

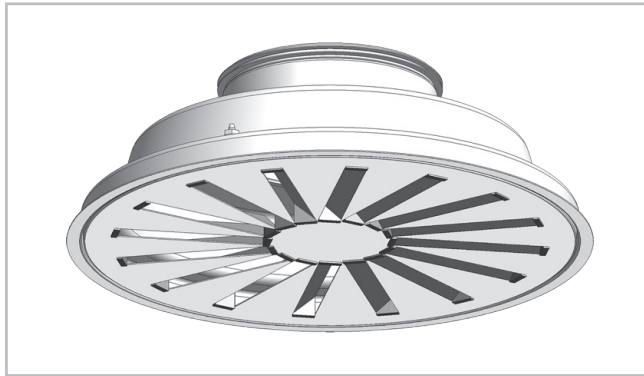
# Lindab **RC15**

Integra - Swirl diffuser



# Integra - Swirl diffuser

# RC15



## Description

RC15 is a circular swirl diffuser with adjustable bars. The diffuser can be used for both supply and extract air. The swirl pattern ensures high induction and a large dynamic range, and is therefore ideal for the horizontal supply of very cold air.

The diffuser can also be set to a vertical supply air pattern, enabling supply of heated air.

Installing a RC15 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. Typically used in applications that don't require a high balancing pressure in the plenum box.

- Large dynamic range
- High induction
- Suitable for cooling at very low temperatures
- Horizontal or vertical supply air pattern
- Can be used for both supply air and extract
- Plenum box with several damper options

## Maintenance

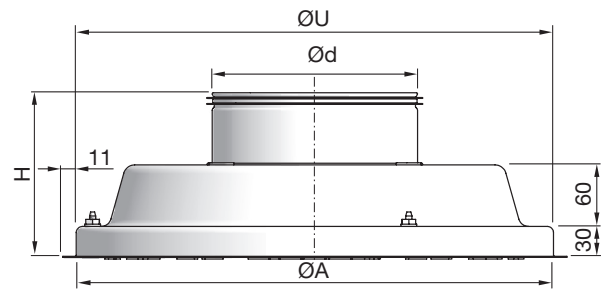
The face plate and swirl insert can be removed to enable cleaning of internal parts or to gain access to the duct or box. The visible parts of the diffuser can be wiped with a damp cloth.

## Order code

<b>Product</b>	<b>RC15</b>	<b>a</b>	<b>bbb</b>
<b>Type</b>	RC15		
<b>Functional use</b>			
S = Supply air			
E = Extract (Without bars)			
<b>Connection dim.</b>			
Ød 160-315			

Example: RC15-S-160

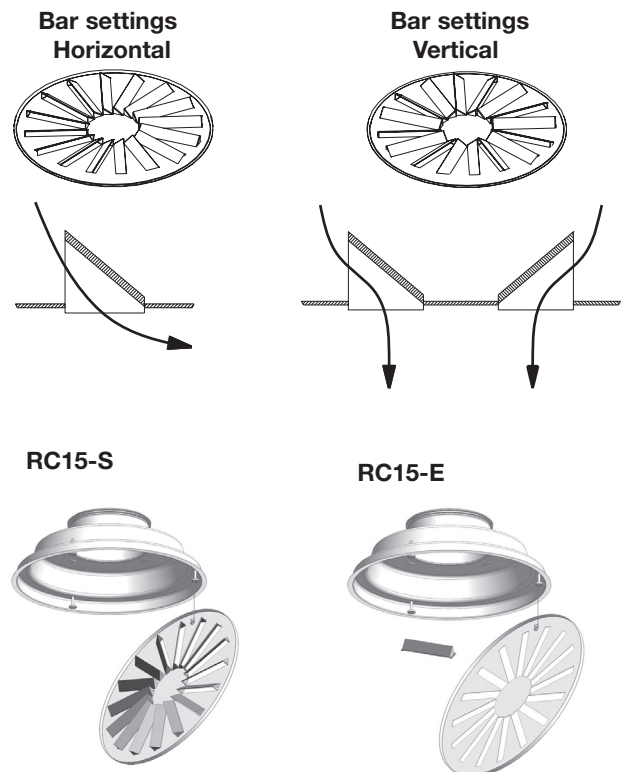
## Dimensions



RC15 Ød	ØA	H	ØU*	m
mm	mm	mm	mm	kg
160	360	140	370	5.30
200	360	140	370	5.40
250	460	140	470	7.40
315	540	140	550	8.10

\* ØU = ceiling grid opening.

Ød 315, No mounting holes for MB !



## Materials and finish

Material: Galvanised steel  
 Standard finish: Powder-coated  
 Standard colours: RAL 9003 and RAL 9010, gloss 30  
 Bars (Only RC15-S): Black ABS plastic

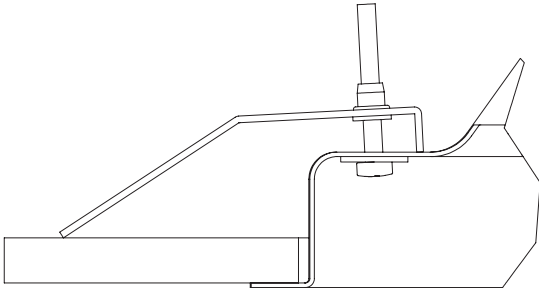
The diffuser is available in other colours. Please contact Lindab's sales department for further information.

