



Lindab **LCR1**

Clean room diffuser



Clean room diffuser

LCR1



Description

The LCR1 diffuser is a clean room diffuser that can be equipped with a HEPA filter, for installation in ceilings. It is typically used in premises where there are stringent requirements concerning the amount of particles and germs in the air. The diffuser can be used both to supply and exhaust air. LCR1 is available in two sizes and with three different types of duct connection. The diffuser can be adapted for the most popular ceiling systems with reference to the order code. It is normally supplied with a rotating front plate, which ensures good mixing and distribution of air throughout the premises. The supply air pattern can be adjusted in size to suit the volume flow rate. The diffuser is also available with a fully-perforated front plate for vertical supply air or exhaust. The diffuser excels by having a hinged front plate and extremely simple and easy filter installation. Filters are supplied by Camfil Farr with a PU or Gel seal. Airtight all-welded box in stainless steel.

- Hinged drop-down front plate
- Simple and easy filter installation
- Supplied adapted for the most popular ceiling systems
- Pattern of airflow adapted for actual volume flow rate
- Detachable duct connection (circular side connection)
- Mounting brackets for threaded bolts are supplied as accessories.
- Low net weight
- Equipped with outlet for pressure measurement and DOP testing.

Materials and finish

Upper section:

Material: Stainless steel

Lower section:

Material: Stainless steel

Standard colour: RAL 9010 or 9003, gloss 30

Frontplate:

Material: Galvanized steel

Standard colour: RAL 9010 or 9003, gloss 30

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

Order (size 400)

Product	LCR1	a	b	c	ddd	400	F
Type							
Duct connection							
S = Side							
T = Top							
Filter type							
P = PU seal							
G = Gel seal							
Front plate							
H = High impulse (rot.)							
L = Low impulse (perf.)							
Air pattern							
300 = 300 (rot.)							
400 = 400 (rot./perf.)							
Size							
400							
Ceiling/type							
F = Fixed ceiling							

Order (size 600)

Product	LCR1	a	b	c	ddd	600	f
Type							
Duct connection							
S = Side							
T = Top							
R = Rect. side							
Filter type							
P = PU seal							
G = Gel seal							
Front plate							
H = High impulse (rot.)							
L = Low impulse (perf.)							
Air pattern							
300 = 300 (rot.)							
400 = 400 (rot.)							
500 = 500 (rot.)							
600 = 600 (rot./perf.)							
Size							
600							
Ceiling/type							
F = Fixed ceiling							
T = Visible T-rail							
C = Clip-In (bevelled)							
A = Other ceiling type*							

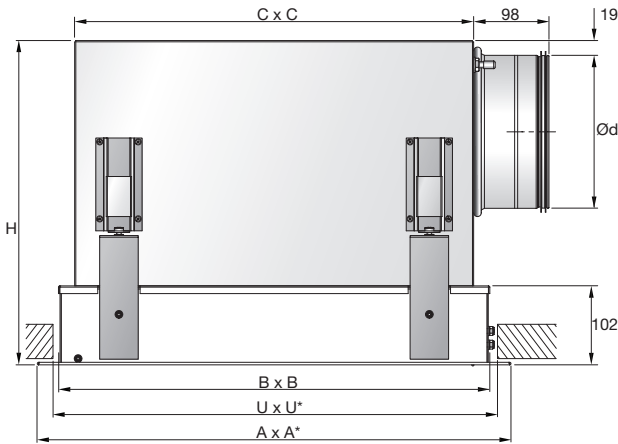
* To be stated in plain text

Clean room diffuser

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Dimensions

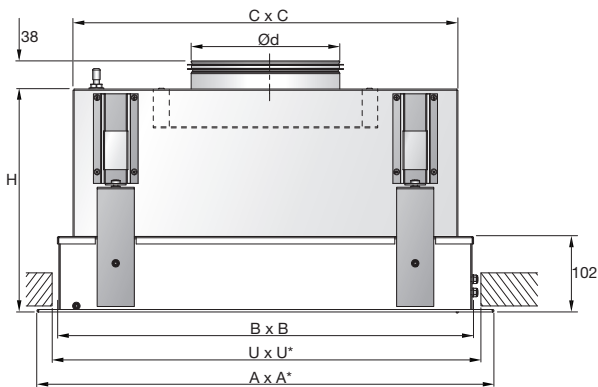
Circular side connection



Size	Ød	H	A	B	C	U	m
mm	mm	mm	mm	mm	mm	mm	kg
400	125	325	415	360	318	375	5.2
600	200	420	615	560	318	575	14.6

* U x U = cutting dimension.

