

QUICK INSTRUCTIONS FOR USE AND ASSEMBLY

Heat recovery units Xflat 200; ESSENTIAL control

The Quick Instructions will guide you through a quick assembly of the product, but it is by no means a substitute for a complete full manual. Full operating instructions are available on our www.xvent.cz website or you can download them using the QR code.



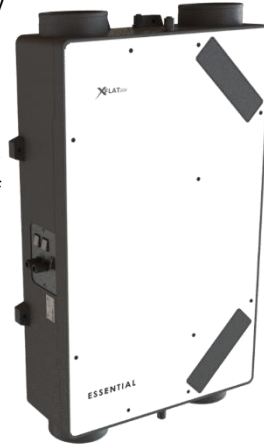
Make sure that there are no electrical or other lines (e.g. gas, water, etc.) running where the unit is installed on a wall or ceiling indoors that could be disturbed during installation. Check that the mains power supply you want to connect the unit to meets the power requirements of the unit (serial plate).



Ensure that the installation of the unit does not endanger the building's statics and meets all the legislative safety. Before starting the installation, check the possibility of connection to the sewer system to drain the condensate from the unit.

1) Using the unit

- The Xflat 200 unit is an air handling unit using continuous ventilation technology with heat recovery (counter-current heat exchanger) and moisture recovery (enthalpy exchanger). The unit has an impact ventilation mode – BOOOST for use, e.g., in the toilet or bathroom. The design of the unit allows, after removing the lid, to turn any neck by 90° – the Multiflex system.
- The unit can be used in rooms with a maximum requirement for a nominal flow rate of approx. 200 m³/h (depending on type) at a maximum layout pressure of 200 Pa.
- The unit is only designed for horizontal or vertical wall and ceiling installation, so that fresh air supply and exhaust air can be provided. The unit allows switching between the right (factory setting) and left version on the control body with two rocker switches (BOTH SWITCHES MUST BE ON to select the version). The unit is equipped with constant flow technology (regardless of external pressure loss). The unit has rotating corners. The unit is intended for indoor covered and dry areas with a room temperature of +5°C to +30°C and the maximum relative humidity of 70%, non-condensing.



To read the QR code, use a smart device (mobile phone, tablet, etc.) that is equipped with this technology.



The fresh air supply temperature from the outside can be between -20°C and +40°C (only for the version with external preheating). If the temperature of the supplied air is lower than -20°C, the unit will be switched off automatically in order to protect it from possible damage.

2) Technical parameters

Business name		Xflat 200 – Essencial	
		XF1-020-ECS0HRXAE-0A0	XF1-020-ECS0ERXAE-0A0
Recuperation exchanger type		HRV – temperature	ERV – temperature/humidity
Bypass type		electronic	electronic
Nominal air output*	m ³ /h	155/207	
Noise level**	dB(A)	31.4/35.1	
Weight***	kg	16	
Power supply of the unit	V/Hz	1~230/50-60	
Nominal unit power	W	104/172 (181)	
Nominal unit current****	A	0.74/1.22 (1.29)	
Recuperation efficacy *****	heat	89.3/88	80.5/78
	humidity	-	43/40
Protection type		IP 20	
Energy efficiency ratio (ERP)*****		cool climate A+, medium climate A, warm climate E / cool climate A+, medium climate A+, warm climate E	

- * Nominal air output for 150/200 m³/h (power input, flow) at external pressure drop of 200 Pa,
- ** Sound pressure level in free space at a distance of 3 m (Q2) – for an air output of 150/200 m³/h
- *** Unit weight without packaging
- **** Power input, current – for air output 150/200 m³/h (max. possible power input, flow)
- ***** Recuperation efficiency specified at 70% of nominal flow according to EN 308 – for air output 150/200 m³/h
- ***** Energy efficiency class (ERP) – for air output 150/200 m³/h

Prohibited use of the Xflat 200 unit

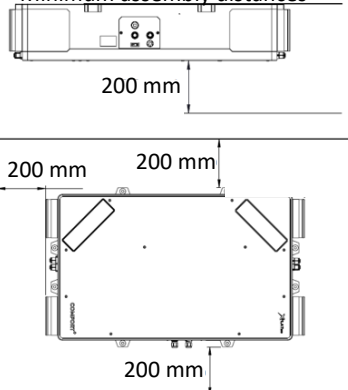
- The unit must not be used for extraction of burning, glowing substances, flammable or explosive gases, aggressive media, liquids.
- The unit must not be installed just below an electrical socket, electrical box, flammable materials, in environments with increased incidence or risk of explosion, flammable substances, with increased dustiness and in environments with higher humidity, e.g., bathrooms, swimming pools, saunas.



