

# Lindab **PS1**

Versio - Ceiling diffusers



# Versio - Ceiling diffusers

PS1



PS1 with grille box type V.

## Description

PS1 is a square perforated diffuser. PS1 can be used for both supply and extract air. PS1 is suitable for the horizontal supply of cooled air. PS1 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.

- Suitable for both supply and extract air
- The possibility of 1-2-3-way dispersal
- Can be used for low impulse
- Plenum box with several damper options

## Order code

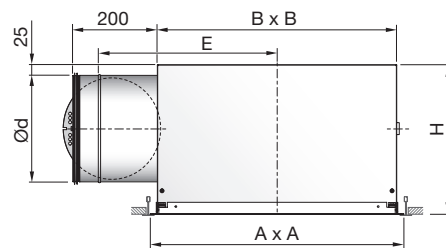
<b>Product</b>	<b>PS</b>	<b>a</b>	<b>b</b>	<b>c</b>	<b>d</b>	<b>eee</b>	<b>f</b>
<b>Type</b>	PS						
<b>Design</b>	1 - 2 - 3 - 4						
<b>Box type</b>	V - H - R (R only extract)						
<b>Functional use</b>	S = Supply air E = Extract L = Low-impulse						
<b>Damper</b>	0 = No damper (Box : H, V) 1 = Damper (Box : H, R) 2 = Damper / Meas.outlets (Box : H)						
<b>Connection dim.</b>	Ø200-315 (Box : V) Ø160-315 (Box : H) 200x100 - 500x100 (Box : R)						
<b>Ceiling system</b>	1 - 14 Ceiling systems, see <a href="#">ceiling tile adaption</a>						

Example: PS-1-V-S-0-200-1



PS1 with plenum box type H.

## Dimensions



### PS1-H

Ød mm	Pattern	A	B	H	E	m kg
160	400	*595	382	261	350	5.9
200	500	*595	462	301	390	8.5
250	600	*595	562	351	420	12.3
315	600	*595	562	416	420	13.1

\* Face plate dimensions A x A shown in table above are valid for ceiling type 1, T24/T15. The A x A dimension depends on ceiling system. See [Ceiling tile adaption](#) for detailed dimensions. For further details on plenum boxes, see the following pages. Configure your PS1 in the LindQST [airborne calculator](#).

## 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

### Grille box/plenum box:

Material: Galvanised steel

### Face plate:

Material: Galvanised steel

Standard finish: Powder-coated

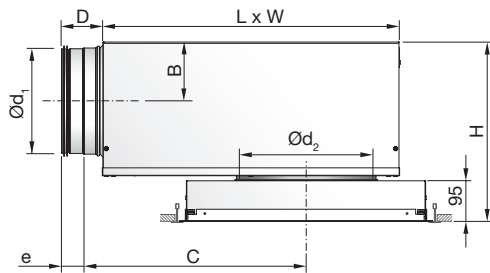
Standard colours: RAL 9003 or RAL 9010, gloss 30.

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

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## PS1-V + MB plenum box



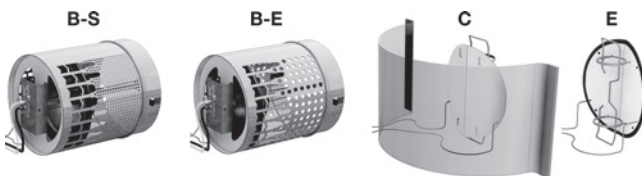
Ød <sub>1</sub> mm	Ød <sub>2</sub> mm	Pattern	B	C	D	e	H*	L	W
			mm						
125	200	400	75	291	78	40	283 - 323	376	310
160	200	400	92	352	78	40	317 - 357	459	380
160	250	500	92	352	78	40	317 - 357	459	380
200	200	400	112	425	78	40	358 - 398	565	460
200	250	500	112	425	78	40	358 - 398	565	460
200	315	600	112	425	78	40	358 - 398	565	460
250	250	500	137	534	118	60	408 - 448	698	540
250	315	600	137	534	118	60	408 - 448	698	540
315	315	600	170	695	118	60	473 - 513	858	540

\* Using accessory MBZ the H dimension will increase:

Ød<sub>2</sub> = 200 mm => H +40 mm

Ød<sub>2</sub> = 250 - 315 mm => H +60 mm

## Damper options



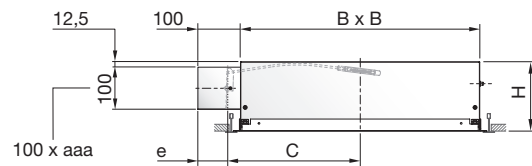
## Order code

Product	MB	a	bbb	ccc	d
Type					
MB					
Damper					
B = Linear cone damper					
C = Blade damper supply					
E = Blade damper extract					
Duct connection Ød <sub>1</sub>					
Ø125-315					
Diffuser dimension Ød <sub>2</sub>					
Ø200-315					
Function (Only for B damper)					
S = Supply air					
E = Extract					

