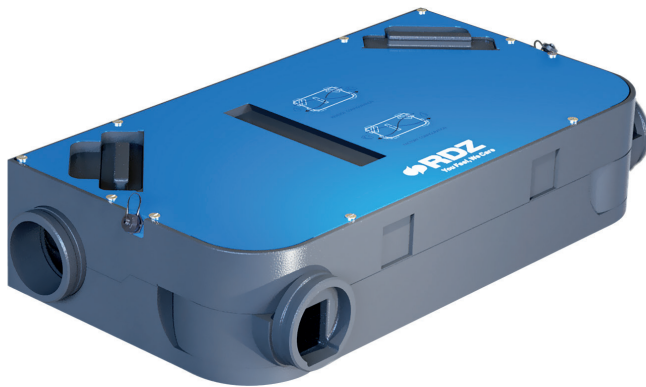


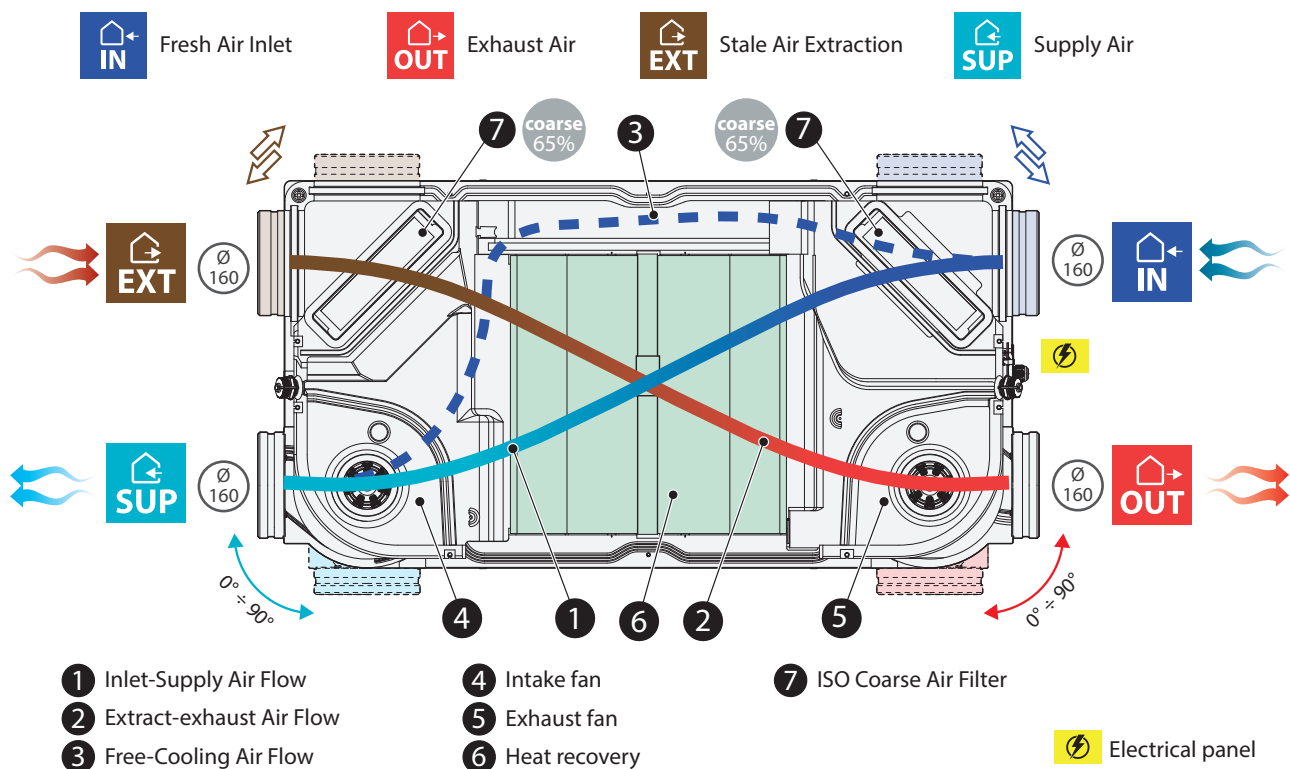
TECHNICAL DATA SHEET



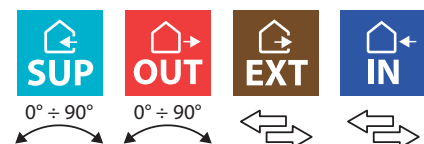
Description	Sizes (wxhxd)	Weight	Code
REFLAIR 150 ERV	1100x240x580 mm	22,5 kg	70RFLOE150
REFLAIR 250 ERV	1100x240x580 mm		70RFLOE250

REFLAIR ERV is the new high-efficiency ductable mechanical ventilation unit with heat enthalpic recovery, designed for residential use. It can be installed either in the ceiling or on the wall. Adjustable and configurable connections ensure a constant pressure drop and reduce the number of connections required. The construction in sintered expanded polypropylene thermally insulates the internal components and makes the unit extremely light. Thanks to its compact dimensions, it can be installed in spaces of reduced height. Reflair ERV can be integrated and managed control panels integrated into the CoRe regulation system, or controlled via digital inputs.

PRINCIPLES OF OPERATION



- Dual-flow controlled mechanical ventilation machine;
- Vertical or horizontal installation;
- Possibility of reversing aerualic flows (Reverse Mode);
- High-efficiency enthalpic countercurrent heat recovery;
- EPP body to increase thermal and acoustic insulation and reduce weight;
- Centrifugal fans with EC motor with costant flow;
- 4 NTC sensors for air temperature detection;
- ISO Coarse 65% (G4) filters as standard;
- Optional ISO ePM1 60% (F7) filters;
- Operating modes: manual, time scheduling, economy, boost, free-cooling;
- Room controllers: CoRe AIR SPEED, CoRe AIR CONTROL, CoRe AIR 3V, probe IAQ;
- Other control options: CoRe System, digital inputs, 0-10V signal, Modbus;



Packaging composition

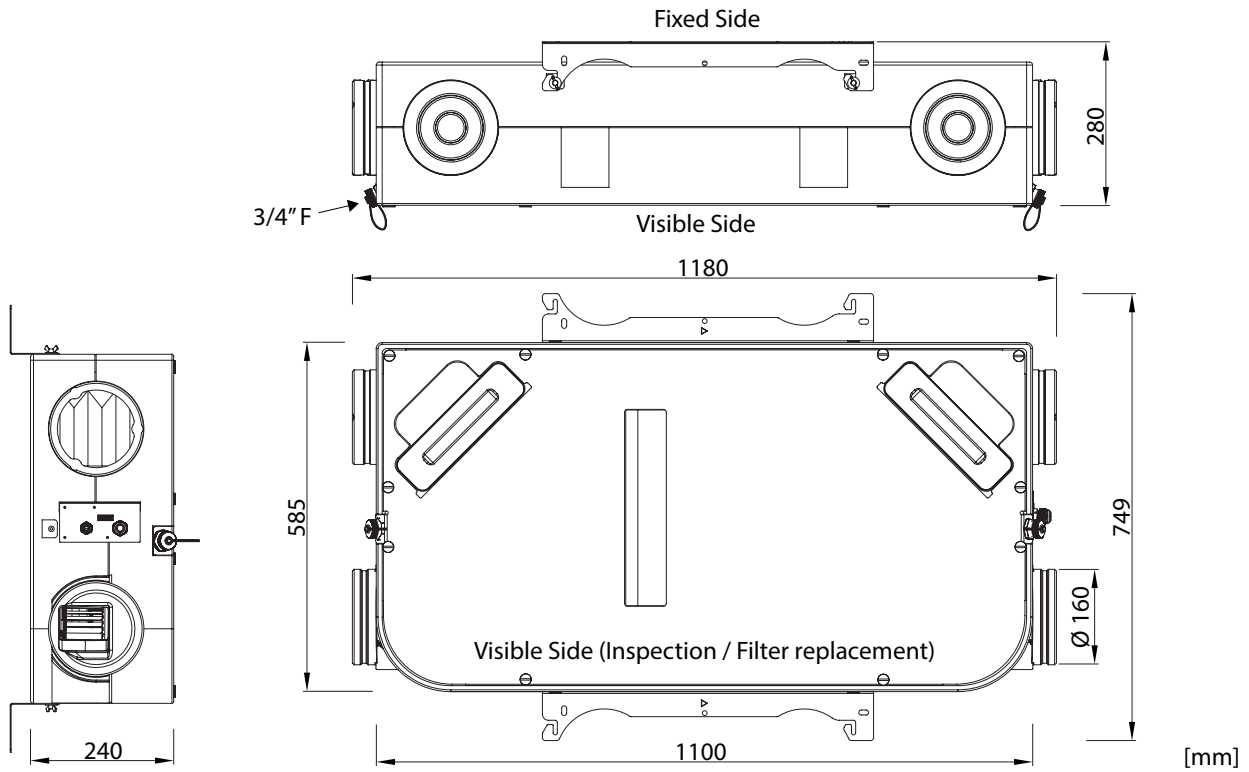
- Packaging composition;
- Installation template for brackets;
- Brackets for ceiling or wall mounting;
- Instruction manual for installation, start-up and maintenance;

Materials

- Sintered expanded polypropylene and prepainted steel;

TECHNICAL DATA SHEET

DIMENSIONS



UNIT CONTROL MODES

CHARACTERISTICS

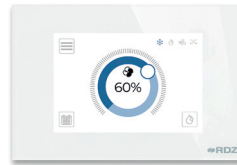
- Wall installation on built-in box 502/503 or \varnothing 60 mm
- Power supply 12 VDC (power supply unit required)
- Bus cable 2x0.5 mm² twisted and shielded
- Power consumption max. 60 mA
- R-BUS port
- Devices for indoor application

CoRe Air Speed



Room control for displaying and setting the unit's operation.

