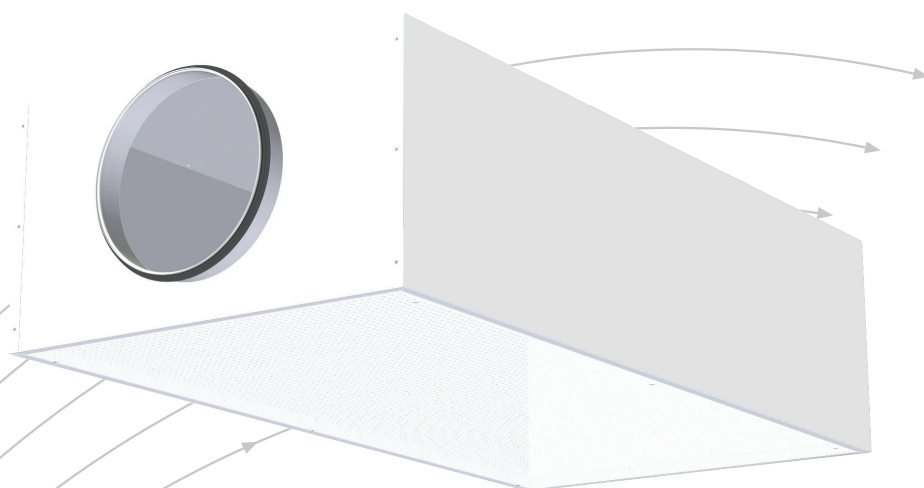


# Siv-inn T/V

Diffuser for high air flow rates



- Suitable for T-profile ceiling system
- Removable front
- Large capacity

**TROX<sup>®</sup> TECHNIK**

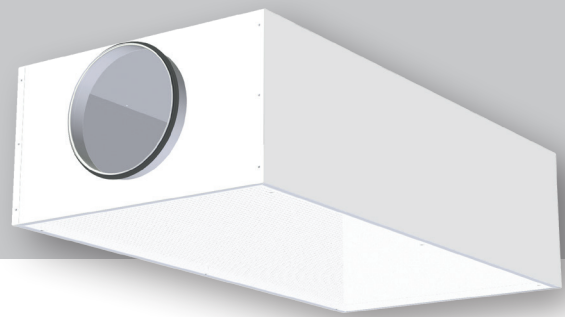
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# Siv-inn T/V



## APPLICATION

Siv-inn T/V is a supply diffuser for areas requiring high air flow rates such as commercial kitchens or laboratories. Suitable for open as well as embedded installation (see fig. 2).

## DESIGN

The product is available in 6 different sizes, with circular end-spigot as standard. External dimensions are designed to fit T-profile ceiling systems with module 600. Alternative connection solutions and positioning are available on request. Siv-inn T/V can also be supplied with perforated sides. The front panel is reinforced and can be removed by unfastening the screws.

## MATERIALS AND SURFACE COATING

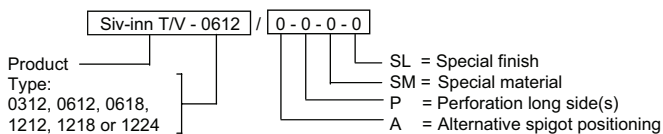
Siv-inn T/V comes in a galvanised steel-plate design. Sides and front are in a white RAL 9003 - gloss 30 finish.

## QUICK SELECTION

| Siv-inn T/V | [m <sup>3</sup> /h] |          |          |
|-------------|---------------------|----------|----------|
| Type        | 25 dB(A)            | 30 dB(A) | 35 dB(A) |
| 0312        | 230                 | 300      | 430      |
| 0612        | 340                 | 470      | 580      |
| 0618        | 540                 | 680      | 860      |
| 1212        | 700                 | 900      | 1200     |
| 1218        | 1000                | 1200     | 1600     |
| 1224        | 1200                | 1600     | 2000     |

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

## ORDER CODE, Siv-inn T/V



Example:  
 Siv-inn T/V-0612 / 0-0-0-0  
 Explanation:  
 Siv-inn T/V, type: 0612 with spigot Ø250.

