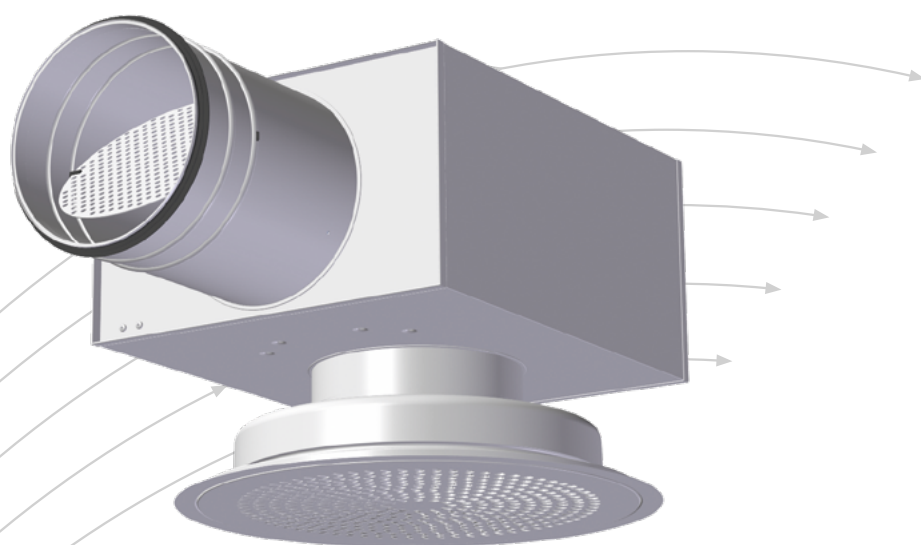


LØV-R

Circular diffuser



- Design-protected LØV-perforation
- Excellent with low temperatures
- Flush mounting
- Removable front panel
- Data provided with Luna plenum box
- Box lined with sound absorber in polyester

TROX[®] TECHNIK

 **Auranor**

TROX Auranor Norge AS

PO Box 100
NO-2712 Brandbu

Telephone +47 61 31 35 00
Fax +47 61 31 35 10
E-mail: firmapost@auranor.no
www.trox.no

LØV-R



APPLICATION

LØV-R is a circular supply diffuser for ceiling mounting. 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.

MATERIALS AND SURFACE COATING

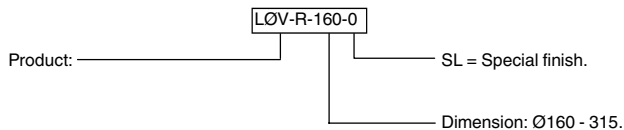
The diffuser front plate are made in steel. The diffuser body is in aluminium and is fitted with an EPDM rubber gasket at the connection collar. All internal and external diffuser elements are finished in RAL 9003 - gloss 30. Other colours are available on request.

QUICK SELECTION

LØV-R Dim.	[m ³ /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

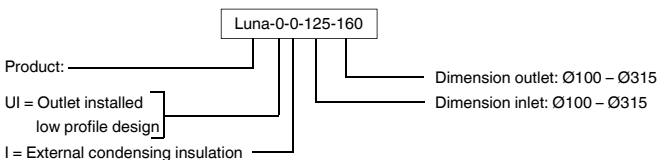
Table 1. The table shows air flow rates at given sound power levels.

ORDER CODE, LØV-R (LOEV-R)



Example:
LOEV-R-160-0
Explanation:
LOEV-R, standard 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 diffuserl [kg]
100	283	99	200	243	65	115	75	0,7
125	322	124	230	282	65	115	75	0,9
160	420	159	320	380	70	120	80	1,5
200	460	199	350	420	70	120	80	1,9
250	570	249	470	530	70	120	80	2,7
315	570	314	470	530	70	120	80	2,7

