CL 025-200

Air-water chiller

Cooling capacity 5,8 ÷ 41 kW

- **Standard version**
- **Version with Integrated hydronic kit system side**
- **Fan Plug-fan**

DESCRIPTION

Chillers for indoor installation for chilled water production with scroll compressors, plugfan fans, external copper coils with aluminum fins.
The base the structure and the panels are made of steel treated with polyester paint RAL 9003.

VERSIONS

° Standard
A With storage tank and pump
P With pump

FEATURES

Operating field

Operation at full load is guaranteed up to an outside air temperature of 42 °C. The unit can produce chilled water at temperatures below zero (down to -10 °C).

EC fan plug-fan

The units are equipped with plug-fans and inverter motors coupled directly with the fan, with the electronic condensation control as standard, which adjusts the air flow according to the actual system requirements, with benefits in terms of consumption and noise reduction.
In addition, compared to conventional centrifugal fans, they do not feature belt and pulley transmission, resulting in easy flow adjustment, compactness, versatility, easy maintenance and no vibrations.

Air supply

Horizontal or vertical, adjustable during installation for all sizes.
Directional air discharge hood:
— plastic for sizes 050 to 090
— galvanised steel for the other sizes

Version with Integrated hydronic kit

Integrated hydronic kit containing the main hydraulic components; available with various configurations to obtain a solution that allows you to save money and to facilitate installation.

Hot water production

In the configuration with desuperheater, it is also possible to produce free-hot water.

MODUCONTROL CONTROL

The command panel of the unit allows the rapid setting of the working parameters of the machine, and their visualisation. The display consists of 4 figures and various LEDs for indicating the type of operational mode, the visualisation of the parameters set and of any alarms triggered. The card stores all the default settings and any modifications.
The regulation using an outside air temperature sensor allows a dynamic control of the water temperature produced by increasing the energy efficiency of the system.

ACCESSORIES

AERSET: It makes it possible to automatically compensate for the operation setting of the unit to which it is connected, based on a 0-10V MODBUS input signal. Mandatory accessory MODU-485BL.
MODU-485BL: RS-485 interface for supervision systems with MODBUS protocol.
MULTICONTROL: Allows the simultaneous control of several units (up to 4), fitted with our MODUCONTROL controller, installed in the same hydraulic system.
PR3: Simplified remote panel. This makes it possible to carry out the unit's basic controls with the signalling of alarms. Can be made remote with shielded cable up to 150 m.
SPLW: System water temperature sensor. In most cases the loose supplied sensors for each chiller/heat pump are sufficient. In cases of a common flow/return header this sensor can be used to control the common system supply water temperature for the chillers connected to the header, or it can be used for temperature monitoring
VT: Antivibration supports
CLPA: Galvanised steel plenum to be installed on the condenser coil, facilitates duct installations.

FACTORY FITTED ACCESSORIES

DRE: Electronic device for peak current reduction.

KR: Anti-freeze electric heater for the plate heat exchanger.
GPCL: Protection grille for the source side exchange coil.

COMPATIBILITY WITH VMF SYSTEM

For more information about VMF system, refer to the dedicated documentation.

ACCESSORIES COMPATIBILITY

Accessories

Model	Ver	025	030	050	070	090	100	150	200
AERSET	°,A,P	•	•	•	•	•	•	•	•
MODU-485BL	°,A,P	•	•	•	•	•	•	•	•
MULTICONTROL	°,A,P	•	•	•	•	•	•	•	•
PR3	°,A,P	•	•	•	•	•	•	•	•
SPLW (1)	°,A,P	•	•	•	•	•	•	•	•

(1) Probe required for MULTICONTROL to manage the secondary circuit system.

Antivibration

Ver	025	030	050	070	090	100	150	200
°,P	VT9	VT9	VT9	VT9	VT9	VT15	VT15	VT15
A	VT15A	VT15A	VT15A	VT15A	VT15A	VT15	VT15	VT15

Galvanised steel plenum

Ver	025	030	050	070	090	100	150	200
°,A,P	CLPA1 (1)	CLPA1 (1)	CLPA2 (2)	CLPA2 (2)	CLPA2 (2)	CLPA3	CLPA3	CLPA3

(1) Not compatible with the GPCL1 accessory
(2) Not compatible with the GPCL2 accessory

Device for peak current reduction

Ver	025	030	050	070	090	100	150	200
°,A,P	DRE5 (1)	DRE5 (1)	DRE5 (1)	DRE5 (1)	DRE5 (1)	DRE5 x 2 (1)	DRE5 x 2 (1)	DRE5 x 2 (1)

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.
A grey background indicates the accessory must be assembled in the factory

