

Perforated diffuser

PC6



Description

PC6 is a circular perforated diffuser that can be used for both supply air and extract air. The diffuser is suitable for the horizontal supply of cooled air. The diffuser can also be used for low impulse and is therefore useful for the supply of replacement air in environments with high rates of air exchange.

Installing a PC6 diffuser in a plenum box type MB can help to achieve a stable flow of air to the diffuser as well as realise the potential for individual adjustment.

Damper type B is an unique linear cone damper which allows to use the full operational area (0-100%) and allows to balance with a high pressure drop over the box with low sound generation. Furthermore the construction of the damper gives an accurate and reliable measurement.

Damper type C and E are with rotating blade dampers for respectively supply and extract air. Typically used in applications that don't require a high balancing pressure in the plenum box.

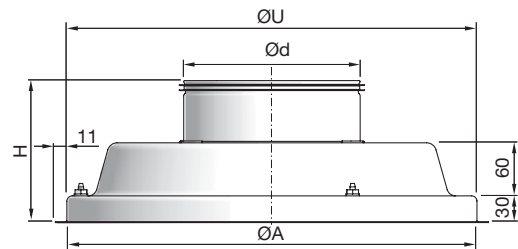
- Suitable for both supply and extract air
- Discrete design
- Can be used for low impulse supply air
- Plenum box with several damper options

Order code

Product	PC6	a	bbb
Type			
PC6			
Functional use			
S = Supply air			
E = Extract			
L = Low-impulse			
Connection dim.			
Ø125-315			

Example: PC6-S-200

Dimensions



PC6 Ød	ØA	H	ØU*	m
mm	mm	mm	mm	kg
125	360	140	370	3.90
160	460	140	470	5.30
200	460	140	470	5.40
250	540	140	550	7.40
315	540	140	550	8.10

* ØU = ceiling grid opening

Ød 315, No mounting holes for MB !

PC6-S



Maintenance

The face plate can be removed to enable cleaning of internal parts or to gain access to the duct or box. The visible parts of the diffuser can be wiped with a damp cloth.

Materials and finish

Material:	Galvanised steel
Standard finish:	Powder-coated
Standard colours:	RAL 9003 and RAL 9010, gloss 30

The diffuser is available in other colours. Please contact Lindab's sales department for further information.

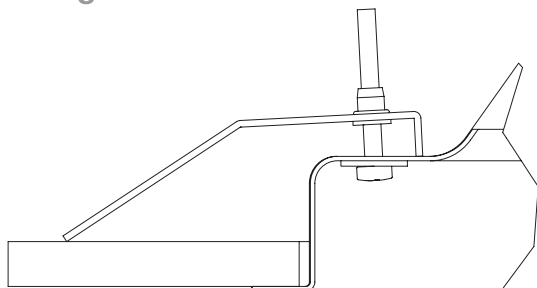
Perforated diffuser

PC6

Accessories

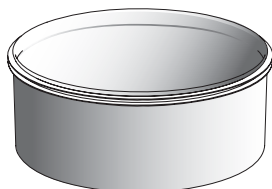
Mounting brackets

DCZ



Extension piece

MBZ

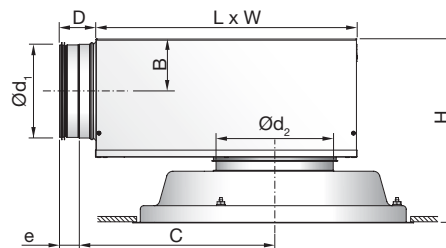


Order code - accessories

Product	aaa	bbb
Type		
Size		

Example: MBZ-200

PC6 + MB Plenum box

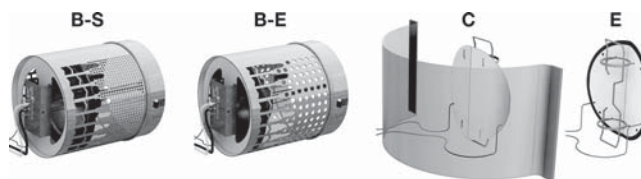


Ød ₁ mm	Ød ₂ mm	B	C	D	e	H*	L	W
100	125	62	245	78	40	250 - 290	310	260
100	160	62	245	78	40	250 - 290	310	260
125	125	75	291	78	40	275 - 315	376	310
125	160	75	291	78	40	275 - 315	376	310
125	200	75	291	78	40	275 - 315	376	310
160	160	92	352	78	40	309 - 349	459	380
160	200	92	352	78	40	309 - 349	459	380
160	250	92	352	78	40	309 - 349	459	380
200	200	112	425	78	40	350 - 390	565	460
200	250	112	425	78	40	350 - 390	565	460
200	315	112	425	78	40	350 - 390	565	460
250	250	137	514	118	60	400 - 440	698	540
250	315	137	514	118	60	400 - 440	698	540
315	315	170	675	118	60	465 - 505	858	540

* Using accessory MBZ the H dimension will increase:

Ød₂ = 125 - 200 mm => H +40 mmØd₂ = 250 - 315 mm => H +60 mm

Damper options



Module plate

LM



Order code - module plate

Product	LM	a	PC6	ccc
Type				
Ceiling system				
Diffuser				
Size				

Example: LM-1-PC6-200

Ceiling system - see introductory summary

Order code

Product	MB	a	bbb	ccc	d
Type					
MB					
Damper					
B = Linear cone damper					
C = Blade damper supply					
E = Blade damper extract					
Duct connection Ød ₁					
Ø100-315					
Diffuser dimension Ød ₂					
Ø125-315					
Function (Only for B damper)					
S = Supply air					
E = Extract					

Example 1: PC6-S-200+MBB-160-200-S

Example 2: PC6-200+MBC-125-200

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Technical data

Following PC6+plenum box data are valid for MBB-S/-E.
For MBC and MBE data go to www.lindQST.com.

Capacity

Air flow q_v [l/s] and [m³/h], total pressure Δp_t [Pa], throw $l_{0,2}$ [m] and sound power level L_{WA} [dB(A)] can be seen in the diagrams.

Frequency-related sound power level

The sound power level in the frequency band is defined as $L_{WA} + K_{ok}$. K_{ok} values are specified in charts beneath the diagrams on the following pages.

Quick selection, supply air

PC6 + MBB-S		$\Delta p_t \geq 50$ Pa		$\Delta p_t \geq 50$ Pa	
duct	PC6	30 dB(A)		35 dB(A)	
$\varnothing d_1$	$\varnothing d_2$	l/s	m ³ /h	l/s	m ³ /h
100	125	32	115	38	137
100	160	39	140	46	166
125	125	39	140	46	166
125	160	48	173	62	223
125	200	56	202	66	238
160	160	53	191	62	223
160	200	66	238	78	281
160	250	74	266	95	342
200	200	71	256	85	306
200	250	92	331	112	403
200	315	113	407	138	497
250	250	110	396	130	468
250	315	122	439	152	547
315	315	156	562	188	677

Low-impulse

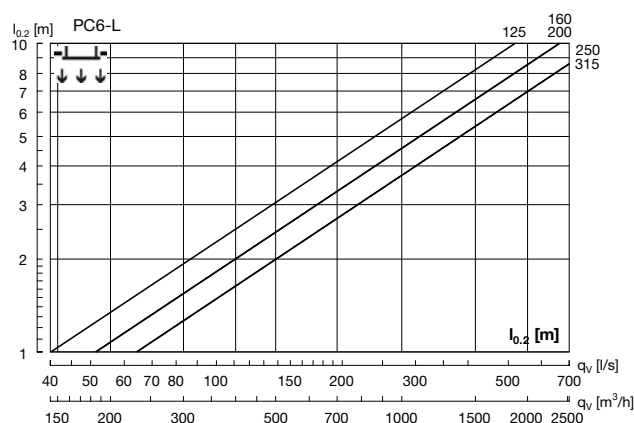
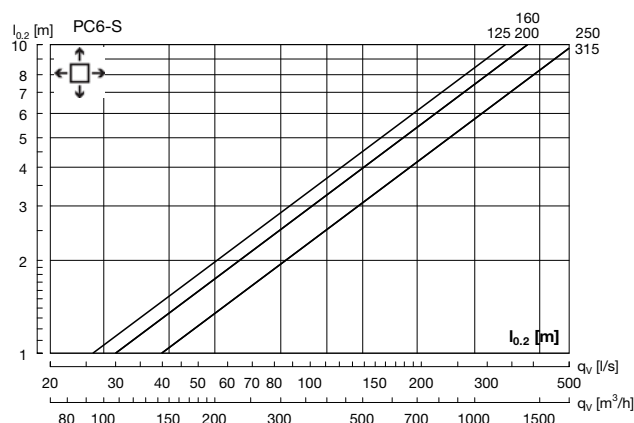
Correction sound power level (L_{WA}) and pressure loss (Δp_t)

On the following pages you can find diagrams for all sizes PC6+MBB supply air. When low-impulse values are wanted use the correction factors in the table below.

PC6-L + MBB-S		Low-impulse	
duct	PC6-L	Correction factor	
$\varnothing d_1$	$\varnothing d_2$	L_{WA}	Δp_t
100	125	-1	x 1
100	160	1	x 1
125	125	-4	x 1
125	160	-1	x 1
125	200	-2	x 1
160	160	-5	x 0,9
160	200	-3	x 1
160	250	-2	x 1
200	200	0	x 1
200	250	0	x 1
200	315	-1	x 1
250	250	-5	x 0,9
250	315	-2	x 1
315	315	0	x 1

Throw $l_{0,2}$

Throw $l_{0,2}$ [m] is specified at a terminal velocity of 0.2 m/s.



Sound attenuation

Sound attenuation of the diffusers ΔL from duct to room, including end reflection, see table below.

