

# Aquami Split heat pump

AQS80X1o<sup>[R14]</sup> / AQS100X13i<sup>[R14]</sup>



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## Device features

- |                                          |                                       |                                         |                                     |                               |                               |                                          |                                                         |
|------------------------------------------|---------------------------------------|-----------------------------------------|-------------------------------------|-------------------------------|-------------------------------|------------------------------------------|---------------------------------------------------------|
|                                          |                                       |                                         |                                     |                               |                               |                                          |                                                         |
| Environmentally friendly refrigerant R32 | Efficient heating                     | Energy efficiency class at 35°C A+++    | Energy efficiency class at 55°C A++ | Maximum COP 5,20              | Operating range down to -25°C | Supply water temperature of 65°C         | Integrated USB port for updates                         |
|                                          |                                       |                                         |                                     |                               |                               |                                          |                                                         |
| Energy meter                             | Smart Grid functionality              | Twin rotary compressor                  | Integrated electric heater          | Outdoor unit drip tray heater | Compressor crankcase heater   | Indoor unit drip tray                    | Easy installation and maintenance                       |
|                                          |                                       |                                         |                                     |                               |                               |                                          |                                                         |
| Compact indoor split unit housing        | Maximum installation length up to 30m | Silent mode                             | Built-in Wi-Fi module               | Daily operation schedule      | Configurable weekly schedules | Vacation mode                            | Menu in English                                         |
|                                          |                                       |                                         |                                     |                               |                               |                                          |                                                         |
| Multilanguage menu                       | Integrated temperature sensor         | Weather operating modes (climate curve) | 2 heating control zones             | Dedicated application         | Disinfection                  | DHW circulation pump operation schedules | Maximum leaving water temperature of 60°C (in DHW mode) |
|                                          |                                       |                                         |                                     |                               |                               |                                          |                                                         |
| Prepared to create a cascade system      | Modbus Protocol                       |                                         |                                     |                               |                               |                                          |                                                         |

Rotenso reserves the right to make changes to its products without prior notice.

# Specification indoor unit

Model			AQS100X131 R14
EAN Code			5905567602122
Compatible outdoor unit model			AQS80X1o / AQS100X1o
Operation modes			Heating and cooling
Leaving water temperature	Surface cooling	°C	5-25
	Surface heating	°C	25-65
	DHW (tank)	°C	30-60
Power supply		V-Hz, Ø	220-240-50, 1f / 380-420-50, 3f
Rated input / Operating current		W / A	9095 / 13,5
Sound power level		dB(A)	42
Electric heater	Power supply	V-Hz, Ø	220-240-50, 1f / 380-420-50, 3f
	Number of heating stages / Power	pcs. / kW	3 / 9 (3 + 3 + 3)
	Maximum running current	A	13,3
Net dimensions		(WxDxH)	mm
Gross dimensions			mm
Net weight / Gross weight			kg
Water circuit	Water connections		inch
	Pressure relief valve		MPa
	Condensate drain		mm
	Expansion tank	Total volume / Actual volume	l
		Maximum pressure / Initial pressure	MPa
	PHE / plate heat exchanger	Type	
		Minimum flow	l/min
	Water pump head		m
Water pump type			
Refrigerant circuit		Liquid / Gas	mm
Minimal wire pcs and dimension of cords*		pcs × mm <sup>2</sup>	Φ9,52 (3/8") / Φ15,9 (5/8") 5 × 2,5
Control cables: indoor unit to outdoor unit		pcs × mm <sup>2</sup>	2 × 0,75 (shielded cable)

