

PMDb

Perforated supply and exhaust air diffuser
for walls

PMDb



FUNCTION

The PMDb is a complete, rectangular diffuser for supply and exhaust air for wall installation. Suitable for constant or variable flow. Air supply preferably at under-temperature.

QUICK FACTS

- Complete diffuser
- Cleanable
- Removable damper
- Simple commissioning, fixed measuring unit

SNABBVAL

AIR FLOW - SOUND LEVEL				
PMDb Size	l/s Min. flow	25 dB(A)	l/s 30 dB(A)	35 dB(A)
200 x 100	8	14	17	19
300 x 100	10	16	19	23
400 x 150	14	25	30	36
500 x 150	23	37	42	52
550 x 200	29	48	58	68
550 x 300	43	65	80	95

Applies to open slot and open damper.
Min. flow on balancing pressure drop = 5 Pa.

DESIGN

The PMDb consists of 2 sections. The ALVa plenum box has a fixed measuring unit, removable acoustic baffle and removable damper, to permit easy access for duct cleaning. The measurement outlet and damper setting device are easily accessible from the room. The diffuser section with a removable acoustic baffle is made of aluminium and galvanised steel, and is painted white. The plenum box is unpainted.

The PMDb is available in two versions: duct connection at the rear or side connection. Each version is available in 6 sizes.

PLANNING

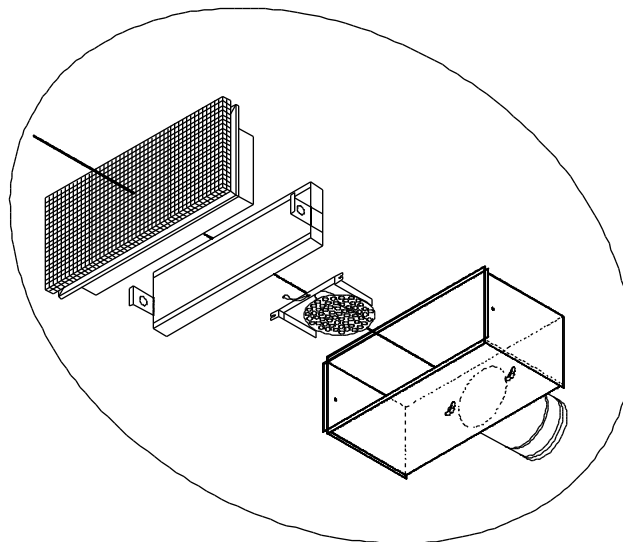
INSTALLATION: The plenum box is mounted into the wall from the room. All sizes fit c/c 600 mm beam partitions. The diffuser section is pressed into the box after painting/wallpapering.

COMMISSIONING: To be carried out with the diffuser section mounted. This method of measurement has a documented low method error. Lockable adjustment. The measuring unit and damper setting device are easily accessible from the room.

TECHNICAL DATA

The sound level dB(A) applies to rooms of 10 m² equivalent absorption area.

Throw $L_{0,2}$ is applicable to isothermal conditions.

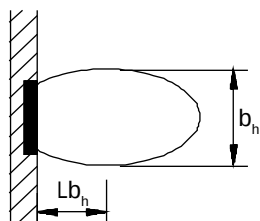


Spread pattern

(For isothermal air supply)

$$b_h = l_{0,2} \times 0.6$$

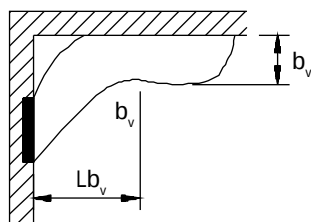
$$L_{bh} = l_{0,2} \times 0.4$$



Open slot

$$b_v = l_{0,2} \times 0.06$$

$$L_{bv} = l_{0,2} \times 0.1$$



Sound data - PMDb - supply air

Sound power level L_w (dB)

Table K_{OK}

Size	Mid-frequency (octave band) Hz						
	125	250	500	1000	2000	4000	8000
200x100	11	3	1	-1	-5	-21	-26
300x100	11	5	2	-3	-9	-21	-26
400x150	12	8	2	-5	-14	-24	-26
500x150	12	8	2	-6	-15	-22	-24
550x200	11	7	3	-3	-10	-21	-26
550x300	10	6	4	-3	-11	-24	-26
Tol. $\pm$	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size	Mid-frequency (octave band) Hz						
	125	250	500	1000	2000	4000	8000
200x100	19	17	12	12	14	17	19
300x100	16	14	11	15	13	15	12
400x150	16	11	14	16	16	18	19
500x150	15	10	13	14	15	18	18
550x200	15	9	12	15	16	18	15
550x300	11	9	14	16	17	19	17
Tol. $\pm$	2	2	2	2	2	2	2

