

# > RXA

## AIR-WATER CHILLERS AND HEAT PUMPS FOR OUTDOOR INSTALLATION



### Available range

#### Unit type

IR	Chiller
IP	Heat pump (reversible on the refrigerant side)

#### Versions

VB	Base Version
VP	Pump version
VA	Tank version

#### Acoustic setting up

AB	Base setting up
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### Unit description

This series of air-water chillers and heat pumps satisfies the cooling and heating requirements of residential plants of small and medium size.

All the units are suitable for outdoor installation and can be applied to fan coil plants, radiant floor plants and high efficiency radiators plants.

The refrigerant circuit, contained in a compartment protected from the air flow to simplify the maintenance operations, is equipped with rotary or scroll compressor (according to the model) mounted on damper supports, brazed plate heat exchanger, thermostatic expansion valve, reverse cycle valve, axial fans

with safety protection grilles, finned coil made of copper pipes and aluminium louvered fins. The circuit is protected by high and low pressure switches and differential pressure switch on the plate heat exchanger.

The plate heat exchanger and all the hydraulic pipes are thermally insulated in order to avoid condensate generation and to reduce thermal losses.

All the units are equipped with variable speed fans control that allows the units to operate with low outdoor temperatures in cooling and high outdoor temperature in heating and permits to reduce noise emissions in such operating conditions.

All the units are supplied with an outdoor temperature sensor, already installed on the unit, in order to realize the climatic control.

All three-phase power supply units are provided with a phase presence and correct sequence controller device.

All the units are accurately built and individually tested in the factory. Only electric and hydraulic connections are required for installation.

### Options

#### Storing and pumping module

- not present (VB - base version)
- standard, high head or modulating pump (VP - pump version)
- tank and standard, high head or modulating pump (VA - tank version)

#### Integrative electrical heaters

- standard in the flow (only VB and VP versions)
- standard in the tank (only VA version)
- upsized in the tank (only VA version)

#### Compressor starting

- standard (contactors)
- soft starter

### Accessories

#### Rubber vibration dampers

#### Coil protection grille

#### Tank antifreeze electrical heater

#### Remote control

#### Modbus serial interface on RS485

#### Programmer clock

#### Phase sequence and voltage controller

**NET NOMINAL performances - Standard plants - EUROVENT certified data**

IR	Base setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
<b>A35W7</b>	Cooling capacity	6,24	7,24	9,12	10,6	14,1	16,7	kW
	Power input	2,31	2,81	3,52	4,16	5,25	6,49	kW
	<b>EER</b>	<b>2,70</b>	<b>2,58</b>	<b>2,59</b>	<b>2,55</b>	<b>2,69</b>	<b>2,57</b>	<b>W/W</b>
	<b>ESEER</b>	<b>3,23</b>	<b>2,92</b>	<b>2,83</b>	<b>2,93</b>	<b>3,02</b>	<b>2,92</b>	<b>W/W</b>
	Water flow rate	0,30	0,35	0,44	0,51	0,68	0,80	l/s
	Pressure drops	17	21	31	40	43	39	kPa
IP	Base setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
<b>A35W7</b>	Cooling capacity	6,12	7,10	8,95	10,4	13,8	16,4	kW
	Power input	2,31	2,81	3,51	4,15	5,24	6,49	kW
	<b>EER</b>	<b>2,65</b>	<b>2,53</b>	<b>2,55</b>	<b>2,51</b>	<b>2,63</b>	<b>2,53</b>	<b>W/W</b>
	<b>ESEER</b>	<b>3,11</b>	<b>2,79</b>	<b>2,76</b>	<b>2,88</b>	<b>2,98</b>	<b>2,89</b>	<b>W/W</b>
	Water flow rate	0,29	0,34	0,43	0,50	0,66	0,79	l/s
	Pressure drops	16	20	30	39	42	38	kPa
<b>A7W45</b>	Heating capacity	6,78	7,87	9,95	11,7	15,4	18,2	kW
	Power input	2,22	2,71	3,38	4,01	5,06	6,25	kW
	<b>COP</b>	<b>3,05</b>	<b>2,90</b>	<b>2,94</b>	<b>2,92</b>	<b>3,04</b>	<b>2,91</b>	<b>W/W</b>
	Water flow rate	0,32	0,37	0,47	0,55	0,73	0,86	l/s
	Pressure drops	18	24	35	45	48	43	kPa

Data declared according to **EN 14511**. The values are referred to units without options and accessories.