Example 1: PS-1-V-S-0-200-1+MBB-160-200-S

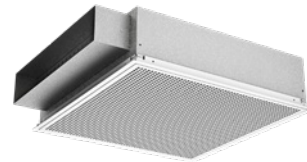
Example 2: PS-1-V-S-0-200-1+MBC-160-200

## PS1 + R plenum box



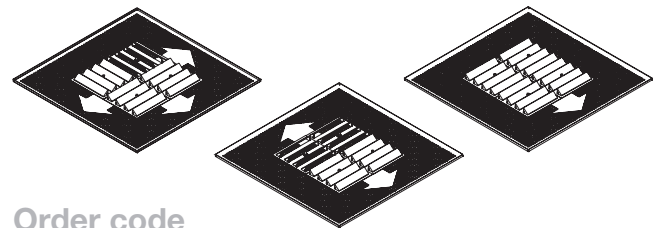
## PS1 + R

aaa x 100 mm	Pattern	B	C	H	e
		mm			
200 x 100	400	382	221	161	70
300 x 100	400	382	221	161	70
400 x 100	500	462	261	161	70
500 x 100	600	562	311	161	70



## Accessories

### MDR - Directional deflector (set)



## Order code

Product	MDR	aaa
Type		
Pattern		

Example: MDR-200

### MBZ - Extension piece

## Order code

Product	MBZ	aaa
Type		
Size		



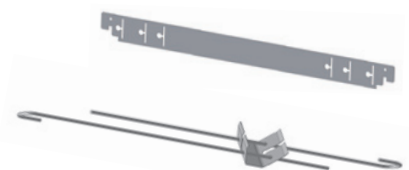
Example: MBZ-200

### PBB - Mounting bracket (set)

### MHS - Suspension

## Order code

Product	aaa
Type	



Example: MHS

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## Technical data

Following PS1-V+plenum box data are valid for MBB-S/E. For MBB-S/-E, MBC and MBE data, go to LindQST [airborne calculator](#).

## Capacity

Air flow  $q_v$  [l/s] and [m<sup>3</sup>/h], total pressure  $\Delta p_t$  [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

### PS1-V + MBB-S

PS1-V + MBB-S		$\Delta p_t \geq 50$ Pa 30 dB(A)		$\Delta p_t \geq 50$ Pa 35 dB(A)	
duct	PS1-V				
$\varnothing d_1$	$\varnothing d_2$	l/s	m <sup>3</sup> /h	l/s	m <sup>3</sup> /h
125	200	58	209	70	252
160	200	63	227	77	277
160	250	71	256	90	324
200	200	82	295	97	349
200	250	88	317	108	389
200	315	108	389	139	500
250	250	106	382	124	446
250	315	124	446	150	540
315	315	152	547	183	659

### Supply air

#### PS1 + H

PS1 + H	Minimum		$\Delta p_t \geq 50$ Pa 30 dB(A)		$\Delta p_t \geq 50$ Pa 35 dB(A)	
	Size $\varnothing d$ mm	l/s	m <sup>3</sup> /h	l/s	m <sup>3</sup> /h	l/s
160	30	108	51	184	57	205
200	49	176	69	248	83	299
250	49	176	93	335	114	410
315	82	295	140	504	164	590

## Sound attenuation

Sound attenuation of the diffusers  $\Delta L$  from duct to room, including end reflection - see table below.

### PS1-V + MBB-S

PS1-V + MBB-S/-E		Centre frequency Hz							
duct	PS1-V	63	125	250	500	1K	2K	4K	8K
$\varnothing d_1$	$\varnothing d_2$								
125	200	14	11	4	15	15	15	16	17
160	200	14	14	7	22	18	17	19	20
160	250	14	14	4	17	15	15	16	19
200	200	13	10	7	16	19	17	19	18
200	250	11	9	6	15	17	15	18	16
200	315	13	8	3	12	16	14	16	15
250	250	14	8	8	16	18	17	17	18
250	315	14	7	5	14	16	15	16	17
315	315	8	9	9	15	17	16	17	21

### PS1 + H

PS1 + H		Centre frequency Hz							
Size $\varnothing d$ mm		63	125	250	500	1K	2K	4K	8K
160		18	15	5	13	11	11	9	10
200		16	10	6	15	11	11	12	14
250		14	9	7	13	8	9	12	14
315		12	8	8	14	10	9	11	14

## Installation -and balancing instruction

For further information go to [LindQST](#) and get all related documentation, including installation -and balancing instruction.

