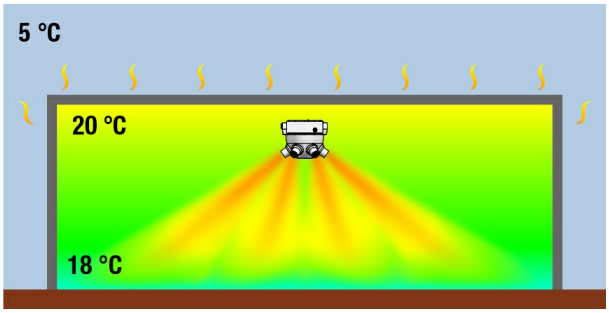
MULTI-DIRECTIONAL AIR HEATER

NOZ$_2$

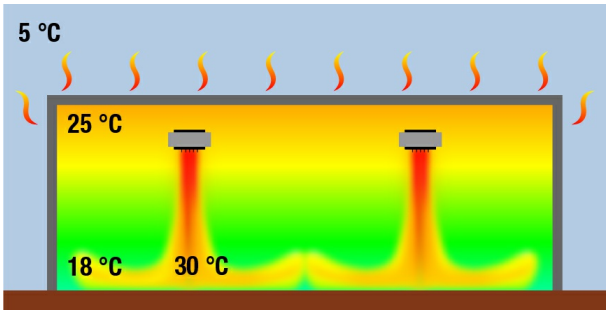
biddle
CLIMATE SOLUTIONS

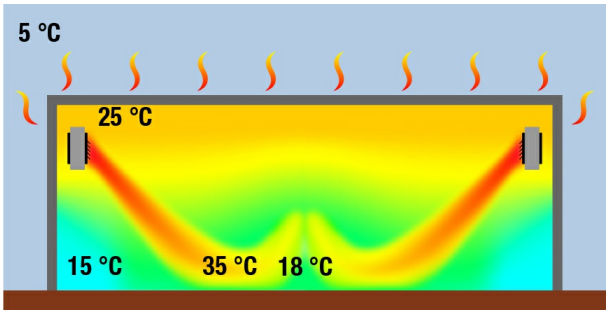
Energy-efficient heat source provides comfort in large rooms

When it comes to providing large, and often high buildings, with the best possible source of efficient heating Biddle has the solution; an air heater that easily surpasses other air heaters. Combining high energy savings with a comfortable working environment is a challenge that the NOZ$_2$ takes on with verve. The NOZ$_2$ meets these requirements with its compelling customer benefits such as optimal distribution of air, minimal loss of heat and fully automatic control.



Biddle NOZ$_2$ air heater:
optimal air distribution & minimal heat loss





Conventional ceiling and wall heaters:
large temperature differences & high heat loss

Energy-saving climate control

The NOZ$_2$ air heater is the ideal energy-efficient solution. The NOZ$_2$ minimises temperature differences in the room and heat loss to the outside environment. Warm air naturally rises up to the ceiling. Adjustable nozzles gradually re-distribute the warm air from the ceiling to the floor level. Warm air is discharged downward through the nozzles with high velocity and induces movement of the surrounding air. As a consequence heated air is distributed optimally throughout the room. The NOZ$_2$ has a large influence area, which means fewer devices may be required. The temperature at the top of the room drops considerably by using the inducing effect of the NOZ$_2$. As a result, less heated air escapes outside via the roof and walls, which results in considerable energy savings. Furthermore on average 15% less power is consumed to heat up the room than with conventional heating devices.

Automatic heating where needed

When the NOZ$_2$ is fitted with automatic controls it constantly maintains the set temperature. The new energy efficient (EC) fans have stepless control, which ensures the fan runs at the optimum speed. The NOZ$_2$ energy efficiency is further enhanced by using the fans to provide destratification so that the warm air at ceiling level is re-used to automatically maintain a comfortable working environment at floor level. All this is achieved without any need for the user to adjust the controls.

Benefits NOZ_2

Energy-saving climate control

- Power consumption reduced by 15%
- Optimal air distribution: large influence area & fewer devices (adjustable nozzles)
- Efficient re-use of energy
- Minimised heat loss

Automatic heating where it is needed

- Comfortable indoor climate
- High air displacement due to induction effect
- Always at the correct setting (automatic control)

And even more ....

- High performance stepless EC-fans
- Automatic control (optional)
- Adjustable discharge pattern
- Easy to operate & maintain
- Models available for water heating, ambient, gas and ventilation applications

Various heat sources

The NOZ_2 can be configured to be suitable for any desired heating source including water heating, ambient, gas and/or ventilation models.

Applications

The NOZ_2 air heaters are suitable for rooms from 4 - 16 m (13 - 52 ft) in height such as factories, storage rooms, warehouses, DIY shops and sports halls.

Leading references:

- AKZO Nobel
- Daimler Chrysler
- Edeka
- Ford
- Grolsch
- MAN
- Netto
- Opel

Automatic comfort and energy savings

In large and high spaces, variable conditions both inside and outside the building often result in a climate which is difficult to control. The effortless realisation of a comfortable indoor climate at the lowest possible energy costs is an ideal scenario for many companies. The fully automatic Biddle NOZ_2 air heater makes this possible.

Constant and optimal

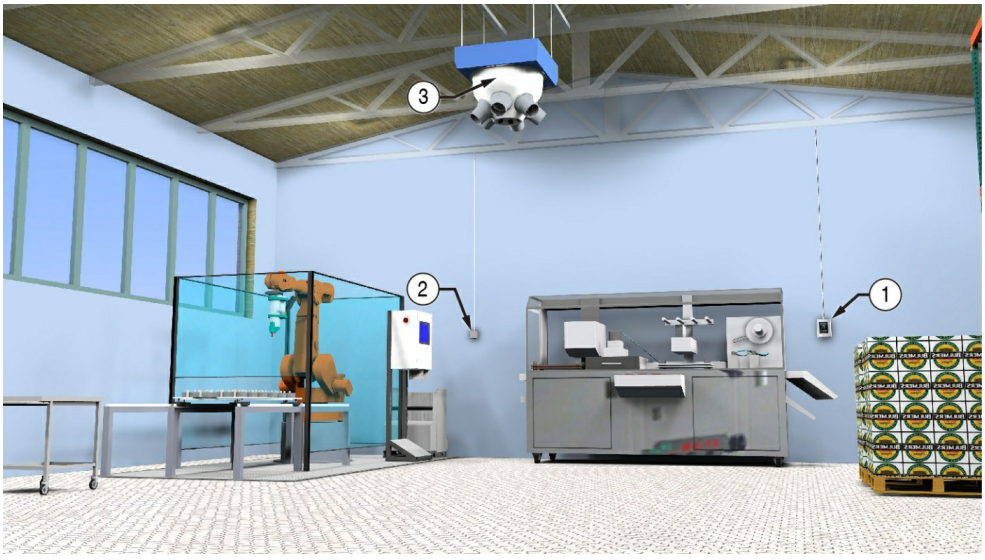
The indoor climate is automatically controlled based on the room temperature set by the user. The heat output and fan speed of the NOZ_2 are automatically adjusted so that the unit is always operating at the desired setting no matter the circumstance. A constant, optimal and energy efficient indoor climate is the result. The automatic NOZ_2 air heater provides the best possible air distribution and minimum heat loss without requiring the user to make any changes or adjustments to achieve this.

Touchscreen and intelligent control

The automatic control of the NOZ_2 contains two well-known Biddle features: the intelligent **CHIPS** technology and the **b-touch** user friendly touchscreen control panel. By combining data from various sensors, the CHIPS technology ensures that the air heater always has the best possible setting.

Intelligent CHIPS-technology

The automatic control with CHIPS technology is constantly searching for the best possible mix of air volume and heat for the correct operation of the NOZ_2. The CHIPS technology adjusts these independently of each other to suit the various situations in the room.



1. b-touch control panel
2. room temperature sensor
3. discharge temperature sensor