## DIMENSIONS AND WEIGHT, Siv-inn T/V

| Type | A    | B    | C   | D   | [kg] |
|------|------|------|-----|-----|------|
| 0312 | 1190 | 290  | 270 | 199 | 10,0 |
| 0612 | 1190 | 590  | 320 | 249 | 18,5 |
| 0618 | 1790 | 590  | 320 | 249 | 27,0 |
| 1212 | 1190 | 1190 | 380 | 314 | 37,0 |
| 1218 | 1790 | 1190 | 380 | 314 | 55,5 |
| 1224 | 2390 | 1190 | 480 | 399 | 74,0 |

Table 2

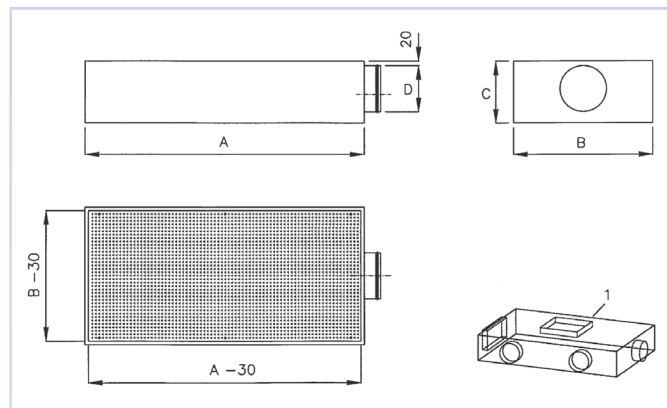


Fig. 1

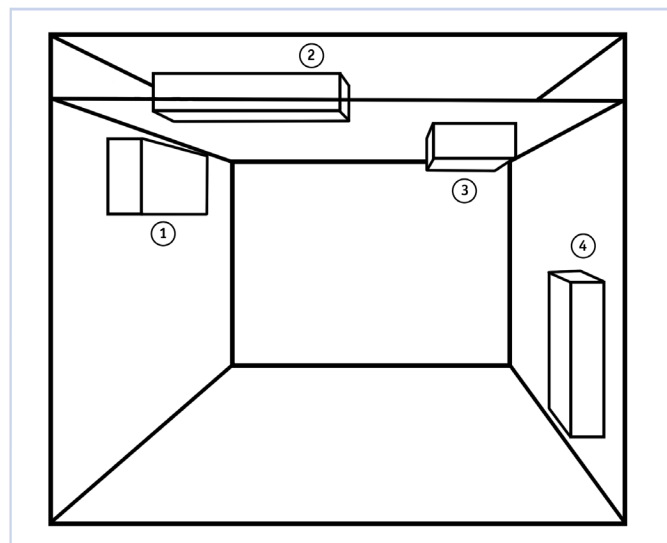


Fig. 2

# Siv-inn T/V

## 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 emitted sound power level at the respective frequencies,  $L_W = L_{WA} + KO$ . A room with absorption equivalent to 10m<sup>2</sup> Sabine will have a sound pressure level which is 4 dB below the sound power level emitted.

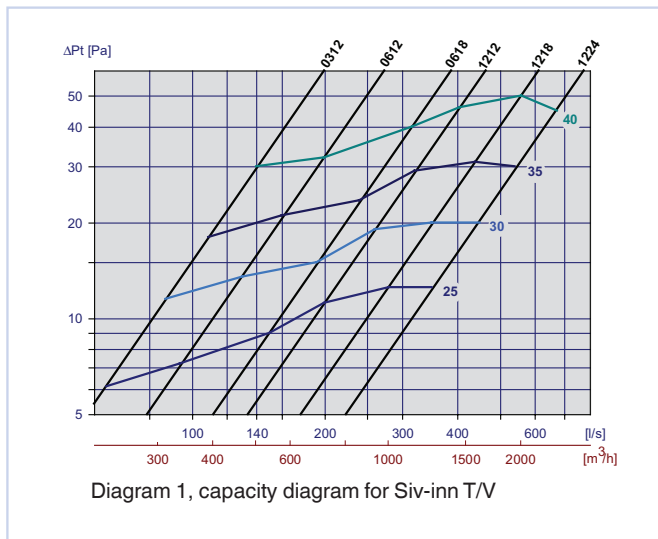
### Example:

An auditorium requires an air supply of 300 l/s, and for this purpose a Siv-inn T/V 1212 is used. Room attenuation is 4 dB. From the diagram, we find that  $L_{WA} = 34$  dB(A) and the total pressure loss is 25 Pa.

