

Sealed Enclosure Cooling

Explosion proof systems engineered and
purpose built for hazardous locations
4,000 – 11,000 BTUH :: 1.1 – 3.2 kW

Features and Benefits

Built for Class 1, Div 2, Groups B, C, & D; T4

- Engineered specifically for hazardous location cooling, not rebuilt from light industrial air conditioners
- Does not require purge and pressurized system
- Dust resistant coils for filterless operation in most environments
- Cleanable, reusable aluminum mesh filter protects coils for extremely dusty and dirty atmospheres
- Digital temperature control
- Narrow design to accommodate 12-in (300-mm) deep cabinets
- R134a earth-friendly refrigerant
- Models for 115, 230 and 400/460 3-phase VAC power input
- UL Listed to save customers time and money with agency approvals
- Easy-mount flanges for simple installation
- Mounting hardware, gaskets and user manual furnished with the unit
- Every unit functionally tested before shipping
- Attractive design with no heavy cast enclosure and minimal use of visible fasteners



Enclosure cooling specifically for classified applications.

As more and more electrical equipment becomes packed into smaller enclosures, the heat generated inside those enclosures rises. That heat can cause process shutdown through tripped overloads or worse, damage to the equipment. In some critical applications, downtime can cost thousands of dollars per hour.

Specific Systems MiniPac enclosure coolers provide cooling that can help prevent costly downtime.

Engineered to provide cooling directly for heat sources such as VFDs, AC drives, PLCs, and communication equipment, our MiniPac enclosure cooling systems maximize cooling efficiency while minimizing the unit footprint. This allows for mounting on enclosures as shallow as 12".

With severe duty options including 316 stainless steel and corrosion resistant coatings, these systems are built to cool process control equipment in hazardous locations like those found in chemical, petrochemical, refining, and drilling applications...even offshore.

MiniPac systems are available in cooling capacities up to 11,000 BTUH (3.2 kW) with simple installation and minimal maintenance.

Which industries benefit from using our environmental control units?

Solutions for:

- Oil & gas exploration and development
- Oil & gas extraction and production
- Oil & gas processing
- Oil & gas transportation and storage
- Waste water treatment and storage
- Pulp & paper mills
- Potash facilities
- Offshore oil & gas
- Grain processing
- Steel manufacturing
- Data centers
- Power plants (coal-fired, NGL, nuclear, etc.)
- Fueling stations
- Mobile broadcasting units
- Mining / resource extraction
- Rapid emergency response teams

Critical applications, including:

- Motor control centers
- Remote instrument enclosures
- Analyzer houses
- Controller / operator cabins
- Variable frequency drive buildings
- Communication shelters
- Power distribution centers
- Blast resistant buildings
- Hazardous materials storage

Specific Systems' units are most often used in heavy industrial applications, such as petroleum, petrochem, production, processing facilities, pipeline pump stations, power/utility distribution, waste water treatment, and grain processing facilities. With a wide selection of options and available, even the most custom industrial applications can be fit to a tee.

Petroleum Processing

Specific Systems has been dedicated to the design, engineering, and manufacturing of special application environmental control systems for the petroleum and process industries since 1974. Our engineering oriented company places special emphasis on durability of design with the ability to withstand adverse atmospheric conditions, including spark resistant and explosion proof areas. In offshore production platforms as well as onshore facilities, many with very corrosive atmospheres, the InPac series units consistently meet and exceed those challenges.

Offshore Petroleum Facilities

Offshore oil processing and production facilities present some of the world's most corrosive and challenging environments. Equipment used in these facilities must withstand salt spray as well as corrosive chemicals and fumes produced during petroleum processing.

HVAC units used in these adverse conditions must be designed to handle the harsh conditions including hydrogen sulfides and many other corrosive chemicals. Specific Systems MiniPac units are designed, engineered, and manufactured to withstand those and other corrosive elements, as well as explosive environments.

Power / Utility Distribution

InPac customers include many energy-related companies, including power generation and distribution. These companies use Specific Systems to cool and protect the power distribution switchgear, MCC, VFD, and process equipment in packaged control centers.

Our engineers are always available to assist in calculating capacity needs for your specific applications by running heat load studies based on internal electrical and electronic equipment and internal and ambient design temperatures.

Other Industries

Along with the petrochemical, utility generation, and distribution industries, Specific Systems manufactures systems destined for use by many other special industries as well as military and governmental agencies. Specific Systems units are found in such diverse applications as food processing, space shuttle ground support systems, and America's space defense initiative.

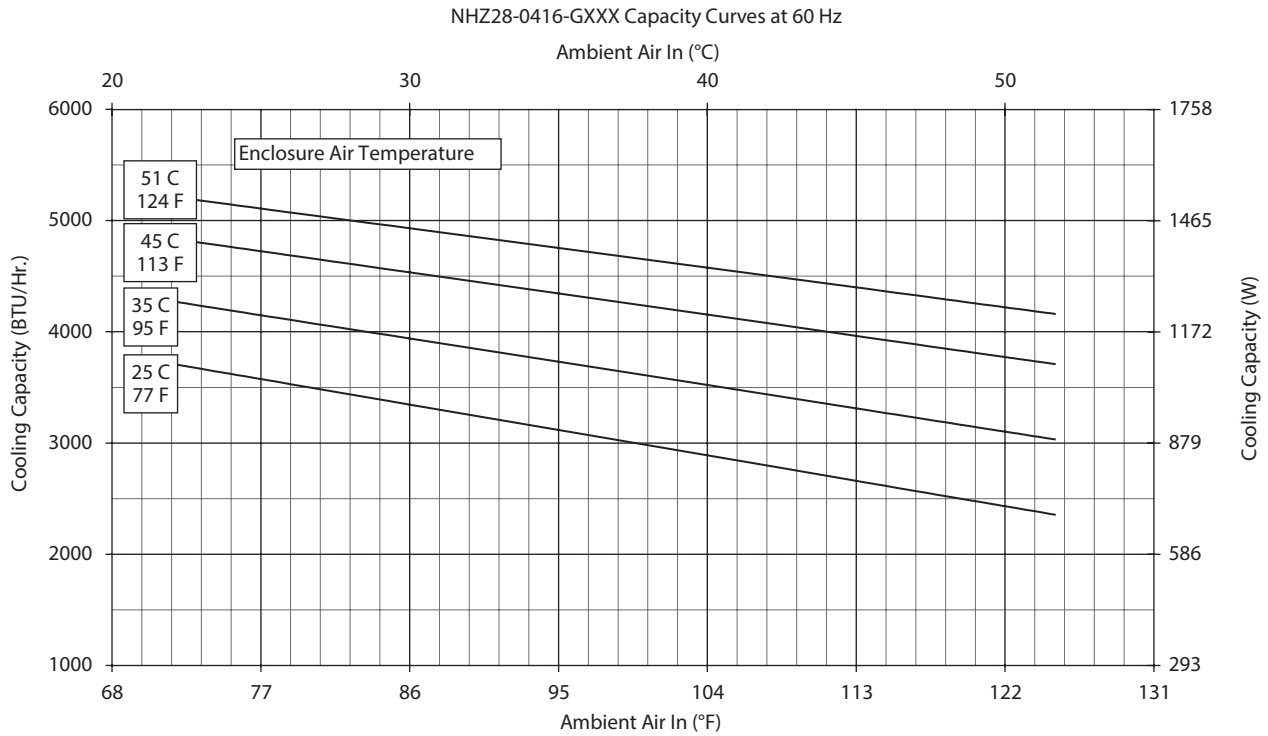
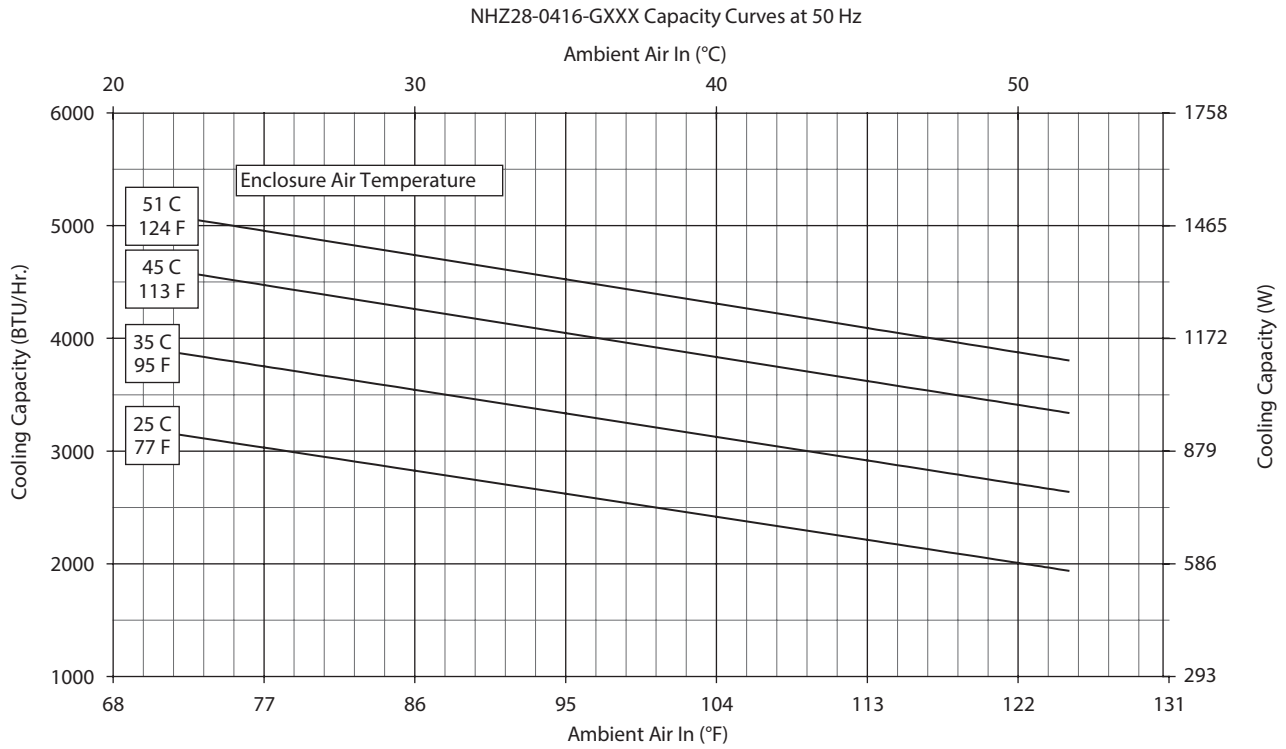
Other regular purchases of Specific Systems InPac units include grain and ethanol production facilities and explosive production facilities

Performance Data NHZ28 4000 BTU/Hr. (1172 Watt)

