# FUTURA Service Manual

The JABLOTRON FUTURA unit service manual is intended for distributors and installation partners of JABLOTRON LIVING TECHNOLOGY CZ s.r.o.

The manual applies to FUTURA M and FUTURA L products

Version 2.0 EN

## Content

## *Symbol used in the manual*

Please pay close attention to the symbols used and, for your safety and the proper operation of the ventilation unit, follow the instructions given for each symbol.

| Symbol | Meaning |
|---|---|
| ! | IMPORTANT |
|  | WARNING, DANGER! |
|  | WARNING, ELECTRICAL EQUIPMENT! |
|  | DANGER, CAUTION? RISK OF HAND INJURY. |

## *Recommended equipment*

1. Connect LITE – web application (www.jablonet.net) for remote management and monitoring. For full control of the unit, we recommend asking the owner to increase the permissions. See the menu “Device settings – Service technician access” to change to “ALL” in the MyJABLOTRON application (Warning – this is not a sharing setting).
2. Phillips screwdriver
3. Flat screwdriver
4. Spatula (min. 5 cm wide)
5. Vaseline LV 2-3
6. Dry cloth
7. Technical alcohol
8. Vacuum cleaner
9. Multimeter
10. Airtight tape
11. Anemometer

## *Functionality check*

1. Visually inspect the unit and the installation location. Check that there has been no unauthorized intervention in the unit (removed cover, disconnected cables, etc.). Record any interference, damage, or dirt.
2. Before continuing, check that the unit does not report any warnings or errors and eliminate any problems.
3. Check that all ventilation power levels of the unit (0, 1, 2, 3, 4, 5, A) are controlled using the connected controller. Record any unusual symptoms (increased noise, etc.).

## *Filter check*

Do not put your hands in the filter opening when checking, as this may cause injury to your hand when colliding with the fans.

1. Check the date of filter replacement and the percentage of clogging. (Connect LITE).
2. In the event that the filters are quickly clogged, inform the owner of the possible causes and how to prevent them. The most common cause is the use of humidifiers with tap water, which can cause clogging very quickly, for example after two weeks. When using humidifiers, we recommend using distilled or demineralized water.
3. Turn off the unit and check the presence of filters (visually) after stopping the fans.
4. If there is a CoolBreeze installation, check that the exhaust (right) filter is located in the CoolBreeze module and not in the FUTURA unit.
5. If necessary, install new filters at the end of the service inspection to prevent them from becoming dirty during further service activities. Confirm the installation of new filters by pressing the button.

Note: The exhaust filter (right) is usually more clogged with fine dust from the interior and causes a higher pressure drop. The result may be higher unit consumption, higher fan speeds to overcome the pressure drop and increased noise.

## *Heat exchanger check*

Check and clean the heat exchanger.

Only authorized person may intervene in the electrical installation. Strictly follow local legal requirements.

1. Remove the front cover (crosshead screwdriver)
2. Remove the plugs of the inspection holes A, B, C, D (wide spatula)
3. Visually inspect the exchanger and record any contamination
4. Clean the exchanger flap paths with a dry cloth. If necessary, use technical alcohol. Do not clean with water or other means.
5. Check the correct movement of all flaps to the end positions by running the “Initialize exchanger” function in Connect LITE – Settings/Functions tab.
6. Remove any dirt and dust with a vacuum cleaner.
7. Insert the service hole plugs and seal them with Vaseline

Do not use grease on the flaps of the heat recovery exchanger! The flap paths of the exchanger must remain dry.


*Figure 1 - Inspection plugs removal with spatula*

*Figure 2 - Heat exchanger flap path*

*Figure 3 - Contamination of the heat exchanger space*

## *Electrical installation check*

Only authorized person may intervene in the electrical installation. Strictly follow local legal requirements.

