HEAT RECOVERY UNIT

CADB-S Series

ENERGY EFFICIENT e VENTILATION SYSTEM

Range of heat recovery units mounted with double skin galvanised sheet steel panels and internally lined with fireproof (M0) fibreglass insulation. They are supplied with a cross flow heat exchanger made of Aluminium with a maximum efficiency of 60%.
All models incorporate single phase direct drive forward curved centrifugal fans, an external IP55 terminal box and are supplied with four mounting feet with antivibration mounts to facilitate the installation and reduce noise transmission.
All models are fitted with inlet and discharge circular duct connection flanges with integrated rubber air seal.
Supplied with two G4 grade filters.

Motors

CADB-010: 2 speeds, Class B insulation, IP44.
CADB-020: Speed controllable by voltage, Class F insulation, IP55.
Electrical supply:
Single phase 230V 50Hz.

Additional information

Heat exchanger removable from the top panel.
Filters removable from side panels.

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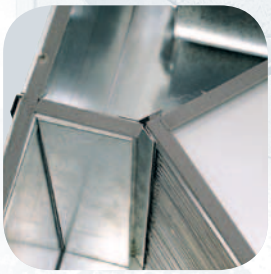
A P P L I C A T I O N S

Low noise level



Double skin galvanised sheet steel panels and internally lined with 25 mm thickness of **fireproof (M0) fibreglass insulation**

Anti-vibration mounts to **reduce vibration and noise transmission** to the installation

Easy to mount

All models are supplied with four mounting feet to facilitate installation

Air tightness

All models incorporate inlet and discharge circular duct connection flanges with integrated rubber air seal

High efficiency filters

Two G4 grade filters, **90% efficiency and M3 fire resistance**

Condensation drain

Permanent drain to evacuate condensation water

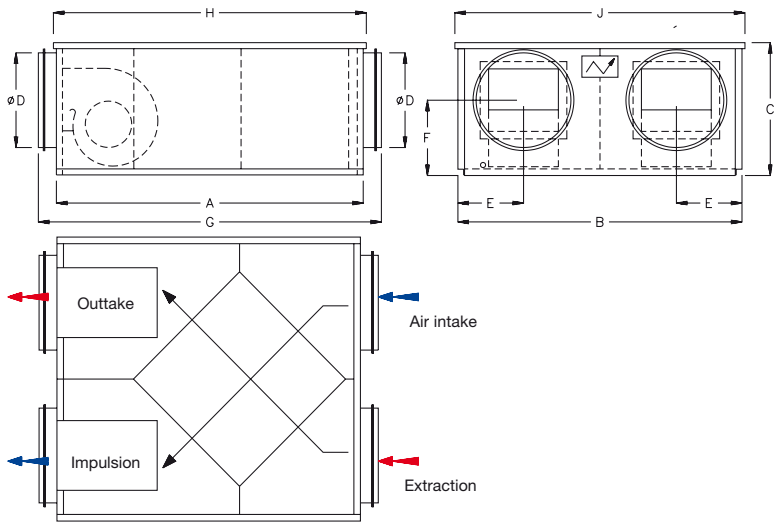
External weatherproof terminal box

IP55 external terminal box

Technical Characteristics

Model	Fan type	Speed (r.p.m.)	Motor power (W)	Maximum current drawn (A)	Maximum flow (m^3/h)	Weight at 230V (kg)
CADB S 010	7/7	1100	2 x 184	2 x 1,5	1200	100
CADB S 010	7/7	1100	2 x 184	2 x 1,5	1200	100