PC6 + MBB-S/-E		Centre frequency Hz							
duct	PC6	63	125	250	500	1K	2K	4K	8K
100	125	19	16	7	15	19	18	19	21
100	160	17	15	4	14	17	17	17	18
125	125	17	15	9	19	17	19	18	20
125	160	15	14	8	18	15	16	17	19
125	200	13	11	4	14	13	15	16	17
160	160	15	15	10	21	17	18	19	20
160	200	18	15	8	21	17	17	18	19
160	250	16	14	5	17	13	15	17	18
200	200	13	11	8	16	18	16	19	17
200	250	13	9	5	14	16	15	18	16
200	315	13	8	3	10	16	14	16	16
250	250	14	8	7	15	17	17	18	17
250	315	13	7	6	14	16	15	16	17
315	315	8	9	8	14	17	16	17	21

Balancing

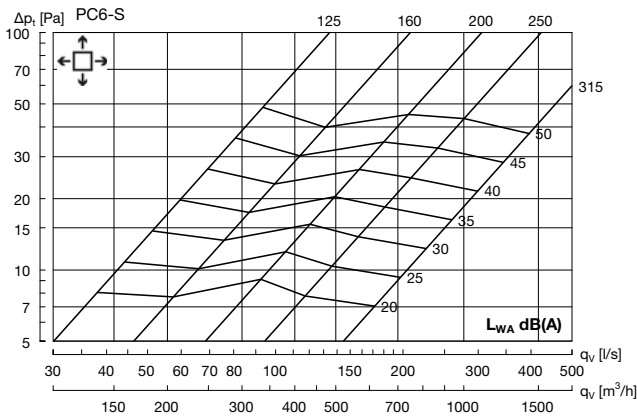
Balancing data is contained in a separate brochure.

Perforated diffuser

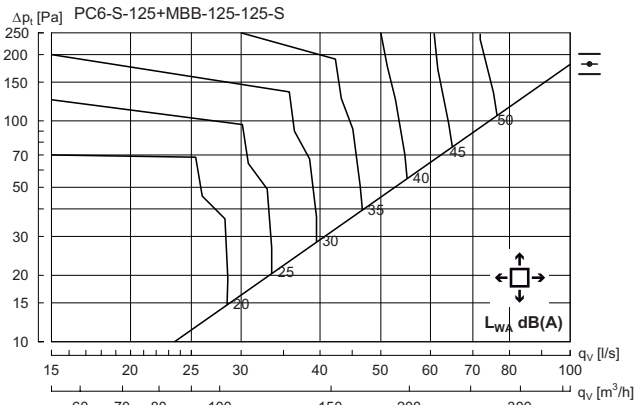
PC6

Technical data

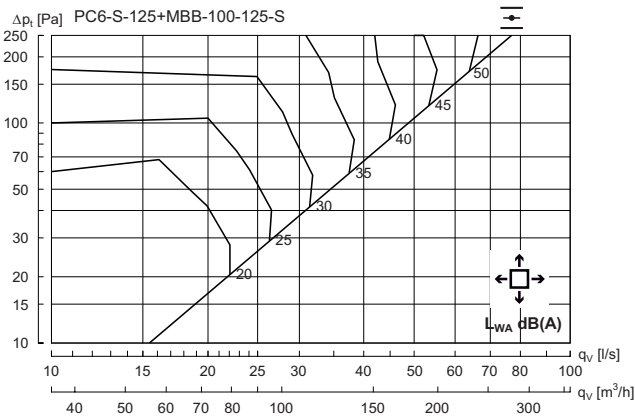
PC6 without box - Supply air



PC6 125 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	7	2	-4	0	-4	-14	-23	-32



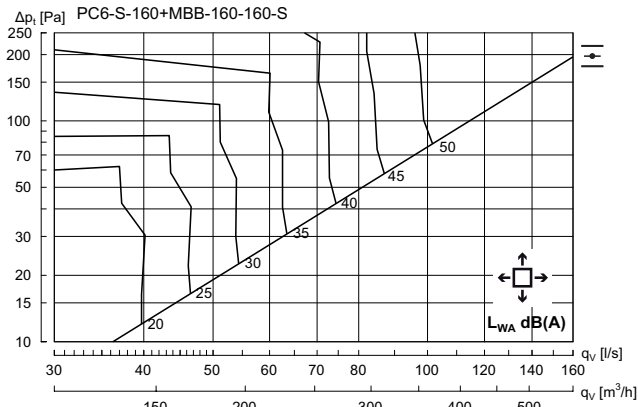
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	6	1	-2	-5	-12	-18	-25

