



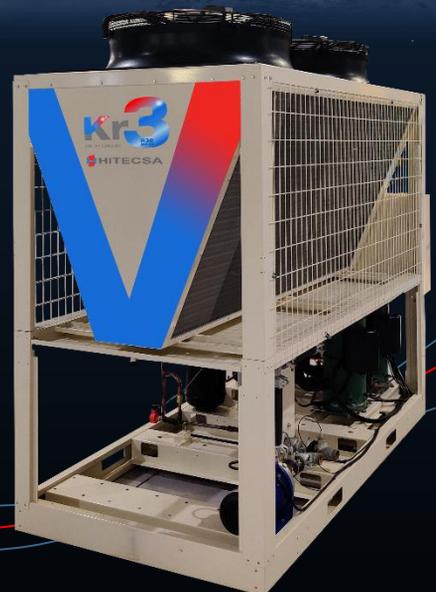
Kr3

CHILLER SERIES BY
 HITECSA

R32
SERIES

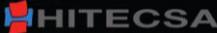
Efficiency in its purest state

*A new generation of
Chillers and Heat Pumps:
more efficient, ecological and sustainable*





Kr3

CHILLER SERIES BY
HITECSA

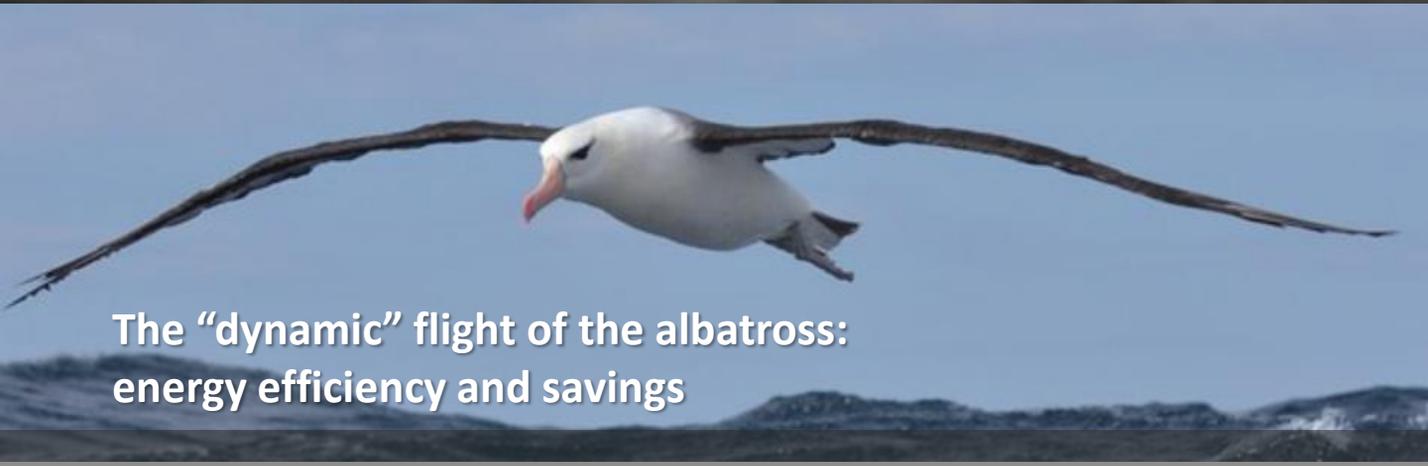
R32
SERIES



The new R-32 series by Hitecsa reflect our constant commitment to innovation and research, with the clear aim of contributing to minimizing the environmental impact, achieving significant improvements in efficiency and increasing comfort and well-being.

*As a result, the new range of **Chillers and Heat Pumps Kr3, R-32 SERIES**, represents a step forward in climate control with hydronic systems.*

Discover the major benefits of this range, “dynamic” and flexible, which uses water as a heat-carrying fluid and an ecological refrigerant to achieve the highest levels of efficiency.



The “dynamic” flight of the albatross: energy efficiency and savings

Soaring birds can remain in the air for a long time with the minimum effort, and the albatross is a clear example of it. Its secret lies both in its anatomy and its flight technique.

Thanks to its long but narrow wings it can glide through the air during a long time, wasting very little energy, since it does not need to flap them because of a “shoulder blockage” by a special tendon which locks them when they are fully extended.