# Integra - Swirl diffuser

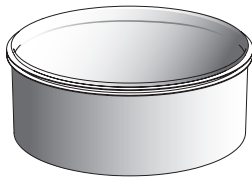
# RC15

## Accessories

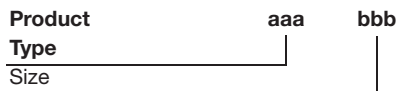
### DCZ - Mounting brackets



### MBZ - Extension piece



#### Order code - accessories

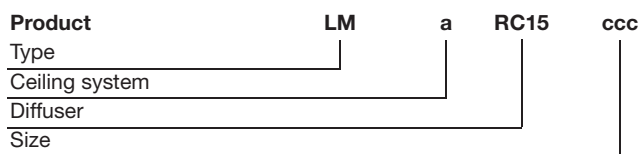


Example: DCZ-200

### LM - Module plate



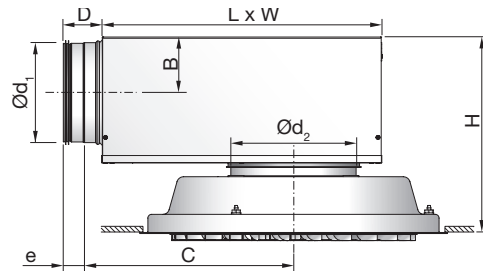
#### Order code - module plate



Example: LM-1-RC15-160

Ceiling system - see introductory summary

## RC15 + MB plenum box



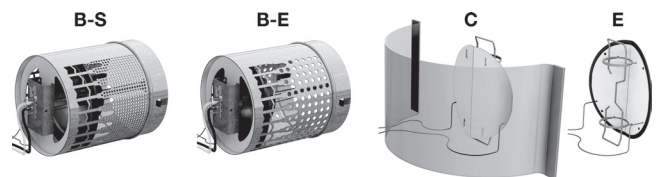
Ød <sub>1</sub> mm	Ød <sub>2</sub> mm	B	C	D	e	H*	L	W
		mm						
100	160	62	245	78	40	250 - 290	310	260
125	160	75	291	78	40	275 - 315	376	310
125	200	75	291	78	40	275 - 315	376	310
160	160	92	352	78	40	309 - 349	459	380
160	200	92	352	78	40	309 - 349	459	380
160	250	92	352	78	40	309 - 349	459	380
200	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:

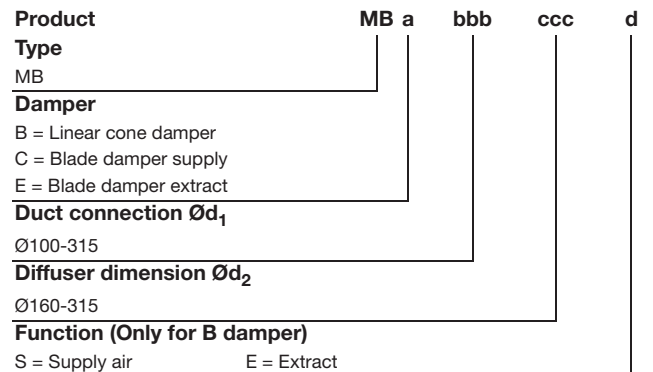
Ød<sub>2</sub> = 100 - 200 mm => H +40 mm

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

## Damper options



## Order code



Example 1: RC15-S-250+MBB-200-250-S

Example 2: RC15-200+MBC-125-200

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## Technical data

Following RC15+plenum box data are valid for MBB-S/-E. For MBC and MBE data, go to [www.lindQST.com](http://www.lindQST.com)

## 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

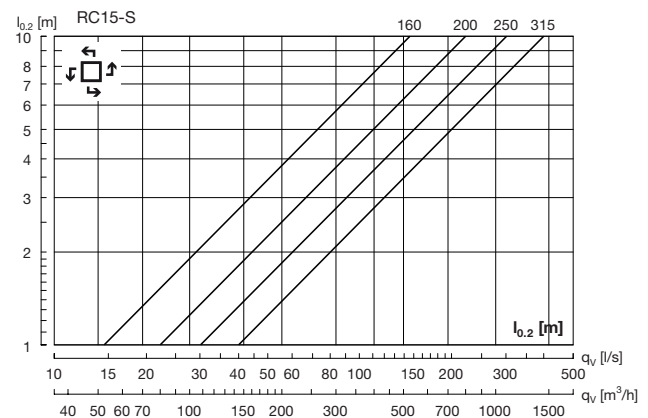
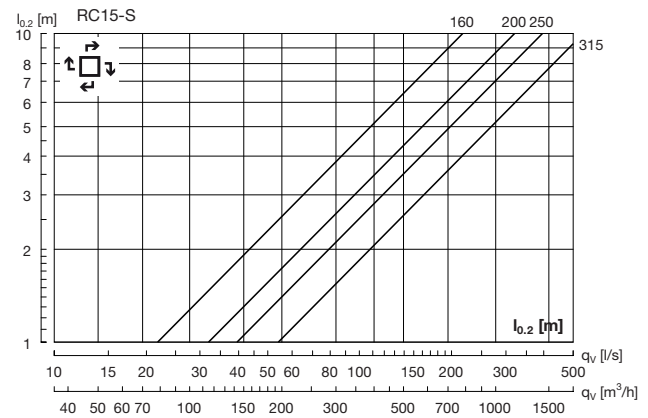
The sound power level in the frequency band is defined as  $L_{WA} + K_{ok}$ .  $K_{ok}$  values are specified in charts beneath the diagrams on the following pages.

