



NEW



* Units Series

Type

IR	chiller
IW	water side reversible chiller
IP	reversible heat pump
BR	chiller brine
BW	water side reversible chiller brine
BP	reversible heat pump brine

Available version

VB	Basic
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Available configuration

AB	Basic
AS	Low noise
AX	eXtra Low noise

* VB unit specifications

RGW units are industrial chillers and heat pumps using R410A ecological gas, designed to meet the requirements of the global markets for medium/small capacity systems in the commercial sectors.

Compact and highly configurable units, they are built to adapt to the various types of systems and to meet the requirements of highly qualified designers.

When developing the range special attention has been paid to the choice of heat exchangers in order to obtain high efficiencies at full loads and partial loads to maximise the seasonal efficiency rating (ESEER) and therefore reduce consumption and running costs.

Attention has also been paid to the problems of noise in order to comply with increasingly strict laws on noise pollution: therefore, on request it is possible to choose from the Basic Version (AB),

Low noise Version (AS), featuring the application soundproofing jackets on the compressors, and the Extra Low noise Version (AX), for a further considerable reduction in unit noise thanks to the use of soundproofing materials.

A wide range of accessories completes the commercial offer. These include pumping modules with 1 or 2 pumps available with standard or high head with a maximum of 4 pumps: 2 on system side and 2 on source side.

The electronic controller can manage the various condensation control systems of the numerous applications required, enabling the control of 2-way or 3-way modulating valves (also offered as accessories) or the control of pumps under INVERTER. The units can therefore be combined with liquid coolers (dry-coolers), cooling towers, geothermal boreholes or used for water cooling (e.g. water system, well, stratum).

All the units are carefully built in compliance with the current regulations and individually tested. Installation therefore only requires the electrical and hydraulic connections.

Cooling only unit (IR)

■ COMPRESSOR: no. 2 SCROLL type, mounted on rubber vibration-mounting supports, complete with high and low pressure switch.

■ IR REFRIGERANT CIRCUIT, complete with liquid/humidity indicator, thermostatic expansion valve, gas safety valve and dehydrator filter.

■ IP REFRIGERANT CIRCUIT integrated with one-way valves and 4-way reversing valve.

■ PLANT SIDE HEAT EXCHANGER:

braze-welded plate-type in stainless steel (AISI 316), complete with thermal insulation shell and differential pressure switch.

■ SOURCE SIDE EXCHANGER (unit IR): braze-welded plate-type in stainless steel (AISI 316)

■ SOURCE SIDE EXCHANGER (unit IW): braze-welded plate-type in stainless steel (AISI 316), complete with thermal insulation shell

■ SOURCE SIDE HEAT EXCHANGER (unit IP): braze-welded plate-type in stainless steel (AISI 316), complete with thermal insulation shell and differential pressure switch.

■ ELECTRICAL PANEL: for power and control complete with door lock main disconnecting switch, microprocessor controller with keyboard-display, and sequence meter (standard).

* Main accessories/Options

Electronic expansion valve

Pumping Modules

- 1 or 2 pumps on source side
- 1 or 2 pumps on system side
- standard or high head pumps

Plate-type exchangers antifreeze heaters

Paddle flowswitch

Water filter

Remote Control repeats the functions of the control system (max. 100 m)

Voltage monitor and sequence meter

Compressor Soft-starter

Compressor retiming condensers

Compressor thermal magnetic switches

Outdoor installation

2-way valve for condensation control

3-way valve for condensation control

Common Data	70.2	80.2	90.2	105.2	120.2	135.2	150.2	170.2	190.2	215.2	240.2	
Supply	400V - 3ph - 50Hz											V-ph-Hz
Quantity-type compressor - n° circ - part load	2 - SCROLL - 1 - 0/50/100%											-
Quantity-type heat exchanged plant side	1 - of brazed stainless steel plates											-
Water content heat exchanged plant side	4	4	5	5	6	7	7	9	10	11	13	l
Water connection IN/OUT heat exchanged plant side	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	
Quantity-type heat exchanged source side	1 - of brazed stainless steel plates											n°- mm- rpm
Water content heat exchanged source side	4	4	5	5	6	7	7	9	10	11	13	l
Water connection IN/OUT heat exchanged source side	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	DN65	"
F.L.A. Full Load Ampere	45	51	62	68	74	82	90	105	120	142	164	A

Cooling Only (IR)

