

Multi-cone diffuser

FKD/J2- 9016 size



Description

FKD is an adjustable circular multi-cone diffuser, which is typically used for supply air. The diffuser can be switched between horizontal and vertical supply air and is therefore ideal for the supply of both heated and cooled air.

Installing an FKD diffuser up to size 400 in a plenum box type MB can help to achieve a stable airflow 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 has a rotating blade damper for supply air. Typically used in applications that don't require a high balancing pressure in the plenum box.

- Suitable for supply air
- Vertical or horizontal supply air pattern
- Plenum box with several damper options

Maintenance

The multi-cone 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.

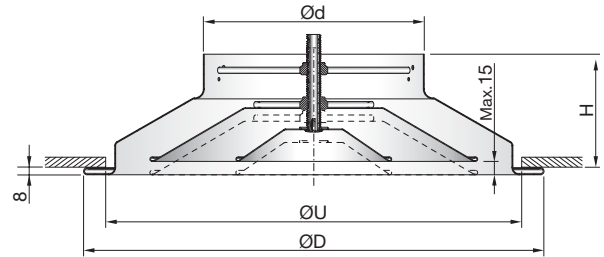
Order code

Product	FKD/J2
Type	FKD/J2
Mod.	Ø 6-20
RAL	

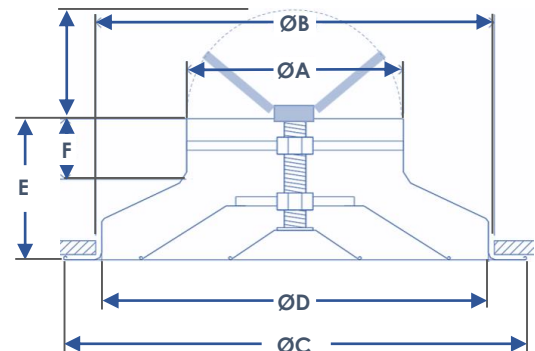
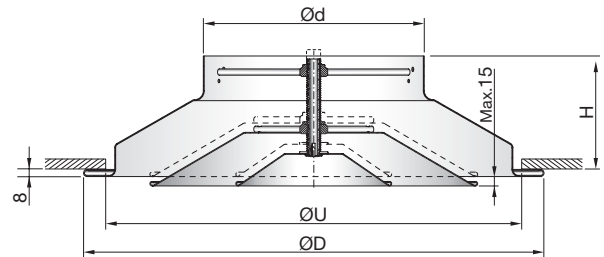
Example: FKD/J2/10-9016 size 2

Dimensions

Vertical



Horizontal



DIMENSIONS (mm)							
Mod.	ØA	ØB	ØC	ØD	E	F	G
6"	157	288	335	280	105	45	82
8"	198	370	423	360	118	48	102
10"	248	475	503	445	130	48	127
12"	298	576	640	560	146	48	152
14"	348	656	730	640	185	65	177
16"	398	700	776	680	185	65	202
18"	448	755	825	735	185	65	227
20"	498	825	917	805	185	65	252

Materials and finish

Material: Aluminium, AISI 304 or AISI 316
 Standard finish: Powder-coated
 Standard colours: RAL 9016 and RAL 9010, gloss 30

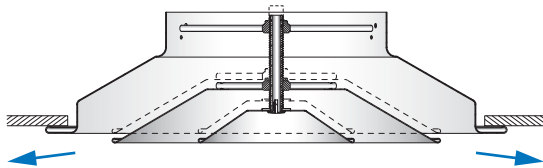
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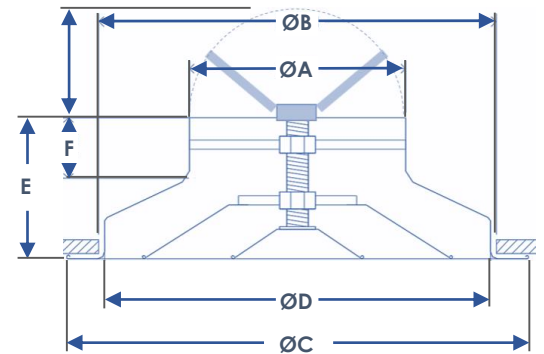
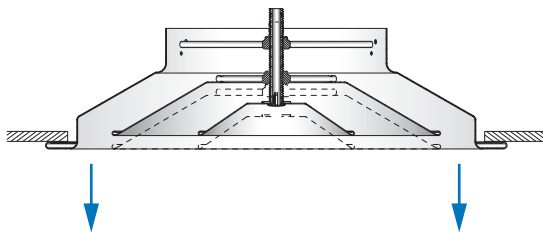
Dispersal patterns