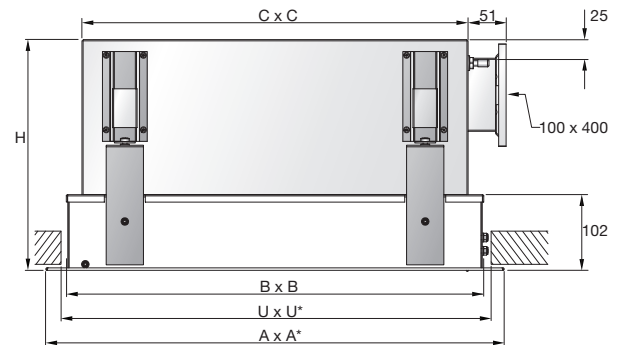
Circular top connection



Size	Ød	H	A	B	C	U	m
mm	mm	mm	mm	mm	mm	mm	kg
400	125	300	415	360	318	375	5
600	200	300	615	560	318	575	12.8

* U x U = cutting dimension.

Rectangular side connection



Size	H	A	B	C	U*	m
mm	mm	mm	mm	mm	mm	kg
600	315	615	560	518	575	12.4

* U x U = cutting dimension.

Variant with increased capacity

The diffuser range can also be supplied in a different design for fixed ceilings, where the diffuser has an increased capacity of up to approx. 900 m³/h. However, the physical dimensions differ from the standard range. This version is made entirely of stainless steel.

A x A dimension: 698 x 698

The diffuser is supplied with a filter with the dimensions 610 x 610 x 110 mm.

* Dimension applies for fixed ceilings.

Go to chapter ceiling type adaption, for other ceiling types.

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Technical data

All measurements include the class H-14 filter, manufactured by Camfil Farr.

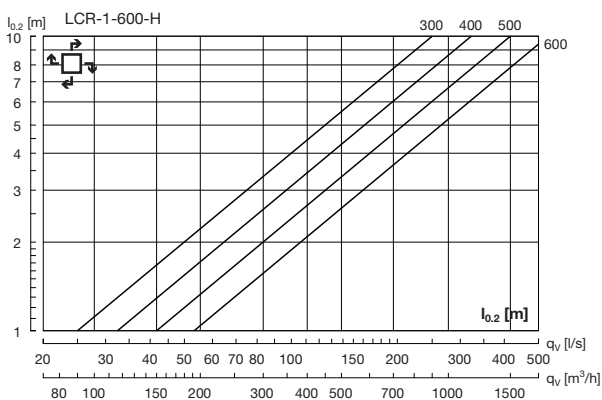
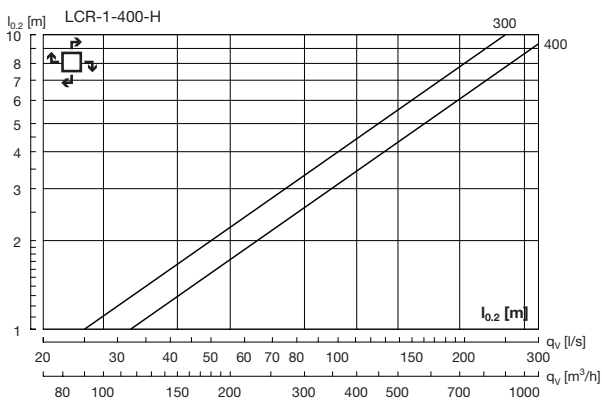
Capacity

Volume 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 on the next pages.

Frequency-related sound effect level

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

Throw length



Sound attenuation

The diffuser's sound attenuation function from duct to room, including end reflection.

	Mean frequency Hz							
Size	63	125	250	500	1K	2K	4K	8K
400	20	13	7	9	12	11	12	18
600	16	10	12	7	8	9	12	18

Ceiling adjustment

LCR1 in size 600 is suitable for installation in several different types of ceiling system. Read more about this in the ceiling adjustment section.

Parts

Filter clip.