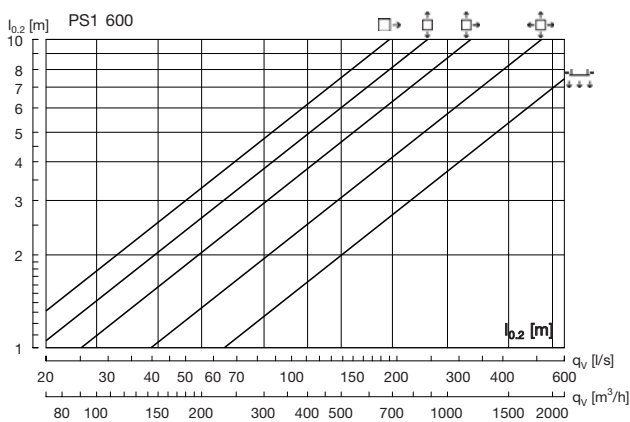
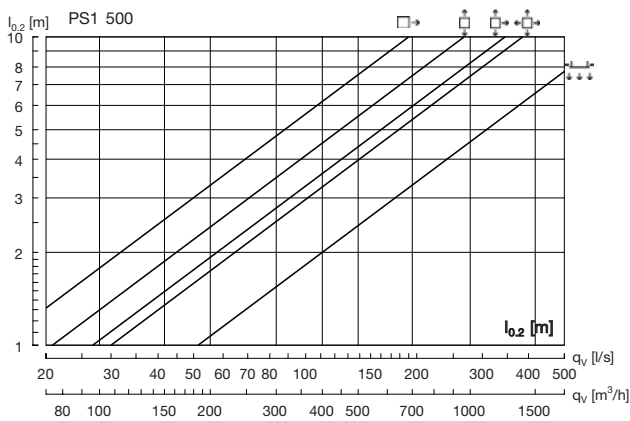
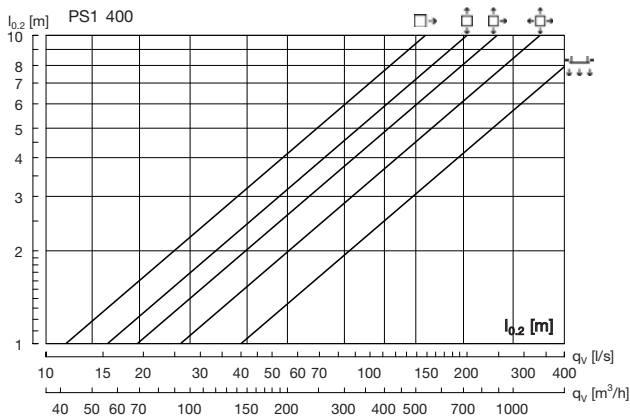
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## Technical data

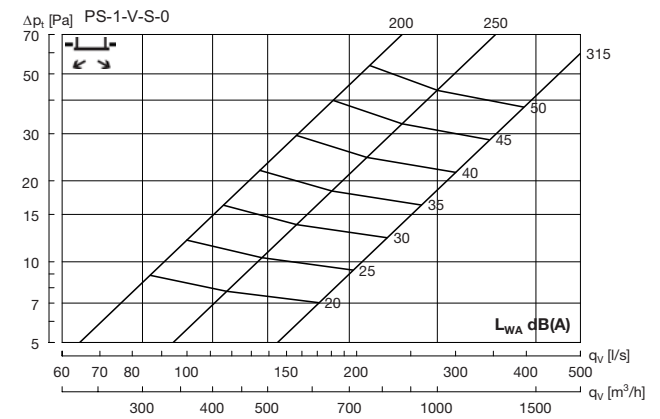
### Throw $l_{0.2}$

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

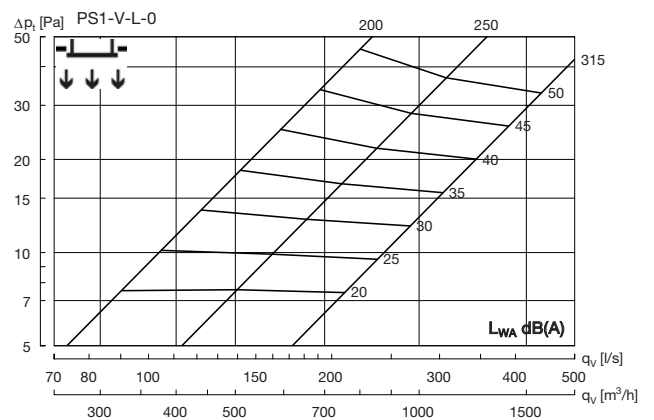


## PS1-V without plenum box

### Supply air



### Low-impulse

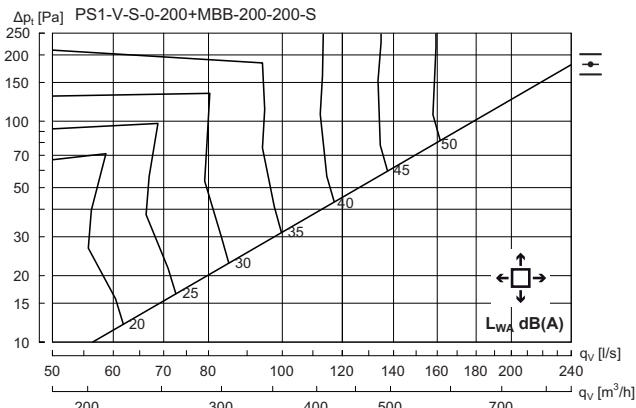


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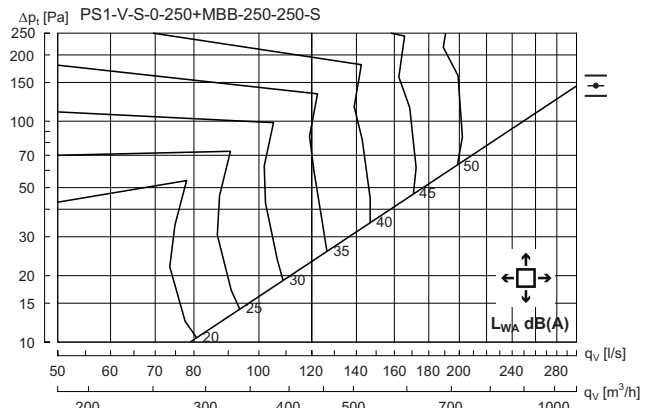
## Technical data

