



UVF ECOWATT



ENGLISH

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1. OVERVIEW

- We appreciate the trust you have placed in us by purchasing this device. You have purchased a high-quality product that has been manufactured in strict compliance with recognized technical regulations regarding safety, and in accordance with **EC** standards.
- Read this instruction booklet carefully, since it contains important information for your safety during the installation, use and maintenance of this product. Keep this booklet in case you need to consult it in the future.
- We ask that you make sure the equipment is in perfect condition when you unpack it, since any existing defect is covered by the **S&P** warranty.
- Technicians responsible for installing, start-up and maintenance must read the instructions and be familiar with them before starting work.

2. SAFETY STANDARDS AND “EC” MARKING

- **S&P** engineers are firmly committed to research and development to achieve products with improved efficiency that complies with current safety standards.
- The standards and recommendations indicated below reflect current standards in the field of safety, and therefore are based primarily on meeting standards of a general nature. Consequently, we recommend that all personnel exposed to risks adhere strictly to local regulations in force regarding hazard prevention.
- **S&P** is in no way responsible for any damage or injury caused to persons or objects resulting from failure to comply with safety standards, and any possible modifications to the product. The EC seal and statement of conformity serve as proof of the product's compliance with applicable European Community standards.

3. GENERAL STANDARDS








- Product risks have been analysed pursuant to the provisions of the Machinery Directive. This manual contains information intended for all personnel exposed to hazards, with the goal of preventing personal injuries or damage to objects resulting from mishandling or improper maintenance. All maintenance service work (corrective and preventive) must be performed with the equipment stopped and disconnected.
- To avoid danger of possible accidental start up ensure that the equipment is electrically isolated and locked. If this is not possible, warning signs should be placed on main distribution console that state:

“WARNING: controls disconnected for maintenance”

- Before connecting the power cable to the motors, make sure that the voltage on the line matches the voltage indicated on the unit's identification plate.

4. UNIT LABELING

- The unit comes with a variety of labels that must not be removed. Here with sample labels and meaning:

ICON / LABEL	MEANING
	Signing on fan access door. Indicates that the unit must be disconnected, followed by a waiting period, since there are moving parts that constitute danger to entry.
	Indicates direction of airflow in the unit.
<div> <div> TIPO: UVF-1200/250 F7 ECOWATT V: 230 HZ: 50/60 IP: 44 A: 1,4 KW: 0.22 Insul.Cl B RPM: 2650 REF: 000 Working Temp -15/55°C </div> <div>   Made in Spain    </div> </div>	Unit identification plate. This indicates: <ul style="list-style-type: none"> - Model - Serial number - Date of manufacture - Maximum absorbed current of motor (A) - Power of installed electric heater - Electrical supply

5. TECHNICAL CHARACTERISTICS

Model	Power supply	Maximum absorbed power (W)	Maximum current (A)	RPM
UVF-400/160 ECOWATT	230/1/50-60	100	0.5	3900
UVF-600/200 ECOWATT	230/1/50-60	115	0.57	3300
UVF-1100/250 ECOWATT	230/1/50-60	210	1.1	2800
UVF-1500/315 ECOWATT	230/1/50-60	235	1.4	2300
UVF-2500/355 ECOWATT	230/1/50-60	355	1.39	1900
UVF-3000/400 ECOWATT	230/1/50-60	360	1.45	1800



6. HANDLING

- The UVF ECOWATT units are supplied packed in a single cardboard box.
- When unit received, unpack and make sure the packaging is intact; any defect may indicate damage to the unit. Review it carefully to make sure that no parts are missing.
- If there is any damage to the unit or the shipment is not complete, write down the problems on the delivery slip and send a claim to the carrier. Also report any problems to **S&P**.
- The unit should be handled carefully and only horizontally.
- Manipulate the unit by hand. If using a forklift, place the box on a pallet. Do not manipulate the box directly with the blades of the forklift.

