NYP

Air-water multipurpose

Cooling capacity 82 ÷ 134 ton
Heating capacity 943700 ÷ 1545000 BTU/h

- **Units designed for 4-pipe systems**
- **High efficiency also at partial loads**
- **Simultaneous and independent production of hot and chilled water**

DESCRIPTION

Multipurpose external units designed for 4-pipe systems. With just one unit simultaneous and independent requests for hot and chilled water can be accommodated all year round.
The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

FEATURES

Operating field

Working at full load down to 0 °F outside air temperature in winter, and up to 115.0 °F in summer. Hot water production up to 140.0 °F (for more information refer to the the selection program Magellano or dedicated documentations).

R454B refrigerant gas.

Use refrigerant fluid R454B, whose classification according to ISO 817 is A2L.
The environmental impact of the units is reduced considerably owing to the last generation R454B refrigerant.
Combining a reduced refrigerant load with a low global warming potential (GWP), these units boast low equivalent CO_2 values.

Dual-circuit unit

The units are dual-circuit, to ensure maximum efficiency both at full load and at partial load.

Electronic expansion valve

The possibility to use electronic expansion valve, offers significant benefits, especially when the chiller is working with partial loads, increasing the energy seasonal efficiency of the unit.

Condensation control temperature

Fitted as standard with a device for electronic condensation control so that the unit can work even with low temperatures, adapting the air flow rate to the actual system request in order to reduce consumption.

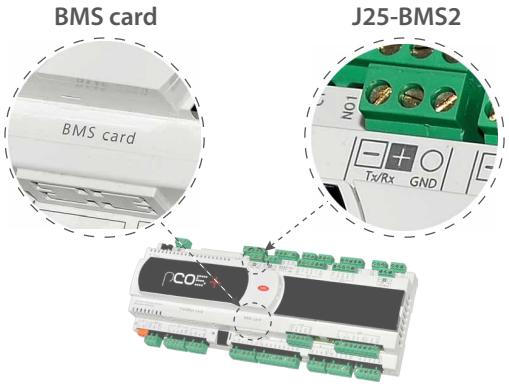
Option integrated hydronic kit

To obtain a solution that offers economic savings and easy installation, these units can be configured with an integrated hydronic kit on both the service side and the recovery side.

The flow switch is available as an accessory for both the system side and the recovery side, and is compulsory; if it is not installed, the warranty will be considered invalid.

CONTROL PCO[5]

Microprocessor adjustment, with keyboard and LCD display,for easy access on the unit is a menu available in several languages.
— The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.
— The temperature control takes place with the integral proportional logic, based on the water output temperature.
— **Night Mode:** it is possible to set a silenced operation profile. Perfect for night operation since it guarantees greater acoustic comfort in the evenings, and a high efficiency in the time of greater load.



In the 'BMS card' port, the compatible accessories are:
— AER485P1
— AERBACP
— MULTICHILLER-EVO (if available) + AER485P1

In the 'J25-BMS2' port, the compatible accessories are:

— AERNET

Note:

— "BMS card" and "J25-BMS2" are two ports on the unit's control board. Only one accessory can be connected to each port.
— **For other requirements, please contact the company.**

ACCESSORIES

AER485P1: RS-485 interface for supervising systems with MODBUS protocol. 1 accessory is provided for each unit control board.
AERBACP: Ethernet communication interface for Bacnet/IP, Modbus TCP/IP, SNMP protocols. 1 accessory is provided for each unit control board.
AERNET: The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 control boards). Also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.
MULTICHILLER-EVO: Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel (max. no. 9), always ensuring constant flow rate to the evaporators.
PGD1: Allows you to control the unit at a distance.
AVX: Spring anti-vibration supports.

FACTORY FITTED ACCESSORIES

DRE: Electronic device for peak current reduction.
RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.
GP_: Anti-intrusion grid kit
BRC_UL: Condensate drip with resistance

ACCESSORIES COMPATIBILITY

Model	1000	1400	1800
AER485P1	•	•	•
AERBACP	•	•	•
AERNET	•	•	•
MULTICHILLER-EVO	•	•	•
PGD1	•	•	•

System side - pumps	Recovery side - pumps	1000	1400	1800
00, P1, P2, P3, P4	00, R1, R2, R3, R4	AVX. (1)	AVX. (1)	AVX. (1)

(1) Contact us.

