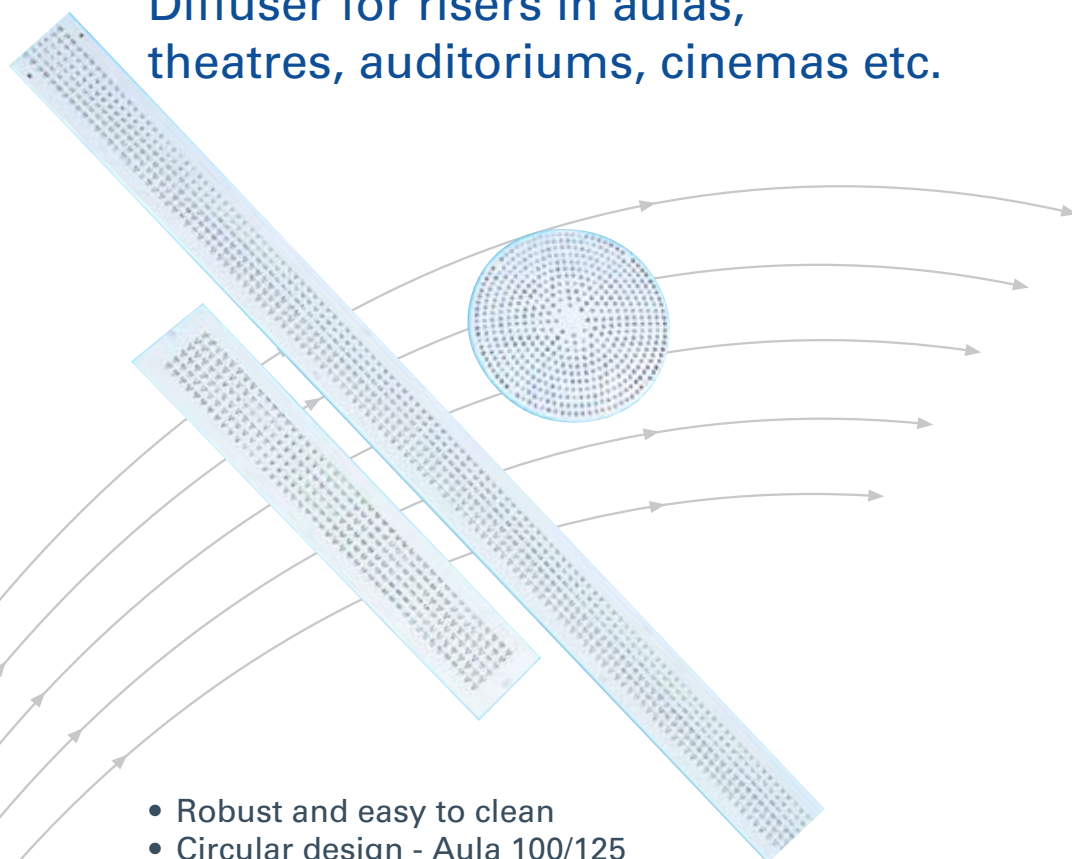


Siv-inn Aula

Diffuser for risers in aulas,
theatres, auditoriums, cinemas etc.



- Robust and easy to clean
- Circular design - Aula 100/125
- Rectangular design - Aula 400, 500 and 600
- Continuous lengths - Aula 2000

TROX[®] TECHNIK

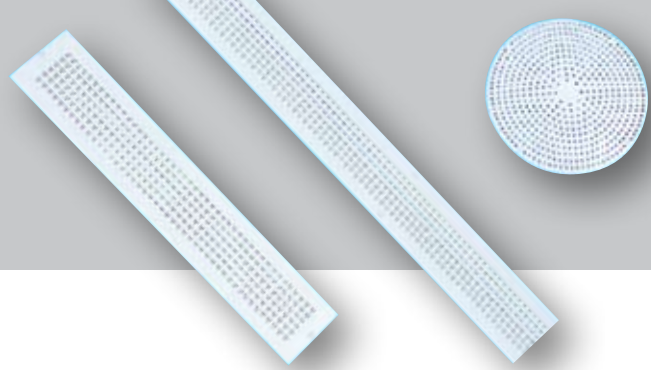
 **Auranor**

TROX Auranor Norge AS

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NO-2712 Brandbu

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e-mail firma@auranor.no
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Siv-inn Aula



APPLICATION

Siv-inn Aula 100 and 125 are primarily intended to meet seating area requirements as shown in fig. 1A.