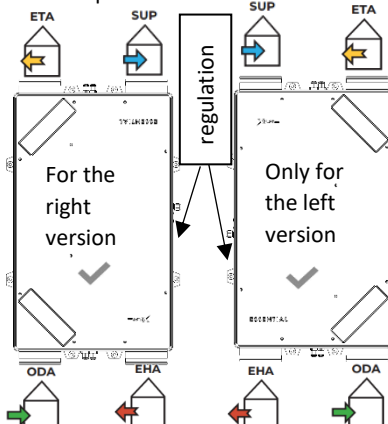
Neither the manufacturer nor the supplier is liable for damage caused by improper use of the units. The user bears the risk.

3) Installing the Xflat 200 unit

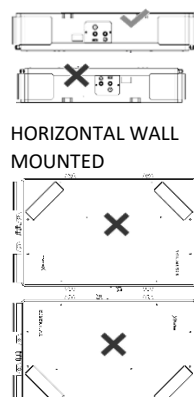
- Minimum assembly distances



Installation positions – VERTICAL ON WALL



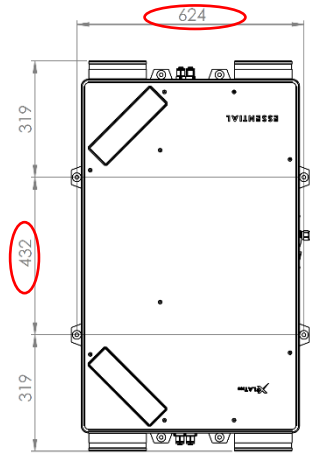
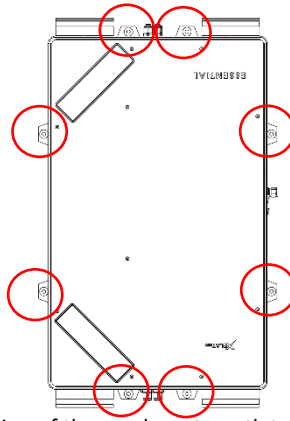
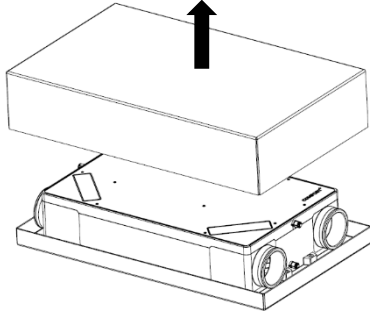
HORIZONTAL ON THE CEILING



The heat recovery unit must be installed and commissioned in accordance with the general and locally applicable safety regulations, by a person with the appropriate training, experience and knowledge of the relevant regulations, standards and potential risks and hazards, or by a suitably trained service technician. **Failure to follow the installation procedure may result in damage to the unit, improper operation and possible damage to the user's health and property.**

- Xflat unit installation procedure

a) Take the unit out of the package

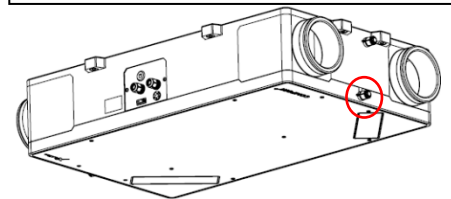
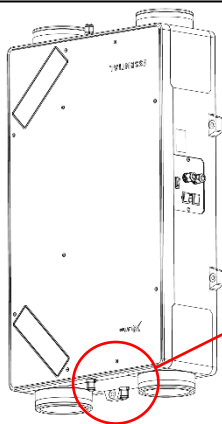


b) Choose the installation position with regard to the location of the condensate outlet and the selected version of the unit right (R – factory setting) / left (L), locate the anchor holes according to the dimensions on the unit, drill and use a spirit level to anchor the unit with the appropriate screws. Do not tilt the unit into a slope.