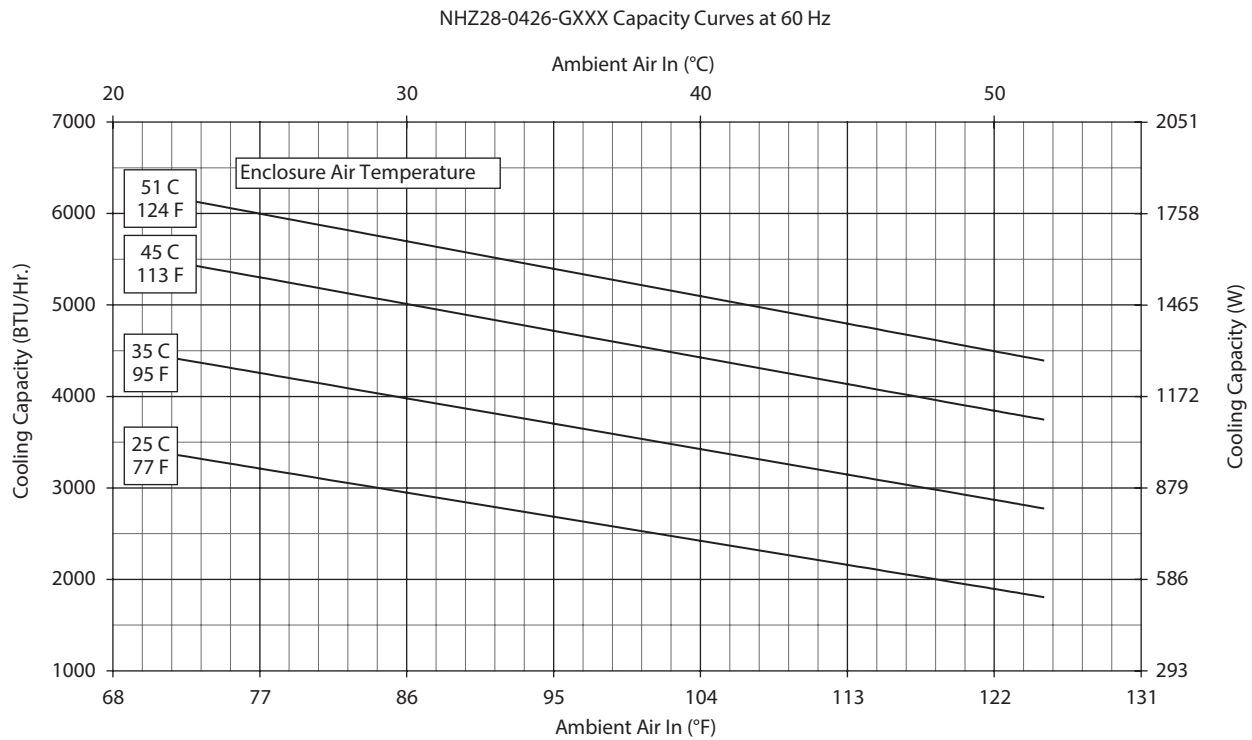
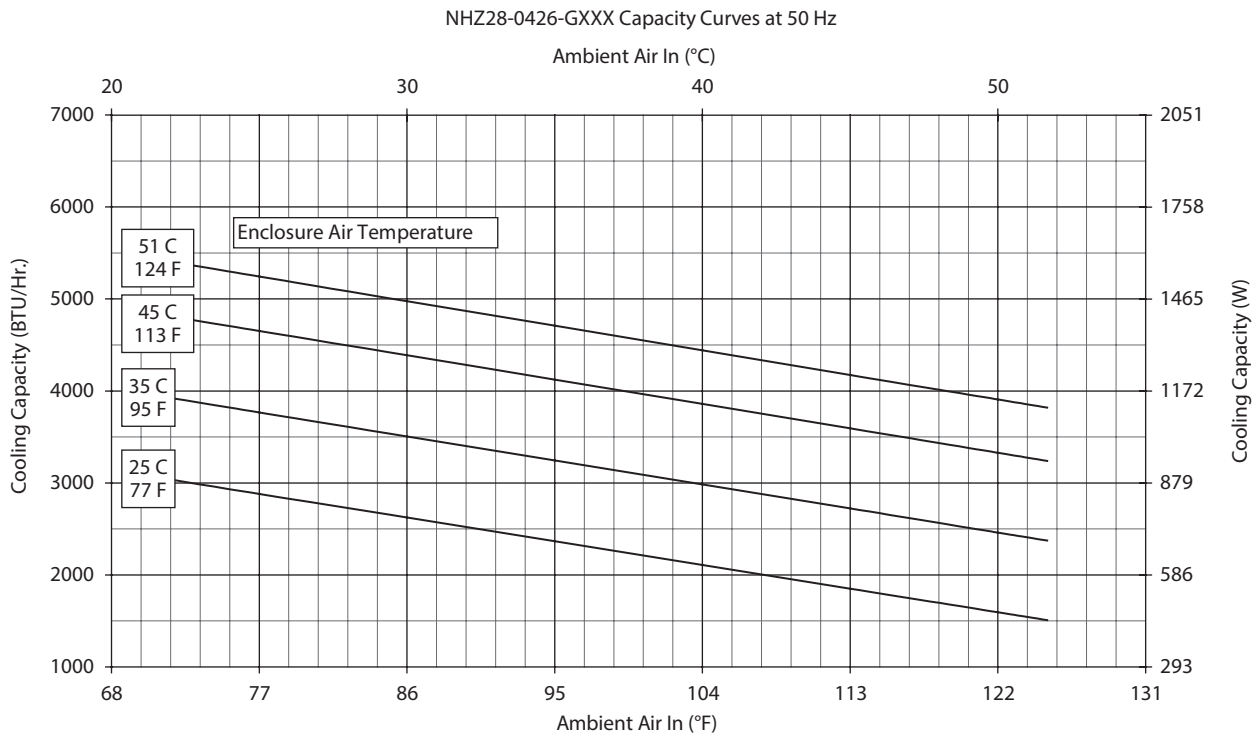
CATALOG NUMBER			
Painted Galvanized Steel Type 4	NHZ280416G300	NHZ280426G300	NHZ280446G300
Painted Galvanized Steel Type 4 with Remote Access Control*	NHZ280416G360	NHZ280426G360	NHZ280446G360
Stainless Steel Type 4X	NHZ280416G400	NHZ280426G400	NHZ280446G400
Stainless Steel Type 4X with Remote Access Control*	NHZ280416G460	NHZ280426G460	NHZ280446G460
Stainless Steel Type 4X Offshore	NHZ280416G500	NHZ280426G500	NHZ280446G500
COOLING PERFORMANCE			
Nominal:			
BTUs/Hr.	3800 / 4000	4000	4000
Watts	1114 / 1172	1172	1172
At 125 F / 125 F (52 C / 52 C):			
BTU/Hr. (50 / 60 Hz)	3805 / 4162	4394	4394
Watts (50 / 60 Hz)	1115 / 1220	1288	1288
At 95 F / 95 F (35 C / 35 C):			
BTU/Hr. (50 / 60 Hz)	3589 / 3974	3690	3690
Watts (50 / 60 Hz)	1052 / 1165	1081	1081
Refrigerant	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	11 / 312	11 / 312	11 / 312
Operating Temperature Range:			
Maximum (°F / °C)	125/52	125/52	125/52
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / M ³ /Hr)	138 / 234	N/A	N/A
External loop 50 Hz (CFM / M ³ /Hr)	268 / 455	N/A	N/A
Internal loop 60 Hz (CFM / M ³ /Hr)	143 / 362	143 / 243	143 / 243
External loop 60 Hz (CFM / M ³ /Hr)	288 / 728	288 / 489	288 / 489
ELECTRICAL DATA			
Rated Voltage	110 / 115	230	460
Frequency (Hz)	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	1039 / 1191	1250	1250
Max. Nominal Current (Amps at 50 / 60 Hz)	11.6-11.2	6.5	3.3
Starting Current (Amps)	40	24.5	12.5
Agency Approvals		cUL Listed CE	
Power Input Description		Others available upon request	
ENCLOSURE PROTECTION			
UL Type		Type 4, 4X Standard	
CONTROLLER			
Description		Digital Controller	
Controller Location		Enclosure Side	
Factory Controller Setting (°F / °C)		80 / 27	
SOUND LEVEL			
At 1.5 Meters	66.1 dBA	65.5 dBA	65.5 dBA
UNIT CONSTRUCTION			
Material		Galvanized Sheet Metal Type 4 Models Stainless steel 316L Type 4X and Offshore Models	
Finish		RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available	
UNIT DIMENSIONS			
Height (in / mm)		28 / 711.2	
Width (in / mm)		11.50 / 292.1	
Depth (in / mm)		14.00 / 355.6	
Weight (lb / kg)	84/38	92/41.7	92/41.7

*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

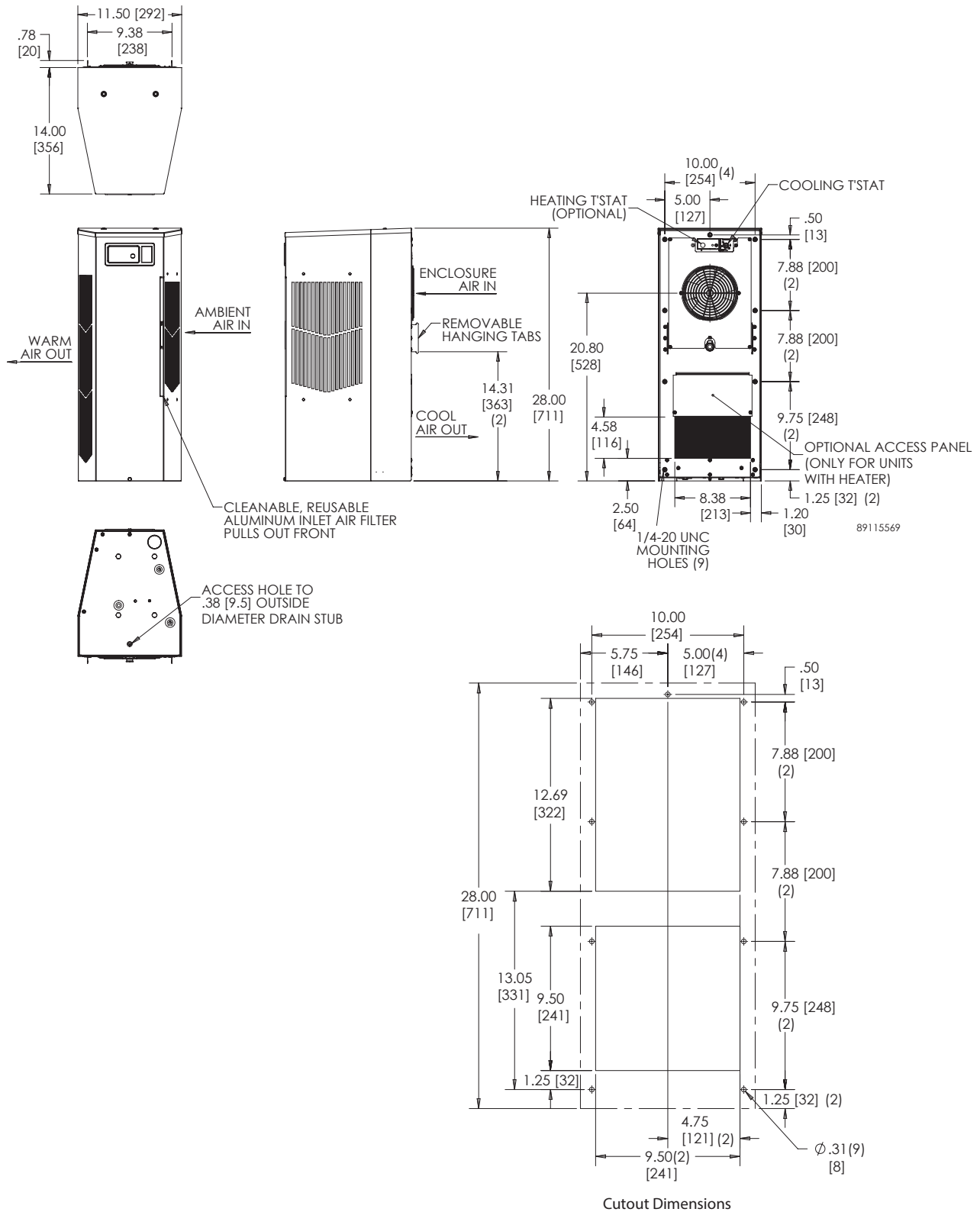
Performance Curves for NHZ28 Models 4000 BTU/Hr. (1172 Watt)



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NHZ28 Models 4000 BTU/Hr. (1172 Watt)

