



SVALBARD-F

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- Open installation
- Available in 1200mm to 3000mm lengths
- Adjustable pressure/air flow rate
- Variable flow pattern
- Dimensioningprogram Auracool - F on our website

APPLICATION

Svalbard-F is a hydronic cooling, heating and ventilation system for use in offices, shops, schools etc. The system is designed to provide excellent cooling effect, and a high induction level ensures a draft-free environment in the occupied zone. Svalbard-F is designed for open installation in ceiling or covering.

Design

- Nozzle configuration for the chilled beam, i.e. desired air supply and pressure, is specified at time of order.
- Svalbard-F is delivered with integrated pressure outlet for air flow rate measurements.
- The front panel can be folded down for inspection and cleaning.
- Svalbard-F is available in installation lengths of 1200, 1800, 2400 and 3000 mm.
- Dispersion options: symmetrical 50/50 or asymmetrical 75/25 (25/75) – can be adjusted on site.
- Connection to air: gable end Ø125 mm (spigot dimension).
- Connection to water: Cu Ø15 x 1, 0 mm.
- Changeable flowpattern via Jet Split lamellae in the beams outlet.
- Blind cover can be provided for adaptation to the wall. See Figure 9.

DESCRIPTION

Materials and surfaces

Frame and casing in a galvanised, steel-plated finish. Delivered in a powdered painted finish (white RAL 9003 - gloss 30) as standard. Copper tube coils with aluminium lamellae. Adjustable lamellae are in a plastic design.

INSTALLATION

SVALBARD-F

Svalbard-F is supplied with a mounting bar for attachment to ceiling or covering (fig. 7). Detailed installation instructions is to be found on our website: trox.no For connection to water (copper pipe Ø15/1), use press, push or screw fittings. I.e. do not use soldering or similar as the heat may damage the O-ring on the push fitting between the cooling coil and pipe bend (see fig. 6 and 7).

WATER VALVE

The water valve should be placed on the return, that is, with arrow on the valve away from the cooling battery and at the tube as figure 8 shows..

TECHNICAL INFORMATION

Order code	
Svalbard-F-1800-104-SKB-A-50/50-1-W-A1-S-0	
	1 2 3 4 5 6 7 8 9 10 11
1 Type/variant Svalbard F, suspended installation	7 Water connection* 1 eller 2
2 Length 1200, 1800, 2400 eller 3000	8 Water valve 0 without water valve WTRV-2-way valve, delivered loose/unassembled**
3. Adjustment factor Auracoeffactor	9 Actuator 0 uten aktuator A1 actuator 24V, delivered loose/unassembled** A2 actuator 230V, delivered loose/unassembled**
4. Coil type SKB standard cooling coil HiB high-capacity coil VKB heating and cooling coil	10 Damper 0 without damper S with damper DRS-K 125**
5. Air connection* A eller B	11 Exposed surface 0 RAL 9003 SL-RAL special finish RAL SL-NCS special finish NCS
6. Flow pattern 0 standard 50/50 25/75 asymmetrical, x=25/y=75 75/25 asymmetrical, x=75/y=25	

* The standard air and water connections are at the same gable end A1 or B2, see Figure 1.

** Accessories supplied loose/unassembled.

Exampel: Svalbard-F-1800-104-SKB-A-50/50-1-W-A1-S-0

Type/variant	Svalbard-F
Length	1800
Adjustment factor	104
Coil type	SKB
Air connection*	A
Flow pattern	50/50
Water connection*	1
Water valve	W
Actuator	A1
Damper	S
Exposed surface	0 RAL 9003

Svalbard F-1200 mm

Δt _a [°C]		6				8				10				L _a	
Total pressure in duct (Pa)		40		80		40		80		40		80		dB(A)	
Coil type		SKB	HKB	40 Pa	80 Pa										
Air flow rate (m ³ /h)	40	210	250	240	280	280	330	320	370	350	410	410	470	<20	27
	60	240	280	270	330	330	380	390	440	410	470	470	550	<20	28
	80	260	300	300	340	340	390	400	460	420	510	510	600	24	30
	100	270	320	320	360	360	420	430	490	450	550	550	650	27	32
	120	280	340	330	380	380	440	450	520	470	570	570	680	31	35

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

Svalbard F-1800 mm

Δt _a [°C]		6				8				10				L _a	
Total pressure in duct (Pa)		40		80		40		80		40		80		dB(A)	
Coil type		SKB	HKB	40 Pa	80 Pa										
Air flow rate (m ³ /h)	90	300	350	340	400	400	460	440	520	500	580	560	640	<20	24
	75	340	400	380	460	460	520	500	600	580	680	640	740	<20	26
	100	380	450	420	500	500	580	560	680	620	700	680	820	22	30
	125	400	480	460	550	550	640	620	740	700	780	760	880	26	32
	150	420	500	480	580	580	680	660	780	740	840	820	940	29	34

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

Svalbard F-2400 mm

Δt _a [°C]		6				8				10				L _a	
Total pressure in duct (Pa)		40		80		40		80		40		80		dB(A)	
Coil type		SKB	HKB	SKB	HKB	40 Pa	80 Pa								
Air flow rate (m ³ /h)	60	400	440	440	500	500	580	540	640	620	720	680	800	<20	24
	90	440	500	480	600	600	680	640	740	700	800	760	900	<20	26
	120	480	560	540	640	640	740	720	840	800	920	900	1060	23	29
	150	520	620	580	680	680	780	760	880	840	980	960	1140	26	32
	180	550	660	620	740	720	840	820	960	900	1040	1040	1200	30	35

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

Svalbard F-3000 mm

Δt _a [°C]		6				8				10				L _a	
Total pressure in duct (Pa)		40		80		40		80		40		80		dB(A)	
Coil type		SKB	HKB	SKB	HKB	SKB	HKB	SKB	HKB	SKB	HKB	SKB	HKB	40 Pa	80 Pa
Air flow rate (m ³ /h)	80	486	556	538	620	658	763	714	818	815	947	898	1038	<20	26
	110	538	623	718	819	724	822	813	937	907	1044	1001	1175	<20	29
	140	574	677	657	782	784	923	902	1035	967	1141	1098	1304	25	31
	170	616	723	698	835	824	955	959	1096	1039	1224	1173	1421	28	34
	200	638	749	740	860	864	1000	975	1135	1089	1263	1259	1514	32	37

Air is supplied via adjustable nozzles which ensure that the air is dispersed along the ceiling in a fan-shaped flow pattern. This technique optimises the dispersion effect by providing a larger area for the supply air and indoor air to mix. Such effective mixing of indoor air and supply air, i.e. induction, minimises the risk of draft in the occupied zone. Svalbard systems which are used for heating only utilises the same technique for effective dispersion of heat along the ceiling. The secondary air is extracted through the perforated area on the unit's frontpanel in order to avoid dirt accumulation on the ceiling.