Technical Catalogue

TETI

R290 INVERTER AVAILABLE SEPR

Air-Cooled liquid chillers for High Temperature applications

Ecodesign Regulation Tier 2 ready - Process HT

EUROKLIMAT
Cooling System Solutions

TETI Solutions

High efficiency air-cooled liquid chillers specifically developed for contexts that require high performance on the one hand and low operating costs on the other. In particular, the machine is optimized for use in the industrial sector where high temperature process cooling is required. The refrigerant fluid used is propane (R290), a natural hydrocarbon with very low GWP that guarantees machine operation in a wide range of operating limits and at the same time allows to meet the regulations on HFC refrigerants, such as the European regulation “F-Gas". Given the flammability characteristic of this substance, these units have important safety elements such as the robust and leak-tight refrigeration circuit, the choice of the most sensitive components with ATEX certification, the electrical panel fitted in a separate compartment and the presence of a gas detection system. In addition, this range is in accordance with regulation (EU) 2016/2281 which implements Directive 2009/125/EC "Ecodesign". The main components are shown in the high efficiency semi-hermetic reciprocating compressor with device for capacity steps, in the axial fans and in the high efficiency condensing coil. All units are equipped with a microprocessor that manages the compressors in order to provide the exact cooling capacity required and that controls the operating alarms with the possibility of connecting to BMS. The dimensions have been optimized in order to minimize the space occupied and the arrangement of the components has been studied in detail to allow any maintenance operation in the simplest and safest way. All units will be rigorously inspected and tested in the production plant before the shipment phase. In addition, once they reach the installation site, the start-up will be simple thanks to the provision of hydraulic and electrical connections that allow quick connection to the power supply networks. These chillers are the result of Euroklimat's continuous improvement of the products, services and production processes that currently comply with the UNI EN ISO 9001:2015 international quality standard.

EK WebService2

wEKool Web Product Selector

Main components

Structure (only PE units)

Structure specifically designed and built to guarantee total resistance to atmospheric agents and corrosion. Base made of galvanized steel sheet, oven-painted with polyester powders. Equipped with sturdy support feet that facilitate the handling of the unit and allow simple and quick installation. Frame made of anodized aluminium profiles, with aluminium alloy corner joints that guarantee excellent mechanical resistance and low weight. Panelling made of galvanized steel, oven-painted with polyester powders. (RAL 7035 standard colour, others on request). Fastening to the aluminium frame is made with stainless steel screws mounted flush on the panels. Internal carpentry in galvanized steel sheet. Rainwater collection tray, in case of outdoor installation, complete with a conveyable discharge without the disassembly of any panel. Sealing gaskets fitted on panels' edges, made coextruded plastic with differentiated consistency.

Structure (only PV units)

Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. The load-bearing components are firmly assembled with rivets and bolts, to make the unit extremely solid and able to withstand even the most severe transport and handling stresses. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request).

Compressor

Reciprocating semi-hermetic single-stage compressor specifically designed and optimized for operation with R290 refrigerant (propane). Compressor designed and manufactured in compliance with the safety requirements of directive 2014/34/EC (ATEX), suitable for installation in Zone 2 and Group IIB gas. Some components are ATEX certified. These compressors, built with robust construction, are specifically designed to guarantee high performance, reliability and efficiency. The three-phase electric motor is cooled by the refrigerant gas coming from the suction side and is protected against any operating anomalies with integral electronic protection and from excessive discharge temperature, with over-temperature and motor overcurrent devices. The compressor is complete with: ptc-probes connected to the protection system, electronic control module and protection of the electric motor (installed inside the electrical panel); oil level sight glass and oil crankcase heater; anti-vibration flexible joints (for suction and discharge pipes); suction and discharge shut-off valves. The compressor is fitted on rubber anti-vibration mountings in order to reduce vibrations towards the structure and facilitate installation. The compressor is supplied with lubricating oil charge. The electrical terminals of the motor are placed in a dedicated box realized with IP54 protection. The compressor can be supplied with one or more step-capacity control heads to guarantee an adaptation of the cooling capacity in case of thermal load's reduction. The number of step-capacity control heads supplied and/or available as accessories varies according to the selected chiller model: please see the list of accessories and unit data sheet for further information.

Fan(s)

Low speed axial fan directly coupled to an asynchronous AC motor with external rotor. The regulation of the rotation speed is ON-OFF type. The function of this component is to process the air axially, i.e. parallel to the rotating motor shaft. The selected model is optimized for operation in refrigeration and air conditioning applications at environmental conditions compatible with those of the selected unit. The main characteristics are the low sound level and high energy efficiency, features that can only be achieved through a high level of aerodynamic design of the fan blades. Equipped with integrated thermal protection and steel protection grille on the air inlet. The assembly consisting of fan, diffuser and protection grid complies with the current European ErP directive. The fan has an IP54 degree of protection and is dynamically balanced according to the ISO 1940 standard.

Air heat exchangers - Condenser (only PE units)

Finned coil, made with copper pipes arranged in staggered rows, mechanically expanded inside a pack of aluminum fins with a high exchange surface.

Air heat exchangers - Condenser (only PV units)

Heat exchanger realized with Microchannel technology, entirely made of aluminum, suitable for the selected refrigerant and for the required use. This type of heat exchanger is optimized for air conditioning and refrigeration applications. The main feature of the Microchannel technology is that of increasing the ratio between primary and secondary exchange surface to obtain the maximum heat exchange, while maintaining compact dimensions, lightness and high resistance to corrosion. In fact, thanks to the reduced hydraulic diameter of the Microchannel aluminum tubes, the heat can be transferred more effectively and efficiently than traditional copper tubes. Through the use of this component it is also possible to reduce the refrigerant charge of the machine, increase the operating efficiency and reduce the sound power associated with respect to the use of other types of batteries.

Water heat exchanger - Evaporator

Brazed plate heat exchanger suitable for the required function and for the selected refrigerant. Plates are made of stainless steel AISI 316 and the brazing filler of copper. This component comes from the application of the most advanced design technologies and from the most scrupulous controls that guarantee high performance and a particularly long-life cycle. The design of the heat exchanger, designed specifically for applications in refrigeration and air conditioning, guarantees good heat exchange capacity, optimal performance as well as compactness and simplicity of installation and maintenance. Equipped with an integrated distribution system that guarantees a uniform distribution of the refrigerant fluid through the plate pack. The exchanger complies with the Pressure Equipment Directive (PED) of the EU in terms of mechanical and material specifications. This component is also supplied with insulation coating of 9 mm thick, made of expanded polyurethane with closed cell (for MT-LT applications, the thickness is greater than the previous and equal to 19 mm). Equipped with differential pressure switch on the water side and a manual air vent valve.

