

# Space-1, 4A, 4B and 5

## Exhaust valves



- User-friendly installation and commissioning
- Easy to clean
- Modern design

**TROX<sup>®</sup> TECHNIK**

 **Auranor**

TROX Auranor Norge AS

PO Box 100  
NO-2760 Brandbu

Telefon +47 61 31 35 00  
Telefaks+47 61 31 35 10  
e-mail: [firmapost@auranor.no](mailto:firmapost@auranor.no)  
[www.trox.no](http://www.trox.no)

# Space-1, 4A, 4B and 5



## APPLICATION

Space is a series of exhaust valves for installation in ceiling or along the sides of circular and rectangular air ducts.

## DESIGN

The Space valves are equipped with an adjustable nozzle for air flow commissioning. Space 1 features a nipple for Spiro duct installation. Space 4A and 4B are designed for circular duct fitting - Ø160-Ø200 and Ø250-Ø1000 respectively. Space 5 is ideal for rectangular duct mounting.

## MATERIALS AND SURFACE COATING

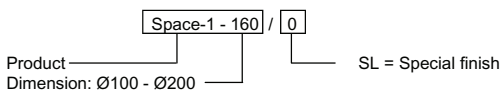
Space is made of steel with a RAL 9010 finish. Other colours are available on request. Space 1 is equipped with a rubber gasket on the connection collar, whereas Space 4 and 5 come with a polyurethane gasket.

## QUICK SELECTION

Space	[m <sup>3</sup> /h]			
	25 dB(A)	30 dB(A)	35 dB(A)	40 dB(A)
100	54	61	72	83
125	133	151	169	209
160	173	220	281	353
200	202	248	295	360
Space 4A-B og 5	122	151	180	216

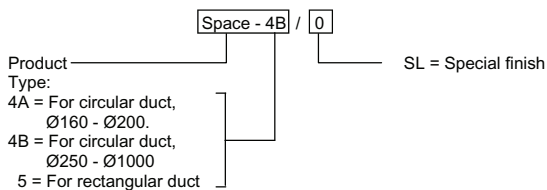
Table 1: The table shows capacity at given sound power levels.

## ORDER CODE, SPACE 1



Example:  
Space-1-160 / 0  
Explanation:  
Space 1 dim. Ø160 for Spiro duct mounting

## ORDER CODE, SPACE 4A, 4B AND 5



Example:  
Space 4B / 0  
Explanation:  
Space 4B for circular duct from and incl. dim. Ø250 to and incl. dim. Ø1000.

## DIMENSIONS AND WEIGHT, Space

Description	D	A	B	C	Weight[kg]
Space-1-100	97	180	10	18	0,4
Space-1-125	123	235	15	30	0,5
Space-1-160	157	235	15	30	0,5
Space-1-200	197	280	15	35	0,6