Siv-inn Aula 400, 500 and 600 are intended for low risers as shown in fig. 1B.

Siv-inn Aula 2000 is also intended for low risers, but offers continuous-length mounting as shown in fig. 1C.



Fig. 1

DESIGN

Aula 100 and 125 are available in a circular design with Ø100 and Ø125 connection collar. Sealing gasket is fitted as standard.

Aula 400, 500 and 600 come in a rectangular design and feature a separate distribution box. The front grille is equipped with a gasket underneath and at both ends, and is perforated with a clover pattern. In addition, the upper edge has been perforated to limit the near-field.

Aula 2000 has a rectangular design and is equipped with a rear distribution box dim. 400, 500 or 600. Screws in an enamel finish are standard. Aula 2000 is available as standard lengths of 2000 mm, with splice connectors and end pieces supplied loose. Adjustment lengths are available on request.

MATERIALS AND SURFACE COATING

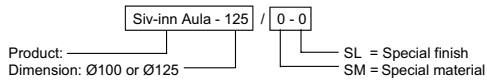
The products are made of galvanised steel plates, and come in a RAL 9010 finish as standard. Other colours and materials are available on request.

QUICK SELECTION

Siv-inn Aula Dim.	[m³/h]		
	25 dB(A)	30 dB(A)	35 dB(A)
100/125	35	50	60
400	40	50	60
500	50	60	80
600	70	90	110

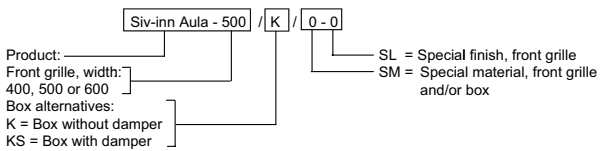
Table 1: The table shows air flow rates at given sound power levels.

ORDER CODE, Siv-inn-Aula 100 og 125



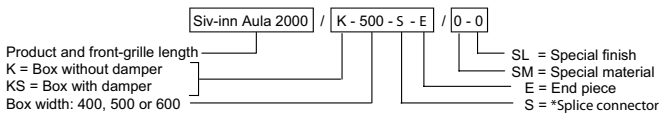
Example:
Siv-inn Aula 125 / 0-0
Explanation:
Siv-inn Aula, dimension Ø125

ORDER CODE, Siv-inn-Aula 400, 500 og 600



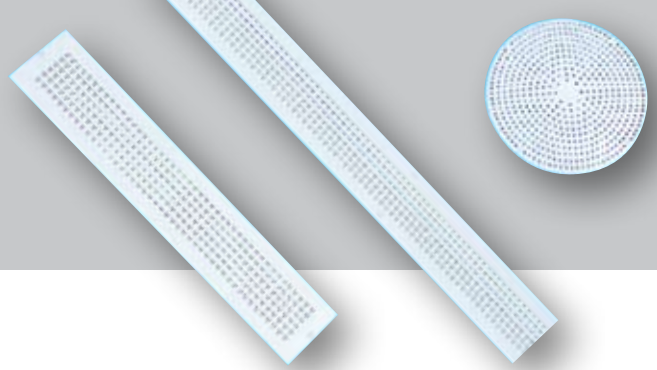
Example:
Siv-inn Aula 500 / K / 0-0
Explanation:
Siv-inn Aula 500, 500 front-grille width and box without damper.


ORDER CODE, Siv-inn-Aula 2000



Example:
Siv-inn Aula 2000 / K-500-E-*S / 0-0
Explanation:
Siv-inn Aula 2000 front grille, box-width 500 without damper. Delivered with end pieces and *splice connectors.
* Number of splice connectors is determined by total length.

