

TECHNICAL DATA SHEET

VALSIR® HRV SYSTEMS

ARIA-H/V



valsir®
QUALITY FOR PLUMBING

Aria

Heat recovery unit



Casing and cover panel made from expandend polypropylene, fitted with external reinforcement plates for airtight closing and for ceiling/wall mounting; internal aerodynamic shape able to minimize air pressure drops and rustles.

G4 efficiency panel filters on both air intakes; as an option, additional F7 compact filter in polypropylene with low air pressure drop; filter removal by independent ergonomic plug doors.

Air-to-air counterflow polystyrene heat recovery with very high efficiency (up to 95%), easily removable for cleaning, equipped with motorised by-pass device.

Supply and exhaust plenum fans with plastic impeller and housing, direct driven by EC technology motors, each fully controllable by unit electronics; optimized layout of each fan section in order to reduce noise to the room.

Plastic collars fitted with additional airtight rubber gasket.

Electronic control complete with temperature sensors inside the unit for the management of ventilation, free-cooling/free-heating mode, heat recovery defrost and possible preheating/reheating systems; possibility of interfacing home management system by Modbus RTU protocol.

Plug-in or remote control panel with built-in room temperature senso.

Approvals:

The approvals of Valsir® HRV systems are available on the website: www.valsir.com

Table Aria H/V Technical data

MODEL		Aria 120	Aria 240
Max airflow rate	m ³ /h	170	260
Nominal airflow rate	m ³ /h	100	200
Nominal external static pressure	Pa	150	170
Noise level	dB	51	55
Working limits	°C	-15 ÷ 45	
Power supply ⁽²⁾	V/ph/Hz	230 / 1 / 50	
Max current ⁽²⁾	A	0.52	1.5
Maximum electric power input	W	54	170

ENERGETIC DATA AS PER UE 1253/2014		Aria 120	Aria 240
Declared typology		UVR-B	
Type of drive installed or intended to be installed		>3 Multispeed	>3 Multispeed
Type of HRS		Recuperative	Recuperative
SEC class average climate		A	A
Specific energy consumption average climate (SEC)	kWh/(m ² a)	-34,5	-34.3
SEC class cold climate		A+	A+
Specific energy consumption cold climate (SEC)	kWh/(m ² a)	-71,7	-70.8
SEC class warm climate		E	E
Specific energy consumption warm climate (SEC)	kWh/(m ² a)	-10,6	-10.7
Thermal dry efficiency of heat recovery	%	85,0	83.0
Max airflow rate	m ³ /h	170	260
Reference flow rate	m ³ /s	0,033	0.051
Specific fan power (SFP)	W/(m ³ /h)	0,336	0.308
Reference pressure	Pa	50	50
Control factor and control typology (CTRL)	Timer	0.95	0.95
Annual electricity consumption of 100m ² floor area	kWh/a	4,25	4.11
Annual heating saved average climate (AHS)	kWh	44,5	43.9
Annual heating saved cold climate (AHS)	kWh	87,0	85.8
Heating saved warm climate (AHS)	kWh	21,0	19.8
Declared maximum external leakage rates of the casing of ventilation units	%	< 3,8	< 3,8
Declared maximum internal leakage rates for bidirectional ventilation units or carry over	%	< 3	< 3
Casing sound power level (LWA) ⁽¹⁾	dB (A)	51	55

⁽¹⁾ The reference flow rate equal to 70% of the maximum value and 50 Pa useful

⁽²⁾ Maximum total value of the two fans

HEAT RECOVERY UNIT		Aria 120	Aria 240
Winter mode (external air: -5 °C, UR 80 %, room air: 20 °C, UR 50 %)			
Efficiency	%	92.1	90.0
Saved power	W	778	1520
Summer mode (external air: 32 °C, UR 50 %, room air: 26 °C, UR 50 %)			
Efficiency	%	87.5	83.9
Saved power	W	174	334

