Technical Catalogue

NATURAL COOLING

R290 SEPR SEER

Air-Cooled Liquid Chillers for High & Medium Temperature Applications

CRIO - TETI - AURA

EUROKLIMAT
Cooling System Solutions

why R290?

CRIO air-cooled chillers offer you optimized natural solutions combining many advantages in a compact package.

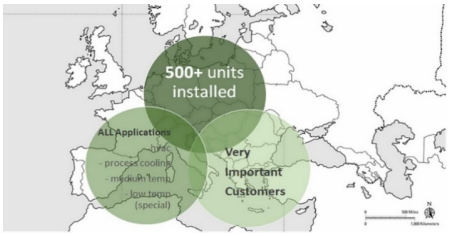
RELIABILITY

Propane's refrigerating properties has been well known since the early twentieth century.

Its low density and its thermodynamic characteristics allow a reduction in charge and relatively low working pressures.

Moreover it offers a very **wide range of applications**, so it can be used in refrigeration as well as in conditioning or heating of buildings.

Euroklimat has more than 12 years' experience with R290 chillers and more than 500 units installed throughout Europe for all applications

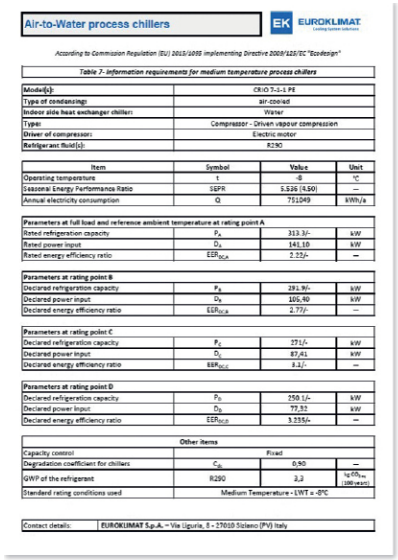


EFFICIENCY

All Models of the CRIO product range are **Eco- Design Ready**.

The EU Ecodesign Directive adopted in 2009 provides rules for improving the environmental performance of products by setting out minimum energy efficiency mandatory requirements for specific product groups.

The CRIO portfolio is additionally divided between "BUSINESS", "HIGH EFFICIENCY" and "HIGH EFFICIENCY +" solutions.



Air-to-Water process chillers

EUROKLIMAT

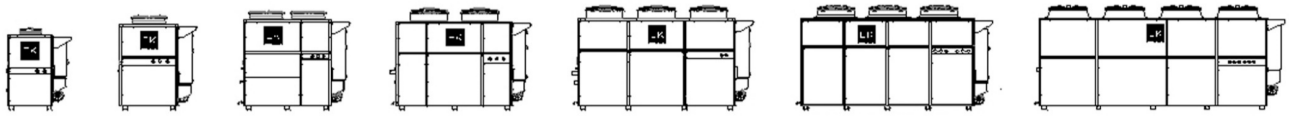
According to Commission Regulation (EU) 2015/1095 implementing Directive 2009/125/EC "Ecodesign"

Table 7- Information requirements for medium temperature process chillers

Model(s):	CRIO 7-1-1 PE
Type of condensing:	air-cooled
Indoor side heat exchanger chiller:	Water
Type:	Compressor - Driven vapour compression
Driver of compressor:	Electric motor
Refrigerant fluid(s):	R290

Item	Symbol	Value	Unit
Operating temperature	t	-8	°C
Seasonal Energy Performance Ratio	SEPR	5,536 (4,50)	–
Annual electricity consumption	Q	751049	kWh/a
Parameters at full load and reference ambient temperature at rating point A			
Rated refrigeration capacity	P_A	313,3/-	kW
Rated power input	D_A	141,10	kW
Rated energy efficiency ratio	EER_{DCA}	2,22/-	–
Parameters at rating point B			
Declared refrigeration capacity	P_B	291,9/-	kW
Declared power input	D_B	105,40	kW
Declared energy efficiency ratio	EER_{DCB}	2,77/-	–
Parameters at rating point C			
Declared refrigeration capacity	P_C	271/-	kW
Declared power input	D_C	87,41	kW
Declared energy efficiency ratio	EER_{DCC}	3,1/-	–
Parameters at rating point D			
Declared refrigeration capacity	P_D	250,1/-	kW
Declared power input	D_D	77,32	kW
Declared energy efficiency ratio	EER_{DCD}	3,235/-	–
Other items			
Capacity control		Fixed	
Degradation coefficient for chillers	C_{dc}	0,90	–
GWP of the refrigerant	R290	3,3	kg CO_{2eq} (100 years)
Standard rating conditions used		Medium Temperature - LWT = -8°C	

Contact details: EUROKLIMAT S.p.A. – Via Liguria, 8 - 37010 Sistano (PV) Italy



Propane Advantages

GREEN TECHNOLOGY

Hydrocarbons like propane, and natural refrigerants in general, are particularly suitable for installation in European countries, where the attention to environmental issues and the commitment to reduce CO2 emissions are constantly growing.

R290 is a long-term solution: thanks to its very Low GWP (GWP R290 = 3) it's suitable to be used up to 2030 without any restriction connected to F-Gas Regulation.

HIGH SAFETY

R290 (propane) is a nontoxic flammable refrigerant.

To ensure the **maximum level of safety**, an **Ex-rated Gas detector** is installed as a standard on all units. All CRIO models are designed and manufactured with the aim to ensure the containment of propane. In case of **R290 leakage the emergency fan** is activated, allowing the dilution of propane and conveying the air/propane mixture towards the air outlet, which can be obviously conveyed if necessary. Also the safety valve(s),when fitted, is (are) conveyed outside the unit. Additionally, the separate compartment of the electrical panel ensures very high safety levels.

PLUG&PLAY

CRIO products range provides an all-in-one solution thanks to the integrated **hydraulic module (optional)** which contains all the water circuit components needed for the system to operate correctly. A wide selection of hydraulic couplings is available to fit site configuration:

- Single or twin pump with automatic switchover
- Standard or high pressure pump(s)
- Victaulic couplings

The optimized foot-print reduce the use of the surface area for easy integration into an existing building. **Quick, easy and cost-effective installation and commissioning.**

CRIO

The natural solution for Medium Temperature applications

CRIO configurations

The below legend allows you to easily select the proper configuration of CRIO chiller.

CRIO BS A BP / ST / AS / EC / OO 110-3-1

Range
CRIO BS - Business
CRIO HE - High Efficiency
CRIO HE+ - High Efficiency+

Unit Type
A - Chiller Air/Water

Solution
BP - Base (brazed plate evaporator)
PP - Base with pump (brazed plate evaporator)
TP - Base with tank (brazed plate evaporator)
IP - Integrata (tank + pump / brazed plate evaporator)

Version
ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment
AS - Standard solution
DS - Desuperheater
HR - Total modulating Heat Recovery

Fans control
EC - EC Fan

Compressor
1S - 1 partial step compressor(s)
2S - 2 partial step compressor(s)
3S - 3 partial step compressor(s)
4S - 4 partial step compressor(s)
OI - ON-OFF compressor + VFD compressor
1I - 1 partial step compressor + VFD compressor
2I - 2 partial step compressor + VFD compressor
II - VFD compressor(s)

Size

Base-P MP 1-0 OO

Hydronic kit
Base-T - Base solution with tank
Base-P - Base solution with pump
Integrata - INTEGRATA solution with pump and tank

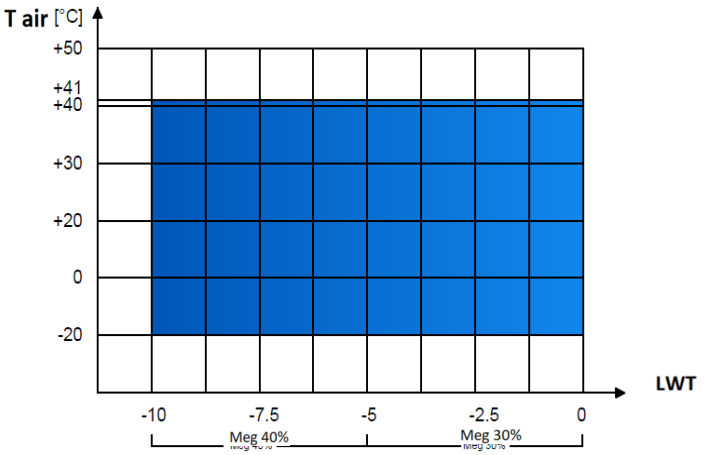
Pressure Head
LP - Low Pressure head (150 kPa)
MP - Medium Pressure head (300 kPa)
HP - High Pressure head (500 kPa)

Number of operating - stand-by pumps

Pump(s) control
OO - ON-OFF control
II - VFD control

CRIO operating limits

CRIO BS Cooling mode



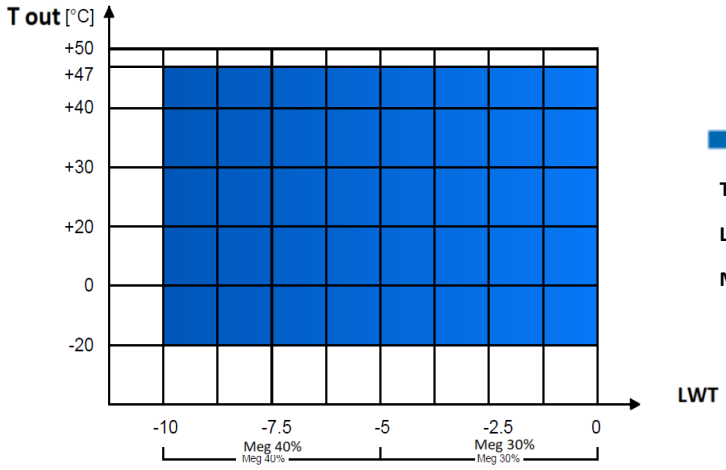
Operating area

T air: Outdoor air temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

CRIO HE / HE+ Cooling mode



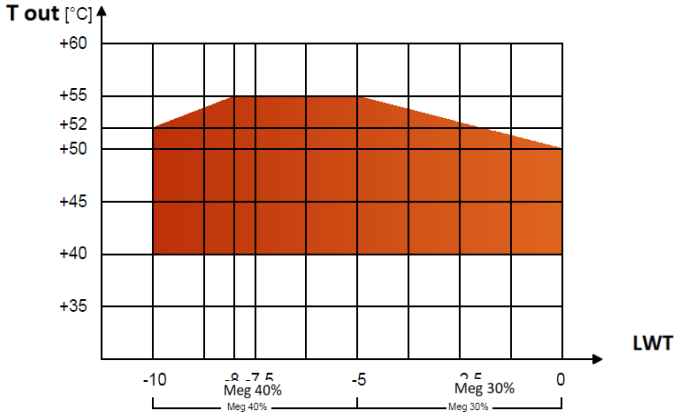
Operating area

T air: Outdoor air temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

CRIO BS / HE / HE+ Desuperheater and Heat recovery mode



Operating area

T out: Desuperheater / Heat recovery exchanger outlet water temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

CRIO BS

7-1-1 PE ⟷ 173-2-2 PE

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

Cu/Al Cu/Al condensing colils

SEPR

Air to water chillers for medium temperature applications

Standard efficiency

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 7 - 173 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 54-55-56-57*

CRIO BS

Technical data

CRIO BS R290 range		7-1-1 PE	9-1-1 PE	12-1-1 PE	17-1-1 PE	19-1-1 PE
COOLING - A BP/ST/AS/EC/*S version						
Cooling capacity [1]	**[kW]**	**6,9**	**8,8**	**12,3**	**17,1**	**19,4**
Total power input [1]	[kW]	3,7	4,4	6	7,8	9,5
EER - Energy Efficiency Ratio	-	**1,88**	**2,01**	**2,02**	**2,19**	**2,04**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	3,4	5,4	6	10,2	11,3
"Ecodesign'' compliance for process application (SEPR)	-	**2,85**	**3,16**	**2,96**	**3,26**	**3,18**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	0,9	1,4	1,6	2,6	2,9
Independent gas circuits	[n°]	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	1	1	1	1	1
Steps of capacity for each compressor (std)	-	1 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)
Condensing coils type	-	Cu/Al				
Fans type	-	Axial EC				
Fans quantity	[n°]	1	1	1	1	1
Fans power input [1] (total)	[kW]	0,5	0,5	0,5	0,7	0,8
Total air flow	[m^3/h]	4.300	6.300	6.300	11.900	12.500
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	1,7	2,1	3,0	4,1	4,7
Evaporator pressure drop [1]	[kPa]	28	22	23	27	26
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**						
Heating capacity [2]	**[kW]**	**1,7**	**2**	**2,8**	**3,6**	**4,3**
Water flow	[m^3/h]	0,30	0,34	0,48	0,61	0,74
Pressure drop (water side)	[kPa]	5,2	5,2	5,3	5,2	5,3
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**10,5**	**13,1**	**18,4**	**24,2**	**28,9**
Water flow	[m^3/h]	1,8	2,3	3,2	4,2	5,0
Pressure drop (water side)	[kPa]	17,9	13,8	24,8	25,7	25,6
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	7,0	8,7	12,5	14,1	16,6
Locked rotor current – LRA without pump	[A]	52,9	64,1	88,3	104,2	119,0
Maximum absorbed current - FLA without pump	[A]	12,7	14,8	21,6	23,5	30,6
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	30	30	30	60	60
Pump type	-	Centrifugal				
Standard pump - 150 kPa useful head						
Motor Efficiency	-	-	-	-	-	-
Pump motor nominal power	[kW]	0,37	0,37	0,37	0,55	0,55
Pump motor nominal current	[A]	1,4	1,4	1,4	1,9	1,9
Standard pump - 250 kPa useful head						
Motor Efficiency	-	-	-	IE3	IE3	IE3
Pump motor nominal power	[kW]	0,55	0,55	0,75	0,9	0,9
Pump motor nominal current	[A]	2	2	1,9	2,5	2,5
Water connections						
Dimension (nominal external diameter)	[inch/DN]	1/2" (DN15)	1/2" (DN15)	1" (DN 25)	1" (DN 25)	1" (DN 25)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	82	79	79	82	83
Total sound pressure (ST version) - at 1 m distance	[db(A)]	67	63	63	65	66
Total sound pressure (ST version) - at 10 m distance	[db(A)]	51	48	48	51	52
Total sound power (LN version)	[db(A)]	79	76	76	79	80
Total sound pressure (LN version) - at 1 m distance	[db(A)]	64	60	60	62	63
Total sound pressure (LN version) - at 10 m distance	[db(A)]	48	45	45	48	49
Total sound power (SL version)	[db(A)]	77	74	74	77	78
Total sound pressure (SL version) - at 1 m distance	[db(A)]	62	58	58	60	61
Total sound pressure (SL version) - at 10 m distance	[db(A)]	46	43	43	46	47

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethileneglycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = -4/-8°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO BS

Technical data

CRIO BS R290 range		23-1-1 PE	28-1-1 PE	33-1-1 PE	39-1-1 PE	48-1-1 PE
COOLING - A BP/ST/AS/EC/*S version						
Cooling capacity [1]	**[kW]**	**23,4**	**28**	**32,6**	**39,1**	**48,3**
Total power input [1]	[kW]	9,9	12,7	15,4	18,3	22,1
EER - Energy Efficiency Ratio	-	**2,36**	**2,20**	**2,11**	**2,14**	**2,18**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	13,3	14,2	17,7	19,9	25,3
"Ecodesign'' compliance for process application (SEPR)	-	**3,31**	**3,23**	**3,35**	**3,09**	**3,32**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	3,5	3,7	4,6	5,2	6,6
Independent gas circuits	[n°]	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	1	1	1	1	1
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (83%); 2 (67%); 3 (50%)	
Condensing coils type	-	Cu/Al				
Fans type	-	Axial EC				
Fans quantity	[n°]	1	1	2	2	2
Fans power input [1] (total)	[kW]	0,7	0,8	1,7	1,7	3
Total air flow	[m^3/h]	11.100	11.800	23.500	23.500	36.100
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	5,7	6,8	7,9	9,5	11,7
Evaporator pressure drop [1]	[kPa]	28	31	34	23	26
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**						
Heating capacity [2]	**[kW]**	**4,2**	**5,5**	**6,1**	**7,7**	**8,6**
Water flow	[m^3/h]	0,74	0,97	1,05	1,34	1,48
Pressure drop (water side)	[kPa]	5,3	5,3	5,4	5,5	5,5
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**33**	**40,8**	**47,3**	**57**	**68,3**
Water flow	[m^3/h]	5,7	7,0	8,1	9,8	11,7
Pressure drop (water side)	[kPa]	25,4	30,6	34,2	42,3	28,3
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	19,1	21,4	27,5	34,1	42,6
Locked rotor current – LRA without pump	[A]	138,1	204,6	228,2	243,0	282,3
Maximum absorbed current - FLA without pump	[A]	37,8	38,8	47,8	57,7	70,3
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	60	60	160	160	290
Pump type	-	Centrifugal				
Standard pump - 150 kPa useful head						
Motor Efficiency	-	-	IE3			
Pump motor nominal power	[kW]	0,55	0,9	0,9	0,9	1,1
Pump motor nominal current	[A]	1,9	2,5	2,5	2,5	3,3
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	1,5	1,5	1,5	1,5	2,2
Pump motor nominal current	[A]	4,1	4,1	4,1	4,1	4,7
Water connections						
Dimension (nominal external diameter)	[inch/DN]	1" (DN 25)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	84	84	87	88	87
Total sound pressure (ST version) - at 1 m distance	[db(A)]	67	67	70	71	69
Total sound pressure (ST version) - at 10 m distance	[db(A)]	53	53	56	57	56
Total sound power (LN version)	[db(A)]	81	81	84	85	84
Total sound pressure (LN version) - at 1 m distance	[db(A)]	64	64	67	68	66
Total sound pressure (LN version) - at 10 m distance	[db(A)]	50	50	53	54	53
Total sound power (SL version)	[db(A)]	79	79	82	83	82
Total sound pressure (SL version) - at 1 m distance	[db(A)]	62	62	65	66	64
Total sound pressure (SL version) - at 10 m distance	[db(A)]	48	48	51	52	51

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethileneglycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = -4/-8°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO BS

Technical data

CRIO BS R290 range		55-1-1 PE	38-2-2 PE	49-2-2 PE	58-2-2 PE
COOLING - A BP/ST/AS/EC/*S version					
Cooling capacity [(1)]	**[kW]**	**55,3**	**38,4**	**48,9**	**58**
Total power input [(1)]	[kW]	27,5	18,8	22,8	27,5
EER - Energy Efficiency Ratio	-	**2,01**	**2,04**	**2,15**	**2,11**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	26,1	20,4	26,3	28,3
"Ecodesign'' compliance for process application (SEPR)	-	**3,12**	**2,95**	**3,45**	**3,37**
REFRIGERANT CIRCUIT					
Refrigerant	-	R290			
GWP	-	3			
Charge of refrigerant - Base unit	[kg]	6,8	5,3	6,8	7,4
Independent gas circuits	[n°]	1	2	2	2
Compressors type	-	Semi-hermetic pistons			
Compressors quantity	[n°]	1	2	2	2
Steps of capacity for each compressor (std)	-	1 (83%); 2 (67%); 3 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)
Condensing coils type	-	Cu/Al			
Fans type	-	Axial Ec			
Fans quantity	[n°]	2	2	2	2
Fans power input [(1)] (total)	[kW]	3,8	1,6	3,3	4,2
Total air flow	[m^3/h]	39.000	24.100	36.200	39.800
Expansion valve type	-	Electronic			
Evaporator water flow [(1)]	[m^3/h]	13,4	9,3	11,9	14,1
Evaporator pressure drop [(1)]	[kPa]	28	24	25	24
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**					
Heating capacity [(2)]	**[kW]**	**11,4**	**9,6**	**8,5**	**10,6**
Water flow	[m^3/h]	1,99	1,65	1,47	1,83
Pressure drop (water side)	[kPa]	5,7	5,3	5,3	5,3
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**					
Heating capacity [(2)]	**[kW]**	**80,4**	**56,7**	**68,3**	**81,9**
Water flow	[m^3/h]	13,8	9,8	11,7	14,1
Pressure drop (water side)	[kPa]	29,4	19,4	26,9	36,9
Electrical data					
Power supply	-	400/3/50			
Emergency power supply	-	230/1/50			
Maximum power input without pump	[kW]	50,2	33,1	38,6	46,4
Locked rotor current – LRA without pump	[A]	330,7	149,6	220,0	248,9
Maximum absorbed current - FLA without pump	[A]	83,9	61,2	69,7	83,1
HYDRONIC KIT (option)					
Buffer tank capacity	[L]	290	160	160	160
Pump type	-	Centrifugal			
Standard pump - 150 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	1,1	0,9	1,1	1,1
Pump motor nominal current	[A]	3,3	2,5	3,3	3,3
Standard pump - 250 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	2,2	1,5	2,2	2,2
Pump motor nominal current	[A]	4,7	4,1	4,7	4,7
Water connections					
Dimension (nominal external diameter)	[inch/DN]	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	2" (DN 50)
Noise levels [(3)]					
Total sound power (ST version)	[db(A)]	87	87	86	86
Total sound pressure (ST version) - at 1 m distance	[db(A)]	69	70	69	69
Total sound pressure (ST version) - at 10 m distance	[db(A)]	56	56	56	56
Total sound power (LN version)	[db(A)]	84	84	83	83
Total sound pressure (LN version) - at 1 m distance	[db(A)]	66	67	66	66
Total sound pressure (LN version) - at 10 m distance	[db(A)]	53	53	53	53
Total sound power (SL version)	[db(A)]	82	82	81	81
Total sound pressure (SL version) - at 1 m distance	[db(A)]	64	65	64	64
Total sound pressure (SL version) - at 10 m distance	[db(A)]	51	51	51	51

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = -4/-8°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO BS

Technical data

CRIO BS R290 range		68-2-2 PE	79-2-2 PE	95-2-2 PE	108-2-2 PE
COOLING - A BP/ST/AS/EC/*S version					
Cooling capacity [(1)]	**[kW]**	**68,1**	**79,2**	**94,8**	**108**
Total power input [(1)]	[kW]	30,6	38,8	45,2	55,2
EER - Energy Efficiency Ratio	-	**2,23**	**2,04**	**2,10**	**1,96**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	36,3	38,1	47,8	49,6
"Ecodesign'' compliance for process application (SEPR)	-	**3,37**	**3,16**	**3,18**	**3,00**
REFRIGERANT CIRCUIT					
Refrigerant	-	R290			
GWP	-	3			
Charge of refrigerant - Base unit	[kg]	9,4	9,9	12,4	12,9
Independent gas circuits	[n°]	2	2	2	2
Compressors type	-	Semi-hermetic pistons			
Compressors quantity	[n°]	2	2	2	2
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)	1 (83%); 2 (67%); 3 (50%)		
Condensing coils type	-	Cu/Al			
Fans type	-	Axial Ec			
Fans quantity	[n°]	2	3	3	3
Fans power input [(1)] (total)	[kW]	4,1	5,9	5,8	6,5
Total air flow	[m^3/h]	36.500	57.800	52.700	55.400
Expansion valve type	-	Electronic			
Evaporator water flow [(1)]	[m^3/h]	16,5	19,2	23,0	26,2
Evaporator pressure drop [(1)]	[kPa]	25	33	36	39
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**					
Heating capacity [(2)]	**[kW]**	**11,7**	**15**	**17,7**	**24,3**
Water flow	[m^3/h]	2,03	2,60	3,14	4,19
Pressure drop (water side)	[kPa]	5,4	5,4	5,5	5,8
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**					
Heating capacity [(2)]	**[kW]**	**95,9**	**114**	**137**	**161**
Water flow	[m^3/h]	16,5	19,6	23,6	27,7
Pressure drop (water side)	[kPa]	31,3	29,4	32,9	36,1
Electrical data					
Power supply	-	400/3/50			
Emergency power supply	-	230/1/50			
Maximum power input without pump	[kW]	56,4	72,6	82,2	97,4
Locked rotor current – LRA without pump	[A]	277,7	307,1	348,0	410,0
Maximum absorbed current - FLA without pump	[A]	97,3	121,8	136,0	163,2
HYDRONIC KIT (option)					
Buffer tank capacity	[L]	160	290	290	290
Pump type	-	Centrifugal			
Standard pump - 150 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	2,2	2,2	2,2	2,2
Pump motor nominal current	[A]	4,7	4,7	4,7	4,7
Standard pump - 250 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	2,2	3	3	4
Pump motor nominal current	[A]	4,7	6,4	6,4	8,7
Water connections					
Dimension (nominal external diameter)	[inch/DN]	2" (DN 50)	2" (DN 50)	2"1/2 (DN 65)	2"1/2 (DN 65)
Noise levels [(3)]					
Total sound power (ST version)	[db(A)]	88	89	91	91
Total sound pressure (ST version) - at 1 m distance	[db(A)]	70	71	73	73
Total sound pressure (ST version) - at 10 m distance	[db(A)]	57	57	59	59
Total sound power (LN version)	[db(A)]	85	86	88	88
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	68	70	70
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	54	56	56
Total sound power (SL version)	[db(A)]	83	84	86	86
Total sound pressure (SL version) - at 1 m distance	[db(A)]	65	66	68	68
Total sound pressure (SL version) - at 10 m distance	[db(A)]	52	52	54	54