### PS1-V 200 + MBB-S - Supply air

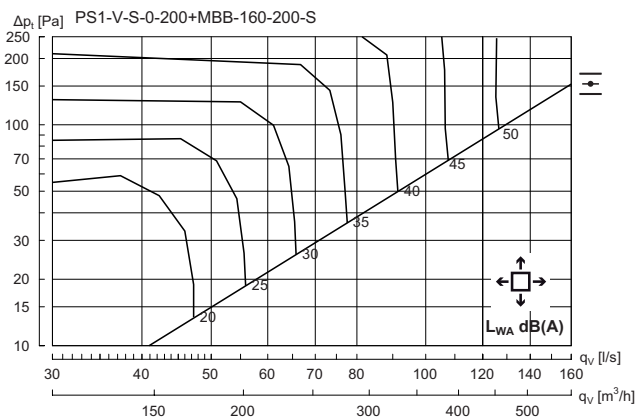


Hz	63	125	250	500	1K	2K	4K	8K
$K_{\text{ok}}$	13	0	-6	0	-4	-17	-25	-32

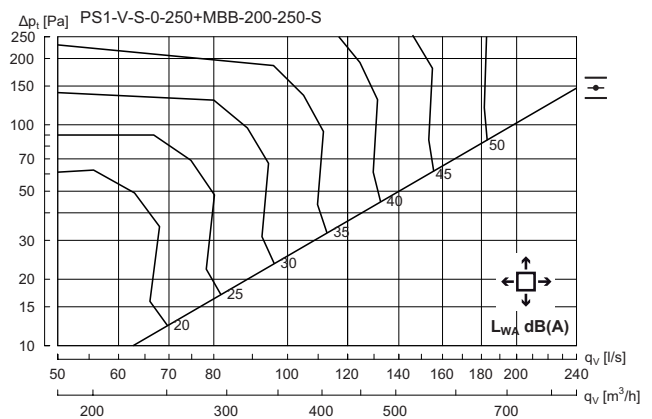
### PS1-V 250 + MBB-S - Supply air



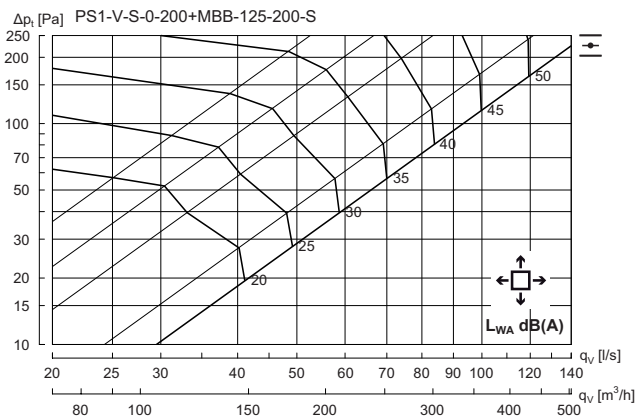
Hz	63	125	250	500	1K	2K	4K	8K
$K_{\text{ok}}$	10	-1	-6	0	-4	-18	-25	-33



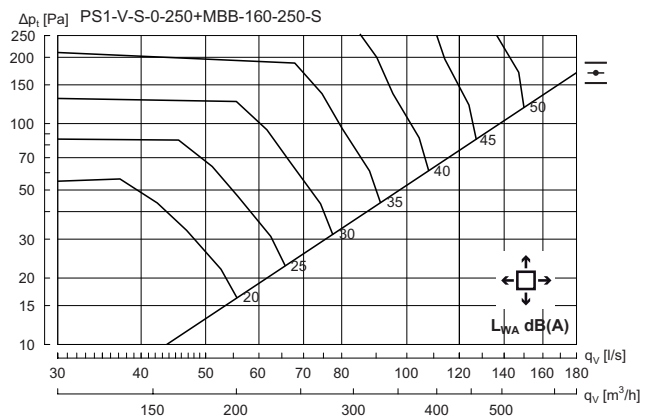
Hz	63	125	250	500	1K	2K	4K	8K
$K_{\text{ok}}$	8	3	-3	-1	-4	-14	-21	-27



Hz	63	125	250	500	1K	2K	4K	8K
$K_{\text{ok}}$	9	4	-4	-1	-4	-15	-22	-28



Hz	63	125	250	500	1K	2K	4K	8K
$K_{\text{ok}}$	9	5	1	-2	-6	-10	-15	-22



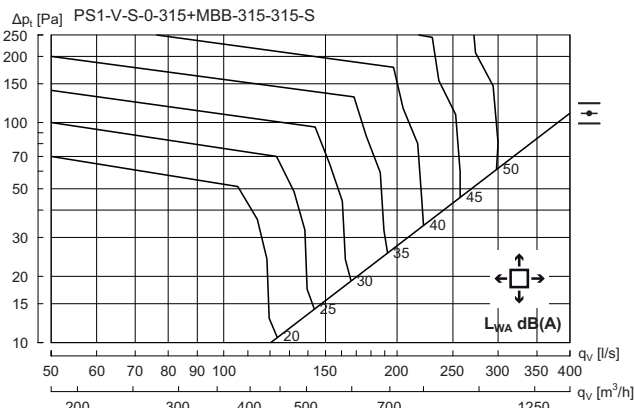
Hz	63	125	250	500	1K	2K	4K	8K
$K_{\text{ok}}$	15	3	-1	-3	-4	-12	-19	-24

