

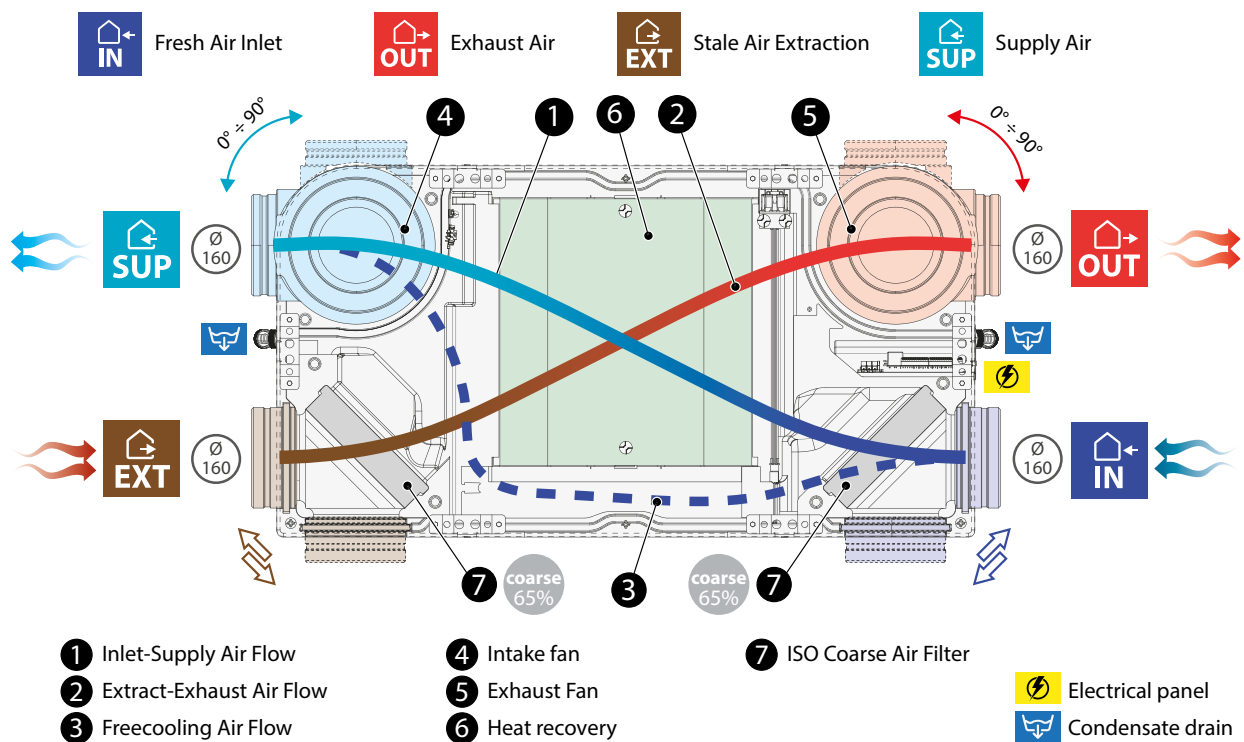
## TECHNICAL DATA SHEET



Description	Dimensions (lxhxd)	Weight	Code
REFLAIR 150	1100x240x580 mm	22 Kg	70RFL00150
REFLAIR 250	1100x240x580 mm		70RFL00250

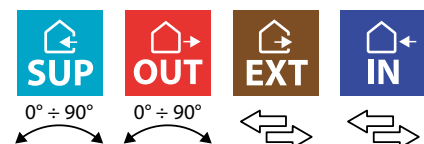
Reflair is an high-efficiency ductable mechanical ventilation unit with heat recovery, designed for residential use. It can be installed either in the false ceiling or on the wall. Adjustable and configurable connections ensure a constant pressure drop and reduce the number of connections required. The 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 can be managed via the Air Control or Air Speed control panels or integrated into the CoRe regulation system.

### PRINCIPLES OF OPERATION



#### Balanced ventilation unit with heat recovery

- Wall and false ceiling installation
- High-efficiency heat recovery with countercurrent flows.;
- EPP body to increase thermal and acoustic insulation and reduce the weight of the unit;
- Centrifugal fans with constant flow EC motor;
- 4 NTC sensors for air temperature monitoring;
- ISO Coarse 65% (G4) filters as standard;
- ISO ePM1 60% (F7) filters optional;
- Operating modes: manual, schedules, economy, boost, free-cooling and free-heating;
- Room controllers: CoRe AIR SPEED, CoRe AIR CONTROL, IAQ probes
- Other control options: CoRe System, digital inputs, 0-10V signal, Modbus;