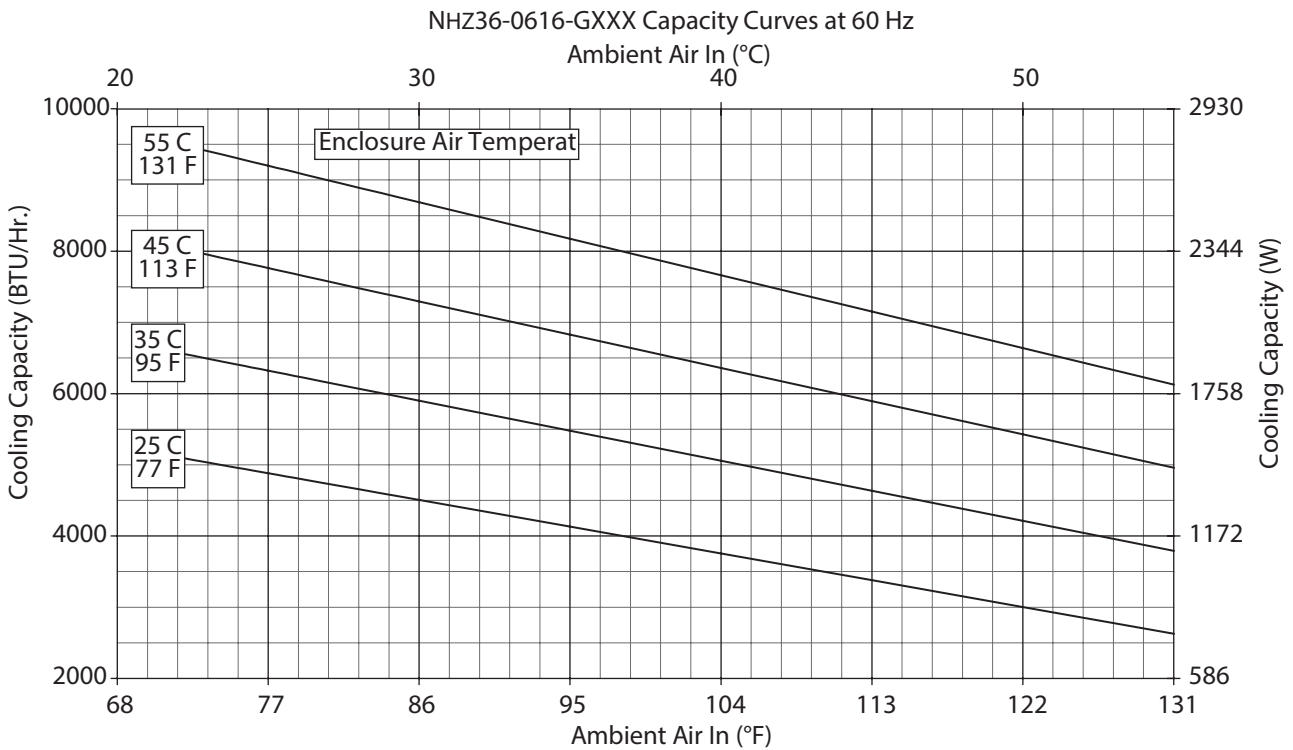
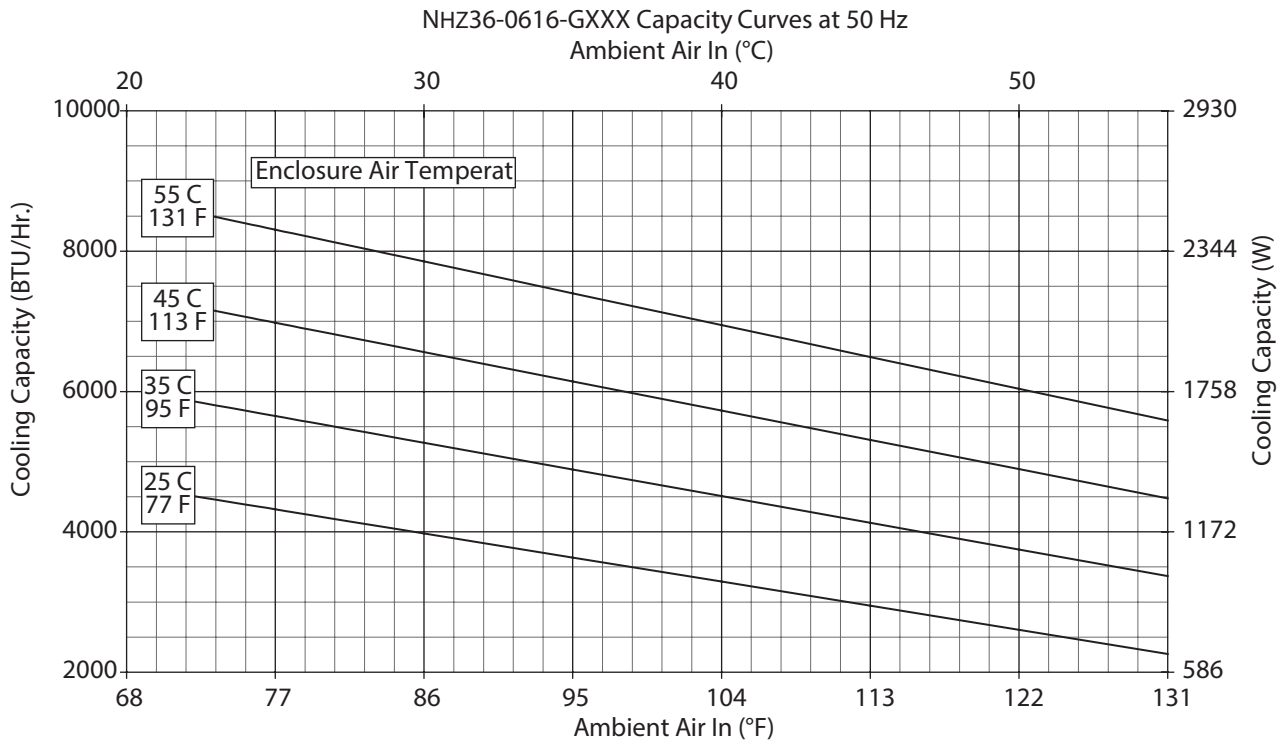


Performance Data NHZ36 6000/8000 BTU/Hr. (1758/2344 Watt)

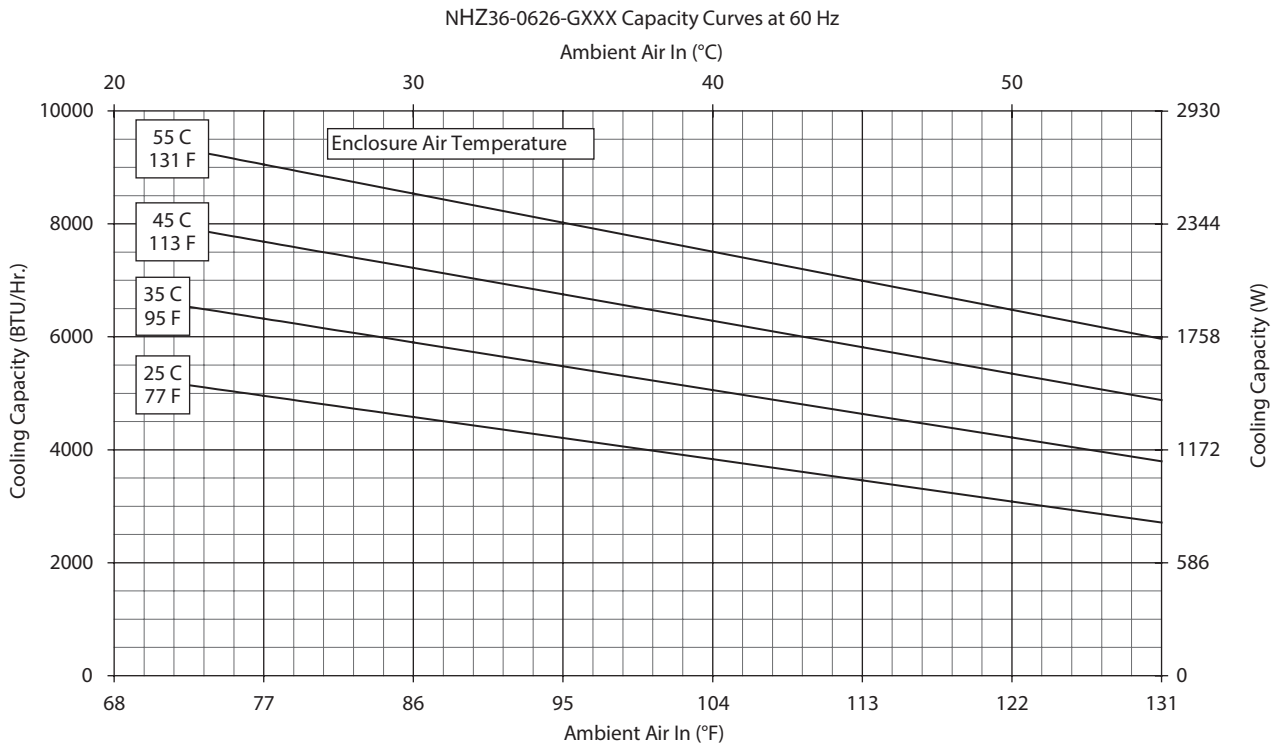
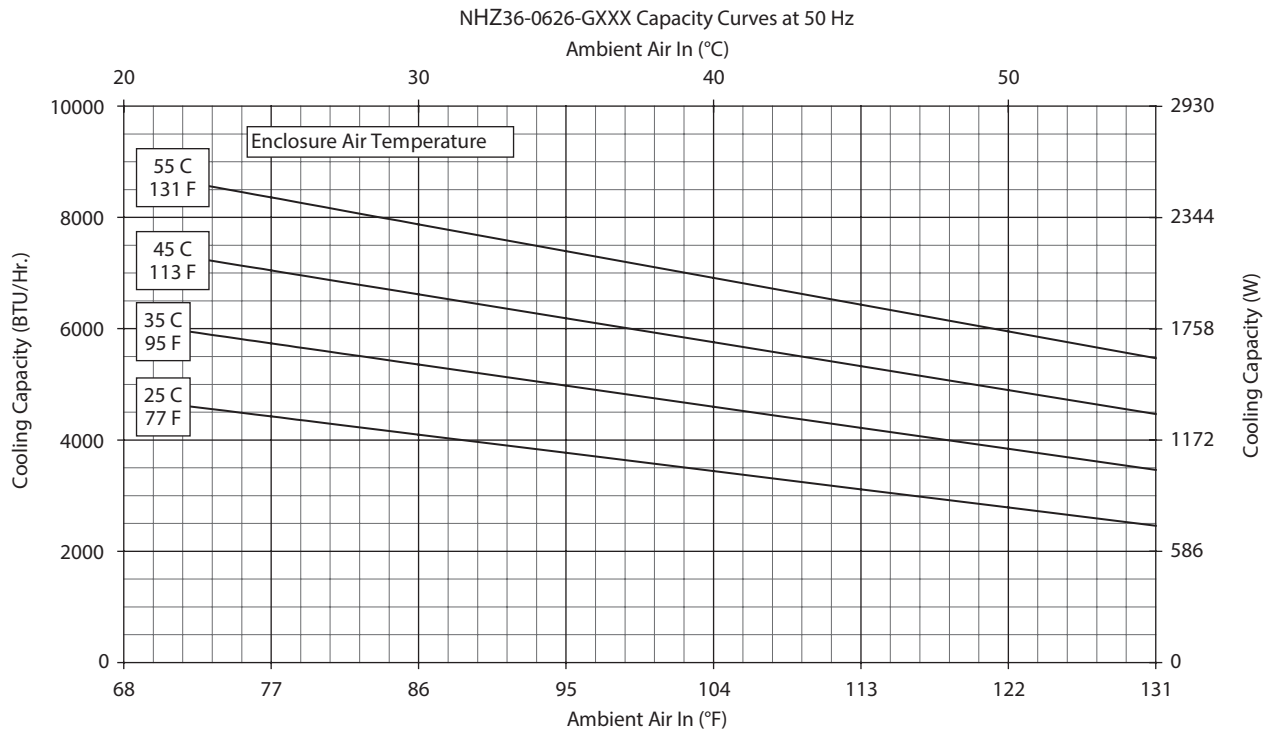
CATALOG NUMBER						
Painted Galvanized Steel Type 4	NHZ360616G300	NHZ360626G300	NHZ360646G300	NHZ360816G300	NHZ360826G300	NHZ360846G300
Painted Galvanized Steel Type 4 with Remote Access Control*	NHZ360616G360	NHZ360626G360	NHZ360646G360	NHZ360816G360	NHZ360826G360	NHZ360846G360
Stainless Steel Type 4X	NHZ360616G400	NHZ360626G400	NHZ360646G400	NHZ360816G400	NHZ360826G400	NHZ360846G400
Stainless Steel Type 4X with Remote Access Control*	NHZ360616G460	NHZ360626G460	NHZ360646G460	NHZ360816G460	NHZ360826G460	NHZ360846G460
Stainless Steel Type 4X Offshore	NHZ360616G500	NHZ360626G500	NHZ360646G500	NHZ360816G500	NHZ360826G500	NHZ360846G500
COOLING PERFORMANCE						
Nominal:						
BTUs/Hr.	5400 / 6000	5400 / 6000	5400 / 6000	8250 / 8500	8250 / 8500	8250 / 8500
Watts	1581 / 1757	1581 / 1757	1581 / 1757	2416 / 2489	2416 / 2489	2416 / 2489
At 131 F / 131 F (55 C / 55 C):						
BTU/Hr. (50 / 60 Hz)	5585 / 6180	5469 / 5965	5300 / 6089	8213 / 8453	7874 / 8063	7777 / 8166
Watts (50 / 60 Hz)	1637 / 1811	1603 / 1748	1553 / 1785	2405 / 2475	2306 / 2361	2277 / 2391
At 95 F / 95 F (35 C / 35 C):						
BTU/Hr. (50 / 60 Hz)	4909 / 5485	5159 / 5621	5572 / 6026	7028 / 7626	6660 / 7411	6877 / 7525
Watts (50 / 60 Hz)	1439 / 1607	1512 / 1647	1633 / 1766	2058 / 2233	1950 / 2170	2014 / 2203
Refrigerant	R134a	R134a	R134a	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	20 / 567	22 / 624	16 / 454	36 / 1021	36 / 1021	36 / 1021
Operating Temperature Range:						
Maximum (°F / °C)	131 / 55	131 / 55	131 / 55	131 / 55	131 / 55	131 / 55
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:						
Internal loop 50 Hz (CFM / M ³ /Hr)	251 / 426	250 / 425	250 / 425	250 / 425	245 / 416	243 / 413
External loop 50 Hz (CFM / M ³ /Hr)	284 / 483	338 / 574	338 / 574	313 / 532	347 / 589	365 / 620
Internal loop 60 Hz (CFM / M ³ /Hr)	261 / 443	261 / 443	261 / 443	263 / 447	258 / 439	254 / 432
External loop 60 Hz (CFM / M ³ /Hr)	311 / 528	356 / 605	356 / 605	338 / 574	382 / 648	394 / 669
ELECTRICAL DATA						
Rated Voltage	115	230	400 / 460 3~	115	230	400 / 460 3~
Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	911 / 1108	908 / 1073	697 / 895	1334 / 1530	1265 / 1403	572 / 628
Max. Nominal Current (Amps at 50 / 60 Hz)	9.1 / 10.1	4.5 / 4.7	1.59 / 1.69	11.6 / 13.3	5.5/6.1	2.9/3.0
Starting Current (Amps)	39.2	23	8.1	48.3	27	16
Agency Approvals	cUL Listed CE Others available upon request					
Power Input Description	Terminal Block					
ENCLOSURE PROTECTION						
UL Type	Type 4, 4X Standard					
CONTROLLER						
Description	Digital Controller					
Controller Location	Enclosure Side					
Factory Controller Setting (°F / °C)	80 / 27					
SOUND LEVEL						
At 1.5 Meters	66.9 dBA	66.7 dBA	68.2 dBA	66.0 dBA	66.0 dBA	66.0 dBA
UNIT CONSTRUCTION						
Material	Galvanized Sheet Metal Type 4 Models Stainless steel 316L Type 4X and Offshore Models					
Finish	RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available					
UNIT DIMENSIONS						
Height (in / mm)	36.00 / 914.4					
Width (in / mm)	11.50 / 292.1					
Depth (in / mm)	14.00 / 355.6					
Weight (lb / kg)	100 / 45	100 / 45	104 / 47	106 / 48	106 / 48	114 / 52