CoRe Air Control



Room control for managing operating modes, time schedules and parameters of the unit.

CoRe Air 3v



Room control for displaying and setting the operation of the controlled mechanical ventilation unit.

INTEGRATION INTO CONTROL SYSTEMS

Reflair ERV can be integrated into RDZ CoRe System or within in systems with Modbus or KNX protocol.

Accessories / Complements		Code
ROOM CONTROLLER	CORE AIR SPEED	7041476
	CORE AIR CONTROL	7041477
	CORE AIR 3V	7041478
	KNX-UTA INTERFACE	7041480
REPLACEMENT AIR FILTER KIT	REFLAIR 150/250 G4	70RFLG4000
	REFLAIR 150/250 F7	70RFLF7000

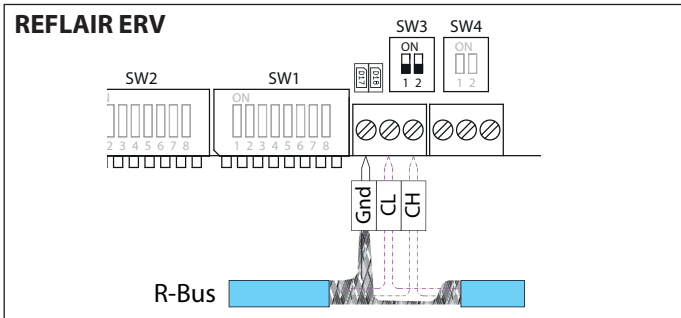
REFLAIR 150 ERV Optional		Code
STD ELECTRIC HEATER	RE-S 05-125	7045565
WATER BATTERY	BA-P 6	7045598
	BA-P 10	7045599
MODULATING VALVE \varnothing 1/2"		7045562

REFLAIR 250 ERV Optional		Code
STD ELECTRICAL RESISTANCE	RE-S 075-160	7045567
WATER BATTERY	BA-P 6	7045598
	BA-P 10	7045599
MODULATING VALVE \varnothing 1/2"		7045562

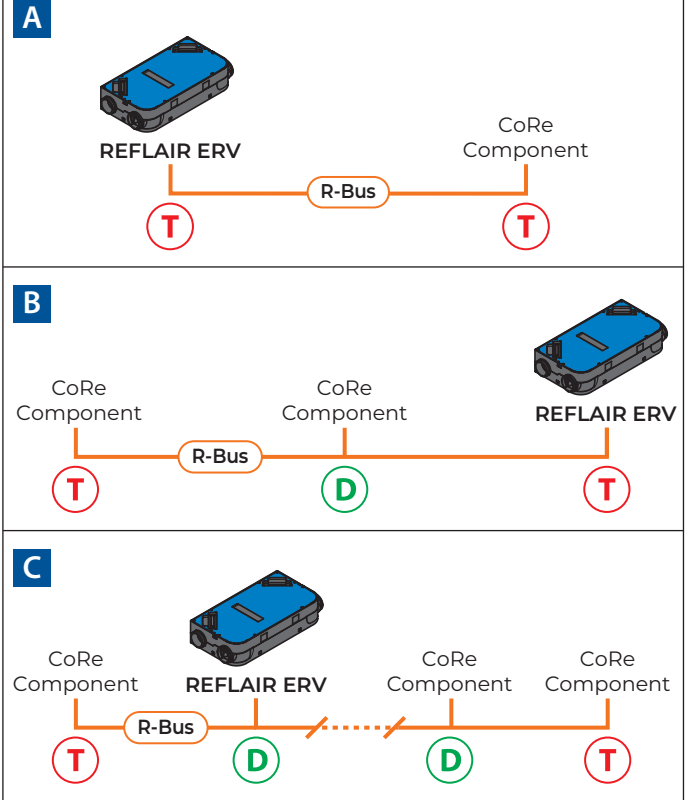
TECHNICAL DATA SHEET

CORE SYSTEM R-BUS NETWORK CONNECTIONS

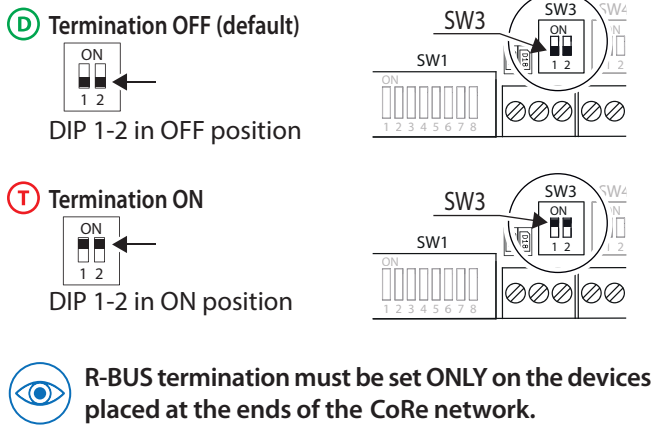
The communication cable between the various nodes is a 2 x 0,5 mm² twisted and shielded cable, entry-exit connection. The shielding must be connected by creating continuity between the various pieces of cable and grounded at a single point in the network. It is possible to connect several probes to the same Reflair ERV unit.



EXAMPLES CONNECTION



TERMINATION R-BUS (SWITCH SW3)

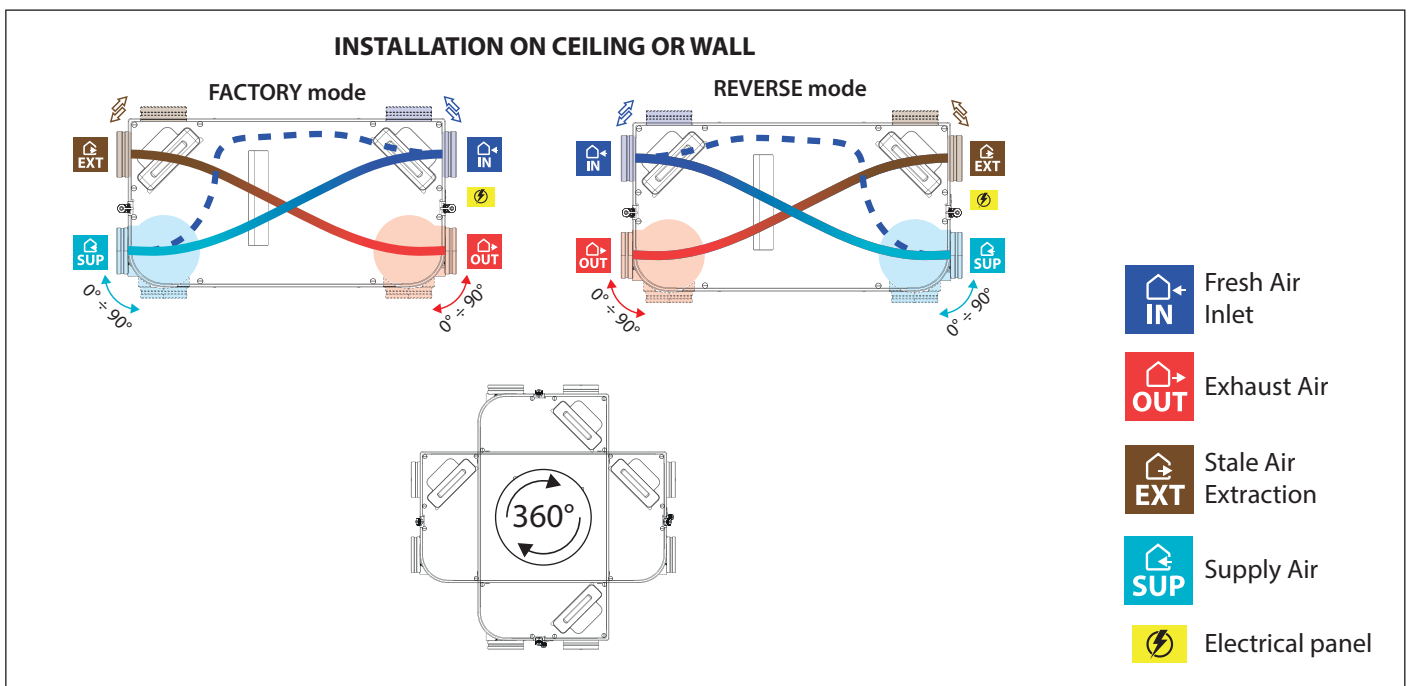


POSSIBLE INSTALLATION CONFIGURATIONS

Below we list the possible airflow configurations for the installation of the REFLAIR ERV in the horizontal ceiling or vertical wall version.

The unit is supplied with FACTORY configuration.

Reversing the flows, called REVERSE configuration, is achieved by setting Switch SW1 (See WIRING DIAGRAM on page 12).