	70.2	80.2	90.2	105.2	120.2	135.2	150.2	170.2	190.2	215.2	240.2	
Cooling capacity (E)	70,0	79,0	92,0	105	118	133	148	170	192	216	240	kW
Total power input	15,0	16,8	20,3	23,3	26,3	29,8	33,3	37,8	42,3	48,4	54,5	kW
EER (E)	4,67	4,70	4,53	4,51	4,49	4,46	4,44	4,50	4,54	4,46	4,40	-
ESEER (E)	6,07	6,16	6,00	5,87	5,94	5,81	5,86	5,95	5,90	5,91	5,74	-
Water flow rate source side	3,34	3,77	4,40	5,02	5,64	6,35	7,07	8,12	9,17	10,32	11,47	l/s
Water pressure drop source side (E)	47	38	40	41	44	42	45	46	48	48	49	kPa
Available static head source side	-	-	-	-	-	-	-	-	-	-	-	kPa
Water flow rate plant side	4,03	4,54	5,32	6,07	6,83	7,71	8,58	9,84	11,1	12,5	13,9	l/s
Water pressure drop plant side (E)	68	55	59	60	65	62	66	67	70	71	72	kPa
Available static head plant side	-	-	-	-	-	-	-	-	-	-	-	kPa

Water side reversible heat pump (IW)

	70.2	80.2	90.2	105.2	120.2	135.2	150.2	170.2	190.2	215.2	240.2	
Cooling capacity (E)	70,0	79,0	92,0	105	118	133	148	170	192	216	240	kW
Total power input	15,0	16,8	20,3	23,3	26,3	29,8	33,3	37,8	42,3	48,4	54,5	kW
EER (E)	4,67	4,70	4,53	4,51	4,49	4,46	4,44	4,50	4,54	4,46	4,40	-
ESEER (E)	6,07	6,16	6,00	5,87	5,94	5,81	5,86	5,95	5,90	5,91	5,74	-
Water flow rate source side	3,34	3,77	4,40	5,02	5,64	6,35	7,07	8,12	9,17	10,3	11,5	l/s
Water pressure drop source side (E)	47	38	40	41	44	42	45	46	48	48	49	kPa
Available static head source side	-	-	-	-	-	-	-	-	-	-	-	kPa
Water flow rate plant side	4,03	4,54	5,32	6,07	6,83	7,71	8,58	9,84	11,1	12,5	13,9	l/s
Water pressure drop plant side (E)	68	55	59	60	65	62	66	67	70	71	72	kPa
Available static head plant side	-	-	-	-	-	-	-	-	-	-	-	kPa
Heating capacity (E)	78,0	87,0	103	117	131	148	165	189	213	240	268	kW
Total power input	19,0	21,0	25,2	28,7	32,2	36,4	40,7	46,3	51,9	58,6	65,4	kW
COP (E)	4,11	4,14	4,09	4,08	4,07	4,07	4,05	4,08	4,10	4,10	4,10	-
Water flow rate source side	3,73	4,16	4,92	5,59	6,26	7,07	7,88	9,03	10,18	11,47	12,80	l/s
Water pressure drop source side (E)	58	46	50	51	54	52	56	57	59	59	61	kPa
Available static head source side	-	-	-	-	-	-	-	-	-	-	-	kPa
Water flow rate plant side	3,34	3,77	4,40	5,02	5,64	6,35	7,07	8,12	9,17	10,32	11,47	l/s
Water pressure drop plant side (E)	47	38	40	41	44	42	45	46	48	48	49	kPa
Available static head plant side	-	-	-	-	-	-	-	-	-	-	-	kPa

NOTES:
 Cooling capacity values measured with plant side water 12/7°C - source side 30/35°C
 Heating capacity values measured with plant side water 40/45°C - source side 10°C water flow rate as conditioning.
 (E): Declared data according to the certification programme LCP EUROVENT
 ESEER : European seasonal efficiency rating in cooling.

Reversible heat pump (IP)