*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

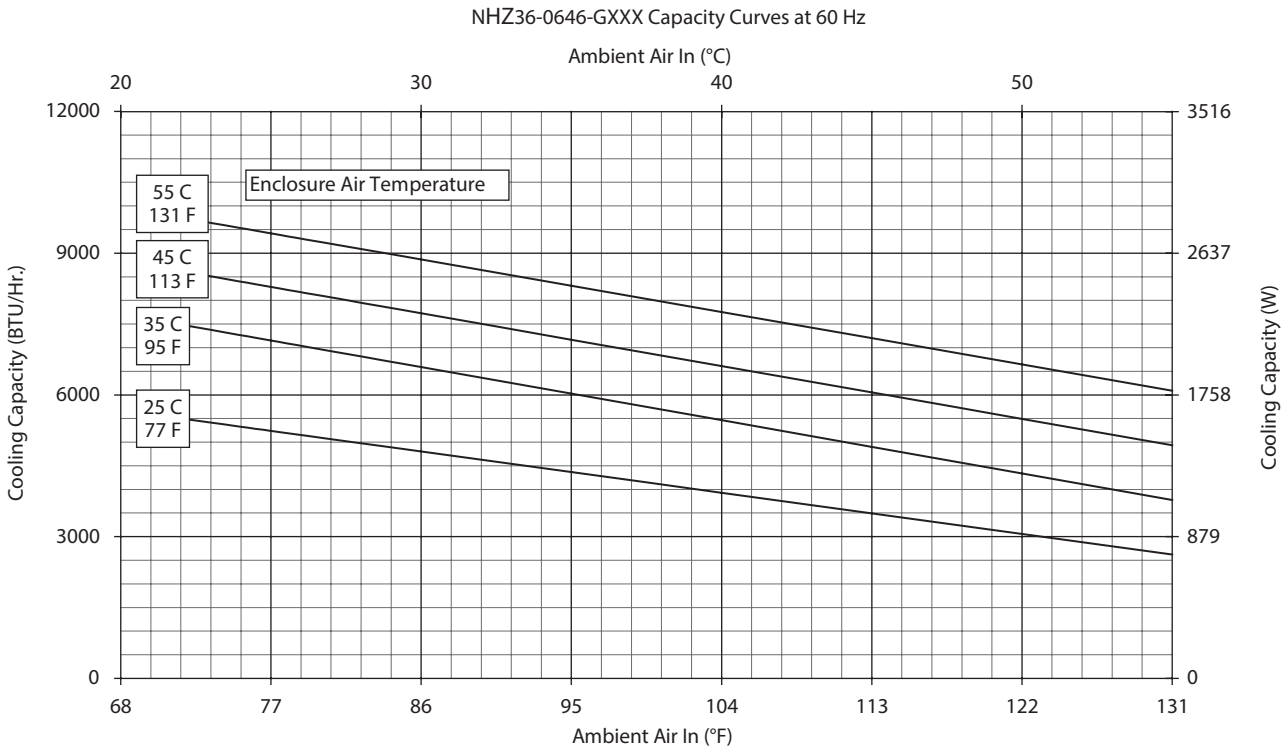
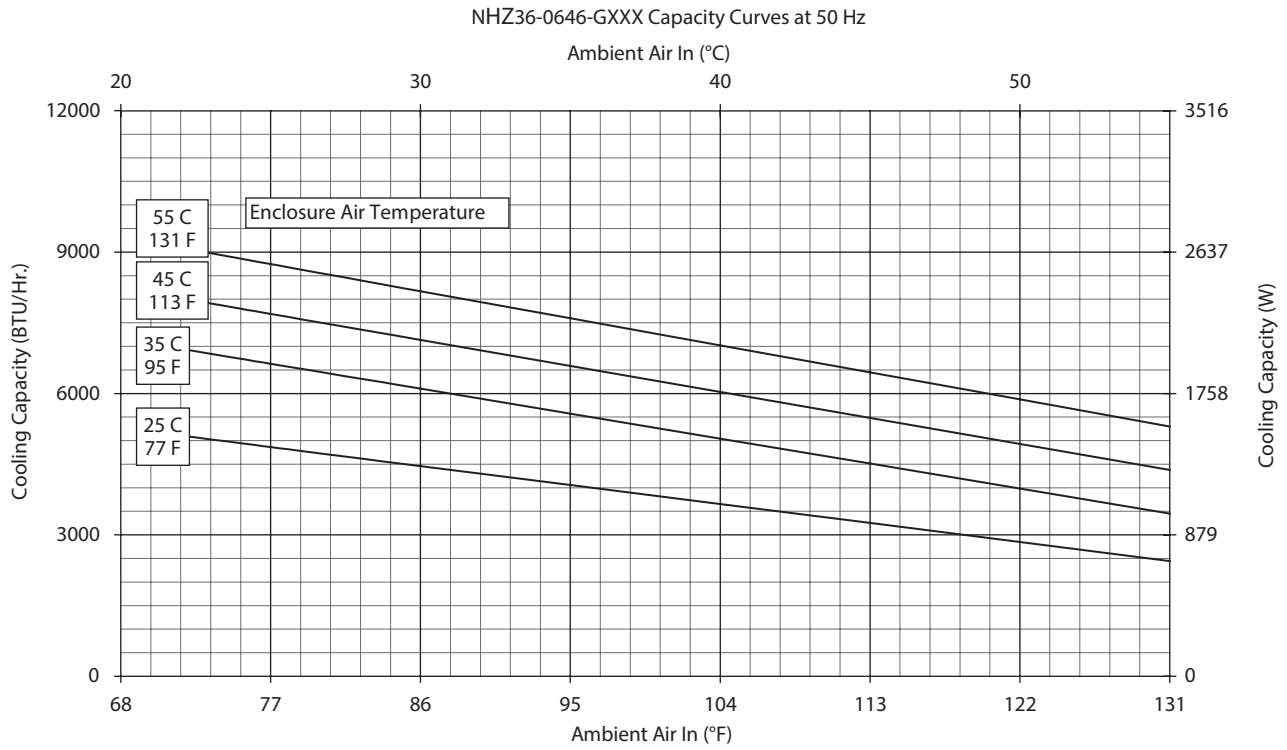
Performance Curves for NHZ36 Models 6000 BTU/Hr. (1758 Watt)



