

# LØV-R

## Circular diffuser



- Design-protected LØV-perforation
- Excellent with low temperatures
- Flush mounting
- Removable front panel
- Data provided with Luna plenum box
- Box lined with Ecoson attenuation material

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# LØV-R



## APPLICATION

LØV-R is a circular supply diffuser for ceiling mounting, and can be installed in fixed ceilings or supplied with ceiling plate fitting for various modular ceiling systems. LØV offers excellent induction and is suitable for both constant and variable volume flow.

## DESIGN

LØV-R features a removable front panel with LØV perforation. Rotational pattern is standard. Flow pattern for one-way and vertical throw, LØV-E and LØV-S, is available on request. HLØ ceiling plate for fitting to modular ceiling systems is supplied as accessory. A version without removable front for modular ceiling systems, LØV-RH, is also available.

## MATERIALS AND SURFACE COATING

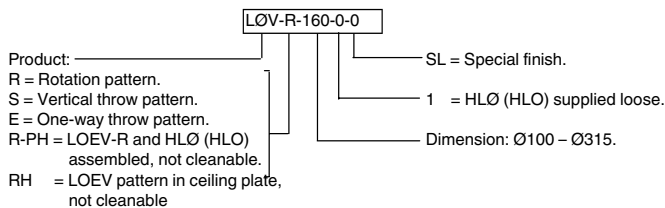
Both the diffuser front and the ceiling plate are made in steel. The diffuser body is in aluminium and is fitted with an EPDM rubber gasket at the connection collar. All internal and external diffuser elements are finished in RAL 9010. Other colours are available on request.

## QUICK SELECTION

LØV-R Dim.	[m <sup>3</sup> /h]		
	25 dB(A)	30 dB(A)	35 dB(A)
100	68	83	97
125	104	122	140
160	180	205	238
200	230	270	313
250	349	400	461
315	472	558	662

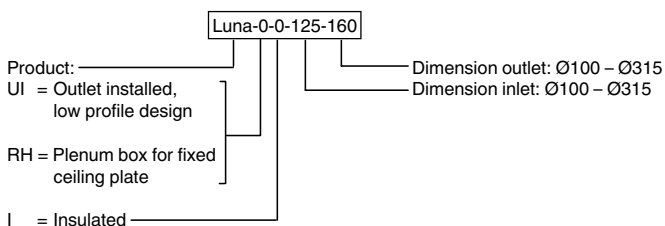
Table 1. The table shows air flow rates at given sound power levels.

## ORDER CODE, LØV (LOEV-R)



Example:  
LOEV-R-160-0-0  
Explanation:  
LOEV-R, rotation pattern dimension Ø160

## ORDER CODE, Luna



Example:  
Luna-0-0-125-160  
Explanation:  
Luna plenum box with inlet Ø125 and outlet Ø160

## DIMENSIONS AND WEIGHT, LØV-R

Dim.	A	B	C	G	E	F	I	Weight diffuser [kg]	Weight diffuser w/ *HPL[kg]
100	283	99	200	243	65	115	75	0,7	3,1
125	322	124	230	282	65	115	75	0,9	3,2
160	420	159	320	380	70	120	80	1,5	3,4
200	460	199	350	420	70	120	80	1,9	3,6
250	570	249	470	530	70	120	80	2,7	3,9
315	570	314	470	530	70	120	80	2,7	3,8

Table 2 (\*HPL = ceiling plate HLØ or RH)

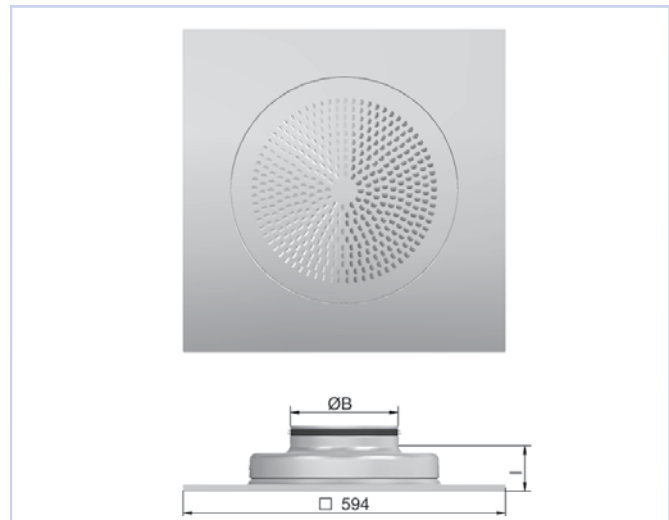


Fig. 1

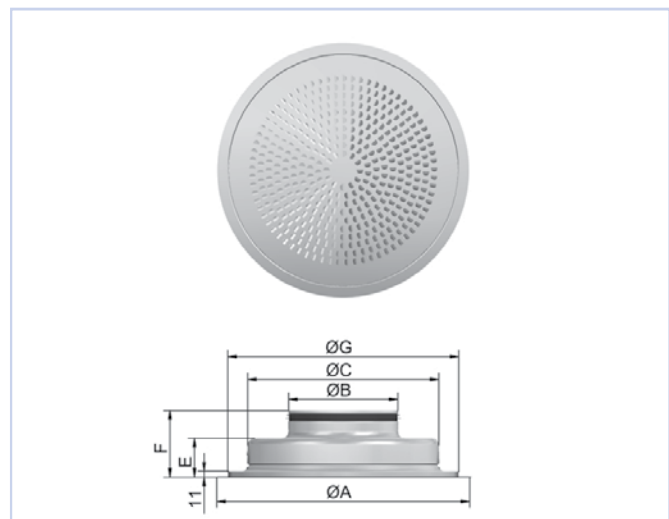


Fig. 2

# LØV-R with Luna plenum box



## APPLICATION

The Luna plenum box is recommended for improved sound attenuation, and provides an adjustment and measurement option. Luna is a rectangular box with a removable damper providing access to the connecting duct. The damper can be locked in the position required.