Electric switchboard

Unit 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;
- Windproof door-lock device;
-Contactor and protection for compressor(s) and pump (if present);
- Magnetothermic switch for the protection of extractor fan;
- Power supply without neutral;
- Cabinet minimum protection rating IP54;
- Lamps for Propane leakage alarm and exhaust fan fault alarm.

To ensure higher level of security, the electrical panel is installed outside the machine. The separation of the panel is also ensured thanks to the use of a double barrier between the compressor compartment and the electrical panel realized through the use of special cable gland plates having a minimum degree of protection IP64. 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.

Electronic regulation / control

The programmable electronic microprocessor control system allows you to automatically adjust the thermal or cooling power supplied by the unit and to manage malfunction alarms. Thanks to a multitasking operating system and the adoption of standard, local and remote connectivity protocols, the selected controller is a powerful control system that can be easily interfaced with the most common Building Management Systems (BMS) on the market.

Consisting of two integrated Ethernet interfaces, three serial interfaces, two optional communication cards, two USB ports and allows a wide choice of communication protocols available.
The objective of the control system is to optimize the power supplied by the compressors in order to increase the efficiency of the unit. The management of the power supply of the compressors changes according to the configuration, the number of circuits and the power ratio between the compressors themselves.
For units with two or more circuits and active prevention in one circuit, a rotation system is provided so as to compensate for the limited circuit, increasing the demand on the other available circuits. This microprocessor allows to manage the adjustment driver of the electronic expansion valve, ensuring optimal operation. In addition, the application software allows easy access to the configuration and machine management parameters via the device display. There are three different password levels, in order to allow three different modes of access to the parameters (modification for the user, modification for technical assistance, total access for the manufacturer). The main screen allows you to quickly access user functions without requiring a password, allowing you to have access to a lot of information such as the status of the machine components, the machine's operating mode, set point, display of the system variables and machine operation. Alarms can be viewed via the display, while alarms can be reset and the machine can be unlocked from the keyboard. The alarm history (up to 64 storable events) can be consulted with the data logger function. The microprocessor is connected to a semi-graphic terminal which allows the controller to interface with the user. This component is designed to offer high versatility, ease of use and quality of performance. Consisting of a 132x64 pixel backlit white display which guarantees high visibility and a 6-key keyboard that recalls the symbols used in the display. The connection with the controller is foreseen via the RS485 network in the pLAN protocol.
Other important features are listed below:
- PID control
There are two types of PID control: at the start-up on and during operation. The start-up control has the task of preventing an excess of required power. Since the size of the load is not known at start-up, but only the temperature is known, the power is gradually increased, pending the reaction of the system. During operation, on the other hand, the check must be rapid to follow any load variations and keep the water temperature as close as possible to the set-point value.
- Management of the operating range of the compressors
The compressor operating points are constantly monitored by the controller to avoid exceeding the operating limits (envelope) and this important control cannot be disabled. When the operating condition occurs outside the envelope, the alarm delay counter starts counting: if the operating condition remains beyond the envelope when the delay has elapsed, a specific alarm is activated, which stops the compressor; if, on the other hand, the operating conditions are within the envelope limits, the alarm delay counter is reset.
-Cloud services
The cloud services, immediately available after connecting to the Ethernet (LAN) and configuring the addresses, allow you to check and / or set the main operating parameters of the machine in real time, view alarm notifications and view reports and graphs on the system performance. All this simply from remote devices connected to the network with the unit. In order to connect remotely through an internet connection, a dedicated "Token" must be activated, which allows you to subscribe to the Cloud service annually.

Refrigerant circuit

The refrigerant circuit of the unit has been designed to function optimally with the selected refrigerant, minimizing pressure drops and ensuring high yields. The circuit is entirely made of copper pipes brazed with silver alloy and thermally insulated on the suction section, to avoid condensation. All circuit components are certified and approved for use with R290 (propane).
The main components of the circuit are:
- Molecular sieve dehydrator filter, capable of retaining impurities of mechanical origin and dehydrating the circuit to protect it from any traces of humidity;
- Indicator of the passage of liquid to check the charge and the moisture content of the gas, thanks to a color change indicator;
- High pressure safety valve, which guarantees opening of the circuit before reaching critical working conditions (if necessary, in accordance with EN-378-2:2016);

- High and low pressure transducers that transmit the values read directly to the machine microprocessor;
- Charging connections for refrigerant;
- Refrigerant charge;
- Anti-freezing oil charge;
- Valves on the suction and discharge sides of the compressor;
- Refrigerant circuit high/low pressure gauges;
- Standard electronic expansion valve (managed by a microprocessor mounted on board);

The evaporation control is entrusted to a lamination valve which regulates the opening on the refrigerant side according to the water temperature.
Some components are ATEX certified and the cooling circuit is made in compliance with the European Pressure Equipment Directive 2014/68/UE (PED).

Water circuit

The BASE solution provides the following main components which are supplied mounted on the machine:
- interface connections to the system (with female threaded or flanged connections) in correspondence with the heat exchanger on the user side;
- pre-painted carbon steel pipes with adequate thermal insulation;
- manual air vent valve positioned at the highest point of the hydraulic circuit;
- differential pressure switch installed in correspondence with the heat exchanger on the user side;
- NTC temperature probes placed at the inlet and outlet of the user side heat exchanger;

To allow the circulation of the fluid in the hydraulic circuit it will be necessary to add a pumping system to the BASE solution.

Safety system and devices

To ensure a high level of safety throughout the useful life of the selected propane unit, special measures have been introduced that make this product unique. In fact, the refrigeration circuit is watertight and sufficiently robust, the pipes have been designed to have few joints and welds and all the materials used are compatible with the R290 refrigerant (propane). The electrical panel is installed in a separate compartment and some of the most important components are ATEX certified. In addition, the unit is equipped with an ATEX certified refrigerant gas leak detector located in the compressor compartment and a centrifugal blower expulsion fan below the electrical panel. The sensor, equipped with a separate power supply and with remote signal via Modbus, provides an alarm level set at 10% of the propane's lower flammability limit (LFL). Safety devices are managed by the microprocessor. If a gas leak is detected, an LED status indicator (red) on the control panel lights up instantly and a series of emergency provisions are activated which guarantee the highest possible level of safety. Activation of the alarm involves the immediate shutdown of the machine and the switching on of the centrifugal extraction fan, which allows to ventilate the compressor compartment by diluting the concentration of R290 up to values below the flammability threshold. The structure is provided with dedicated air intake and exhaust air for ventilation fan, both equipped with special weather protection made of galvanized steel sheet. If present, the safety valves installed on the refrigerant circuit are conveyed outside the machine to ensure greater safety during unit operation.

