

QR120P-I



IT	MANUALE DI INSTALLAZIONE ED USO E MANUTENZIONE.....	2
EN	INSTALLATION, USE AND MAINTENANCE MANUAL.....	17

QR120P-I

Heat Recovery Ventilation Unit

Read this manual carefully before using the product and keep it in a safe place for reference as necessary. This product was constructed up to standard and in compliance with regulations relating to electrical equipment and must be installed by technically qualified personnel. The manufacturer assumes no responsibility for damage to persons or property resulting from failure to observe the instructions contained in this manual.

1 INDEX

2	Precautions.....	18
3	Product information.....	18
3.1	General.....	18
3.2	Dimensions and Weight.....	19
3.3	Duct connections.....	19
3.4	Space required.....	19
3.5	Rating label.....	19
4	Transport and Storage.....	19
5	Installation.....	20
5.1	Unpacking.....	20
5.2	Where/how to install.....	20
5.3.1	Ceiling installation.....	20
5.3.2	Wall installation.....	21
5.4	Precabled electric connections.....	22
5.5	Additional electric connections.....	23
6	Commissioning.....	24
6.1	Setting Fan speed.....	24
6.2	Before Starting the System.....	25
7	Operation.....	25
7.1	3-speed operation with control panel CTRL-V1 (supplied as standard).....	26
7.2	Remote Enable.....	27
7.3	Modbus Control.....	27
8	Maintenance and service.....	27
8.1	Components list.....	27
8.2	Description of Components.....	28
8.3	Maintenance.....	28
8.4	Service.....	29
8.5	Troubleshooting.....	30
9	Disposal and Recycling.....	31
10	ErP Product Fiche.....	32

2 PRECAUTIONS

WARNING

Make sure that the mains supply to the unit is disconnected before performing any installation, service, maintenance or electrical work!

WARNING

The installation and service of the unit and complete ventilation system must be performed by an authorized installer and in accordance with local rules and regulations.

WARNING

If any abnormality in operation is detected, disconnect the device from the mains supply and contact a qualified technician immediately.

Transport and storage

- Do not leave the device exposed to atmospheric agents (rain, sun, snow, etc.).
- Duct connections/duct ends must be covered during storage and installation.

Installation

- After removing the product from its packaging, verify its conditions. Do not leave packaging within the reach of children or people with disabilities.
- Beware of sharp edges. Use protective gloves.
- The device should not be used as an activator for water heaters, stoves, etc., nor should it discharge into hot air/fume vent ducts deriving from any type of combustion unit or tumble dryer. It must expel air outside via its own special duct.
- If the environment in which the product is installed also houses a fuel-operating device (water heater, methane stove etc., that is not a “sealed chamber” type), it is essential to ensure adequate air intake, to ensure good combustion and proper equipment operation.
- The electrical system to which the device is connected must comply with local regulations.
- Before connecting the product to the power supply or the power outlet, ensure that:
 - the data plate (voltage and frequency) correspond to those of the electrical mains
 - the electrical power supply/socket is adequate for maximum device power.
- For installation an omnipolar switch should be incorporated in the fixed wiring, in accordance with the wiring rules, to provide a full disconnection under overvoltage category III conditions (contact opening distance equal to or greater than 3mm).

Use

- The device should not be used for applications other than those specified in this manual.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Do not touch the appliance with wet or damp hands/feet.
- The device is designed to extract clean air only, i.e. without grease, soot, chemical or corrosive agents, or flammable or explosive mixtures.
- Do not use the product in the presence of inflammable vapours, such as alcohol, insecticides, gasoline, etc.
- **The system should operate continuously, and only be stopped for maintenance/service.**
- Do not obstruct ducts or grilles to ensure optimum air passage.
- Do not immerse the device or its parts in water or other liquids.
- Operating temperature: 0°C up to +40°C.

Service

- Although the mains supply to the unit has been disconnected there is still risk for injury due to rotating parts that have not come to a complete standstill.
- Beware of sharp edges. Use protective gloves.
- Use original spare parts only for repairs.

3 PRODUCT INFORMATION

3.1 General

This is the Installation, Use and Maintenance Manual of the heat recovery ventilation units, model QR120P-I.

This manual consists of basic information and recommendations concerning installation, commissioning, use and service operations to ensure a proper fail-free operation of the unit.

The key to proper, safe and smooth operation of the unit is to read this manual thoroughly, use the unit according to given guidelines and follow all safety requirements.

The QR120P-I is supplied with the CTRL-V1 control panel. The package also contains no. 2 spacers for ceiling installation, no. 1 filter cap removal bracket.