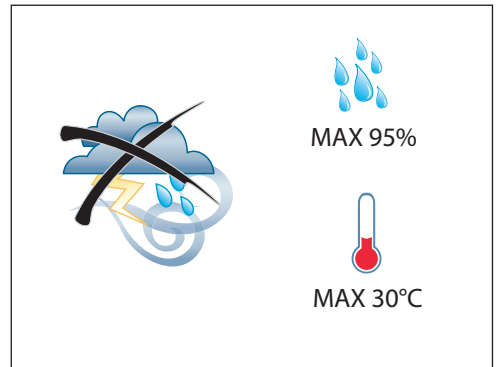
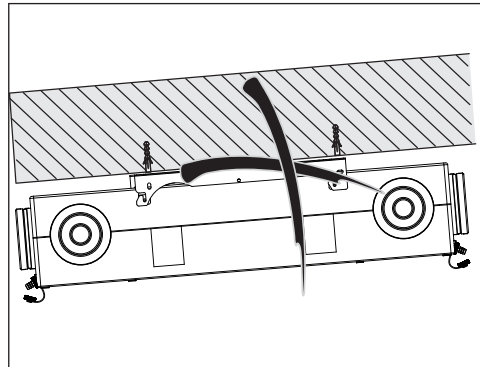
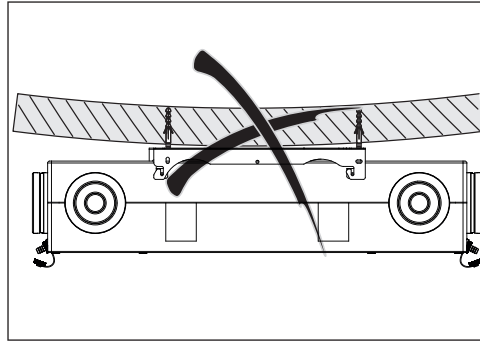
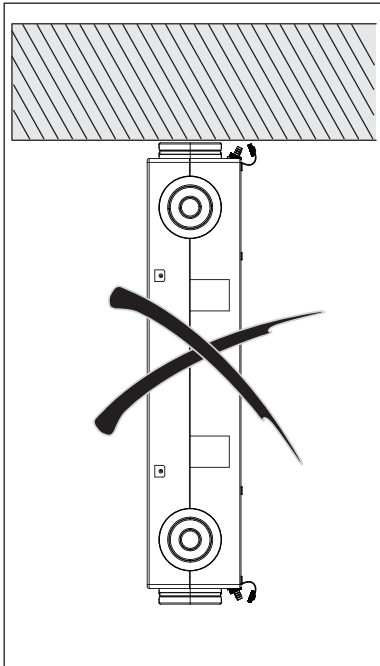
TECHNICAL DATA SHEET

INSTRUCTION FOR POSITIONING AND FIXING

CAUTION

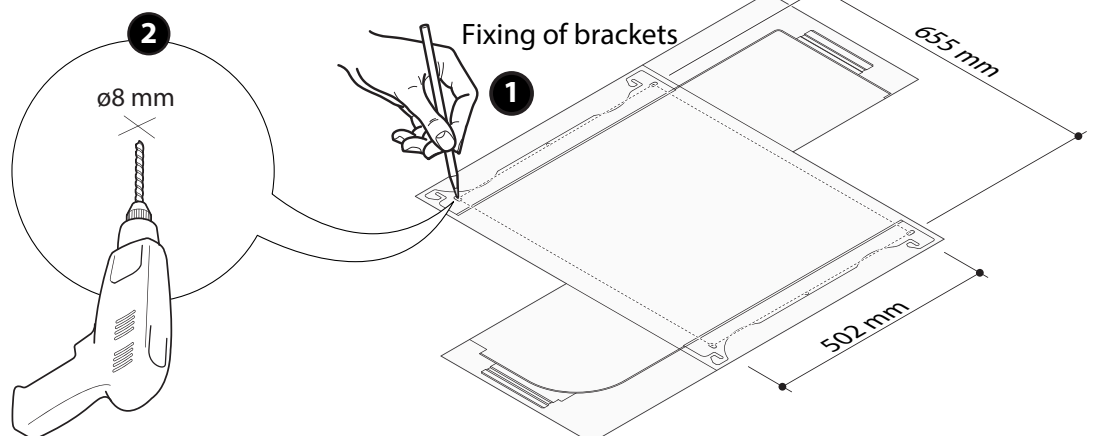
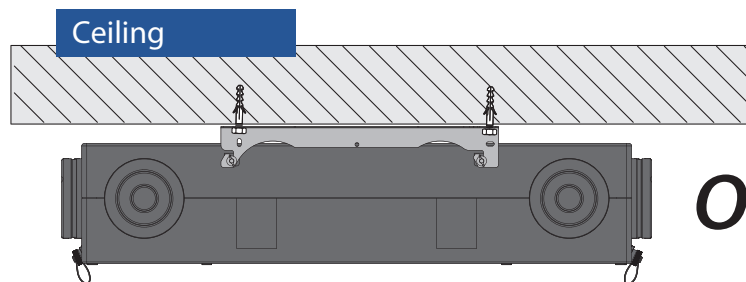
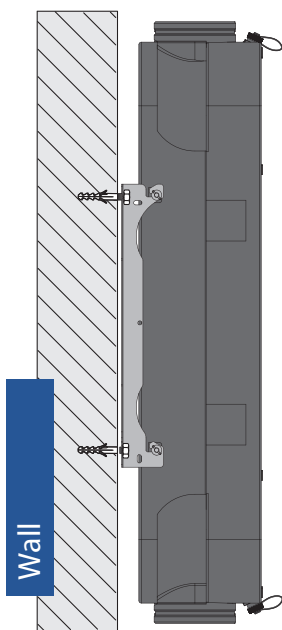
- Installation and maintenance must be carried out by qualified personnel only. Throughout installation, make sure that the equipment is not connected to the electrical mains.
- It shall be installed only inside the building.

Positioning installation



CORRECT POSITIONING

Positioning the unit on the ceiling or wall as indicated, use the supplied brackets to fix the unit.







TECHNICAL DATA SHEET

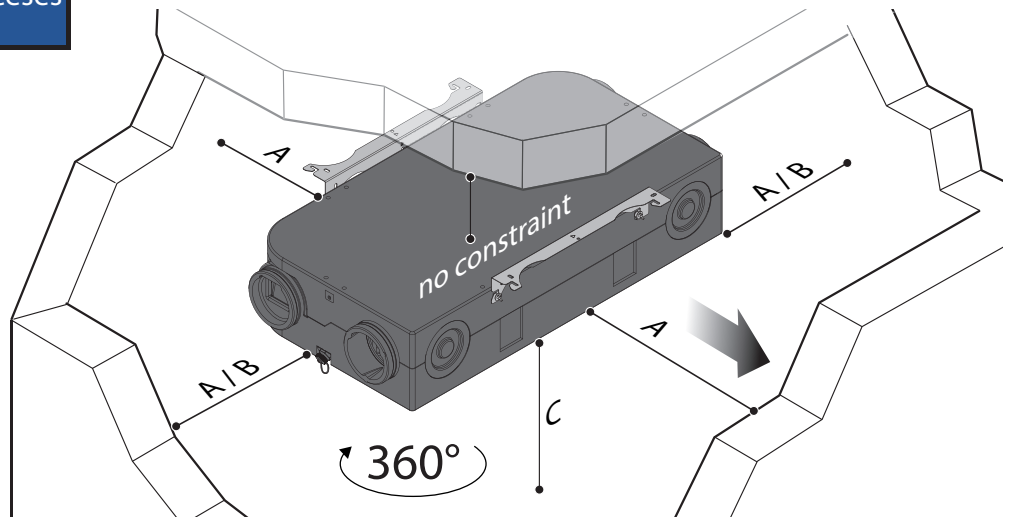
CEILING INSTALLATION

IMPORTANT: provide the necessary space for the aeraulic connections and for their bends by ensuring that the minimum respect constraints of the unit are respected.




The minimum distances to be observed depend on the positioning of the connections and the position of the electrical panel and condensate drain. Maintain a minimum distance of 40 cm on all sides of the unit with the presence of the aeraulic connections (A1), otherwise 10 cm is sufficient (A2). For inspection and maintenance of the unit, ensure a distance of at least 30 cm in the presence of the switch cabinet (B), 15 cm in the presence of the condensate drain (B) and 60 cm at the front for cleaning the filters/recuperator (C).