Sound data - PMDb - exhaust air

Sound power level L_w (dB)

Table K_{OK}

Size	Mid-frequency (octave band) Hz						
	125	250	500	1000	2000	4000	8000
200x100	13	5	2	-3	-14	-27	-29
300x100	12	6	3	-4	-12	-22	-27
400x150	13	9	1	-7	-14	-24	-28
500x150	13	8	1	-3	-13	-27	-29
550x200	13	8	1	-6	-13	-22	-27
550x300	13	8	2	-5	-10	-24	-28
Tol. $\pm$	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size	Mid-frequency (octave band) Hz						
	125	250	500	1000	2000	4000	8000
200x100	19	17	12	12	14	17	19
300x100	16	14	11	15	13	15	12
400x150	16	11	14	16	16	18	19
500x150	15	10	13	14	15	18	18
550x200	15	9	12	15	16	18	15
550x300	11	9	14	16	17	19	17
Tol. $\pm$	2	2	2	2	2	2	2

Engineering graphs - PMDb - supply air

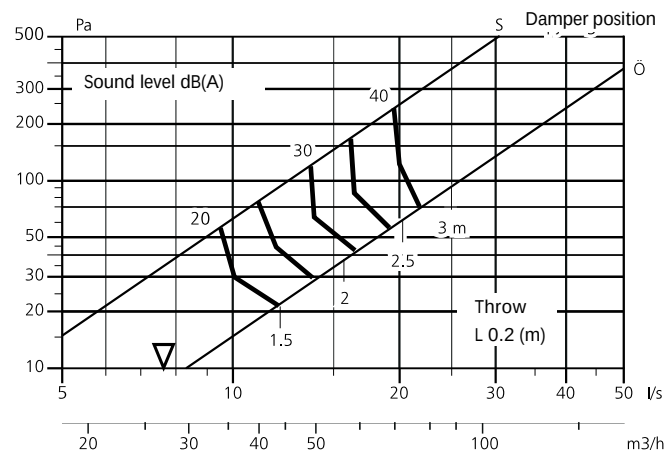
Air flow - Pressure drop - Sound level - Throw

The graphs present the data for the PMDb mounted with its upper edge 200 mm from the ceiling. For side connection (K), the sound level increases by about 2 dB(A) for sizes 200-100, 300-100, 400-100 and about 5 dB(A) for sizes 500-150, 500-200 and 500-300.

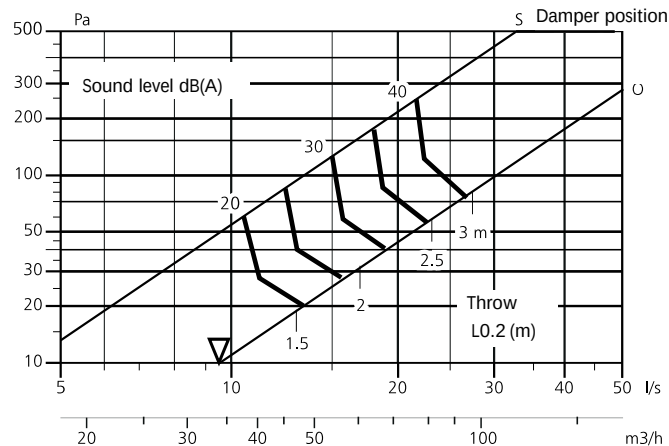
The pressure drop increases by about 10% for all sizes.

These graphs should not be used for commissioning.
 Δ = min. balancing air flow.

