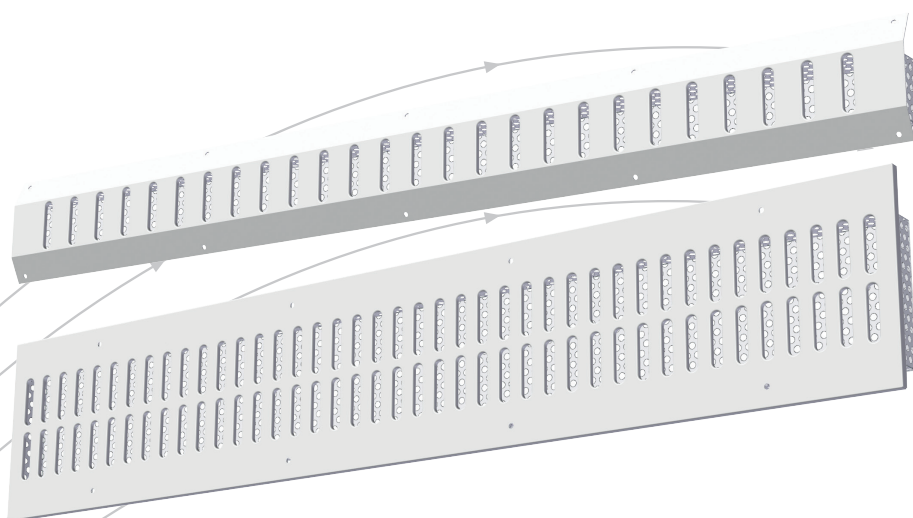


Exit-4 and Exit-5

Extract air terminal device for duct installation



- Suitable for circular and rectangular ducts
- Excellent distribution
- Adapted to fit dimensions Ø200 to Ø1250

TROX[®] TECHNIK

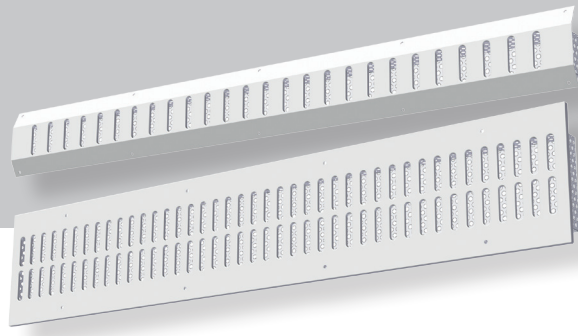
 **Auranor**

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Exit-4 and Exit-5



APPLICATION

Exit-4 and Exit-5 are rectangular extract air terminal devices which are fitted to the side of circular and rectangular air ducts.

DESIGN

Exit features punched-out nozzles at the front and a perforated diffuser plate at the back. Exit-4D and 4DD are made for circular duct installation, Ø200-Ø1000 and Ø315-Ø1250 respectively. Exit-5D and 5DD are designed for rectangular duct installation.

MATERIALS AND SURFACE COATING

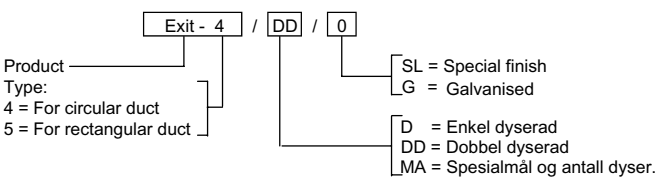
Exit is made of steel, and comes in a RAL 9010 finish. Other colours are available on request. The valves are fitted with polyurethane gaskets.

QUICK SELECTION

Exit-4 and 5	[m³/h]			
Type	25 dB(A)	30 dB(A)	35 dB(A)	40 dB(A)
4D / 5D	115	144	180	223
4DD / 5DD	331	396	504	612

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

ORDER CODE, Exit-4 and Exit-5



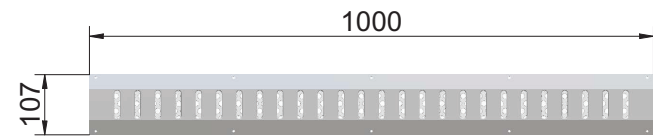
Example:
 Exit-4 / DD / 0
 Explanation:
 Exit-4 for circular duct, double nozzle row.