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = -4/-8°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO BS

Technical data

CRIO BS R290 range		126-2-2 PE	137-2-2 PE	157-2-2 PE	173-2-2 PE
COOLING - A BP/ST/AS/EC/*S version					
Cooling capacity [(1)]	**[kW]**	**126**	**137**	**157**	**173**
Total power input [(1)]	[kW]	63,8	70,3	74,6	82,1
EER - Energy Efficiency Ratio	-	**1,97**	**1,95**	**2,11**	**2,11**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	70,8	73,5	98,2	101,8
"Ecodesign'' compliance for process application (SEPR)	-	**2,70**	**2,68**	**2,83**	**2,80**
REFRIGERANT CIRCUIT					
Refrigerant	-	R290			
GWP	-	3			
Charge of refrigerant - Base unit	[kg]	18,4	19,1	25,5	26,5
Independent gas circuits	[n°]	2	2	2	2
Compressors type	-	Semi-hermetic pistons			
Compressors quantity	[n°]	2	2	2	2
Steps of capacity for each compressor (std)	-	2 (75%); 3 (62,5%); 4 (50%)			
Condensing coils type	-	Cu/Al			
Fans type	-	Axial EC			
Fans quantity	[n°]	3	3	4	4
Fans power input [(1)] (total)	[kW]	5,3	5,7	5,4	6,1
Total air flow	[m^3/h]	66.600	68.400	77.500	81.200
Expansion valve type	-	Electronic			
Evaporator water flow [(1)]	[m^3/h]	30,5	33,2	38,1	41,9
Evaporator pressure drop [(1)]	[kPa]	43	45	42	37
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**					
Heating capacity [(2)]	**[kW]**	**29,1**	**32,6**	**33,1**	**37**
Water flow	[m^3/h]	5,04	5,61	5,75	6,40
Pressure drop (water side)	[kPa]	6,0	6,2	15,0	16,0
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**					
Heating capacity [(2)]	**[kW]**	**186**	**205**	**228**	**250**
Water flow	[m^3/h]	32,0	35,3	39,2	43,0
Pressure drop (water side)	[kPa]	40	47,5	50,5	53,7
Electrical data					
Power supply	-	400/3/50			
Emergency power supply	-	230/1/50			
Maximum power input without pump	[kW]	92,0	111,2	113,5	119,1
Locked rotor current – LRA without pump	[A]	385,7	468,3	559,0	660,8
Maximum absorbed current - FLA without pump	[A]	161,4	188,6	189,4	207,0
HYDRONIC KIT (option)					
Buffer tank capacity	[L]	500	500	470	470
Pump type	-	Centrifugal			
Standard pump - 150 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	3	3	3	3
Pump motor nominal current	[A]	6,4	6,4	6,4	6,4
Standard pump - 250 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	4	4	5,5	5,5
Pump motor nominal current	[A]	8,7	8,7	10,6	10,6
Water connections					
Dimension (nominal external diameter)	[inch/DN]	3" (DN 80)	3" (DN 80)	3" (DN 80)	3" (DN 80)
Noise levels [(3)]					
Total sound power (ST version)	[db(A)]	90	94	95	95
Total sound pressure (ST version) - at 1 m distance	[db(A)]	71	75	76	76
Total sound pressure (ST version) - at 10 m distance	[db(A)]	58	62	63	63
Total sound power (LN version)	[db(A)]	87	91	92	92
Total sound pressure (LN version) - at 1 m distance	[db(A)]	68	72	73	73
Total sound pressure (LN version) - at 10 m distance	[db(A)]	55	59	60	60
Total sound power (SL version)	[db(A)]	85	89	90	90
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	70	71	71
Total sound pressure (SL version) - at 10 m distance	[db(A)]	53	57	58	58

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = -4/-8°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO BS

158-2-2 PV ⟷ 182-2-2 PV

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

MCX Microchannel condensing colils

SEPR

Air to water chillers for medium temperature applications

Standard efficiency

Solution

B - Base

I - Integrata

Version

ST - Standard

LN - Low Noise

SL - Super Low Noise

Equipment

AS - Standard equipment

DS - Desuperheater

HR - Total modulating Heat Recovery

Cooling capacity 158 - 182 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tube´s air shadow to provide maximum heat exchange through our condensers.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 54-55-56-57*

CRIO BS

Technical data

CRIO BS R290 range		158-2-2 PV	174-2-2 PV	182-2-2 PV
COOLING - A BP/ST/AS/EC/*S version				
Cooling capacity [1]	**[kW]**	**158**	**174**	**182**
Total power input [1]	[kW]	74,6	81,9	85,7
EER - Energy Efficiency Ratio	-	**2,12**	**2,12**	**2,12**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	64,6	69,5	69,5
"Ecodesign'' compliance for process application (SEPR)	-	**2,82**	**2,80**	**2,79**

REFRIGERANT CIRCUIT				
Refrigerant	-	R290		
GWP	-	3		
Charge of refrigerant - Base unit	[kg]	16,8	18,1	18,1
Independent gas circuits	[n°]	2	2	2
Compressors type	-	Semi-hermetic pistons		
Compressors quantity	[n°]	2	2	2
Steps of capacity for each compressor (std)	-	2 (75%); 3 (62,5%); 4 (50%)		
Condensing coils type	-	Microchannel		
Fans type	-	Axial EC		
Fans quantity	[n°]	4	4	4
Fans power input [1] (total)	[kW]	4,9	5,4	5,7
Total air flow	[m^3/h]	77.100	80.100	81.900
Expansion valve type	-	Electronic		
Evaporator water flow [1]	[m^3/h]	38,3	42,2	44,1
Evaporator pressure drop [1]	[kPa]	42	38	41

DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**				
Heating capacity [2]	**[kW]**	**32,7**	**36,1**	**38,4**
Water flow	[m^3/h]	5,66	6,24	6,66
Pressure drop (water side)	[kPa]	14,7	15,4	15,8

HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**				
Heating capacity [2]	**[kW]**	**228**	**250**	**263**
Water flow	[m^3/h]	39,2	43,0	45,2
Pressure drop (water side)	[kPa]	50,5	53,7	38,6

Electrical data				
Power supply	-	400/3/50		
Emergency power supply	-	230/1/50		
Maximum power input without pump	[kW]	113,5	119,1	127,3
Locked rotor current – LRA without pump	[A]	559,0	660,8	704,4
Maximum absorbed current - FLA without pump	[A]	189,4	207,0	222,2

HYDRONIC KIT (option)				
Buffer tank capacity	[L]	290	290	290
Pump type	-	Centrifugal		

Standard pump - 150 kPa useful head				
Motor Efficiency	-	IE3		
Pump motor nominal power	[kW]	3	3	3
Pump motor nominal current	[A]	6,4	6,4	6,4

Standard pump - 250 kPa useful head				
Motor Efficiency	-	IE3		
Pump motor nominal power	[kW]	5,5	5,5	5,5
Pump motor nominal current	[A]	10,6	10,6	10,6

Water connections				
Dimension (nominal external diameter)	[inch/DN]	3" (DN 80)	3" (DN 80)	3" (DN 80)

Noise levels [3]				
Total sound power (ST version)	[db(A)]	95	95	97
Total sound pressure (ST version) - at 1 m distance	[db(A)]	76	76	78
Total sound pressure (ST version) - at 10 m distance	[db(A)]	63	63	65
Total sound power (LN version)	[db(A)]	92	92	94
Total sound pressure (LN version) - at 1 m distance	[db(A)]	73	73	75
Total sound pressure (LN version) - at 10 m distance	[db(A)]	60	60	62
Total sound power (SL version)	[db(A)]	90	90	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	71	71	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	58	58	60

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = -4/-8°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO BS

Dimensions and weights

CRIO BS R290 range		7-1-1 PE	9-1-1 PE	12-1-1 PE	17-1-1 PE	19-1-1 PE	23-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	1230	1380	1380	1680	1680	1680
Width	[mm]	685	835	835	1025	1025	1025
Height (ST - LN)	[mm]	1405	1820	1820	2121	2121	2121
Height (SL)	[mm]	-	-	-	2208	2208	2208
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	190	300	300	410	420	440
Operating weight (A BP/ST/AS/EC/** version)	[kg]	195	305	305	415	425	445
DIMENSIONS - Large unit							
Lenght	[mm]	1730	1980	1980	2330	2330	2330
Width	[mm]	685	835	835	1025	1025	1025
Height (ST - LN)	[mm]	1405	1820	1820	2221	2221	2221
Height (SL)	[mm]	-	-	-	2308	2308	2308
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata LP 1-1 OO	-	Large	Large	Large	Large	Large	Large
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-1 OO	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Large	Large	Large

CRIO BS R290 range		28-1-1 PE	33-1-1 PE	39-1-1 PE	48-1-1 PE	55-1-1 PE	38-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	1680	2330	2330	2980	2980	2330
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2121	2221	2221	2300	2300	2221
Height (SL)	[mm]	2208	2308	2308	2360	2360	2308
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	510	660	630	830	840	700
Operating weight (A BP/ST/AS/EC/** version)	[kg]	515	665	635	837	847	705
DIMENSIONS - Large unit							
Lenght	[mm]	2330	2980	2980	3920	3920	2980
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2221	2221	2360	2360	2221
Height (SL)	[mm]	2308	2308	2308	2420	2420	2308
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Large
Integrata LP 1-1 OO	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Large
Integrata MP 1-1 OO	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard

CRIO BS

Dimensions and weights

CRIO BS R290 range		49-2-2 PE	58-2-2 PE	68-2-2 PE	79-2-2 PE	95-2-2 PE	108-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	2980	2980	2980	3920	3920	3920
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2300	2300	2300	2360	2360	2360
Height (SL)	[mm]	2360	2360	2360	2420	2420	2420
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	940	970	1000	1200	1260	1280
Operating weight (A BP/ST/AS/EC/** version)	[kg]	947	977	1007	1208	1268	1288
DIMENSIONS - Large unit							
Lenght	[mm]	3920	3920	3920	-	-	-
Width	[mm]	1025	1025	1025	-	-	-
Height (ST - LN)	[mm]	2360	2360	2360	-	-	-
Height (SL)	[mm]	2420	2420	2420	-	-	-
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard

CRIO BS R290 range		126-2-2 PE	137-2-2 PE	157-2-2 PE	173-2-2 PE	158-2-2 PV	174 & 182-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	4200	4200	5500	5500	3100	3100
Width	[mm]	1185	1185	1535	1535	2345	2345
Height (ST - LN)	[mm]	2320	2320	2350	2350	2465	2465
Height (SL)	[mm]	2380	2380	2410	2410	2525	2525
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	1630	1670	1700	1920	1925	1940
Operating weight (A BP/ST/AS/EC/** version)	[kg]	1640	1680	1710	1930	1940	1955
DIMENSIONS - Large unit							
Lenght	[mm]	5000	5000	Contact EK	Contact EK	4450	4450
Width	[mm]	1185	1185	Contact EK	Contact EK	2345	2345
Height (ST - LN)	[mm]	2320	2320	Contact EK	Contact EK	2465	2465
Height (SL)	[mm]	2380	2380	Contact EK	Contact EK	2525	2525
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Large	Large	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Large	Contact EK	Contact EK	Large	Large
Integrata LP 1-1 OO	-	Large	Large	Standard	Standard	Large	Large
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Contact EK	Contact EK	Large	Large
Integrata MP 1-0 OO	-	Large	Large	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Contact EK	Contact EK	Large	Large
Integrata MP 1-1 OO	-	Large	Large	Standard	Standard	Large	Large
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Contact EK	Contact EK	Large	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Contact EK	Contact EK	Large	Large

CRIO HE

10-1-1 PE ⟷ 116-2-2 PE

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

Cu/Al condensing colils

SEPR

Air to water chillers for medium temperature applications

High efficiency

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 10 - 116 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 54-55-56-57*

CRIO HE

Technical data

CRIO HE R290 range		10-1-1 PE	14-1-1 PE	17-1-1 PE	20-1-1 PE	24-1-1 PE	30-1-1 PE
COOLING - A BP/ST/AS/EC/*S version							
Cooling capacity [1]	**[kW]**	**9,6**	**13,8**	**17,3**	**20,4**	**24,1**	**30,2**
Total power input [1]	[kW]	4,2	5,9	7,6	9,9	10,4	12,4
EER - Energy Efficiency Ratio	-	**2,30**	**2,36**	**2,28**	**2,06**	**2,31**	**2,44**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	8,3	10,7	11,5	15,5	15,5	20,4
"Ecodesign'' compliance for process application (SEPR)	-	**3,59**	**3,41**	**3,60**	**3,49**	**3,61**	**3,91**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	2,2	2,8	3,0	4,0	4,0	5,3
Independent gas circuits	[n°]	1	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	1	1
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)					
Condensing coils type	-	Cu/Al					
Fans type	-	Axial EC					
Fans quantity	[n°]	1	1	1	2	2	2
Fans power input [1] (total)	[kW]	0,2	0,3	0,7	1,4	1	0,9
Total air flow	[m^3/h]	6.900	7.400	10.900	21.500	18.600	21.200
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	2,3	3,3	4,2	4,9	5,8	7,3
Evaporator pressure drop [1]	[kPa]	24	27	29	29	29	35
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**							
Heating capacity [2]	**[kW]**	**1,8**	**2,35**	**3,13**	**3,65**	**3,84**	**4,54**
Water flow	[m^3/h]	0,31	0,40	0,54	0,63	0,66	0,78
Pressure drop (water side)	[kPa]	5,1	5,2	5,2	5,2	5,2	5,2
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**13**	**18,2**	**23,8**	**28,6**	**32,6**	**40,3**
Water flow	[m^3/h]	2,2	3,1	4,1	4,9	5,6	6,9
Pressure drop (water side)	[kPa]	13,5	24,3	25,1	25,1	24,8	30
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	9,3	13,1	14,1	17,7	20,2	22,5
Locked rotor current – LRA without pump	[A]	65,0	89,2	104,2	120,9	140,0	206,5
Maximum absorbed current - FLA without pump	[A]	15,7	22,5	23,5	32,5	39,7	40,7
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	60	60	60	160	160	290
Pump type	-	Centrifugal					
Standard pump - 150 kPa useful head							
Motor Efficiency	-	-	-	-	-	-	IE3
Pump motor nominal power	[kW]	0,37	0,37	0,55	0,55	0,55	0,9
Pump motor nominal current	[A]	1,4	1,4	1,9	1,9	1,9	2,5
Standard pump - 250 kPa useful head							
Motor Efficiency	-	-	IE3	IE3	IE3	IE3	IE3
Pump motor nominal power	[kW]	0,55	0,75	0,9	0,9	1,5	1,5
Pump motor nominal current	[A]	2	1,9	2,5	2,5	4,1	4,1
Water connections							
Dimension (nominal external diameter)	[inch/DN]	1/2" (DN15)	1" (DN 25)	1" (DN 25)	1" (DN 25)	1" (DN 25)	1" 1/2 (DN 40)
Noise levels [3]							
Total sound power (ST version)	[db(A)]	73	76	79	82	82	81
Total sound pressure (ST version) - at 1 m distance	[db(A)]	56	59	62	65	65	63
Total sound pressure (ST version) - at 10 m distance	[db(A)]	43	45	48	51	51	50
Total sound power (LN version)	[db(A)]	70	73	76	79	79	78
Total sound pressure (LN version) - at 1 m distance	[db(A)]	53	56	59	62	62	60
Total sound pressure (LN version) - at 10 m distance	[db(A)]	40	42	45	48	48	47
Total sound power (SL version)	[db(A)]	68	71	74	77	77	76
Total sound pressure (SL version) - at 1 m distance	[db(A)]	51	54	57	60	60	58
Total sound pressure (SL version) - at 10 m distance	[db(A)]	38	40	43	46	46	45

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE

Technical data

CRIO HE R290 range		35-1-1 PE	41-1-1 PE	48-1-1 PE	56-1-1 PE	41-2-2 PE	48-2-2 PE
COOLING - A BP/ST/AS/EC/*S version							
Cooling capacity [1]	**[kW]**	**34,8**	**41,3**	**48,4**	**56,4**	**41,1**	**48**
Total power input [1]	[kW]	14,2	19,8	22,7	25	17,9	19,5
EER - Energy Efficiency Ratio	-	**2,46**	**2,08**	**2,13**	**2,25**	**2,30**	**2,46**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	23,5	24,5	29,4	39	32,9	39,4
"Ecodesign'' compliance for process application (SEPR)	-	**3,81**	**3,40**	**3,50**	**3,61**	**3,69**	**3,74**

REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	6,1	6,3	7,6	10,1	8,5	10,2
Independent gas circuits	[n°]	1	1	1	1	2	2
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	2	2
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)	1 (83%); 2 (67%); 3 (50%)			1 (75%); 2 (50%)	1 (75%); 2 (50%)
Condensing coils type	-	Cu/Al					
Fans type	-	Axial EC					
Fans quantity	[n°]	2	2	2	3	3	3
Fans power input [1] (total)	[kW]	1,6	4,2	3,8	2,4	1,3	1,1
Total air flow	[m^3/h]	26.200	40.150	35.500	36.000	30.900	27.150
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	8,4	10,0	11,7	13,7	10,0	11,6
Evaporator pressure drop [1]	[kPa]	18	20	26	29	19	25

DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**							
Heating capacity [2]	**[kW]**	**5,02**	**6,6**	**8,1**	**10,1**	**7,27**	**7,61**
Water flow	[m^3/h]	0,86	1,14	1,39	1,74	1,25	1,31
Pressure drop (water side)	[kPa]	5,3	5,3	5,4	5,6	5,2	5,2

HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**47,2**	**56,8**	**67,3**	**79,3**	**57,3**	**64,7**
Water flow	[m^3/h]	8,1	9,8	11,6	13,6	9,9	11,1
Pressure drop (water side)	[kPa]	34,1	42,1	27,6	28,7	19,8	24,4

Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	27,5	37,8	42,6	47,7	34,3	39,3
Locked rotor current – LRA without pump	[A]	228,2	248,5	282,3	327,1	151,5	177,8
Maximum absorbed current - FLA without pump	[A]	47,8	63,2	70,3	80,3	63,1	77,5

HYDRONIC KIT (option)							
Buffer tank capacity	[L]	290	290	290	290	290	290
Pump type	-	Centrifugal					

Standard pump - 150 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	0,9	0,9	1,1	1,1	1,1	1,1
Pump motor nominal current	[A]	2,5	2,5	3,3	3,3	3,3	3,3

Standard pump - 250 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	1,5	1,5	2,2	2,2	1,5	2,2
Pump motor nominal current	[A]	4,1	4,1	4,7	4,7	4,1	4,7

Water connections							
Dimension (nominal external diameter)	[inch/DN]	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	2" (DN 50)	1" 1/2 (DN 40)	1" 1/2 (DN 40)

Noise levels [3]							
Total sound power (ST version)	[db(A)]	84	86	87	86	83	84
Total sound pressure (ST version) - at 1 m distance	[db(A)]	66	68	69	68	65	66
Total sound pressure (ST version) - at 10 m distance	[db(A)]	53	55	56	54	51	52
Total sound power (LN version)	[db(A)]	81	83	84	83	80	81
Total sound pressure (LN version) - at 1 m distance	[db(A)]	63	65	66	65	62	63
Total sound pressure (LN version) - at 10 m distance	[db(A)]	50	52	53	51	48	49
Total sound power (SL version)	[db(A)]	79	81	82	81	78	79
Total sound pressure (SL version) - at 1 m distance	[db(A)]	61	63	64	63	60	61
Total sound pressure (SL version) - at 10 m distance	[db(A)]	48	50	51	49	46	47

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE

Technical data

CRIO HE R290 range		60-2-2 PE	70-2-2 PE	83-2-2 PE	97-2-2 PE	116-2-2 PE
COOLING - A BP/ST/AS/EC/*S version						
Cooling capacity [1]	**[kW]**	**60,1**	**70,4**	**83,2**	**97,2**	**116**
Total power input [1]	[kW]	24,9	31,4	35,3	43,5	49,5
EER - Energy Efficiency Ratio	-	**2,42**	**2,24**	**2,36**	**2,24**	**2,34**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	41,6	45,2	65,5	67,5	87,6
"Ecodesign'' compliance for process application (SEPR)	-	**3,94**	**3,65**	**3,58**	**3,56**	**3,70**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	10,8	11,7	17,0	17,5	22,8
Independent gas circuits	[n°]	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2	2	2	2	2
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (83%); 2 (67%); 3 (50%)		
Condensing coils type	-	Cu/Al				
Fans type	-	Axial EC				
Fans quantity	[n°]	3	3	3	3	4
Fans power input [1] (total)	[kW]	2,5	5,6	3,3	5,8	3,2
Total air flow	[m^3/h]	36.800	51.500	55.550	68.400	63.800
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	14,6	17,1	20,2	23,6	28,1
Evaporator pressure drop [1]	[kPa]	26	26	29	32	37
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**						
Heating capacity [2]	**[kW]**	**8,99**	**10,1**	**13,3**	**16,2**	**20,5**
Water flow	[m^3/h]	1,55	1,74	2,29	2,79	3,53
Pressure drop (water side)	[kPa]	5,2	5,3	5,3	5,4	5,6
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**81**	**94,5**	**114**	**136**	**160**
Water flow	[m^3/h]	13,9	16,3	19,6	23,4	27,5
Pressure drop (water side)	[kPa]	36,1	30,5	29,2	27,2	35,7
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	43,9	59,4	72,6	82,2	100,5
Locked rotor current – LRA without pump	[A]	245,3	282,4	307,1	348,0	414,6
Maximum absorbed current - FLA without pump	[A]	79,5	102,0	121,8	136,0	167,8
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	290	500	500	470
Pump type	-	Centrifugal				
Standard pump - 150 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	1,1	2,2	2,2	2,2	2,2
Pump motor nominal current	[A]	3,3	4,7	4,7	4,7	4,7
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	2,2	3	3	4	4
Pump motor nominal current	[A]	4,7	6,4	6,4	8,7	8,7
Water connections						
Dimension (nominal external diameter)	[inch/DN]	2" (DN 50)	2" (DN 50)	2" (DN 50)	2"1/2 (DN 65)	2"1/2 (DN 65)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	85	88	88	90	89
Total sound pressure (ST version) - at 1 m distance	[db(A)]	67	70	69	71	70
Total sound pressure (ST version) - at 10 m distance	[db(A)]	53	56	56	58	57
Total sound power (LN version)	[db(A)]	82	85	85	87	86
Total sound pressure (LN version) - at 1 m distance	[db(A)]	64	67	66	68	67
Total sound pressure (LN version) - at 10 m distance	[db(A)]	50	53	53	55	54
Total sound power (SL version)	[db(A)]	80	83	83	85	84
Total sound pressure (SL version) - at 1 m distance	[db(A)]	62	65	64	66	65
Total sound pressure (SL version) - at 10 m distance	[db(A)]	48	51	51	53	52