We aim to find:

- Emitted sound power level from one diffuser at 250 Hz.
- A-weighted sound pressure level in the room.
  - According to table 4, the correction factor for 250 Hz is -1 dB.  $L_W$  at 250 Hz is thus:  $L_{WA} + KO = 34 + (-1) = 33$  dB
  - A room attenuation equivalent to 4 dB provides a sound pressure level in the room of:  $34 - 4 = 30$  dB(A)

## CALCULATION DIAGRAM



Static sound attenuation incl. end reflection, Siv-inn T/V

| Siv-inn T/V<br>Type | Attenuation [dB] |     |     |     |    |    |    |    |
|---------------------|------------------|-----|-----|-----|----|----|----|----|
|                     | 63               | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| 0312                | 16               | 9   | 4   | 3   | 12 | 15 | 14 | 13 |
| 0612                | 14               | 9   | 3   | 3   | 11 | 15 | 13 | 13 |
| 0618                | 14               | 11  | 3   | 2   | 5  | 6  | 10 | 9  |
| 1212                | 12               | 10  | 3   | 2   | 5  | 6  | 10 | 9  |
| 1218                | 12               | 10  | 2   | 2   | 5  | 6  | 9  | 8  |
| 1224                | 11               | 9   | 3   | 2   | 5  | 5  | 9  | 8  |

Table 3

Correction factor [KO], Siv-Inn T/V

| Siv-inn T/V<br>Type | KO [dB] |     |     |     |    |     |     |     |
|---------------------|---------|-----|-----|-----|----|-----|-----|-----|
|                     | 63      | 125 | 250 | 500 | 1k | 2k  | 4k  | 8k  |
| 0312                | 3       | 5   | 4   | -3  | -5 | -16 | -17 | -18 |
| 0612                | 4       | 5   | 4   | -4  | -7 | -17 | -17 | -19 |
| 0618                | 0       | 1   | 0   | -2  | -6 | -15 | -18 | -18 |
| 1212                | 1       | 1   | -1  | -3  | -5 | -15 | -17 | -17 |
| 1218                | 4       | 5   | 3   | -3  | -5 | -11 | -17 | -18 |
| 1224                | 3       | 5   | 2   | -2  | -5 | -11 | -16 | -17 |

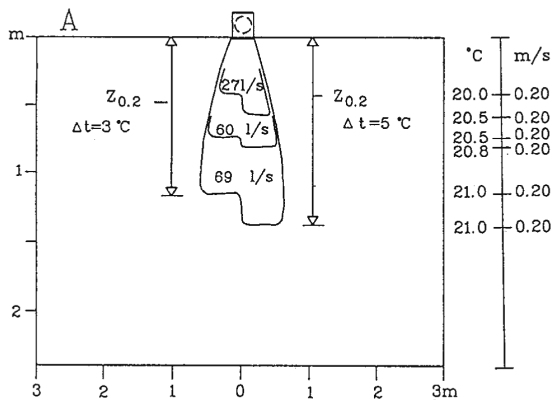
Table 4

# Siv-inn T/V

## FLOW PATTERN

Diagram A shows the air flow pattern and near-field measured from the unit at a 0.2 m/s end-speed. Diagrams C and D provide the velocity profile, the 0.2 m/s isovel, for wall mounting.

All diagrams show the flow pattern for three different air flow rates and at a lower temperature of 3 and 5 °C respectively. The data is based on  $t_{in} = 18^{\circ}\text{C}$  and  $t_{room} = 21/23^{\circ}\text{C}$ .



### EXAMPLE:

Type 0312 mounted in ceiling will, at 60 l/s and  $\Delta t = 5^{\circ}\text{C}$ , provide a near-field of 0.8 m ( $Z_{0.2}$ ) from ceiling. The temperature gradient in the supply zone is shown on the temperature scale to the right.