3.2 Dimensions and Weight

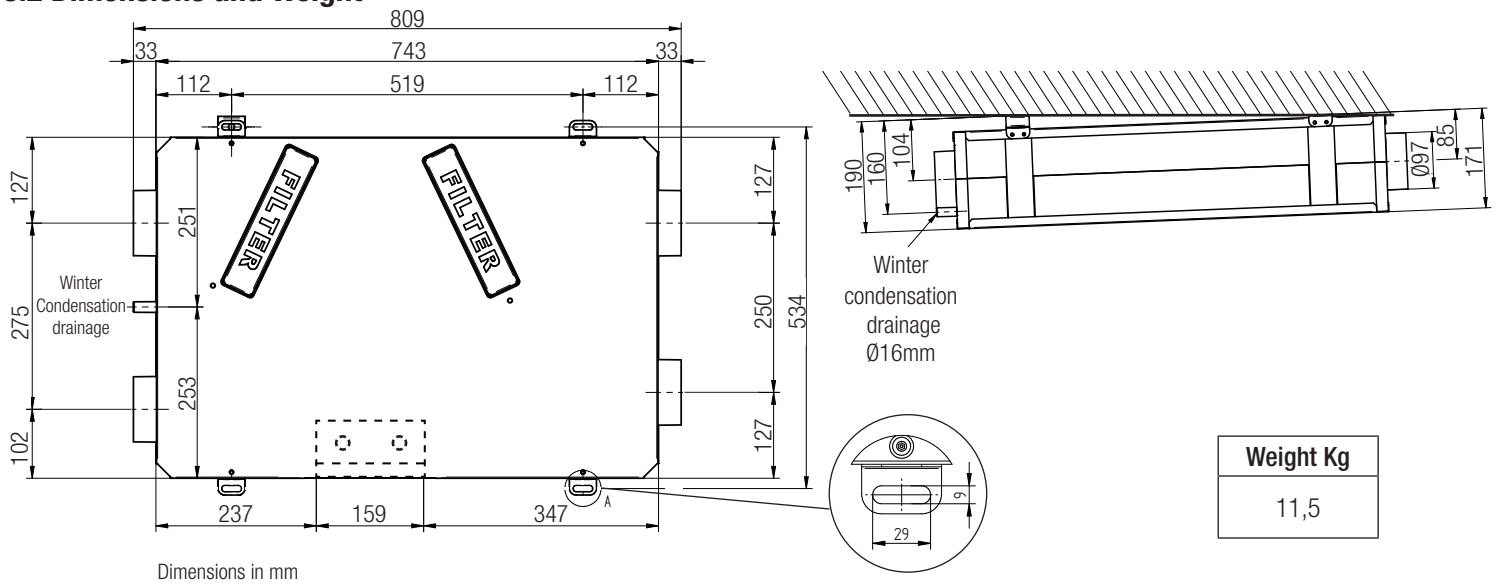


Fig.3.a

3.3 Duct connections

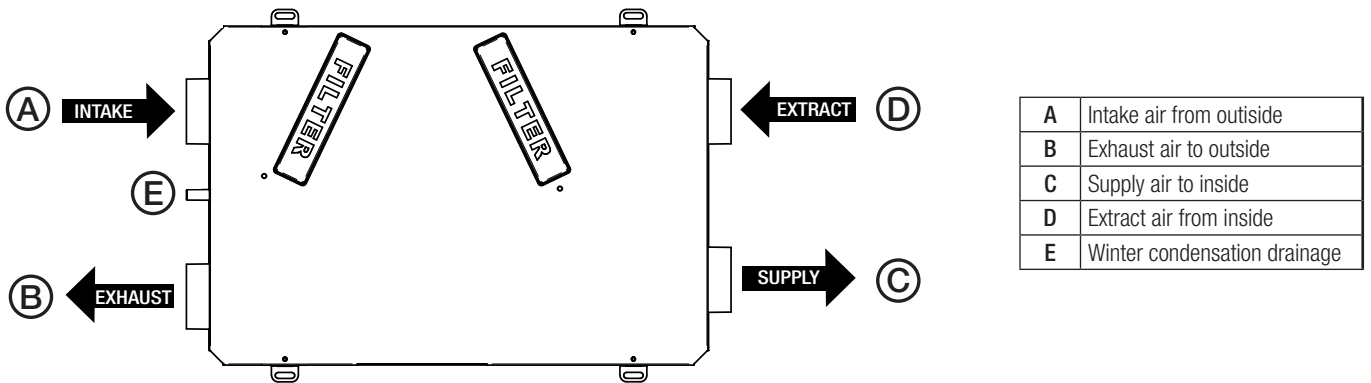


Fig.3.b

3.4 Space required

Make sure that enough space is left around the unit to allow easy maintenance (access to filters, terminal box and inspection panel removal).

3.5 Rating label

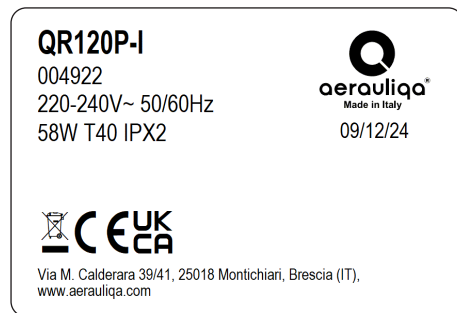


Fig.3.c Rating label

4 TRANSPORT AND STORAGE

WARNING

Make sure that specific warnings and cautions in Chapter 2 are carefully read, understood and applied!

The appliance is delivered in one carton box.

The appliance should be stored and transported in such a way that it is protected against physical damage that can harm spigots, casing, control panel etc...

It should be covered so that dust, rain and snow cannot enter and damage the unit and its components.

5 INSTALLATION

WARNING

Make sure that specific warnings and cautions in Chapter 2 are carefully read, understood and applied!

This section describes how to install the unit correctly.

The unit must be installed according to these instructions.

5.1 Unpacking

Verify that the unit (and eventual accessories) delivered is according to order before starting the installation. Any discrepancies from the ordered equipment must be reported to the supplier.

5.2 Where/how to install

- All QR units are meant for indoor installation in a heated space.
- Mount the unit on flat surface.
- Place the unit preferably in a separate room (e.g. storage, laundry room or similar).
- When choosing the location it should be kept in mind that the unit requires maintenance regularly and that the inspection door should be easily accessible.
- Leave free space for opening the removable panel and for removal of the main components (§3.4).
- The outdoor air intake of the building should if possible be put in the northern or eastern side of the building and away from other exhaust outlets like kitchen fan exhausts or laundry room outlets.
- The unit casing is provided with 1 winter condensation drainage.

5.3.1 Ceiling installation

The unit must be installed in the following position.

It is important that the unit is mounted with the supplied spacers for condensation drainage to work properly.

