



# Energy VAV

Air flow restrictor

TECHNICAL LEAFLET

# Energy VAV

## Air flow restrictor

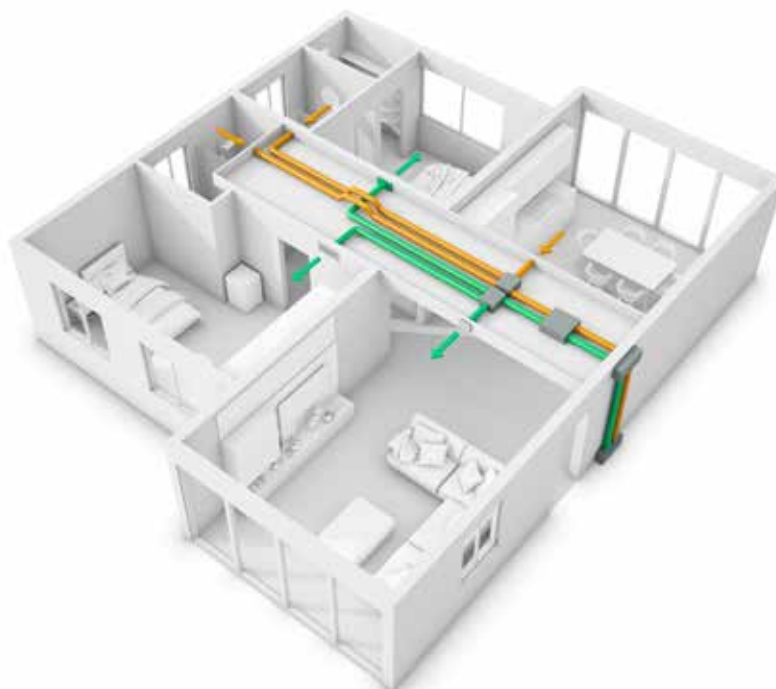


The Energy VAV are compact units for the regulation of variable air flow rate; with the Energy VAV the supply air and the aspiration air is distributed and partialized in every room according to one's own need (by using an air flow restrictor). The Energy VAV units are extremely adaptable and can be used for both, residential and commercial environments. Furthermore the Energy VAV are devices easy to install and to put into operation as they are stand-alone with no need to be interfaced with the centralized ventilation unit.

The desired flow rate for both, the supply air and the extracted air from the interior environments is continuously assured by regulation dampers completely integrated within the unit and managed by electronic board fitted on the unit, with reduced dimensions and ease of installation.

The units are moreover equipped with an automatic air flow control system operated by an integrated humidity sensor located in the extraction air duct.

If the humidity of the indoor environment exceeds the reference parameters, to prevent the proliferation of mould and pathogenic bacteria, the fresh air flow is increased with the aim of restoring a healthy humidity level. The control also prevents from dropping below excessively low humidity levels, thus preventing excessively dry conditions inside the environments and, as a result, any health hazards. The units are NOT able, by themselves, to lower the level of internal humidity to a value below that of the air provided by the centralised ventilation unit.



The Energy VAV units assure the maximum emissions and the minimum global consumption of the ventilation system, when they are used in combination with centralised units able to control the pressure within the ducts.

Compared to the single-zone installations, in the multi-zone installations (systems with flow rate regulation dampers) it is preferable that the central unit reacts to the pressure fluctuations due to the variation of the position of the installation dampers, by modulating the flow rate provided in accordance to the each interior's need.

To optimize the installations it is possible to combine for e.g. the ENY-VAV units with the Vertical Energy Plus centralised ventilation unit in the configuration with steady\* differential pressure.

