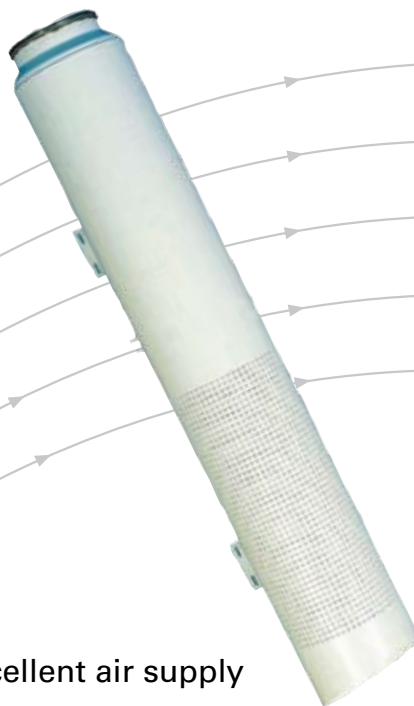


Siv-inn School

Complete air-supply solution for school premises



- Ensures excellent air supply
- Cleanable
- Reinforced front
- Ideal for renovation work

TROX[®] TECHNIK

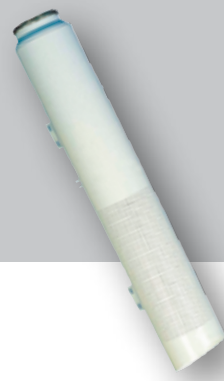
 **Auranor**

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Siv-inn School



APPLICATION

Siv-inn School is designed for classrooms and lecture halls, but can also be used in other areas. What makes this solution unique is its compliance with the requirements for efficient air replacement, low velocity in the occupied zone and easy-clean design. The unit is particularly well-suited for renovation work as it provides a certain clearance between diffuser and wall. Conflict with cornices, cables, etc. is thus avoided.

DESIGN

The unit features a sound attenuator, measuring station and damper. Its front, perforated with our design protected-clover pattern, provides excellent induction and even air distribution to the room.

MATERIALS AND SURFACE COATING

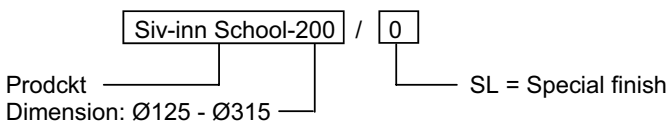
The unit comes in a galvanized steel-plate design, with a RAL 9010 finish as standard. Other materials/colours are available on request.

QUICK SELECTION

Siv-inn School	[m ³ /h]		
	25 dB(A)	30 dB(A)	35 dB(A)
125	140	200	250
160	230	270	340
200	340	530	520
250	610	750	900
315	720	1080	1440

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

ORDER CODE, Siv-inn School



Example:
 Siv-inn School-200 / 0
 Explanation:
 Siv-inn School, connection collar Ø200

DIMENSIONS AND WEIGHT, Siv-inn School

Dim.	d	D	H _{tot}	Weight [kg]
125	124	165	2075	7,5
160	159	205	2080	9,0
200	199	255	2090	17,0
250	249	320	2110	19,5
315	314	405	2340	22,5

Table 2

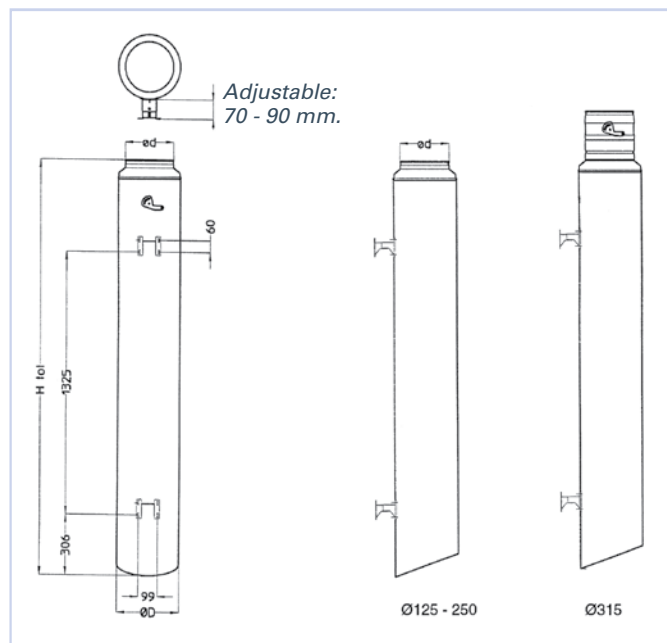


Fig.1

Siv-inn School

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 4 dB below the sound power level emitted.

