



PRO SERIES RANGE

R290



The simplest way to gain the highest efficiency.

The **ProSeries Range**, which includes Heco-clima's **air-cooled units with R290**, is characterized by great reliability and reduced installation and management costs. It represents the best solution for the environment, with the **lowest GWP***.

This type of chiller turns out to be particularly suitable for all the **applications** where **flammable refrigerants** are allowed.

The ProSeries Range represents the best solution for these installations because it provides **high efficiency at minimum costs**.

*R290 GWP = 3

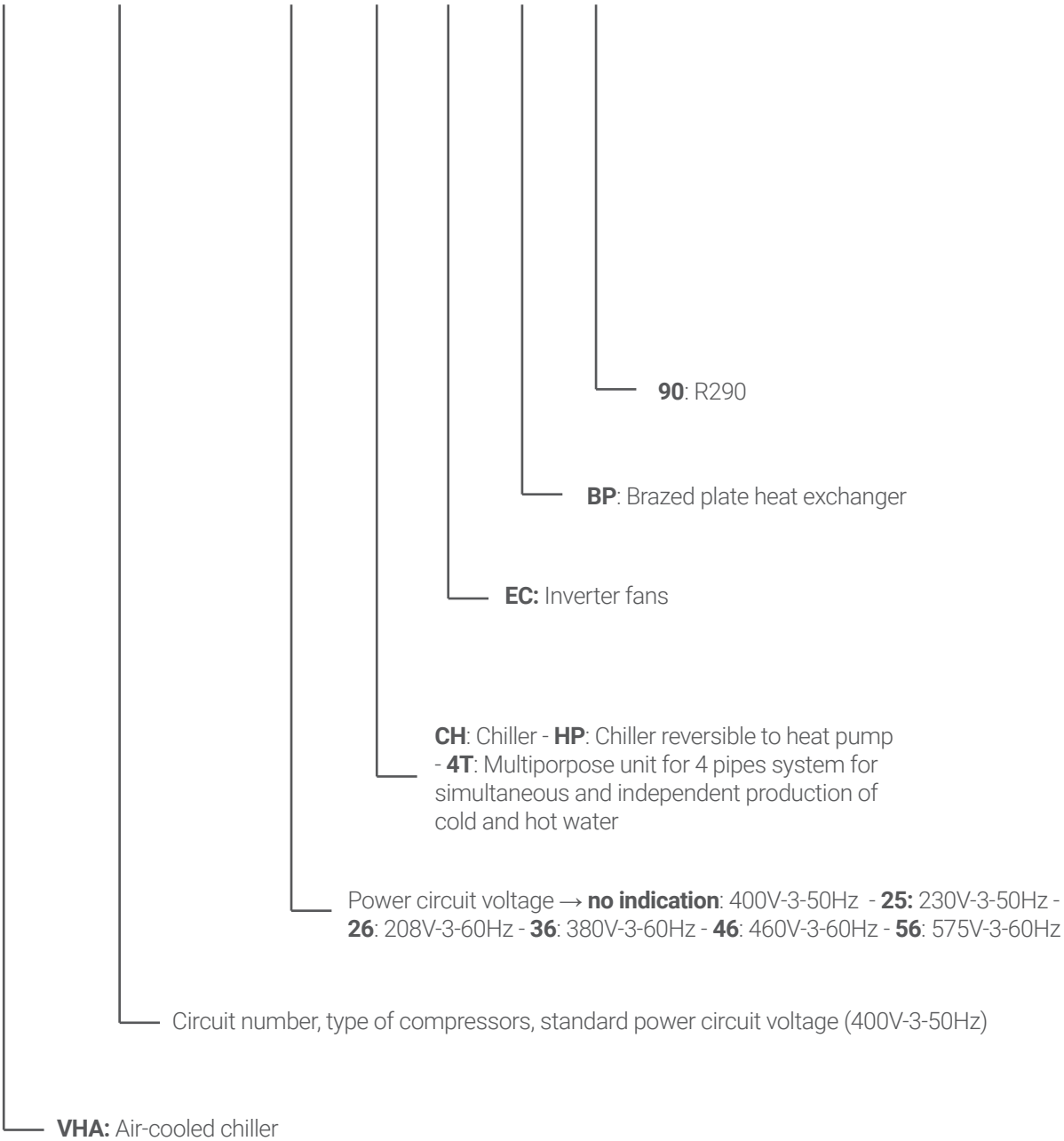
Index

Name description	Pag. 4
Main components	Pag. 7
VHA CH	Pag. 12
VHA HP	Pag. 16
VHA HPT	Pag. 22
VHA 4T	Pag. 26

Name description

Here you can see an example about nomenclature of Hecoclima's units. The name of an air-cooled chiller with semi-hermetic reciprocating compressors, R290 refrigerant gas, a brazed plate evaporator and EC fans is composed of the following basic abbreviations. All specifications and options are subject to change without notice from the manufacturer.

