

**189BNV EVOLUTION® V
VARIABLE SPEED AIR CONDITIONER
WITH PURON® REFRIGERANT
1 - 5 TON**



Product Data



The Evolution® V air conditioner offers high-efficiency variable speed performance in a remarkably small cabinet and provides up to 19 SEER cooling efficiency. The variable speed inverter capacity control delivers up to 5 stages of operation for exceptional load matching, dehumidification and zoning performance.

This product has been designed and manufactured to provide flexible system matching and work with a wide variety of indoor units and controls.

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

INDUSTRY LEADING FEATURES / BENEFITS

Energy Efficiency

- Up to 19 SEER / up to 13 EER
- Microtube Technology™ refrigeration system

Sound

- Sound level as low as 55 dBA in low speed (Silencer System II).
- Soft start and smooth ramp to operating speeds

Comfort

- Variable speed compressor operates at 5 stages with capacity range from as wide as 25-100%
- Air cooled Inverter variable speed drive
 - System requires Evolution® Connex™ Control with version 11 software or newer for 5 stage operation on sizes 24 - 60 and version 12 or higher on size 13.
 - Ratings provided with 2-stage thermostats and suitable non-communicating indoor products for 2-stage operation.
- Energy Tracking capability with the Evolution® Connex™ Wall Control w/software version 13 or later
 - Energy Tracking has the ability to monitor and estimate the energy consumption of your Evolution® system.

Reliability

- Puron® refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- Inverter control drives compressor and fan motor
- No control module attached to fan motor
- Evolution intelligence monitors critical system parameters
- Pressure equalizer valve for easy compressor starting
- High pressure switch
- Suction pressure transducer
- Compressor discharge temperature sensor
- Suction temperature sensor
- Filter drier (field installed)
- Internal crankcase heater standard

Flexibility and installation:

- 2 control wires to outdoor unit in complete Evolution® system and Connex™ Control
- Smaller and lighter than 2-stage units
- Minimum and Maximum adjustments with Evolution® Connex™ Control
- Compatible with non-communicating thermostats

Durability

DuraGuard™ protection package:

- Solid, Durable sheet metal construction
- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

Applications

- Line sets up to 100 ft (30.5 m) equivalent length
- No long-line accessories required.

MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	14
N	N	N	A	A/N	N	N	N	N	A/N	A/N	N	A
1	8	9	B	N	V	0	3	6	0	0	0	A
Product Family 1=AC	Tier 8= Evolution Series	SEER 9 = 19 SEER	Major Series B=Puron	Voltage N= 208-230-1 or 208/230-1	Variations V = Variable Speed	Cooling Capacity			0=Not Defined B=Design Variation	Open 0=Not Defined	Open 0=Not Defined	Series A = Original Series



STANDARD FEATURES

FEATURES	Unit Size - Voltage, Series							
	13	24B	25	36	37	48	49	60
Puron Refrigerant	X	X	X	X	X	X	X	X
Variable Speed Rotary Compressor	X	X	X	X	X	X	X	X
Air-Cooled Integrated Inverter Drive	X	X	X	X	X	X	X	X
Louvered Coil Guard	X	X	X	X	X	X	X	X
Field Installed Filter Drier	X	X	X	X	X	X	X	X
Front Seating Service Valves	X	X	X	X	X	X	X	X
Internal Pressure and Temperature Protection	X	X	X	X	X	X	X	X
Suction Pressure Transducer	X	X	X	X	X	X	X	X
High Pressure Switch	X	X	X	X	X	X	X	X
Internal Crankcase Heater	X	X	X	X	X	X	X	X
Enhanced Diagnostics with Evolution® Connex™ Control (version 11 software or newer for 5 stage operation on sizes 24 - 60 and version 12 or higher on size 13.)	X	X	X	X	X	X	X	X
Deluxe Sound Blanket	X	X	X	X	X	X	X	X
Energy Tracking Capability with the Evolution® Connex™ Wall Control (requires software version 13 or later)	X	X	X	X	X	X	X	X
Outdoor Air Temperature Sensor	X	X	X	X	X	X	X	X

X = Standard

PHYSICAL DATA

UNIT SIZE SERIES	13-A	24B-A	25-A	36-A	37-A	48-A	49-A	60-A
Compressor Type	Variable Speed Rotary							
REFRIGERANT	Puron® (R-410A)							
Control	TXV (Puron® Hard Shutoff)							
Charge lb (kg)	4.6 (2.09)	4.80 (2.18)	5.5 (2.50)	6.0 (2.72)	7.5 (3.40)	7.5 (3.40)	9.6 (4.35)	8.30 (3.76)
COND FAN	Forward Swept Propeller Type, Direct Drive							
Air Discharge	Vertical							
Air Qty (CFM)	1600	2500	2500	2500	4500	4500	4800	4500
Motor HP	1/5	1/5	1/3	1/3	1/3	1/3	1/3	1/3
Motor RPM	650	825	1050	1050	850	850	850	900
COND COIL								
Face Area (Sq ft)	11.12	11.12	13.90	13.90	21.50	21.50	27.53	23.65
Fins per In.	20	20	20	20	20	20	25	20
Rows	1	1	1	1	1	1	1	1
Circuits	6	5	6	6	8	8	8	8
VALVE CONNECT. (In. ID)								
Vapor	5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8
Liquid	3/8							
REFRIGERANT TUBES (In. OD)								
Rated Vapor*	3/4	3/4	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8
Max Liquid Line	3/8							

* Units are rated with 25 ft (7.6 m) of lineset length. See Vapor Line Sizing and Cooling Capacity Loss table when using other sizes and lengths of lineset.

Note: See unit Installation Instruction for proper installation.

REFRIGERANT PIPING LENGTH LIMITATIONS

Maximum Line Lengths:

The maximum allowable total equivalent length for air conditioners can vary depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the outdoor unit.

Maximum Line Lengths for Air Conditioner Applications

	MAXIMUM ACTUAL LENGTH ft (m)	MAXIMUM EQUIVALENT LENGTH† ft (m)	MAXIMUM VERTICAL SEPARATION ft (m)
Units on equal level	100 (30.5)	100 (30.5)	N/A
Outdoor unit ABOVE indoor unit	100 (30.5)	100 (30.5)	100 (30.5)
Outdoor unit BELOW indoor unit	See Table 'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit'		

† Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

Maximum Total Equivalent Length† - Outdoor Unit BELOW Indoor Unit

Size	Liquid Line Diameter w/ TXV	AC with Puron® Refrigerant – Maximum Total Equivalent Length† Vertical Separation ft (m) Outdoor unit BELOW indoor unit;						
		0–20 (0 – 6.1)	21–30 (6.4 – 9.1)	31–40 (9.4 – 12.2)	41–50 (12.5 – 15.2)	51–60 (15.5 – 18.3)	61–70 (18.6 – 21.3)	71–80 (21.6 – 24.4)
1–Ton	3/8	100*	100*	100*	100*	100*	100*	100*
2–Ton	3/8	100*	100*	100*	100*	100*	100*	100*
3–Ton	3/8	100*	100*	100*	100*	100*	100*	100*
4–Ton	3/8	100*	100*	100*	100*	100	100	--
5–Ton	3/8	100*	100*	100*	100*	100	100	--

* Maximum actual length not to exceed 100 ft (30.5 m)

† Total equivalent length accounts for losses due to elbows or fitting.

-- = outside acceptable range

LONG LINE APPLICATIONS

Unit is approved for up to 100 ft (30.5 m) equivalent length and vertical separations shown above with no additional accessories. Longer line set applications are not permitted.

COOLING CAPACITY LOSS TABLE

Nominal Size (Btuh)	Line OD (in.)	189BNV Cooling Capacity Loss (%)				
		Total Equivalent Line Length (ft)				
		25	50	75	80	100
13	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	0.1	0.4	0.6	0.7	0.8
24B	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	0.1	0.4	0.6	0.7	0.8
25	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	0.1	0.4	0.6	0.7	0.8
	7/8	0.0	0.1	0.3	0.3	0.4
36	5/8	1.1	2.4	3.7	4.0	5.0
	3/4	0.3	0.8	1.3	1.4	1.8
	7/8	0.0	0.3	0.5	0.6	0.8
37	3/4	0.7	1.6	2.4	2.6	3.2
	7/8	0.3	0.7	1.1	1.2	1.6
48	3/4	0.7	1.6	2.4	2.6	3.2
	1 1/8	0.0	0.1	0.2	0.3	0.4
60	3/4	1.0	2.3	3.5	3.8	4.8
	7/8	0.4	1.0	1.7	1.8	2.3
	1 1/8	0.0	0.1	0.3	0.4	0.5

Rating Line Size in **BOLD**

MIN/MAX AIRFLOW TABLES

The indoor airflow delivered by this system varies significantly based on outdoor temperature, indoor unit combination, and system demand. The airflows on these tables are for duct design considerations. Duct systems capable of these ranges will ensure

the system will deliver full capacity at all outdoor temperatures. Minimum and maximum airflows can be adjusted from these numbers in the Evolution Control Setup screen.

Cooling – Comfort Mode			Minimum Cooling (Dehum or Zoning)
Size	Max Stage 5 Airflow	Max Stage 1 Airflow	
1 – Ton	420	300	300
2 – Ton	739	300	300
3 – Ton	990	300	300
4 – Ton	1389	542	457
5 – Ton	1600	700	600

Cooling – Efficiency Mode		
Size	Max Stage 5 Airflow	Max Stage 1 Airflow
1 – Ton	420	300
2 – Ton	825	585
3 – Ton	1050	600
4 – Ton	1400	875
5 – Ton	1800	975

Cooling Max Mode		
Size	Max Stage 5 Airflow	Max Stage 1 Airflow
1 – Ton (550 cfm/ delivered ton)	780	434
2 – Ton (24)	850	585
2 – Ton (25) (550 cfm/ delivered ton)*	1350	510
3 – Ton	1200	600
4 – Ton	1600	875
4 – Ton – 49	1450	875
5 – Ton	2000	975

* Serial number beginning with 0115E and newer

LEGEND:

Max Capacity Airflow – Stage 5 airflow varies depending on conditions. This is the highest airflow the system will attempt to deliver in this particular mode. Ductwork for non-zoned systems should be sized for this airflow to ensure the system can deliver full capacity when needed. Improper duct design may result in excessive airflow noise and/or cutback occurrences at max airflow conditions.

Highest Min. Capacity Airflow – Stage 1 airflow also varies depending on conditions. In zoned systems, each zone must be capable of delivering this airflow for the system to deliver full capacity into the zone. Otherwise, airflow may be diverted to other zones or cutback may occur.

Min Cooling (Dehum or Zoning) – Lowest airflow the system will deliver. May operate down to this airflow in dehumidification mode or in zoning applications where ductwork restrictions have caused the blower to cut-back.