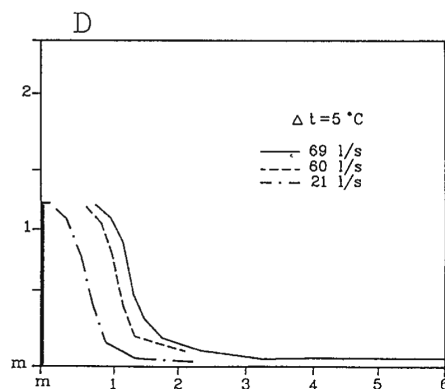
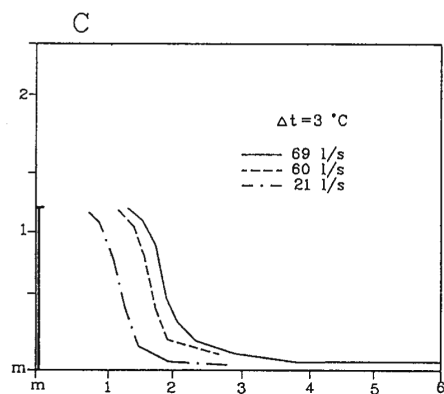


Diagram 2, Siv-inn T/V, 0312

# Siv-inn T/V

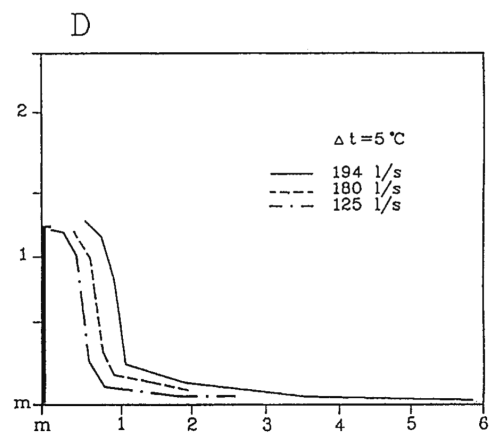
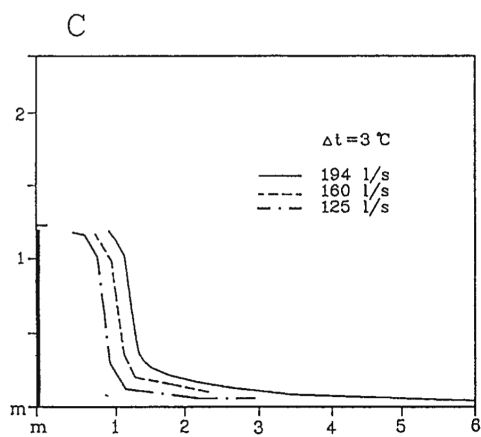
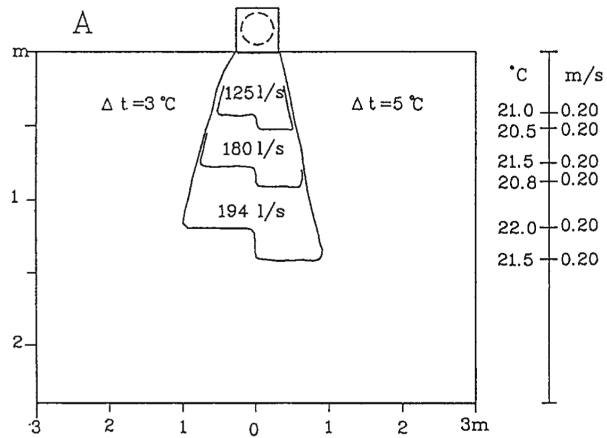