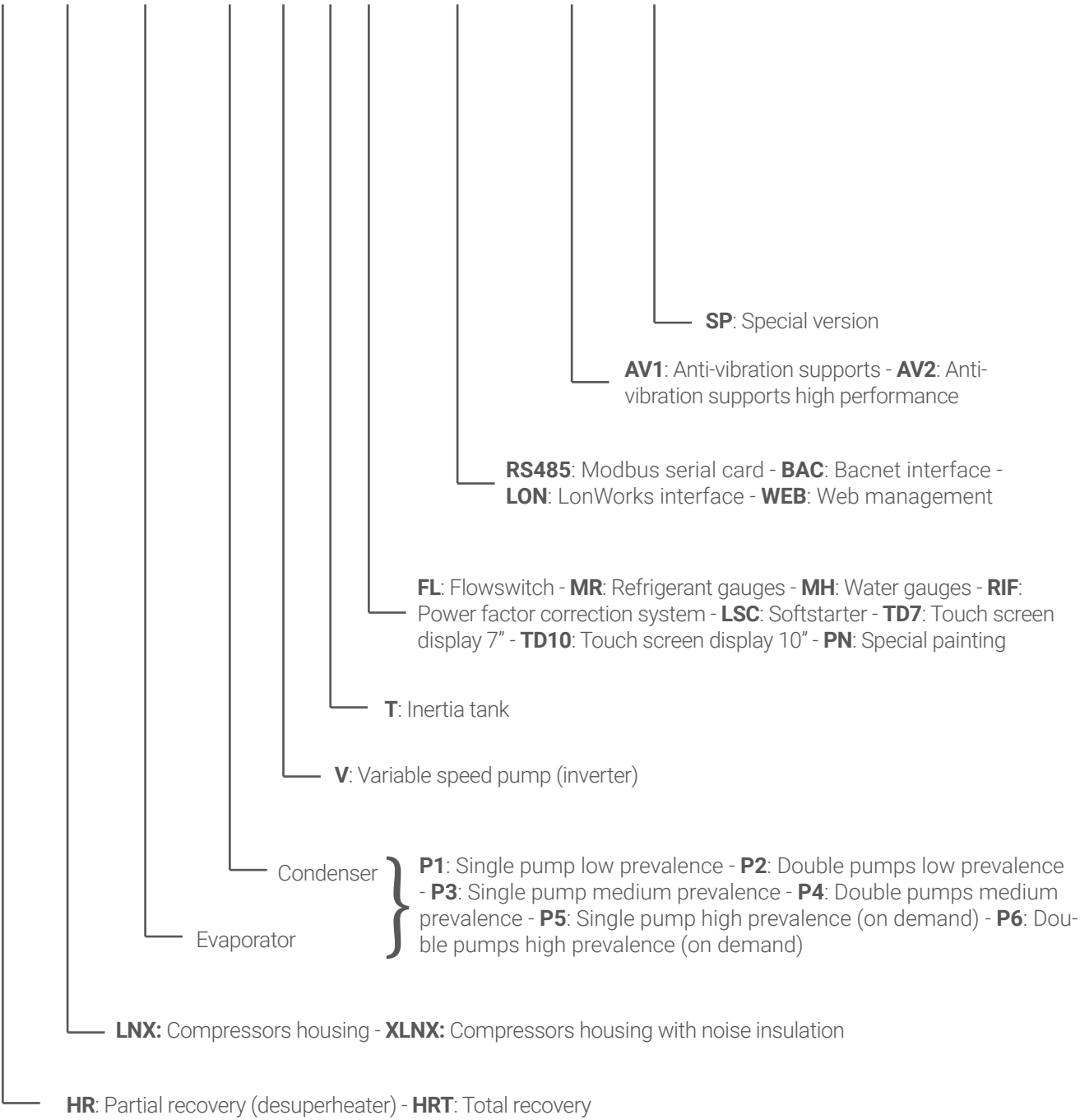
VHA P2.142.2(25) CH EC BP 90



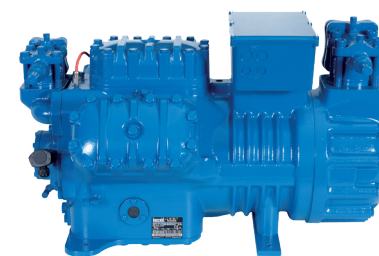
Available options

Here you can see an example about available options of our units. If options are present they will be showed under unit's name description.

HR LN EP1 CP1 V T FL RS485 AV1 SP



MAIN COMPONENTS

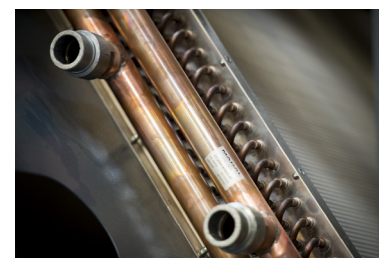


Compressors

Compressors are reciprocating semi-hermetic type specially designed for applications with R290.

The main technical features are:

- 4 or 6 cylinders depending on the size
- Mechanics optimized for the use of hydrocarbons
- Load special oil
- Equipotential connection of all electrical components
- Electrical connection box
- Oil heater
- PTC probes for discharge and engine temperature control
- Oil differential pressure switch
- Electronic control unit for the main functions of correct operation
- Oil level sensor in the case of compressors in parallel on the same circuit
- Drive via inverter in the case of a single compressor unit
- Partialization ON / OFF in the case of two compressors in parallel on the same circuit



Microchannel / Finned coils

The exchangers for disposal toward the external air source are built to withstand the stresses of pressure and thermal shocks caused by the refrigeration cycle and are perfectly compatible with R290 refrigerant.

Chillers: microchannel batteries, painted with epoxy powders, with very low internal volume to minimize the refrigerant charge, and with high heat exchange performances to maximize the cooling cycle efficiency.

Reversible heat pump chillers and multi-purpose units: finned coils with internally lined copper pipes and aluminum fins with hydrophilic treatment to maximize heat exchange and drain condensate that forms in the fins, in addition to ensuring a long life against corrosion.

In the case of particularly corrosive atmospheres it is possible to protect the external surface of the batteries with special treatments.



Inverter

Inverters are foreseen for the single-compressor units to maximize the modulation capacity and the average seasonal efficiency of the unit.

Main features are:

- Generous dimensioning to guarantee the starting of the compressor
- High switching frequencies for the maximum duration of the driven motor
- Built-in EMC filter which, together with the use of special cables, reduce to minimum the electromagnetic emissions
- Electronic control of the maximum current absorbed by the motor



Refrigerant circuit

The refrigeration circuit is completely wired, its connections are made with copper pipes and includes: liquid shut-off valve and solenoid valve, hermetic filter drier, liquid and humidity indicator, electronic thermostatic valve, safety gauges on the high pressure transducer side and low pressure, pressure ports for filling and emptying the refrigerant. In the compressor suction there is a superheater which cools the liquid before reaching the electronic valve.

A liquid receiver allows the correct operation of the circuits in the various configurations of heat pumps and multipurpose units, while a special liquid accumulator protects the compressor against flooding by liquid refrigerant during breaks and/or in the inversions of the cycle for defrosting or in the changes of the multipurpose circuits.

In the case of units with two compressors per circuit there is an oil separator on the common discharge line of the compressors and two solenoid valves complete the oil supply circuit to the individual compressors.