# Versio - Ceiling diffusers

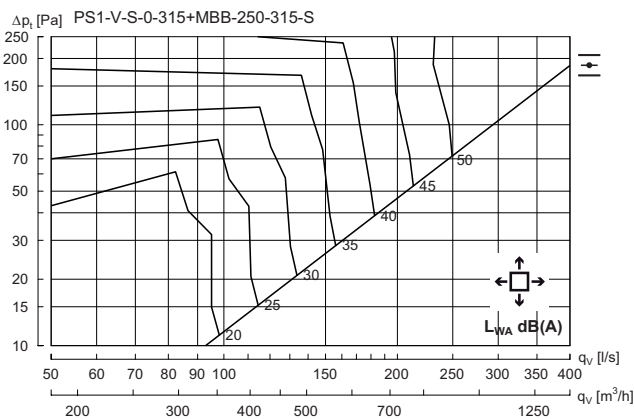
# PS1

## Technical data

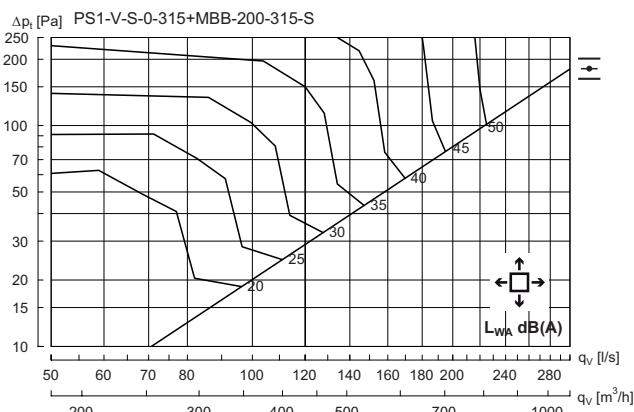
### PS1-V 315 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	12	0	-3	-1	-4	-16	-22	-28



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	9	4	-3	-1	-4	-15	-22	-28



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	10	5	-1	-2	-4	-12	-19	-25

### Low-impulse correction, sound power level ( $L_{WA}$ ) and pressure loss ( $\Delta p_t$ )

On the previous pages you can find diagrams for all sizes PS1-V+MBB-S supply air. When low-impulse values are wanted, use the correction factors in the table below.

#### PS1-V + MBB-S

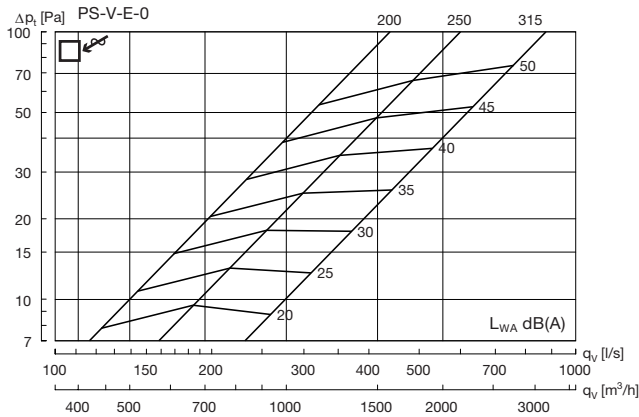
PS1-V + MBB-S		Low-impulse Correction factor	
duct	PS1-V	$L_{WA}$	$\Delta p_t$
$\varnothing d_1$	$\varnothing d_2$		
125	200	-1	x 1
160	200	-2	x 0,9
160	250	0	x 1
200	200	-3	x 0,9
200	250	0	x 1
200	315	0	x 1
250	250	0	x 1
250	315	0	x 1
315	315	0	x 1