## DESIGN

The Luna plenum box features a damper and measurement device for adjustment. It is insulated with Ecoson and is available with one or two dimensional changes between inlet and outlet. Furthermore, the box can be supplied with external condensation insulation. **A low-profile design [UI]** is also available, and **for this design a reduction in capacity of approx. 20% will apply.**

The distance between diffuser and box can be increased by up to 35 cm without extending the wire and measuring tube.

## MATERIALS AND SURFACE COATING

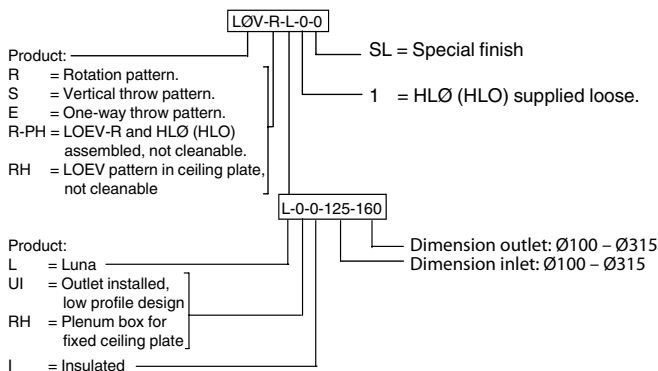
Luna is supplied in a galvanised finish, and with four internal walls lined with fibre-free insulation. The connection collar is fitted with an EPDM rubber gasket.

## QUICK SELECTION

LØV-R Dim.	Luna Dim.	[m³/h]		
		25 dB(A)	30 dB(A)	35 dB(A)
100	100-100	58	72	88
125	100-125	76	91	120
	125-125	86	101	119
160	125-160	97	126	158
	160-160	144	166	191
200	160-200	162	191	227
	200-200	191	216	245
250	200-250	248	288	338
	250-250	274	317	367
315	250-315	313	374	439
	315-315	367	425	497

Table 3. The table shows air flow rates at given sound power levels and 50 Pa total pressure loss.

## ORDER CODE, LØV-R (LOEV-R) with Luna



Example:  
LOEV-R-L-0-0-125-160-0-0  
Explanation:  
LOEV-R diffuser and Luna plenum box inlet Ø125 and outlet/diffuser dim. Ø160.

## DIMENSIONS AND WEIGHT, Luna

Dim.	D	DA	B	H	H1	H2	L	L1	L2	Weight Luna [kg]
100-100	99	102	220	122	247	125	325	295	133	2,3
100-125	99	127	220	122	247	125	325	295	133	2,3
100-160	99	162	220	122	252	130	360	310	150	2,4
125-125	124	127	250	147	272	125	360	335	150	2,4
125-160	124	162	250	147	277	130	360	335	150	2,9
125-200	124	202	250	147	277	130	400	355	170	3,1
160-160	159	162	340	182	312	130	400	390	170	4,1
160-200	159	202	340	182	312	130	400	390	170	4,2
160-250	159	252	340	182	312	130	452	415	198	4,6
200-200	199	202	380	222	352	130	452	460	198	5,7
200-250	199	252	380	222	352	130	452	460	198	5,7
200-315	199	317	380	222	352	130	515	485	228	6,1
250-250	249	252	390	272	402	130	515	535	228	7,4
250-315	249	317	390	272	402	130	515	535	228	7,4
315-315	314	317	500	337	467	130	600	655	260	11

Table 4

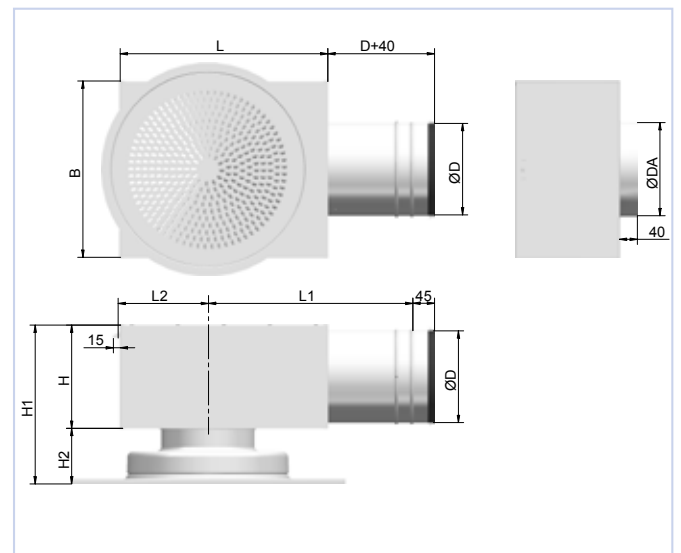


Fig. 3

# LØV-R

## ACOUSTIC DATA

The diagrams provide a summary of the A-weighted sound power level from diffuser,  $L_{WA}$ . Correction factors in table 6, page 8, are used to calculate emitted sound power level at the respective frequency,  $L_W = L_{WA} + KO$ . The sound pressure level in a room with absorption equivalent to 10m<sup>2</sup> Sabine will be 4 dB below the sound power level emitted.