The low pressure side is thermal insulated by a closed cell anticondensate mattress. The safety valves have the drains all conveyed in a single pipe which the user can then easily connect to a conveying pipe to a safe emission point.

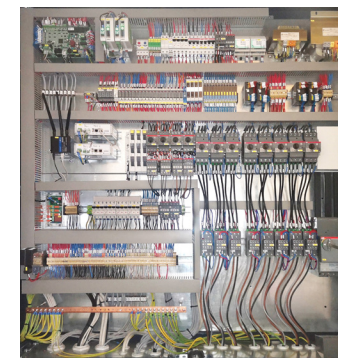


Hidronic kit

Modules supplied separately from the units, low/medium/high head version, single or double pump both on the evaporator side and on the condenser side, on/off pumps or inverter with automatic speed adjustment to guarantee the prevalence required by the circuits.

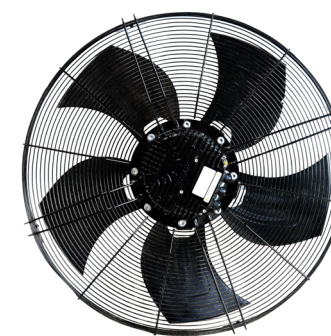
All solutions maintain the mandatory constant flow to the chiller heat exchangers. Inertial tanks can be supplied with the volumes suitable for the chillers supplied.

The new Pump energy saving function is available, which allows the pumps to be temporarily stopped when all the primary circuit loads are at zero for a certain time. The unit is able to control remote pumps where not supplied together



Switchboard

The switchboard is completely wired inside a watertight steel box IP54, produced according to the strictest European norms. Power circuit designed for the rated supply indicated in the datasheet, with fuse protection, counters, thermal relays for each compressor. The control circuit includes all control devices, including the thermostatic compressor insertion system. All switchboards are equipped with an IEC socket for service supply on the field. Moreover, the multi-compressor unit is provided with a thermostat-run ventilation and heating system.



Fans

The fans are axial type with inclined blades and directly coupled EC type motor to obtain the maximum average seasonal efficiency, a robust safety grill in galvanized and painted steel completes the equipment.

The electronic control allows a perfect modulation of the fan speed from zero to the maximum speed.



Brazed plate heat exchangers

They are specifically designed for high efficiency chillers and heat pumps. Perfectly compatible with the R290, thanks to their compactness and to the optimized design of the profile of the plates as well as to a generous dimensioning, they guarantee very high performances to the refrigeration cycle excellent drainage of the oil from their inside, as well as to reduced pressure losses on the hydronic circuit side reducing to a minimum the energy consumption of the always present water circulation.



Flammable Gas Sensor

The compressor compartment is monitored by a specially designed sensor capable of monitoring the concentration of R290 in the closed volume. Three levels of intervention guarantee maximum system safety by fan start-up for ventilation of the compressor compartment, machine shutdown and finally the possibility of controlling the opening of a remote switch that turns off the unit in the event of excessively refrigerant leakage that could generate an atmosphere potentially explosive.



Electronic controller

Electronic board for unit management: inlet/outlet water temperatures, cooling and/or heating capacity adjustment, working hours of each compressor, high/low pressure and maximum flow temperature alarms, high and low superheat alarms, condensing pressure regulation/evaporation, evaporator antifreeze protection through double control of the water flow and the minimum flow temperature, self-adaptive defrost (only reversible heat pumps and multi-function units), ON/OFF pump / s control, inverter constant flow pump / s control, pump shutdown function/and with still compressors, and other....



Remote monitoring option

System for remote monitoring via the Internet of chiller operating data. This innovative tool allows you to remotely view how the machine is working, fine-tune the operating parameters and customize them to the specific user system, make software updates when needed.



VHA CH

Air cooled chiller with semi-hermetic reciprocating compressors and axial fans for outdoor installation.



COOLING
USER PLANT

- Reciprocating compressors
- Dry expansion BPHE evaporator
- EC axial fans 800 mm

General Description

The air-cooled ProSeries chillers are assembled on a self-supporting metal screwed structure, painted with epoxy powder suitably treated for outdoor installation.

All units are supplied completely wired and ready to be connected to the user's plant.

Before delivery, every machine is submitted to a performance test according to the strictest norms in force, with intervention tests of all the safety systems and components installed.

Each unit is available with low-speed fans and compressor sound insulation kit for installation in areas where noise emission must be extremely limited.

Compressors and components are specifically manufactured for applications with R290.

The compressor cabinet is equipped with a gas leakage sensor and an extracting fan to guarantee maximum safety to the system.

All safety valve outlets are conveyed to a single pipe, and the user can easily connect it to a safe ejection point.

The hydronic kits are made up of constant water flow pumps and inertial tank, into splitted boxes.

For the correct operation of the unit it is mandatory to equip the primary circuit with the necessary inertial water volumes.

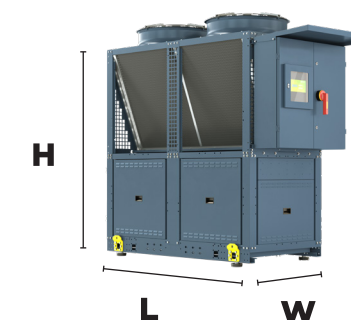
Typical units dimensions

Length: from 1700 to 4850 mm

Width : from 1050 to 2110 mm

Height: 2430 mm

Operating Weight: from 837 kg to 3973 kg



Air cooled chiller with semi-hermetic reciprocating compressors and axial fans for outdoor installation.