Hinged drop-down front plate



Magnetic lock for front plate



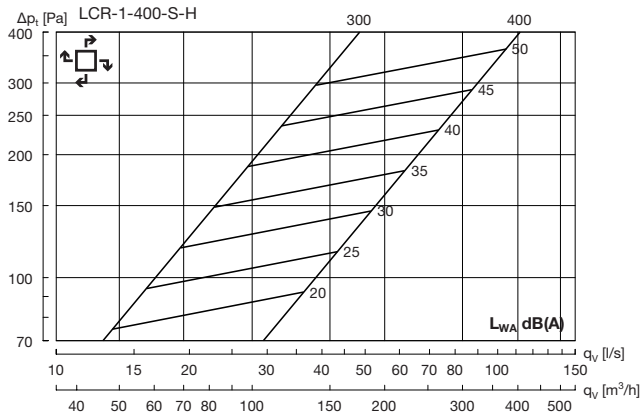
Detachable circular duct connection (side only, Ø)



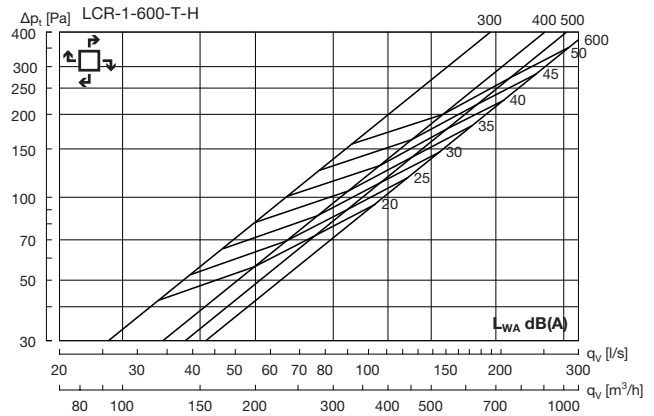
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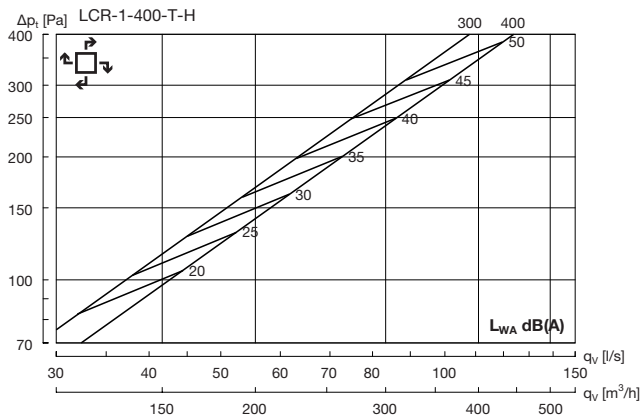
Technical data (rotation - supply)



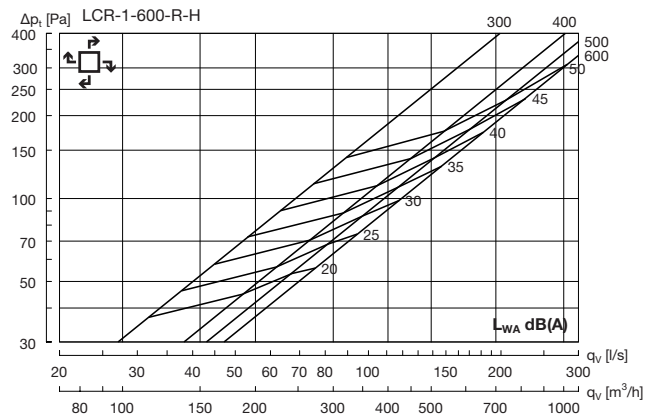
Size	63	125	250	500	1K	2K	4K	8K
400-300	0	3	1	-1	-5	-13	-23	-36
400-400	5	2	0	-1	-5	-10	-21	-25



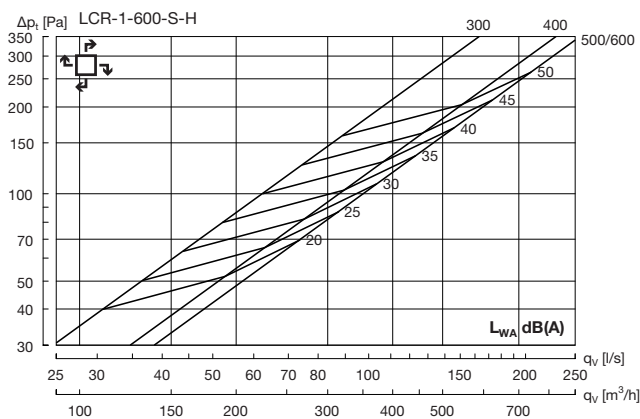
Size	63	125	250	500	1K	2K	4K	8K
600-300	4	7	2	-2	-5	-14	-14	-34
600-400	4	5	2	-2	-5	-12	-20	-33
600-500	5	5	1	-3	-4	-10	-24	-34
600-600	8	0	1	-1	-5	-12	-22	-28



