

Perforated diffuser

PC7



Description

PC7 is a circular diffuser with perforated face plate and integrated swirl insert. The diffuser is suitable for the horizontal supply of very cold air. The integrated swirl insert ensures optimum distribution and high induction.

Installing a PC7 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 is with a rotating blade damper for supply air. Typically used in applications that don't require a high balancing pressure in the plenum box.

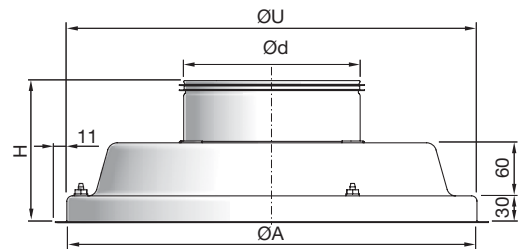
- High induction
- Discrete design
- Suitable for cooling at very low temperatures
- Plenum box with several damper options

Order code

Product	PC7	S	aaa
Type			
PC7			
Functional use			
S = Supply air			
Connection dim.			
Ød 160-315			

Example: PC7-S-200

Dimensions



PC7 Ød	ØA	H	ØU*	m
mm	mm	mm	mm	kg
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 !

PC7-S



Maintenance

The face plate and swirl insert 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.

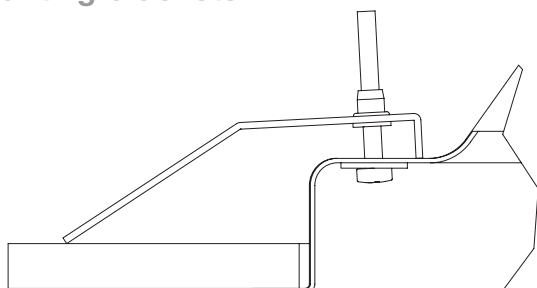
Perforated diffuser

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Accessories

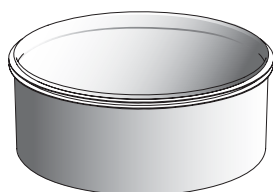
Mounting brackets

DCZ



Extension piece

MBZ



Order code - accessories

Product	aaa	bbb
Type		
Size		

Example: DCZ-200

Module plate

LM



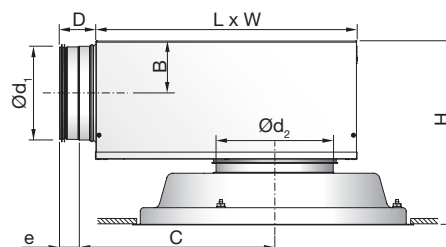
Order code - module plate

Product	LM	a	PC7	ccc
Type				
Ceiling system				
Diffuser				
Size				

Example: LM-1-PC7-200

Ceiling system - see introductory summary.

PC7 + MB plenum box



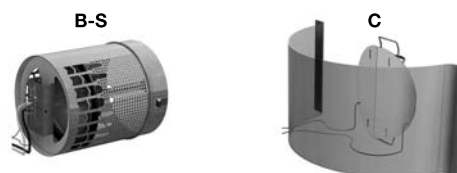
Ød ₁ mm	Ød ₂ mm	B	C	D	e	H*	L	W
100	160	62	245	78	40	250 - 290	310	260
125	160	75	291	78	40	275 - 315	376	310
125	200	75	291	78	40	275 - 315	376	310
160	160	92	352	78	40	309 - 349	459	380
160	200	92	352	78	40	309 - 349	459	380
160	250	92	352	78	40	309 - 349	459	380
200	200	112	425	78	40	350 - 390	565	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 = 160 - 200 mm => H +40 mm

Ød₂ = 250 - 315 mm => H +60 mm

Damper options



Order code

Product	MB	a	bbb	ccc	S
Type					
Damper					
B = Linear cone damper					
C = Blade damper supply					
Duct connection Ød ₁					
Ø100-315					
Diffuser dimension Ød ₂					
Ø160-315					
Function (Only for B damper)					
S = Supply air					