Energy VAV



\*Unit to select within the configuration ENY-PV DP

It is moreover possible to install a wall **remote control user interface** (optional T-EP control);

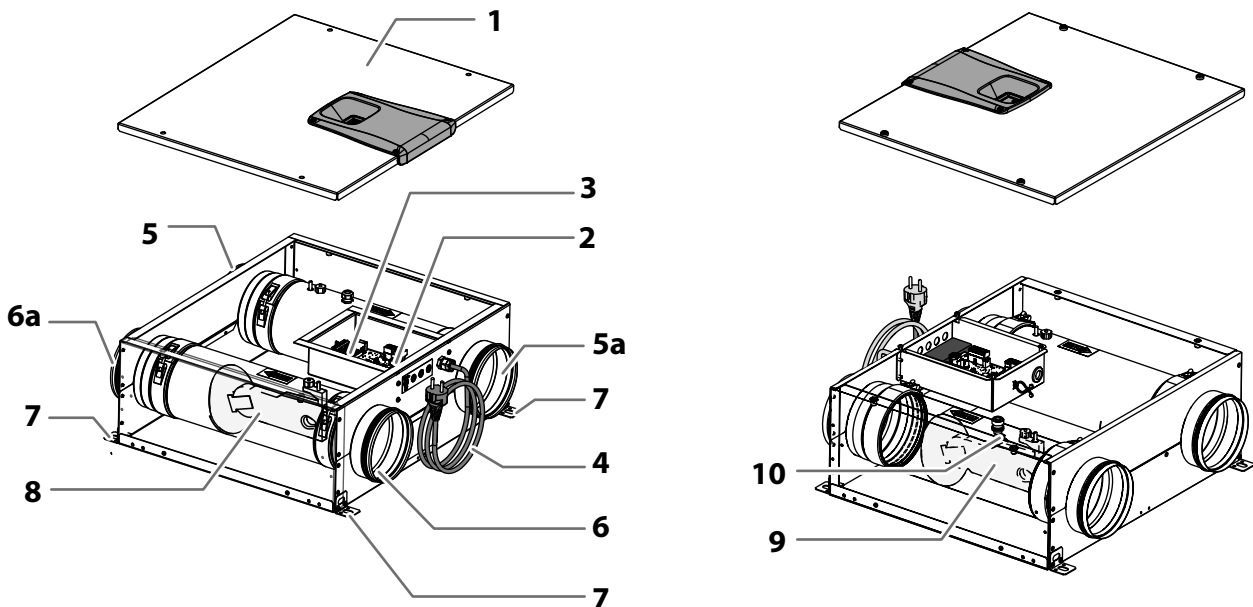
There is a choice of 8 weekly programs for these units: 4 preset programs and 4 free programs that can be modified as required. The operation can be selected in various intervals of the day, at one of the **4 standard speeds**, or at the hyperventilation speed "**Party**". At any time, the user may force the programming manually, which will resume at the beginning of the next time interval.

In the manual mode, in addition to the nominal speed, **there are 3 default speeds equal to 70%, 45%, and 25% of the project flow rate**. The timed intensive ventilation modes can be activated via the user interface ("Party" mode) or via a remote switch located in a particular room ("Booster" mode).

The Energy VAV units can be used in combination with the Energy SIL silencer box able to limit significantly the level of noise entered into the ambients, by improving the acoustic comfort.

The Energy SIL silencer box assures the maximum installation flexibility. As a matter of fact, the accessory can be directly connected to the ENY-VAV air flow restrictor or freely dislocated within the installation.

