Ceiling diffusers - visible

HLD, DSB, Aarhus.

Usage

For ventilation of larger rooms in industry, shopping malls, hangars, arenas and similar buildings, there will typically be a need for both heating and cooling. This makes demands on being able to vary the jet pattern from horizontal (cooling needs) to vertical (heating needs). This is in order to avoid too great a velocity in the occupied zone in the cooling situation, and that the air penetrates the occupied zone in the heating situation, so the greatest amount of efficiency is obtained.

Function

The diffusers have an adjustable jet pattern, which makes the diffusers suitable for both heating and cooling. The jet pattern can be adjusted manually or with several types of electric motors.
RCW/RCWB is available with a thermal actuator, where the jet pattern is adjustable in relation to the supply air temperature. This way costly electrical work for the individual diffusers is saved.

RCW, rotation diffuser

Ceiling diffusers - visible

Industrial diffusers

Swirl diffuser

RCW

Description

RCW is a rotation diffuser particularly suitable for rooms with a high ceiling.

The diffuser is equipped with adjustable blades, so the supply air pattern can be changed from vertical to horizontal.

The blade settings can be adjusted manually, or the function can be automated using various types of motor. RCW with manual blade adjustment is supplied as standard with a blade setting of 30°.

The motorized models are supplied as standard with a blade setting from 30° to 75°. In the motorized versions, RCW can be supplied with an electric on/off motor, a modulating motor or a thermal actuator, where the supply air pattern is changed in step with the supply air temperature

- Suitable for both cooling and heating
- Horizontal and vertical dispersal pattern
- High induction
- Can be supplied with an electric motor
- Can be supplied with a thermal actuator

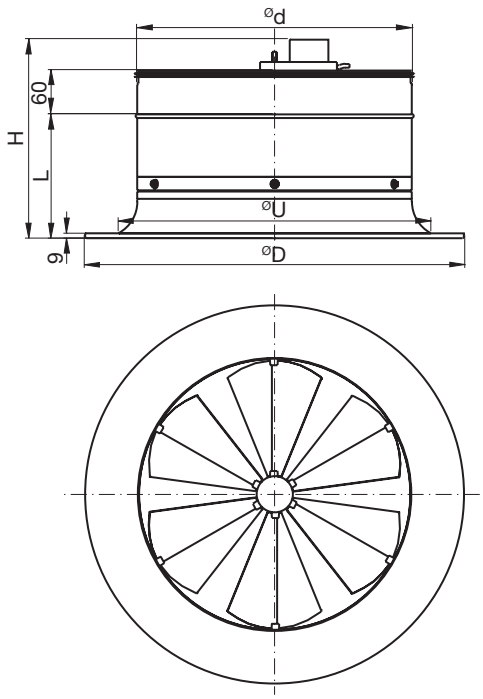
Maintenance

The visible parts of the diffuser can be wiped with a damp cloth. For other maintenance, see installation instructions.

Order code

Product		RCW	a	bbb	A
Type					
Manual	0				
Motorized - modulating	1				
Motorized- on/off	2				
Thermal actuator	3				
Size					
Version					

Dimensions



Ød Size	ØD mm	H mm	L mm	ØU mm	Weight * kg
250	360	240	143	285	2.40
315	460	267	168	365	3.10
400	560	292	178	450	4.40
500	670	341	226	570	6.80
630	870	391	273	740	9.90

* Motorized models weigh approx. 1 kg more than the weight stated in the table above.

Motor type

RCW-1 Ød	Motor
315-400	NM24A-MF-F
500-630	LH24A-MF60

RCW-2 Ød	Motor
250-400	NM24A-F
500-630	LH24A60

Materials and finish

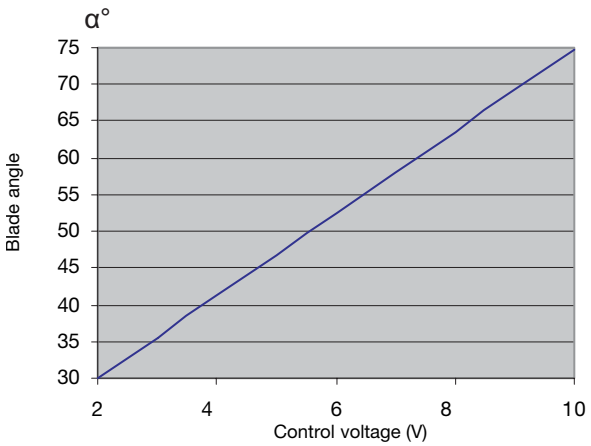
Material: Aluminium & steel
Standard finish: Powder-coated
Standard colour: RAL 9010 Gloss 30

Available in other colours. Please contact Lindab's sales department for further information.
Other blade settings can be supplied on request.

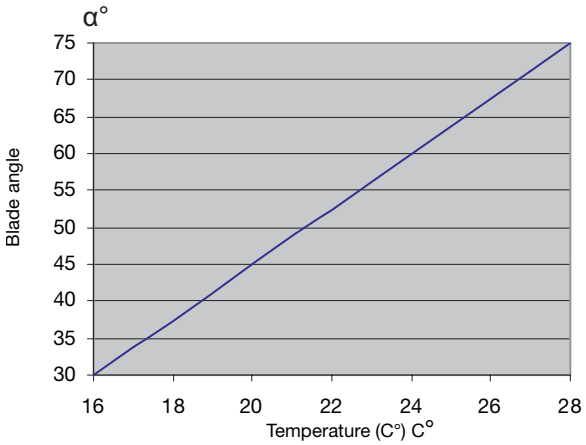
Swirl diffuser RCW

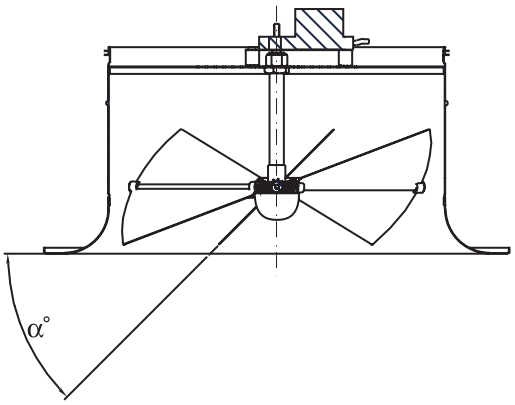
Technical data

RCW with electric modulating motor



RCW with thermal actuator





Capacity

Volume flow q_v [l/s] and [m^3/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 $l_{0.2}$ / turning point $l_{0.0}$

Throw $l_{0.2}$[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 and +15 K respectively.

Frequency-related sound effect level

The sound effect 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.

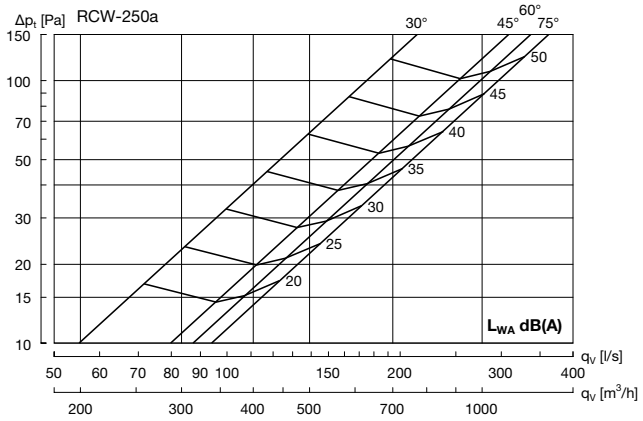
Quick selection

Size	Angle	q_v [l/s]	q_v [m³/h]	P_t [Pa]	$l_{0.2}$ isoterm [m]	$l_{0.0}$ +10K [m]
		L_{WA} = 40				
250	30°	138	498	63	10	
250	75°	138	498	22		5
315	30°	237	854	65	6	
315	75°	237	854	24		6
400	30°	361	1299	60	5	
400	75°	361	1299	22		6
500	30°	453	1630	52	5	
500	75°	453	1630	13		5
630	30°	818	2943	57	6	
630	75°	818	2943	17		7
		L_{WA} = 50				
250	30°	192	692	121	13	
250	75°	192	692	42		7
315	30°	329	1183	124	8	
315	75°	329	1183	46		8
400	30°	513	1846	122	7	
400	75°	513	1846	44		8
500	30°	636	2290	103	6	
500	75°	636	2290	25		6
630	30°	1136	4088	110	8	
630	75°	1136	4088	32		9
		L_{WA} = 60				
250	30°	267	962	234	18	
250	75°	267	962	81		10
315	30°	455	1638	238	10	
315	75°	455	1638	88		11
400	30°	729	2623	247	11	
400	75°	729	2623	89		12
500	30°	893	3216	203	8	
500	75°	893	3216	49		9
630	30°	1577	5679	213	11	
630	75°	1577	5679	62		12

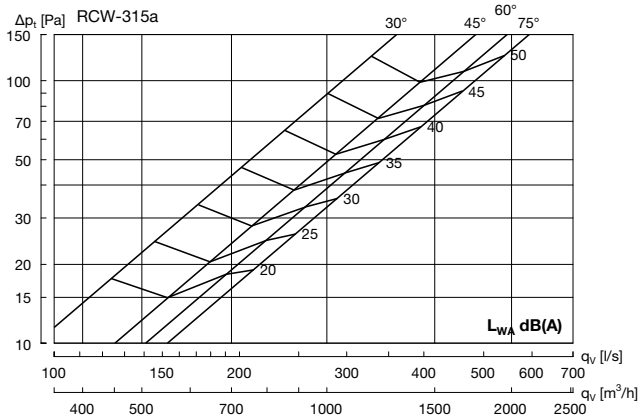
Swirl diffuser

RCW

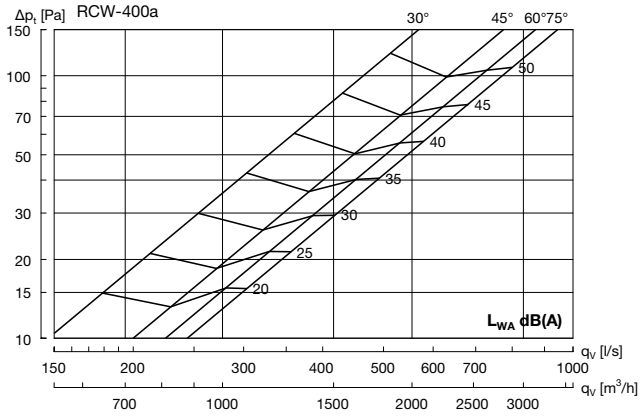
Technical data



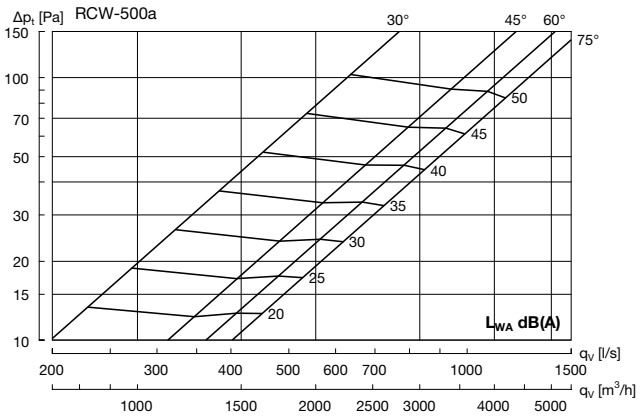
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	7	1	-2	-2	-4	-9	-18	-21



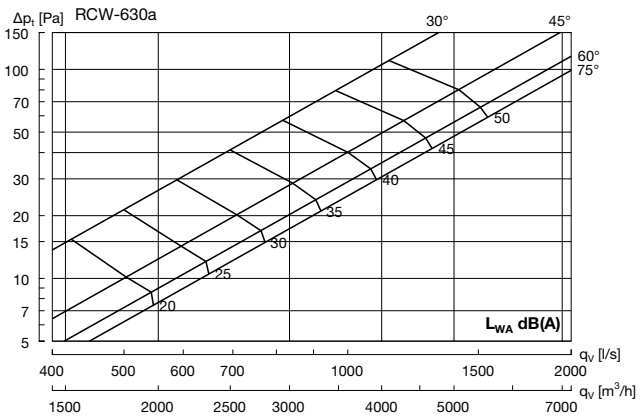
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	2	-1	-3	-4	-10	-17	-21



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	1	-2	-2	-3	-13	-20	-23



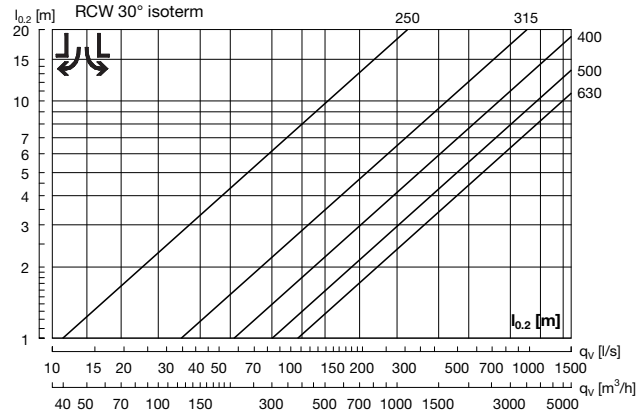
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	1	-2	-1	-4	-12	-20	-22



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	15	5	0	-2	-5	-12	-18	-22

Throw $l_{0.2}$ horizontal

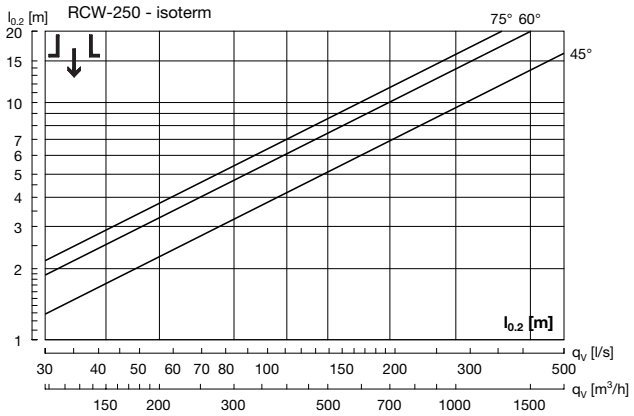
Horizontal throw $l_{0.2}$ is specified for free suspension. If the diffuser is installed < 300 mm from the ceiling, the value must be multiplied by 1.4.