# Versio - Ceiling diffusers

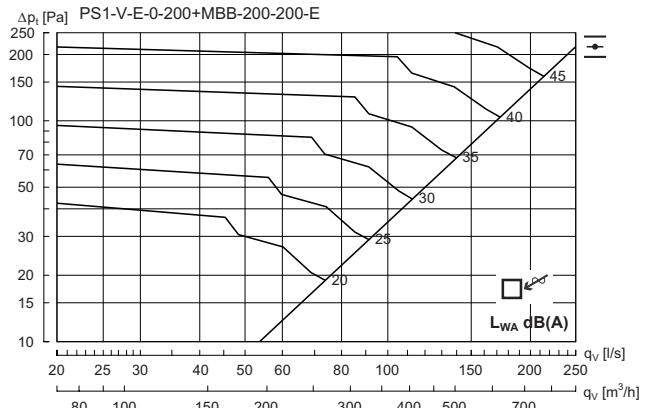
# PS1

## Technical data

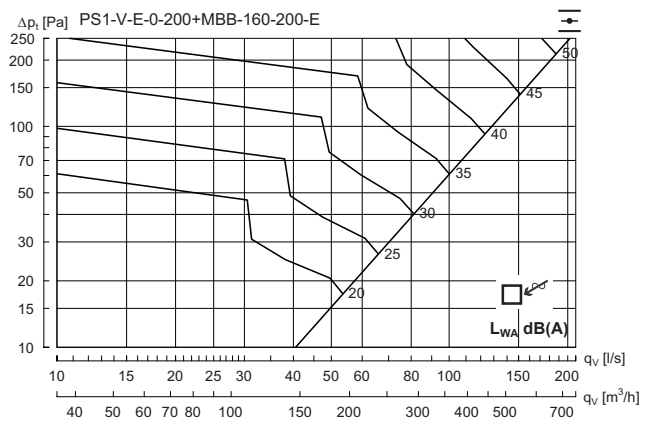
### PS1-V without plenum box



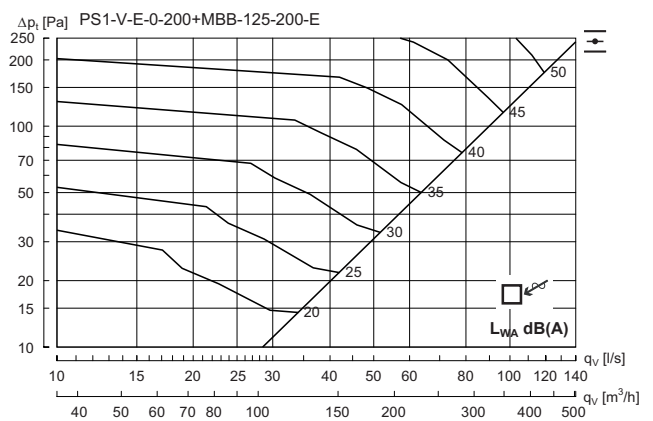
### PS1-V 200 + MBB-E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	15	5	1	-3	-6	-10	-14	-23



