NYG 1000-1800

Air-water chiller

Cooling capacity 88 ÷ 145 ton

- **High efficiency also at partial loads**
- **Low refrigerant charge**
- **Night mode**

DESCRIPTION

Air-cooled outdoor chiller designed to meet air conditioning needs in residential/commercial complexes or industrial applications.
These are outdoor units with streamlined scroll compressors used with R454B gas.
Condensing coil with copper pipes and aluminium louvers, plate heat exchanger.
The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

FEATURES

Operating field

Operation at full load up to 115.0 °F external air temperature. Unit can produce chilled water up to 14.0 °F .
For more information refer to the selection program and to to the dedicated documentation.

Dual-circuit unit

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

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.

Aluminium microchannel coils

The microchannel condensing aluminum coils ensure high levels of efficiency, reduced quantities of refrigerant and lower unit weight. The treatment "O" available as configurator it ensures high resistance to corrosion even in the most aggressive environments.

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.

Option integrated hydronic kit

Integrated hydronic kit containing the main hydraulic components; available with various configurations with one or two pumps, with high or low head and storage tank, to obtain a solution that allows you to save money and to facilitate installation.

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.
- **Floating HP control:** available for all models with an inverter fan. Thanks to continuous fan modulation, unit operation is optimised in every working position in cooling mode. The result is enhanced machine energy efficiency with partial loads.
- **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.

ACCESSORIES

AER485P1: RS-485 interface for supervising systems with MODBUS protocol. 1 accessory is provided for each unit control board.
AERNET: The device remotely controls, manages and remotely monitors a chiller/heat pump using a PC, smartphone or table via a Cloud connection. AERNET acts as Master while each connected unit is configured as Slave up to a maximum of 6 control cards. It is also possible to save a log file with all the data from the connected units to your terminal with a simple click for possible post-analysis. With the purchase of the Router, the Customer benefits from a 24-month free period during which he can use the Aernet Service at no additional cost. At the end of this initial period, the Service may be renewed by subscribing to a 1, 2 or 3 year subscription. For further details on costs and renewal methods, please contact our office or consult the technical documentation available on our website. www.aermec.com.
FL-UL: Flow switch.
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.

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
KRQ: Electric heater for the control and electric power board.

ACCESSORIES COMPATIBILITY

Model	1000	1400	1800
AER485P1	•	•	•
AERNET	•	•	•
FL-UL (1)	•	•	•
MULTICHILLER-EVO	•	•	•

(1) Compliant with UL regulation

Antivibration

Size	Electric power board	Hydronic kit	Code kit
1000	IN FRONT OF	00	AVX1320
1000	IN FRONT OF	P1/P2/P3/P4	AVX1321
1000	IN FRONT OF	01/02/03/04	AVX1322
1400	IN FRONT OF	00	AVX1323
1400	IN FRONT OF	P1/P2/P3/P4	AVX1324
1400	IN FRONT OF	01/02/03/04	AVX1325
1800	IN FRONT OF	00	AVX1326
1800	IN FRONT OF	P1/P2/P3/P4	AVX1326
1800	IN FRONT OF	01/02/03/04	AVX1327
1000	BEHIND	00	AVX1328
1000	BEHIND	P1/P2/P3/P4	AVX1329
1000	BEHIND	01/02/03/04	AVX1330
1400	BEHIND	00	AVX1331
1400	BEHIND	P1/P2/P3/P4	AVX1331
1400	BEHIND	01/02/03/04	AVX1332
1800	BEHIND	00	AVX1336
1800	BEHIND	P1/P2/P3/P4	AVX1333
1800	BEHIND	01/02/03/04	AVX1334

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

KRQ

1000	1400	1800
KRQ_NYG_L	KRQ_NYG_L	KRQ_NYG_L

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

CONFIGURATOR

Field		Description
1,2,3		**NYG**
4,5,6,7		**Size** 1000, 1400, 1800
8		**Operating field**
	X	Electronic thermostatic expansion valve (1)
	Z	Low temperature electronic thermostatic valve (2)
9		**Model**
	°	Cooling only
10		**Heat recovery**
	D	With desuperheater
	°	Without heat recovery
11		**Coils**
	0	Coated aluminium microchannel
	°	Aluminium microchannel
12		**Fans**
	J	Inverter

