
AVI ↔ **AIR**

AVI35 Hybrid Heat Recovery unit



Installation and User Manual

Designed and assembled in Canada by Distribution Avi-Air Inc.

Modèle : AVI35W

**Intake Ventilator : 1- 60Hz 240V 1,9A
2,35A with triac RPM 3255 0,6Hp
CSA 172512**

**Exhaust Ventilator : 1- 60Hz 240V 1,9A
2,35A with triac RPM 3255 0,6Hp CSA
172512**

Patent Pending USPTO 62/366,657

www.distributionavi-air.com

114 Rang Roy
Saint-Alphonse de Granby
J0E2A0
Qc, Canada

450 375 5539
450 531 9865
sales@distributionavi-air.com

Table of content

| | |
|--|----------------|
| Electrician's note and diagram..... | Page 5 |
| Installation Guide..... | Page 17 |
| Warranty..... | Page 21 |

Electrician's Notes and Connection Diagram

The manufacturer recommends that the electrical connection be performed by a qualified electrician.

Warnings and precautions

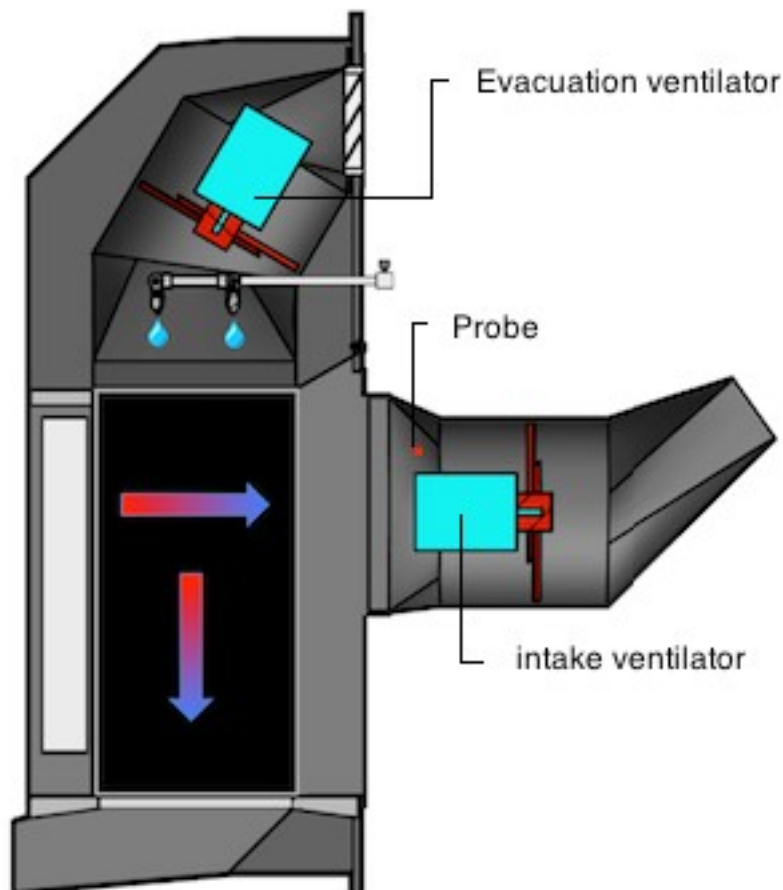
Recovery probe

Only one probe per stage is used per regulator. The probe is assigned to the INTAKE ventilator of the recuperator.

The INTAKE fan will be activated based on this probe when the Avi35 is in recovery mode.

If more than one recuperator is connected in series to the regulator, the manufacturer recommends to place the probe on the Avi35 recuperator which will be used during the departure of a flock, or the one which will work in the first place.

The manufacturer recommends installing the probe at one end of the INTAKE fan leg support. The probe should be secured at a minimum distance of 8 cm from the motor.



Warnings and precautions

DPDT relay used for defrost cycles in Maximus and AVI-28

The controller switch corresponding to the relay energizing the DPDT contactors (not included) is automatically deactivated to prevent human error. Automatic deactivation of the switch prevents undesired fan rotation inversions caused by the user.

DPDT contactors are energized only automatically by the controller.

Automatic Reversal of **INTAKE** Fan Rotation will not occur if the variable board switch associated with the **INTAKE** fans is not set to automatic position.

The manufacturer recommends to check the reversal of rotation functions of the INTAKE fan at the first start of the Avi35.

INTERLOCK double relays used for defrost cycles in Multi-Zone Genius

The GENIUS controller will use two relays to energize the corresponding interlock double relay contactors (not included) that activates the defrost cycles. Therefore, the first relay will activate the fan clockwise, whereas the second relay will activate the fan counterclockwise. The manufacturer recommends to check the reversal of rotation functions of the INTAKE fan at the first start of the Avi35.

Warnings and precautions

Automated rinsing system

The manufacturer recommends the use of a centrifugal booster pump (not included) providing a minimum of 10 gpm at 50 psi to provide sufficient water to the flushing system.

All regulators in the same building use the same centrifugal booster pump.