FKD is supplied for vertical supply air as standard. The dispersal pattern can be altered to horizontal supply air by setting the inner part of the diffuser to its lowest position.

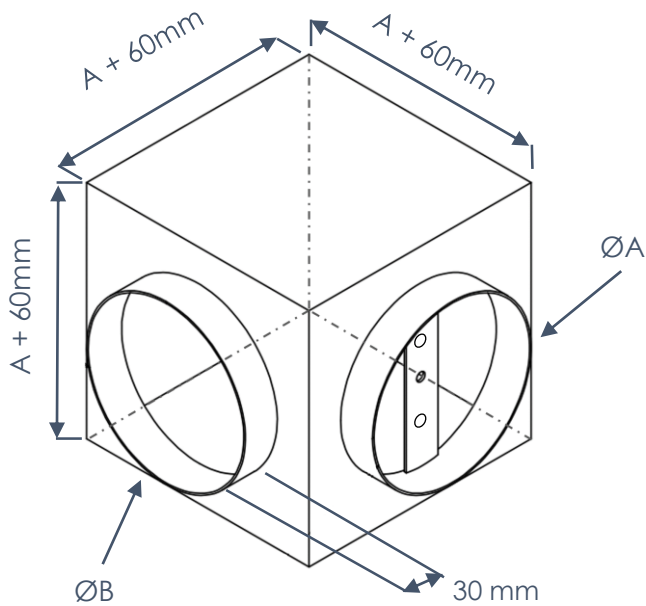
Horizontal



Vertical



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ØA (mm)	ØB (mm)
160	157
200	197
250	247
300	297
350	347
400	397
450	447
500	497

Damper options



Order code

Product	MB	a	bbb	ccc	S
Type					
MB					
Damper					
B = Linear cone damper					
C = Blade damper supply					
Duct connection Ød ₁					
Ø100-315					
Diffuser dimension Ød ₂					
Ø160-400					
Function (Only for B damper)					
S = Supply air					

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

Example 2: FKD-200+MBC-160-200

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Technical data

Following FKD+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.

Throw $l_{0,2}$

Throw $l_{0,2}$ [m] can be seen in the diagram for isothermal air at a speed of 0.2 m/s.

Frequency-related sound power level

The sound power level in the frequency band is defined as $L_{wok} = L_{WA} + K_{ok}$. K_{ok} values are specified in charts beneath the diagrams on the following pages. K_{ok} values for FKD without a box can be found in a separate supplement.

Sound attenuation

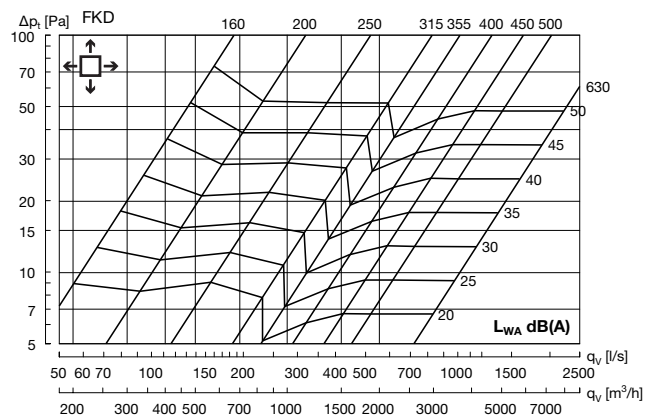
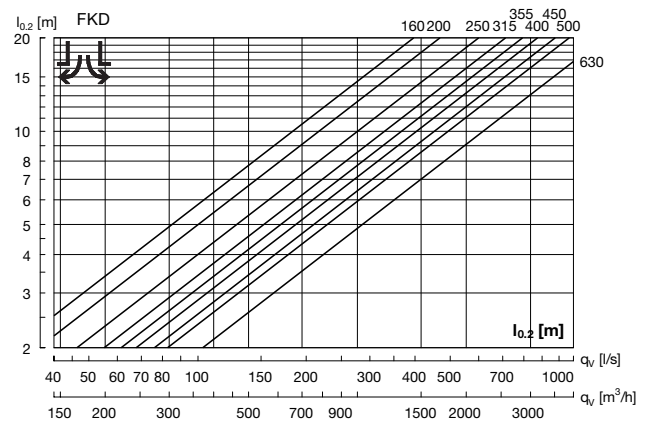
Sound attenuation of the diffuser ΔL from duct to room, including end reflection, see table below.

