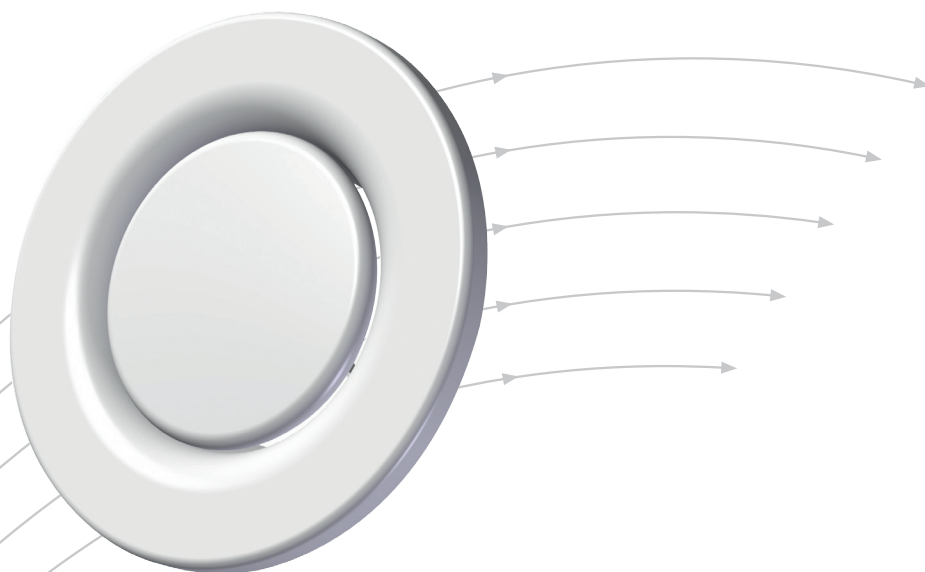


LVS

Extract air terminal device



- Broad adjustment range
- Easy commissioning

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LVS



APPLICATION

LVS is an extract air terminal device for ceiling or wall mounting.

DESIGN

LVS features an adjustable centre cone for air flow rate commissioning. Mounting frame, KKT, for Spiro duct connection is available on request.

MATERIALS AND SURFACE COATING

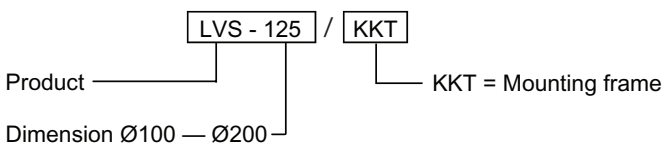
LVS is made of steel, and comes in a RAL 9010 finish. Other colours are available on request. KKT is fitted with a rubber gasket on the connection collar.

QUICK SELECTION

LVS Dim.	Cone position - s [mm]	[m ³ /h]		
		30 dB(A)	35 dB(A)	40 dB(A)
100	-5	60	70	80
125	-6	90	110	140
160	-5	140	170	200
200	-10	160	190	240

Table 1. The table shows air flow rates at given sound power levels.

ORDER CODE, LVS



Example:
LVS-125 / KKT

Explanation:
LVS, dimension Ø125, with KKT mounting frame.

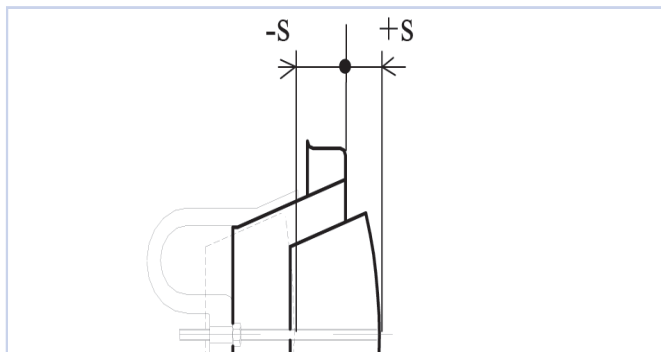


Fig. 1

DIMENSIONS AND WEIGHT, LVS

Dim.	B	C	D	Weight [kg]
100	40	99	132	0,2
125	46	124	162	0,3
160	54	159	205	0,4
200	61	199	245	0,6