Besides, this long-distance traveler is known for practicing a flight technique known as “dynamic soaring”, which uses the gradient of the wind speed that exists on the surface of the ocean. Taking advantage of the rising currents flowing over the waves, it can soar to a higher altitude and fly for a longer time, thus covering long distances effortlessly.

DID YOU KNOW THAT... The albatross is known for being able to fly thousands of miles in a short period of time, with such a little effort that it can make a complete turn of the Earth in just over a month.



New range Kr3, R-32 SERIES: more efficient, more sustainable



In compliance with Ecodesign ErP 2021.

The new family of Water to Air Chillers Kr3 represents a step forward in climate control with hydronic systems.

By incorporating R-32 refrigerant, with a very low GWP and a lower refrigerant charge, they contribute to reducing the greenhouse effect.

The new Kr3 units, thanks to the integration of this pure and noble gas, together with the use of the most state-of-the-art control systems, have considerably improved their performances with regard to the previous models: higher efficiencies, wider operation limits and a better behavior in severe conditions, as well as higher reliability and durability.



Why R-32?

0%

IMPACT ON
OZONE

75%

LESS IMPACT
ON GWP

RECYCLABLE

100%

PURE

30%

LESS QUANTITY OF
REFRIGERANT

+

ENERGY
EFFICIENCY

R-32 is a HFC pure refrigerant gas, with a very low Global Warming Potential (GWP: 677), high efficiencies and a great power of refrigeration.

The complete transition will take place before the year 2030, but at Hitecsa it is our commitment to act in advance with the aim of always offering leading-edge HVAC solutions, environmentally friendly, with the best energy efficiencies and low GWP refrigerants.

The EU legislation has established that gases with a high GWP will gradually disappear. The European regulation EC 517/2014 states it is mandatory for all European countries to replace fluorinated gases (F gases) due to environmental reasons and pollution. They are being progressively replaced by R-32, with 0% impact on the ozone layer, higher energy efficiencies, 30% lower charge of refrigerant and 75% less impact on the global warming.



New range Kr3, R-32 series: for a more efficient and sustainable comfort



HIGHER ENERGY EFFICIENCY

R-32 is a more energy-efficient refrigerant gas in respect to the traditional ones.

R-32 allows to achieve a 13% heating capacity level and a 4% COP rate higher than R-410A. This means that with a lower charge, higher capacities and efficiencies can be obtained.

R-32 has a 2.9% cooling capacity level and a 6.4% EER rate higher than R-410A at standard conditions.

R-32 consumes less energy at very low outdoor temperatures.

R-32 allows to obtain A+++ class energy efficiency and it has A2L safety classification, which means very low flammability level and zero toxicity rate.

MAXIMUM ECONOMIC SAVINGS

With R-32, less quantity of refrigerant is needed (30% less than R-410A). Besides, its reduced tax cost, due to a lower GWP than other gases, together with the possibility of allowing direct recharges, make it a very economic refrigerant.

BETTER PERFORMANCE

With higher COP and EER rates than other HFC gases, R-32 has optimal thermodynamic properties and very high efficiencies, even at severe external conditions.





ENVIRONMENTALLY FRIENDLY

The lower GWP and its higher efficiency contribute reduce direct greenhouse effect, due to lower CO₂ emissions from the electricity production system.

The equipment and facilities carry less refrigerant fluid, so there are fewer emissions of this gas into the atmosphere.

It is an easier fluid to collect, recover and use in other mixes, which contributes to the circular economy.

MAXIMUM ECONOMIC SAVINGS

R-32 is a **more energy-efficient** refrigerant gas in respect to the traditional ones.

R-32 allows to achieve a 13% heating capacity level and a 4% COP rate higher than R-410A. This means that with a lower charge, **higher capacities and efficiencies** can be obtained.

The lower gas charge of the equipment, per unit of thermal power delivered, means a lower cost that multiplies the mentioned savings.

The greater energy efficiency of this gas has a direct impact on energy consumption, and therefore on the cost of electricity consumption.

As a **pure refrigerant**, equipment recharging operations and, consequently, maintenance and repair costs are reduced.

The increase that will occur in the demand for R-32 will lead to a consequent decrease in the price, while in the case of the aforementioned HFC, the trend will be the reverse.