SIZE		P1.71.2	P1.84.2	P1.103.2	P1.130.2	P1.142.2	P1.168.2	P1.196.2
CHILLER PERFORMANCE								
Nominal cooling capacity (1)	kW	58,8	70,3	80,2	95,3	101,8	120,7	135,3
Nominal power input (1)	kW	18,8	20,7	24,8	29,8	32,6	39,0	43,1
E.E.R.	kW/kW	3,13	3,39	3,24	3,19	3,13	3,10	3,14
SEER (EN 14511-2018) (2)								
Sound Pressure Level at 10 m (3)	dB(A)	56,8	56,2	56,6	55,5	57,7	55,2	57,6
Calculated Sound Power	dB(A)	81,0	80,0	80,0	80,0	80,0	83,0	82,0
MAIN COMPONENTS AND ELECTRICAL DATA								
Compressors type	Type	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
Compressors number	n°	1	1	1	2	2	2	2
Circuit number	n°	1	1	1	1	1	1	1
Condenser coil type (4)	Type	F	F	F	F	F	F	F
Fans number	n°	1	2	2	2	2	2	3
Evaporator type (5)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Refrigerant charge	kg	3,6	4,4	5,2	5,5	6,0	6,4	8,9
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Total running current	A	32,0	35,2	42,1	50,7	55,4	66,2	73,2
Total max current	A	41,9	47,6	50,6	73,2	80,8	94,6	95,2
Max starting current	A	54	64	68	210	218	236	115
DIMENSIONS								
Length with cabinet (6)	mm	1700	2750	2750	2750	2750	2750	3800
Width (6)	mm	1050	1050	1050	1050	1050	1050	1050
Height	mm	2430	2430	2430	2430	2430	2430	2430
Shipping weight	kg	815	1071	1099	1341	1362	1377	1673
Operating weight	kg	836	1097	1126	1377	1396	1415	1721
<div>(1) Nominal data for inlet/outlet water temperature 12/7 °C; Outdoor air 35 °C</div> <div>(2) Index valid only for units with EC fans option. For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool</div> <div>(3) Sound pressure on free field reflecting surface (directivity fact. 2) according to ISO 3744</div> <div>(4) M: microchannels; F: finned coil; R: Remote condenser</div> <div>(5) BPHE: Brazed plate heat exchanger; S&T: Shell and tube exchanger</div> <div>(6) Excluded footprint of hydronic connections and lifting brackets</div> <div>All specifications are subject to change without notice from the manufacturer.</div>								

Air cooled chiller with semi-hermetic reciprocating compressors and axial fans for outdoor installation.

P1.229.2	P1.252.2	P2.260.2	P2.284.2	P2.336.2	P2.374.2	P2.393.2	P2.458.2	P2.518.2	P2.560.2	P2.616.2
154,9	172,9	191,1	204,2	238,0	264,0	278,7	307,6	345,5	365,0	402,7
51,1	57,5	60,0	65,4	77,0	86,6	86,3	101,5	116,6	119,4	133,7
3,03	3,01	3,18	3,12	3,09	3,05	3,23	3,03	2,96	3,06	3,01
For more details on seasonal efficiency indicators ask the manufacturer or see calculation by Hecoselectool										
59,4	59,7	58,5	60,7	58,2	61,9	62,6	65,1	67,1	65,4	63,8
85,0	85,0	83,0	83,0	86,0	87,0	85,0	85,0	88,0	86,0	86,0
reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
2	2	4	4	4	4	4	4	4	4	4
1	1	2	2	2	2	2	2	2	2	2
F	F	F	F	F	F	F	F	F	F	F
3	3	4	4	4	4	6	6	6	8	8
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
9,5	9,2	11,7	12,6	13,5	14,8	17,7	19,7	20,7	25,1	26,0
400-3-50	230-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
86,8	97,7	102,0	111,2	130,9	147,1	146,6	172,6	198,2	203,0	227,3
117,9	131,9	146,4	161,6	189,2	195,2	195,8	226,8	269,8	282,4	324,8
137	151	287	302	331	334	345	336	394	419	441
3800	3800	4850	4850	4850	4850	3800	3800	3800	4850	4850
1050	1050	1050	1050	1050	1050	2110	2110	2110	2110	2110
2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430
1738	1772	2468	2529	2549	2602	2916	3116	3249	3757	3770
1786	1809	2557	2615	2652	2722	3042	3250	3383	3937	3973

VHA HP

Air-cooled chiller reversible to heat pump, with semi-hermetic reciprocating compressors and axial fans for outdoor installation.



COOLING
USER PLANT



HEATING
USER PLANT

- Reciprocating compressors
- Dry expansion BPHE reversible evaporator
- EC axial fans 800 mm

General Description

The ProSeries air-cooled chillers reversible to heat pump are assembled on a self-supporting metal screwed structure, painted with epoxy powder suitably treated for outdoor installation.

All units are supplied completely wired and ready to be connected to the user's plant.

Prior to delivery every machine is submitted to a performance test according to the strictest norms in force, with intervention tests of all the safety systems and components installed.

Each unit is available with low-speed fans and compressor sound insulation kit for installation in areas where noise emission must be extremely limited.

Large operative range of outdoor air temperature (-10 °C up to 45 °C in heating and cooling mode), they are designed for two-pipe seasonal switching systems. During winter it produces hot water up to 55 °C, and during summer produces cold water.

Compressors and main components are specifically manufactured for applications with R290.

The compressor cabinet is equipped with a gas leakage sensor and an extracting fan to guarantee maximum safety to the system.

All safety valve outlets are conveyed to a single pipe, and the user can easily connect it to a safe ejection point.

Advanced electronic defrost control with number of cycles optimization depending on the climatic conditions and the actual operating time of the compressors.

The hydronic kits are made up of constant water flow pumps and inertial tank, into splitted boxes.

For the correct operation of the unit it is mandatory to equip the primary circuit with the necessary inertial water volumes.