Diagram 3, Siv-inn T/V, 0612

# Siv-inn T/V

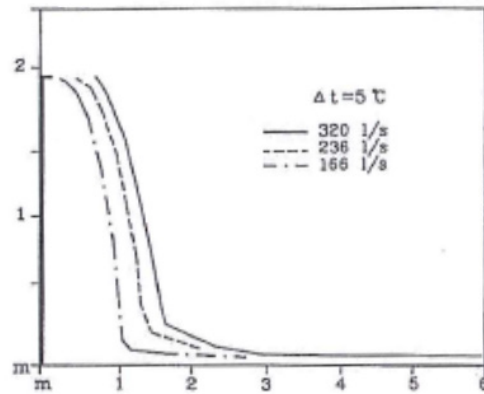
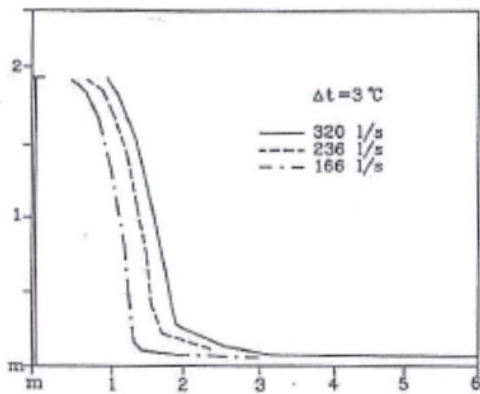
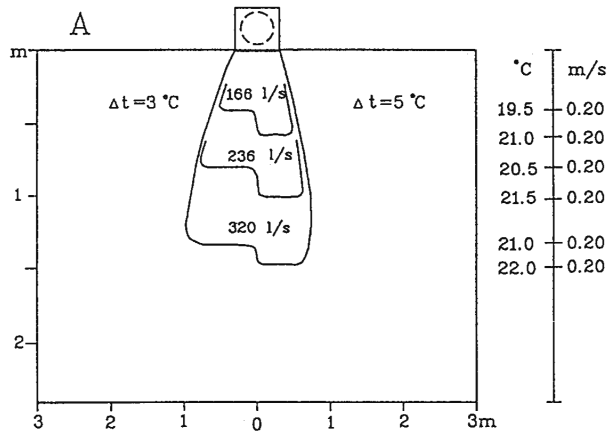


Diagram 4, Siv-inn T/V, 0618

# Siv-inn T/V

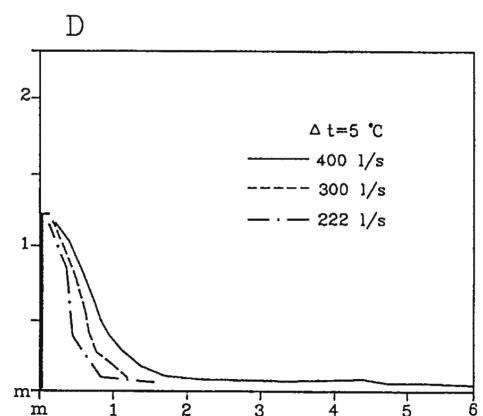
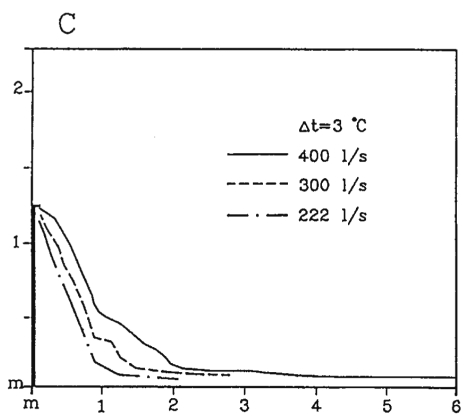
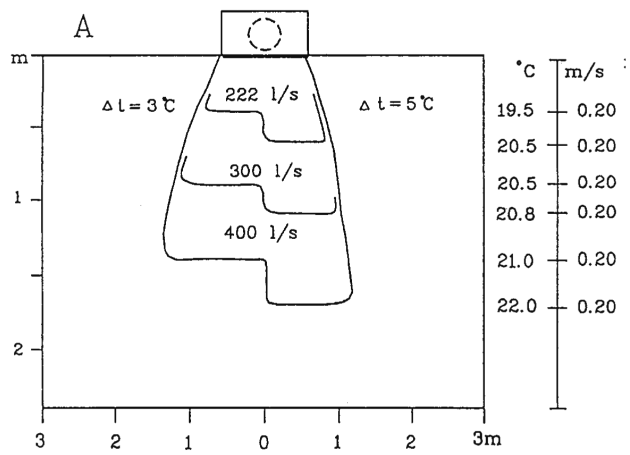