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE

130-2-2 PV ⟷ 185-2-2 PV

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

MCX Microchannel condensing colils

SEPR

Air to water chillers for medium temperature applications

High efficiency

Solution

B - Base

I - Integrata

Version

ST - Standard

LN - Low Noise

SL - Super Low Noise

Equipment

AS - Standard equipment

DS - Desuperheater

HR - Total modulating Heat Recovery

Cooling capacity 130 - 185 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tube´s air shadow to provide maximum heat exchange through our condensers.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 54-55-56-57*

CRIO HE

Technical data

CRIO HE R290 range		130-2-2 PV	142-2-2 PV	161-2-2 PV	175-2-2 PV	185-2-2 PV
COOLING - A BP/ST/AS/EC/*S version						
Cooling capacity [1]	**[kW]**	**130**	**142**	**161**	**175**	**185**
Total power input [1]	[kW]	61,8	67,7	73,3	80,5	85
EER - Energy Efficiency Ratio	-	**2,10**	**2,10**	**2,20**	**2,17**	**2,18**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	55,8	61,1	77	77,9	81,4
"Ecodesign'' compliance for process application (SEPR)	-	**2,99**	**3,02**	**3,08**	**3,05**	**3,07**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	14,5	15,9	20,0	20,2	21,2
Independent gas circuits	[n°]	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2	2	2	2	2
Steps of capacity for each compressor (std)	-	2 (75%); 3 (62,5%); 4 (50%)				
Condensing coils type	-	Microchannel				
Fans type	-	Axial EC				
Fans quantity	[n°]	4	4	6	6	6
Fans power input [1] (total)	[kW]	4,3	5,9	3,3	4,3	5,3
Total air flow	[m^3/h]	72.600	82.700	83.400	93.000	101.100
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	31,5	34,4	39,0	42,4	44,8
Evaporator pressure drop [1]	[kPa]	41	35	33	38	34
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**						
Heating capacity [2]	**[kW]**	**26,8**	**28,3**	**33**	**35,5**	**37,4**
Water flow	[m^3/h]	4,61	4,87	5,68	6,11	6,43
Pressure drop (water side)	[kPa]	5,8	6,0	14,7	15,0	15,1
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**185**	**204**	**228**	**247**	**262**
Water flow	[m^3/h]	31,8	35,1	39,2	42,5	45,1
Pressure drop (water side)	[kPa]	39,5	47,1	50,4	52,3	38,4
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	95,1	114,3	119,5	125,1	133,3
Locked rotor current – LRA without pump	[A]	390,3	472,9	568,3	670,1	713,7
Maximum absorbed current - FLA without pump	[A]	166,0	193,2	198,7	216,3	231,5
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	290	290	290	290
Pump type	-	Centrifugal				
Standard pump - 150 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	3	3	3	3	3
Pump motor nominal current	[A]	6,4	6,4	6,4	6,4	6,4
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	4	4	5,5	5,5	5,5
Pump motor nominal current	[A]	8,7	8,7	10,6	10,6	10,6
Water connections						
Dimension (nominal external diameter)	[inch/DN]	3" (DN 80)	3" (DN 80)	3" (DN 80)	3" (DN 80)	3" (DN 80)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	90	94	95	95	97
Total sound pressure (ST version) - at 1 m distance	[db(A)]	71	75	75	75	77
Total sound pressure (ST version) - at 10 m distance	[db(A)]	58	62	63	63	65
Total sound power (LN version)	[db(A)]	87	91	92	92	94
Total sound pressure (LN version) - at 1 m distance	[db(A)]	68	72	72	72	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	55	59	60	60	62
Total sound power (SL version)	[db(A)]	85	89	90	90	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	70	70	70	72
Total sound pressure (SL version) - at 10 m distance	[db(A)]	53	57	58	58	60

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE

Dimensions and weights

CRIO HE R290 range		10-1-1 PE	14-1-1 PE	17-1-1 PE	20-1-1 PE	24-1-1 PE	30-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	1680	1680	1680	2330	2330	2980
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2121	2121	2121	2221	2221	2221
Height (SL)	[mm]	2208	2208	2208	2308	2308	2308
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	350	360	410	550	560	720
Operating weight (A BP/ST/AS/EC/** version)	[kg]	355	365	415	555	565	727
DIMENSIONS - Large unit							
Lenght	[mm]	2330	2330	2330	2980	2980	3920
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2221	2221	2221	2221	2281
Height (SL)	[mm]	2308	2308	2308	2308	2308	2368
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Standard
Integrata LP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Standard
Integrata MP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Standard	Standard	Standard

CRIO HE R290 range		35-1-1 PE	41-1-1 PE	48-1-1 PE	56-1-1 PE	41-2-2 PE	48-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	2980	2980	2980	3920	3920	3920
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2300	2300	2281	2281	2281
Height (SL)	[mm]	2308	2360	2360	2368	2368	2368
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	740	810	850	960	940	970
Operating weight (A BP/ST/AS/EC/** version)	[kg]	747	817	857	968	948	978
DIMENSIONS - Large unit							
Lenght	[mm]	3920	3920	3920	-	-	-
Width	[mm]	1025	1025	1025	-	-	-
Height (ST - LN)	[mm]	2281	2360	2360	-	-	-
Height (SL)	[mm]	2368	2420	2420	-	-	-
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard

CRIO HE

Dimensions and weights

CRIO HE R290 range		60-2-2 PE	70-2-2 PE	83-2-2 PE	97-2-2 PE	116-2-2 PE	130-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	3920	3920	4200	4200	5500	3100
Width	[mm]	1025	1025	1185	1185	1535	2345
Height (ST - LN)	[mm]	2281	2360	2320	2320	2350	2465
Height (SL)	[mm]	2368	2420	2380	2380	2410	2525
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	1080	1150	1460	1510	1710	1855
Operating weight (A BP/ST/AS/EC/** version)	[kg]	1088	1158	1470	1520	1720	1870
DIMENSIONS - Large unit							
Lenght	[mm]	-	-	5000	5000	Contact EK	4450
Width	[mm]	-	-	1185	1185	Contact EK	2345
Height (ST - LN)	[mm]	-	-	2320	2320	Contact EK	2465
Height (SL)	[mm]	-	-	2380	2380	Contact EK	2525
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Large	Large	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Integrata LP 1-1 OO	-	Standard	Standard	Large	Large	Standard	Large
Integrata LP 1-1 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Integrata MP 1-0 OO	-	Standard	Standard	Large	Large	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Integrata MP 1-1 OO	-	Standard	Standard	Large	Large	Standard	Large
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large

CRIO HE R290 range		142-2-2 PV	161-2-2 PV	175-2-2 PV	185-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit					
Lenght	[mm]	3100	4450	4450	4450
Width	[mm]	2345	2345	2345	2345
Height (ST - LN)	[mm]	2465	2465	2465	2465
Height (SL)	[mm]	2525	2525	2525	2525
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	1900	2560	2575	2590
Operating weight (A BP/ST/AS/EC/** version)	[kg]	1915	2578	2593	2608
DIMENSIONS - Large unit					
Lenght	[mm]	4450	-	-	-
Width	[mm]	2345	-	-	-
Height (ST - LN)	[mm]	2465	-	-	-
Height (SL)	[mm]	2525	-	-	-
Unit dimensions with hydronic kit					
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard
Integrata LP 1-1 OO	-	Large	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Large	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Standard	Standard	Standard

CRIO HE+

10-1-1 PE ⟷ 116-2-2 PE

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

Cu/Al condensing colils

EIA ready

SEPR

Air to water chillers for medium temperature applications

High efficiency plus

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 10 - 116 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 54-55-56-57*

CRIO HE+

Technical data

CRIO HE+ R290 range		10-1-1 PE	14-1-1 PE	17-1-1 PE	21-1-1 PE
COOLING - A BP/ST/AS/EC/*S version					
Cooling capacity [1]	**[kW]**	**9,6**	**13,8**	**17,3**	**21,1**
Total power input [1]	[kW]	4,2	5,9	7,6	9,2
EER - Energy Efficiency Ratio	-	**2,30**	**2,36**	**2,28**	**2,28**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	8,3	10,7	11,5	15,1
"Ecodesign'' compliance for process application (SEPR)	-	**3,59**	**3,41**	**3,60**	**3,40**
REFRIGERANT CIRCUIT					
Refrigerant	-	R290			
GWP	-	3			
Charge of refrigerant - Base unit	[kg]	2,2	2,8	3,0	3,9
Independent gas circuits	[n°]	1	1	1	1
Compressors type	-	Semi-hermetic pistons			
Compressors quantity	[n°]	1	1	1	1
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)
Condensing coils type	-	Cu/Al			
Fans type	-	Axial EC			
Fans quantity	[n°]	1	1	1	2
Fans power input [1] (total)	[kW]	0,2	0,3	0,7	0,4
Total air flow	[m^3/h]	6.900	7.400	10.900	13.800
Expansion valve type	-	Electronic			
Evaporator water flow [1]	[m^3/h]	2,3	3,3	4,2	5,1
Evaporator pressure drop [1]	[kPa]	24	27	29	28
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**					
Heating capacity [2]	**[kW]**	**1,8**	**2,35**	**3,13**	**3,72**
Water flow	[m^3/h]	0,31	0,40	0,54	0,64
Pressure drop (water side)	[kPa]	5,1	5,2	5,2	0,2
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**					
Heating capacity [2]	**[kW]**	**13**	**18,2**	**23,8**	**28,2**
Water flow	[m^3/h]	2,2	3,1	4,1	4,9
Pressure drop (water side)	[kPa]	13,5	24,3	25,1	24,6
Electrical data					
Power supply	-	400/3/50			
Emergency power supply	-	230/1/50			
Maximum power input without pump	[kW]	9,3	13,1	14,1	17,7
Locked rotor current – LRA without pump	[A]	65,0	89,2	104,2	120,9
Maximum absorbed current - FLA without pump	[A]	15,7	22,5	23,5	32,5
HYDRONIC KIT (option)					
Buffer tank capacity	[L]	60	60	60	160
Pump type	-	Centrifugal			
Standard pump - 150 kPa useful head					
Motor Efficiency	-	-	-	-	-
Pump motor nominal power	[kW]	0,37	0,37	0,55	0,55
Pump motor nominal current	[A]	1,4	1,4	1,9	1,9
Standard pump - 250 kPa useful head					
Motor Efficiency	-	-	IE3	IE3	IE3
Pump motor nominal power	[kW]	0,55	0,75	0,9	0,9
Pump motor nominal current	[A]	2	1,9	2,5	2,5
Water connections					
Dimension (nominal external diameter)	[inch/DN]	1/2" (DN15)	1" (DN 25)	1" (DN 25)	1" (DN 25)
Noise levels [3]					
Total sound power (ST version)	[db(A)]	73	76	79	80
Total sound pressure (ST version) - at 1 m distance	[db(A)]	56	59	62	63
Total sound pressure (ST version) - at 10 m distance	[db(A)]	43	45	48	49
Total sound power (LN version)	[db(A)]	70	73	76	77
Total sound pressure (LN version) - at 1 m distance	[db(A)]	53	56	59	60
Total sound pressure (LN version) - at 10 m distance	[db(A)]	40	42	45	46
Total sound power (SL version)	[db(A)]	68	71	74	75
Total sound pressure (SL version) - at 1 m distance	[db(A)]	51	54	57	58
Total sound pressure (SL version) - at 10 m distance	[db(A)]	38	40	43	44

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE+

Technical data

CRIO HE+ R290 range		30-1-1 PE	36-1-1 PE	56-1-1 PE	41-2-2 PE
COOLING - A BP/ST/AS/EC/*S version					
Cooling capacity [1]	**[kW]**	**30,2**	**36**	**56,4**	**41,1**
Total power input [1]	[kW]	12,4	14,1	25,1	17,9
EER - Energy Efficiency Ratio	-	**2,44**	**2,55**	**2,25**	**2,30**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	20,4	27,9	39	32,9
"Ecodesign'' compliance for process application (SEPR)	-	**3,91**	**3,69**	**3,61**	**3,69**
REFRIGERANT CIRCUIT					
Refrigerant	-	R290			
GWP	-	3			
Charge of refrigerant - Base unit	[kg]	5,3	7,2	10,1	8,5
Independent gas circuits	[n°]	1	1	1	2
Compressors type	-	Semi-hermetic pistons			
Compressors quantity	[n°]	1	1	1	2
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (83%); 2 (67%); 3 (50%)	1 (75%); 2 (50%)
Condensing coils type	-	Cu/Al			
Fans type	-	Axial EC			
Fans quantity	[n°]	2	2	3	3
Fans power input [1] (total)	[kW]	0,9	0,9	2,4	1,3
Total air flow	[m^3/h]	21.200	19.700	36.000	30.900
Expansion valve type	-	Electronic			
Evaporator water flow [1]	[m^3/h]	7,3	8,7	13,7	10,0
Evaporator pressure drop [1]	[kPa]	35	18	29	19
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**					
Heating capacity [2]	**[kW]**	**4,54**	**5,09**	**10,1**	**7,27**
Water flow	[m^3/h]	0,78	0,88	1,74	1,25
Pressure drop (water side)	[kPa]	5,2	0,3	5,6	5,2
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**					
Heating capacity [2]	**[kW]**	**40,3**	**46,7**	**79,3**	**57,3**
Water flow	[m^3/h]	6,9	8,0	13,6	9,9
Pressure drop (water side)	[kPa]	30	8,1	28,7	19,8
Electrical data					
Power supply	-	400/3/50			
Emergency power supply	-	230/1/50			
Maximum power input without pump	[kW]	22,5	27,5	47,7	34,3
Locked rotor current – LRA without pump	[A]	206,5	228,2	327,1	151,5
Maximum absorbed current - FLA without pump	[A]	40,7	47,8	80,3	63,1
HYDRONIC KIT (option)					
Buffer tank capacity	[L]	290	290	290	290
Pump type	-	Centrifugal			
Standard pump - 150 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	0,9	0,9	1,1	1,1
Pump motor nominal current	[A]	2,5	2,5	3,3	3,3
Standard pump - 250 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	1,5	1,5	2,2	1,5
Pump motor nominal current	[A]	4,1	4,1	4,7	4,1
Water connections					
Dimension (nominal external diameter)	[inch/DN]	1" 1/2 (DN 40)	1" 1/2 (DN 40)	2" (DN 50)	1" 1/2 (DN 40)
Noise levels [3]					
Total sound power (ST version)	[db(A)]	81	84	86	83
Total sound pressure (ST version) - at 1 m distance	[db(A)]	63	66	68	65
Total sound pressure (ST version) - at 10 m distance	[db(A)]	50	53	54	51
Total sound power (LN version)	[db(A)]	78	81	83	80
Total sound pressure (LN version) - at 1 m distance	[db(A)]	60	63	65	62
Total sound pressure (LN version) - at 10 m distance	[db(A)]	47	50	51	48
Total sound power (SL version)	[db(A)]	76	79	81	78
Total sound pressure (SL version) - at 1 m distance	[db(A)]	58	61	63	60
Total sound pressure (SL version) - at 10 m distance	[db(A)]	45	48	49	46

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE+

Technical data

CRIO HE+ R290 range		48-2-2 PE	83-2-2 PE	99-2-2 PE	116-2-2 PE
COOLING - A BP/ST/AS/EC/*S version					
Cooling capacity [1]	**[kW]**	**48**	**83,2**	**99,4**	**116**
Total power input [1]	[kW]	19,5	35,3	38,1	49,5
EER - Energy Efficiency Ratio	-	**2,46**	**2,36**	**2,61**	**2,34**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	39,4	65,5	85,8	87,6
"Ecodesign'' compliance for process application (SEPR)	-	**3,74**	**3,58**	**3,62**	**3,70**
REFRIGERANT CIRCUIT					
Refrigerant	-	R290			
GWP	-	3			
Charge of refrigerant - Base unit	[kg]	10,2	17,0	22,3	22,8
Independent gas circuits	[n°]	2	2	2	2
Compressors type	-	Semi-hermetic pistons			
Compressors quantity	[n°]	2	2	2	2
Steps of capacity for each compressor (std)	-	1 (75%); 2 (50%)	1 (83%); 2 (67%); 3 (50%)		
Condensing coils type	-	Cu/Al			
Fans type	-	Axial EC			
Fans quantity	[n°]	3	3	4	4
Fans power input [1] (total)	[kW]	1,1	3,3	1,8	3,2
Total air flow	[m^3/h]	27.150	55.550	51.100	63.800
Expansion valve type	-	Electronic			
Evaporator water flow [1]	[m^3/h]	11,6	20,2	24,1	28,1
Evaporator pressure drop [1]	[kPa]	25	29	33	37
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**					
Heating capacity [2]	**[kW]**	**7,61**	**13,3**	**17,1**	**20,5**
Water flow	[m^3/h]	1,31	2,29	2,94	3,53
Pressure drop (water side)	[kPa]	5,2	5,3	0,4	5,6
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**					
Heating capacity [2]	**[kW]**	**64,7**	**114**	**137**	**160**
Water flow	[m^3/h]	11,1	19,6	23,6	27,5
Pressure drop (water side)	[kPa]	24,4	29,2	33,1	35,7
Electrical data					
Power supply	-	400/3/50			
Emergency power supply	-	230/1/50			
Maximum power input without pump	[kW]	39,3	72,6	85,3	100,5
Locked rotor current – LRA without pump	[A]	177,8	307,1	352,6	414,6
Maximum absorbed current - FLA without pump	[A]	77,5	121,8	140,6	167,8
HYDRONIC KIT (option)					
Buffer tank capacity	[L]	290	500	470	470
Pump type	-	Centrifugal			
Standard pump - 150 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	1,1	2,2	2,2	2,2
Pump motor nominal current	[A]	3,3	4,7	4,7	4,7
Standard pump - 250 kPa useful head					
Motor Efficiency	-	IE3			
Pump motor nominal power	[kW]	2,2	3	4	4
Pump motor nominal current	[A]	4,7	6,4	8,7	8,7
Water connections					
Dimension (nominal external diameter)	[inch/DN]	1" 1/2 (DN 40)	2" (DN 50)	2"1/2 (DN 65)	2"1/2 (DN 65)
Noise levels [3]					
Total sound power (ST version)	[db(A)]	84	88	89	89
Total sound pressure (ST version) - at 1 m distance	[db(A)]	66	69	70	70
Total sound pressure (ST version) - at 10 m distance	[db(A)]	52	56	57	57
Total sound power (LN version)	[db(A)]	81	85	86	86
Total sound pressure (LN version) - at 1 m distance	[db(A)]	63	66	67	67
Total sound pressure (LN version) - at 10 m distance	[db(A)]	49	53	54	54
Total sound power (SL version)	[db(A)]	79	83	84	84
Total sound pressure (SL version) - at 1 m distance	[db(A)]	61	64	65	65
Total sound pressure (SL version) - at 10 m distance	[db(A)]	47	51	52	52

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE+

130-2-2 PV ⟷ 185-2-2 PV

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

MCX Microchannel condensing colils

EIA ready

SEPR

Air to water chillers for medium temperature applications

High efficiency plus

Solution

B - Base

I - Integrata

Version

ST - Standard

LN - Low Noise

SL - Super Low Noise

Equipment

AS - Standard equipment

DS - Desuperheater

HR - Total modulating Heat Recovery

Cooling capacity 130 - 185 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tube´s air shadow to provide maximum heat exchange through our condensers.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 54-55-56-57*

CRIO HE+

Technical data

CRIO HE+ R290 range		130-2-2 PV	142-2-2 PV	161-2-2 PV	175-2-2 PV	185-2-2 PV
COOLING - A BP/ST/AS/EC/*S version						
Cooling capacity [1]	**[kW]**	**130**	**142**	**161**	**175**	**185**
Total power input [1]	[kW]	61,8	67,8	73,3	80,5	85
EER - Energy Efficiency Ratio	-	**2,10**	**2,10**	**2,20**	**2,17**	**2,18**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	55,8	61,1	77	77,9	81,4
"Ecodesign'' compliance for process application (SEPR)	-	**2,99**	**3,02**	**3,08**	**3,05**	**3,07**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	14,5	15,9	20,0	20,2	21,2
Independent gas circuits	[n°]	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2	2	2	2	2
Steps of capacity for each compressor (std)	-	2 (75%); 3 (62,5%); 4 (50%)				
Condensing coils type	-	Microchannel				
Fans type	-	Axial EC				
Fans quantity	[n°]	4	4	6	6	6
Fans power input [1] (total)	[kW]	4,3	5,9	3,3	4,3	5,3
Total air flow	[m^3/h]	72.600	82.700	83.400	93.000	101.100
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	31,5	34,4	39,0	42,4	44,8
Evaporator pressure drop [1]	[kPa]	41	35	33	38	34
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**						
Heating capacity [2]	**[kW]**	**26,8**	**28,3**	**33**	**35,5**	**37,4**
Water flow	[m^3/h]	4,61	4,87	5,68	6,11	6,43
Pressure drop (water side)	[kPa]	5,8	6,0	14,7	15,0	15,1
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**185**	**204**	**228**	**247**	**262**
Water flow	[m^3/h]	31,8	35,1	39,2	42,5	45,1
Pressure drop (water side)	[kPa]	39,5	47,1	50,4	52,3	38,4
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	95,1	114,3	119,5	125,1	133,3
Locked rotor current – LRA without pump	[A]	390,3	472,9	568,3	670,1	713,7
Maximum absorbed current - FLA without pump	[A]	166,0	193,2	198,7	216,3	231,5
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	290	290	290	290
Pump type	-	Centrifugal				
Standard pump - 150 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	3	3	3	3	3
Pump motor nominal current	[A]	6,4	6,4	6,4	6,4	6,4
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	4	4	5,5	5,5	5,5
Pump motor nominal current	[A]	8,7	8,7	10,6	10,6	10,6
Water connections						
Dimension (nominal external diameter)	[inch/DN]	3" (DN 80)	3" (DN 80)	3" (DN 80)	3" (DN 80)	3" (DN 80)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	90	94	95	95	97
Total sound pressure (ST version) - at 1 m distance	[db(A)]	71	75	75	75	77
Total sound pressure (ST version) - at 10 m distance	[db(A)]	58	62	63	63	65
Total sound power (LN version)	[db(A)]	87	91	92	92	94
Total sound pressure (LN version) - at 1 m distance	[db(A)]	68	72	72	72	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	55	59	60	60	62
Total sound power (SL version)	[db(A)]	85	89	90	90	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	70	70	70	72
Total sound pressure (SL version) - at 10 m distance	[db(A)]	53	57	58	58	60

Reference conditions:

(1) Condenser air intake temperature = 30 °C - Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = -4/-8 °C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

CRIO HE+

Dimensions and weights

CRIO HE+ R290 range		10-1-1 PE	14-1-1 PE	17-1-1 PE	21-1-1 PE	30-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	1680	1680	1680	2330	2980
Width	[mm]	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2121	2121	2121	2221	2221
Height (SL)	[mm]	2208	2208	2208	2308	2308
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	350	360	410	560	720
Operating weight (A BP/ST/AS/EC/** version)	[kg]	355	365	415	565	727
DIMENSIONS - Large unit						
Lenght	[mm]	2330	2330	2330	2980	3920
Width	[mm]	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2221	2221	2221	2281
Height (SL)	[mm]	2308	2308	2308	2308	2368
Unit dimensions with hydronic kit						
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Standard
Integrata LP 1-1 OO	-	Large	Large	Large	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Standard
Integrata MP 1-1 OO	-	Large	Large	Large	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Standard	Standard