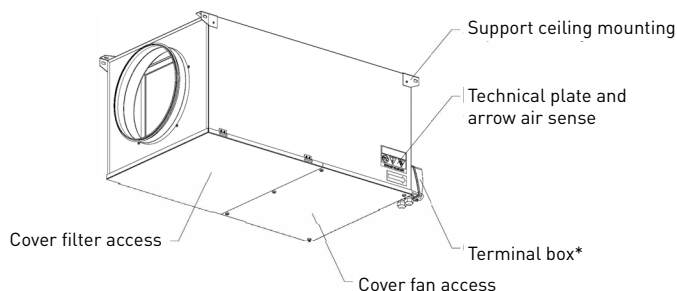
7. INSTALLATION

7.1. OVERVIEW

- The technician responsible for unit receipt must ensure that the characteristics of the existing power supply agree with the electrical data on the unit's identification plate.
- Before installing the unit in its final position, make sure that the place where it will be located is strong enough to support its weight.
- Under no circumstances should these units be installed in flammable or explosive environments, in environments that contain oil vapours, salt air, or corrosive environments.
- Equipment installation can present hazards due to the material used, pressures in the system and the electrical components. For this reason, only trained and qualified service personnel may install service or repair the equipment.
- As a precaution, when performing operations inside the equipment, shut off the power at a main breaker. This serves to prevent any accidents involving the equipment's moving parts, which can start accidentally, well as to prevent any direct or indirect contact with live parts.
- The unit must also be disconnected by the cut-off switch integrated in the terminal box of the product.

7.2. IDENTIFICATION UNIT PARTS

The main module may consist of three different sections: filter, coils and fans. However, one of the first two sections may not be included. The following illustration identifies the main components of the main module.



* In the small models UVF-400/160, UVF-600/200 and UVF-1100/250 the terminal box is remote, supplied with a 650mm long hose cable.

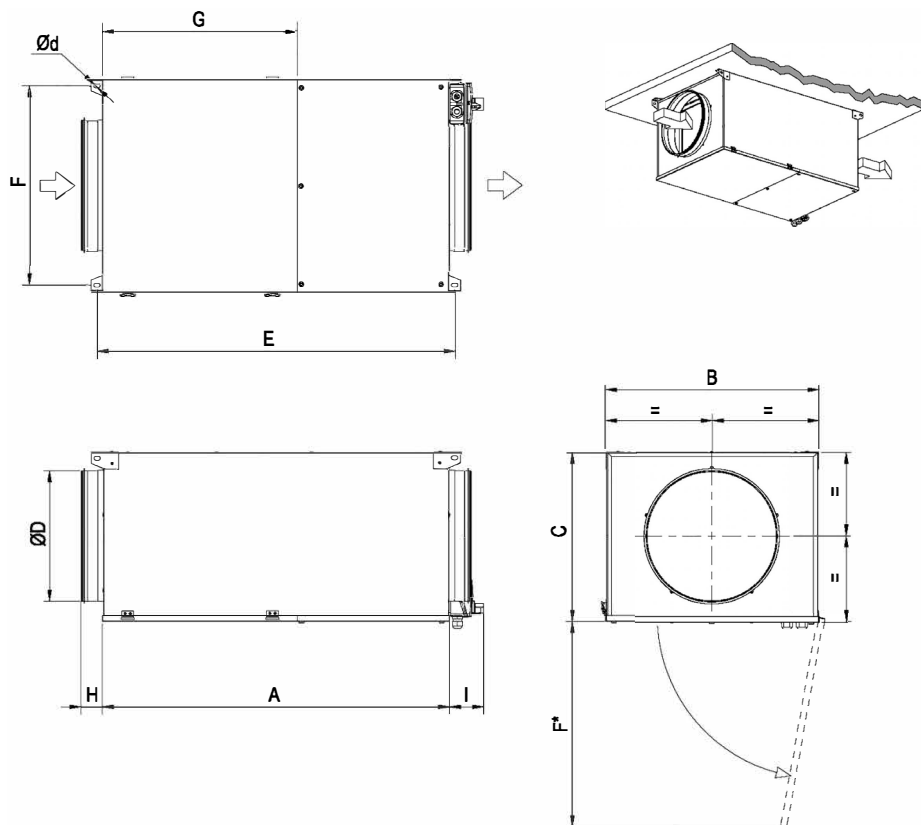
7.3. INSTALLATION SITE

The unit must be installed so that the airflow is upright vertical position: Bottom air intake and top discharge.

- Avoid installing the unit in areas near heat sources or in damp areas where the unit might come in contact with water or the relative humidity is close to 100%.
- It is recommended that the unit be installed in a place that is easily accessible for the installation. Provide sufficient room for maintenance, connection and drainage of condensate.