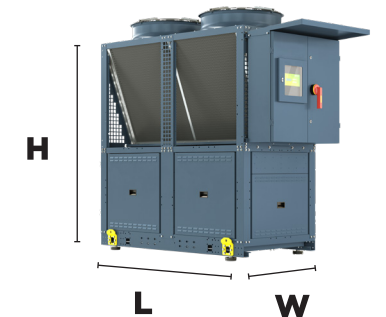
Typical units dimensions

Length: from 1700 to 9050 mm

Width : from 1050 to 2260 mm

Height: from 2430 to 2530 mm

Operating Weight: from 943 kg to 9389 kg



VHA HP

Air cooled chiller reversible to heat pump, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

SIZE		P1.59.2	P1.71.2	P1.84.2	P1.103.2	P1.130.2	P1.142.2
CHILLER PERFORMANCE							
Nominal cooling capacity (1)	kW	48,9	59,8	67,7	78,7	94,8	101,2
Nominal power input (1)	kW	16,3	18,3	21,4	25,9	31,6	34,4
E.E.R.	kW/kW	3,00	3,26	3,16	3,03	3,00	2,94
SEER (EN 14511-2018) (2)		For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool					
Nominal heating capacity (7)	kW	51,6	63,4	72,4	85,0	102,9	109,7
Nominal power input (7)	kW	14,9	17,2	19,6	23,5	28,7	30,9
C.O.P.	kW/kW	3,46	3,69	3,70	3,61	3,59	3,55
SCOP (EN 14511-2018) (2)		For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool					
Sound Pressure Level at 10 m (3)	dB(A)	54,0	56,6	56,2	56,6	56,8	58,5
Calculated Sound Power	dB(A)	80,0	80,0	80,0	80,0	83,0	83,0
MAIN COMPONENTS AND ELECTRICAL DATA							
Compressors type	Type	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
Compressors number	n°	1	1	1	1	2	2
Circuit number	n°	1	1	1	1	1	1
Condenser coil type (4)	Type	F	F	F	F	F	F
Fans number	n°	1	2	2	2	2	2
Evaporator type (5)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Refrigerant charge	kg	6,5	8,0	8,8	11,7	11,9	13,1
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Total running current	A	27,7	31,1	36,4	44,1	53,7	58,5
Total max current	A	34,3	42,2	47,6	50,6	76,2	83,8
Max starting current	A	44	57	64	68	210	218
DIMENSIONS							
Length with cabinet (6)	mm	1700	2750	2750	2750	2750	2750
Width (6)	mm	1050	1050	1050	1050	1050	1050
Height	mm	2430	2430	2430	2430	2430	2430
Shipping weight	kg	920	1179	1204	1233	1531	1557
Operating weight	kg	943	1201	1231	1260	1569	1594
(1) Nominal data for inlet/outlet water temperature 12/7 °C; Outdoor air 35 °C (2) Index valid only for units with EC fans option. For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool (3) Sound pressure on free field reflecting surface (directivity fact. 2) according to ISO 3744 (4) M: microchannels; F: finned coil; R: Remote condenser (5) BPHE: Brazed plate heat exchanger; S&T: Shell and tube exchanger							

VHA HP

Air cooled chiller reversible to heat pump, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

P1.168.2	P1.196.2	P1.229.2	P2.248.2	P2.260.2	P2.284.2	P2.336.2
115,6	136,2	154,0	174,0	183,0	200,6	228,2
39,5	45,4	53,4	59,2	62,3	69,2	78,4
2,93	3,00	2,89	2,94	2,94	2,90	2,91
For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool						
127,4	144,3	161,8	193,8	201,8	221,1	251,9
34,8	42,2	47,8	53,3	55,8	63,5	70,5
3,66	3,42	3,39	3,63	3,62	3,48	3,58
For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool						
53,9	58,8	59,4	56,9	58,5	61,5	56,9
82,0	85,0	85,0	83,0	83,0	87,0	85,0
reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
2	2	2	4	4	4	4
1	1	1	2	2	2	2
F	F	F	F	F	F	F
3	3	3	4	4	4	6
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
14,4	19,2	20,6	23,0	24,8	27,1	29,3
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
67,1	77,1	90,7	100,6	105,9	117,6	133,2
93,4	99,7	117,9	138,8	146,4	167,6	186,8
240	115	137	279	287	302	339
3800	3800	3800	4850	4850	4850	3800
1050	1050	1050	1050	1050	1050	2110
2430	2430	2430	2430	2430	2430	2430
1871	1901	2000	2818	2868	2919	3284
1910	1950	2049	2898	2960	3011	3394
(6) Excluded footprint of hydronic connections and lifting brackets (7) Nominal data for inlet/outlet water temperature 40/45 °C; outdoor air 7 °C - RH 87% All specifications are subject to change without notice from the manufacturer.						

VHA HP

Air cooled chiller reversible to heat pump, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

SIZE		P2.374.2	P2.393.2	P2.458.2	P2.518.2	P2.560.2	P2.616.2
CHILLER PERFORMANCE							
Nominal cooling capacity (1)	kW	260,0	273,5	303,9	332,4	357,3	386,1
Nominal power input (1)	kW	85,6	91,5	107,5	118,6	126,8	141,0
E.E.R.	kW/kW	3,04	2,99	2,83	2,80	2,82	2,74
SEER (EN 14511-2018) (2)		For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool					
Nominal heating capacity (7)	kW	280,2	294,9	335,2	369,6	397,4	429,0
Nominal power input (7)	kW	76,9	84,3	96,3	104,0	116,9	126,8
C.O.P.	kW/kW	3,64	3,50	3,48	3,55	3,40	3,38
SCOP (EN 14511-2018) (2)		For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool					
Sound Pressure Level at 10 m (3)	dB(A)	61,4	63,4	65,6	66,9	66,0	63,8
Calculated Sound Power	dB(A)	85,0	88,0	89,0	86,0	89,0	89,0
MAIN COMPONENTS AND ELECTRICAL DATA							
Compressors type	Type	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
Compressors number	n°	4	4	4	4	4	4
Circuit number	n°	2	2	2	2	2	2
Condenser coil type (4)	Type	F	F	F	F	F	F
Fans number	n°	6	6	6	8	8	8
Evaporator type (5)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Refrigerant charge	kg	37,7	38,4	42,3	46,8	53,8	56,1
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Total running current	A	145,5	155,5	182,8	201,6	215,6	239,7
Total max current	A	192,8	204,8	235,8	264,4	294,4	324,8
Max starting current	A	342	345	336	401	419	441
DIMENSIONS							
Length with cabinet (6)	mm	3800	3800	3800	4850	4850	4850
Width (6)	mm	2110	2110	2110	2110	2110	2110
Height	mm	2430	2430	2430	2430	2430	2430
Shipping weight	kg	3380	3364	3606	4267	4338	4392
Operating weight	kg	3506	3491	3740	4404	4518	4595
(1) Nominal data for inlet/outlet water temperature 12/7 °C; Outdoor air 35 °C (2) Index valid only for units with EC fans option. For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool (3) Sound pressure on free field reflecting surface (directivity fact. 2) according to ISO 3744 (4) M: microchannels; F: finned coil; R: Remote condenser (5) BPHE: Brazed plate heat exchanger; S&T: Shell and tube exchanger							

