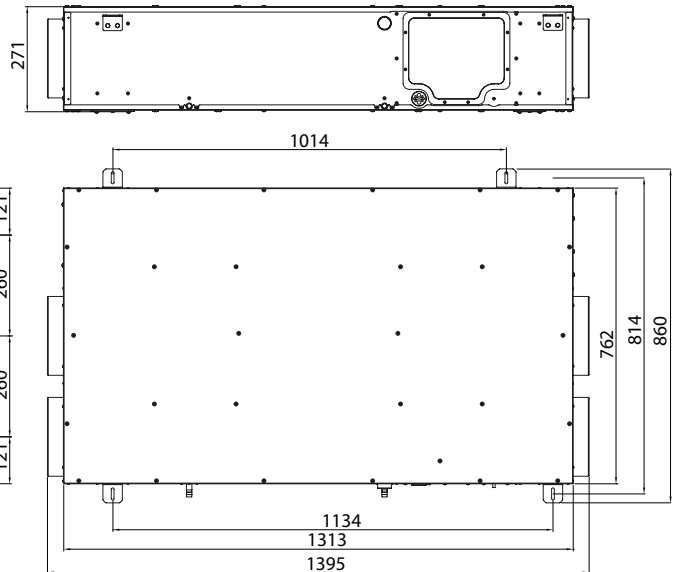


TECHNICAL DATA SHEET



Descrizione	Misure (lxhxp)	Cod.
CHR 400 CoRe	1395x271x860 mm	7045514



Accessories / Complements		Cod.
CONTROLLER	CORE AIR SPEED	7041476
	CORE AIR CONTROL	7041477
AIR FILTER REPLACEMENT KIT		7044105
CONDENSATE	SF-M 13	3600401
DRAIN KIT (*)	SF-P	7045502

(*) no. 2 Mandatory condensate drain kit.

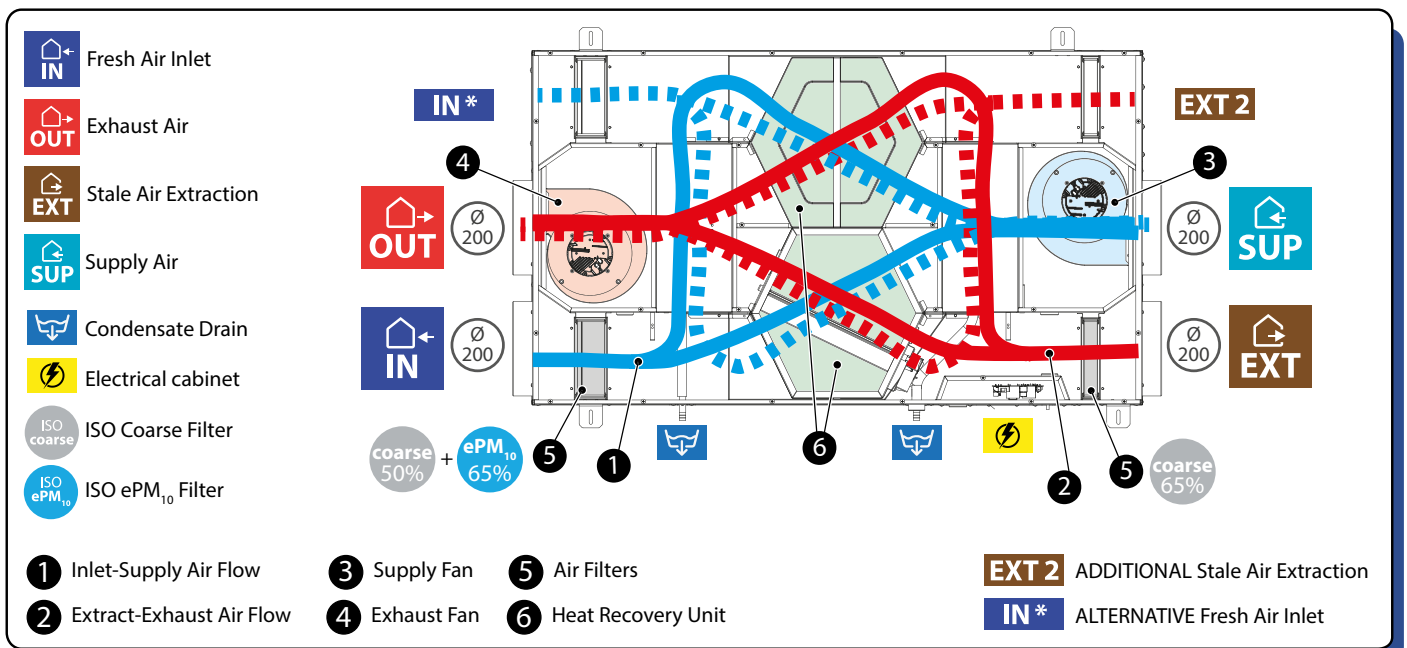
Optional order separately		Cod.
STD ELECTRICAL DUCT HEATER	RE-S 15-200	7045571