CRIO HE+ R290 range		36-1-1 PE	56-1-1 PE	41-2-2 PE	48-2-2 PE	83-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	2980	3920	3920	3920	4200
Width	[mm]	1025	1025	1025	1025	1185
Height (ST - LN)	[mm]	2221	2281	2281	2281	2320
Height (SL)	[mm]	2308	2368	2368	2368	2380
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	760	960	940	970	1460
Operating weight (A BP/ST/AS/EC/** version)	[kg]	767	968	948	978	1470
DIMENSIONS - Large unit						
Lenght	[mm]	3920	-	-	-	5000
Width	[mm]	1025	-	-	-	1185
Height (ST - LN)	[mm]	2281	-	-	-	2320
Height (SL)	[mm]	2368	-	-	-	2380
Unit dimensions with hydronic kit						
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Large
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Large
Integrata LP 1-1 OO	-	Standard	Standard	Standard	Standard	Large
Integrata LP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Large
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Large
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Large
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Large
Integrata MP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Large

CRIO HE+

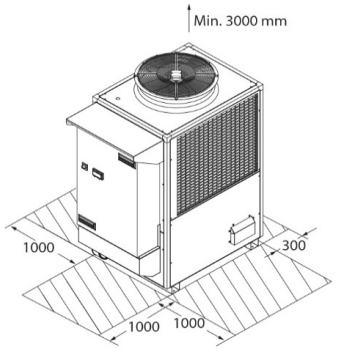
Dimensions and weights

CRIO HE+ R290 range		99-2-2 PE	116-2-2 PE	130-2-2 PV	142-2-2 PV	161-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	5500	5500	3100	3100	4450
Width	[mm]	1535	1535	2345	2345	2345
Height (ST - LN)	[mm]	2350	2350	2465	2465	2465
Height (SL)	[mm]	2410	2410	2525	2525	2525
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	1690	1710	1855	1900	2560
Operating weight (A BP/ST/AS/EC/** version)	[kg]	1700	1720	1870	1915	2578
DIMENSIONS - Large unit						
Lenght	[mm]	Contact EK	Contact EK	4450	4450	-
Width	[mm]	Contact EK	Contact EK	2345	2345	-
Height (ST - LN)	[mm]	Contact EK	Contact EK	2465	2465	-
Height (SL)	[mm]	Contact EK	Contact EK	2525	2525	-
Unit dimensions with hydronic kit						
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Contact EK	Contact EK	Large	Large	Standard
Integrata LP 1-1 OO	-	Standard	Standard	Large	Large	Standard
Integrata LP 1-1 OO and HR equipment	-	Contact EK	Contact EK	Large	Large	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Contact EK	Contact EK	Large	Large	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Large	Large	Standard
Integrata MP 1-1 OO and HR equipment	-	Contact EK	Contact EK	Large	Large	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Contact EK	Contact EK	Large	Large	Standard

CRIO HE+ R290 range		142-2-2 PV	175-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit			
Lenght	[mm]	4450	4450
Width	[mm]	2345	2345
Height (ST - LN)	[mm]	2465	2465
Height (SL)	[mm]	2525	2525
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	2575	2590
Operating weight (A BP/ST/AS/EC/** version)	[kg]	2593	2608
DIMENSIONS - Large unit			
Lenght	[mm]	-	-
Width	[mm]	-	-
Height (ST - LN)	[mm]	-	-
Height (SL)	[mm]	-	-
Unit dimensions with hydronic kit			
Integrata LP 1-0 OO	-	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard
Integrata LP 1-1 OO	-	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Standard	Standard
Integrata MP 1-0 OO	-	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard
Base-P LP 1-0 OO	-	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard
Base-T	-	Standard	Standard
Base-T and HR equipment	-	Standard	Standard

CRIO range

CRIO BS



7-1-1 PE ⟷ 28-1-1 PE

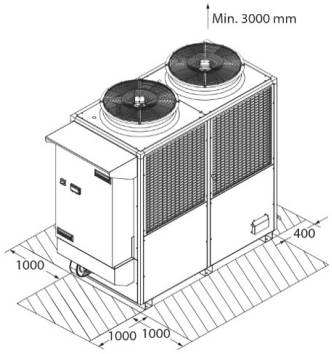
Cooling capacity
from 7 kW to 28 kW

CRIO HE/HE+

10-1-1 PE ⟷ 17-1-1 PE

Cooling capacity HE
from 10 kW to 17 kW
Cooling capacity HE+
from 10 kW to 17 kW

CRIO BS



33-1-1 PE ⟷ 68-1-1 PE

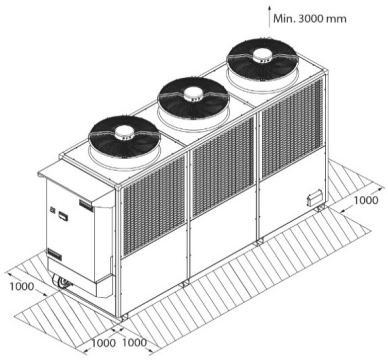
Cooling capacity
from 33 kW to 68 kW

CRIO HE/HE+

20-1-1 PE ⟷ 48-1-1 PE

Cooling capacity HE
from 20 kW to 48 kW
Cooling capacity HE+
from 21 kW to 36 kW

CRIO BS



79-2-2 PE ⟷ 137-2-2 PE

Cooling capacity
from 79 kW to 137 kW

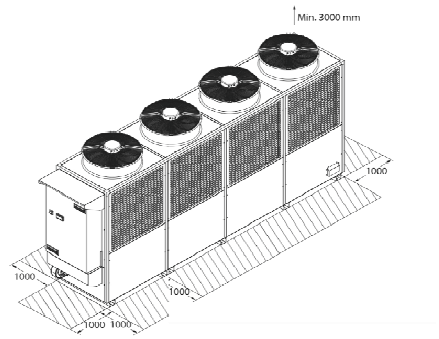
CRIO HE/HE+

56-1-1 PE ⟷ 97-2-2 PE

Cooling capacity HE
from 56 kW to 97 kW
Cooling capacity HE+
from 56 kW to 83 kW

CRIO range

CRIO BS



157-2-2 PE ⟷ 173-2-2 PE

Cooling capacity
from 157 kW to 173 kW

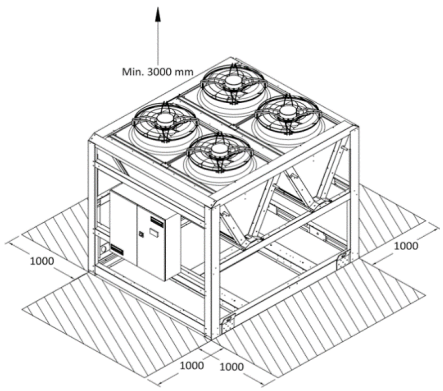
CRIO HE/HE+

99-2-2 PE ⟷ 116-2-2 PE

Cooling capacity HE
116 kW

Cooling capacity HE+
from 99 kW to 116 kW

CRIO BS



158-2-2 PV ⟷ 182-2-2 PV

Cooling capacity
from 158 kW to 182 kW

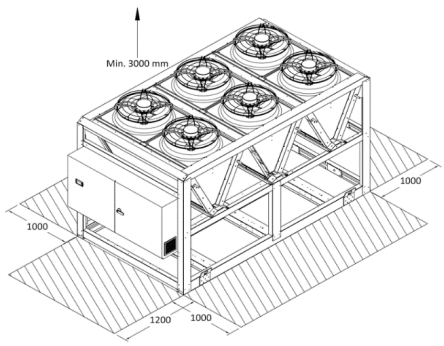
CRIO HE/HE+

130-2-2 PE ⟷ 142-2-2 PE

Cooling capacity HE
from 130 kW to 142 kW

Cooling capacity HE+
from 130 kW to 142 kW

CRIO BS



CRIO HE/HE+

161-2-2 PV ⟷ 185-2-2 PV

Cooling capacity HE
from 161 kW to 185 kW

Cooling capacity HE+
from 161 kW to 185 kW

TETI

The natural solution for High Temperature applications

TETI configurations

The below legend allows you to easily select the proper configuration of TETI chiller.

TETI BS A BP / ST / AS / EC / OO 110-3-1

Range
TETI BS - Business
TETI HE - High Efficiency

Unit Type
A - Chiller Air/Water

Solution
BP - Base (brazed plate evaporator)
PP - Base with pump (brazed plate evaporator)
TP - Base with tank (brazed plate evaporator)
IP - Integrata (tank + pump / brazed plate evaporator)

Version
ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment
AS - Standard solution
DS - Desuperheater
HR - Total modulating Heat Recovery

Fans control
OO - AC fan with ON-OFF pressure controller
PH - AC fan with cut-phase controllers
EC - EC Fan

Compressor
1S - 1 partial step compressor(s)
2S - 2 partial step compressor(s)
3S - 3 partial step compressor(s)
4S - 4 partial step compressor(s)
OI - ON-OFF compressor + VFD compressor
1I - 1 partial step compressor + VFD compressor
2I - 2 partial step compressor + VFD compressor
II - VFD compressor(s)

Size

Base-P MP 1-0 OO

Hydronic kit
Base-T - Base solution with tank
Base-P - Base solution with pump
Integrata - INTEGRATA solution with pump and tank

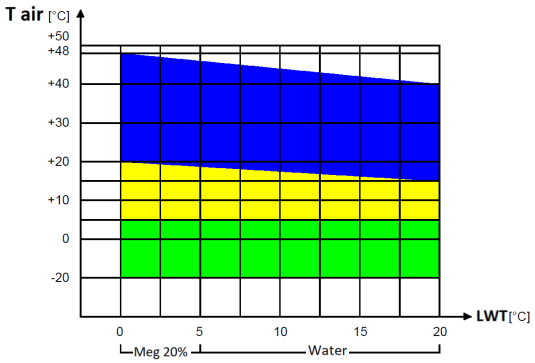
Pressure Head
LP - Low Pressure head (150 kPa)
MP - Medium Pressure head (300 kPa)
HP - High Pressure head (500 kPa)

Number of operating - stand-by pumps

Pump(s) control
OO - ON-OFF control
II - VFD control

TETI operating limits

TETI BS Business Cooling mode



Operating area with pressostatic condensing ON-OFF control

Operating area with phase cut condensing control

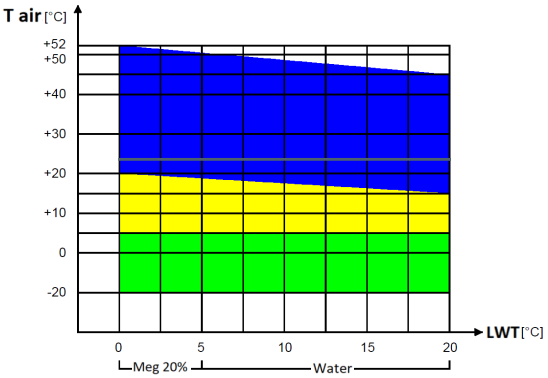
Operating area with EC fans

T air: Outdoor air temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

TETI HE High Efficiency Cooling mode



Operating area with pressostatic condensing ON-OFF control

Operating area with phase cut condensing control

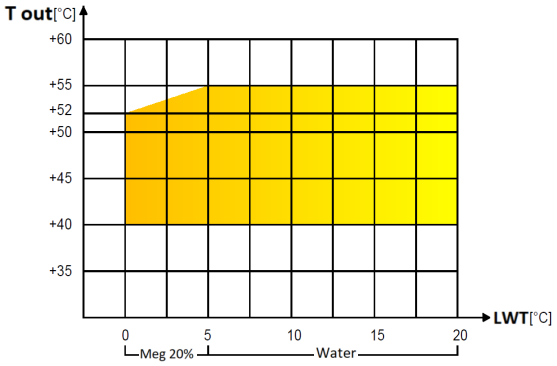
Operating area with EC fans

T air: Outdoor air temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

TETI BS / HE Cooling mode and Desuperheater



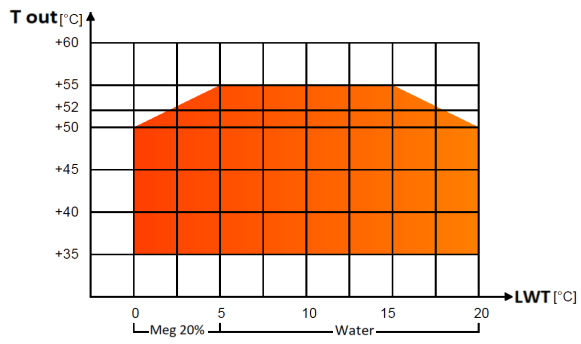
Operating area

T out: Desuperheater exchanger outlet water temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

TETI BS / HE Cooling mode and Total Modulating Heat Recovery



Operating area

T out: Heat recovery exchanger outlet water temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

TETI BS

13-1-1 PE ⟷ 287-2-2 PE

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

Cu/Al condensing colils

SEPR

Air to water chillers for medium temperature applications

Standard efficiency

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 12,5 - 286,5 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 44-45-46-47*

TETI BS

Technical data

TETI BS R290 range		13-1-1 PE	16-1-1 PE	25-1-1 PE	32-1-1 PE	40-1-1 PE	49-1-1 PE
COOLING - A BP/ST/AS/OO/*S version							
Cooling capacity [1]	**[kW]**	**12,58**	**16,34**	**25,19**	**31,88**	**40,28**	**48,87**
Total power input [1]	[kW]	2,5	3,9	5,7	8,7	9,9	12,4
EER - Energy Efficiency Ratio	-	**4,97**	**4,14**	**4,42**	**3,67**	**4,09**	**3,94**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	4,7	5	8,7	9,5	12,2	14,6
"Ecodesign'' compliance for process application (SEPR)	-	**5,53**	**5,00**	**5,77**	**5,01**	**5,81**	**5,26**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	1,2	1,3	2,2	2,4	3,2	3,8
Independent gas circuits	[n°]	1	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	1	1
Available steps of capacity	-	1 (50%)		1 (75%); 2 (50%)			
Condensing coils type	-	Cu/Al					
Fans type	-	Axial AC					
Fans quantity	[n°]	1	1	1	1	1	2
Fans power input [1] (total)	[kW]	0,4	0,4	0,7	0,7	0,7	1,5
Total air flow	[m^3/h]	5.900	5.900	11.400	11.400	10.700	21.300
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	2,2	2,8	4,3	5,5	6,9	8,4
Evaporator pressure drop [1]	[kPa]	25	20	43	65	60	58
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**							
Heating capacity [2]	**[kW]**	**1,3**	**2,2**	**3,1**	**5,1**	**5,5**	**6,8**
Water flow	[m^3/h]	0,22	0,38	0,54	0,88	0,97	1,17
Pressure drop (water side)	[kPa]	5,1	5,2	5,3	5,7	5,9	5,6
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**15,1**	**20,3**	**30,8**	**40,5**	**50**	**61,1**
Water flow	[m^3/h]	2,6	3,5	5,3	7,0	8,6	10,5
Pressure drop (water side)	[kPa]	12,6	21,8	22,4	30,7	34,3	29,5
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	3,9	5,4	9,0	12,8	13,8	17,3
Locked rotor current – LRA without pump	[A]	36,9	44,7	65,0	89,2	104,2	120,8
Maximum absorbed current - FLA without pump	[A]	7,4	10,0	15,7	22,5	23,5	32,4
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	30	30	60	60	60	160
Pump type	-	Centrifugal					
Standard pump - 250 kPa useful head							
Motor Efficiency	-	-	-	IE3	IE3	IE3	IE3
Pump motor nominal power	[kW]	0,6	0,55	0,9	1,5	1,5	1,5
Pump motor nominal current	[A]	2,1	2	2,5	4,1	4,1	4,1
Standard pump - 450 kPa useful head							
Motor Efficiency	-	IE3	IE3	IE3	IE3	IE3	IE3
Pump motor nominal power	[kW]	1,1	1,1	1,3	1,3	2,2	2,2
Pump motor nominal current	[A]	3,3	3,3	3,3	3,3	4,7	4,7
Water connections							
Dimension (nominal external diameter)	[inch/DN]	1/2" (DN15)	1" (DN 25)	1" (DN 25)	1" (DN 25)	1" 1/4 (DN 32)	1" 1/4 (DN 32)
Noise levels [3]							
Total sound power (ST version)	[db(A)]	77	80	81	83	83	86
Total sound pressure (ST version) - at 1 m distance	[db(A)]	61	64	64	66	66	68
Total sound pressure (ST version) - at 10 m distance	[db(A)]	45	48	49	51	51	54
Total sound power (LN version)	[db(A)]	74	77	78	80	80	83
Total sound pressure (LN version) - at 1 m distance	[db(A)]	58	61	61	63	63	65
Total sound pressure (LN version) - at 10 m distance	[db(A)]	42	45	46	48	48	51
Total sound power (SL version)	[db(A)]	72	75	76	78	78	81
Total sound pressure (SL version) - at 1 m distance	[db(A)]	56	59	59	61	61	63
Total sound pressure (SL version) - at 10 m distance	[db(A)]	40	43	44	46	46	49

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI BS

Technical data

TETI BS R290 range		57-1-1 PE	73-1-1 PE	85-1-1 PE	101-1-1 PE	119-1-1 PE	100-2-2 PE
COOLING - A BP/ST/AS/OO/*S version							
Cooling capacity [1]	**[kW]**	**56,89**	**73,37**	**84,91**	**100,7**	**119,1**	**99,7**
Total power input [1]	[kW]	14,1	18,2	20,9	25,3	28,5	23,7
EER - Energy Efficiency Ratio	-	**4,03**	**4,03**	**4,06**	**3,98**	**4,18**	**4,20**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	15,7	20,6	22	27,6	37,1	29,9
"Ecodesign'' compliance for process application (SEPR)	-	**5,54**	**5,07**	**5,09**	**5,04**	**5,83**	**5,84**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	4,1	5,3	5,7	7,2	9,6	7,8
Independent gas circuits	[n°]	1	1	1	1	1	2
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	1	2
Available steps of capacity	-	1 (75%); 2 (50%)			1 (83%); 2 (67%); 3 (50%)		1 (75%); 2 (50%)
Condensing coils type	-	Cu/Al					
Fans type	-	Axial AC					
Fans quantity	[n°]	2	2	2	2	3	3
Fans power input [1] (total)	[kW]	1,5	3,6	3,6	3,7	2,2	2,1
Total air flow	[m^3/h]	21.300	34.700	34.700	32.100	33.400	35.400
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	9,8	12,6	14,6	17,3	20,5	17,1
Evaporator pressure drop [1]	[kPa]	56	55	41	43	47	51
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**							
Heating capacity [2]	**[kW]**	**7,6**	**7,9**	**10**	**13,2**	**16,1**	**13,5**
Water flow	[m^3/h]	1,31	1,36	1,74	2,29	2,81	2,32
Pressure drop (water side)	[kPa]	5,8	5,6	5,9	6,1	6,4	5,6
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**70,9**	**91,4**	**105,7**	**125,8**	**147,3**	**123,2**
Water flow	[m^3/h]	12,2	15,7	18,2	21,6	25,3	21,2
Pressure drop (water side)	[kPa]	29,8	38,7	40,4	47	47,8	27,7
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	19,8	24,8	29,8	36,4	39,4	33,6
Locked rotor current – LRA without pump	[A]	139,9	211,9	233,6	248,4	278,6	151,4
Maximum absorbed current - FLA without pump	[A]	39,6	46,1	53,2	63,1	66,6	63,0
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	160	290	290	290	290	290
Pump type	-	Centrifugal					
Standard pump - 250 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	1,5	1,8	3	3	3	3
Pump motor nominal current	[A]	4,1	4,7	6,4	6,4	6,4	6,4
Standard pump - 450 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	2,2	4	4	5,5	7,5	5,5
Pump motor nominal current	[A]	4,7	8,7	8,7	10,6	13,6	10,6
Water connections							
Dimension (nominal external diameter)	[inch/DN]	1" 1/4 (DN 32)	1" 1/2 (DN 40)	2" (DN 50)	2" (DN 50)	2" (DN 50)	2" (DN 50)
Noise levels [3]							
Total sound power (ST version)	[db(A)]	86	85	87	87	89	86
Total sound pressure (ST version) - at 1 m distance	[db(A)]	68	67	69	69	70	67
Total sound pressure (ST version) - at 10 m distance	[db(A)]	54	53	55	55	57	54
Total sound power (LN version)	[db(A)]	83	82	84	84	86	83
Total sound pressure (LN version) - at 1 m distance	[db(A)]	65	64	66	66	67	64
Total sound pressure (LN version) - at 10 m distance	[db(A)]	51	50	52	52	54	51
Total sound power (SL version)	[db(A)]	81	80	82	82	84	81
Total sound pressure (SL version) - at 1 m distance	[db(A)]	63	62	64	64	65	62
Total sound pressure (SL version) - at 10 m distance	[db(A)]	49	48	50	50	52	49

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI BS

Technical data

TETI BS R290 range		118-2-2 PE	144-2-2 PE	164-2-2 PE	199-2-2 PE	248-2-2 PE	287-2-2 PE
COOLING - A BP/ST/AS/OO/*S version							
Cooling capacity [1]	**[kW]**	**118,4**	**144**	**164**	**199,4**	**248,2**	**286,5**
Total power input [1]	[kW]	28,2	36,3	42,2	49,4	56,3	69,3
EER - Energy Efficiency Ratio	-	**4,20**	**3,97**	**3,89**	**4,04**	**4,41**	**4,13**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	38,9	40,1	41,4	61,3	84,7	87,6
"Ecodesign'' compliance for process application (SEPR)	-	**5,99**	**5,01**	**5,00**	**5,08**	**5,62**	**5,29**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	10,1	10,4	10,8	15,9	22,0	22,8
Independent gas circuits	[n°]	2	2	2	2	2	2
Compressors type	-	mi-hermetic pistons		Semi-hermetic pistons			
Compressors quantity	[n°]	2	2	2	2	2	2
Available steps of capacity	-	1 (75%); 2 (50%)			1 (83%); 2 (67%); 3 (50%)		
Condensing coils type	-	Cu/Al					
Fans type	-	Axial AC					
Fans quantity	[n°]	3	3	3	3	4	4
Fans power input [1] (total)	[kW]	2,2	5,6	5,6	4,9	6,7	6,7
Total air flow	[m^3/h]	33.400	46.800	46.900	59.900	77.351	77.400
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	20,4	24,8	28,2	34,3	42,7	49,3
Evaporator pressure drop [1]	[kPa]	57	63	57	63	66	68
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**							
Heating capacity [2]	**[kW]**	**15**	**17,7**	**22,3**	**27,5**	**29,5**	**29,5**
Water flow	[m^3/h]	2,59	3,06	3,90	4,77	5,19	5,19
Pressure drop (water side)	[kPa]	5,7	5,7	6,1	6,2	6,1	6,1
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**146,3**	**179,8**	**205,6**	**248**	**303,6**	**354,7**
Water flow	[m^3/h]	25,2	30,9	35,4	42,7	52,2	61,0
Pressure drop (water side)	[kPa]	38,3	41,4	42,9	43,7	38,7	39,8
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	35,4	47,3	57,3	70,5	82,4	97,6
Locked rotor current – LRA without pump	[A]	216,3	253,4	282,2	306,9	352,4	414,4
Maximum absorbed current - FLA without pump	[A]	66,0	87,6	101,8	121,6	140,4	167,6
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	290	290	290	500	470	470
Pump type	-	Centrifugal					
Standard pump - 250 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	3	4	4	4	5,5	5,5
Pump motor nominal current	[A]	6,4	8,7	8,7	8,7	10,6	10,6
Standard pump - 450 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	7,5	7,5	7,5	7,5	11	11
Pump motor nominal current	[A]	13,6	13,6	13,6	13,6	21,3	21,3
Water connections							
Dimension (nominal external diameter)	[inch/DN]	2" (DN 50)	2"1/2 (DN 65)	2"1/2 (DN 65)	2"1/2 (DN 65)	3" (DN 80)	3" (DN 80)
Noise levels [3]							
Total sound power (ST version)	[db(A)]	87	88	90	89	91	91
Total sound pressure (ST version) - at 1 m distance	[db(A)]	68	69	71	70	71	71
Total sound pressure (ST version) - at 10 m distance	[db(A)]	55	56	58	57	59	59
Total sound power (LN version)	[db(A)]	84	85	87	86	88	88
Total sound pressure (LN version) - at 1 m distance	[db(A)]	65	66	68	67	68	68
Total sound pressure (LN version) - at 10 m distance	[db(A)]	52	53	55	54	56	56
Total sound power (SL version)	[db(A)]	82	83	85	84	86	86
Total sound pressure (SL version) - at 1 m distance	[db(A)]	63	64	66	65	66	66
Total sound pressure (SL version) - at 10 m distance	[db(A)]	50	51	53	52	54	54