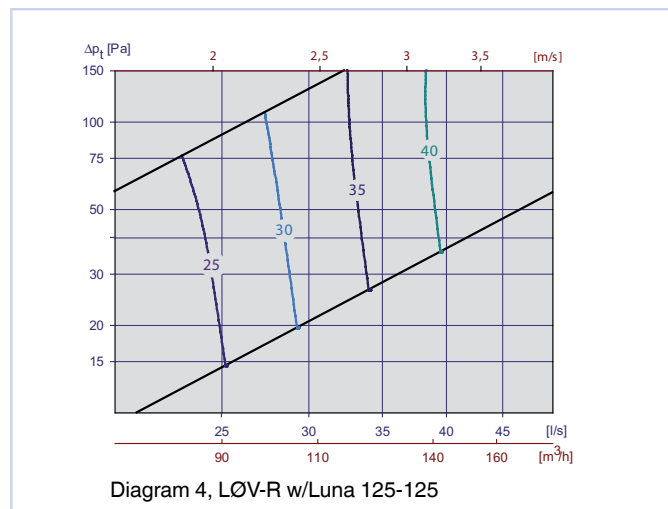
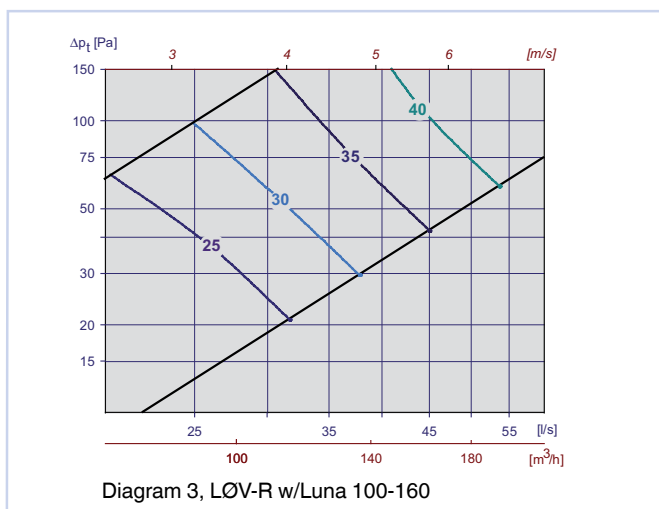
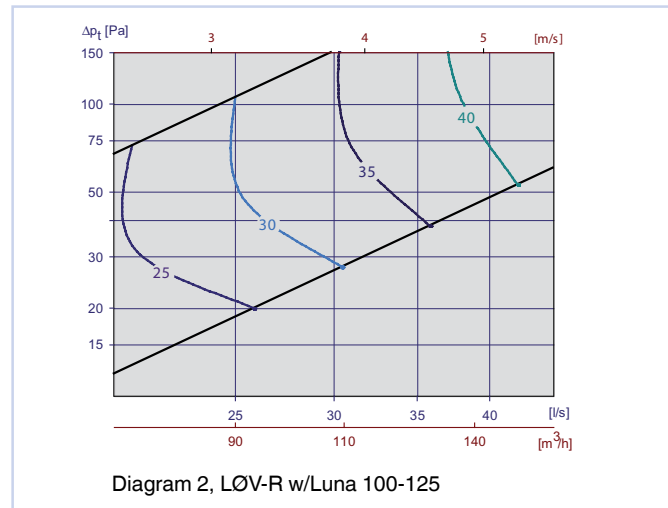
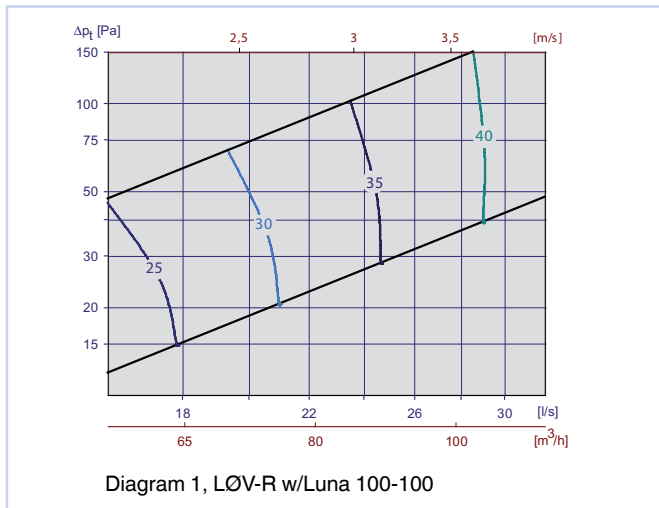
### Example:

LØV-R with Luna Ø100-160 - desired volume air flow rate 35 l/s. From diagram 3, we find that  $L_{WA} = 28$  dB(A) with open damper and 24 Pa total pressure loss. We would like to find the following data:

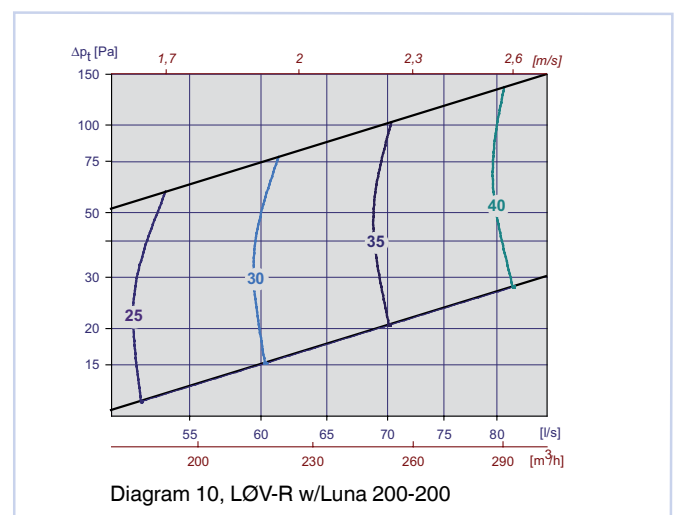
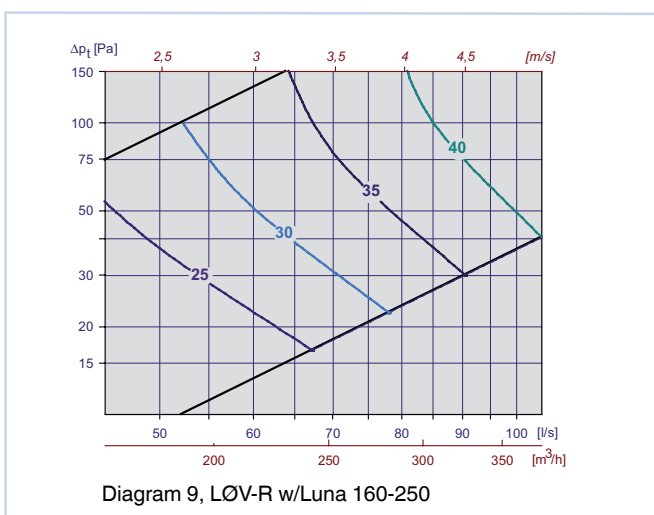
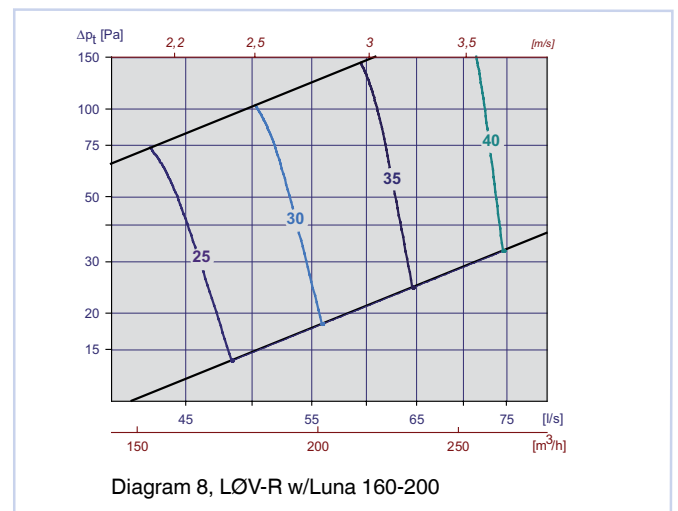
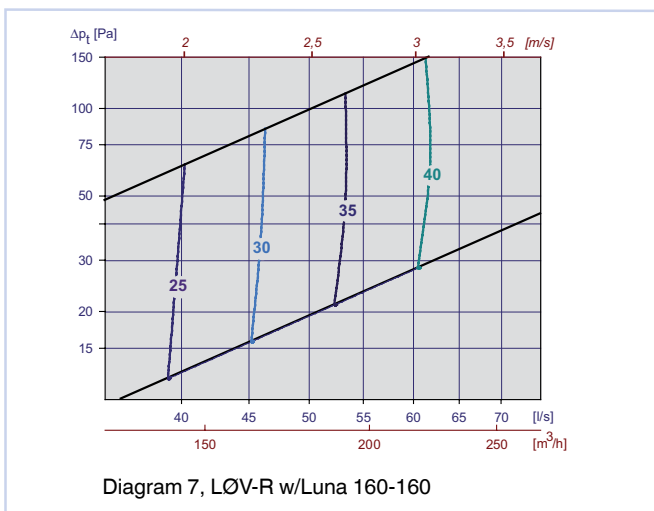
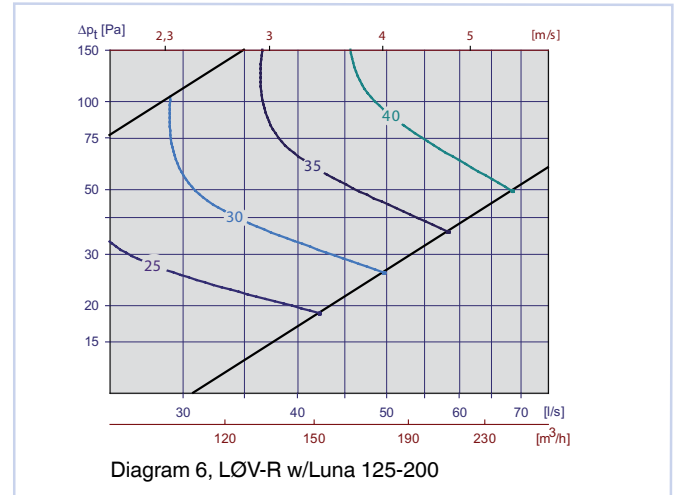
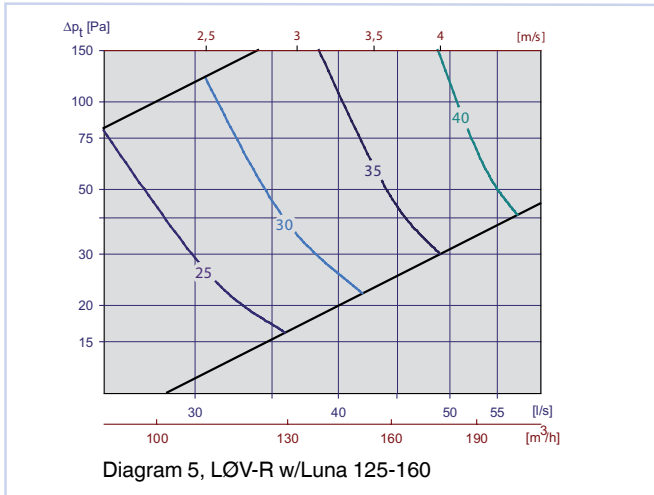
- Emitted sound power level at 250 Hz
- A-weighted sound pressure level in an office.
- A-weighted sound pressure level in an office at 50 Pa total pressure loss, (i.e. 26 Pa choking with the unit's damper).