Each solenoid valve 240V must be connected to a single ON / OFF relay of the regulator. Each valve has its own circuit to the controller.

MULTIFAN MOTOR SPECIFICATION

Multifan



Technical Data single phase 240 V / 60 Hz (CFM)

| 1 ~240V 60 Hz | 3200 RPM | ø (inch) | Type | Multifan code | I _{nom} (A) | I _{max} (A) | P _{in} (W) | Controllability (*) | L _p dB(A) (**) | CFM/W at 0 SP | Cond. uF/400 | 0 | 0.05 | 0.10 | 0.125 | 0.15 | 0.20 | 0.25 | 0.50 |
|---------------|----------|-------------|------|------------------|-------------------------|-------------------------|------------------------|------------------------|---------------------------------|------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | | | | | | | | | SP | SP | SP | SP | SP | SP | SP | SP |
| | | 14" | 2E35 | V2E35KØ | 1.96 | 2.35 | 430 | E/T | 65 | 6.8 | 6 | 2,930 | 2,900 | 2,820 | 2,790 | 2,770 | 2,710 | 2,650 | 2,360 |

Warnings and precautions

INTAKE AND EXHAUST VENTILATORS

The manufacturer recommends consulting the regulator installation guide for connection to the variable board and the ON / OFF relays.

The manufacturer recommends a maximum of **FOUR** Avi35 pickups by Gev2 accessory card amplifier for Genius Itouch and AVI-28.

The manufacturer recommends a maximum of **TWO** Avi 35 per variable relay card from a Genius Itouch controller.

The manufacturer recommends a maximum of **THREE** Avi35 per variable relay card from a MAXIMUS controller.

EXHAUST VENTILATORS must be connected in parallel to a variable relay of the regulator. Drill the plastic on the side of the shutter to pass the wire. Drill diagonally to reach the plastic piece that supports the **EXHAUST VENTILATOR**. Keep enough space to allow the louves to open without touching the electrical wire. See diagram.

The **INTAKE VENTILATORS** must be connected in parallel to another variable relay of the regulator. Drill the upper right corner of the inlet fan housing to pass the wire and probe wire.

The manufacturer recommends using the same common L2 for the 230V solenoid valve of the wash system, as well as the relay contactors and the AVi35 **INTAKE** and **EXHAUST VENTILATORS** if only one Avi35 is wired.. **If many Avi35 are wire in parallel, then use two circuits. One circuit for Exhaust Ventilator and valves and another circuit for intake fan and contactors. True RMS amps is 2,35 running on triac.**

The manufacturer recommends installing a bipolar mechanical switch to each fan.

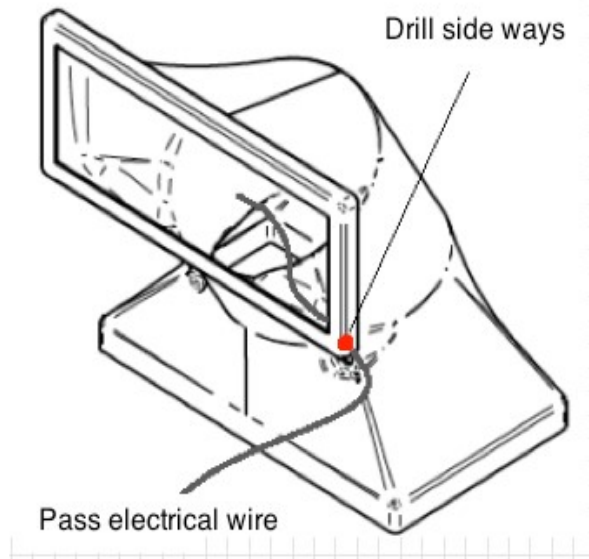
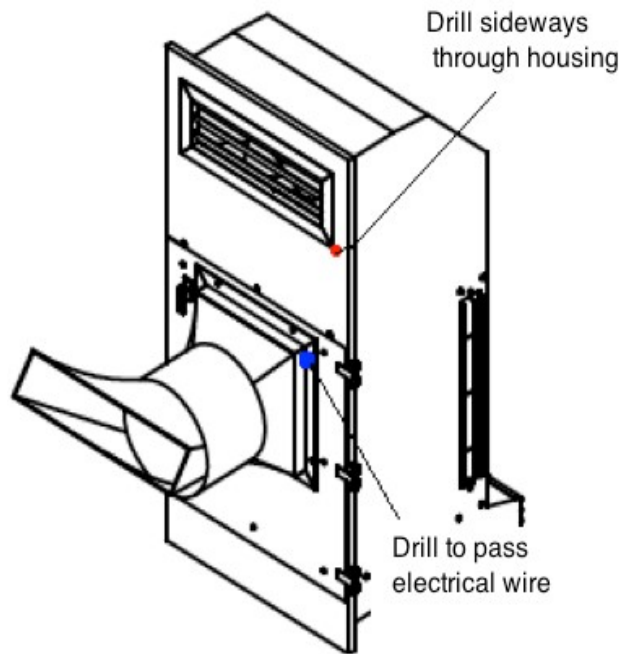
The manufacturer recommends a 3-wire cable to connect the **EXHAUST VENTILATOR** motor to the bipolar mechanical switch associated with the **EXHAUST VENTILATOR**.