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI BS

309-2-2 PV ⟷ 449-2-2 PV

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

MCX Microchannel condensing colils

SEPR

Air to water chillers for medium temperature applications

Standard efficiency

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 308,9 - 449,6 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tube´s air shadow to provide maximum heat exchange through our condensers.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 44-45-46-47*

TETI BS

Technical data

TETI BS R290 range		309-2-2 PV	346-2-2 PV	393-2-2 PV	428-2-2 PV	449-2-2 PV
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [(1)]	**[kW]**	**308,9**	**346**	**392,8**	**428**	**448,6**
Total power input [(1)]	[kW]	78,8	92,8	91,8	101,5	107,1
EER - Energy Efficiency Ratio	-	**3,92**	**3,73**	**4,28**	**4,22**	**4,19**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	66,4	75,9	85,1	88,8	92,4
"Ecodesign'' compliance for process application (SEPR)	-	**5,01**	**5,11**	**5,46**	**5,26**	**5,20**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	17,3	19,7	22,1	23,1	24,0
Independent gas circuits	[n°]	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2	2	2	2	2
Available steps of capacity	-	2 (75%); 3 (62,5%); 4 (50%)				
Condensing coils type	-	Microchannel				
Fans type	-	Axial AC				
Fans quantity	[n°]	4	4	6	6	6
Fans power input [(1)] (total)	[kW]	6,5	6,5	9,9	9,8	9,8
Total air flow	[m^3/h]	79.700	79.700	119.600	119.600	119.600
Expansion valve type	-	Electronic				
Evaporator water flow [(1)]	[m^3/h]	53,1	59,5	67,6	73,6	77,2
Evaporator pressure drop [(1)]	[kPa]	52	49	61	58	54
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [(2)]	**[kW]**	**44,9**	**57,6**	**51,7**	**57,7**	**61,3**
Water flow	[m^3/h]	7,77	10,02	8,91	9,99	10,59
Pressure drop (water side)	[kPa]	7,0	8,2	22,0	25,8	28,0
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [(2)]	**[kW]**	**380**	**428**	**477**	**524**	**553**
Water flow	[m^3/h]	65,9	74,2	82,7	90,9	95,9
Pressure drop (water side)	[kPa]	39,4	42,8	46,6	45,6	50,3
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	113,4	124,0	129,6	138,6	140,6
Locked rotor current – LRA without pump	[A]	474,7	573,2	678,9	719,5	722,8
Maximum absorbed current - FLA without pump	[A]	197,0	218,0	234,2	243,4	250,0
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	290	290	290	290
Pump type	-	Centrifugal				
Standard pump - 250 kPa useful head						
Motor Efficiency	-			IE3		
Pump motor nominal power	[kW]	7,5	7,5	11	11	11
Pump motor nominal current	[A]	13,6	13,6	21,3	21,3	21,3
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	11	11	11	15	15
Pump motor nominal current	[A]	21,3	21,3	21,3	27,7	27,7
Water connections						
Dimension (nominal external diameter)	[inch/DN]	4" (DN 100)	4" (DN 100)	4" (DN 100)	4" (DN 100)	4" (DN 100)
Noise levels [(3)]						
Total sound power (ST version)	[db(A)]	92	93	94	94	94
Total sound pressure (ST version) - at 1 m distance	[db(A)]	73	74	74	74	74
Total sound pressure (ST version) - at 10 m distance	[db(A)]	60	61	62	62	62
Total sound power (LN version)	[db(A)]	89	90	91	91	91
Total sound pressure (LN version) - at 1 m distance	[db(A)]	70	71	71	71	71
Total sound pressure (LN version) - at 10 m distance	[db(A)]	57	58	59	59	59
Total sound power (SL version)	[db(A)]	87	88	89	89	89
Total sound pressure (SL version) - at 1 m distance	[db(A)]	68	69	69	69	69
Total sound pressure (SL version) - at 10 m distance	[db(A)]	55	56	57	57	57

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI BS

Dimensions and weights

TETI BS R290 range		13-1-1 PE	16-1-1 PE	25-1-1 PE	32-1-1 PE	40-1-1 PE	49-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	1380	1380	1680	1680	1680	2330
Width	[mm]	835	835	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	1820	2121	2121	2121	2221
Height (SL)	[mm]	-	-	2208	2208	2208	2308
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	230	302	380	360	410	550
Operating weight (A BP/ST/AS/OO/** version)	[kg]	235	307	385	365	415	555
DIMENSIONS - Large unit							
Lenght	[mm]	1980	1980	2330	2330	2330	2980
Width	[mm]	835	835	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	1820	2221	2221	2221	2221
Height (SL)	[mm]	-	-	2308	2308	2308	2308
Unit dimensions with hydronic kit							
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-1 OO	-	Large	Large	Large	Large	Large	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata HP 1-1 OO	-	Large	Large	Large	Large	Large	Standard
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Large	Large	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Large	Large	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Large	Large	Standard

TETI BS R290 range		57-1-1 PE	73-1-1 PE	85-1-1 PE	101-1-1 PE	119-1-1 PE	100-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	2330	2980	2980	2980	3920	3920
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2300	2300	2300	2281	2281
Height (SL)	[mm]	2308	2360	2360	2360	2368	2368
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	558	762	773	830	950	930
Operating weight (A BP/ST/AS/OO/** version)	[kg]	563	769	780	837	958	938
DIMENSIONS - Large unit							
Lenght	[mm]	2980	3920	3920	3920	-	-
Width	[mm]	1025	1025	1025	1025	-	-
Height (ST - LN)	[mm]	2221	2360	2360	2360	-	-
Height (SL)	[mm]	2308	2420	2420	2420	-	-
Unit dimensions with hydronic kit							
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Standard	Standard
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI BS

Dimensions and weights

TETI BS R290 range		118-2-2 PE	144-2-2 PE	164-2-2 PE	199-2-2 PE	248-2-2 PE	287-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	3920	3920	3920	4200	5500	5500
Width	[mm]	1025	1025	1025	1185	1535	1535
Height (ST - LN)	[mm]	2281	2360	2360	2320	2350	2350
Height (SL)	[mm]	2368	2420	2420	2380	2410	2410
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	1055	1134	1150	1460	1698	1686
Operating weight (A BP/ST/AS/OO/** version)	[kg]	1063	1142	1158	1470	1708	1701
DIMENSIONS - Large unit							
Lenght	[mm]	-	-	-	5000	Contact EK	Contact EK
Width	[mm]	-	-	-	1185	Contact EK	Contact EK
Height (ST - LN)	[mm]	-	-	-	2320	Contact EK	Contact EK
Height (SL)	[mm]	-	-	-	2380	Contact EK	Contact EK
Unit dimensions with hydronic kit							
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Large	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK	Contattare EK
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Large	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK	Contattare EK
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Large	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK	Contattare EK
Integrata HP 1-1 OO	-	Standard	Standard	Standard	Large	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK	Contattare EK
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK	Contattare EK

TETI BS R290 range		309-2-2 PV	346-2-2 PV	393-2-2 PV	428-2-2 PV	449-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	3100	3100	4450	4450	4450
Width	[mm]	2345	2345	2345	2345	2345
Height (ST - LN)	[mm]	2465	2465	2465	2465	2465
Height (SL)	[mm]	2525	2525	2525	2525	2525
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	1898	1908	2543	2557	2575
Operating weight (A BP/ST/AS/OO/** version)	[kg]	1913	1923	2561	2575	2593
DIMENSIONS - Large unit						
Lenght	[mm]	4450	4450	-	-	-
Width	[mm]	2345	2345	-	-	-
Height (ST - LN)	[mm]	2465	2465	-	-	-
Height (SL)	[mm]	2525	2525	-	-	-
Unit dimensions with hydronic kit						
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Large	Large	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Standard	Standard	Standard
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Large	Large	Standard	Standard	Standard
Integrata HP 1-1 OO	-	Large	Large	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Standard	Standard	Standard

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI HE

13-1-1 PE ⟷ 293-2-2 PE

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

Cu/Al condensing colils

SEPR

Air to water chillers for medium temperature applications

High efficiency

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 12,5 - 292,7 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 44-45-46-47*

TETI HE

Technical data

TETI HE R290 range		13-1-1 PE	26-1-1 PE	34-1-1 PE	42-1-1 PE	52-1-1 PE	59-1-1 PE
COOLING - A BP/ST/AS/OO/*S version							
Cooling capacity [1]	**[kW]**	**12,58**	**25,54**	**34,36**	**41,93**	**51,84**	**58,79**
Total power input [1]	[kW]	2,529	5,678	8,151	9,72	11,95	13,02
EER - Energy Efficiency Ratio	**-**	**4,97**	**4,50**	**4,22**	**4,31**	**4,34**	**4,52**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	4,7	9	11,4	14,6	14,9	19,6
"Ecodesign'' compliance for process application (SEPR)	-	**5,53**	**5,88**	**5,81**	**5,42**	**5,92**	**6,16**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	1,2	2,3	3,0	3,8	3,9	5,1
Independent gas circuits	[n°]	1	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	1	1
Available steps of capacity	-	1 (50%)	1 (75%); 2 (50%)				
Condensing coils type	-	Cu/Al					
Fans type	-	Axial AC					
Fans quantity	[n°]	1	1	1	2	2	2
Fans power input [1] (total)	[kW]	0,4366	0,7309	0,7545	1,538	1,529	1,399
Total air flow	[m^3/h]	5.900	11.400	10.700	21.300	21.300	23.900
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	2,2	4,4	5,9	7,2	8,9	10,1
Evaporator pressure drop [1]	[kPa]	25,33	26,62	44,93	43,87	47,29	46,08
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**							
Heating capacity [2]	**[kW]**	**1,3**	**3,2**	**4,8**	**5,1**	**6,4**	**6,6**
Water flow	[m^3/h]	0,22	0,55	0,84	0,87	1,11	1,16
Pressure drop (water side)	[kPa]	5,9	5,3	5,4	5,4	5,4	5,4
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**15,1**	**31,2**	**42,4**	**51,6**	**63,7**	**71,6**
Water flow	[m^3/h]	2,6	5,4	7,3	8,9	11,0	12,3
Pressure drop (water side)	[kPa]	12,6	22,4	30,7	24,3	30,1	32,9
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	3,9	9,0	12,8	14,8	17,3	19,8
Locked rotor current – LRA without pump	[A]	36,9	65,0	89,2	106,0	120,8	139,9
Maximum absorbed current - FLA without pump	[A]	7,4	15,7	22,5	25,3	32,4	39,6
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	30	60	60	160	160	290
Pump type	-	Centrifugal					
Standard pump - 250 kPa useful head							
Motor Efficiency	-	-	IE3	IE3	IE3	IE3	IE3
Pump motor nominal power	[kW]	0,6	0,9	1,5	1,5	1,5	1,5
Pump motor nominal current	[A]	2,1	2,5	4,1	4,1	4,1	4,1
Standard pump - 450 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	1,1	1,3	1,3	2,2	2,2	2,2
Pump motor nominal current	[A]	3,3	3,3	3,3	4,7	4,7	4,7
Water connections							
Dimension (nominal external diameter)	[inch/DN]	1/2" (DN15)	1" (DN 25)	1" (DN 25)	1" 1/4 (DN 32)	1" 1/4 (DN 32)	1" 1/2 (DN 40)
Noise levels [3]							
Total sound power (ST version)	[db(A)]	77	81	83	86	86	85
Total sound pressure (ST version) - at 1 m distance	[db(A)]	61	64	66	68	68	67
Total sound pressure (ST version) - at 10 m distance	[db(A)]	45	49	51	54	54	53
Total sound power (LN version)	[db(A)]	74	78	80	83	83	82
Total sound pressure (LN version) - at 1 m distance	[db(A)]	58	61	63	65	65	64
Total sound pressure (LN version) - at 10 m distance	[db(A)]	42	46	48	51	51	50
Total sound power (SL version)	[db(A)]	72	76	78	81	81	80
Total sound pressure (SL version) - at 1 m distance	[db(A)]	56	59	61	63	63	62
Total sound pressure (SL version) - at 10 m distance	[db(A)]	40	44	46	49	49	48

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI HE

Technical data

TETI HE R290 range		76-1-1 PE	88-1-1 PE	104-1-1 PE	124-1-1 PE	105-2-2 PE	116-2-2 PE
COOLING - A BP/ST/AS/OO/*S version							
Cooling capacity [(1)]	**[kW]**	**75,89**	**88,27**	**104,3**	**124,2**	**105,3**	**116,1**
Total power input [(1)]	[kW]	18,21	20,13	22,62	30,15	22,62	26,91
EER - Energy Efficiency Ratio	-	**4,17**	**4,38**	**4,61**	**4,12**	**4,66**	**4,31**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	21,9	27,2	36	37,7	37,6	38,9
"Ecodesign'' compliance for process application (SEPR)	-	**5,27**	**5,46**	**6,22**	**5,18**	**6,47**	**6,02**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	5,7	7,0	9,4	9,8	9,8	10,1
Independent gas circuits	[n°]	1	1	1	1	2	2
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	2	2
Available steps of capacity	-	1 (75%); 2 (50%)		1 (83%); 2 (67%); 3 (50%)		1 (75%); 2 (50%)	
Condensing coils type	-	Cu/Al					
Fans type	-	Axial AC					
Fans quantity	[n°]	2	2	3	3	3	3
Fans power input [(1)] (total)	[kW]	3,602	3,716	2,21	5,646	2,206	2,198
Total air flow	[m^3/h]	34.700	32.000	33.400	46.800	33.400	33.400
Expansion valve type	-	Electronic					
Evaporator water flow [(1)]	[m^3/h]	13,1	15,2	17,9	21,4	18,1	20,0
Evaporator pressure drop [(1)]	[kPa]	33,34	33,94	36,98	42,04	36,21	43,06
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**							
Heating capacity [(2)]	**[kW]**	**8,5**	**10,1**	**12,8**	**15,3**	**12,6**	**15,3**
Water flow	[m^3/h]	1,48	1,73	2,20	2,65	2,19	2,69
Pressure drop (water side)	[kPa]	5,5	5,6	5,8	6,0	5,4	5,5
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [(2)]	**[kW]**	**94**	**108,3**	**126,8**	**154,1**	**127,7**	**142,8**
Water flow	[m^3/h]	16,2	18,6	21,8	26,5	22,0	24,6
Pressure drop (water side)	[kPa]	38,7	40,4	47	47,8	28	35,7
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	24,8	29,8	34,6	43,5	33,6	38,6
Locked rotor current – LRA without pump	[A]	211,9	233,6	244,8	286,8	151,4	177,7
Maximum absorbed current - FLA without pump	[A]	46,1	53,2	59,5	74,8	63,0	77,4
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	290	290	290	290	290	290
Pump type	-	Centrifugal					
Standard pump - 250 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	1,8	3	3	3	3	3
Pump motor nominal current	[A]	4,7	6,4	6,4	6,4	6,4	6,4
Standard pump - 450 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	4	4	5,5	7,5	5,5	7,5
Pump motor nominal current	[A]	8,7	8,7	10,6	13,6	10,6	13,6
Water connections							
Dimension (nominal external diameter)	[inch/DN]	1" 1/2 (DN 40)	2" (DN 50)	2" (DN 50)	2" (DN 50)	2" (DN 50)	2" (DN 50)
Noise levels [(3)]							
Total sound power (ST version)	[db(A)]	85	87	88	89	87	88
Total sound pressure (ST version) - at 1 m distance	[db(A)]	67	69	69	70	68	69
Total sound pressure (ST version) - at 10 m distance	[db(A)]	53	55	56	57	55	56
Total sound power (LN version)	[db(A)]	82	84	85	86	84	85
Total sound pressure (LN version) - at 1 m distance	[db(A)]	64	66	66	67	65	66
Total sound pressure (LN version) - at 10 m distance	[db(A)]	50	52	53	54	52	53
Total sound power (SL version)	[db(A)]	80	82	83	84	82	83
Total sound pressure (SL version) - at 1 m distance	[db(A)]	62	64	64	65	63	64
Total sound pressure (SL version) - at 10 m distance	[db(A)]	48	50	51	52	50	51

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI HE

Technical data

TETI HE R290 range		147-2-2 PE	175-2-2 PE	215-2-2 PE	248-2-2 PE	293-2-2 PE
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [1]	**[kW]**	**147**	**174,9**	**214,6**	**248,2**	**292,7**
Total power input [1]	[kW]	36,35	38,74	45,29	56,32	69,71
EER - Energy Efficiency Ratio	-	**4,04**	**4,51**	**4,74**	**4,41**	**4,20**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	41,3	60,4	80	84	87
"Ecodesign'' compliance for process application (SEPR)	-	**5,11**	**5,77**	**5,69**	**5,62**	**5,09**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	10,7	15,7	20,8	21,8	22,6
Independent gas circuits	[n°]	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2	2	2	2	2
Available steps of capacity	-	1 (75%); 2 (50%)		1 (83%); 2 (67%); 3 (50%)		
Condensing coils type	-	Cu/Al				
Fans type	-	Axial AC				
Fans quantity	[n°]	3	3	4	4	4
Fans power input [1] (total)	[kW]	5,613	4,953	6,743	6,705	9,78
Total air flow	[m^3/h]	46.800	59.800	77.300	77.300	95.700
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	25,3	30,1	36,9	42,7	50,3
Evaporator pressure drop [1]	[kPa]	47,15	50,04	59,21	65,63	70,13
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [2]	**[kW]**	**18,1**	**20,3**	**23,2**	**31,1**	**37**
Water flow	[m^3/h]	3,13	3,49	4,05	5,36	6,41
Pressure drop (water side)	[kPa]	5,7	5,7	5,6	6,0	6,4
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**182,9**	**213,1**	**259,2**	**303,6**	**338**
Water flow	[m^3/h]	31,5	36,7	44,6	52,2	58,5
Pressure drop (water side)	[kPa]	41,1	42,9	43,7	38,7	42,8
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	47,3	57,3	72,8	82,4	97,6
Locked rotor current – LRA without pump	[A]	253,4	282,2	311,5	352,4	414,4
Maximum absorbed current - FLA without pump	[A]	87,6	101,8	126,2	140,4	167,6
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	500	470	470	470
Pump type	-	Centrifugal				
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	4	4	4	5,5	5,5
Pump motor nominal current	[A]	8,7	8,7	8,7	10,6	10,6
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	7,5	7,5	7,5	11	11
Pump motor nominal current	[A]	13,6	13,6	13,6	21,3	21,3
Water connections						
Dimension (nominal external diameter)	[inch/DN]	2"1/2 (DN 65)	2"1/2 (DN 65)	3" (DN 80)	3" (DN 80)	3" (DN 80)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	88	89	90	91	93
Total sound pressure (ST version) - at 1 m distance	[db(A)]	69	70	70	71	73
Total sound pressure (ST version) - at 10 m distance	[db(A)]	56	57	58	59	61
Total sound power (LN version)	[db(A)]	85	86	87	88	90
Total sound pressure (LN version) - at 1 m distance	[db(A)]	66	67	67	68	70
Total sound pressure (LN version) - at 10 m distance	[db(A)]	53	54	55	56	58
Total sound power (SL version)	[db(A)]	83	84	85	86	88
Total sound pressure (SL version) - at 1 m distance	[db(A)]	64	65	65	66	68
Total sound pressure (SL version) - at 10 m distance	[db(A)]	51	52	53	54	56

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI HE

313-2-2 PV ⟷ 484-2-2 PV

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

MCX Microchannel condensing colils

SEPR

Air to water chillers for medium temperature applications

High efficiency

Solution

B - Base

I - Integrata

Version

ST - Standard

LN - Low Noise

SL - Super Low Noise

Equipment

AS - Standard equipment

DS - Desuperheater

HR - Total modulating Heat Recovery

Cooling capacity 312,9 - 483,8 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tube´s air shadow to provide maximum heat exchange through our condensers.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

For the complete list of accessories please see pages 44-45-46-47

TETI HE

Technical data

TETI HE R290 range		313-2-2 PV	350-2-2 PV	388-2-2 PV	449-2-2 PV	484-2-2 PV
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [1]	**[kW]**	**312,9**	**350,4**	**388,1**	**448,6**	**483,8**
Total power input [1]	[kW]	66,82	74,92	85,89	95,08	101,8
EER - Energy Efficiency Ratio	-	**4,68**	**4,68**	**4,52**	**4,72**	**4,75**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	81,9	81,7	86,2	98,7	102,3
"Ecodesign'' compliance for process application (SEPR)	-	**5,69**	**5,84**	**5,66**	**5,87**	**6,09**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	21,3	21,2	22,4	25,6	26,6
Independent gas circuits	[n°]	2				
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2				
Available steps of capacity	-	2 (75%); 3 (62,5%); 4 (50%)				
Condensing coils type	-	Microchannel				
Fans type	-	Axial AC				
Fans quantity	[n°]	6	6	6	8	8
Fans power input [1] (total)	[kW]	9,95	9,91	9,87	13,23	13,2
Total air flow	[m^3/h]	119.600	119.600	119.600	159.500	159.500
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	53,8	60,3	66,8	77,2	83,2
Evaporator pressure drop [1]	[kPa]	40,94	49,97	49	53,92	54,13
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [2]	**[kW]**	**34,4**	**38,8**	**46,6**	**46,5**	**52,5**
Water flow	[m^3/h]	5,95	6,75	8,18	8,05	9,04
Pressure drop (water side)	[kPa]	13,3	15,4	19,6	19,2	22,4
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**341**	**384**	**432**	**485**	**531**
Water flow	[m^3/h]	59,2	66,5	74,8	84,0	92,1
Pressure drop (water side)	[kPa]	38,3	40,1	43,4	48	46,7
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	118,0	128,6	129,6	143,2	145,2
Locked rotor current – LRA without pump	[A]	483,9	582,4	678,9	728,7	732,0
Maximum absorbed current - FLA without pump	[A]	206,2	227,2	234,2	252,6	259,2
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	290	290	290	290
Pump type	-	Centrifugal				
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	7,5	7,5	11	11	11
Pump motor nominal current	[A]	13,6	13,6	21,3	21,3	21,3
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	11	11	15	18,5	18,5
Pump motor nominal current	[A]	21,3	21,3	27,7	35	35
Water connections						
Dimension (nominal external diameter)	[inch/DN]	4" (DN 100)	4" (DN 100)	4" (DN 100)	4" (DN 100)	4" (DN 100)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	93	93	94	94	95
Total sound pressure (ST version) - at 1 m distance	[db(A)]	73	73	74	73	74
Total sound pressure (ST version) - at 10 m distance	[db(A)]	61	61	62	62	63
Total sound power (LN version)	[db(A)]	90	90	91	91	92
Total sound pressure (LN version) - at 1 m distance	[db(A)]	70	70	71	70	71
Total sound pressure (LN version) - at 10 m distance	[db(A)]	58	58	59	59	60
Total sound power (SL version)	[db(A)]	88	88	89	89	90
Total sound pressure (SL version) - at 1 m distance	[db(A)]	68	68	69	68	69
Total sound pressure (SL version) - at 10 m distance	[db(A)]	56	56	57	57	58