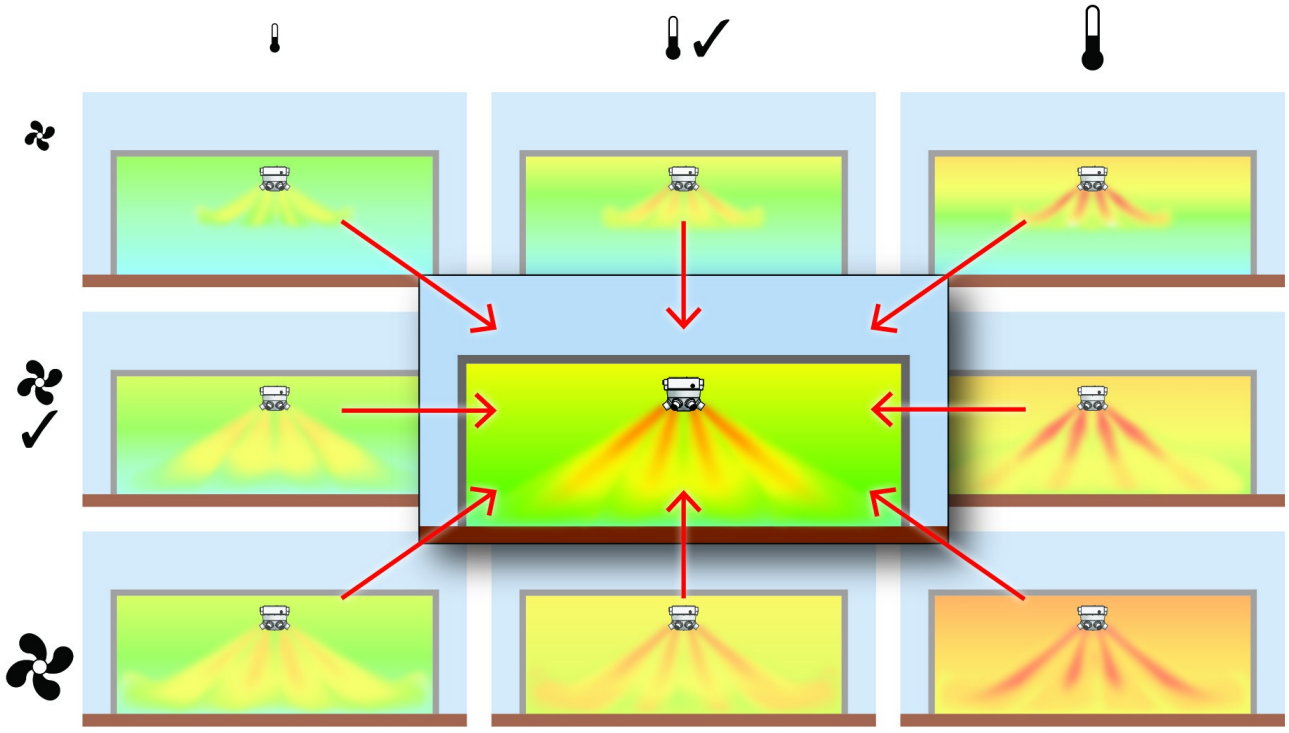
CHIPS-technology

Optimal and directed air distribution

To achieve the ideal air distribution, it is very important to set the nozzles at the correct angle. Depending on the floor area to be heated and the height of the room, the installation height and the nozzle angle need to be programmed into the b-touch. Air speed will then be continuously adjusted based on the temperature difference between the discharged air (**3**) and the measured room temperature (**2**) at floor level (1.5 m / 4 ft). In this way, the air distribution (destratification) throughout the room is optimised and the air will always reach the floor.

Comfortable indoor climate

Heat is regulated based on the room temperature set on the b-touch (**1**). The intelligent software in the integrated room temperature control accurately determines (sensor **2**) the heat to be added in order to maintain the desired room temperature at floor level. First, use is made of available heat from a high level in the room. Next, the water valve precisely regulates the quantity of heat in order to maintain the set temperature at floor level. The required air volume is automatically adjusted accordingly.



Sufficient air speed in order to reach the ground and sufficient heat in order to heat the induced air in such a way that the desired room temperature (comfort) is reached.

Conventional controlled air heater

Regarding conventional air heaters only the speed is controlled manually or automatically. In this way the air volume and heat are interlinked. In contrast, the Biddle automatic control regulates the air volume and heat independently of each other, which ensures an ideal situation.

b-touch

The user-friendly **b-touch** control panel has the ability to set all NOZ_2 functions, such as switching the unit on/off and adjusting room temperature, but also situation-specific settings. Because the intelligence of the automatic NOZ_2 is integrated in the unit, the NOZ_2 can also function without the b-touch. The b-touch is then used as a service panel. The b-touch offers the following:

- manual and auto mode
- programmable timer
- touchscreen control
- status display
- 4 language navigation menu: English, Dutch, German and French
- convenient configuration wizard for the required on site settings
- screen security with personal PIN code
- possibility for integration of company logo
- easy to be put outside the room or in a casing

Analysis tool

The b-touch has an USB port at the bottom for exporting user data, importing and exporting settings and updating new software. This offers the user the opportunity to monitor the operation of the NOZ_2 and, when necessary, to adjust settings.

NOZ_2 air heater: for a comfortable indoor climate

And more ...

Modbus

The automatically regulated NOZ_2 has the ability to communicate using the Modbus protocol. This makes remote control with a BMS system quite easy. The Modbus and the b-touch can be used in parallel, so that local control and remote control can occur simultaneously.

Energy efficiency

The NOZ_2 is supplied as a standard with energy efficient EC fans, enabling stepless control. Compared to traditional AC fans this will lead to considerable savings.

Control of multiple units

A single b-touch can be used to regulate a maximum of 5 units. When ventilation is provided, each unit must be equipped with a b-touch controller.

Benefits

Automatic control

- Self-regulating: always maintains the right settings
- A constantly comfortable indoor climate
- Most energy efficient climate solution

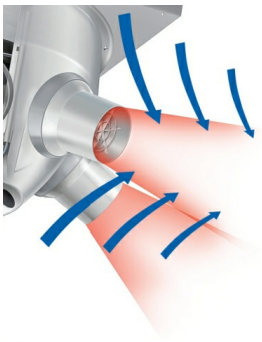
Touchscreen and intelligent

- b-touch control panel
- Best possible setting due to CHIPS technology

And more ...

- Stepless control (EC fans)
- Communication by BMS / Modbus possible

Optimum air distribution by induction



The air jet causes surrounding stagnant air to move (induction)

The NOZ_2 is equipped with six individually adjustable nozzles. The nozzles determine the air direction and thus the depth and the area of influence of the air heater. Warm air is blown out through the nozzles at high speed. The air jet from the NOZ_2 draws in the surrounding, stationary air, so that a good mixture of air is achieved. This is the inductive effect of the air heater. The heat is quickly and evenly distributed throughout the large space. As a result, outside heat loss through the ceiling and walls is minimised. Due to the strong inductive effect, the induction air flow rate of 10 times the primary air displacement, the temperature gradient is only 0,25 °C per metre (0,13 °F per ft) contrary to conventional air heaters. The large area of influence of the NOZ_2 is one of the reasons why fewer units can comfortably heat a large space.

Benefits

Induction

- Quick and even air distribution throughout the room
- Minimum heat loss through ceiling and walls
- Low temperature gradient (minimum difference in temperature)
- Large air displacement due to induction
- Fewer units due to large area of influence

b-control

Stepless control

The b-control is a manual 0 – 10 V potentiometer, which is continuously variable and can be easily set to the desired fan speed. When using the basic control it is necessary to manually adjust the NOZ_2 throughout the day to compensate for changes in the environment and outside temperatures.

Automatic on and off

Use of the optional room thermostat enables the NOZ_2 to be automatically switched on in order to obtain the set room temperature and off once the room temperature is reached.

Energy efficiency

The NOZ_2 is supplied as a standard with energy efficient EC fans as standard, enabling stepless control. Compared to traditional AC fans this will lead to considerable savings.

Control of multiple units

A single b-control can be used to control a maximum of 5 units.

Benefits

b-control

- Stepless control (0 – 10 V)
- Automatic on/off (by means of a room thermostat)
- Easy to operate
- Control of max. 5 units

A suitable solution for every situation

Possibilities:

- Suspended ceiling model
- For ceiling heights between 4 - 16 m (13 - 52 ft)
- Recirculation and/or ventilation unit
- Two models: NOZ_2 25 (small range) and NOZ_2 50 (large range)
- Supply NOZ_2 25: 230V and NOZ_2 50: 480V

Heat source:

- Water: see below for possibilities
- Ambient: without heating
- Gas: with the exception of NOZ_2 50 (information available upon request)

Control options:

- Automatic control with b-touch control panel and CHIPS technology
- Basic control with b-control (0 - 10 V)
- BMS: Modbus communication

Standard colours:

- Combination RAL 5011 / 9006
- RAL 9006
- Other RAL colours available on request

Types of water coils:

Standard: H2 (2-row), H3 (3-row) and H6 (6-row)

The NOZ_2 with automatic control can be provided for many water ranges (max. water temperature 120 °C / 16 bar - 248 °F / 232 psi) The discharge temperature is limited by the control to 50 °C (122 °F). In the case of an uncontrolled basic model, consideration should be given to the maximum temperatures of 90/70 °C (194/158 °F) for the H2, 80/60 °C (176/140 °F) for the H3 and 60/40 °C (140/104 °F) for the H6.

On request: H1p (1-row)

Suitable for high water temperatures (130/110 °C - 266/230 °F, 150/130 °C - 302/266 °F and 175/155 °C - 347/311 °F) and for high pressure (max. 23,8 bar / 345 psi). Delivered with welded flanges.

For the right NOZ_2

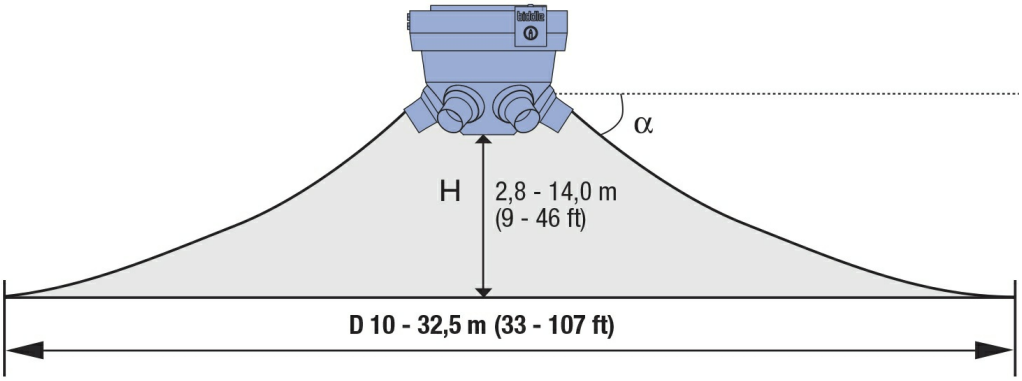
There are two models available in the NOZ_2 range. The models are designed to be mounted at different heights as shown in the table below.

	mounting height[1]	influence area
NOZ_2 25	2,8 – 8,5 m (9 - 28 ft)	100 – 400 m^2 (1100 - 4300 sqft)
NOZ_2 50	3,5 – 14 m (11 - 46 ft)	200 – 800 m^2 (2200 - 8600 sqft)

[1] The mounting height is measured from the bottom of the unit to the floor.