Example 1: PC7-S-200+MBB-160-200-S

Example 2: PC7-200+MBC-125-200

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Technical data

Following PC7+plenum box data are valid for MBB-S.
For MBC 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

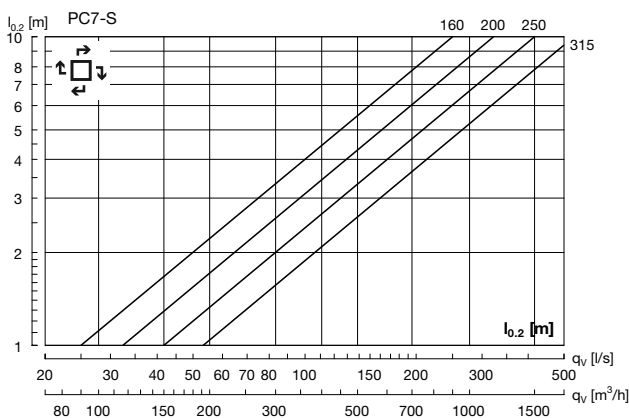
The sound power level in the frequency band is defined as $L_{WA}+K_{ok}$. K_{ok} values are specified in charts beneath the diagrams on the following pages.

Quick selection, supply air

PC7 + MBB-S		$\Delta p_t \geq 50$ Pa 30 dB(A)		$\Delta p_t \geq 50$ Pa 35 dB(A)	
duct $\varnothing d_1$	PC7 $\varnothing d_2$	l/s	m ³ /h	l/s	m ³ /h
100	160	36	130	43	155
125	160	44	158	55	198
125	200	50	180	60	216
160	160	47	169	55	198
160	200	55	198	66	238
160	250	71	256	88	317
200	200	60	216	72	259
200	250	84	302	99	356
200	315	93	335	113	407
250	250	88	317	103	371
250	315	96	346	114	410
315	315	107	385	127	457

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.

PC7 + MBB-S		Centre frequency Hz							
duct $\varnothing d_1$	PC7 $\varnothing d_2$	63	125	250	500	1K	2K	4K	8K
100	160	17	15	5	12	18	17	17	19
125	160	15	14	7	18	16	17	18	20
125	200	12	11	4	14	14	16	16	18
160	160	17	15	10	21	18	19	20	20
160	200	18	15	8	21	17	17	19	20
160	250	17	14	4	16	14	16	18	19
200	200	14	10	8	16	19	16	20	18
200	250	12	10	6	14	17	15	18	17
200	315	12	8	4	10	16	14	17	16
250	250	13	9	8	15	17	17	18	18
250	315	13	7	6	14	16	16	17	17
315	315	9	9	9	14	17	16	17	22

Balancing

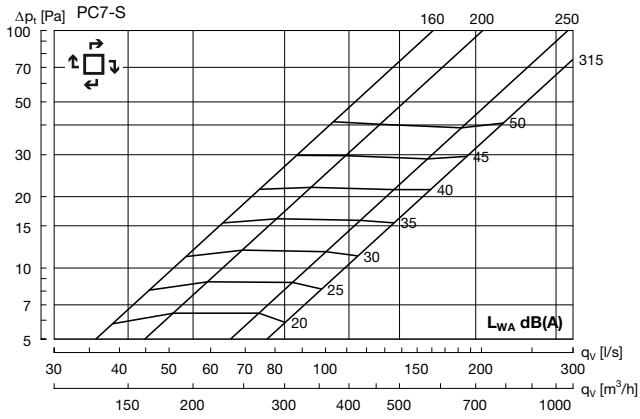
Balancing data is contained in a separate brochure.