- The correction factor is 0 dB. Emitted sound power level at 250 Hz is then:  $L_W = L_{WA} + KO = 28 + (0) = 28$  dB
- If we assume a room absorption equivalent to 10m<sup>2</sup> Sabine, A-weighted sound pressure level will be:  $28 - 4 = 24$  dB(A).
- Following the 35 l/s line in the diagram up to 50 Pa gives a reading of 32 dB(A) = 4 dB increase, and A-weighted sound pressure level will thus be 28 dB(A).

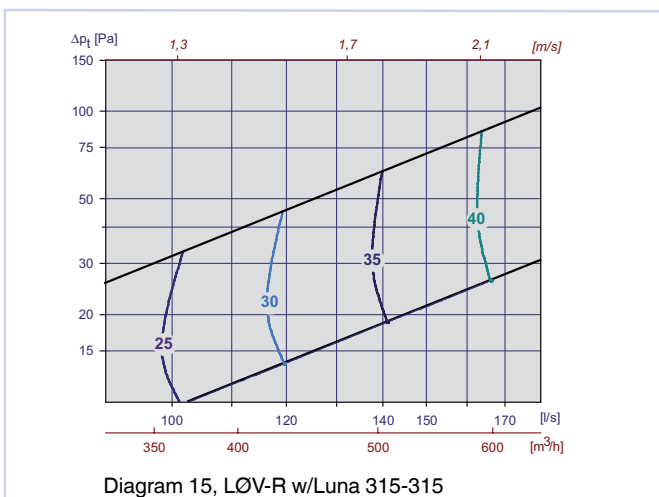
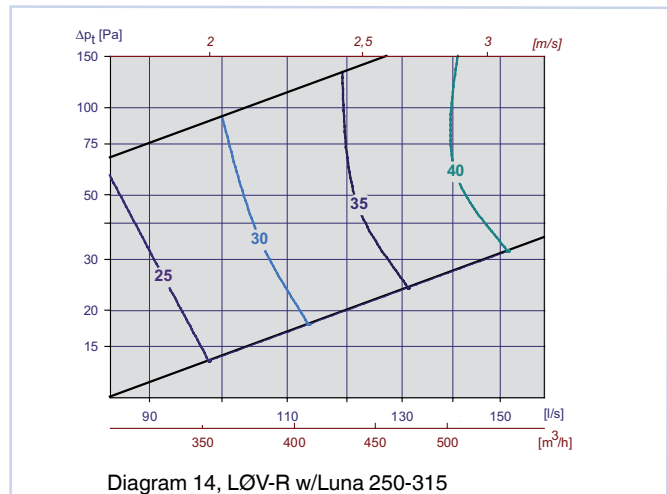
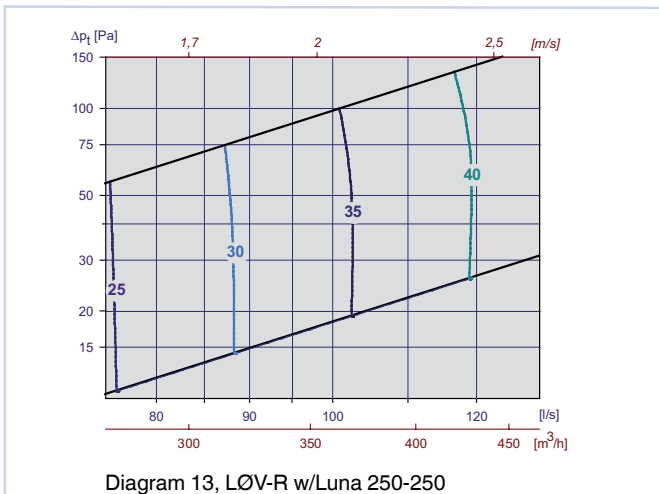
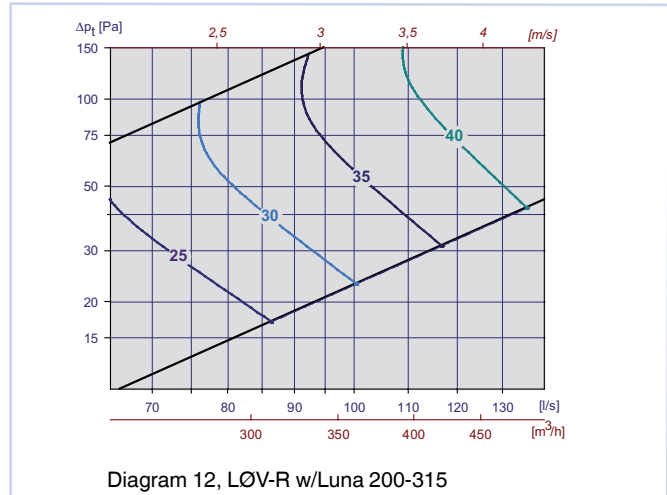
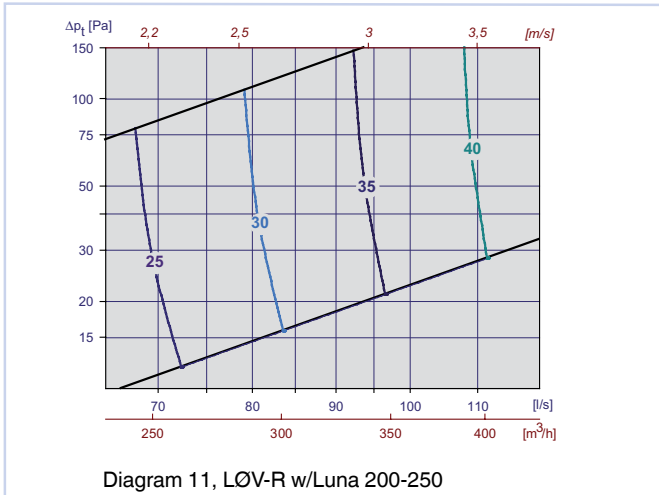
## CALCULATION DIAGRAMS