Size	63	125	250	500	1K	2K	4K	8K
400-300	6	4	1	-1	-5	-13	-22	-29
400-400	3	-1	-3	0	-5	-10	-22	-26



Size	63	125	250	500	1K	2K	4K	8K
600-300	7	7	1	-2	-5	-14	-11	-32
600-400	5	7	1	-2	-6	-10	-19	-28
600-500	3	5	-1	-4	-5	-7	-13	-25
600-600	2	-3	-4	-4	-4	-6	-16	-21



Size	63	125	250	500	1K	2K	4K	8K
600-300	1	7	1	-1	-6	-15	-4	-34
600-400	2	8	0	-2	-5	-12	-22	34
600-500	2	5	-1	-1	-5	-12	-17	-28
600-600	1	-2	-4	0	-4	-12	-21	-28

Code key

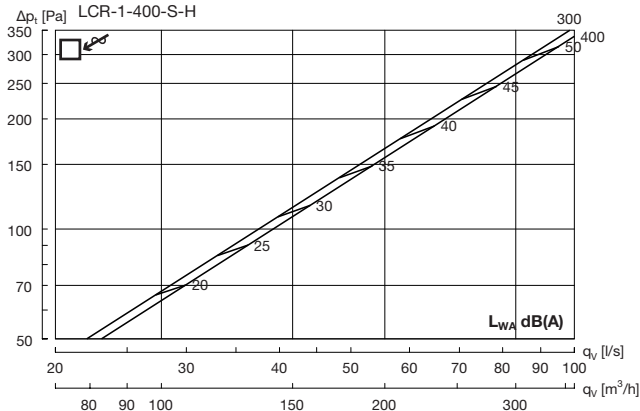
- S - H = Circular side connection
- T - H = Circular top connection
- R - H = Rectangular side connection

All measurements include the class H-14 filter manufactured by Camfil Farr.

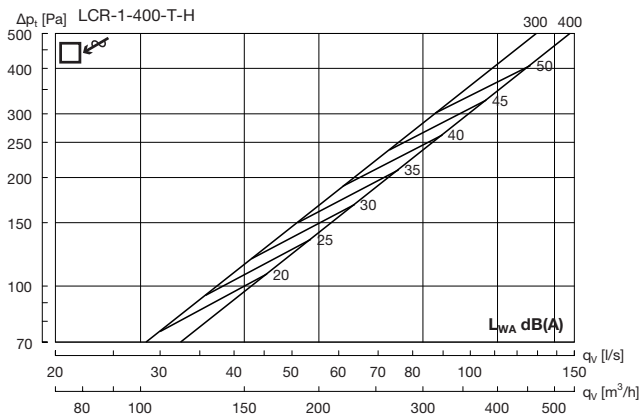
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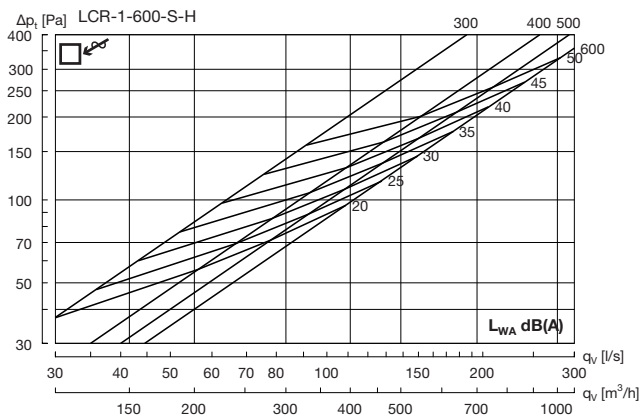
Technical data (rotation - exhaust)