1. Switch off the power supply to the unit
2. Check and tighten the power supply and bus terminals (cross and flat screwdriver) if necessary
3. Switch on the power supply to the unit and check the 24 VDC supply voltage on the power supply. If necessary, adjust the voltage (by turning the trimmer) so that the output is 24 ± 0.2 VDC (multimeter).
4. Check that all peripherals are connected. Check their correct function
    - Boost buttons – check whether the ventilation capacity is increased (Connect LITE)
    - Overpressure button – check whether the supply fan capacity has been increased (Connect LITE)
    - Circulation button – check whether the circulation damper has opened (visually through the service opening A)
    - VarioBreeze flaps – when the ventilation is switched off (0 = Standby), all flaps are closed. Use a strong lamp (you can use a mobile phone, for example) to shine through the individual flap and check their correct function.
    - VarioBreeze buttons – press the buttons one by one to check whether the Boost function is activated (Connect LITE)
5. CoolBreeze heating and cooling – set a higher desired temperature than the current temperature and activate the heating. Check whether the desired and actual CoolBreeze power and the evaporator temperature increase (to approx. 50 ± 5 °C). In case of cooling, reduce the desired temperature and switch the mode to cooling. Check the power and the evaporator temperature decrease (2 to 5 °C). (Connect LITE)
6. If some devices are not connected or not communicating, check the supply voltage on the communication bus (24 VDC x GND) (multimeter). The communication bus voltage (A x GND, B x GDN) ranges between 2 – 2.5 VDC. If a short circuit occurs, the protective varistors of the VarioBreeze flap or button are most often damaged and check for a possible short circuit according to the following procedure.
    - Disconnect the communication bus
    - Use a multimeter to “beep” A x GND on the device terminal block
    - Use a multimeter to “beep” B x GND on the device terminal block
    - If it beeps, the varistor is damaged and needs to be replaced
7. Install the front cover

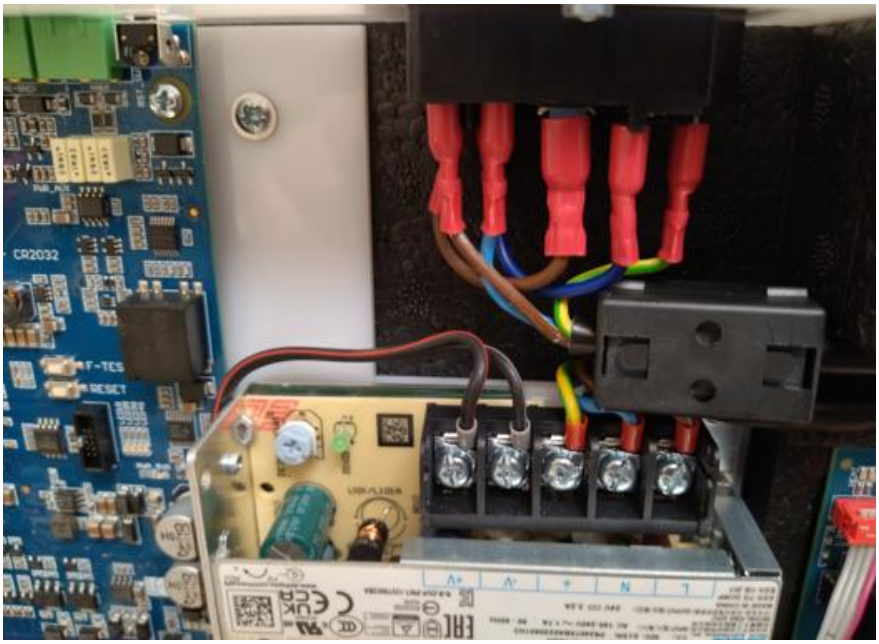


*Figure 4 - 24 VDC power supply terminal*

*Figure 5 - Dirty drain hose*

## *Air duct check*

1. Check the facade box and remove any dirt (visually)
2. Check the connection and tightness of the supply and exhaust pipes (EPP)
3. Check the connection and tightness of the silencers between the unit and the distribution box
4. Check the connection and tightness of the flexi pipes to the distribution boxes and dampers (mechanical or VarioBreeze)
5. Cover any leaks with airtight tape.

*Figure 6 - Air leakage in EPP ducts*

## *Air flow regulation*

If you suspect poor ventilation, it is advisable to check the correct ventilation settings.
The amount of supply and extract air must be balanced to ensure high heat recovery efficiency.