#### Packaging composition

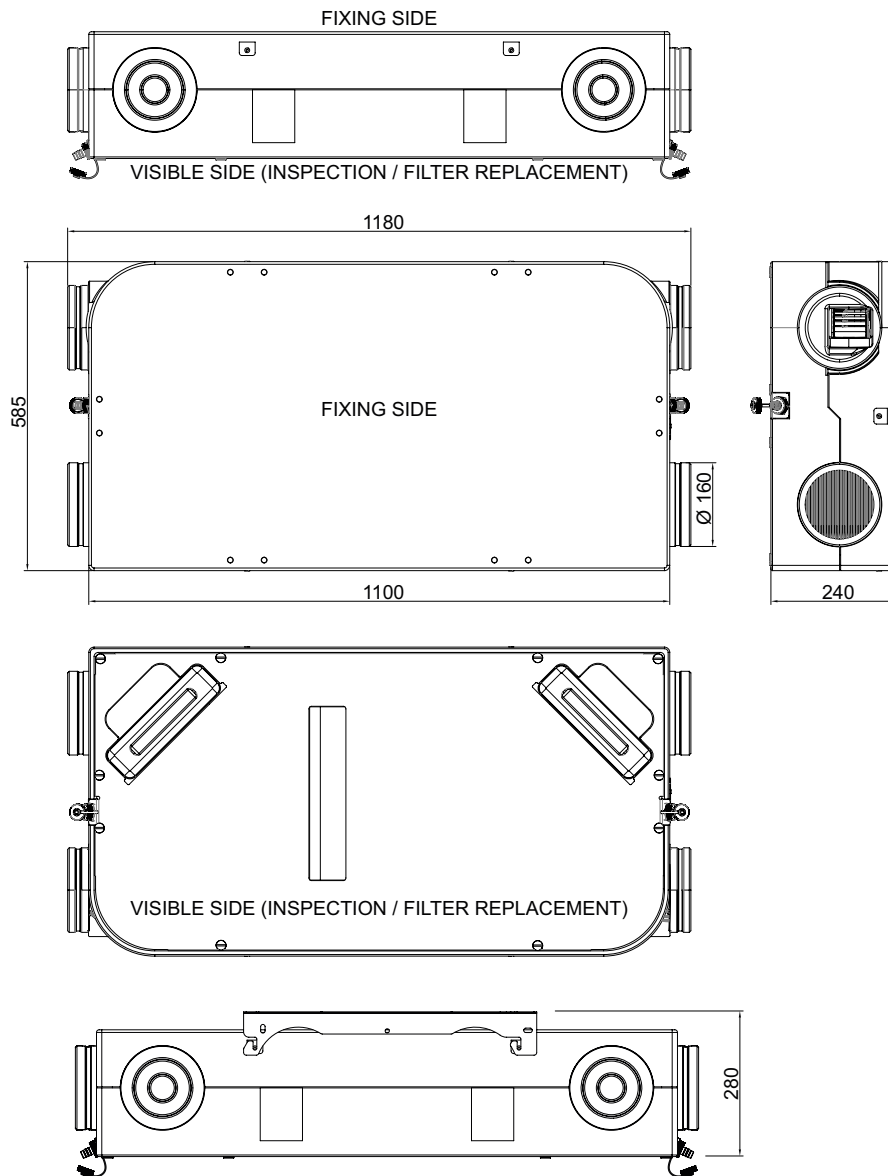
- Mechanical ventilation unit
- Installation template for brackets;
- Brackets for ceiling or wall mounting
- Instruction manual for installation, start-up and maintenance;

