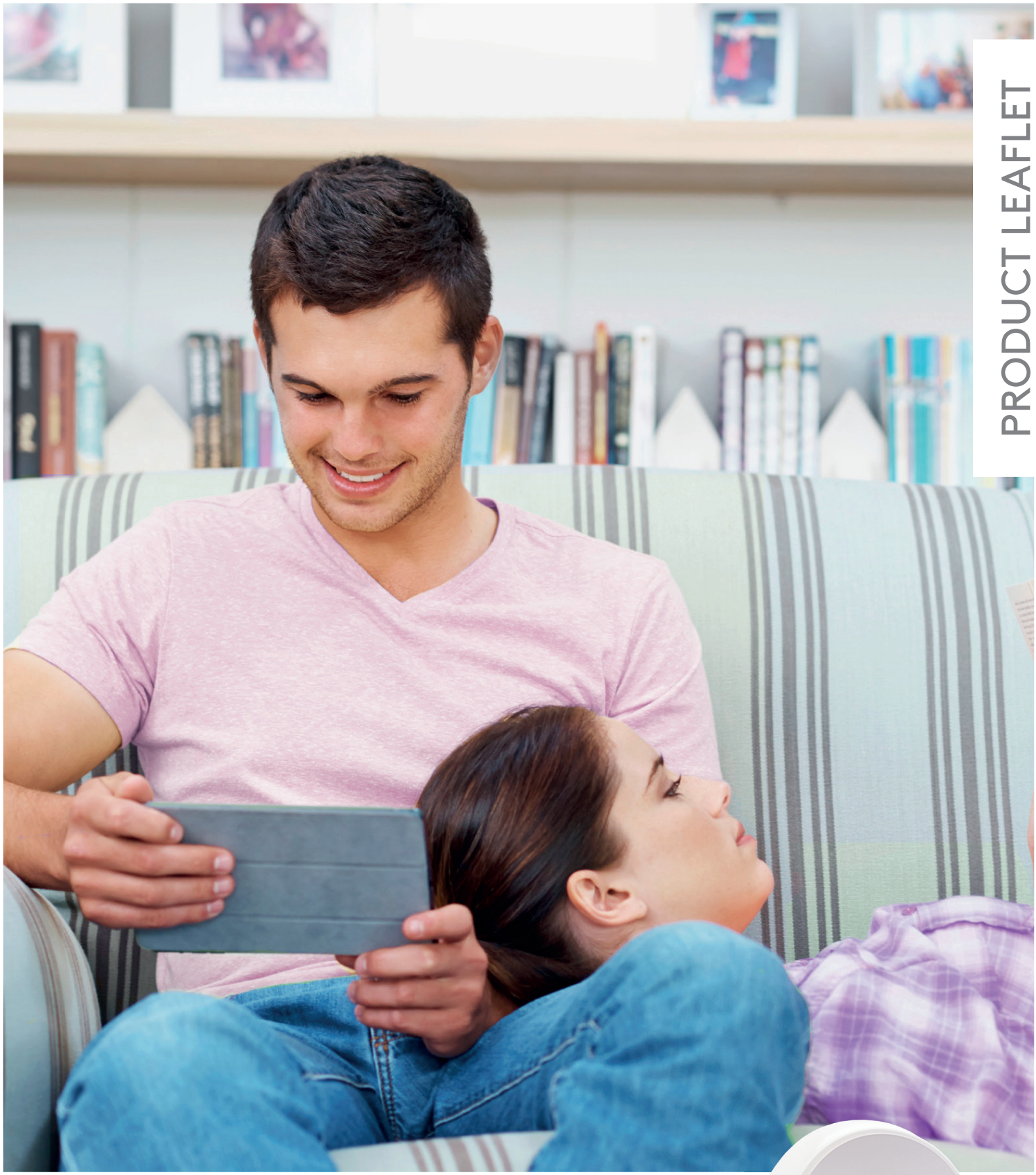
PRODUCT LEAFLET



SDK

Supply air diffuser for
ceiling installation in homes

Swegon

Technical description

Design
SDK is a supply air diffuser that is designed for small areas and small air flows. SDK is available both as 1-way air spread and 3-way. The diffuser is made in powder coated steel sheet. The mounting frame is equipped with rubber seal to give a tight connection to the duct system.

Materials and finish
SDK is delivered in powder coated steel sheet, white standard color RAL9003 /NCS 0500-N. The mounting frame is made of galvanized sheet steel with rubber seal.

Project planning
Use dimensioning charts to design the unit. A diffuser mounted directly before a bend or T-piece will increase the sound with 3 dB (A) compared to charts.

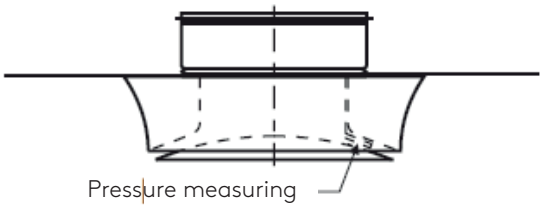
Installation and commisioning
Always use mounting frame to mount the diffuser in circular ducts. The diffuser is easy to install in the frame with springs. A distance from the roof to prevent "dirt rings" in the ceiling.
The commissioning pressure is measured behind the sector plate and the airflow is calculated using the k-factor and the formula presented.
Observe the distance between the frame and the plate.
Sector plate position should be toward the outer radius of A diffuser mounted in a 90° bend.

Maintenance
Clean air diffuser when necessary using warm water and soap, Alternatively use a vacuum cleaner.

K-Factor
A pressure of at least 5 Pa is required to obtain at least ± 10% accuracy of the airflow.

Supply air diffuser for ceiling installation in homes
- Supply air diffuser for ceiling installation.
- With possibility of commissioning and airflow measuring.

