

## **MECHANICAL HEAT RECOVERY VENTILATION FOR RESIDENTIAL BUILDINGS**

### **JD Series**



## **GUIDE FOR INSTALLATION, USE AND MAINTENANCE**

### **Original instruction**

## SAFETY STANDARDS AND "CE" MARKING

Our technicians are steadily engaged in research and development of more and more efficient products in compliance with the safety "standards" in force.

The standards and suggestions contained herein reflect the safety standards in force and, therefore, are mainly based on the compliance of said general regulations.

Consequently, we would suggest all people exposed to risks to comply the accident prevention regulations in force in their respective countries.

Messrs UTEK s.r.l. are exempted from any responsibility attributable to damage caused to persons and things resulting from the non-compliance with the safety standards and any product modifications.

The **CE marking** and the relevant declaration of conformity prove the conformity to the applicable community regulations.

The products which are not provided with the CE marking must be certified by the purchaser who shall have to certify the conformity of the whole plant.

Units are as prescribed by:

- Machinery directive 2006/42/EC
- Low voltage directive EEC 2006/95
- Electromagnetic compatibility directive 2004/108/EC

And in accordance with the following harmonized standards:

EN 12100-1: 2003; EN 12100-2: 2003; EN 60204-1:2006

## GENERAL

The safety protection devices may not be removed if this is not absolutely necessary.

In this case, suitable measures to point out the possible danger shall be immediately taken. The restoration of said protection devices on the product shall take place as soon as the reasons for the temporary removal cease.

All (ordinary and extraordinary) maintenance interventions shall be carried out with disconnected machine and electrical and pneumatic supply. In order to avoid the risk of possible accidental starts, provide the electric panels, the central units and the switchboards with warning signals with the following reading "**caution: control disconnected for maintenance works**".

Before connecting the electrical supply cable to the terminal board make sure that the line voltage is in compliance with the voltage stated on the machine plate.

Replace the product labels if, with the passing of time, they should become illegible.

## MAINTENANCE REGULATIONS

The personnel in charge with maintenance must keep to the accident prevention regulations in force and to the following instructions:

- wear suitable accident prevention clothes
- when the noise exceeds the admissible levels, use protection headsets
- make sure that an interlock is provided so that the machine may not be started from non-authorized persons

## INSTALLATION CONDITIONS

Installation allowed inside the buildings or outdoor, with temperature between 0° to +45° C

To avoid:

- areas near sources of heat source, steam, flammable and/or explosives gases, dusty areas

To consider:

- consider an area where the air flow and noise of the unit don't disturb the neighbors;
- minimum space required for the maintenance (as defined below);
- the floor or wall must be suitable to the weight of the unit and don't cause vibrations;
- a position that does not block passageways or entrances;
- the unit must be canalized
- measures to protect the fan vents with special protection to prevent contact with moving mechanical parts;

The protection degree is IP20. In case of outdoor installation, place the unit in a place sheltered from the weather.

## REMAINING RISKS

The risks of the products have been analyzed according to the Machine Directive. (all. I of Directive 2006/42/CE)

The present handbook contains information for all persons in charge and has the purpose to avoid possible damages to persons and/or things attributable to remaining risks.

## MACHINE SIGNALS

The machine can be provided with several signalling pictograms which may not be removed

Said signals can be subdivided into:

### PROHIBITION SIGNALS:

Do not repair or adjust during motion



**DANGER SIGNALS:**

They signal the presence of parts under voltage in the container on which the plate is provided.

**IDENTIFICATION SIGNALS:**

Serial number plate: it states the product data and the manufacturer address.



**REMARK:** other signals can be added to the product according to the analysis carried out on the remaining risk.

**GOODS RECEPTION**

Each product is carefully checked before shipping.

On goods reception, it is necessary to make sure that products have not suffered any damages during transport.

In this case, send a complaint to the forwarding agent.

The forwarding agent is responsible for any transport damages.

Products are loaded on pallets and fastened to them by means of straps and protection film or in self-supporting cardboard boxes which are fastened to pallets.

**HANDLING**

Before displacing products, make sure that the means of transport employed has a suitable carrying capacity.

For pallet lifting use forklifts.

According to the standard 89/391/CEE and following standards, manual lifting is admissible up to a max. weight of 20 Kg under shoulders level, but over floor level.

**START**

Before starting it is opportune to carry out some checks:

- Make sure that the product does not contain any foreign matters and that all components are fastened in their seats;
- Make sure that the inspection door is closed.