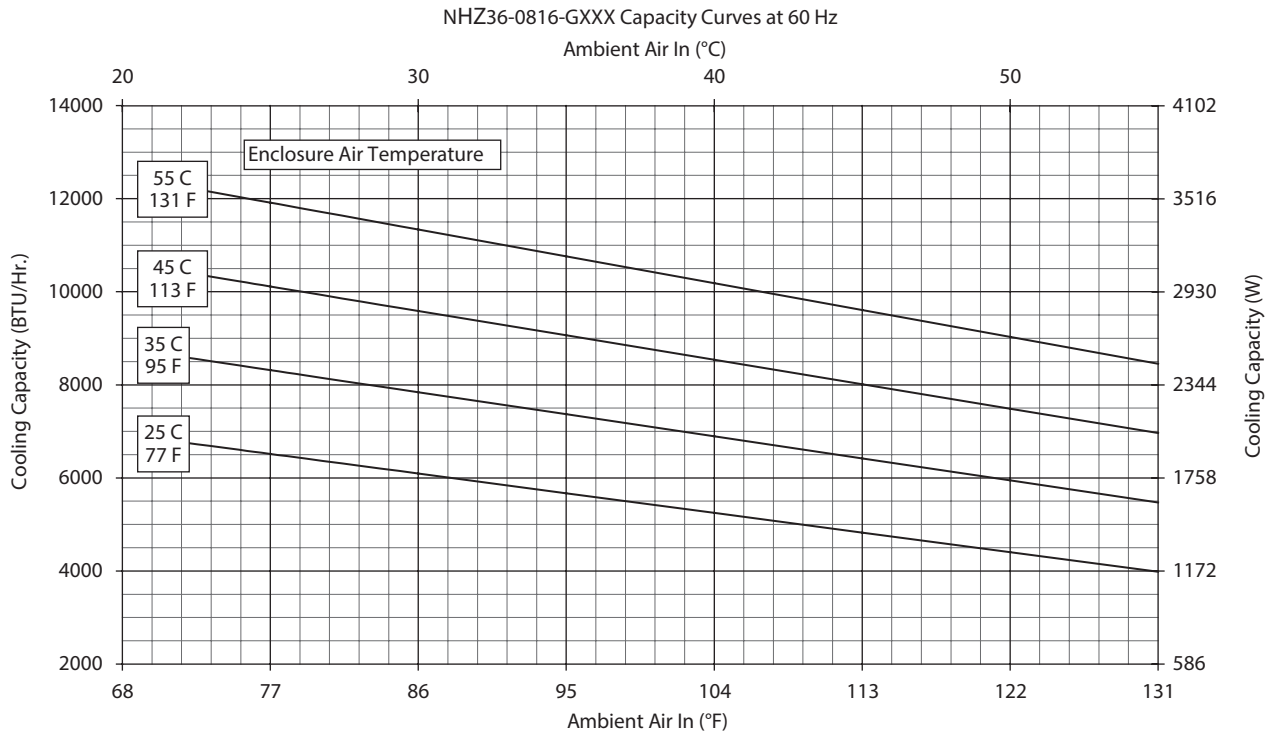
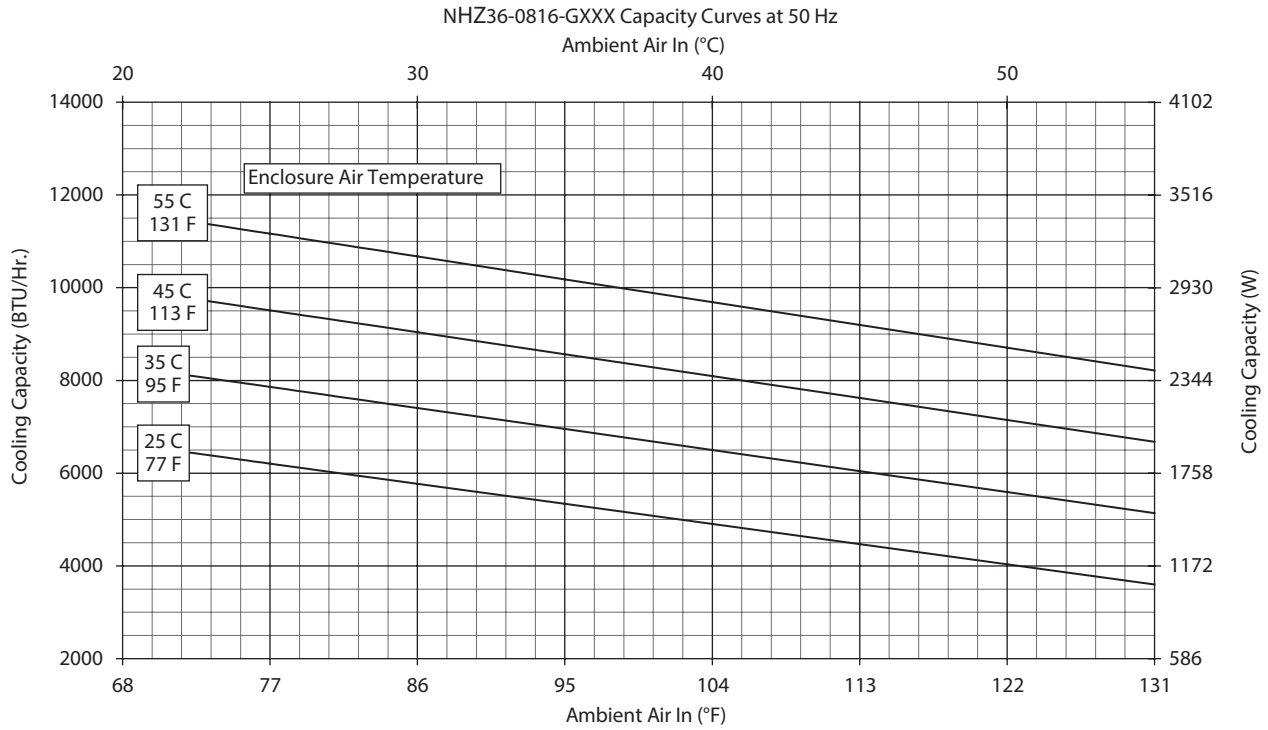
Performance Curves for NHZ36 Models 6000 BTU/Hr. (1758 Watt)



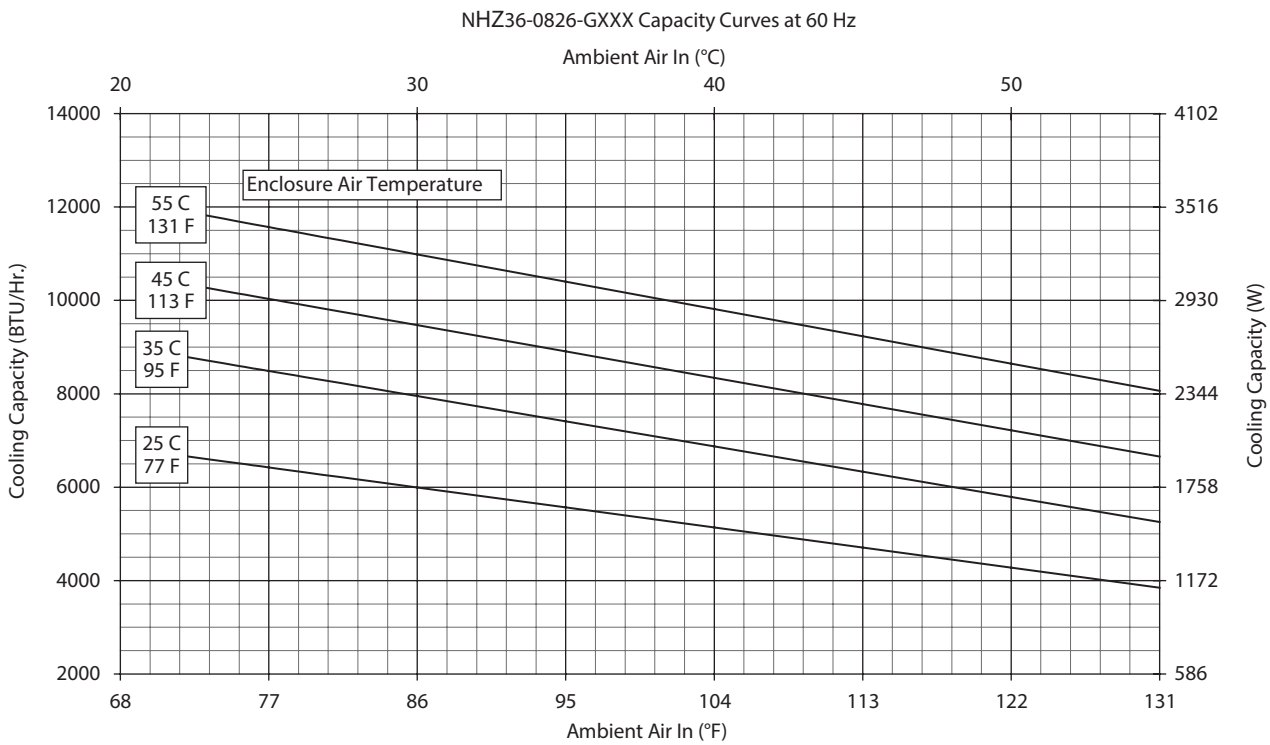
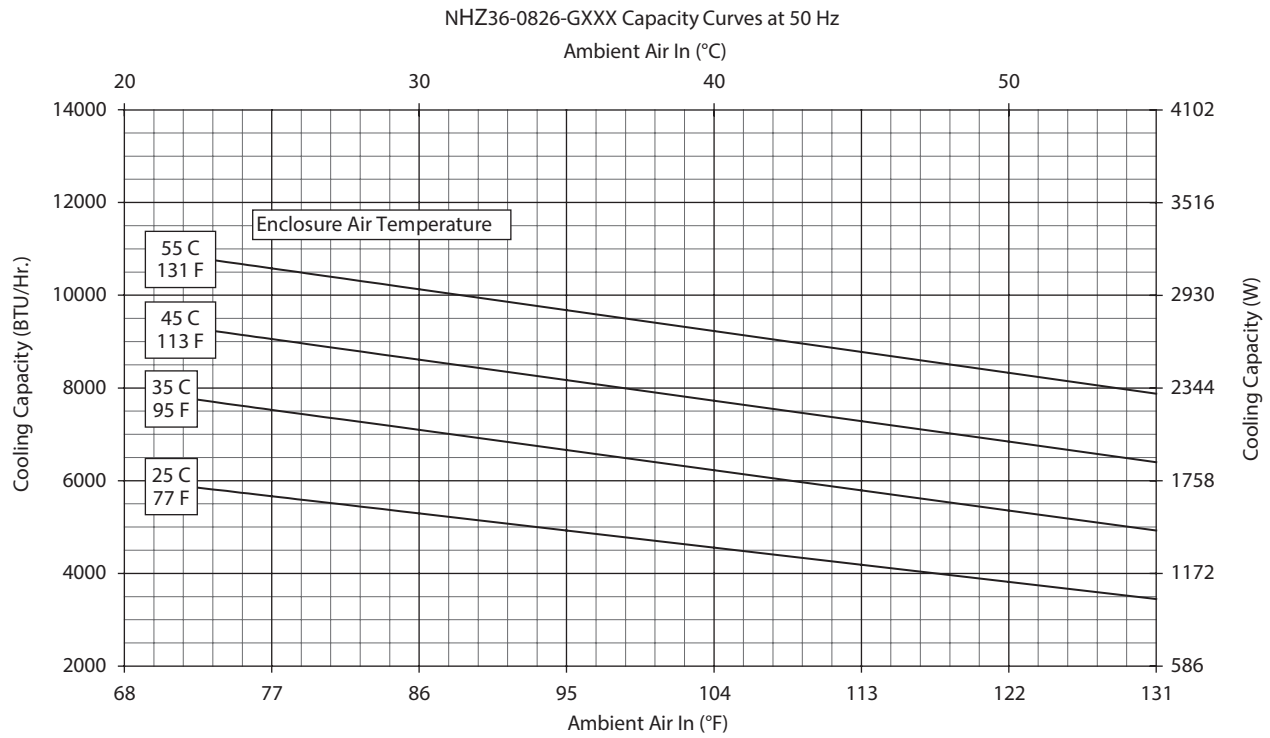
Performance Curves for NHZ36 Models 6000 BTU/Hr. (1758 Watt)