ELECTRICAL DATA

UNIT SIZE – VOLTAGE, SERIES	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MAX FUSE ** or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		
13 – A	208 – 230 – 1	253	197	N/A	10.3	0.58	13.5	20
24B – A				N/A	10.3	0.58	13.5	20
25 – A				N/A	17.7	1.20	23.6	40
36 – A				N/A	18.4	1.20	24.2	40
37 – A				N/A	19.6	1.20	26.0	40
48 – A				N/A	20.9	1.20	27.3	40
49 – A				N/A	19.6	1.40	26.0	40
60 – A				N/A	30.9	1.40	40.0	60

* Permissible limits of the voltage range at which the unit will operate satisfactorily

** Time – Delay fuse.

FLA – Full Load Amps

LRA – Locked Rotor Amps

MCA – Minimum Circuit Amps

RLA – Rated Load Amps

NOTE: Control circuit is 24V on all units and requires external power source. Copper wire must be used from service disconnect to unit. All motors/compressors contain internal overload protection.

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE – VOLTAGE, SERIES	
13 – A	If an Evolution Control is installed, subcooling recommendation displayed in Charging Mode must be followed. If not, subcooling chart shown on the charging label must be followed
24B – A	
25 – A	
36 – A	
37 – A	
48 – A	
49 – A	
60 – A	

RPM-CAPACITY-SOUND (dBA)*

STAGE #	COMP RPM	CAPACITY %	SOUND (dBA)
189BNV013			
1	1500	58%	58
2	1867	72%	59
3	2100	81%	59
4	2350	90%	59
5	2600	100%	60
189BNV024B			
1	1500	35%	55
2	2566	56%	60
3	3150	69%	65
4	3950	87%	66
5	4700	100%	68
189BNV025			
1	1200	36%	56
2	1900	58%	61
3	2400	73%	63
4	2600	79%	67
5	3300	100%	69
189BNV036			
1	1200	25%	56
2	2400	50%	61
3	3300	69%	65
4	4200	88%	69
5	4800	100%	71
189BNV037			
1	1200	40%	56
2	1800	60%	63
3	2200	73%	67
4	2600	87%	67
5	3000	100%	68
189BNV048			
1	1500	35%	62
2	2460	57%	65
3	2800	65%	67
4	3650	84%	70
5	4320	100%	72
189BNV049			
1	1200	38%	57
2	1840	59%	62
3	2300	74%	66
4	2700	87%	68
5	3120	100%	73
189BNV060			
1	1200	32%	57
2	2180	55%	61
3	2850	70%	64
4	3700	90%	70
5	4140	100%	72

*Estimated sound for stages 2, 3, and 4
For 2-stage operation: Low = Stage 2, High = Stage 5

SOUND POWER LEVEL (dBA)

Unit Size – Voltage, Series	Typical Octave Band Spectrum (without tone adjustment)	Min Speed Cooling	Max Speed Cooling
013-A	Freq (Hz)	1500 RPM	2600 RPM
	125	62.0	64.0
	250	61.0	59.5
	500	54.0	55.0
	1000	53.0	57.0
	2000	49.0	50.0
	4000	42.0	49.5
	8000	47.5	49.5
	Sound Rating (dBA)	59	63
024B-A	Freq (Hz)	1500 RPM	4700 RPM
	125	63.0	67.5
	250	57.0	66.5
	500	51.5	61.5
	1000	47.5	58.0
	2000	41.5	54.5
	4000	38.0	57.5
	8000	45.5	53.5
	Sound Rating (dBA)	55	67
025-A	Freq (Hz)	1200 RPM	3300 RPM
	125	59.5	70.0
	250	56.0	67.5
	500	54.0	67.5
	1000	50.0	63.5
	2000	41.5	59.0
	4000	35.0	58.0
	8000	48.0	51.5
	Sound Rating (dBA)	55	69
036-A	Freq (Hz)	1200 RPM	4800 RPM
	125	59.5	70.0
	250	56.0	68.0
	500	54.0	66.0
	1000	50.0	64.0
	2000	41.5	61.5
	4000	35.0	62.0
	8000	48.0	55.5
	Sound Rating (dBA)	55	72
037-A	Freq (Hz)	1200 RPM	3000 RPM
	125	64.0	74.0
	250	61.0	68.0
	500	57.5	66.5
	1000	53.5	61.5
	2000	49.0	59.5
	4000	42.0	57.5
	8000	44.0	51.0
	Sound Rating (dBA)	60	69
048-A	Freq (Hz)	1500 RPM	4320 RPM
	125	67.0	73.5
	250	63.0	71.5
	500	57.0	69.5
	1000	54.5	64.5
	2000	51.0	62.5
	4000	54.0	62.5
	8000	47.5	54.5
	Sound Rating (dBA)	64	72
49-A	Freq (Hz)	1200	3120
	125	44.5	52.0
	250	48.5	63.0
	500	50.5	63.5
	1000	51.5	67.5
	2000	47.5	61.5
	4000	43.5	58.5
	8000	47.5	54.5
	Sound Rating (dBA)	57	73.0
060-A	Freq (Hz)	1200 RPM	4140 RPM
	125	61.5	71.5
	250	59.5	73.0
	500	54.5	70.0
	1000	50.5	65.0
	2000	44.0	62.0
	4000	41.5	60.5
	8000	49.0	58.0
	Sound Rating (dBA)	57	72

NOTE: Tested in compliance with AHRI 270-1995 but not listed with AHRI.

ACCESSORIES

KIT NUMBER	KIT NAME	13-A	24B-A	25-A	36-A	37-A	48-A	49-A	60-A
KSASF0101AAA	SPRT FEET KIT						X	X	X
KSASF0201AAA	SPRT FEET KIT	X	X	X	X	X			
KSATX0201PUR	TXV KIT	X	X	X					
KSATX0301PUR	TXV KIT				X	X			
KSATX0401PUR	TXV KIT						X	X	
KSATX0501PUR	TXV KIT								X
KSBTX0201PUR	TXV KIT	X	X	X					
KSBTX0301PUR	TXV KIT				X	X			
KSBTX0401PUR	TXV KIT						X	X	

x = Accessory S = Standard

Accessory Description and Usage

Support Feet

Raises unit above base pad. 2 and 3 ton kit contains 5 feet for stable installation with small base. 4 and 5 ton kit contains 4 feet.

Usage Guideline:

Recommended for rooftop applications

Thermostatic Expansion Valve (TXV)

A modulating flow-control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator.

Usage Guideline:

Required if indoor unit does not already contain Puron® refrigerant TXV

CONTROLS

SYSTXBECN01-A	Evolution Connex Control (non-Wi-Fi) version 11 or newer
SYSTXBEC01-A	Evolution Connex Control (Wi-Fi)
SYSTXBECW01-A	Evolution Connex Control with Wi-Fi & Wireless Access Point
SYSTXBBNIM01	Evolution Network Interface Module (Connects Heat Recovery and Energy Recovery Ventilators on non-zoning applications.)
SYSTXBB4ZC01	Evolution 4-Zone Damper Control Module
SYSTXBBSMS01-E	Evolution Smart Sensor

THERMOSTATS

PART NUMBER	PROGRAM	GAS	ELECTRIC	HEAT	COOL
T6-PAC01	7-Day	√	√	1	1
T6-NRH01-A	NP	√	√	3	2
T6-NAC01	NP	√	√	1	1

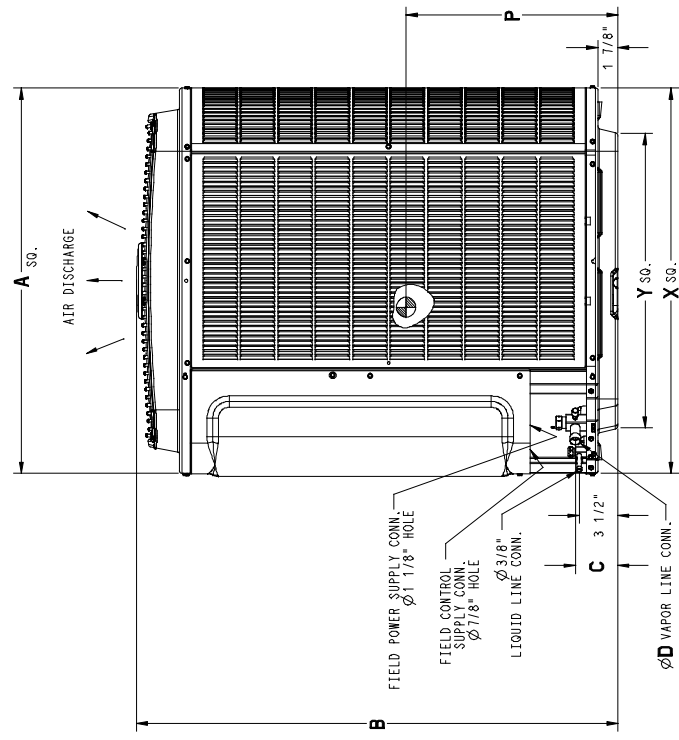
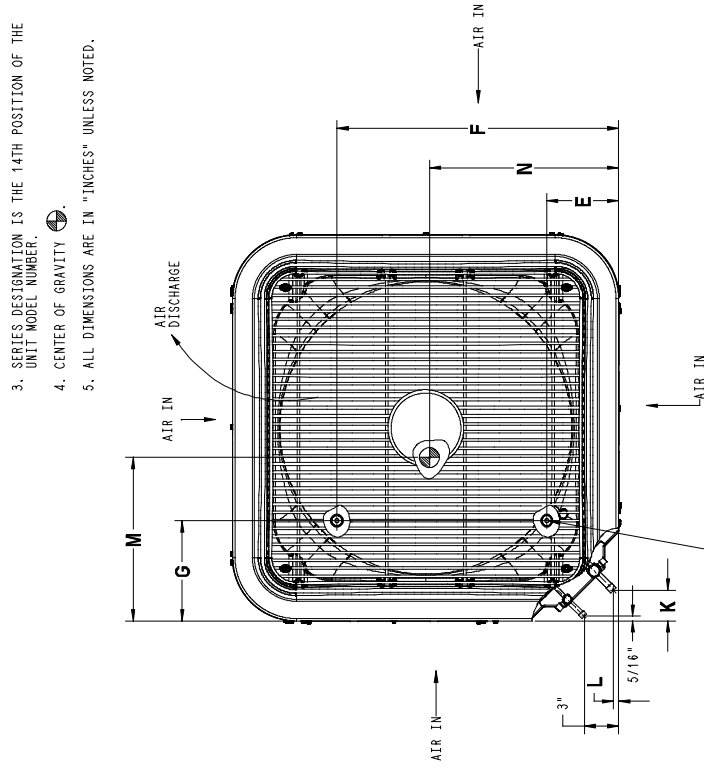
DIMENSIONS - ENGLISH

UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (lbs)	SHIPPING WEIGHT (lbs)	SHIPPING DIMENSIONS (L x W x H)
189BNV0130	A	X 0 0 0	23 1/8"	31 13/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/4"	11 1/4"	14 1/2"	139	182	25 1/4" X 25 1/4" X 35 5/8"
189BNV0248	A	X 0 0 0	23 1/8"	31 13/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/4"	11 1/4"	14 1/2"	139	182	25 1/4" X 25 1/4" X 35 5/8"
189BNV0250	A	X 0 0 0	23 1/8"	38 1/2"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	10 3/4"	10 3/4"	18 1/4"	180	186	25 1/4" X 25 1/4" X 43 3/8"
189BNV0360	A	X 0 0 0	23 1/8"	38 1/2"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	10 3/4"	10 3/4"	18 1/4"	160	186	25 1/4" X 25 1/4" X 43 3/8"
189BNV0370	A	X 0 0 0	31 3/16"	38 15/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	14 1/2"	14 5/8"	18 3/4"	216	255	33 3/8" X 33 3/8" X 46 1/8"
189BNV0480	A	X 0 0 0	31 3/16"	38 15/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	14 1/2"	14 5/8"	18 3/4"	216	255	33 3/8" X 33 3/8" X 46 1/8"
189BNV0490	A	X 0 0 0	35"	43 11/16"	3 7/8"	7/8"	6 9/16"	28 7/16"	9 1/8"	2 15/16"	5/8"	16 1/4"	16 1/4"	21 1/4"	282	300	36 1/8" X 39 1/4" X 50 3/16"
189BNV0600	A	X 0 0 0	31 3/16"	42 5/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	16 1/2"	15"	20"	241	282	33 3/8" X 33 3/8" X 49 9/16"

X = YES
O = NO

208/230-160	460-3-60
208/230-160	208/230-3-60

- NOTES:
- ALLOW 30" CLEARANCE TO SERVICE SIDE OF UNIT.
48" ABOVE UNIT, 6" ON ONE SIDE, 12" ON REMAINING SIDE,
AND 24" BETWEEN UNITS FOR PROPER AIRFLOW.
 - MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING
MODE IS 55°F, MAX. 115°F.
 - SERIES DESIGNATION IS THE 14TH POSITION OF THE
UNIT MODEL NUMBER.
 - CENTER OF GRAVITY
 - ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.



UNIT SIZE	"X" MIN. GROUND MOUNTING PAD APPLICATION DIMENSIONS	"Y" MIN. ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS
13, 24, 25, 36	23 1/8"	17 3/4"
37, 48, 60	31 3/16"	20 7/16"
49	35"	23"
		26 3/4"

MEASUREMENT - ENGLISH

DIMENSIONS - SI

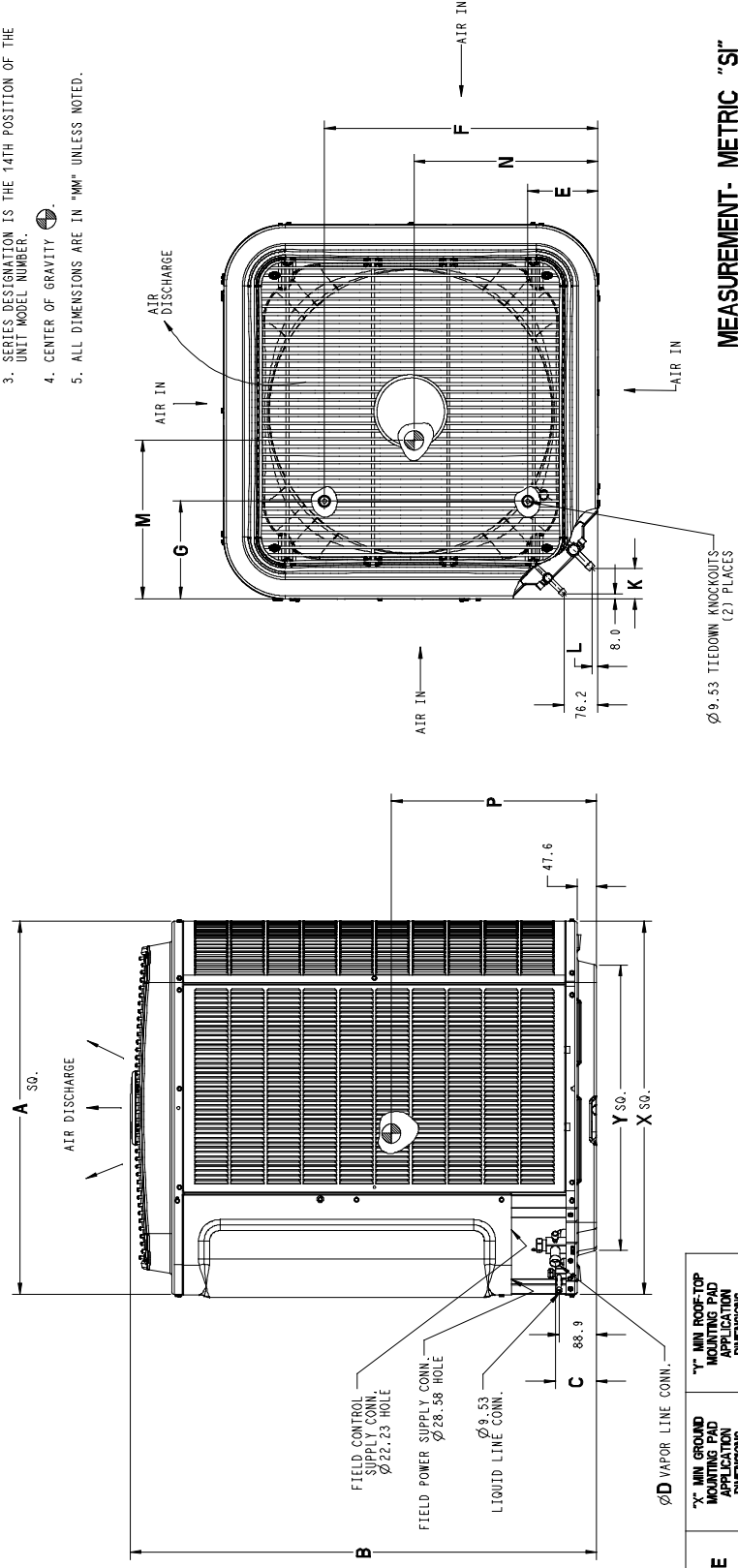
UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (Kgs)	SHIPPING WEIGHT (Kgs)	SHIPPING DIMENSIONS (L x W x H)
1898NV0130	A	X 0 0 0	587.3	807.3	96.1	19.1	112.7	458.8	198.4	71.4	12.7	285.8	285.8	368.3	63.0	73.5	641.5 X 641.5 X 905.2
1898NV024B	A	X 0 0 0	587.3	807.3	96.1	19.1	112.7	458.8	198.4	71.4	12.7	285.8	285.8	368.3	63.0	73.5	641.5 X 641.5 X 905.2
1898NV0250	A	X 0 0 0	587.3	980.1	96.1	19.1	112.7	458.8	198.4	71.4	12.7	273.1	273.1	463.6	72.6	84.4	641.5 X 641.5 X 1102.2
1898NV0360	A	X 0 0 0	587.3	980.1	96.1	19.1	112.7	458.8	198.4	71.4	12.7	273.1	273.1	463.6	72.6	84.4	641.5 X 641.5 X 1102.2
1898NV0370	A	X 0 0 0	792.2	988.5	98.4	22.2	166.7	627.1	231.8	74.6	15.9	368.3	371.5	476.3	98.0	115.7	846.6 X 846.6 X 1172.2
1898NV0480	A	X 0 0 0	792.2	988.5	98.4	22.2	166.7	627.1	231.8	74.6	15.9	368.3	371.5	476.3	98.0	115.7	846.6 X 846.6 X 1172.2
1898NV0490	A	X 0 0 0	889.0	1111.0	98.4	22.2	166.7	722.3	231.8	74.6	15.9	412.8	412.8	539.8	118.8	136.1	917.7 X 997.7 X 1274.9
1898NV0600	A	X 0 0 0	792.2	1074.9	98.4	22.2	166.7	627.1	231.8	74.6	15.9	419.1	381.0	508.0	109.3	127.9	846.6 X 846.6 X 1258.6

X = YES
O = NO

208/230-160	208/230-3-60	460-3-60
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NOTES:

- ALLOW 762.0 CLEARANCE TO SERVICE SIDE OF UNIT. 710.0 TO REMOVE UNIT. 152.4 ON SERVICE SIDE AND 304.8 ON REMAINING SIDE, AND 609.6 BETWEEN UNITS FOR PROPER AIRFLOW.
- MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 13°C, MAX. 46°C.
- SERIES DESIGNATION IS THE 14TH POSITION OF THE UNIT MODEL NUMBER.
- CENTER OF GRAVITY
- ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.



UNIT SIZE	"X" MIN. GROUND MOUNTING PAD APPLICATION DIMENSIONS	"Y" MIN. ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS
13, 24, 25, 36	587.4	451.3
37, 48, 60	634.0	518.5
49	792.2	593.2
	869.0	679.7

MEASUREMENT- METRIC "SI"

TESTED AHRI COMBINATION RATINGS*

NOTE: Ratings contained in this document are subject to change at any time.

For AHRI ratings certificates, please refer to the AHRI directory www.ahridirectory.org
 Additional ratings and system combinations can be accessed via the Bryant database at: www.MyBryantRatings.com

Outdoor Model Number	Indoor Model Number	Furnace Model Number	Cooling Capacity High	EER	SEER	ID CFM
189BNV013*0**A*	FE4ANF002L+UI		12800	13.0	17.0	420
189BNV024B0**A*	FE4ANF002L+UI		24000	11.0	17.5	825
189BNV025*0**A*	FE4AN(B,F)005L+UI		24000	12.5	19.0	825
189BNV036*0**A*	FE4AN(B,F)005L+UI		35000	10.5	18.0	1050
189BNV037*0**A*	FE4ANB006L+UI		33600	13.0	18.5	1050
189BNV048*0**A*	FE4ANB006L+UI		46500	11.0	18.0	1400
189BNV049*0**A*	CNPV*6024AL*+UI	58CV(A,X)155-22	44500	12.5	19.0	1200
189BNV060*0**A*	FE4ANB006L+UI		57000	10.0	16.5	1600

* Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:

Cooling Standard: 80°F (27°C) db 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.

EER — Energy Efficiency Ratio

SEER — Seasonal Energy Efficiency Ratio

UI — User Interface

NOTE: Ratings contained in this document are subject to change at any time.