Table 2

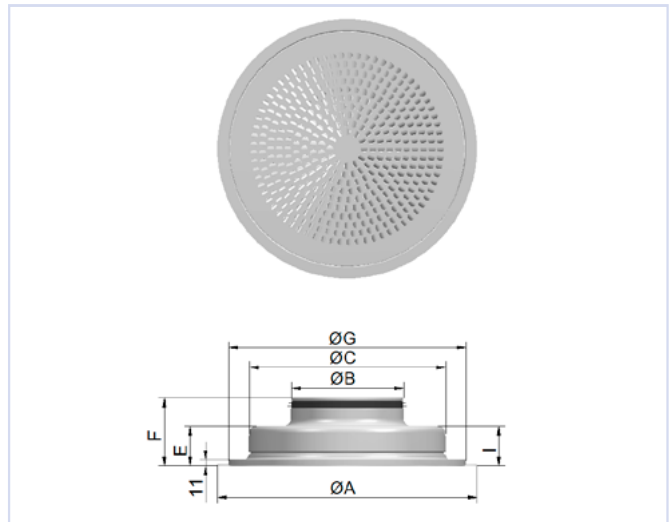


Fig. 1

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 a sound absorber in polyester 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 a sound absorber in polyester. The connection collar is fitted with an EPDM rubber gasket.

QUICK SELECTION

LØV-R Dim.	Luna Dim.	[m ³ /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.

DIMENSIONS AND WEIGHT, Luna

Dim.	D	DA	B	H	H1	H2	L	L1	L2	Weight (kg) m/Luna
100-100	99	102	220	122	260	138	325	292	127	2,3
100-125	99	127	220	122	260	138	325	292	127	2,3
100-160	99	162	220	122	265	143	360	309	145	2,4
125-125	124	127	250	147	285	138	360	334	145	2,4
125-160	124	162	250	147	290	143	360	334	145	2,9
125-200	124	202	250	147	290	143	400	354	165	3,1
160-160	159	162	340	182	325	143	403	390	167	4,1
160-200	159	202	340	182	325	143	403	390	167	4,2
160-250	159	252	340	182	325	143	453	415	192	4,6
200-200	199	202	380	222	365	143	453	457	190	5,7
200-250	199	252	380	222	365	143	453	457	190	5,7
200-315	199	317	380	222	365	143	515	487	222	6,1
250-250	249	252	390	272	415	143	515	537	222	7,4
250-315	249	317	390	272	415	143	515	537	222	7,4
315-315	314	317	500	337	480	143	600	654	255	11