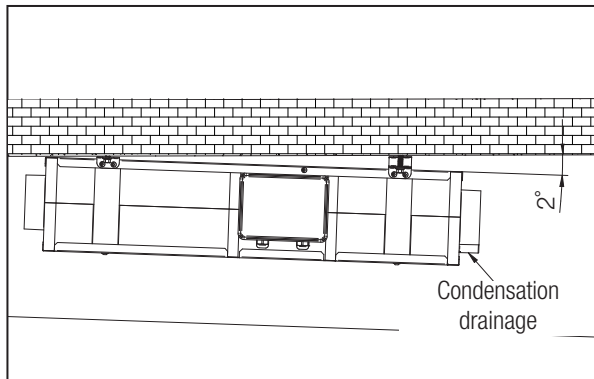


Fig 5.a

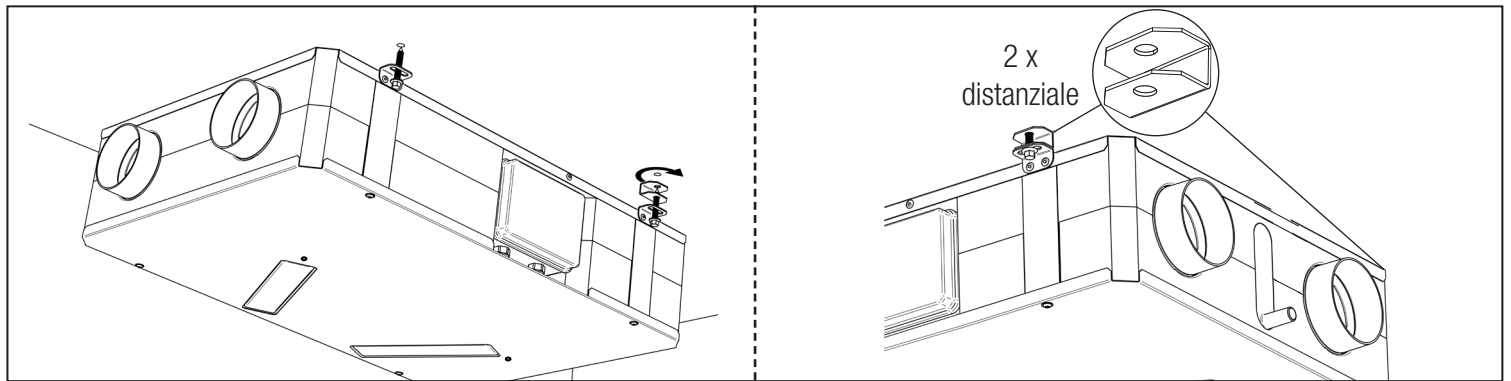


Fig. 5.b

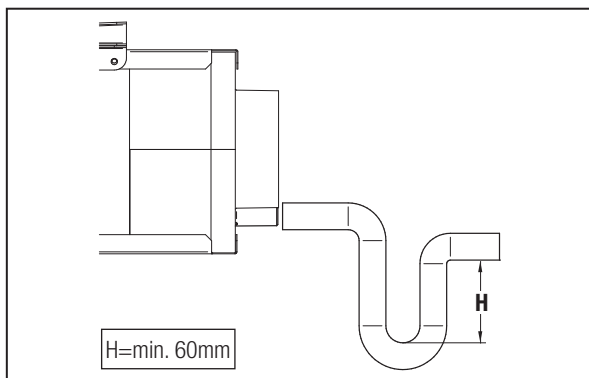


Fig. 5.c

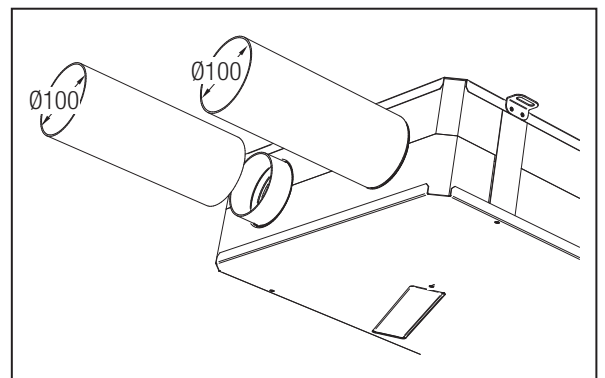


Fig. 5.d

- 5.a** Prepare the surface where the unit is to be mounted. Make sure that the surface is flat, leveled and that it supports the weight of the unit. Perform the installation in accordance with local rules and regulations.
- 5.b** It is important that the unit is tilted by 2° in order for the condensate drain to function properly: use the spacers supplied which must be mounted on the fixing brackets of the side with the condensate drain. Use appropriate plugs and rods or screws (not supplied) to fix the unit to the ceiling. It is recommended to fit the unit with anti-vibration mounts (not supplied).
- 5.c** Connect the winter condensation drainage (Ø16mm) to the drainage pipe. Make sure of water and air tightness of all connections. It is recommended to use a U-bend (or similar) in the condensation drainage pipe.
- 5.d** Connect the unit to the duct system. Make sure that all necessary accessories are used to create a functional ventilation solution. Connect the unit electrically according to §5.4. Check that it starts up correctly.

5.3.2 Wall installation

The unit must be installed in the following position:

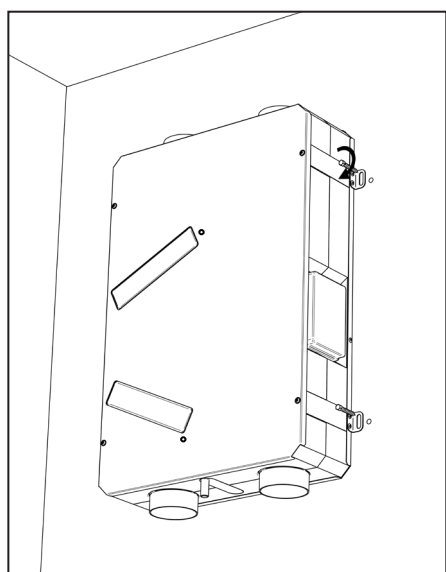


Fig 5.e

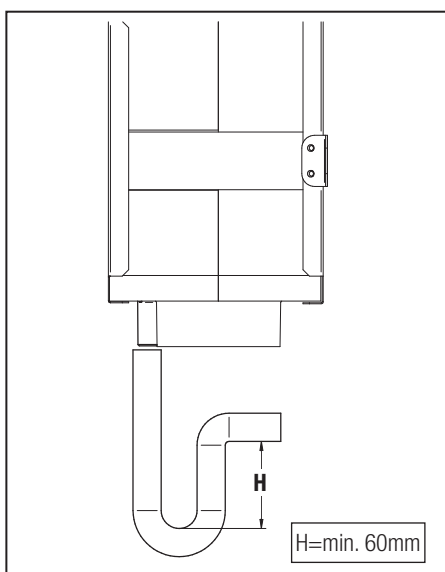


Fig. 5.f

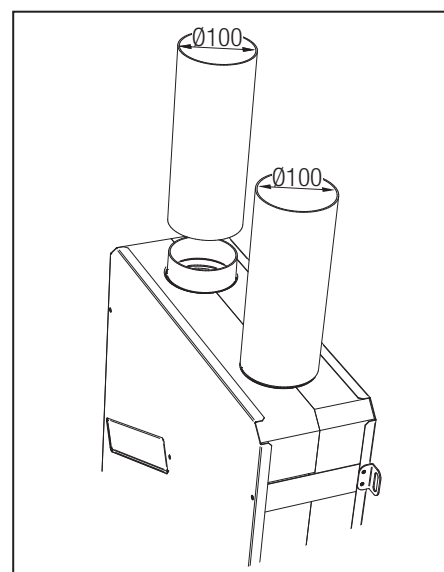


Fig. 5.g

- 5.e** Prepare the surface where the unit is to be mounted. Make sure that the surface is flat, leveled and that it supports the weight of the unit. Perform the installation in accordance with local rules and regulations. Use appropriate plugs and rods or screws (not supplied) to fix the unit to the ceiling. It is recommended to fit the unit with anti-vibration mounts (not supplied).
- 5.f** Connect the winter drain connection (Ø16mm) to the drainage hole. Make sure of water and air tightness of all connections. It is recommended to use a U-bend (or similar) in the condensation drainage pipe.
- 5.g** Connect the unit to the duct system. Make sure that all necessary accessories are used to create a functional ventilation solution. Connect the unit electrically according to §5.4. Check that it starts up correctly.

5.4 Precabled electric connections

WARNING

Make sure that the mains supply to the unit is disconnected before performing any installation, service, maintenance or electrical work!

WARNING

The installation and service of the unit and complete ventilation system must be performed by an authorized installer and in accordance with local rules and regulations.

The unit must be earthed.

The unit is wired internally from factory.

Unit comes pre-wired with:

- power supply cable (3-core: brown, blue, yellow/green).
 - control cable, for connection to CTRL-V1 supplied (6-core: brown, yellow, white, green, grey, pink).
- Factory setting: speed 1 at 40%, speed 2 at 70% and speed 3 at 100%.

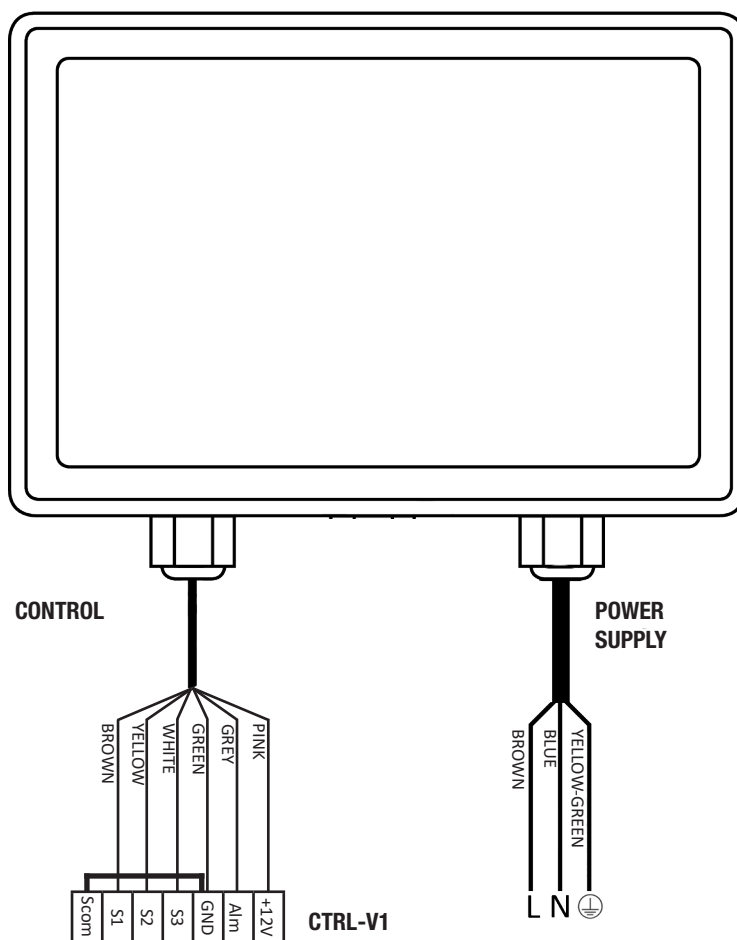


Fig. 5.h Precabling



Fig. 5.i CTRL-V1
(supplied as standard)

5.5 Additional electric connections

WARNING

Make sure that the mains supply to the unit is disconnected before performing any installation, service, maintenance or electrical work!