Ideal discharge direction

To optimise the distribution of the discharged air, the nozzles can be adjusted. The ideal discharge direction depends on the influence area and the mounting height. These two factors have a significant influence on the selection of the NOZ_2 .



Representation of the mounting height (H) and the diameter of the heated floor area (D).

The completion of the below steps will lead to the ideal discharge direction and the correct selection of the NOZ_2.

1. Influence area (heated floor area)

Based on the dimensions of the room, the diameter (**D**) of the heated floor area will be determined. Due to the inducing effect of the NOZ_2 a larger area will be heated than the diameter of the heated area.

2. Mounting height

The mounting height (**H**) is the distance between the floor and the bottom of the unit.

3. Ideal discharge direction

By means of the table on the next page the correct nozzle angle (**α**) can be selected.

4. Model and number of NOZ_2 air heaters

By means of the table on the next page the NOZ_2 model and the number of devices can be selected.

5. Selection NOZ_2

The selection depends on the applied heat source (water, ambient or gas), the desired room temperature and the power consumption (kW). The final selection of the NOZ_2 is based on the technical data.

Discharge direction and selection

Due to the strong inductive effect, the induction flow rate is 10 times the primary air displacement and the temperature gradient is only 0,25 °C per metre (0,13 °F per ft) contrary to conventional air heaters. By applying a NOZ$_2$ on average 15% will be saved on the power consumption (kW) (based on ISSO 57 heat loss calculation - The Netherlands).

Nozzle angle based on mounting height and diameter of the heated floor area

	D [m]	10	12,5	15	17,5	20	22,5	25	27,5	30	32,5
H [m]	(ft)	(32)	(41)	(49)	(57)	(65)	(73)	(82)	(90)	(98)	(106)
3	(9)	42	36	31	27	24	22	-	-	-	-
4	(13)	50	44	39	34	31	28	26	24	22	20
5	(16)	-	50	45	41	37	34	31	29	27	25
6	(19)	-	-	50	46	42	39	36	33	31	29
7	(22)	-	-	-	50	46	43	40	37	35	33
8	(26)	-	-	-	-	50	47	44	41	39	36
9	(29)	-	-	-	-	53	50	47	44	42	40
10	(32)	-	-	-	-	-	53	50	47	45	43
11	(36)	-	-	-	-	-	-	53	50	48	45
12	(39)	-	-	-	-	-	-	-	53	50	48
13	(42)	-	-	-	-	-	-	-	-	52	50
14	(45)	-	-	-	-	-	-	-	-	-	52

NOZ$_2$ 25
NOZ$_2$ 50

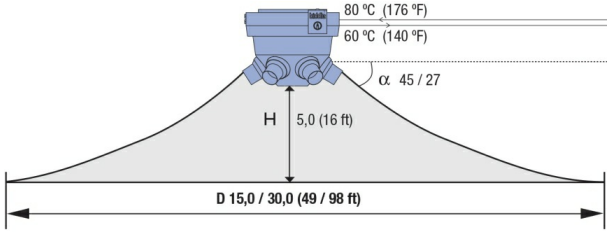
Example NOZ$_2$ selection

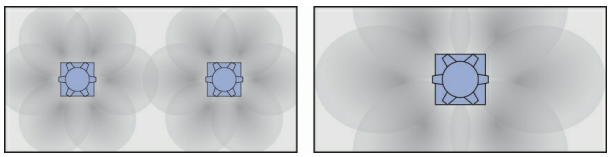
Room data:

Dimensions: 30 x 15 m (98 x 49 ft), height: 6 m (20 ft)
Room temperature: 15 °C (59 °F)
Water range: 80/60 °C (176/140 °F)
Heat loss (conventional): 54 kW (184 kBTU/h)

Steps:

1. **D** = 15 or 30 m (49 or 98 ft)
2. **H** = 5 m (16 ft)
3. **α** = 45 or 27
4. 2 x NOZ$_2$ 25 or 1 x NOZ$_2$ 50
5. **kW** = 46 (156 kBTU/h) -/-15% x conventional heaters





2 x NOZ$_2$ 25 or 1 x NOZ$_2$ 50

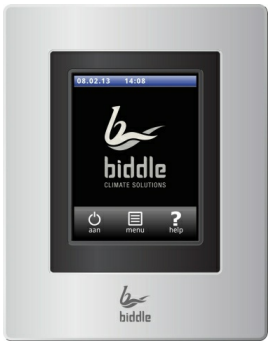
Based on the NOZ$_2$ technical data (with an air inlet temperature of 15 °C / 59 °F) the below maximal heating capacities apply. Because the NOZ$_2$ 25 with the H2 heating coil just does not meet the required power of 46 kW (156 kBTU/h), the maximal heating capacity is also calculated for the H3 coil. To convert the H3 to 80/60 °C / 176/140 °F the correction factor is 1,71.

- 2 x NOZ$_2$ 25: H2 = 42,2 kW (144 kBTU/h), **H3 = 72,6 kW** (248 kBTU/h)
- 1 x NOZ$_2$ 50: **H2 = 46,7 kW** (159 kBTU/h)

The final choice depends on more factors like the layout and function of the room and the required sound level. Based on the total overview the choice will be made between 2 x NOZ2 25-H3 or 1 x NOZ2 50-H2.

Water & ambient versions

With regard to control and mounting of the NOZ_2 air heater various accessories are available.



b-touch control panel

Standard delivery:

- Energy efficient EC fans (stepless control)
- Integrated isolation switch

Control / operation:

- Automatic control incl. CHIPS technology or
- Basic control

Control accessories automatic control:

- b-touch control panel
- Room temperature sensor
- Water-side control: valve and actuator (not in ambient version)
- Biddle low-voltage cable (35 m / 115 ft)

Basic control:

- b-control: potentiometer (0-10 Volt)
- Optional: room thermostat


Suspension frame

Installation:

There are two options for the installation of the NOZ_2:

- Optional: suspension frame for quick and easy installation
- M8 threaded rods

Optional:

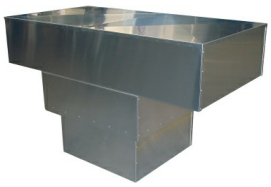
- Combination of recirculation with ventilation (see ventilation information sheet)
- Plastic caps to cover max. 2 nozzles
- Separate flange set for hot water connection

Ventilation version

NOZ_2 is available in a ventilation model in order to supply a room with fresh outside air.

Standard delivery:

Frost-protection thermostat
- automatic control: installed and wired
- basic control: installed, but not wired



Roof cap

Filter module

Accessories ventilation

- Roof cap
- Duct sections: length 0,5, 1 and 1,5 m (20", 40" or 60")
- Filter module: filter class G2

Automatic control:

Damper section incl. installed and wired servomotor is necessary

Basic control:

Damper section:
- excl. servomotor
- incl. servomotor with pull-back spring (not wired)
- incl. servomotor without pull-back-spring return (not wired)

3-way damper section

1-way damper section

Types of damper sections:

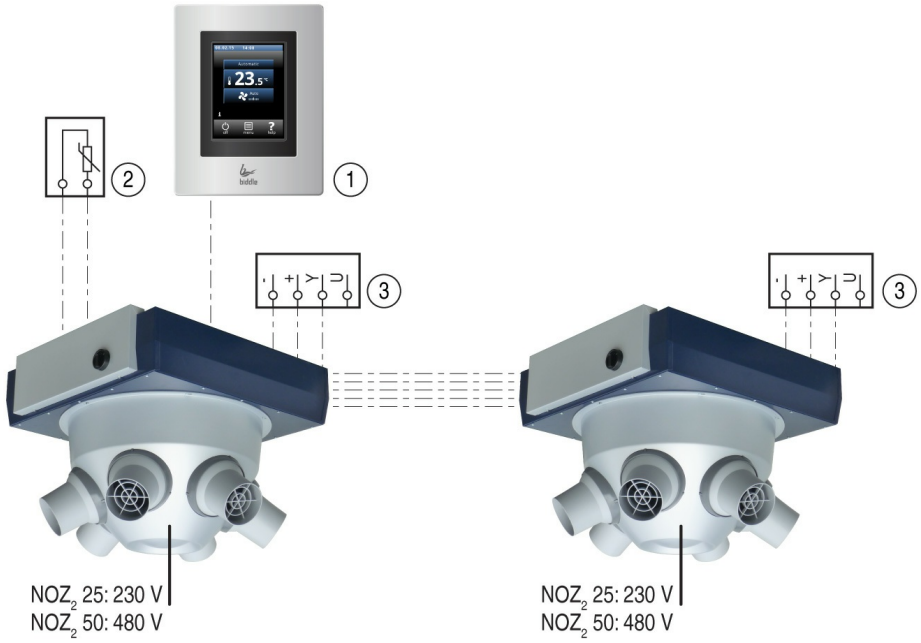
3-way: this is used in a combination of ventilation (supply of outside air) and recirculation (intake of inside air). The proportion of these two air flows can, if required, be controlled. Even in times of frost danger, the recirculation function may be used to heat the room.