DESCRIPTION

The CHR 400 CoRe mechanical ventilation unit includes a high efficiency counter-flow heat exchanger made of PPE (~90%). The housing, internally insulated, is made of galvanised sheet metal and it contains two centrifugal fans, one supply fan and one extract fan, equipped with EC motor, operating at constant air flow and ensuring reduced energy consumption. CHR 400 CoRe is designed for horizontal false ceiling installation in small and medium-sized residential buildings, either single detached dwellings or in block of flats. The unit is also equipped with a ISO ePM10 65% (M5) filter with ISO Coarse 50% (G2) pre-filter on the air supply line, and a ISO Coarse 65% (G4) filter on the extract line, which ensure the right protection of the heat exchanger and offer the excellent filtration of the new air introduced into the room. The CHR 400 CoRe mechanical ventilation unit is provided with bypass connection for the free-cooling function and 4 NTC sensors to detect air temperature in the air inlets and outlets. Defrost function and dirty filter alarm included. It can be managed via CoRe Air Speed, CoRe Air Control panels or via Modbus electronic control unit (Wi/LC), Konnex system (KNX-UTA) and digital inputs. The CHR 400 CoRe unit can be combined with the DWF 400 dehumidification module in order to obtain fresh air ventilation and humidity control in the summertime.

• Nominal air flow 400 m³/h with 200 Pa, Air outlets Ø 200 mm, Sound pressure level at 1 m: 50 dB(A), Max electrical power 290 W, Size (wxhxd): 1395x271x860 mm, Weight 46.6 kg

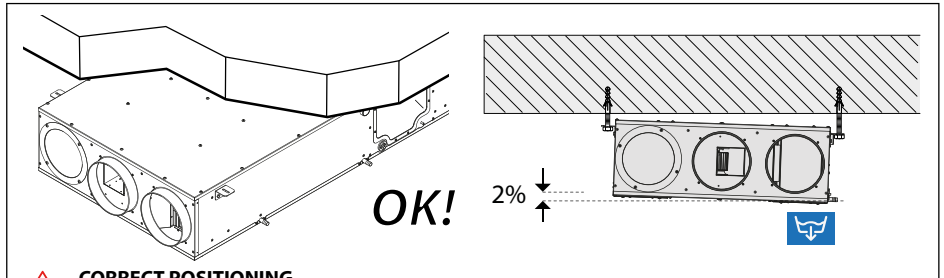
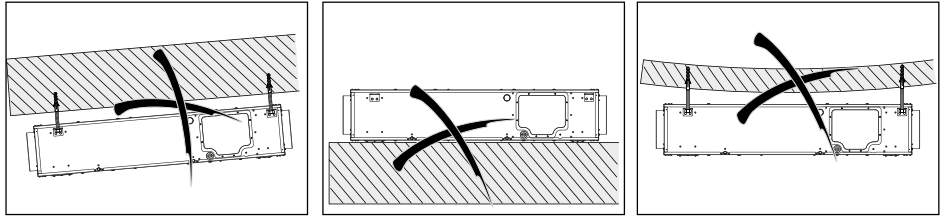
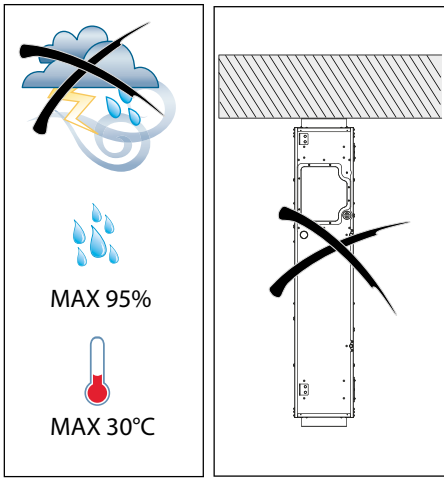
PRINCIPLE OF OPERATION



(*) For the Fresh Air Intake it is possible to choose between the default position and the ALTERNATIVE one, by swapping the position of the collar and the air filter. For Air Extraction, on the other hand, it is possible to double (not swap position) the dedicated vents using the ADDITIONAL one (additional air filters and collars must be ordered, not supplied from the factory).