WARNING

The installation and service of the unit and complete ventilation system must be performed by an authorized installer and in accordance with local rules and regulations.

The units must be earthed.

The unit is wired internally from factory.

To connect the the CTRL-V1 to the mother board use a 6-core cable: 30m max length.

Figures below show the wiring diagram.

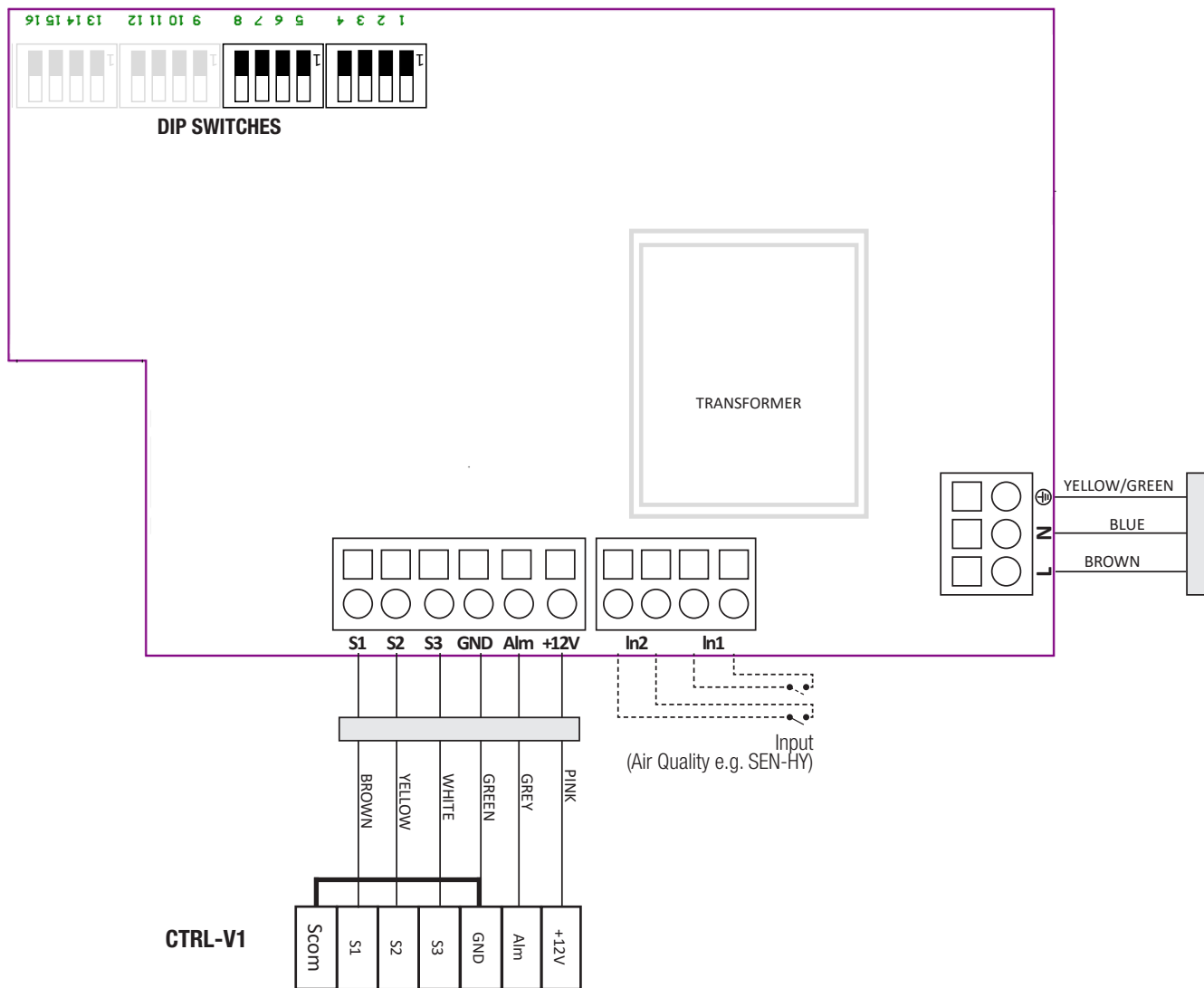


Fig. 5.j Electrical connections on the motherboard fitted in the terminal box.

Inputs/commands

N°1 AC supply connector.

N°2 on/off inputs (volt-free contacts), for ambient sensors (named In1, In2).

N°1 6-pole connector for CTRL-V1.

6 COMMISSIONING

6.1 Setting Fan speed

The speed of the unit can be adjusted during installation according to required ventilation rate, by setting the relevant dip switch. **Figure 6. a** below shows performance curve at different settings of the 0-10V signal to the motors. Consumption refers to the 2 motors.

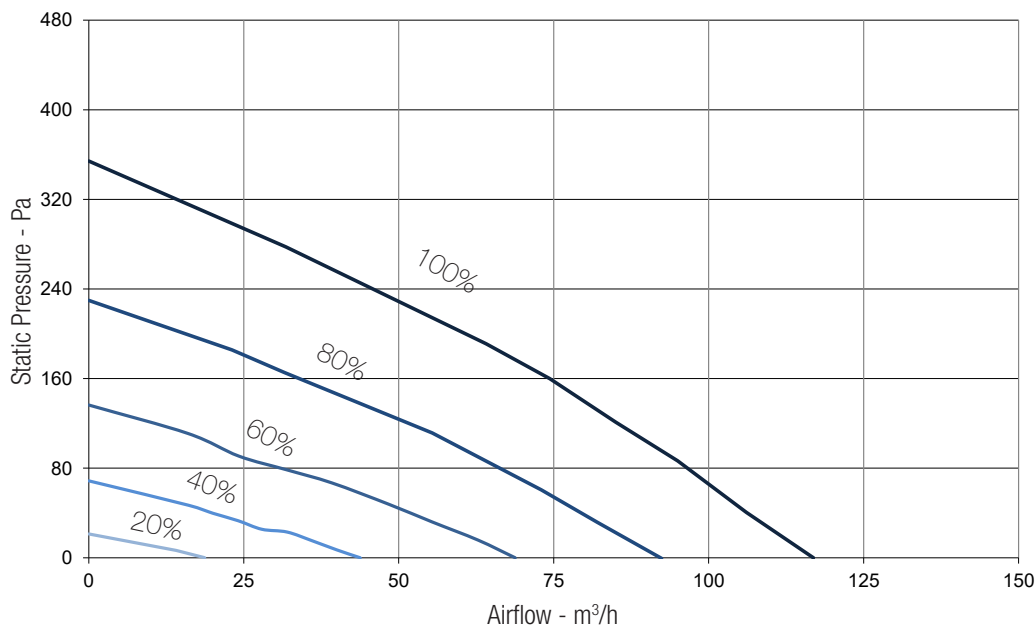
Table 6. b indicates the efficiency of the heat exchanger and of the condensation produced in different climatic conditions, to help the installer or the designer of the ventilation system to decide if to connect the condensation drainage. High production of condensation is the direct consequence of a high efficiency level as well as of the humidity rate.

Table 6. c indicates the sound level at the different speeds.