7.4. DIMENSIONS AND SPACE FOR MAINTENANCE

The installer must provide spaces free of obstruction and be able to freely access the unit for maintenance.



Model	A	B	C	D	E	F	d	G	H	I	Weight (kg)
UVF-400/160 ECOWATT	692	313	259	160	718	278	9	468	52	52**	9
UVF-600/200 ECOWATT	728	363	309	200	754	350	9	468	52	52**	9,5
UVF-1100/250 ECOWATT	770	413	334	250	795	400	9	468	52	52**	12
UVF-1500/315 ECOWATT	836	513	409	315	862	500	9	468	52	77	13
UVF-2500/355 ECOWATT	932	613	459	355	957	600	9	468	52	77	15
UVF-3000/400 ECOWATT	932	613	459	400	957	600	9	468	52	77	15

Dimensions (mm)

* Dimension F: Filter maintenance free distance

** Models UV-400/160 to UVF-1100/250 with remote terminal box

7.5. UNIT INSTALLATION

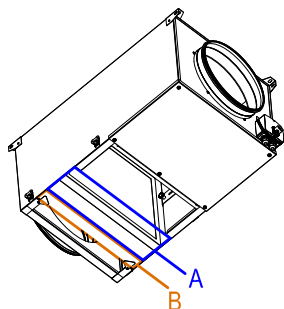
The unit can be mounted on floor, wall and false ceiling. To prevent the transmission of vibrations, appropriate anti-vibration mounts must be installed in the mounting position and the type of surface on which the unit is mounted. For wall mounting, the unit must be supported on the 4 existing support points.

7.6. ASSEMBLY OF ADDITIONAL FILTERS / DISASSEMBLY OF FILTERS

Depending on the version, the unit is supplied with one or two filters located inside it. In the versions with a filter it is possible to add a second filter (order as accessory). In all the versions it is possible to locate a prefilter. To mount the additional filters, follow the following sequence:

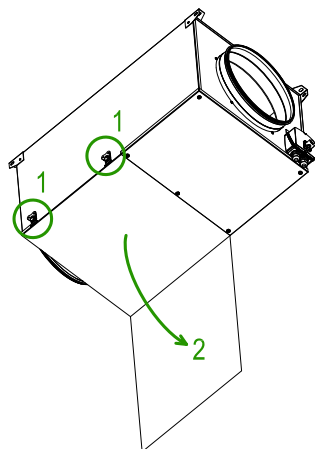
Mounting an additional filter

The UVF-ECOWATT ventilation boxes allow the assembly of up to 3 stages of filtration inside, located as follows:

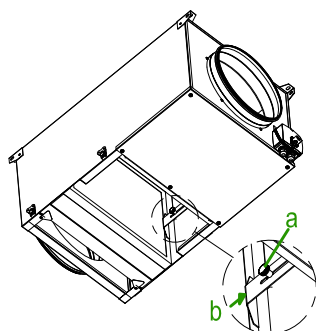


- A. Filter holder with clamping arms in which it is located the filter supplied as standard and that has capacity to have a second filter.
- B. Guide filter holder in which it is possible to locate a pre-filter (G4 or M5).

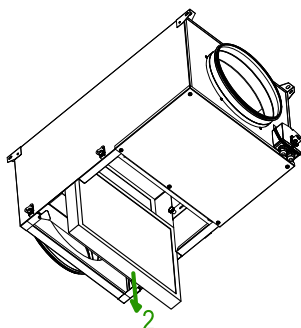
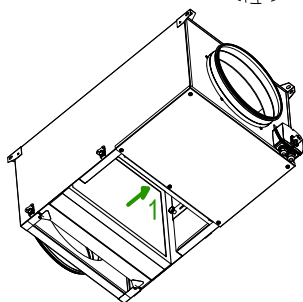
To add a second filter it is necessary to follow the following steps:



Remove the filter registration cover by turning the existing closing hands on the side and back loosened of these **(1)**. Then, tilt the lid towards the side opposite the closing hands **(2)**.