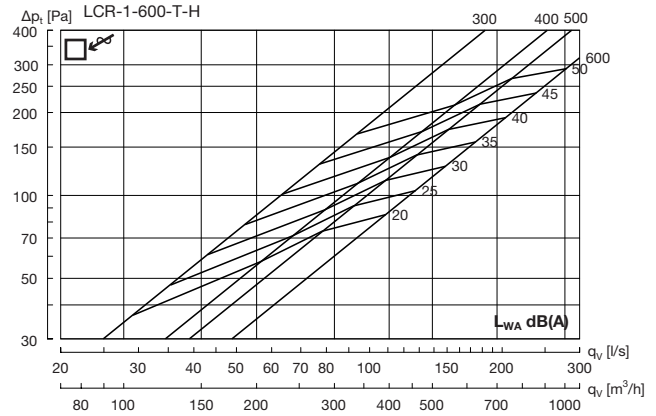
Size	63	125	250	500	1K	2K	4K	8K
400-300	-3	5	2	-1	-5	-14	-22	-25
400-400	4	4	3	-2	-6	-10	-19	-24



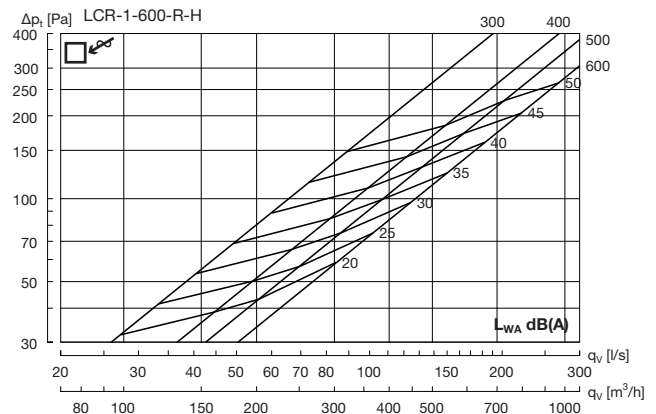
Size	63	125	250	500	1K	2K	4K	8K
400-300	9	3	2	-2	-5	-12	-20	-24
400-400	6	8	4	-2	-8	-16	-19	-22



Size	63	125	250	500	1K	2K	4K	8K
600-300	1	3	2	-2	-3	-12	-19	-25
600-400	3	7	1	-2	-5	-15	-20	-30
600-500	3	8	0	-1	-5	-15	-22	-32
600-600	4	5	1	-1	-5	-17	-28	-40



Size	63	125	250	500	1K	2K	4K	8K
600-300	7	7	1	-2	-6	-14	-22	-32
600-400	5	7	1	-2	-6	-10	-19	-28
600-500	3	5	-1	-4	-5	-7	-13	-25
600-600	2	-3	-4	-4	-4	-6	-16	-21



Size	63	125	250	500	1K	2K	4K	8K
600-300	0	3	-1	-2	-4	-11	-18	-26
600-400	6	5	0	-3	-4	-9	-18	-26
600-500	6	3	-3	-5	-5	-7	-12	-21
600-600	2	1	-3	-3	-5	-7	-13	-22

Code key

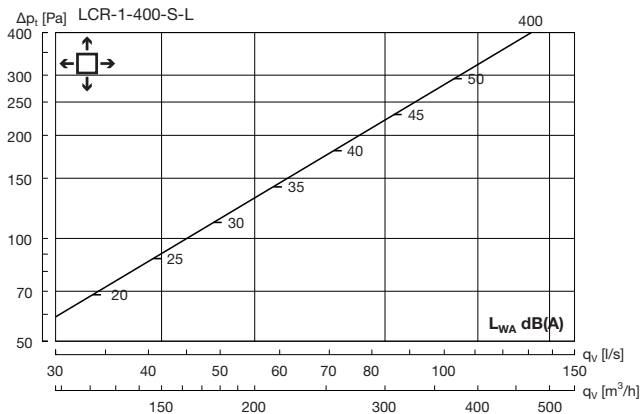
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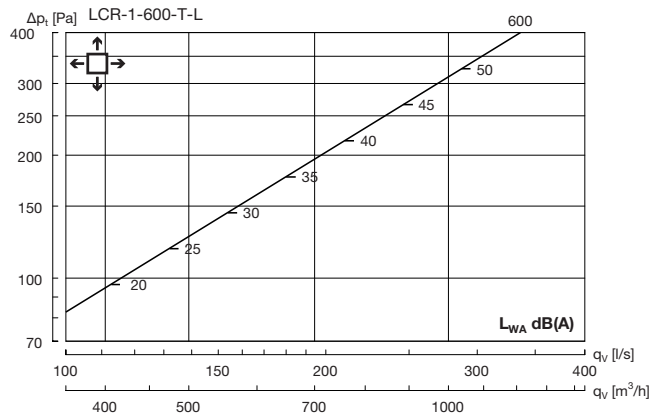
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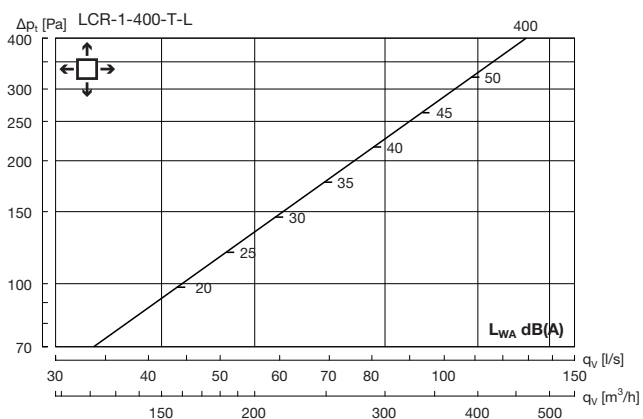
Technical data (perforated - supply)