Antifreeze electric heater

Ver	025	030	050	070	090	100	150	200
°,A,P	KR2	KR2	KR2	KR2	KR2	KR2	KR100	KR100

A grey background indicates the accessory must be assembled in the factory

Anti-intrusion grid

Ver	025	030	050	070	090	100	150	200
°,A,P	GPCL1	GPCL1	GPCL2	GPCL2	GPCL2	GPCL3	GPCL3	GPCL3

A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

Field		Description
1,2		**CL**
3,4,5		**Size** 025, 030, 050, 070, 090, 100, 150, 200
6		**Model**
	°	Cooling only
7		**Execution**
	°	Standard
8		**Version**
	°	Standard
	A	With storage tank and pump
	P	With pump
9		**Heat recovery**
	°	Without heat recovery
	D	With desuperheater (1)
10		**Coils**
	°	Copper-aluminium
	R	Copper-copper
	S	Copper-Tinned copper
	V	Copper-painted alumimium
11		**Operating field**
	°	Standard mechanic thermostatic valve (2)
	Y	Low temperature mechanic thermostatic valve (3)
	Z	Low temperature electronic thermostatic valve (4)
12		**Evaporator**
	°	Standard
	C	Motocondensing unit
13		**Power supply**
	°	400V ~ 3N 50Hz with magnet circuit breakers (5)
	M	230V ~ 3 50Hz (6)

(1) Only for CL 050 ÷ 200 sizes
(2) Water produced from 4 °C ÷ 18 °C
(3) Water produced from 0 °C ÷ - 10 °C
(4) Water produced from 0 °C ÷ 4 °C
(5) Only for CL 025 ÷ 200 sizes
(6) Only for CL 025 ÷ 030 sizes

PERFORMANCE SPECIFICATIONS

CL ° - (version °) - (400V 3N ~ 50Hz / 230V ~ 50Hz)

Size		025	030	050	070	090	100	150	200
Cooling performance 12 °C / 7 °C (1)									
Cooling capacity	kW	5,8	7,1	12,7	16,3	20,2	26,3	33,0	40,6
Input power	kW	2,2	2,6	4,3	5,5	6,8	8,8	11,3	14,4
Cooling total input current - 400V	A	4,8	5,1	8,4	10,0	13,0	17,0	19,0	25,0
Cooling total input current - 230V	A	10,0	13,0	-	-	-	-	-	-
EER	W/W	2,70	2,72	2,98	3,00	2,98	2,99	2,91	2,82
Water flow rate system side	l/h	1008	1233	2189	2817	3484	4533	5695	7001
Pressure drop system side	kPa	19	26	27	29	29	45	53	72

(1) Data 14511:2018; System side water heat exchanger 12 °C/7 °C; External air 35 °C

CL ° - (versions A/P) - (400V 3N ~ 50Hz / 230V ~ 50Hz)

Size		025	030	050	070	090	100	150	200
Cooling performance 12 °C / 7 °C (1)									
Cooling capacity	kW	5,9	7,2	12,8	16,5	20,4	26,5	33,4	41,0
Input power	kW	2,1	2,6	4,2	5,4	6,8	8,9	11,6	14,6
Cooling total input current - 400V	A	5,1	5,4	9,0	11,0	13,0	18,0	21,0	27,0
Cooling total input current - 230V	A	11,0	14,0	-	-	-	-	-	-
EER	W/W	2,76	2,78	3,02	3,04	3,02	2,97	2,87	2,81
Water flow rate system side	l/h	1008	1233	2189	2817	3484	4533	5695	7001
Useful head system side	kPa	71	62	73	66	58	83	131	122

(1) Data 14511:2018; System side water heat exchanger 12 °C/7 °C; External air 35 °C

ENERGY DATA

Size			025	030	050	070	090	100	150	200
Cooling capacity with low leaving water temp (UE n° 2016/2281)										
SEER	°	W/W	3,90	3,82	3,81	3,82	3,83	4,09	4,01	3,85
	A,P	W/W	4,10	4,02	4,03	4,02	3,98	3,95	3,85	3,85
ηsc	°	%	153,00	149,90	149,50	149,80	150,10	160,50	157,50	150,90
	A,P	%	160,80	157,60	158,20	157,70	156,30	154,80	151,10	150,80

ELECTRIC DATA

Size			025	030	050	070	090	100	150	200
400V 3N ~ 50Hz										
Electric data										
Maximum current (FLA)	°	A	11,0	12,0	14,0	15,0	20,0	27,0	31,0	41,0
	A,P	A	12,1	12,6	15,6	17,3	22,3	29,3	33,8	43,8
Peak current (LRA)	°	A	38,0	41,0	77,0	77,0	105,0	91,0	93,0	126,0
	A,P	A	38,6	41,6	79,1	79,1	107,1	92,8	95,6	128,6

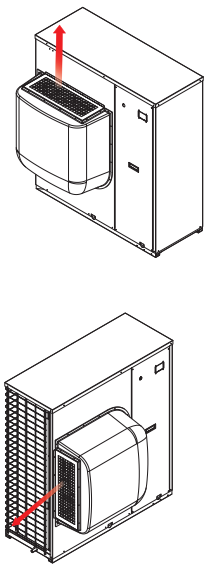
Size			025	030	050	070	090	100	150	200
230V ~ 50Hz										
Electric data										
Maximum current (FLA)	°	A	22,0	25,0	-	-	-	-	-	-
	A,P	A	22,6	25,6	-	-	-	-	-	-
Peak current (LRA)	°	A	67,0	88,0	-	-	-	-	-	-
	A,P	A	67,6	88,6	-	-	-	-	-	-

