

EVH S21 V.2

Electric duct preheater for heat exchanger freeze protection

Features

- Heat exchanger freeze protection by means of preheating of the intake air.
- Maintains the duct air temperature at a point that prevents the heat exchanger freezing.
- Compatible with \varnothing 125 up to 315 mm air ducts.



Design

- The casing is internally filled with 20 mm layer of non-flammable mineral wool.
- The casing and the junction box are made of galvanized steel.
- Heating elements are made of stainless steel.
- Airtight connection to air ducts due to rubber seals.

Control

- Equipped with a power cable.
- The signal cable for connection to the controller of the air handling unit.
- Equipped with a triac power regulator. Regulation is carried out via switching-on and switching-off the full load. Load commutation is carried out by the semiconductor device (triac). The switching unit has no wearing mechanical elements.
- Equipped with overheat thermostats:**
 - main protection with automatic restart at +60 °C;
 - emergency protection with manual restart at +90 °C.

Mounting

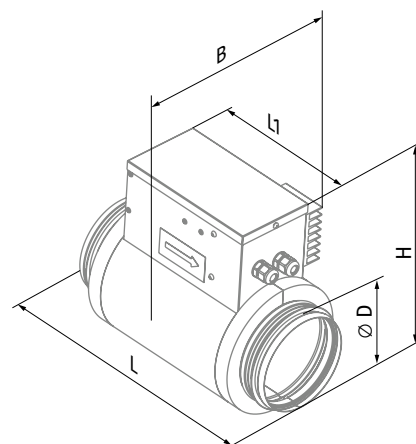
- Fixation to round air ducts by means of clamp (included in the delivery)
- The heater is controlled by the air handling unit through the cable supplied and connected to the heater at the factory.
- In case of horizontal mounting position the control box cover must be directed upwards only. Permitted deviation up to 90°. The control box cover may not be positioned downwards!

Compatibility chart

Heater model	Unit model
EVH 125 S21 V.2	KOMFORT EC SB unit with a \varnothing 125 pipe and an S21 automation without a DB-9M connector
EVH 150 S21 V.2	KOMFORT EC SB unit with a \varnothing 150 pipe and an S21 automation without a DB-9M connector
EVH 160 S21 V.2	KOMFORT EC SB unit with a \varnothing 160 pipe and an S21 automation without a DB-9M connector
EVH 200 S21 V.2	KOMFORT EC SB unit with a \varnothing 200 pipe and an S21 automation without a DB-9M connector
EVH 250 S21 V.2	KOMFORT EC SB unit with a \varnothing 250 pipe and an S21 automation without a DB-9M connector
EVH 315 S21 V.2	BlauAIR unit with a \varnothing 315 pipe and an S21 automation without a DB-9M connector

Overall dimensions [mm]

Model	\varnothing D	B	H	L	L1
EVH 125-0.6-1	125	164	249	306	192
EVH 125-0.8-1	125	164	249	306	192
EVH 125-1.2-1	125	164	249	306	192
EVH 150-0.8-1	150	189	280	306	192
EVH 150-1.2-1	150	189	280	306	192
EVH 150-1.7-1	150	189	280	306	192
EVH 150-2.0-1	150	189	280	306	192
EVH 160-0.8-1	160	197	291	306	192
EVH 160-1.2-1	160	197	291	306	192
EVH 160-1.7-1	160	197	291	306	192
EVH 160-2.0-1	160	197	291	306	192
EVH 200-1.2-1	200	239	336	306	192
EVH 200-1.7-1	200	239	336	306	192
EVH 200-2.0-1	200	239	336	306	192
EVH 250-1.2-1	250	287	388	307	192
EVH 250-2.0-1	250	287	388	307	192
EVH 250-3.0-1	250	287	388	307	192
EVH 315-2.0-1	315	353	454	306	192
EVH 315-3.0-1	315	353	454	306	192

