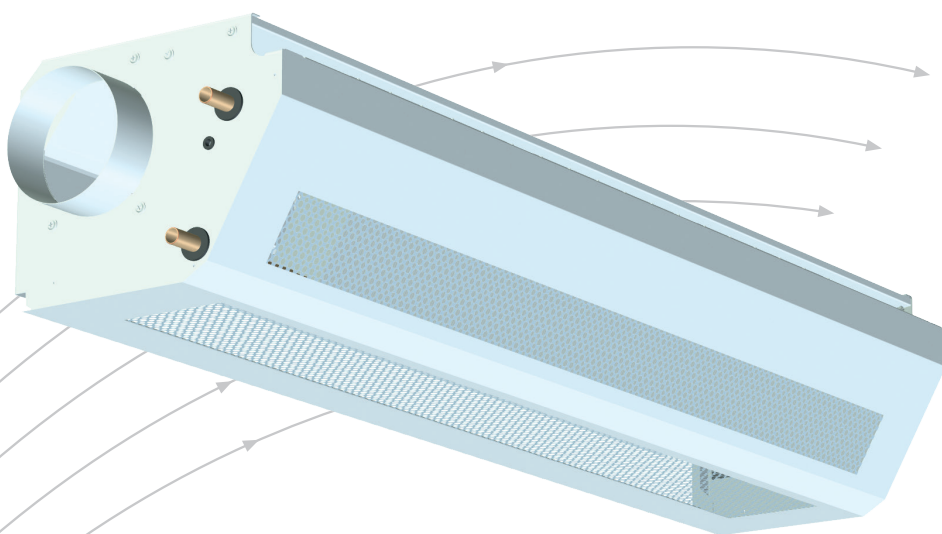


Svalbard-H

Chilled beam for corner installation between wall and ceiling



- Available in 1200mm to 3000mm lengths
- Adjustable pressure/air flow rate
- Adjustable flow pattern
- Dimensioning program Auracool - H on our website

TROX[®] TECHNIK

 **Auranor**

TROX Auranor Norge AS

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NO-2712 Brandbu

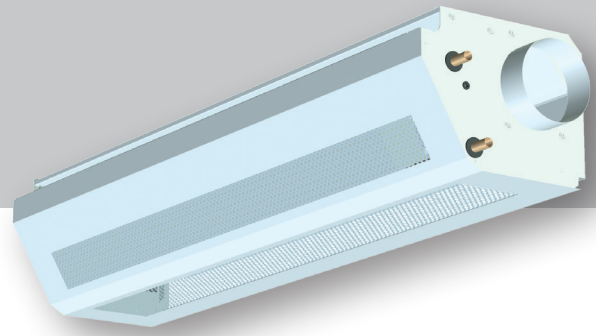
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Svalbard-H



QUICK SELECTION, Svalbard-H

The tables state the cooling effect from the chilled beam's water circuit and the emitted sound power level from the beam. In order to calculate total cooling effect, the cooling effect of the supply air must be added as shown in the example below.

Example			
Product:	Svalbard-H1800		
Battery type:	Standard	Water-side cooling effect at 40 Pa as per table 3 =	310 W
Air flow rate:	80 m ³ /h	Supply-air cooling effect: $q/3600 \times 1,2 \times c_p \times \Delta t_{\text{room-supply air}}$ =	
$\Delta t_{\text{room-water}}$:	10°C	$80/3600 \times 1,2 \times 1010 \times 6$ =	160 W
$\Delta t_{\text{room-supply air}}$:	6°C	Total cooling effect =	470 W

Svalbard-H-1200 mm

Δt_k [°C]	6		8		10		L_w dB(A)		
Total pressure in duct [Pa]	40	80	40	80	40	80	40Pa	80 Pa	
Air flow rate [m ³ /h]	40	110	130	150	170	180	210	23	32
	50	120	140	160	190	200	230	27	33
	60	120	150	170	200	210	240	30	35
	70	130	150	180	200	220	250	32	36
	80	140	160	190	210	230	260	34	38

Table 2: Cooling effects at 0.06 litres of water per sec

Svalbard-H-1800 mm

Δt_k [°C]	6		8		10		L_w dB(A)		
Total pressure in duct [Pa]	40	80	40	80	40	80	40Pa	80 Pa	
Air flow rate [m ³ /h]	40	150	160	200	220	240	270	21	29
	60	170	190	220	250	270	310	26	32
	80	180	210	250	290	310	360	29	34
	100	200	230	270	310	330	380	32	37
	120	210	240	280	320	350	400	34	40