FKD + MBB-S		Centre frequency Hz							
duct	FKD	63	125	250	500	1K	2K	4K	8K
$\varnothing d_1$	$\varnothing d_2$								
100	160	20	16	5	15	17	17	16	19
125	160	13	13	8	19	13	16	16	19
125	200	15	11	6	15	12	14	16	17
160	160	16	17	10	18	17	18	20	21
160	200	15	14	7	19	15	16	18	19
160	250	17	16	4	16	15	16	16	18
200	200	13	10	6	15	18	15	19	17
200	250	13	9	4	12	17	13	17	16
200	315	13	8	3	8	16	14	16	15
250	250	14	8	8	15	17	17	17	18
250	315	13	6	5	13	15	15	16	17
250	400	12	4	3	12	13	14	14	15
315	315	7	9	8	12	17	16	17	21
315	400	7	8	7	11	16	14	16	19

Balancing

Balancing data is contained in a separate brochure.

Horizontal



Multi-cone diffuser

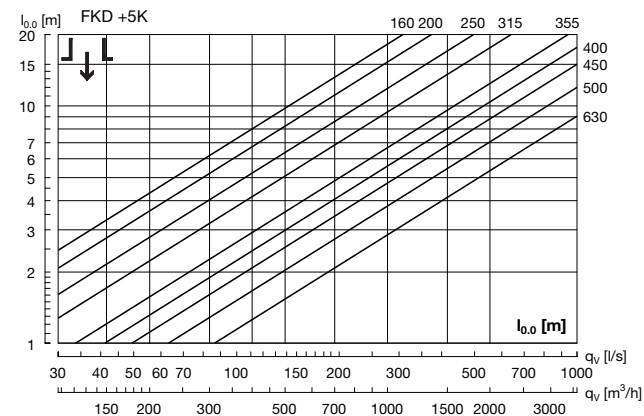
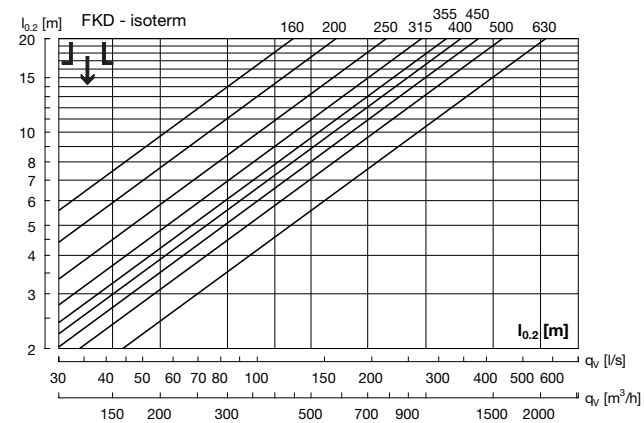
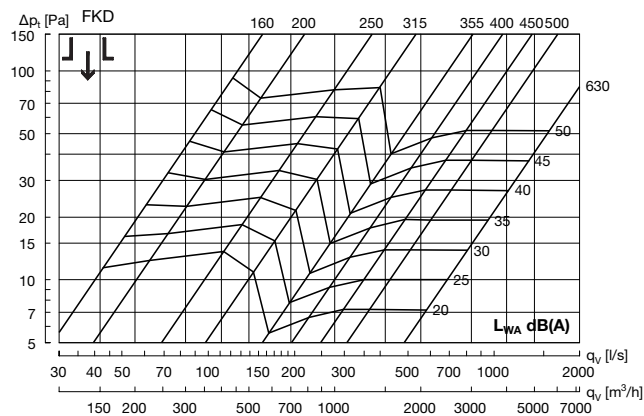
FKD/J2- 9016 size