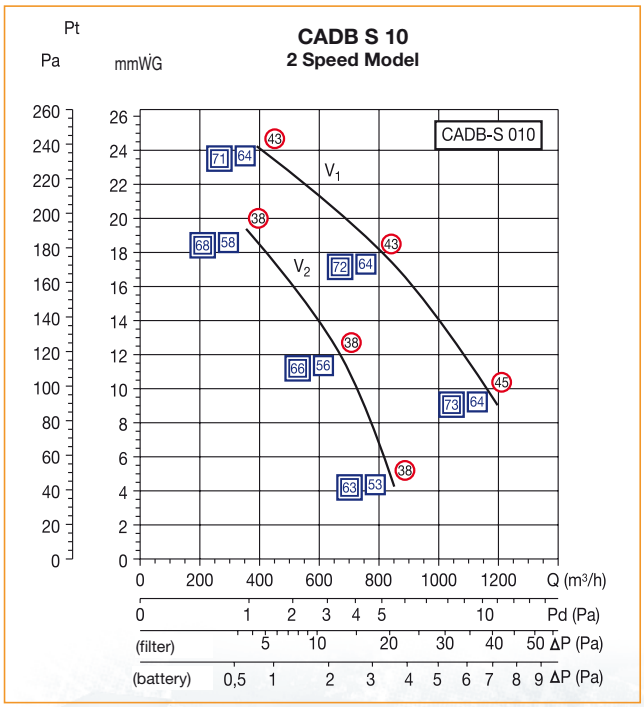
Dimensions (mm)

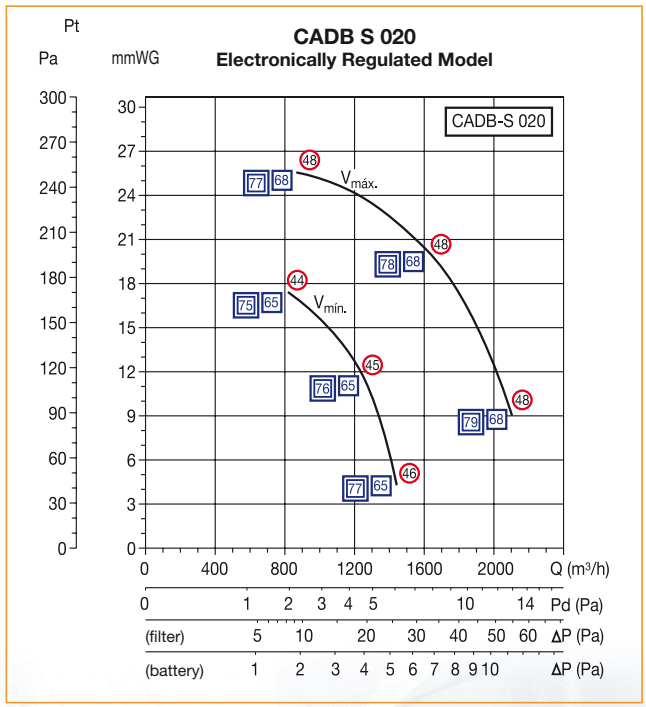


	CADB S 010	CADB S 020
A	1030	1100
B	950	1030
C	470	570
Ø D	315	400
E	230	260
F	245	290
G	1120	1220
H	1050	1120
J	970	1050

Characteristic Curves

- The graphs are valid for air density of 1.2 kg/m 3 , with the tubing apparatus for intake and outtake.
- ○ Level of acoustic pressure measured in open field at 4m. Intake tubing. Lp in dB (A).
- □ Level of acoustic power radiated in the intake duct. Lw in dB (A).
- ▣ Level of acoustic power radiated in the outtake duct. Lw in dB (A).

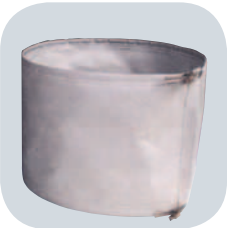




Mounting accessories

AFL and AFR
Filters

Model	Frame Support + Filter	Spare Filter
CADB S 010	AFL-010	AFR-010
CADB S 020	AFL-020	AFR-020



MSO
Flexible connector

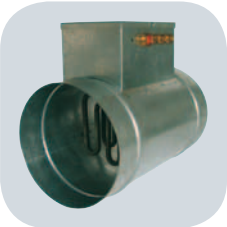
Model	Flexible connector
CADB S 010	MSO-315
CADB S 020	MSO-400

APC
Discharge protection guards

Model	Screen
CADB S 010	APC-315
CADB S 020	APC-400

Electrical accessories: Electric heater batteries

The heater battery operation must be enslaving to the fan operation. The installation must include a pressure switch to switch off the electric heater battery supplies in case of fan failure.