Table Aria H/V technical data

HEAT RECOVERY UNIT		Aria 120	Aria 240
Dimensions			
A	mm	874	874
A1	mm	972	972
B	mm	240	300
C	mm	655	655
C1	mm	360	360
D	mm	125	125
D1	mm	16	16
Weight	kg	12	17
Box dimensions		150	280
A1'	mm	1030	1030
B'	mm	330	330
C'	mm	690	690
Weight	kg	15	20

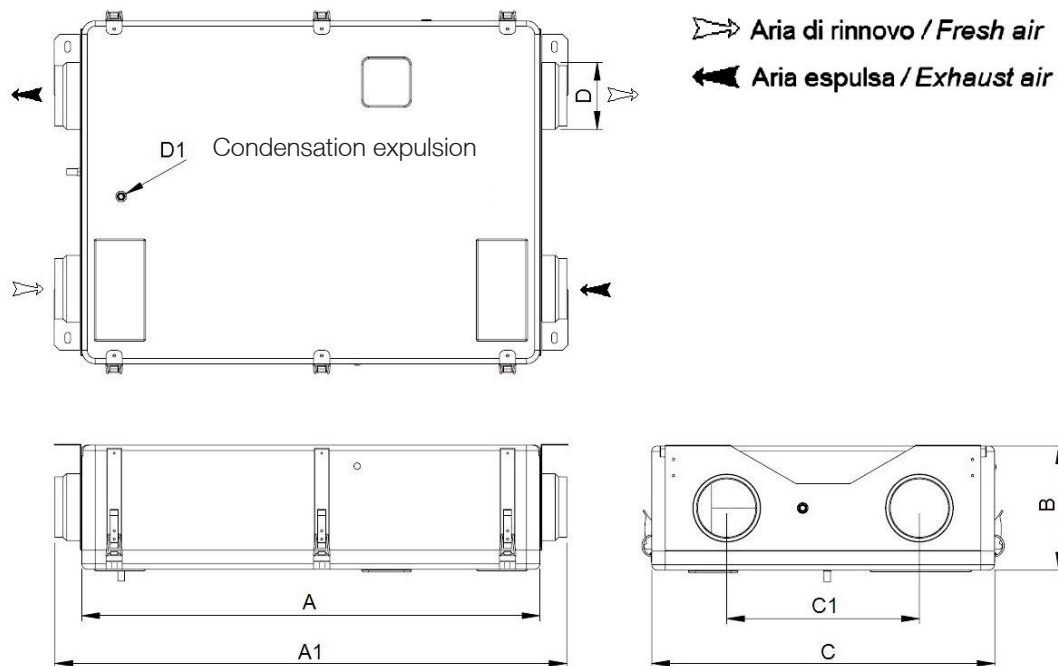
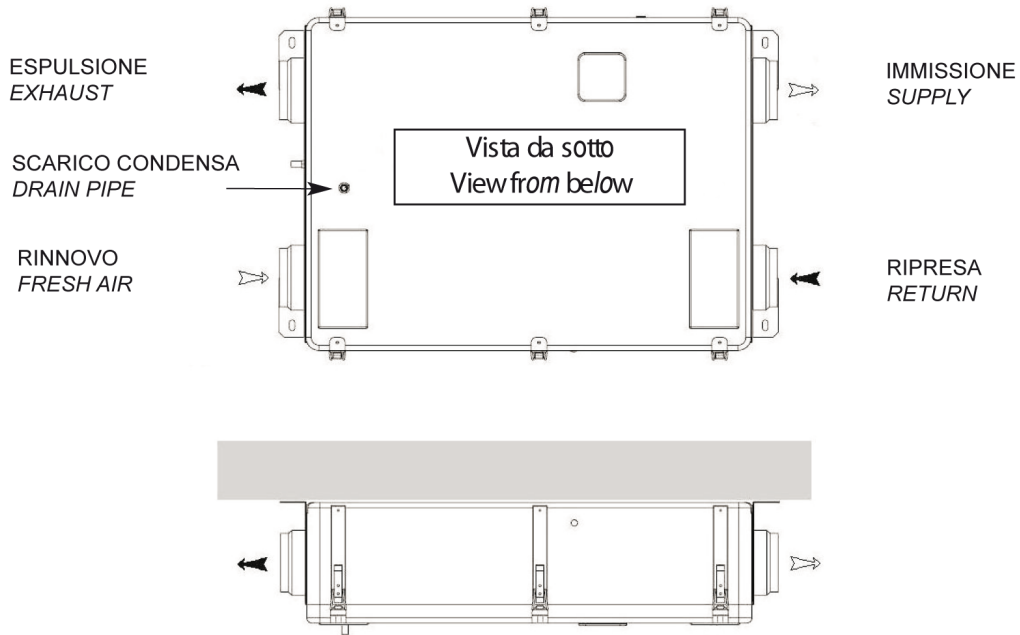
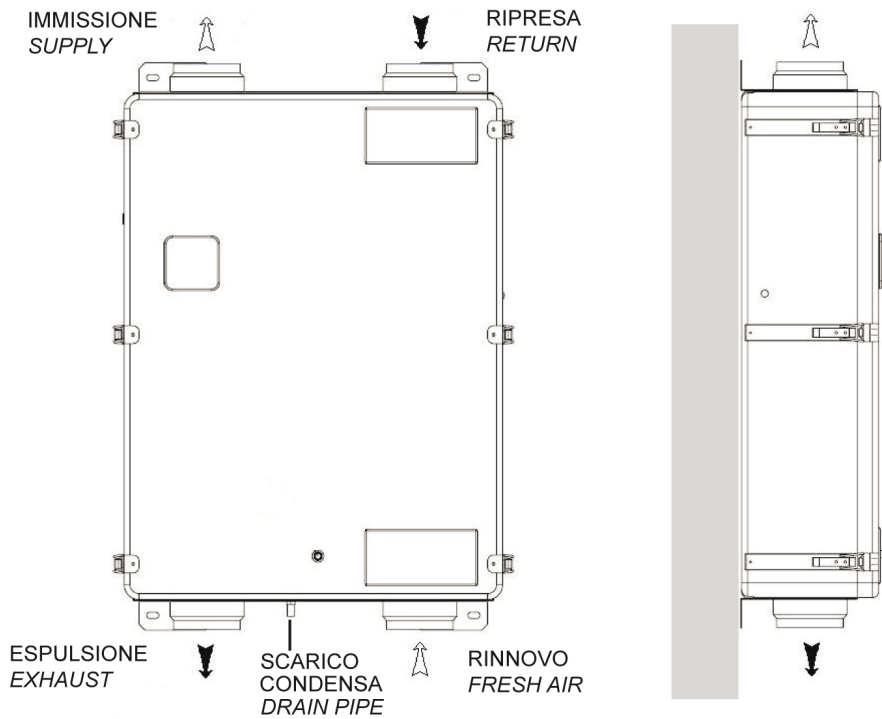