## Quick selection, supply air

RC15 + MBB-S		$\Delta p_t \geq 50$ Pa		$\Delta p_t \geq 50$ Pa	
duct	RC15	30 dB(A)		35 dB(A)	
$\varnothing d_1$	$\varnothing d_2$	l/s	m <sup>3</sup> /h	l/s	m <sup>3</sup> /h
100	160	36	130	44	158
125	160	44	158	54	194
125	200	49	176	59	212
160	160	47	169	56	202
160	200	54	194	64	230
160	250	69	248	90	324
200	200	56	202	66	238
200	250	82	295	99	356
200	315	101	364	125	450
250	250	90	324	106	382
250	315	113	407	137	493
315	315	138	497	163	587

## 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  $\Delta L$  from duct to room, including and reflection, see table below.

RC15 + MBB-S/-E		Centre frequency Hz							
duct	RC15	63	125	250	500	1K	2K	4K	8K
$\varnothing d_1$	$\varnothing d_2$								
100	160	17	15	5	12	19	20	20	21
125	160	16	14	8	18	18	20	20	21
125	200	11	12	6	14	14	19	18	19
160	160	16	15	11	22	20	22	21	21
160	200	16	15	9	22	19	21	20	21
160	250	18	14	4	17	14	16	18	19
200	200	13	12	8	17	20	19	21	18
200	250	12	9	6	14	19	16	18	17
200	315	11	8	4	10	17	16	19	17
250	250	13	8	7	15	19	19	18	18
250	315	12	8	6	14	17	17	18	18
315	315	8	9	9	14	18	18	18	23

## Balancing

Balancing data is contained in a separate brochure.

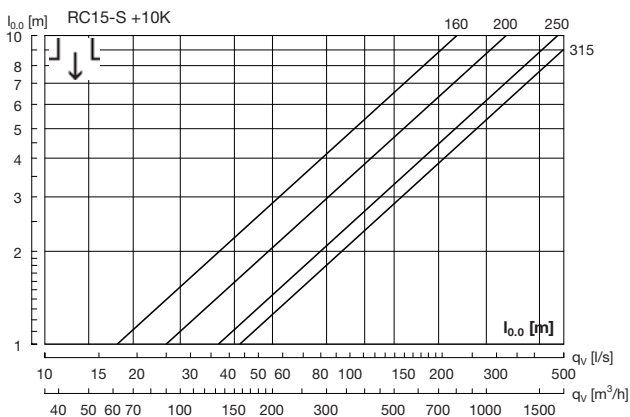
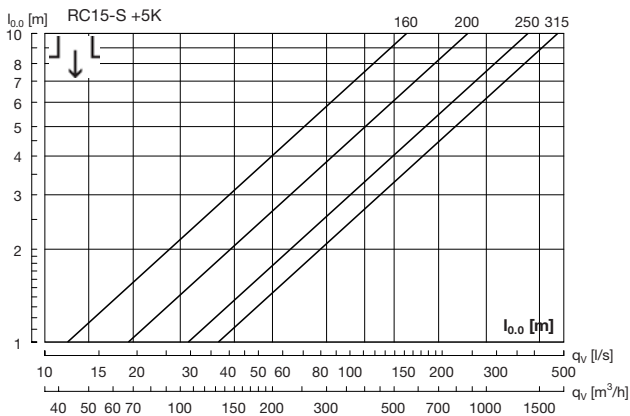
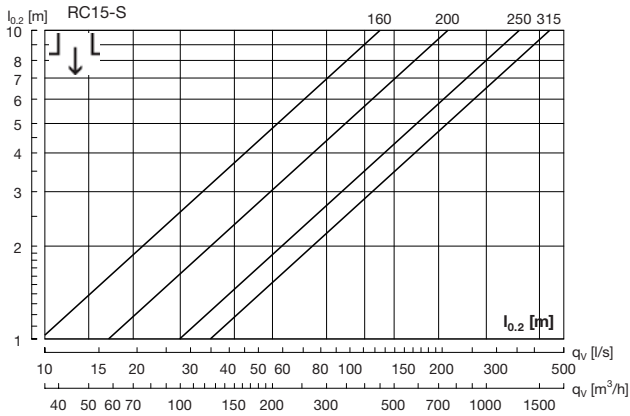
# Integra - Swirl diffuser