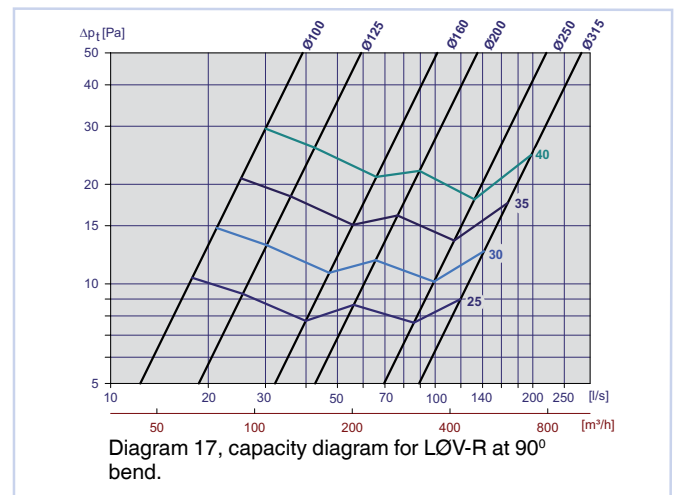
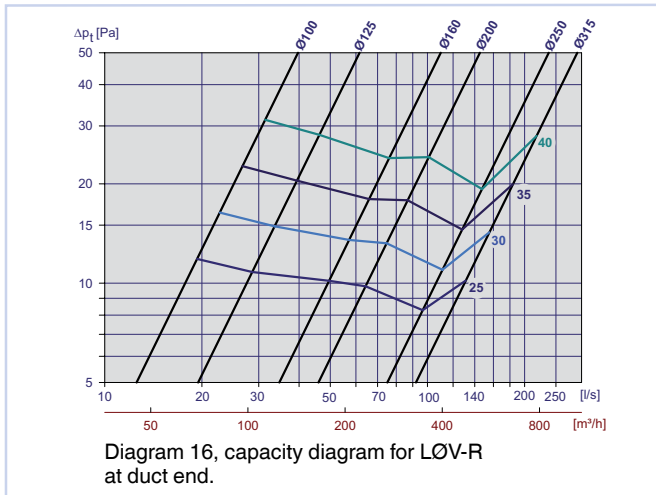
# LØV-R



# LØV-R



# LØV-R



Static sound attenuation incl. end reflection, LØV-R with Luna

LØV-R Dim.	Luna Dim.	Attenuation [dB]							
		63	125	250	500	1k	2k	4k	8k
100	100-100	25	19	18	18	21	24	17	12
125	100-125	26	13	14	14	20	22	15	18
160	100-160	27	10	11	12	19	20	13	16
125	125-125	23	15	12	17	22	20	14	19
160	125-160	24	11	9	13	19	16	12	16
200	125-200	24	8	7	12	18	16	11	15
160	160-160	20	12	16	13	18	13	15	17
200	160-200	17	8	10	14	20	12	14	16
250	160-250	19	10	11	13	17	10	12	14
200	200-200	17	13	15	16	20	13	16	18
250	200-250	17	11	12	15	17	11	14	16
315	200-315	19	11	11	13	17	10	13	15
250	250-250	14	10	13	12	14	11	10	13
315	250-315	15	10	11	14	15	11	12	14
	315-315	10	8	12	16	12	13	13	14