	70.2	80.2	90.2	105.2	120.2	135.2	150.2	170.2	190.2	215.2	240.2	
Cooling capacity (E)	68,6	77,4	90,2	103	116	130	145	167	188	212	235	kW
Total power input	14,9	16,6	20,1	23,1	26,0	29,5	33,0	37,4	41,9	47,9	54,0	kW
EER (E)	4,62	4,65	4,49	4,46	4,44	4,42	4,40	4,45	4,49	4,42	4,36	-
ESEER (E)	6,01	6,10	5,94	5,81	5,88	5,75	5,80	5,89	5,84	5,85	5,68	-
Water flow rate source side	3,28	3,70	4,31	4,92	5,53	6,23	6,93	7,96	8,99	10,1	11,2	l/s
Water pressure drop source side (E)	45	36	38	39	42	40	43	44	46	46	47	kPa
Available static head source side	-	-	-	-	-	-	-	-	-	-	-	kPa
Water flow rate plant side	3,95	4,45	5,22	5,96	6,71	7,57	8,43	9,66	10,9	12,3	13,7	l/s
Water pressure drop plant side (E)	66	53	56	58	62	60	64	65	68	68	70	kPa
Available static head plant side	-	-	-	-	-	-	-	-	-	-	-	kPa
Heating capacity (E)	77,0	86,0	102	116	130	147	164	187	211	238	265	kW
Total power input	19,1	21,1	25,3	28,9	32,4	36,6	41,0	46,5	52,0	59,0	65,9	kW
COP (E)	4,03	4,08	4,03	4,01	4,00	4,00	4,00	4,02	4,06	4,03	4,03	-
Water flow rate source side	3,68	4,11	4,87	5,53	6,20	7,00	7,84	8,94	10,1	11,4	12,7	l/s
Water pressure drop source side (E)	57	45	49	50	53	51	55	56	58	58	60	kPa
Available static head source side	-	-	-	-	-	-	-	-	-	-	-	kPa
Water flow rate plant side	3,95	4,45	5,22	5,96	6,71	7,57	8,43	9,66	10,9	12,3	13,7	l/s
Water pressure drop plant side (E)	66	53	56	58	62	60	64	65	68	68	70	kPa
Available static head plant side	-	-	-	-	-	-	-	-	-	-	-	kPa

NOTES:
 Cooling capacity values measured with plant side water 12/7°C - source side 30/35°C
 Heating capacity values measured with plant side water 40/45°C - source side 10°C water flow rate as conditioning.
 (E): Declared data according to the certification programme LCP EUROVENT
 ESEER : European seasonal efficiency rating in cooling.

Operation limits	Unit type	Cooling		Heating		
		min	max	min	max	
Leaving source water temperature	IR, IW, IP, BR, BP	20 (5*)	50	10	25	(°C)
Leaving plant water temperature	IR, IW, IP	5	20	25	55	(°C)
Leaving plant water temperature	BR, BP	-8	5	25	55	(°C)

* with accessories DCC condensation control device

Basic Configuration (AB)

	70.2	80.2	90.2	105.2	120.2	135.2	150.2	170.2	190.2	215.2	240.2	
SWL (E)	75	76	77	77	77	78	78	79	79	80	80	dB(A)
SPL 1 m	59	60	61	61	61	62	62	63	63	64	64	dB(A)
SPL 5 m	49	50	51	51	51	52	52	53	53	54	54	dB(A)
SPL 10 m	44	45	46	46	46	47	47	48	48	49	49	dB(A)

Low noise Configuration (AS)

	70.2	80.2	90.2	105.2	120.2	135.2	150.2	170.2	190.2	215.2	240.2	
SWL (E)	71	72	73	73	73	74	74	75	75	76	76	dB(A)
SPL 1 m	55	56	57	57	57	58	58	59	59	60	60	dB(A)
SPL 5 m	45	46	47	47	47	48	48	49	49	50	50	dB(A)
SPL 10 m	40	41	42	42	42	43	43	44	44	45	45	dB(A)

eXtra low noise Configuration (AX)

	70.2	80.2	90.2	105.2	120.2	135.2	150.2	170.2	190.2	215.2	240.2	
SWL (E)	67	68	69	69	69	70	70	71	71	72	72	dB(A)
SPL 1 m	51	52	53	53	53	54	54	55	55	56	56	dB(A)
SPL 5 m	41	42	43	43	43	44	44	45	45	46	46	dB(A)
SPL 10 m	36	37	38	38	38	39	39	40	40	41	41	dB(A)

NOTE:
 SWL Sound power levels, with reference to 1×10^{-12} W in dB(A) measured in compliance with ISO 9614 standards, is certified according to the Eurovent certification program. Eurovent certification (E) exclusively refers to the Total Sound Power in dB(A), which is therefore the only binding acoustic specification.
 SPL Sound pressure levels, with reference to 2×10^{-5} Pa calculated by applying the ISO-3744 relation (Eurovent 8/1) and refer to a distance of 1/5/10 meter away from the external surface of units operating in standard condition (ambient air T=35°C, water 12/7°C) in cooling mode, in open field with directivity factor 2.

USER INTERFACING

The controller on the unit is designed to ensure energy-saving and efficiency. It enables the setting of:

- Double Set Point
- Heating in integration



Dimensions and minimum operating space