# RC15

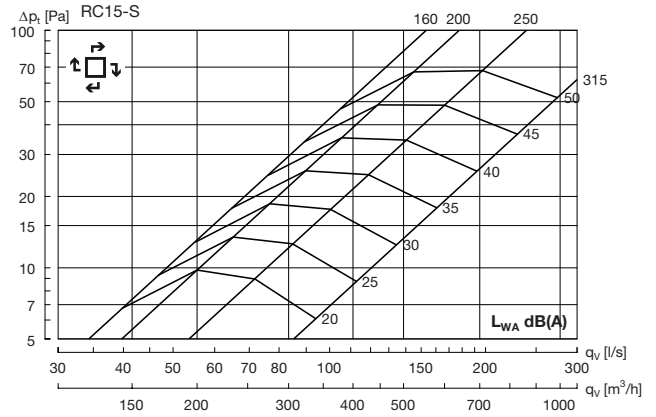
## Technical data

### Throws/Turning points

Throw  $l_{0.2}$  [m] is specified at a terminal velocity of 0.2 m/s.  
 Turning point  $l_{0.0}$  [m] is specified for +5 K and +10 K respectively.



### RC15 without box – supply air

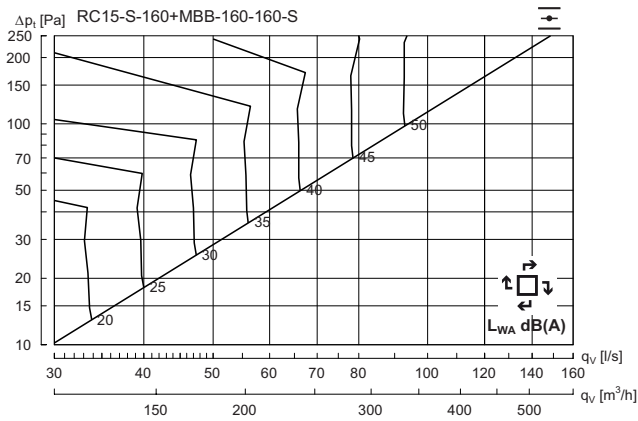


# Integra - Swirl diffuser

# RC15

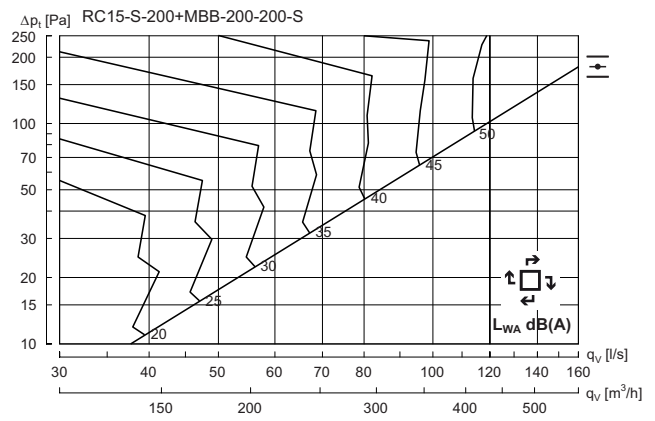
## Technical data

### RC15 160 + MBB-S - Supply air

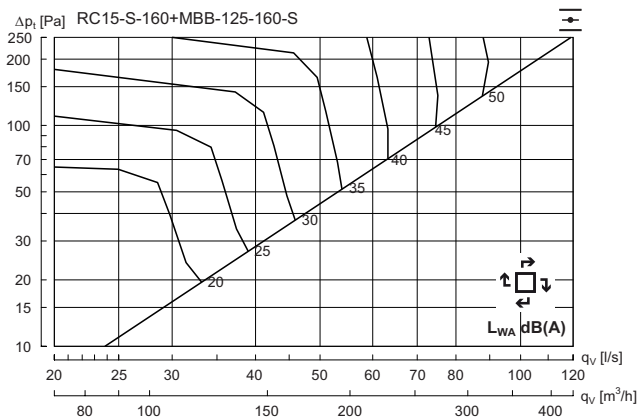


Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	10	2	-4	0	-5	-17	-23	-31

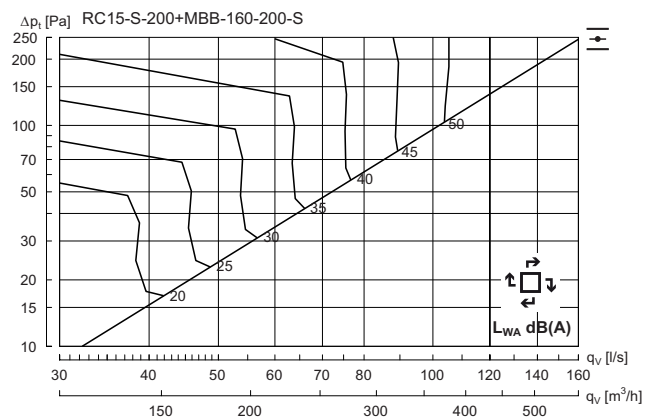
### RC15 - 200 + MBB-S - Supply air



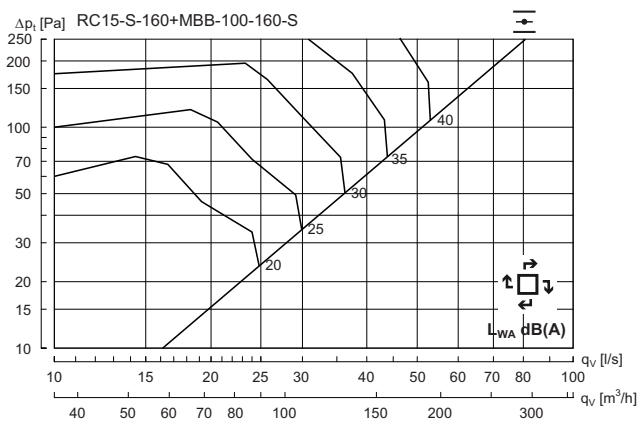
Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	8	3	-4	-1	-4	-15	-22	-31