Table 4

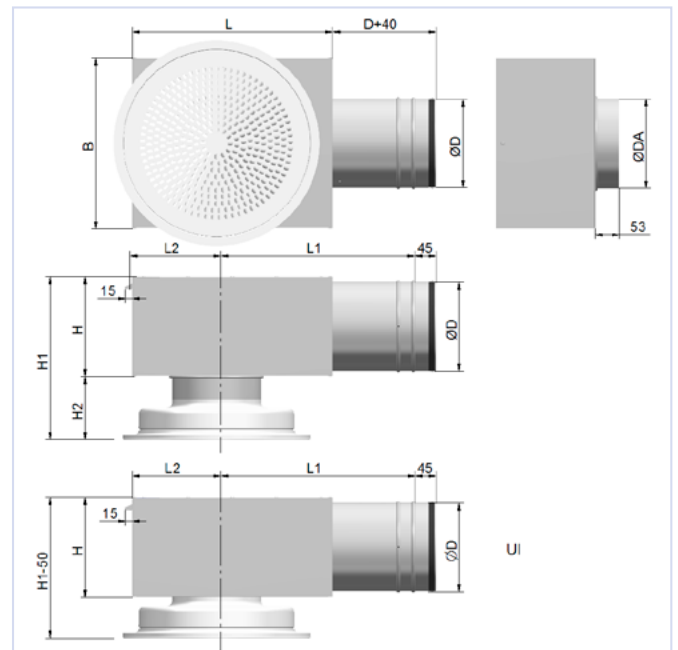


Fig. 2

LØV-R

ACOUSTIC DATA

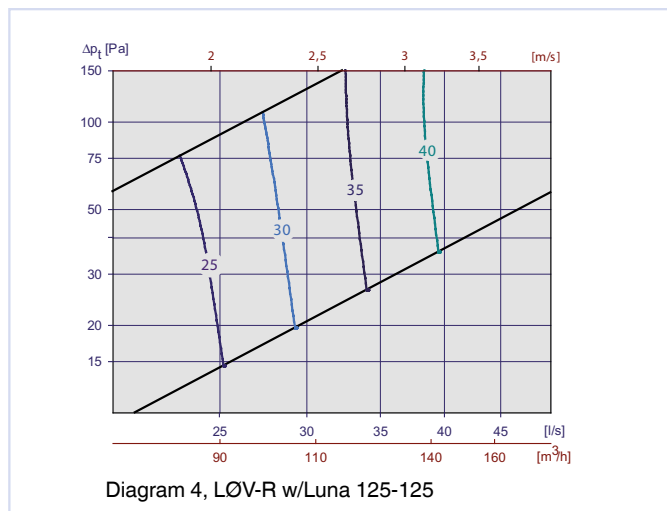
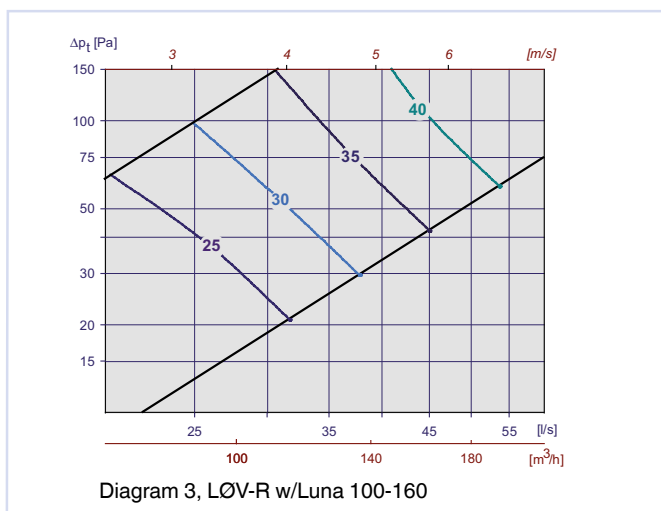
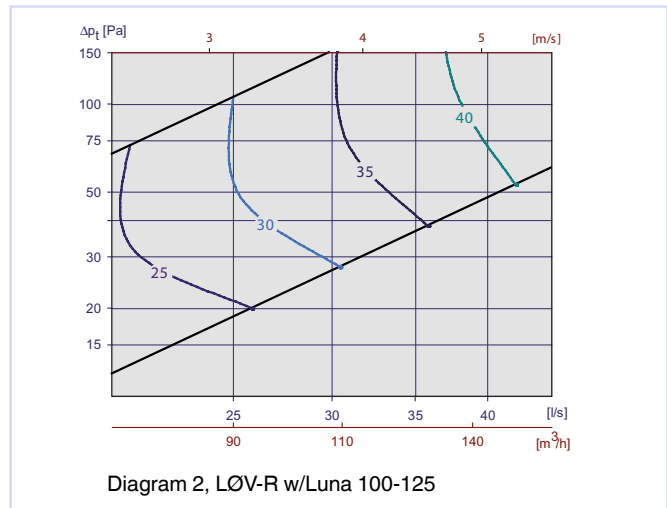
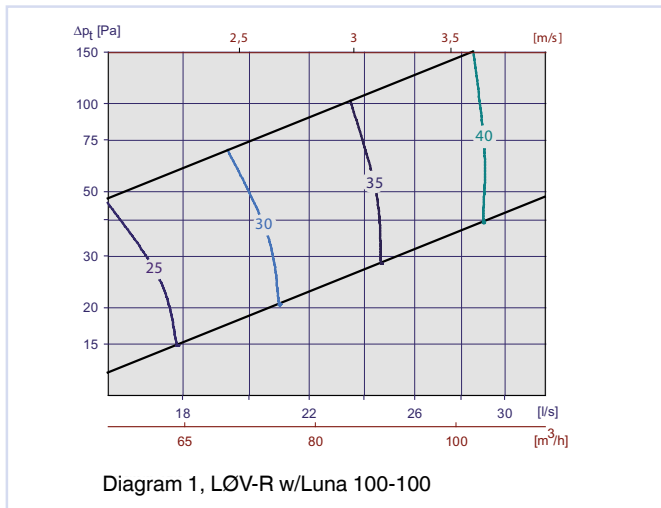
The diagrams provide a summary of the A-weighted sound power level from diffuser, L_{WA} . Correction factors in table 6, page 8, are used to calculate emitted sound power level at the respective frequency, $L_w = L_{WA} + KO$. The sound pressure level in a room with absorption equivalent to 10m² Sabine will be 4 dB below the sound power level emitted.