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE

EDB °F (°C)	EVAP. AIR °F (°C)	188BNV013 / FE4ANF02L Efficiency Needs Condenser Entering Air Temperature F (°C)																							
		115 (46.1)			105 (40.5)			95 (35)			85 (29.4)			75 (23.9)			65 (18.3)								
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**				
75 (23.9)	72 (22.2)		12.59	5.26	1.36		13.48	5.59	1.17		14.21	5.86	0.98		15.07	6.18	0.81		15.92	6.51	0.65		16.76	6.83	0.50
	67 (19.4)		11.37	7.16	1.35		12.17	7.50	1.17		12.84	7.79	0.98		13.61	8.13	0.82		14.37	8.46	0.67		15.11	8.79	0.53
	63 (17.2)	420	10.47	8.84	1.34		11.21	8.99	1.17	420	11.83	9.30	0.99	420	12.53	9.64	0.83		13.22	9.98	0.69		13.89	10.32	0.56
	57 (13.9)		9.83	9.83	1.34		10.40	10.40	1.17		10.89	10.89	0.99		11.42	11.42	0.84		11.93	11.93	0.71		12.42	12.42	0.59
	67 (19.4)		12.55	7.18	1.36		13.44	7.52	1.17		14.16	7.81	0.98		15.02	8.15	0.81		15.87	8.49	0.65		16.71	8.83	0.50
80 (26.7)	67 (19.4)	420	11.34	9.04	1.35		12.13	9.40	1.17	420	12.80	9.71	0.98	420	13.57	10.07	0.82		14.33	10.42	0.67		15.07	10.76	0.53
	63 (17.2)		10.52	10.47	1.35		11.23	10.87	1.17	420	11.84	11.20	0.99	420	12.54	11.57	0.83		13.22	11.93	0.69		13.88	12.28	0.56
	57 (13.9)		10.48	10.48	1.34		11.08	11.08	1.17		11.59	11.59	0.99		12.16	12.16	0.83		12.70	12.70	0.70		13.22	13.22	0.57
	67 (19.4)		10.14	4.18	1.01		10.85	4.45	0.90		12.12	5.12	0.77		12.91	5.41	0.66		13.68	5.70	0.54		14.43	5.98	0.42
	67 (19.4)	300	9.12	5.54	1.01		9.75	5.82	0.91	300	10.91	7.08	0.79	420	11.61	7.38	0.68		12.29	7.68	0.57		12.95	7.97	0.47
80 (26.7)	63 (17.2)		8.38	6.82	1.01		8.86	6.90	0.91		10.04	8.80	0.79	420	10.67	8.92	0.69		11.28	9.23	0.60		11.88	9.53	0.50
	57 (13.9)		7.73	7.73	1.00		8.17	8.17	0.82		9.57	9.57	0.80		10.07	10.07	0.70		10.54	10.54	0.61		11.01	11.01	0.52
	67 (19.4)	300	10.10	5.57	1.01		10.82	5.86	0.90		12.07	7.11	0.77	420	12.86	7.42	0.66		13.63	7.73	0.54		14.38	8.03	0.42
	63 (17.2)		9.09	6.92	1.01		9.73	7.22	0.91		10.89	9.03	0.79	420	11.58	9.36	0.68		12.25	9.68	0.57		12.91	9.99	0.47
	57 (13.9)		8.39	7.99	1.01		8.97	8.29	0.91		10.24	10.24	0.79	420	10.78	10.78	0.69		11.34	11.19	0.59		11.92	11.53	0.50
75 (23.9)	67 (19.4)		8.23	8.23	1.01		8.70	8.70	0.91		10.23	10.23	0.79		10.75	10.75	0.69		11.26	11.26	0.60		11.76	11.76	0.50
	67 (19.4)	200	9.09	3.68	0.77		9.09	3.68	0.77		8.44	3.80	0.51	300	9.06	3.83	0.44		9.67	4.05	0.36		10.28	4.28	0.28
	63 (17.2)		7.65	4.36	0.83		8.17	4.60	0.77		7.61	5.05	0.51	300	8.16	5.29	0.45		8.70	5.53	0.39		9.23	5.77	0.31
	57 (13.9)		7.04	5.08	0.82		7.51	5.32	0.77		7.02	6.18	0.51	300	7.51	6.44	0.46		8.00	6.69	0.40		8.46	6.93	0.34
	67 (19.4)		6.23	6.15	0.81		6.63	6.39	0.77		6.75	6.75	0.52		7.16	7.16	0.47		7.54	7.54	0.41		7.90	7.90	0.36
80 (26.7)	67 (19.4)	200	8.48	4.39	0.83		9.06	4.63	0.77		8.40	5.06	0.51		9.02	5.30	0.44		9.64	5.55	0.36		10.24	5.80	0.28
	63 (17.2)		7.63	5.29	0.83		8.15	5.54	0.77		7.59	6.49	0.51	300	8.14	6.76	0.45		8.68	7.02	0.39		9.21	7.28	0.31
	57 (13.9)		7.03	6.01	0.82		7.49	6.26	0.77		7.23	7.23	0.51	300	7.66	7.66	0.46		8.08	8.08	0.40		8.50	8.42	0.33
	67 (19.4)		6.58	6.58	0.82		6.94	6.94	0.77		7.22	7.22	0.51		7.65	7.65	0.46		8.06	8.06	0.40		8.46	8.46	0.34
	57 (13.9)		8.50	3.45	0.83		9.09	3.68	0.77		8.44	3.80	0.51	300	9.06	3.83	0.44		9.67	4.05	0.36		10.28	4.28	0.28

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 — Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR EWB °F (°C)	189BNV024B / FE4ANF02L Efficiency Mode Condenser Entering Air Temperature F (°C)																				
		115 (46.1)			105 (40.5)			95 (35)			85 (29.4)			75 (23.9)			65 (18.3)					
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	
STAGE 5																						
75 (23.9)	72 (22.2)		28.43	9.90	2.85	25.03	10.49	2.52	28.46	11.02	2.20	28.00	11.80	1.91	29.51	12.16	1.63					
	67 (19.4)		21.30	13.70	2.81	22.76	14.32	2.49	24.07	14.89	2.18	25.46	15.50	1.90	26.82	16.10	1.63					
	63 (17.2)	825	19.74	16.69	2.78	21.07	17.34	2.47	22.29	17.94	2.17	23.56	18.57	1.89	24.85	19.20	1.63	825				
	57 (13.9)		18.74	18.74	2.76	19.81	19.81	2.45	20.78	20.78	2.15	21.79	21.79	1.88	22.78	22.78	1.63					
	67 (19.4)		23.36	13.70	2.85	24.96	14.32	2.52	26.39	14.88	2.20	27.93	15.49	1.91	29.44	16.09	1.63					
80 (26.7)	72 (22.2)		21.24	17.45	2.81	22.89	18.11	2.49	24.00	18.72	2.18	25.39	19.36	1.90	26.76	19.99	1.63					
	67 (19.4)	825	19.96	19.96	2.78	21.18	20.93	2.47	22.35	21.63	2.17	23.61	22.94	1.89	24.86	23.02	1.63	825				
	63 (17.2)		19.93	19.93	2.78	21.05	21.05	2.47	22.07	22.07	2.16	23.12	23.12	1.89	24.16	24.16	1.63					
	57 (13.9)		16.60	7.18	1.72	17.75	7.59	1.53	18.75	7.96	1.31	19.88	8.37	1.12	20.99	8.78	0.94					
	67 (19.4)	650	15.01	10.22	1.72	16.06	10.66	1.53	16.99	11.06	1.32	18.00	11.49	1.14	18.99	11.92	0.97	650				
80 (26.7)	72 (22.2)		13.88	12.59	1.71	14.82	13.06	1.54	15.70	13.48	1.32	16.62	13.94	1.15	17.52	14.38	0.99					
	67 (19.4)		13.48	13.48	1.71	14.25	14.25	1.54	14.97	14.97	1.32	15.70	15.70	1.16	16.40	16.40	1.01					
	63 (17.2)	650	16.54	10.24	1.72	17.89	10.68	1.53	18.68	11.07	1.31	19.81	11.51	1.12	20.92	11.94	0.94					
	57 (13.9)		14.98	13.23	1.72	16.01	13.70	1.53	16.94	14.13	1.32	17.95	14.59	1.14	18.93	15.05	0.97					
	67 (19.4)	650	14.42	14.42	1.72	15.24	15.24	1.53	15.99	15.99	1.32	16.77	16.77	1.15	17.61	17.39	0.99	650				
75 (23.9)	72 (22.2)		14.40	14.40	1.72	15.22	15.22	1.53	15.96	15.96	1.32	16.74	16.74	1.15	17.50	17.50	0.99					
	67 (19.4)		14.01	6.30	1.38	15.00	6.65	1.24	9.25	4.60	0.54	9.85	4.81	0.46	10.45	5.01	0.37					
	63 (17.2)	650	12.64	9.35	1.39	13.52	9.73	1.25	8.32	7.38	0.55	8.85	7.61	0.48	9.37	7.84	0.40	585				
	57 (13.9)		11.71	11.62	1.39	12.49	12.06	1.26	8.11	8.11	0.55	8.56	8.56	0.46	9.00	9.00	0.41					
	67 (19.4)		11.67	11.67	1.39	12.35	12.35	1.26	8.11	8.11	0.55	8.55	8.55	0.48	8.98	8.98	0.41					
80 (26.7)	72 (22.2)		13.95	9.39	1.38	14.94	9.76	1.24	9.20	7.43	0.54	9.80	7.66	0.45	10.39	7.90	0.37					
	67 (19.4)		12.66	12.32	1.39	13.52	12.75	1.25	8.77	8.77	0.54	9.26	9.26	0.47	9.73	9.73	0.39					
	63 (17.2)	650	12.55	12.55	1.39	13.28	13.28	1.26	8.77	8.77	0.54	9.25	9.25	0.47	9.72	9.72	0.39	585				
	57 (13.9)		12.53	12.53	1.39	13.26	13.26	1.26	8.76	8.76	0.54	9.24	9.24	0.47	9.71	9.71	0.39					
	67 (19.4)		11.04	5.22	0.29	11.04	5.22	0.29	11.04	5.22	0.29	11.04	5.22	0.29	11.04	5.22	0.29					