Table 3: Cooling effects at 0.06 litres of water per sec

Svalbard-H-2400 mm

Δt_k [°C]	6		8		10		L_w dB(A)		
Total pressure in duct [Pa]	40	80	40	80	40	80	40Pa	80 Pa	
Air flow rate [m ³ /h]	60	200	230	270	300	340	370	22	29
	80	220	250	295	330	370	410	26	32
	100	240	270	320	360	400	450	29	35
	120	250	290	335	385	420	480	31	37
	140	260	300	350	400	440	500	33	39

Table 4: Cooling effects at 0.06 litres of water per sec

Svalbard-H-3000 mm

Δt_k [°C]	6		8		10		L_w dB(A)		
Total pressure in duct [Pa]	40	80	40	80	40	80	40Pa	80 Pa	
Air flow rate [m ³ /h]	60	230	240	310	330	390	420	21	29
	80	250	270	340	380	430	480	23	31
	100	270	310	370	420	460	520	26	34
	130	300	340	400	450	500	560	30	37
	160	320	360	430	480	530	600	33	39

Table 5: Cooling effects at 0.06 litres of water per sec

Svalbard-H

DIMENSIONING

For accurate dimensioning, please use the Auracool software available for download at our website www.trox.no

The software enables selection of the optimum chilled beam for the prevailing conditions.

Among the factors calculated in Auracool are:

- Cooling effect
- Heating effect
- Sound power level
- Sound attenuation
- Pressure drop air/water
- Appropriate positioning

TECHNICAL DATA FOR COMMISSIONING DAMPER DRS-K, Ø125.

Diagram 1 shows total pressure drop over the damper alone as a function of air flow rate.

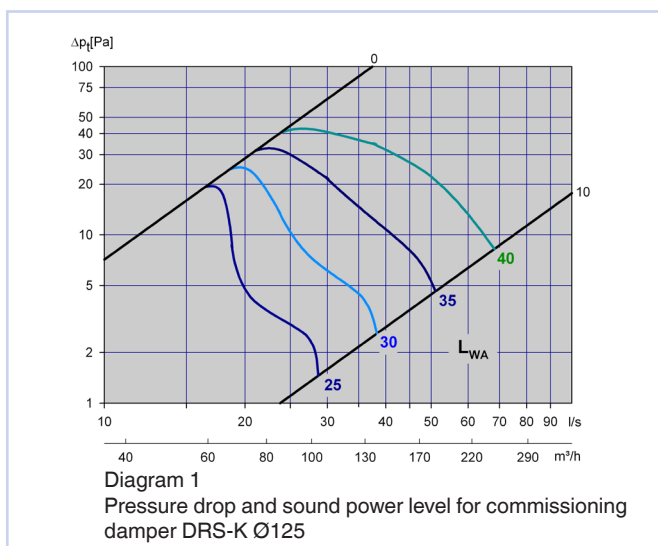
The graphs represent A-weighted sound pressure level. Table 6 provides the correction factor [KO] for conversion to various frequency levels.

Correction factors shown in the diagram are for open damper (right/ lower line) and closed damper (left/upper line). Open is equivalent to a damper angle of 0°.

The correction factors for intermediate points are interpolated between these. Sound power level for each frequency is calculated using the formula: $L_{W_{okt}} = L_{WA} + KO$ where L_{WA} is sound pressure level obtained from diagram 1.



Fig. 3, DRS-K Ø125



Correction factor [KO], DRS-K Ø125

DRS-K	Octave band (Hz)							
	63	125	250	500	1k	2k	4k	8k
Damper open(10)	19	5	1	-3	-9	-12	-16	-1
Damper closed(0)	17	0	-5	-10	-14	-9	-8	-19

Table 6: Correction factors for conversion to sound power level at the respective frequencies

Svalbard-H

THROW LENGTH

Appropriate positioning in order to prevent high velocities in the occupied zone is calculated by using the product selection software Auracool available for download via our website: www.trox.no

FLOW PATTERN

The direction and angle of the flow pattern can be adjusted via Jet Split lamellae. This can be visualised in the Auracool software available for download at our website: www.trox.no