#### Materials

Sintered expanded polypropylene and pre-painted steel

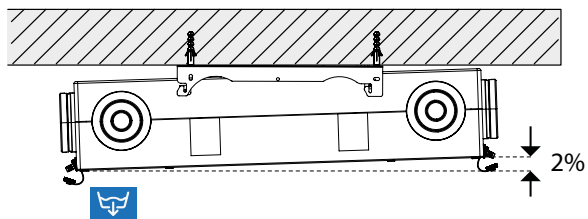
# TECHNICAL DATA SHEET

## DIMENSIONS

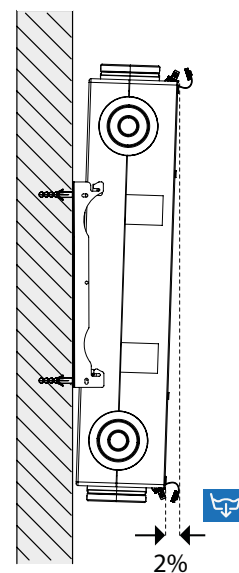


## INSTALLATION

### CEILING



### WALL



# TECHNICAL DATA SHEET

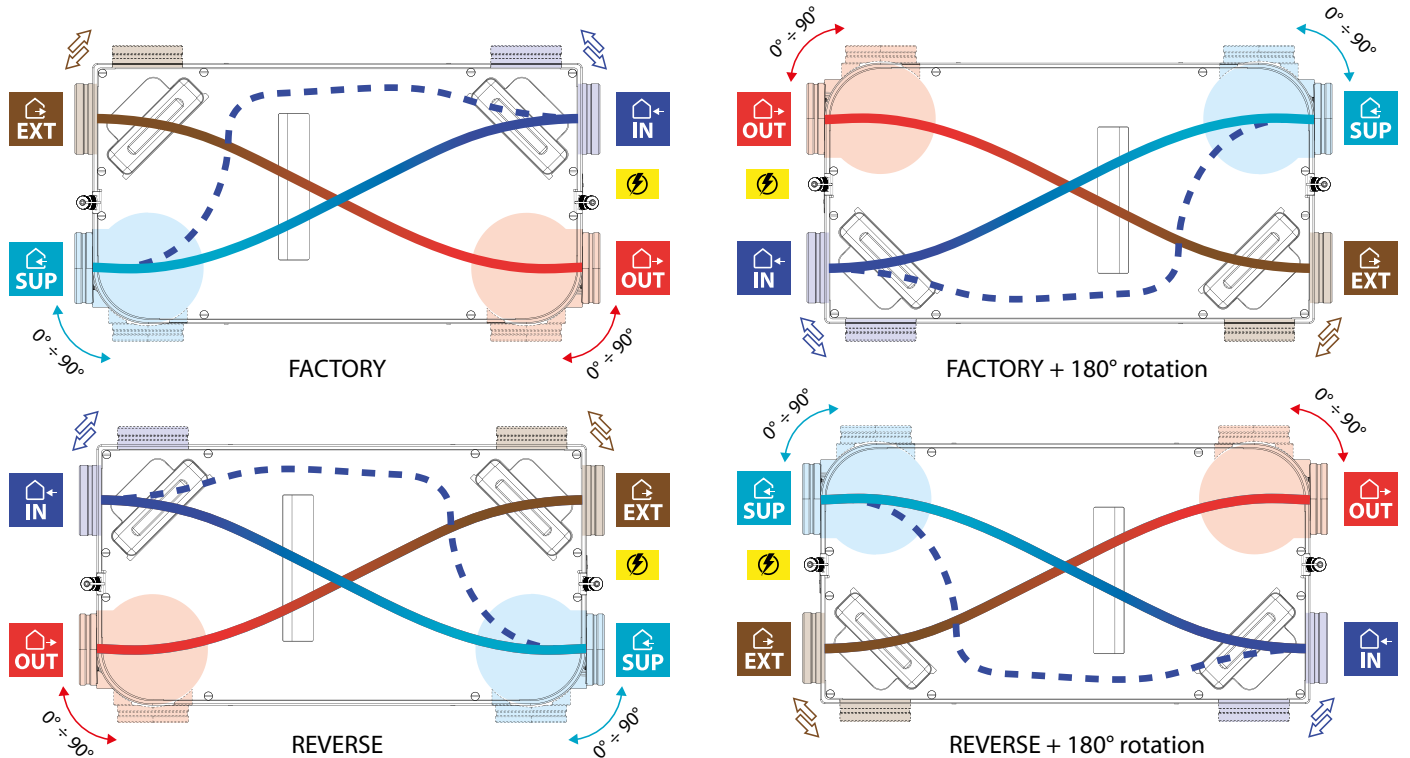
## POSSIBLE CONFIGURATIONS OF INSTALLATION

Below we list the possible airflow configurations for the installation of REFLAIR in the horizontal ceiling or vertical wall version. The unit is supplied with FACTORY configuration.

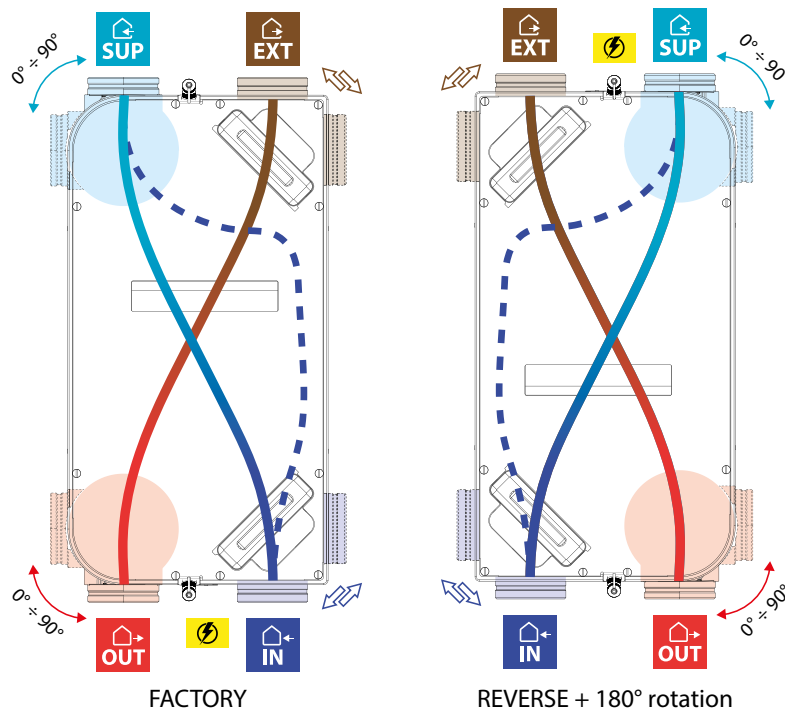
Reversing the flows, called REVERSE configuration, is obtained by setting DIP 2 Switch SW1 to the ON position (See the section on the on-board board).