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 — Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB *F (°C)	EVAP. AIR	189BNV25/FE4AHF005 Efficiency Mode Condenser Entering Air Temperature F (°C)																			
		115 (46.1)			105 (40.5)			95 (35)			85 (29.4)			75 (23.9)			65 (18.3)				
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**
75 (23.9)	72 (22.2)	825	23.68	9.99	2.51	25.12	10.51	2.21	26.43	11.00	1.90	27.77	11.50	1.62	29.08	11.99	1.34	825	30.34	12.47	1.07
	67 (19.4)		21.55	13.82	2.50	22.88	14.39	2.21	24.10	14.93	1.92	25.35	15.48	1.65	26.55	16.01	1.39				
	63 (17.2)		19.97	16.81	2.49	21.22	17.43	2.22	22.38	18.00	1.93	23.54	18.59	1.67	24.67	19.16	1.42				
	57 (13.9)		18.96	18.96	2.48	19.97	19.97	2.21	20.91	20.91	1.94	21.84	21.84	1.69	22.75	22.75	1.45				
	72 (22.2)		23.52	13.77	2.50	24.94	14.33	2.20	26.25	14.85	1.90	27.59	15.38	1.61	28.89	15.91	1.34				
80 (26.7)	67 (19.4)	825	21.46	17.56	2.50	22.78	18.18	2.21	24.00	18.75	1.92	25.24	19.33	1.65	26.45	19.90	1.39	825	27.61	20.46	1.13
	63 (17.2)		20.19	20.19	2.49	21.30	21.10	2.22	22.43	21.76	1.93	23.57	22.40	1.67	24.68	23.02	1.42				
	57 (13.9)		20.15	20.15	2.49	21.20	21.20	2.22	22.18	22.18	1.93	23.15	23.15	1.67	24.09	24.09	1.43				
	72 (22.2)		15.55	6.67	1.25	16.54	7.02	1.17	17.29	7.30	1.03	18.23	7.64	0.91	19.14	7.98	0.77				
	67 (19.4)		14.11	9.43	1.25	15.02	9.82	1.18	15.76	10.15	1.05	16.63	10.52	0.95	17.47	10.89	0.82				
75 (23.9)	63 (17.2)	650	13.09	11.60	1.25	13.94	12.02	1.19	14.67	12.38	1.06	15.47	12.78	0.97	16.26	13.17	0.85	650	17.02	13.56	0.71
	57 (13.9)		12.65	12.65	1.25	13.36	13.36	1.20	13.97	13.97	1.07	14.62	14.62	0.98	15.26	15.26	0.87				
	72 (22.2)		15.43	9.41	1.24	16.40	9.79	1.17	17.14	10.08	1.03	18.08	10.45	0.91	18.99	10.81	0.77				
	67 (19.4)		14.07	12.14	1.25	14.97	12.56	1.18	15.70	12.91	1.05	16.56	13.31	0.94	17.39	13.70	0.82				
	63 (17.2)		13.49	13.49	1.25	14.23	14.23	1.19	14.84	14.84	1.06	15.54	15.49	0.96	16.30	15.95	0.84				
80 (26.7)	57 (13.9)	650	13.47	13.47	1.25	14.20	14.20	1.19	14.81	14.81	1.06	15.50	15.50	0.96	16.17	16.17	0.85	650	17.05	16.38	0.71
	72 (22.2)		12.12	5.39	0.73	12.92	5.68	0.75	10.55	4.66	0.46	11.18	4.89	0.44	11.84	5.13	0.39				
	67 (19.4)		10.98	7.95	0.74	11.73	8.27	0.77	9.58	6.85	0.47	10.16	7.10	0.47	10.74	7.35	0.43				
	63 (17.2)		10.22	9.94	0.74	10.91	10.29	0.77	8.93	8.56	0.49	9.46	8.83	0.49	10.00	9.10	0.46				
	57 (13.9)		10.14	10.14	0.74	10.74	10.74	0.78	8.82	8.82	0.49	9.29	9.29	0.50	9.75	9.75	0.47				
80 (26.7)	72 (22.2)	650	11.99	7.94	0.73	12.79	8.25	0.75	10.41	6.81	0.46	11.06	7.06	0.44	11.73	7.32	0.38	585	12.41	7.59	0.28
	67 (19.4)		10.97	10.45	0.74	11.70	10.80	0.76	9.55	8.98	0.47	10.13	9.25	0.47	10.71	9.53	0.43				
	63 (17.2)		10.83	10.83	0.74	11.46	11.46	0.77	9.40	9.40	0.48	9.89	9.89	0.48	10.37	10.37	0.44				
	57 (13.9)		10.82	10.82	0.74	11.44	11.44	0.77	9.39	9.39	0.48	9.87	9.87	0.48	10.35	10.35	0.44				
	72 (22.2)		12.52	5.37	0.28	12.52	5.37	0.28	12.52	5.37	0.28	12.52	5.37	0.28	12.52	5.37	0.28				

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	188BNV08E / FE4ANF05 Efficiency Mode Condenser Entering Air Temperature °F (°C)																						
		115 (46.1)			105 (40.5)			95 (35)			85 (29.4)			75 (23.9)			65 (18.3)							
		ID SCFM	Capacity MBtuh Total	Total Sys. KW** Sens†	ID SCFM	Capacity MBtuh Total	Total Sys. KW** Sens†	ID SCFM	Capacity MBtuh Total	Total Sys. KW** Sens†	ID SCFM	Capacity MBtuh Total	Total Sys. KW** Sens†	ID SCFM	Capacity MBtuh Total	Total Sys. KW** Sens†	ID SCFM	Capacity MBtuh Total	Total Sys. KW** Sens†					
STAGE 5																								
75 (23.9)	72 (22.2)	34.24	14.18	4.44	1050	36.41	14.99	3.89	1050	38.29	15.70	3.36	1050	40.30	16.47	2.87	1050	42.28	17.24	2.41				
	67 (19.4)	31.38	19.07	4.38		33.85	19.95	3.85		35.13	20.75	3.34		36.99	21.60	2.87		38.79	22.42	2.43				
	63 (17.2)	29.21	22.90	4.33		31.07	23.84	3.81		32.74	24.70	3.31		34.48	25.59	2.86		36.17	26.47	2.44				
	57 (13.9)	27.05	27.05	4.27		28.50	28.50	3.77		29.85	29.85	3.28		31.20	31.20	2.84		32.85	32.25	2.44				
	72 (22.2)	34.04	18.92	4.44		36.21	19.79	3.88		38.09	20.56	3.35		40.10	21.39	2.86		42.08	22.22	2.41				
80 (26.7)	67 (19.4)	31.25	23.78	4.38	1050	33.23	24.72	3.84	1050	35.00	25.57	3.33	1050	36.86	26.47	2.86	1050	38.66	27.35	2.42				
	63 (17.2)	29.21	27.55	4.33		31.05	28.56	3.81		32.70	29.48	3.31		34.43	30.44	2.86		36.11	31.38	2.43				
	57 (13.9)	28.61	28.61	4.32		30.14	30.14	3.80		31.53	31.53	3.30		32.95	32.95	2.85		34.31	34.31	2.44				
	72 (22.2)	21.81	9.32	1.96		900	23.25	9.85		1.83	900	24.29		10.24	1.67	900		25.66	10.75	1.50	900	27.01	11.26	1.31
	67 (19.4)	19.85	13.12	1.96			21.18	13.71		1.84		22.21		14.19	1.68			23.48	14.77	1.52		24.72	15.33	1.35
63 (17.2)	18.41	16.08	1.95	19.86	16.73		1.85	20.68	17.29	1.68		21.87	17.91	1.54	23.02		18.53	1.37						
57 (13.9)	17.71	17.71	1.95	18.75	18.75		1.85	19.63	19.63	1.68		20.61	20.61	1.54	21.57		21.57	1.39						
72 (22.2)	21.64	13.06	1.95	23.07	13.65		1.83	24.08	14.08	1.66		25.46	14.85	1.49	26.81		15.21	1.31						
80 (26.7)	67 (19.4)	19.77	16.83	1.95	900	21.09	17.48	1.84	900	22.11	18.01	1.67	900	23.37	18.64	1.52	900	24.60	19.26	1.35				
	63 (17.2)	18.86	18.86	1.95		19.85	19.95	1.84		20.82	20.82	1.68		21.94	21.87	1.53		23.07	22.38	1.37				
	57 (13.9)	18.83	18.83	1.95		19.91	19.91	1.84		20.79	20.79	1.68		21.82	21.82	1.53		22.82	22.82	1.37				
	72 (22.2)	14.74	6.58	0.98		800	15.80	6.96		1.00	800	10.82		4.81	0.48	800		11.57	5.09	0.46	800	12.38	5.38	0.39
	67 (19.4)	13.36	9.71	0.98			14.34	10.16		1.02		9.83		7.10	0.49			10.52	7.42	0.49		11.24	7.76	0.44
63 (17.2)	12.47	12.13	0.98	13.37	12.65		1.03	9.17	8.88	0.51		9.81	9.25	0.51	10.45		9.62	0.47						
57 (13.9)	12.37	12.37	0.98	13.18	13.18		1.03	9.09	9.09	0.51		9.66	9.66	0.52	10.22		10.22	0.48						
72 (22.2)	14.58	9.69	0.97	15.63	10.12		1.00	10.67	7.06	0.47		11.46	7.39	0.46	12.27		7.73	0.39						
80 (26.7)	67 (19.4)	13.36	12.75	0.98	800	14.32	13.27	1.02	800	9.80	9.32	0.49	800	10.49	9.70	0.49	800	11.21	10.08	0.44				
	63 (17.2)	13.20	13.20	0.98		14.04	14.04	1.02		9.68	9.68	0.49		10.28	10.28	0.49		10.89	10.89	0.45				
	57 (13.9)	13.18	13.18	0.98		14.02	14.02	1.02		9.67	9.67	0.49		10.26	10.26	0.49		10.87	10.87	0.45				
	72 (22.2)	14.74	6.58	0.98		15.80	6.96	1.00		10.82	4.81	0.48		11.57	5.09	0.46		12.38	5.38	0.39				
	67 (19.4)	13.36	9.71	0.98		14.34	10.16	1.02		9.83	7.10	0.49		10.52	7.42	0.49		11.24	7.76	0.44				