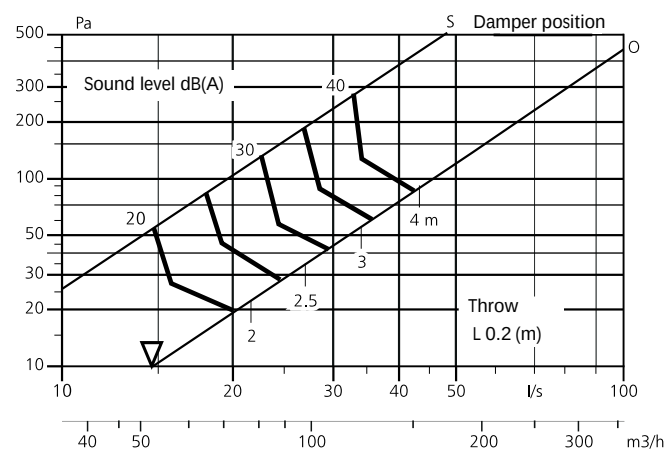
PMDb 200-100



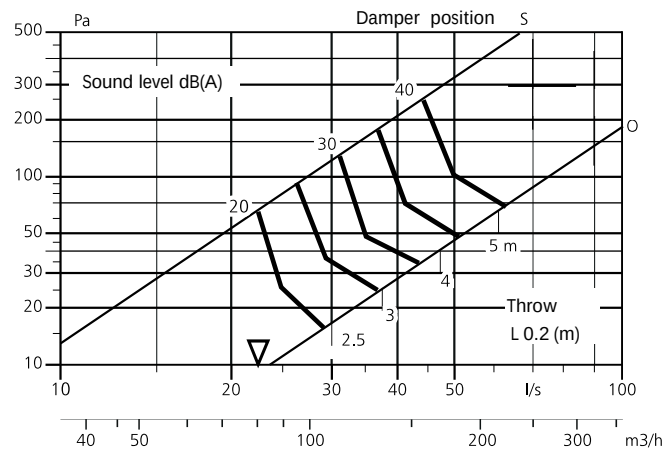
PMDb 300-100



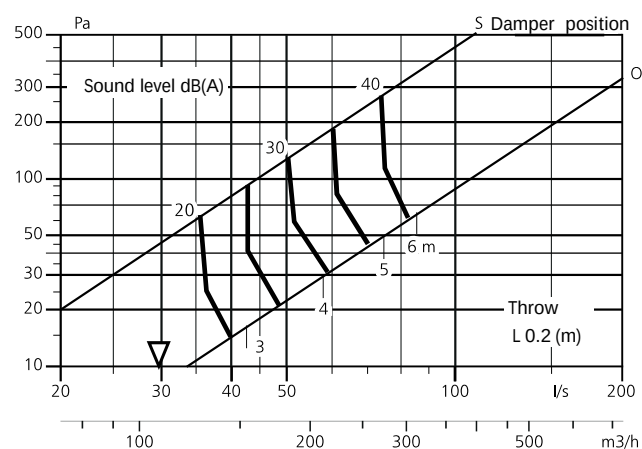
PMDb 400-150



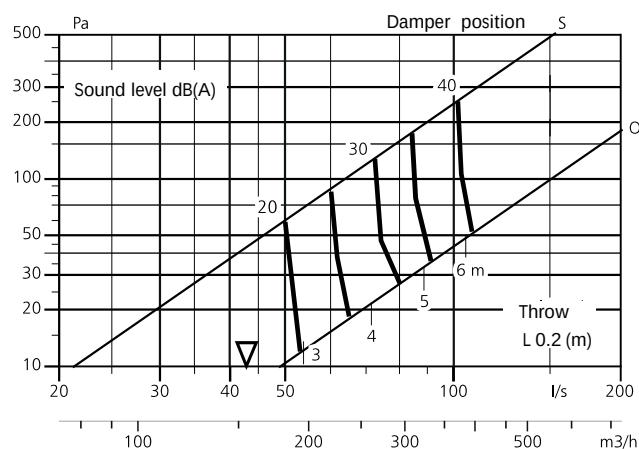
PMDb 500-150



PMDb 550-200



PMDb 550-300



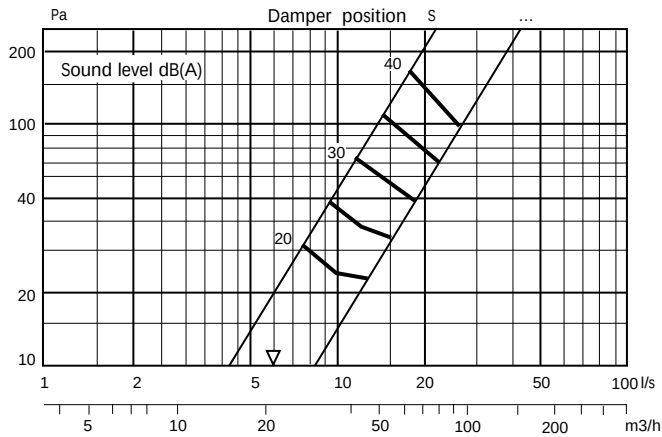
Engineering graphs - PMDb - exhaust air

Air flow - Pressure drop - Sound level

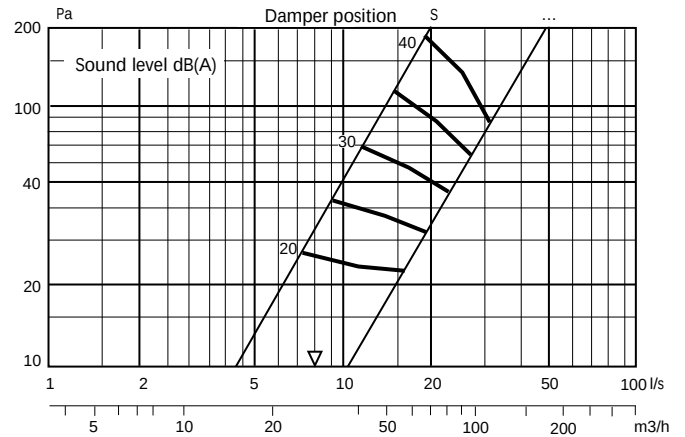
These graphs should not be used for commissioning.

▽ = min. balancing air flow.