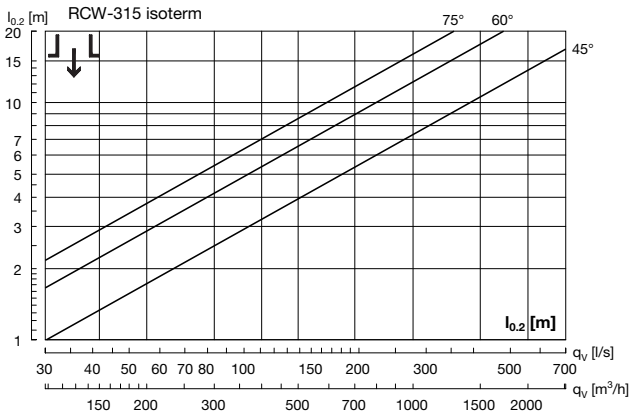
Swirl diffuser

RCW

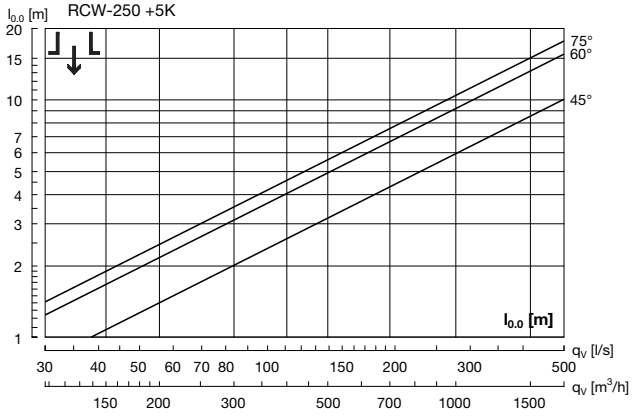
RCW-250 - isoterm



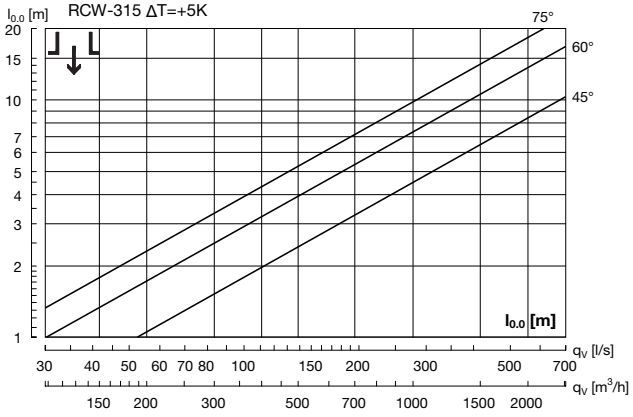
RCW-315 isoterm



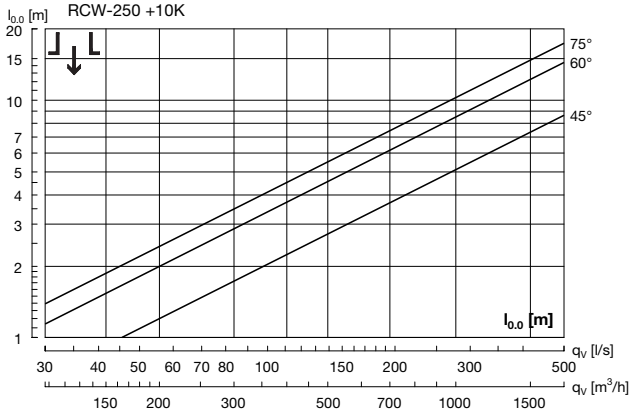
RCW-250 +5K



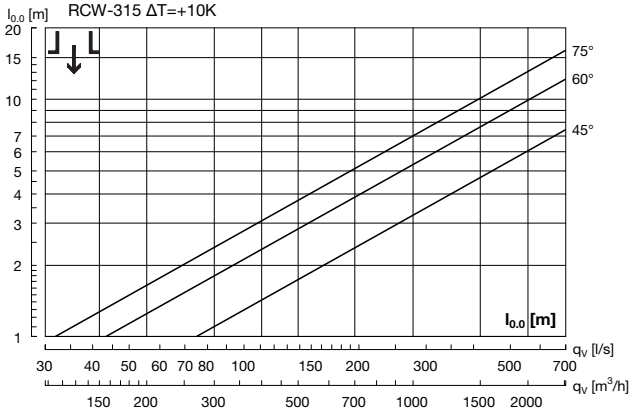
RCW-315 ΔT=+5K



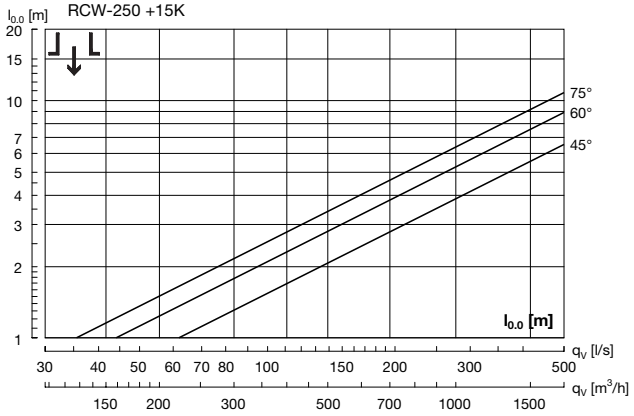
RCW-250 +10K



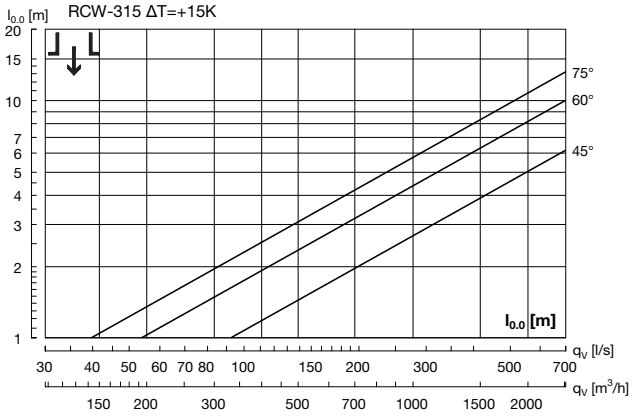
RCW-315 ΔT=+10K



RCW-250 +15K



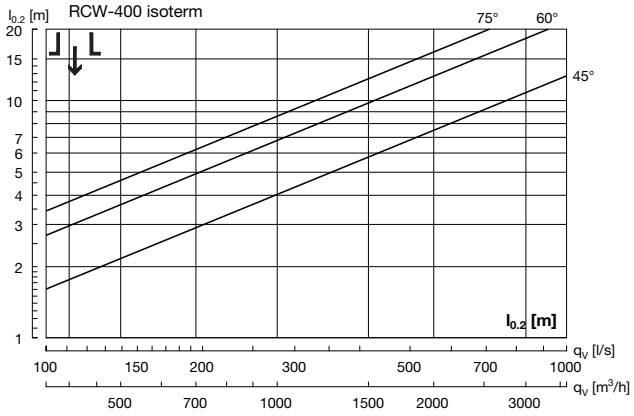
RCW-315 ΔT=+15K



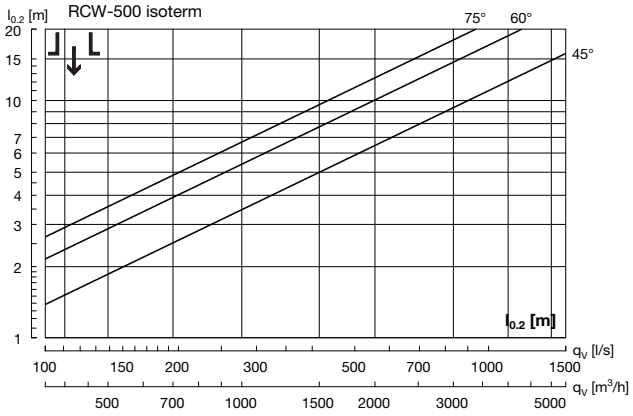
Swirl diffuser

RCW

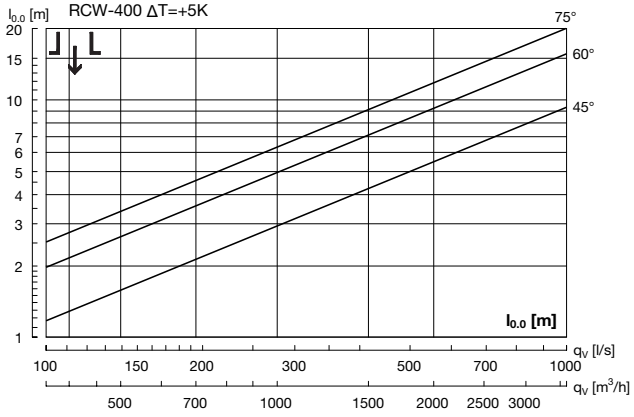
RCW-400 isoterm



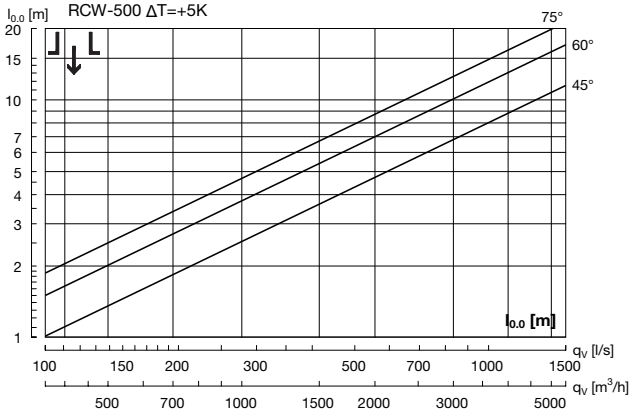
RCW-500 isoterm



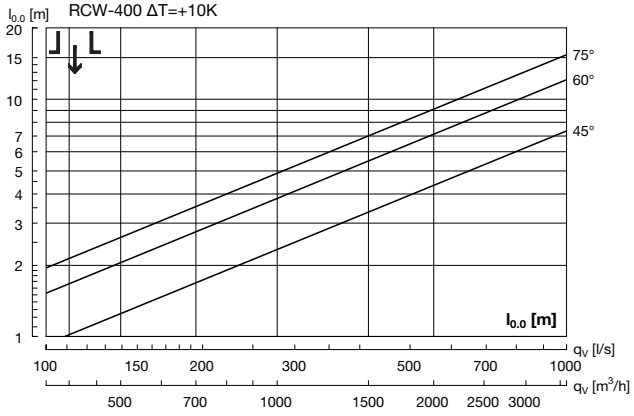
RCW-400 ΔT=+5K



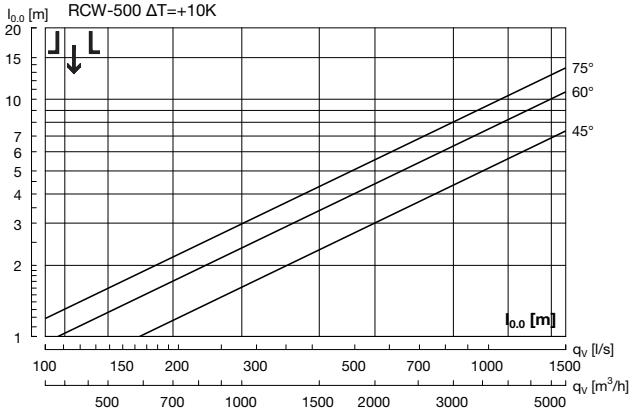
RCW-500 ΔT=+5K



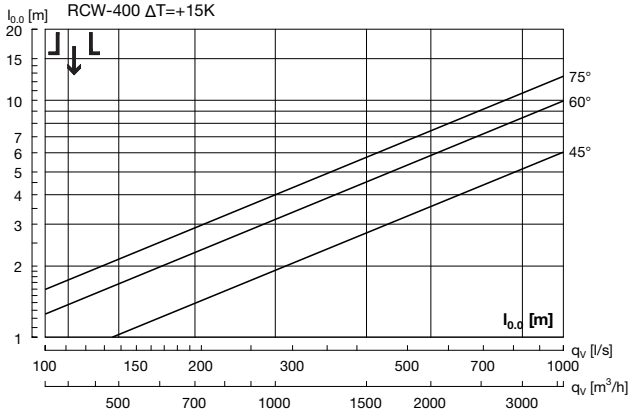
RCW-400 ΔT=+10K



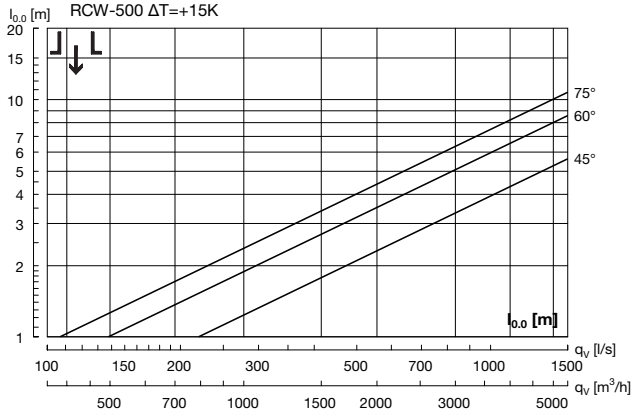
RCW-500 ΔT=+10K



RCW-400 ΔT=+15K

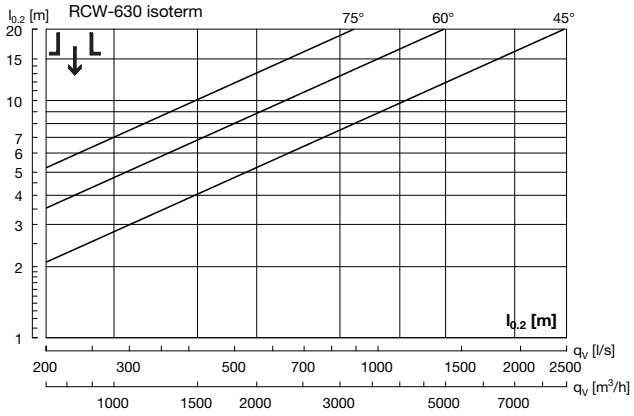


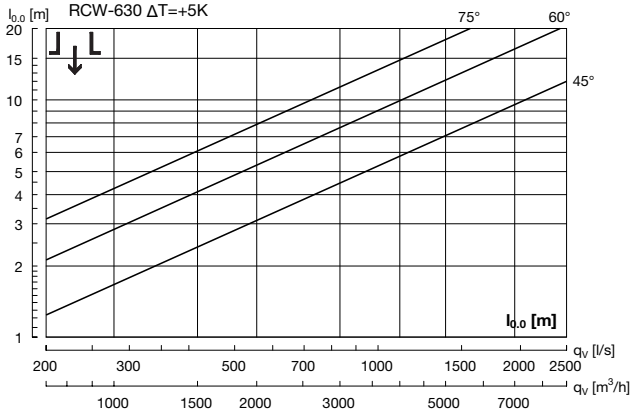
RCW-500 ΔT=+15K

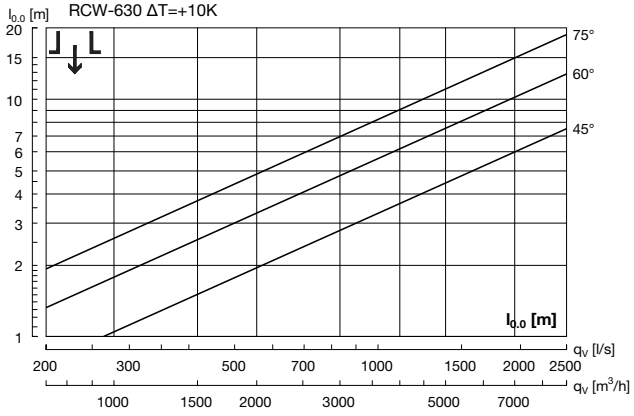


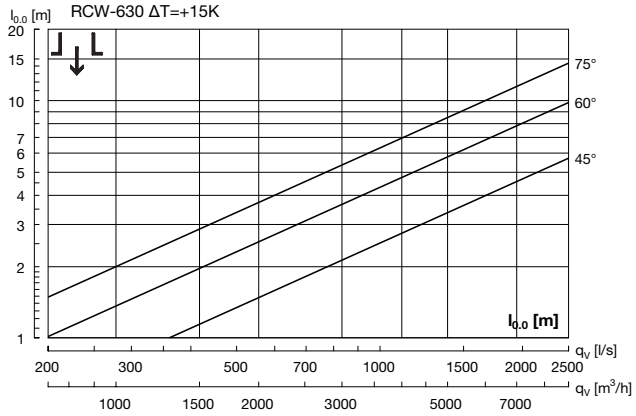
Swirl diffuser

RCW









Swirl diffuser

RCWB

Description

RCWB is a rotation diffuser (RCW) with integral box, particularly suitable for rooms with a high ceiling.

The diffuser is equipped with adjustable blades, so the supply air pattern can be changed from vertical to horizontal. The blade settings can be adjusted manually, or the function can be automated using various types of motor.

RCWB with manual blade adjustment is supplied as standard with a blade setting of 30°.

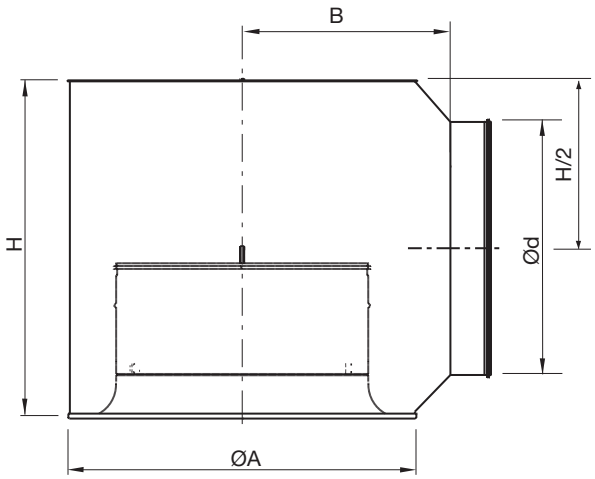
The motorized models are supplied as standard with a blade setting from 30° to 75°. In the motorized versions, RCWB can be supplied with an electric on/off motor, a modulating motor or a thermal actuator, where the supply air pattern is changed in step with the supply air temperature.

- Suitable for both cooling and heating
- Horizontal and vertical dispersal patterns
- High induction
- Can be supplied with an electric motor
- Can be supplied with a thermal actuator

Order code

Product	**RCWB**	**a**	**bbb**	**c**	**A**
Type					
Manual	0				
Motorized - modulating	1				
Motorized- on/off	2				
Thermal actuator	3				
Galvanised box		0			
Box RAL 9010		1			
Size					
Version					

Dimensions



Ød Size	ØA mm	H mm	B mm	Weight * kg