Table 5

# LØV-R

Correction factor [KO], LØV-R with Luna

LØV-R	Luna	KO [dB]															
		Damper closed								Damper open							
Dim.	Dim.	63	125	250	500	1k	2k	4k	8k	63	125	250	500	1k	2k	4k	8k
100	100-100	-13	-5	-7	-3	-3	-9	-21	-27	-7	-5	-7	-3	-3	-9	-21	-27
125	100-125	-6	3	0	-3	-5	-11	-13	-16	-3	0	-2	-2	-3	-11	-23	-24
160	100-160	-7	3	3	-3	-8	-10	-10	-13	-4	0	0	-3	-4	-10	-20	-24
125	125-125	-8	-1	-2	-3	-3	-10	-18	-20	-3	-1	-3	-3	-3	-10	-22	-23
160	125-160	-10	-1	0	-4	-7	-9	-8	-10	-9	-4	-3	-4	-3	-9	-21	-26
200	125-200	-9	1	1	-3	-9	-11	-7	-9	0	-1	0	-3	-3	-11	-22	-21
160	160-160	-11	-1	-3	-3	-3	-11	-15	-15	2	-4	-4	-3	-3	-11	-22	-23
200	160-200	-7	2	0	-4	-6	-9	-10	-11	-1	-1	-1	-3	-3	-12	-23	-21
250	160-250	-10	0	-1	-7	-10	-7	-7	-9	2	-1	-1	-3	-3	-12	-22	-20
200	200-200	-11	-3	-5	-4	-2	-10	-20	-19	-3	-4	-7	-4	-2	-9	-22	-26
250	200-250	-9	0	-2	-4	-5	-9	-12	-13	-6	-4	-5	-3	-2	-10	-23	-24
315	200-315	-8	0	-2	-7	-9	-6	-8	-9	-4	-1	-1	-4	-3	-10	-21	-21
250	250-250	-11	-3	-5	-4	-3	-10	-16	-17	-2	-3	-5	-3	-2	-11	-22	-23
315	250-315	-10	0	-2	-5	-5	-8	-10	-12	-4	-2	-3	-3	-3	-10	-22	-23
	315-315	-12	-4	-7	-4	-3	-8	-19	-25	-4	-4	-7	-4	-3	-8	-20	-27

Table 6

Static sound attenuation incl. end reflection, LØV-R

LØV-R	Attenuation [dB]							
	63	125	250	500	1k	2k	4k	8k
100	24	17	12	3	3	4	4	5
125	24	16	10	2	2	2	3	4
160	20	13	9	1	2	1	2	4
200	19	12	5	1	2	1	2	3
250	16	11	4	1	1	1	2	3
315	16	7	3	1	1	1	1	2

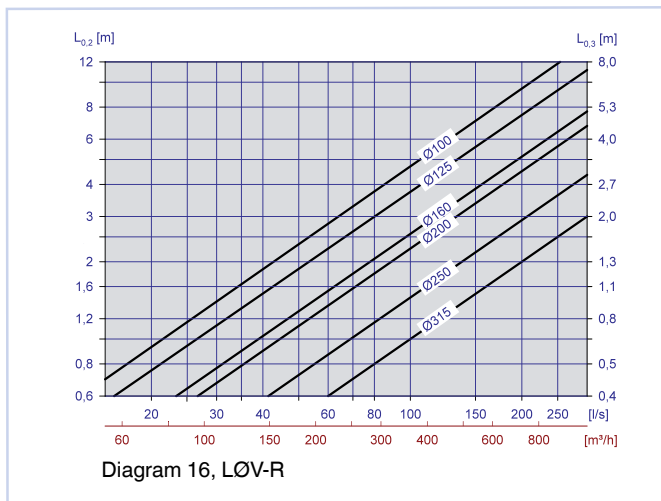
Table 7

Correction factor [KO], LØV-R

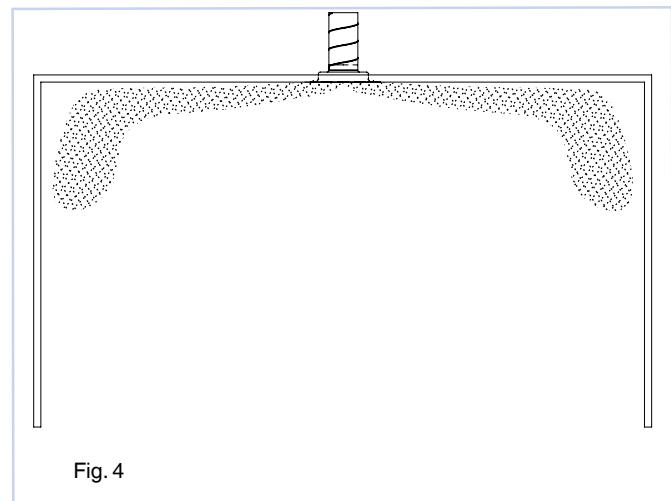
LØV-R	KO [dB]							
	63	125	250	500	1k	2k	4k	8k
100	-18	-11	-6	-1	-4	-9	-22	-24
125	-23	-14	-8	-3	-4	-7	-18	-26
160	-20	-12	-8	-4	-3	-8	-23	-27
200	-19	-10	-7	-4	-3	-8	-21	-26
250	-18	-10	-6	-5	-2	-11	-23	-24
315	-21	-14	-10	-6	-2	-7	-18	-27

Table 8

## THROW LENGTHS



## FLOW PATTERN



# LØV-R

## INSTALLATION

When mounted in fixed ceiling or inserted in ceiling plate, LØV-R is attached by means of two mounting brackets (fig. 5). For installation in modular ceiling systems, use of HLØ ceiling plate is recommended. If a Luna plenum box is used, this is attached to the rear of the support bracket by means of threaded rod or strap (fig. 6).