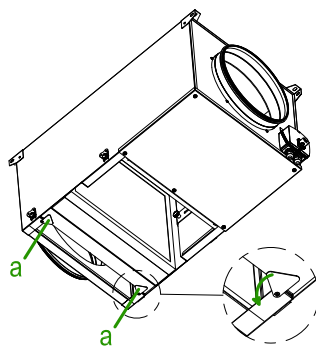
To release the filter or filters, loosen the two threaded knobs that hold each support **(a)**, and move the arms until leaving enough space to remove the filter or filters **(b)**.



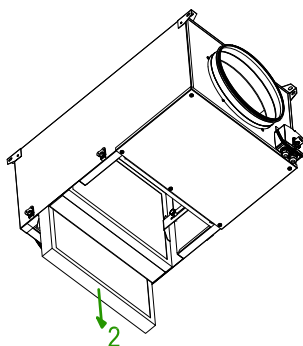
Remove used filters and replace them with the new ones, respecting the sense date of airflow found in the frame.

The microfilters used in the UVF-ECOWATT boxes are high efficiency filters that can not be cleaned. Cleaning these filters can damage them and affect the degree of filtration.

Disassembly the prefilter:



Rotate the lower stops with shape triangular **(a)** holding the prefilter.



Release the prefilter, making it slide by the guides **(2)**.

7.7. CONNECTING THE UNIT TO THE DUCT SYSTEM

- Never use the unit as a support or weight-bearing structure for ductwork.
- Connect the unit to the air ducts using flexible connectors to prevent vibrations from being transmitted to the duct system.
- Check to make sure air intake and flow are not being blocked and that there are no obstacles impeding good air circulation. Failure to do so will affect the efficiency of the system.

7.8. ELECTRICAL CONNECTION

IMPORTANT!

To avoid contamination of the filters included in the unit, they are supplied in plastic bags. Prior to the start-up of the unit, it is necessary to remove these bags and reassemble the filters making sure that the air sense matches the one indicated in the filter frame.

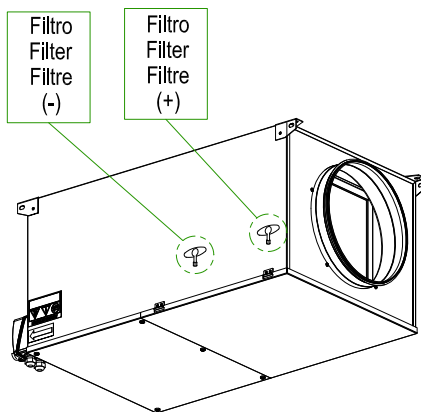
- Before putting the unit in place, make sure that the nominal supply voltage matches that listed on the unit's identification plate.
- It should be installed with cables whose cross-section meets current regulations and prevents overheating and voltage drops that exceed permissible limits. Current regulations must be obeyed, and the designer's instructions must be followed at all times.
- Before connecting the cables, make sure that the electricity is turned off and that there is no voltage present in any of them.
- The installer must keep the following points in mind when performing the electrical connections:
 - After these steps are performed, check to make sure all electrical connections are secure (loose wiring connections can cause irreparable damage).
 - As a safety measure, if there is no power to the fan, the necessary interlocks must be performed so that all other electrical components are also de-energised.

The power supply is made in the external terminal box. In no case it is necessary open the fan access register during electrical connection work. This record should only be opened in annual maintenance tasks to verify the state of the fan or in case it requires its replacement.

7.9. CONNECTING THE PRESSURE SENSORS

7.9.1. Dirty filters

The unit is equipped with 2 pressure taps on each side of the filters so that a pressure switch can be installed to control dirt levels in the filters.



Section 9.3. presents a table with the values recommended for filter replacement.

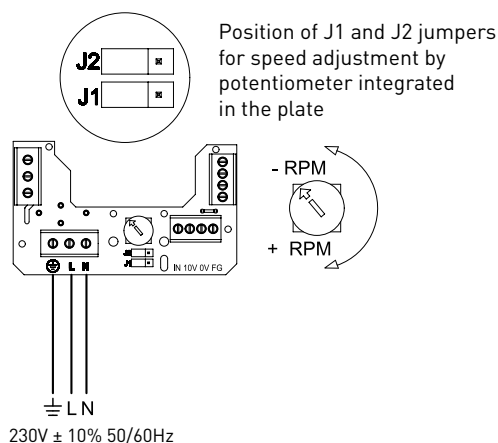
8. ADJUSTING OF THE FAN SPEED

All models of the UVF-ECOWATT range have an integrated potentiometer inside the electrical cabinet that allows the manual adjustment of the fan speed.