Table 2

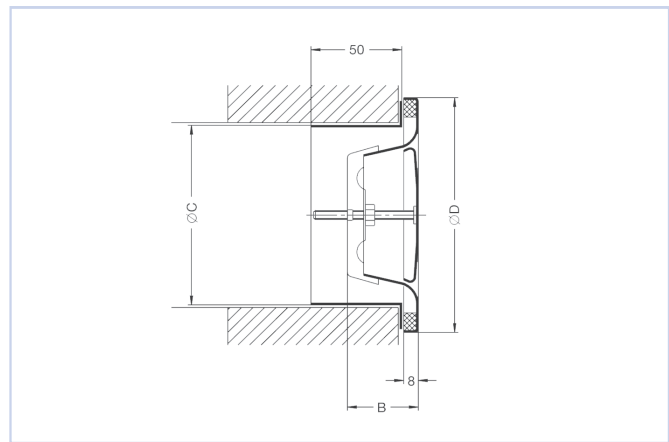


Fig. 2

DIMENSIONS AND WEIGHT, KKT

Dim.	d	D ₂	Weight [kg]
100	99	125	0,10
125	124	150	0,12
160	159	185	0,18
200	199	225	0,24

Table 3

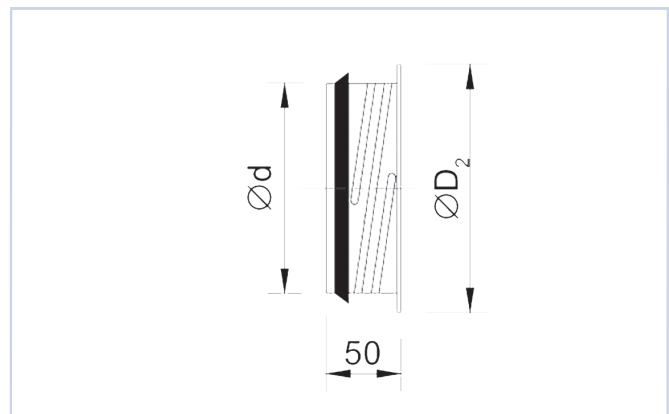
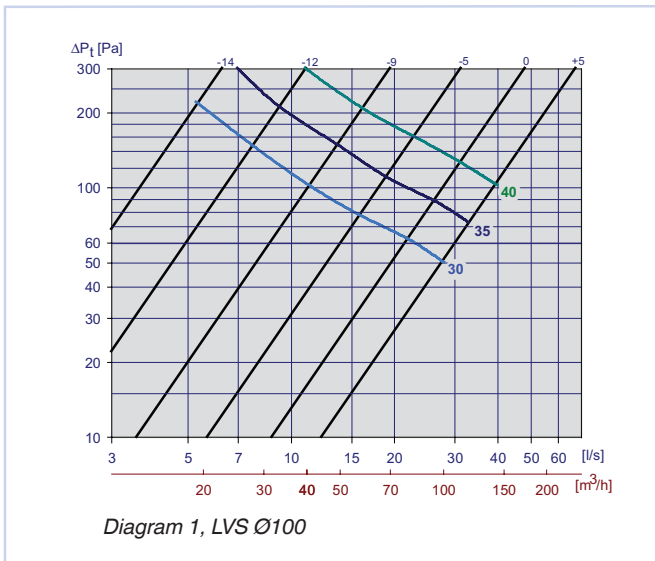


Fig. 3

ACOUSTIC DATA

The diagrams provide a summary of the A-weighted sound power level from diffuser, L_{WA} . Correction factors in table 4 are used to calculate emitted sound power level at the respective frequencies, $L_W = L_{WA} + KO$. A room with absorption equivalent to 10m² Sabine will have a sound pressure level which is 4dB below the sound power level emitted.

CALCULATION DIAGRAMS



Example:

Office premises require an indoor air extraction of 30 l/s, and for this purpose a LVS Ø100 extract air terminal device is used. Room attenuation is 6dB, and the centre cone is to be choked 20 Pa.