Siv-inn Aula



 DIMENSIONS AND WEIGHT, Siv-inn Aula
Siv-inn Aula 2000, weight 1.6 kg per metre.

Dim.	A	B	Weight [kg]
400	400	350	0,6
500	500	450	0,8
600	600	550	1,0

Table 2

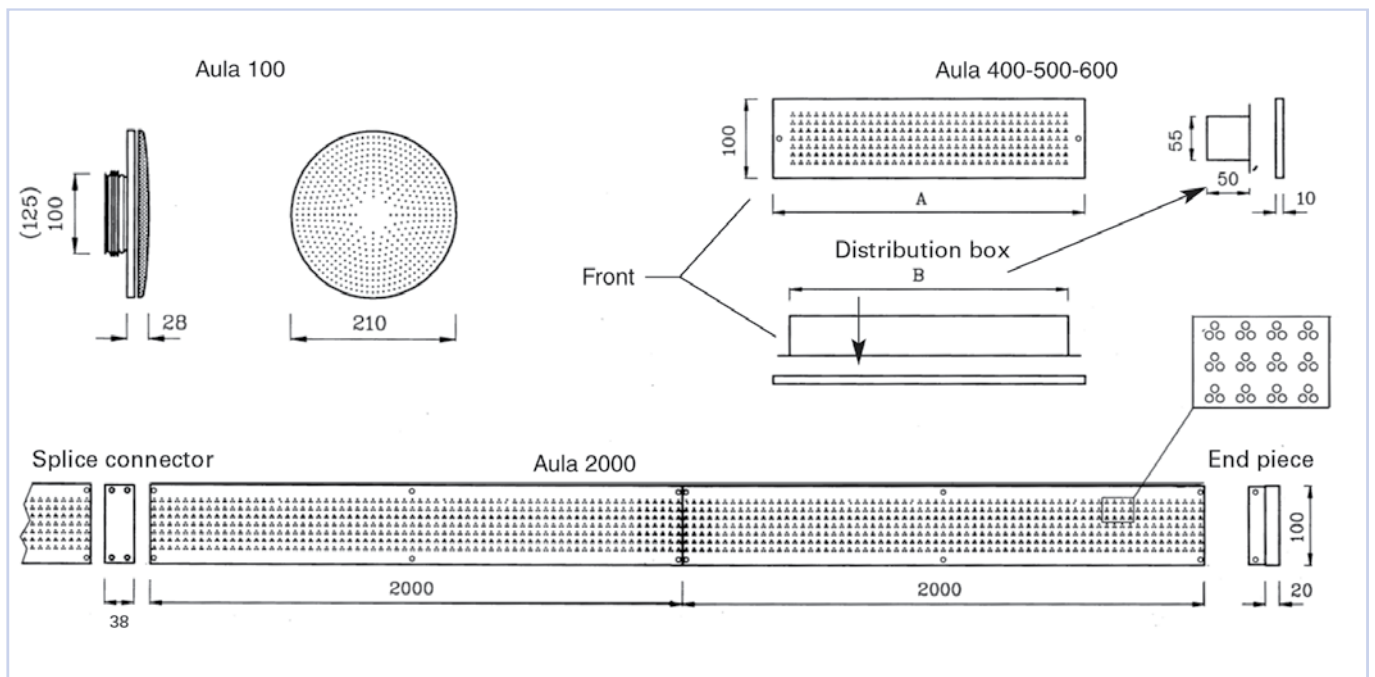


Fig. 2

Siv-inn Aula

ACOUSTIC DATA

The diagram provides a summary of the A-weighted sound power level from diffuser, L_{WA} . Correction factors in table 4 are used to calculate 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.