Technical data

Throw $l_{0,2}$ / turning point $l_{0,0}$

Throws $l_{0,2}$ [m] can be seen in the diagrams for isothermal air at a speed of 0.2 m/s. Turning point $l_{0,0}$ [m] can be seen in the diagrams for heated air, +5 K, +10 K respectively.

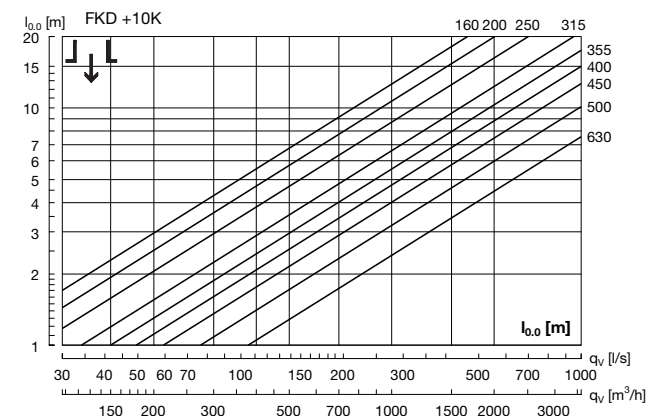
Vertical



Vertical supply air correction sound power level (L_{WA}) and pressure loss (Δp_t)

On the following pages you can find diagrams for all sizes FKD+MBB-S horizontal supply air. When Vertical supply air values are wanted, use the correction factors in the table below.

FKD + MBB-S duct		Vertical supply air Correction factor	
$\text{Ø}d_1$	FKD $\text{Ø}d_2$	L_{WA}	Δp_t
100	160	3	x 1,2
125	160	1	x 1,2
125	200	1	x 1,1
160	160	5	x 1,5
160	200	3	x 1,3
160	250	0	x 1,1
200	200	1	x 1,3
200	250	5	x 1,2
200	315	0	x 1,1
250	250	1	x 1,3
250	315	2	x 1,3
250	400	1	x 1,1
315	315	4	x 1,4
315	400	3	x 1,2

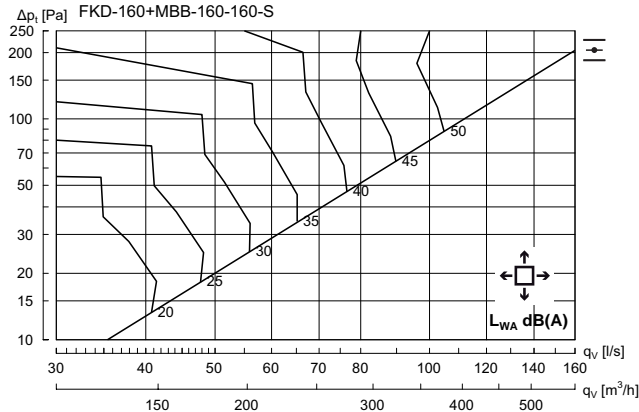


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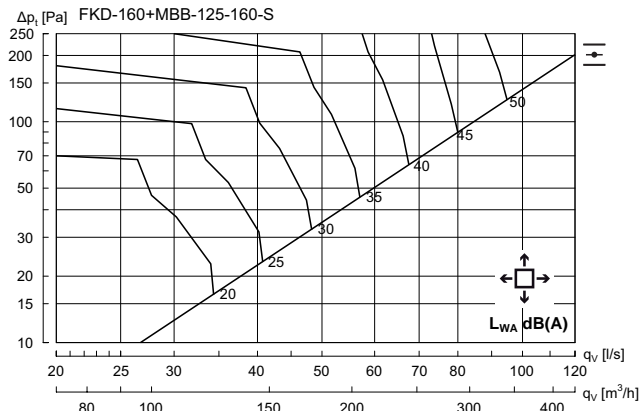
FKD/J2- 9016 size