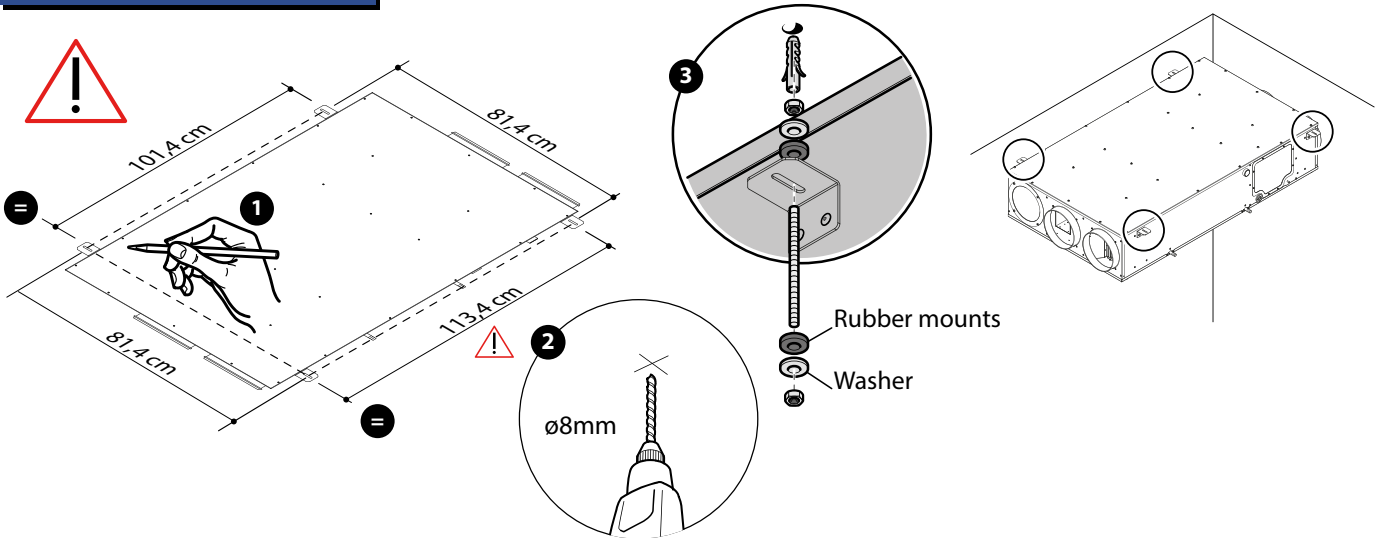
TECHNICAL DATA SHEET

Positioning indications

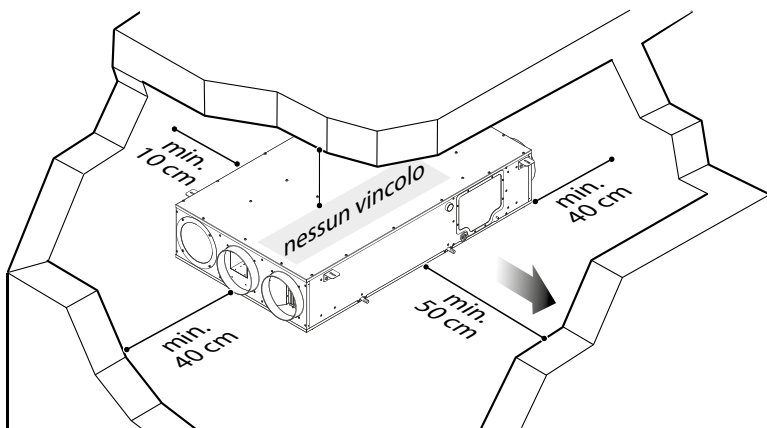


⚠️ CORRECT POSITIONING
Position the machine on the ceiling with an inclination of 2% towards the condensate drain.