250	360	415	250	5.70
315	460	480	300	8.20
400	560	570	350	11.8
500	670	670	412	17.2
630	870	800	500	25.7

* Motorized models weigh approx. 1 kg more than the weight stated in the table above.

Motor type

RCWB-1 Ød	Motor
315-400	NM24A-MF-F
500-630	LH24A-MF60

RCWB-2 Ød	Motor
250-400	NM24A-F
500-630	LH24A60

Maintenance

The visible parts of the diffuser can be wiped with a damp cloth. For other maintenance, see installation instructions.

Materials and finish

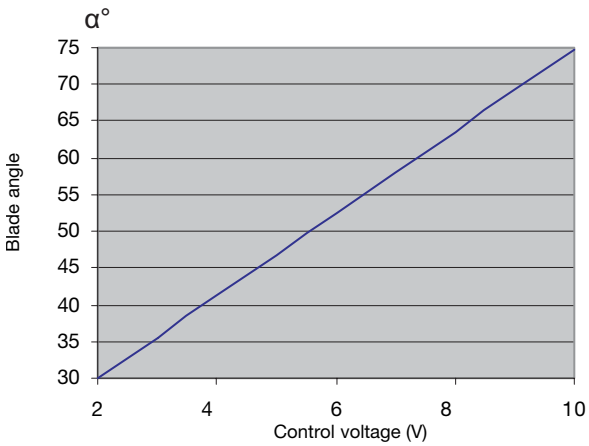
Material:	Aluminium & steel
Standard finish:	Powder-coated
Standard colour:	RAL 9010 Gloss 30
Box:	Hot-galvanised steel

Available in other colours. Please contact Lindab's sales department for further information.

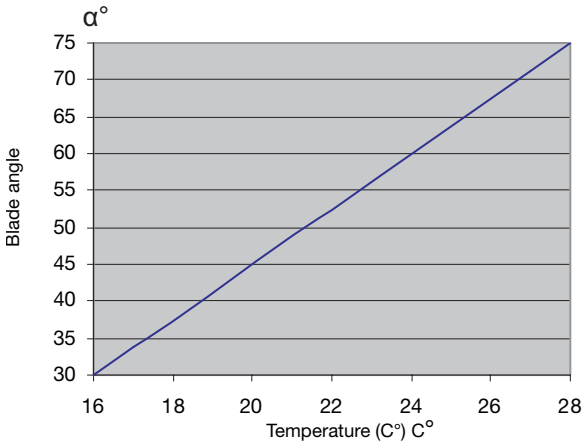
Swirl diffuser RCWB

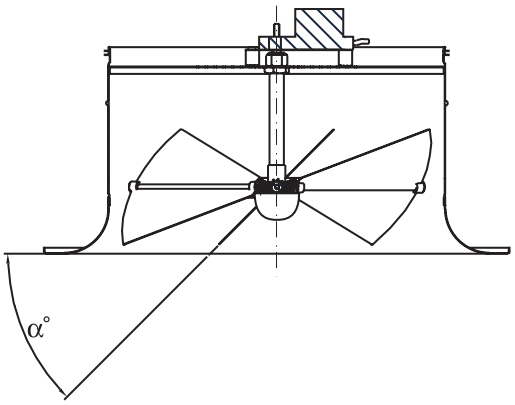
Technical data

RCWB with electric modulating motor



RCWB with thermal actuator





Capacity

Volume flow q_v [l/s] and [m^3/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 $l_{0.2}$ / turning point $l_{0.0}$

Throw $l_{0.2}$[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 and +15 K respectively.

Frequency-related sound effect level

The sound effect 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.

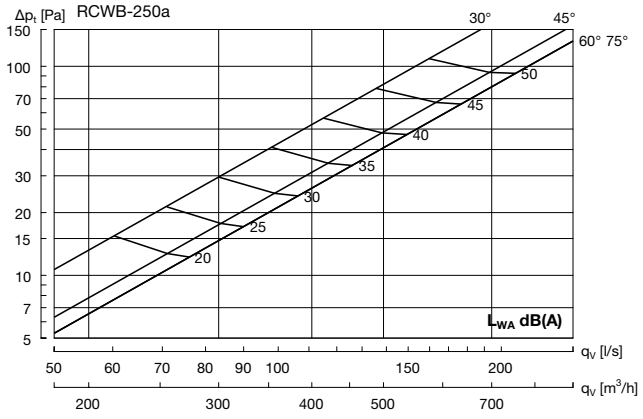
Quick selection

Size	Angle	q_v [l/s]	q_v [m^3/h]	P_t [Pa]	$l_{0.2}$ isoterm [m]	$l_{0.0}$ +10K [m]
		L_{WA} = 40				
250	30°	115	415	57	8	
250	75°	115	415	28		5
315	30°	187	672	53	5	
315	75°	187	672	29		5
400	30°	290	1043	49	4	
400	75°	290	1043	27		5
500	30°	403	1451	47	4	
500	75°	403	1451	22		4
630	30°	605	2178	39	5	
630	75°	605	2178	19		5
		L_{WA} = 50				
250	30°	160	575	108	11	
250	75°	160	575	54		6
315	30°	257	924	101	6	
315	75°	257	924	54		7
400	30°	397	1428	91	6	
400	75°	397	1428	50		7
500	30°	565	2034	91	6	
500	75°	565	2034	43		6
630	30°	861	3098	80	7	
630	75°	861	3098	39		7
		L_{WA} = 60				
250	30°	221	796	208	15	
250	75°	221	796	103		8
315	30°	353	1271	190	8	
315	75°	353	1271	103		9
400	30°	543	1954	170	8	
400	75°	543	1954	93		9
500	30°	792	2851	180	8	
500	75°	792	2851	85		8
630	30°	1224	4407	161	9	
630	75°	1224	4407	78		10

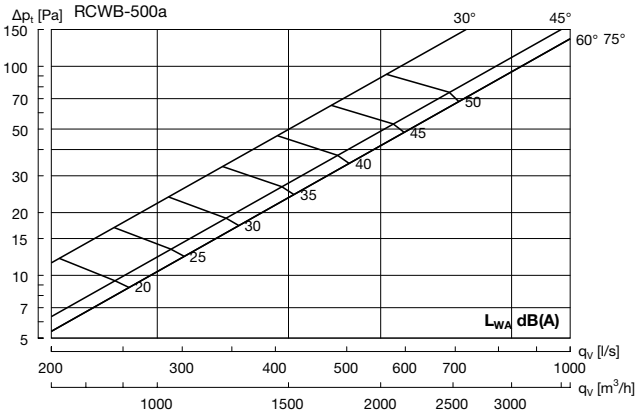
Swirl diffuser

RCWB

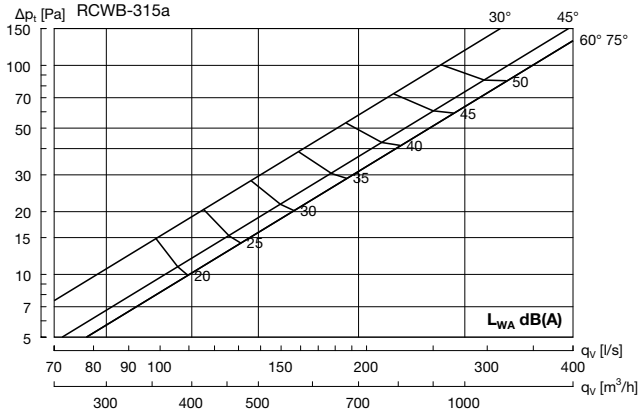
Technical data



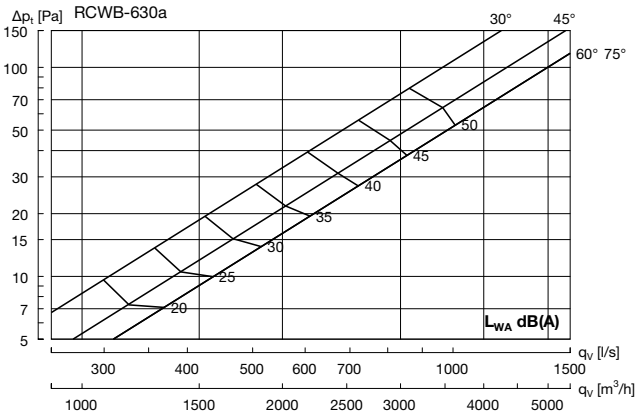
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	5	0	-5	-4	-3	-9	-17	-26