VHA HP

Air cooled chiller reversible to heat pump, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

P4.748.2	P4.824.2	P4.912.2	P4.960.2	P4.1040.2	P4.1135.2	P4.1230.2
514	570	626	644	705	761	831
180	203	220	237	237	256	278
2,86	2,81	2,85	2,72	2,97	2,97	2,99
For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool						
548	618	656	688	752	807	864
165	181	195	213	213	232	250
3,32	3,41	3,36	3,23	3,53	3,48	3,46
For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool						
58	58	58	59	59	59	59
91,0	91,0	91,0	92,0	92,0	92,0	92,0
reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
4	4	4	4	4	4	4
4	4	4	4	4	4	4
F	F	F	F	F	F	F
12	12	12	12	16	16	16
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
86,0	86,0	92,0	92,0	108	108	115
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
301	341	369	397	397	430	466
433	447	465	478	589	641	693
659	734	774	784	900	1020	1070
6950	6950	6950	6950	9050	9050	9050
2110	2110	2110	2110	2260	2260	2260
2530	2530	2530	2530	2530	2530	2530
6234	6234	6515	6515	8304	9006	9052
6521	6521	6811	6836	8623	9344	9389
(6) Excluded footprint of hydronic connections and lifting brackets (7) Nominal data for inlet/outlet water temperature 40/45 °C; outdoor air 7 °C - RH 87%						
All specifications are subject to change without notice from the manufacturer.						

VHA HPT

High-temperature air-cooled chiller reversible to heat pump, with semi-hermetic reciprocating compressors and axial fans for outdoor installation.



COOLING
USER PLANT



HEATING
USER PLANT

- Reciprocating compressors
- Dry expansion BPHE reversible evaporator
- EC axial fans 800 mm

General Description

The ProSeries high-temperature air-cooled chillers reversible to heat pump are assembled on a self-supporting metal screwed structure, painted with epoxy powder suitably treated for outdoor installation.

All units are supplied completely wired and ready to be connected to the user's plant.

Prior to delivery every machine is submitted to a performance test according to the strictest norms in force, with intervention tests of all the safety systems and components installed.

Each unit is available with low-speed fans and compressor sound insulation kit for installation in areas where noise emission must be extremely limited.

Large operative range of outdoor air temperature (-15 °C up to 45 °C in heating and cooling mode), they are designed for two-pipe seasonal switching systems. During winter it produces hot water up to 70°C, and even with an outdoor air temperature of -15 °C it can reach 65 °C. During summer, it produces cold water.

HPT series was born to replace traditional boiler gas system, although the applications can be multiple in both comfort and process systems.

Compressors and main components are specially manufactured for applications with R290.

The compressor cabinet is equipped with a gas leakage sensor and an extracting fan to guarantee maximum safety to the system.

All safety valve outlets are conveyed to a single pipe, and the user can easily connect it to a safe ejection point.

Advanced electronic defrost control with number of cycles optimization depending on the climatic conditions and the actual operating time of the compressors.

The hydronic kits are made up of constant water flow pumps and inertial tank, into splitted boxes.

For the correct operation of the unit it is mandatory to equip the primary circuit with the necessary inertial water volumes.

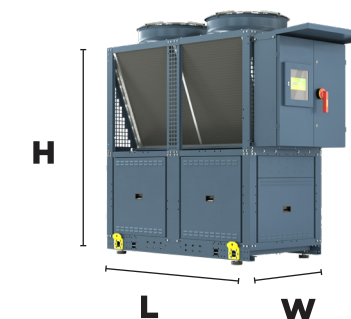
Typical units dimensions

Length: from 2750 to 3800 mm

Width : from 1050 to 2110 mm

Height: 2430 mm

Operating Weight: from 1537 kg to 3505 kg



High-temperature air-cooled chiller reversible to heat pump, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

SIZE		P2.111.2/1D55	P2.118.2/1D55	P2.168.2	P2.252.2	P2.266.2
CHILLER PERFORMANCE						
Nominal cooling capacity (1)	kW	83,3	90,8	114	178	185
Nominal power input (1)	kW	27,8	30,3	40,8	61,8	66,3
E.E.R.	kW/kW	3,00	3,00	2,79	2,88	2,79
SEER (EN 14511-2018) (2)		For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool				
Nominal heating capacity (6)	kW	70	75	106	150	158
Nominal power input (6)	kW	30,6	32,5	44,4	65,7	69,8
C.O.P.	kW/kW	2,29	2,31	2,39	2,28	2,26
SCOP (EN 14511-2018) (2)		For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool				
Sound Pressure Level at 10 m (3)	dB(A)	51	51	50	51	51
Calculated sound power	dB(A)	83	83	82	83	83
MAIN COMPONENTS AND ELECTRICAL DATA						
Compressors type	Type	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
Compressors number	n°	2	2	2	2	2
Circuit number	n°	2	2	2	2	2
Condenser coil type	Type	F	F	F	F	F
Fans number	n°	2	2	3	4	4
Evaporator type (4)	Type	BPHE	BPHE	BPHE	BPHE	BPHE
Refrigerant charge	kg	12,8	12,0	15,8	24,8	24,8
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50 + PS	400-3-50	400-3-50 + PS	400-3-50 + PS
Total running current	A	44,5	48,1	68,7	104	112
Total max current	A	74,2	76,2	115	178	188
Max starting current	A	142	144	204	285	353
DIMENSIONS						
Length with cabinet (5)	mm	2750	2750	3800	2750	2750
Width (5)	mm	1050	1050	1050	2110	2110
Height	mm	2430	2430	2430	2430	2430
Shipping weight	kg	1515	1606	1964	2508	2608
Operating weight	kg	1537	1644	2003	2567	2667
(1) Nominal data for inlet/outlet water temperature 12/7 °C; Outdoor air 35 °C (2) Index valid only for units with EC fans option. For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool (3) Sound pressure on free field reflecting surface (directivity fact. 2) according to ISO 3744 (4) BPHE: Brazed plate heat exchanger						