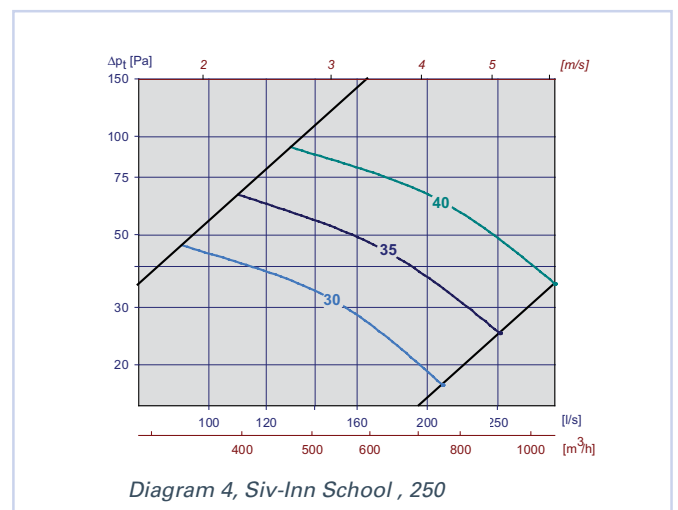
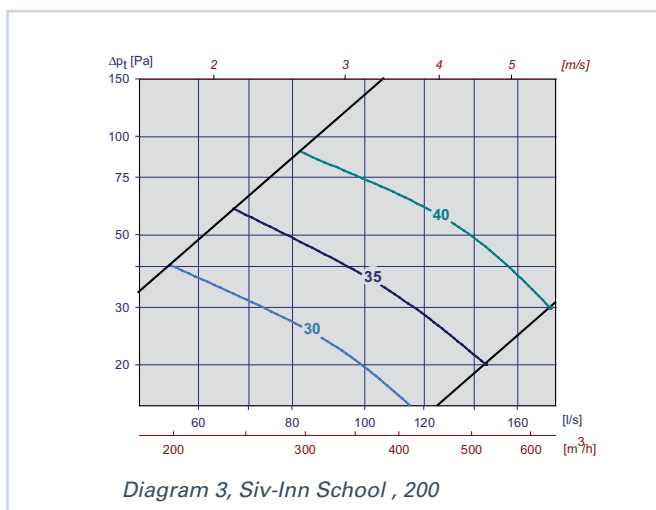
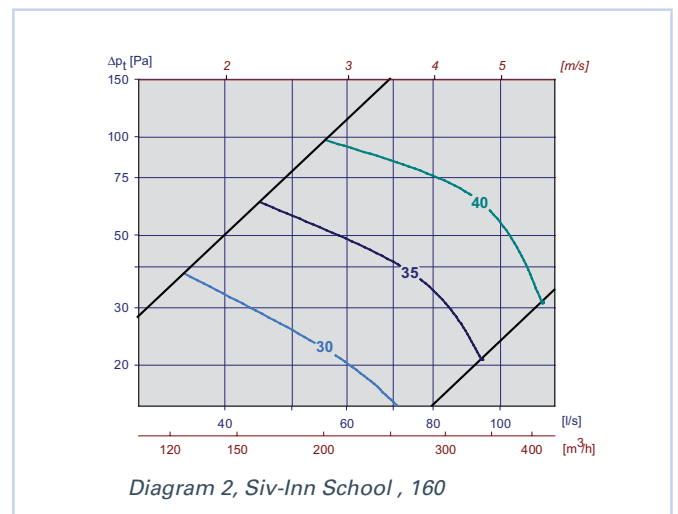
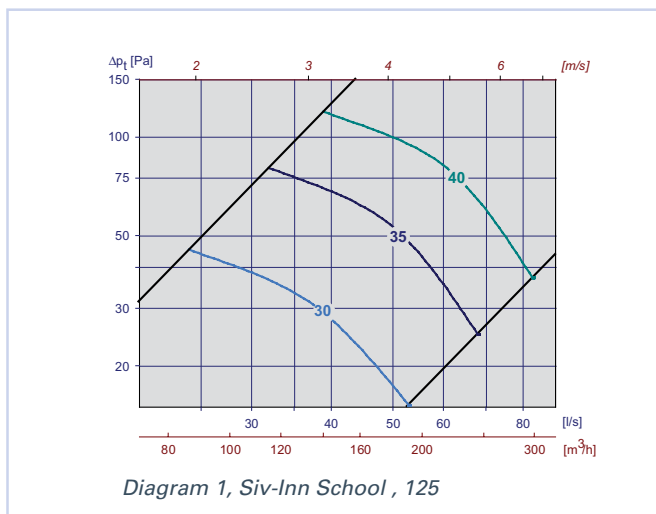
Example:

A small classroom requires an air supply of 160 l/s, and for this purpose two Siv-inn School 160 units are used. Room attenuation is 8 dB, and the diffuser's damper is to be choked 20 Pa. According to diagram 2, $L_{WA} = 31$ dB(A) with damper open and 15 Pa total pressure loss.

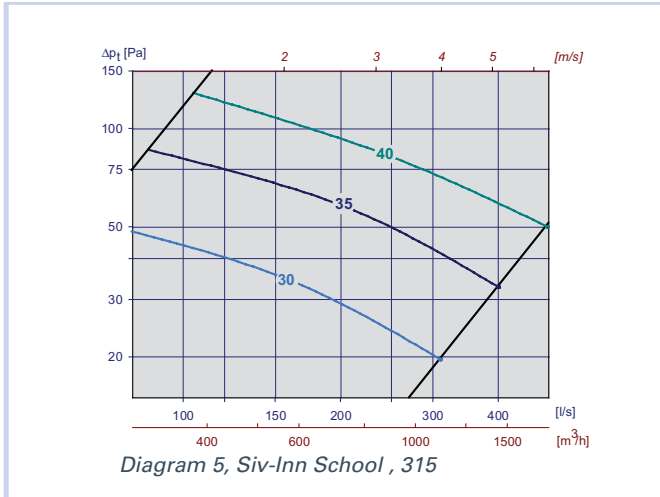
We aim to find:

- Emitted sound power level from diffusers at 250 Hz, damper open.
- A-weighted sound pressure level in the room with damper open.
- A-weighted sound pressure level in the room with damper choked.
 - According to table 4, the correction factor for 250 Hz is 2 dB. L_W at 250 Hz is thus: $L_{WA} + KO = 31 + 2 = 33$ dB
 - With two diffusers, the total sound power level emitted increases by 3 dB, i.e. 36 dB. A room attenuation equivalent to 8 dB provides a sound pressure level in the room of: $36 - 8 = 28$ dB(A)
 - With 20 Pa choking we reach 35 Pa, and the diagram shows an increase in L_{WA} of 4 dB. Sound pressure level is thus $28 + 4 = 32$ dB(A).

DIMENSJONERINGSDIAGRAM



Siv-inn School



Static sound attenuation incl. end reflection, Siv-inn School

Siv-inn School	Attenuation [dB]							
Dim.	63	125	250	500	1k	2k	4k	8k
125	27	20	10	5	5	15	13	12
160	26	19	9	9	6	21	17	14
200	25	18	9	8	18	22	20	16
250	18	11	6	8	17	16	13	13
315	11	7	17	15	27	18	15	15

Table 3

NEAR-FIELD

Data in table 5 is measured at a room temperature (trom) of 23°C and air supply temperatures (t_{in}) of 20°C and 17°C with Δt equivalent to 3°C and 6°C respectively.

$L_{0,2}$ = distance in metres from wall to 0.2/0.5 m/s isovel measured 0.1 m above floor level.

$B_{0,2}$ = distance in metres from wall to 0.2/0.5 m/s isovel measured 0.03 m above floor level.