Diagram 5, Siv-inn T/V, 1212

# Siv-inn T/V

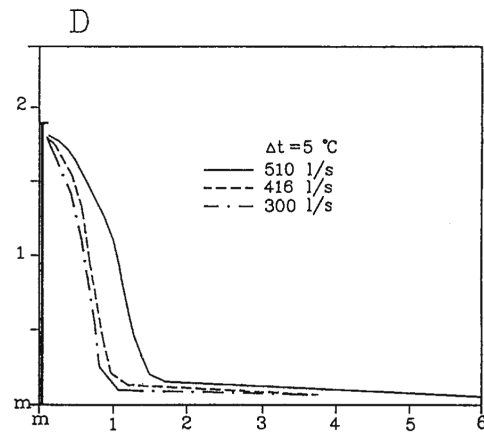
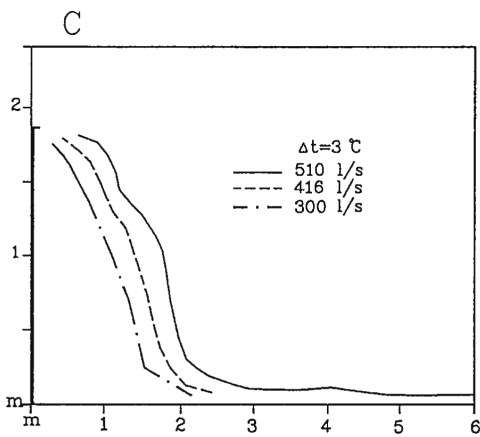
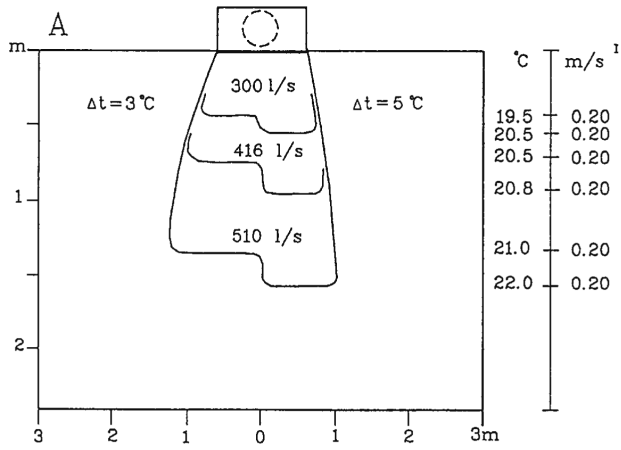


Diagram 6, Siv-inn T/V, 1218

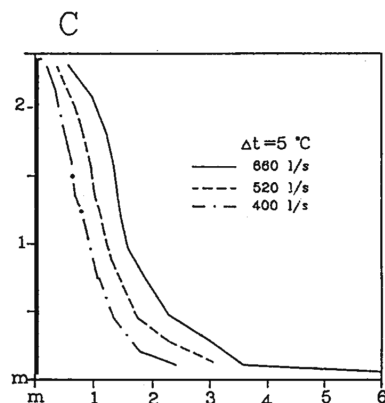
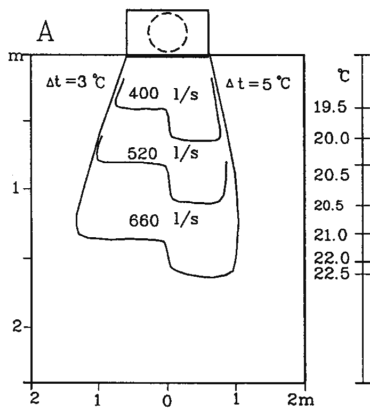


Diagram 7, Siv-inn T/V, 1224



# Siv-inn T/V

## INSTALLATION

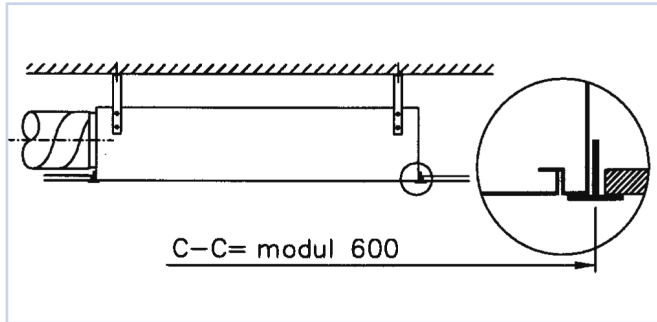


Fig 3: Installation in ceiling, designed to fit T-profile ceiling system.

## MAINTENANCE

The diffuser can be cleaned by using a damp cloth.  
When cleaning of ductwork, the diffuser front must be removed.

## 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)

Siv-inn T/V is developed and manufactured by:

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