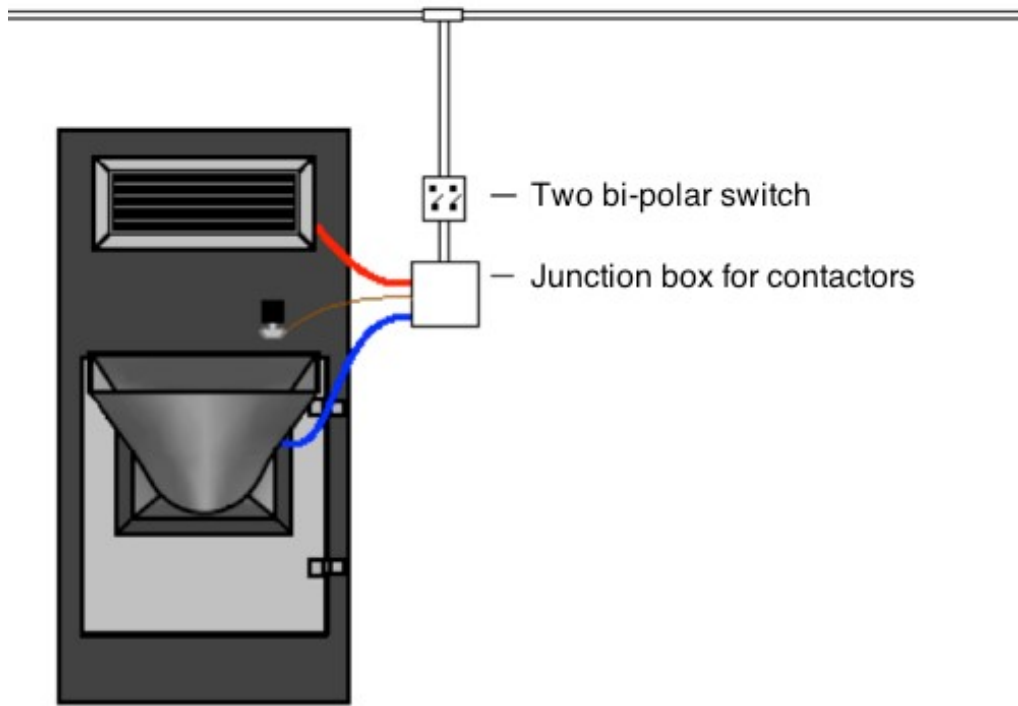
The manufacturer recommends a 6-wire cable to connect the **INTAKE VENTILATOR** motor to the **DPDT** relay or the **INTERLOCK** relays and the bipolar mechanical switch associated with the **INTAKE VENTILATOR**.

The manufacturer recommends a 3-wire cable to connect the solenoid valve.

The gauge of the wires must respect the electrical code in force in your area.