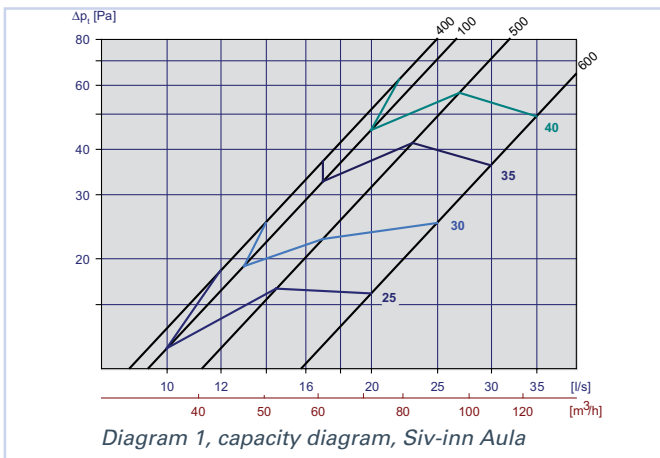
Example:

An auditorium requires an air supply of 400 l/s, and for this purpose a total of 20 Siv-inn Aula 600 units are used. From the diagram, we find that $L_{WA} = 25$ dB(A) and the total pressure loss is 16 Pa.

We aim to find:

- a) Emitted sound power level from one diffuser at 250 Hz.
- b) A-weighted sound pressure level in the room.
 - a) According to table 4, the correction factor for 250 Hz is -5 dB. L_W at 250 Hz is thus: $L_{WA} + KO = 25 + (-5) = 20$ dB
 - b) By using 20 diffusers, the total sound power level increases by 13 dB. A room attenuation equivalent to 12 dB provides a sound pressure level in the room of: $25 + 13 - 12 = 26$ dB(A)

CALCULATION DIAGRAMS



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

Siv-Inn Aula	Attenuation [dB]							
	63	125	250	500	1k	2k	4k	8k
100/125	27	20	18	11	4	3	5	4
400	16	11	9	12	4	8	5	4
500	15	10	9	14	6	8	6	5
600	13	8	7	14	7	8	6	5

Table 3

Correction factor [KO], Siv-Inn Aula

Siv-Inn Aula	KO [dB]							
	63	125	250	500	1k	2k	4k	8k
100/125	1	0	-5	-5	-7	-9	-14	-18
400	-1	-2	-3	-3	-5	-6	-17	-20
500	-3	-3	-5	-5	-5	-5	-14	-18
600	-5	-4	-5	-5	-2	-6	-15	-19

Table 4

NEAR-ZONE

As shown in fig. 3, air is distributed between the connection boxes as well. With a near-zone requirement of 0.5 m at $L_{0,15}$ m/s, a maximum of 150 m³/h per lm is recommended. For the Siv-inn Aula 2000 diffuser the distribution box can be mounted more freely to meet the given length of the front.

Aula m ³ /h	100	400	500	600
$L_{0,15}$ m	0,20-0,50	0,30-0,55	0,40-0,60	0,40-0,65

Table 5 shows the near-zone in metres at end speed of 0.15 m/s, and is based on $Dt = 3^\circ$ between air supply and room temperature.