Minimum space allowances

A		A1	min. 40 cm
		A2	min. 10 cm
B			min. 30 cm
C			min. 60 cm



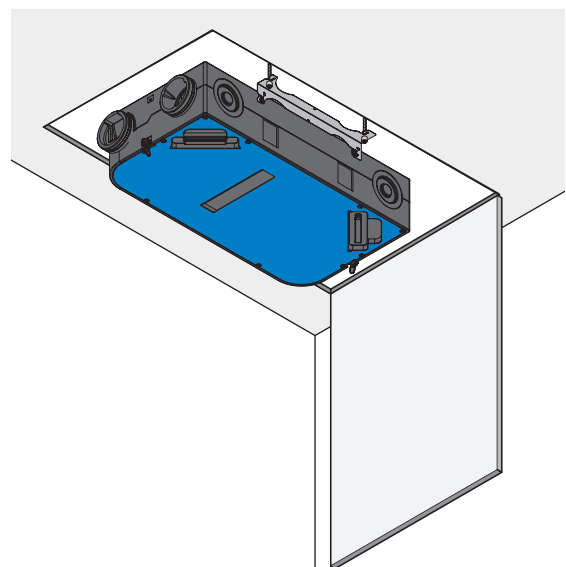
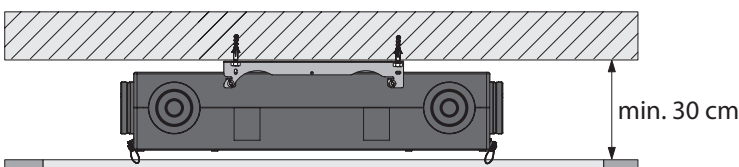
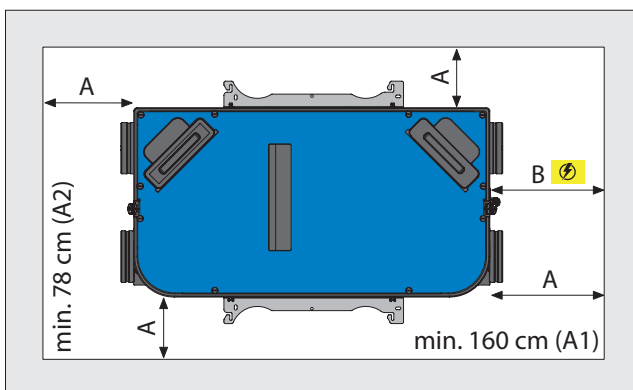
Inspection hatch

A		B
		
A1	A2	
min. 20 cm	min. 10 cm	min. 30 cm



INSTALLATION ON FALSE CEILING

When the unit is installed on a false ceiling, it is **MANDATORY** to provide an inspection hatch for servicing the unit.



TECHNICAL DATA SHEET




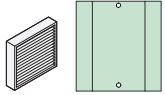
WALL INSTALLATION

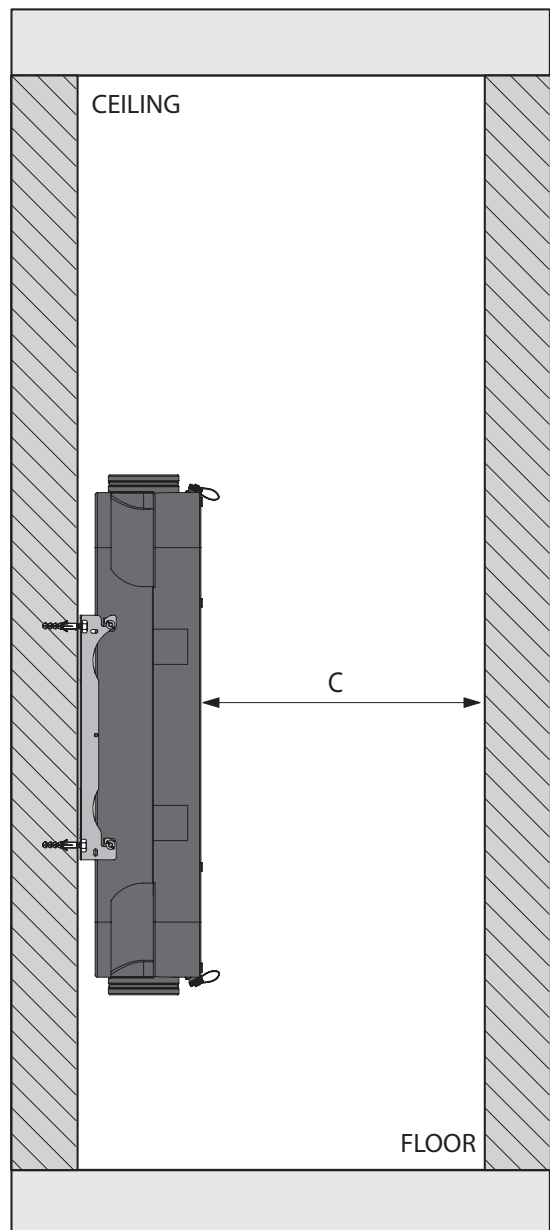
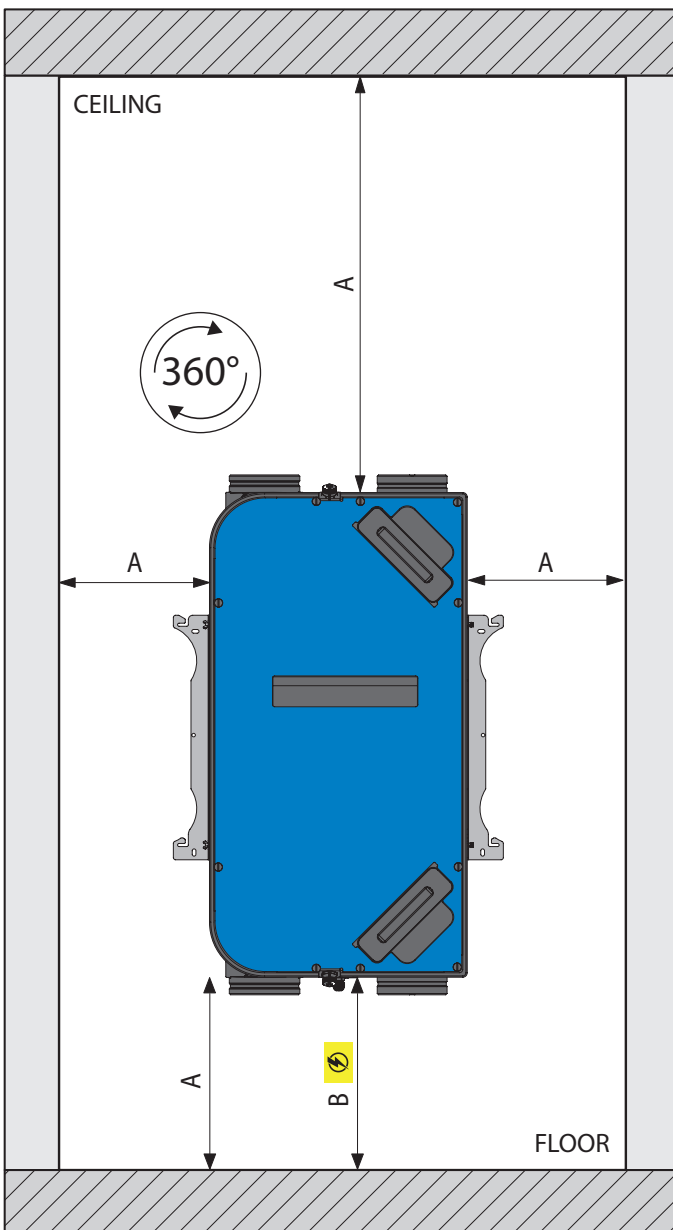
IMPORTANT: provide the necessary space for aeraulic connections and their bends, making sure to observe the minimum clearances. The unit can be installed freely on the wall without orientation constraints.

The minimum clearances depend on the positioning of the connections and the position of the switch cabinet.

If aeraulic connections are present, maintain a minimum distance from the wall of 40 cm (A1), otherwise 10 cm (A2) is sufficient. For inspection and maintenance of the unit, ensure a distance of at least 30 cm in the presence of the electrical panel (B) and 60 cm at the front for cleaning the filters/recuperator (C).

Minimum space allowances

A		B	C
			
A1	A2		
min. 40 cm	min. 10 cm	min. 30 cm	min. 60 cm



TECHNICAL DATA SHEET

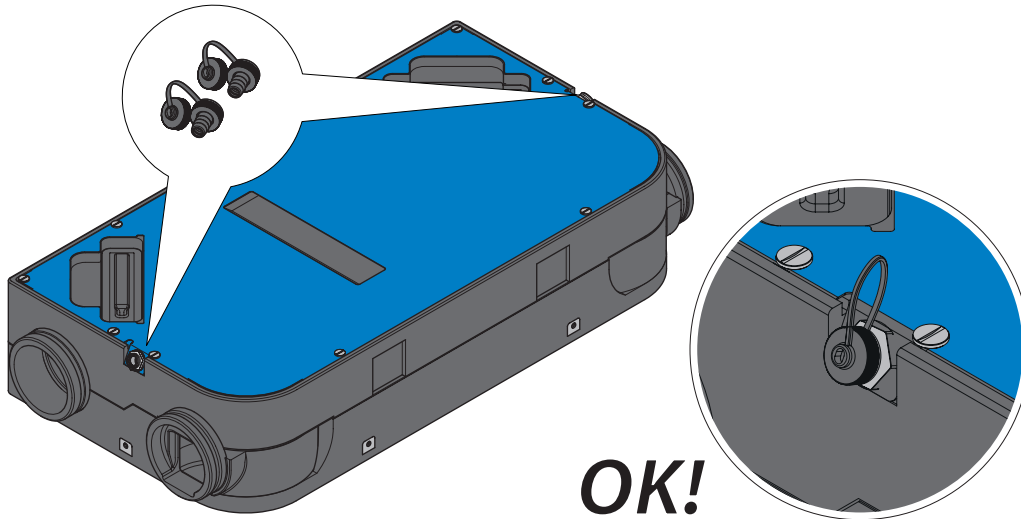
HYDRAULIC CONNECTIONS



ATTENTION

INSTALLATION OF PLUGS ON CONDENSATE DRAINS.