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 — Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR EWB °F (°C)	115 (46.1)					105 (40.5)					95 (35)					85 (29.4)					75 (23.9)					65 (18.3)					
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	Total Sys. KW**	
75 (23.9)	72 (22.2)		32.70	13.63	3.49		34.98	14.48	3.05		37.03	15.26	2.59		39.26	16.11	2.21		41.44	16.95	1.86		43.61	17.78	1.54							
	67 (19.4)	1050	31.53	19.22	3.08	1050	31.81	19.44	3.03		33.70	20.30	2.58	1050	35.71	21.22	2.21		37.89	22.14	1.87	1050	39.65	23.05	1.56							
	63 (17.2)		27.56	22.83	3.44		29.48	23.32	3.02		31.25	24.26	2.58		33.12	25.24	2.21		34.94	26.21	1.88		36.75	27.17	1.58							
	57 (13.9)		25.78	25.78	3.41		27.31	27.31	3.00		28.73	28.73	2.56		30.19	30.19	2.21		31.62	31.62	1.89		33.01	33.01	1.61							
	72 (22.2)		32.58	18.47	3.49		34.88	19.41	3.05		36.91	20.26	2.59		39.14	21.19	2.21		41.32	22.11	1.86		43.48	23.02	1.54							
80 (26.7)	67 (19.4)	1050	31.43	24.01	3.08	1050	31.71	24.30	3.03		33.60	25.24	2.58	1050	35.61	26.24	2.21		37.59	27.23	1.87	1050	39.55	28.22	1.56							
	63 (17.2)		27.61	27.02	3.44		29.49	28.13	3.02		31.23	29.15	2.58		33.10	30.22	2.21		34.91	31.27	1.88		36.70	32.31	1.58							
	57 (13.9)		27.36	27.36	3.44		28.98	28.98	3.01		30.45	30.45	2.57		32.00	32.00	2.21		33.49	33.49	1.89		34.96	34.96	1.59							
	72 (22.2)		22.96	9.72	2.41		24.70	10.37	2.11		26.36	10.99	1.76		28.08	11.65	1.50		29.77	12.29	1.25		31.45	12.83	1.03							
	67 (19.4)	900	20.81	13.49	2.42	900	22.39	14.22	2.13		23.90	14.93	1.79	900	25.43	15.65	1.54		26.95	16.37	1.30	900	28.46	17.09	1.08							
75 (23.9)	63 (17.2)		19.24	16.44	2.42		20.68	17.23	2.14		22.09	18.01	1.80		23.50	18.79	1.56		24.89	19.57	1.34		26.28	20.35	1.13							
	57 (13.9)		18.34	18.34	2.42		19.54	19.54	2.15		20.70	20.70	1.82		21.85	21.85	1.58		22.98	22.98	1.37		24.10	24.10	1.17							
	72 (22.2)		22.86	13.49	2.41		24.60	14.23	2.11		26.26	14.93	1.76		27.98	15.67	1.50		29.67	16.39	1.25		31.35	17.12	1.03							
	67 (19.4)	900	20.74	17.22	2.42	900	22.31	18.03	2.13		23.83	18.82	1.79	900	25.36	19.62	1.54		26.87	20.42	1.30	900	28.38	21.22	1.08							
	63 (17.2)		19.57	19.57	2.42		20.83	20.83	2.14		22.16	21.83	1.80		23.54	22.72	1.56		24.92	23.58	1.33		26.29	24.45	1.12							
80 (26.7)	57 (13.9)		19.53	19.53	2.42		20.79	20.79	2.14		22.01	22.01	1.80		23.22	23.22	1.56		24.42	24.42	1.34		25.59	25.59	1.14							
	72 (22.2)		18.16	7.73	1.96		19.62	8.28	1.73		21.04	8.83	1.48		22.46	9.38	1.25		23.88	9.93	0.97		25.30	10.48	0.75							
	67 (19.4)	800	16.42	10.82	1.98	800	17.74	11.45	1.76		19.06	12.08	1.49	800	20.38	12.71	1.25		21.70	13.44	1.03	800	23.92	14.17	0.81							
	63 (17.2)		15.19	13.25	1.99		16.40	13.94	1.77		17.61	14.63	1.49		18.82	15.36	1.25		20.03	16.10	1.03		21.45	16.83	0.81							
	57 (13.9)		14.59	14.59	1.99		15.61	15.61	1.78		16.63	16.63	1.49		17.65	17.65	1.25		18.67	18.67	1.03		19.69	19.69	0.81							
80 (26.7)	72 (22.2)		18.08	10.84	1.96		19.54	11.47	1.73		21.00	12.00	1.48		22.42	13.00	1.25		23.84	13.96	1.03		25.26	14.90	0.81							
	67 (19.4)	800	16.38	13.89	1.98	800	17.69	14.60	1.75		19.00	15.31	1.48	800	20.31	16.02	1.25		21.62	16.94	1.03	800	24.14	17.86	0.81							
	63 (17.2)		15.57	15.57	1.99		16.68	16.66	1.77		17.69	17.69	1.48		18.70	18.70	1.25		19.71	19.71	1.03		20.72	20.72	0.81							
	57 (13.9)		15.54	15.54	1.99		16.63	16.63	1.77		17.64	17.64	1.48		18.65	18.65	1.25		19.66	19.66	1.03		20.67	20.67	0.81							
	72 (22.2)		22.96	9.72	2.41		24.70	10.37	2.11		26.36	10.99	1.76		28.08	11.65	1.50		29.77	12.29	1.25		31.45	12.83	1.03							

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAR AIR	189BNV048 / FE4BNB006 Efficiency Mode Condenser Entering Air Temperature °F (°C)																							
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**
75 (23.9)	72 (22.2)	1400	44.82	18.57	5.52	47.96	19.76	4.88	50.99	20.91	4.29	53.98	22.06	3.74	56.89	23.19	3.23	1400	59.70	24.29	2.75	1400	59.70	24.29	2.75
	67 (19.4)		40.99	24.95	5.42	43.86	26.26	4.80	46.65	27.54	4.23	49.36	28.80	3.70	52.01	30.04	3.21		54.60	31.27	2.75		54.60	31.27	2.75
	63 (17.2)		38.13	29.97	5.34	40.79	31.36	4.74	43.37	32.72	4.18	45.91	34.07	3.67	48.37	35.40	3.19		50.78	36.72	2.74		50.78	36.72	2.74
	57 (13.9)		35.29	35.29	5.26	37.41	37.41	4.66	39.46	39.46	4.12	41.45	41.45	3.62	43.58	43.09	3.16		45.70	44.59	2.73		45.70	44.59	2.73
	72 (22.2)		44.60	24.79	5.51	47.74	26.09	4.88	50.77	27.36	4.28	53.76	28.82	3.73	56.66	29.86	3.22		59.48	31.07	2.75		59.48	31.07	2.75
80 (26.7)	67 (19.4)	1400	40.84	31.14	5.42	43.71	32.55	4.80	46.50	33.94	4.23	49.21	35.31	3.70	51.86	36.65	3.20	54.45	37.98	2.75	54.45	37.98	2.75		
	63 (17.2)		38.13	36.06	5.34	40.76	37.59	4.74	43.33	39.07	4.18	45.84	40.54	3.67	48.30	41.98	3.18	50.70	43.40	2.74	50.70	43.40	2.74		
	57 (13.9)		37.36	37.36	5.32	39.59	39.59	4.72	41.72	41.72	4.16	43.81	43.81	3.64	45.84	45.84	3.17	47.82	47.82	2.73	47.82	47.82	2.73		
	72 (22.2)		29.42	12.82	2.82	31.80	13.43	2.56	33.63	14.20	2.26	35.75	15.00	2.00	37.82	15.78	1.74	39.85	16.55	1.49	39.85	16.55	1.49		
	67 (19.4)		26.82	17.86	2.80	28.83	18.79	2.56	30.73	19.68	2.27	32.66	20.80	2.02	34.57	21.50	1.77	36.44	22.40	1.52	36.44	22.40	1.52		
75 (23.9)	63 (17.2)	1200	24.93	21.96	2.79	26.79	22.99	2.55	28.58	23.99	2.26	30.39	25.00	2.02	32.16	26.00	1.78	33.91	26.99	1.55	33.91	26.99	1.55		
	57 (13.9)		24.03	24.03	2.78	25.61	25.61	2.55	27.12	27.12	2.26	28.62	28.62	2.03	30.11	30.11	1.80	31.55	31.55	1.57	31.55	31.55	1.57		
	72 (22.2)		29.22	17.78	2.81	31.39	18.70	2.55	33.41	19.57	2.25	35.52	20.47	2.00	37.60	21.37	1.74	39.62	22.25	1.48	39.62	22.25	1.48		
	67 (19.4)		26.71	22.96	2.80	28.71	24.01	2.56	30.60	25.01	2.26	32.52	26.03	2.01	34.42	27.05	1.77	36.30	28.05	1.52	36.30	28.05	1.52		
	63 (17.2)		25.56	25.56	2.80	27.23	27.23	2.55	28.80	28.80	2.26	30.48	30.24	2.02	32.21	31.42	1.78	33.93	32.55	1.55	33.93	32.55	1.55		
75 (23.9)	72 (22.2)	1100	25.50	10.99	2.21	27.46	11.73	2.07	19.62	8.56	0.95	20.96	9.06	0.84	22.29	9.57	0.72	23.61	10.07	0.57	23.61	10.07	0.57		
	67 (19.4)		23.22	15.65	2.21	25.04	16.51	2.08	17.88	12.38	0.98	19.11	12.99	0.88	20.32	13.60	0.76	21.53	14.21	0.62	21.53	14.21	0.62		
	63 (17.2)		21.57	19.30	2.21	23.24	20.26	2.08	16.68	15.37	1.00	17.82	16.07	0.90	18.95	16.77	0.79	20.07	17.46	0.66	20.07	17.46	0.66		
	57 (13.9)		20.89	20.89	2.20	22.32	22.32	2.08	16.33	16.33	1.00	17.34	17.34	0.91	18.34	18.34	0.81	19.33	19.33	0.68	19.33	19.33	0.68		
	72 (22.2)		25.31	15.59	2.21	27.26	16.44	2.06	19.42	12.31	0.95	20.76	12.92	0.84	22.09	13.52	0.71	23.43	14.14	0.57	23.43	14.14	0.57		
80 (26.7)	67 (19.4)	1100	23.13	20.20	2.21	24.93	21.18	2.07	17.82	16.09	0.98	19.04	16.80	0.88	20.25	17.51	0.76	21.44	18.21	0.62	21.44	18.21	0.62		
	63 (17.2)		22.25	22.25	2.21	23.77	23.77	2.08	17.35	17.35	0.98	18.41	18.41	0.89	19.46	19.46	0.78	20.50	20.50	0.65	20.50	20.50	0.65		
	57 (13.9)		22.21	22.21	2.21	23.73	23.73	2.08	17.32	17.32	0.98	18.39	18.39	0.89	19.43	19.43	0.78	20.47	20.47	0.65	20.47	20.47	0.65		
	72 (22.2)		29.42	12.82	2.82	31.80	13.43	2.56	33.63	14.20	2.26	35.75	15.00	2.00	37.82	15.78	1.74	39.85	16.55	1.49	39.85	16.55	1.49		
	67 (19.4)		26.82	17.86	2.80	28.83	18.79	2.56	30.73	19.68	2.27	32.66	20.80	2.02	34.57	21.50	1.77	36.44	22.40	1.52	36.44	22.40	1.52		