R-32 vs R-410A

REFRIGERANT	GWP (AR5)	GWP vs R-410A	Cost Price €/kg	VAT (Spain) €/kg	Capacity vs R-410A	COP vs R-410A	EER vs R-410A	Gas Charge vs R-410A
R-410A	1924	-	-	31.31	-	-	-	-
R-32	677	-65%	-25%	10.13	131%	+ 3%	+ 6%	-30%



Kr3b

Heat Pump

Kr3

Cooling only



Scroll compressors in tandem, specially designed for heat pump applications, allowing wide operation limits.

Axial fans with EC motor and internal thermal protection; protection grids against accidents; proportional electronic device for the adjustment of the rotation speed of the fan (condensation control + evaporation control).



Casing: made of galvanized steel plate and coated with oven polymerized polyester resin (RAL 1013) which provides excellent resistance to corrosion and weather conditions.

Electric protection of all the main components by means of magnetothermic relays.

Electronic expansion valves.



New control system W-HiReg as standard.

With condensation and evaporation control by using a standard variator, for the complete management of all the components in order to reach the maximum efficiency in all the conditions, a total protection of the elements of the equipment and high capacity of communication.

Modbus as standard: ModBus RS485.

Webserver can be included as standard by means of a connector Ethernet.



- **Cooling capacities:** from 39.6 to 75.1 kW (Cabinet 1) from 84.3 to 120.2 (Cabinet 2) from 144.9 to 233.1 (Cabinet 3)
- **Heating capacities:** from 43.9 to 84.4 kW (Cabinet 1) from 95.1 to 135.7 kW (Cabinet 2) from 165.5 to 257.9 kW (Cabinet 3)
- 3 Cabinet sizes



MAIN BENEFITS

- **High efficiency** in accordance with the requirements established in the Regulations 813/2013 and 2281/2016 (Ecodesign, ErP Ready). according to ErP21.
- **Water as a heat-carrying fluid.**
- High performances in all conditions thanks to the **optimized design of every component.**
- **Asymmetrical tandem of scroll compressors** for a maximum partialisation.
- Integration of the **hydronic kit** for an easier installation.
- **Modbus as a standard feature.**
- **Flow switch as a standard feature.**
- **No vibrations** thanks to an internal damping structure for each compressor and installation with dampers in the base frame.
- **Easy and safe access to its internal parts** by means of hexagonal screws with riveted nut on the panels, the controller display can be accessed by a window and the electrical panel by a hinged door and a lock cover.



High capacity of remote communication and monitoring by **IoT system Connect Plus by HITECSA** which allows a permanent follow-up and register of the parameters and operating conditions, for an easier maintenance.