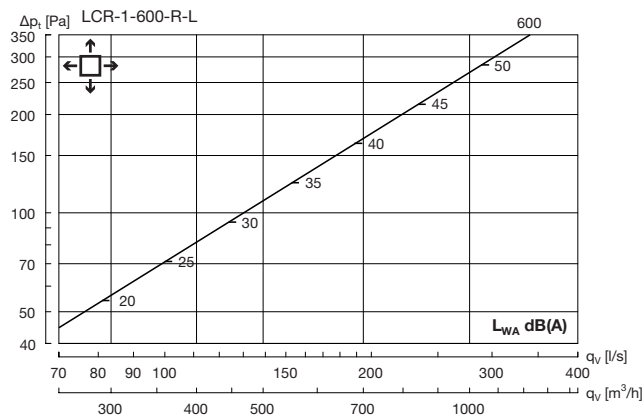
Size	63	125	250	500	1K	2K	4K	8K
400	5	-9	-10	-4	-2	-10	-22	-31



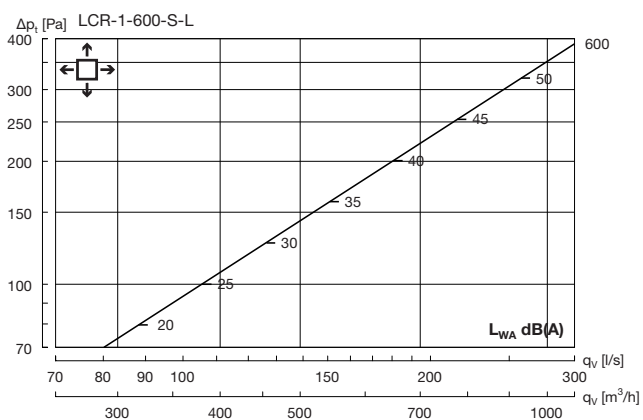
Size	63	125	250	500	1K	2K	4K	8K
600	5	-3	-7	-5	-2	-8	-22	-29