DIP1	DIP2	DIP3	Speed I
0	0	0	40%
0	0	1	25%
0	1	0	30%
0	1	1	35%
1	0	0	45%
1	0	1	50%
1	1	0	55%
1	1	1	60%

DIP5	DIP6	DIP7	Speed II
0	0	0	70%
0	0	1	40%
0	1	0	50%
0	1	1	55%
1	0	0	60%
1	0	1	65%
1	1	0	80%
1	1	1	90%

DIP4	Speed III
0	100%
1	95%



Speed %	W max	m³/h max
20	9	22
40	13	48
60	20	71
80	32	96
100	56	114

Fig. 6.a Intake curve according to Reg. 1253/2014 (ErP) and dip switch setting.

EXTERNAL		INTERNAL		30 m³/h		60 m³/h		90 m³/h		120 m³/h	
T	R. H.	T	R. H.	η	H ₂ O	η	H ₂ O	η	H ₂ O	η	H ₂ O
°C	%	°C	%	%	kg/h	%	kg/h	%	kg/h	%	kg/h
-18	60	20	30	93,4	0,09	89,7	0,17	86,4	0,24	83,7	0,3
-18	70	20	40	94,3	0,13	91,1	0,25	88,3	0,36	86	0,46
-18	80	20	50	95	0,17	92,3	0,32	89,9	0,47	87,9	0,61
-10	60	20	30	93	0,06	88,9	0,1	85,3	0,13	82,1	0,16
-10	70	20	40	94	0,09	90,6	0,17	87,5	0,24	85	0,45
-10	80	20	50	94,9	0,13	92	0,24	89,5	0,35	87,3	0,00
0	20	30	91,2	0,0	86,3	0,00	82,1	0,00	78,7	0,00	0,06
0	20	40	92,7	0,03	88,4	0,05	84,4	0,06	80,8	0,06	0,19
0	20	50	94	0,06	90,5	0,11	87,4	0,14	84,7	0,19	0,00
10	50	20	40	91,2	0,00	86,3	0,00	82,1	0,00	78,7	0,00
10	60	20	50	91,2	0,00	86,3	0,00	82,1	0,00	78,7	0,00
10	70	20	60	92,2	0,01	87,3	0,01	82,7	0,01	78,7	0,00
35	60	26	50	91,3	0,00	86,5	0,00	82,3	0,00	78,9	0,00
35	70	26	55	93,8	0,02	89,9	0,04	86,2	0,05	82,7	0,05
35	80	26	60	96,3	0,05	94,1	0,1	92,2	0,15	90,5	0,19
40	60	26	50	94,3	0,05	90,7	0,08	87,4	0,1	84,3	0,12

Tabella. 6.b Thermal efficiency of the heat exchanger and average production of condensation water.

Speed 100%	Lw dB - SOUND POWER OCTAVE BAND								LwA dB(A)	Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot		@3m
	48	52	58	54	47	43	36	61	58	38

Speed 80%	Lw dB - SOUND POWER OCTAVE BAND								LwA dB(A)	Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot		@3m
	43	52	53	49	42	37	28	57	53	33

Speed 60%	Lw dB - SOUND POWER OCTAVE BAND								LwA dB(A)	Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot		@3m
	38	46	45	43	36	29	18	50	46	26

Speed 40%	Lw dB - SOUND POWER OCTAVE BAND								LwA dB(A)	Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot		@3m
	34	40	37	35	26	18	14	43	39	18

Speed 20%*	Lw dB - SOUND POWER OCTAVE BAND								LwA dB(A)	Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot		@3m
	-	-	-	-	-	-	-	-	-	-

Tabella 6.c Sound level: dB(A) figures are average spherical free-field, for comparative use only.
*measurements compared with chamber background noise.

6.2 Before Starting the System

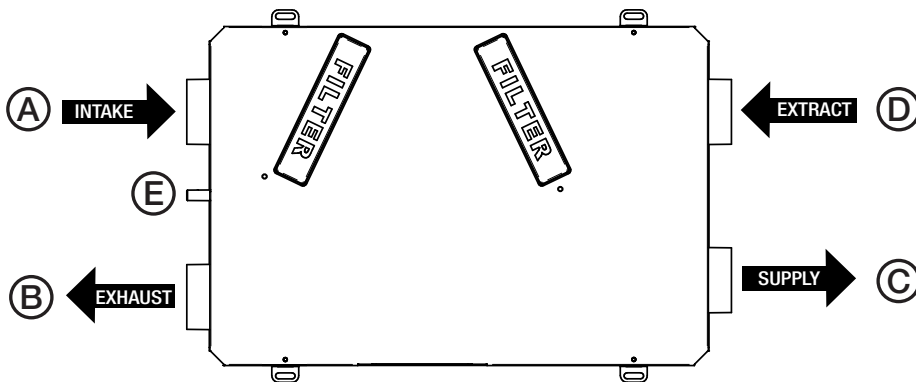
When the installation is finished, check that:

- Filters are mounted correctly.
- The unit is installed in accordance with the instructions.
- The unit is correctly wired.
- Eventual outdoor and exhaust air dampers and silencers are installed and that the duct system is correctly connected to the unit.
- All ducts are sufficiently insulated and installed according to local rules and regulations.
- Outdoor air intake is positioned with sufficient distance to pollution sources (kitchen ventilator exhaust, central vacuum system exhaust or similar).
- The unit is correctly set and commissioned.

7 OPERATION

WARNING

Make sure that specific warnings and cautions in Chapter 2 are carefully read, understood and applied!



A	Intake air from outside
B	Exhaust air to outside
C	Supply air to inside
D	Extract air from inside
E	Winter condensation drainage

Fig.7.a

7.1 3-speed operation with CTRL-V1 control panel (supplied as standard)

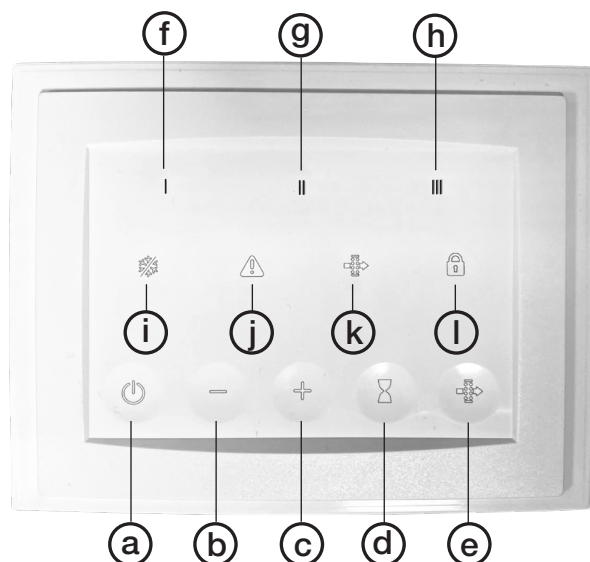


Fig. 7.b CTRL-V1

- Ⓐ to activate/deactivate the unit
- Ⓑ to change the speed
- Ⓒ to change the speed
- Ⓓ to manually activate the Boost function
- Ⓔ to reset the filter alarm
- Ⓕ green led: speed 1 indicator
- Ⓖ green led: speed 2 indicator
- Ⓗ green led: speed 3 indicator
- Ⓘ blue led: anti-frost activation indicator
- Ⓙ red led: malfunction indicator
- Ⓚ yellow led: filter maintenance/replacement indicator
- Ⓛ yellow led: keypad lock indicator