INSTALLATION AND ELECTRICAL DIAGRAM

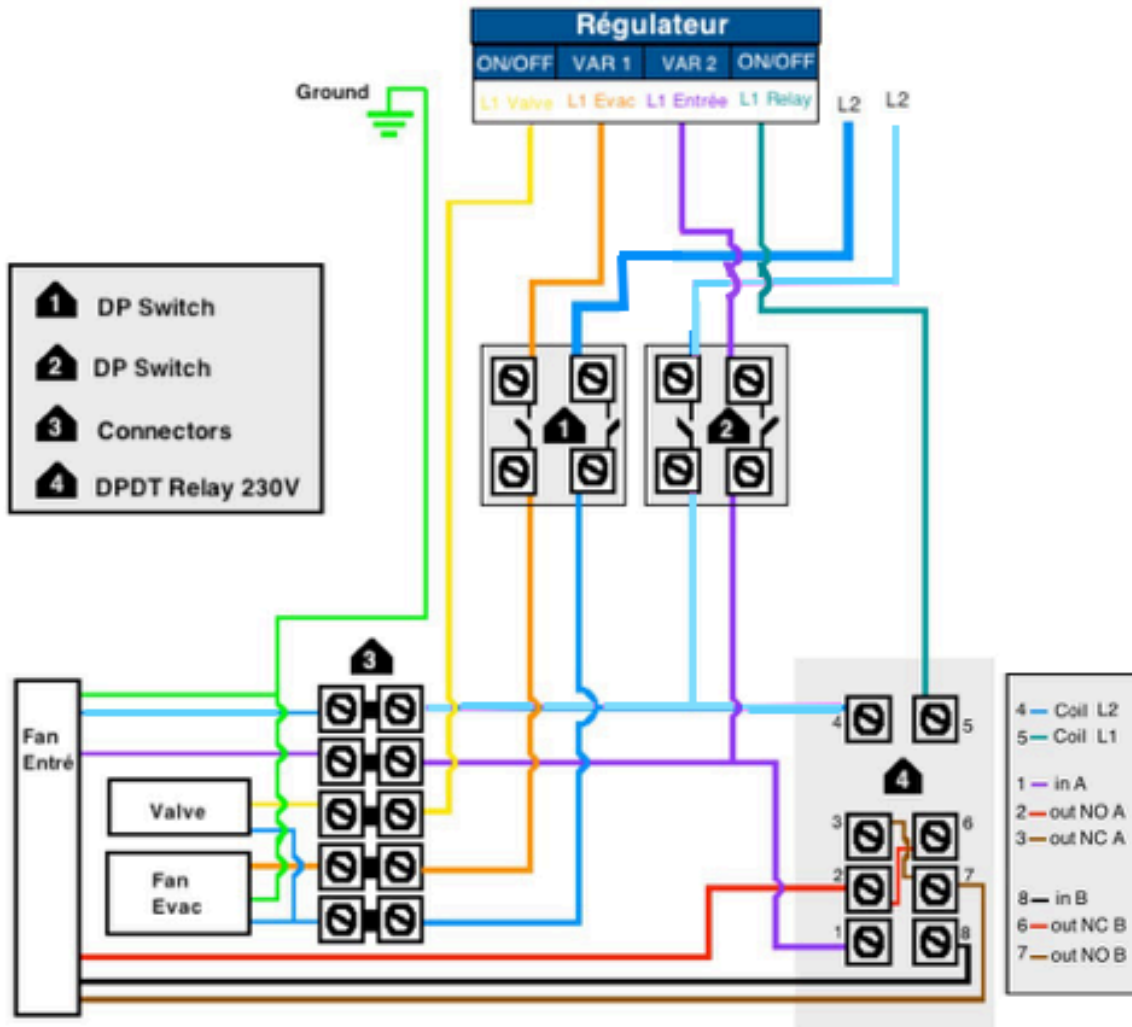




Maximus & AVI-28

CONNECTION DIAGRAM

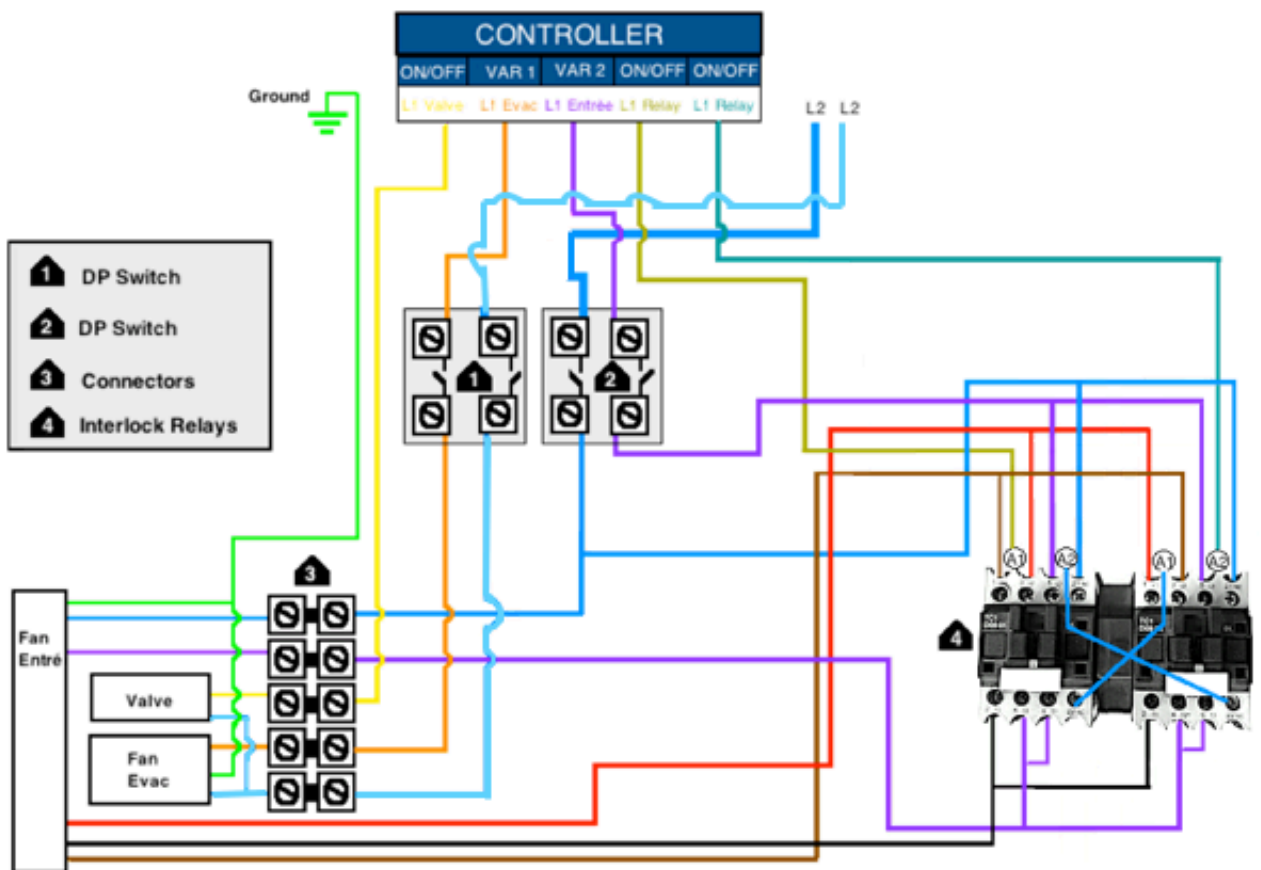
Each solenoid valve 240V must be connected to a single ON / OFF relay of the regulator. Each valve has its own circuit to the controller.