Perforated diffuser

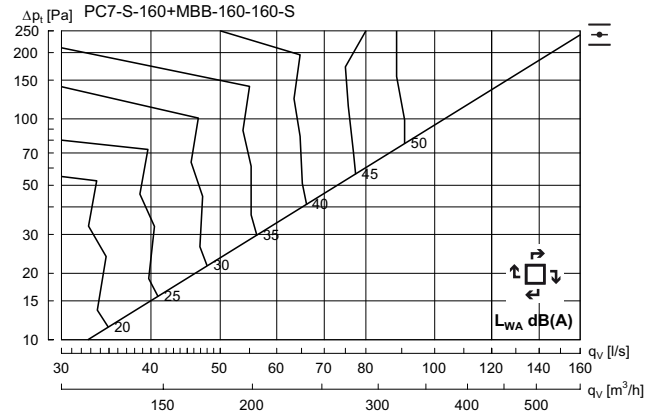
PC7

Technical data

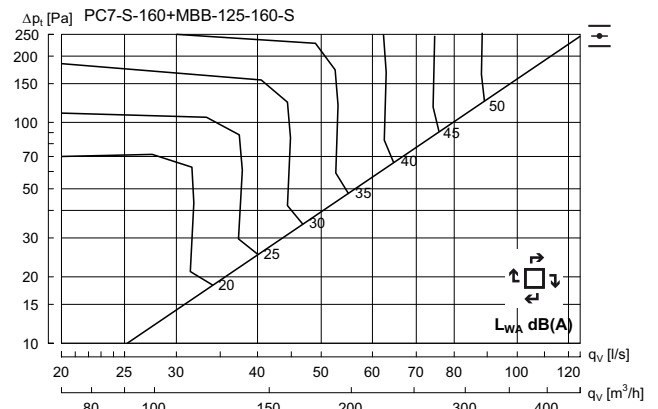
PC7 without box - Supply air



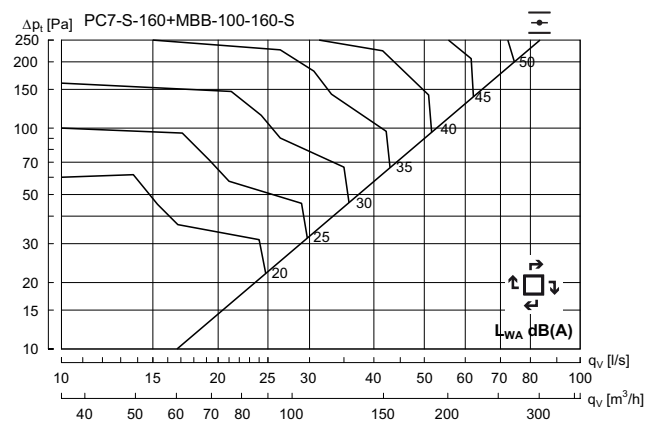
PC7 160 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	10	1	-4	-1	-3	-18	-26	-32



Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	10	4	-1	-1	-5	-14	-19	-25



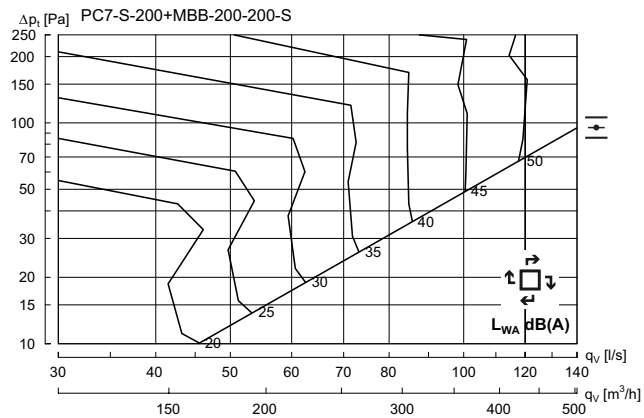
Hz	63	125	250	500	1K	2K	4K	8K
K _{ok}	11	3	0	-1	-6	-10	-14	-20