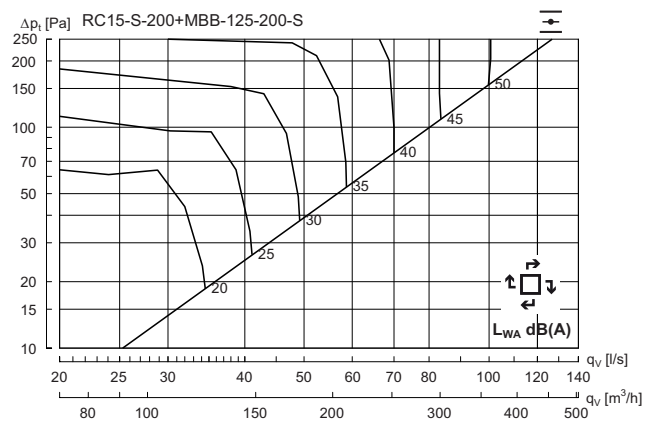
Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	10	4	-1	0	-6	-13	-18	-24



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	9	3	-1	-2	-4	-14	-21	-29



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	12	4	2	-1	-8	-12	-16	-19



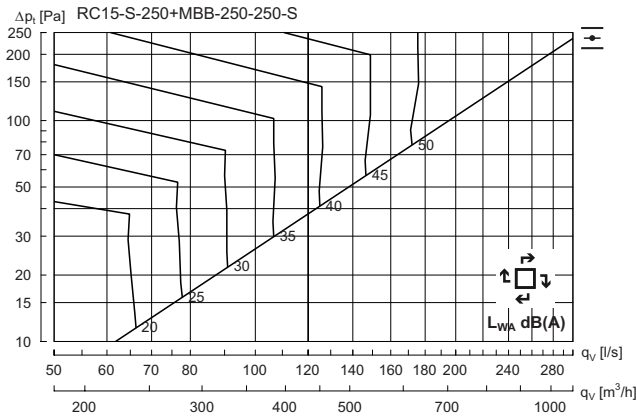
Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	7	5	0	-1	-5	-13	-17	-24

# Integra - Swirl diffuser

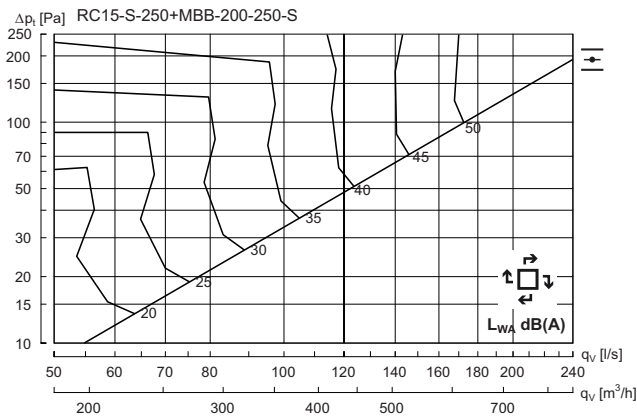
# RC15

## Technical data

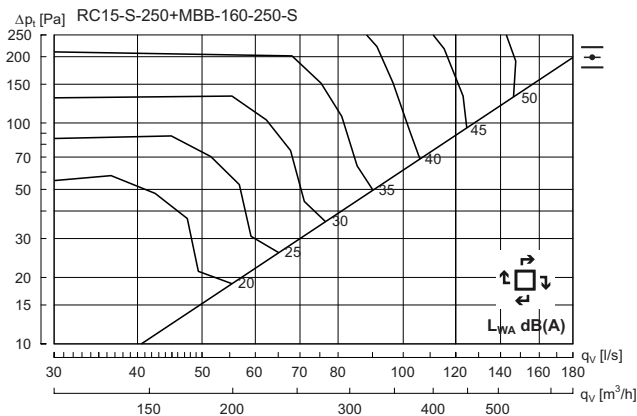
### RC15 - 250 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	12	1	-4	0	-4	-16	-24	-20