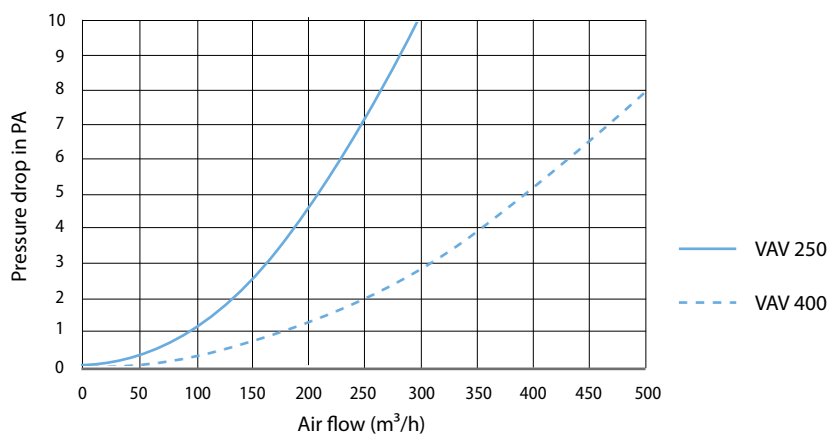
## Description of the components



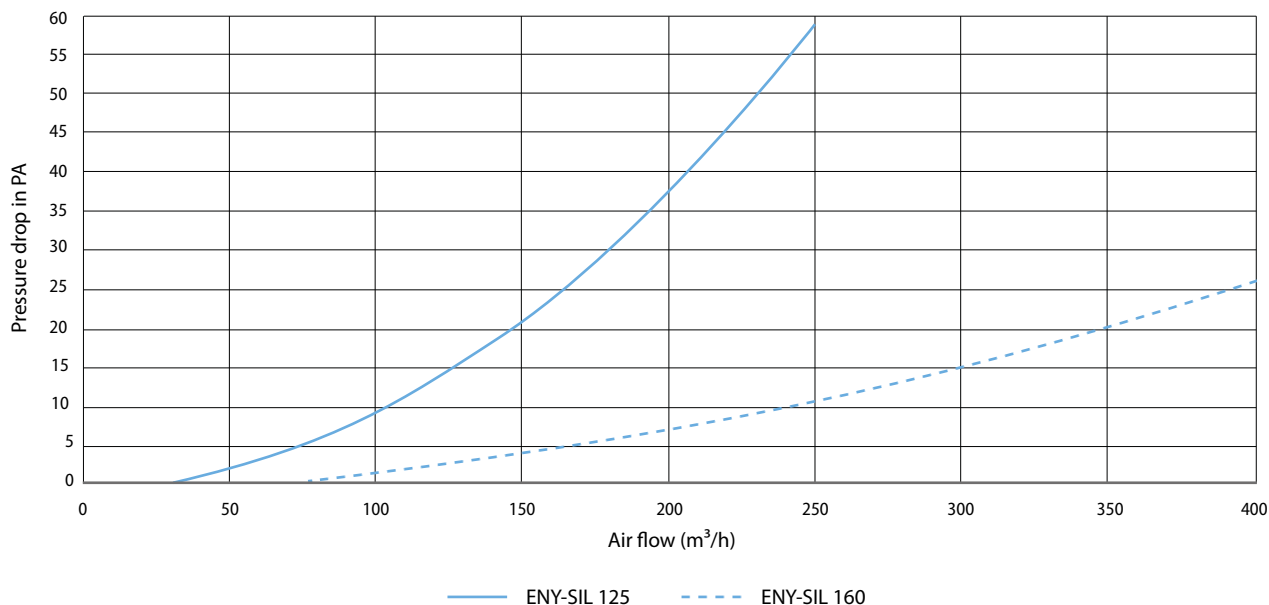
- 1 Frontal panel**  
made of hot-dip galvanised steel sheet panels painted in RAL 9003 and satin finish obtained with epoxy paint dried in oven at 180 °C.
- 2 Main power board**  
Main power board with built-in display, easy to use for calibration and unit commissioning.
- 3 Control display**
- 4 Power supply cable**
- 5-5a-6-6a Stainless steel air distribution connections for inlet/outlet air flows**
- 7 Suspension brackets**
- 8-9 Integrated air flow rate modulating damper**
- 10 Temperature and humidity probe**