Example:

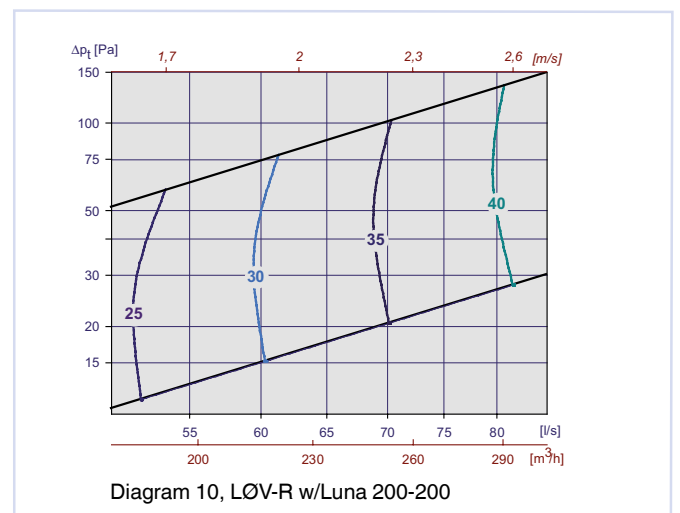
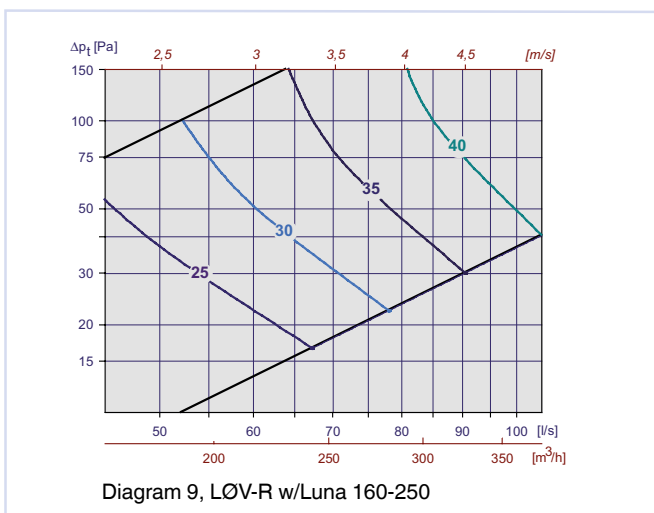
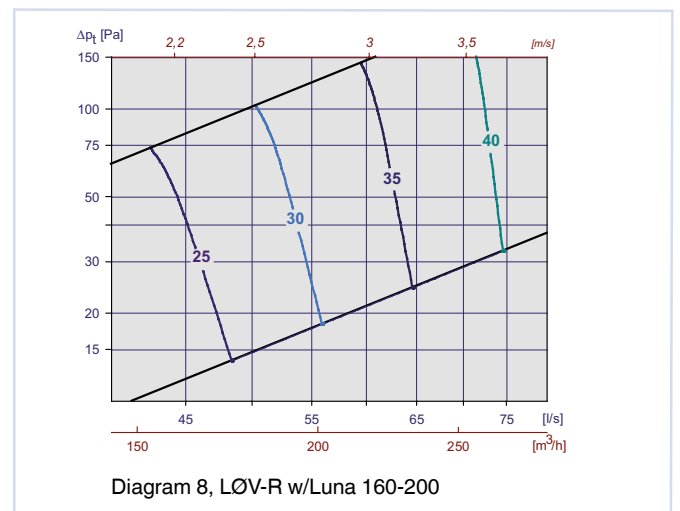
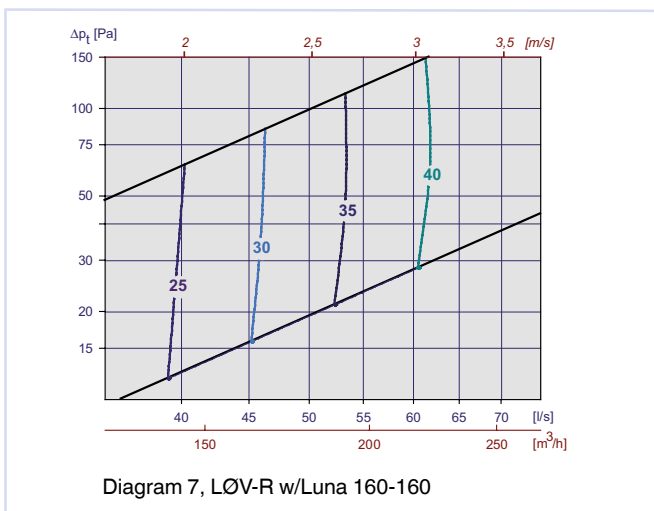
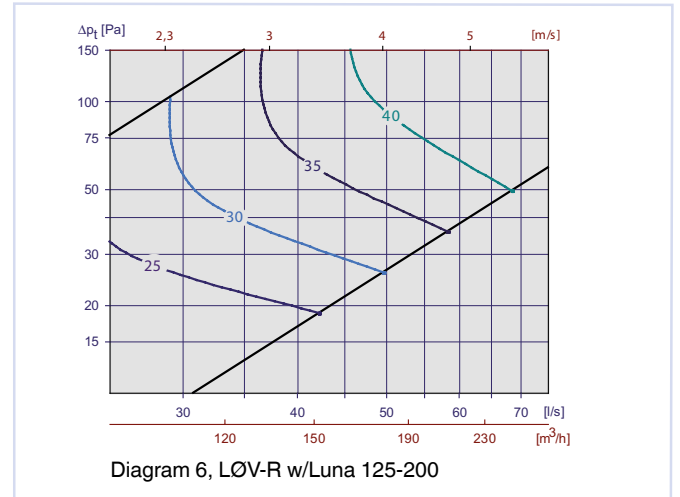