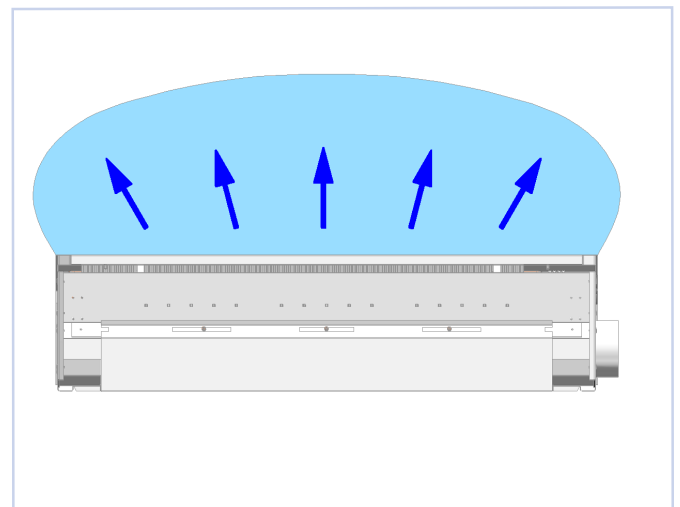


Fig. 4: Flow pattern

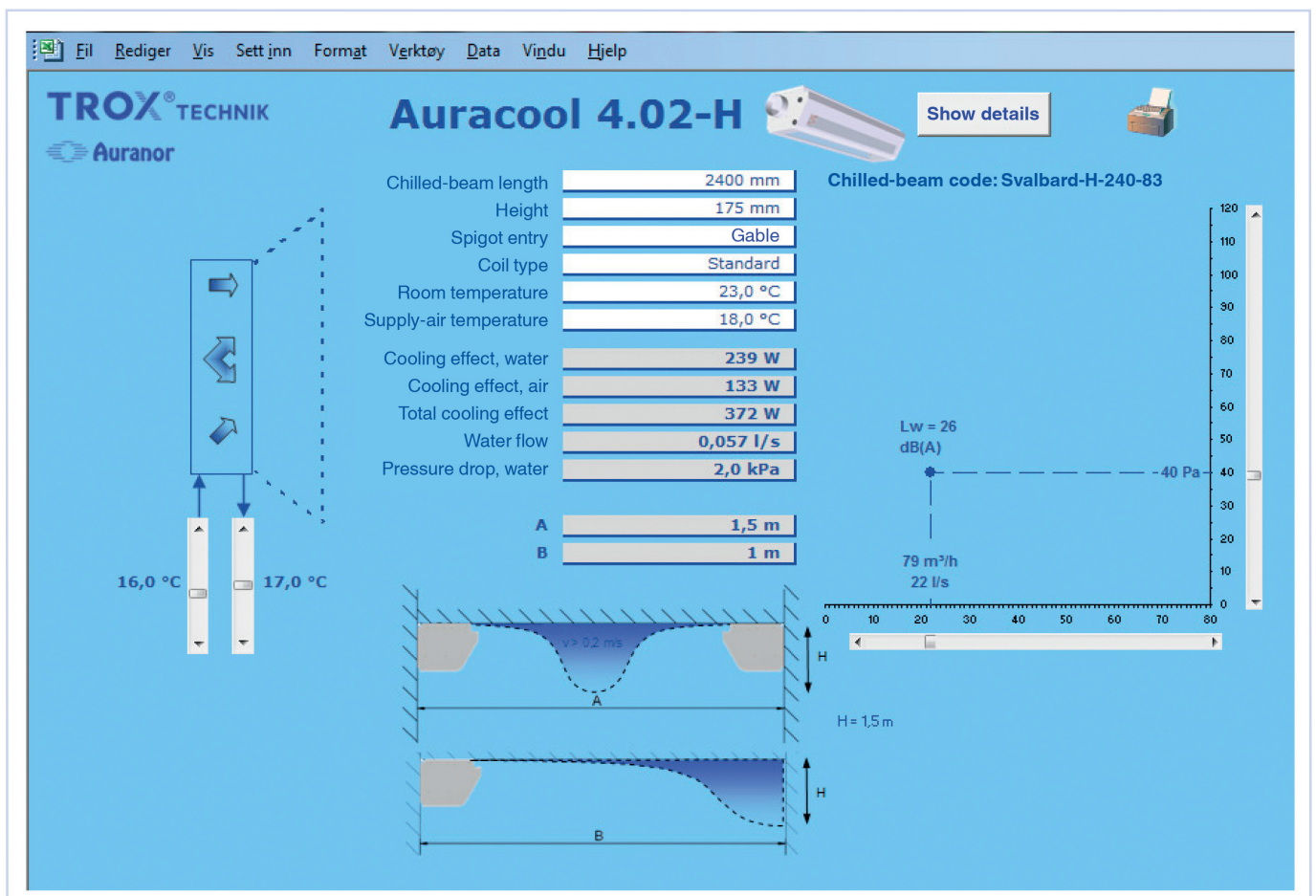


Fig. 5: Auracool window

Svalbard-H

INSTALLATION, Svalbard-H

Svalbard-H is supplied with a mounting bar for attachment to wall, and to which the chilled beam is then attached. Detailed installation guidelines are provided with each product delivery.