ABE
Electric heater batteries
Operations
- **Defrosting operation**: To heat the outside fresh air before going through the heat recovery unit to avoid frost accumulation and sealing of the heat exchanger.
- **Post heating operation**: To increase the temperature of the supply air, after the heat exchanger.

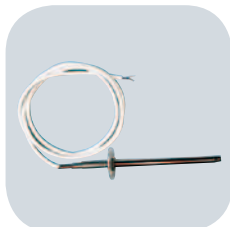
					DEFROSTING OPERATION			POST HEATING OPERATION*		
Heat recovery Model	Supply	Diameter (mm)	Power (kW)	Heater type	Controller	Duct sensor	External potentiometer	Controller	Duct sensor	External potentiometer
CADB S 010	1~230V	315	3	ABE 315/3M	PULSER	TGK 310	TBI 10	PULSER	TGK 330	TBI 30
CADB S 020	1~230V	400	5	ABE 400/5M	PULSER + PULSER ADD	TGK 310	TBI 10	PULSER + PULSER ADD	TGK 330	TBI 30

* Other control configurations are possible

Electrical heater battery accessories
To control the heater batteries.

PULSER controller
Electronic controller to regulate the heat output for single phase or two phase (200 - 415 V) electric heater battery in order to maintain a constant pre-selected temperature. Depending on the selected temperature, the controller pulses the entire power output and uses a time-proportional control to maintain that temperature.

PULSER-ADD
Supplementary unit for slave control from another PULSER to control batteries with power ratings superior to the PULSER capacity (3600W-230V).superior to the PULSER capacity (3600W-230V).



TG- K310, TG-K330 and TG-K360
Duct temperature sensor.
Temperature range:
TG-K310 from -20 to 10ºC.
TG-K330 from 0 to 30ºC.

COM-2
Speed switch for CADB S 010.

REB-10
Single phase electronic speed controller for CADB S 020.

TG-R430
Room sensor with set point adjustment between 0 and +30ºC. Used with the PULSER D or the TTC 25 mounted within cabinet, to measure the room temperature to control.

TBI-10
Potentiometer mounted on the main board panel for setting temperature between -20 and +10ºC. Used with the Pulser and a TGK-310 duct sensor to set the minimum air temperature before entering in the heat exchanger.

PRESSURE SWITCH DPS 2-30
Differential pressure switch to control the fan running and the filter clogging up. Working pressure range from 20 to 300 Pa.

TBI-30
Potentiometer mounted on the main board panel for setting temperature between 0 and +30ºC. Used with the Pulser and with a TGK-330 duct sensor to set the air temperature after the electric battery in post heating operation.

SQA
Automatically switches the fan on when the quality of the ambient air deteriorates below an acceptable level due to fumes, odours, tobacco, smoke or dampness etc… Adjustable run-on-timer facility which enables the fan to operate for a pre-selected time period after the air quality sensor has switched off.
Important: this sensor must not be used to detect combustible gases or fires ans in connection with any safety alarm systems.

IP protection	Class	Maximum current (A)	Operating temperature	Timer adjustment
IP21	II (▣)	2*	0-50 °C	1-25 min.

* For inductive loads

Acoustic Accessories

SIL
Sound attenuators to mount at the inlet and/or discharge of the heat recovery units

Model	Attenuator	ØA (mm)	ØB (mm)	C (mm)	D (mm)	dB Attenuation							
						63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
CADB S 010	SIL 315	315	400	700	860	2	2,2	3,3	9	21,2	7,6	4,1	5,5
CADB S 020	SIL 400	400	500	700	860	1,8	3,1	4	9,5	13,7	5,6	0,4	5,9