Device for peak current reduction

1000	1400	1800
DRE (1)	DRE (1)	DRE (1)

(1) Contact the factory
A grey background indicates the accessory must be assembled in the factory

Power factor correction

1000	1400	1800
RIF (1)	RIF (1)	RIF (1)

(1) Contact the factory
A grey background indicates the accessory must be assembled in the factory

Anti-intrusion grid

1000	1400	1800
GPV (1)	GPV (1)	GPV (1)

(1) Contact the factory
A grey background indicates the accessory must be assembled in the factory

Condensate drip with resistance

Ver	1000	1400	1800
6	BRC3R_6UL_NYG	BRC4R_6UL_NYG	BRC5R_6UL_NYG
7	BRC3R_7UL_NYG	BRC4R_7UL_NYG	BRC5R_7UL_NYG
8	BRC3R_8UL_NYG	BRC4R_8UL_NYG	BRC5R_8UL_NYG
9	BRC3R_9UL_NYG	BRC4R_9UL_NYG	BRC5R_9UL_NYG

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

CONFIGURATOR

Field		Description
1,2,3		**NYP**
4,5,6,7		**Size** 1000, 1400, 1800
8		**Operating field**
	X	Electronic thermostatic expansion valve
9		**Coils**
	V	Copper pieps-Coated aluminium fins
	°	Copper-aluminium
10		**Fans**
	J	EC Inverter motors
	M	Enhanced EC inverter (1)
11		**Power supply**
	6	230V ~ 3 60Hz with magnet circuit breakers
	7	460V ~ 3 60Hz with magnet circuit breakers
	8	575V ~ 3 60Hz with magnet circuit breakers
	9	208V ~ 3 60Hz with magnet circuit breakers
12,13		**System side - pumps**
	00	Without hydronic kit
	0T	Hydronic kit with control and balancing valve (2)
	P1	Single pump low head
	P2	Pump low head + stand-by pump
	P3	Single pump high head
	P4	Pump high head + stand-by pump
14,15		**Recovery side - pumps**
	00	Without hydronic kit
	0T	Hydronic kit with control and balancing valve (3)
	R1	Single pump low head
	R2	Pump low head + stand-by pump
	R3	Single pump high head
	R4	Pump high head + stand-by pump
16		**Electric power board**
	B	Behind
	°	In front of

(1) Option not available with 575V power supply
(2) Available only with 0T recovery side hydronic kit.
(3) Available only with 0T user side hydronic kit.

PERFORMANCE SPECIFICATIONS

		1000	1400	1800
Cooling performance 54.01 °F / 44.01 °F (1)				
Cooling capacity	ton	82.20	108.5	134.7
Input power	kW	101.6	133.1	164.7
EER	BTU/(Wh)	9.711	9.777	9.816
IPLV	BTU/(Wh)	16.04	16.48	16.17
Pressure drop system side	ft H_2O	7.56	7.23	9.53
Water flow rate system side	gpm	196.7	259.5	322.2
Heating performance 104 °F / 113 °F (2)				
Heating capacity	BTU/h	943700	1244000	1545000
Input power	kW	94.93	124.5	154.0
COP	kW/kW	2.913	2.930	2.941
Pressure drop system side	ft H_2O	8.55	8.17	10.8
Water flow rate system side	gpm	211.6	279.1	346.5
Simultaneous operation (heating + cooling), 4 pipes AHRI				
Cooling capacity	ton	77.13	101.4	125.7
Recovered heating power	Btu/h	1217000	1601000	1984000
Input power	kW	89.94	118.4	146.8
TER	kW/kW	6.982	6.977	6.974
Water flow rate cold side	gpm	196.7	259.5	322.2
Pressure drop cold side	ft H_2O	7.56	7.23	9.53
Water flow rate hot side	gpm	211.6	279.1	346.5
Pressure drop hot side	ft H_2O	8.55	8.17	10.8