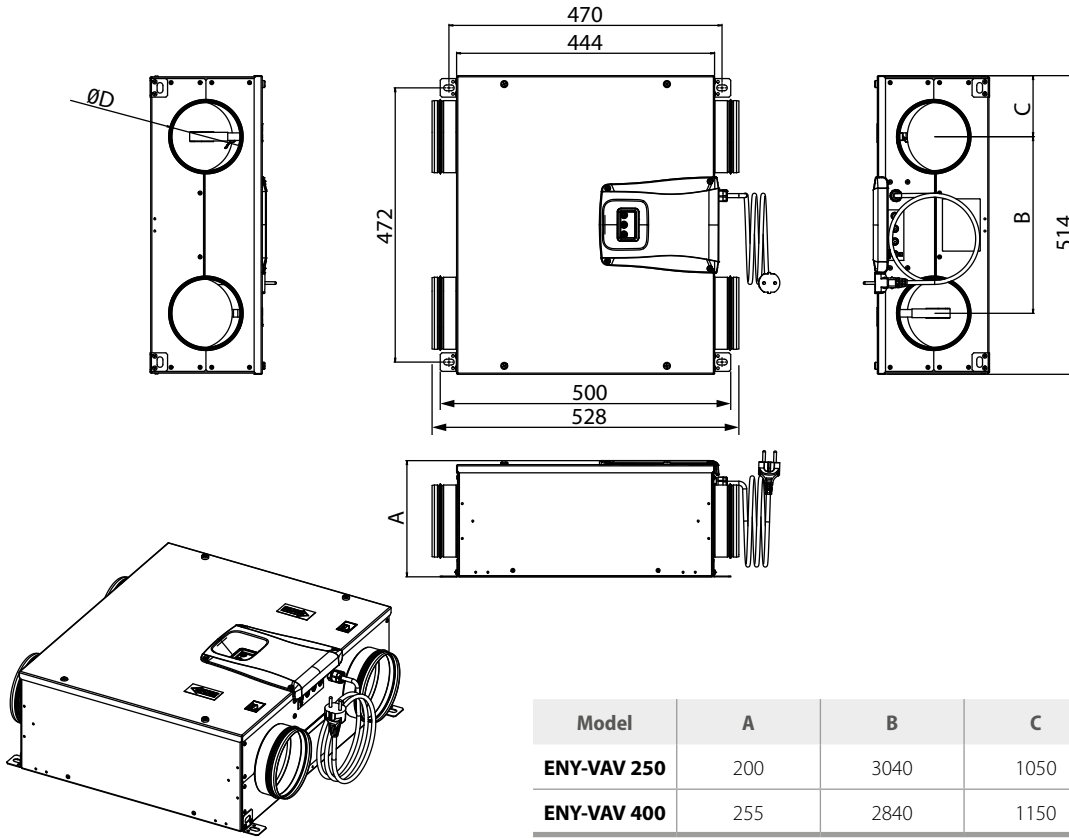
Model		ENY-VAV 250	ENY-VAV 400
Length	mm	528	
Width	mm	514	
Height	mm	200	255
Diameter of Connections	-	125	160
Weight	kg	10,3	11,3
Packaged unit weight	kg	12	13
Maximum Flow rate	m <sup>3</sup> /h	250	400
Minimum useful static pressure	Pa	11	10
Reference flow rate	m <sup>3</sup> /h	175	300
Minimum calibration rate	m <sup>3</sup> /h	75	120
Maximum absorbed power (motors and controls)	W	4,7	
Maximum absorbed current (motors and controls)	mA	58	
Power supply	-	Single-phase - 230 V - 50 Hz	
Consumption in stand-by	-	< 1W	

### Minimum pressure drop with opened damper



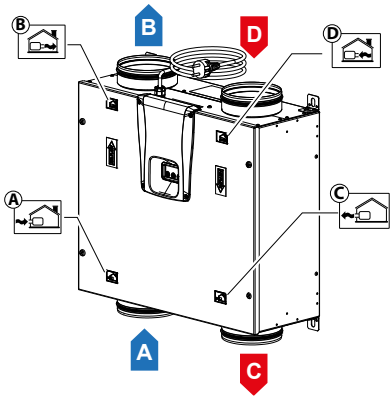
### VAV Silencer Pressure drop



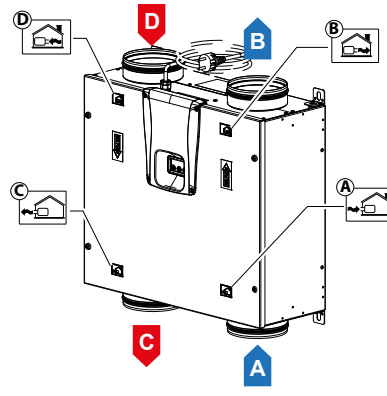


## Installation Type

Vertical unit ENY-VAV (left)

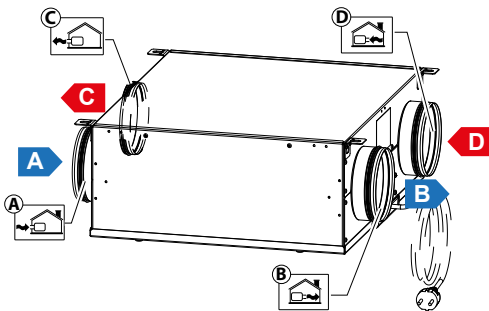


Vertical unit ENY-VAV (right)