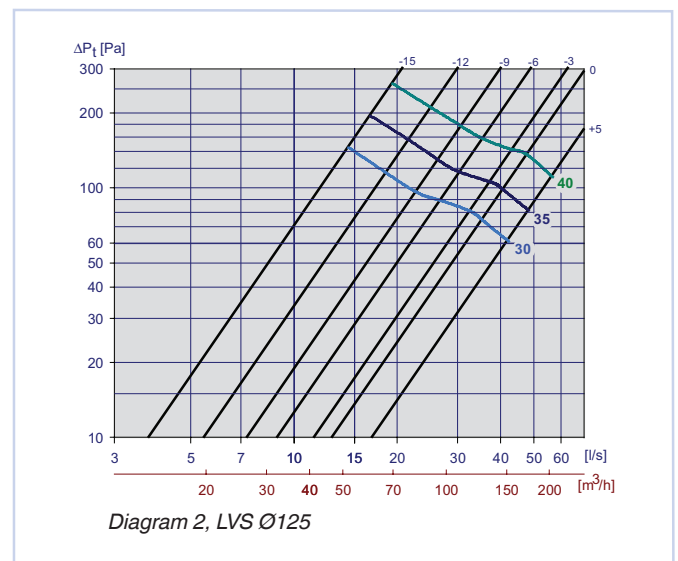
We aim to find:

- Emitted sound power level from the valve at 250 Hz, at chosen working point.
- A-weighted sound pressure level in the room with the valve fully open.
- A-weighted sound pressure level in the room with centre cone choked.

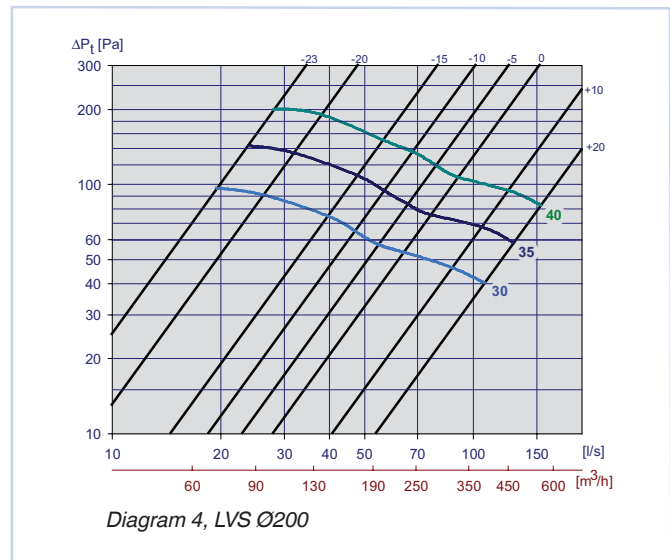
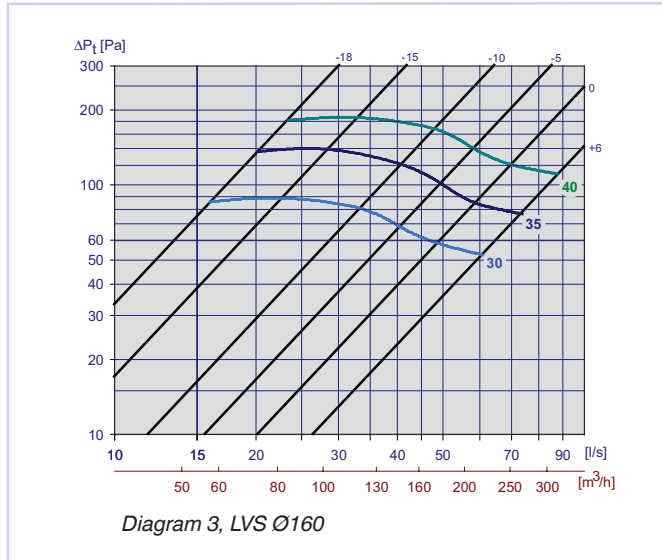
Solution:

LVS Ø100, required air flow rate 30 l/s. According to diagram 1, $L_{WA} = 32\text{dB(A)}$ with damper open and 60 Pa total pressure loss.