Sound levels

Sound levels are obtained by means of theoretical calculations that could deviate from the real conditions of the place of installation of the unit.
Sound Power: this is the acoustic emission of the unit when operating. It is dependent on operating conditions. Sound power level in compliance with ISO 3744.
Sound Pressure: this is the measurement of the effect of the acoustic emission generated by the unit at a certain distance and in the acoustic environment (reflection, absorption, directivity) in which it operates.
The value will depend on the sound power of the unit, the directivity of the source and the reflectivity of the surroundings. Sound pressure level (average value), calculated for unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

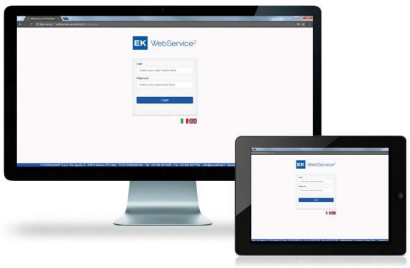
It is assumed that sound power and sound pressure are linked together by defining the space and conditions as follows:
- the source is omnidirectional, i.e. the acoustic emission is the same in all directions
- hemispherical field conditions with the presence of the support plane considered perfectly reflective (Q=2).

Standard packaging

Standard packing consists of heat-shrinkable plastic film that covers the entire unit and protects it from dust, water and other atmospheric agents. Polystyrene corners are also provided in order to protect the unit from potential accidental damages caused during transports.

wEKool Web Product Selector

EK WebService²



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

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 according to models

(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 R290 range		49-1-1 PE	57-1-1 PE	73-1-1 PE	85-1-1 PE	101-1-1 PE
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity (1)	**[kW]**	**48,87**	**56,89**	**73,37**	**84,91**	**100,7**
Total power input (1)	[kW]	12,4	14,1	18,2	20,9	25,3
EER - Energy Efficiency Ratio	-	**3,94**	**4,03**	**4,03**	**4,06**	**3,98**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	14,6	15,7	20,6	22	27,6
"Ecodesign'' compliance for process application (SEPR)	-	**5,26**	**5,54**	**5,07**	**5,09**	**5,04**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	3,8	4,1	5,3	5,7	7,2
Independent gas circuits	[n°]	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	1	1	1	1	1
Available steps of capacity	-	1 (75%); 2 (50%)	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 AC				
Fans quantity	[n°]	2	2	2	2	2
Fans power input (1) (total)	[kW]	1,5	1,5	3,6	3,6	3,7
Total air flow	[m^3/h]	21.300	21.300	34.700	34.700	32.100
Expansion valve type	-	Electronic				
Evaporator water flow (1)	[m^3/h]	8,4	9,8	12,6	14,6	17,3
Evaporator pressure drop (1)	[kPa]	58	56	55	41	43
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity (2)	**[kW]**	**6,8**	**7,6**	**7,9**	**10**	**13,2**
Water flow	[m^3/h]	1,17	1,31	1,36	1,74	2,29
Pressure drop (water side)	[kPa]	5,6	5,8	5,6	5,9	6,1
HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**						
Heating capacity (2)	**[kW]**	**61,1**	**70,9**	**91,4**	**105,7**	**125,8**
Water flow	[m^3/h]	10,5	12,2	15,7	18,2	21,6
Pressure drop (water side)	[kPa]	29,5	29,8	38,7	40,4	47
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	17,3	19,8	24,8	29,8	36,4
Locked rotor current – LRA without pump	[A]	120,8	139,9	211,9	233,6	248,4
Maximum absorbed current - FLA without pump	[A]	32,4	39,6	46,1	53,2	63,1
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	160	160	290	290	290
Pump type	-	Centrifugal				
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	1,5	1,5	1,8	3	3
Pump motor nominal current	[A]	4,1	4,1	4,7	6,4	6,4
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	2,2	2,2	4	4	5,5
Pump motor nominal current	[A]	4,7	4,7	8,7	8,7	10,6
Water connections						
Dimension (nominal external diameter)	[inch/DN]	1" 1/4 (DN 32)	1" 1/4 (DN 32)	1" 1/2 (DN 40)	2" (DN 50)	2" (DN 50)
Noise levels (3)						
Total sound power (ST version)	[db(A)]	86	86	85	87	87
Total sound pressure (ST version) - at 1 m distance	[db(A)]	68	68	67	69	69
Total sound pressure (ST version) - at 10 m distance	[db(A)]	54	54	53	55	55
Total sound power (LN version)	[db(A)]	83	83	82	84	84
Total sound pressure (LN version) - at 1 m distance	[db(A)]	65	65	64	66	66
Total sound pressure (LN version) - at 10 m distance	[db(A)]	51	51	50	52	52
Total sound power (SL version)	[db(A)]	81	81	80	82	82
Total sound pressure (SL version) - at 1 m distance	[db(A)]	63	63	62	64	64
Total sound pressure (SL version) - at 10 m distance	[db(A)]	49	49	48	50	50

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 according to models

(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 R290 range		119-1-1 PE	100-2-2 PE	118-2-2 PE	144-2-2 PE	164-2-2 PE
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [(1)]	**[kW]**	**119,1**	**99,7**	**118,4**	**144**	**164**
Total power input [(1)]	[kW]	28,5	23,7	28,2	36,3	42,2
EER - Energy Efficiency Ratio	-	**4,18**	**4,20**	**4,20**	**3,97**	**3,89**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	37,1	29,9	38,9	40,1	41,4
"Ecodesign'' compliance for process application (SEPR)	-	**5,83**	**5,84**	**5,99**	**5,01**	**5,00**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	9,6	7,8	10,1	10,4	10,8
Independent gas circuits	[n°]	1	2	2	2	2
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	1	2	2	2	2
Available steps of capacity	-	1 (83%); 2 (67%); 3 (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 AC				
Fans quantity	[n°]	3	3	3	3	3
Fans power input [(1)] (total)	[kW]	2,2	2,1	2,2	5,6	5,6
Total air flow	[m^3/h]	33.400	35.400	33.400	46.800	46.900
Expansion valve type	-	Electronic				
Evaporator water flow [(1)]	[m^3/h]	20,5	17,1	20,4	24,8	28,2
Evaporator pressure drop [(1)]	[kPa]	47	51	57	63	57
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [(2)]	**[kW]**	**16,1**	**13,5**	**15**	**17,7**	**22,3**
Water flow	[m^3/h]	2,81	2,32	2,59	3,06	3,90
Pressure drop (water side)	[kPa]	6,4	5,6	5,7	5,7	6,1
HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**						
Heating capacity [(2)]	**[kW]**	**147,3**	**123,2**	**146,3**	**179,8**	**205,6**
Water flow	[m^3/h]	25,3	21,2	25,2	30,9	35,4
Pressure drop (water side)	[kPa]	47,8	27,7	38,3	41,4	42,9
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	39,4	33,6	35,4	47,3	57,3
Locked rotor current – LRA without pump	[A]	278,6	151,4	216,3	253,4	282,2
Maximum absorbed current - FLA without pump	[A]	66,6	63,0	66,0	87,6	101,8
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]	3	3	3	4	4
Pump motor nominal current	[A]	6,4	6,4	6,4	8,7	8,7
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	7,5	5,5	7,5	7,5	7,5
Pump motor nominal current	[A]	13,6	10,6	13,6	13,6	13,6
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)]	89	86	87	88	90
Total sound pressure (ST version) - at 1 m distance	[db(A)]	70	67	68	69	71
Total sound pressure (ST version) - at 10 m distance	[db(A)]	57	54	55	56	58
Total sound power (LN version)	[db(A)]	86	83	84	85	87
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	64	65	66	68
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	51	52	53	55
Total sound power (SL version)	[db(A)]	84	81	82	83	85
Total sound pressure (SL version) - at 1 m distance	[db(A)]	65	62	63	64	66
Total sound pressure (SL version) - at 10 m distance	[db(A)]	52	49	50	51	53