DIMENSIONS AND WEIGHT, EXIT 4 and 5

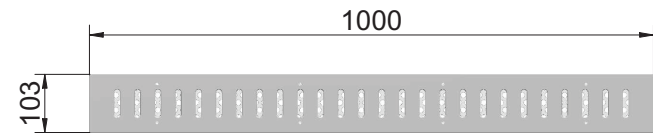
Exit-4D with single nozzle row is suitable for dim. Ø200. to dim. Ø1000 inclusive. Exit-4DD with double nozzle row is suitable for dim. Ø315. to dim. Ø1250 inclusive.

Product	Weight [kg]	Groove dimensions [mm]
Exit-4D	1,3	975 x 60
Exit-5D	1,3	975 x 60
Exit-4 DD	1,7	975 x 135
Exit-5 DD	1,7	975 x 135

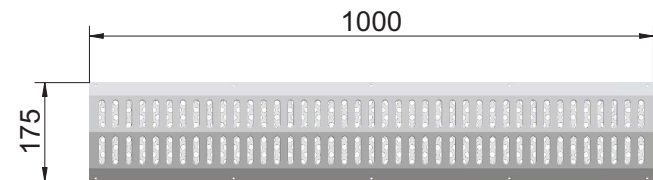
Table 2



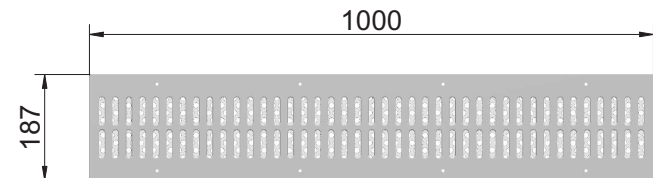
Exit-4D



Exit-5D



Exit-4DD



Exit-5DD

Fig. 1

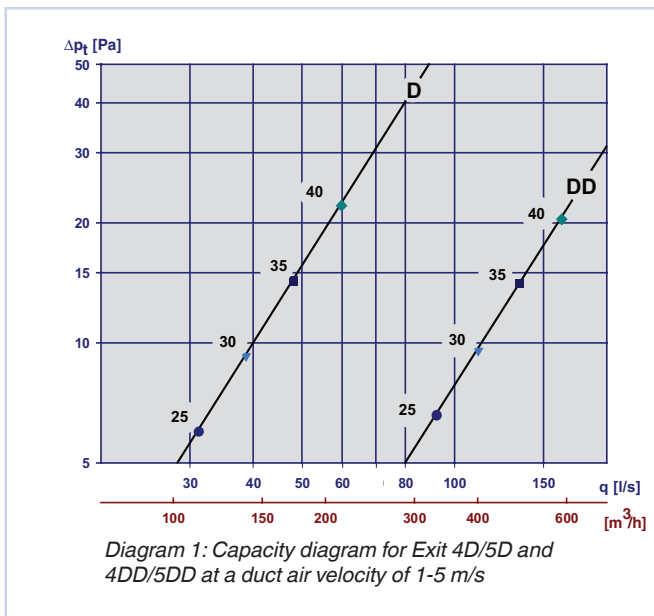
Exit-4 and Exit-5

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 $10m^2$ Sabine will have a sound pressure level which is 4 dB below the sound power level emitted. Table 3 shows the static sound attenuation excluding end reflection. If the valve is fitted to the last section of a duct with end cap, the total sound attenuation, including end reflection, will depend on the duct diameter

Example:

CALCULATION DIAGRAMS



Static sound attenuation excl. end reflection [KO], Exit-4 and Exit-5

Exit-4 and 5	Demping [dB]							
Type	63	125	250	500	1k	2k	4k	8k
4D/5D	0	0	1	4	7	9	11	11
4DD/5DD	0	0	0	2	4	6	8	8

Table 3

Correction factor [KO], Exit-4 and Exit-5

Exit-4 and 5	KO [dB]							
Type	63	125	250	500	1k	2k	4k	8k
4D/5D	-5	-3	-6	-9	-5	-12	-19	-28
4DD/5DD	-4	-3	-3	-3	-6	-12	-18	-23

Table 4

A room requires an indoor air extraction of 240 l/s, and to achieve this we have used two extract air terminal devices of type Exit-4DD fitted close to the end cap on an Ø250 duct. Room attenuation is estimated to 8 dB.

We aim to find:

- Emitted sound power level from one valve at 250 Hz.
- A-weighted sound pressure level in the room from one valve.
- Total sound pressure level in the room with two valves.
- Attenuation at 250Hz.