Size	63	125	250	500	1K	2K	4K	8K
400	10	10	3	-4	-11	-12	-13	-14



Size	63	125	250	500	1K	2K	4K	8K
600	7	-9	-6	-3	-5	-7	-12	-19



Size	63	125	250	500	1K	2K	4K	8K
600	9	-6	-8	0	-4	-12	-25	-35

Code key

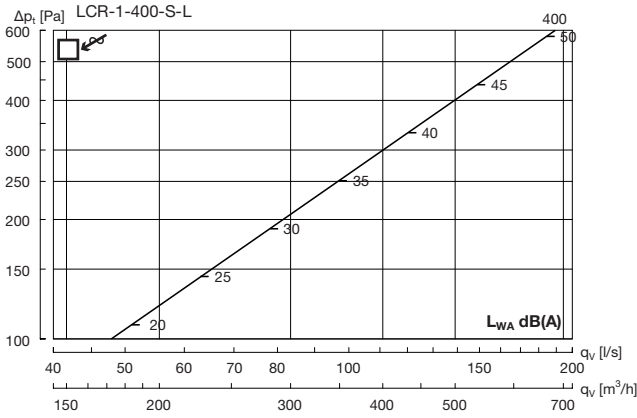
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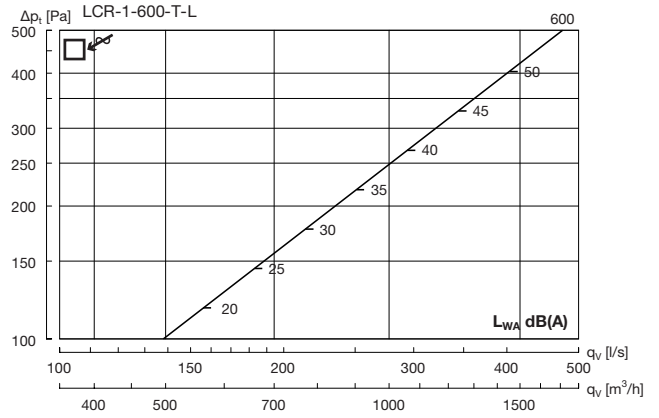
Clean room diffuser

LCR1

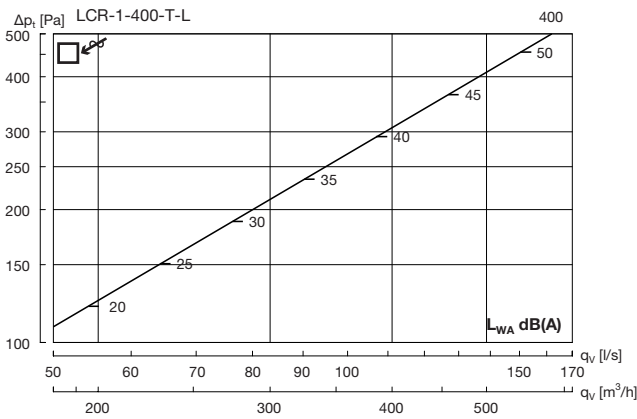
Technical data (perforated - exhaust)



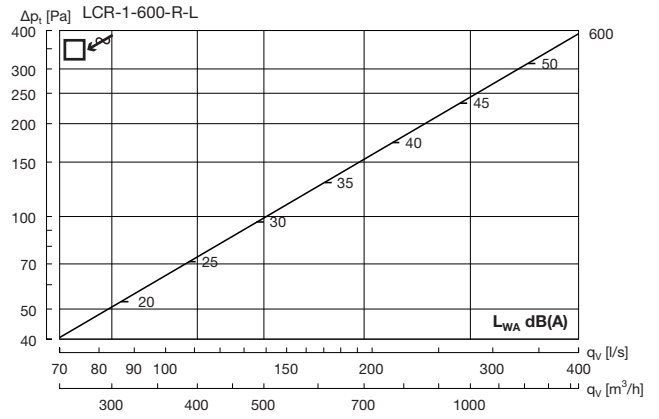
Size	63	125	250	500	1K	2K	4K	8K
400	8	8	2	-4	-7	-10	-15	-19



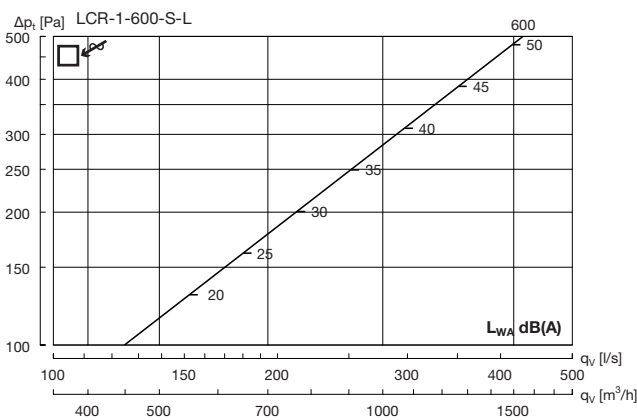
Size	63	125	250	500	1K	2K	4K	8K
600	13	11	4	-4	-11	-15	-19	-27



Size	63	125	250	500	1K	2K	4K	8K
400	10	10	3	-4	-11	-12	-13	-14



Size	63	125	250	500	1K	2K	4K	8K
600	2	-4	-6	-4	-5	-6	-10	-21



Size	63	125	250	500	1K	2K	4K	8K
600	13	9	0	-2	-7	-11	-16	-23

Code key

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- T - H = Circular top connection
- R - H = Rectangular side connection

All measurements include the class H-14 filter manufactured by Camfil Farr.



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