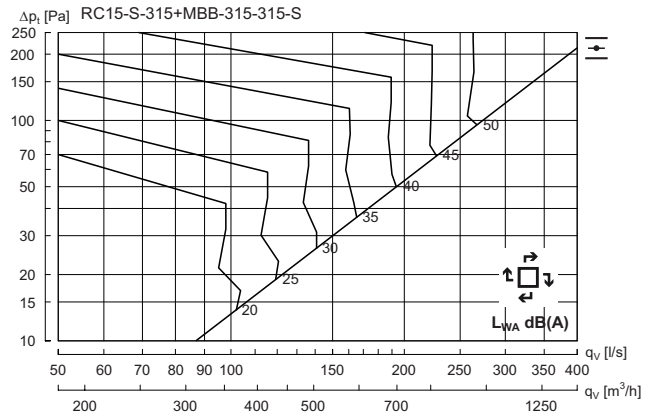


Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	10	4	-3	-2	-3	-15	-21	-29

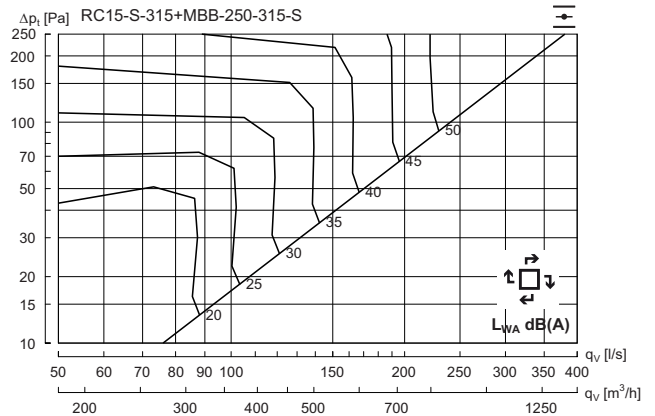


Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	15	5	0	-3	-4	-13	-19	-25

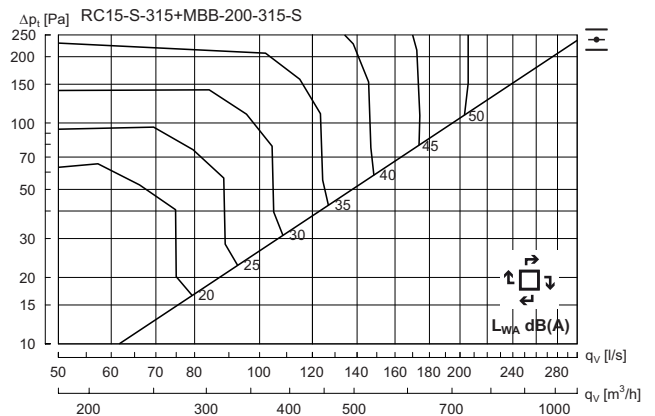
### RC15 - 315 + MBB-S - Supply air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	14	3	-2	-2	-4	-13	-22	-31



Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	11	3	-2	-1	-4	-13	-19	-28



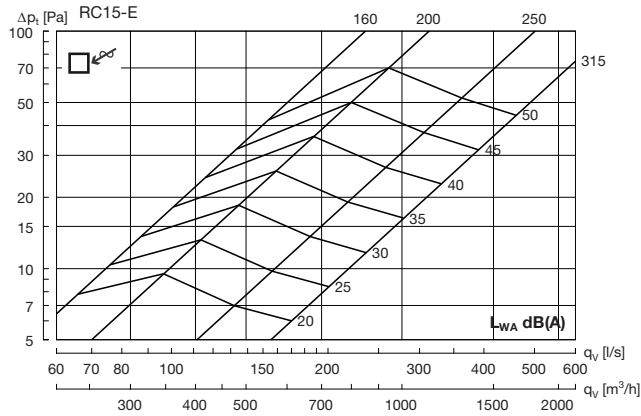
Hz	63	125	250	500	1K	2K	4K	8K
$K_{ok}$	9	7	-1	-2	-5	-13	-19	-26