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 according to models

(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 R290 range		199-2-2 PE	248-2-2 PE	287-2-2 PE	309-2-2 PV	346-2-2 PV
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [(1)]	**[kW]**	**199,4**	**248,2**	**286,5**	**308,9**	**346**
Total power input [(1)]	[kW]	49,4	56,3	69,3	78,8	92,8
EER - Energy Efficiency Ratio	-	**4,04**	**4,41**	**4,13**	**3,92**	**3,73**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	61,3	84,7	87,6	66,4	75,9
"Ecodesign'' compliance for process application (SEPR)	-	**5,08**	**5,62**	**5,29**	**5,01**	**5,11**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	15,9	22,0	22,8	17,3	19,7
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 (83%); 2 (67%); 3 (50%)	1 (83%); 2 (67%); 3 (50%)	1 (83%); 2 (67%); 3 (50%)	2 (75%); 3 (62,5%); 4 (50%)	2 (75%); 3 (62,5%); 4 (50%)
Condensing coils type	-	Cu/Al	Cu/Al	Cu/Al	Microchannel	Microchannel
Fans type	-	Axial AC				
Fans quantity	[n°]	3	4	4	4	4
Fans power input [(1)] (total)	[kW]	4,9	6,7	6,7	6,5	6,5
Total air flow	[m^3/h]	59.900	77.351	77.400	79.700	79.700
Expansion valve type	-	Electronic				
Evaporator water flow [(1)]	[m^3/h]	34,3	42,7	49,3	53,1	59,5
Evaporator pressure drop [(1)]	[kPa]	63	66	68	52	49
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [(2)]	**[kW]**	**27,5**	**29,5**	**29,5**	**44,9**	**57,6**
Water flow	[m^3/h]	4,77	5,19	5,19	7,77	10,02
Pressure drop (water side)	[kPa]	6,2	6,1	6,1	7,0	8,2
HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**						
Heating capacity [(2)]	**[kW]**	**248**	**303,6**	**354,7**	**N.A**	**N.A**
Water flow	[m^3/h]	42,7	52,2	61,0	-	-
Pressure drop (water side)	[kPa]	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]	70,5	82,4	97,6	113,4	124,0
Locked rotor current – LRA without pump	[A]	306,9	352,4	414,4	474,7	573,2
Maximum absorbed current - FLA without pump	[A]	121,6	140,4	167,6	197,0	218,0
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	500	470	470	290	290
Pump type	-	Centrifugal				
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	4	5,5	5,5	7,5	7,5
Pump motor nominal current	[A]	8,7	10,6	10,6	13,6	13,6
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	7,5	11	11	11	11
Pump motor nominal current	[A]	13,6	21,3	21,3	21,3	21,3
Water connections						
Dimension (nominal external diameter)	[inch/DN]	2"1/2 (DN 65)	3" (DN 80)	3" (DN 80)	4" (DN 100)	4" (DN 100)
Noise levels [(3)]						
Total sound power (ST version)	[db(A)]	89	91	91	92	93
Total sound pressure (ST version) - at 1 m distance	[db(A)]	70	71	71	73	74
Total sound pressure (ST version) - at 10 m distance	[db(A)]	57	59	59	60	61
Total sound power (LN version)	[db(A)]	86	88	88	89	90
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	68	68	70	71
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	56	56	57	58
Total sound power (SL version)	[db(A)]	84	86	86	87	88
Total sound pressure (SL version) - at 1 m distance	[db(A)]	65	66	66	68	69
Total sound pressure (SL version) - at 10 m distance	[db(A)]	52	54	54	55	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 according to models

(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 R290 range		393-2-2 PV	428-2-2 PV	449-2-2 PV
COOLING - A BP/ST/AS/OO/*S version				
Cooling capacity [1]	**[kW]**	**392,8**	**428**	**448,6**
Total power input [1]	[kW]	91,8	101,5	107,1
EER - Energy Efficiency Ratio	-	**4,28**	**4,22**	**4,19**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	85,1	88,8	92,4
"Ecodesign'' compliance for process application (SEPR)	-	**5,46**	**5,26**	**5,20**

REFRIGERANT CIRCUIT				
Refrigerant	-	R290		
GWP	-	3		
Charge of refrigerant - Base unit	[kg]	22,1	23,1	24,0
Independent gas circuits	[n°]	2	2	2
Compressors type	-	Semi-hermetic pistons		
Compressors quantity	[n°]	2	2	2
Available steps of capacity	-	2 (75%); 3 (62,5%); 4 (50%)	2 (75%); 3 (62,5%); 4 (50%)	2 (75%); 3 (62,5%); 4 (50%)
Condensing coils type	-	Microchannel		
Fans type	-	Axial AC		
Fans quantity	[n°]	6	6	6
Fans power input [1] (total)	[kW]	9,9	9,8	9,8
Total air flow	[m^3/h]	119.600	119.600	119.600
Expansion valve type	-	Electronic		
Evaporator water flow [1]	[m^3/h]	67,6	73,6	77,2
Evaporator pressure drop [1]	[kPa]	61	58	54

DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**				
Heating capacity [2]	**[kW]**	**51,7**	**57,7**	**61,3**
Water flow	[m^3/h]	8,91	9,99	10,59
Pressure drop (water side)	[kPa]	22,0	25,8	28,0

HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**				
Heating capacity [2]	**[kW]**	**N.A**	**N.A**	**N.A**
Water flow	[m^3/h]	-	-	-
Pressure drop (water side)	[kPa]	-	-	-

Electrical data				
Power supply	-	400/3/50		
Emergency power supply	-	230/1/50		
Maximum power input without pump	[kW]	129,6	138,6	140,6
Locked rotor current – LRA without pump	[A]	678,9	719,5	722,8
Maximum absorbed current - FLA without pump	[A]	234,2	243,4	250,0

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

Standard pump - 250 kPa useful head				
Motor Efficiency	-	IE3		
Pump motor nominal power	[kW]	11	11	11
Pump motor nominal current	[A]	21,3	21,3	21,3

Standard pump - 450 kPa useful head				
Motor Efficiency	-	IE3		
Pump motor nominal power	[kW]	11	15	15
Pump motor nominal current	[A]	21,3	27,7	27,7

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

Noise levels [3]				
Total sound power (ST version)	[db(A)]	94	94	94
Total sound pressure (ST version) - at 1 m distance	[db(A)]	74	74	74
Total sound pressure (ST version) - at 10 m distance	[db(A)]	62	62	62
Total sound power (LN version)	[db(A)]	91	91	91
Total sound pressure (LN version) - at 1 m distance	[db(A)]	71	71	71
Total sound pressure (LN version) - at 10 m distance	[db(A)]	59	59	59
Total sound power (SL version)	[db(A)]	89	89	89
Total sound pressure (SL version) - at 1 m distance	[db(A)]	69	69	69
Total sound pressure (SL version) - at 10 m distance	[db(A)]	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 according to models

(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 R290 range		13-1-1 PE	16-1-1 PE	25-1-1 PE	32-1-1 PE	40-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	1380	1380	1680	1680	1680
Width	[mm]	835	835	1025	1025	1025
Height (ST - LN)	[mm]	1820	1820	2121	2121	2121
Height (SL)	[mm]	-	-	2208	2208	2208
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	230	302	380	360	410
Operating weight (A BP/ST/AS/OO/** version)	[kg]	235	307	385	365	415

DIMENSIONS - Large unit						
Lenght	[mm]	1980	1980	2330	2330	2330
Width	[mm]	835	835	1025	1025	1025
Height (ST - LN)	[mm]	1820	1820	2221	2221	2221
Height (SL)	[mm]	-	-	2308	2308	2308

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	Large	Large	Large
Integrata MP 1-1 OO	-	Large	Large	Large	Large	Large
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large
Integrata HP 1-1 OO	-	Large	Large	Large	Large	Large
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
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	-	Large	Large	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	-	Large	Large	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Large	Large

TETI BS R290 range		49-1-1 PE	57-1-1 PE	73-1-1 PE	85-1-1 PE	101-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	2330	2330	2980	2980	2980
Width	[mm]	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2221	2300	2300	2300
Height (SL)	[mm]	2308	2308	2360	2360	2360
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	550	558	762	773	830
Operating weight (A BP/ST/AS/OO/** version)	[kg]	555	563	769	780	837

DIMENSIONS - Large unit						
Lenght	[mm]	2980	2980	3920	3920	3920
Width	[mm]	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2221	2360	2360	2360
Height (SL)	[mm]	2308	2308	2420	2420	2420
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	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
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	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
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

TETI BS R290 range		119-1-1 PE	100-2-2 PE	118-2-2 PE	144-2-2 PE	164-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	3920	3920	3920	3920	3920
Width	[mm]	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2281	2281	2281	2360	2360
Height (SL)	[mm]	2368	2368	2368	2420	2420
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	950	930	1055	1134	1150
Operating weight (A BP/ST/AS/OO/** version)	[kg]	958	938	1063	1142	1158
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

TETI BS R290 range		199-2-2 PE	248-2-2 PE	287-2-2 PE	309-2-2 PV	346-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	4200	5500	5500	3100	3100
Width	[mm]	1185	1535	1535	2345	2345
Height (ST - LN)	[mm]	2320	2350	2350	2465	2465
Height (SL)	[mm]	2380	2410	2410	2525	2525
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	1460	1698	1686	1898	1908
Operating weight (A BP/ST/AS/OO/** version)	[kg]	1470	1708	1701	1913	1923
DIMENSIONS - Large unit						
Lenght	[mm]	5000	Contact EK	Contact EK	4450	4450
Width	[mm]	1185	Contact EK	Contact EK	2345	2345
Height (ST - LN)	[mm]	2320	Contact EK	Contact EK	2465	2465
Height (SL)	[mm]	2380	Contact EK	Contact EK	2525	2525
Unit dimensions with hydronic kit						
Integrata MP 1-0 OO	-	Large	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Large	Contattare EK	Contattare EK	Large	Large
Integrata MP 1-1 OO	-	Large	Standard	Standard	Large	Large
Integrata MP 1-1 OO and HR equipment	-	Large	Contattare EK	Contattare EK	Large	Large
Integrata HP 1-0 OO	-	Large	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Large	Contattare EK	Contattare EK	Large	Large
Integrata HP 1-1 OO	-	Large	Standard	Standard	Large	Large
Integrata HP 1-1 OO and HR equipment	-	Large	Contattare EK	Contattare EK	Large	Large
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	Contattare EK	Contattare EK	Large	Large

TETI BS R290 range		393-2-2 PV	428-2-2 PV	449-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit				
Lenght	[mm]	4450	4450	4450
Width	[mm]	2345	2345	2345
Height (ST - LN)	[mm]	2465	2465	2465
Height (SL)	[mm]	2525	2525	2525
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	2543	2557	2575
Operating weight (A BP/ST/AS/OO/** version)	[kg]	2561	2575	2593

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
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard	Standard
Integrata HP 1-0 OO	-	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Standard	Standard	Standard
Integrata HP 1-1 OO	-	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Standard	Standard	Standard
Base-P MP 1-0 OO	-	Standard	Standard	Standard
Base-P MP 1-0 OO and HR equipment	-	Standard	Standard	Standard
Base-P MP 1-1 OO	-	Standard	Standard	Standard
Base-P MP 1-1 OO and HR equipment	-	Standard	Standard	Standard
Base-P HP 1-0 OO	-	Standard	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard
Base-T and HR equipment	-	Standard	Standard	Standard