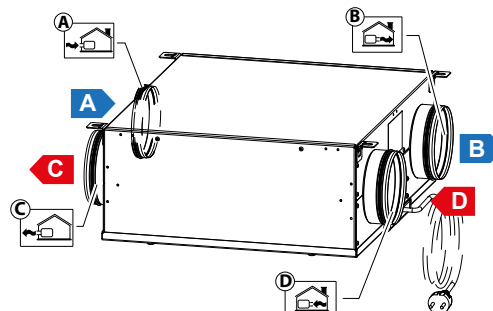


- A Air supply inlet
- B Air supply outlet
- C Stale extracted air outlet
- D Stale extracted air inlet

Horizontal unit ENY-VAV (left)



Horizontal unit ENY-VAV (right)



# Energy SIL

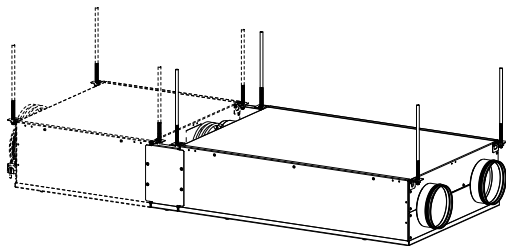
## Silencer



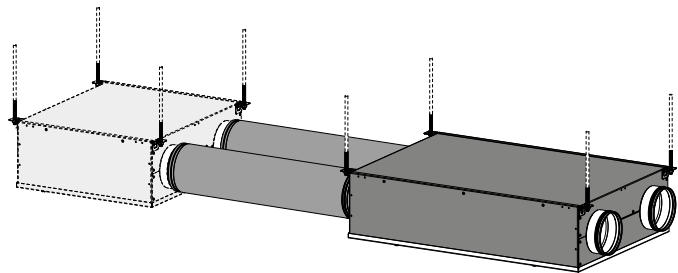
The Energy SIL silencer is able to limit significantly the level of noise entered into the environments, by improving the acoustic comfort. The silencer is available in two models : with air distribution connections for ducts of diameter 125 mm and for air distribution connections of diameter 160 mm. The Energy SIL silencer box assures the maximum installation flexibility. As a matter of fact the accessory can be directly connected to the ENY-VAV air flow restrictor or freely dislocated within the installation.

### Mounting and silencer installation

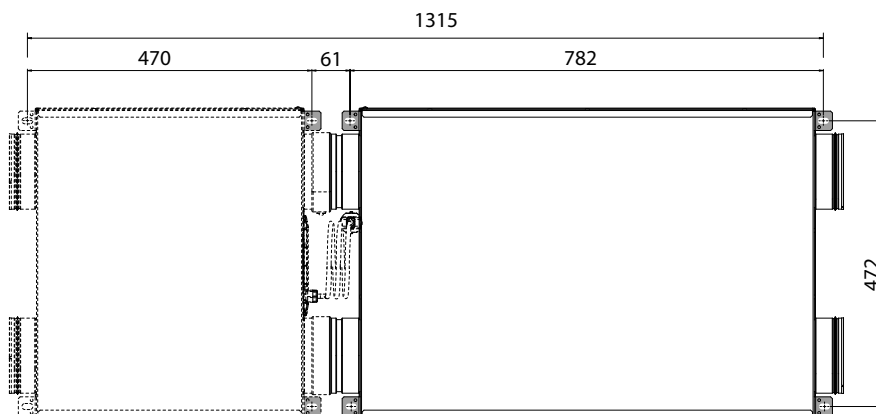
#### Compact mounting



#### Detached mounting



### Silencer dimensions



Model	h (mm)	kg
<b>DN125</b>	200	14,2
<b>DN160</b>	255	16,3



A company of Arbonia Group  
**ARBONIA** ▲

Follow us



Sabiana app



---

**SABIANA SpA**

Società a socio unico

Via Piave 53 - 20011 Corbetta (MI) Italia

T. +39 02 97203 1 r.a. • F. +39 02 9777282

info@sabiana.it

**www.sabiana.it**