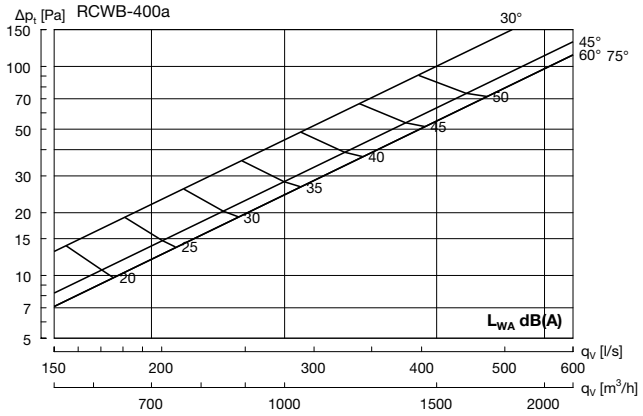
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	8	2	-3	-2	-4	-11	-21	-30



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	7	-1	-4	-3	-3	-10	-19	-27



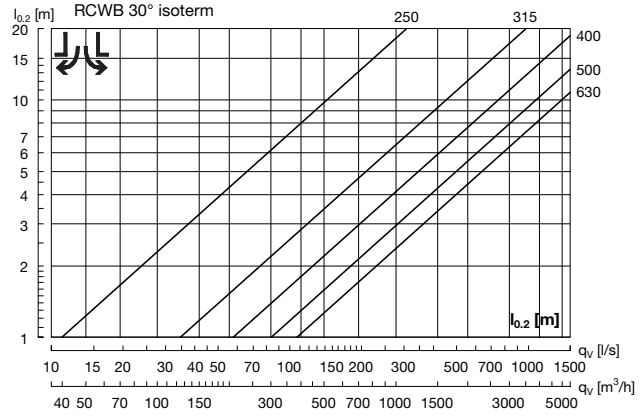
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	7	-1	-3	-1	-4	-13	-24	-33



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	8	0	-5	-2	-3	-11	-20	-28

Throw $l_{0.2}$ horizontal

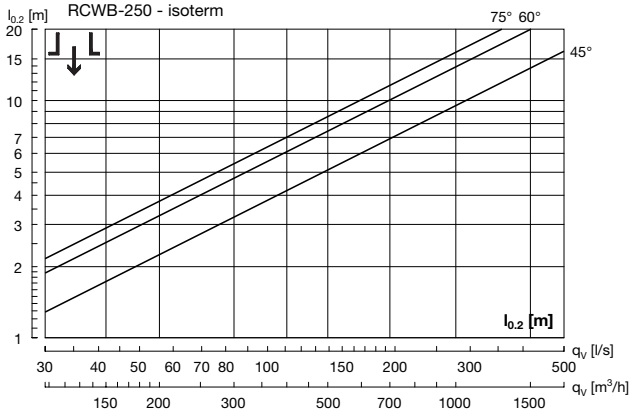
Horizontal throw $l_{0.2}$ is specified for free suspension. If the diffuser is installed < 300 mm from the ceiling, the value must be multiplied by 1.4.