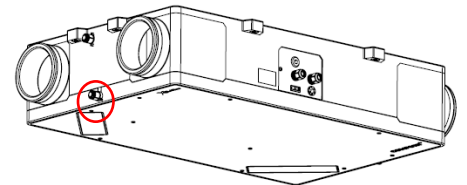
Vertical wall-mounted – right version – switches in R position
Factory settings

Vertical wall-mounted – left version – switches in L position

For ceiling – right version – switches in R position
Factory settings



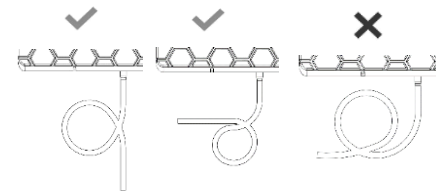
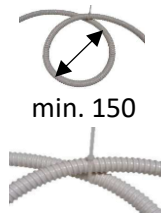
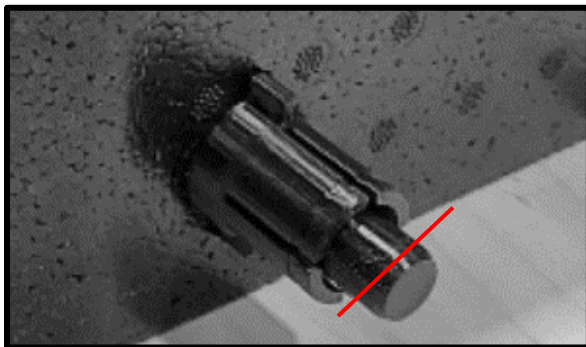
For ceiling – left version – switches in L position



c) cut off the edge of the condensate outlet and remove the resulting burrs

d) create a siphon by attaching the hose and ties

e) select the correct position of the siphon for connection to the sewer



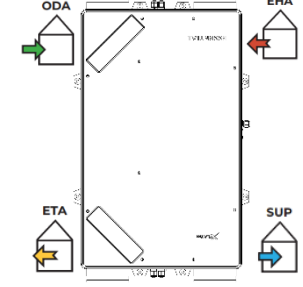
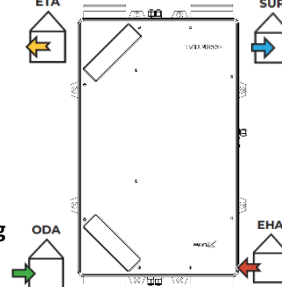
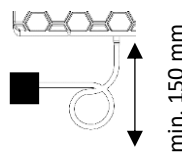
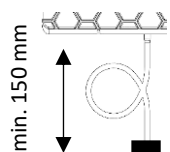
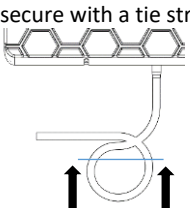
h) connect the air ducts to the sockets of the $\varnothing 160$ mm (external) or $\varnothing 130$ mm (internal) according to the purpose, then insulate so that there are no thermal bridges between the joints

f) water the siphon, connect the hose to the unit's outlet and secure with a tie strap

g) connect the siphon to the sewer system

socket designation – right version – switches in R

socket designation – left version – switches in L



ATTENTION: if the air conditioner is used in a ventilated building for cooling in summer, it is necessary to connect a second condensate outlet – see complete instructions



- Before starting up the unit for the first time or after an extended shutdown, check the watering of the siphon. If you are making a bend in the hose, make sure you have the correct bend radius to avoid 'hose breakage'. Always choose a hose – pipe of the same or larger diameter for extending the siphon hose. Always choose the hose-pipe coupling with the smallest possible reduction in the internal diameter.

- All pipe joints that are connected to the unit must be sufficiently sealed to prevent unwanted leaks and consequent problems, e.g., condensation-connected pipes must be of the same diameter as the unit's connections. If smaller diameter piping is used, this may affect the air performance of the unit and may reduce the life of the fans

4) Installing the Xflat 200 controller


- The controller is supplied as standard connected to the unit with a 10 m long multi-core cable. The individual 'cores' of the interconnecting cable are marked with numbers for better orientation when disconnecting/connecting from the periphery. One side of the connecting cable is plugged into the terminal block in the unit. The other side is connected to the controller. The controller is designed for wall assembly.

- **Assembly of the controller on the wall** – standard length of the communication cable 10 m

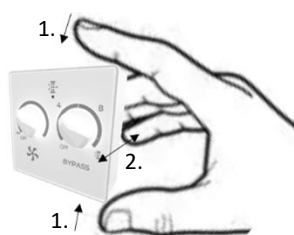
- Open the controller box – from the side of the controller press the top and bottom of the box towards you, then open the box away from you. This will split the box and at the same time split it into the front and back – wall part.