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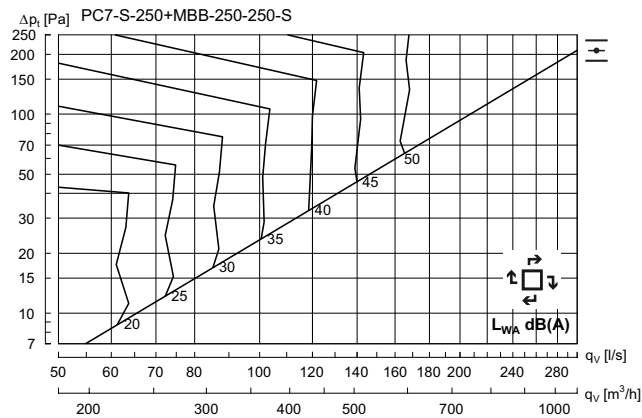
Technical data

PC7 200 + MBB-S - Supply air

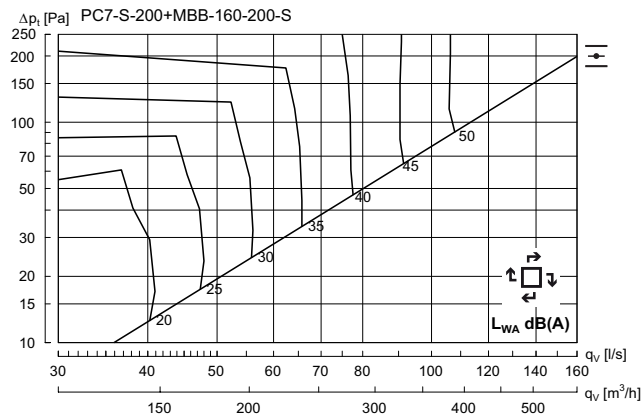


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	-1	-4	0	-4	-19	-26	-31

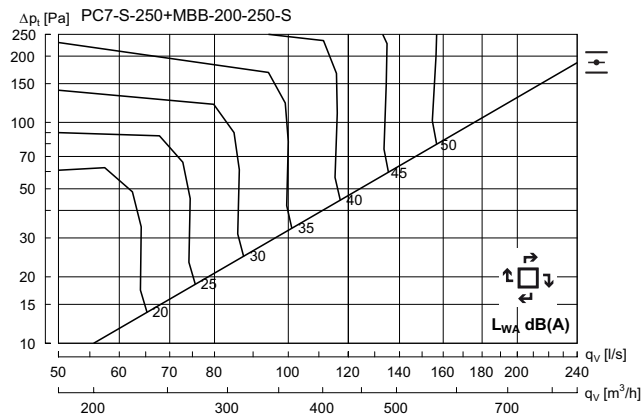
PC7 250 + MBB-S - Supply air



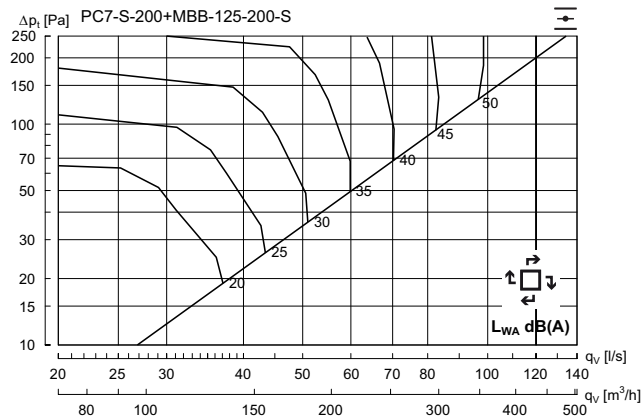
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	-1	-5	0	-4	-18	-28	-36