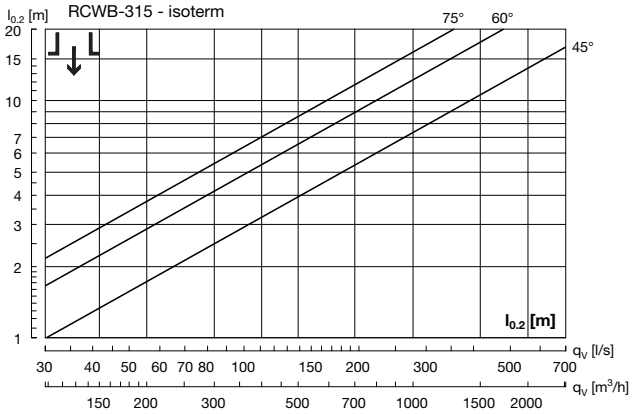
Swirl diffuser

RCWB

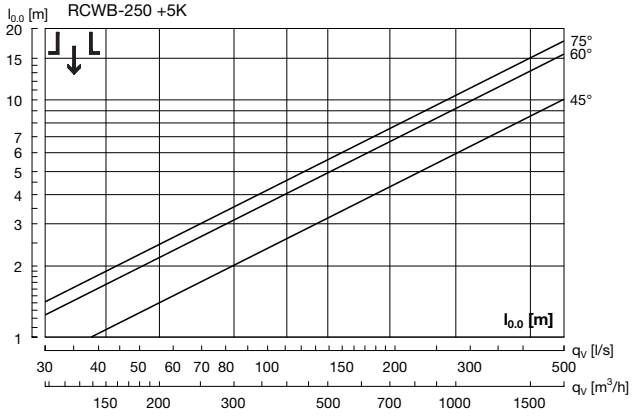
RCWB-250 - isoterm



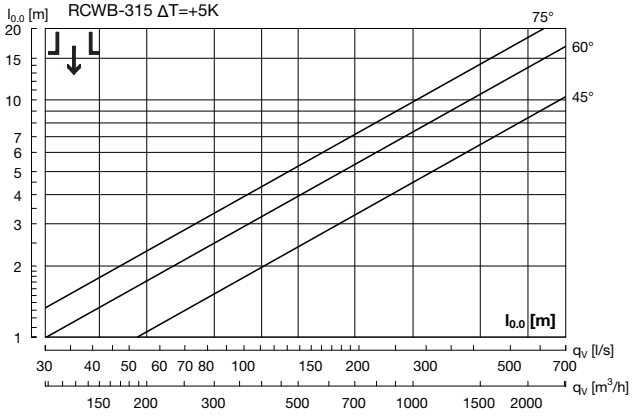
RCWB-315 - isoterm



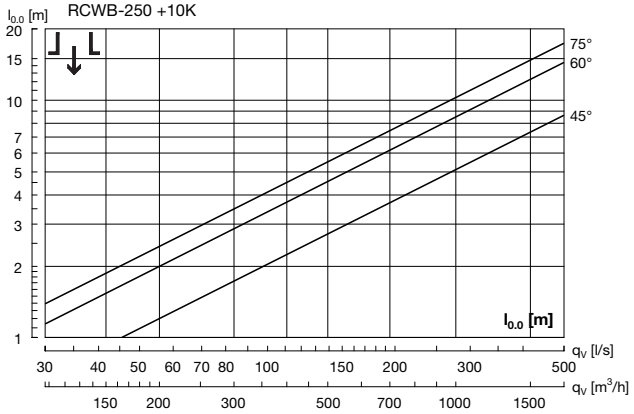
RCWB-250 +5K



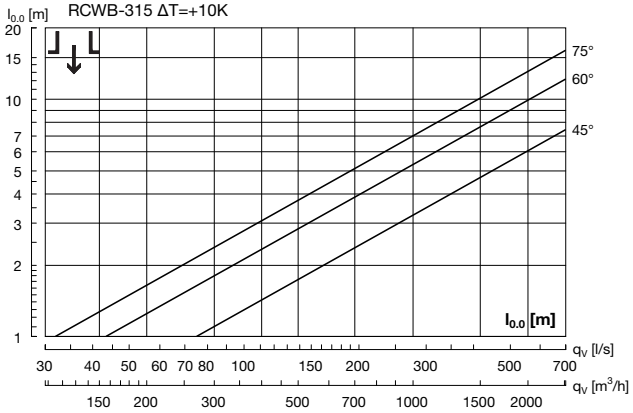
RCWB-315 ΔT=+5K



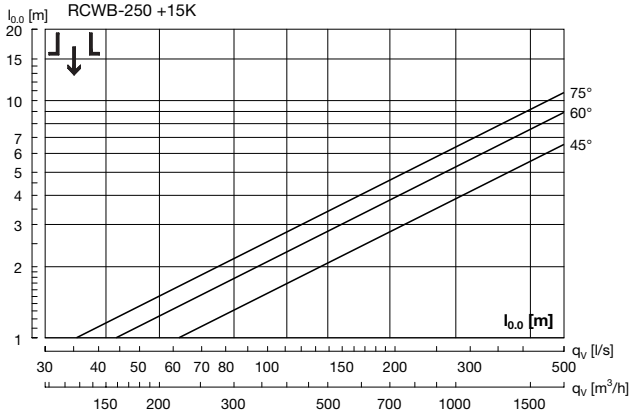
RCWB-250 +10K



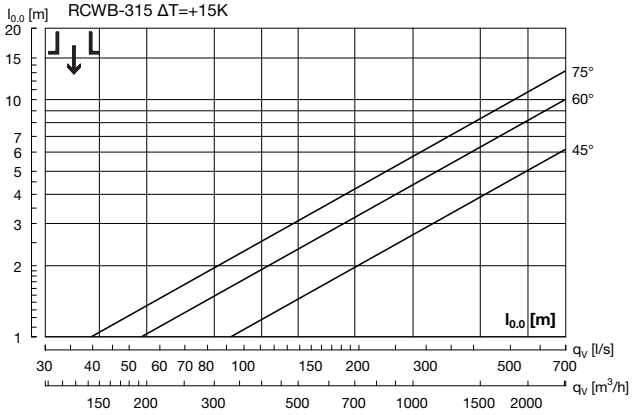
RCWB-315 ΔT=+10K



RCWB-250 +15K

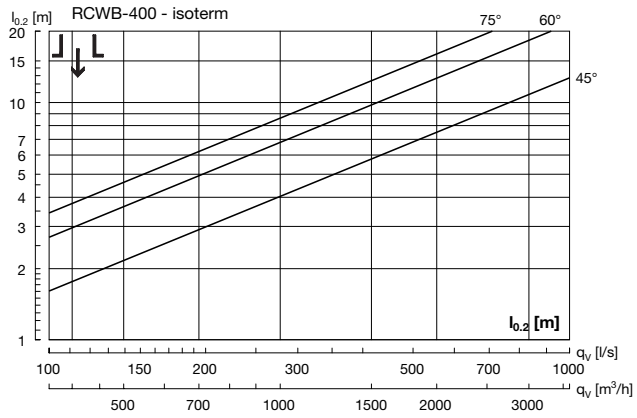


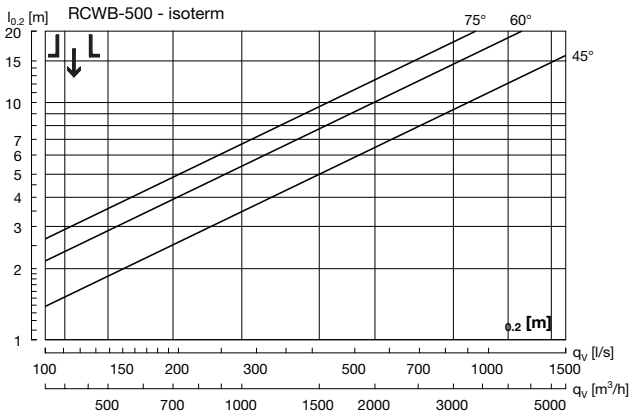
RCWB-315 ΔT=+15K

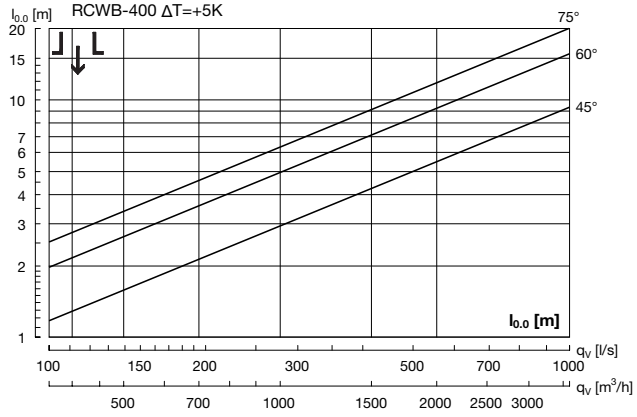


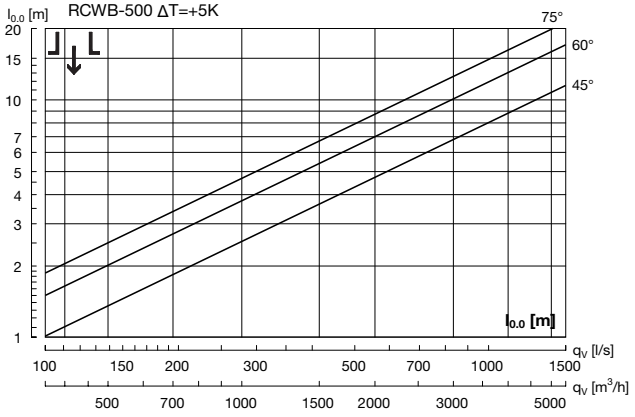
Swirl diffuser

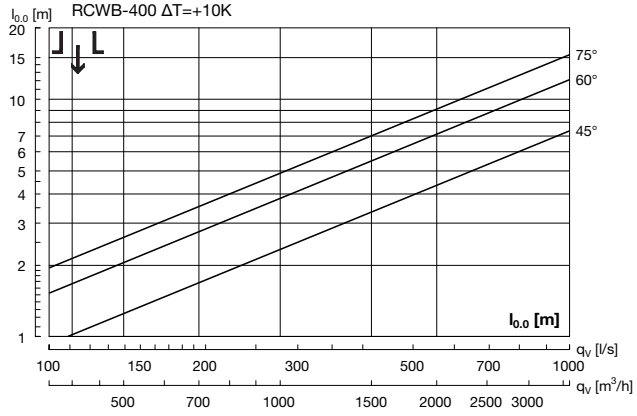
RCWB

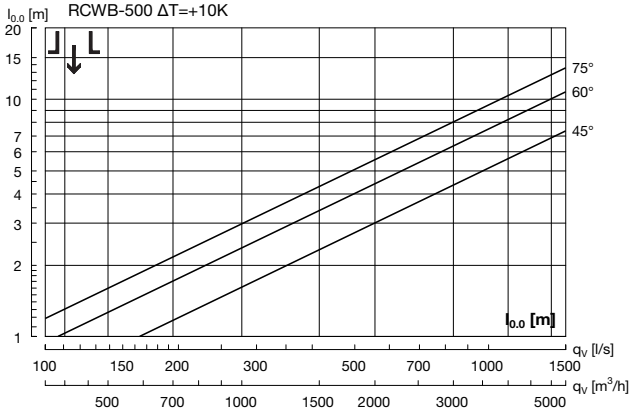


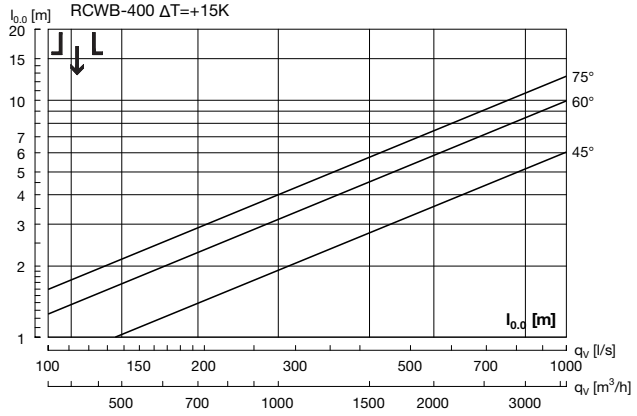


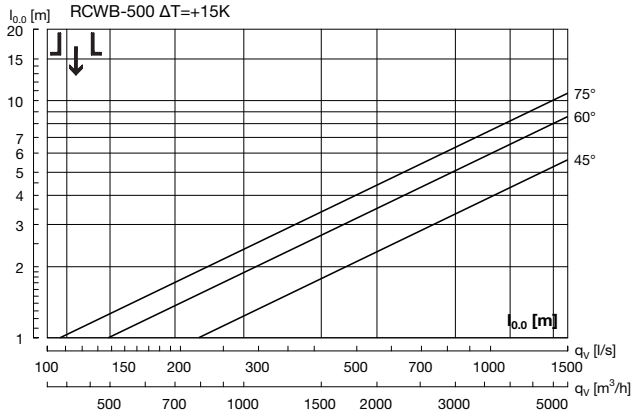






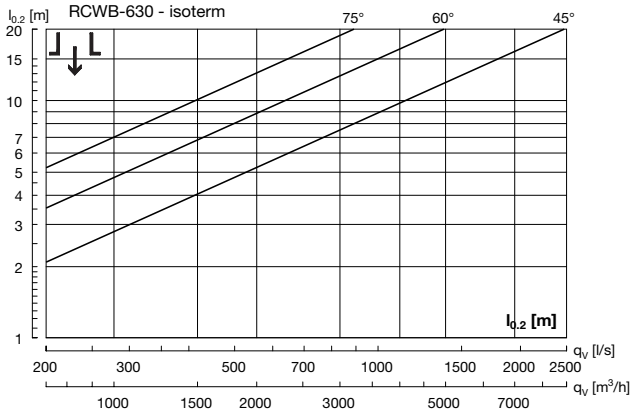


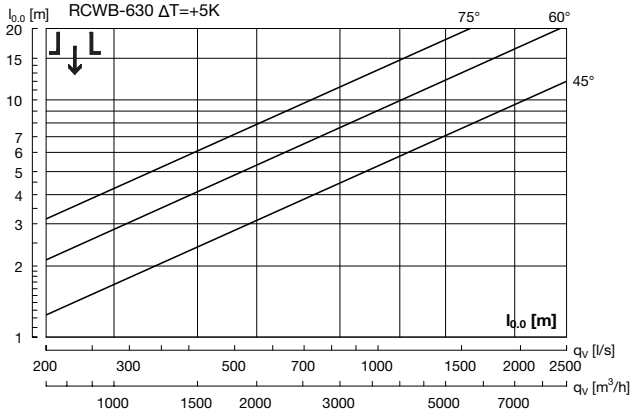


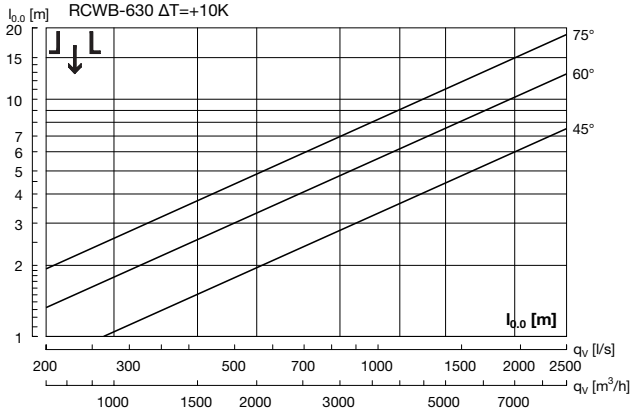


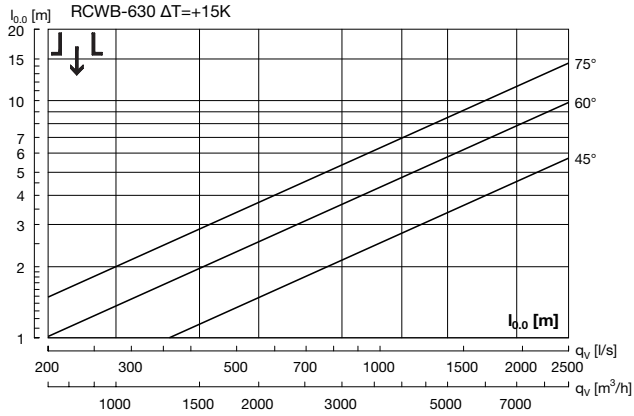
Swirl diffuser

RCWB

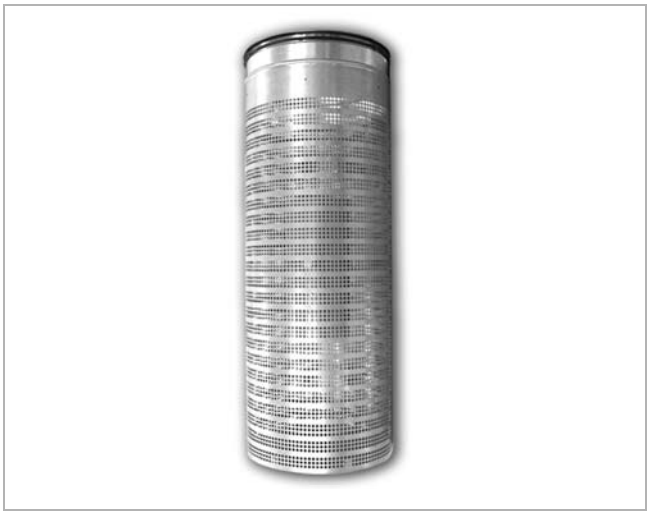








Perforated diffuser HLD



Description

HLD is a circular high level displacement diffuser adapted for industrial requirements. HLD is equipped with a damper function, which makes it possible to vary the supply air pattern between horizontal or vertical, depending on whether heating or cooling is required. The switch can be made manually, or it can be automated using several types of motor. The external dimensions of the diffuser are adapted to the connection, making it easy to integrate into an ordinary duct system. HLD can be suspended from or installed on a wall or column using the installation bracket, which ensures great flexibility no matter how premises are used.

- Suitable for both cooling and heating
- Horizontal and vertical dispersal patterns
- High capacity
- Flexible positioning
- Can be supplied with an electric motor
- Can be supplied with a thermal actuator

Maintenance

The visible parts of the diffuser can be wiped with a damp cloth. For other maintenance, see installation instructions.

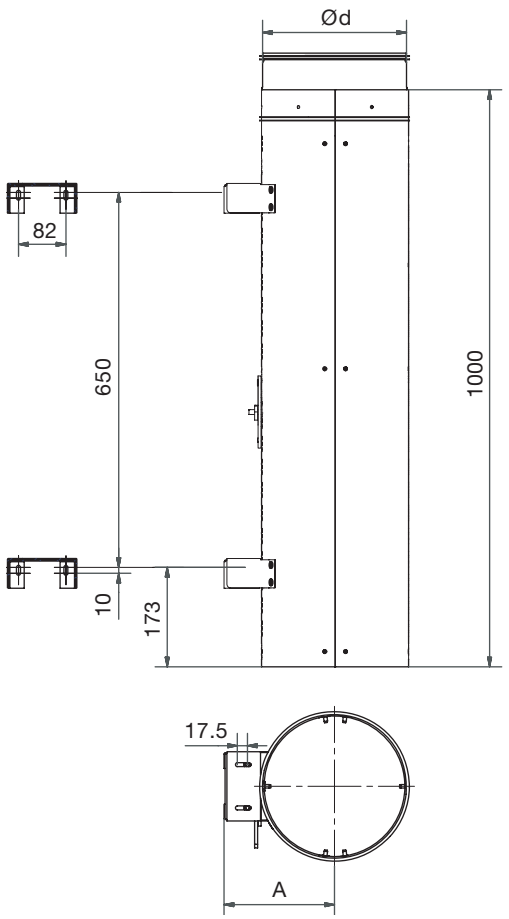
Order code

Product		**HLD**	**a**	**bbb**
Type				
Manual	0			
Motorized - modulating	1			
Motorized- on/off	2			
Automatic thermal actuator	3			
Size				

Accessories

Product	**HLZ**	**a**
Installation brackets (1set)		
Size		

Dimensions



Ød Size	A mm	Weight * kg
250	192	11.5
315	225	13.7
400	270	17,0
500	322	21,0
630	390	27,0

*Motorized models weigh approx. 1 kg more than the weight stated in the table above.

Motor type

Type	Motor
HLD - 1	NM24A-MF-F
HLD - 2	NM24A-F

Materials and finish

Material: Galvanised steel
Standard finish: Galvanised

HLD is also available in stainless steel. Please contact Lindab's sales department for further information.

Perforated diffuser HLD

Technical data

Capacity

Volume flow q_v [l/s] and [m^3/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 $l_{0.2}$ / turning point $l_{0.0}$

Throw $l_{0.2}$[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.

Frequency-related sound effect level

The sound effect 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

Size		q_v [l/s]	q_v [m^3/h]	P_t [Pa]	$l_{0.2}$ isoterm [m]	$l_{0.0}$ +5K [m]
		L_{WA} = 50				
250	Horizontal	259	934	44	2	
250	Vertical	259	934	44		3
315	Horizontal	394	1420	37	2	
315	Vertical	394	1420	37		3
400	Horizontal	586	2111	32	2	
400	Vertical	586	2111	32		2
500	Horizontal	938	3377	32	3	
500	Vertical	938	3377	32		2
630	Horizontal	1500	5401	32	4	
630	Vertical	1500	5401	32		2
		L_{WA} = 55				
250	Horizontal	305	1099	62	2	
250	Vertical	305	1099	62		3
315	Horizontal	457	1647	50	2	
315	Vertical	457	1647	50		3
400	Horizontal	680	2447	44	3	
400	Vertical	680	2447	44		3
500	Horizontal	1087	3915	42	3	
500	Vertical	1087	3915	42		3
630	Horizontal	1739	6262	42	4	
630	Vertical	1739	6262	42		2
		L_{WA} = 60				
250	Horizontal	359	1294	85	2	
250	Vertical	359	1294	85		4
315	Horizontal	531	1910	68	3	
315	Vertical	531	1910	68		3
400	Horizontal	788	2838	58	3	
400	Vertical	788	2838	58		3
500	Horizontal	1261	4539	57	4	
500	Vertical	1261	4539	57		3
630	Horizontal	2017	7260	57	5	
630	Vertical	2017	7260	57		3

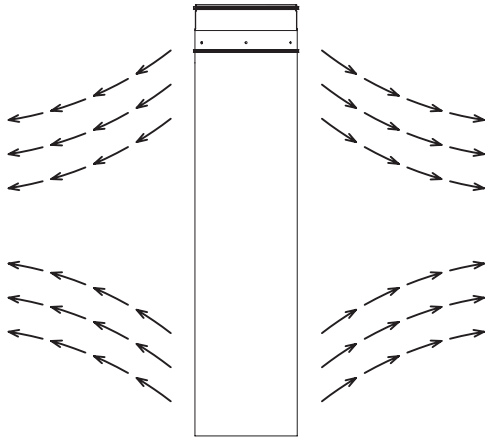
Supply air

With its special design, HLD is suitable for the supply of large volumes of air with short throws in a limited area. This concentrates the supplied air in a small area within a larger space, after which the air distributes itself around the premises. Normally, a horizontal dispersal pattern is recommended in cooling situations and a vertical dispersal pattern in heating situations.