- Do not disconnect the cable from the controller

- Screw the rear metal part of the controller to the wiring box with adequate fasteners

 **Secure the cable route between the unit and the controller so that it is stable and cannot be accidentally destroyed, damaged or even possibly jammed from another source.**

a) open the controller box




- Use appropriate force to release the clamp lock to prevent damage to the clamp or PCB.

- In case of disconnecting and reconnecting the connecting cable – pay attention to the correct connection of the individual wires – numbers (each wire has its number on it) to the terminals in the controller according to the attached wiring diagram in the controller box

- Fit and screw the front of the box onto the already fixed wall section

c) Disconnecting the connection cable from the controller

 - Before disconnecting – pulling out the wires from the terminal of the controller, make sure that the unit is switched off – disconnected from the mains and the switching element is secured against arbitrary switching on.

- If necessary, the connected end of the communication cable can be disconnected from the controller, e.g., when the cable is pulled through a construction cavity (protective sleeve).

- Before disconnecting – pulling the wire out of the terminals, first press the orange lock button. Then slide the wire out and release the lock. When you need to connect the wire from the clamp, the procedure is the same.

- Spring clamps with manual wire locking are used to connect the wires in the unit and in the controller. A strand-type conductor (stranded wire) and a solid conductor (wire) in the cross-section range from 0.5 to 1.5 mm² can be installed in the terminals.

- Use appropriate force to release the clamp lock to prevent damage to the clamp or PCB.


- In case of disconnecting and reconnecting the connecting cable – pay attention to the correct connection of the individual wires – numbers (each wire has its number on it) to the terminals in the controller according to the attached wiring diagram in the controller box

d) Disconnecting the connection cable from the control unit


- The other end of the connection cable is connected in the control unit. Before accessing the control, loosen both grommets, then unscrew the locking screws of the control plate and slide it out. The cables that are connected to the elements located on the control plate have sufficient margin to be pulled out of the unit body and thus make the main terminal block in which the connecting cable is connected accessible

- Disconnect the existing cable from the control terminals, pull it out of the grommet it passes through and install the external connecting cable by reversing the procedure.

The terminals can be fitted with both litz wire type conductor (wire with hollow) and solid conductor (wire) in the cross-section range from 0.5 to 1.5 mm², the length of the chamfer is 10 mm. Before inserting the conductor into the terminals, first press the locking orange push-button. Then retract the conductor, release the lock and slightly pull it out of the terminal to verify that the conductor is properly secured.

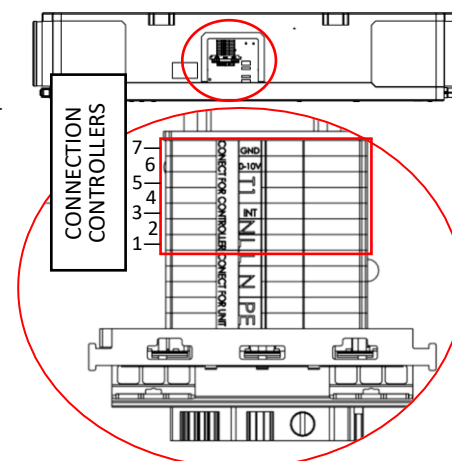
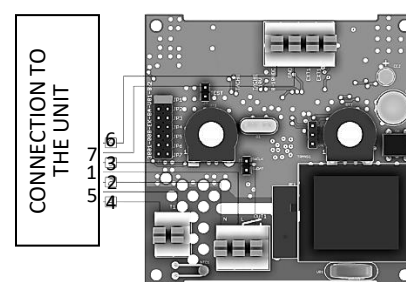
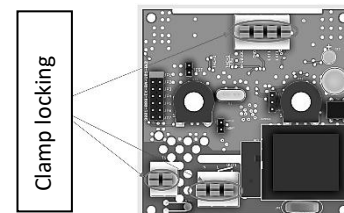
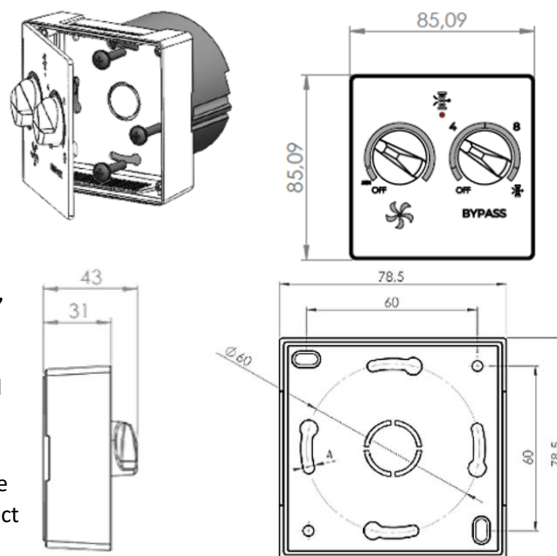
 - Take extra care when wiring the connecting cable to ensure that the correct wiring (individual numbers) of the individual cores are connected to the terminal block. Failure to ensure correct wiring can result in damage to the unit, the controller and electric shock.