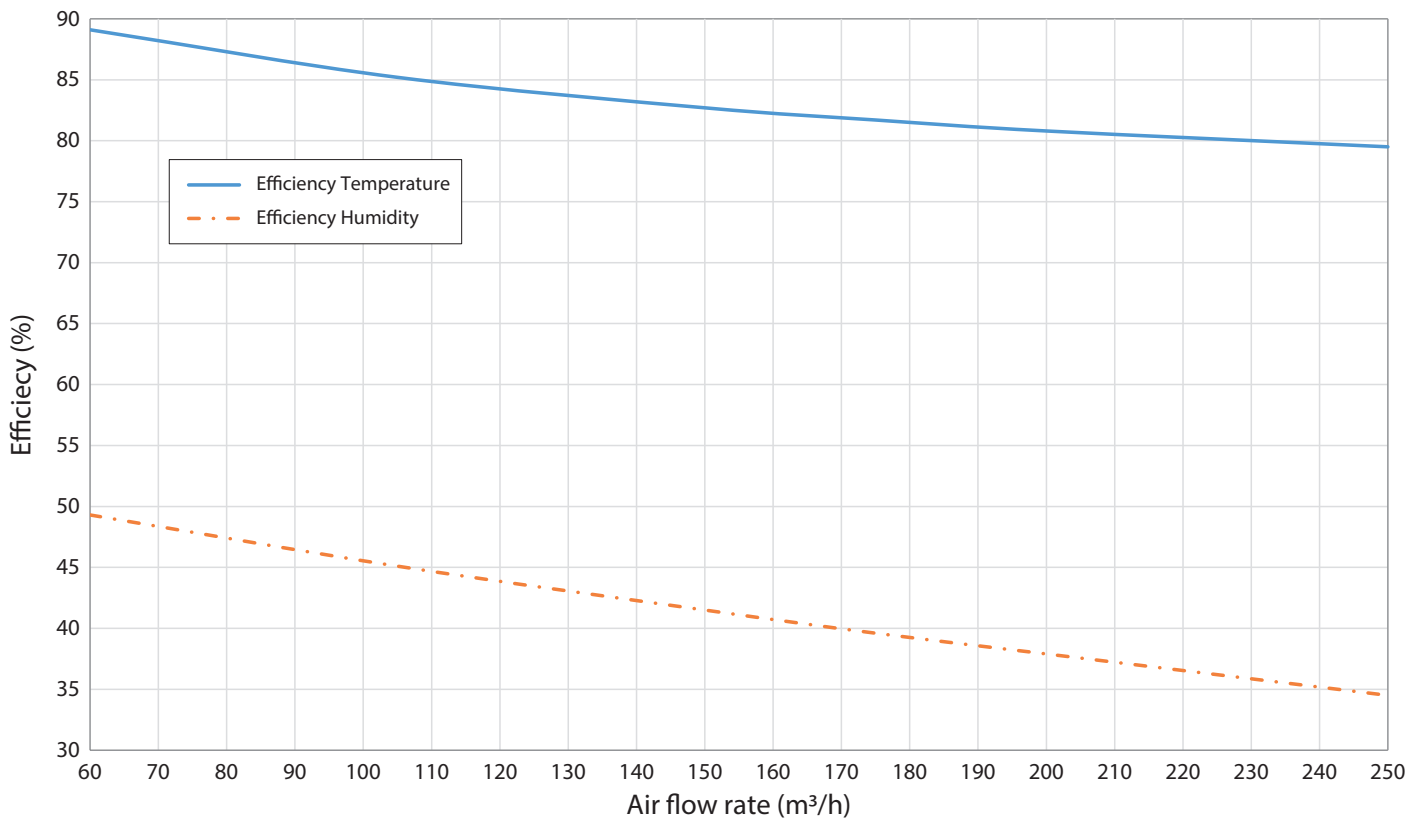
The unit doesn't require a condensate drain system, close the exit with the plugs supplied in the kit.