1-way: this is used in assemblies involving 100% ventilation, so that no moisture or heat loss occurs when the air heater is not operating.

Electrical connections

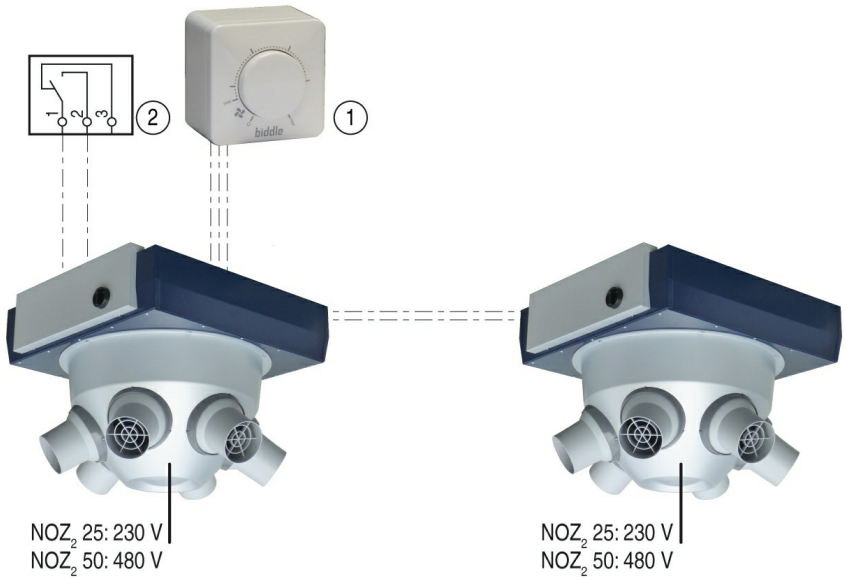
The NOZ_2 is standard delivered with a built in isolation switch, to which the supply cable of 230V or 480V can be connected.

Automatic control



1. b-touch control panel
2. room temperature sensor
3. water-side control

Basic control



1. b-control regulator
2. room thermostat (optional)

Specifications

Casing

The casing of the air heater is made of zinc plated sheet steel and has an inspection panel at the side. The cone, nozzles and the ring are made of plastic. The unit is delivered as a standard in two colours: in RAL 5011/RAL9006 (steel blue/aluminium) and completely in RAL 9006 (aluminium). Other RAL colours are available at an extra charge.

Motor / fan assembly

The diagonal fan is made up of a plastic (NOZ_2 25) or an aluminium (NOZ_2 50) impeller and an external rotor motor with EC technology. If overheated, the motor is protected by thermal contacts, which will break the electric circuit.

Heating coil

The high efficient heating coils are made up of 3/8" copper pipes and aluminium fins. The water connections for the NOZ_2 25 are G 3/4" and for the NOZ_2 50 G1". These connections are located in the side of the unit.

NOZ_2 25-H2 (metric)

mounting height	m	2.8 - 8.5				
influence area	m^2	100 - 400				
electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,8				
max. input power	kW	0,41				
max. specific fan power	W/l/s	0,39				
weight	kg	37				
water range	°C	80/60°				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	523	1365	2132	2926	3759
power consumption	kW	0,02	0,04	0,1	0,23	0,41
sound pressure level at 5m	dB(A)	17	31	44	53	60
air inlet temperature	°C			**-10**		
heating capacity	kW	9,8	18,5	24,1	28,8	32,8
discharge air temperature	°C	40,1	26,2	20,2	16,2	13,3
water flow rate	l/h	430	810	1055	1260	1440
water pressure drop	kPa	0,7	2,4	3,8	5,3	6,7
air inlet temperature	**°C**			**0**		
heating capacity	kW	8,4	15,8	20,6	24,6	28,1
discharge air temperature	°C	44,3	32	26,7	23,3	20,7
water flow rate	l/h	365	690	900	1075	1230
water pressure drop	kPa	0,6	1,8	2,9	4	5,1
air inlet temperature	**°C**			**10**		
heating capacity	kW	7	13,2	17,2	20,5	23,4
discharge air temperature	°C	48,2	37,7	33,1	30,1	27,9
water flow rate	l/h	305	575	755	900	1030
water pressure drop	kPa	0,4	1,3	2,1	2,8	3,6
air inlet temperature	**°C**			**15**		
heating capacity	kW	6,4	11,9	15,5	18,5	21,2
discharge air temperature	°C	50,6	40,4	36,2	33,5	31,4
water flow rate	l/h	280	520	680	810	930
water pressure drop	kPa	0,3	1	1,7	2,4	3
air inlet temperature	**°C**			**18**		
heating capacity	kW	6	11,1	14,5	17,3	19,8
discharge air temperature	°C	51,7	42	38,1	35,5	33,5
water flow rate	l/h	260	490	635	760	870
water pressure drop	kPa	0,3	0,9	1,5	2,1	2,7
air inlet temperature	**°C**			**20**		
heating capacity	kW	5,7	10,6	13,9	16,5	18,9
discharge air temperature	°C	52,4	43,1	39,3	36,8	34,9
water flow rate	l/h	250	465	605	725	830
water pressure drop	kPa	0,3	0,9	1,4	1,9	2,5

NOZ_2 25-H2 (imperial)

mounting height	ft	9.2 - 27.9				
influence area	ft²	1076 - 4306				
electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,8				
max. input power	kW	0,41				
weight	lb	82				
water range	°F	176/140				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	308	804	1255	1723	2213
power consumption	kW	0,1	0,1	0,1	0,3	0,5
sound pressure level at 5m	dB(A)	17	31	44	53	60
air inlet temperature	°F			**14**		
heating capacity	kBTU/h	33,5	63,2	82,2	98,1	112
discharge air temperature	°F	104,2	79,1	68,3	61,2	55,9
water flow rate	USGPH	114	214	279	333	380
water pressure drop	psi	0,1	0,3	0,6	0,8	1
air inlet temperature	°F			**32**		
heating capacity	kBTU/h	28,6	53,9	70,3	83,9	95,8
discharge air temperature	°F	111,7	89,7	80,1	73,9	69,2
water flow rate	USGPH	97	183	238	285	325
water pressure drop	psi	0,1	0,3	0,4	0,6	0,7
air inlet temperature	°F			**50**		
heating capacity	kBTU/h	23,8	44,9	58,6	70	80
discharge air temperature	°F	118,8	99,8	91,6	86,2	82,2
water flow rate	USGPH	81	153	199	237	271
water pressure drop	psi	0,1	0,2	0,3	0,4	0,5
air inlet temperature	°F			**59**		
heating capacity	kBTU/h	21,8	40,6	52,9	63,2	72,2
discharge air temperature	°F	123	104,8	97,2	92,2	88,6
water flow rate	USGPH	74	138	180	214	245
water pressure drop	psi	0	0,2	0,2	0,3	0,4
air inlet temperature	°F			**64,4**		
heating capacity	kBTU/h	125	107,7	100,5	95,8	92,4
discharge air temperature	°F	125	107,7	100,5	95,8	92,4
water flow rate	USGPH	69	129	168	201	229
water pressure drop	psi	0	0,1	0,2	0,3	0,4
air inlet temperature	°F			**68**		
heating capacity	kBTU/h	19,5	36,3	47,3	56,4	64,5
discharge air temperature	°F	126,3	109,6	102,7	98,2	94,9
water flow rate	USGPH	66	123	160	192	219
water pressure drop	psi	0	0,1	0,2	0,3	0,4

NOZ_2 25-H3 (metric)

mounting height	m	2.8 - 8.5				
influence area	m^2	100 - 400				
electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,8				
max. input power	kW	0,39				
max. specific fan power	W/l/s	0,38				
weight	kg	39				
water range	°C	60/40°				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	511	1321	2078	2858	3674
power consumption	kW	0,02	0,04	0,09	0,21	0,39
sound pressure level at 5m	dB(A)	17	31	43	53	60
air inlet temperature	°C			**-10**		
heating capacity	kW	9	17,9	23,9	28,9	33,4
discharge air temperature	°C	37,3	26,1	20,7	17	14,2
water flow rate	l/h	395	775	1035	1255	1450
water pressure drop	kPa	0,7	2,4	4,1	5,8	7,6
air inlet temperature	**°C**			**0**		
heating capacity	kW	7,4	14,4	19,3	23,4	27
discharge air temperature	°C	40,1	30,2	25,7	22,6	20,3
water flow rate	l/h	320	625	835	1015	1170
water pressure drop	kPa	0,5	1,6	2,8	3,9	5,1
air inlet temperature	**°C**			**10**		
heating capacity	kW	5,7	11,1	14,8	17,9	20,7
discharge air temperature	°C	42,2	34,1	30,5	28	26,1
water flow rate	l/h	250	480	645	780	895
water pressure drop	kPa	0,3	1	1,7	2,4	3,1
air inlet temperature	**°C**			**15**		
heating capacity	kW	4,9	9,5	12,6	15,3	17,6
discharge air temperature	°C	43,1	35,9	32,7	30,6	29
water flow rate	l/h	215	410	550	660	765
water pressure drop	kPa	0,2	0,8	1,3	1,8	2,3
air inlet temperature	**°C**			**18**		
heating capacity	kW	4,4	8,5	11,3	13,7	15,7
discharge air temperature	°C	43,6	37	34,1	32,1	30,6
water flow rate	l/h	190	370	490	595	685
water pressure drop	kPa	0,2	0,6	1	1,5	1,9
air inlet temperature	**°C**			**20**		
heating capacity	kW	4,1	7,9	10,5	12,6	14,5
discharge air temperature	°C	43,9	37,7	34,9	33,1	31,7
water flow rate	l/h	180	340	455	550	630
water pressure drop	kPa	0,2	0,5	0,9	1,3	1,7