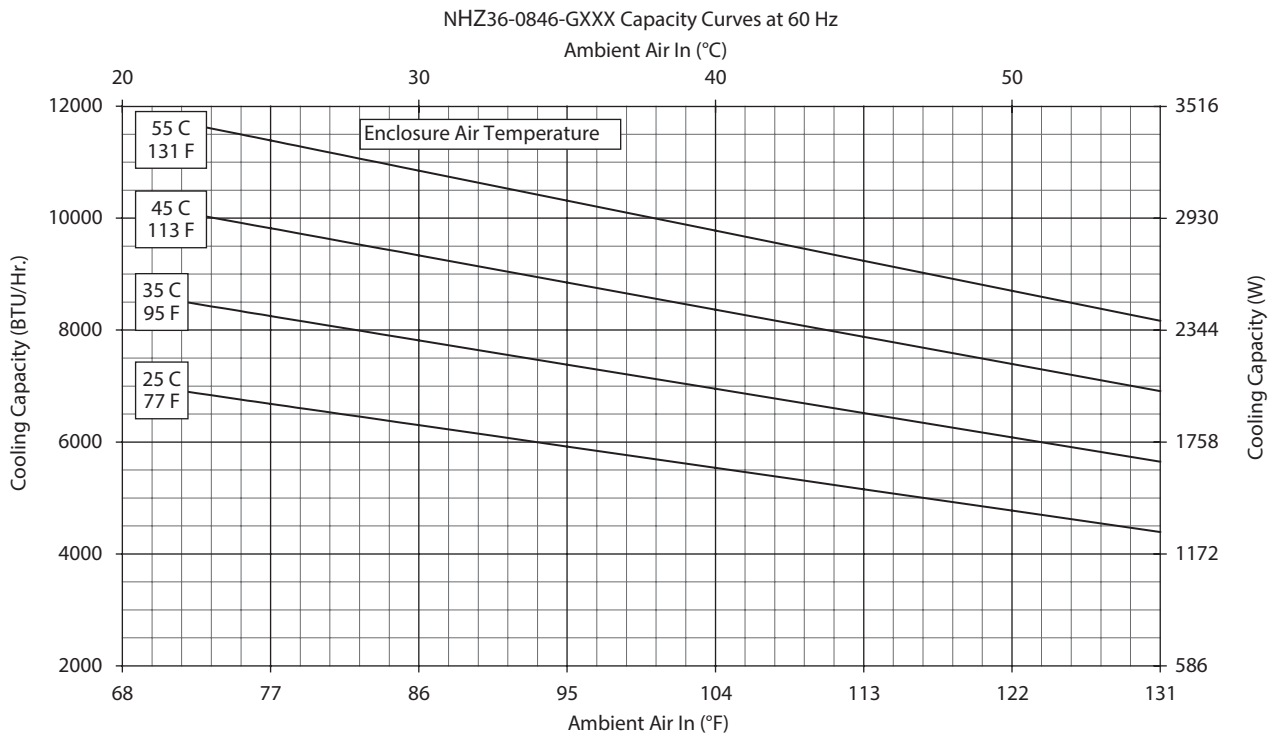
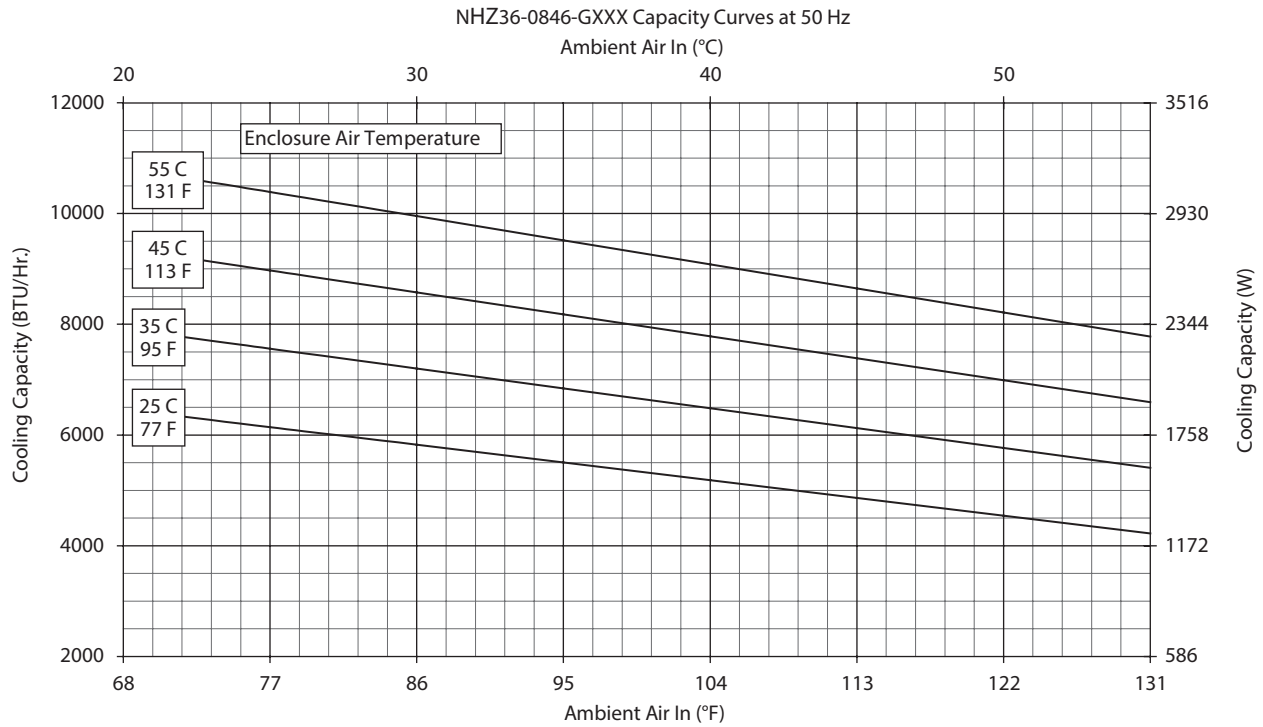
Performance Curves for NHZ36 Models 8000 BTU/Hr. (2344 Watt)



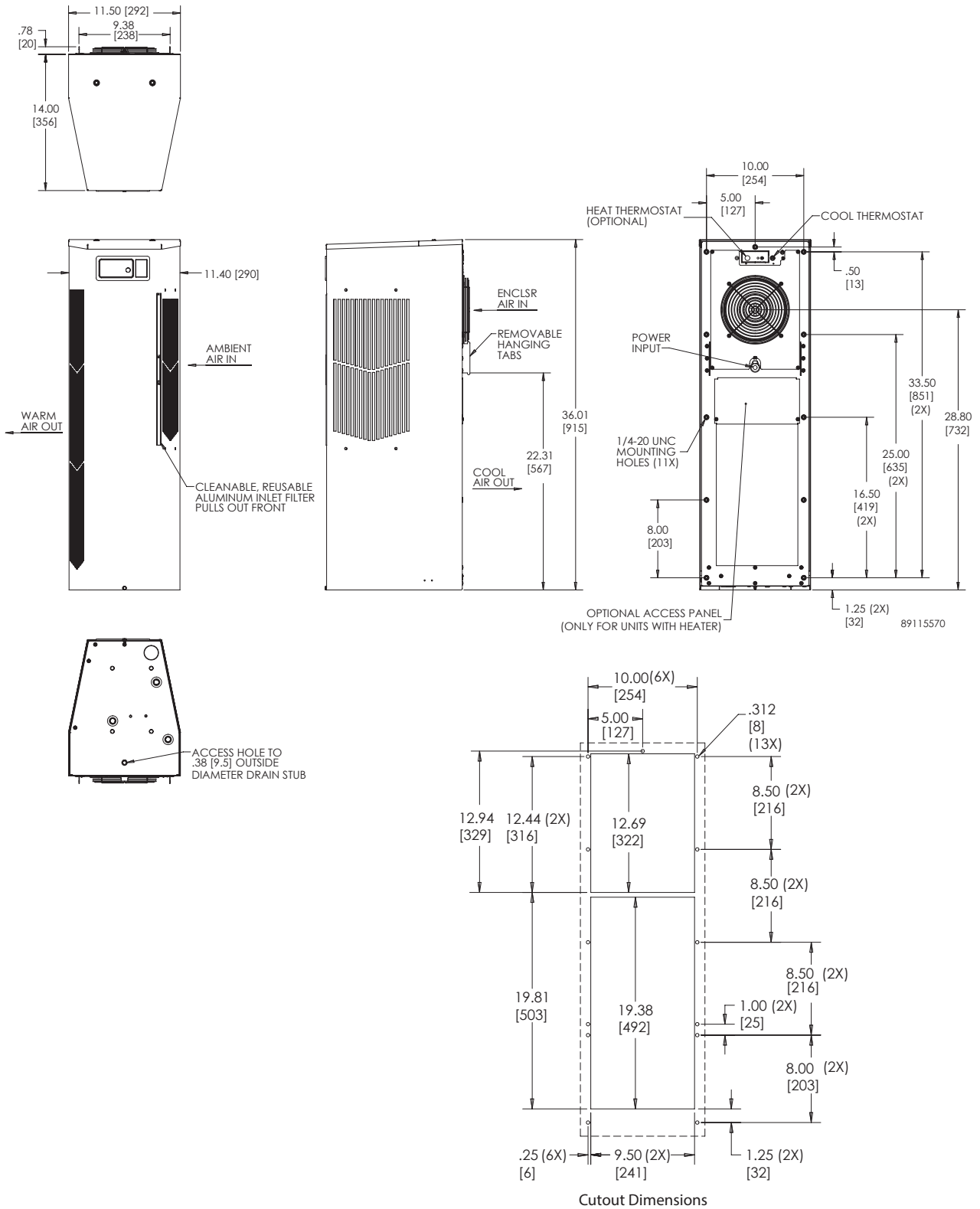
Performance Curves for NHZ36 Models 8000 BTU/Hr. (2344 Watt)



Performance Curves for NHZ36 Models 8000 BTU/Hr. (2344 Watt)



NHZ36 6000/8000 BTU/Hr. (1758/2344 Watt)



Visit www.PentairProtect.com to download 2D and 3D CAD drawings into the overall design of your electronic system.

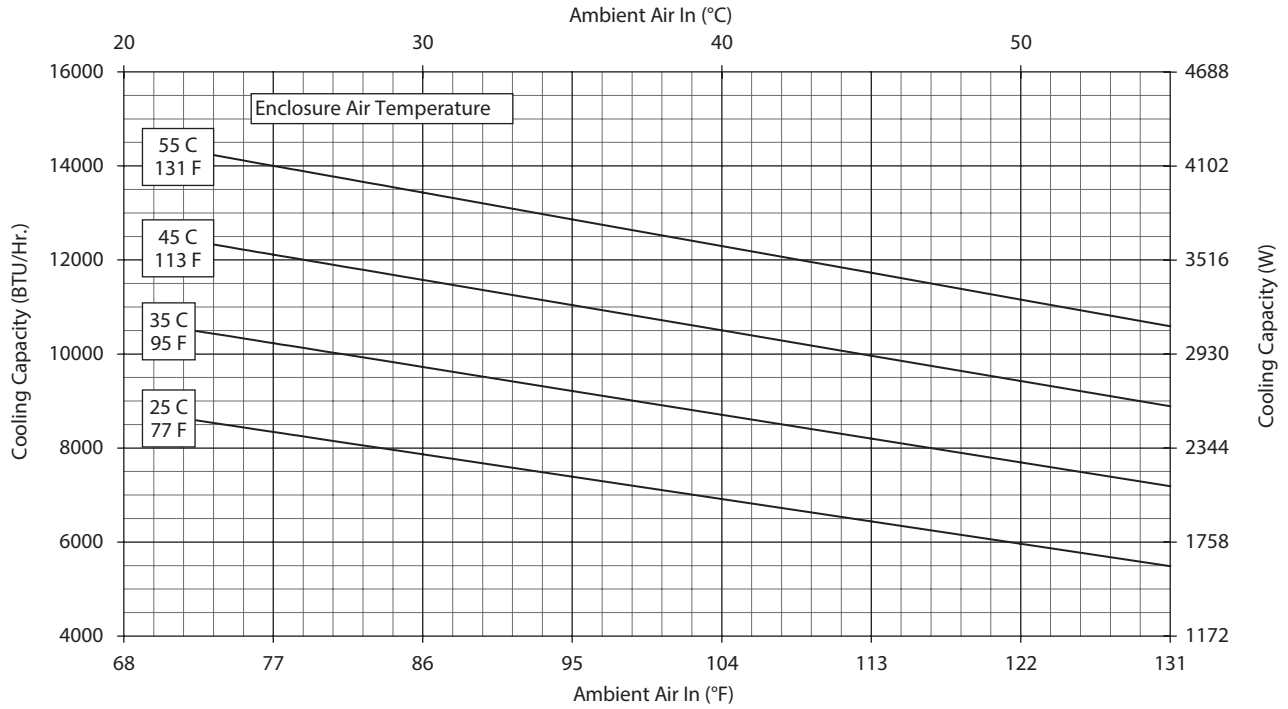
Performance Data NHZ43 11000 BTU/Hr. (3223 Watt)