# Specification outdoor unit

Model			AQS80X1o R14
EAN Code			5905567602061
Power supply			220-240-50, 1f
Heating (A7/W35)	Capacity	kW	8,30
	Rated input	kW	1,60
	COP		5,20
Heating (A7/W45)	Capacity	kW	8,20
	Rated input	kW	2,08
	COP		3,95
Heating (A7/W55)	Capacity	kW	7,50
	Rated input	kW	2,36
	COP		3,18
Cooling (A35/W18)	Capacity	kW	8,40
	Rated input	kW	1,66
	EER		5,05
Cooling (A35/W7)	Capacity	kW	7,40
	Rated input	kW	2,19
	EER		3,38
Seasonal energy efficiency LWT 35°C	SCOP <sup>(1)</sup>		5,21
	Rated heat output	kW	8,1
	Seasonal energy efficiency ratio (η <sub>S</sub> )	%	205,6
	Annual energy consumption	kWh	3218
Seasonal space heating energy efficiency class <sup>(1)</sup>			A+++
Seasonal energy efficiency LWT 55°C	SCOP <sup>(1)</sup>		3,36
	Rated heat output	kW	6,6
	Seasonal energy efficiency ratio (η <sub>S</sub> )	%	131,6
	Annual energy consumption	kWh	4054
Seasonal space heating energy efficiency class <sup>(1)</sup>			A++
SEER	LWT at 7°C		5,83
	LWT at 8°C		8,95
Minimum rated current of the overcurrent circuit breaker with breaker type		A	B20
Compressor	Type		Twin rotary inverter compressor DC
	Type		Brushless DC motor / BLDC
Fan	Quantity		1
	Type/ GWP		R32 / 675
Refrigerant	Charged (<15m)		kg
			1,65
		TCO <sub>eq</sub>	1,11
Pipe connections	Liquid / Gas	mm	Φ9,52 (3/8") / Φ15,9 (5/8")
	Minimum installation length	m	2
	Maximum installation length	m	30
	Additional amount of refrigerant for over 15 linear meters	g/m	38
Maximum height difference	Outdoor unit above the indoor unit	m	20
	Outdoor unit below the indoor unit	m	20
Minimal wire pcs and dimension of cords*		pcs × mm <sup>2</sup>	3 × 4
Control cables: indoor unit to outdoor unit		pcs × mm <sup>2</sup>	2 × 0,75 (shielded cable)
Bracket spacing		(WxD)	656x456
Sound pressure level		dB(A)	46
Sound power level		dB(A)	59
Net dimensions		(WxDxH)	mm
Gross dimensions		(WxDxH)	mm
Net weight/Gross weight			kg
Operating outdoor temperature	Cooling	°C	-5-43
	Heating	°C	-25-35
	DHW	°C	-25-43

1. Seasonal energy efficiency class measured under average climate conditions.

Notes:

DHW - Domestic hot water

LWT - Leaving water temperature

The sound pressure level is measured 1m in front of the unit and (1+H)/2m (where H is the height of the unit) above the floor in semi-anechoic room. During on-site operation sound pressure levels can be higher as a result of ambient noise. Sound pressure level and sound power level reflect the maximum value tested under three conditions specified respectively in notes A7/W35, ΔT=5; A7/W45, ΔT=5; A7/W55 ΔT=8; relative humidity 85%. The figures specified above refer to the following standards: EN14511; EN14825; EN50564; EN12102; (EU) Np. 811/2013; (EU) No. 813/2013; Journal of Laws 2014 / C 207/02: 2014.

The residual current circuit breaker used to protect the electrical circuit of the appliance shall be selected in view of the electrical regulations in force, assuming that the rated residual current is not greater than IΔn: 30mA



































\*The above values apply to supply cables with a maximum length of 20mb. If this value is exceeded, an electrical designer should be consulted.

# Aquami Split heat pump

AQS100X1o<sup>[R14]</sup> / AQS100X13i<sup>[R14]</sup>



## Device features

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|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Environmentally friendly refrigerant R32 | <br>Efficient heating                     | <br>Energy efficiency class at 35°C A+++    | <br>Energy efficiency class at 55°C A++ | <br>Maximum COP 5,00              | <br>Operating range down to -25°C | <br>Supply water temperature of 65°C         | <br>Integrated USB port for updates                         |
| <br>Energy meter                             | <br>Smart Grid functionality              | <br>Twin rotary compressor                  | <br>Integrated electric heater          | <br>Outdoor unit drip tray heater | <br>Compressor crankcase heater   | <br>Indoor unit drip tray                    | <br>Easy installation and maintenance                       |
| <br>Compact indoor split unit housing        | <br>Maximum installation length up to 30m | <br>Silent mode                             | <br>Built-in Wi-Fi module               | <br>Daily operation schedule      | <br>Configurable weekly schedules | <br>Vacation mode                            | <br>Menu in English                                         |
| <br>Multilanguage menu                       | <br>Integrated temperature sensor         | <br>Weather operating modes (climate curve) | <br>2 heating control zones             | <br>Dedicated application         | <br>Disinfection                  | <br>DHW circulation pump operation schedules | <br>Maximum leaving water temperature of 60°C (in DHW mode) |
| <br>Prepared to create a cascade system      | <br>Modbus Protocol                       |                                                                                                                                |                                                                                                                            |                                                                                                                      |                                                                                                                        |                                                                                                                                   |                                                                                                                                                  |