FUNCTIONALITY	DESCRIPTION	TOUCH BUTTON	ICON	LED COLOUR
On/Off				
	Pressing the touch button the unit is activated/deactivated		-	-
Continuous running speed				
	Speed I factory set is 40%: if necessary it can be adjusted by acting on the dip switch inside the terminal box as indicated in Fig. 6.a	+ and - to change the speed	I	green
	Speed II factory set is 70%: if necessary it can be adjusted by acting on dip switch inside the terminal box as indicated in Fig. 6.a	+ and - to change the speed	II	green
	Speed III factory set is 100%: if necessary it can be adjusted by acting on dip switch inside the terminal box as indicated in Fig. 6.a	+ and - to change the speed	III	green
BOOST				
	The unit will run at speed III for a fixed period of 15'. At the end of this time, the unit returns to the previously set speed.		III	green flashing
Filter reset				
	Every 3 months the controller alerts the user to perform filter maintenance. By pressing the button for at least 1 second, the timing is reactivated			yellow
Antifrost				
	The unit is equipped with a thermistor that, when necessary, reduces the speed of the inlet fan to prevent the formation of ice in the exchanger, which would irreparably damage the exchanger itself. When conditions return to normal, the function is automatically deactivated.	-		blue
Motor anomaly				
	In case of a motor malfunction, the red led lights up. Contact technical assistance.	-		red
Keypad lock				
	The CTRL-V1 control panel buttons can be blocked. Keep the + and - buttons pressed contemporaneously for at least 5 seconds. Repeat this operation to unlock	+ and - (keep pressed for at least 5 seconds)		yellow

In the absence of alarms, the CTRL-V1 control panel goes into standby mode (no LEDs on) 3 minutes after the last button press.

7.2 Remote Enable

It allows to activate/deactivate the unit from remote by means of a volt-free contact by connecting the In1 input as per fig.5.j. To enable this function it is necessary to act on dip switch 8.

DIP8	Remote Enable
0	disable
1	enable

7.3 Modbus control

The unit can be controlled via Modbus (Modbus RTU over RS485). For specification, contact our customer service.

8 MAINTENANCE AND SERVICE

WARNING

Make sure that specific warnings and cautions in Chapter 2 are carefully read, understood and applied!

Maintenance can be carried out by the user.

Service must be performed only by an authorized installer and in accordance with local rules and regulations.

Questions regarding installation, use, maintenance and service of the unit should be answered by your installer or place of purchase!

8.1 Components list

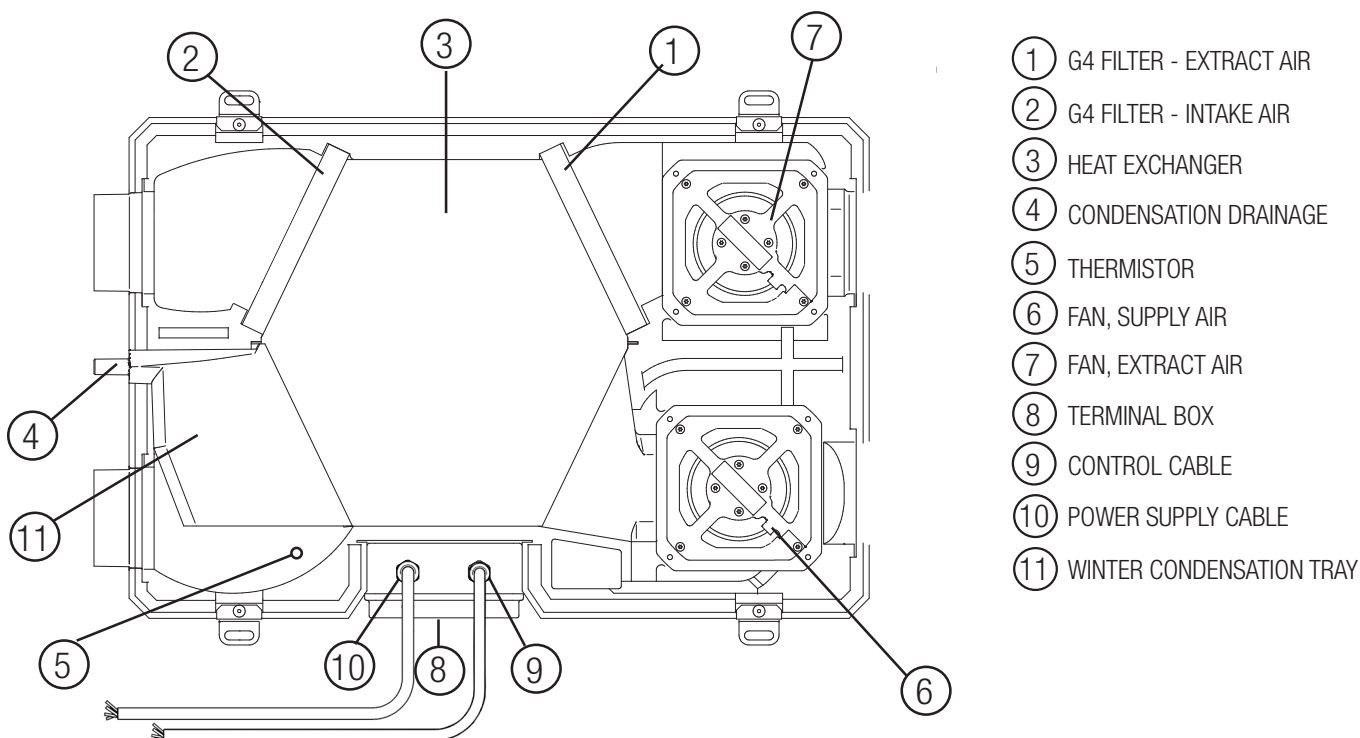


Fig. 8.a Internal components

8.2 Description of Components

Fans

The fans have external rotor motors of EC type which can be steplessly controlled individually between 25-100%. The motor bearings are life time lubricated and maintenance free. It is possible to easily disconnect and replace the fans if necessary.

Filters

The 2 filters are of filter quality G4 for both the intake air and extract air.

The filters need to be cleaned regularly (and replaced when polluted) during maintenance. New sets of filters can be acquired from your installer or wholesaler.

Heat exchanger

The unit is equipped with a highly efficient, counter-flow plate heat exchanger. Supply air temperature is therefore normally maintained without adding additional heat. The heat exchanger is removable for cleaning and maintenance during service.

Condensation drainage

Depending on the relative humidity in the extract air, condensation may occur on the cold surfaces of the heat exchanger (Table. 6.b). The condensate water is led out through drainage pipe.

Thermistor

Temperature probe to implement temperature dependent functions.

8.3 Maintenance

WARNING

Make sure that the mains supply to the unit is disconnected before performing any installation, service, maintenance or electrical work!

- Keep the unit surface free from dust.
- Once every 3 months (fixed period), the unit warns the user to perform the filter maintenance (Fig. 7.b - **(k)**). The actual need to perform this operation may vary depending on indoor and outdoor ambient conditions.
- Clean the filters every 3 months with a vacuum cleaner (Fig. 8.b-c-d).
- Press the CTRL-V1 button **(e)** (Fig. 7.b) to reactivate the filter alarm.
- Replace the filters every year.