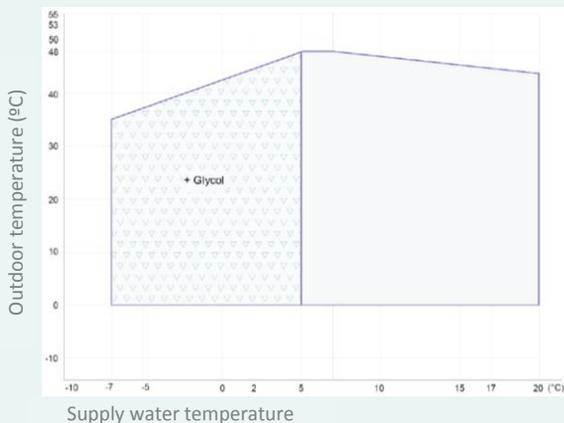
TECHNICAL SPECIFICATIONS – CABINET 1

MODELS		Kr3b-40	Kr3b-45	Kr3b-55	Kr3b-65	Kr3b-75
Outdoor temperature: 35°C. Inlet water temperature: 12°C. Outlet water temperature: 7°C.						
Cooling capacity	(kW)	39.6	48.6	58.8	66.8	75.1
TOTAL effective power	(kW)	13.6	16.7	18.9	21.7	25.0
Water flow	(m ³ /h)	6.8	8.3	10.1	11.4	12.9
Available static pressure	(KPa)	79	129	98	110	88
EER	-	2.92	2.91	3.10	3.08	3.00
SEER	-	4.10	4.11	4.17	4.20	4.17
ηs COOLING	(%)	166.2	166.1	170.5	170.2	170.0
Outdoor temperature: 7(6)°C. Inlet water temperature: 40°C. Outlet water temperature: 45°C.						
Heating capacity	(kW)	41.8	52.1	64.7	74.1	83.5
TOTAL effective power	(kW)	13.9	17.4	20.1	23.1	26.1
Water flow	(m ³ /h)	7.3	9.1	11.3	12.9	14.5
Available static pressure	(KPa)	75	128	95	93	73
COP	-	3.00	3.00	3.22	3.21	3.20
Outdoor temperature: 7(6)°C. Inlet water temperature: 30°C. Outlet water temperature: 35°C.						
Heating capacity	(kW)	43.9	53.7	65.2	74.2	84.4
TOTAL effective power	(kW)	11.8	14.3	17.0	19.3	22.2
Water flow	(m ³ /h)	7.6	9.3	11.3	12.9	14.6
Available static pressure	(KPa)	69	119	87	86	64
COP	-	3.71	3.77	3.83	3.85	3.80
SCOP	-	3.24	3.26	3.55	3.58	3.56
ηs HEATING	(%)	126.8	127.5	139.2	140.1	139.3
ELECTRICAL DATA						
Power supply	(V)	400/3/50 Without neutral				
Max. operating current	(A)	35	40	48	53	60
REFRIGERANT						
Number of circuits	-	1				
Refrigerant gas type	-	R-32				
Global Warming Potential(GWP)	-	677				
COMPRESSORS						
Type	-	SCROLL				
TOTAL number of compressors	-	2				
OUTDOOR FAN						
Type	-	AXIAL EC				
TOTAL number of fans	-	1		2		
Max. air flow	(m ³ /h)	25,000		36,000		40,000
WATER CIRCUIT						
Connection type	-	GROOVED – VICTAULIC TYPE				
Connection outer diameter	"	1 1/4"		1 1/2"		
DIMENSIONS AND WEIGHTS						
Length	(mm)	2,400				
Width	(mm)	1,150				
Height	(mm)	2,350		2,205		
Weight (without options)	(Kg)	689	694	725	730	730



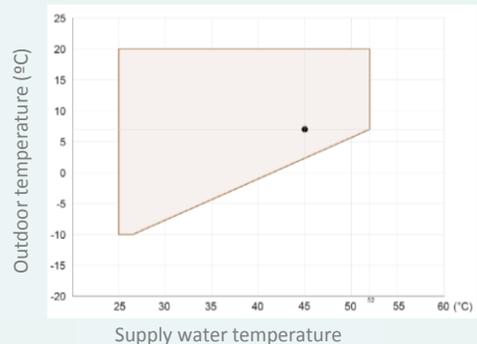
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COOLING MODE



WIDE OPERATION LIMITS

HEATING MODE



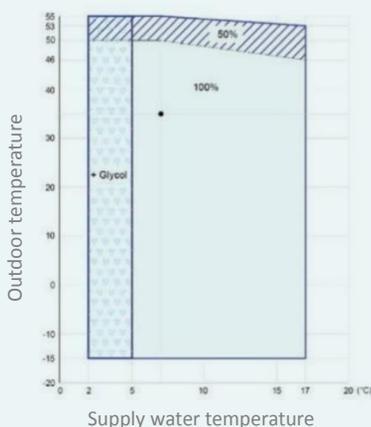
TECHNICAL SPECIFICATIONS – CABINET 2

MODELS		Kr3b-85	Kr3b-95	Kr3b-120
Outdoor temperature: 35°C. Inlet water temperature: 12°C. Outlet water temperature: 7°C.				
Cooling capacity	(kW)	84.3	99.0	120.2
TOTAL effective power	(kW)	28.0	33.8	41.5
Water flow	(m ³ /h)	14.5	17.0	20.6
Available static pressure	(KPa)	109	160	140
EER	-	3.01	2.93	2.90
SEER	-	4.27	4.25	4.23
ηs COOLING	(%)	167.9	167.1	166.2
Outdoor temperature: 7(6)°C. Inlet water temperature: 40°C. Outlet water temperature: 45°C.				
Heating capacity	(kW)	92.0	112.0	133.2
TOTAL effective power	(kW)	30.3	37.2	44.4
Water flow	(m ³ /h)	15.8	19.2	22.9
Available static pressure	(KPa)	96	144	104
COP	-	3.04	3.01	3.00
Outdoor temperature: 7(6)°C. Inlet water temperature: 30°C. Outlet water temperature: 35°C.				
Heating capacity	(kW)	95.1	115.6	135.7
TOTAL effective power	(kW)	25.4	31.1	36.7
Water flow	(m ³ /h)	16.4	19.9	23.4
Available static pressure	(KPa)	88	136	99
COP	-	3.74	3.72	3.70
SCOP	-	3.63	3.58	3.58
ηs HEATING	(%)	141.3	140.1	140.2
ELECTRICAL DATA				
Power supply	(V)	400/3/50 Without neutral		
Max. operating current	(A)	77	95	108
REFRIGERANT				
Number of circuits	-	1		
Refrigerant gas type	-	R-32		
Global Warming Potential(GWP)	-	677		
COMPRESSORS				
Type	-	SCROLL		
TOTAL number of compressors	-	2		
OUTDOOR FAN				
Type	-	AXIAL EC		
TOTAL number of fans	-	2		
Max. air flow	(m ³ /h)	50,000		58,000
WATER CIRCUIT				
Connection type	-	GROOVED – VICTAULIC TYPE		
Connection outer diameter	"	2"		
DIMENSIONS AND WEIGHTS				
Length	(mm)	2,840		
Width	(mm)	1,185		
Height	(mm)	2,530		
Weight (without options)	(Kg)	900	1,025	1,040