Figure Installations



➤ *Aria di rinnovo / Fresh air*
 ➤ *Aria espulsa / Exhaust air*

**ORIZZONTALE A SOFFITTO
 CEILING INSTALLATION**



➤ *Aria di rinnovo / Fresh air*
 ➤ *Aria espulsa / Exhaust air*

**VERTICALE A PARETE
 WALL INSTALLATION**

Table Aria H/V 120 energy yields

Flow rate	Room air		Renewal air		Supplied air	Efficiency	Recovered power
m ³ /h	°C	U.R. %	°C	U.R. %	°C	%	W
50	20	50	-10	(*)	18.8	96.0	486
50	20	50	-7	(*)	18.9	95.9	437
50	20	50	-5	(*)	18.9	95.8	404
50	20	50	0	(*)	19.1	95.3	322
50	22	50	-10	(*)	20.8	96.2	517
50	22	50	-7	(*)	20.9	96.1	468
50	22	50	-5	(*)	20.9	96.0	435
50	22	50	0	(*)	21.0	95.7	353
50	26	50	30	(**)	26.3	93.2	62
50	26	50	32	(**)	26.4	93.2	93
50	26	50	34	(**)	26.6	93.2	124
100	20	50	-10	(*)	17.8	92.6	938
100	20	50	-7	(*)	17.9	92.3	843
100	20	50	-5	(*)	18.0	92.1	778
100	20	50	0	(*)	18.2	91.3	617
100	22	50	-10	(*)	19.8	93.0	1000
100	22	50	-7	(*)	19.9	92.8	904
100	22	50	-5	(*)	20.0	92.6	840
100	22	50	0	(*)	20.2	91.9	679
100	26	50	30	(**)	26.5	87.5	116
100	26	50	32	(**)	26.8	87.5	174
100	26	50	34	(**)	27.0	87.5	232
150	20	50	-10	(*)	16.9	89.7	1363
150	20	50	-7	(*)	17.1	89.3	1222
150	20	50	-5	(*)	17.2	89.0	1128
150	20	50	0	(*)	17.5	87.7	889
150	22	50	-10	(*)	18.9	90.3	1455
150	22	50	-7	(*)	19.1	90.0	1314
150	22	50	-5	(*)	19.2	89.7	1220
150	22	50	0	(*)	19.5	88.6	982
150	26	50	30	(**)	26.7	82.7	165
150	26	50	32	(**)	27.0	82.7	247
150	26	50	34	(**)	27.4	82.7	329