**CAUTION:**

***If the fan mouths are not ducted, use a suitable protection net. Check the earth connection***

**DISASSEMBLY AND ASSEMBLY**

Before starting any operation, make sure that the product is excluded from any electrical connection and that the impeller is switched off.

Disassembly and assembly are extraordinary maintenance operations and must be carried out by qualified personnel.

**DISPOSAL**

Do not dismantle the system themselves: disassembly of the product and any other party, shall be performed by a qualified installer in accordance with relevant local and national regulations in force.

## CEILING HORIZONTAL INSTALLATION

The heat recovery module **JD series** is equipped with holes fixing in the four unit angles, where hooking is possible through threaded bars or chains in order to facilitate ceiling fastening and levelling (see fig.A).

After fastening the unit in the right position, carry out the connection to the ducting and the condensate discharge pipe fastening on the air exhaust side.

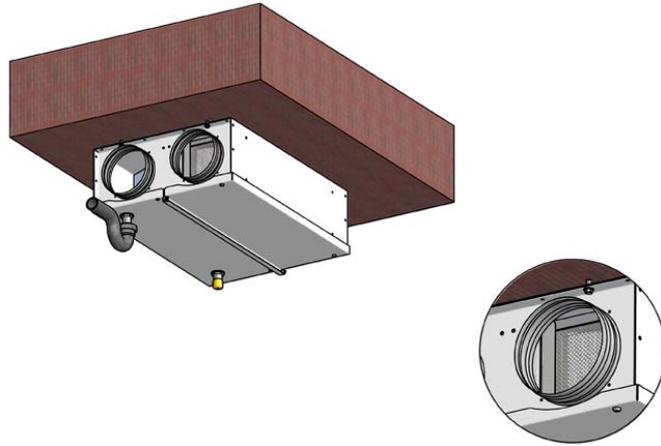
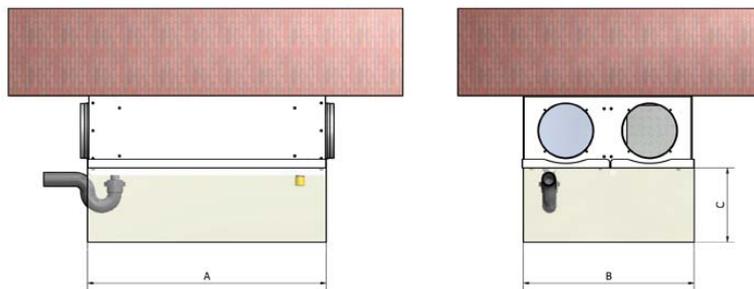


