

ENH S21 V.2

Duct heater for supply air reheating

Features

- The heater is designed for integration into a ventilation system and joint operation with an air handling unit equipped with a control system used to switch on the heater and control its operation.
- The heater maintains the supply duct air temperature at a point set by the unit controller.
- Compatible with Ø 125 up to 315 mm air ducts.



Design

- The casing, the junction box and the heater cover are made of galvanized steel with the heating elements in stainless steel. The heater casing is additionally heat-insulated with 20 mm non-flammable mineral wool layer. The heaters are equipped with rubber seals for airtight connection to the air ducts.
- **ENH S21 V.2** duct heaters are equipped with a factory-wired power supply cable and control cable, as well as a duct temperature sensor which is connected to the air handling unit.
- The temperature is controlled smoothly by the air handling unit controller using a PWM signal in cycles of 10 seconds. Load commutation is carried out by a semiconductor device (triac). The heaters are equipped with overheat thermostats:
 - main overheat protection with automatic reset at +60 °C
 - emergency overheat protection with manual reset at +90 °C.

Mounting

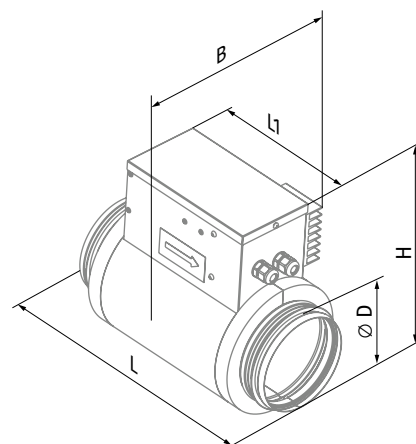
- The heater design ensures its mounting on the round ducts in any position by means of clamps (included in delivery). The air flow direction shall match the direction of the arrow on the heater casing.
- In case of horizontal mounting the control box must be installed with the cover upwards. Swivel range from the normal position up to max. 90°. Do not install the control box with the cover downwards.

Compatibility chart

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

Overall dimensions [mm]

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

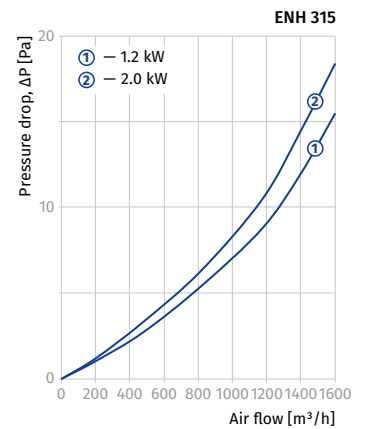
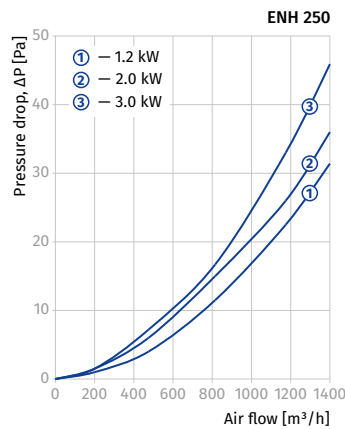
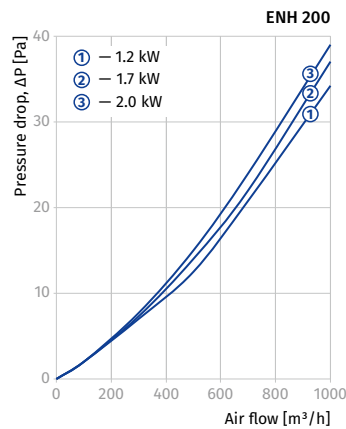
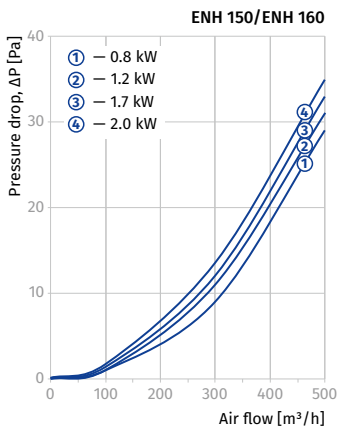
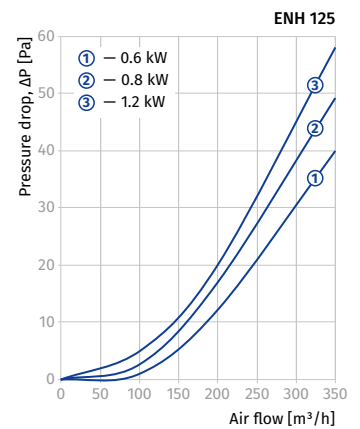


Designation key

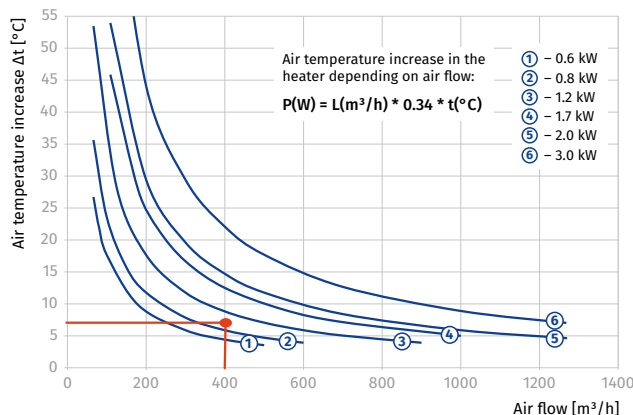
Series	Connected air duct diameter [mm]	Heater power [kW]	Number of phases	Compatibility with automation
ENH	125; 150; 160; 200; 250; 315	– 0.6; 0.8; 1.2; 1.7; 2.0; 3.0	– 1: single-phase	S21 V.2: compatible with an S21 automation without a DB-9M connector

Technical data

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



Heater capacity selection diagram



• **The ENH heater parameters calculation example:**

- It is necessary to select a heater for supply air post-heating to a temperature of +24 °C, provided the temperature downstream of the heat exchanger is +17 °C. Therefore it is essential to increase temperature by +7 °C. The ventilation system incorporates the KOMFORT EC SB 350 S21. Rated air capacity 400 m³/h.
- Determine the intersection of the post-heating temperature line (+7 °C) and the rated air capacity line (400 m³/h). In this case the 1200 W heater capacity provides necessary post-heating (+7 °C). The **ENH 160-1.2-1** with the diameter matching the spigot diameter of the air handling unit KOMFORT EC SB 350 S21 is a suitable model.