**EER** (Energy Efficiency Ratio) = ratio of the total cooling capacity to the effective power input of the unit

**COP** (Coefficient Of Performance) = ratio of the total heating capacity to the effective power input of the unit

**ESEER** (European Seasonal Energy Efficiency Ratio) = Unit in **A CLASS**.

**A35W7** = source : air in 35°C d.b. / plant : water in 12°C out 7°C

**A35W18** = source : air in 35°C d.b. / plant : water in 23°C out 18°C

**A7W45** = source : air in 7°C d.b. 6°C w.b. / plant : water in 40°C out 45°C

**A7W35** = source : air in 7°C d.b. 6°C w.b. / plant : water in 30°C out 35°C

**Acoustic performances**

Base setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
Sound power level <sup>(E)</sup>	69	69	72	72	74	74	dB(A)
Sound pressure level at 1 meter	55	55	57	57	59	59	dB(A)
Sound pressure level at 5 meters	44	44	46	46	48	48	dB(A)
Sound pressure level at 10 meters	38	38	41	41	43	43	dB(A)

**(E): EUROVENT certified data**

The acoustic performances are referred to units operating in cooling mode at nominal conditions A35W7.

Unit placed in free field on reflecting surface (directional factor equal to 2).

The sound power level is measured according to ISO 9614 standard.

The sound pressure level is calculated according to ISO 3744 and is referred to a distance of 1/5/10 metres from the external surface of the unit.

### Technical data

Unit	6.1	7.1	9.1	11.1	14.1	17.1	
Power supply	230 - 1 - 50		230 - 1 - 50 400 - 3N - 50		400 - 3N - 50		V-ph-Hz
Compressor type	rotative		scroll				-
N° compressors / N° refrigerant circuits	1 / 1						n°
Plant side heat exchanger type	stainless steel brazed plates						-
Source side heat exchanger type	finned coil						-
Fans type	axial						-
N° fans	1						n°
Tank volume	33		50		71		l
Hydraulic fittings	1" M						-

### Electrical data

Standard unit	6.1	7.1	9.1	11.1	14.1	17.1	
Power supply	230 - 1 - 50	230 - 1 - 50	230 - 1 - 50 / 400 -3N- 50	230 - 1 - 50 / 400 -3N- 50	400 -3N- 50	400 -3N- 50	V-ph-Hz
<b>FLA</b> - Full load current at maximum tolerated conditions	13,4	17,1	22,0 / 8,1	24,8 / 9,0	11,1	13,9	A
<b>FLI</b> - Full load power input at maximum tolerated conditions	2,9	3,7	4,7 / 4,7	5,3 / 5,3	6,2	8,0	kW
<b>MIC</b> - Maximum instantaneous current of the unit	82	112	141 / 54	174 / 69	87	106	A
<b>MIC SS</b> - Maximum instantaneous current of the unit with soft starter options	41	43	49 / 33	59 / 40	48	55	A
Unit with high head modulating pump	6.1	7.1	9.1	11.1	14.1	17.1	
Power supply	230 - 1 - 50	230 - 1 - 50	230 - 1 - 50 / 400 -3N- 50	230 - 1 - 50 / 400 -3N- 50	400 -3N- 50	400 -3N- 50	V-ph-Hz
<b>FLA</b> - Full load current at maximum tolerated conditions	14.4	18.1	23.3 / 9.4	26.1 / 10.3	12.9	15.7	A
<b>FLI</b> - Full load power input at maximum tolerated conditions	3.1	3.9	4.95 / 4.95	5.55 / 5.55	6.55	8.35	kW
<b>MIC</b> - Maximum instantaneous current of the unit	83	113	142.3 / 55.3	175.3 / 70.3	88.8	107.8	A
<b>MIC SS</b> - Maximum instantaneous current of the unit with soft starter options	42	44	50.3 / 34.3	60.3 / 41.3	49.8	56.8	A