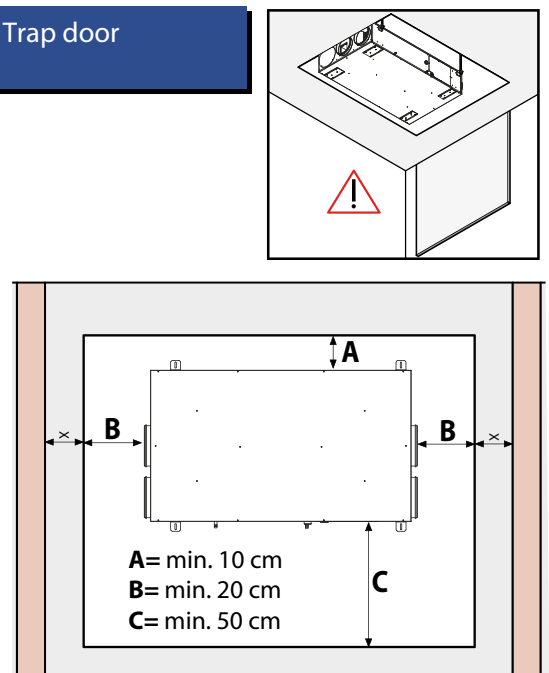
Fixing to ceiling



Minimum space allowances



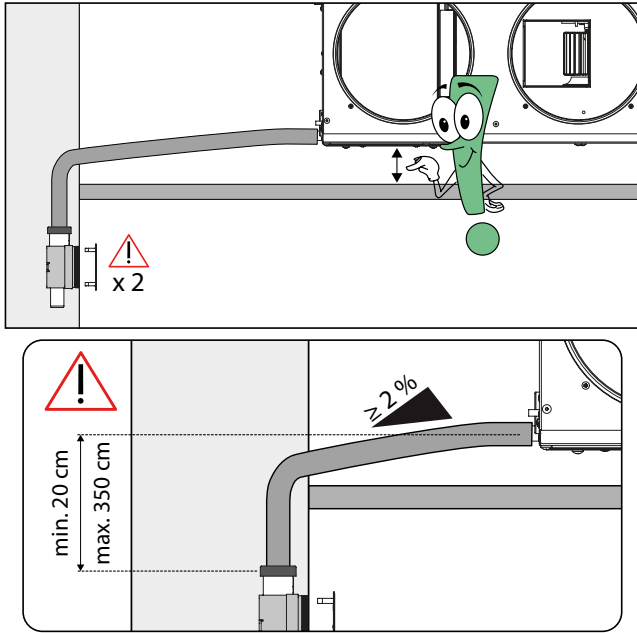
Trap door



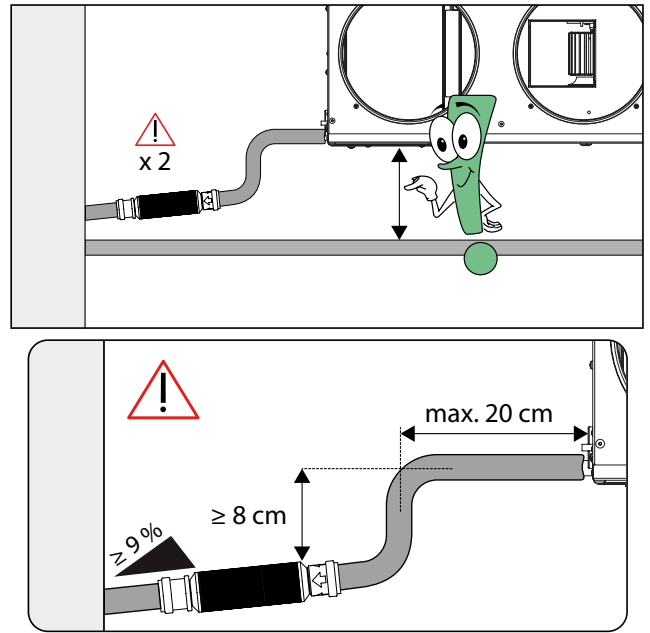
TECHNICAL DATA SHEET

OBLIGATORY KIT FOR CONDENSATE DRAIN

A SF-P



B SF-M 13



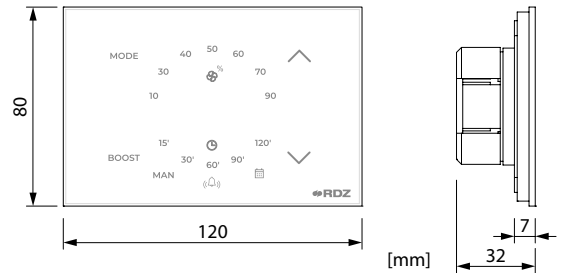
UNIT CONTROL MODES

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 mm² twisted and shielded
- Max. power consumption: 60 mA.