### CEILING INSTALLATION



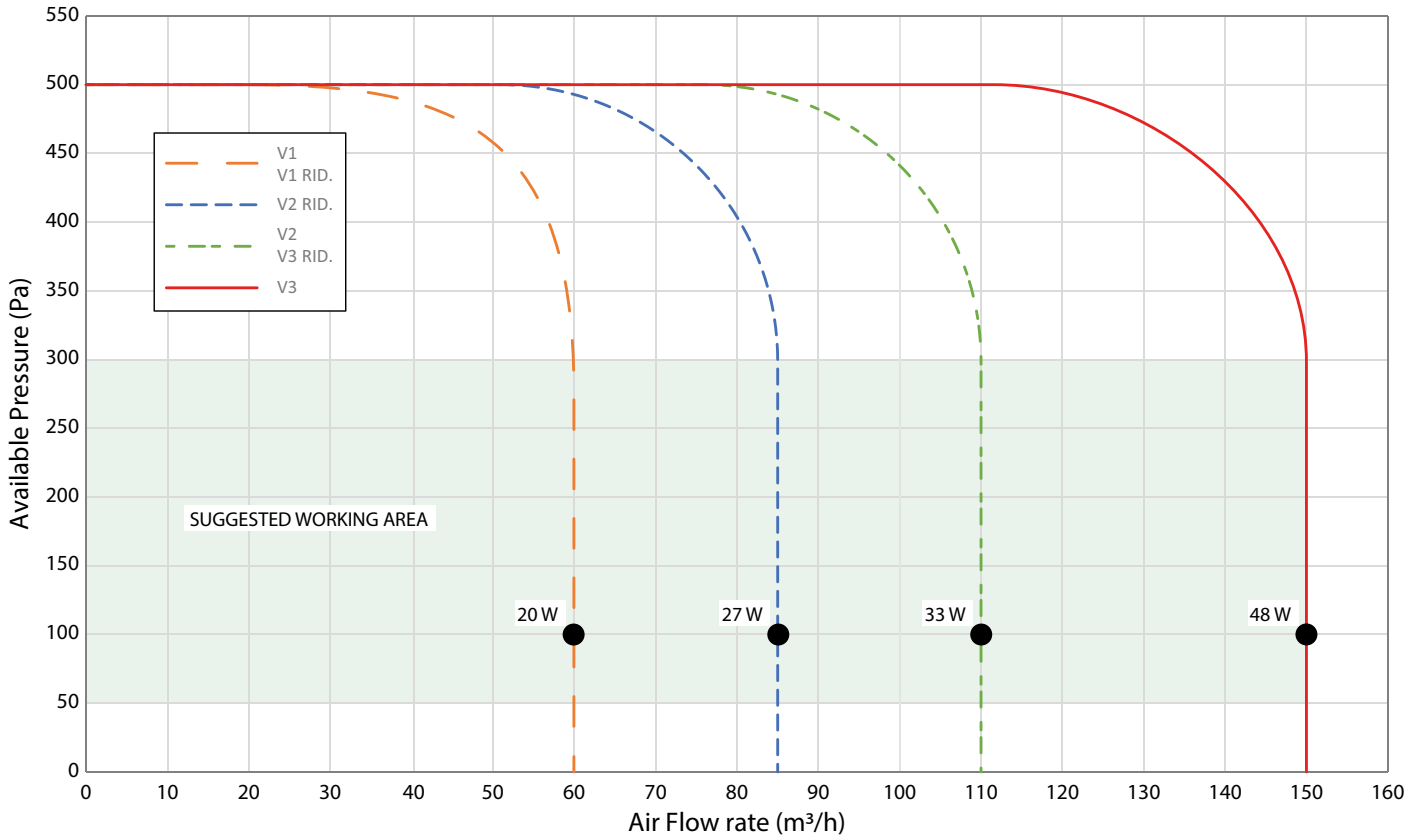
### WALL INSTALLATION



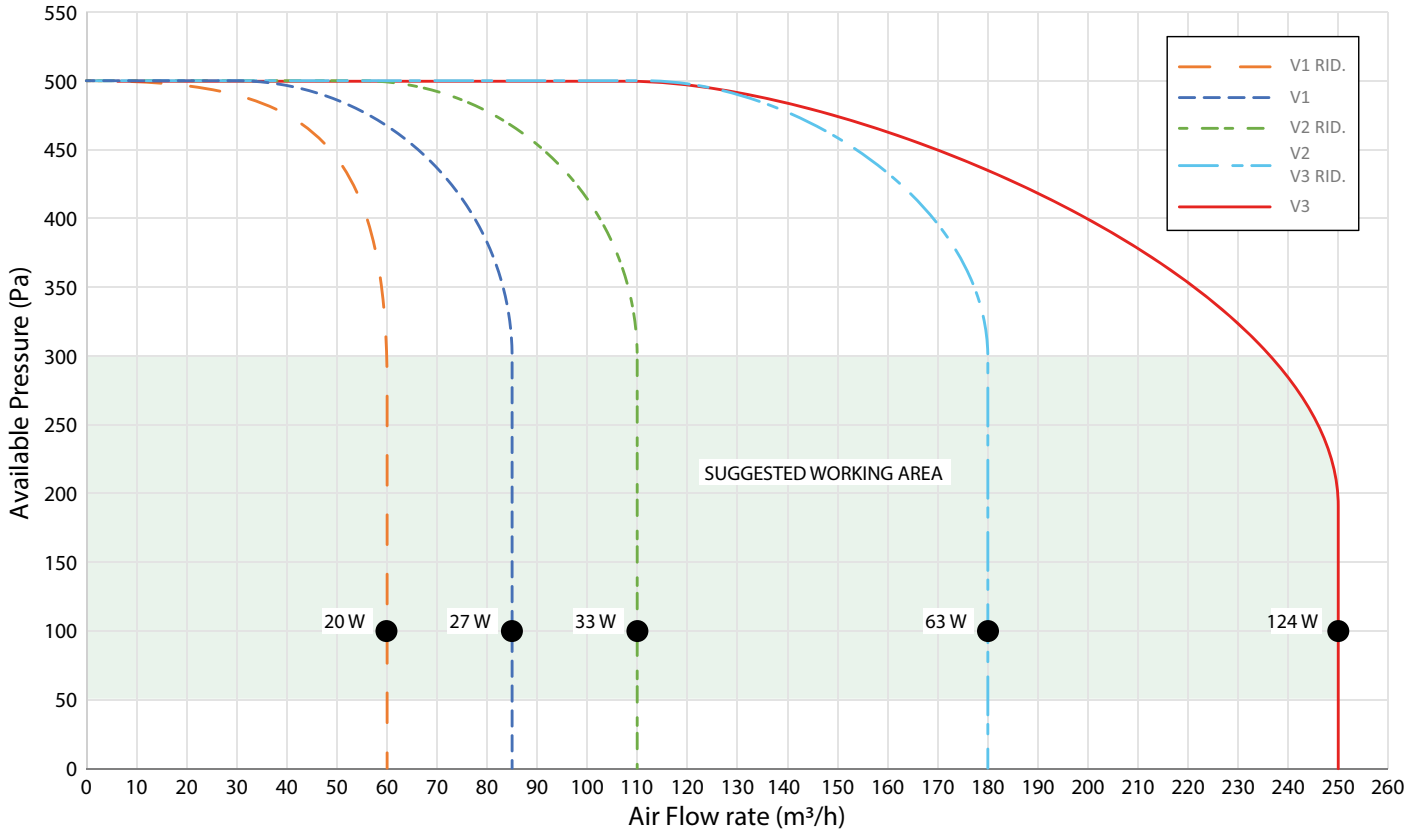
# TECHNICAL DATA SHEET

## AEREAULIC PERFORMANCE

### REFLAIR 150



### REFLAIR 250

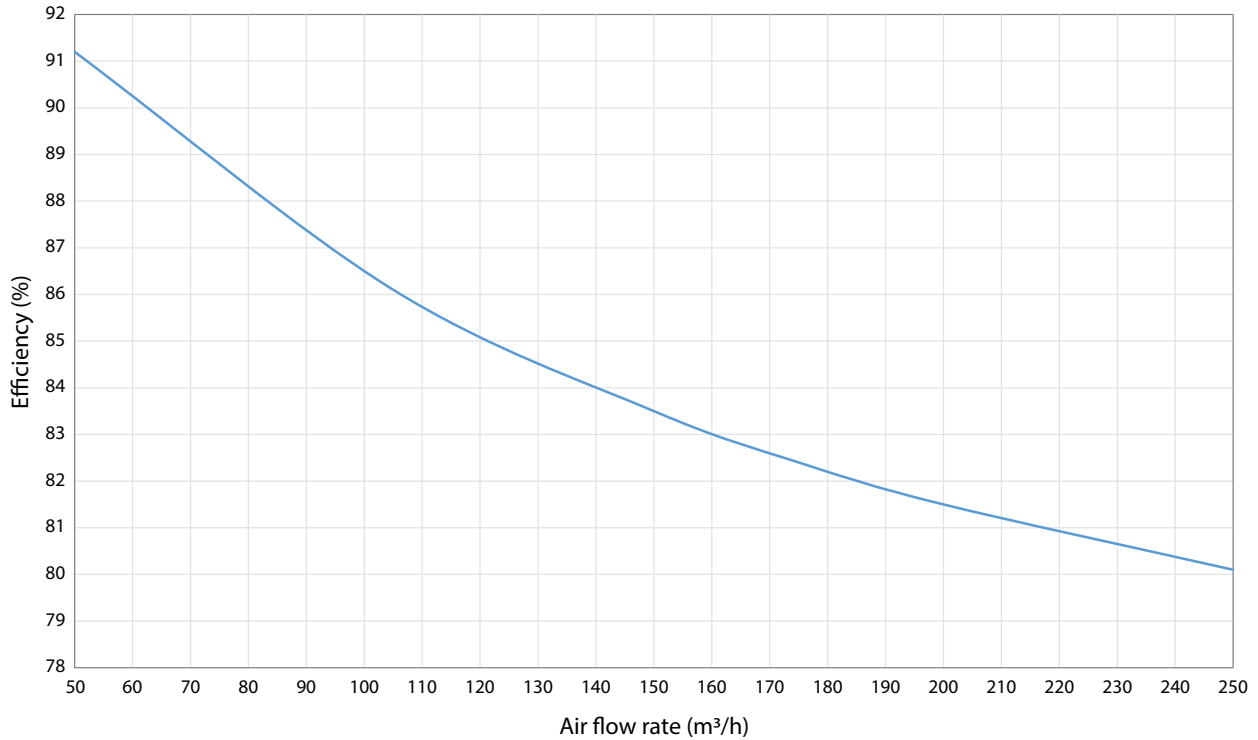


# TECHNICAL DATA SHEET

## EXCHANGER EFFICIENCY

According to standard: UNI EN 13141

### REFLAIR 150 - 250



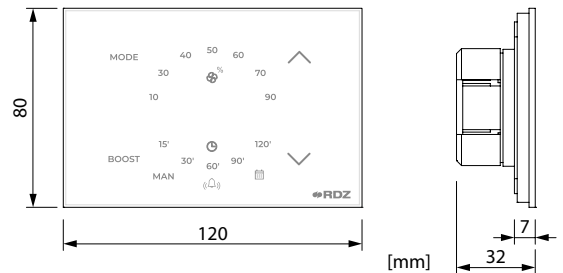
## UNIT CONTROL MODES

### CORE AIR SPEED ROOM INTERFACE



Room interface to control the air renewal unit and display the related data

- Installation on 502E, 503E or Ø 60 mm boxes
- 12 Vdc power supply (power supply unit not included)
- Bus cable 2x05 mm<sup>2</sup> twisted and shielded
- Max. power consumption: 60 mA.