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

(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 R290 range		59-1-1 PE	76-1-1 PE	88-1-1 PE	104-1-1 PE	124-1-1 PE
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [(1)]	**[kW]**	**58,79**	**75,89**	**88,27**	**104,3**	**124,2**
Total power input [(1)]	[kW]	13,02	18,21	20,13	22,62	30,15
EER - Energy Efficiency Ratio	-	**4,52**	**4,17**	**4,38**	**4,61**	**4,12**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	19,6	21,9	27,2	36	37,7
"Ecodesign'' compliance for process application (SEPR)	-	**6,16**	**5,27**	**5,46**	**6,22**	**5,18**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	5,1	5,7	7,0	9,4	9,8
Independent gas circuits	[n°]	1	1	1	1	1
Compressors type	-	Semi-hermetic pistons				
Compressors quantity	[n°]	1	1	1	1	1
Available steps of capacity	-	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (75%); 2 (50%)	1 (83%); 2 (67%); 3 (50%)	1 (83%); 2 (67%); 3 (50%)
Condensing coils type	-	Cu/Al				
Fans type	-	Axial AC				
Fans quantity	[n°]	2	2	2	3	3
Fans power input [(1)] (total)	[kW]	1,399	3,602	3,716	2,21	5,646
Total air flow	[m^3/h]	23.900	34.700	32.000	33.400	46.800
Expansion valve type	-	Electronic				
Evaporator water flow [(1)]	[m^3/h]	10,1	13,1	15,2	17,9	21,4
Evaporator pressure drop [(1)]	[kPa]	46,08	33,34	33,94	36,98	42,04
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [(2)]	**[kW]**	**6,6**	**8,5**	**10,1**	**12,8**	**15,3**
Water flow	[m^3/h]	1,16	1,48	1,73	2,20	2,65
Pressure drop (water side)	[kPa]	5,4	5,5	5,6	5,8	6,0
HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**						
Heating capacity [(2)]	**[kW]**	**71,6**	**94**	**108,3**	**126,8**	**154,1**
Water flow	[m^3/h]	12,3	16,2	18,6	21,8	26,5
Pressure drop (water side)	[kPa]	32,9	38,7	40,4	47	47,8
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	34,6	43,5
Locked rotor current – LRA without pump	[A]	139,9	211,9	233,6	244,8	286,8
Maximum absorbed current - FLA without pump	[A]	39,6	46,1	53,2	59,5	74,8
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]	1,5	1,8	3	3	3
Pump motor nominal current	[A]	4,1	4,7	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
Pump motor nominal current	[A]	4,7	8,7	8,7	10,6	13,6
Water connections						
Dimension (nominal external diameter)	[inch/DN]	1" 1/2 (DN 40)	1" 1/2 (DN 40)	2" (DN 50)	2" (DN 50)	2" (DN 50)
Noise levels [(3)]						
Total sound power (ST version)	[db(A)]	85	85	87	88	89
Total sound pressure (ST version) - at 1 m distance	[db(A)]	67	67	69	69	70
Total sound pressure (ST version) - at 10 m distance	[db(A)]	53	53	55	56	57
Total sound power (LN version)	[db(A)]	82	82	84	85	86
Total sound pressure (LN version) - at 1 m distance	[db(A)]	64	64	66	66	67
Total sound pressure (LN version) - at 10 m distance	[db(A)]	50	50	52	53	54
Total sound power (SL version)	[db(A)]	80	80	82	83	84
Total sound pressure (SL version) - at 1 m distance	[db(A)]	62	62	64	64	65
Total sound pressure (SL version) - at 10 m distance	[db(A)]	48	48	50	51	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 according to models

(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 R290 range		105-2-2 PE	116-2-2 PE	147-2-2 PE	175-2-2 PE	215-2-2 PE
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [(1)]	**[kW]**	**105,3**	**116,1**	**147**	**174,9**	**214,6**
Total power input [(1)]	[kW]	22,62	26,91	36,35	38,74	45,29
EER - Energy Efficiency Ratio	-	**4,66**	**4,31**	**4,04**	**4,51**	**4,74**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	37,6	38,9	41,3	60,4	80
"Ecodesign'' compliance for process application (SEPR)	-	**6,47**	**6,02**	**5,11**	**5,77**	**5,69**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	9,8	10,1	10,7	15,7	20,8
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 (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 AC				
Fans quantity	[n°]	3	3	3	3	4
Fans power input [(1)] (total)	[kW]	2,206	2,198	5,613	4,953	6,743
Total air flow	[m^3/h]	33.400	33.400	46.800	59.800	77.300
Expansion valve type	-	Electronic				
Evaporator water flow [(1)]	[m^3/h]	18,1	20,0	25,3	30,1	36,9
Evaporator pressure drop [(1)]	[kPa]	36,21	43,06	47,15	50,04	59,21
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [(2)]	**[kW]**	**12,6**	**15,3**	**18,1**	**20,3**	**23,2**
Water flow	[m^3/h]	2,19	2,69	3,13	3,49	4,05
Pressure drop (water side)	[kPa]	5,4	5,5	5,7	5,7	5,6
HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**						
Heating capacity [(2)]	**[kW]**	**127,7**	**142,8**	**182,9**	**213,1**	**259,2**
Water flow	[m^3/h]	22,0	24,6	31,5	36,7	44,6
Pressure drop (water side)	[kPa]	28	35,7	41,1	42,9	43,7
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	33,6	38,6	47,3	57,3	72,8
Locked rotor current – LRA without pump	[A]	151,4	177,7	253,4	282,2	311,5
Maximum absorbed current - FLA without pump	[A]	63,0	77,4	87,6	101,8	126,2
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	290	290	290	500	470
Pump type	-	Centrifugal				
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	3	3	4	4	4
Pump motor nominal current	[A]	6,4	6,4	8,7	8,7	8,7
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	5,5	7,5	7,5	7,5	7,5
Pump motor nominal current	[A]	10,6	13,6	13,6	13,6	13,6
Water connections						
Dimension (nominal external diameter)	[inch/DN]	2" (DN 50)	2" (DN 50)	2"1/2 (DN 65)	2"1/2 (DN 65)	3" (DN 80)
Noise levels [(3)]						
Total sound power (ST version)	[db(A)]	87	88	88	89	90
Total sound pressure (ST version) - at 1 m distance	[db(A)]	68	69	69	70	70
Total sound pressure (ST version) - at 10 m distance	[db(A)]	55	56	56	57	58
Total sound power (LN version)	[db(A)]	84	85	85	86	87
Total sound pressure (LN version) - at 1 m distance	[db(A)]	65	66	66	67	67
Total sound pressure (LN version) - at 10 m distance	[db(A)]	52	53	53	54	55
Total sound power (SL version)	[db(A)]	82	83	83	84	85
Total sound pressure (SL version) - at 1 m distance	[db(A)]	63	64	64	65	65
Total sound pressure (SL version) - at 10 m distance	[db(A)]	50	51	51	52	53