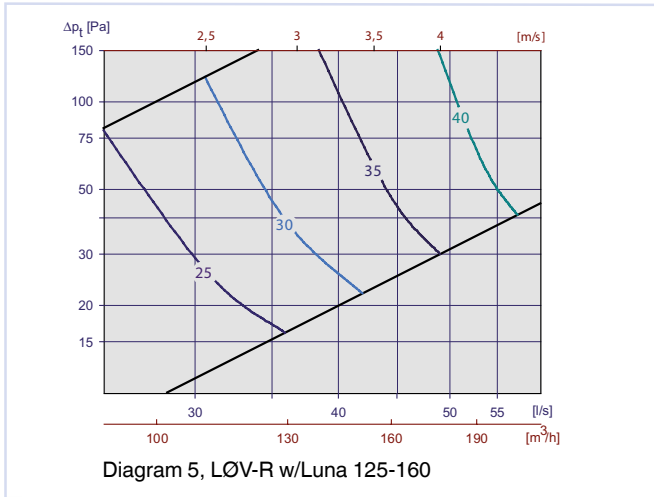
LØV-R with Luna Ø100-160 - desired volume air flow rate 35 l/s. From diagram 3, we find that $L_{WA} = 28$ dB(A) with open damper and 24 Pa total pressure loss. We would like to find the following data:

- 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 10m² Sabine, A-weighted sound pressure level will be: $28 - 4 = 24$ dB(A).
 - Following the 35 l/s line in the diagram up to 50Pa gives a reading of 32 dB(A). With 4dB attenuation equivalent sound pressure level will thus be: $32 - 4 = 28$ dB(A)

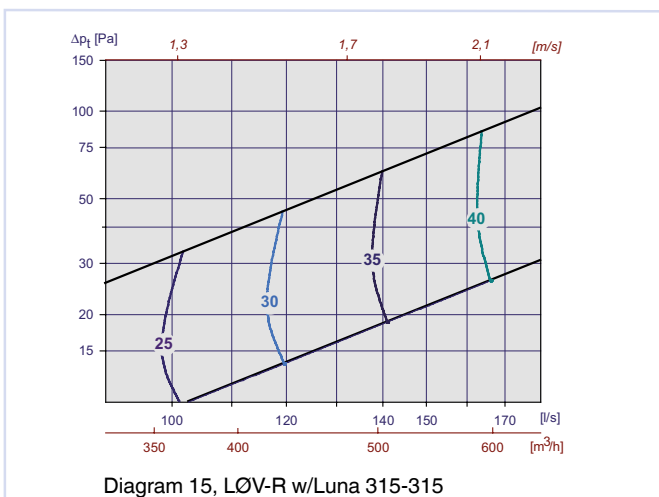
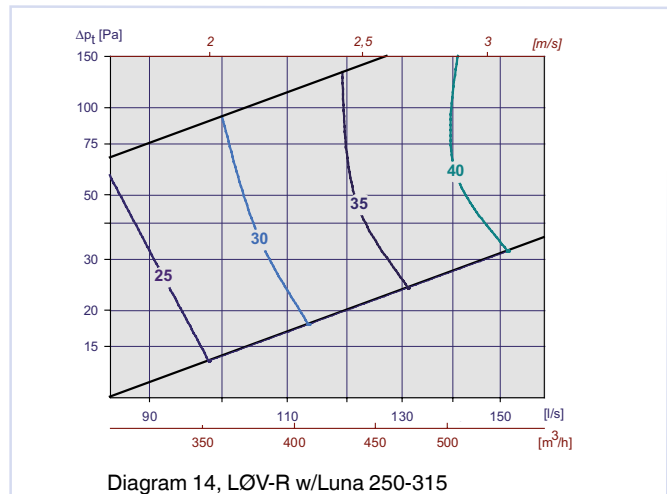
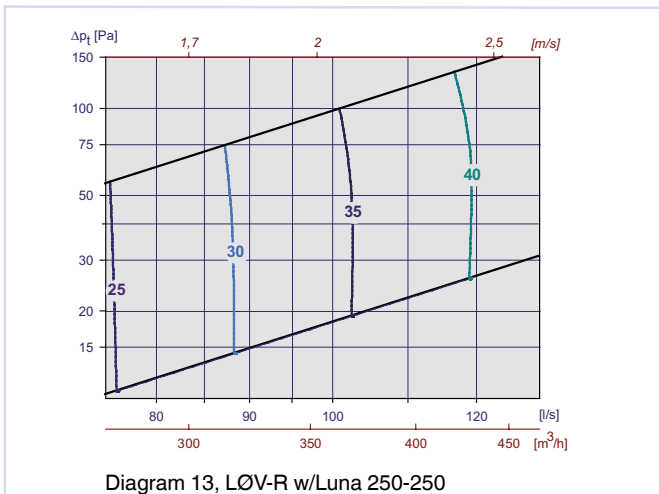
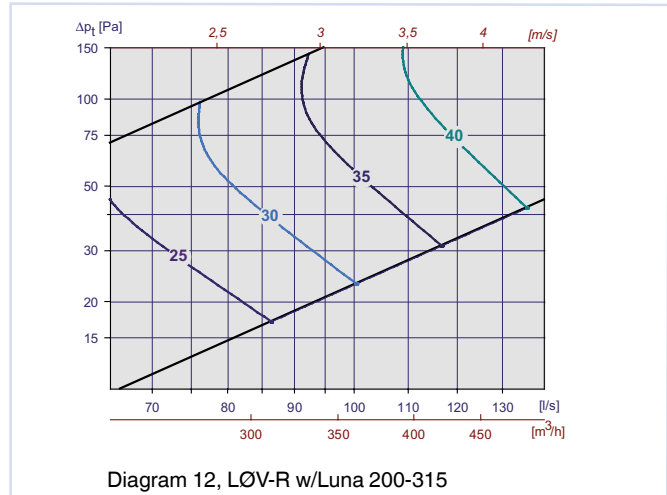
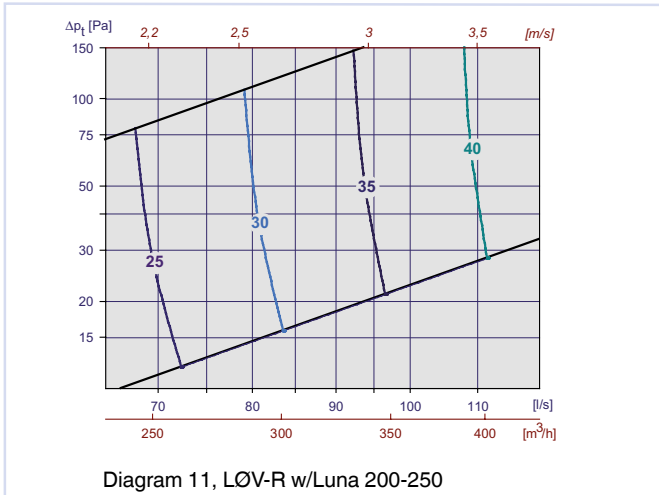
CALCULATION DIAGRAMS