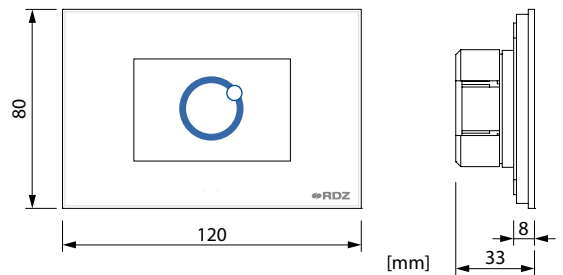


### CORE AIR CONTROL ROOM INTERFACE



Graphical interface to manage functioning, scheduling and unit parameters.

- Installation on 502E, 503E or Ø 60 mm boxes
- 12 Vdc power supply (power supply unit not included)
- Bus cable 2x05 mm<sup>2</sup> twisted and shielded
- Max. power consumption: 60 mA.



## INTEGRATION INTO CONTROL SYSTEMS

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

Accessories / Complements		Cod.
ROOM CONTROLLER	CORE AIR SPEED	7041476
	CORE AIR CONTROL	7041477
	KNX-UTA INTERFACE	7041480
AIR FILTERS KIT	REFLAIR 150/250 G4	70RFLG4000
	REFLAIR 150/250 F7	70RFLF7000
CONDENSATE DRAIN KIT (*)	SF-M 13	3600401
	SF-P	7045502

(\*) nr. 1 Condensate drain kit mandatory

REFLAIR 150   Optional		Cod.
STD ELECTRIC HEATER	RE-S 05-125	7045565
WATER BATTERY	BA-P 6	7045598
	BA-P 10	7045599
MODULATING VALVE Ø ½"		7045562

REFLAIR 250   Optional		Cod.
STD ELECTRICAL RESISTANCE	RE-S 075-160	7045567
WATER BATTERY	BA-P 6	7045598
	BA-P 10	7045599
MODULATING VALVE Ø ½"		7045562

# 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 150
- c) Specific Energy Consumption (SEC) kWh/(m<sup>2</sup>a) 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
<i>Cold</i>	-74,8	A+	-75,7	A+	-77,5	A+	-81,0	A+
<i>Average</i>	-37,6	A	-38,3	A	-39,6	A	-42,2	A+
<i>Warm</i>	-13,6	E	-14,2	E	-15,3	E	-17,4	E

- d) Article 2 typology:
  - I) Residential Ventilation Unit (RVU)
  - II) Bidirectional (BVU)

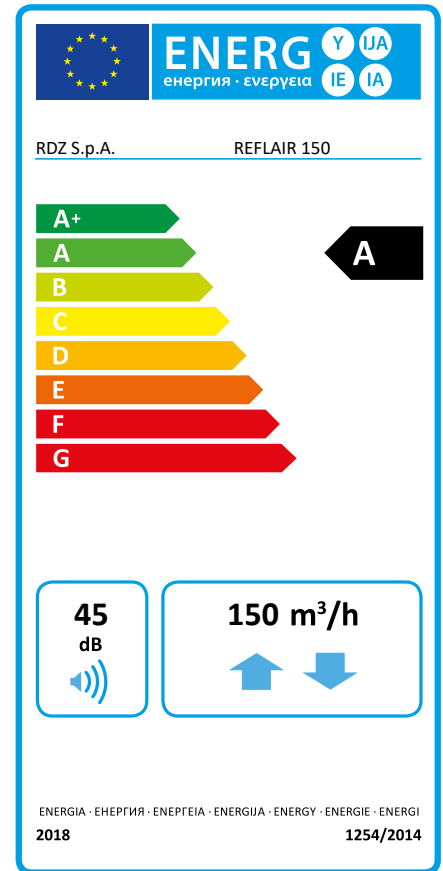
- e) Drive Variable speed drive
- f) Recuperative heat exchanger
- g) Thermal efficiency of heat recovery 86,1% at reference flow rate
- h) Maximum flow rate 150 m<sup>3</sup>/h at 100 Pa. This unit is for residential use only.
- i) Power input at maximum flow rate 115 W
- j) Sound power level (LWA) 45 dB
- k) Reference flow rate 0,0292 m<sup>3</sup>/s
- l) Reference pressure difference 50 Pa
- m) Reference Specific Power Input (SPI) 0,2095 W/(m<sup>3</sup>/h)
- n) see c)
- o) Leakage rates at reference flow rate
  - I) Maximum internal < 5%
  - II) Maximum external < 7%
- p) not applicable
- q) Filter alarm reset via room controller
- r) not applicable
- s) Recycling disassembly instruction - go to [www.rdz.it](http://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
<i>Cold</i>	844	825	788	720
<i>Average</i>	307	288	251	183
<i>Warm</i>	262	243	206	138