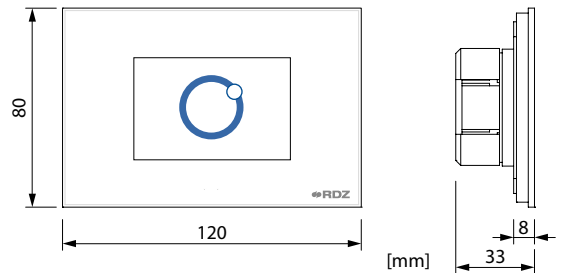


CORE AIR CONTROL ROOM INTERFACE



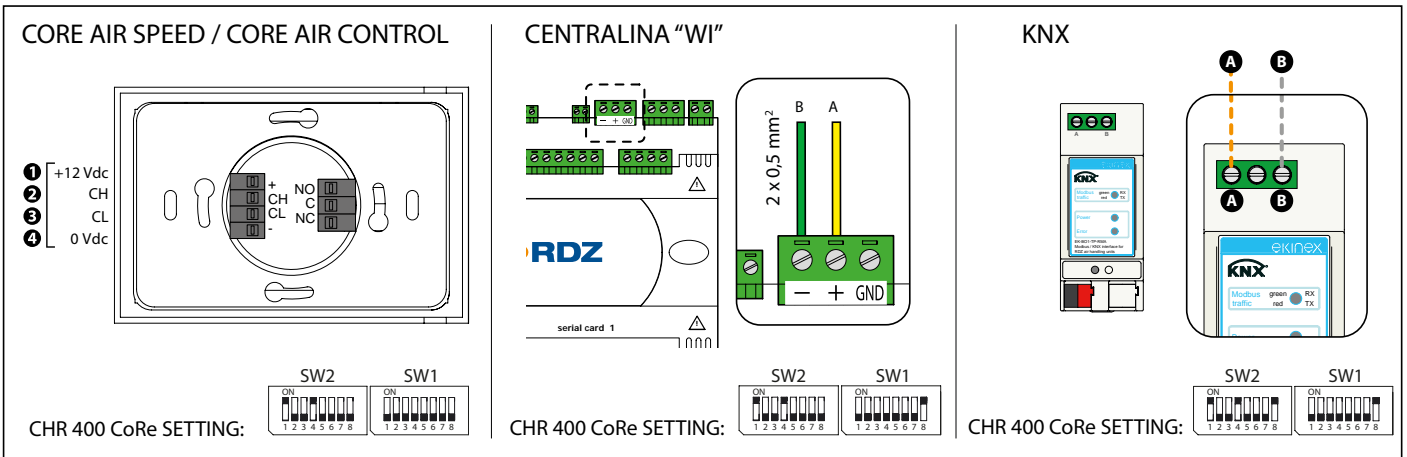
Graphical interface to manage functioning, scheduling and unit parameters.

- Installation on 502E, 503E or Ø 60 mm boxes
- 12 Vdc power supply (power supply unit not included)
- Bus cable 2x05 mm² twisted and shielded
- Max. power consumption: 60 mA.



INTEGRATION INTO CONTROL SYSTEMS

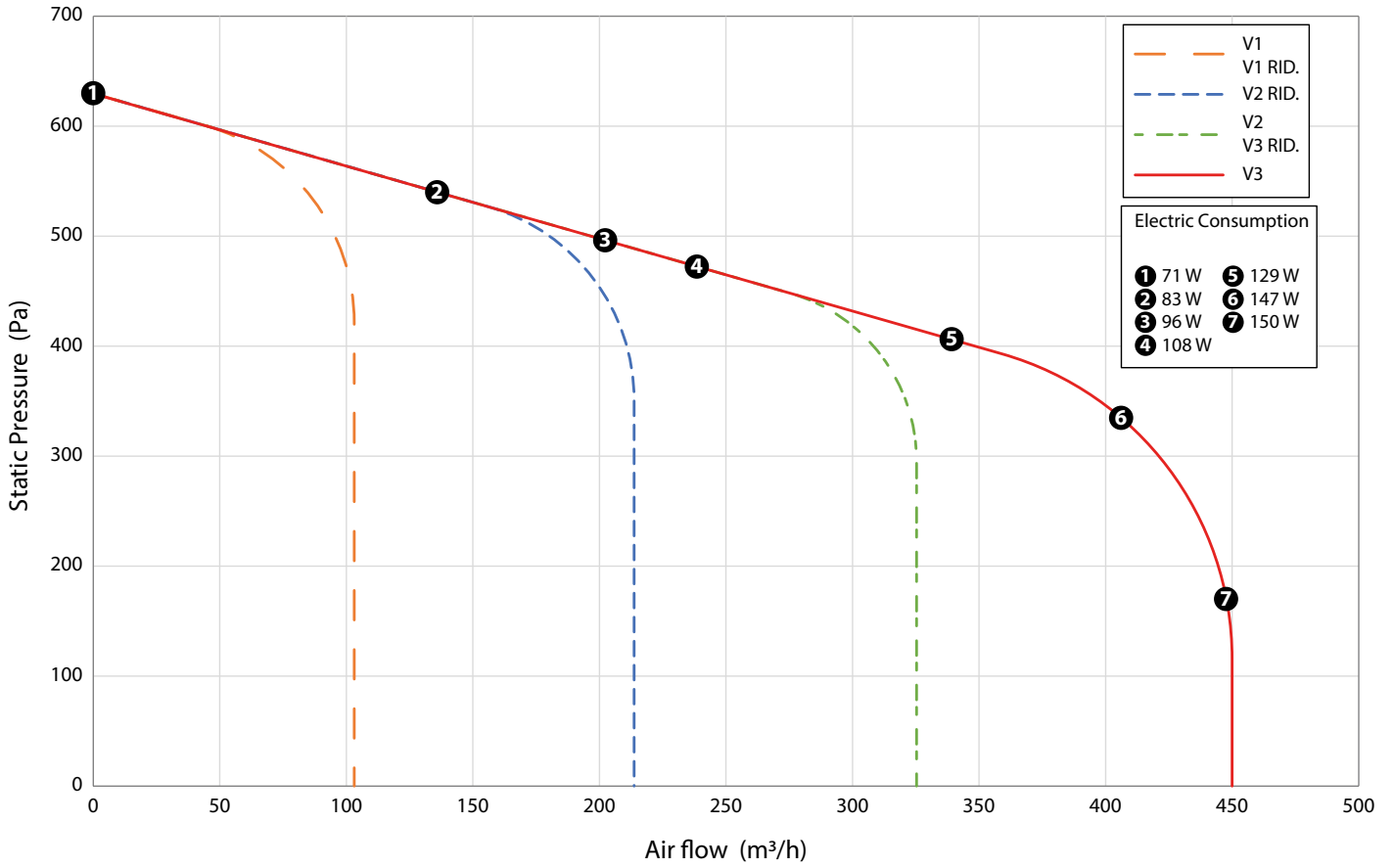
Refrair can be integrated into RDZ CoRe System or within in systems with Modbus or KNX protocol.