(1) Reference conditions: AHRI std 550/590 I-P; Service side water 54.01°F / 44.01°F; Outside air 95°F
(2) Reference conditions: AHRI std 550/590 I-P; Service side water 104 °F / 113 °F; Outside air 44.6 °F

Size			1000	1400	1800
Cooling system side 4-pipe system (1)					
Cooling total input current	6	A	307.2	400.9	494.6
	7	A	145.6	191.1	236.6
	8	A	116.0	151.5	187.0
	9	A	339.7	443.3	546.9
Heating system side 4-pipe system (2)					
Heating total input current	6	A	295.8	384.9	474.0
	7	A	140.2	183.5	226.8
	8	A	111.7	145.5	179.3
	9	A	327.1	425.7	524.2

(1) Data: System side water heat exchanger 54.0 °F / 44.1 °F; External air 95 °F
(2) Data: Heat exchanger water (services side) 104 °F / 113 °F; outside air 44.6 °F b.s. / 42.8 °F b.u.

Key:

6. 230V ~ 3 60Hz
7. 460V ~ 3 60Hz
8. 575V ~ 3 60Hz
9. 208V ~ 3 60Hz

M fan not available with 575V power supply.

		1000	1400	1800
Partialisations EER				
100 %	BTU/Wh	9,72	9,79	9,83
75 %	BTU/Wh	13,34	12,80	13,31
50 %	BTU/Wh	17,81	18,87	17,85
25 %	BTU/Wh	19,28	21,09	20,51

ELECTRIC DATA

Inverter fan

Size		1000	1400	1800
Power supply: 230V				
Peak current (LRA)	A	891.0	1,162.0	1,287.0
Minimum circuit amperage (MCA)	A	450.00	600.00	750.00
Maximum overcurrent permitted by the protection device (MOP)	A	500.00	700.00	800.00
Nominal Short-Circuit Current (SCCR)	kA	65	65	65
Power supply: 460V				
Peak current (LRA)	A	428.0	596.0	667.0
Minimum circuit amperage (MCA)	A	225.00	300.00	400.00
Maximum overcurrent permitted by the protection device (MOP)	A	250.00	350.00	400.00
Nominal Short-Circuit Current (SCCR)	kA	65	65	65
Power supply: 575V				
Peak current (LRA)	A	334.0	451.0	505.0
Minimum circuit amperage (MCA)	A	175.00	225.00	300.00
Maximum overcurrent permitted by the protection device (MOP)	A	175.00	250.00	300.00
Nominal Short-Circuit Current (SCCR)	kA	50	50	50
Power supply: 208V				
Peak current (LRA)	A	891.0	1,162.0	1,287.0
Minimum circuit amperage (MCA)	A	450.00	600.00	750.00
Maximum overcurrent permitted by the protection device (MOP)	A	500.00	700.00	800.00
Nominal Short-Circuit Current (SCCR)	kA	65	65	65

Increased fan

Power supply 460V-3-60Hz

Size		1000	1400	1800
Power supply: 230V				
Peak current (LRA)	A	925.0	1,206.0	1,343.0
Minimum circuit amperage (MCA)	A	500.00	650.00	800.00
Maximum overcurrent permitted by the protection device (MOP)	A	500.00	750.00	900.00
Nominal Short-Circuit Current (SCCR)	kA	65	65	65
Power supply: 460V				
Peak current (LRA)	A	443.0	617.0	693.0
Minimum circuit amperage (MCA)	A	250.00	350.00	400.00
Maximum overcurrent permitted by the protection device (MOP)	A	250.00	350.00	450.00
Nominal Short-Circuit Current (SCCR)	kA	65	65	65
Power supply: 575V				
Peak current (LRA)	A	-	-	-
Minimum circuit amperage (MCA)	A	-	-	-
Maximum overcurrent permitted by the protection device (MOP)	A	-	-	-
Nominal Short-Circuit Current (SCCR)	kA	-	-	-
Power supply: 208V				
Peak current (LRA)	A	925.0	1,206.0	1,343.0
Minimum circuit amperage (MCA)	A	500.00	650.00	800.00
Maximum overcurrent permitted by the protection device (MOP)	A	500.00	750.00	900.00
Nominal Short-Circuit Current (SCCR)	kA	65	65	65

Data calculated without hydronic kit and accessories.