INSTALLATION, water valve

The water valve is to be installed on the return (chilled water out), and with the water-valve arrow pointing away from the cooling coil (the various connection options are shown in fig. 8).

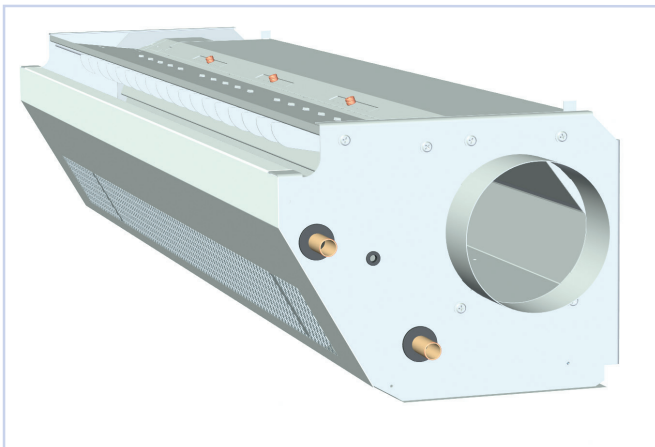


Fig. 6: Svalbard-H, installation

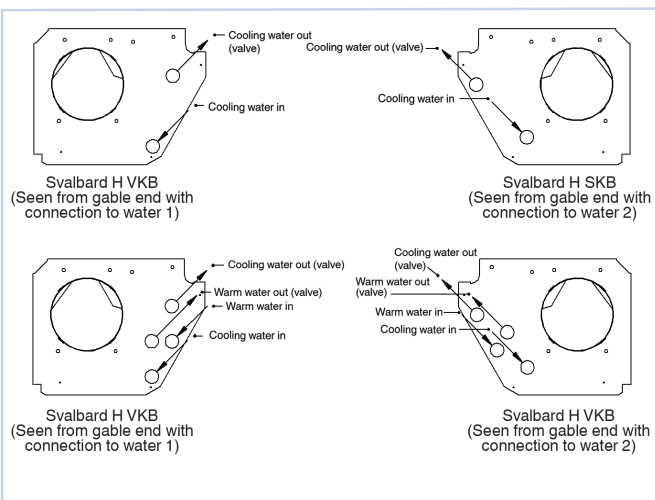


Fig. 8 Svalbard-H, water valve installation

Svalbard-H is developed and manufactured by:

COMMISSIONING

Svalbard-H will have a pre-set air flow rate and pressure in accordance with the details specified. The pre-set value and correction factor will be specified on an appropriately positioned label which is visible when the front is folded down. If required, the air flow rate can be adjusted on site. New nozzle positions can be obtained from the factory or in Auracool which can be downloaded from our website: www.trox.no
Max. working pressure waterside 10 bars.
Max. test pressure waterside 15 bars.

MAINTENANCE

Full access to the coil is achieved by folding down the front panel as shown in fig. 7. Vacuuming and, if required, using a damp cloth to clean the unit is recommended.

ENVIRONMENT

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

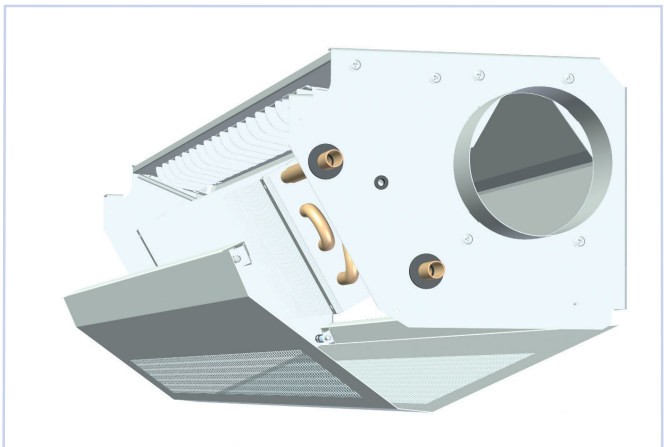


Fig. 7: Svalbard-H, installation



Fig. 9: Svalbard-H, blind cover.

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