EFFICIENCY OF THE RECUPERATOR

According to the standard: UNI EN 13141

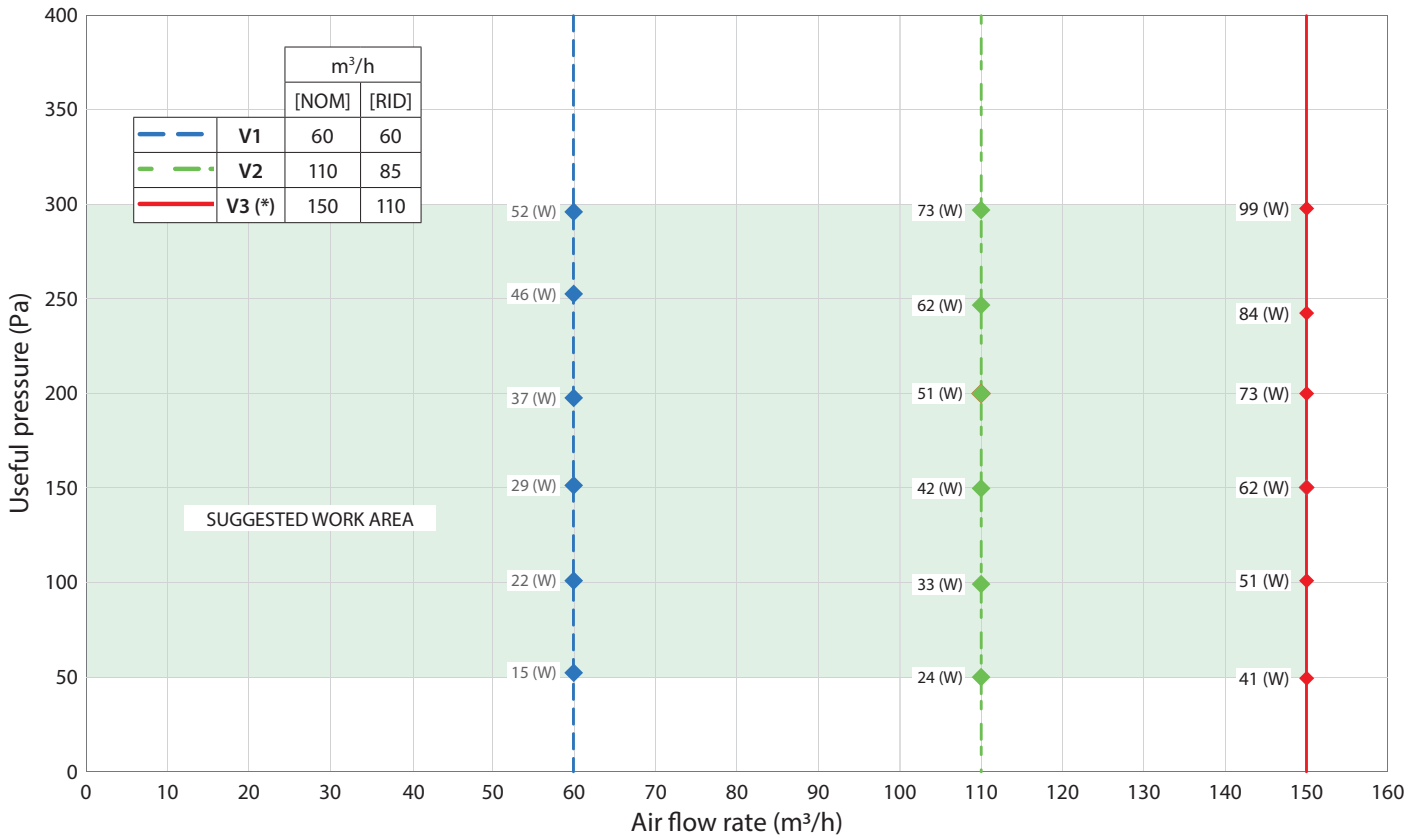
REFLAIR 150 - 250 ERV



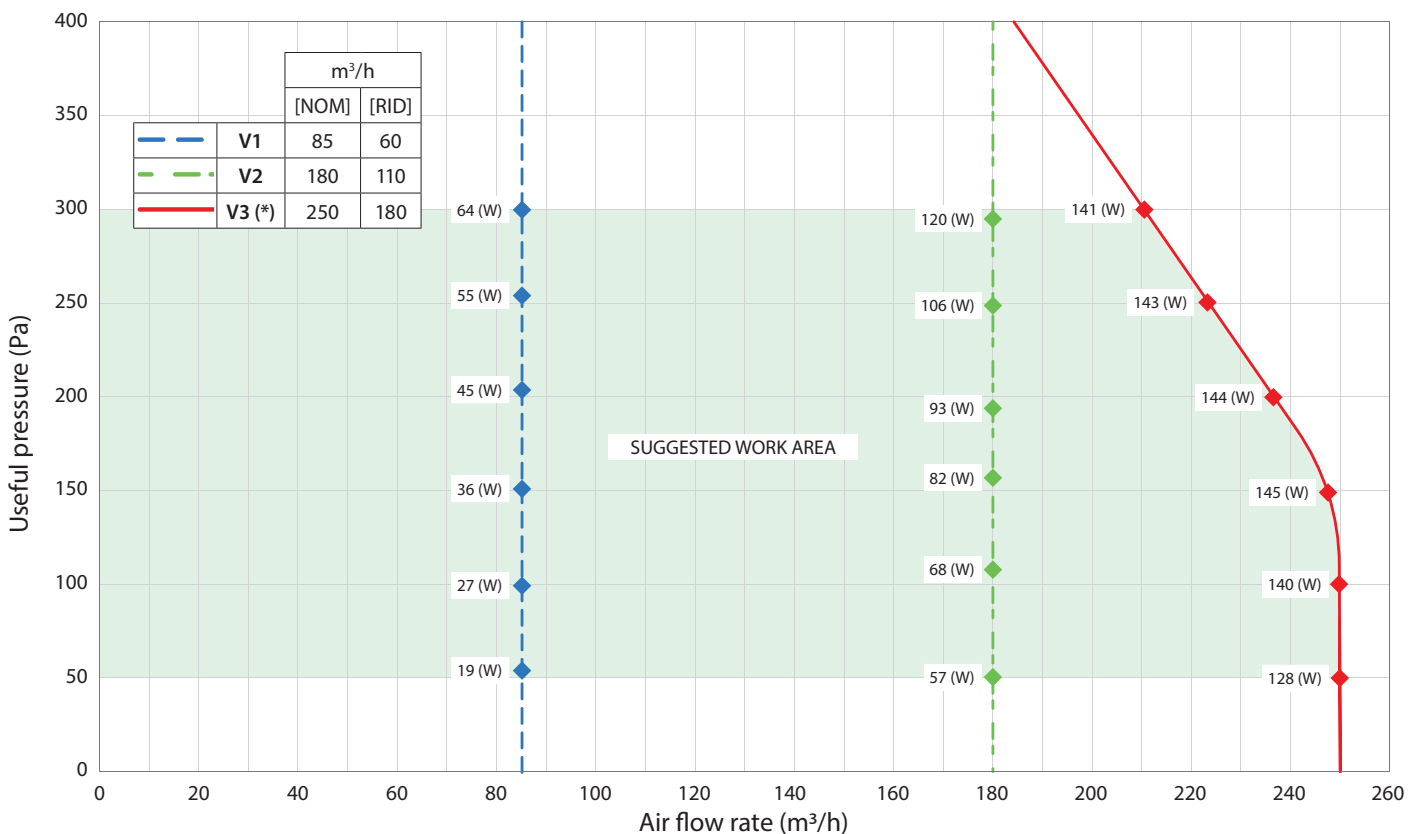
TECHNICAL DATA SHEET

AERAUIC PERFORMANCE

REFLAIR ERV 150



REFLAIR ERV 250



NOMINAL AIR FLOWS RATES [NOM] - REDUCED AIR FLOWS RATES [RID]

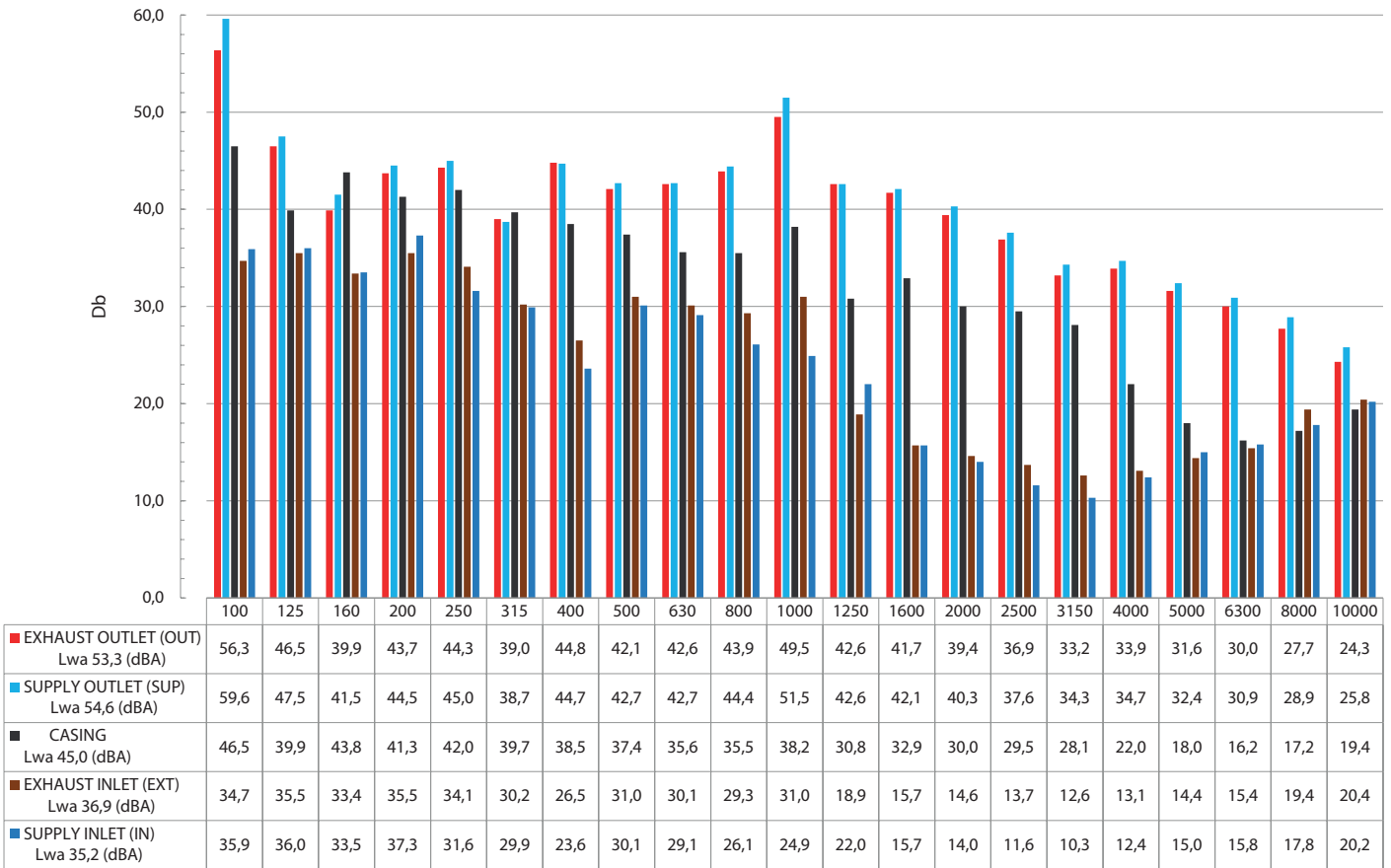
On installations with a 3-speed controller, a reduced flow rate range can be set via Dip Switch.

(*) Speed V3 (BOOST) is timed with a default of 15 min. and can be activated if environmental conditions require it.