- Reassemble the control plate into the unit

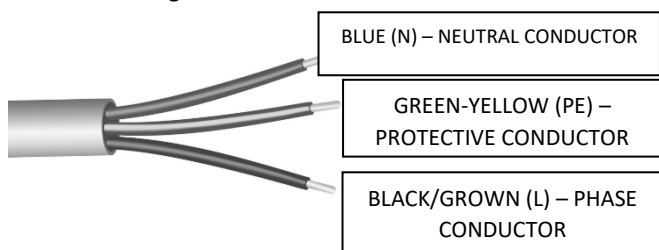
 - Ensure that the cables between the control housing and the unit terminal block are properly aligned to avoid pinching or damage. The cables must be loose so that the end connections of the individual cables cannot be stressed.

 5) Wiring – connection to the power grid

b) dimensions of the controller



- Before starting all the assembly works, ensure that the wiring box or mains power outlet that you want to use to connect the unit is equipped with a protective (green-yellow) conductor or contact (pin)
- If you use a mains plug to connect the unit, it must always remain accessible so that the unit can be safely disconnected from the mains in the event of danger.
- The relevant current circuit must be protected in the electric power distribution system by the maximum of 16 A.
- Electrical connection of the unit to the mains must only be carried out by persons qualified for this activity with a valid authorisation and knowledge of relevant standards and directives in the country.
- This unit belongs to the product group with type Y connection. If the supply cord is damaged, it must be replaced by the manufacturer, its service centre or similarly qualified person to avoid dangerous situations
- The unit supply voltage of 1~230 V/50-60 Hz must not be modified in any way, otherwise there is a risk of damaging the electrical elements of the unit.
- Connecting the Xflat 200 unit to the mains



- Connection of the unit to the wiring box
- The power supply cable is prepared by the manufacturer for connection to the wiring box.
- Use adequate connecting elements (e.g. terminal plates, spring terminals, etc.) to connect the power supply cable to the mains
- Connecting the unit to the electrical outlet
- The supply cable can be equipped with a fork with a protective conductor (pin) – not included in the delivery

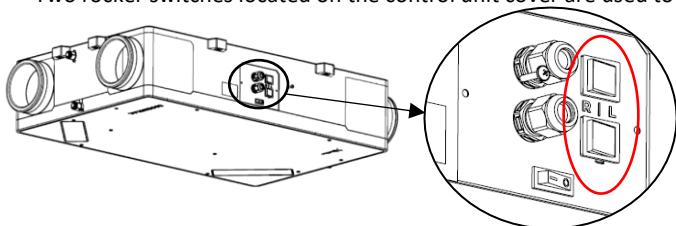
⚡ The installation of the supply cable into the wiring box or the installation of the plug onto the supply cable and the subsequent connection to the mains must be carried out by a competent person who is authorised to do so and who is familiar with the relevant standards and guidelines in the country concerned.

6) Regulation – electrical accessories for Xflat 200 unit

- There is no need to connect anything else to the unit for the correct operation of the unit. It is, therefore, ready for its immediate use after assembly. No AQS sensors can be directly connected to the unit control.

a) Switching the unit version right/left

- Unit control allows switching between right (factory setting) and left
- Two rocker switches located on the control unit cover are used to set the version.



- BOTH ROCKER SWITCHES MUST ALWAYS BE ON for proper switching of the unit design. Always only switch the switches when the unit is switched off from the power supply – main switch off.
- If both switches are not switched to the same position, the unit will not operate properly.