Perforated diffuser

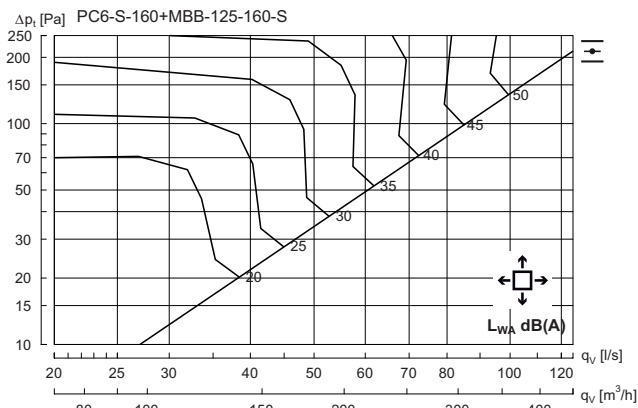
PC6

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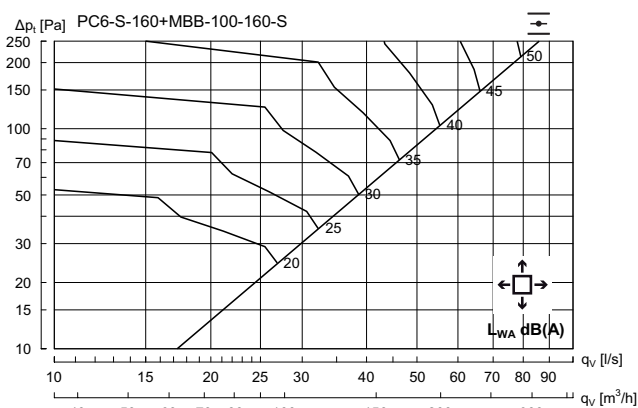
PC6 160 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	3	-5	-1	-3	-15	-23	-29

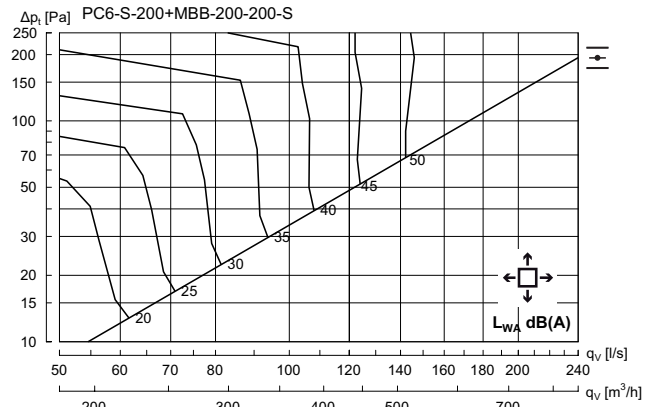


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	5	0	-2	-5	-12	-17	-25

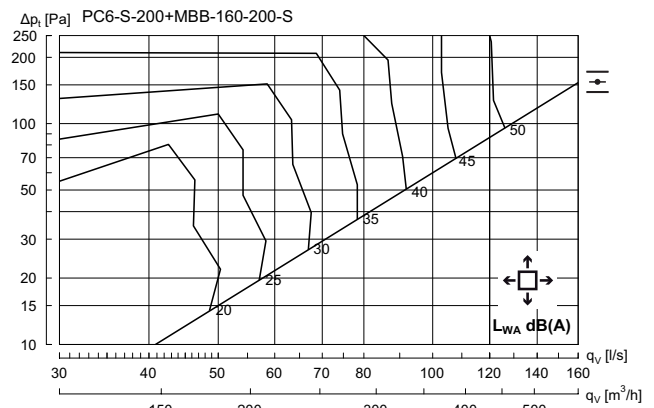


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	7	4	0	-1	-5	-11	-16	-22

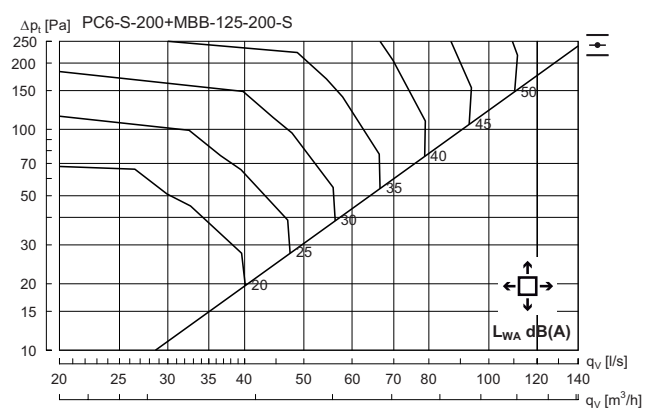
PC6 200 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	2	-5	-1	-4	-15	-22	-27



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	4	-2	-2	-3	-12	-20	-27



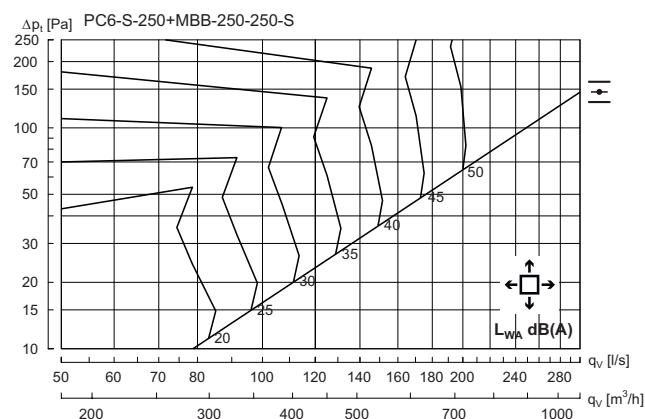
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	6	5	0	-2	-5	-10	-16	-22