FLOW PATTERN

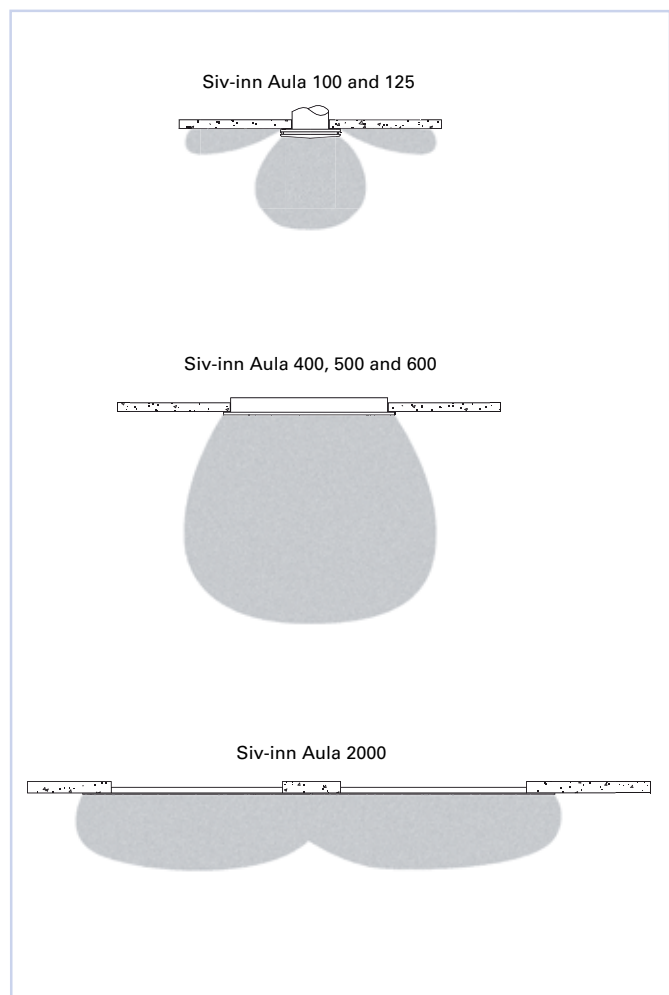


Fig. 3

Siv-inn Aula

INSTALLATION

Siv-inn Aula-100-125

Siv-inn Aula 100 is equipped with a sealing gasket which simplifies installation considerably as the diffuser is fixed in place by a straightforward press-and-twist method as shown in fig. 4.

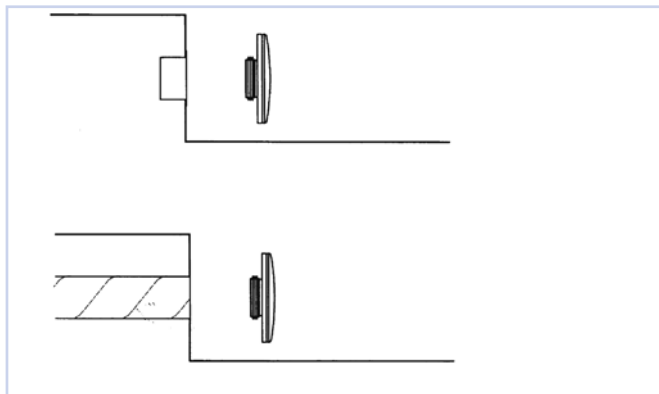


Fig. 4

Siv-inn Aula-400-500-600 and Siv-inn Aula-2000

The connection box is inserted directly into the wall or riser groove, and the front is attached by using the screws provided. Please see fig. 5 and 6.

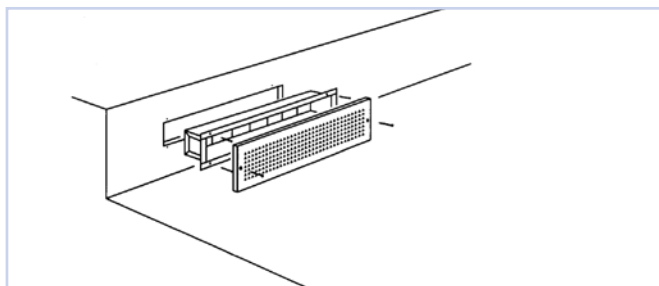


Fig. 5

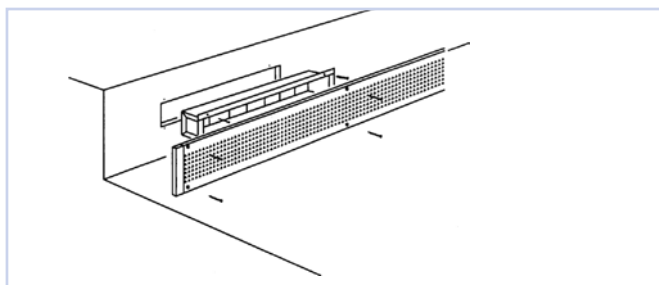


Fig. 6

Siv-Inn Aula is developed and manufactured by:

COMMISSIONING

When the hall is used as a pressure chamber, commissioning of each unit in order to maintain an even air distribution for all diffusers is usually not necessary.

MAINTENANCE

Can be cleaned with a damp cloth.

ENVIRONMENT

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

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