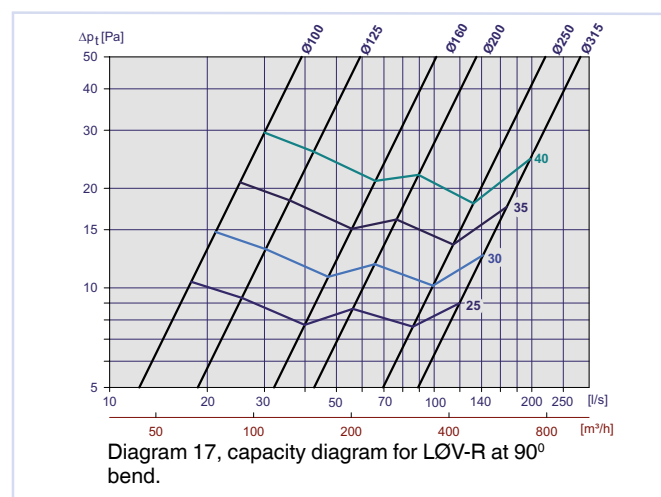
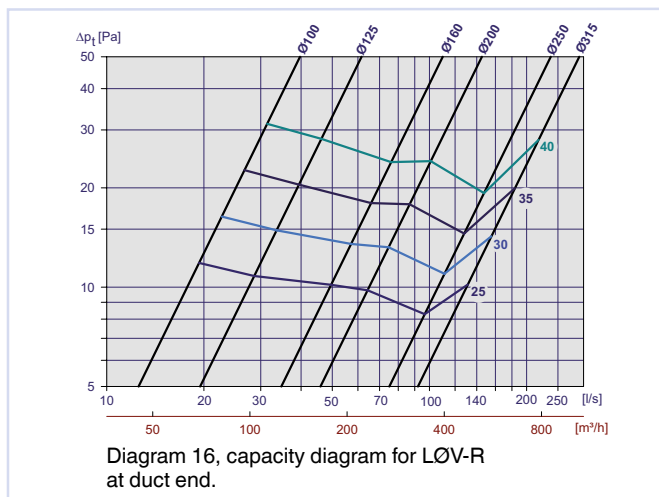
LØV-R



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

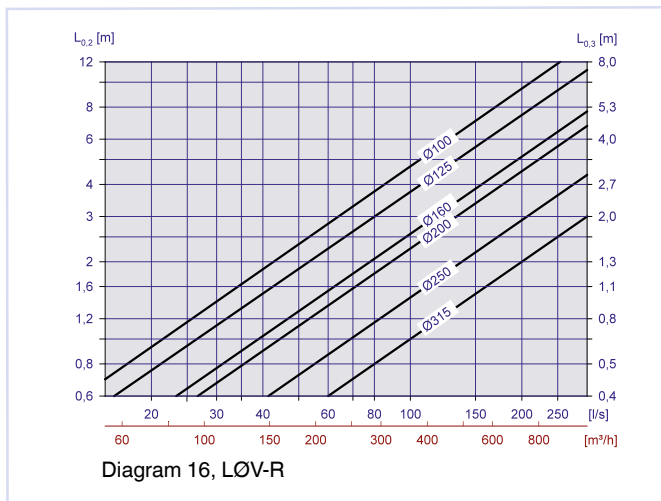
Table 7

Correction factor [KO], LØV-R

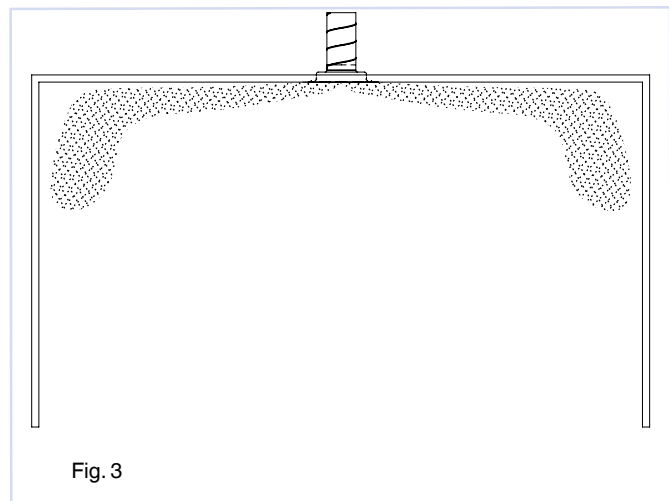
LØV-R	KO [dB]							
	63	125	250	500	1k	2k	4k	8k
100	-18	-11	-6	-1	-4	-9	-22	-24
125	-23	-14	-8	-3	-4	-7	-18	-26
160	-20	-12	-8	-4	-3	-8	-23	-27
200	-19	-10	-7	-4	-3	-8	-21	-26
250	-18	-10	-6	-5	-2	-11	-23	-24
315	-21	-14	-10	-6	-2	-7	-18	-27

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.4). 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.5).