Perforated diffuser

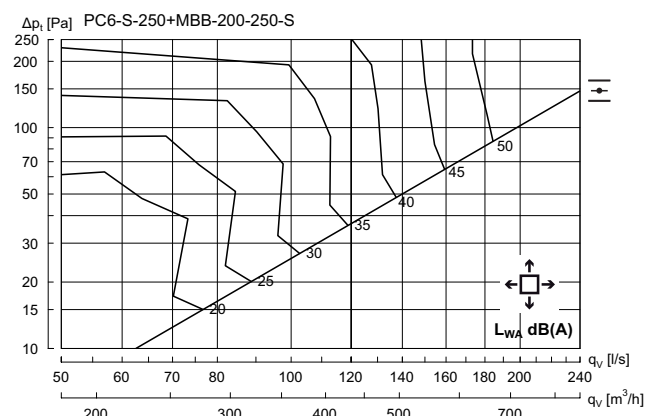
PC6

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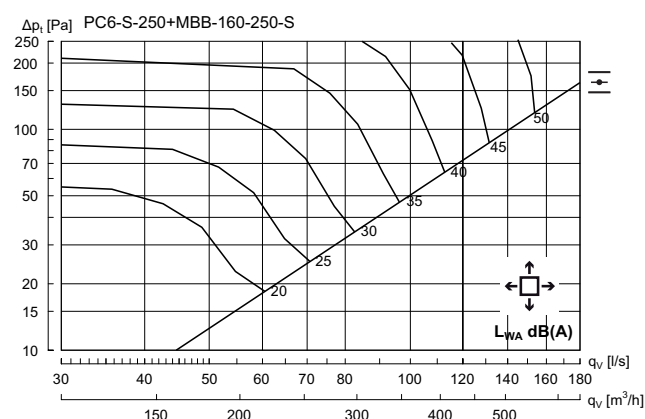
PC6 250 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	9	-1	-6	0	-4	-16	-25	-30

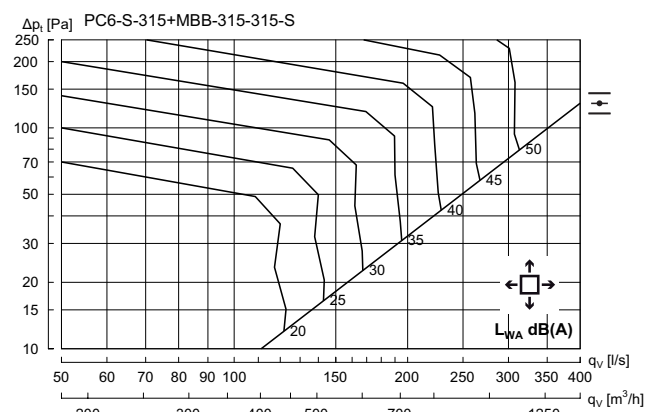


Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	11	3	-3	-2	-3	-14	-22	-29

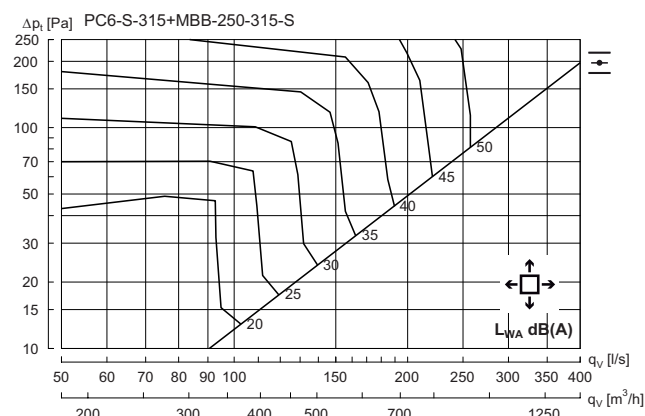


Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	12	3	-1	-4	-4	-10	-18	-24

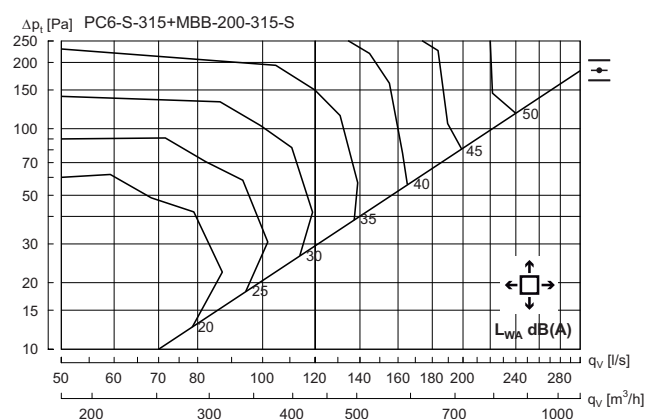
PC6 315 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	13	1	-2	-2	-4	-13	-23	-29



Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	11	2	-3	-2	-3	-13	-19	-26



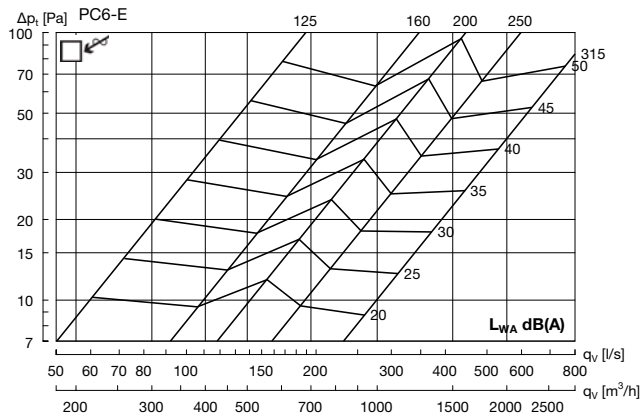
Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	10	6	-1	-2	-4	-12	-20	-26

Perforated diffuser

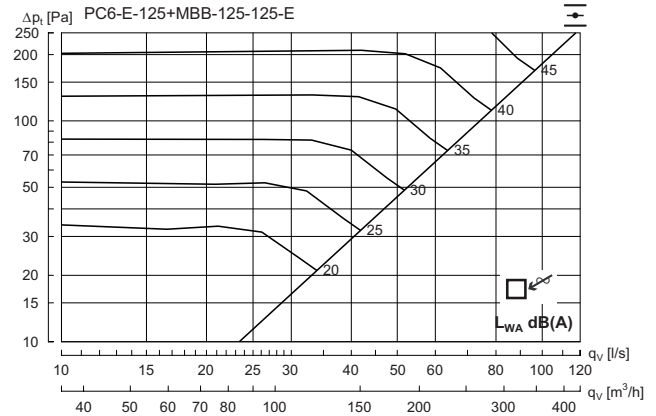
PC6

Technical data

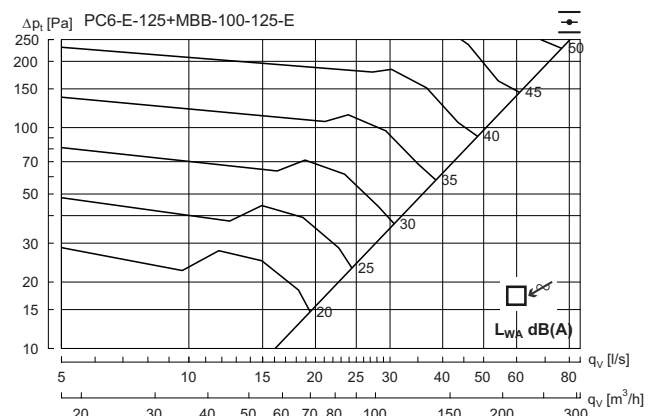
PC6 without box - Extract air



PC6 125 + MBB-E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	5	0	-2	-5	-11	-14	-21



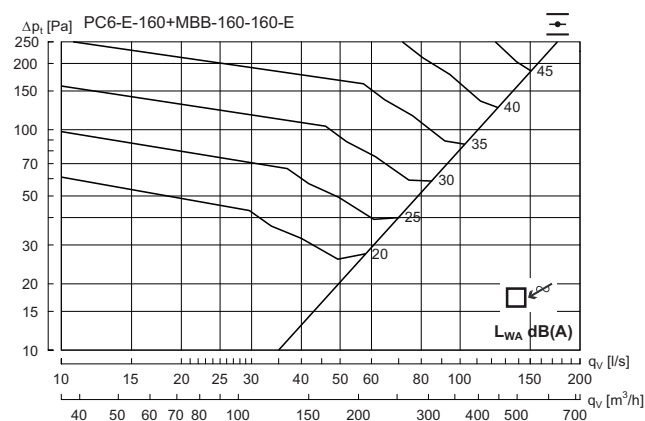
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	-1	4	-2	-8	-11	-16	-23