High-temperature air-cooled chiller reversible to heat pump, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

P2.280.2	P2.336.2	P2.374.2	P2.393.2	P2.412.2	P2.412.2/2D55
200	230	263	282	292	314
71,4	82,7	91,0	97,7	103,0	115,0
2,80	2,78	2,89	2,89	2,83	2,73
For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool					
169	198	224	238	249	272
76,1	88,2	96,7	105,0	110,0	120,0
2,22	2,24	2,32	2,27	2,26	2,27
For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool					
55	53	53	56	57	56
86	85	85	88	89	88
reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
2	2	2	2	2	2
2	2	2	2	2	2
F	F	F	F	F	F
4	6	6	6	6	6
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
26,0	29,3	36,0	36,4	38,0	39,0
400-3-50	400-3-50	400-3-50	400-3-50 + PS	400-3-50 + PS	400-3-50
120	140	153	164	172	173
197	237	265	276	287	264
362	453	531	558	569	316
2750	3800	3800	3800	3800	3800
2110	2110	2110	2110	2110	2110
2430	2430	2430	2430	2430	2430
2654	2959	3338	3333	3433	3418
2712	3033	3420	3415	3515	3505
(5) Excluded footprint of hydronic connections and lifting brackets (6) Nominal data for inlet/outlet water temperature 65/70 °C; outdoor air 7 °C - RH 87% All specifications are subject to change without notice from the manufacturer.					

VHA 4T

Air-cooled multipurpose unit for 4 pipes system, with simultaneous and independent production of cold and hot water, with semi-hermetic compressors and axial fans. For outdoor installation.

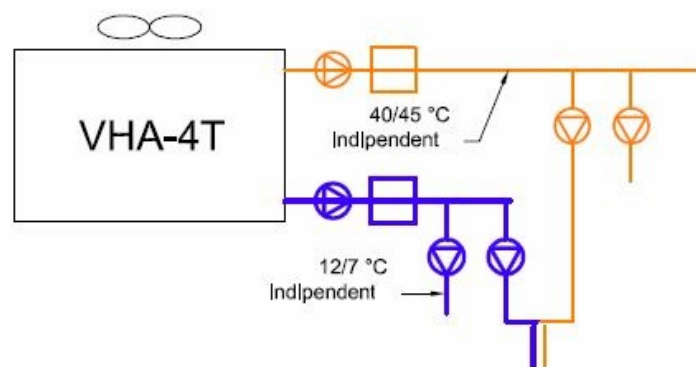


HEATING

USER PLANT

COOLING

USER PLANT



Available for (including but not limited to):

- 4-pipe fan-coils
- 2-pipe fan-coils with seasonal switching
- AHU with double coil (hot/cold)
- Domestic hot water
- Other applications

NOTES:

Highly recommended: water storage 10-30 l/kW for hot circuit

- Reciprocating compressors
- Dry expansion BPHE evaporator
- BPHE condenser
- EC axial fans 800 mm

General Description

The ProSeries air-cooled multipurpose units are assembled on a self-supporting metal screwed structure, painted with epoxy powder suitably treated for outdoor installation.

All units are supplied completely wired and ready to be connected to the user's plant. Prior to delivery every machine is submitted to a performance test according to the strictest norms in force, with intervention tests of all the safety systems and components installed.

Each unit is available with low-speed fans and compressor sound insulation kit for installation in areas where noise emission must be extremely limited.

With large operative range of outdoor air temperature (-10 °C up to 45 °C all year round), multipurpose units produce both hot and cold water at the same time, but are proportionally independent of each other.

The application is on four-pipe systems where heating and cooling are needed all year round on each circuit.

Unlike total recovery chillers, the heating capacity is totally independent from cooling capacity, so that they can meet all specific demands for the hot and cold circuits.

Compressors and components are specifically manufactured for applications with R290.

The compressor cabinet is equipped with a gas leakage sensor and an extracting fan to guarantee maximum safety to the system.

All safety valve outlets are conveyed to a single pipe, and the user can easily connect it to a safe ejection point.

Advanced electronic defrost control with number of cycles optimization depending on the climatic conditions and the actual operating time of the compressors.

The hydronic kits are made up of constant water flow pumps and inertial tank, into splitted boxes. For the correct operation of the unit it is mandatory to equip the primary circuit with the necessary inertial water volumes.

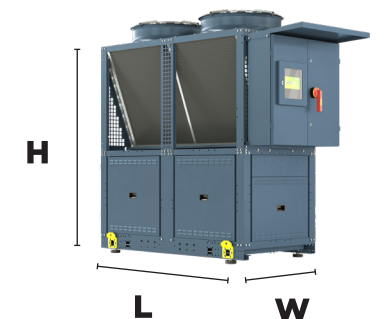
Typical units dimensions

Length: from 1700 to 5900 mm

Width : from 1050 to 2110 mm

Height: 2430 mm

Operating Weight: from 1047 kg to 5696 kg



VHA 4T

Air-cooled multipurpose unit for 4 pipes system, with simultaneous and independent production of cold and hot water, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