1. Check the amount of supply and extract air and adjust the ventilation balance by regulating the supply fan (Connect LITE)
2. Check the position of the mechanical dampers.
3. Check the cleanliness and opening of the distribution elements (nozzles, etc.).
4. If necessary, adjust the power settings according to customer requirements (anemometer, Connect LITE).

Note: In the case of major interventions in the air conditioning system, we recommend performing a complete analysis of the distribution with new filters.

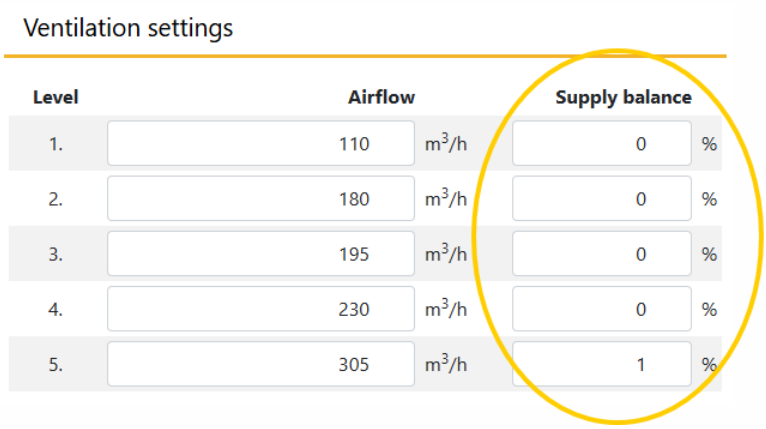


*Figure 7 - Supply fan balancing*

## *End of service inspection*

1. Inform the owner of any defects found and fixed
2. Replace filters if necessary.
3. Give the completed Service record to the owner and keep a copy.
4. Enter the date of the Service inspection in Connect LITE.

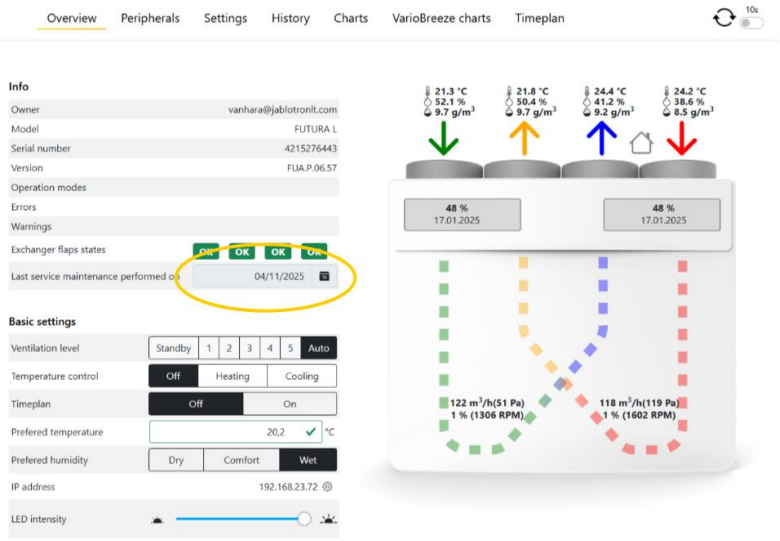


*Figure 8 - Service inspection date*

## SERVICE RECORD – TEMPLATE

| | | |
|---|---|---|
| **FUTURA** | | |
| Unit serial number (eg. 40031140000000) | | |
| PCB serial number (eg. 4215278000) | | |
| **SERVICE COMPANY** | | |
| Service company name | | |
| Name and Surname of the servicing person | | |
| Date of service | | |
| **SERVICE RECORD** | | |
| ☑ | Control action | Note |
| ☐ | Functionality check | |
| ☐ | Filter check | |
| ☐ | Heat exchanger check | |
| ☐ | Electrical installation check | |
| ☐ | Condensate drain check | |
| ☐ | Air duct check | |
| ☐ | Air flow regulation (optional) | |
| ☐ | End of service inspection | |
| | | |
| Date and signature of the inspector | | |
| Date and signature of the person taking over | | |