(*) UR external air from 50 to 90%

(**) UR external air from 40 to 60%

Figure Aria H/V 120 energy yields

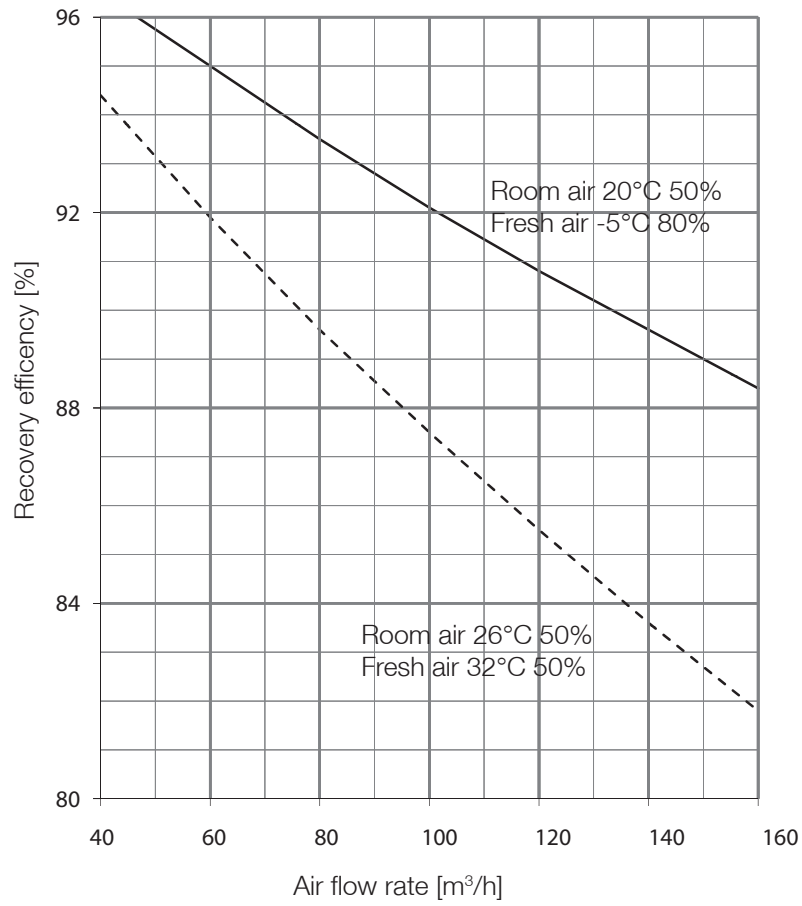


Table Aria H/V 240 energy yields

Flow rate	Room air		Renewal air		Supplied air	Efficiency	Recovered power
m ³ /h	°C	U.R. %	°C	U.R. %	°C	%	W
100	20	50	-10	(*)	18.3	94.4	957
100	20	50	-7	(*)	18.4	94.3	860
100	20	50	-5	(*)	18.5	94.1	795
100	20	50	0	(*)	18.7	93.5	632
100	22	50	-10	(*)	20.3	94.8	1018
100	22	50	-7	(*)	20.4	94.6	921
100	22	50	-5	(*)	20.5	94.5	857
100	22	50	0	(*)	20.7	94.0	694
100	26	50	30	(**)	26.4	90.6	120
100	26	50	32	(**)	26.6	90.6	180
100	26	50	34	(**)	26.8	90.6	240
200	20	50	-10	(*)	17.1	90.3	1830
200	20	50	-7	(*)	17.3	90.2	1644
200	20	50	-5	(*)	17.4	90.0	1520
200	20	50	0	(*)	17.7	88.6	1197
200	22	50	-10	(*)	19.1	91.0	1955
200	22	50	-7	(*)	19.3	90.7	1766
200	22	50	-5	(*)	19.4	90.4	1640
200	22	50	0	(*)	19.7	89.4	1321
200	26	50	30	(**)	26.7	83.9	222
200	26	50	32	(**)	27.0	83.9	334
200	26	50	34	(**)	27.3	83.9	445
300	20	50	-10	(*)	15.9	86.3	2625
300	20	50	-7	(*)	16.2	85.8	2348
300	20	50	-5	(*)	16.3	85.3	2162
300	20	50	0	(*)	16.7	83.4	1690
300	22	50	-10	(*)	17.9	87.1	2809
300	22	50	-7	(*)	18.1	86.7	2533
300	22	50	-5	(*)	18.3	86.3	2347
300	22	50	0	(*)	18.6	84.7	1876
300	26	50	30	(**)	26.9	77.4	308
300	26	50	32	(**)	27.4	77.4	462
300	26	50	34	(**)	27.8	77.4	616