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 according to models

(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 R290 range		248-2-2 PE	293-2-2 PE	313-2-2 PV	350-2-2 PV	388-2-2 PV
COOLING - A BP/ST/AS/OO/*S version						
Cooling capacity [(1)]	**[kW]**	**248,2**	**292,7**	**312,9**	**350,4**	**388,1**
Total power input [(1)]	[kW]	56,32	69,71	66,82	74,92	85,89
EER - Energy Efficiency Ratio	-	**4,41**	**4,20**	**4,68**	**4,68**	**4,52**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	84	87	81,9	81,7	86,2
"Ecodesign'' compliance for process application (SEPR)	-	**5,62**	**5,09**	**5,69**	**5,84**	**5,66**
REFRIGERANT CIRCUIT						
Refrigerant	-	R290				
GWP	-	3				
Charge of refrigerant - Base unit	[kg]	21,8	22,6	21,3	21,2	22,4
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 (83%); 2 (67%); 3 (50%)	1 (83%); 2 (67%); 3 (50%)	2 (75%); 3 (62,5%); 4 (50%)	2 (75%); 3 (62,5%); 4 (50%)	2 (75%); 3 (62,5%); 4 (50%)
Condensing coils type	-	Cu/Al	Cu/Al	Microchannel	Microchannel	Microchannel
Fans type	-	Axial AC				
Fans quantity	[n°]	4	4	6	6	6
Fans power input [(1)] (total)	[kW]	6,705	9,78	9,95	9,91	9,87
Total air flow	[m^3/h]	77.300	95.700	119.600	119.600	119.600
Expansion valve type	-	Electronic				
Evaporator water flow [(1)]	[m^3/h]	42,7	50,3	53,8	60,3	66,8
Evaporator pressure drop [(1)]	[kPa]	65,63	70,13	40,94	49,97	49
DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**						
Heating capacity [(2)]	**[kW]**	**31,1**	**37**	**34,4**	**38,8**	**46,6**
Water flow	[m^3/h]	5,36	6,41	5,95	6,75	8,18
Pressure drop (water side)	[kPa]	6,0	6,4	13,3	15,4	19,6
HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**						
Heating capacity [(2)]	**[kW]**	**303,6**	**361,2**	**N.A.**	**N.A.**	**N.A.**
Water flow	[m^3/h]	52,2	62,1	-	-	-
Pressure drop (water side)	[kPa]	38,7	39,8	-	-	-
Electrical data						
Power supply	-	400/3/50				
Emergency power supply	-	230/1/50				
Maximum power input without pump	[kW]	82,4	97,6	118,0	128,6	129,6
Locked rotor current – LRA without pump	[A]	352,4	414,4	483,9	582,4	678,9
Maximum absorbed current - FLA without pump	[A]	140,4	167,6	206,2	227,2	234,2
HYDRONIC KIT (option)						
Buffer tank capacity	[L]	470	470	290	290	290
Pump type	-	Centrifugal				
Standard pump - 250 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	5,5	5,5	7,5	7,5	11
Pump motor nominal current	[A]	10,6	10,6	13,6	13,6	21,3
Standard pump - 450 kPa useful head						
Motor Efficiency	-	IE3				
Pump motor nominal power	[kW]	11	11	11	11	15
Pump motor nominal current	[A]	21,3	21,3	21,3	21,3	27,7
Water connections						
Dimension (nominal external diameter)	[inch/DN]	3" (DN 80)	3" (DN 80)	4" (DN 100)	4" (DN 100)	4" (DN 100)
Noise levels [(3)]						
Total sound power (ST version)	[db(A)]	91	93	93	93	94
Total sound pressure (ST version) - at 1 m distance	[db(A)]	71	73	73	73	74
Total sound pressure (ST version) - at 10 m distance	[db(A)]	59	61	61	61	62
Total sound power (LN version)	[db(A)]	88	90	90	90	91
Total sound pressure (LN version) - at 1 m distance	[db(A)]	68	70	70	70	71
Total sound pressure (LN version) - at 10 m distance	[db(A)]	56	58	58	58	59
Total sound power (SL version)	[db(A)]	86	88	88	88	89
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	68	68	68	69
Total sound pressure (SL version) - at 10 m distance	[db(A)]	54	56	56	56	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 according to models

(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 R290 range		449-2-2 PV	484-2-2 PV
COOLING - A BP/ST/AS/OO/*S version			
Cooling capacity [1]	**[kW]**	**448,6**	**483,8**
Total power input [1]	[kW]	95,08	101,8
EER - Energy Efficiency Ratio	-	**4,72**	**4,75**
Saved CO2 equivalent Ton (*)	[CO_2 Ton]	98,7	102,3
"Ecodesign'' compliance for process application (SEPR)	-	**5,87**	**6,09**

REFRIGERANT CIRCUIT			
Refrigerant	-	R290	
GWP	-	3	
Charge of refrigerant - Base unit	[kg]	25,6	26,6
Independent gas circuits	[n°]	2	2
Compressors type	-	Semi-hermetic pistons	
Compressors quantity	[n°]	2	2
Available steps of capacity	-	2 (75%); 3 (62,5%); 4 (50%)	2 (75%); 3 (62,5%); 4 (50%)
Condensing coils type	-	Microchannel	
Fans type	-	Axial AC	
Fans quantity	[n°]	8	8
Fans power input [1] (total)	[kW]	13,23	13,2
Total air flow	[m^3/h]	159.500	159.500
Expansion valve type	-	Electronic	
Evaporator water flow [1]	[m^3/h]	77,2	83,2
Evaporator pressure drop [1]	[kPa]	53,92	54,13

DESUPERHEATER (option) **- A BP/ST/DS/OO/*S**			
Heating capacity [2]	**[kW]**	**46,5**	**52,5**
Water flow	[m^3/h]	8,05	9,04
Pressure drop (water side)	[kPa]	19,2	22,4

HEAT RECOVERY (option) **- A BP/ST/HR/OO/*S**			
Heating capacity [2]	**[kW]**	**N.A.**	**N.A.**
Water flow	[m^3/h]	-	-
Pressure drop (water side)	[kPa]	-	-

Electrical data			
Power supply	-	400/3/50	
Emergency power supply	-	230/1/50	
Maximum power input without pump	[kW]	143,2	145,2
Locked rotor current – LRA without pump	[A]	728,7	732,0
Maximum absorbed current - FLA without pump	[A]	252,6	259,2