NOZ_2 25-H3 (imperial)

mounting height	ft	9.2 - 27.9				
influence area	ft²	1076 - 4306				
electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,8				
max. input power	kW	0,39				
weight	lb	86				
water range	°F	140/104				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	301	778	1223	1683	2163
power consumption	kW	0,1	0,1	0,1	0,3	0,4
sound pressure level at 5m	dB(A)	17	31	43	53	60
air inlet temperature	°F			**14**		
heating capacity	kBTU/h	30,9	61	81,5	98,7	114
discharge air temperature	°F	99,1	78,9	69,2	62,6	57,6
water flow rate	USGPH	104	205	274	332	383
water pressure drop	psi	0,1	0,3	0,6	0,8	1,1
air inlet temperature	°F			**32**		
heating capacity	kBTU/h	25,2	49,2	65,8	79,7	92
discharge air temperature	°F	104,1	86,4	78,2	72,7	68,6
water flow rate	USGPH	85	165	221	268	309
water pressure drop	psi	0,1	0,2	0,4	0,6	0,7
air inlet temperature	°F			**50**		
heating capacity	kBTU/h	19,5	37,9	50,6	61,2	70,6
discharge air temperature	°F	107,9	93,4	86,8	82,4	79,1
water flow rate	USGPH	66	127	170	206	237
water pressure drop	psi	0	0,1	0,2	0,4	0,5
air inlet temperature	°F			**59**		
heating capacity	kBTU/h	16,8	32,4	43,1	52,1	60
discharge air temperature	°F	109,6	96,7	90,9	87	84,1
water flow rate	USGPH	56	109	145	175	202
water pressure drop	psi	0	0,1	0,2	0,3	0,3
air inlet temperature	°F			**64,4**		
heating capacity	kBTU/h	110,5	98,6	93,3	89,8	87,1
discharge air temperature	°F	110,5	98,6	93,3	89,8	87,1
water flow rate	USGPH	51	98	130	157	181
water pressure drop	psi	0	0,1	0,2	0,2	0,3
air inlet temperature	°F			**68**		
heating capacity	kBTU/h	14	26,9	35,7	43,1	49,6
discharge air temperature	°F	111	99,9	94,9	91,6	89,1
water flow rate	USGPH	47	90	120	145	166
water pressure drop	psi	0	0,1	0,1	0,2	0,2

NOZ_2 25-H6 (metric)

mounting height	m	2.8 - 8.5				
influence area	m^2	100 - 400				
electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,3				
max. input power	kW	0,29				
max. specific fan power	W/l/s	0,32				
weight	kg	47				
water range	°C	50/30°				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	442	1087	1784	2493	3214
power consumption	kW	0,02	0,03	0,07	0,15	0,29
sound pressure level at 5m	dB(A)	16	31	43	52	59
air inlet temperature	°C			**-10**		
heating capacity	kW	8,9	19,1	28,1	35,8	42,7
discharge air temperature	°C	43,8	36,9	32	28,3	25,5
water flow rate	l/h	385	825	1215	1550	1845
water pressure drop	kPa	1,3	5,1	10,3	16,1	22,1
air inlet temperature	**°C**			**0**		
heating capacity	kW	7	14,9	21,9	27,9	33,2
discharge air temperature	°C	44	38	34	31	28,6
water flow rate	l/h	305	645	945	1205	1435
water pressure drop	kPa	0,8	3,3	6,6	10,2	14
air inlet temperature	**°C**			**10**		
heating capacity	kW	5,2	10,9	15,9	20,2	24
discharge air temperature	°C	43,9	38,8	35,6	33,2	31,4
water flow rate	l/h	225	470	690	875	1035
water pressure drop	kPa	0,5	1,9	3,7	5,7	7,7
air inlet temperature	**°C**			**15**		
heating capacity	kW	4,3	9	13	16,4	19,4
discharge air temperature	°C	43,6	39	36,2	34,2	32,6
water flow rate	l/h	185	385	560	710	840
water pressure drop	kPa	0,3	1,3	2,5	3,9	5,3
air inlet temperature	**°C**			**18**		
heating capacity	kW	3,8	7,8	11,2	14,1	16,6
discharge air temperature	°C	43,3	39	36,4	34,6	33,2
water flow rate	l/h	165	335	485	610	720
water pressure drop	kPa	0,3	1	1,9	2,9	4
air inlet temperature	**°C**			**20**		
heating capacity	kW	3,4	6,9	10	12,5	14,7
discharge air temperature	°C	43	39	36,6	34,9	33,6
water flow rate	l/h	150	300	430	540	635
water pressure drop	kPa	0,2	0,8	1,6	2,4	3,2

NOZ_2 25-H6 (imperial)

mounting height	ft	9.2 - 27.9				
influence area	ft²	1076 - 4306				
electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,3				
max. input power	kW	0,29				
weight	lb	104				
water range	°F	122/86				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	261	640	1051	1468	1892
power consumption	kW	0,1	0,1	0,1	0,2	0,3
sound pressure level at 5m	dB(A)	16	31	43	52	59
air inlet temperature	°F			**14**		
heating capacity	kBTU/h	30,4	65,2	95,9	122,3	145,8
discharge air temperature	°F	110,9	98,4	89,6	83	77,8
water flow rate	USGPH	102	218	321	409	488
water pressure drop	psi	0,2	0,7	1,5	2,3	3,2
air inlet temperature	°F			**32**		
heating capacity	kBTU/h	24	51	74,7	95,2	113,3
discharge air temperature	°F	111,2	100,5	93,2	87,7	83,5
water flow rate	USGPH	80	171	250	318	379
water pressure drop	psi	0,1	0,5	1	1,5	2
air inlet temperature	°F			**50**		
heating capacity	kBTU/h	17,8	37,3	54,3	68,9	81,8
discharge air temperature	°F	111	101,9	96,1	91,8	88,5
water flow rate	USGPH	60	125	182	231	274
water pressure drop	psi	0,1	0,3	0,5	0,8	1,1
air inlet temperature	°F			**59**		
heating capacity	kBTU/h	14,8	30,6	44,2	55,9	66,2
discharge air temperature	°F	110,4	102,3	97,1	93,5	90,7
water flow rate	USGPH	49	102	148	187	221
water pressure drop	psi	0,1	0,2	0,4	0,6	0,8
air inlet temperature	°F			**64,4**		
heating capacity	kBTU/h	109,9	102,3	97,6	94,3	91,8
discharge air temperature	°F	109,9	102,3	97,6	94,3	91,8
water flow rate	USGPH	43	89	128	161	190
water pressure drop	psi	0	0,1	0,3	0,4	0,6
air inlet temperature	°F			**68**		
heating capacity	kBTU/h	11,7	23,7	34	42,7	50,3
discharge air temperature	°F	109,3	102,1	97,8	94,8	92,5
water flow rate	USGPH	39	79	114	143	168
water pressure drop	psi	0	0,1	0,2	0,3	0,5

NOZ_2 50-H2 (metric)

mounting height	m	3.5 - 14				
influence area	m^2	200 - 800				
electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,8				
max. input power	kW	1,94				
max. specific fan power	W/l/s	0,76				
weight	kg	64				
water range	°C	80/60°				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	1523	3533	5611	7346	9235
power consumption	kW	0,04	0,15	0,44	1,02	1,94
sound pressure level at 5m	dB(A)	28	42	54	62	69
air inlet temperature	°C			**-10**		
heating capacity	kW	25,3	43	56	64,6	72,6
discharge air temperature	°C	34,3	22,5	16,6	13,5	11
water flow rate	l/h	1110	1885	2455	2830	3180
water pressure drop	kPa	1,1	3,1	5	6,5	8
air inlet temperature	**°C**			**0**		
heating capacity	kW	21,6	36,7	47,8	55,2	62,1
discharge air temperature	°C	39,2	28,8	23,6	20,8	18,6
water flow rate	l/h	945	1610	2095	2420	2720
water pressure drop	kPa	0,9	2,3	3,7	4,8	6
air inlet temperature	**°C**			**10**		
heating capacity	kW	18	30,6	39,9	46,1	51,8
discharge air temperature	°C	43,8	34,8	30,4	28	26,1
water flow rate	l/h	790	1340	1745	2020	2270
water pressure drop	kPa	0,6	1,6	2,7	3,5	4,3
air inlet temperature	**°C**			**15**		
heating capacity	kW	16,2	27,6	36	41,6	46,7
discharge air temperature	°C	46,1	37,8	33,7	31,5	29,8
water flow rate	l/h	710	1210	1575	1820	2050
water pressure drop	kPa	0,5	1,3	2,2	2,9	3,6
air inlet temperature	**°C**			**18**		
heating capacity	kW	15,2	25,8	33,6	38,9	43,7
discharge air temperature	°C	47,4	39,6	35,7	33,6	32
water flow rate	l/h	665	1130	1475	1705	1915
water pressure drop	kPa	0,4	1,2	1,9	2,5	3,1
air inlet temperature	**°C**			**20**		
heating capacity	kW	14,5	24,7	32,1	37,1	41,7
discharge air temperature	°C	48,2	40,7	37	35	33,4
water flow rate	l/h	635	1080	1405	1625	1830
water pressure drop	kPa	0,4	1,1	1,8	2,3	2,9