Dimension	Airflow		Sound dB (A)	Pressure (Pa)
	l/s	m³/h		
SDK 100, 125-1v	23	83	25	40
SDK 100, 125-3v	29	104	25	38
At 13 mm distance				



$$q = k \cdot \sqrt{p}$$

$$p = \left(\frac{q}{k}\right)^2$$

q = Airflow l/s
p = Pressure (Pa)
k = Commissioning factor

Figure 1. commissioning

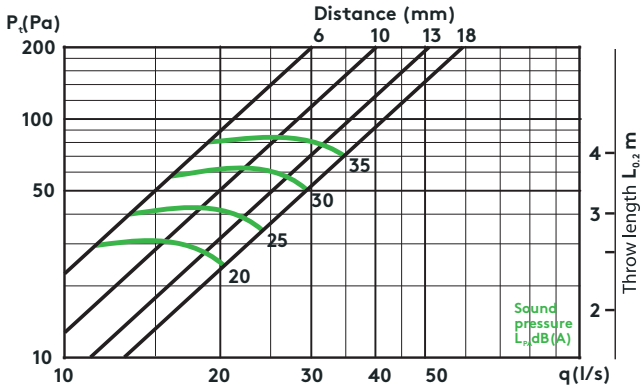
Product	Distance (mm)	Straight duct	90° bend
SDK 100-1v	6	2,0	2,0
	8	2,6	2,5
	10	2,9	2,8
	13	3,4	3,4
	18	4,2	4,2
SDK 100-3v	6	2,6	2,6
	8	3,4	3,2
	10	4,0	3,8
	13	4,9	4,6
	18	5,6	5,4

Product	Distance (mm)	Straight duct	90° bend
SDK 125-1v	6	2,0	2,0
	8	2,3	2,3
	10	2,8	2,8
	13	3,4	3,3
	18	3,7	3,9
SDK 125-3v	6	2,7	2,7
	8	3,4	3,3
	10	4,0	3,8
	13	4,7	4,6
	18	5,3	5,3

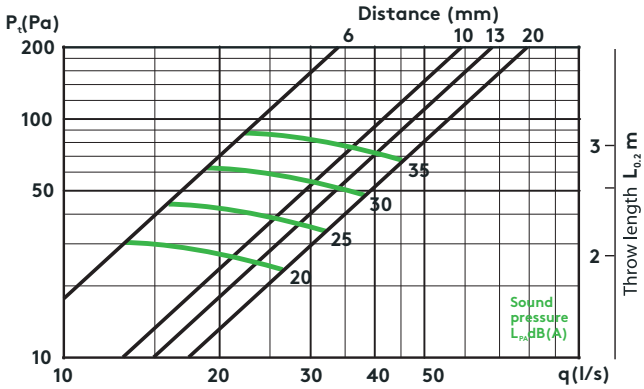
Sizing

- Throw length reported in sizing chart is dependent of the airflow.
- In general, the aim should be to have the air distribution covering up so much of the room as possible.
- Appropriate distribution pattern (1-way or 3-way) depends on the supply air device placement in relation to the room's appearance
- Throw length is presented with isovel 0.20 m/s. In winter cases with request for isovel 0.15 m/s correction factor 0.8 is used. In summer case with requests for isovel 0.25 m / s use the correction factor 1.2.
- Recommended max. under temperature is 10K.
- Noise level is presented in dB(A) with an acoustic room absorbance of 4 dB (10m2 equivalent sound absorption area).
- Mounting directly in a bend or T-piece will create a 3 dB (A) noise increase compared to data reported in the sizing chart.

SDK 100, 125 1v



SDK 100, 125 3v



Sound data

Sound power level Lw (dB) table

Dimension	Frequency (octave) Hz							
	63	125	250	500	1000	2000	4000	8000
100, 125 1v	1	-2	5	3	-1	-7	-13	-26
100, 125 3v	4	1	5	3	-2	-7	-11	-25
Tol +/–	6	3	2	2	2	2	2	2

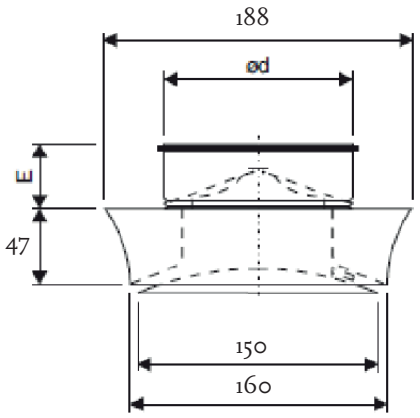
Sound attenuation ΔL (dB) table ΔL

Dimension	Frequency (octave) Hz							
	63	125	250	500	1000	2000	4000	8000
100, 125 1v	16	13	8	6	3	5	3	4
100, 125 3v	16	14	8	6	3	6	4	6
Tol +/–	6	3	2	2	2	2	2	2

Dimensions and weight

SDK

Dimension	Measures (mm)		Weight (kg)
(Nominal dim.)	ød	E	
100	98	45	0,6
125	123	64	0,6



Order key

Product

Supply air ceiling diffuser:	SDK	aaa	-b v
Dimension: 100, 125			
Air spread: -1v, -3v			

Accessories:	EXK	a	bbb
T = mounting frame, insert, rubber seal			
Dimension: 100, 125			

Specification text

QMC.2 SUPPLY AIR DIFFUSER FOR CEILING MOUNTING

Supply air diffuser with 1-way/3-way air spread designed for areas with small airflows.

TDXX
Supplier: Swegon
Type: SDK + SDKT
Dim. / air spread: XXX-Xv X pcs.

Feel good **inside**

Swegon