CATALOG NUMBER			
Painted Galvanized Steel Type 4	NHZ431216G300	NHZ431226G300	NHZ431246G300
Painted Galvanized Steel Type 4 with Remote Access Control*	NHZ431216G360	NHZ431226G360	NHZ431246G360
Stainless Steel Type 4X	NHZ431216G400	NHZ431226G400	NHZ431246G400
Stainless Steel Type 4X with Remote Access Control*	NHZ431216G460	NHZ431226G460	NHZ431246G460
Stainless Steel Type 4X Offshore	NHZ431216G500	NHZ431226G500	NHZ431246G500
COOLING PERFORMANCE			
Nominal:			
BTUs/Hr.	10400 / 11000	10400 / 11000	10400 / 11000
Watts	3047 / 3223	2900 / 3223	2900 / 3223
At 131 F / 131 F (55 C / 55 C):			
BTU/Hr. (50 / 60 Hz)	10588 / 11180	9946 / 11052	10048 / 10797
Watts (50 / 60 Hz)	3103 / 3277	2915 / 3239	2945 / 3164
At 95 F / 95 F (35 C / 35 C):			
BTU/Hr. (50 / 60 Hz)	9475 / 10023	8967 / 9644	8587 / 9559
Watts (50 / 60 Hz)	2777 / 2937	2628 / 2826	2517 / 2801
Refrigerant	R134a	R134a	R134a
Refrigerant Charge (ounces/grams)	36 / 1021	38 / 1077	41 / 1162
Operating Temperature Range:			
Maximum (°F / °C)	125 / 52	131 / 55	131 / 55
Minimum (°F / °C)	-40 / -40	-40 / -40	-40 / -40
Air Flow at 0 Static Pressure:			
Internal loop 50 Hz (CFM / M ³ /Hr)	239 / 406	259 / 440	254 / 432
External loop 50 Hz (CFM / M ³ /Hr)	494 / 839	489 / 831	341 / 579
Internal loop 60 Hz (CFM / M ³ /Hr)	250 / 425	267 / 454	260 / 442
External loop 60 Hz (CFM / M ³ /Hr)	528 / 897	525 / 892	564 / 958
ELECTRICAL DATA			
Rated Voltage	115	230	400 / 460 3~
Frequency (Hz)	50 / 60	50 / 60	50 / 60
Operating Range	+/-10%	+/-10%	+/-10%
Max. Power Consumption (Watts at 50 / 60 Hz)	1802 / 2446	1802 / 2446	1283 / 1644
Max. Nominal Current (Amps at 50 / 60 Hz)	16.6 / 22.0	8.7 / 9.1	3.1 / 3.3
Starting Current (Amps)	57	38	16
Agency Approvals		cUL Listed CE	
Power Input Description		Others available upon request	
ENCLOSURE PROTECTION		Terminal Block	
UL Type		Type 4, 4X Standard	
CONTROLLER			
Description		Digital Controller	
Controller Location		Enclosure Side	
Factory Controller Setting (°F / °C)		80 / 27	
SOUND LEVEL			
At 1.5 Meters	68.4 dBA	68.4 dBA	69.6 dBA
UNIT CONSTRUCTION			
Material		Galvanized Sheet Metal Type 4 Models Stainless steel 316L Type 4X and Offshore Models	
Finish		RAL 7035 light-gray, semi-textured powder-coat paint standard Other colors available	
UNIT DIMENSIONS			
Height (in / mm)		43.00 / 1092.2	
Width (in / mm)		11.50 / 292.1	
Depth (in / mm)		14.00 / 355.6	
Weight (lb / kg)	127/57.6	127/57.6	138/62.6

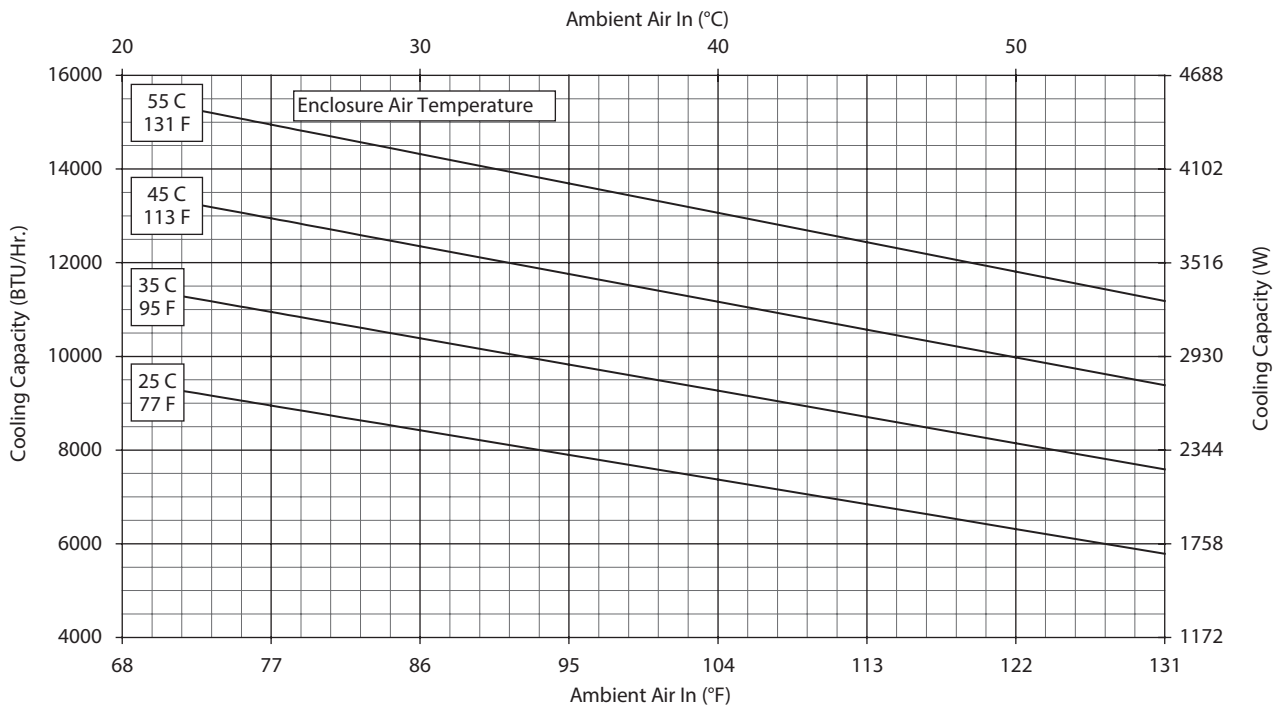
*Units with Remote Access Control utilize a digital controller and communicate via EtherNet/IP, Profinet, Modbus TCP/IP and SNMP over ethernet or modbus RTU over USB.

Performance Curves for NHZ43 Models 11000 BTU/Hr. (3223 Watt)

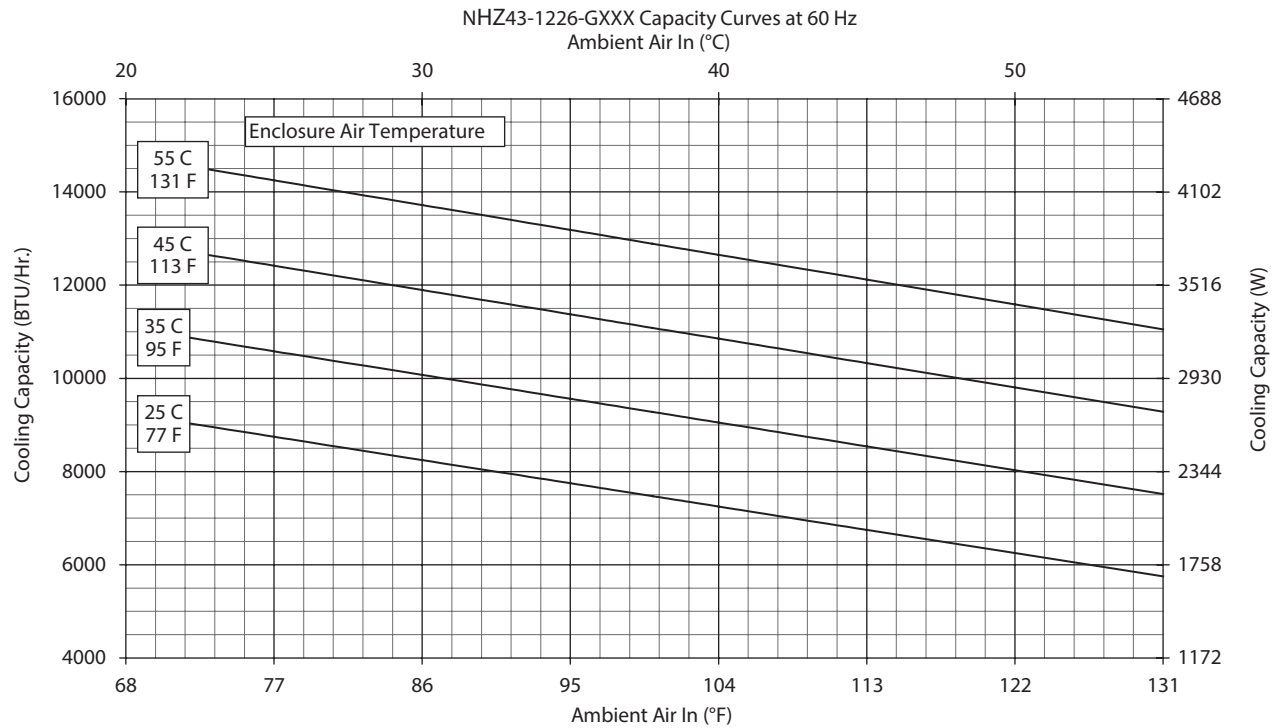
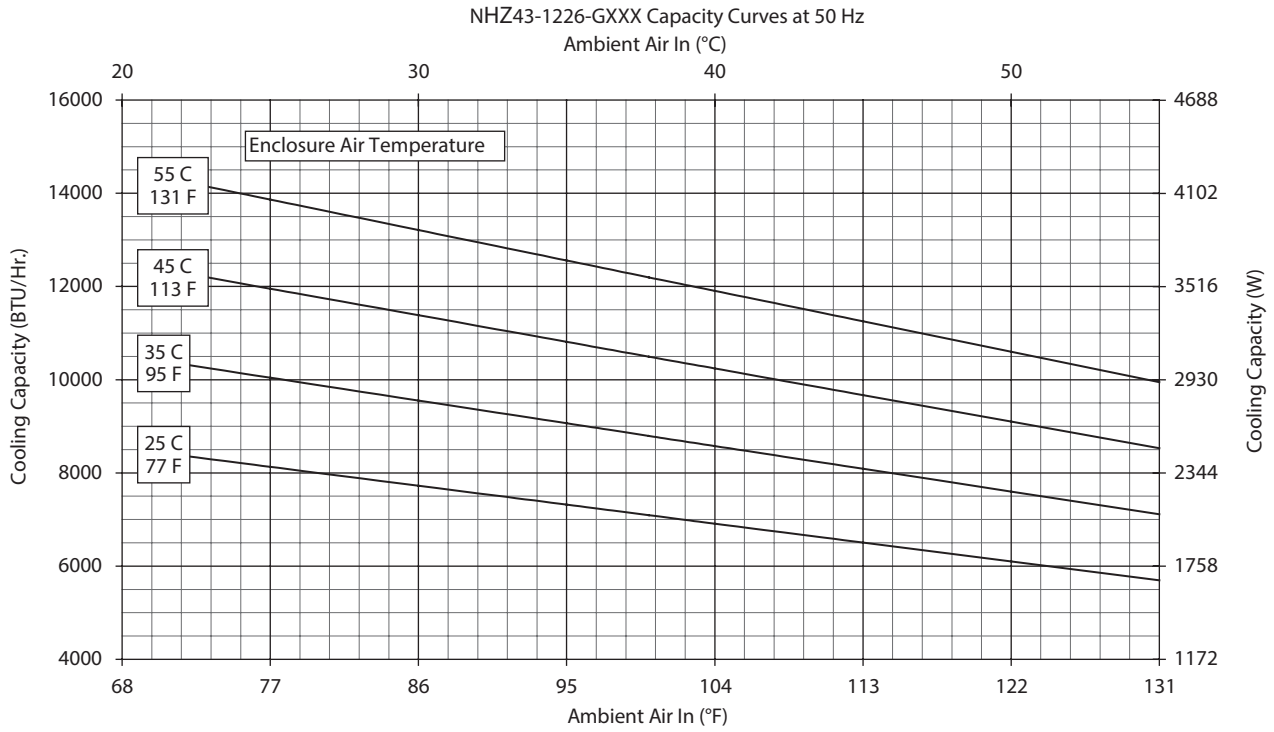
NHZ43-1216-GXXX Capacity Curves at 50 Hz