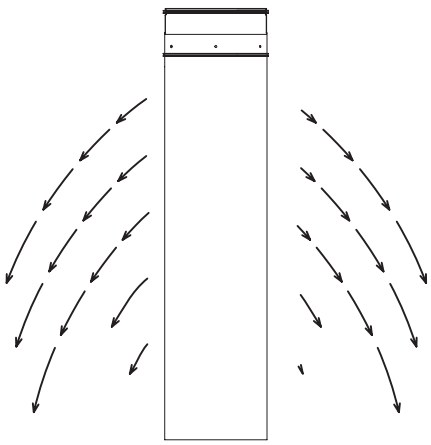
Planning

HLD with cooled air works in much the same way as displacement ventilation. Displacement ventilation has a higher temperature efficiency than mixing ventilation, and thus more power is discharged with the same volume of air and the same cooling temperature. For the calculation of discharged power in a cooling situation, use the calculation method for displacement ventilation. For HLD with heated air, power is calculated as for mixing ventilation.

Horizontal supply air - cooling



Vertical supply air - heating

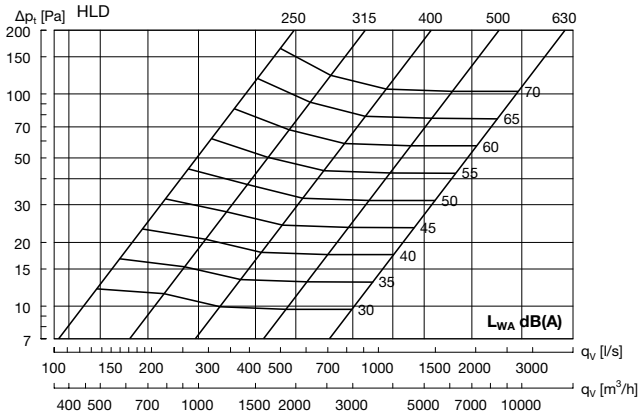


Perforated diffuser HLD

Technical data

Sound power level

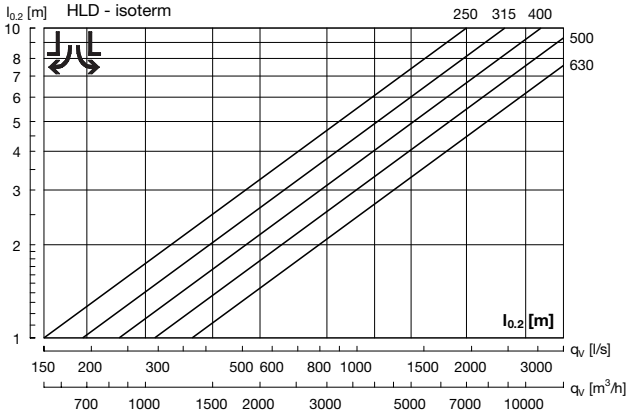
The diagram for sound effect level and pressure applies to both horizontal and vertical dispersal.

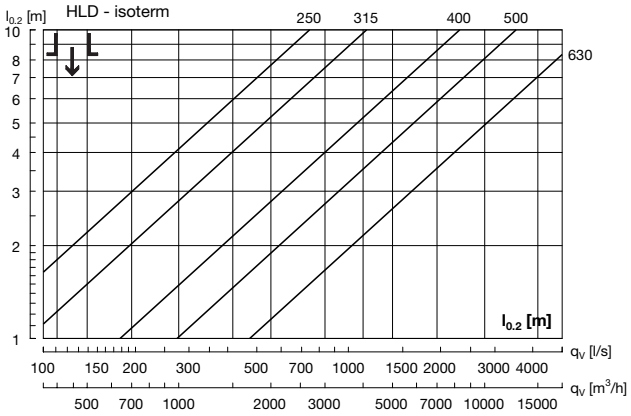


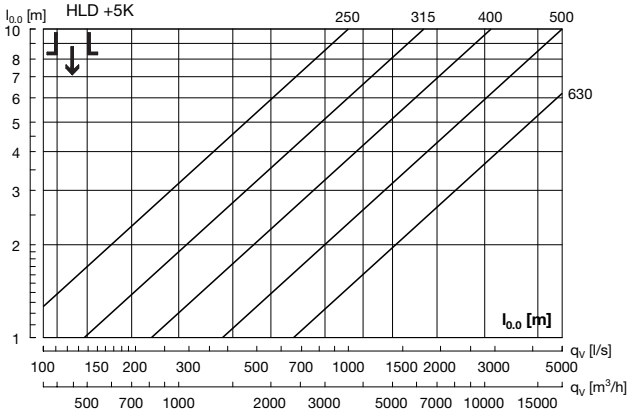
Size	Hz	63	125	250	500	1K	2K	4K	8K
250	K_{ok}	4	-3	-3	1	-6	-16	-29	-37
315	K_{ok}	12	1	0	1	-7	-16	-27	-36
400	K_{ok}	5	-3	2	1	-8	-17	-29	-41
500	K_{ok}	5	-3	2	1	-8	-17	-29	-41
630	K_{ok}	5	-3	2	1	-8	-17	-29	-41

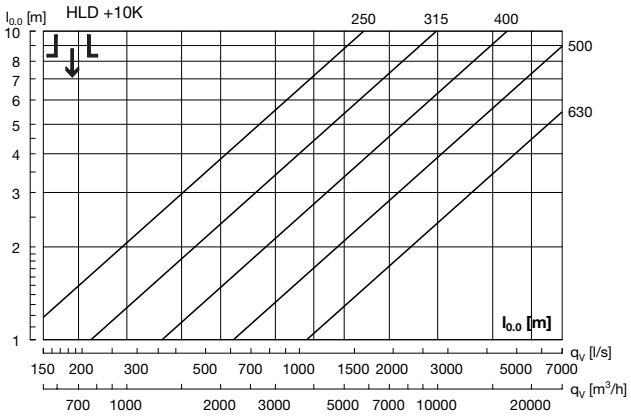
Throw $l_{0.2}$ / Turning point $l_{0.0}$

These diagrams apply for installation heights > 1 m









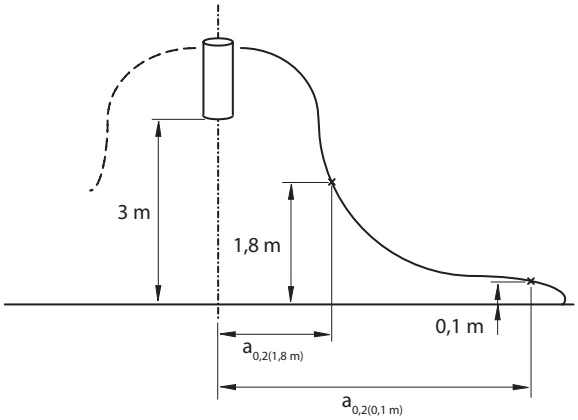
Perforated diffuser HLD

Technical data

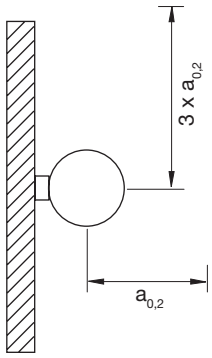
All diagrams apply for suspended installation.

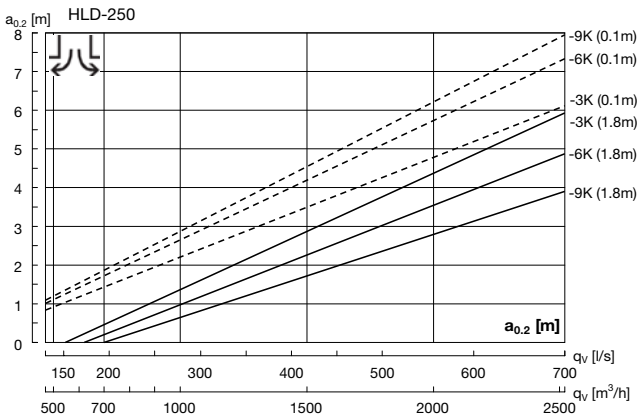
Near zones

For cooling and horizontal supply air, HLD will function as a displacement diffuser positioned high up.
The near zone is shown for two different heights, one “inner” near zone $a_{0.2\ (1.8\ m)}$ defined as the distance from the diffuser where the speed at a height of 1.8 m is 0.2 m/s, and an “outer” near zone $a_{0.2\ (0.1\ m)}$, which is the distance from the diffuser where the speed at a height of 0.1 m is 0.2 m/s.

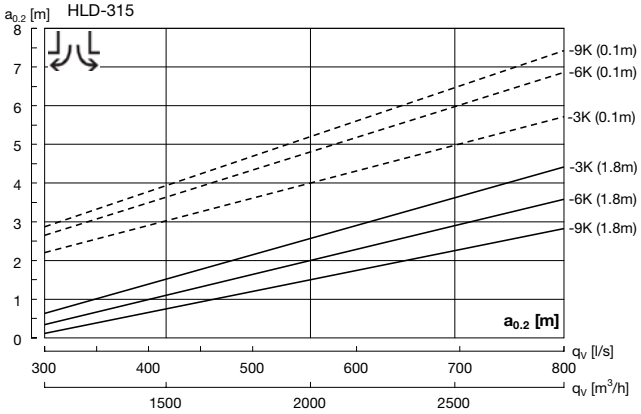


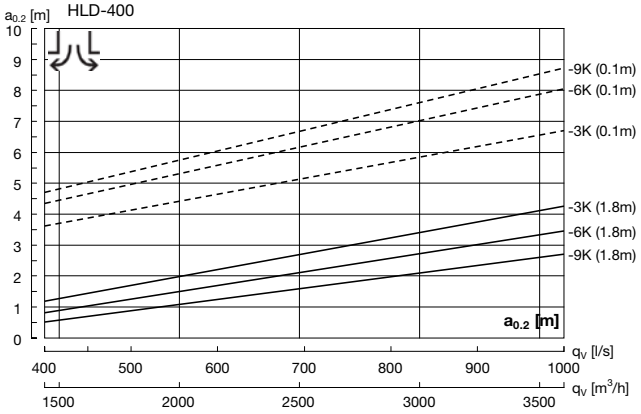
For wall installation the following corrections apply:
$a_{0.2}$ at right angles to wall = diagram value.
$a_{0.2}$ along wall = diagram value × 3.

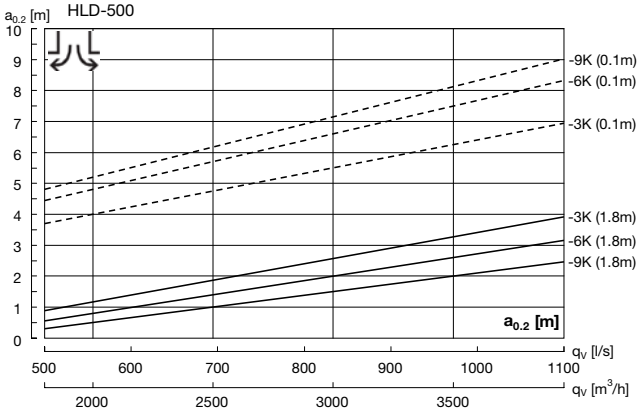


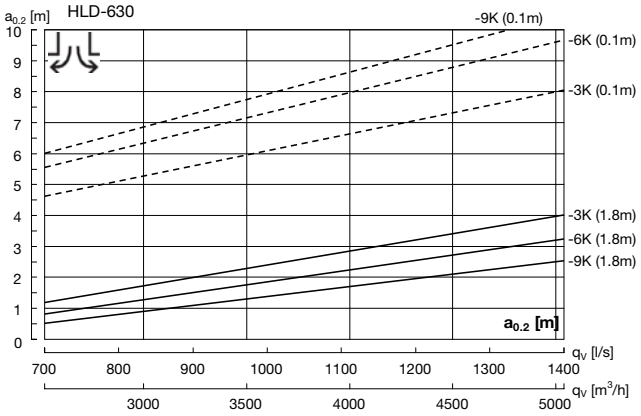


Nearzone, Horizontal







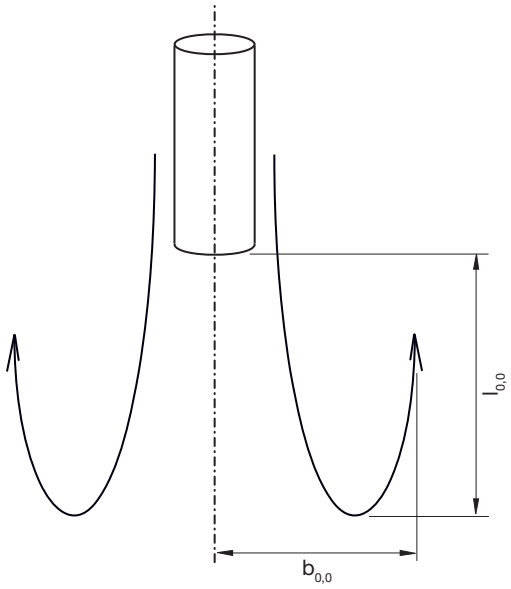


Perforated diffuser HLD

Technical data

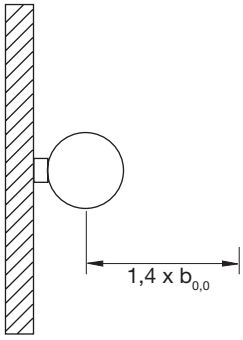
Spread

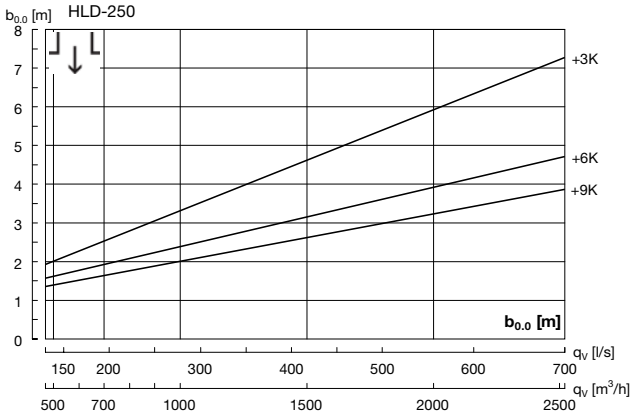
For vertical supply air with warm air, the air from the diffuser will turn at a vertical distance of $l_{0.0}$ from the diffuser. The width of the air jet, $b_{0.0}$, which can also be designated horizontal spread, can be seen in the diagrams for spread.