- Table 4 shows that the correction factor for open damper at 250 Hz is -6dB. L_W at 250 Hz is thus: $L_{WA} + KO = 32 + (-6) = 26\text{dB}$
- A room attenuation equivalent to 6dB provides a sound pressure level in the room of: $32 - 6 = 26\text{dB(A)}$
- With 20 Pa choking we reach 80 Pa, and the diagram shows an increase in L_{WA} of 3dB. The sound pressure level is thus: $26 + 3 = 29\text{dB(A)}$



LVS



Correction factor [KO], LVS

LSV	Correction factor KO [dB]							
	63	125	250	500	1k	2k	4k	8k
100	0	-4	-6	-5	-6	-4	-16	-28
125	-1	-3	-3	-7	-7	-3	-18	-29
160	5	-2	-3	-4	-3	-8	-17	-28
200	3	-1	-4	-6	-2	-10	-19	-26

Table 4

INSTALLATION

Separate mounting frame (KKT) is attached to the duct by using blind rivets or self-drilling screws. The valve is then screwed into the mounting frame. Installation principle is shown in fig. 4.

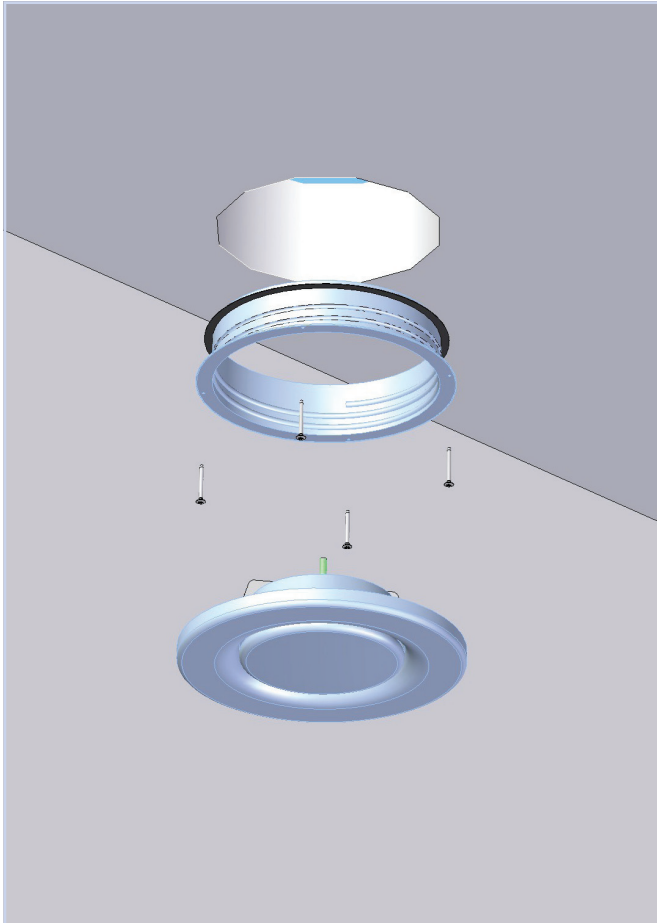


Fig. 4: Installation

COMMISSIONING

The air flow rate is adjusted by turning the centre cone. It is fixed in place by tightening the lock nut at the rear of the centre bolt. Valve commissioning is carried out by measuring the pressure difference at the back of the centre cone, and calculating the air flow rate according to correction factor for valve dimension and centre cone position. Correction factors are provided on a label attached to the valve and can also be found in our commissioning guide available at our website: www.trox.no.

MAINTENANCE

The valve can be cleaned by using a damp cloth. When cleaning the duct network, the valve must be removed in order to gain access to the ducting.

ENVIRONMENT

Enquiries regarding product declaration can be directed to our sales team, or information can be found at our website: www.trox.no.

The company reserves the right to make amendments without prior notice.