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI HE

Dimensions and weights

TETI HE R290 range		13-1-1 PE	26-1-1 PE	34-1-1 PE	42-1-1 PE	52-1-1 PE	59-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	1380	1680	1680	2330	2330	2980
Width	[mm]	835	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	2121	2121	2221	2221	2221
Height (SL)	[mm]	-	2208	2208	2308	2308	2308
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	230	355	365	550	550	660
Operating weight (A BP/ST/AS/OO/** version)	[kg]	235	360	370	555	555	667
DIMENSIONS - Large unit							
Lenght	[mm]	1980	2330	2330	2980	2980	3920
Width	[mm]	835	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	2221	2221	2221	2221	2281
Height (SL)	[mm]	-	2308	2308	2308	2308	2368
Unit dimensions with hydronic kit							
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Standard
Integrata MP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Standard
Integrata HP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Standard	Standard	Standard

TETI HE R290 range		76-1-1 PE	88-1-1 PE	104-1-1 PE	124-1-1 PE	105-2-2 PE	116-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	2980	2980	3920	3920	3920	3920
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2300	2300	2281	2360	2281	2281
Height (SL)	[mm]	2360	2360	2368	2420	2368	2368
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	750	790	940	1000	975	980
Operating weight (A BP/ST/AS/OO/** version)	[kg]	757	797	948	1008	983	988
DIMENSIONS - Large unit							
Lenght	[mm]	3920	3920	-	-	-	-
Width	[mm]	1025	1025	-	-	-	-
Height (ST - LN)	[mm]	2360	2360	-	-	-	-
Height (SL)	[mm]	2420	2420	-	-	-	-
Unit dimensions with hydronic kit							
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI HE

Dimensions and weights

TETI HE R290 range		147-2-2 PE	175-2-2 PE	215-2-2 PE	287-2-2 PE	248-2-2 PE	293-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	3920	4200	5500	5500	5500	5500
Width	[mm]	1025	1185	1535	1535	1535	1535
Height (ST - LN)	[mm]	2360	2320	2350	2350	2350	2350
Height (SL)	[mm]	2420	2380	2410	2410	2410	2410
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	1145	1380	1690	1686	1700	1745
Operating weight (A BP/ST/AS/OO/** version)	[kg]	1153	1390	1700	1701	1710	1755
DIMENSIONS - Large unit							
Lenght	[mm]	-	5000	Contact EK	Contact EK	Contact EK	Contact EK
Width	[mm]	-	1185	Contact EK	Contact EK	Contact EK	Contact EK
Height (ST - LN)	[mm]	-	2320	Contact EK	Contact EK	Contact EK	Contact EK
Height (SL)	[mm]	-	2380	Contact EK	Contact EK	Contact EK	Contact EK
Unit dimensions with hydronic kit							
Integrata MP 1-0 OO	-	Standard	Large	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Large	Contattare EK	Contattare EK	Contattare EK	Contattare EK
Integrata MP 1-1 OO	-	Standard	Large	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Standard	Large	Contattare EK	Contattare EK	Contattare EK	Contattare EK
Integrata HP 1-0 OO	-	Standard	Large	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Standard	Large	Contattare EK	Contattare EK	Contattare EK	Contattare EK
Integrata HP 1-1 OO	-	Standard	Large	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Standard	Large	Contattare EK	Contattare EK	Contattare EK	Contattare EK
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Large	Contattare EK	Contattare EK	Contattare EK	Contattare EK

TETI HE R290 range		313-2-2 PV	350-2-2 PV	388-2-2 PV	449-2-2 PV	484-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	4450	4450	4450	5700	5700
Width	[mm]	2345	2345	2345	2345	2345
Height (ST - LN)	[mm]	2465	2465	2465	2465	2465
Height (SL)	[mm]	2525	2525	2525	2525	2525
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	2495	2515	2560	2900	2915
Operating weight (A BP/ST/AS/OO/** version)	[kg]	2513	2533	2578	2920	2935
DIMENSIONS - Large unit						
Lenght	[mm]	-	-	-	-	-
Width	[mm]	-	-	-	-	-
Height (ST - LN)	[mm]	-	-	-	-	-
Height (SL)	[mm]	-	-	-	-	-
Unit dimensions with hydronic kit						
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

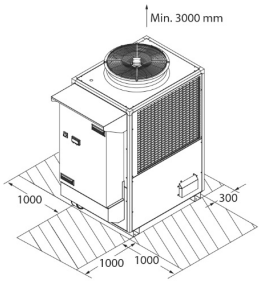
(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

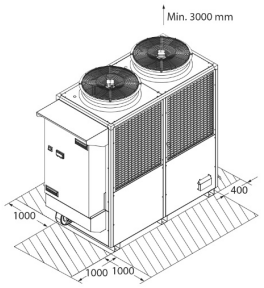
(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

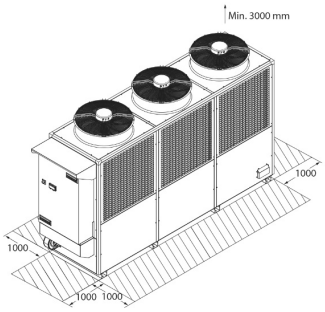
(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

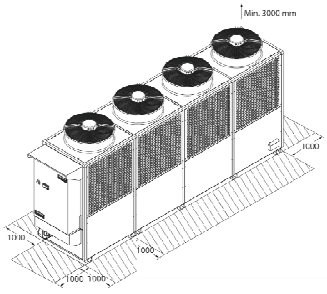
(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

TETI range

TETI BS **Business**	TETI HE **High Efficiency**
	
13-1-1 PE ⟷ 40-1-1 PE	13-1-1 PE ⟷ 34-1-1 PE
Cooling capacity from 12,5 kW to 40,2 kW	Cooling capacity from 12,5 kW to 34,3 kW

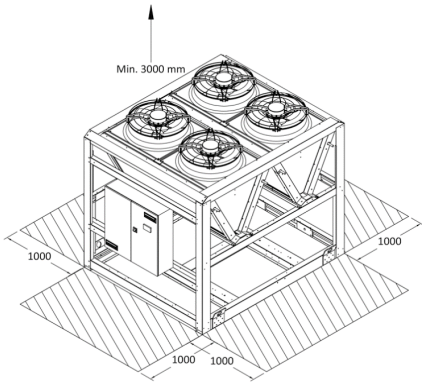
TETI BS **Business**	TETI HE **High Efficiency**
	
49-1-1 PE ⟷ 101-1-1 PE	42-1-1 PE ⟷ 88-1-1 PE
Cooling capacity from 48,8 kW to 100,7 kW	Cooling capacity from 41,9 kW to 88,2 kW

TETI BS **Business**	TETI HE **High Efficiency**
	
119-1-1 PE ⟷ 199-1-1 PE	104-1-1 PE ⟷ 175-1-1 PE
Cooling capacity from 119,1 kW to 199,4 kW	Cooling capacity from 104,3 kW to 174,9 kW

TETI BS **Business**	TETI HE **High Efficiency**
	
248-2-2 PE ⟷ 287-2-2 PE	215-2-2 PE ⟷ 293-2-2 PE
Cooling capacity from 248,2 kW to 286,5 kW	Cooling capacity from 214,6 kW to 292,7 kW

TETI range

TETI BS Business



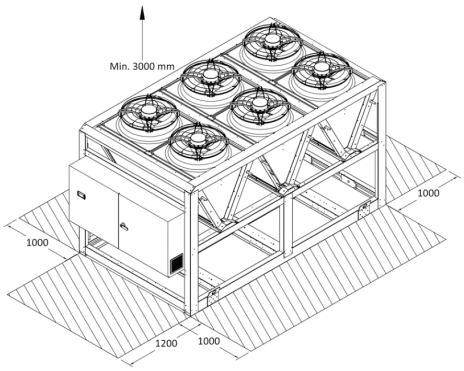
309-2-2 PV ⟷ 346-2-2 PV

Cooling capacity

from 308,9 kW to 346 kW

TETI HE High Efficiency

TETI BS Business



393-2-2 PV ⟷ 449-2-2 PV

Cooling capacity

from 392,8 kW to 448,6 kW

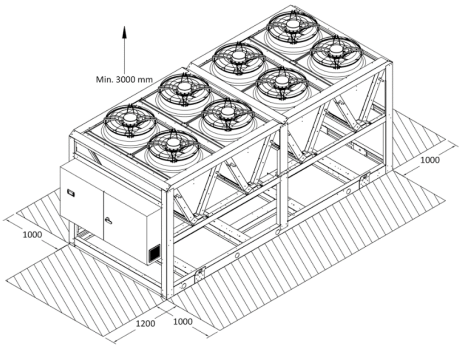
TETI HE High Efficiency

313-2-2 PV ⟷ 388-2-2 PV

Cooling capacity

from 312,9 kW to 388,1 kW

TETI BS Business



TETI HE High Efficiency

449-2-2 PV ⟷ 484-2-2 PV

Cooling capacity

from 448,6 kW to 483,8 kW

AURA

The natural solution for Comfort applications

AURA configurations

The below legend allows you to easily select the proper configuration of AURA chiller.

AURA HE A BP / ST / AS / EC / OO 108-2-2

Range
AURA HE - High Efficiency
AURA HEI - High Efficiency Inverter

Unit Type
A - Chiller Air/Water

Solution
BP - Base (brazed plate evaporator)
PP - Base with pump (brazed plate evaporator)
TP - Base with tank (brazed plate evaporator)
IP - Integrata (tank + pump / brazed plate evaporator)

Version
ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment
AS - Standard solution
DS - Desuperheater
HR - Total modulating Heat Recovery

Fans control
EC - EC Fan

Compressor
1S - 1 partial step compressor(s)
2S - 2 partial step compressor(s)
3S - 3 partial step compressor(s)
4S - 4 partial step compressor(s)
OI - ON-OFF compressor + VFD compressor
II - VFD compressor(s)

Size

Base-P MP 1-0 OO

Hydronic kit
Base-T - Base solution with tank
Base-P - Base solution with pump
Integrata - INTEGRATA solution with pump and tank

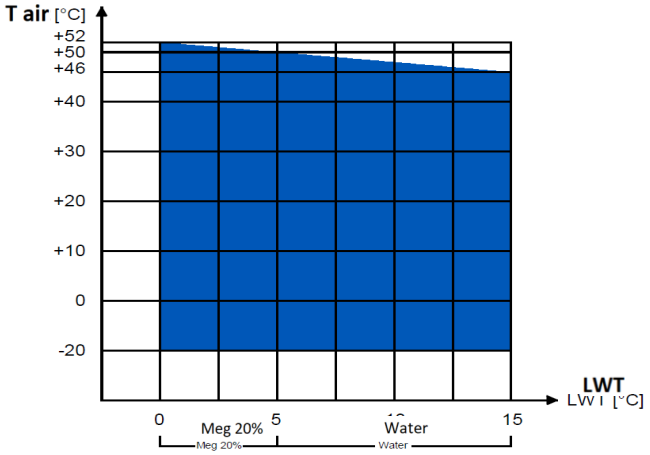
Pressure Head
LP - Low Pressure head (150 kPa)
MP - Medium Pressure head (300 kPa)
HP - High Pressure head (500 kPa)

Number of operating - stand-by pumps

Pump(s) control
OO - ON-OFF control
II - VFD control

AURA operating limits

AURA HE / AURA HEI Cooling mode



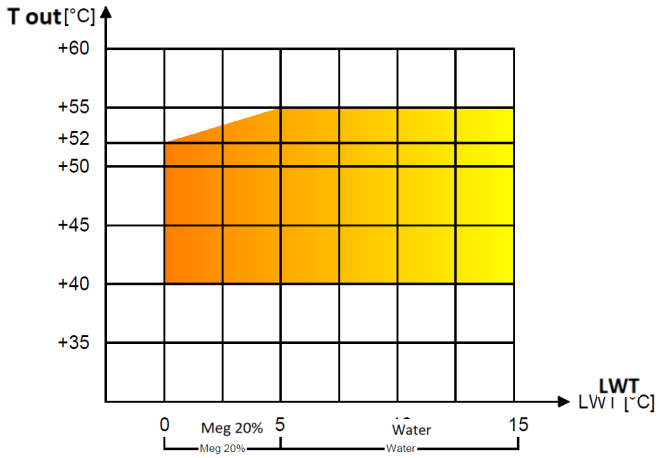
Operating area

T air: Outdoor air temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

AURA HE / AURA HEI Cooling mode and Desuperheater



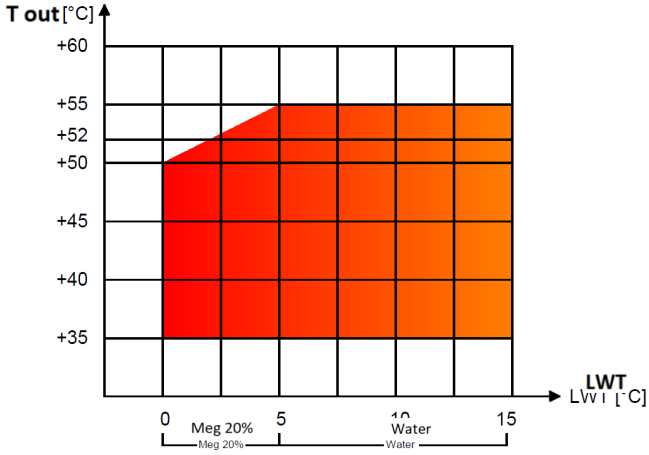
Operating area

T out: Desuperheater exchanger outlet water temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

AURA HE / AURA HEI Cooling mode and Total Modulating Heat Recovery



Operating area

T out: Heat recovery exchanger outlet water temperature [°C]

LWT: Evaporator outlet temperature [°C]

Meg: Mixture of ethylene glycol

AURA HE

9-1-1 PE ⟷ 181-2-2 PE

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

Cu/Al condensing colils

SEER

Air to water chillers for comfort applications

Standard efficiency

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 8,8 - 180,7 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 44-45-46-47*

AURA HE

Technical data

AURA HE R290 range		9-1-1 PE	12-1-1 PE	19-1-1 PE	26-1-1 PE	31-1-1 PE	37-1-1 PE
COOLING - A BP/ST/AS/EC/*S version							
Cooling capacity [1]	**[kW]**	**8,8**	**12,3**	**18,6**	**25,9**	**30,9**	**37,3**
Total power input [1]	[kW]	2,3436	3,3724	4,9281	7,096	8,742	11,118
EER - Energy Efficiency Ratio	-	**3,09**	**2,98**	**3,24**	**2,99**	**2,96**	**2,91**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	4,7	8	10,2	13,8	14,8	15,3
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**161,96**	**161,00**	**167,40**	**162,20**	**162,20**	**161,60**

REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	1,2	2,1	2,6	3,6	3,8	4,0
Independent gas circuits	[n°]	1	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	1	1
Steps of capacity for each compressor (std)	-	1 (50%)	1 (50%)	2 (75-50%)	2 (75-50%)	2 (75-50%)	2 (75-50%)
Condensing coils type	-	Cu/Al					
Fans type	-	Axial EC					
Fans quantity	[n°]	1	1	1	2	2	2
Fans power input [1] (total)	[kW]	0,5	0,8	0,8	1,6	1,7	1,7
Total air flow	[m^3/h]	6.350	12.100	11.600	22.650	23.500	23.500
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	1,5	2,1	3,2	4,5	5,3	6,4
Evaporator pressure drop [1]	[kPa]	14	13	26	29	27	28

DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**							
Heating capacity [2]	**[kW]**	**1,054**	**1,381**	**1,783**	**2,461**	**3,259**	**4,425**
Water flow	[m^3/h]	0,20	0,20	0,30	0,40	0,60	0,80
Pressure drop (water side)	[kPa]	5,0	5,0	5,0	5,0	5,0	6,0

HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**10,95**	**14,8**	**22,2**	**31**	**38,9**	**47**
Water flow	[m^3/h]	1,9	2,6	3,9	5,4	6,8	8,2
Pressure drop (water side)	[kPa]	17	15	21	39	26	24

Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	4,0	6,1	9,3	14,2	15,2	17,7
Locked rotor current – LRA without pump	[A]	36,9	45,6	65,0	91,1	106,1	120,9
Maximum absorbed current - FLA without pump	[A]	7,4	10,9	15,7	24,4	25,4	32,5

HYDRONIC KIT (option)							
Buffer tank capacity	[L]	30	60	60	160	160	160
Pump type	-	Centrifugal					

Standard pump - 150 kPa useful head							
Motor Efficiency	-	-	-	-	-	-	-
Pump motor nominal power	[kW]	0,37	0,37	0,37	0,55	0,55	0,55
Pump motor nominal current	[A]	1	1,4	1,4	1,9	1,9	1,9

Standard pump - 250 kPa useful head							
Motor Efficiency	-	-	-	-	IE3	IE3	IE3
Pump motor nominal power	[kW]	0,55	0,55	0,55	0,9	0,9	1,5
Pump motor nominal current	[A]	2	2	2	2,5	2,5	4,1

Water connections							
Dimension (nominal external diameter)	[inch/DN]	1/2" (DN15)	1/2" (DN15)	1" (DN 25)	1" (DN 25)	1" (DN 25)	1" 1/4 (DN 32)

Noise levels [3]							
Total sound power (ST version)	[db(A)]	77	81	82	85	86	86
Total sound pressure (ST version) - at 1 m distance	[db(A)]	61	64	65	67	68	68
Total sound pressure (ST version) - at 10 m distance	[db(A)]	45	49	50	53	54	54
Total sound power (LN version)	[db(A)]	74	78	79	82	83	83
Total sound pressure (LN version) - at 1 m distance	[db(A)]	58	61	62	64	65	65
Total sound pressure (LN version) - at 10 m distance	[db(A)]	42	46	47	50	51	51
Total sound power (SL version)	[db(A)]	72	76	77	80	81	81
Total sound pressure (SL version) - at 1 m distance	[db(A)]	56	59	60	62	63	63
Total sound pressure (SL version) - at 10 m distance	[db(A)]	40	44	45	48	49	49

Reference conditions:

(1) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HE

Technical data

AURA HE R290 range		45-1-1 PE	55-1-1 PE	64-1-1 PE	76-1-1 PE	62-2-2 PE	72-2-2 PE
COOLING - A BP/ST/AS/EC/*S version							
Cooling capacity [1]	**[kW]**	**45,1**	**54,8**	**64,3**	**76,2**	**62,4**	**72,1**
Total power input [1]	[kW]	12,426	15,169	17,33	21,621	17,828	22,637
EER - Energy Efficiency Ratio	-	**2,71**	**2,82**	**2,96**	**3,16**	**2,81**	**2,89**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	20,4	22,8	27,9	39,1	29,2	31,5
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**161,80**	**162,08**	**165,10**	**164,20**	**161,68**	**161,44**

REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	5,3	5,9	7,2	10,1	7,6	8,2
Independent gas circuits	[n°]	1	1	1	1	2	2
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	2	2
Steps of capacity for each compressor (std)	-	2 (75-50%)	2 (75-50%)	2 (75-50%)	3 (83-67-50%)	2 (75-50%)	2 (75-50%)
Condensing coils type	-	Cu/Al					
Fans type	-	Axial EC					
Fans quantity	[n°]	2	2	2	3	2	3
Fans power input [1] (total)	[kW]	4,2	4,2	4,4	2,5	4,4	2,4
Total air flow	[m^3/h]	40.400	40.400	37.750	36.700	37.300	38.700
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	7,8	9,4	11,1	13,1	10,7	12,4
Evaporator pressure drop [1]	[kPa]	30	20	20	22	23	30

DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**							
Heating capacity [2]	**[kW]**	**4,139**	**5,883**	**6,461**	**7,966**	**7,076**	**9,464**
Water flow	[m^3/h]	0,70	1,00	1,10	1,40	1,20	1,60
Pressure drop (water side)	[kPa]	6,0	6,0	6,0	6,0	5,0	6,0

HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**55,7**	**67,5**	**78,7**	**94,5**	**77,45**	**93,3**
Water flow	[m^3/h]	9,7	11,8	13,7	16,5	13,5	16,3
Pressure drop (water side)	[kPa]	27	25	36	35	31	26

Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	22,3	26,2	31,2	35,3	31,8	34,3
Locked rotor current – LRA without pump	[A]	189,8	212,0	233,7	244,9	133,2	151,5
Maximum absorbed current - FLA without pump	[A]	39,5	46,2	53,3	59,6	52,5	63,1

HYDRONIC KIT (option)							
Buffer tank capacity	[L]	290	290	290	290	160	290
Pump type	-	Centrifugal					

Standard pump - 150 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	0,9	0,9	1,1	1,1	1,1	1,1
Pump motor nominal current	[A]	2,5	2,5	3,3	3,3	3,3	3,3

Standard pump - 250 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	1,5	1,5	2,2	2,2	2,2	2,2
Pump motor nominal current	[A]	4,1	4,1	4,7	4,7	4,7	4,7

Water connections							
Dimension (nominal external diameter)	[inch/DN]	1" 1/4 (DN 32)	1" 1/4 (DN 32)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	1" 1/2 (DN 40)

Noise levels [3]							
Total sound power (ST version)	[db(A)]	84	85	87	88	85	86
Total sound pressure (ST version) - at 1 m distance	[db(A)]	66	67	69	69	67	67
Total sound pressure (ST version) - at 10 m distance	[db(A)]	52	53	55	56	53	54
Total sound power (LN version)	[db(A)]	81	82	84	85	82	83
Total sound pressure (LN version) - at 1 m distance	[db(A)]	63	64	66	66	64	64
Total sound pressure (LN version) - at 10 m distance	[db(A)]	49	50	52	53	50	51
Total sound power (SL version)	[db(A)]	79	80	82	83	80	81
Total sound pressure (SL version) - at 1 m distance	[db(A)]	61	62	64	64	62	62
Total sound pressure (SL version) - at 10 m distance	[db(A)]	47	48	50	51	48	49

Reference conditions:

(1) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HE

Technical data

AURA HE R290 range		84-2-2 PE	108-2-2 PE	127-2-2 PE	149-2-2 PE	181-2-2 PE
COOLING - A BP/ST/AS/EC/*S version						
Cooling capacity [1]	**[kW]**	**84,1**	**108,3**	**127,4**	**148,5**	**180,7**
Total power input [1]	[kW]	25,37	31,092	35,217	45,184	52,128
EER - Energy Efficiency Ratio	-	**3,02**	**2,87**	**3,11**	**2,91**	**3,01**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	41,2	45,2	62,4	67,3	85,9
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**162,08**	**161,64**	**168,10**	**161,64**	**161,30**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	10,7	11,7	16,2	17,5	22,3
Independent gas circuits	[n°]	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2	2	2	2	2
Steps of capacity for each compressor (std)	-	2 (75-50%)	2 (75-50%)	2 (75-50%)	3 (83-67-50%)	3 (83-67-50%)
Condensing coils type	-	Cu/Al				
Fans type	-	Axial EC				
Fans quantity	[n°]	3	3	3	3	4
Fans power input [1] (total)	[kW]	2,5	6,6	5,8	5,8	7,9
Total air flow	[m^3/h]	36.700	55.250	68.300	68.300	88.600
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	14,5	18,6	21,9	25,5	31,1
Evaporator pressure drop [1]	[kPa]	26	23	30	33	46
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**						
Heating capacity [2]	**[kW]**	**10,2**	**12,98**	**13,54**	**18,66**	**19,26**
Water flow	[m^3/h]	1,80	2,30	2,30	3,20	3,30
Pressure drop (water side)	[kPa]	6,0	6,0	6,0	6,0	6,0
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**						
Heating capacity [2]	**[kW]**	**107,3**	**136,6**	**157,3**	**190,3**	**224,6**
Water flow	[m^3/h]	18,7	23,8	27,4	33,1	39,1
Pressure drop (water side)	[kPa]	35	29	36	41	48
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	39,3	49,4	59,4	72,6	85,3
Locked rotor current – LRA without pump	[A]	177,8	253,6	282,4	306,9	352,6
Maximum absorbed current - FLA without pump	[A]	77,5	87,8	102,0	121,8	140,6
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	290	500	500	470
Pump type	-	Centrifugal				
Standard pump - 150 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	1,1	2,2	2,2	2,2	2,2
Pump motor nominal current	[A]	3,3	4,7	4,7	4,7	4,7
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	2,2	3	3	4	4
Pump motor nominal current	[A]	4,7	6,4	6,4	8,7	8,7
Water connections						
Dimension (nominal external diameter)	[inch/DN]	2" (DN 50)	2" (DN 50)	2" (DN 50)	2"1/2 (DN 65)	2"1/2 (DN 65)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	88	88	89	89	91
Total sound pressure (ST version) - at 1 m distance	[db(A)]	69	69	70	70	71
Total sound pressure (ST version) - at 10 m distance	[db(A)]	56	56	57	57	59
Total sound power (LN version)	[db(A)]	85	85	86	86	88
Total sound pressure (LN version) - at 1 m distance	[db(A)]	66	66	67	67	68
Total sound pressure (LN version) - at 10 m distance	[db(A)]	53	53	54	54	56
Total sound power (SL version)	[db(A)]	83	83	84	84	86
Total sound pressure (SL version) - at 1 m distance	[db(A)]	64	64	65	65	66
Total sound pressure (SL version) - at 10 m distance	[db(A)]	51	51	52	52	54