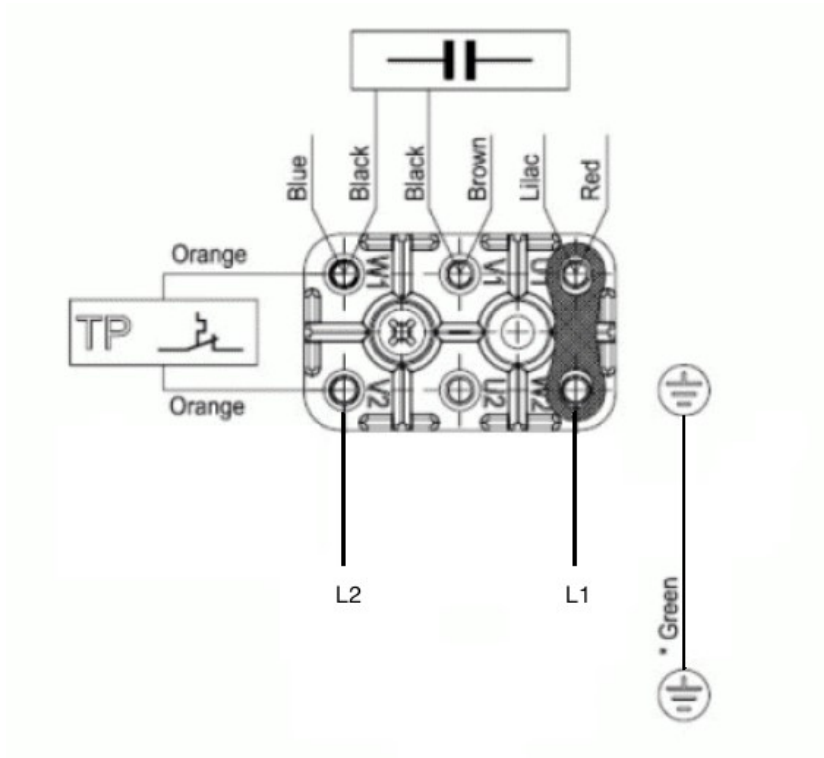
GENIUS MULTI-ZONE AVI35 CONNECTION DIAGRAM

With a pair of 3 poles interlock contactors and 1 NC

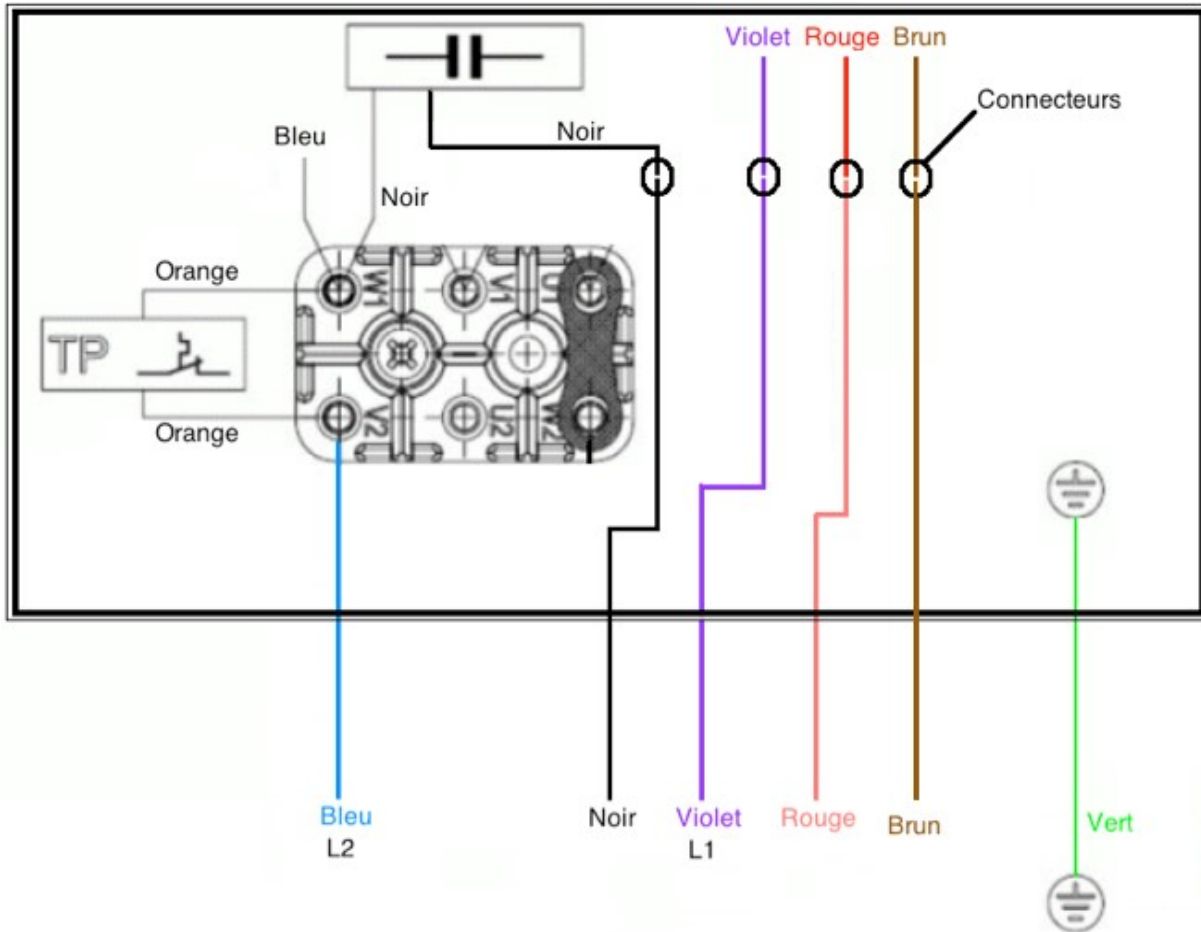
Each solenoid valve 240V must be connected to a single ON / OFF relay of the regulator.
Each valve has its own circuit to the controller.