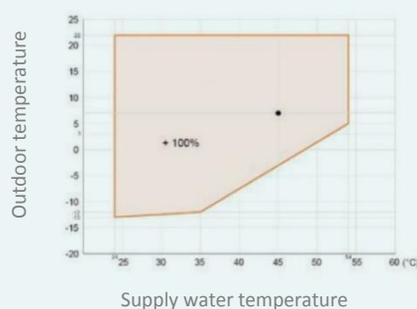
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COOLING MODE



WIDE OPERATION LIMITS

HEATING MODE



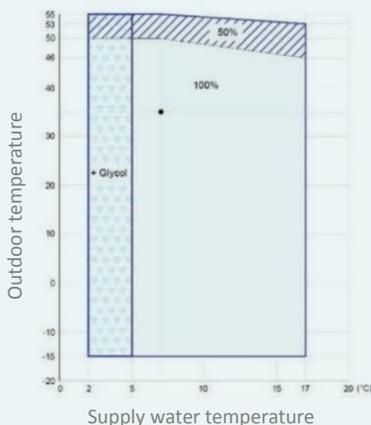
TECHNICAL SPECIFICATIONS – CABINET 3

MODELS		Kr3b-140	Kr3b-160	Kr3b-190	Kr3b-235
Temperatura Exterior: 35°C, Temperatura Entrada Agua: 12°C, Temperatura Salida Agua: 7°C.					
Cooling capacity	(kW)	144.9	161.0	187.8	233.1
TOTAL effective power	(kW)	49.9	55.2	64.2	80.4
Water flow	(m ³ /h)	24.9	27.6	32.2	40.0
Available static pressure	(KPa)	192	178	175	142
EER	-	2.90	2.91	2.92	2.90
SEER	-	4.88	4.53	4.45	3.63
ηs COOLING	(%)	192	178	175	142
Outdoor temperature: 7(6)°C. Inlet water temperature: 40°C. Outlet water temperature: 45°C.					
Heating capacity	(kW)	160.2	174.8	213.1	249.7
TOTAL effective power	(kW)	53.4	59.2	73.6	86.1
Water flow	(m ³ /h)	27.6	30.1	36.8	43.1
Available static pressure	(KPa)	175	162	157	127
COP	-	3.00	2.95	2.90	2.90
Outdoor temperature: 7(6)°C. Inlet water temperature: 30°C. Outlet water temperature: 35°C.					
Heating capacity	(kW)	165.5	180.8	220.9	257.9
TOTAL effective power	(kW)	45.4	49.9	62.4	75.0
Water flow	(m ³ /h)	28.6	31.2	38.1	44.5
Available static pressure	(KPa)	170	157	151	120
COP	-	3.64	3.62	3.54	3.44
SCOP	-	4.33	4.00	3.85	3.08
ηs HEATING	(%)	170	157	151	120
ELECTRICAL DATA					
Power supply	(V)	400/3/50 Without neutral			
Max. operating current	(A)	131	148	184	210
REFRIGERANT					
Number of circuits	-	2			
Refrigerant gas type	-	R-32			
Global Warming Potential(GWP)	-	677			
COMPRESSORS					
Type	-	SCROLL			
TOTAL number of compressors	-	2			
OUTDOOR FAN					
Type	-	AXIAL EC			
TOTAL number of fans	-	4			
Max. air flow	(m ³ /h)	100,000		116,000	
WATER CIRCUIT					
Connection type	-	GROOVED – VICTAULIC TYPE			
Connection outer diameter	"	3"			
DIMENSIONS AND WEIGHTS					
Length	(mm)	2,840			
Width	(mm)	2,250			
Height	(mm)	2,530			
Weight (without options)	(Kg)	1,800	1,850	1,930	1,980