According to diagram 1, $L_{WA} = 32$ dB(A) for each valve at 12 Pa total pressure loss.

- Table 4 shows a correction factor for 250 Hz of -3 dB. L_W at 250 Hz is thus: $L_{WA} + KO = 32 + (-3) = 29$ dB(A)
- A room attenuation equivalent to 8 dB provides a sound pressure level in the room of: $32 - 8 = 24$ dB(A)
- With two identical sources of sound in the room, the resulting sound pressure level in the room will increase by 3 dB: $24 + 3 = 27$ dB(A)
- As there are two identical valves in the room, we will deduct 3 dB from the end reflection. The formula used is: Internal attenuation + end reflection - 3 dB, which is: $0 + 6 - 3 = 3$ dB

Example of end reflection, Ø250 Spiro duct

Duct diameter	Frequency (Hz)	End reflection (dB)
250 mm	63	17
	125	11
	250	6
	500	2
	1000	1
	2000	0
	4000	0
	8000	0

Table 5

Exit-4 and Exit-5

INSTALLATION

Grooves in ducting are made as described below and shown in fig. 2 and 3. The diffuser plate and front panel are positioned over the groove and are attached by using the screws provided. Installation in terms of air flow direction is shown in fig. 4.

Exit-4D and Exit-5D, grooves in ducting: L= 975, H=60

Exit-4DD and Exit-5DD, grooves in ducting: L= 975, H=135

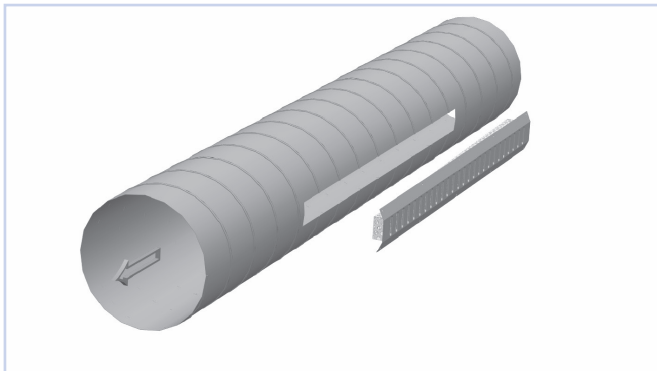


Fig. 2: Installation, Exit-4D and Exit-4DD.

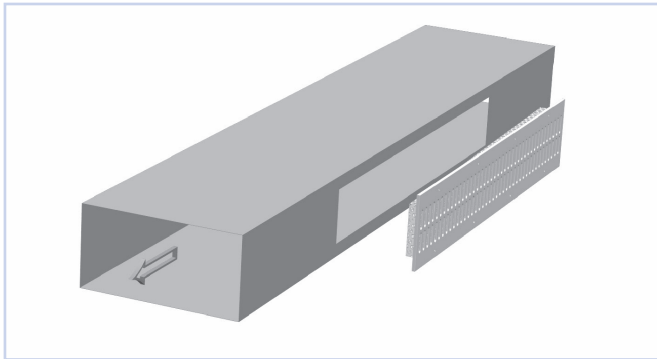


Fig. 3: Installation, Exit-5D and Exit-5DD.

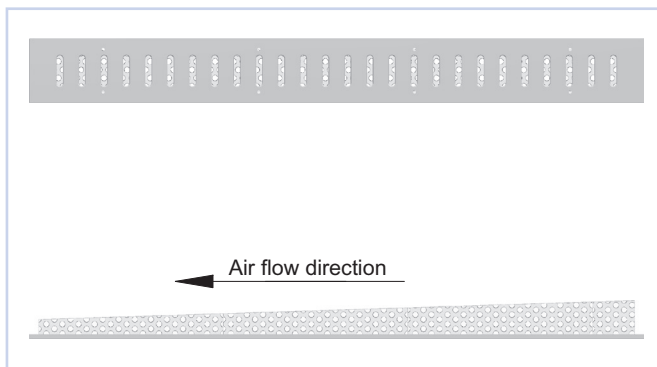


Fig. 4: Installation, Exit-4 and Exit-5.

Exit-4 and Exit-5 is developed and manufactured by:

COMMISSIONING

For commissioning it is advisable to use damper in duct positioned after the last valve, and measurement

MAINTENANCE

The valve can be cleaned by using a damp cloth.

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.