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	16	6	0	-3	-7	-9	-15	-21



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	10	4	2	-2	-6	-10	-15	-22

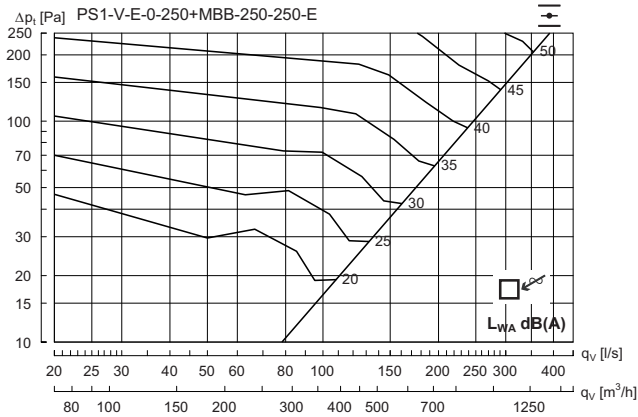


# Versio - Ceiling diffusers

# PS1

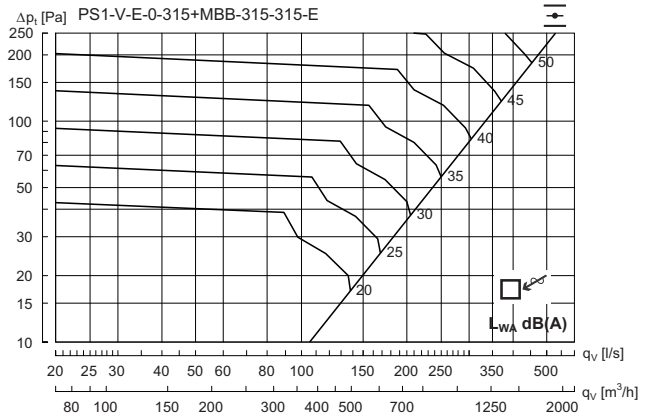
## Technical data

### PS1-V 250 + MBB-E - Extract air

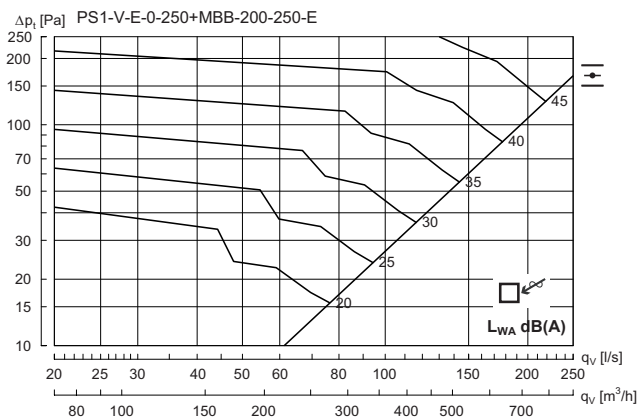


Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	10	6	2	-3	-6	-10	-15	-23

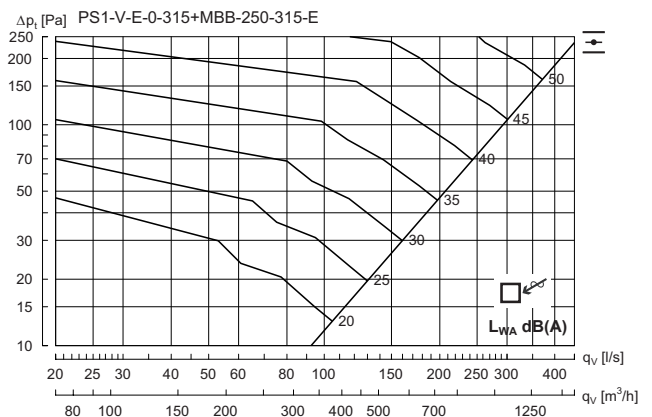
### PS1-V 315 + MBB-E - Extract air



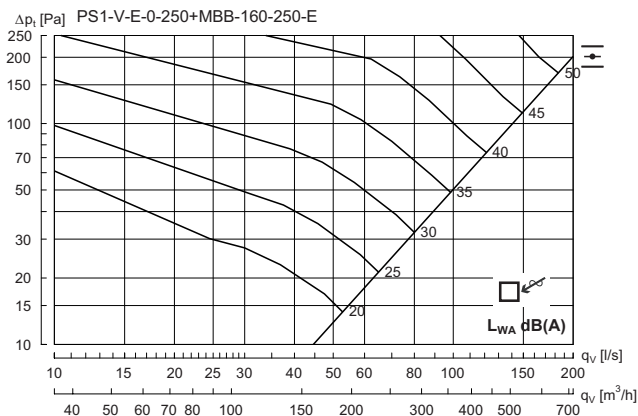
Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	11	5	3	-3	-7	-10	-15	-26



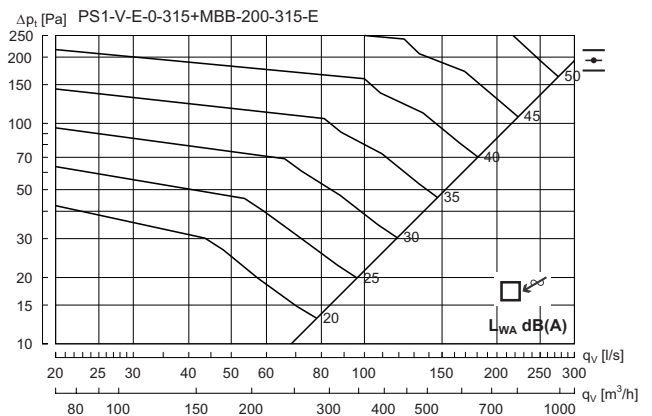
Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	14	5	1	-3	-5	-10	-15	-22



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	11	5	2	-3	-6	-11	-16	-23



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	15	6	0	-3	-6	-9	-14	-21



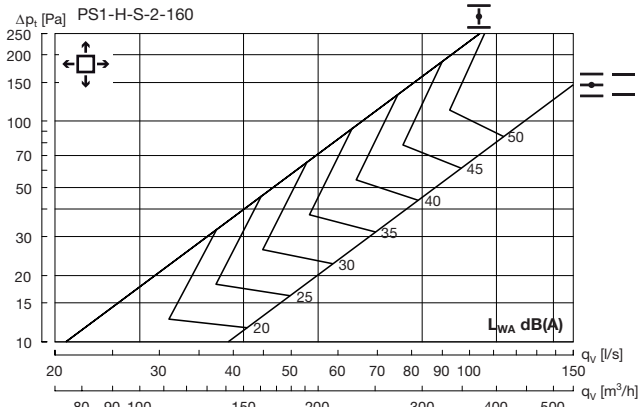
Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	13	5	1	-3	-6	-10	-14	-22

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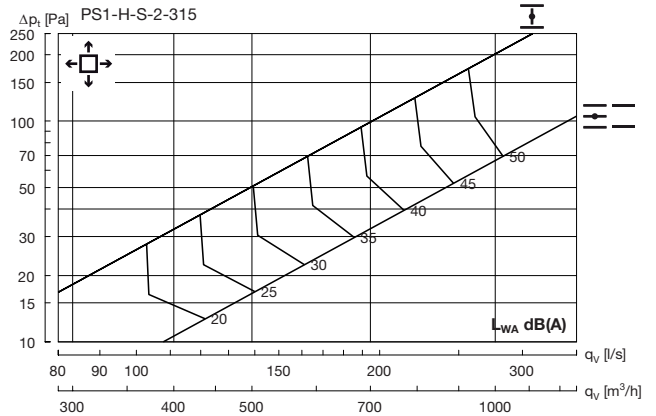
## Technical data