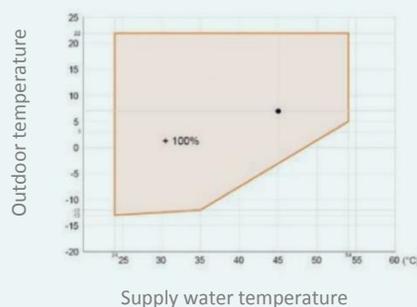
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COOLING MODE



WIDE OPERATION LIMITS

HEATING MODE



State-of-the-art control and connectivity systems, flexible and smart, for a safe and efficient comfort



NEW W-HiReg CONTROL WEBSERVER INTEGRATED

REMOTE CONTROL OF THE UNIT

- TEMPERATURE SETTINGS
- OPERATION MODE
- CIRCUITS
- FLOWS & PRESSURES
- TIME PROGRAMMING
- NOTIFICATIONS & ALARMS



The new *HITECSA* control system *W-HiReg* incorporates a *Web Server* application allowing to remotely manage the unit from a terminal (computer, Tablet, etc...) by means of an Ethernet connection.

Gama KRONO

Unit 1

Modulo: 11.12°C

Modulo: 13.58°C

Gama KRONO

Unit 2

Modulo: 11.12°C

Modulo: 13.58°C

Gama KRONO

Id	Nombre	Unidad	Valor	Unidad	Valor	Unidad	Valor	Unidad	Valor
1	Temperatura ambiente	°C	20.5	°C	20.5	°C	20.5	°C	20.5
2	Temperatura de agua fría	°C	11.12	°C	11.12	°C	11.12	°C	11.12
3	Temperatura de agua caliente	°C	13.58	°C	13.58	°C	13.58	°C	13.58
4	Temperatura de agua de retorno	°C	11.12	°C	11.12	°C	11.12	°C	11.12
5	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
6	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12
7	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
8	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12
9	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
10	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12
11	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
12	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12
13	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
14	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12
15	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
16	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12
17	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
18	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12
19	Temperatura de agua de salida	°C	13.58	°C	13.58	°C	13.58	°C	13.58
20	Temperatura de agua de entrada	°C	11.12	°C	11.12	°C	11.12	°C	11.12

Gama KRONO

23/09/20 Mié 10:02

SONDA REGULACION

15.7°C

Set: 11.1°C

Res: 100.0%

Estado unidad: ON



NEW IoT SYSTEM CONNECT PLUS BY HITECSA

REMOTE CONTROL OF THE INSTALLATION

- Units operation
- On/off
- Environmental conditions
- Temperature programming
- Diagnostics and alerts
- Consumptions control

WIDE RANGE OF ACCESSORIES AND OPTIONS



CONFIGURATION

- Partial heat recovery unit



MECHANICAL

- Anti-corrosion coils protection
- Coils protection grid
- Rubber-metal anti-vibration mounts
- Compressors acoustic jacket
- Super-silenced version



ENERGY

- Thermal power meter
- Energy consumption meter



HYDRAULIC

- Water filter
- Flow switch
- HAP water pump and variable speed
- Reserve water pump
- Hydronic kit (buffer tank + expansion tank)
- Electric heater in tank



CONTROL

- ModBus interface & BACnet TCP/IP
- PGD controller
- Compressors soft-starters
- Master/slave operation up to 6 units
- Leak detector

A CUSTOMIZED SERVICE IN HVAC

Tailor-made advice and support thanks to the large experience of HITECSA in HVAC installations and to the professional skills of its team with quick response times.

IN-HOUSE MANUFACTURE WITH THE BEST EUROPEAN STANDARDS


100%
EUROPEAN
MANUFACTURE



Production site - Vilanova i la Geltrú
(Barcelona - Spain)



Production site - Vilafranca del Penedès
(Barcelona - Spain)



From a specialist to a specialist



HIPLUS AIRE ACONDICIONADO S.L.



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