SIZE		P1.59.2	P1.71.2	P1.84.2	P1.103.2	P1.130.2	P1.142.2	P1.168.2	P1.196.2
CHILLER PERFORMANCE									
Nominal cooling capacity (1)	kW	48,4	59,5	67,3	77,7	93,5	101,8	116,0	135,9
Nominal power input (1)	kW	16,4	18,4	21,6	25,6	31,5	34,8	40,0	45,9
E.E.R.	kW/kW	2,96	3,23	3,12	3,04	2,97	2,93	2,90	2,96
Nominal heating capacity (7)	kW	52,3	77,9	88,9	103,2	125,0	136,6	156,0	181,8
Nominal power input (7)	kW	14,7	17,0	19,1	23,0	27,9	30,8	34,3	41,5
C.O.P.	kW/kW	3,57	4,60	4,65	4,48	4,48	4,43	4,54	4,38
SCOP (EN 14511-2018) (2)		For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool							
Cooling capacity at cooling+heating mode (8)	kW	50,97	60,75	70,52	80,27	99,31	108,60	124,90	138,40
Heating capacity at cooling+heating mode (8)	kW	65,4	78,0	89,9	103,9	127,6	139,3	160,3	179,1
Power input at cooling+heating mode	kW	14,6	17,4	19,6	24,0	28,7	31,3	32,3	41,5
T.E.R.	kW/kW	7,99	7,95	8,18	7,68	7,91	7,93	8,84	7,65
Sound Pressure Level at 10 m (3)	dB(A)	54,0	56,6	56,2	56,6	56,8	58,5	53,9	58,8
Calculated Sound Power	dB(A)	80,0	80,0	80,0	80,0	83,0	83,0	82,0	85,0
MAIN COMPONENTS AND ELECTRICAL DATA									
Compressors type	Type	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
Compressors number	n°	1	1	1	1	2	2	2	2
Circuit number	n°	1	1	1	1	1	1	1	1
Condenser coil type (4)	Type	F	F	F	F	F	F	F	F
Fans number	n°	1	2	2	2	2	2	3	3
Evaporator type (5)	Type	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
Refrigerant charge	kg	7,6	9,2	10,1	13,5	13,7	15,1	16,5	22,1
Power circuit voltage	V/Ph/Hz	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
Total running current	A	27,8	31,3	36,7	43,5	53,5	59,1	68,0	78,0
Total max current	A	34,3	42,2	47,6	50,6	76,2	83,8	93,4	99,7
Max starting current	A	44	57	64	68	210	218	240	115
DIMENSIONS									
Length with cabinet (6)	mm	1700	2750	2750	2750	2750	2750	3800	3800
Width (6)	mm	1050	1050	1050	1050	1050	1050	1050	1050
Height	mm	2430	2430	2430	2430	2430	2430	2430	2430
Shipping weight	kg	1024	1289	1322	1354	1721	1764	2069	2121
Operating weight	kg	1047	1312	1349	1380	1758	1804	2108	2170
(1) Nominal data for inlet/outlet water temperature 12/7 °C; Outdoor air 35 °C (2) Index valid only for units with EC fans option. For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool (3) Sound pressure on free field reflecting surface (directivity fact. 2) according to ISO 3744 (4) M: microchannels; F: finned coil; R: Remote condenser (5) BPHE: Brazed plate heat exchanger; S&T: Shell and tube exchanger									

VHA 4T

Air-cooled multipurpose unit for 4 pipes system, with simultaneous and independent production of cold and hot water, with reciprocating semi-hermetic compressors and axial fans. For outdoor installation.

P1.229.2	P2.248.2	P2.260.2	P2.284.2	P2.336.2	P2.374.2	P2.393.2	P2.458.2	P2.518.2	P2.560.2	P2.616.2
153,6	175,3	183,0	200,6	228,2	260,0	273,5	303,9	332,4	358,6	386,5
54,0	59,3	62,3	69,2	78,6	85,9	91,5	107,5	118,6	129,1	140,9
2,84	2,96	2,94	2,90	2,90	3,03	2,99	2,83	2,80	2,78	2,74
207,6	234,6	245,3	269,8	306,8	345,9	365,0	411,4	451,0	487,7	527,4
47,1	53,1	55,2	62,2	67,7	75,2	83,2	94,9	102,3	116,3	125,4
4,41	4,42	4,45	4,34	4,53	4,60	4,39	4,33	4,41	4,19	4,21
For more details on Seasonal efficiency indicators ask to manufacturer or see calculation by Hecoselectool										
159,80	184,80	194,00	211,70	243,80	274,00	282,70	320,20	352,00	370,50	404,50
207,5	239,5	251,0	273,0	313,0	351,1	363,3	413,6	457,2	481,2	526,6
48,8	55,9	58,5	62,6	70,7	78,8	82,7	95,8	107,9	113,6	124,6
7,53	7,59	7,61	7,74	7,87	7,93	7,81	7,66	7,50	7,50	7,47
59,4	56,9	58,5	61,5	56,9	61,4	63,4	65,6	66,9	66,0	63,8
85,0	82,0	83,0	86,0	84,0	84,0	88,0	88,0	86,0	89,0	89,0
reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating	reciprocating
2	4	4	4	4	4	4	4	4	4	4
1	2	2	2	2	2	2	2	2	2	2
F	F	F	F	F	F	F	F	F	F	F
3	4	4	4	6	6	6	6	8	8	8
BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE	BPHE
23,6	26,4	28,3	31,0	33,4	43,1	44,0	48,2	53,4	61,4	64,0
400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50	400-3-50
91,8	100,8	105,9	117,6	133,6	146,0	155,5	182,8	201,6	219,5	239,5
117,9	138,8	146,4	167,6	186,8	192,8	204,8	235,8	264,4	294,4	324,8
137	279	287	302	339	342	345	336	401	419	441
3800	4850	4850	4850	3800	4850	4850	5900	5900	5900	5900
1050	1050	1050	1050	2110	2110	2110	2110	2110	2110	2110
2430	2430	2430	2430	2430	2430	2430	2430	2430	2430	2430
2234	3186	3264	3322	3692	4081	4067	4779	5201	5401	5493
2283	3266	3356	3413	3802	4209	4195	4915	5338	5311	5696
(6) Excluded footprint of hydronic connections and lifting brackets (7) Nominal data for inlet/outlet water temperature 40/45 °C; outdoor air 7 °C - RH 87% (8) Nominal data for cold water inlet/outlet 12/7 °C, hot water inlet/outlet 40/45 °C										
All specifications are subject to change without notice from the manufacturer.										





Hecoclima Srl

Via Valdarno, 45
Gubbio (PG) - ITALY
T. +39 075 9288903
F. +39 075 9288904
info@hecoclima.com

www.hecoclima.com