Technical data

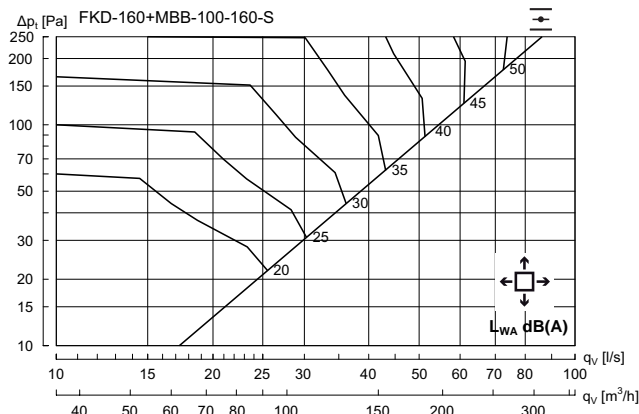
FKD 160 + MBB-S Horizontal



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	7	0	-6	-4	-9	-22	-31

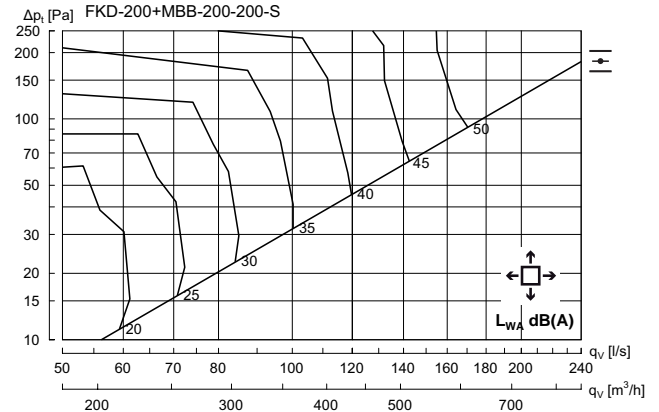


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	5	2	-5	-5	-9	-18	-25

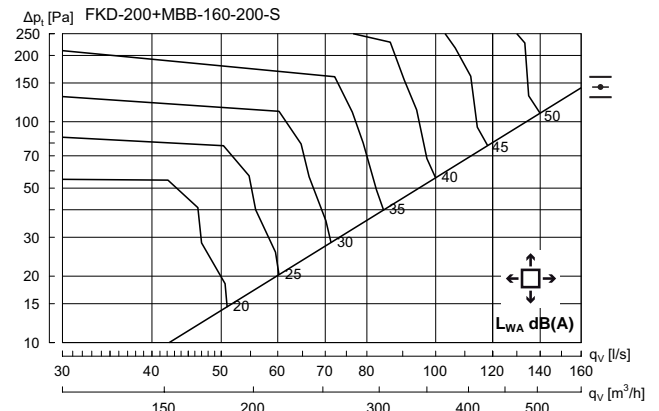


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	4	2	-3	-5	-9	-16	-22

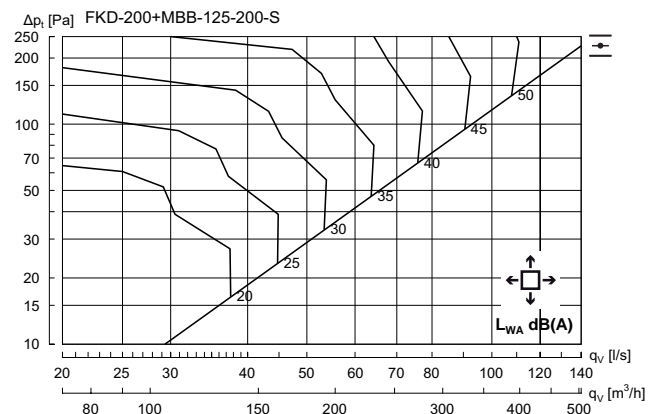
FKD 200 + MBB-S Horizontal



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	13	5	-2	-5	-3	-12	-22	-28



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	5	1	-5	-4	-11	-20	-25



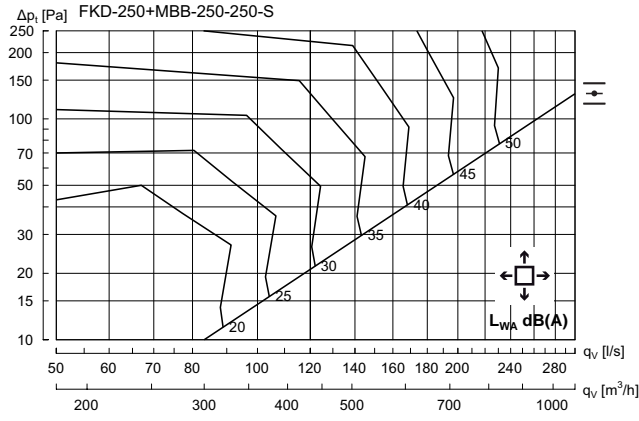
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	4	1	-4	-4	-10	-16	-23

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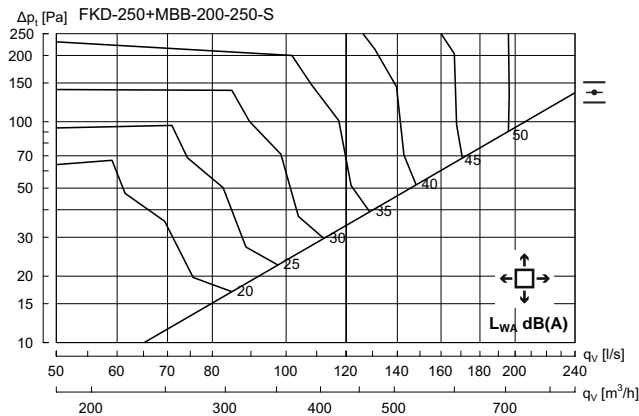
FKD/J2- 9016 size