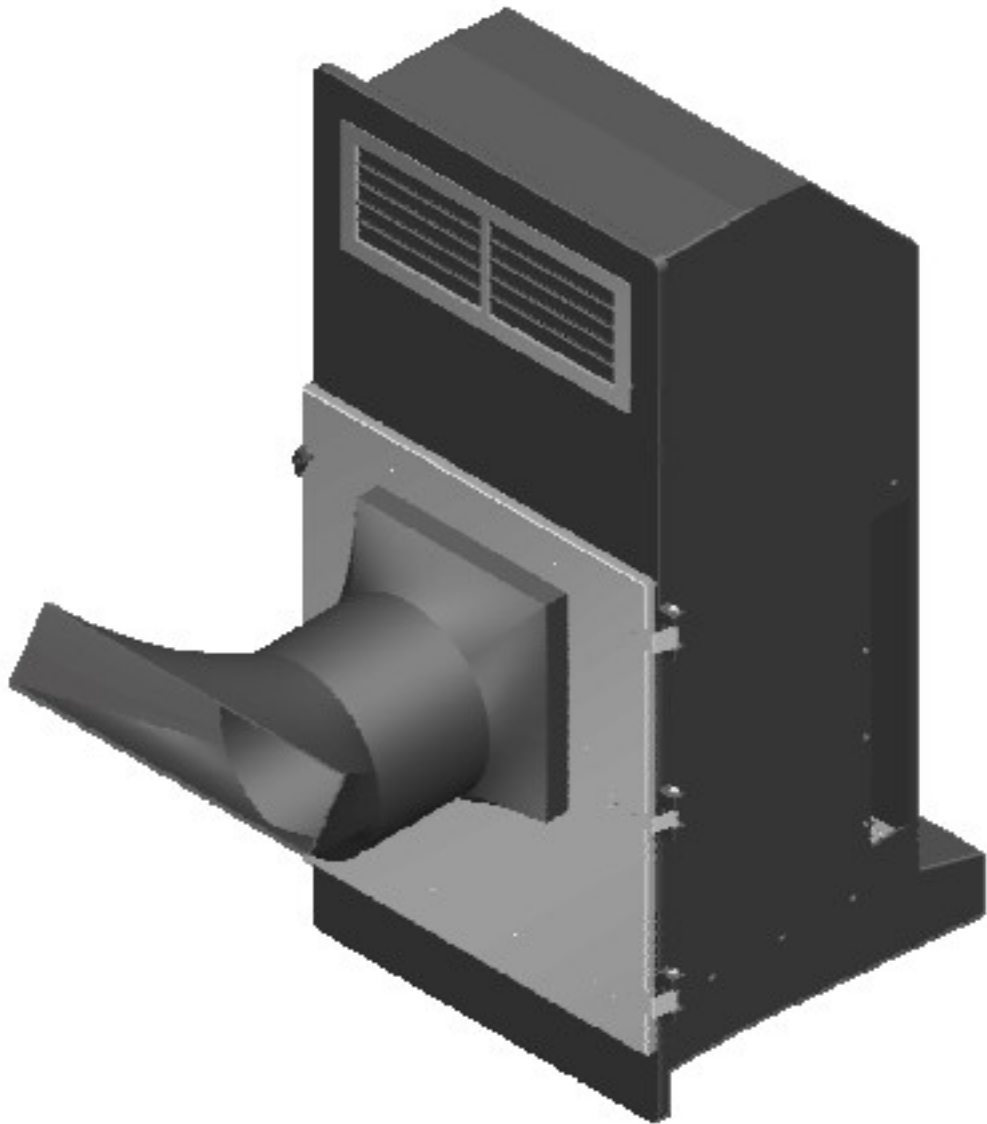
EXHAUST FAN CONNECTION DIAGRAM



INTAKE FAN CONNECTION DIAGRAM



Installation Guide



Warnings and precautions

The manufacturer recommends installing the recuperators in the wall of the building. Ideally, the Avi35 should not be installed directly above each other to prevent ice build-up above the unit on the lower floor. Also, plan for a large accumulation of ground ice at the exit of the recuperator during winter.