Perforated diffuser

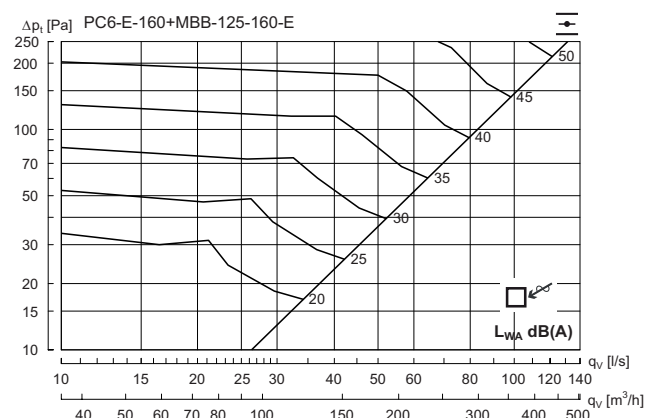
PC6

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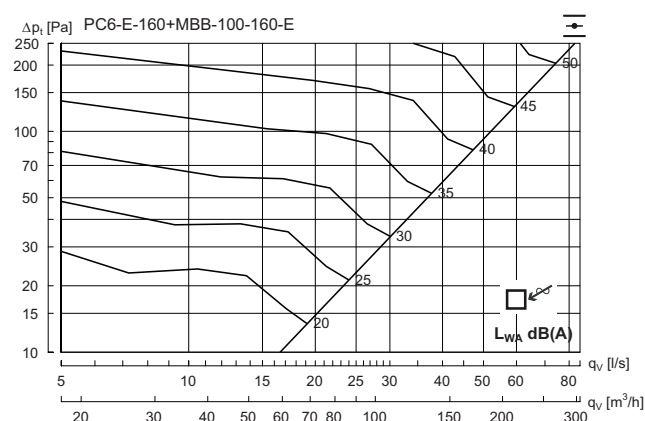
PC6 160 + MBB-E - Extract air



H _z	63	125	250	500	1K	2K	4K	8K
K_{ok}	20	8	-1	-4	-6	-12	-18	-21

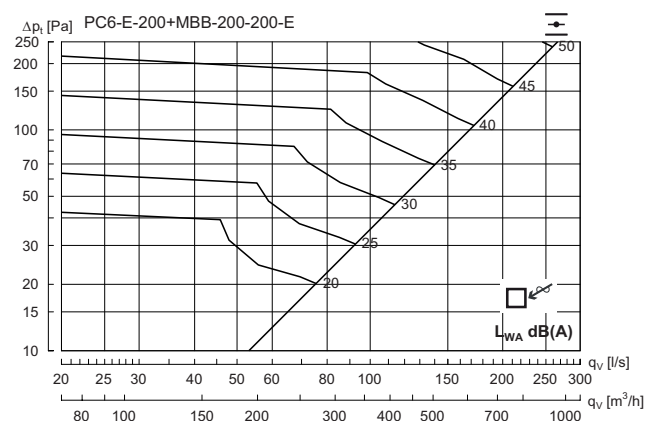


H _z	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	6	1	-2	-6	-11	-14	-21

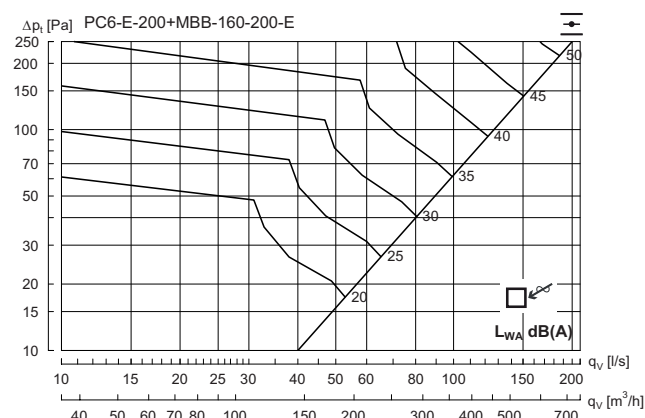


H _z	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	3	3	-1	-8	-11	-16	-22

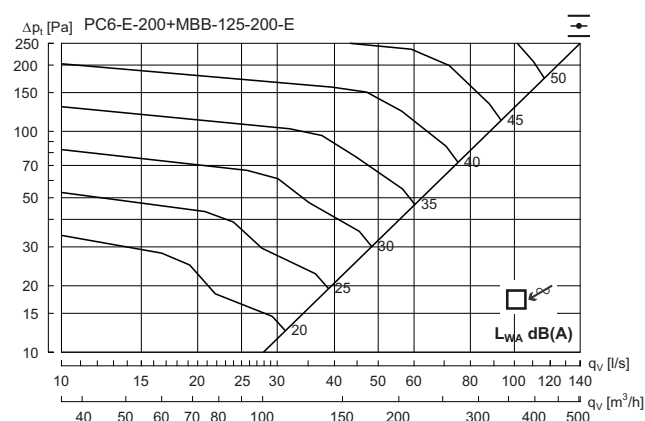
PC6 200+ MBB-E - Extract air



H _z	63	125	250	500	1K	2K	4K	8K
K_{ok}	14	4	0	-3	-5	-9	-15	-23



H _z	63	125	250	500	1K	2K	4K	8K
K_{ok}	15	6	-1	-3	-5	-9	-15	-21



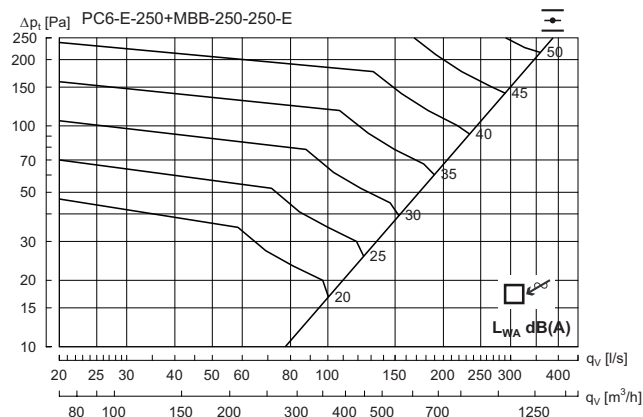
H _z	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	3	1	-2	-5	-10	-16	-22