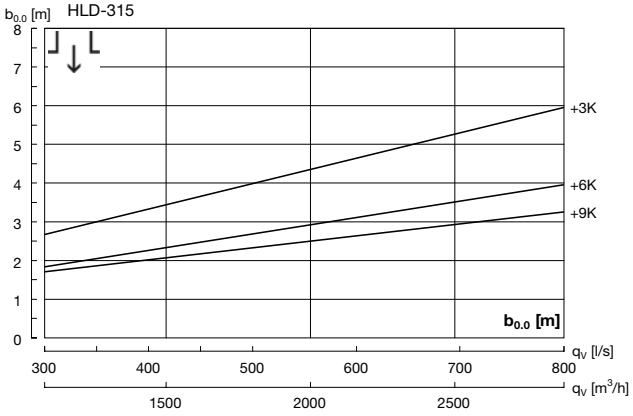
$l_{0.0}$ values in 2 diagrams bottom right hand corner page 323.

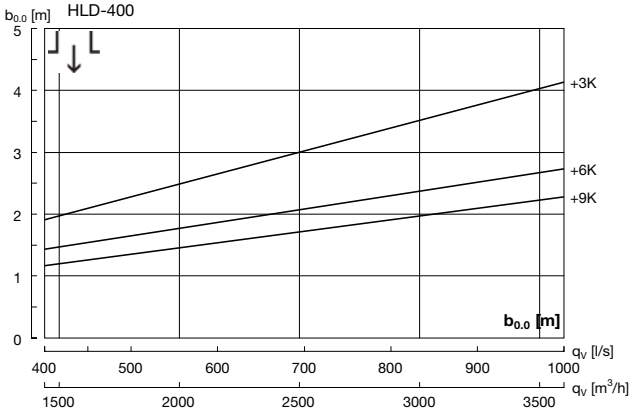
For wall installation the following correction applies:
$b_{0.0}$ wall = diagram value × 1.4.

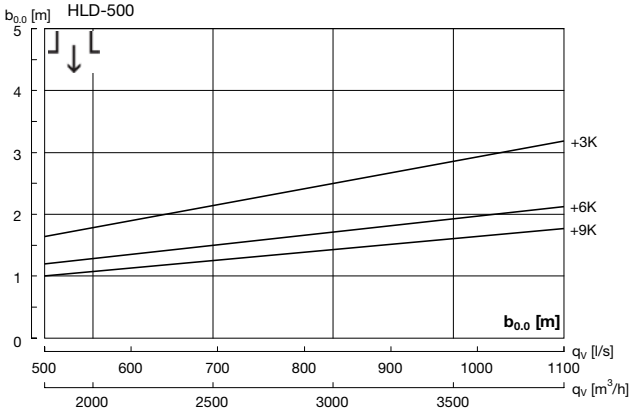


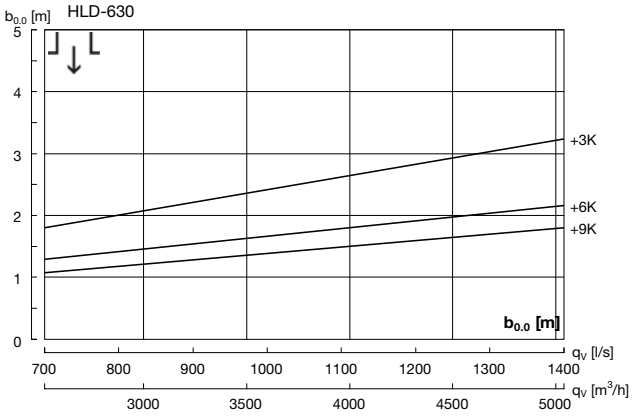


Spread, Vertical









Multi-cone diffuser FKD

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 MBB can help to achieve a stable airflow to the diffuser as well as realise the potential for individual adjustment.

- Suitable for both supply and exhaust air
- Vertical or horizontal supply air pattern

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.

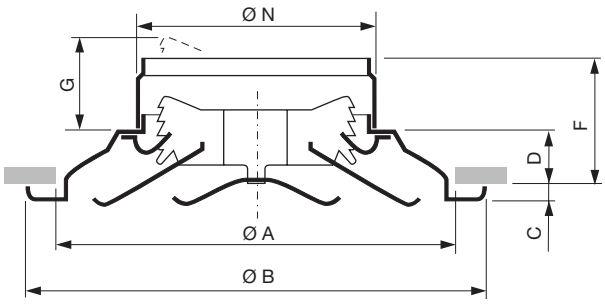
Order code

Product	**FKD**	**aaa**
Type		
FKD		
Connection dim.		
Ø160-630		

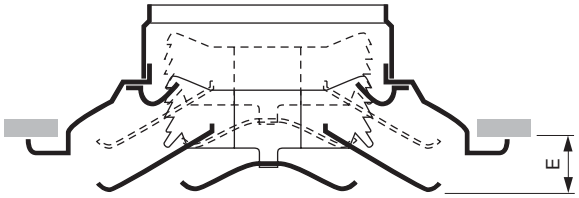
Example: FKD-200

Dimensions

Vertical



Horizontal



FKD Size	ØA mm	ØB mm	C mm	D mm	E mm	F mm	G mm	ØN mm	Weight kg
160	279	323	12	35	22	85	46	160	1.75
200	375	428	10	51	26	101	55	200	2.70
250	467	538	14	67	33	117	68	250	4.70
315	557	635	10	85	42	135	80	315	6.20
355	648	743	18	96	46	146	86	355	8,00
400	740	856	14	116	49	166	92	400	11.8
450	832	970	14	135	66	185	110	450	14,0
500	924	1081	17	149	66	199	116	500	18,0
630	1103	1286	18	182	66	232	116	630	21,0

Number of cones: size 160–400: 2
size 450-630: 3
Ø A: ceiling grid opening

Materials and finish

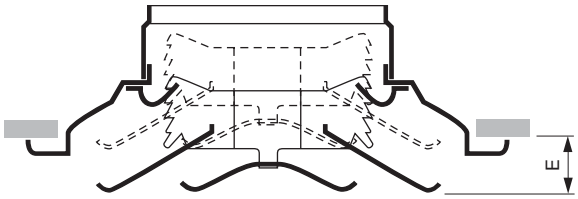
Material: Steel
Standard finish: Powder-coated
Standard colour: RAL 9010 white

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

Multi-cone diffuser FKD

Dispersal patterns

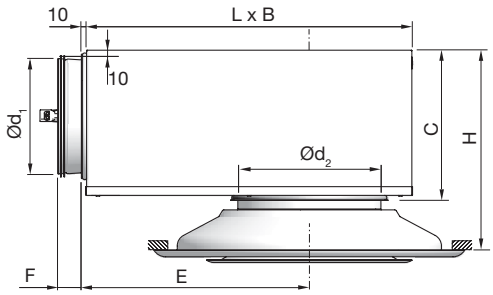
FKD is supplied for vertical supply air as standard.
The dispersal pattern can be altered to horizontal supply air by setting the inner part of the diffuser to its lowest position.



Accessories

Plenum box MBB

FKD + MBB



FKD + MBB							
Duct	FKD	B	C	E	F	H	L
$Ød_1$ mm	$Ød_2$ mm	mm	mm	mm	mm	mm	mm
100	160	260	159	216	50	195 - 235	310
125	160	310	184	262	50	220 - 260	376
125	200	310	184	262	50	236 - 276	376
160	160	380	220	323	50	255 - 295	459
160	200	380	220	323	50	270 - 310	459
160	250	380	220	323	50	286 - 326	459
200	200	460	259	396	70	361 - 401	565
200	250	460	259	396	70	327 - 367	565
200	315	460	259	396	70	345 - 385	565
250	250	540	309	486	70	377 - 417	698
250	315	540	309	486	70	395 - 435	698
250	400	540	309	486	70	426 - 466	698
315	315	540	373	646	70	460 - 500	858
315	400	540	373	646	70	491 - 531	858

Order code

Product	MBB	aaa	bbb	c

Type
MBB

Duct connection
Ø100-315

Diffuser dimension
Ø160-400

Functional use
S = Supply air
E = Exhaust

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

Multi-cone diffuser FKD

Technical data

Capacity

Air flow q_v [l/s] and [m^3/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.

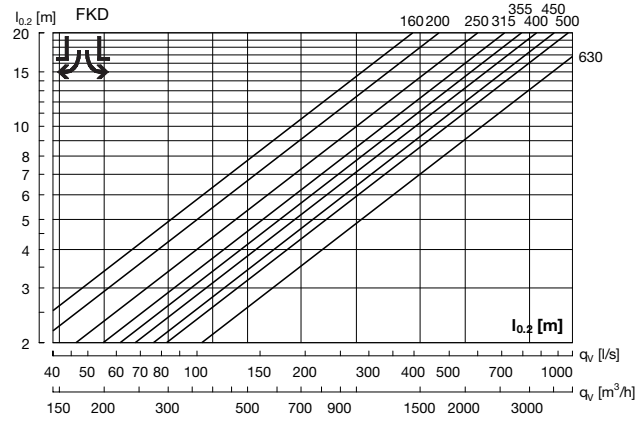
Throw $l_{0.2}$

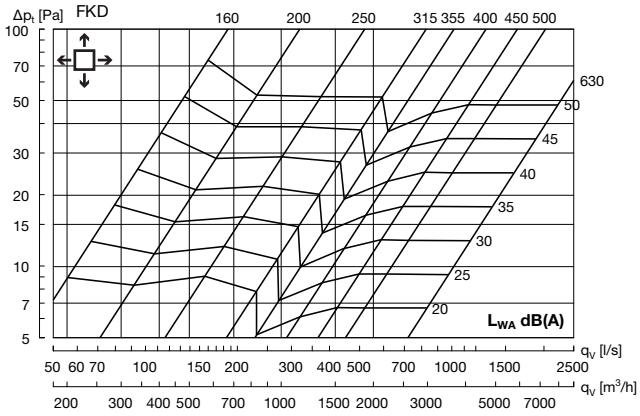
Throw $l_{0.2}$ [m] can be seen in the diagram for isothermal air at a speed of 0.2 m/s.

Frequency-related sound effect level

The sound effect 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.

Horizontal





Sound attenuation

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

FKD + MBB		Centre frequency Hz							
Duct	FKD								
$Ød_1$	$Ød_2$	63	125	250	500	1K	2K	4K	8K
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.

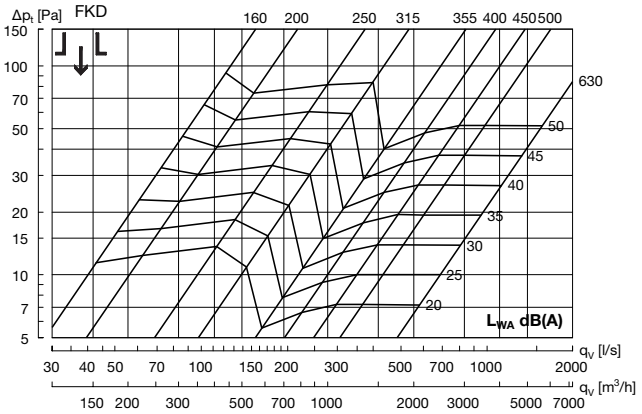
Multi-cone diffuser FKD

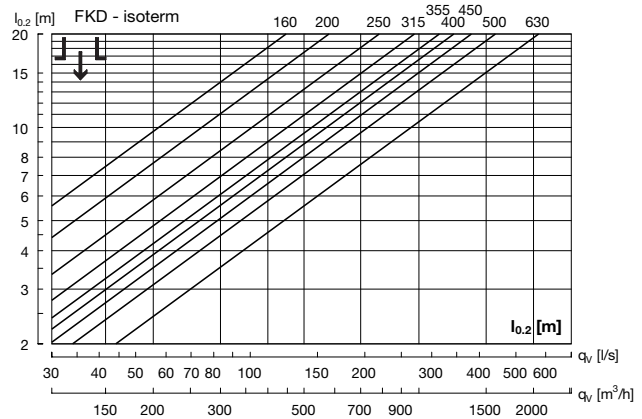
Technical data

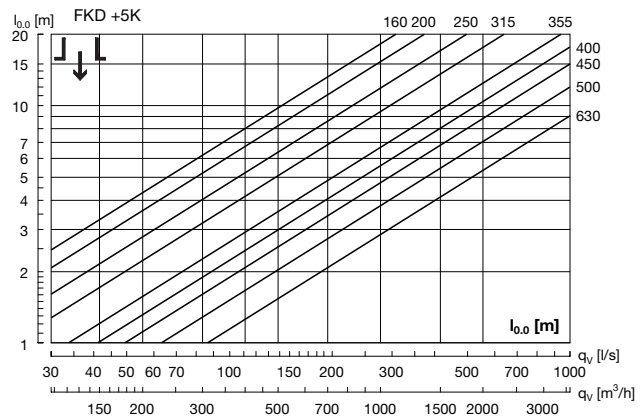
Throw $l_{0.2}$ / turning point $l_{0.0}$

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



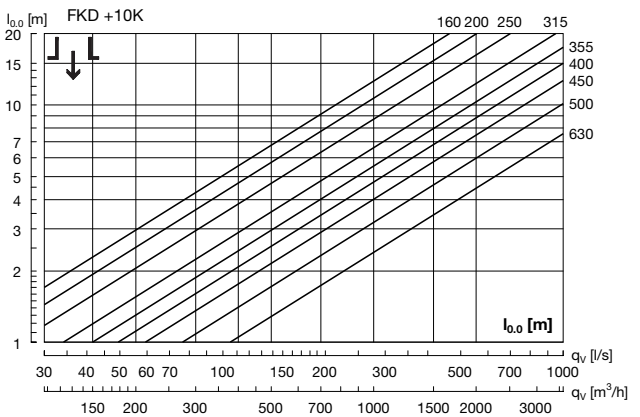




Vertical supply air correction sound power level (L_{WA}) and pressure loss (Δp_t)