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# Specification indoor unit

Model			AQS160X13i R14	
EAN Code			5905567602139	
Operation modes			Heating and cooling	
Leaving water temperature	Surface cooling	°C	5-25	
	Surface heating	°C	25-65	
	DHW (tank)	°C	30-60	
Power supply		V-Hz, Ø	220-240-50, 1f / 380-420-50, 3f	
Rated input / Operating current		W / A	9095 / 13,5	
Sound power level		dB(A)	43	
Electric heater	Power supply	V-Hz, Ø	220-240-50, 1f / 380-420-50, 3f	
	Number of heating stages / Power	pcs. / kW	3 / 9 (3 + 3 + 3)	
	Maximum running current	A	13,3	
Net dimensions		(WxDxH)	mm	
Gross dimensions			420 × 270 × 790	
Net weight / Gross weight			mm	
			525 × 360 × 1050	
			kg	
			39/45	
Water circuit	Water connections		inch	
	Pressure relief valve		MPa	
	Condensate drain		mm	
	Expansion tank	Total volume / Actual volume		l
		Maximum pressure / Initial pressure		MPa
	PHE / plate heat exchanger	Type		PHE / plate heat exchanger
		Minimum flow		l/min
	Water pump head		m	
	Water pump type			9
	Refrigerant circuit		Liquid / Gas	mm
			Φ9,52 (3/8") / Φ15,9 (5/8")	
Minimal wire pcs and dimension of cords*		pcs × mm <sup>2</sup>	5 × 2,5	
Control cables: indoor unit to outdoor unit		pcs × mm <sup>2</sup>	2 × 0,75 (shielded cable)	

# Specification outdoor unit

Minimum rated current of the overcurrent circuit breaker with breaker type			AQS100X1o R14
EAN Code			5905567602078
Power supply			220-240-50, 1f
Heating (A7W35)	Capacity	kW	10,00
	Rated input	kW	2,00
	COP		5,00
Heating (A7W45)	Capacity	kW	10,00
	Rated input	kW	2,63
	COP		3,80
Heating (A7W55)	Capacity	kW	9,50
	Rated input	kW	3,06
	COP		3,10
Cooling (A35W18)	Capacity	kW	10,00
	Rated input	kW	2,08
	EER		4,80
Cooling (A35W7)	Capacity	kW	8,20
	Rated input	kW	2,48
	EER		3,30
Seasonal energy efficiency LWT 35°C	SCOP <sup>(1)</sup>		5,19
	Rated heat output	kW	9,2
	Seasonal energy efficiency ratio (η <sub>S</sub> )	%	204,8
	Annual energy consumption	kWh	3644
Seasonal space heating energy efficiency class <sup>(1)</sup>			A+++
Seasonal energy efficiency LWT 55°C	SCOP <sup>(1)</sup>		3,49
	Rated heat output	kW	7,7
	Seasonal energy efficiency ratio (η <sub>S</sub> )	%	135,7
	Annual energy consumption	kWh	4567
Seasonal space heating energy efficiency class <sup>(1)</sup>			A++
SEER	LWT at 7°C		5,98
	LWT at 8°C		8,78
Minimum rated current of the overcurrent circuit breaker with breaker type			A
Compressor			Twin rotary inverter compressor DC
Fan	Type		Brushless DC motor / BLDC
	Quantity		1
Refrigerant	Type/ GWP		R32 / 675
	Charged (<15m)	kg	1,65
		TCO <sub>eq</sub>	
Pipe connections	Liquid / Gas	mm	Φ9,52 (3/8") / Φ15,9 (5/8")
	Minimum installation length	m	2
	Maximum installation length	m	30
Additional amount of refrigerant for over 15 linear meters		g/m	38
Maximum height difference	Outdoor unit above the indoor unit	m	20
	Outdoor unit below the indoor unit	m	20
Minimal wire pcs and dimension of cords*		pcs × mm <sup>2</sup>	3 × 4
Control cables: indoor unit to outdoor unit		pcs × mm <sup>2</sup>	2 × 0,75 (shielded cable)
Bracket spacing		(WxD)	656x456
Sound pressure level		dB(A)	49
Sound power level		dB(A)	60
Net dimensions		(WxDxH)	mm
Gross dimensions		(WxDxH)	mm
			1118×523×865
Net weight/Gross weight		kg	75/86
Operating outdoor temperature	Cooling	°C	-5-43
	Heating	°C	-25-35
	DHW	°C	-25-43

1. Seasonal energy efficiency class measured under average climate conditions.

Notes:  
DHW – Domestic hot water  
LWT – Leaving water temperature

The sound pressure level is measured 1m in front of the unit and (1+H)/2m (where H is the height of the unit) above the floor in semi-anechoic room. During on-site operation sound pressure levels can be higher as a result of ambient noise. Sound pressure level and sound power level reflect the maximum value tested under three conditions specified respectively in notes A7W35, ΔT=5; A7W45, ΔT=5; A7W55, ΔT=8; relative humidity 85%. The figures specified above refer to the following standards: EN14511; EN14825; EN50564; EN12102; (EU) Np. 811/2013; (EU) No. 813/2013; Journal of Laws 2014 / C 207/02: 2014.

The residual current circuit breaker used to protect the electrical circuit of the appliance shall be selected in view of the electrical regulations in force, assuming that the rated residual current is not greater than I<sub>Δn</sub>: 30mA

\*The above values apply to supply cables with a maximum length of 20mb. If this value is exceeded, an electrical designer should be consulted.