



120m<sup>3</sup>/h

# SUPPLY AND HEAT RECOVERY VENTILATION UNIT

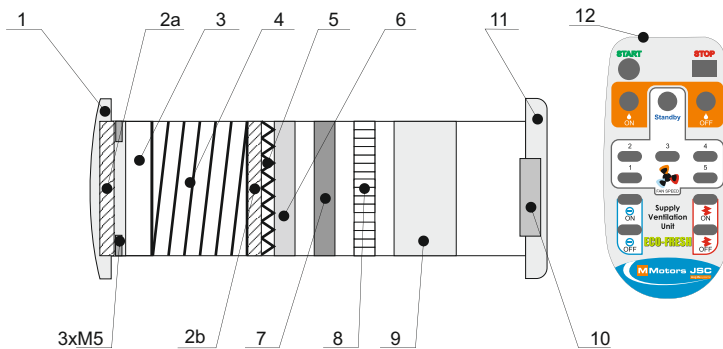
## "ECO-FRESH 05"

**M Motors JSC**  
long life systems

### GOLD MEDAL IFP

International Technical Fair Plovdiv - 2009

PATENT No 110146



- Outer grille** - prevents the system of getting dump even in heavy rains.
- Filter:**
  - **Special charcoal filter** - guarantees fresh and filtered airflow in the premises even in heavy polluted areas. Thoroughly clears the air from smells, dust, burnt gas, bacteria etc.
  - **Fine filter** - used in very dusty areas.

*In very polluted areas the filter should be changed 2 to 3 times a year.*
- Positioning the filter** - **2a** (when access to the outer grill is possible), or **2b** (when access is possible only from inside the premises).
- Metal Shutter** – prevents the inflow of cold air when the unit is switched off.
- Duct** – duct adjustable in length to suit the wall thickness.
- Heater 420W** – economical heater designed for intermitted operation. Maintains the temperature of the inflowing air to 23° C. Achieves Δt (the temperature difference between the outside air and the air inflowing into the premises) 35° C at supply rate 120 m<sup>3</sup>/h.

**IMPORTANT!**  
When the outside temperature is below -12°C it is necessary to reduce the speed of the fan in order to guarantee inflowing air with room temperature 23°C.

- Thermostat** - controls the heating element to guarantee inflowing fresh air at 23°C room temperature. When the temperature of the inflowing air is above 17°C, the heating element will remain switched off.
- Thermal relay** - prevents the system from overheating
- Ionizer** - disinfects and cleans the air from dust and debris that can be harmful to breath or aggravate allergies. Prevents the formation of mould and mildew.
- Five speed supply ventilation unit** - equipped with a regulator allowing to control the debit of the inflowing air from 30m<sup>3</sup>/h (night mode) to 120m<sup>3</sup>/h (day mode).
- Humidity Control System** - controls the humidity by keeping it below 70-75%.
- Decorative grille** - can be white, Inox, Chrome or other colours.
- Remote Control:**

**START** - System switch on;

**STOP** - System switch off;

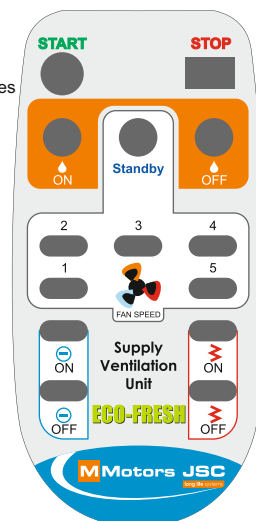
**Standby** – The standby button will stop the system, and the system will be in state of readiness. The humidity control system and timer is live and will start the fan and ionizer when the humidity reaches over 70-75%. The built-in timer ensures operation for 10 minutes after the humidity falls below 70-75%. In standby mode the heater, the fan and ionizer can be switched ON and OFF and controlled from the designated buttons on the remote control.

**ON** - Switch ON Humidity Control System;  
**OFF** - Switch OFF Humidity Control System;

**FAN SPEED** – 5 Speed control panel. At speed 1 the fan operates silently at 30m<sup>3</sup>/h extraction rate suitable for nighttime operation. At Speed 5 the fan operates at its maximum rate 120m<sup>3</sup>/h, suitable for daytime operation.

**ON** - Switch ON the Ionizer.  
**OFF** - Switch OFF the Ionizer.

**ON** - Switch ON inflowing air heater;  
**OFF** - Switch OFF inflowing air heater;



### LED LIGHTS

#### Green LED:

- When the green LED blinks, the unit is switched OFF;
- When the LED is permanently lit, the unit is switched ON.

#### Red LED:

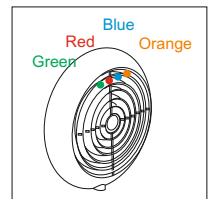
- When the red LED is permanently lit, the unit is in state of readiness to start heating the inflowing air if it drops below 17°C.
- When the LED blinks, the inflowing air is below 17°C and the heater starts operating.

#### Orange LED:

- When the orange LED is permanently lit, the Humidity Control System and Timer is ON;
- When the LED blinks, the humidity is above 75%.

#### Blue LED:

- When the blue LED is ON, the Ionizer is operating.



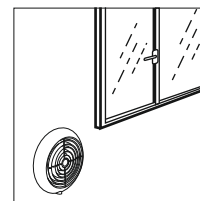
### Note

- When the system is activated from the Standby button, the green, orange and blue LEDs are lit. The system is now in state of readiness to start operating when the humidity reaches above 70-75%. When the humidity reaches over these values, the fan starts operating on speed 3 together with the ionizer. The fan will stop 10 min after the humidity drops below 70-75%.
- The heater can be switched on by the remote control and it will start heating the inflowing air when its below 17°C.
- You can choose your own combination of options from the remote control.

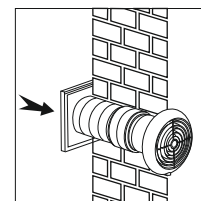
### Dimensions: Minimum wall thickness 32 cm.

*Upon customer's request, the unit can be manufactured to fit to wall thickness of 17 cm.*

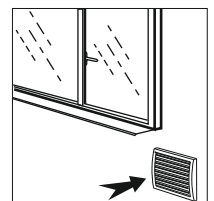
Model	Voltage Hz/V	Maximum Debit m <sup>3</sup> /h	Consumed Power		Spinning Frequency min <sup>-1</sup>	Protection Degree IP	Weight Kg
			Fan W	Heater W			
<b>05</b>	50/220	120	46	420	2650	X4	3,1



Inside Grille



Wall mounting



Outside Grille

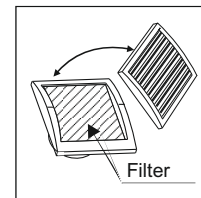


Fig. 2a

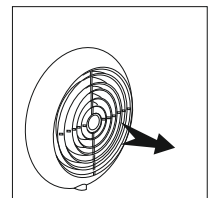


Fig. 2

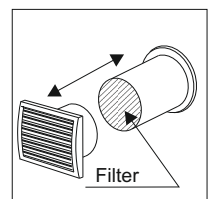


Fig. 2b