Fig. A

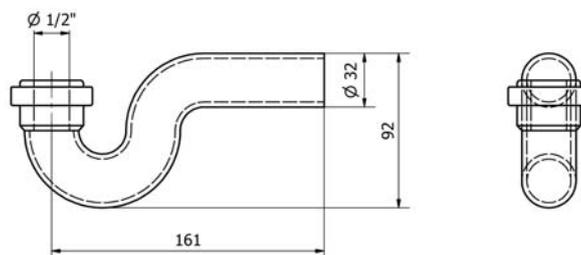
## MINIMUM SPACES REQUIRED FOR THE MAINTENANCE



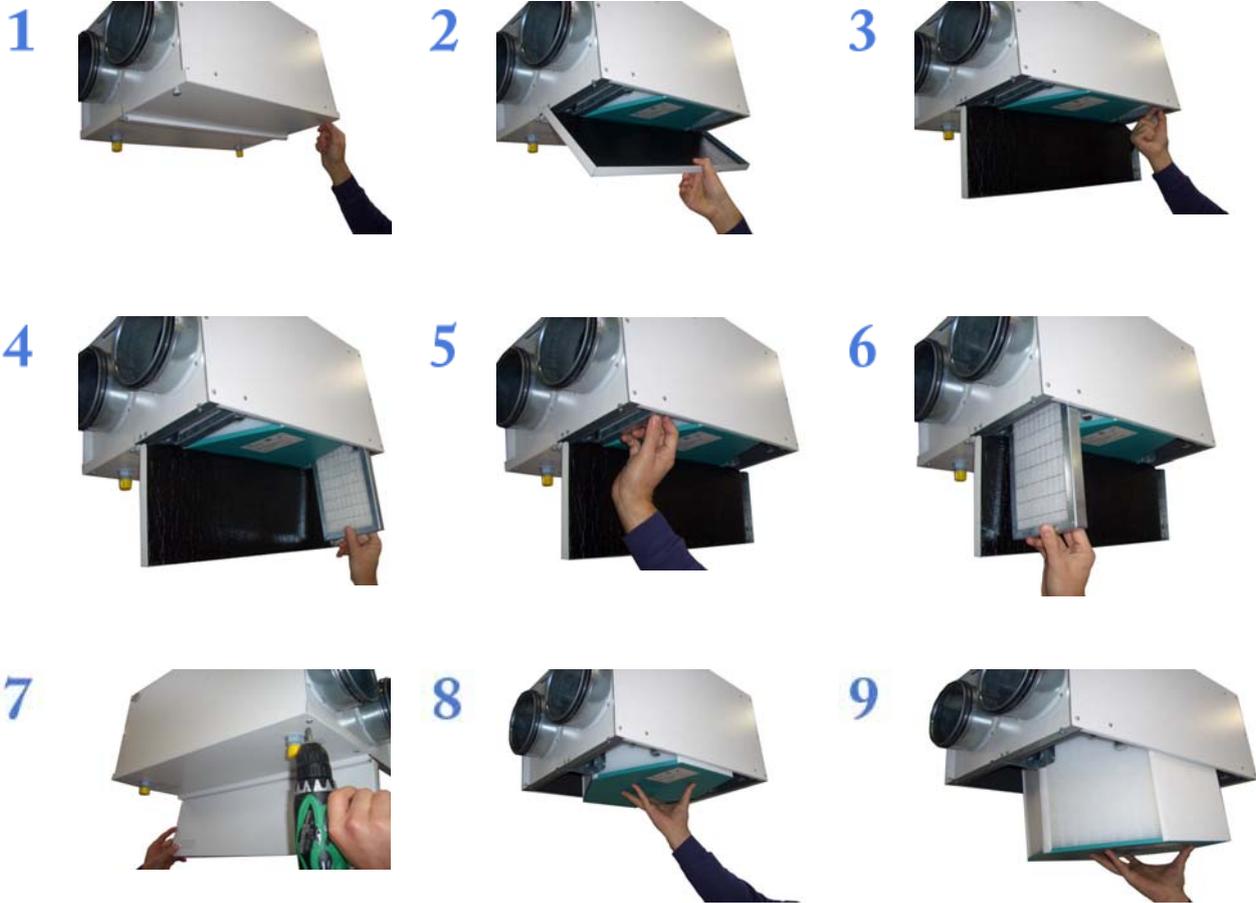
MOD.	A (mm)	B (mm)	C (mm)
JD 100	550	400	200
JD 200	550	400	300

**The unit is equipped with condensate drainage to evacuate the water during normal operation. Should always be provided with a drain pipe siphon and minimum slope of 3% in order to avoid stationing of condensate.**

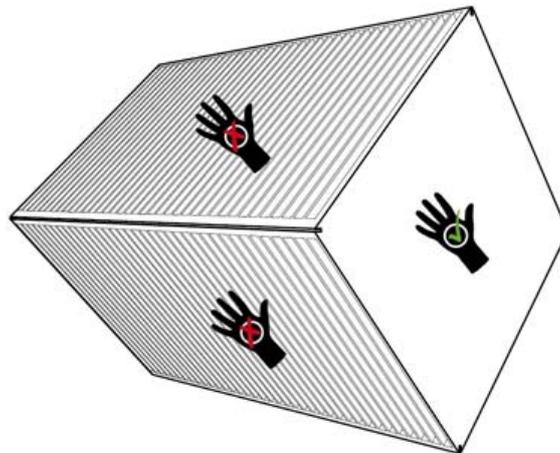
**The siphon is essential for the proper functioning of the machine in order to avoid sucking air and allow the natural flow of condensate.**



## MAINTENANCE AND CLEANING OF FILTERS AND HEAT EXCHANGER WITH BENEATH ACCESS



## PRECAUTIONS IN HANDLING HEAT EXCHANGER



### Recommended periodical maintenance

*Filter replacement: variable depending on environment air pollution (dust, fume, etc)*

### Recommended periodical maintenance:

*Exchanger cleaning: 1 operation season approximately*

**TROUBLESHOOTING**

<b>Fault</b>	<b>Causes</b>	<b>Remedies</b>
<b>Insufficient air capacity</b>  <b>Insufficient pressure</b>	Clogged pipelines and/or suction points Clogged impeller Overloaded filter Insufficient rotation speed Clogged heat exchanger	Pipelines and suction point cleaning Impeller cleaning Filter cleaning or replacement Supply voltage check if necessary, correct Exchanger cleaning
<b>Exchange air temperature too cold</b>	External air inferior to -5°C	Employ of post-heating devices
<b>Insufficient exchanger performance</b>	Exchange vanes are dirty	Heat exchanger cleaning