# Integra - Swirl diffuser

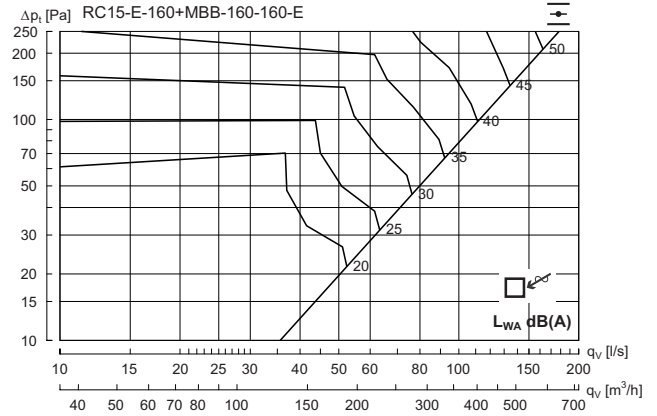
# RC15

## Technical data

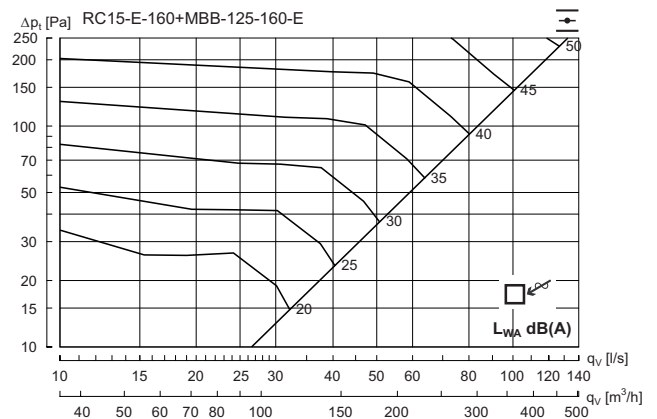
### RC15 without box – Extract air



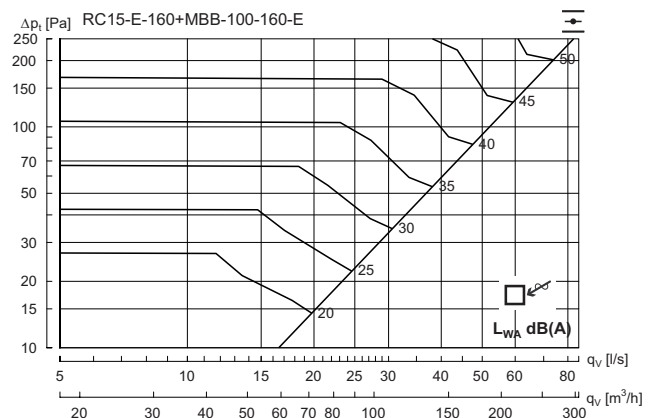
### RC15 - 160 + MBB-E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	16	6	0	-3	-6	-11	-16	-21



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	13	6	1	-2	-7	-12	-14	-22



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	11	4	3	0	-9	-13	-17	-23

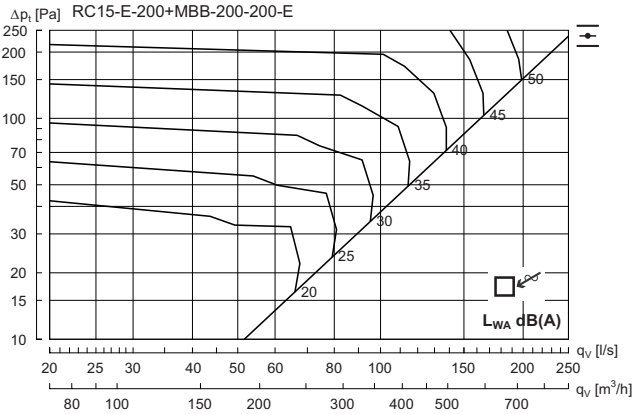


# Integra - Swirl diffuser

# RC15

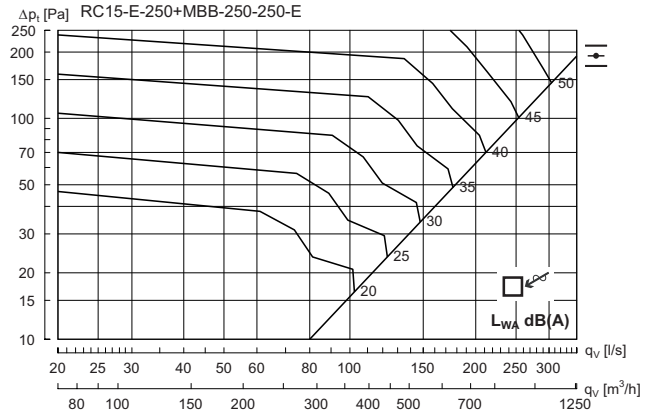
## Technical data

### RC15 - 200 + MBB-E - Extract air

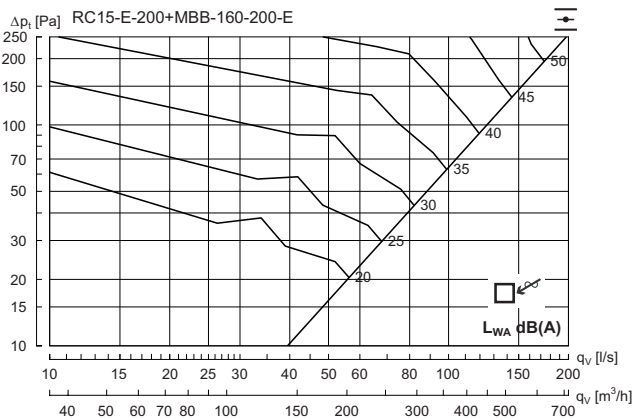


Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	14	5	0	-2	-5	-11	-16	-24

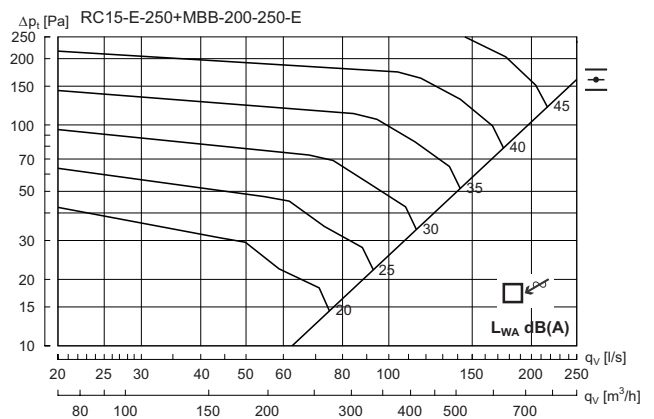
### RC15 - 250 + MBB-E - Extract air



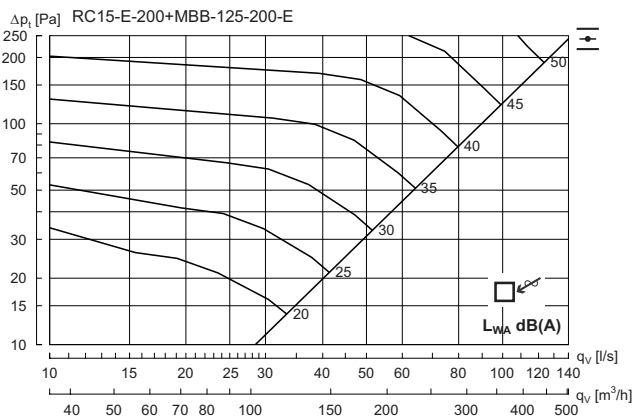
Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	12	6	2	-3	-6	-12	-17	-24