NOZ_2 50-H2 (imperial)

mounting height	ft	11.5 - 45.9				
influence area	ft²	2153 - 8611				
electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,8				
max. input power	kW	1,94				
weight	lb	141				
water range	°F	176/140				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	897	2080	3303	4324	5436
power consumption	kW	0,1	0,2	0,5	1,1	2
sound pressure level at 5m	dB(A)	28	42	54	62	69
air inlet temperature	°F			**14**		
heating capacity	kBTU/h	86,4	146,8	191	220,5	247,6
discharge air temperature	°F	93,8	72,5	61,9	56,2	51,7
water flow rate	USGPH	293	498	648	748	840
water pressure drop	psi	0,2	0,4	0,7	0,9	1,2
air inlet temperature	°F			**32**		
heating capacity	kBTU/h	73,6	125,3	163,1	188,5	211,8
discharge air temperature	°F	102,6	83,8	74,4	69,5	65,5
water flow rate	USGPH	250	425	554	640	719
water pressure drop	psi	0,1	0,3	0,5	0,7	0,9
air inlet temperature	°F			**50**		
heating capacity	kBTU/h	61,3	104,4	136	157,2	176,7
discharge air temperature	°F	110,9	94,7	86,7	82,4	79
water flow rate	USGPH	208	354	462	533	600
water pressure drop	psi	0,1	0,2	0,4	0,5	0,6
air inlet temperature	°F			**59**		
heating capacity	kBTU/h	55,3	94,2	122,7	141,8	159,5
discharge air temperature	°F	114,9	100	92,7	88,7	85,6
water flow rate	USGPH	188	320	416	481	541
water pressure drop	psi	0,1	0,2	0,3	0,4	0,5
air inlet temperature	°F			**64,4**		
heating capacity	kBTU/h	117,3	103,2	96,2	92,5	89,5
discharge air temperature	°F	117,3	103,2	96,2	92,5	89,5
water flow rate	USGPH	176	299	390	450	506
water pressure drop	psi	0,1	0,2	0,3	0,4	0,5
air inlet temperature	°F			**68**		
heating capacity	kBTU/h	49,5	84,2	109,6	126,6	142,4
discharge air temperature	°F	118,8	105,3	98,6	95	92,1
water flow rate	USGPH	168	286	372	430	483
water pressure drop	psi	0,1	0,2	0,3	0,3	0,4

NOZ_2 50-H3 (metric)

mounting height	m	3.5 - 14				
influence area	m^2	200 - 800				
electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,7				
max. input power	kW	1,84				
max. specific fan power	W/l/s	0,73				
weight	kg	67				
water range	°C	60/40°				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	1466	3456	5501	7207	9046
power consumption	kW	0,04	0,14	0,42	0,96	1,84
sound pressure level at 5m	dB(A)	28	42	54	62	69
air inlet temperature	°C			**-10**		
heating capacity	kW	23,7	42,6	56,7	66,2	74,9
discharge air temperature	°C	33,2	22,9	17,5	14,5	12,1
water flow rate	l/h	1030	1850	2460	2870	3250
water pressure drop	kPa	1,4	4,1	6,9	9,2	11,5
air inlet temperature	**°C**			**0**		
heating capacity	kW	19,2	34,4	45,8	53,4	60,5
discharge air temperature	°C	36,2	27,6	23	20,5	18,5
water flow rate	l/h	835	1495	1985	2320	2625
water pressure drop	kPa	1	2,8	4,7	6,2	7,8
air inlet temperature	**°C**			**10**		
heating capacity	kW	14,8	26,5	35,2	41,1	46,4
discharge air temperature	°C	39	32	28,3	26,3	24,7
water flow rate	l/h	645	1150	1525	1780	2015
water pressure drop	kPa	0,6	1,7	2,9	3,8	4,8
air inlet temperature	**°C**			**15**		
heating capacity	kW	12,7	22,6	30	35	39,5
discharge air temperature	°C	40,3	34,1	30,9	29,2	27,8
water flow rate	l/h	550	980	1300	1515	1715
water pressure drop	kPa	0,4	1,3	2,2	2,8	3,6
air inlet temperature	**°C**			**18**		
heating capacity	kW	11,5	20,3	26,9	31,3	35,4
discharge air temperature	°C	41	35,3	32,4	30,8	29,5
water flow rate	l/h	495	880	1165	1360	1535
water pressure drop	kPa	0,4	1,1	1,8	2,3	2,9
air inlet temperature	**°C**			**20**		
heating capacity	kW	10,6	18,8	24,8	28,9	32,7
discharge air temperature	°C	41,5	36,1	33,4	31,9	30,7
water flow rate	l/h	460	815	1075	1255	1415
water pressure drop	kPa	0,3	0,9	1,5	2	2,5

NOZ_2 50-H3 (imperial)

mounting height	ft	11.5 - 45.9				
influence area	ft²	2153 - 8611				
electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,7				
max. input power	kW	1,84				
weight	lb	148				
water range	°F	140/104				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	863	2035	3238	4242	5325
power consumption	kW	0,1	0,2	0,5	1	1,9
sound pressure level at 5m	dB(A)	28	42	54	62	69
air inlet temperature	°F			**14**		
heating capacity	kBTU/h	81	145,5	193,4	225,7	255,5
discharge air temperature	°F	91,7	73,2	63,5	58,1	53,7
water flow rate	USGPH	272	489	650	758	858
water pressure drop	psi	0,2	0,6	1	1,3	1,7
air inlet temperature	°F			**32**		
heating capacity	kBTU/h	65,5	117,5	156,2	182,4	206,4
discharge air temperature	°F	97,2	81,6	73,5	68,9	65,3
water flow rate	USGPH	220	395	525	613	693
water pressure drop	psi	0,1	0,4	0,7	0,9	1,1
air inlet temperature	°F			**50**		
heating capacity	kBTU/h	50,6	90,5	120,1	140,1	158,5
discharge air temperature	°F	102,3	89,6	83	79,4	76,5
water flow rate	USGPH	170	304	403	471	532
water pressure drop	psi	0,1	0,2	0,4	0,6	0,7
air inlet temperature	°F			**59**		
heating capacity	kBTU/h	43,4	77,2	102,3	119,3	134,9
discharge air temperature	°F	104,6	93,4	87,6	84,5	82
water flow rate	USGPH	146	259	344	401	453
water pressure drop	psi	0,1	0,2	0,3	0,4	0,5
air inlet temperature	°F			**64,4**		
heating capacity	kBTU/h	105,9	95,6	90,3	87,5	85,2
discharge air temperature	°F	105,9	95,6	90,3	87,5	85,2
water flow rate	USGPH	131	233	308	359	406
water pressure drop	psi	0,1	0,2	0,3	0,3	0,4
air inlet temperature	°F			**68**		
heating capacity	kBTU/h	36,2	64,1	84,7	98,6	111,4
discharge air temperature	°F	106,7	97	92,1	89,4	87,3
water flow rate	USGPH	122	215	285	331	374
water pressure drop	psi	0	0,1	0,2	0,3	0,4

NOZ_2 50-H6 (metric)

mounting height	m	3.5 - 14				
influence area	m^2	200 - 800				
electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,1				
max. input power	kW	1,33				
max. specific fan power	W/l/s	0,6				
weight	kg	76				
water range	°C	50/30°				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	1157	3039	4908	6454	8022
power consumption	kW	0,04	0,12	0,3	0,69	1,33
sound pressure level at 5m	dB(A)	27	42	53	62	68
air inlet temperature	°C			**-10**		
heating capacity	kW	22,5	49,8	70,9	85,7	98,9
discharge air temperature	°C	41,9	33,7	28,5	25,4	22,9
water flow rate	l/h	975	2150	3065	3705	4275
water pressure drop	kPa	2,3	9,6	18,3	25,8	33,5
air inlet temperature	**°C**			**0**		
heating capacity	kW	17,7	38,9	55,2	66,7	76,9
discharge air temperature	°C	42,4	35,4	31,2	28,6	26,5
water flow rate	l/h	765	1680	2385	2880	3325
water pressure drop	kPa	1,5	6,1	11,6	16,3	21,2
air inlet temperature	**°C**			**10**		
heating capacity	kW	13,1	28,3	40	48,2	55,5
discharge air temperature	°C	42,5	36,8	33,4	31,4	29,8
water flow rate	l/h	565	1225	1730	2080	2395
water pressure drop	kPa	0,8	3,4	6,5	9	11,7
air inlet temperature	**°C**			**15**		
heating capacity	kW	10,8	23,1	32,5	39	44,8
discharge air temperature	°C	42,3	37,2	34,3	32,6	31,3
water flow rate	l/h	470	1000	1405	1685	1935
water pressure drop	kPa	0,6	2,4	4,4	6,2	7,9
air inlet temperature	**°C**			**18**		
heating capacity	kW	9,4	20	27,9	33,5	38,4
discharge air temperature	°C	42,1	37,4	34,8	33,3	32,1
water flow rate	l/h	410	865	1210	1445	1660
water pressure drop	kPa	0,5	1,8	3,4	4,7	6
air inlet temperature	**°C**			**20**		
heating capacity	kW	8,5	17,9	24,9	29,7	34
discharge air temperature	°C	41,8	37,4	35	33,7	32,6
water flow rate	l/h	370	770	1075	1285	1470
water pressure drop	kPa	0,4	1,5	2,7	3,8	4,8