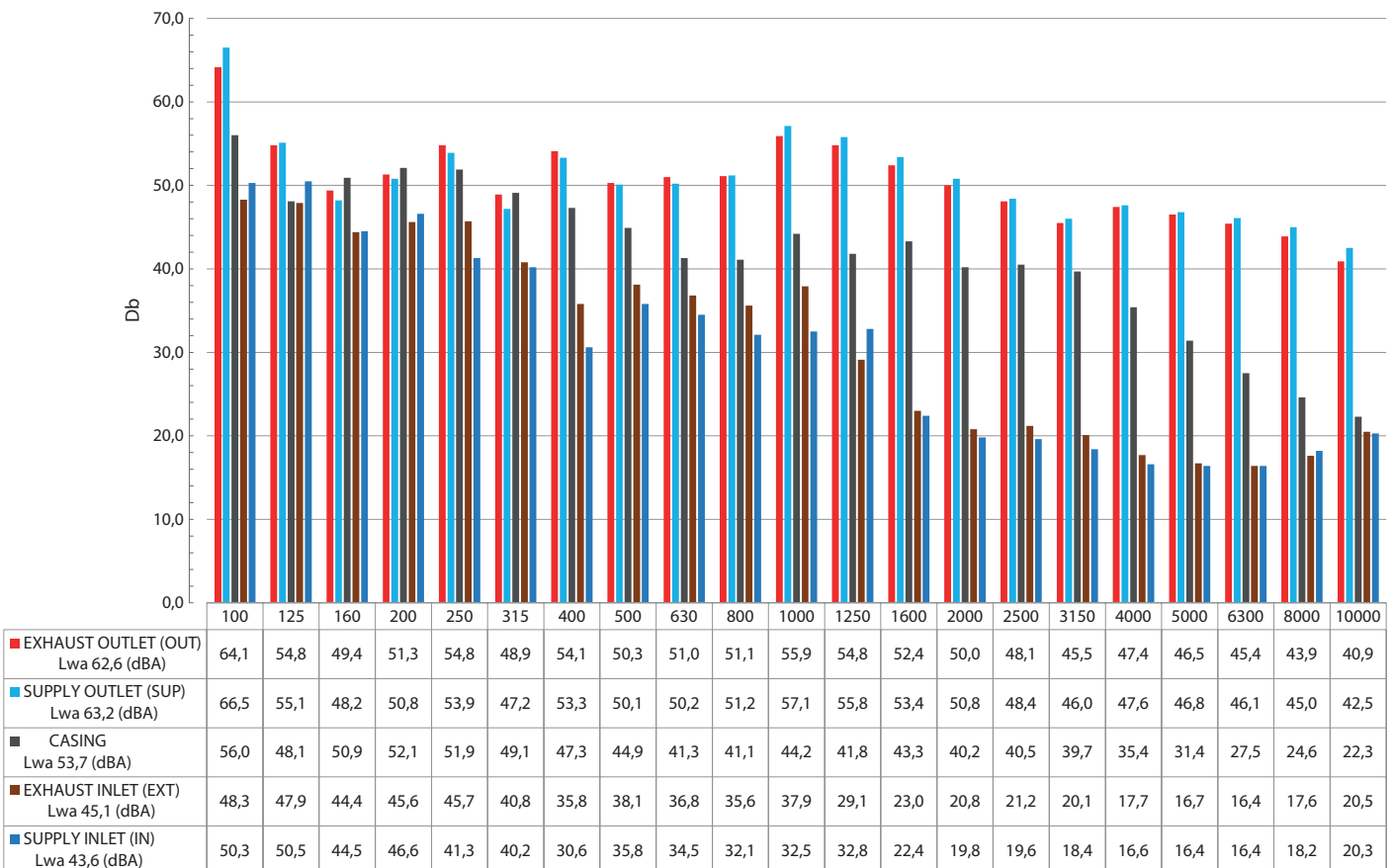
TECHNICAL DATA SHEET

ACOUSTIC PERFORMANCE

REFLAIR 150 ERV | Sound Power Levels



REFLAIR 250 ERV | Sound Power Levels



TECHNICAL DATA SHEET

PERFORMANCE ACCORDING TO COMMISSION REGULATION (UE) NO 1254/2014

European Union Commission Regulation (UE) N. 1254/2014

Ecodesign Requirements for Ventilation Units

Annex IV Informations requirements [fiche] for RVU as referred to in Article 4 (1)

a) Manufacturer: RDZ S.p.A.

b) Model: REFLAIR 150 ERV

c) Specify Energy Consumption(SEC) kWh/(m²a) and Class:

	Control typology and CTRL factor							
	Manual		Clock		Central demand		Local demand	
	1		0,95		0,85		0,65	
	SEC	Class	SEC	Class	SEC	Class	SEC	Class
Cold	-73,6	A+	-74,6	A+	-76,5	A+	-80,2	A+
Average	-36,6	A	-37,4	A	-38,9	A	-41,7	A
Warm	-12,8	E	-13,4	E	-14,7	E	-17,0	E

d) Article 2 typology:

I) Residential Ventilation Unit (UVR)

II) Bidirectional (BVU)

e) Variable speed drive

f) Recovery heat exchanger

g) Thermal efficiency of heat recovery 85.2 % at reference flow rate

h) Maximum flow rate 150 m³/h. This unit is for residential use only.

i) Electrical power consumption at maximum capacity 51 W

j) Sound power level (LWA) 45 dB

k) Reference flow rate 0.0292 m³/s

l) Pressure difference of reference 50 Pa

m) Specific electric power (SPI) 0.2319 W/(m³/h)

n) See c)

o) Leakage at reference flow rate

I) Maximum internal 5,1 %

II) Maximum external 4,7 %

p) Not applicable

q) Visual signal on room control

r) Not applicable

s) Disposal instructions - go to www.rdz.it

t) Not applicable

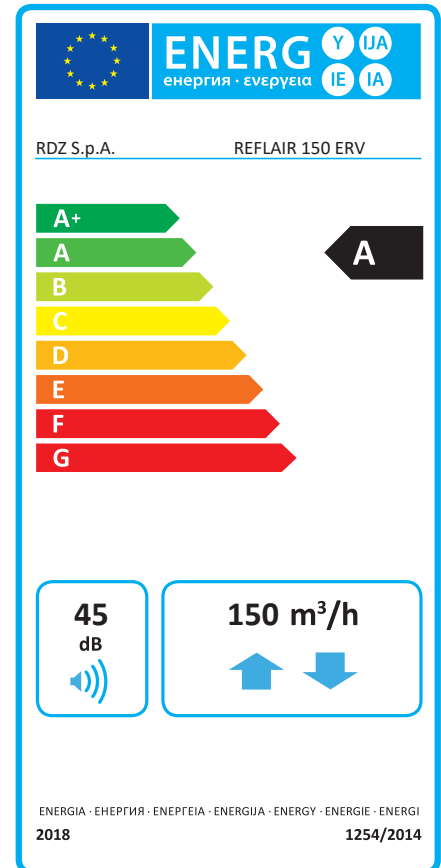
u) Not applicable

v) Annual electricity consumption (AEC) (in kWh of electricity/a);

	Control typology and CTRL factor			
	Manual	Clock	Central demand	Local demand
	1	0,95	0,85	0,65
Cold	873	851	810	734
Average	336	314	273	197
Warm	291	269	228	152

w) Annual heating savings (AHS) (in kWh primary energy/a)

	Control typology and CTRL factor			
	Manual	Clock	Central demand	Local demand
	1	0,95	0,85	0,65
Cold	8664	8710	8803	8987
Average	4429	4453	4500	4594
Warm	2003	2013	2035	2077



TECHNICAL DATA SHEET

PERFORMANCE ACCORDING TO COMMISSION REGULATION (EU) NO 1254/2014

European Union Commission Regulation (EU) No 1254/2014

Ecodesign Requirements for Ventilation Units

Annex IV Information requirements [fiche] for RVUs as referred to in Article 4(1)

a) Manufacturer: RDZ S.p.A.

b) Model: REFLAIR 250 ERV

c) Specific Energy Consumption (SEC) kWh/(m²a) and Class:

	Control typology and CTRL factor							
	Manual		Clock		Central demand		Local demand	
	1		0,95		0,85		0,65	
	SEC	Class	SEC	Class	SEC	Class	SEC	Class
Cold	-67,5	A+	-68,9	A+	-71,6	A+	-76,8	A+
Average	-31,5	B	-32,7	B	-34,8	A	-38,9	A
Warm	-8,3	F	-9,3	F	-11,2	E	-14,6	E

d) Article 2 typology:

I) Residential Ventilation Unit (UVR)

II) Bi-directional (BVU)

e) Variable speed drive

f) Heat recovery heat exchanger

g) Thermal efficiency of heat recovery 81.7 % at reference flow rate

h) Maximum flow rate 250 m³/h. This unit is for residential use only.

i) Electrical power input at maximum flow 140 W

j) Sound power level (LWA) 54 dB

k) Reference flow rate 0.0497 m³/s

l) Reference pressure difference 50 Pa

m) Specific electric power (SPI) 0.3570 W/(m³/h)

n) See c)

o) Leakage at reference flow rate

I) Maximum internal 3 %

II) Maximum external 2.8 %

p) Not applicable

q) Visual signal on room control

r) Not applicable

s) Disposal instructions - go to www.rdz.it

t) Not applicable

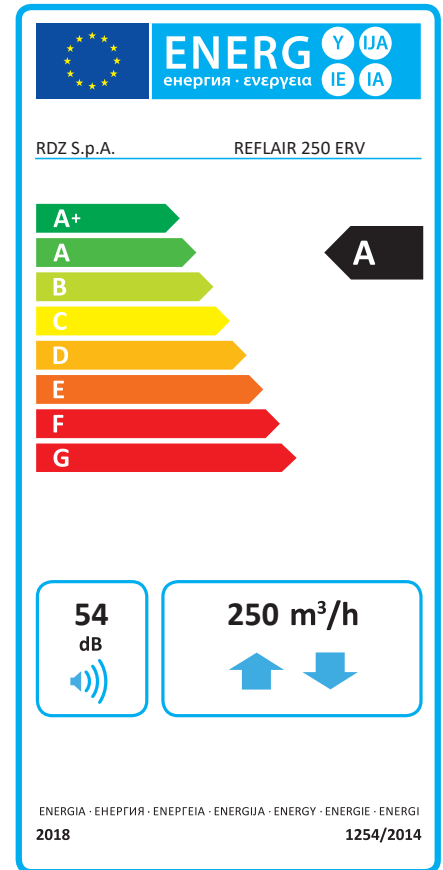
u) Not applicable

(v) Annual electricity consumption (AEC) (in kWh electricity/a);

	Control typology and CTRL factor			
	Manual	Clock	Central demand	Local demand
	1	0,95	0,85	0,65
Cold	1029	996	932	816
Average	492	459	395	279
Warm	447	414	350	234

(w) Annual heating savings (AHS) (in kWh primary energy/a)