(*) UR external air from 50 to 90%

(**) UR external air from 40 to 60%

Figure Aria H/V 240 energy yields

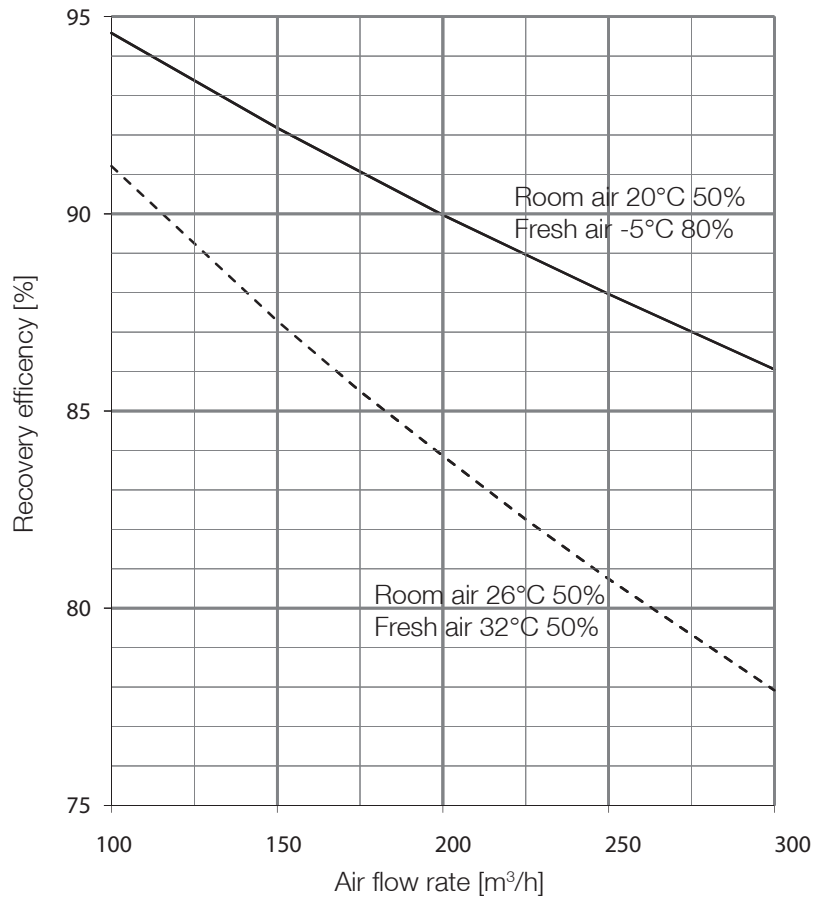