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

Standard pump - 250 kPa useful head			
Motor Efficiency	-	IE3	
Pump motor nominal power	[kW]	11	11
Pump motor nominal current	[A]	21,3	21,3

Standard pump - 450 kPa useful head			
Motor Efficiency	-	IE3	
Pump motor nominal power	[kW]	18,5	18,5
Pump motor nominal current	[A]	35	35

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

Noise levels [3]			
Total sound power (ST version)	[db(A)]	94	95
Total sound pressure (ST version) - at 1 m distance	[db(A)]	73	74
Total sound pressure (ST version) - at 10 m distance	[db(A)]	62	63
Total sound power (LN version)	[db(A)]	91	92
Total sound pressure (LN version) - at 1 m distance	[db(A)]	70	71
Total sound pressure (LN version) - at 10 m distance	[db(A)]	59	60
Total sound power (SL version)	[db(A)]	89	90
Total sound pressure (SL version) - at 1 m distance	[db(A)]	68	69
Total sound pressure (SL version) - at 10 m distance	[db(A)]	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 according to models

(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 R290 range		13-1-1 PE	26-1-1 PE	34-1-1 PE	42-1-1 PE	52-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	1380	1680	1680	2330	2330
Width	[mm]	835	1025	1025	1025	1025
Height (ST - LN)	[mm]	1820	2121	2121	2221	2221
Height (SL)	[mm]	-	2208	2208	2308	2308
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	230	355	365	550	550
Operating weight (A BP/ST/AS/OO/** version)	[kg]	235	360	370	555	555

DIMENSIONS - Large unit						
Lenght	[mm]	1980	2330	2330	2980	2980
Width	[mm]	835	1025	1025	1025	1025
Height (ST - LN)	[mm]	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
Integrata MP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large
Integrata MP 1-1 OO	-	Large	Large	Large	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Large	Large	Large	Large	Large
Integrata HP 1-1 OO	-	Large	Large	Large	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Large	Large	Large	Large	Large
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	-	Large	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	-	Large	Standard	Standard	Standard	Standard
Base-T	-	Standard	Standard	Standard	Standard	Standard
Base-T and HR equipment	-	Large	Large	Large	Standard	Standard

TETI HE R290 range		59-1-1 PE	76-1-1 PE	88-1-1 PE	104-1-1 PE	124-1-1 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	2980	2980	2980	3920	3920
Width	[mm]	1025	1025	1025	1025	1025
Height (ST - LN)	[mm]	2221	2300	2300	2281	2360
Height (SL)	[mm]	2308	2360	2360	2368	2420
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	660	750	790	940	1000
Operating weight (A BP/ST/AS/OO/** version)	[kg]	667	757	797	948	1008

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 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	-	Large	Large	Large	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	-	Large	Large	Large	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

TETI HE R290 range		105-2-2 PE	116-2-2 PE	147-2-2 PE	175-2-2 PE	215-2-2 PE
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	3920	3920	3920	4200	5500
Width	[mm]	1025	1025	1025	1185	1535
Height (ST - LN)	[mm]	2281	2281	2360	2320	2350
Height (SL)	[mm]	2368	2368	2420	2380	2410
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	975	980	1145	1380	1690
Operating weight (A BP/ST/AS/OO/** version)	[kg]	983	988	1153	1390	1700
DIMENSIONS - Large unit						
Lenght	[mm]	-	-	-	5000	Contact EK
Width	[mm]	-	-	-	1185	Contact EK
Height (ST - LN)	[mm]	-	-	-	2320	Contact EK
Height (SL)	[mm]	-	-	-	2380	Contact EK
Unit dimensions with hydronic kit						
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Large	Standard
Integrata MP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Large	Standard
Integrata MP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Large	Standard
Integrata HP 1-0 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK
Integrata HP 1-1 OO	-	Standard	Standard	Standard	Large	Standard
Integrata HP 1-1 OO and HR equipment	-	Standard	Standard	Standard	Large	Contattare EK
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	Large	Contattare EK

TETI HE R290 range		248-2-2 PE	293-2-2 PE	313-2-2 PV	350-2-2 PV	388-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit						
Lenght	[mm]	5500	5500	4450	4450	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/OO/** version)	[kg]	1700	1745	2495	2515	2560
Operating weight (A BP/ST/AS/OO/** version)	[kg]	1710	1755	2513	2533	2578
DIMENSIONS - Large unit						
Lenght	[mm]	Contact EK	Contact EK	-	-	-
Width	[mm]	Contact EK	Contact EK	-	-	-
Height (ST - LN)	[mm]	Contact EK	Contact EK	-	-	-
Height (SL)	[mm]	Contact EK	Contact EK	-	-	-
Unit dimensions with hydronic kit						
Integrata MP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-0 OO and HR equipment	-	Contattare EK	Contattare EK	Standard	Standard	Standard
Integrata MP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata MP 1-1 OO and HR equipment	-	Contattare EK	Contattare EK	Standard	Standard	Standard
Integrata HP 1-0 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Contattare EK	Contattare EK	Standard	Standard	Standard
Integrata HP 1-1 OO	-	Standard	Standard	Standard	Standard	Standard
Integrata HP 1-1 OO and HR equipment	-	Contattare EK	Contattare EK	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	-	Contattare EK	Contattare EK	Standard	Standard	Standard

TETI HE R290 range		449-2-2 PV	484-2-2 PV
DIMENSIONS AND WEIGHTS - Standard unit			
Lenght	[mm]	5700	5700
Width	[mm]	2345	2345
Height (ST - LN)	[mm]	2465	2465
Height (SL)	[mm]	2525	2525
Shipping weight (A BP/ST/AS/OO/** version)	[kg]	2900	2915
Operating weight (A BP/ST/AS/OO/** version)	[kg]	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
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
Integrata HP 1-0 OO	-	Standard	Standard
Integrata HP 1-0 OO and HR equipment	-	Standard	Standard
Integrata HP 1-1 OO	-	Standard	Standard
Integrata HP 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-P HP 1-0 OO	-	Standard	Standard
Base-P HP 1-0 OO and HR equipment	-	Standard	Standard
Base-P HP 1-1 OO	-	Standard	Standard
Base-P HP 1-1 OO and HR equipment	-	Standard	Standard
Base-T	-	Standard	Standard
Base-T and HR equipment	-	Standard	Standard

The data are indicative and not binding. Euroklimat reserves the right to make changes at any time without notice.

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 Silicon Oasis,UAE
PO Box 28178, Dubai, UAE

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

www.euroklimatme.com

HYDRO CARBONS 21

green cooling initiative