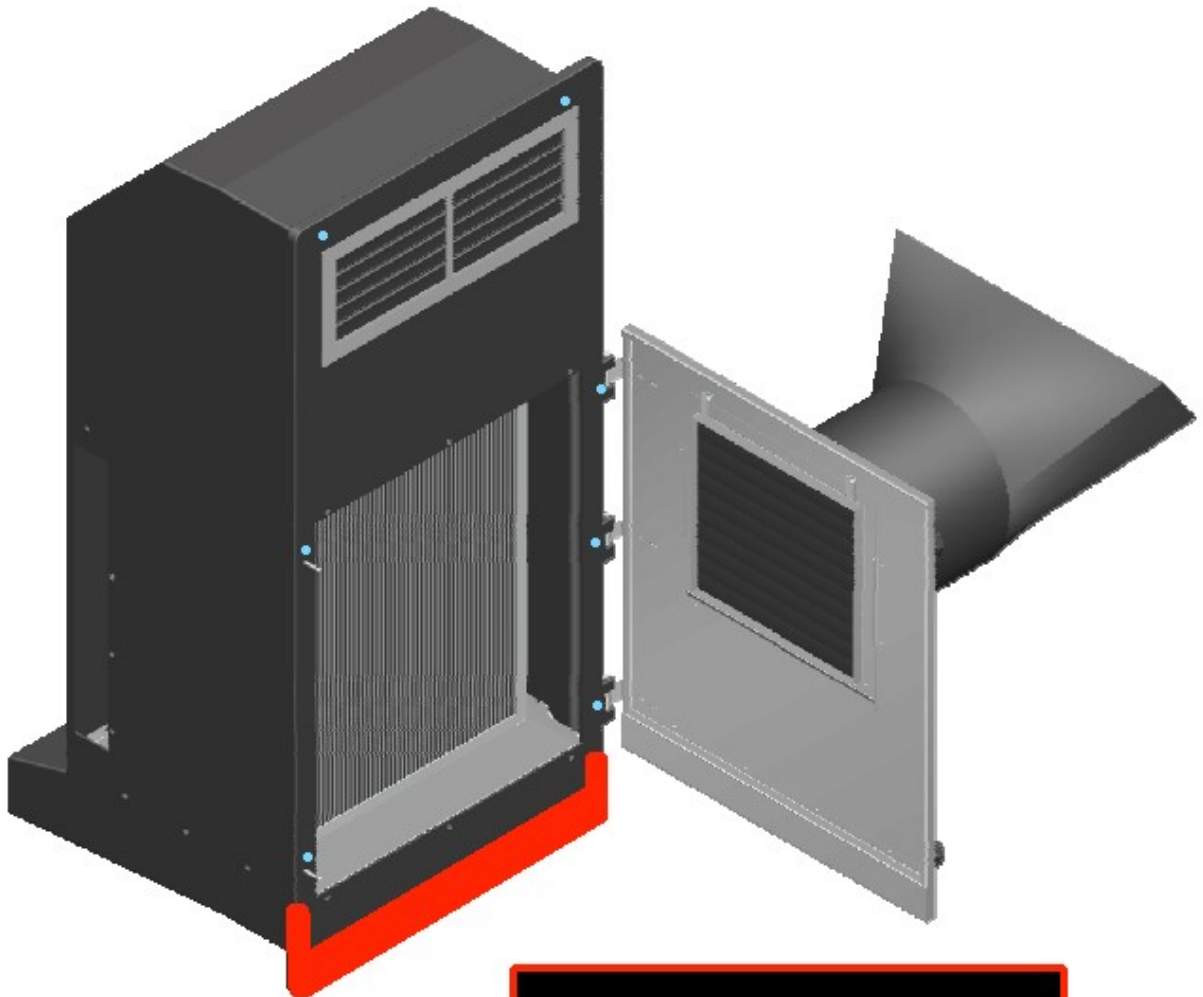
The manufacturer also recommends that a distance of at least 7 meters be maintained between the Avi35 recuperator and another standard building exhaust fan. The aim is to prevent a return of stale and dusty air from other standard exhaust fans in the Avi35 fresh air INTAKEs.

Do not drill holes in the bottom of the Avi35. See installation diagram 1

Secure the unit to the wall by aiming through the pre-drilled holes in the facade. Screw both sides of the unit into the wall frame. See installation diagram 3.