Table 2

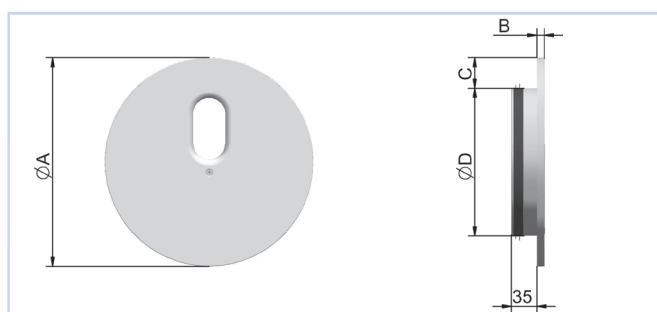


Fig. 1, Space-1

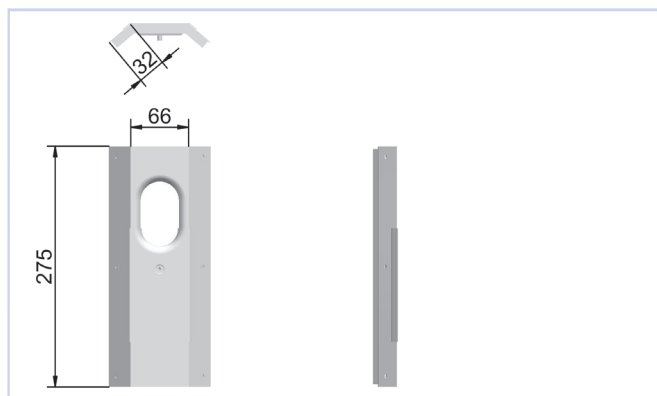


Fig. 2, Space-4

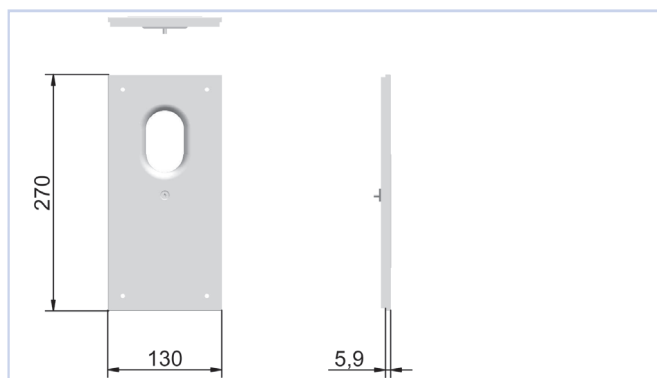


Fig. 3, Space-5

# Space-1, 4A, 4B and 5

## ACOUSTIC DATA

The diagrams provide a summary of the A-weighted sound power level from valve,  $L_{WA}$ . Correction factors in table 4, page 5, are used to calculate emitted sound power level at the respective frequencies,  $L_W = L_{WA} + KO$ . The sound pressure level in a room with absorption equivalent to 10m<sup>2</sup> Sabine will be 4 dB below the sound power level emitted.

### Example:

Space 1 installed at duct end. Required draw-out level is 60 l/s, and room attenuation is 6 dB.

We aim to find:

- Emitted sound power level from one valve at 250 Hz, damper open.
- A-weighted sound pressure level with damper open.