- Marking R – right version
- Marking L – left version

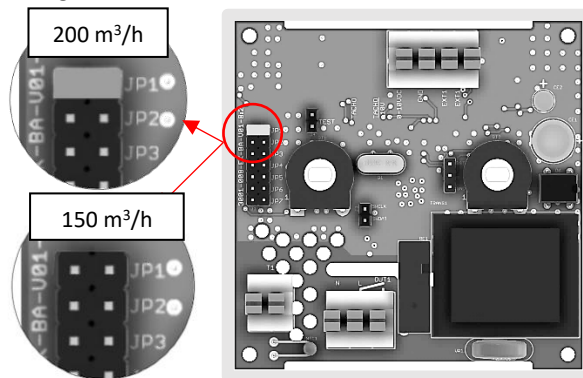
b) Switching the rated 150/200 m³/h output of the unit

- The unit has a switchable nominal air output of 150 m³/h and 200 m³/h (factory setting)
- The required air output is set on the unit's controller.



- Only make adjustments when the unit is switched off from the power supply – main switch off. Failure to comply may result in irreversible damage to the unit or personal injury

- Open the controller as described in Section 4(a)
- On the inside of the front of the controller box, remove/add the clamping bridge marked JP1. If removal is necessary, it is recommended to store the clamping bridge.



c) Connecting an external contact – BOOST (EXT1)

- The unit control allows connection of an external button (flap switch with automatic flap return, e.g., bell button with return spring) to start the shock ventilation mode for 10 min. – BOOST.

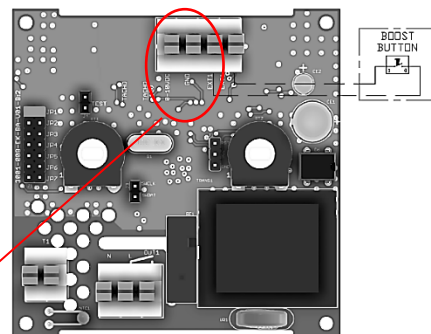
- The BOOST mode is designed for 10 min. of shock ventilation in rooms with an immediate need for ventilation, e.g., bathroom, toilet, etc.



- Connect only when the unit is disconnected from the power supply – main switch off.

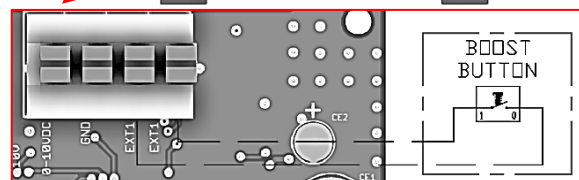
Failure to comply may result in irreversible damage to the unit or personal injury

- Open the controller box as described in 4(a)
- On the inside of the front of the controller box, remove the red wire clip from the EXT1 contact and connect the wires from the button designed to trigger BOOST mode
- Close the controller box



- Technical parameters of external contact – BOOST

- The external contact is designed as potential-free
- Switched voltage 24 VDC/5 mA.



- BOOST mode functionality

When the push-button (damper switch with automatic damper return) is pressed, the BOOST mode is activated

- The BOOST mode is activated and the unit is run at the selected maximum rated air output for 10 min.
- After the end of the running time of BOOST mode – 10 min., the unit returns to the previous mode