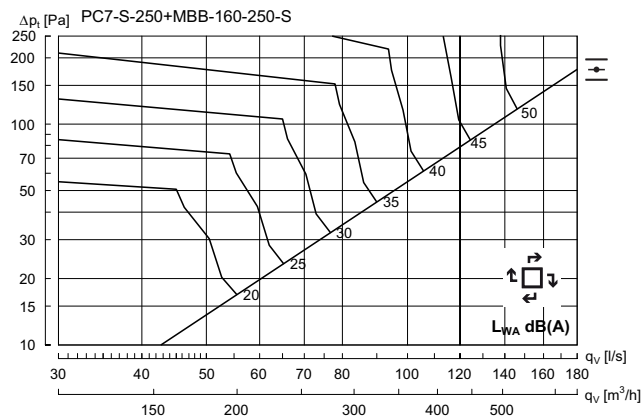
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	2	-2	-1	-4	-16	-24	-29



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	2	-3	-1	-4	-16	-24	-29



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	6	5	1	-1	-5	-13	-19	-24



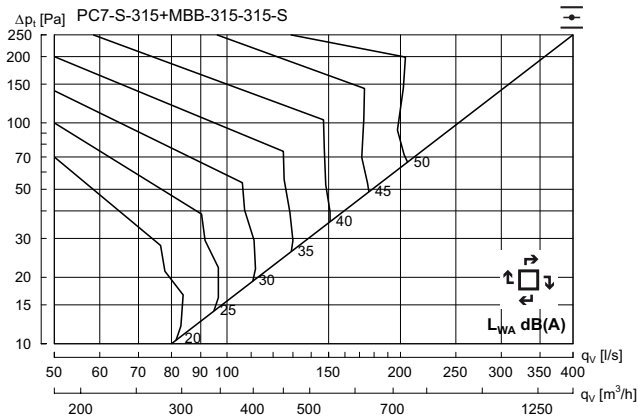
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	4	1	-2	-4	-13	-20	-26

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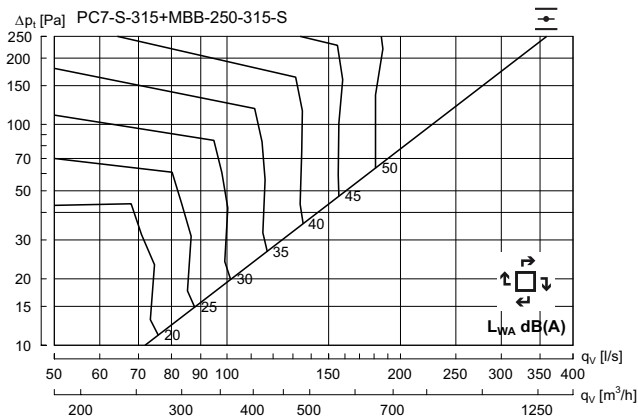
PC7

Technical data

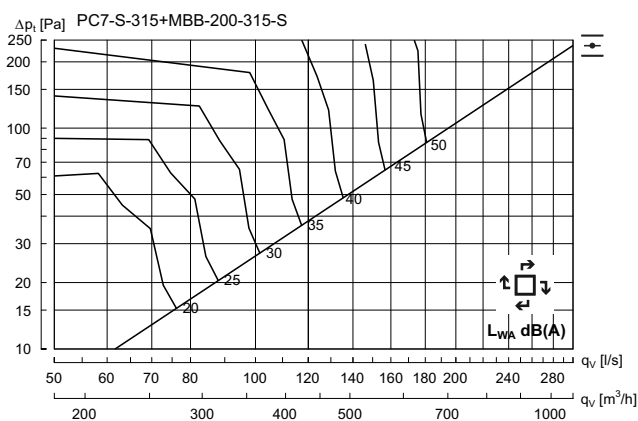
PC7 315 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	1	-2	0	-5	-18	-23	-32



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	0	-2	0	-4	-16	-25	-34



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	4	-1	-1	-4	-14	-21	-27