Technical data

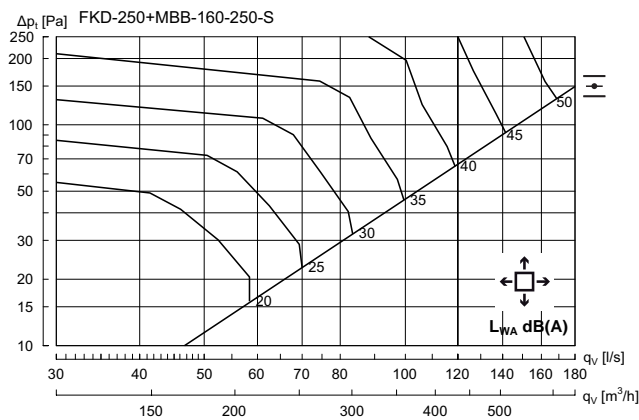
FKD 250 + MBB-S Horizontal



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	5	-2	-4	-3	-13	-20	-26

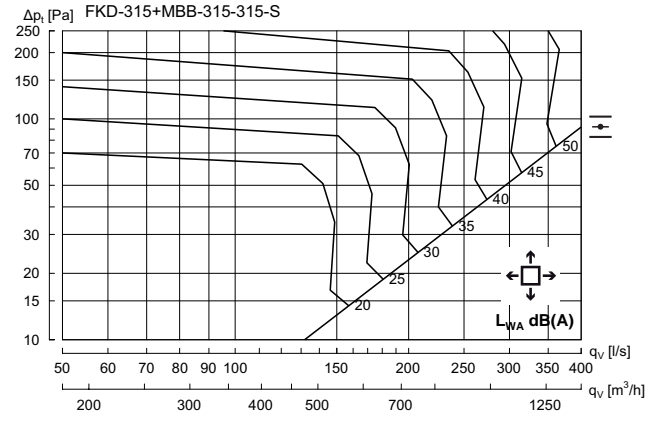


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	5	-2	-3	-3	-12	-19	-24

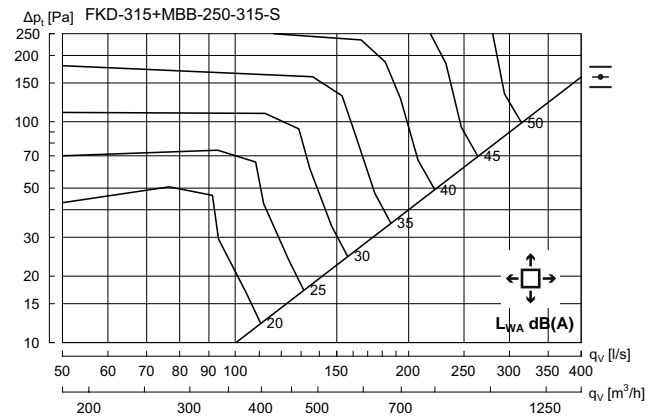


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	4	0	-3	-4	-12	-18	-24

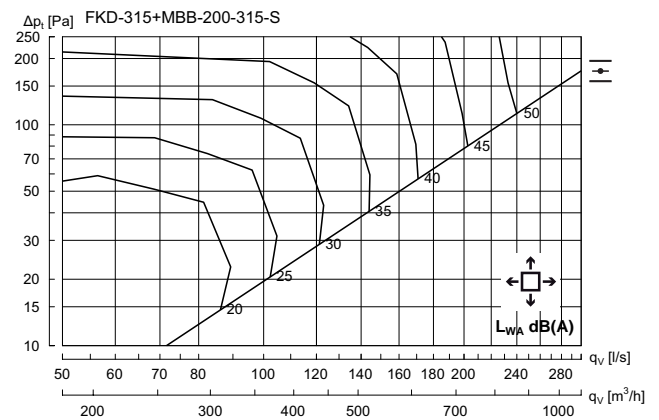
FKD 315 + MBB-S Horizontal