Perforated diffuser

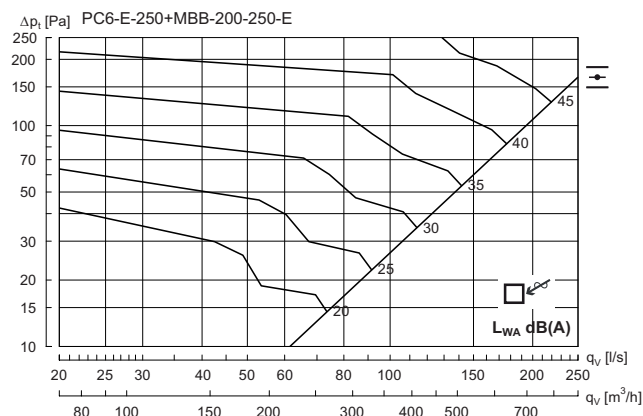
PC6

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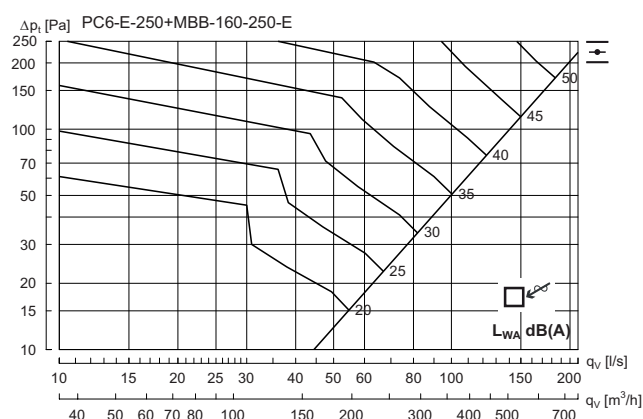
PC6 250+ MBB_E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	5	2	-3	-5	-11	-17	-24

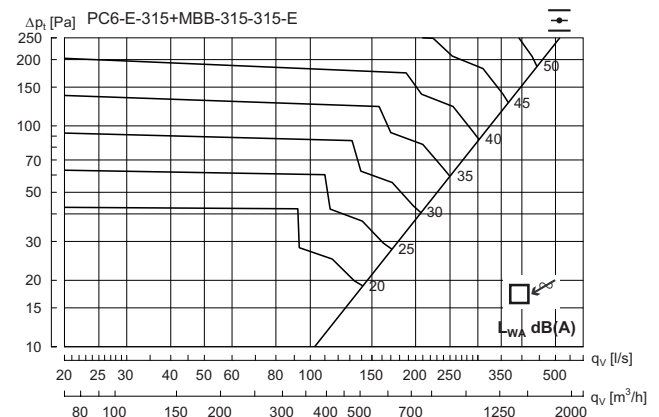


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	4	0	-3	-5	-10	-14	-21

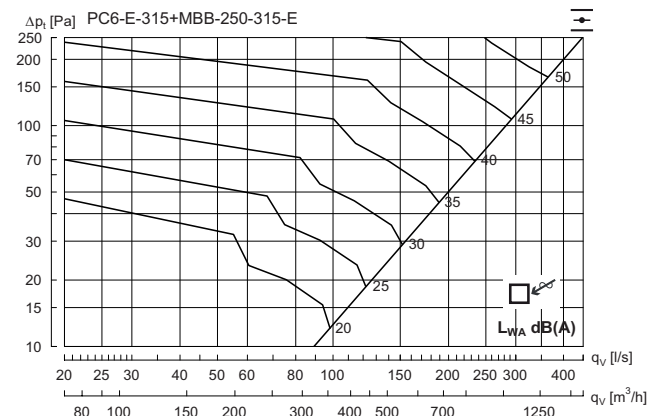


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	14	6	0	-4	-6	-9	-14	-19

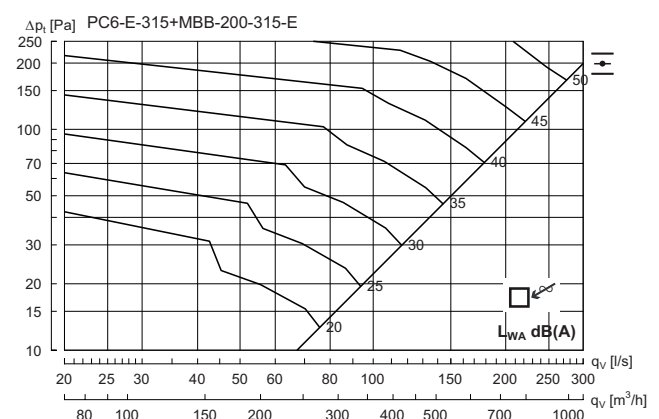
PC6 315+ MBB-E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	5	3	-3	-6	-10	-16	-27



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	8	5	2	-3	-5	-11	-17	-25



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	5	1	-3	-5	-9	-14	-22