Field	Description
M	Enhanced EC inverter (3)
13	**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
14,15	**Integrated hydronic kit**
00	Without hydronic kit
01	Storage tank with low head pump
02	Storage tank with low head pump + stand-by pump
03	Storage tank with high head pump
04	Storage tank with high head pump + stand-by pump
P1	Single pump low head
P2	Pump low head + stand-by pump
P3	Single pump high head
P4	Pump high head + stand-by pump
2T	2 pipes hydronic kit configuration
16	**Electric power board**
B	Behind
°	In front of

(1) Water produced down to +39,2 °F
(2) Water outlet temperature below +39.2 °F
(3) Option not available with 575V power supply

PERFORMANCE SPECIFICATIONS

Size		1000	1400	1800
Cooling performance 54.01 °F / 44.01 °F (1)				
Cooling capacity	ton	88.46	116.7	144.9
Input power	kW	103.1	135.2	167.2
EER	BTU/(Wh)	10.29	10.36	10.40
IPLV	BTU/(Wh)	16.45	16.86	16.58
Water flow rate system side	gpm	211.6	279.1	346.6
Pressure drop system side	ft H_2O	8.63	8.25	10.9

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

Size			1000	1400	1800
Cooling performance 54.0 °F / 44.1 °F (1)					
Cooling total input current	6	A	312.3	407.8	503.2
	7	A	148.0	194.4	240.7
	8	A	117.9	154.0	190.2
	9	A	345.3	450.9	556.5

(1) Data: System side water heat exchanger 54.0 °F / 44.1 °F; External air 95 °F

M fan not available with 575V power supply.

Size		1000	1400	1800
Partialisations EER				
100 %	BTU/Wh	10,30	10,37	10,41
75 %	BTU/Wh	13,79	13,20	13,85
50 %	BTU/Wh	18,36	19,21	18,22
25 %	BTU/Wh	19,11	21,26	20,44

ELECTRIC DATA

Fan J

Size		1000	1400	1800
Integrated hydronic kit: 00				
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

Fan M

Size		1000	1400	1800
Integrated hydronic kit: 00				
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

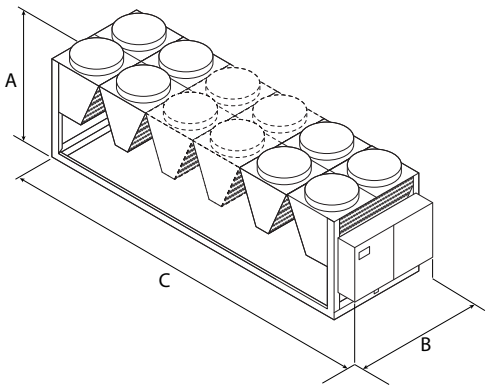
Size		1000	1400	1800
Compressor				
Type	type		Scroll	
Compressor regulation	Type		On-Off	
Number	no.	4	4	4
Circuits	no.	2	2	2
Refrigerant	type		R454B	
Total refrigerant charge (1)	lbs	132.3	176.4	220.5
Hydraulic connections				
Connections (in/out)	Type		Grooved joints	
Sizes (in/out)	Ø	3"	4"	4"
Sound 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
Power supply: 7				
Inverter fan				
Type	type		Axial	
Fan motor	type		Inverter	
Number	no.	6	8	10
Air flow rate cooling mode	cfm	67,098	89,464	111,830
Total fan input current	A	19.8	26.4	33.0
Total fan input power	kW	13,2	17,6	22,0

Size		1000	1400	1800
Power supply: 7				
Increased fan				
Type	type		axials	
Fan motor	type		Inverter	
Number	no.	6	8	10
Air flow rate cooling mode	cfm	67,098	89,464	111,830
Total fan input current	A	37.2	49.6	62.0
Total fan input power	kW	24,0	32,0	40,0

DIMENSIONS



Size		1000	1400	1800
Dimensions and weights				
A	in	96.5	96.5	96.5
B	in	86.6	86.6	86.6
C	in	156.3	203.1	250.0
Empty weight	lbs	6,658	8,234	9,755

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