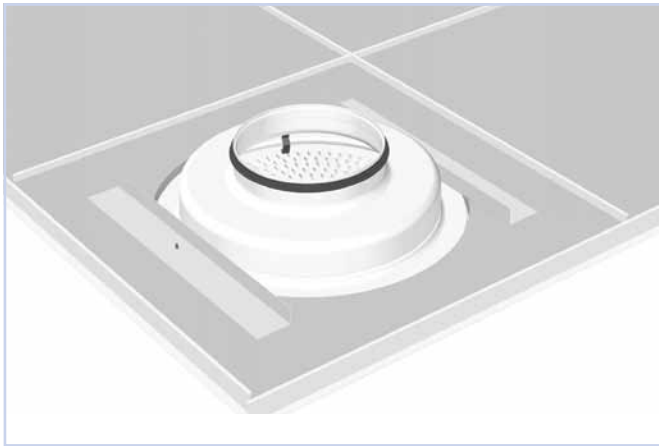


Fig. 5. Installation

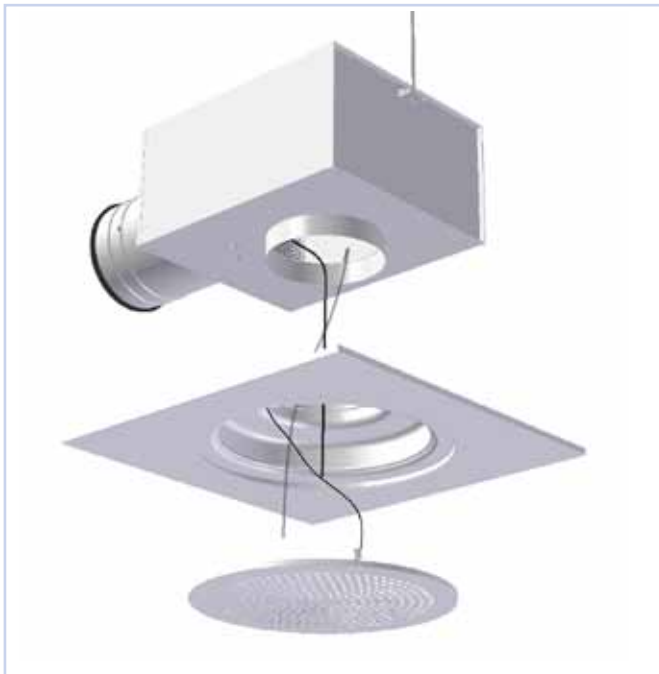
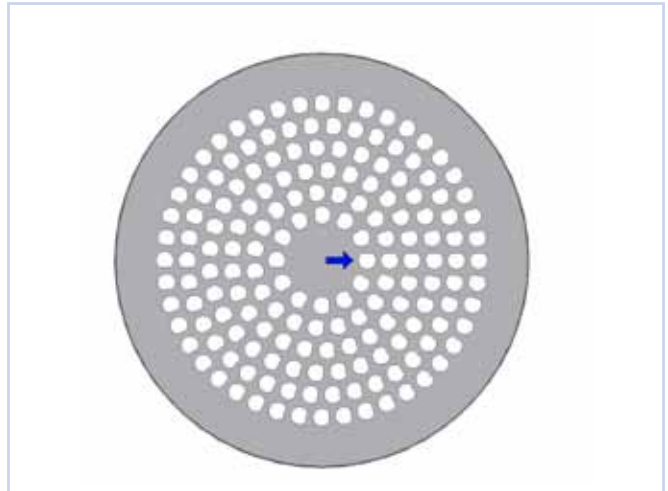


Fig. 6. Installation

## COMMISSIONING

During regulation, the valve-front must be attached. Pull the measuring tube out through the perforation at the front. Diagram 7 shows where the regulating wire is pulled out through the opening (“Leaf-flap”) in the centre at the front. If LOEV-RH is used, the measuring tube and regulating wire come out through the underside of the chamber. Close the damper with wing nuts on the cable. The K-factor for calculating air flow rate can be found on the label in the valve, or in the adjustment guide on our website: [www.trox.no](http://www.trox.no)



Figur 7

## MAINTENANCE

The diffuser is to be cleaned with a damp cloth. When cleaning the duct network, the diffuser front is to be removed in order to gain access to the duct. If Luna is used, diffuser plate and damper are to be removed in order to gain free access to the duct.

## ENVIRONMENT

Enquiries regarding product declaration can be directed to our sales team, or information can be found at our website: [www.trox.no](http://www.trox.no)

LØV-R is developed and manufactured by:

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