Reference conditions:

(1) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HE

212-2-2 PV ⟷ 335-2-2 PV

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

MCX Microchannel condensing colils

SEER

Air to water chillers for comfort applications

Standard efficiency

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 212 - 335,1 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tube´s air shadow to provide maximum heat exchange through our condensers.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 44-45-46-47*

AURA HE

Technical data

AURA HE R290 range		212-2-2 PV	240-2-2 PV	269-2-2 PV	291-2-2 PV	321-2-2 PV	335-2-2 PV
COOLING - A BP/ST/AS/EC/*S version							
Cooling capacity [1]	**[kW]**	**212**	**239,9**	**269,1**	**290,7**	**320,7**	**335,1**
Total power input [1]	[kW]	62,623	70,3	80,2	87,72	93,17	98,37
EER - Energy Efficiency Ratio	-	**3,02**	**2,94**	**2,93**	**2,93**	**2,96**	**2,94**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	62,4	83,2	87	88,1	100	106,4
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**162,00**	**161,04**	**161,56**	**161,44**	**161,72**	**161,48**

REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	16,2	21,6	22,6	22,9	26,0	27,6
Independent gas circuits	[n°]	2	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	2	2	2	2	2	2
Steps of capacity for each compressor (std)	-	3 (83-67-50%)	4 (87.5-75-62.5-50%)				
Condensing coils type	-	Microchannel					
Fans type	-	Axial EC					
Fans quantity	[n°]	4	6	6	6	8	8
Fans power input [1] (total)	[kW]	7,7	11,3	11,6	11,5	15	15,4
Total air flow	[m^3/h]	91.600	135.750	137.400	137.400	181.150	183.200
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	36,5	41,3	46,3	50,0	55,2	57,6
Evaporator pressure drop [1]	[kPa]	46	27	27	31	31	34

DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**							
Heating capacity [2]	**[kW]**	**24,74**	**27,32**	**32,47**	**37,29**	**37,08**	**39,26**
Water flow	[m^3/h]	4,30	4,70	5,60	6,50	6,40	6,80
Pressure drop (water side)	[kPa]	6,0	6,0	6,0	6,0	6,0	7,0

HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**265**	**306,3**	**335**	**363,9**	**422**	**445**
Water flow	[m^3/h]	46,2	0,0	58,4	63,4	73,2	77,1
Pressure drop (water side)	[kPa]	50	34	33	38	41,7	41,1

Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	100,5	122,3	132,9	133,9	148,9	150,9
Locked rotor current – LRA without pump	[A]	414,6	484,2	582,7	679,2	729,1	732,4
Maximum absorbed current - FLA without pump	[A]	167,8	206,5	227,5	234,5	253,0	259,6

HYDRONIC KIT (option)							
Buffer tank capacity	[L]	290	290	290	290	290	290
Pump type	-	Centrifugal					

Standard pump - 150 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	3	3	3	3	5,5	5,5
Pump motor nominal current	[A]	6,4	6,4	6,4	6,4	10,6	10,6

Standard pump - 250 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	4	5,5	5,5	5,5	5,5	7,5
Pump motor nominal current	[A]	8,7	10,6	10,6	10,6	10,6	13,6

Water connections							
Dimension (nominal external diameter)	[inch/DN]	3" (DN 80)	3" (DN 80)	3" (DN 80)	3" (DN 80)	4" (DN 100)	4" (DN 100)

Noise levels [3]							
Total sound power (ST version)	[db(A)]	91	93	93	94	94	95
Total sound pressure (ST version) - at 1 m distance	[db(A)]	72	73	73	74	73	74
Total sound pressure (ST version) - at 10 m distance	[db(A)]	59	61	61	62	62	63
Total sound power (LN version)	[db(A)]	88	90	90	91	91	92
Total sound pressure (LN version) - at 1 m distance	[db(A)]	69	70	70	71	70	71
Total sound pressure (LN version) - at 10 m distance	[db(A)]	56	58	58	59	59	60
Total sound power (SL version)	[db(A)]	86	88	88	89	89	90
Total sound pressure (SL version) - at 1 m distance	[db(A)]	67	68	68	69	68	69
Total sound pressure (SL version) - at 10 m distance	[db(A)]	54	56	56	57	57	58

Reference conditions:

(1) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HE

Dimensions and weights

AURA HE R290 range		9-1-1 PE	12-1-1 PE	19-1-1 PE	26-1-1 PE	31-1-1 PE	37-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	1380	1680	1680	2330	2330	2330
Width	[mm]	835	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	2221	2221	2221	2221	2221
Height (SL)	[mm]	-	2208	2208	2308	2308	2308
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	230	231	380	500	550	550
Operating weight (A BP/ST/AS/EC/** version)	[kg]	235	236	385	505	555	555
DIMENSIONS - Large unit							
Lenght	[mm]	1980	2330	2330	2980	2980	2980
Width	[mm]	835	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	2221	2221	2221	2221	2221
Height (SL)	[mm]	-	2308	2308	2308	2308	2308
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata LP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Standard	Standard	Standard

AURA HE R290 range		45-1-1 PE	55-1-1 PE	64-1-1 PE	76-1-1 PE	62-2-2 PE	72-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	2980	2980	2980	3920	2980	3920
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2360	2360	2360	-	2360	-
Height (SL)	[mm]	2360	2360	2360	2368	2360	2368
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	740	750	790	940	840	930
Operating weight (A BP/ST/AS/EC/** version)	[kg]	747	757	797	948	847	938
DIMENSIONS - Large unit							
Lenght	[mm]	3920	3920	3920	-	3920	-
Width	[mm]	1025	1025	1025	-	1025	-
Height (ST - LN)	[mm]	2360	2360	2360	-	2360	-
Height (SL)	[mm]	2420	2420	2420	-	2420	-
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Large	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Large	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard

AURA HE

Dimensions and weights

AURA HE R290 range		84-2-2 PE	108-2-2 PE	127-2-2 PE	149-2-2 PE	181-2-2 PE	212-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	3920	3920	4200	4200	5500	3100
Width	[mm]	1025	1025	1185	1185	1535	2345
Height (ST - LN)	[mm]	-	-	2320	2320	Contact EK	2465
Height (SL)	[mm]	2368	2420	2380	2380	2410	2525
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	980	1150	1380	1470	1690	1860
Operating weight (A BP/ST/AS/EC/** version)	[kg]	988	1158	1390	1480	1700	1875
DIMENSIONS - Large unit							
Lenght	[mm]	-	-	5000	5000	Contact EK	4450
Width	[mm]	-	-	1185	1185	Contact EK	2345
Height (ST - LN)	[mm]	-	-	2320	2320	Contact EK	2465
Height (SL)	[mm]	-	-	2380	2380	Contact EK	2525
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Large	Large	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Integrata LP 1-1 OO	-	Standard	Standard	Large	Large	Standard	Large
Integrata LP 1-1 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Integrata MP 1-0 OO	-	Standard	Standard	Large	Large	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Integrata MP 1-1 OO	-	Standard	Standard	Large	Large	Standard	Large
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Large	Large	Contact EK	Large

AURA HE R290 range		240-2-2 PV	269-2-2 PV	291-2-2 PV	321-2-2 PV	335-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	4450	4450	4450	5700	5700
Width	[mm]	2345	2345	2345	2345	2345
Height (ST - LN)	[mm]	-	-	-	-	-
Height (SL)	[mm]	2525	2525	2525	2525	2525
Shipping weight (A BP/ST/AS/EC/** version)	[kg]	2495	2530	2560	2900	2900
Operating weight (A BP/ST/AS/EC/** version)	[kg]	2513	2548	2578	2920	2920
DIMENSIONS - Large unit						
Lenght	[mm]	-	-	-	-	-
Width	[mm]	-	-	-	-	-
Height (ST - LN)	[mm]	-	-	-	-	-
Height (SL)	[mm]	-	-	-	-	-
Unit dimensions with hydronic kit						
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard

AURA HEI

11-1-1 PE ⟷ 192-2-2 PE

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

Cu/Al condensing colils

SEER

Air to water chillers for comfort applications

High efficiency with inverter

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 10,7 - 192,3 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 44-45-46-47*

AURA HEI

Technical data

AURA HEI R290 range		11-1-1 PE	14-1-1 PE	17-1-1 PE	24-1-1 PE	32-1-1 PE	41-1-1 PE
COOLING - A BP/ST/AS/EC/*I version							
Cooling capacity [1]	**[kW]**	**10,67**	**13,77**	**16,99**	**24,14**	**31,86**	**40,51**
Total power input [1]	[kW]	3,1	3,7	5	6,3	9,5	11,7
EER - Energy Efficiency Ratio	-	**2,97**	**3,17**	**2,96**	**3,12**	**2,85**	**2,59**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	4,5	10,2	10,4	14,3	15,1	19,3
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**162,30**	**163,40**	**161,00**	**171,00**	**163,30**	**163,30**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	1,2	2,6	2,7	3,7	3,9	5,0
Independent gas circuits	[n°]	1	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	1	1
Inverter nominal power (std)	[kW]	3	4	5,5	7,5	11	11
Condensing coils type	-	Cu/Al					
Fans type	-	Axial EC					
Fans quantity	[n°]	1	1	1	2	2	2
Fans power input [1] (total)	[kW]	0,5	0,6	0,7	1,4	1,7	3,9
Total air flow	[m^3/h]	6.200	10.300	11.200	22.000	23.500	39.150
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	1,8	2,4	2,9	4,2	5,5	7,0
Evaporator pressure drop [1]	[kPa]	20	15	22	17	28	32
DESUPERHEATER (option) **- A BP/ST/DS/EC/*I**							
Heating capacity [2]	**[kW]**	**1,378**	**1,436**	**1,997**	**2,106**	**3,661**	**4,722**
Water flow	[m^3/h]	0,20	0,20	0,30	0,40	0,60	0,80
Pressure drop (water side)	[kPa]	5,0	5,0	5,0	5,0	5,0	5,0
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*I**							
Heating capacity [2]	**[kW]**	**13,77**	**17,5**	**21,97**	**30,44**	**41,3**	**52,18**
Water flow	[m^3/h]	2,4	3,0	3,8	5,2	7,1	9,0
Pressure drop (water side)	[kPa]	13	19	19	19	25	33
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	4,2	5,8	6,8	10,4	14,2	19,1
Locked rotor current – LRA without pump	[A]	7,4	10,5	12,6	17,6	24,4	31,2
Maximum absorbed current - FLA without pump	[A]	7,4	10,5	12,6	17,6	24,4	31,2
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	30	60	60	160	160	290
Pump type	-	Centrifugal					
Standard pump - 150 kPa useful head							
Motor Efficiency	-	-	-	-	-	-	IE3
Pump motor nominal power	[kW]	0,37	0,37	0,37	0,55	0,55	0,9
Pump motor nominal current	[A]	1,4	1,4	1,4	1,9	1,9	2,5
Standard pump - 250 kPa useful head							
Motor Efficiency	-	-	-	-	IE3	IE3	IE3
Pump motor nominal power	[kW]	0,55	0,55	0,55	0,9	0,9	1,5
Pump motor nominal current	[A]	2	2	2	2,5	2,5	4,1
Water connections							
Dimension (nominal external diameter)	[inch/DN]	1/2" (DN15)	1" (DN 25)	1" (DN 25)	1" (DN 25)	1" 1/4 (DN 32)	1" 1/4 (DN 32)
Noise levels [3]							
Total sound power (ST version)	[db(A)]	78	82	82	85	86	84
Total sound pressure (ST version) - at 1 m distance	[db(A)]	62	65	65	67	68	66
Total sound pressure (ST version) - at 10 m distance	[db(A)]	46	50	50	53	54	52
Total sound power (LN version)	[db(A)]	75	79	79	82	83	81
Total sound pressure (LN version) - at 1 m distance	[db(A)]	59	62	62	64	65	63
Total sound pressure (LN version) - at 10 m distance	[db(A)]	43	47	47	50	51	49
Total sound power (SL version)	[db(A)]	73	77	77	80	81	79
Total sound pressure (SL version) - at 1 m distance	[db(A)]	57	60	60	62	63	61
Total sound pressure (SL version) - at 10 m distance	[db(A)]	41	45	45	48	49	47

Reference conditions:

(1) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HEI

Technical data

AURA HEI R290 range		49-1-1 PE	56-1-1 PE	67-1-1 PE	80-1-1 PE	64-2-2 PE	78-2-2 PE
COOLING - A BP/ST/AS/EC/*S version							
Cooling capacity [1]	**[kW]**	**49,05**	**56,08**	**67,12**	**80,13**	**63,6**	**78,29**
Total power input [1]	[kW]	14,7	15,4	19,6	24,2	19,4	24,9
EER - Energy Efficiency Ratio	-	**2,58**	**2,83**	**2,80**	**3,00**	**2,92**	**2,86**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	23	28,3	29	39,7	31,4	39
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**162,80**	**162,90**	**162,20**	**164,10**	**165,00**	**162,30**
REFRIGERANT CIRCUIT							
Refrigerant	-	R290					
GWP	-	3					
Charge of refrigerant - Base unit	[kg]	6,0	7,4	7,5	10,3	8,2	10,1
Independent gas circuits	[n°]	1	1	1	1	2	2
Compressors type	-	Semi-hermetic pistons					
Compressors quantity	[n°]	1	1	1	1	2	2
Steps of capacity for each compressor (std)	-	15	18,5	22	30	11	11
Condensing coils type	-	Cu/Al					
Fans type	-	Axial EC					
Fans quantity	[n°]	2	2	2	3	3	3
Fans power input [1] (total)	[kW]	4,2	4,4	4,4	2,5	2,4	2,5
Total air flow	[m^3/h]	40.400	37.700	37.700	36.700	38.600	36.700
Expansion valve type	-	Electronic					
Evaporator water flow [1]	[m^3/h]	8,4	9,6	11,5	13,8	10,9	13,5
Evaporator pressure drop [1]	[kPa]	16	16	18	20	24	23
DESUPERHEATER (option) **- A BP/ST/DS/EC/*S**							
Heating capacity [2]	**[kW]**	**6,104**	**5,822**	**7,612**	**9,81**	**8,019**	**11,21**
Water flow	[m^3/h]	1,10	1,00	1,30	1,70	1,40	1,90
Pressure drop (water side)	[kPa]	6,0	5,0	6,0	6,0	5,0	5,0
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*S**							
Heating capacity [2]	**[kW]**	**63,76**	**71,45**	**86,71**	**104,3**	**82,98**	**103,08**
Water flow	[m^3/h]	11,0	12,3	14,9	17,9	14,3	17,7
Pressure drop (water side)	[kPa]	22	27	25	31	28	32
Electrical data							
Power supply	-	400/3/50					
Emergency power supply	-	230/1/50					
Maximum power input without pump	[kW]	21,8	22,5	26,6	28,8	27,3	29,3
Locked rotor current – LRA without pump	[A]	38,3	39,8	46,5	49,7	46,9	48,9
Maximum absorbed current - FLA without pump	[A]	38,3	39,8	46,5	49,7	46,9	48,9
HYDRONIC KIT (option)							
Buffer tank capacity	[L]	290	290	290	290	290	290
Pump type	-	Centrifugal					
Standard pump - 150 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	0,9	0,9	1,1	1,1	1,1	1,1
Pump motor nominal current	[A]	2,5	2,5	3,3	3,3	3,3	3,3
Standard pump - 250 kPa useful head							
Motor Efficiency	-	IE3					
Pump motor nominal power	[kW]	1,5	1,5	2,2	2,2	2,2	2,2
Pump motor nominal current	[A]	4,1	4,1	4,7	4,7	4,7	4,7
Water connections							
Dimension (nominal external diameter)	[inch/DN]	1" 1/4 (DN 32)	1" 1/2 (DN 40)	1" 1/2 (DN 40)	2" (DN 50)	1" 1/2 (DN 40)	2" (DN 50)
Noise levels [3]							
Total sound power (ST version)	[db(A)]	84	85	85	88	86	87
Total sound pressure (ST version) - at 1 m distance	[db(A)]	66	67	67	69	67	68
Total sound pressure (ST version) - at 10 m distance	[db(A)]	52	53	53	56	54	55
Total sound power (LN version)	[db(A)]	81	82	82	85	83	84
Total sound pressure (LN version) - at 1 m distance	[db(A)]	63	64	64	66	64	65
Total sound pressure (LN version) - at 10 m distance	[db(A)]	49	50	50	53	51	52
Total sound power (SL version)	[db(A)]	79	80	80	83	81	82
Total sound pressure (SL version) - at 1 m distance	[db(A)]	61	62	62	64	62	63
Total sound pressure (SL version) - at 10 m distance	[db(A)]	47	48	48	51	49	50

Reference conditions:

(1) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45 °C - Condenser air intake temperature = 35 °C -Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to (1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HEI

Technical data

AURA HEI R290 range		96-2-2 PE	111-2-2 PE	133-2-2 PE	165-2-2 PE	192-2-2 PE
COOLING - A BP/ST/AS/EC/*I version						
Cooling capacity [1]	**[kW]**	**96,3**	**111,4**	**133**	**165,4**	**192,3**
Total power input [1]	[kW]	30,2	31,2	39,8	46,9	59,8
EER - Energy Efficiency Ratio	-	**2,61**	**3,01**	**2,92**	**3,02**	**2,84**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	43,4	63,7	65	86,7	91,1
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**161,10**	**162,00**	**161,20**	**167,70**	**161,30**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	11,3	16,6	16,9	22,5	23,7
Independent gas circuits	[n°]	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	2	2	2	2	2
Inverter nominal power (std)	[kW]	15	18,5	22	30	30
Condensing coils type	-	Cu/Al				
Fans type	-	Axial EC				
Fans quantity	[n°]	3	3	3	4	4
Fans power input [1] (total)	[kW]	6,6	5,8	5,8	7,9	7,9
Total air flow	[m^3/h]	55.250	68.300	68.300	88.600	88.600
Expansion valve type	-	Electronic				
Evaporator water flow [1]	[m^3/h]	16,6	19,2	22,9	28,4	33,1
Evaporator pressure drop [1]	[kPa]	24	24	27	34	39
DESUPERHEATER (option) **- A BP/ST/DS/EC/*I**						
Heating capacity [2]	**[kW]**	**13,03**	**12,05**	**16,28**	**17,2**	**24,73**
Water flow	[m^3/h]	2,30	2,10	2,80	3,00	4,30
Pressure drop (water side)	[kPa]	6,0	6,0	6,0	6,0	6,0
HEAT RECOVERY (option) **- A BP/ST/HR/EC/*I**						
Heating capacity [2]	**[kW]**	**126,42**	**142,46**	**172,66**	**212**	**251,6**
Water flow	[m^3/h]	21,7	24,5	29,7	36,5	43,3
Pressure drop (water side)	[kPa]	32	31	38	40	52
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	40,4	41,9	50,1	63,0	76,2
Locked rotor current – LRA without pump	[A]	71,8	74,8	88,2	107,2	127,0
Maximum absorbed current - FLA without pump	[A]	71,8	74,8	88,2	107,2	127,0
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	500	500	470	470
Pump type	-	Centrifugal				
Standard pump - 150 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	2,2	2,2	2,2	2,2	3
Pump motor nominal current	[A]	4,7	4,7	4,7	4,7	6,4
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	2,2	3	3	4	4
Pump motor nominal current	[A]	4,7	6,4	6,4	8,7	8,7
Water connections						
Dimension (nominal external diameter)	[inch/DN]	2" (DN 50)	2" (DN 50)	2"1/2 (DN 65)	2"1/2 (DN 65)	2"1/2 (DN 65)
Noise levels [3]						
Total sound power (ST version)	[db(A)]	87	86	86	89	89
Total sound pressure (ST version) - at 1 m distance	[db(A)]	68	67	67	69	69
Total sound pressure (ST version) - at 10 m distance	[db(A)]	55	54	54	57	57
Total sound power (LN version)	[db(A)]	84	83	83	86	86
Total sound pressure (LN version) - at 1 m distance	[db(A)]	65	64	64	66	66
Total sound pressure (LN version) - at 10 m distance	[db(A)]	52	51	51	54	54
Total sound power (SL version)	[db(A)]	82	81	81	84	84
Total sound pressure (SL version) - at 1 m distance	[db(A)]	63	62	62	64	64
Total sound pressure (SL version) - at 10 m distance	[db(A)]	50	49	49	52	52

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HEI

195-2-2 PV ⟷ 398-2-2 PV

R290 Refrigerant R290 | GWP=3

Brazed plate heat exchanger

Semi-hermetic piston compressor

Axial fan

MCX Microchannel condensing colils

SEER

Air to water chillers for comfort applications

High efficiency with inverter

Solution

B - Base
I - Integrata

Version

ST - Standard
LN - Low Noise
SL - Super Low Noise

Equipment

AS - Standard equipment
DS - Desuperheater
HR - Total modulating Heat Recovery

Cooling capacity 194,6 - 398,2 kW

Safety system	To ensure high-safety-level the unit is equipped with an **ATEX certified gas detector and an EC centrifugal extraction fan**. The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
Structure	Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Basement and panels made of galvanized steel sheet, oven-painted with polyurethane powders. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool.
Compressor	Reciprocating semi-hermetic type compressor equipped with: electronic control module and protection of the electric motor (installed inside the electrical panel); oil charge; oil level sight glass and oil crankcase heater; anti-vibration rubber supports; anti-vibration pipes (suction and discharge); suction and discharge valves. The compressor can be supplied with one or more RSH capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction: please see the list of accessories for further information.
EC Fan	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
Air heat exchanger	Microchannel technology increases the primary to secondary surface area ratio and reduces the tube´s air shadow to provide maximum heat exchange through our condensers.
Water heat exchanger	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).
Water circuit (Integrata)	**Base version:** as interface to the plant, includes the water fittings of the evaporator only. **Integrated version:** Water storage tank, water pressure gauge, safety valve, water discharge valve, centrifugal pump(s) suitable for glycol solutions up to 40%, manual by-pass valve, manual air venting valve. The pump control equipment is fitted inside the electrical board of the unit and the microprocessor control manages the pump starting, timing and all the safety devices of the whole system.