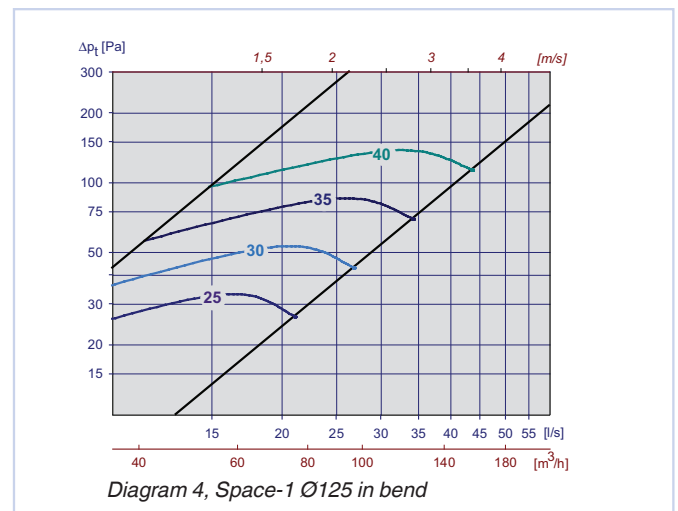
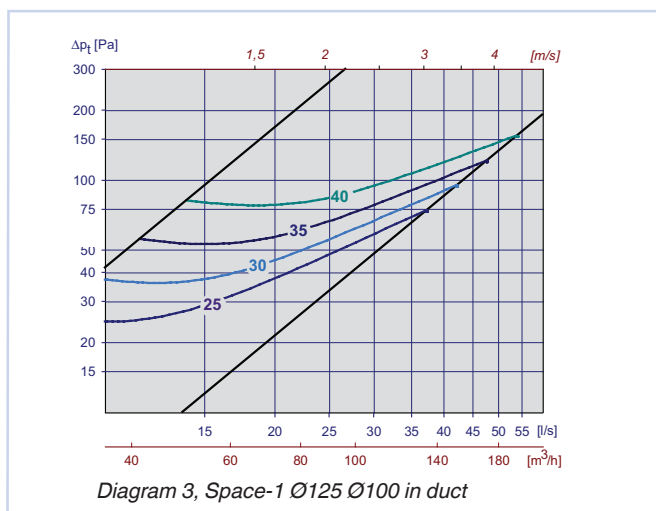
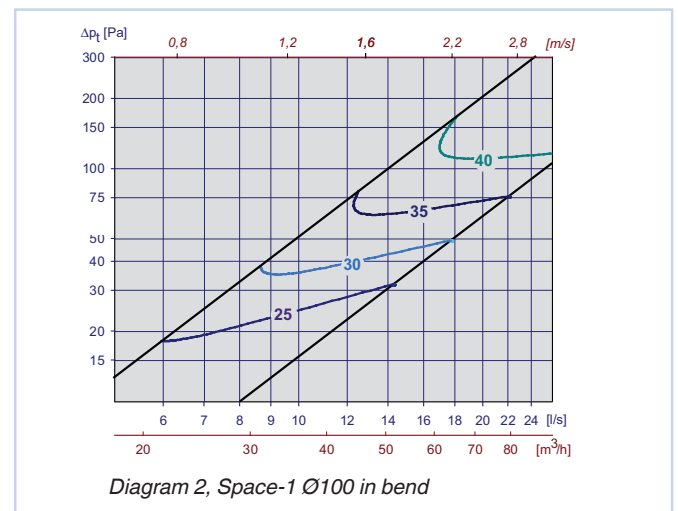
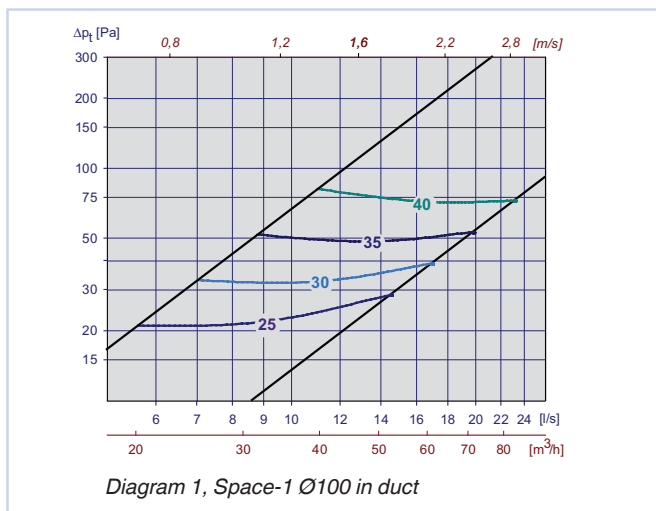
According to diagram 7,  $L_{WA} = 27$  dB(A) for each valve with damper open and 120 Pa total pressure loss.

- Table 4 provides a correction factor of -2dB for open damper at 250 Hz, and  $L_W$  at 250 Hz is thus:

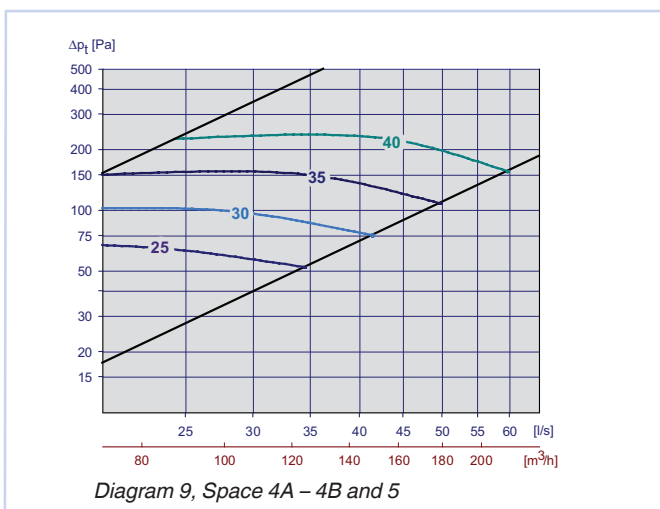
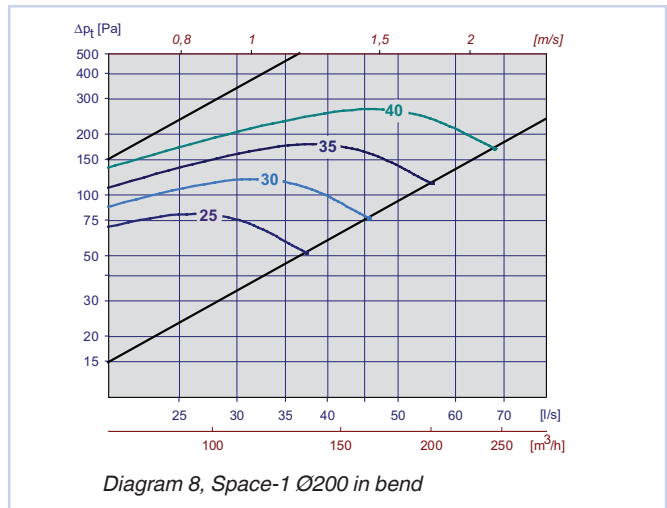
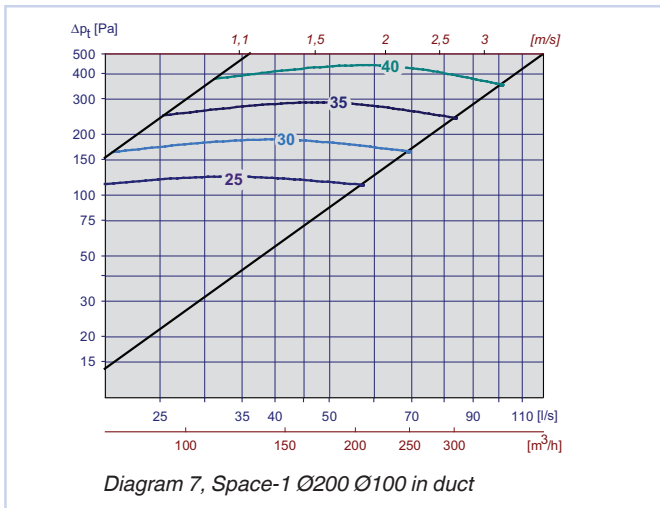
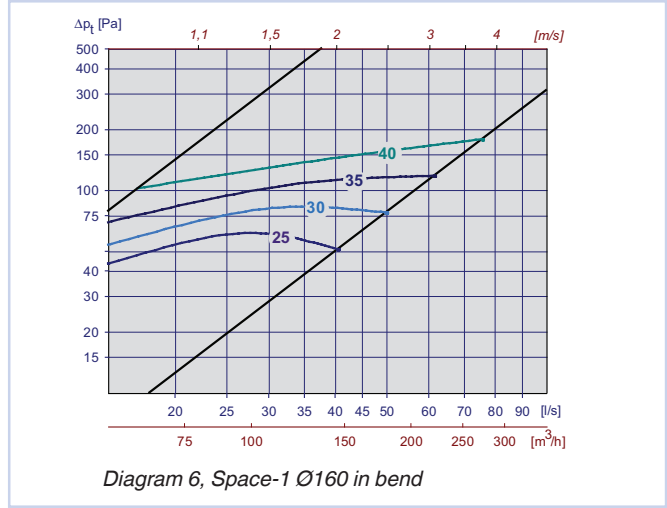
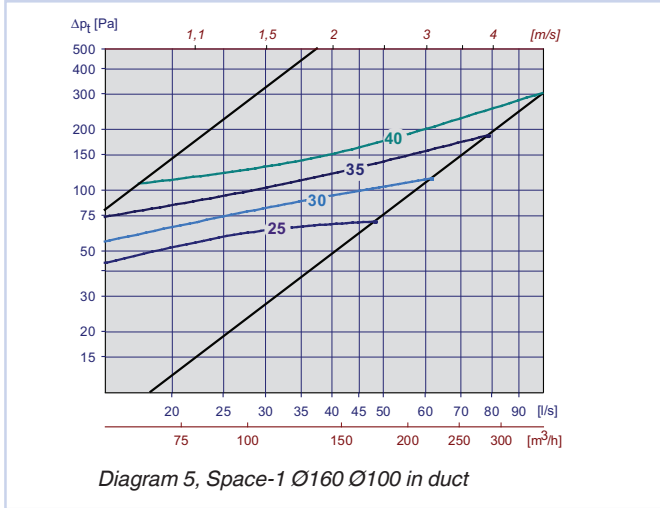
$$L_{WA} + KO = 27 + (-2) = 25 \text{ dB}$$

- With a room attenuation equivalent to 6 dB, the sound pressure level in the room is:  $27 - 6 = 21$  dB(A).