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	14	3	0	-2	-4	-14	-20	-26



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	5	-1	-2	-4	-12	-19	-21



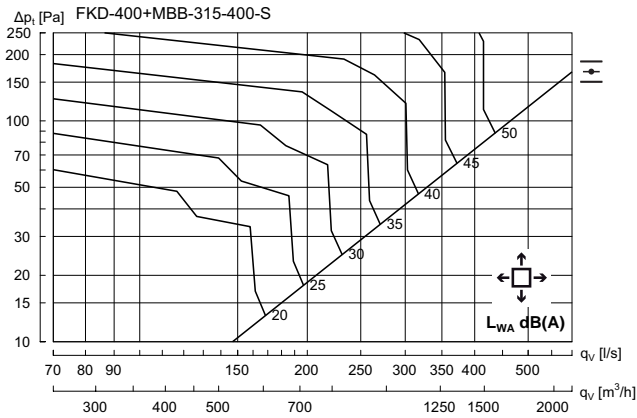
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	5	-1	-2	-5	-11	-18	-24

Multi-cone diffuser

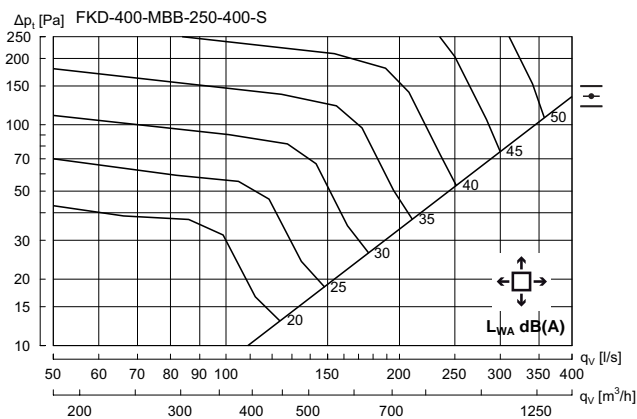
FKD/J2- 9016 size

Technical data

FKD 400 + MBB-S Horizontal



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	11	4	1	-1	-6	-12	-17	-24



Hz	63	125	250	500	1K	2K	4K	8K
K_{sk}	9	4	1	-1	-6	-12	-17	-25