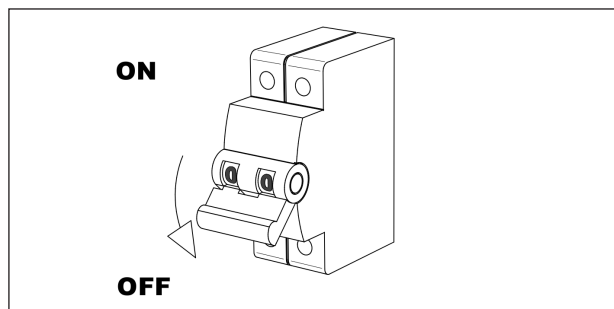


Fig. 8.e

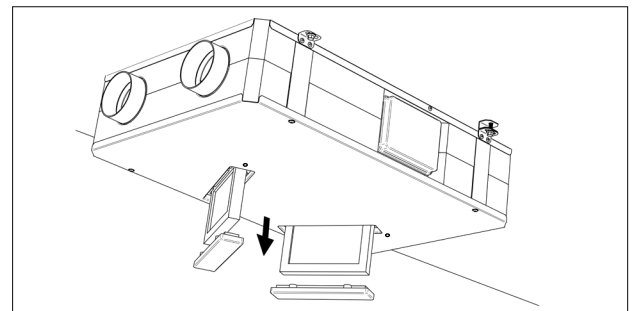


Fig. 8.f

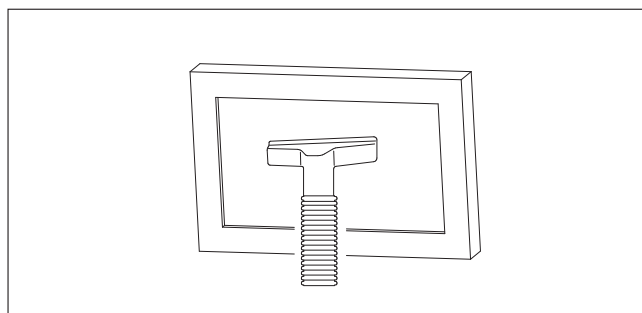


Fig. 8.g

8.4 Service

WARNING

Make sure that the mains supply to the unit is disconnected before performing any installation, service, maintenance or electrical work!

WARNING

The installation and service of the unit and complete ventilation system must be performed by an authorized installer and in accordance with local rules and regulations.

- Keep the unit surface free from dust.
- Once every 3 months (fixed period), the unit warns the user to perform the filter maintenance (Fig. 7.b - **(k)**). The actual need to perform this operation may vary depending on indoor and outdoor ambient conditions.
- Clean the filters every 3 months with a vacuum cleaner (Fig. 8.e-f-g).
- Press the CTRL-V1 button **(e)** (Fig. 7.b) to reactivate the filter alarm.
- Replace the filters every year.

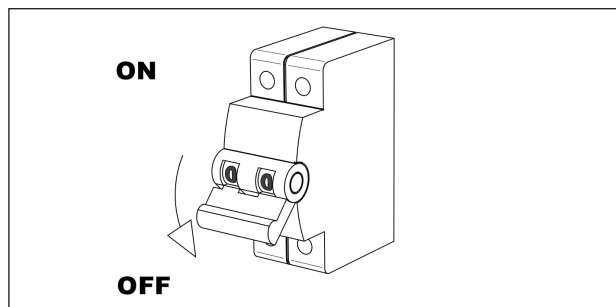


Fig. 8.e

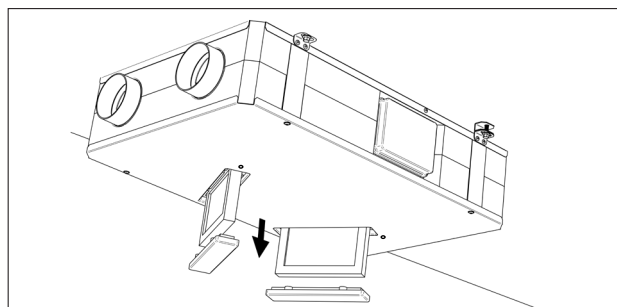


Fig. 8.f

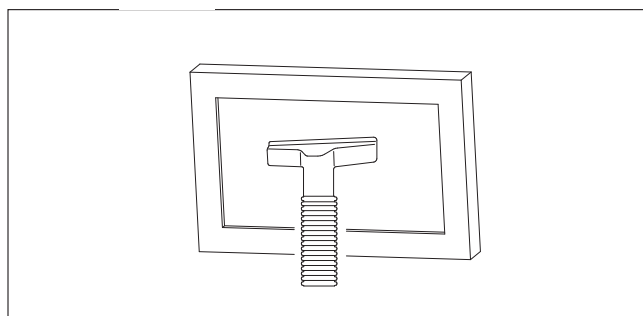


Fig. 8.g

- Clean the heat exchanger every year with a vacuum cleaner. This may differ per situation depending on internal and external environmental conditions and on frequency of filter cleaning (Fig. 8.e-f-h-i-j-k-l).

ATTENTION: after cleaning make sure that the heat exchanger and the condensation tray are well mated and inserted in their seat.

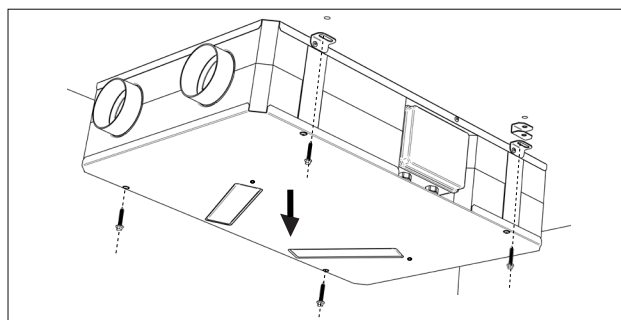


Fig. 8.h

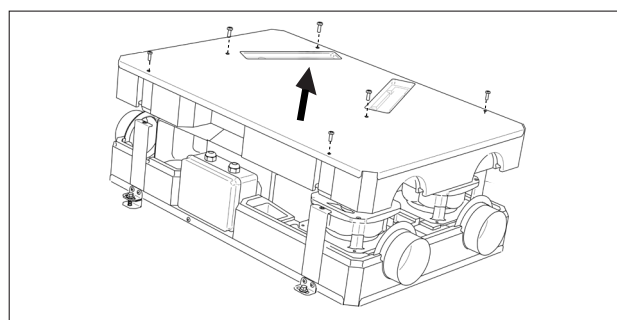


Fig. 8.i

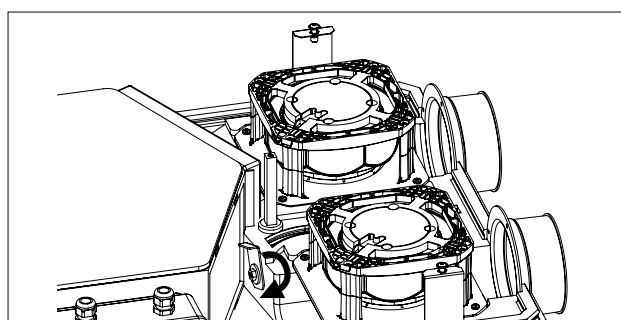


Fig. 8.j

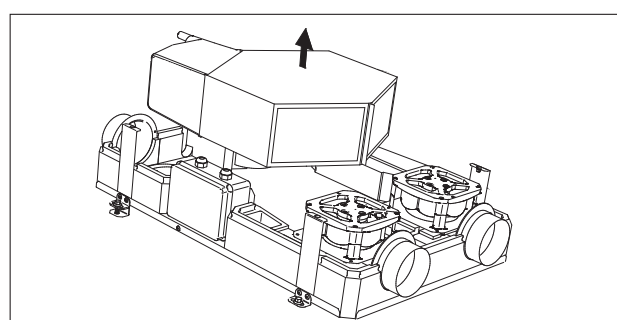


Fig. 8.k

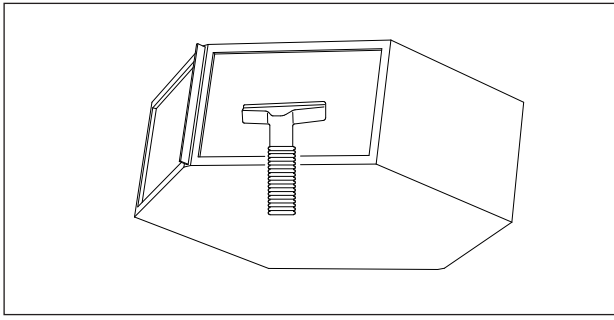


Fig. 8.l

- Clean the fans every year with a vacuum cleaner. This may differ per situation depending on internal and external environmental conditions and on frequency of filter cleaning. Do not move the balance clips of the fan (Fig. 8.e-f-h-i-m).