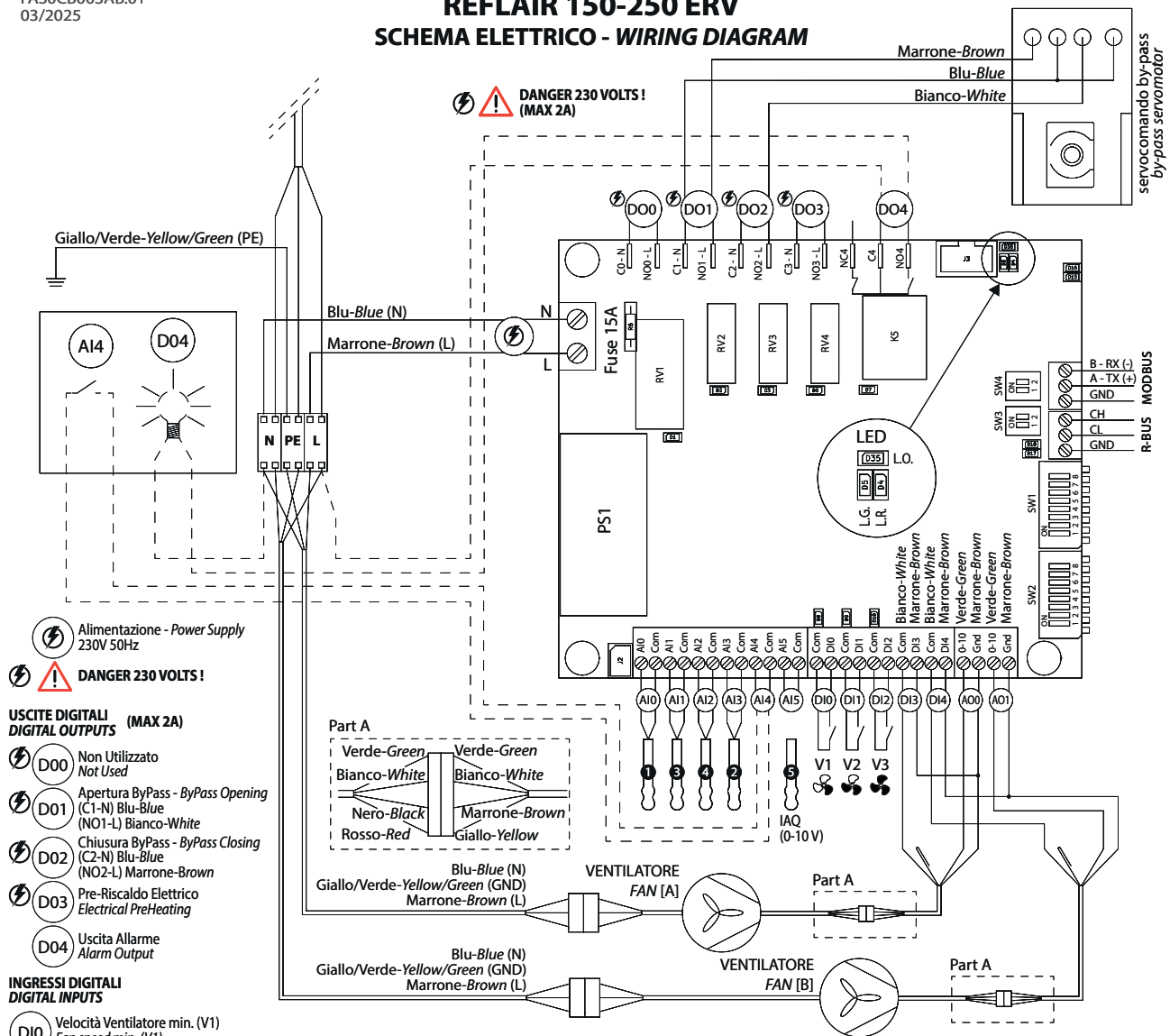
	Control typology and CTRL factor			
	Manual	Clock	Ambientale centralizzato	Local demand
	1	0,95	0,85	0,65
Cold	8446	8503	8617	8845
Average	4318	4347	4405	4522
Warm	1952	1966	1992	2045



TECHNICAL DATA SHEET

FAS0CB003AB.01
03/2025

REFLAIR 150-250 ERV SCHEMA ELETTRICO - WIRING DIAGRAM



Alimentazione - Power Supply
230V 50Hz

DANGER 230 VOLTS !

USCITE DIGITALI DIGITAL OUTPUTS (MAX 2A)

- D00** Non Utilizzato - Not Used
- D01** Apertura ByPass - ByPass Opening (C1-N) Blu-Blue (NO1-L) Bianco-White
- D02** Chiusura ByPass - ByPass Closing (C2-N) Blu-Blue (NO2-L) Marrone-Brown
- D03** Pre-Riscaldamento Elettrico - Electrical PreHeating
- D04** Uscita Allarme - Alarm Output

INGRESSI DIGITALI DIGITAL INPUTS

- D10** Velocità Ventilatore min. (V1) Fan speed min. (V1)
- D11** Velocità Ventilatore med. (V2) Fan speed med. (V2)
- D12** Velocità Ventilatore max. (V3) Fan speed max (V3)
- D13** [A] Ventilatore - Fan (Com) Bianco-White (D13) Marrone-Brown
- D14** [B] Ventilatore - Fan (Com) Bianco-White (D14) Marrone-Brown

USCITE ANALOGICHE ANALOGUE OUTPUTS

- AO0** [A] Ventilatore - Fan (0-10) Verde-Green (Gnd) Marrone-Brown
- AO1** [B] Ventilatore - Fan (0-10) Verde-Green (Gnd) Marrone-Brown

INGRESSI ANALOGICI ANALOGUE INPUTS

- AI0** Sonda-Probe ① (Com) (AI0) Nero-Black
- AI1** Sonda-Probe ③ (Com) (AI1) Nero-Black
- AI2** Sonda-Probe ④ (Com) (AI2) Nero-Black
- AI3** Sonda-Probe ② (Com) (AI3) Nero-Black
- AI4** Reset Allarme Filtri - Filters Alarm Reset
- AI5** Sonda Qualità Aria Amb. (*) ⑤ Indoor Air Quality Probe (*) *Se presente - If present

SWITCH SW1 (default)

DIP 1 SELETTORE FLUSSO ARIA-AIR FLOW SELECTOR
OFF= Portate Aria Nominali-Nominal Flow Rates
ON= Portate Aria Ridotte-Reduced Flow Rates

DIP 2 SELETTORE CONFIG.-CONFIGURATION SELECTOR
OFF= FACTORY
ON= REVERSE

DIP 2 OFF | FACTORY MODE

- ① (AI0) SUP | Immissione Aria-Supply Air
- ③ (AI1) IN | Ingresso Aria Esterna-Air Inlet
- ④ (AI2) EXT | Estrazione Aria-Air Extraction
- ② (AI3) OUT | Espulsione Aria-Exhaust Air

[A] Ventilatore - Fan SUP | Immissione Aria-Supply Air
[B] Ventilatore - Fan OUT | Espulsione Aria-Exhaust Air

DIP 2 ON | REVERSE MODE

- ① (AI0) OUT | Espulsione Aria-Exhaust Air
- ③ (AI1) EXT | Estrazione Aria-Air Extraction
- ④ (AI2) IN | Ingresso Aria Esterna-Air Inlet
- ② (AI3) SUP | Immissione Aria-Supply Air

[A] Ventilatore - Fan SUP | Immissione Aria-Supply Air
[B] Ventilatore - Fan OUT | Espulsione Aria-Exhaust Air

DIP 3
OFF= Recuperatore standard - Standard exchanger
ON= Recuperatore entalpico - Enthalpic exchanger

DIP 4
OFF= (AI5) 0-10 V Disabilitato - Disabled
ON= (AI5) 0-10 V Abilitato - Enabled

DIP 5-6-7
Non Utilizzato - Not Used

DIP 8
MODBUS - Gestione Portate Aria - Air Flow Manag.
OFF= % | ON= m³/h (Wi-KNX)

SWITCH SW2 (default)

DIP 1-2-3-4-5-6
INDIRIZZO MODBUS-MODBUS ADDRESS
DEFAULT: 9 (DIP 1 ON, DIP 4 ON)

DIP 7
VELOCITÀ TRASMISSIONE
BAUD RATE
OFF= 19200 Bit/s (Wi-KNX)
ON= 9600 Bit/s

DIP 8
NR. BIT STOP-NR. OF STOP BITS
OFF= 2 Bit Stop
ON= 1 Bit Stop (KNX)

SWITCH SW3 (default)

R-BUS
Terminazione Linea
Line termination
OFF= DIP (1-2) OFF
ON= DIP (1-2) ON

SWITCH SW4 (default)

MODBUS
Terminazione Linea
Line termination
OFF= DIP (1-2) OFF
ON= DIP (1-2) ON

ALLARMI E SEGNALAZIONI - ALARMS AND SIGNALLING

(D5 L.G.) Verde-Green | Led Funzionamento-Operation Led
(D35 L.O.) Arancione-Orange | Led Allarmi-Alarms Led
(D4 L.R.) Rosso-Red | Led Errori-Errors Led

Tipo Type	Descrizione Description	Nr. Lampeggi Nr. of flashes
D5 L.G. Verde Green	Modalità Economy - Economy mode	1
	Modalità Rinnovo - Renewal mode	2
	Modalità Boost - Boost mode	3
	Modalità Sbrinamento - Defrost mode	4
D35 L.O. Arancione Orange	Allarme Sonda - Probe Alarm ①	1
	Allarme Sonda - Probe Alarm ③	2
	Allarme Sonda - Probe Alarm ④	3
	Allarme Sonda - Probe Alarm ②	4
	Allarme Sonda Qualità Aria - Air Quality Probe Alarm ⑤	5
D4 L.R. Rosso Red	Malfunzionamento Ventilatore (A) - Fan (A) Malfunction	1
	Malfunzionamento Ventilatore (B) - Fan (B) Malfunction	2
	Segnalazione Filtri Sporchi - Dirty Filter Warning	3
	Blocco Macchina Filtri Sporchi - Machine Lock Dirty Filters	4



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 ✉ info@rdz.it 🌐 www.rdz.it

FAC0CB044BZ.03 04/2026

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV
ISO 9001