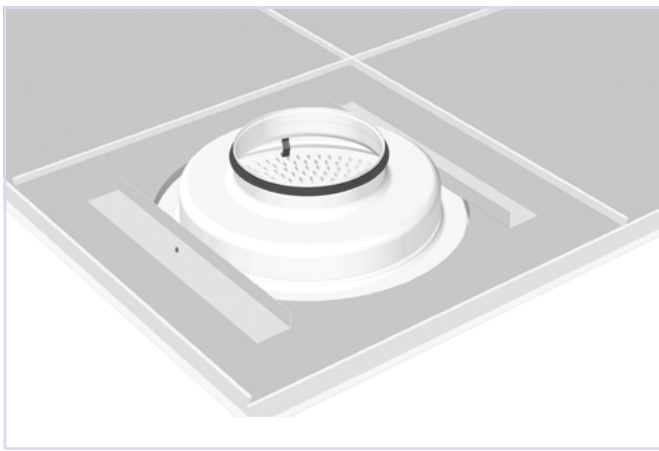


Fig. 4. Installation

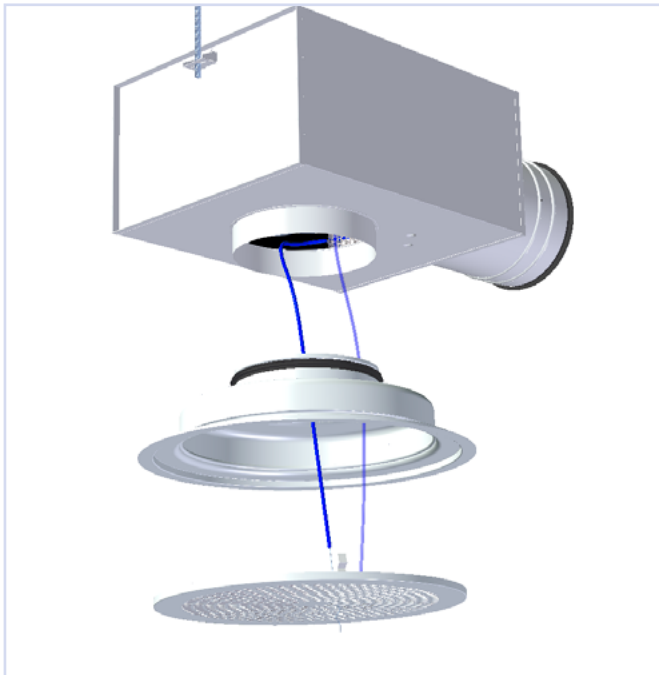


Fig. 5. Installation

LØV-R is developed and manufactured by:

TROX[®] TECHNIK
 **Auranor**

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. The damper is secured by using a clamping nut on the wire, tighten the clamping nut properly so the damper not change position. 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

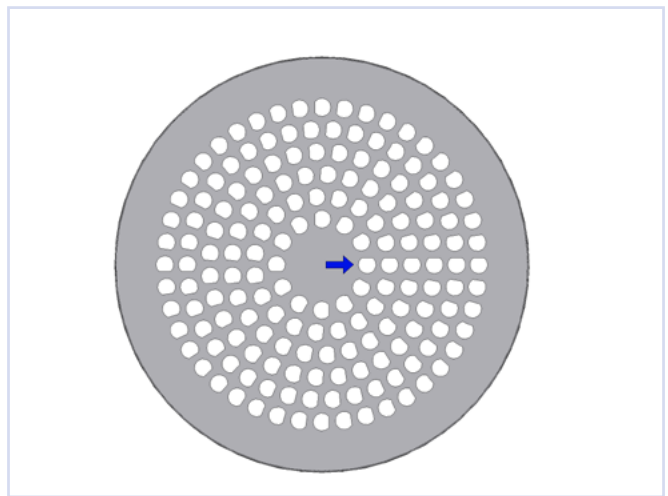


Fig. 6

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

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

Head Office:
TROX Auranor Norge AS, PO Box 100, NO-2712 Brandbu
Telephone: +47 61 31 35 00 Fax: +47 61 31 35 10 www.trox.no