### PS1+H - Supply air

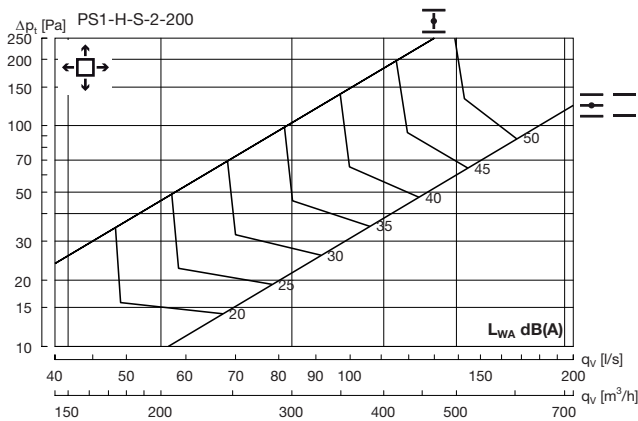


Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	8	4	3	-3	-6	-11	-15	-14

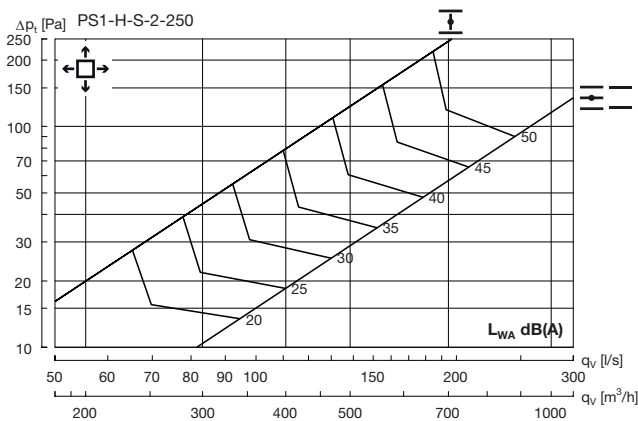
### PS1+H - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	13	4	0	-1	-6	-13	-17	-27



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	5	5	1	-1	-7	-12	-12	-18



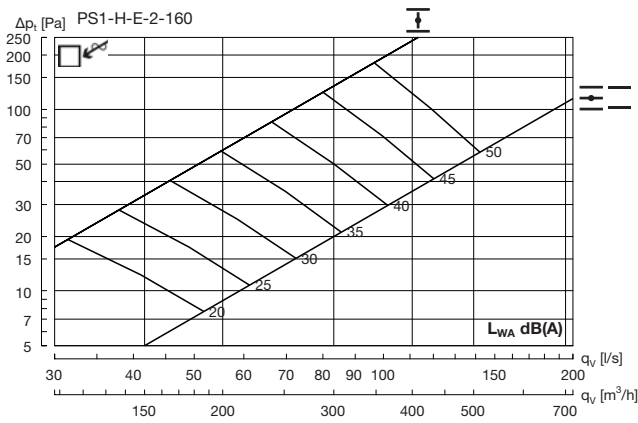
Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	9	5	2	-1	-7	-14	-18	-19

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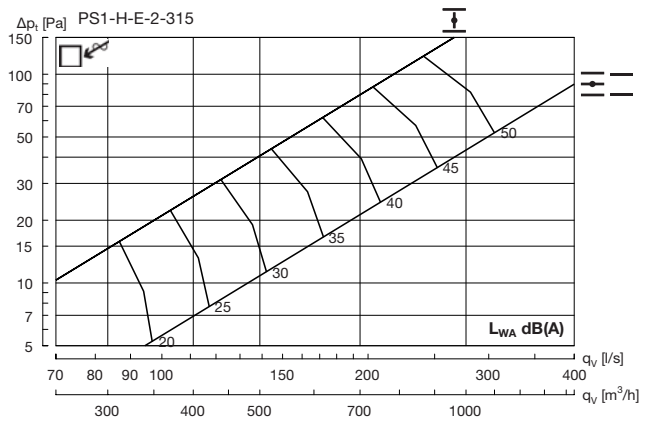
## Technical data

### PS1+H - Extract air

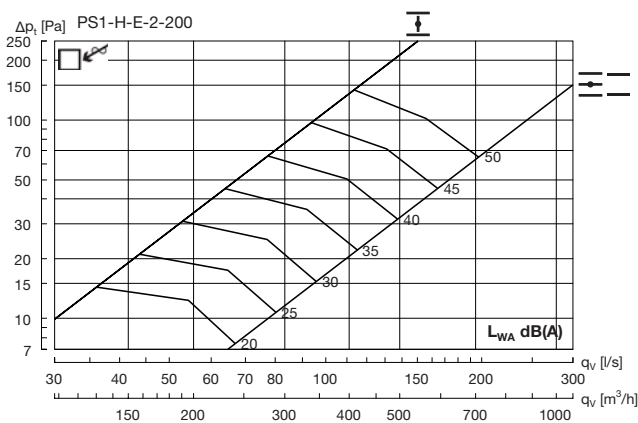


Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	10	4	6	-3	-11	-12	-19	-25

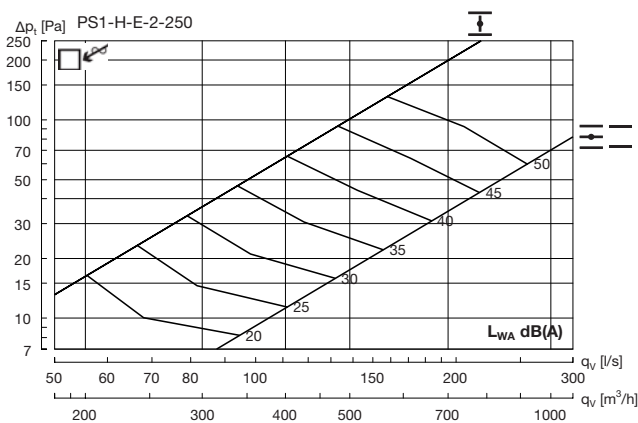
### PS1+H - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	11	3	1	1	-8	-16	-26	-37



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	10	4	5	-2	-9	-13	-21	-29



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	11	5	2	-2	-6	-12	-22	-32



Most of us spend the majority of our time indoors. Indoor climate is crucial to how we feel, how productive we are and if we stay healthy.

We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

Lindab | For a better climate