### Operative range

Temperature	Unit type	Cooling		Heating		
		min	max	min	max	
Outdoor air inlet temperature	IR, IP	-10	48	-15	42	°C
Water outlet temperature	IR, IP	5	25	30	55	°C

The unit is managed by a microprocessor controller to which, through a wiring board, all the electrical loads and the control devices are connected. The user interface is realized by a display and four buttons that allow to view and, if necessary, modify all the operating parameters of the unit. It's available, as an accessory, a remote control that reports all the functionalities of the user interface placed on the unit.

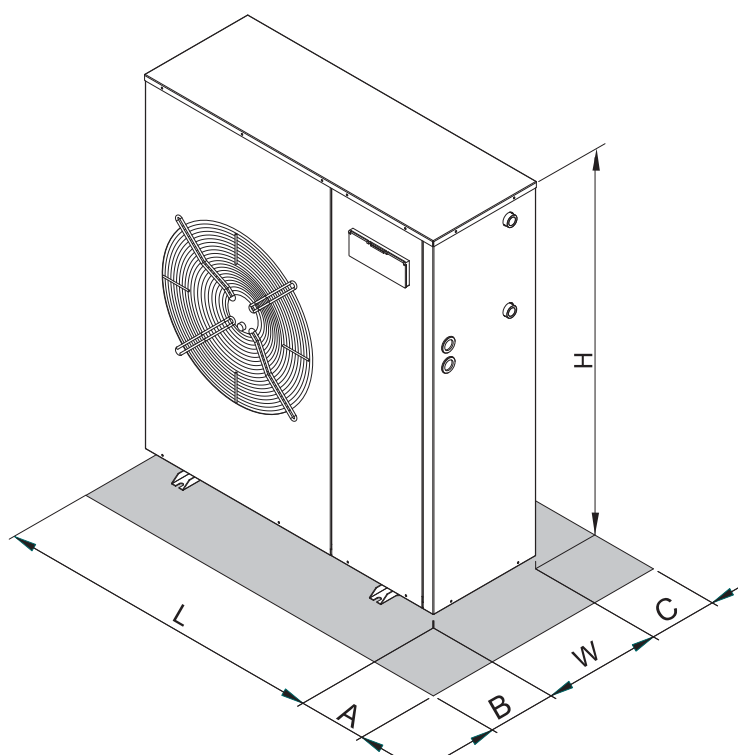
The main functions available are :

- water temperature management (through set point adjustment)
- climatic control in heating and in cooling mode (automatic set point adjustment according to outdoor air temperature)
- dynamic defrost cycle management according to outdoor air temperature
- alarm memory management and diagnostic

- fans management by means of continuous rotational speed control
- pump management
- integrative electrical heaters management in heating mode (2 step logic)
- compressor and pump operating hours recording
- serial communication through Modbus protocol
- remote stand by
- remote cooling-heating
- general alarm digital output



### DIMENSIONS AND MINIMUM OPERATING AREA



	Version	6.1	7.1	9.1	11.1	14.1	17.1	
L	VB - VP	994	994	994	994	994	994	mm
	VA	1329	1329	1329	1329	1329	1329	mm
W	-	356	356	356	356	356	356	mm
H	-	903	903	1153	1153	1453	1453	mm
A	-	400	400	400	400	400	400	mm
B	-	600	600	600	600	600	600	mm
C	-	200	200	200	200	200	200	mm
Operating maximum weight*	VA	164	171	220	238	285	294	kg