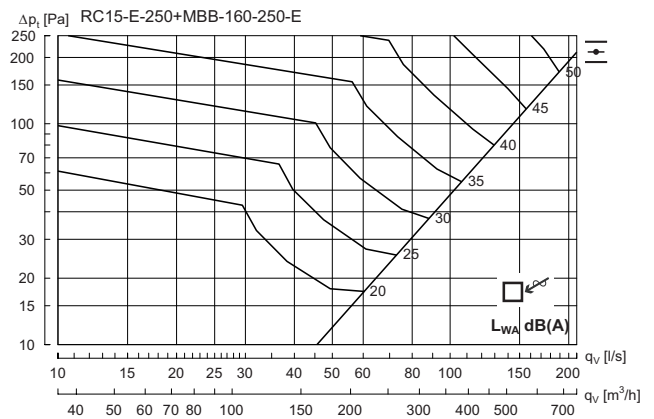
Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	17	6	-1	-3	-6	-10	-14	-19



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	13	5	0	-3	-6	-10	-14	-23



Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	14	3	1	-1	-6	-12	-15	-22



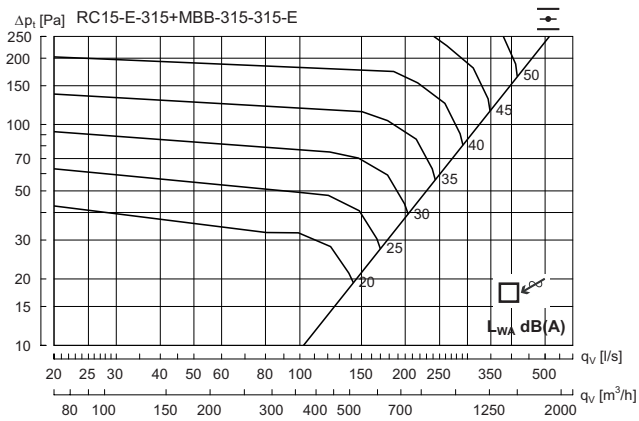
Hz	63	125	250	500	1K	2K	4K	8K
$K_{sk}$	13	7	0	-3	-6	-10	-15	-19

# Integra - Swirl diffuser

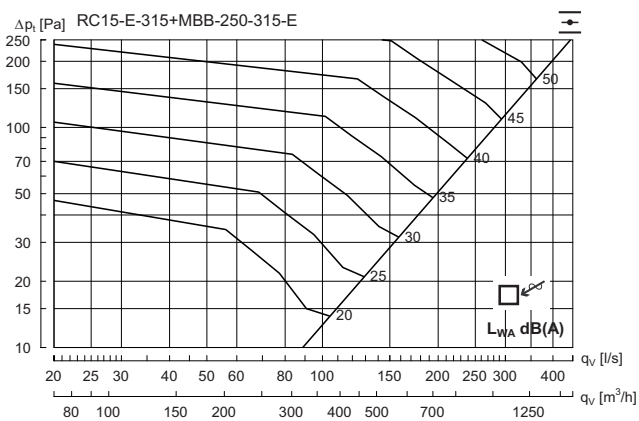
# RC15

## Technical data

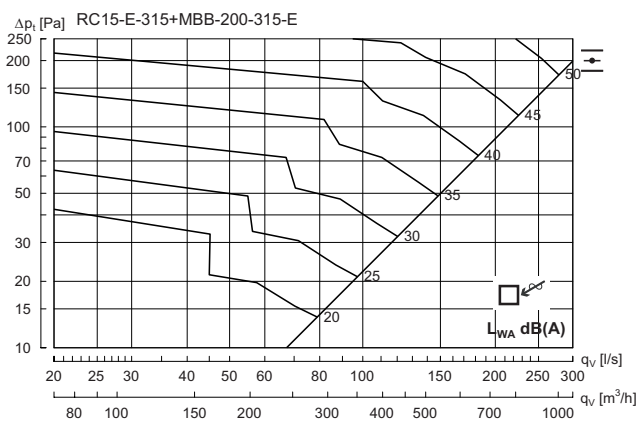
### RC15 - 315 + MBB-E - Extract air



Hz	63	125	250	500	1K	2K	4K	8K
$K_{\alpha}$	12	5	3	-3	-6	-11	-16	-25



Hz	63	125	250	500	1K	2K	4K	8K
$K_{\alpha}$	9	5	2	-3	-5	-11	-17	-25



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



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](#)