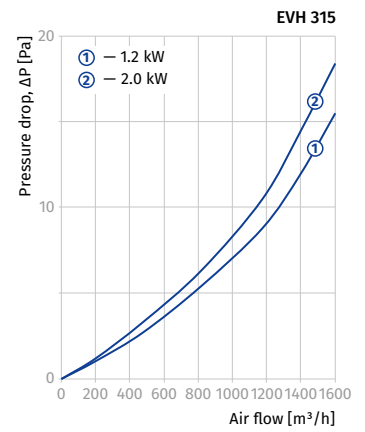
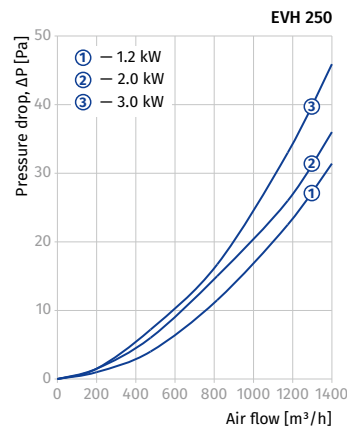
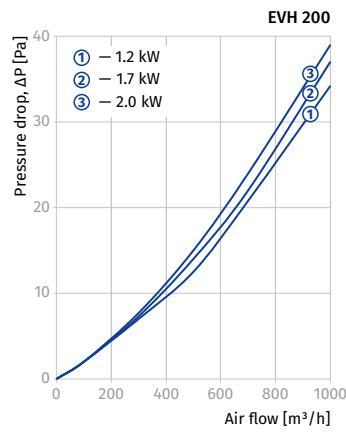
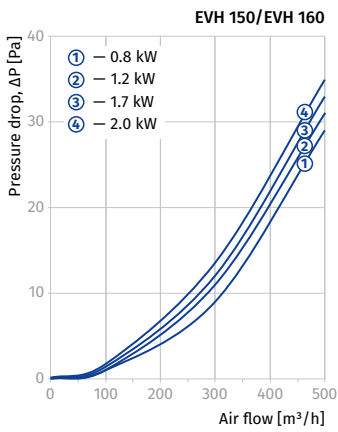
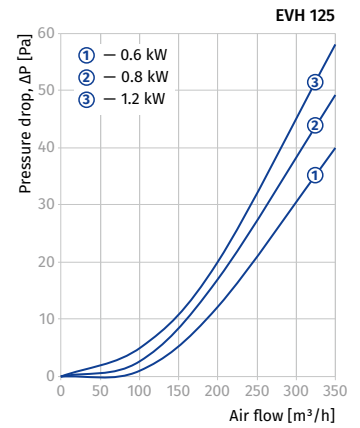


Designation key

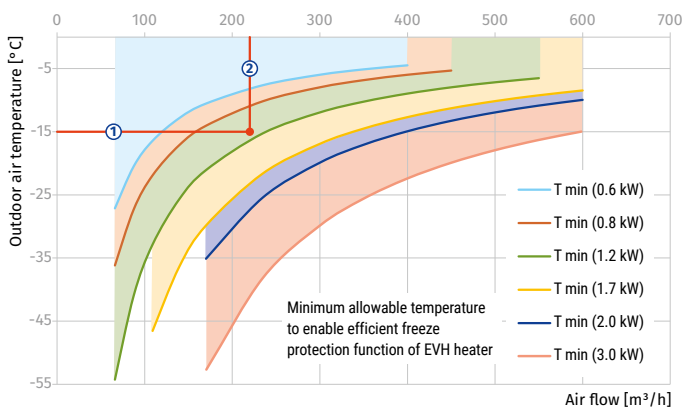
Series	Connected air duct diameter [mm]	Heater power [kW]	Number of phases	Compatibility with automation
EVH	125; 150; 160; 200; 250; 315	– 0.6; 0.8; 1.2; 1.7; 2.0; 3.0	– 1: single-phase	S21 V.2: compatible with an S21 automation without a DB-9M connector

Technical data

Parameters	Min. air flow [m³/h (l/s)]	Power [kW]	Current [A]
EVH 125-0.6-1	60 (17)	0.6	2.6
EVH 125-0.8-1	80 (22)	0.8	3.5
EVH 125-1.2-1	90 (25)	1.2	5.2
EVH 150-0.8-1	80 (22)	0.8	3.5
EVH 150-1.2-1	90 (25)	1.2	5.2
EVH 150-1.7-1	160 (44)	1.7	7.4
EVH 150-2.0-1	170 (47)	2.0	8.7
EVH 160-0.8-1	80 (22)	0.8	3.5
EVH 160-1.2-1	150 (42)	1.2	5.2
EVH 160-1.7-1	160 (44)	1.7	7.4
EVH 160-2.0-1	170 (47)	2.0	8.7
EVH 200-1.2-1	150 (42)	1.2	5.2
EVH 200-1.7-1	160 (44)	1.7	7.4
EVH 200-2.0-1	170 (47)	2.0	8.7
EVH 250-1.2-1	180 (50)	1.2	5.2
EVH 250-2.0-1	200 (56)	2.0	8.7
EVH 250-3.0-1	375 (104)	3.0	13.0
EVH 315-2.0-1	220 (61)	2.0	8.7
EVH 315-3.0-1	320 (89)	3.0	13.0



Heater capacity selection diagram



EVH heater parameters calculation example:

- It is necessary to select EVH freeze protection heater for the KOMFORT EC SB 350 S21 unit. Design outdoor air temperature in cold season is -15 °C. Design capacity is 220 m³/h.
- Identify the interception point of the air flow line (1) with the outdoor temperature line (2). In this case the heater with the capacity of 1200 W will assure efficient freeze protection of the heat exchanger. Select the **EVH 160-1.2-1** heater with the diameter corresponding to the diameter of the spigot of the KOMFORT EC SB 350 S21 unit.