Figure Aria H/V 120 characteristic graph

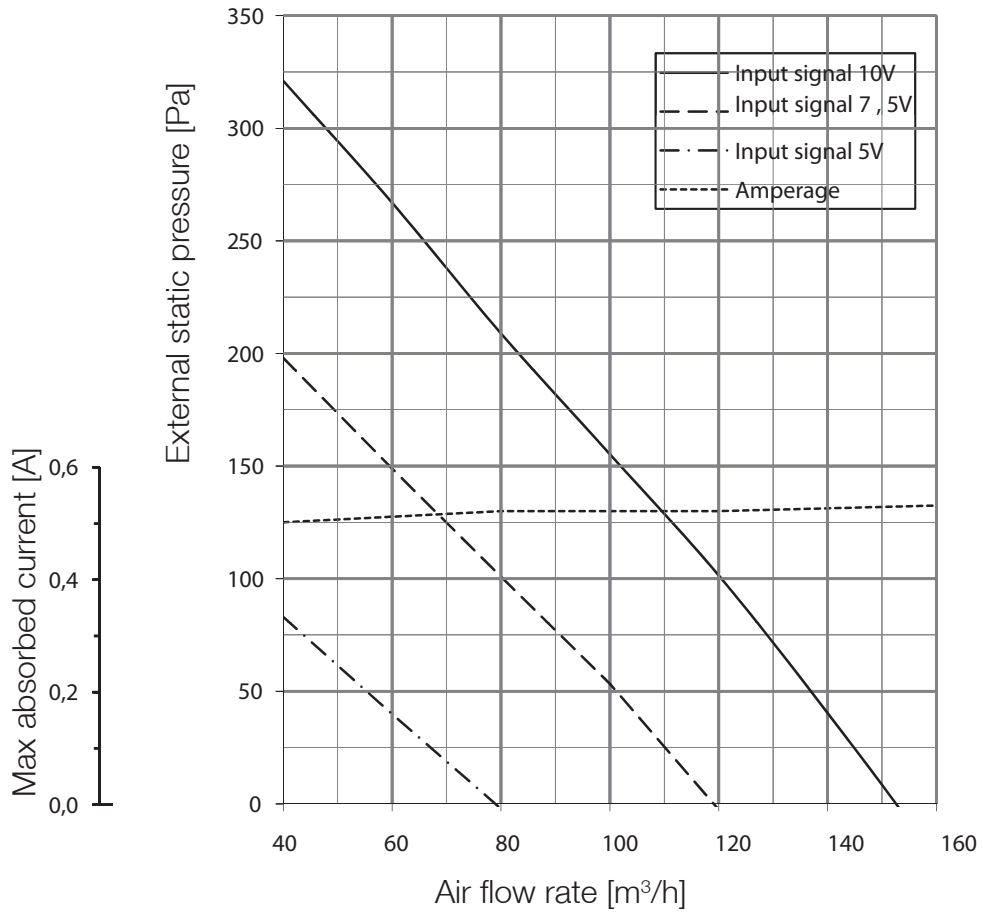


Figure Aria H/V 240 characteristic graph