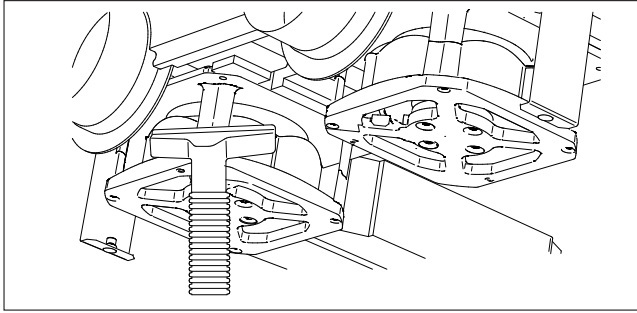


Fig. 8.m

8.5 Troubleshooting

Fans do not start

1. Check that main supply gets to the unit.
2. Check that all connections are working (all connections in terminal box and fast couplings of intake and exhaust air fans).

Led on CTRL-V1 control panel lights on

1. Check paragraph 7

Reduced airflow

1. Check setting of fan speed in the terminal box or control panel.
2. Check filters. Change of filters required?
3. Check diffusers. Cleaning of grilles and diffusers required?
4. Check fans and heat exchange block. Cleaning required?
5. Check if air intake and exhaust have been clogged.
6. Check ducting system for damage and/or dirt accumulation.

Fan noise/vibrations

1. Clean fan impellers. Cleaning required?
2. Check that the fans are firmly in place within the unit.

Excessive air noise

1. Check setting of fan speed in the terminal box or remote controller.
2. Check grilles and diffusers. Re-setting or cleaning of grilles and diffusers required?

Gurgling noise

1. Drain connections have not been installed correctly.
2. Drain connection has a too low water level, fill it up with water.

Unpleasant smell

1. Drain connections have not been installed correctly.
2. Drain connection has a too low water level, fill it up with water.
3. Check filters. Change of filters required?
4. Check ducting system and grilles and diffusers. Cleaning required?

Water leakage near the unit

1. Drain connections have not been installed correctly. Checking necessary?
2. Drain connections are dirty. Cleaning necessary?

9 DISPOSAL AND RECYCLING



Information on disposal of units at the end of life.

This product complies with EU Directive 2002/96/EC.

The symbol of the crossed-out dustbin indicates that this product must be collected separately from other waste at the end of its life. The user must, therefore, dispose of the product in question at suitable electronic and electro-technical waste disposal collection centres, or else send the product back to the retailer when purchasing a new, equivalent type device.

Separate collection of decommissioned equipment for recycling, treatment and environmentally compatible disposal helps to prevent negative effects on the environment and on health and promotes the recycling of the materials that make up the equipment.

Improper disposal of the product by the user may result in administrative sanctions as provided by law.

10. Direttiva ErP - Regolamenti 1253/2014 - 1254/2014
ErP Directive - Regulations 1253/2014 - 1254/2014

a)	Marchio - <i>Mark</i>	-	AERALIQA		
b)	Modello - <i>Model</i>	-	QR120P-I		
c)	Classe SEC - <i>SEC class</i>	-	A	A	B
c1)	SEC climi caldi - <i>SEC warm climates</i>	kWh/m ² .a	-14,1	-10,4	-7,3
c2)	SEC climi temperati - <i>SEC average climates</i>	kWh/m ² .a	-38,9	-34,5	-30,6
c3)	SEC climi freddi - <i>SEC cold climates</i>	kWh/m ² .a	-82,2	-76,7	-66,6
	Etichetta energetica - <i>Energy label</i>	-	Sì Yes		
d)	Tipologia unità - <i>Unit typology</i>	-	Residenziale - bidirezionale Residential - bidirectional		
e)	Tipo azionamento - <i>Type of drive</i>	-	Azionamento a velocità variabile Variable speed drive		
f)	Sistema di recupero calore <i>Type of Heat Recovery System</i>	-	A recupero Heat recovery		
g)	Efficienza termica - <i>Thermal efficiency of heat recovery</i>	%	82		
h)	Portata massima @100Pa - <i>Maximum flow rate @100Pa</i>	m ³ /h	91		
i)	Potenza elettrica (alla portata massima) <i>Electric power input at maximum flow rate</i>	W	58		
j)	Livello potenza sonora (L _{WA}) - <i>Sound power level (L_{WA})</i>	dBA	50		
k)	Portata di riferimento - <i>Reference flow rate</i>	m ³ /h	64		
l)	Differenza di pressione di riferimento <i>Reference pressure difference</i>	Pa	50		
m)	Potenza assorbita specifica (SPI) <i>Specific power input (SPI)</i>	W/(m ³ /h)	0,391		
n1)	Fattore di controllo - <i>Control factor</i>	-	0,65	0,85	1
n2)	Tipologia di controllo - <i>Control typology</i>	-	Controllo ambientale locale Local demand control	Controllo ambientale centrale Central demand control	Controllo manuale (no DCV) Manual control (no DCV)
o1)	Trafilamento interno massimo <i>Maximum internal leakage rate</i>	%	0,9		
o2)	Trafilamento esterno massimo <i>Maximum external leakage rate</i>	%	2,8		
p1)	Tasso di miscela interno - <i>Internal mixing rate</i>	%	N/A		
p2)	Tasso di miscela esterno - <i>External mixing rate</i>	%	N/A		
q)	Segnale avvertimento filtro - <i>Visual filter warning</i>	-	Avviso su display "FILTER" Visual filter warning on display		
r)	Istruzioni installazione griglie <i>Instructions to install regulated grilles</i>	-	N/A		
s)	Indirizzo Internet istruzioni di pre/disassemblaggio <i>Internet address for pre/disassembly instructions</i>	-	www.aerauliqa.it www.aerauliqa.com		
t)	Sensibilità del flusso alle variazioni di pressione <i>Airflow sensitivity to pressure variations</i>	%	N/A		
u)	Tenuta all'aria interna/esterna <i>Indoor/outdoor air tightness</i>	m ³ /h	N/A		
v1)	Consumo annuo di energia (AEC) climi caldi <i>AEC - Annual electricity consumption - warm climates</i>	kWh	2,6	3,8	4,9
v2)	Consumo annuo di energia (AEC) climi temperati <i>AEC - Annual electricity consumption - average climates</i>	kWh	2,6	3,8	5,3
v3)	Consumo annuo di energia (AEC) climi freddi <i>AEC - Annual electricity consumption - cold climates</i>	kWh	2,6	3,8	10,7
w1)	Risparmio di riscaldamento annuo (AHS) climi caldi <i>AHS - Annual heating saved - warm climates</i>	kWh	20,5	20,0	19,6
w2)	Risparmio di riscaldamento annuo (AHS) climi temperati <i>AHS - Annual heating saved - average climates</i>	kWh	45,3	44,1	43,3
w3)	Risparmio di riscaldamento annuo (AHS) climi freddi <i>AHS - Annual heating saved - cold climates</i>	kWh	88,6	86,3	84,6



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