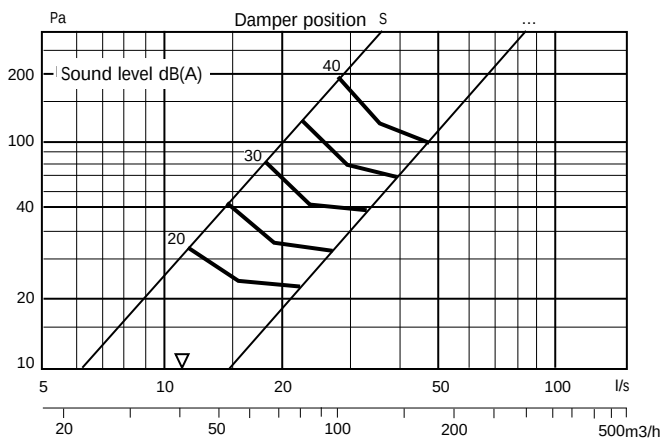
PMDb 200-100, exhaust air



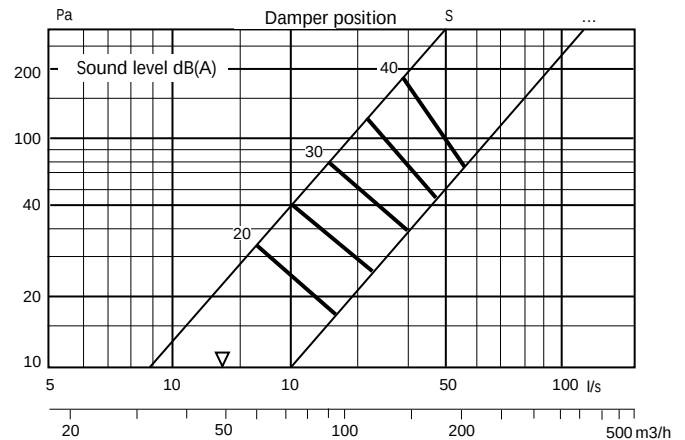
PMDb 300-100, exhaust air



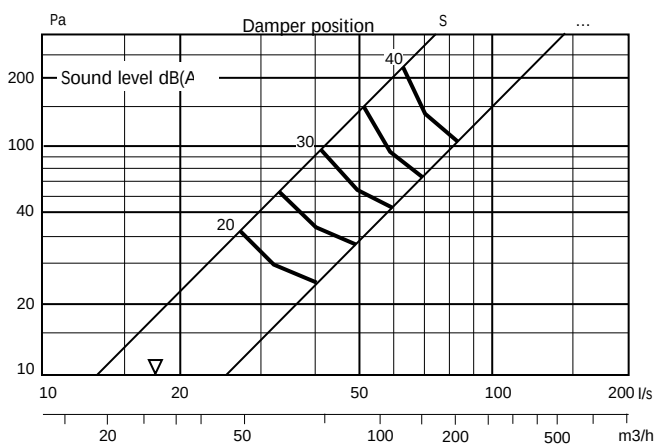
PMDb 400-150, exhaust air



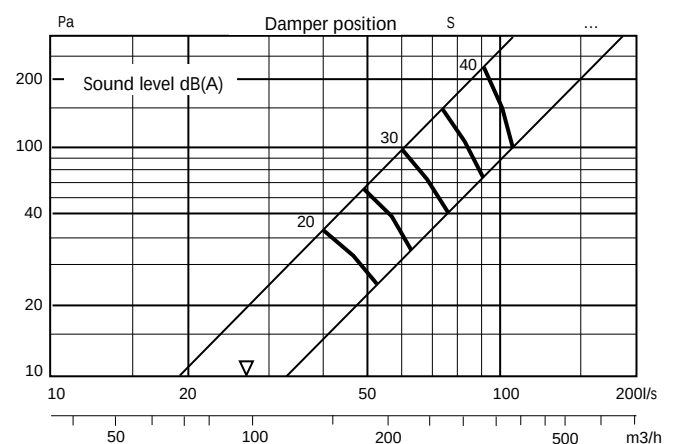
PMDb 500-150, exhaust air



PMDb 550-200, exhaust air

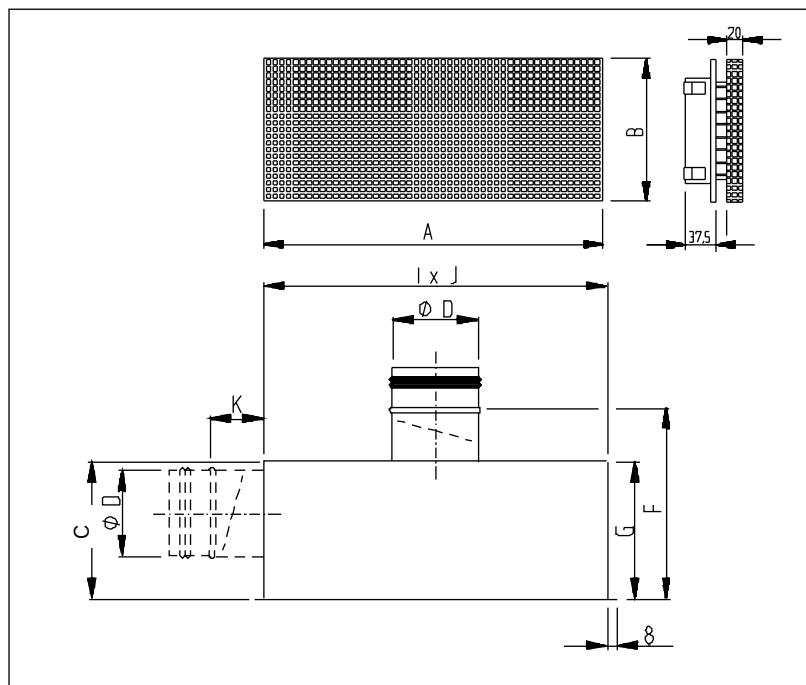


PMDb 550-300, exhaust air



PMDb

DIMENSIONS AND WEIGHT



Size								Connection, short side	
	A	B	ØD	F	G	I x J	Weight, kg	K	G2
200x100	230	130	79	223	164	200 x 100	1.7	45	235
300x100	330	130	79	223	164	300 x 100	2.0	45	235
400x150	430	180	99	293	209	400 x 150	3.2	80	275
500x150	530	180	124	293	209	500 x 150	4.2	80	300
550x200	580	230	159	318	214	550 x 200	5.7	100	340
550x300	580	330	199	368	244	550 x 300	7.0	120	385

ORDER KEY

Product designation

Perforated supply and exhaust air diffuser PMDb aaa - bbb - c

Size: 200x100, 300x100
400x150, 500x150
550x200, 550x300

Connection: B = rear
K = short side

Specification example

Stifab Farex perforated supply and exhaust air diffuser, type PMDb, with the following functions:

- Adjustable throw
- Removable commissioning damper with regulating cords
- Measurement function with low method error
- Internal sound absorber with reinforced outer surface
- Powder-coated in white