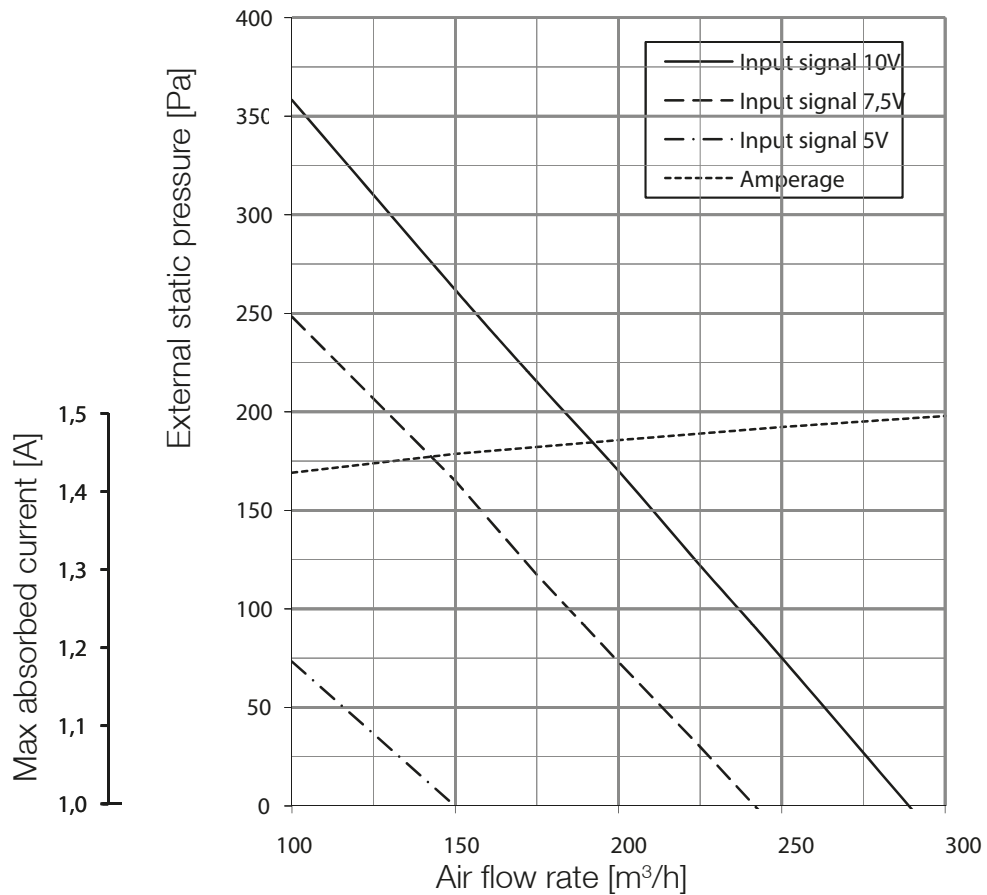
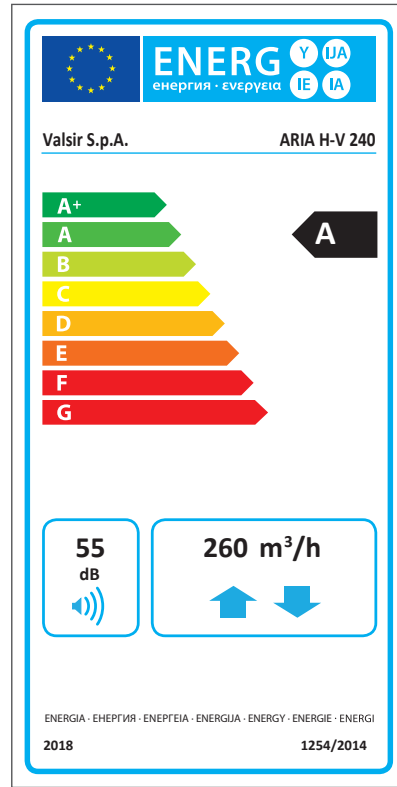
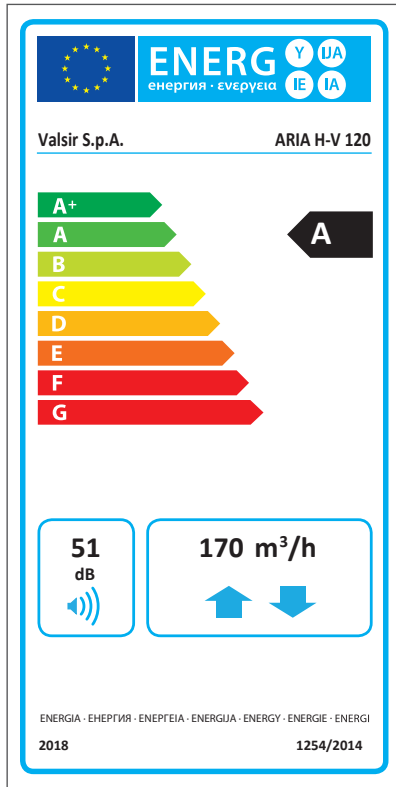
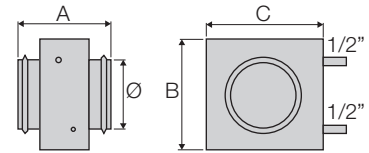