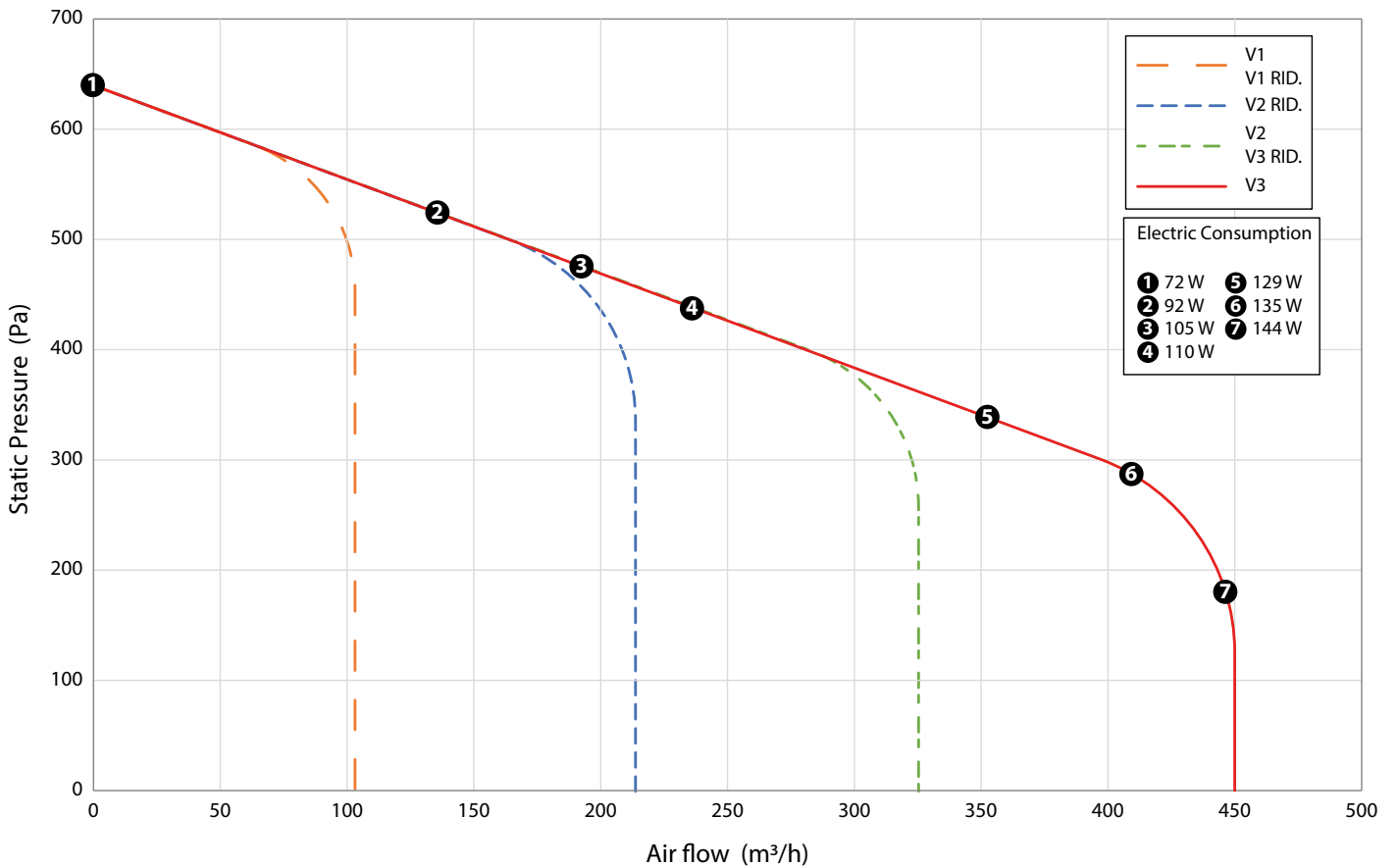
TECHNICAL DATA SHEET

AERAULIC PERFORMANCE

Inlet Fan



Exhaust Fan



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: CHR 400 CoRe
 c) Specific Energy Consumption (SEC) kWh/(m²a) and Class:

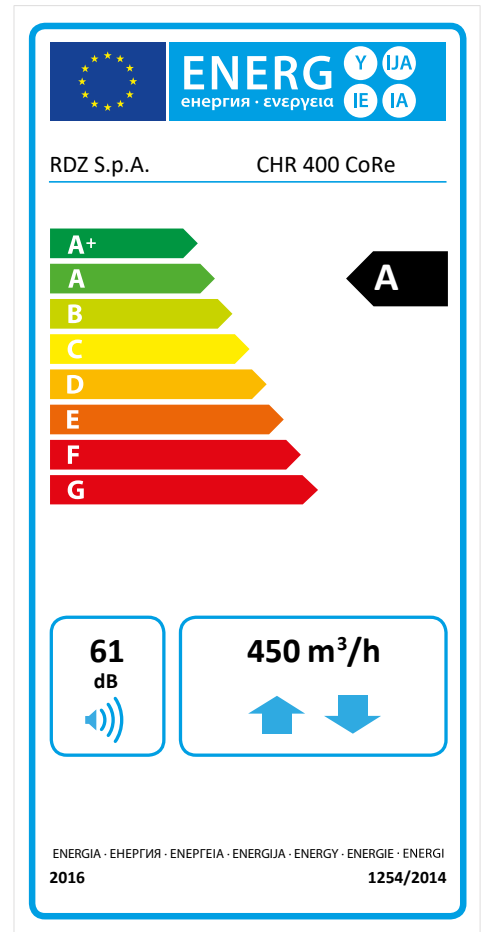
	Control typology and CTRL factor							
	Manual		Clock		Central demand		Local demand	
	1		0,95		0,85		0,65	
	SEC	Classe	SEC	Classe	SEC	Classe	SEC	Classe
Cold	-69,3	A+	-70,8	A+	-73,6	A+	-78,7	A+
Average	-33,3	B	-34,5	A	-36,8	A	-40,8	A
Warm	-10,0	E	-11,1	E	-13,1	E	-16,4	E

- 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 82% at reference flow rate
 h) Maximum flow rate 450 m³/h. This unit is for residential use only.
 i) Power input at maximum flow rate 158 W
 j) Sound power level (LWA) 61 dB
 k) Reference flow rate 0,0875 m³/s
 l) Reference pressure difference 50 Pa
 m) Reference Specific Power Input (SPI) 0,305 W/(m³/h)
 n) see c)
 o) Leakage rates at reference flow rate
 I) Maximum internal < 5%
 II) Maximum external < 5%
 p) not applicable
 q) Filter alarm reset via room controller
 r) not applicable
 s) Recycling disassembly instruction - 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	1019	977	898	767
Average	482	440	361	230
Warm	437	395	316	185