NOZ_2 50-H6 (imperial)

mounting height	ft	11.5 - 45.9				
influence area	ft²	2153 - 8611				
electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,1				
max. input power	kW	1,33				
weight	lb	168				
water range	°F	122/86				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	681	1789	2889	3799	4722
power consumption	kW	0,1	0,2	0,3	0,7	1,4
sound pressure level at 5m	dB(A)	27	42	53	62	68
air inlet temperature	°F			**14**		
heating capacity	kBTU/h	76,8	169,8	242	292,5	337,6
discharge air temperature	°F	107,5	92,6	83,4	77,8	73,2
water flow rate	USGPH	257	568	810	979	1129
water pressure drop	psi	0,3	1,4	2,6	3,7	4,9
air inlet temperature	°F			**32**		
heating capacity	kBTU/h	60,4	132,6	188,5	227,5	262,4
discharge air temperature	°F	108,3	95,7	88,1	83,5	79,8
water flow rate	USGPH	202	444	631	761	878
water pressure drop	psi	0,2	0,9	1,7	2,4	3,1
air inlet temperature	°F			**50**		
heating capacity	kBTU/h	44,7	96,7	136,6	164,4	189,2
discharge air temperature	°F	108,5	98,2	92,1	88,6	85,7
water flow rate	USGPH	150	324	457	550	633
water pressure drop	psi	0,1	0,5	0,9	1,3	1,7
air inlet temperature	°F			**59**		
heating capacity	kBTU/h	36,9	79	110,9	133,1	152,9
discharge air temperature	°F	108,1	99	93,8	90,8	88,3
water flow rate	USGPH	124	264	371	445	512
water pressure drop	psi	0,1	0,3	0,6	0,9	1,1
air inlet temperature	°F			**64,4**		
heating capacity	kBTU/h	107,7	99,3	94,6	91,9	89,8
discharge air temperature	°F	107,7	99,3	94,6	91,9	89,8
water flow rate	USGPH	108	228	319	382	438
water pressure drop	psi	0,1	0,3	0,5	0,7	0,9
air inlet temperature	°F			**68**		
heating capacity	kBTU/h	29	60,9	84,8	101,3	116
discharge air temperature	°F	107,3	99,4	95,1	92,6	90,6
water flow rate	USGPH	97	204	284	339	388
water pressure drop	psi	0,1	0,2	0,4	0,5	0,7

NOZ_2 25-A (metric)

electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,9				
max. input power	kW	0,43				
max. specific fan power	W/l/s	0,4				
weight	kg	29				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	533	1399	2176	2980	3827
power consumption	kW	0,02	0,04	0,11	0,24	0,43
sound pressure level at 5m	dB(A)	17	32	44	53	60

NOZ_2 50-A (metric)

electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,9				
max. input power	kW	2,02				
max. specific fan power	W/l/s	0,77				
weight	kg	47				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	m^3/h	1568	3595	5699	7457	9387
power consumption	kW	0,05	0,15	0,47	1,07	2,02
sound pressure level at 5m	dB(A)	29	42	54	62	70

NOZ_2 25-A (imperial)

electrical supply	V/ph/Hz	230/1/60				
max. input current	A	1,9				
max. input power	kW	0,43				
weight	lb	64				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	314	824	1281	1754	2253
power consumption	kW	0,1	0,1	0,2	0,3	0,5
sound pressure level at 5m	dB(A)	17	32	44	53	60

NOZ_2 50-A (imperial)

electrical supply	V/ph/Hz	480/3/60				
max. input current	A	2,9				
max. input power	kW	2,02				
weight	lb	128				
speed		**2V**	**4V**	**6V**	**8V**	**10V**
air volume	cfm	924	2117	3355	4390	5525
power consumption	kW	0,1	0,2	0,5	1,1	2,1
sound pressure level at 5m	dB(A)	29	42	54	62	70

Correction factors heating capacity

The heating capacities stated in the tables are based on the following water ranges:
- H2: 80/60 °C (176/140 °F)
- H3: 60/40 °C (140/104 °F)
- H6: 50/30 °C (122/86 °F)

The air inlet temperature is 15 °C (59 °F). If water and air inlet temperatures differ, the maximal heating capacity is to be multiplied by the correction factors from the tables below. These are based on the NOZ_2 25, the data for the NOZ_2 50 do not differ significantly.

LPHW H2		**air inlet temperature**							
		-10 °C	**-5 °C**	**0 °C**	**5 °C**	**10 °C**	**15 °C**	**18 °C**	**20 °C**
		14 °F	**23 °F**	**32 °F**	**41 °F**	**50 °F**	**59 °F**	**64,4 °F**	**68 °F**
110/90 °C[1]	230/194 °F	2,21	2,1	1,98	1,87	1,75	1,64	1,57	1,53
100/80 °C[1]	212/176 °F	2	1,88	1,77	1,65	1,54	1,43	1,36	1,32
90/70 °C	194/158 °F	1,78	1,66	1,55	1,44	1,32	1,22	1,15	1,11
82/71 °C	180/160 °F	1,75	1,64	1,52	1,41	1,3	1,19	1,13	1,08
80/60 °C	176/140 °F	1,55	1,44	1,33	1,22	1,11	1	0,94	0,89
70/50 °C	158/122 °F	1,33	1,22	1,11	1	0,89	0,78	0,72	0,68
60/40 °C	140/104 °F	1,1	0,99	0,89	0,78	0,67	0,57	0,51	0,47
LPHW H3									
90/70 °C[1]	194/158 °F	3	2,81	2,61	2,43	2,24	2,06	1,95	1,88
80/60 °C	176/140 °F	2,63	2,44	2,25	2,07	1,89	1,71	1,6	1,53
70/50 °C	158/122 °F	2,27	2,08	1,89	1,71	1,53	1,35	1,25	1,18
60/40 °C	140/104 °F	1,9	1,71	1,53	1,35	1,18	1	0,9	0,83
LPHW H6									
70/50 °C[1]	158/122 °F	3,15	2,89	2,64	2,39	2,15	1,91	1,77	1,68
60/40 °C	140/104 °F	2,68	2,42	2,18	1,93	1,7	1,46	1,32	1,23
50/30 °C	122/86 °F	2,2	1,96	1,71	1,47	1,24	1	0,86	0,76

[1] Water range not suitable in case of an uncontrolled basic model.

Automatic control: the discharge temperature is limited on 50 °C (122 °F).

With the ventilation model, air volume decreases (due to modules and ductwork). The following guideline may be used:

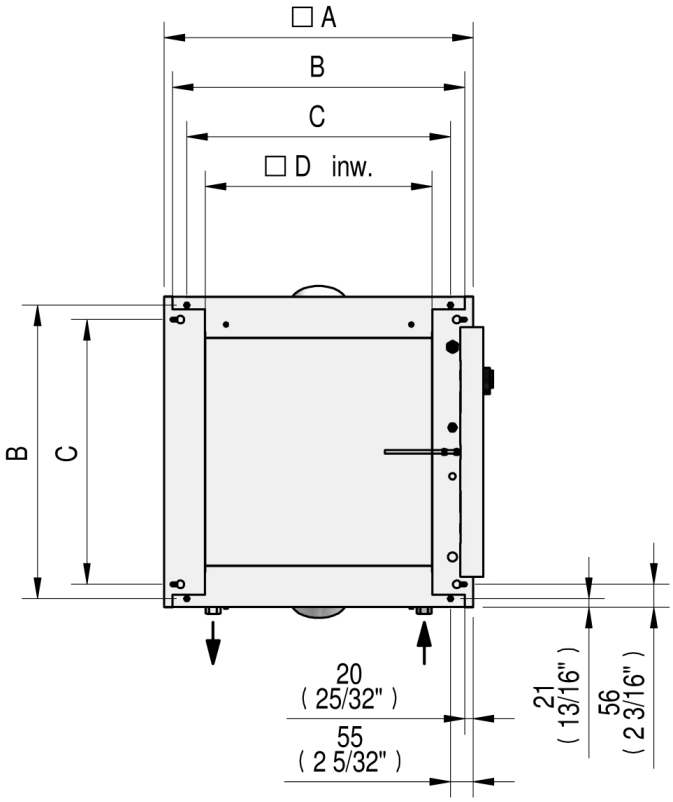
- 1 module = 15 % less than the table values
- 2 modules and duct work = 20 % less than the table values

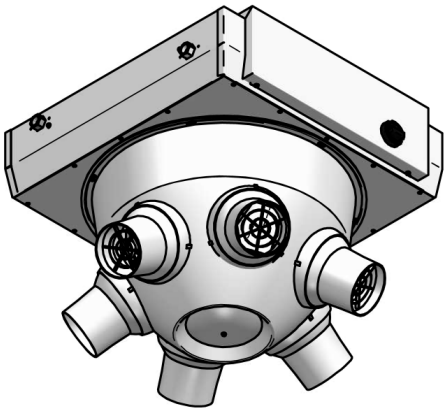
A decrease in air volume also leads to a decrease in heating capacity. Using the formula, you may calculate the new heating capacity.