GENERAL TECHNICAL DATA

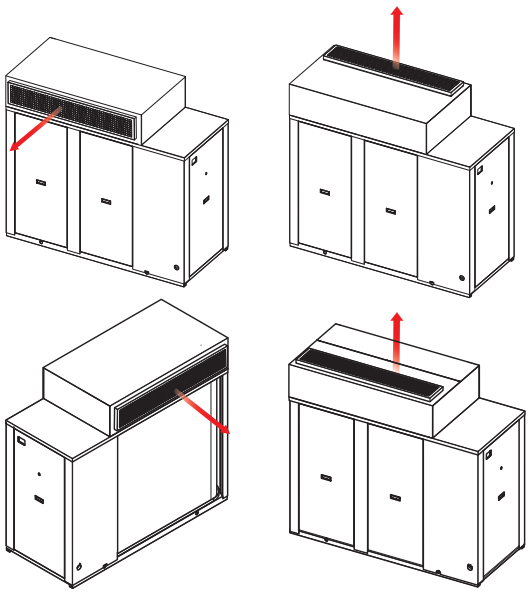
Size			025	030	050	070	090	100	150	200
Compressor										
Type	°,A,P	type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressor regulation	°,A,P	Type	On-off	On-off	On-off	On-off	On-off	On-off	On-off	On-off
Number	°,A,P	no.	1	1	1	1	1	2	2	2
Circuits	°,A,P	no.	1	1	1	1	1	1	1	1
Refrigerant	°,A,P	type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge	°,A,P	kg	1,5	2,7	4,0	4,0	4,0	5,5	7,5	7,5
System side heat exchanger										
Type	°,A,P	type	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
Number	°,A,P	no.	1	1	1	1	1	1	1	1
Hydraulic connections										
Connections (in/out)	°,A,P	Type	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F
Size (in)	°,A,P	Ø	1¼	1¼	1¼	1¼	1¼	1¼	1¼	1¼
Size (out)	°,A,P	Ø	1¼	1¼	1¼	1¼	1¼	1¼	1¼	1¼
Fan										
Type	°,A,P	type	Plug-fan	Plug-fan	Plug-fan	Plug-fan	Plug-fan	Plug-fan	Plug-fan	Plug-fan
Fan motor	°,A,P	type	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
Number	°,A,P	no.	1	1	1	1	1	2	2	2
Air flow rate	°,A,P	m^3/h	4000	4000	6500	6500	7500	10000	12000	12000
High static pressure	°,A,P	Pa	50	50	80	80	80	100	100	100
Machine body										
Sound power level	°,A,P	dB(A)	78,0	78,0	73,0	73,0	76,0	74,0	79,0	79,0
Sound pressure level in cooling mode (10 m)	°,A,P	dB(A)	46,0	46,0	41,0	41,0	44,0	42,0	47,0	47,0
Delivery unit										
Sound power level	°,A,P	dB(A)	78,0	78,0	78,0	78,0	81,0	78,0	83,0	83,0
Sound pressure level in cooling mode (10 m)	°,A,P	dB(A)	46,0	46,0	46,0	46,0	49,0	47,0	52,0	52,0

DISCHARGE HOOD POSSIBLE CONFIGURATIONS

CL 025 ÷ 090



CL 100 ÷ 200

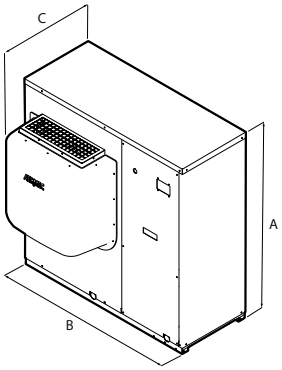


Air supply
Horizontal or vertical, adjustable during installation for all sizes.
Directional air discharge hood:

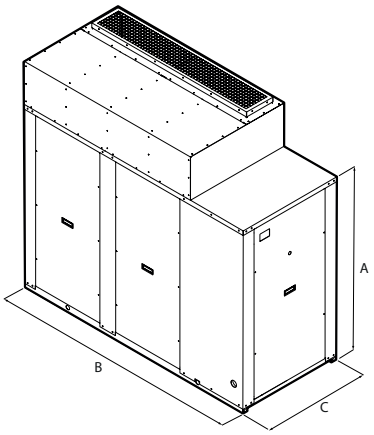
— plastic for sizes 050 to 090
— galvanised steel for the other sizes

DIMENSIONS

CL 025 ÷ 090



CL 100 ÷ 200



Size			025	030	050	070	090	100	150	200
Dimensions and weights										
A	°,A,P	mm	1028	1281	1281	1281	1281	1674	1674	1674
B	°,P	mm	1005	1006	1160	1160	1160	1897	1897	1897
	A	mm	1366	1458	1610	1610	1610	1897	1897	1897
C	°,A,P	mm	702	754	798	798	798	801	801	801
Weight empty	°	kg	127	160	208	210	212	469	471	475
	A	kg	157	201	252	260	256	532	537	542
	P	kg	133	166	217	225	221	482	487	492

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