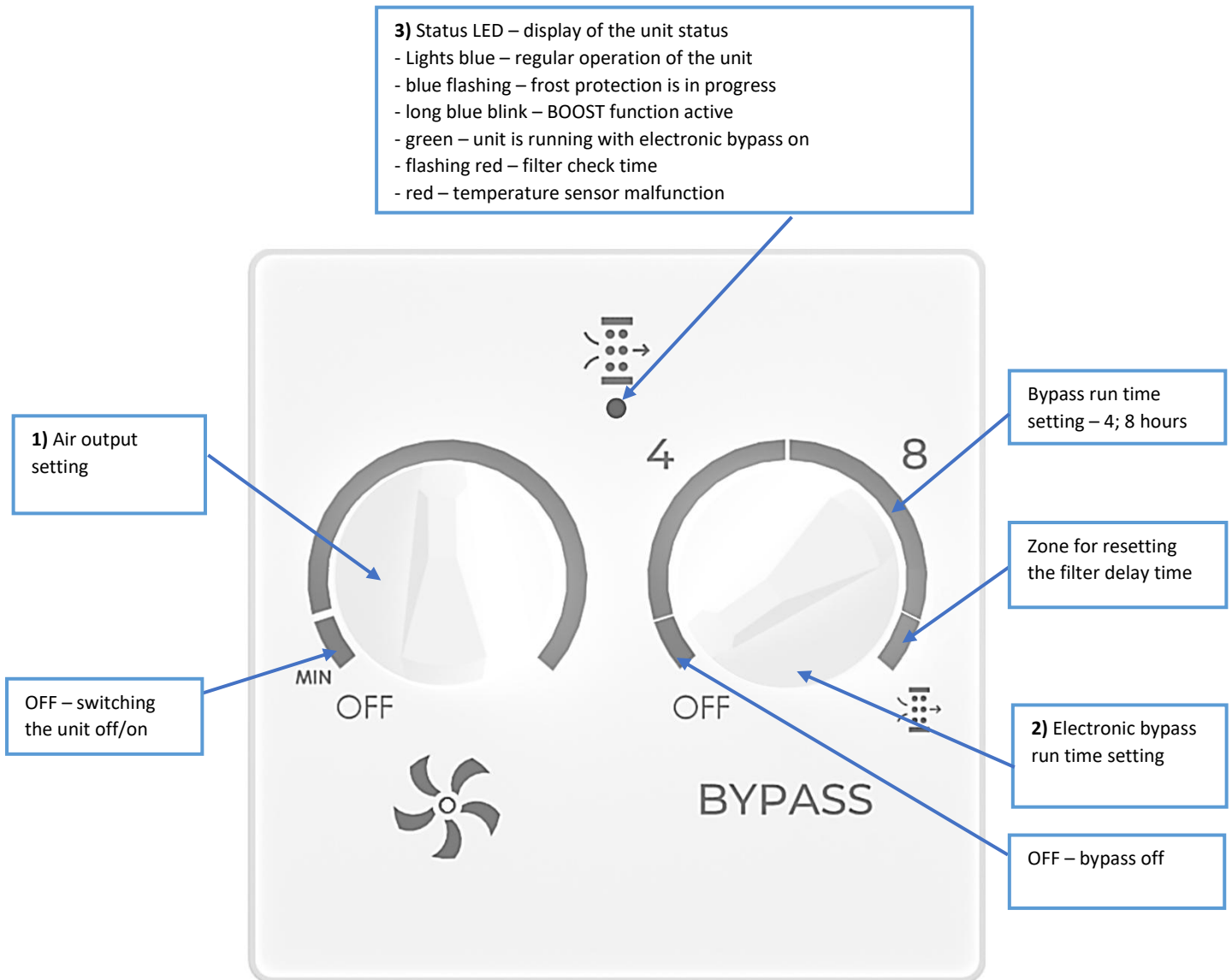
If you wish to exit the BOOST mode before the set running time,

hold the push-button for approx. 2 s.




The BOOST mode is automatically ended, and the unit returns to its previous mode

d) Description of the Xflat 200 unit controller with ESSENCIAL control

- 3) Status LED – display of the unit status**
- Lights blue – regular operation of the unit
 - blue flashing – frost protection is in progress
 - long blue blink – BOOST function active
 - green – unit is running with electronic bypass on
 - flashing red – filter check time
 - red – temperature sensor malfunction



e) Connection of external electric preheater, reheater

-  - Install the heater – preheater according to the heater manufacturer’s instructions, e.g., flow direction, distance from the unit, heater position, distance of temperature sensor from the heater, etc.
- If the heater manufacturer requires a minimum piping velocity for proper heater operation, this must be addressed by a separate component (e.g. differential pressure sensor). Under no circumstances can the unit be used for this purpose.
-  - The supply wiring for the heater must be a separate supply including the switched phase controlled by the unit, under no circumstances can the heater be powered from the unit.
- We recommend using a heater with a channel sensor (for temperature control) and control via an external contact from the unit
- The maximum power of the heater is recommended to be 600 W due to the air output of the unit.
- For trouble-free and long-lasting operation of the external heater, we recommend using a filter box in front of the heater to catch coarse dirt.
-  - In no event will the manufacturer of the unit be liable for improper assembly, malfunction or damage caused by the heater.

f) Block diagram of the Xflat 200 unit – ESSENCIAL control