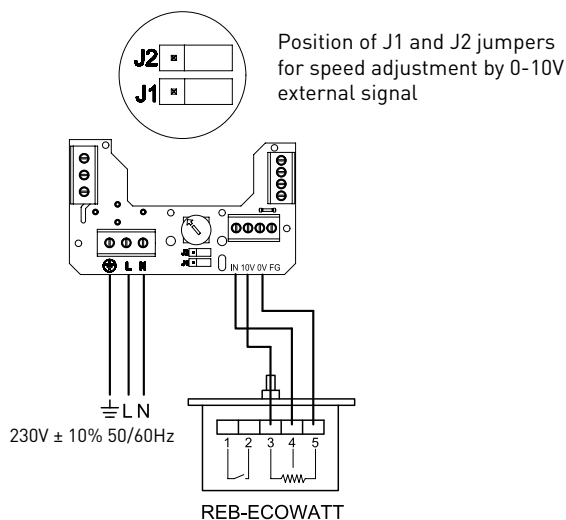
It is not necessary to open the fan access register during connection work electric.

Depending on the existing jumper position next to the potentiometer, it is possible to select the type of regulating element between the manual potentiometer integrated in the plate, or an external control signal of type 0-10V.

Speed adjustment through potentiometer integrated in the plate



Speed adjustment by external potentiometer / external 0-10V signal



Using the control accessory AERO-REG CONTROL, it is possible to control the speed of the fans from an external sensor (CO2, humidity, pressure). See the details on connection in the AERO-REG CONTROL instructions.



9. PREVENTIVE MAINTENANCE

In these operations we must take into account the following aspects:

9.1. MOTORS

- Check the power consumption has not increased.
- Periodically check the electrical connections are making good contact; this will prevent breakdowns.
- We recommend checking the fan mounting periodically.

9.2. FANS

- Every three months, clean the dirt from the fan blades and bearings, since dirt can not only reduce airflow but also lead to unbalanced operation and increase noise.
- Periodically, test the airflow on each fan.

9.3. FILTERS

- To make sure that the filters are working properly, the pressure loss across the filter must be monitored precisely (since this is an indicator of dirt levels). The following table indicates the maximum recommended values for pressure loss before filter replacement.

Filter	G4	M5	M6	F7	F8	F9
Loss of charge (Pa)	150	200	200	200	225	225

- Even if the maximum pressure loss has not been reached, filters should be inspected each month to make sure that the filter and filter housing are sealed.
- It is not recommended that filters be washed, since they will never recover their initial efficiency and doing so can produce wear on the filters. Although washing or vacuuming in the opposite direction from normal air circulation can achieve an optimal finish, it is recommended that you always have a set of replacement filters on hand. Under no circumstances should the unit be run without filters, since this can introduce dirt into vital components of the unit and lead to equipment wear and loss of efficiency.

Filter parts table

Model	G4	M5	F7	F9	Quantity	Dimensions (mm)
UVF-400/160 ECOWATT	AFR UVF-400 G4	AFR UVF-400 M5	AFR UVF-400 F7	AFR UVF-400 F9	1	300x250x48
UVF-600/200 ECOWATT	AFR UVF-600 G4	AFR UVF-600 M5	AFR UVF-600 F7	AFR UVF-600 F9	1	350x300x48
UVF-1100/250 ECOWATT	AFR UVF-1100 G4	AFR UVF-1100 M5	AFR UVF-1100 F7	AFR UVF-1100 F9	1	400x325x48
UVF-1500/315 ECOWATT	AFR UVF-1500 G4	AFR UVF-1500 M5	AFR UVF-1500 F7	AFR UVF-1500 F9	1	500x400x48
UVF-2500/355 ECOWATT	AFR UVF-2500/3000 G4	AFR UVF-2500/3000 M5	AFR UVF-2500/3000 F7	AFR UVF-2500/3000 F9	1	600x450x48
UVF-3000/400 ECOWATT	AFR UVF-2500/3000 G4	AFR UVF-2500/3000 M5	AFR UVF-2500/3000 F7	AFR UVF-2500/3000 F9	1	600x450x48



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