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 — Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP AIR EWB °F (°C)	188BNV049 / °C/NP/602AL* Efficiency Mode Condenser Entering Air Temperature °F (°C)											75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (52.8)		
		115 (46.1)			105 (40.5)			95 (35)			85 (29.4)			75 (23.9)			65 (18.3)			55 (13.3)			45 (8.3)							
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**					
75 (23.9)	72 (22.2)	1200	45.15	18.59	4.64	47.22	19.34	4.10	49.13	20.04	3.62	50.85	20.69	3.20	52.44	21.29	2.83	53.80	21.86	2.50	1200	46.89	27.54	2.45	48.81	33.18	2.45			
	67 (19.4)	1200	40.99	24.58	4.57	42.88	25.28	4.03	44.59	25.92	3.56	46.15	26.50	3.14	47.59	27.05	2.77	48.81	33.18	2.45	1200	45.22	31.98	2.42	44.02	37.24	2.42			
	63 (17.2)	1200	37.94	29.29	4.53	39.87	29.93	3.99	41.26	30.52	3.52	42.70	31.05	3.10	44.02	31.54	2.74	45.22	37.62	2.42	1200	40.46	38.55	2.38	39.47	38.20	2.89			
	57 (13.9)	1200	34.94	34.94	4.48	36.17	36.17	3.94	37.25	37.25	3.47	38.39	37.79	3.05	39.47	38.20	2.89	40.46	38.55	2.38	1200	36.52	44.21	2.39	36.52	44.21	2.39			
	53 (11.1)	1200	31.12	40.99	4.65	47.12	40.99	4.10	49.03	40.99	3.62	50.75	40.99	3.20	52.34	40.99	2.83	53.80	40.99	2.50	1200	34.94	48.81	2.45	34.94	48.81	2.45			
80 (26.7)	72 (22.2)	1100	31.12	13.04	2.69	33.04	13.72	2.42	34.76	14.34	2.13	36.52	14.98	1.89	38.19	15.60	1.67	39.82	16.21	1.47	1100	34.94	20.78	1.46	34.94	20.20	1.67			
	67 (19.4)	1100	27.98	17.71	2.68	29.74	18.37	2.42	31.35	18.98	2.12	32.83	19.60	1.88	34.47	20.20	1.67	35.92	20.78	1.46	1100	31.66	24.31	1.47	31.66	23.76	1.67			
	63 (17.2)	1100	25.70	21.37	2.67	27.30	22.01	2.41	28.81	22.61	2.11	30.27	23.20	1.88	31.66	23.76	1.67	33.00	24.31	1.47	1100	27.60	29.51	1.47	27.60	28.59	1.67			
	57 (13.9)	1100	24.22	24.22	2.66	25.43	25.43	2.41	26.54	26.54	2.11	27.60	27.60	1.88	28.59	28.59	1.67	29.51	29.51	1.47	1100	24.22	37.62	2.42	24.22	37.24	2.74			
	53 (11.1)	1100	31.03	17.82	2.69	32.96	18.48	2.42	34.67	19.07	2.13	36.43	19.69	1.89	38.11	20.29	1.67	39.73	20.88	1.47	1100	31.03	48.81	2.45	31.03	48.81	2.45			
75 (23.9)	72 (22.2)	1100	24.22	10.36	1.81	26.07	11.01	1.70	27.49	11.68	1.51	29.45	12.35	1.33	30.47	12.75	1.33	31.45	13.15	1.17	1100	24.22	16.25	1.46	24.22	16.25	1.46			
	67 (19.4)	1100	21.60	14.43	1.81	23.29	15.08	1.71	24.94	15.75	1.51	27.60	16.42	1.33	28.59	16.88	1.33	29.51	17.28	1.17	1100	21.60	20.85	1.67	21.60	20.85	1.67			
	63 (17.2)	1100	19.74	17.61	1.80	21.27	18.26	1.71	22.81	18.85	1.51	25.43	19.42	1.33	26.54	19.88	1.33	27.60	20.31	1.17	1100	19.74	25.51	1.67	19.74	25.51	1.67			
	57 (13.9)	1100	19.08	19.08	1.80	20.28	20.28	1.71	20.28	20.28	1.51	21.60	21.60	1.33	22.81	22.81	1.33	24.22	24.22	1.17	1100	19.08	31.45	1.47	19.08	31.45	1.47			
	53 (11.1)	1100	24.14	14.58	1.81	25.99	15.23	1.70	27.49	15.91	1.51	29.45	16.58	1.33	30.47	16.88	1.33	31.45	17.28	1.17	1100	24.14	38.55	2.38	24.14	38.55	2.38			
80 (26.7)	72 (22.2)	1100	21.61	18.61	1.81	23.27	19.26	1.71	24.94	19.93	1.51	27.60	20.40	1.33	28.59	20.85	1.33	29.51	21.28	1.17	1100	21.61	25.51	1.67	21.61	25.51	1.67			
	67 (19.4)	1100	20.60	20.60	1.80	21.86	21.86	1.71	22.81	22.81	1.51	24.22	24.22	1.33	25.43	25.43	1.33	26.54	26.54	1.17	1100	20.60	31.45	1.47	20.60	31.45	1.47			
	63 (17.2)	1100	20.56	20.56	1.80	21.82	21.82	1.71	22.81	22.81	1.51	24.22	24.22	1.33	25.43	25.43	1.33	26.54	26.54	1.17	1100	20.56	38.55	2.38	20.56	38.55	2.38			
	57 (13.9)	1100	24.22	10.36	1.81	26.07	11.01	1.70	27.49	11.68	1.51	29.45	12.35	1.33	30.47	12.75	1.33	31.45	13.15	1.17	1100	24.22	16.25	1.46	24.22	16.25	1.46			
	53 (11.1)	1100	21.60	14.43	1.81	23.29	15.08	1.71	24.94	15.75	1.51	27.60	16.42	1.33	28.59	16.88	1.33	29.51	17.28	1.17	1100	21.60	20.85	1.67	21.60	20.85	1.67			

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 — Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAR. AIR °F (°C)	189BNV060 / FE4BNB06L Efficiency Mode Condenser Entering Air Temperature °F (°C)																									
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)					
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**		
STAGE 5																											
75 (23.9)	72 (22.2)	55.38	22.79	7.70	59.00	24.17	6.73	62.54	25.53	5.88	65.96	26.86	5.13	69.30	28.16	4.47	72.59	29.46	3.89	1600	1600	1600	1600	1600	1600	1600	1600
	67 (19.4)	50.63	30.18	7.50	53.95	31.68	6.54	57.12	33.14	5.70	60.22	34.57	4.96	63.25	35.99	4.32	66.21	37.38	3.75								
	63 (17.2)	47.11	36.00	7.35	50.18	37.58	6.40	53.13	39.12	5.57	55.99	40.62	4.84	58.78	42.11	4.21	61.52	43.58	3.65								
	57 (13.9)	43.16	43.16	7.19	45.55	45.55	6.23	47.97	47.63	5.40	50.44	49.37	4.69	52.86	51.01	4.06	55.26	52.62	3.52								
	72 (22.2)	55.24	30.04	7.70	58.86	31.53	6.73	62.40	33.00	5.88	65.82	34.44	5.13	68.15	35.85	4.47	72.44	37.26	3.89								
80 (26.7)	67 (19.4)	50.50	37.37	7.50	53.83	38.98	6.54	57.00	40.53	5.70	60.10	42.07	4.96	63.13	43.59	4.32	66.10	45.08	3.75	1600	1600	1600	1600	1600	1600	1600	1600
	63 (17.2)	47.09	43.10	7.35	50.13	44.81	6.40	53.07	46.46	5.57	55.91	48.08	4.84	58.70	49.67	4.21	61.44	51.25	3.65								
	57 (13.9)	45.62	45.62	7.29	48.12	48.12	6.33	50.51	50.51	5.49	52.83	52.83	4.76	55.06	55.06	4.12	57.24	57.24	3.56								
	72 (22.2)	35.94	15.07	3.39	38.40	15.98	3.08	40.44	16.73	2.76	42.79	17.61	2.51	45.10	18.48	2.29	47.36	19.34	2.08								
	67 (19.4)	32.49	20.54	3.35	34.72	21.48	3.05	36.67	22.32	2.72	38.80	23.24	2.47	40.88	24.15	2.24	42.94	25.05	2.04								
75 (23.9)	63 (17.2)	29.95	24.83	3.33	32.01	25.81	3.03	33.87	26.70	2.69	35.85	27.65	2.44	37.78	28.59	2.22	39.68	29.52	2.01	1350	1350	1350	1350	1350	1350	1350	1350
	57 (13.9)	28.14	28.14	3.32	29.76	29.76	3.02	31.24	31.24	2.67	32.75	32.75	2.42	34.21	34.21	2.19	35.65	35.65	1.99								
	72 (22.2)	35.82	20.59	3.39	38.29	21.54	3.08	40.32	22.34	2.76	42.67	23.26	2.51	44.98	24.17	2.29	47.24	25.07	2.08								
	67 (19.4)	32.39	26.01	3.35	34.62	26.99	3.05	36.56	27.87	2.72	38.70	28.83	2.47	40.78	29.77	2.24	42.84	30.72	2.04								
	63 (17.2)	30.07	30.04	3.29	32.09	31.18	3.03	33.90	32.16	2.69	35.85	33.17	2.44	37.76	34.16	2.22	39.65	35.14	2.01								
80 (26.7)	57 (13.9)	30.02	30.02	3.33	31.70	31.70	3.03	33.22	33.22	2.68	34.80	34.80	2.43	36.33	36.33	2.21	37.82	37.82	2.00								
	72 (22.2)	26.64	11.34	1.89	28.56	12.02	1.84	20.89	8.78	1.03	22.26	9.26	1.00	23.59	9.73	0.91	24.89	10.21	0.75	1200	1200	1200	1200	1200	1200	1200	
	67 (19.4)	23.86	15.71	1.89	25.60	16.40	1.84	18.63	11.93	1.02	19.89	12.40	1.00	21.11	12.85	0.92	22.30	13.31	0.77								
	63 (17.2)	21.85	19.14	1.89	23.45	19.83	1.84	16.95	14.38	1.01	18.11	14.83	1.00	19.24	15.26	0.92	20.34	15.69	0.79								
	57 (13.9)	20.91	20.91	1.88	22.14	22.14	1.84	15.97	15.97	1.01	16.81	16.81	1.00	17.62	17.62	0.94	18.38	18.38	0.81								
72 (22.2)	26.55	15.84	1.89	28.46	16.52	1.84	20.81	12.06	1.03	22.18	12.52	1.00	23.51	12.97	0.91	24.81	13.42	0.75									
80 (26.7)	67 (19.4)	23.79	20.16	1.89	25.52	20.85	1.84	18.58	15.17	1.02	19.83	15.62	1.00	21.05	16.05	0.92	22.24	16.48	0.77	975	975	975	975	975	975	975	
	63 (17.2)	22.48	22.48	1.89	23.77	23.77	1.84	17.25	17.25	1.01	18.20	17.98	1.00	19.28	18.43	0.92	20.35	18.85	0.79								
	57 (13.9)	22.44	22.44	1.89	23.72	23.72	1.84	17.21	17.21	1.01	18.08	18.08	1.00	18.91	18.91	0.93	19.70	19.70	0.80								
	72 (22.2)	26.64	11.34	1.89	28.56	12.02	1.84	20.89	8.78	1.03	22.26	9.26	1.00	23.59	9.73	0.91	24.89	10.21	0.75								
	67 (19.4)	23.86	15.71	1.89	25.60	16.40	1.84	18.63	11.93	1.02	19.89	12.40	1.00	21.11	12.85	0.92	22.30	13.31	0.77								