Refer to diagram 4 regarding the drain plugs on Multifan fan motors

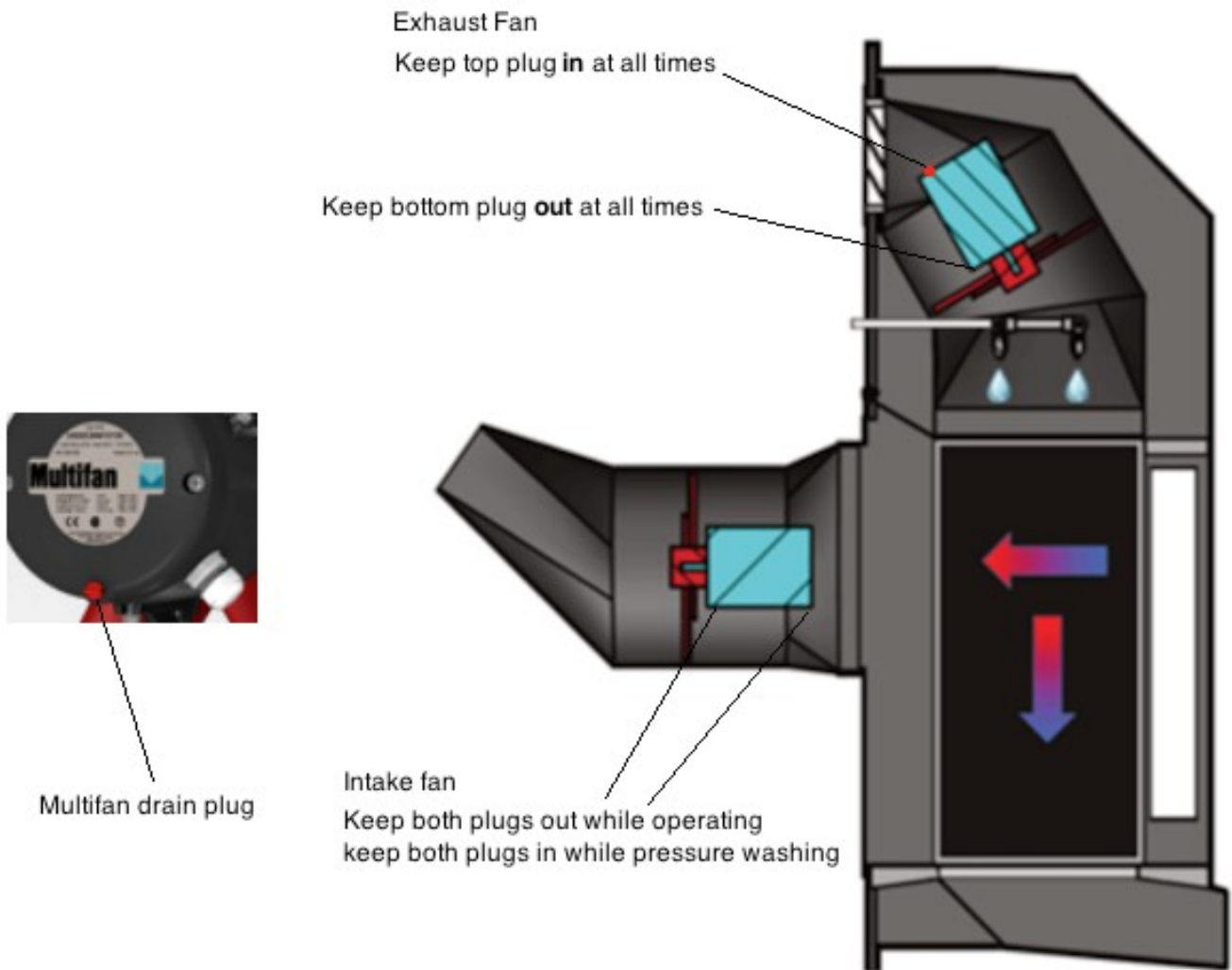
Installation diagram 1



DO NOT DRILL IN RED ZONE

Installation Diagram 4

Multifan drain plug



Limited warranty

The assembled product and individual components are subject to rigorous inspection and verification to ensure maximum product reliability and quality. However, the possibility of breakage and / or malfunction may exist. Contact your supplier for service. The warranty is for a period of three years from the date of sale. Proof of purchase is required to validate the warranty.

In any case, the warranty applies only to manufacturing defects and specifically excludes any damage caused by overload, short circuit, misuse, vandalism, unforeseen event, deluge, fire, hail or natural disaster. Any modification and repair not authorized by the manufacturer on this product automatically void the warranty and relieves the manufacturer of any liability.

The manufacturer assumes only the aforementioned obligations, excluding any other warranties or obligations. This warranty states that in all cases the manufacturer will be responsible only for the replacement of defective parts and will not be liable for any personal injury, damage, loss of profit, stoppage of operations, fines for contravention of the law or damage to the production of BUYER. The BUYER takes over the defense and holds the innocent manufacturer in any of the legal or extralegal procedures or request of the customer or by a third party and in respect of any legal or extralegal expenses and fees occasioned by such damage.