Siv-inn School	Dim [m³/h]	$\Delta t = 3^\circ\text{C}$				$\Delta t = 6^\circ\text{C}$			
		$L_{0,2}$	$B_{0,2}$	$L_{0,15}$	$B_{0,15}$	$L_{0,2}$	$B_{0,2}$	$L_{0,15}$	$B_{0,15}$
125	100	0,5	0,5	0,6	0,6	0,5	1,1	0,7	1,3
	150	0,7	0,9	0,8	0,9	0,8	0,9	1,0	1,1
	200	0,8	1,1	1,0	1,5	1,1	1,4	1,5	1,7
160	150	0,0	0,0	0,5	0,6	0,5	1,0	0,6	1,2
	225	0,5	1,0	0,7	1,3	0,7	1,4	1,3	1,6
	300	0,7	1,9	1,2	2,1	1,4	1,5	1,5	2,2
200	202	0,5	1,0	0,6	1,2	0,5	1,0	0,7	1,1
	325	0,8	1,4	1,4	1,8	0,9	1,0	1,0	1,3
	500	1,0	1,8	1,8	2,1	0,9	1,8	1,5	2,0
250	400	0,7	1,0	1,0	1,6	0,7	1,0	1,0	1,6
	600	1,1	1,5	1,5	2,2	1,0	1,4	1,4	2,0
	800	1,8	2,2	2,2	2,5	1,6	2,1	2,0	2,3
315	700	0,7	1,5	1,0	2,2	1,5	2,5	2,5	3,0
	1000	1,5	2,0	2,0	2,4	2,5	3,0	3,0	3,5
	1300	1,7	2,5	2,5	3,0	3,0	3,5	3,5	4,0

Table 5

Correction factor [KO], Siv-Inn School

Siv-inn School	KO [dB]							
Dim.	63	125	250	500	1k	2k	4k	8k
125	2	3	1	0	-5	-12	-16	-16
160	2	3	2	0	-5	-12	-20	-13
200	4	5	0	-8	-12	-10	-16	-14
250	2	2	0	-2	-4	-8	-16	-16
315	4	5	1	-2	-5	-10	-16	-15

Table 4

FLOW PATTERN



Fig. 2

Siv-inn School

INSTALLATION

Siv-inn School is attached to the wall by means of two brackets (supplied). Recommended minimum distance to floor is 10 cm. This is due to the inspection hatch being positioned at the bottom of the unit.

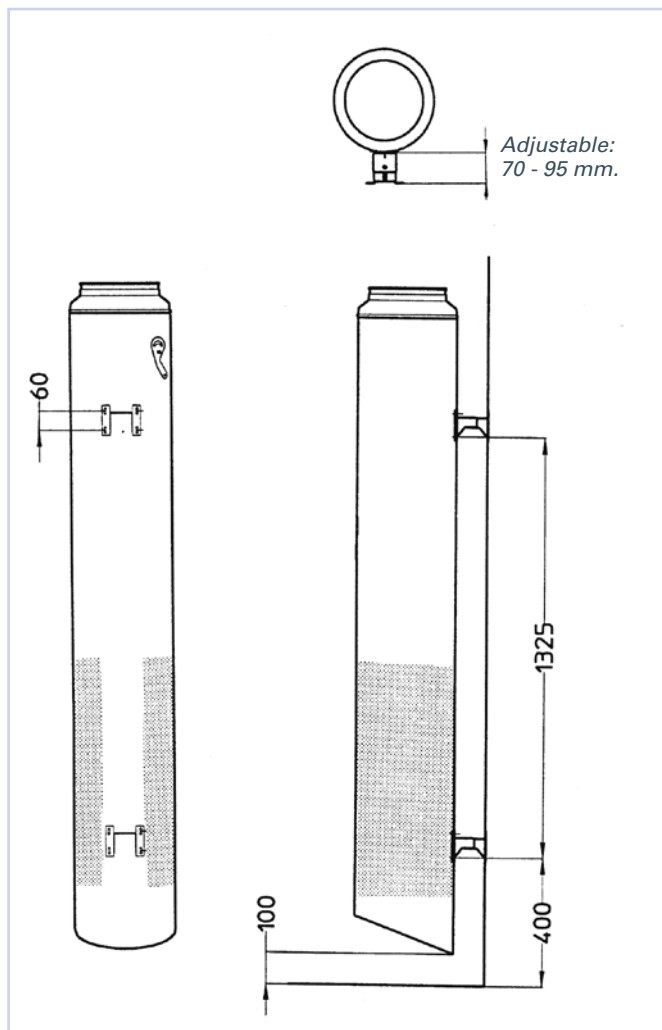


Fig. 3: Installation

COMMISSIONING

Correction factors for calculation of air flow rates are provided on the label inside the diffuser, or can be found in our commissioning guide at our website: www.auranor.no.

MAINTENANCE

The unit is equipped with an inspection hatch at the bottom for cleaning. This hatch can be opened with a simple manoeuvre.

ENVIRONMENT

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

Siv-inn School is developed and manufactured by:

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