Figure Aria H/V energy label referred to UE 1254/2014 Regulation

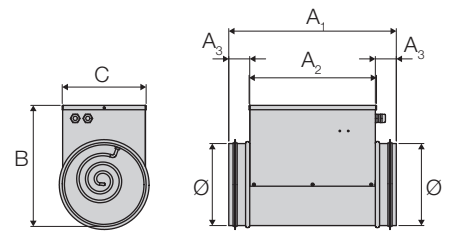


Water coils for ARIA recovery unit model



Recovery unit flow rate	Performance	Ø	A	B	C
120-240 m³/h	300-480 W	125	200	240	270
330 m³/h	810 W	160	200	240	270
420 m³/h	1190 W	200	240	240	270

Electric coils for ARIA recovery unit model



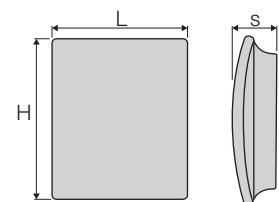
Recovery unit flow rate	Power	Ø	A ₁	A ₂	A ₃	B	C
120-240 m³/h	500 W	125	400	300	50	217	125
330 m³/h	1000 W	160	400	300	50	245	161
420 m³/h	1500 W	200	400	300	50	289	200

F7 filter kit for ARIA recovery unit model



Recovery unit flow rate	Nr of filters
120 m³/h	2
240 m³/h	2
330 m³/h	4
420 m³/h	4

Temperature and humidity wall sensor for ARIA recovery unit model



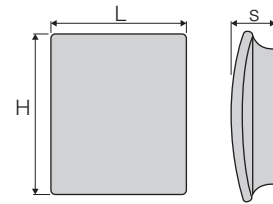
L	H	s	Mod.
85	100	26	Aria

**Wall VOC sensor for ARIA,
IDRONICA, ISOTERMA and
MAXIMA recovery unit models**



HxLxP	Air quality
81x79x26	0... 100%

**Temperature and humidity
wall sensor for ARIA
recovery unit model**



L	H	s	Mod.
85	100	26	Aria, Idronica, Isoterma, Maxima

PLUMBING

WASTE SYSTEMS



SUPPLY SYSTEMS



GAS SYSTEMS



FLUSH SYSTEMS



BATHROOM SYSTEMS



TRAPS



RADIANT SYSTEMS



DRAINAGE SYSTEMS



HRV SYSTEM



ACADEMY



SEWER SYSTEMS



WATER TREATMENT



BUILDING

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