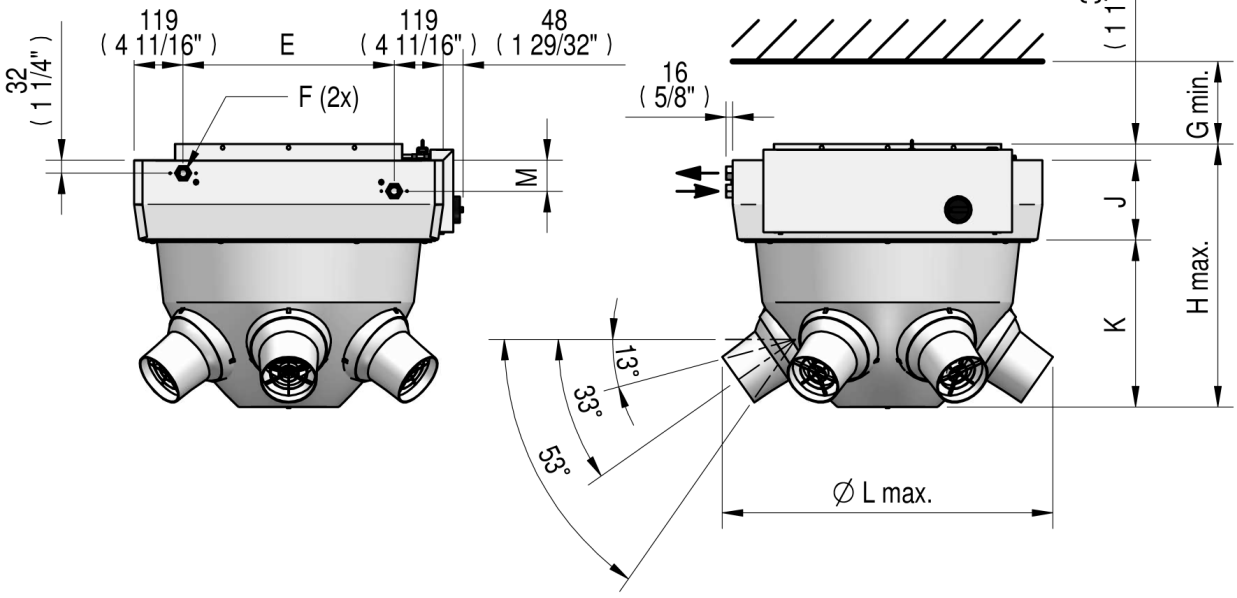
- 1 module = Q*new* = 0,93 x Q*table value*
- 2 modules and duct work = Q*new* = 0,90 x Q*table value*

If circumstances differ from those described here, such as different water temperatures or more than one unit in a single room, please do not hesitate to ask for our advice.

NOZ_2 water & ambient

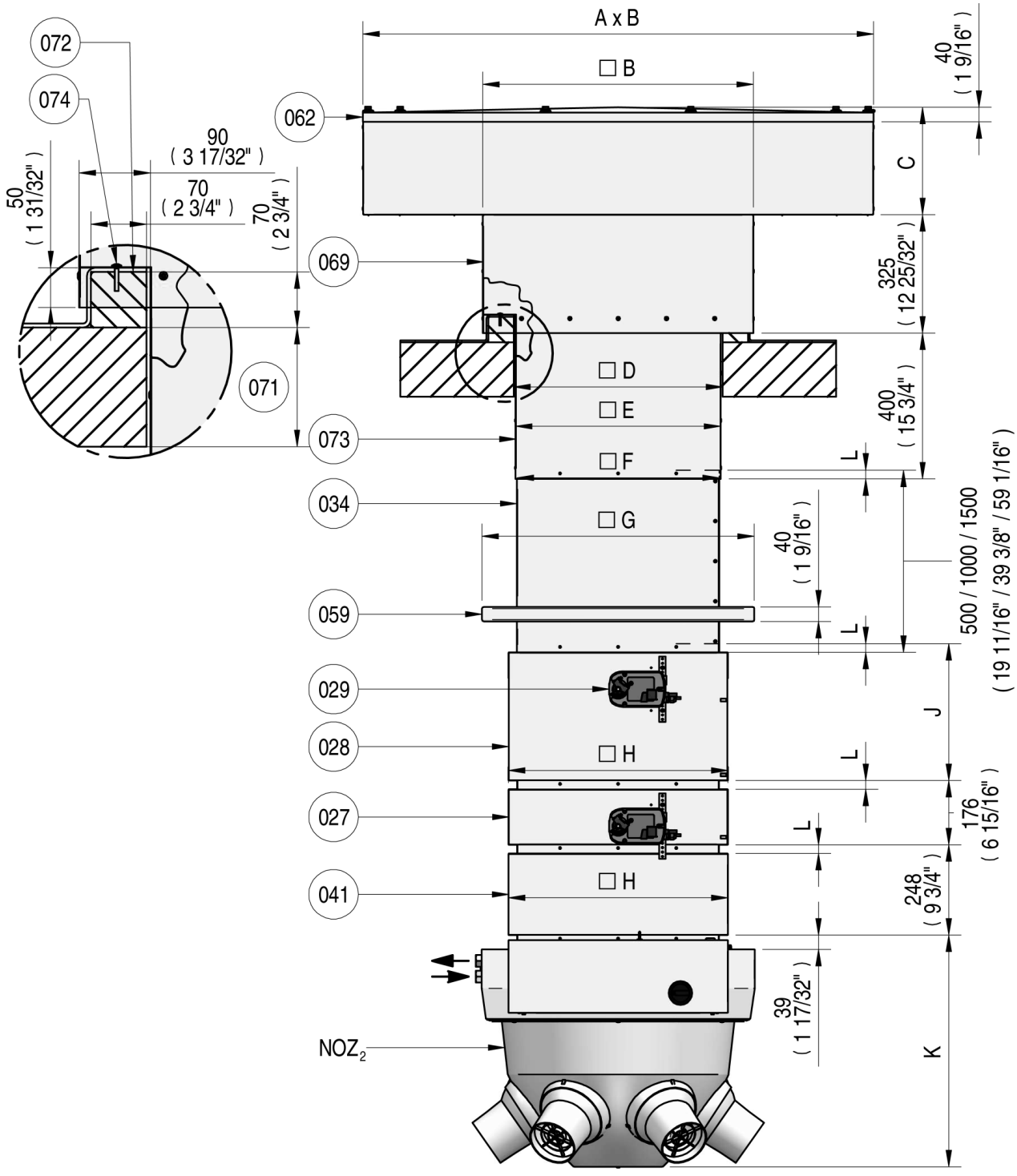






	A	B	C	D	E	F	G	H	J	K	L	M
NOZ_2 25..-A/H2/H3-..	750	710	640	550	512	G 3/4"	200	636	193	404	803	75
NOZ_2 25..-H6-...	750	710	640	550	512	G 3/4"	200	696	253	404	803	140
NOZ_2 50..-A/H2/H3-..	975	935	865	775	737	G 1"	300	793	249	505	1016	75
NOZ_2 50..-H6-...	975	935	865	775	737	G 1"	300	821	277	505	1016	140
NOZ_2 25..-A/H2/H3-..	29 17/32"	27 15/16"	25 3/16"	21 21/32"	20 5/32"	G 3/4"	7 7/8"	25 1/32"	7 19/32"	15 29/32"	31 5/8"	2 15/16"
NOZ_2 25..-H6-...	29 17/32"	27 15/16"	25 3/16"	21 21/32"	20 5/32"	G 3/4"	7 7/8"	27 13/32"	9 31/32"	15 29/32"	31 5/8"	5 1/2"
NOZ_2 50..-A/H2/H3-..	38 3/8"	36 13/16"	34 1/16"	30 1/2"	29 1/32"	G 1"	11 13/16"	31 7/32"	9 13/16"	19 7/8"	40"	2 15/16"
NOZ_2 50..-H6-...	38 3/8"	36 13/16"	34 1/16"	30 1/2"	29 1/32"	G 1"	11 13/16"	32 5/16"	10 29/32"	19 7/8"	40"	5 1/2"

NOZ_2 ventilation (water & ambient)



	A	B	C	D	E	F	G	H	J	K	L
NOZ_2 25V-A/H2/H3	1406	746	295	575	565	557	750	604	376	636	24
NOZ_2 25V-H6	1406	746	295	575	565	557	750	604	376	696	24
NOZ_2 50V-A/H2/H3	1871	971	415	800	790	782	975	829	556	793	24
NOZ_2 50V-H6	1871	971	415	800	790	782	975	829	556	821	24
NOZ_2 25V-A/H2/H3	55 11/32"	29 3/8"	11 5/8"	22 5/8"	22 1/4"	21 15/16"	29 17/32"	23 25/32"	14 13/16"	25 1/32"	15/16"
NOZ_2 25V-H6	55 11/32"	29 3/8"	11 5/8"	22 5/8"	22 1/4"	21 15/16"	29 17/32"	23 25/32"	14 13/16"	27 13/32"	15/16"
NOZ_2 50V-A/H2/H3	73 21/32"	38 7/32"	16 11/32"	31 1/2"	31 3/32"	30 25/32"	38 3/8"	32 5/8"	21 7/8"	31 7/32"	15/16"
NOZ_2 50V-H6	73 21/32"	38 7/32"	16 11/32"	31 1/2"	31 3/32"	30 25/32"	38 3/8"	32 5/8"	21 7/8"	32 5/16"	15/16"

Index

The corresponding numbers in the dimensional sketch are explained below:

27 - Damper module 1-way
28 - Damper module 3-way
29 - Damper motor
34 - Duct section
59 - Mounting frame
62 - Rain cap (removable)
69 - Roof cap
71 - Roof thickness
72 - Roof upstand
73 - Roof vent flange
74 - Screw connection

Notes

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• ISO 14001

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