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

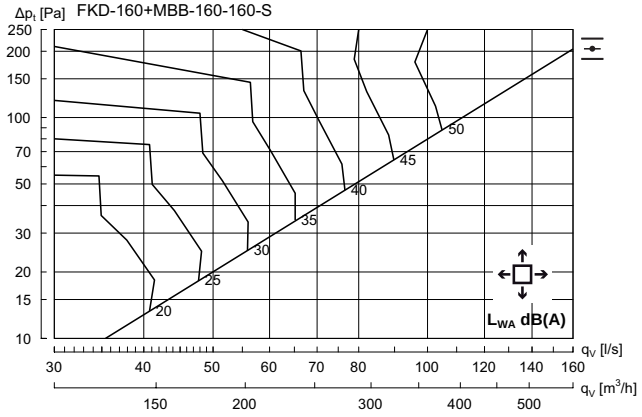
FKD + MBB		Vertical supply air Correction factor	
Duct Ød$_1$	FKD Ød$_2$	L_{WA}	Δp_t
100	160	3	x 1,2
125	160	1	x 1,2
125	200	1	x 1,1
160	160	5	x 1,5
160	200	3	x 1,3
160	250	0	x 1,1
200	200	1	x 1,3
200	250	5	x 1,2
200	315	0	x 1,1
250	250	1	x 1,3
250	315	2	x 1,3
250	400	1	x 1,1
315	315	4	x 1,4
315	400	3	x 1,2



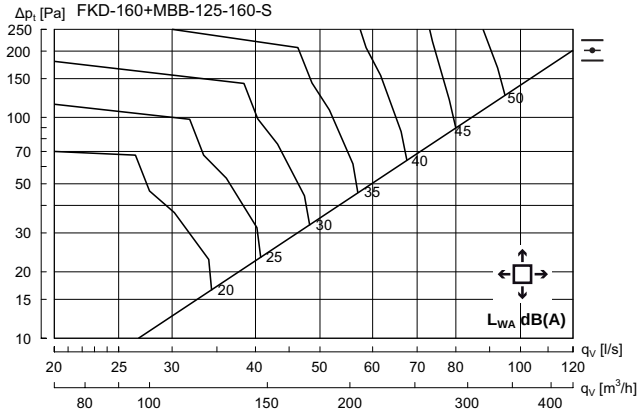
Multi-cone diffuser FKD

Technical data

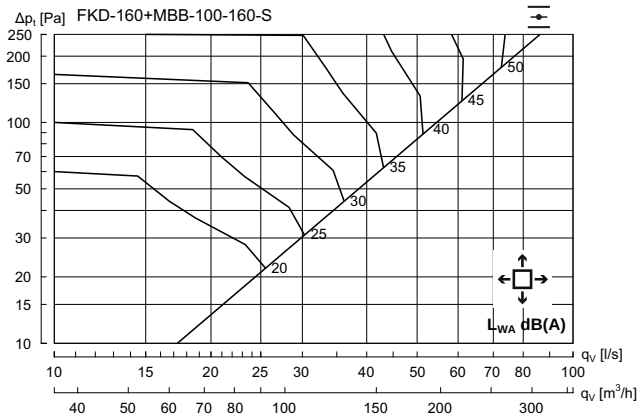
FKD 160 + MBB Horizontal



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

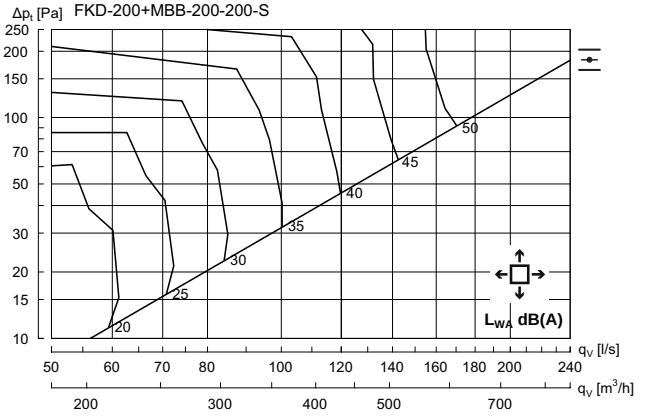


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	5	2	-5	-5	-9	-18	-25

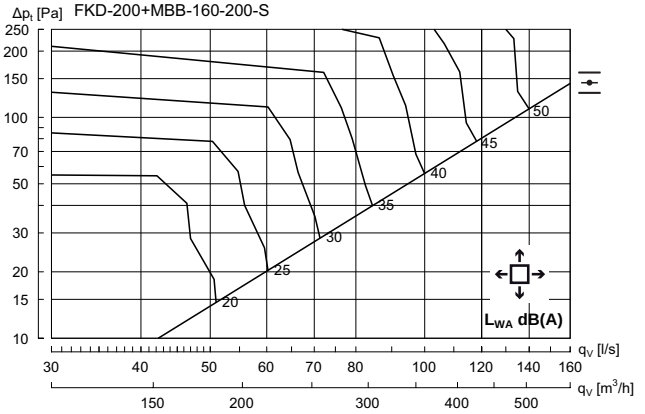


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	4	2	-3	-5	-9	-16	-22

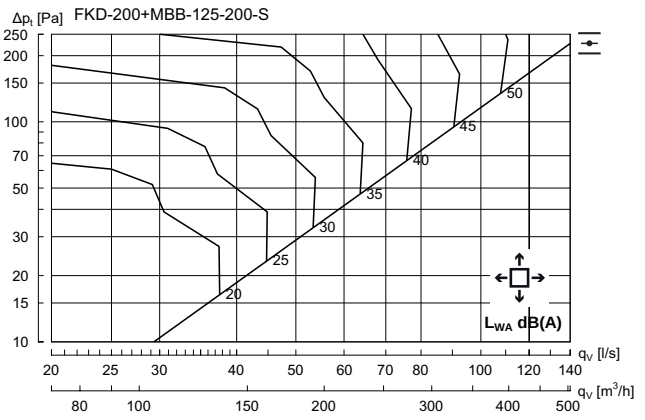
FKD 200 + MBB Horizontal



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

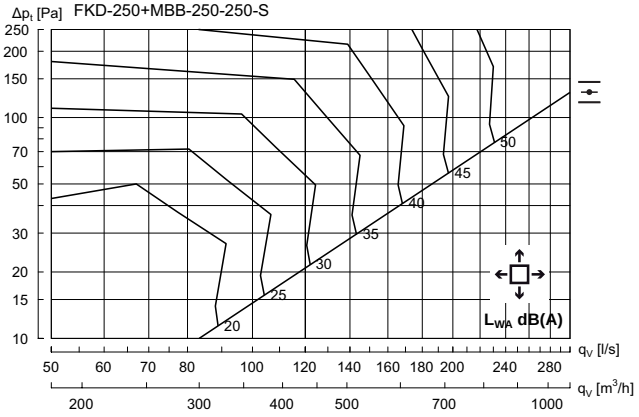


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	4	1	-4	-4	-10	-16	-23

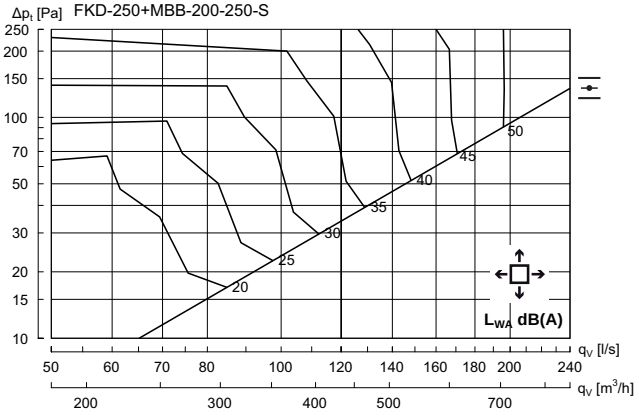
Multi-cone diffuser FKD

Technical data

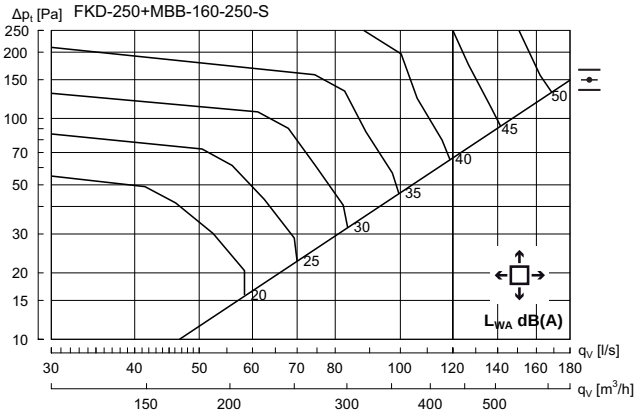
FKD 250 + MBB Horizontal



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

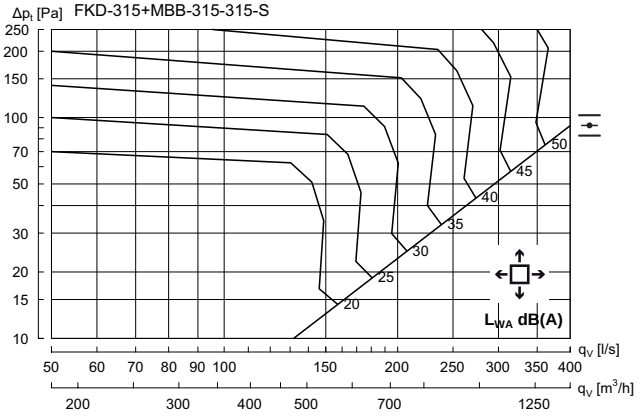


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	11	5	-2	-3	-3	-12	-19	-24

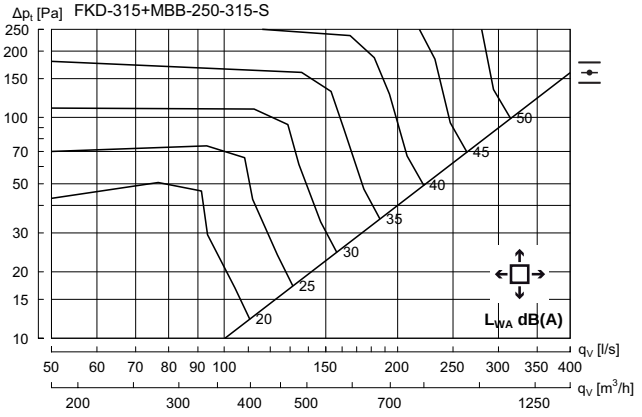


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	4	0	-3	-4	-12	-18	-24

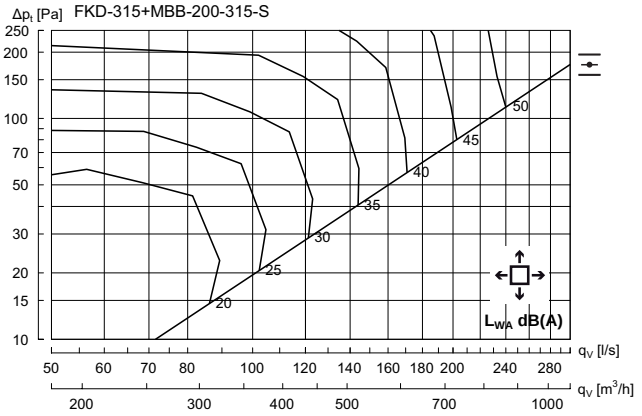
FKD 315 + MBB Horizontal



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

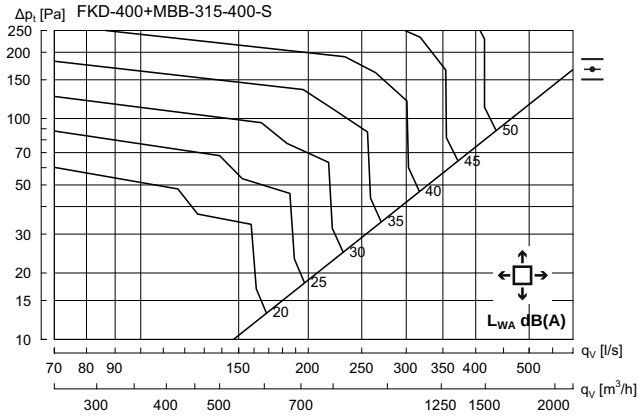


Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	9	5	-1	-2	-5	-11	-18	-24

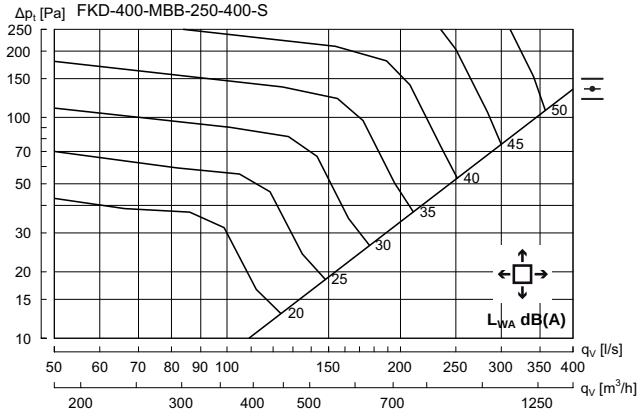
Multi-cone diffuser FKD

Technical data

FKD 400 + MBB Horizontal



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



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