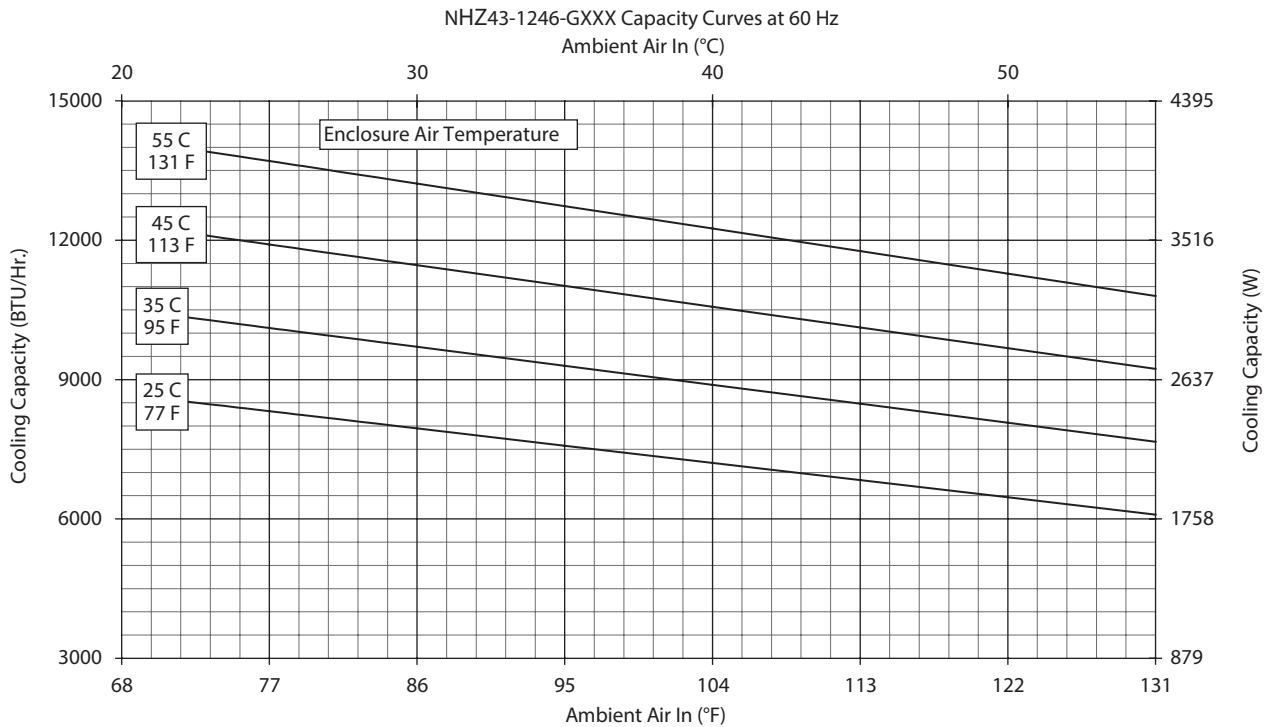
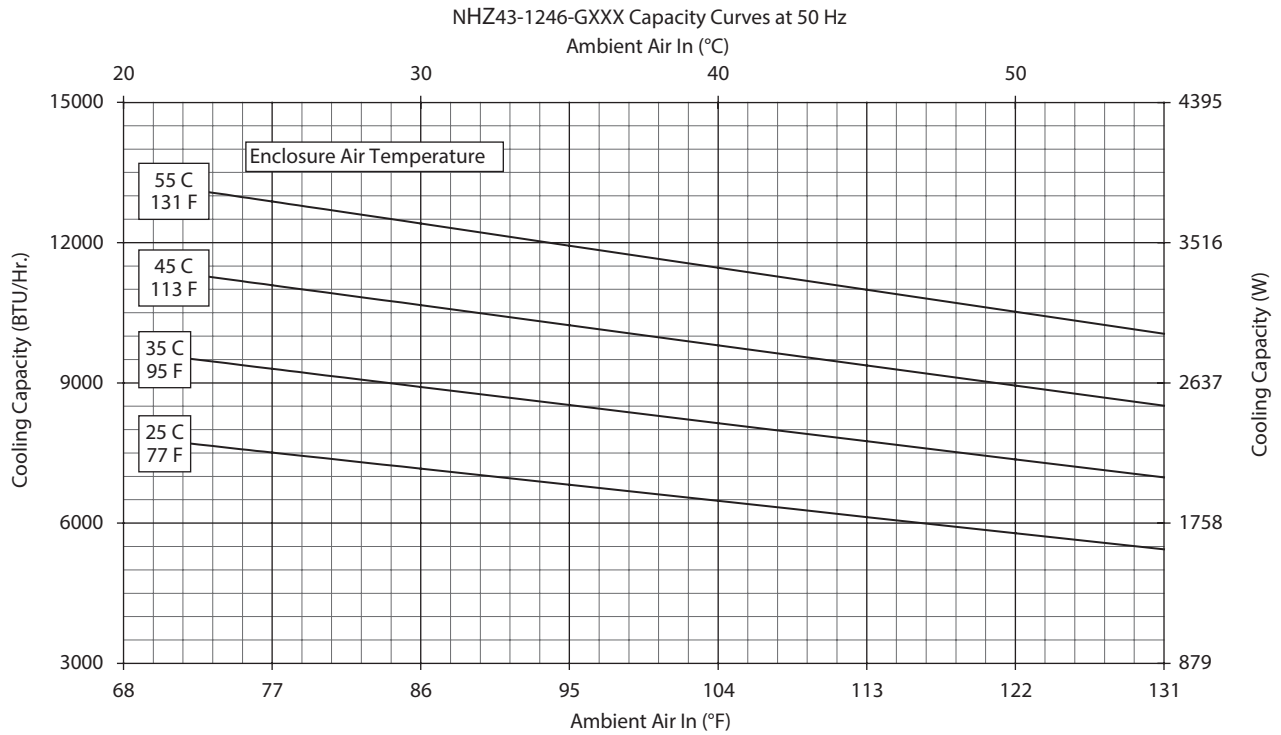
NHZ43-1216-GXXX Capacity Curves at 60 Hz



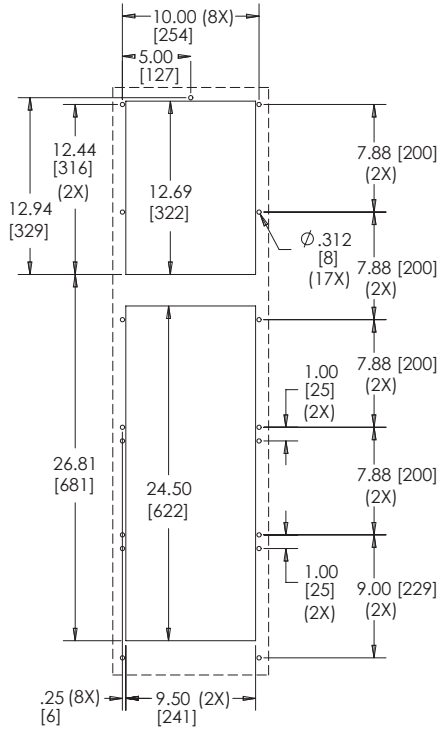
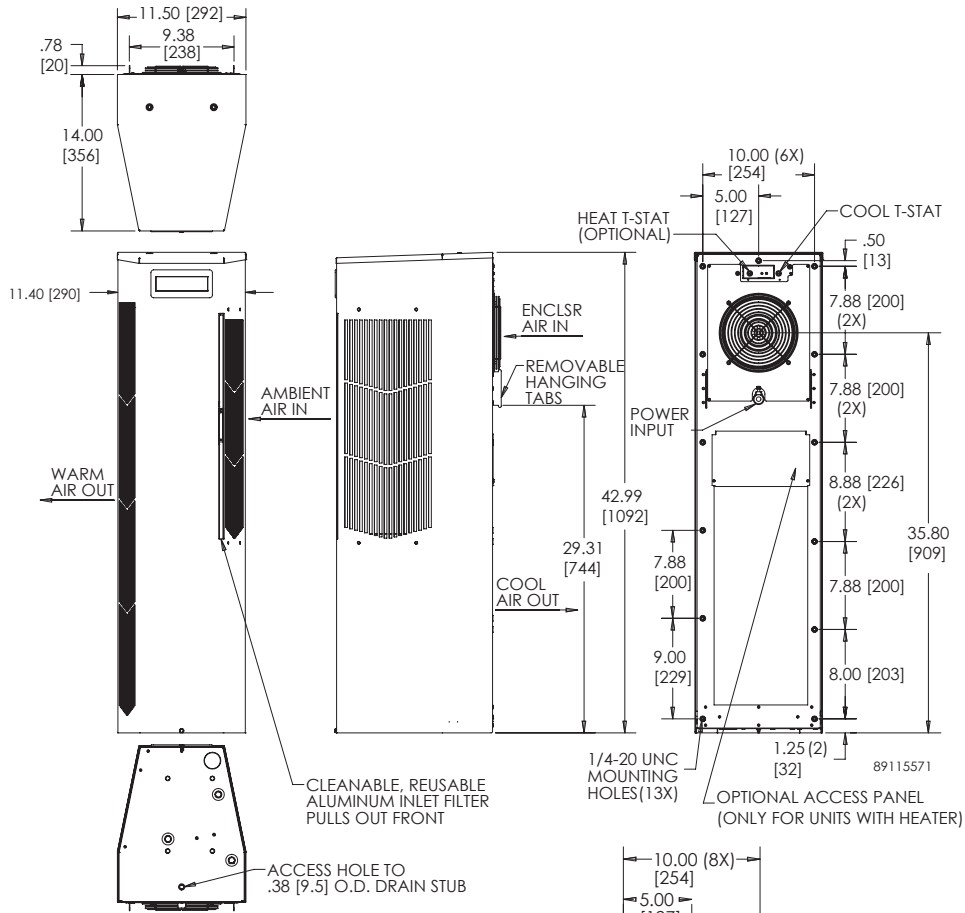
Performance Curves for NHZ43 Models 11000 BTU/Hr. (3223 Watt)



Performance Curves for NHZ43 Models 11000 BTU/Hr. (3223 Watt)



NHZ43 12000 BTU/Hr. (3516 Watt)



CUTOUT INSTRUCTIONS



AIRPAK
BY SPECIFIC SYSTEMS

MAC
BY SPECIFIC SYSTEMS

INPAC
BY SPECIFIC SYSTEMS

MINIPAC
BY SPECIFIC SYSTEMS

Specific Systems Modular Technology is Number One

Since 1974, Specific Systems, LTD. has held strong to a commitment of reliability, service, and design excellence in special purpose environmental air conditioning, heating, ventilating, and pressurization systems. This has been accomplished through proven engineering and design principles, combined with a dedication to continued improvements in our standard modular products. With this strong engineering focus, Specific Systems leads the industry in modular environmental control technology.

Through the years, Specific Systems has designed and manufactured a full range of specialized products, including custom environmental control packages, filtration systems, massive mobile cooling centers, and other HVAC systems. Our custom engineering services are available on a contract basis for special design and development programs.

SPECIFIC SYSTEMS™
www.SPECIFICSYSTEMS.com

7655 East 41st St., Tulsa, OK 74145 :: (918) 663-9321 :: (918) 663-5498 fax

InPac

A broad product line of industrial & explosion proof A/C, purge & pressurization, and heating equipment for the petroleum and process industries. Available in sizes from 1–50 tons, InPacs are designed with redundant systems for use in highly corrosive and explosive atmospheres.

AirPak

The AirPak line of wall-mounted A/C units are available in capacities from 5–20 tons. The units are designed for use in heavy-duty commercial and industrial applications such as telecommunications, instrumentation, control, and electrical powerhouse shelter assemblies.

Mac

Our Military product line, available in MilSpec configuration with capacities from 1–10 tons. The Mac series is often chosen for use in highly mobile electronic shelter applications.

MiniPac

The MiniPac Series enclosure HVAC systems for hazardous locations are available in capacity ranges from 4,000–11,000 BTUH with optional 316 stainless steel construction and corrosion resistant coatings. MiniPac systems can be mounted in Class I Division 2 areas on enclosures as narrow as 12" making them a perfect fit for any hazardous application.