GENERAL TECHNICAL DATA

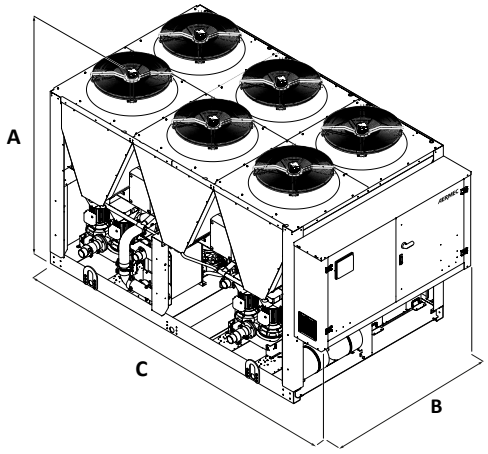
		1000	1400	1800
Compressor				
Type	type	Scroll	Scroll	Scroll
Compressor regulation	Type	On-Off	On-Off	On-Off
Number	no.	4	4	4
Circuits	no.	2	2	2
Refrigerant	type	R454B	R454B	R454B
Refrigerant charge (1)	lbs	132.3	176.4	220.5
4-pipe system - System side heat exchanger (cold side)				
Type	type	Brazed plate	Brazed plate	Brazed plate
Number	no.	1	1	1
Connections (in/out)	Type	Grooved joints	Grooved joints	Grooved joints
Size (in)	Ø	3″	4″	4″
Size (out)	Ø	3″	4″	4″
4-pipe system - Recovery side heat exchanger (hot side)				
Type	type	Brazed plate	Brazed plate	Brazed plate
Number	no.	2	2	2
Connections (in/out)	Type	Grooved joints	Grooved joints	Grooved joints
Size (in)	Ø	3″	4″	4″
Size (out)	Ø	3″	4″	4″
Sound data calculated in cooling mode (2)				
Sound power level	dB(A)	90,1	91,7	94,0

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.
(2) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2. Sound pressure (cold functioning) measured in free field, 10 m / 33 ft away from the unit external surface (in compliance with UNI EN ISO 3744).

Size			**1000**	**1400**	**1800**
Inverter fan					
Type	6,7,8,9	type	axials	axials	axials
Fan motor	6,7,8,9	type	Inverter	Inverter	Inverter
Number	6,7,8,9	no.	6	8	10
Air flow rate cooling mode	6,7,8,9	cfm	67,098	89,464	111,830
Air flow rate heating mode	6,7,8,9	cfm	60,035	80,047	100,058
Total fan input current	6,9	A	39.6	52.8	66.0
	7	A	19.8	26.4	33.0
	8	A	15.8	21.1	26.4
Total fan input power	6,7,8,9	kW	13.2	17.6	22.0

Size			**1000**	**1400**	**1800**
Increased fan					
Type	6,7,9	type	axials	axials	axials
	8	type	-	-	-
Fan motor	6,7,9	type	Inverter	Inverter	Inverter
	8	type	-	-	-
Number	6,7,9	no.	6	8	10
	8	no.	-	-	-
Air flow rate cooling mode	6,7,9	cfm	67,098	89,464	111,830
	8	cfm	-	-	-
Air flow rate heating mode	6,7,9	cfm	60,035	80,047	100,058
	8	cfm	-	-	-
Total fan input current	6,9	A	73.2	97.6	122.0
	7	A	37.2	49.6	62.0
	8	A	-	-	-
Total fan input power	6,7,9	kW	24.0	32.0	40.0
	8	kW	-	-	-

DIMENSIONS



Size			1000	1400	1800
Dimensions and weights					
A	J	in	96.5	96.5	96.5
	M	in	100.4	100.4	100.4
B	J,M	in	86.6	86.6	86.6
C	J,M	in	156.3	203.1	250.0
4-pipe					
Empty weight	J,M	lbs	7,959	10,064	11,762

Dimensions without packaging

The weight of the unit does not include the hydronic kit and accessories.

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