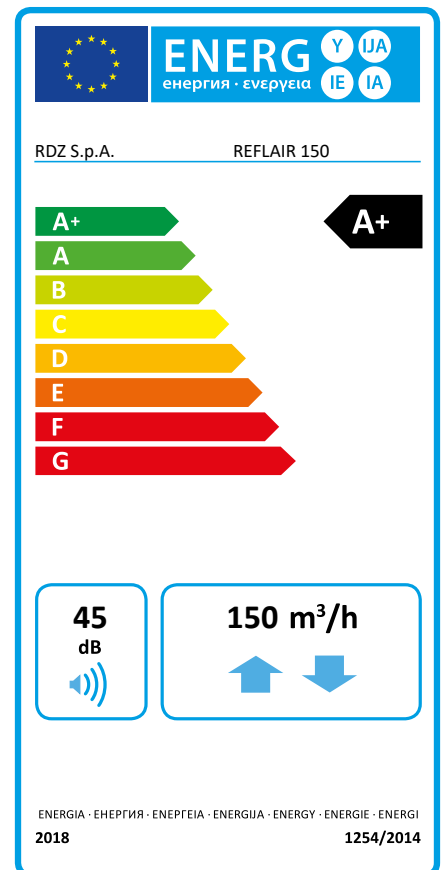
w) the annual heating saved (AHS) (in kWh primary energy/a)

Control typology and CTRL factor				
	Manual	Clock	Central demand	Local demand
	1	0,95	0,85	0,65
<i>Cold</i>	8720	8764	8850	9024
<i>Average</i>	4458	4480	4524	4613
<i>Warm</i>	2016	2026	2046	2086

with control:  
 Manual, Clock, Central demand



with control:  
 Local demand



# 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

c) Specific Energy Consumption (SEC) kWh/(m<sup>2</sup>a) 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
<i>Cold</i>	-70,3	A+	-71,5	A+	-73,9	A+	-78,4	A+
<i>Average</i>	-34,0	A	-35,0	A	-36,8	A	-40,3	A
<i>Warm</i>	-10,6	E	-11,4	E	-12,9	E	-15,8	E

d) Article 2 typology:

I) Residential Ventilation Unit (RVU)

II) Bidirectional (BVU)

e) Drive Variable speed drive

f) Recuperative heat exchanger

g) Thermal efficiency of heat recovery 83,0 % at reference flow rate

h) Maximum flow rate 250 m<sup>3</sup>/h. This unit is for residential use only.

i) Power input at maximum flow rate 165 W

j) Sound power level (LWA) 50 dB

k) Reference flow rate 0,0486 m<sup>3</sup>/s

l) Reference pressure difference 50 Pa

m) Reference Specific Power Input (SPI) 0,2914 W/(m<sup>3</sup>/h)

n) see c)

o) Leakage rates at reference flow rate

I) Maximum internal < 3%

II) Maximum external < 4%

p) not applicable

q) Filter alarm reset via room controller

r) not applicable

s) Recycling disassembly instruction - go to [www.rdz.it](http://www.rdz.it)

t) not applicable

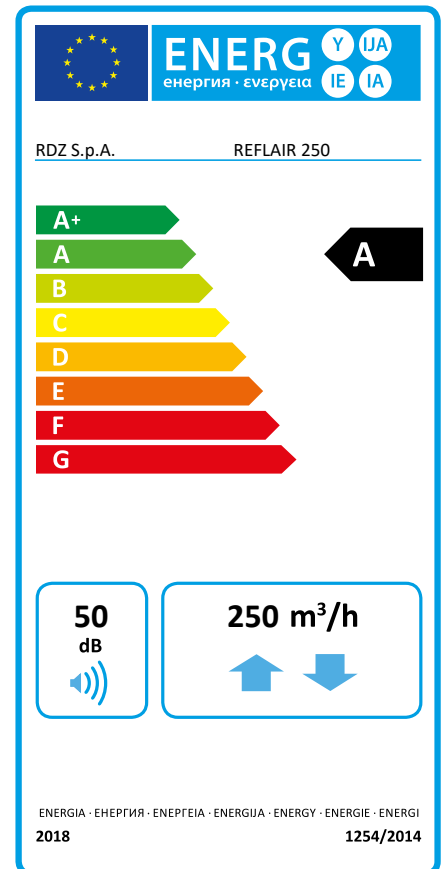
u) not applicable

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
<i>Cold</i>	947	920	868	773
<i>Average</i>	410	383	331	236
<i>Warm</i>	365	338	286	191