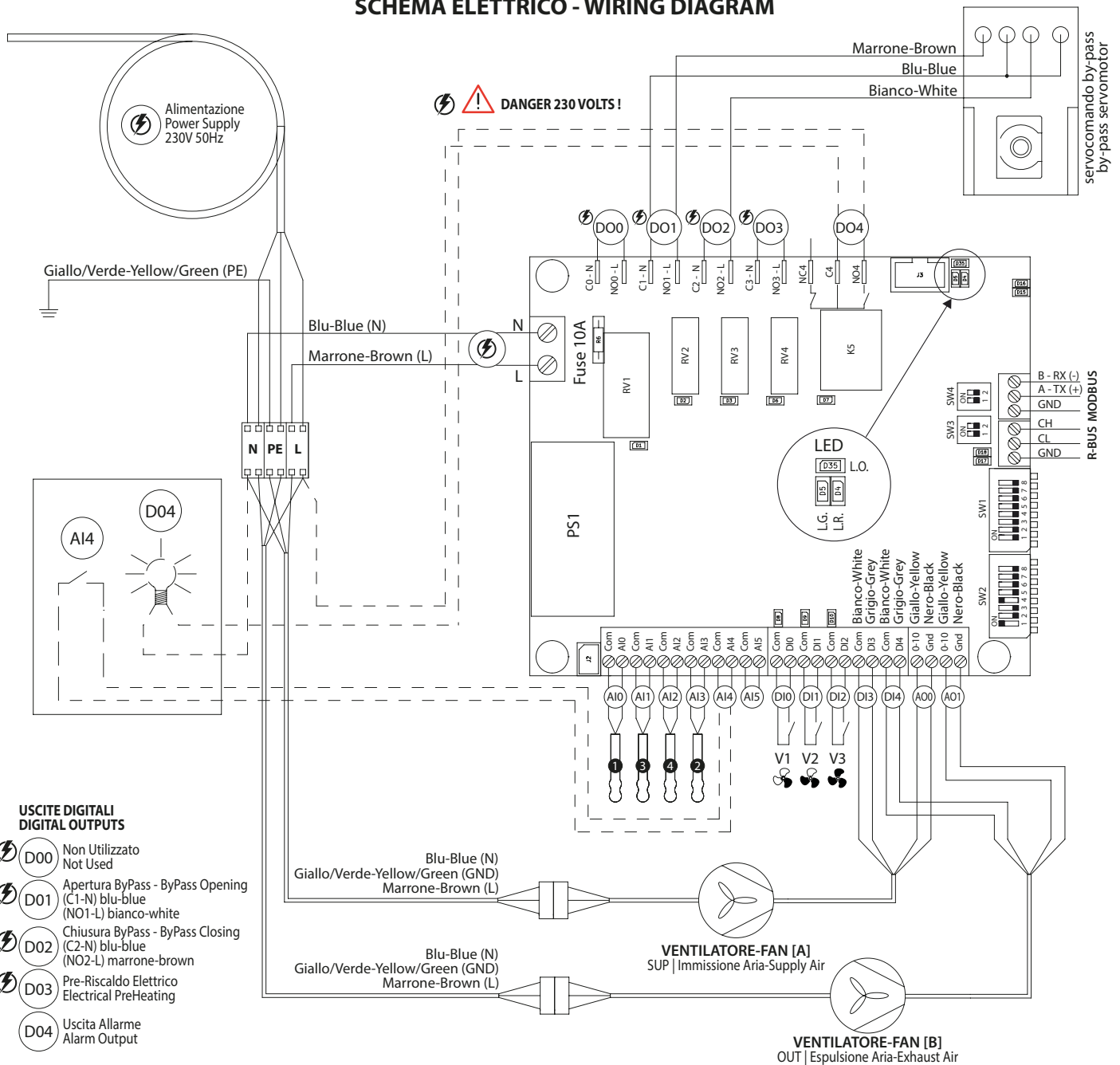
- w) the annual heating saved (AHS) (in kWh primary energy/a)

	Control typology and CTRL factor			
	Manual	Clock	Central demand	Local demand
	1	0,95	0,85	0,65
Cold	8465	8521	8633	8857
Average	4327	4356	4413	4528
Warm	1957	1970	1996	2047



TECHNICAL DATA SHEET

CHR 400 CoRe SCHEMA ELETTRICO - WIRING DIAGRAM



USCITE DIGITALI DIGITAL OUTPUTS

- DO0** Non Utilizzato / Not Used
- DO1** Apertura ByPass - ByPass Opening (C1-N) blu-blu (N01-L) bianco-white
- DO2** Chiusura ByPass - ByPass Closing (C2-N) blu-blu (N02-L) marrone-brown
- DO3** Pre-Riscaldamento Elettrico / Electrical PreHeating
- DO4** Uscita Allarme / Alarm Output

INGRESSI ANALOGICI ANALOGUE INPUTS

- AI0** Sonda-Probe 1 SUP | Immissione Aria-Supply Air (Com) (AI0) | nero-black
- AI1** Sonda-Probe 3 IN | Ingresso Aria Esterna-Air Inlet (Com) (AI1) | nero-black
- AI2** Sonda-Probe 4 EXT | Estrazione Aria-Air Extraction (Com) (AI2) | nero-black
- AI3** Sonda-Probe 2 OUT | Espulsione Aria-Exhaust Air (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 SUP | Immissione Aria-Supply Air (Com) bianco-white (DI3) grigio-grey
- DI4** [B] Ventilatore - Fan OUT | Espulsione Aria-Exhaust Air (Com) bianco-white (DI4) grigio-grey

USCITE ANALOGICHE ANALOGUE OUTPUTS

- AO0** [A] Ventilatore - Fan SUP | Immissione Aria-Supply Air (0-10) giallo-yellow (Gnd) nero-black
- AO1** [B] Ventilatore - Fan OUT | Espulsione Aria-Exhaust Air (0-10) giallo-yellow (Gnd) nero-black

- DIP 1** FLUSSO ARIA-AIR FLOW SELECTOR
OFF= Portate Nominali-Nominal Flow
ON= Portate Ridotte-Reduced Flow
DIP 2-3-4-5-6-7 Non Utilizzato-Not Used
- DIP 8** OFF= Default | ON= Wi - KNX
- DIP 1-2-3-4-5-6** INDIRIZZO-ADDRESS
DEFAULT: 9 (DIP 1 ON, DIP 4 ON)
- DIP 7** TRASMISSIONE-TRANSMISSION
OFF= 19200 Bit/s | ON= 9600 Bit/s
- DIP 8** NR. BIT STOP-NR. OF STOP BITS
OFF= 2 Bit (Wi) | ON= 1 Bit (NKX)