ACCESSORI PRINCIPALI

- Anti-vibration rubber/spring mounts
- Air heat exchanger protection panel or filter
- Air heat exchanger with various coatings treatment
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Open / Closed expansion vessel with automatic filling unit
- RSH Capacity Control head / Inverter driven compressor
- Advanced control c.pCo

» *For the complete list of accessories please see pages 44-45-46-47*

AURA HEI

Technical data

AURA HEI R290 range		195-2-2 PV	228-2-2 PV	278-2-2 PV	318-2-2 PV	348-2-2 PV	380-2-2 PV	398-2-2 PV
COOLING - A BP/ST/AS/EC/*I version								
Cooling capacity [1]	**[kW]**	**194,6**	**227,8**	**278,1**	**317,7**	**348,3**	**379,8**	**398,2**
Total power input [1]	[kW]	58,6	73,2	78,8	93,7	106,4	108,7824514	110,6222624
EER - Energy Efficiency Ratio	-	**2,93**	**2,82**	**3,03**	**2,93**	**2,86**	**2,99**	**3,07**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	61,6	66,6	93,2	96,4	104,8	119	122,7
"Ecodesign'' compliance for comfort application ($\eta_{s,c}$)	[%]	**161,80**	**161,10**	**169,80**	**162,20**	**161,30**	**164,40**	**162,00**

REFRIGERANT CIRCUIT								
Refrigerant	-	R290						
GWP	-	3						
Charge of refrigerant - Base unit	[kg]	16,0	17,3	24,2	25,0	27,2	30,9	31,9
Independent gas circuits	[n°]	2	2	2	2	2	2	2
Compressors type	-	Semi-hermetic pistons						
Compressors quantity	[n°]	2	2	2	2	2	2	2
Inverter nominal power (std)	[kW]	30	37	55	55	75	75	90
Condensing coils type	-	Microchannel						
Fans type	-	Axial EC						
Fans quantity	[n°]	4	4	8	8	8	10	10
Fans power input [1] (total)	[kW]	7,7	7,6	13	14,9	15,4	18,1	19,2
Total air flow	[m^3/h]	91.600	91.600	171.300	180.600	183.200	223.000	228.200
Expansion valve type	-	Electronic						
Evaporator water flow [1]	[m^3/h]	33,5	39,2	47,8	54,6	59,9	65,3	68,5
Evaporator pressure drop [1]	[kPa]	40	32	35	36	43	43	42

DESUPERHEATER (option) **- A BP/ST/DS/EC/*I**								
Heating capacity [2]	**[kW]**	**23,41**	**31,84**	**29,57**	**37,49**	**43,17**	**41,74**	**42,39**
Water flow	[m^3/h]	4,10	5,50	5,10	6,50	7,50	7,20	7,40
Pressure drop (water side)	[kPa]	6,0	6,0	6,0	6,0	7,0	7,0	7,0

HEAT RECOVERY (option) **- A BP/ST/HR/EC/*I**								
Heating capacity [2]	**[kW]**	**252,8**	**300,6**	**356,4**	**396**	**440**	**476**	**504**
Water flow	[m^3/h]	43,5	51,7	61,3	68,7	76,3	82,6	87,4
Pressure drop (water side)	[kPa]	52	35	37	42,5	40,3	42,5	42,6

Electrical data								
Power supply	-	400/3/50						
Emergency power supply	-	230/1/50						
Maximum power input without pump	[kW]	76,2	85,6	110,0	127,5	138,1	146,8	150,8
Locked rotor current – LRA without pump	[A]	127,0	141,2	187,6	217,0	238,0	254,6	263,8
Maximum absorbed current - FLA without pump	[A]	127,0	141,2	187,6	217,0	238,0	254,6	263,8

HYDRONIC KIT (option)								
Buffer tank capacity	[L]	290	290	290	290	290	470	470
Pump type	-	Centrifugal						

Standard pump - 150 kPa useful head								
Motor Efficiency	-	IE3						
Pump motor nominal power	[kW]	3	3	3	5,5	5,5	5,5	5,5
Pump motor nominal current	[A]	6,4	6,4	6,4	10,6	10,6	10,6	10,6

Standard pump - 250 kPa useful head								
Motor Efficiency	-	IE3						
Pump motor nominal power	[kW]	4	5,5	5,5	5,5	7,5	7,5	7,5
Pump motor nominal current	[A]	8,7	10,6	10,6	10,6	13,6	13,6	13,6

Water connections								
Dimension (nominal external diameter)	[inch/DN]	3" (DN 80)	3" (DN 80)	3" (DN 80)	4" (DN 100)	4" (DN 100)	4" (DN 100)	4" (DN 100)

Noise levels [3]								
Total sound power (ST version)	[db(A)]	89	91	94	94	94	95	96
Total sound pressure (ST version) - at 1 m distance	[db(A)]	70	72	73	73	73	74	75
Total sound pressure (ST version) - at 10 m distance	[db(A)]	57	59	62	62	62	62	63
Total sound power (LN version)	[db(A)]	86	88	91	91	91	92	93
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	69	70	70	70	71	72
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	56	59	59	59	59	60
Total sound power (SL version)	[db(A)]	84	86	89	89	89	90	91
Total sound pressure (SL version) - at 1 m distance	[db(A)]	65	67	68	68	68	69	70
Total sound pressure (SL version) - at 10 m distance	[db(A)]	52	54	57	57	57	57	58

Reference conditions:

(1) Condenser air intake temperature = 25 °C - Evaporator water temperature IN/OUT = 20/15 °C - Fluid: water - Condensing coil: Cu/Al or microchannel according to models

(2) Plate heat exchanger water temp. IN/OUT = 40/45°C - Condenser air intake temperature = 35°C -Evaporator water temperature IN/OUT = 20/15°C - Fluid: ethilene glycol - Condensing coil: Cu/Al or microchannel

(1) - (2) The declared cooling capacity are not taking into account the pump motor power input (where provided).

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

(*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

AURA HEI

Dimensions and weights

AURA HEI R290 range		11-1-1 PE	14-1-1 PE	17-1-1 PE	24-1-1 PE	32-1-1 PE	41-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	1380	1680	1680	2330	2330	2980
Width	[mm]	835	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	2121	2121	2221	2221	2300
Height (SL)	[mm]	-	2208	2208	2308	2308	2360
Shipping weight (A BP/ST/AS/EC/*I version)	[kg]	240	320	350	510	550	690
Operating weight (A BP/ST/AS/EC/*I version)	[kg]	245	325	355	515	555	697
DIMENSIONS - Large unit							
Lenght	[mm]	1980	2330	2330	2980	2980	3920
Width	[mm]	835	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	2221	2221	2221	2221	2360
Height (SL)	[mm]	-	2308	2308	2308	2308	2420
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Standard
Integrata LP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large	Standard
Integrata MP 1-1 OO	-	Large	Large	Large	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Standard	Standard	Standard

AURA HEI R290 range		49-1-1 PE	56-1-1 PE	67-1-1 PE	80-1-1 PE	64-2-2 PE	78-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	2980	2980	2980	3920	3920	3920
Width	[mm]	1025	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2300	2300	2300	2281	2281	2281
Height (SL)	[mm]	2360	2360	2360	2368	2368	2368
Shipping weight (A BP/ST/AS/EC/*I version)	[kg]	760	790	800	940	920	970
Operating weight (A BP/ST/AS/EC/*I version)	[kg]	767	797	807	948	928	978
DIMENSIONS - Large unit							
Lenght	[mm]	3920	3920	3920	-	-	-
Width	[mm]	1025	1025	1025	-	-	-
Height (ST - LN)	[mm]	2360	2360	2360	-	-	-
Height (SL)	[mm]	2420	2420	2420	-	-	-
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Standard	Standard	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard

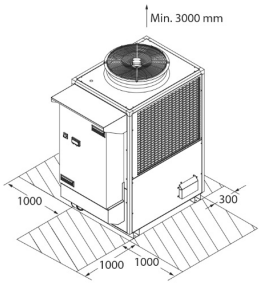
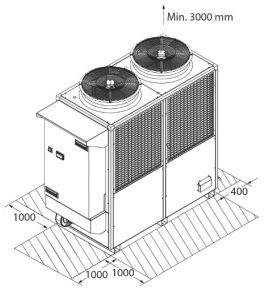
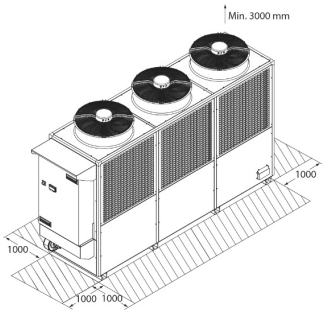
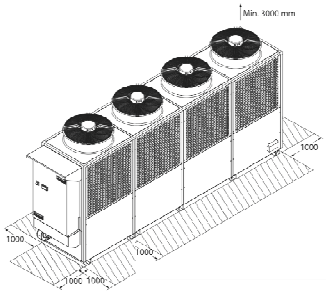
AURA HEI

Dimensions and weights

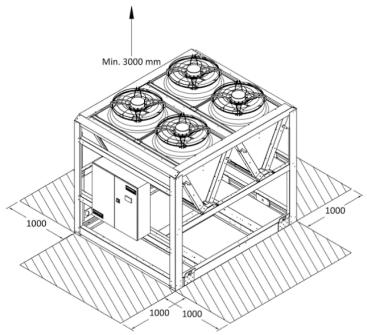
AURA HEI R290 range		96-2-2 PE	111-2-2 PE	133-2-2 PE	165-2-2 PE	192-2-2 PE	195-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	3920	4200	4200	5500	5500	3100
Width	[mm]	1025	1185	1185	1535	1535	2345
Height (ST - LN)	[mm]	2360	2320	2320	2350	2350	2465
Height (SL)	[mm]	2420	2380	2380	2410	2410	2525
Shipping weight (A BP/ST/AS/EC/*I version)	[kg]	990	1370	1390	1660	1700	1854
Operating weight (A BP/ST/AS/EC/*I version)	[kg]	998	1380	1400	1670	1710	1869
DIMENSIONS - Large unit							
Lenght	[mm]	-	5000	5000	Contact EK	Contact EK	4450
Width	[mm]	-	1185	1185	Contact EK	Contact EK	2345
Height (ST - LN)	[mm]	-	2320	2320	Contact EK	Contact EK	2465
Height (SL)	[mm]	-	2380	2380	Contact EK	Contact EK	2525
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Large	Large	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Standard	Large	Large	Contattare EK	Contattare EK	Large
Integrata LP 1-1 OO	-	Standard	Large	Large	Standard	Standard	Large
Integrata LP 1-1 OO and HR equipment	-	Standard	Large	Large	Contattare EK	Contattare EK	Large
Integrata MP 1-0 OO	-	Standard	Large	Large	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Large	Large	Contattare EK	Contattare EK	Large
Integrata MP 1-1 OO	-	Standard	Large	Large	Standard	Standard	Large
Integrata MP 1-1 OO and HR equipment	-	Standard	Large	Large	Contattare EK	Contattare EK	Large
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Large	Large	Contattare EK	Contattare EK	Large

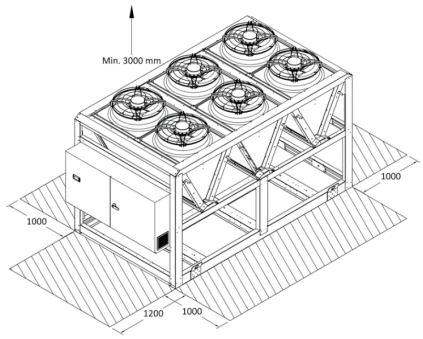
AURA HEI R290 range		228-2-2 PV	278-2-2 PV	318-2-2 PV	348-2-2 PV	380-2-2 PV	398-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit							
Lenght	[mm]	3100	5700	5700	5700	6950	6950
Width	[mm]	2345	2345	2345	2345	2345	2345
Height (ST - LN)	[mm]	2465	2465	2465	2465	2465	2465
Height (SL)	[mm]	2525	2525	2525	2525	2525	2525
Shipping weight (A BP/ST/AS/EC/*I version)	[kg]	1882	2815	2852	2878	3406	3421
Operating weight (A BP/ST/AS/EC/*I version)	[kg]	1897	2835	2872	2898	3429	3444
DIMENSIONS - Large unit							
Lenght	[mm]	4450	-	-	-	-	-
Width	[mm]	2345	-	-	-	-	-
Height (ST - LN)	[mm]	2465	-	-	-	-	-
Height (SL)	[mm]	2525	-	-	-	-	-
Unit dimensions with hydronic kit							
Integrata LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata LP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Large	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P LP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Standard	Standard	Standard	Standard	Standard

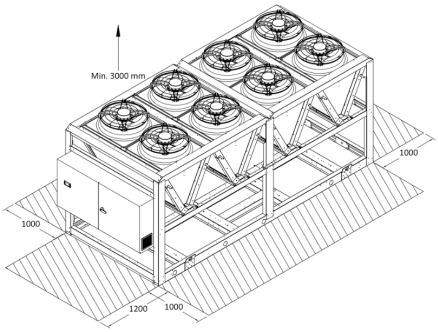
AURA range

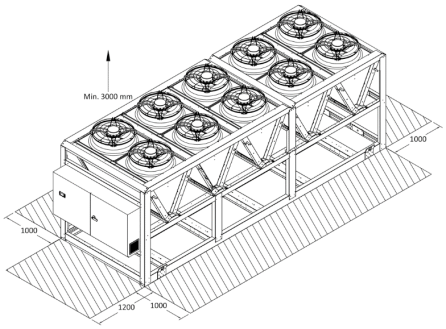
	AURA HE	AURA HEI
	9-1-1 PE ⟷ 19-1-1 PE Cooling capacity from 8,8 kW to 18,6 kW	11-1-1 PE ⟷ 17-1-1 PE Cooling capacity from 10,6 kW to 16,9 kW
	AURA HE	AURA HEI
	26-1-1 PE ⟷ 64-1-1 PE 62-2-2 PE Cooling capacity from 25,9 kW to 64,3 kW	24-1-1 PE ⟷ 67-1-1 PE Cooling capacity from 24,1 kW to 67,1 kW
	AURA HE	AURA HEI
	76-1-1 PE 72-2-2 PE ⟷ 149-2-2 PE Cooling capacity from 72,1 kW to 148,5 kW	80-1-1 PE ⟷ 133-1-1 PE Cooling capacity from 63,6 kW to 133 kW
	AURA HE	AURA HEI
	181-2-2 PE Cooling capacity Nominal cooling capacity 180,7	165-2-2 PE ⟷ 192-2-2 PE Cooling capacity from 165,4 kW to 192,3 kW

AURA range

AURA HE	AURA HEI
	212-2-2 PV Cooling capacity Nominal cooling capacity 212	195-2-2 PV ⟷ 228-2-2 PV Cooling capacity from 194,6 kW to 227,8 kW

AURA HE	AURA HEI
	240-2-2 PV ⟷ 291-2-2 PV Cooling capacity from 239,9 kW to 290,7 kW	

AURA HE	AURA HEI
	321-2-2 PV ⟷ 335-2-2 PV Cooling capacity from 320,7 kW to 335,1 kW	278-2-2 PV ⟷ 348-2-2 PV Cooling capacity from 278,1 kW to 348,3 kW

AURA HE	AURA HEI
	380-2-2 PV ⟷ 398-2-2 PV Cooling capacity from 378,8 kW to 398,2 kW

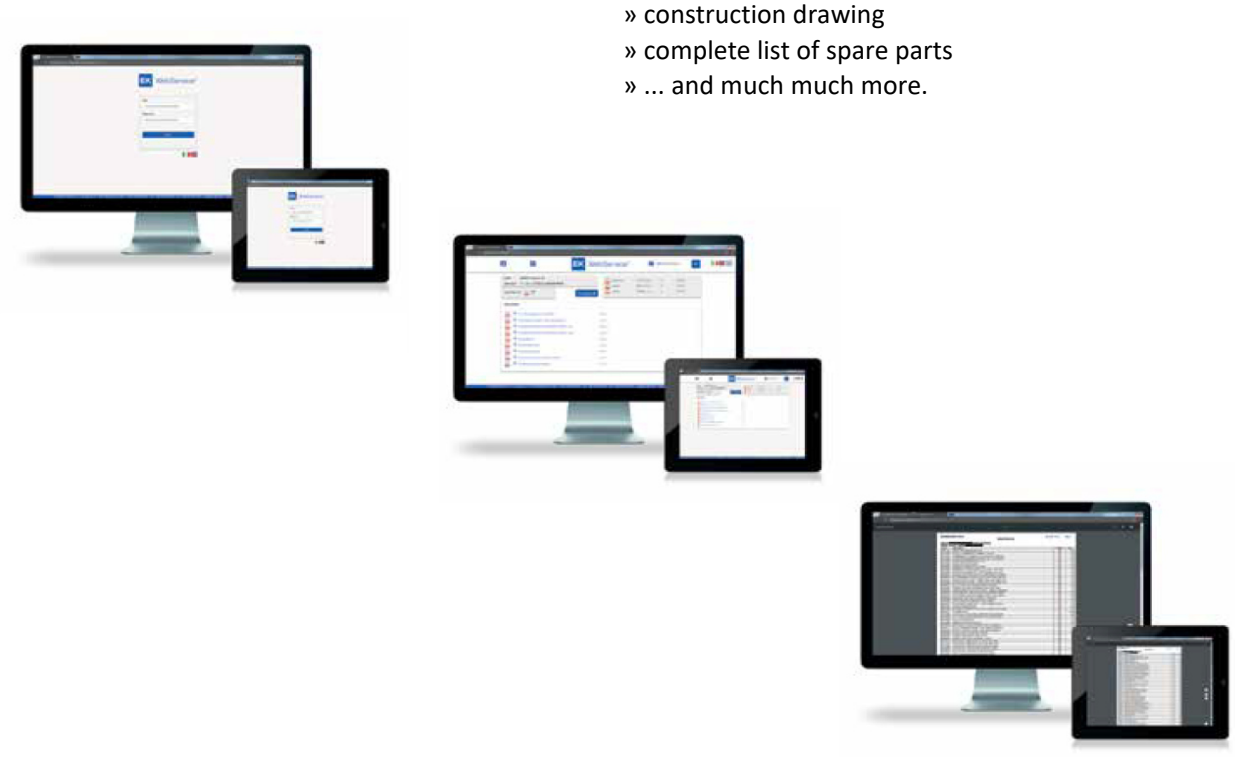
Websevice^2

What do I receive with my order?

When you order an Euroklimat product, after the order confirmation, you get your user ID and password to access to WebService^2.
With the advent of information technology, there are several possibilities for communication and transmission of information in real-time.
Euroklimat wanted to exploit these instruments creating a website, which provides an important support to all customers: WebService^2.

EK WebService^2

WebService^2 - web portal 24/7
The simple and intuitive interface of the site allows you to "browse" quickly and easily reach the information you need. Planned and designed for the specific competences, "webservice"is a web portal that enables customers or support centres to access the detailed documentation for each single machine:
» order confirmation, waybill and invoice
» declaration of conformity
» instructions manual
» electric diagram
» construction drawing
» complete list of spare parts
» ... and much much more.



Websevice^2

The information is consequently always available and up-to-date, also when you are physically at the site of installation.

Thanks to the new features of WebService2, it is now possible to check in real time the availability of spare parts for each serial number, simply by accessing the service with your own web credentials.

The “mission” of Euroklimat is always to improve the service offered to customers.

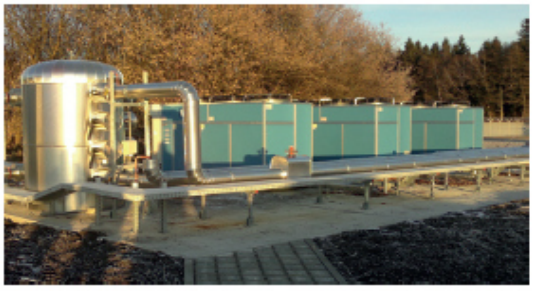
R290 References

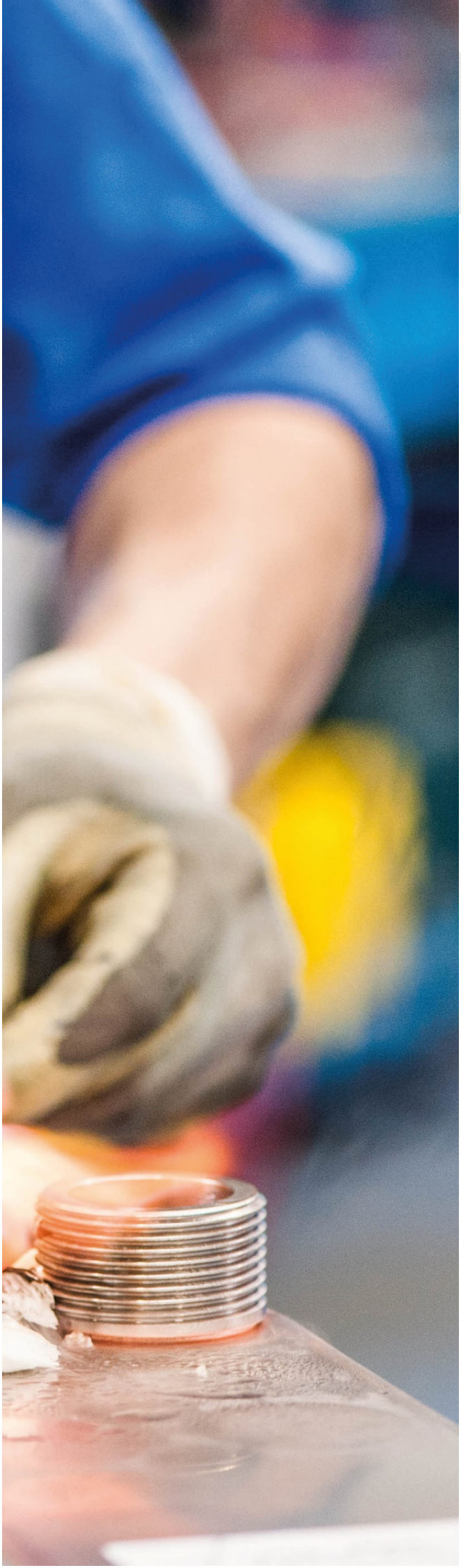
Customers who have chosen us		
Nestlè	Metro	Roche Diagnostic
Coop	Waitrose	Danish Technological Institute
E.ON Kernkraft	Carrefour	Del Monte Foods
Colruyt	STEF	Clauger
John Lewis Birmingham	Cityringen Copenhagen	The Coca Cola Company

Some R290 Installations







Our plants and quality management

Over 50 years of business

Since we set up business in 1963, the company's head offices have always been in Italy, near Milan. Today, our aim is to be a market leader in chillers with natural refrigerant (propane): by doing this, we are helping the industry to become more efficient, preserving natural resources and protecting the environment.

Organization in Italy

At our Italian plant spread over an area of 6,000 square metres, with a work force of 60 people, Euroklimat designs and produces refrigeration units, heat pumps and precision air conditioners that can be used both in industrial processes and traditional comfort applications.

Infinite quality

Euroklimat firmly believes that Customer Satisfaction is an indispensable factor for success. A priority objective to achieve this result is the constant improvement of our products, services and the relative production processes.
This objective means involving all of the company's resources with planned, systematic activities for Quality; for this reason, our system complies with the international standard UNI EN ISO 9001:2015.

Organization in China

Our plant covers a surface of approximately 100,000 square metres, with over 1,000 people and includes a large test chamber and a sophisticated R&D laboratory, in addition to real production departments, where the performance of the units is measured before being placed on the market.

QUALITY SYSTEM CERTIFICATION
DNV·GL
ISO 9001

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 =

Stabilimento Italia • Siziano

Stabilimento Cina • Huangjiang, Dongguan, Guangdong

EUROKLIMAT
Cooling System Solutions

EUROKLIMAT SpA

Factory Italy

Via Liguria, 8
27010 Siziano (PV) Italy

T: +39 038 2610282
E: info@euroklimat.it

www.euroklimat.it

Euroklimat Co., Ltd

Factory China

Euroklimat Industrial Park
Huangjiang, Dongguan, Guangdong, China

T: +86 0769 8366 0888 ext. 8260
E: info@euroklimat.it

www.euroklimat.com.cn

EUROKLIMAT FZCO

Office Dubai

High Bay Office 24, Dubai Silcon Oasis, UAE
PO Box 28178, Dubai, UAE

T: +971 4 3423152
E: info@ek-me.com

www.euroklimatme.com

green cooling initiative

9999023 CATALOGO TECNICO "CRIO" "CRIO_XX-YY_revZ_ENG"