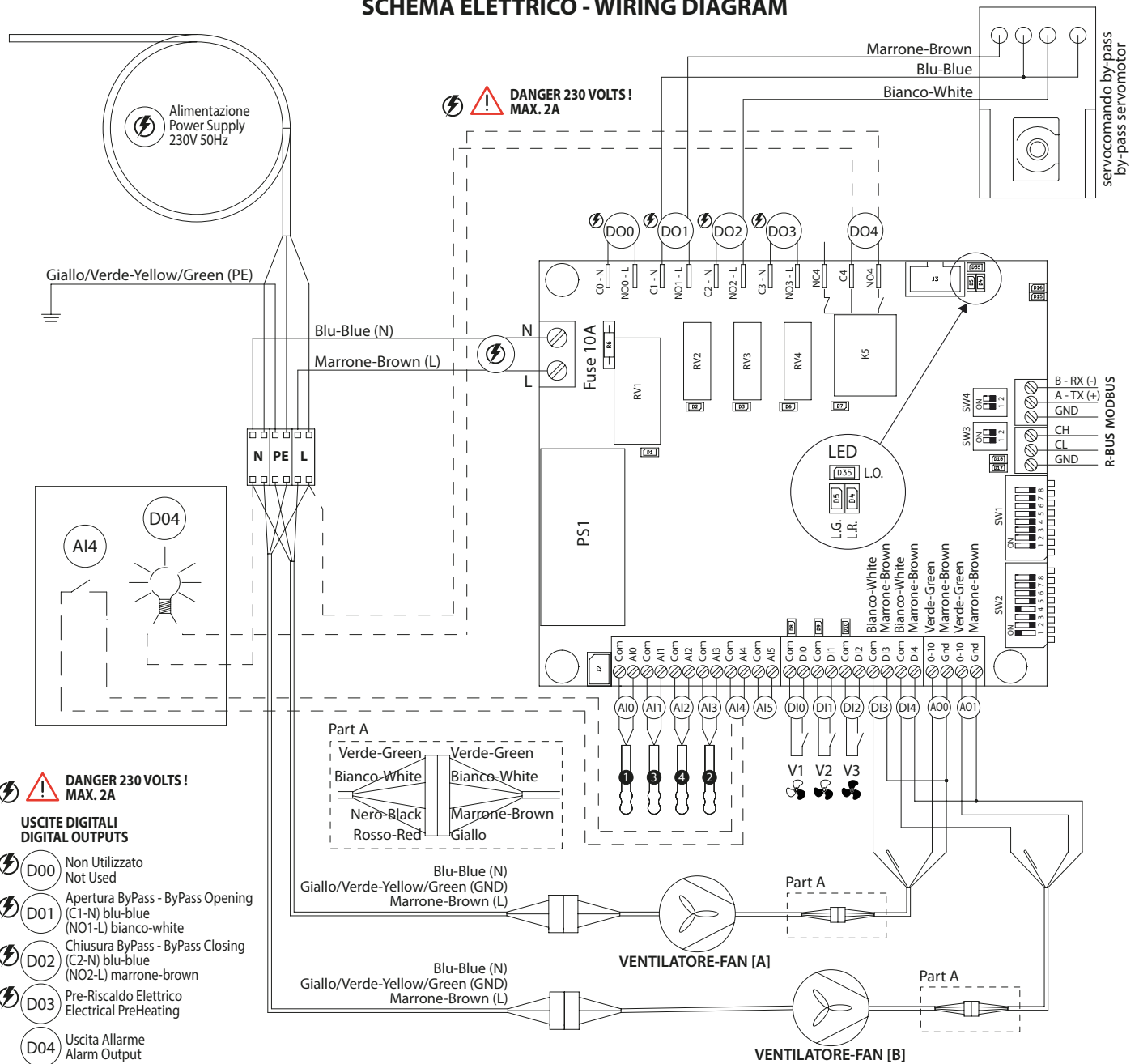
w) the annual heating saved (AHS) (in kWh primary energy/a)

	Control typology and CTRL factor			
	Manual	Clock	Central demand	Local demand
	1	0,95	0,85	0,65
<i>Cold</i>	8527	8580	8686	8898
<i>Average</i>	4359	4386	4440	4548
<i>Warm</i>	1971	1983	2008	2057



# TECHNICAL DATA SHEET

## REFLAIR 150-250 SCHEMA ELETTRICO - WIRING DIAGRAM



**DANGER 230 VOLTS!**  
MAX. 2A

### USCITE DIGITALI DIGITAL OUTPUTS

- DO0** Non Utilizzato  
Not Used
- DO1** Apertura ByPass - ByPass Opening  
(C1-N) blu-blue  
(NO1-L) bianco-white
- DO2** Chiusura ByPass - ByPass Closing  
(C2-N) blu-blue  
(NO2-L) marrone-brown
- DO3** Pre-Riscaldamento Elettrico  
Electrical PreHeating
- DO4** Uscita Allarme  
Alarm Output

### 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** 0-10V

### INGRESSI DIGITALI DIGITAL INPUTS

- DI0** Velocità Ventilatore min. (V1)  
Fan speed min. (V1)
- DI1** Velocità Ventilatore med. (V2)  
Fan speed med. (V2)
- DI2** Velocità Ventilatore max. (V3)  
Fan speed max (V3)
- DI3** [A] Ventilatore - Fan  
(Com) bianco-white  
(DI3) marrone-brown
- DI4** [B] Ventilatore - Fan  
(Com) bianco-white  
(DI4) 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

### FACTORY MODE DIP 2 = OFF

- 1 SUP | Immissione Aria-Supply Air
- 3 IN | Ingresso Aria Esterna-Air Inlet
- 4 EXT | Estrazione Aria-Air Extraction
- 2 OUT | Espulsione Aria-Exhaust Air
- [A] Ventilatore - Fan  
SUP | Immissione Aria-Supply Air
- [B] Ventilatore - Fan  
OUT | Espulsione Aria-Exhaust Air

### REVERSE MODE DIP 2 = ON

- 1 OUT | Espulsione Aria-Exhaust Air
- 3 EXT | Estrazione Aria-Air Extraction
- 4 IN | Ingresso Aria Esterna-Air Inlet
- 2 SUP | Immissione Aria-Supply Air
- [A] Ventilatore - Fan  
OUT | Espulsione Aria-Exhaust Air
- [B] Ventilatore - Fan  
SUP | Immissione Aria-Supply Air