## CALCULATION DIAGRAMS



# Space-1, 4A, 4B and 5



# Space-1, 4A, 4B and 5

Static sound attenuation incl. end reflection for Space 1, 4A, 4B and 5

Space		Attenuation [dB]							
Valve	Dim.	63	125	250	500	1k	2k	4k	8k
Space-1	100	21	17	19	10	10	9	10	8
	125	18	20	19	12	11	9	11	9
	160	14	17	18	13	13	11	12	8
	200	13	8	12	12	10	11	12	9
Space-4A, 4B and 5	–	12	9	9	9	9	10	9	8

Table 3

Correction factor [KO], Space 1, 4A, 4B and 5

Space		KO [dB]															
Valve	Dim.	Damper closed								Damper open							
		63	125	250	500	1k	2k	4k	8k	63	125	250	500	1k	2k	4k	8k
Space-1	100	-1	-12	-13	-10	-1	-19	-20	-19	6	-2	-5	-7	-2	-16	-14	-11
	125	0	-13	-12	-10	-1	-19	-20	-18	-3	-4	-6	-9	-6	-4	-17	-21
	160	-2	-11	-14	-11	-1	-13	-21	-21	4	-1	-2	-3	-5	-8	-12	-14
	200	4	0	-2	-4	-5	-7	-12	-14	2	0	-2	-5	-6	-6	-10	-14
(in bend)	100	3	-4	-8	-7	-1	-13	-16	-15	9	4	-3	-4	-4	-13	-12	-9
	125	-2	-12	-12	-10	-1	-10	-13	-20	1	-2	-5	-5	-5	-9	-7	-12
	160	0	-10	-13	-10	-1	-14	-21	-21	5	-1	-1	-4	-5	-8	-12	-16
	200	-1	-6	-11	-13	-13	-7	-3	-18	0	-4	-6	-7	-3	-6	-14	-19
Space-4A, 4B and 5	–	-6	-7	-2	-3	-6	-7	-12	-18	6	10	2	-5	-8	-10	-15	-19

Table 4

# Space-1, 4A, 4B and 5

## INSTALLATION

Installation principle shown in fig. 4, 5 and 6.



Fig. 4: Installation, Space 1

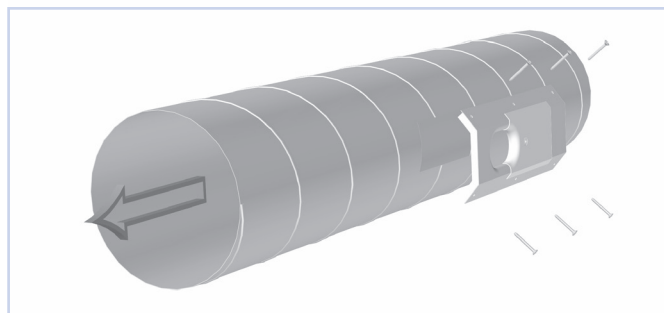


Fig. 5: Installation, Space 4A and 4B

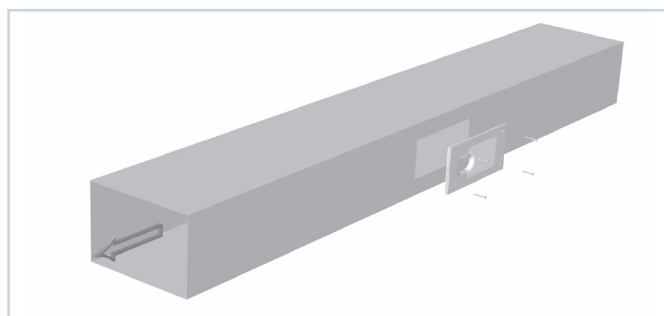


Fig. 6: Installation, Space 5

## COMMISSIONING

Commissioning of damper in duct prior to first valve is recommended.

## MAINTENANCE

The valve is to be cleaned with a damp cloth.

## MILJØ

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)

Space is developed and manufactured by:

**TROX<sup>®</sup> TECHNİK**  
**Auranor**

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](http://www.trox.no)