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB ° F (° C)	EVAP. AIR		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB ° F (° C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	
			Total	Sensit			Total	Sensit			Total	Sensit			Total	Sensit			Total	Sensit		Total
75 (23.9)	72 (22.2)	360	13.14	5.38	1.16	420	14.21	5.86	0.98	420	15.07	6.18	0.81	420	15.92	6.51	0.65	420	16.76	6.83	0.50	
	67 (19.4)		11.86	7.01	1.16		12.84	7.79	0.98		13.61	8.13	0.82		14.37	8.46	0.67		15.11	8.79	0.53	
	63 (17.2)		10.91	8.29	1.16		11.83	9.30	0.99		12.53	9.64	0.83		13.22	9.98	0.69		13.89	10.32	0.56	
	57 (13.9)		9.88	9.88	1.16		10.89	10.89	0.99		11.42	11.42	0.84		11.93	11.93	0.71		12.42	12.42	0.59	
	72 (22.2)		13.10	7.04	1.16		14.16	7.81	0.98		15.02	8.15	0.81		15.87	8.49	0.65		16.71	8.83	0.50	
80 (26.7)	67 (19.4)	360	11.82	8.65	1.16	420	12.80	9.71	0.98	420	13.57	10.07	0.82	420	14.33	10.42	0.67	420	15.07	10.76	0.53	
	63 (17.2)		10.90	9.92	1.16		11.84	11.20	0.99		12.54	11.57	0.83		13.22	11.93	0.69		13.88	12.28	0.56	
	57 (13.9)		10.51	10.51	1.16		11.59	11.59	0.99		12.16	12.16	0.83		12.70	12.70	0.70		13.22	13.22	0.57	
	72 (22.2)		10.85	4.45	0.90		11.86	4.92	0.77		12.61	5.20	0.65		13.33	5.47	0.54		14.04	5.74	0.43	
	67 (19.4)		9.75	5.82	0.91		10.67	6.59	0.78		11.33	6.88	0.68		11.97	7.17	0.57		12.60	7.45	0.47	
75 (23.9)	63 (17.2)	300	8.96	6.90	0.91	360	9.81	7.90	0.79	360	10.40	8.20	0.69	360	10.98	8.49	0.60	360	11.55	8.78	0.50	
	57 (13.9)		8.17	8.17	0.92		9.13	9.13	0.79		9.58	9.58	0.71		10.02	10.02	0.62		10.45	10.45	0.53	
	72 (22.2)		10.82	5.86	0.90		11.82	6.62	0.77		12.56	6.92	0.65		13.29	7.21	0.54		14.00	7.50	0.43	
	67 (19.4)		9.73	7.22	0.91		10.64	8.28	0.78		11.30	8.59	0.68		11.94	8.89	0.57		12.57	9.19	0.47	
	63 (17.2)		8.97	8.29	0.91		9.84	9.57	0.79		10.42	9.89	0.69		10.99	10.21	0.60		11.56	10.52	0.50	
80 (26.7)	57 (13.9)	300	8.70	8.70	0.91	360	9.73	9.73	0.79	360	10.22	10.22	0.69	360	10.68	10.68	0.60	360	11.14	11.14	0.51	
	72 (22.2)		9.87	4.09	0.77		8.43	3.60	0.51		9.04	3.82	0.45		9.66	4.05	0.37		10.27	4.28	0.28	
	67 (19.4)		8.87	5.49	0.78		7.60	5.04	0.52		8.15	5.28	0.46		8.69	5.52	0.39		9.22	5.76	0.32	
	63 (17.2)		8.15	6.59	0.78		7.00	6.18	0.52		7.50	6.43	0.47		7.98	6.68	0.41		8.45	6.93	0.34	
	57 (13.9)		7.59	7.59	0.78		6.74	6.74	0.52		7.15	7.15	0.47		7.53	7.53	0.42		7.89	7.89	0.36	
75 (23.9)	72 (22.2)	300	9.83	5.52	0.77	300	8.39	5.05	0.51	300	9.00	5.30	0.45	300	9.62	5.55	0.37	300	10.23	5.80	0.28	
	67 (19.4)		8.84	6.90	0.78		7.58	6.49	0.52		8.13	6.75	0.46		8.67	7.01	0.39		9.19	7.27	0.32	
	63 (17.2)		8.17	7.99	0.78		7.22	7.22	0.52		7.65	7.65	0.47		8.07	8.07	0.41		8.49	8.42	0.34	
	57 (13.9)		8.09	8.09	0.78		7.21	7.21	0.52		7.64	7.64	0.47		8.05	8.05	0.41		8.45	8.45	0.34	
	72 (22.2)		10.85	4.45	0.90		11.86	4.92	0.77		12.61	5.20	0.65		13.33	5.47	0.54		14.04	5.74	0.43	

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

189B1V024B / FE4ANF002L Comfort + Dehumidify Mode
Condenser Entering Air Temperature F (°C)

EDB °F (°C)	EVAP. AIR EWB °F (°C)	105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
		Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	
		Total	Sensit			Total	Sensit			Total	Sensit			Total	Sensit			Total	Sensit		Total
75 (23.9)	72 (22.2)	24.23	9.92	2.44	25.33	10.31	2.12	26.93	10.95	1.84	28.54	11.60	1.58	30.28	12.32	1.33	708	708	708	1.33	
	67 (19.4)	22.01	12.96	2.42	23.01	13.22	2.10	24.45	14.00	1.83	25.91	14.82	1.58	27.51	15.77	1.34					
	63 (17.2)	20.38	15.34	2.39	21.31	15.50	2.08	22.64	16.40	1.82	24.00	17.33	1.57	25.48	18.47	1.35					
	57 (13.9)	18.45	18.45	2.36	19.08	18.80	2.05	20.28	19.87	1.80	21.49	20.99	1.57	22.82	22.37	1.36					
	72 (22.2)	24.17	12.95	2.44	25.27	13.22	2.12	26.87	14.00	1.84	28.48	14.82	1.58	30.22	15.77	1.33					
80 (26.7)	67 (19.4)	21.96	15.96	2.42	22.96	16.09	2.10	24.40	17.02	1.83	25.86	17.99	1.58	27.45	19.17	1.34	708	708	708	1.34	
	63 (17.2)	20.36	18.31	2.39	21.28	18.35	2.08	22.61	19.39	1.82	23.97	20.49	1.57	25.45	21.85	1.35					
	57 (13.9)	19.56	19.56	2.38	20.08	20.08	2.07	21.29	21.29	1.81	22.54	22.54	1.57	23.97	23.97	1.35					
	72 (22.2)	16.80	6.88	1.49	17.53	7.13	1.28	18.69	7.80	1.10	19.82	8.06	0.92	21.04	8.55	0.76					
	67 (19.4)	15.18	8.96	1.50	15.85	9.13	1.28	16.89	9.72	1.11	17.91	10.28	0.95	18.99	10.93	0.79					
75 (23.9)	63 (17.2)	13.98	10.59	1.50	14.80	10.69	1.28	15.56	11.37	1.13	16.49	12.01	0.97	17.48	12.77	0.82	484	484	484	0.82	
	57 (13.9)	12.83	12.83	1.49	12.99	12.94	1.29	13.83	13.75	1.14	14.64	14.51	1.00	15.53	15.43	0.86					
	72 (22.2)	16.75	8.99	1.49	17.48	9.16	1.28	18.64	9.75	1.10	19.77	10.32	0.92	20.98	10.97	0.76					
	67 (19.4)	15.14	11.05	1.50	15.81	11.13	1.28	16.85	11.84	1.11	17.87	12.51	0.95	18.95	13.31	0.79					
	63 (17.2)	13.97	12.86	1.50	14.59	12.68	1.28	15.54	13.48	1.13	16.47	14.23	0.97	17.46	15.14	0.82					
80 (26.7)	57 (13.9)	13.43	13.43	1.50	13.78	13.78	1.29	14.66	14.66	1.13	15.51	15.51	0.99	16.47	16.47	0.84	484	484	484	0.84	
	72 (22.2)	13.91	5.70	1.21	8.34	3.43	0.52	8.89	3.65	0.44	9.31	3.80	0.37	9.90	4.05	0.29					
	67 (19.4)	12.50	7.42	1.22	7.48	4.49	0.53	7.97	4.78	0.46	8.34	4.91	0.40	8.86	5.24	0.33					
	63 (17.2)	11.48	8.77	1.22	6.85	5.34	0.53	7.30	5.67	0.47	7.63	5.79	0.41	8.11	6.18	0.35					
	57 (13.9)	10.41	10.41	1.22	6.25	6.25	0.54	6.65	6.65	0.48	6.87	6.87	0.43	7.32	7.32	0.37					
75 (23.9)	72 (22.2)	13.87	7.46	1.21	8.31	4.53	0.52	8.86	4.82	0.44	9.28	4.96	0.37	9.87	5.29	0.29	245	245	245	0.29	
	67 (19.4)	12.47	9.17	1.22	7.45	5.59	0.53	7.94	5.94	0.46	8.31	6.06	0.40	8.83	6.48	0.33					
	63 (17.2)	11.48	10.51	1.22	6.85	6.43	0.53	7.30	6.83	0.47	7.62	6.93	0.41	8.10	7.41	0.35					
	57 (13.9)	11.08	11.08	1.22	6.68	6.68	0.54	7.10	7.10	0.48	7.33	7.33	0.42	7.81	7.81	0.36					
	72 (22.2)	13.91	5.70	1.21	8.34	3.43	0.52	8.89	3.65	0.44	9.31	3.80	0.37	9.90	4.05	0.29					
80 (26.7)	67 (19.4)	12.50	7.42	1.22	7.48	4.49	0.53	7.97	4.78	0.46	8.34	4.91	0.40	8.86	5.24	0.33	245	245	245	0.33	
	63 (17.2)	11.48	8.77	1.22	6.85	5.34	0.53	7.30	5.67	0.47	7.63	5.79	0.41	8.11	6.18	0.35					
	57 (13.9)	10.41	10.41	1.22	6.25	6.25	0.54	6.65	6.65	0.48	6.87	6.87	0.43	7.32	7.32	0.37					
	72 (22.2)	13.87	7.46	1.21	8.31	4.53	0.52	8.86	4.82	0.44	9.28	4.96	0.37	9.87	5.29	0.29					
	67 (19.4)	12.47	9.17	1.22	7.45	5.59	0.53	7.94	5.94	0.46	8.31	6.06	0.40	8.83	6.48	0.33					
80 (26.7)	63 (17.2)	11.48	10.51	1.22	6.85	6.43	0.53	7.30	6.83	0.47	7.62	6.93	0.41	8.10	7.41	0.35	245	245	245	0.35	
	57 (13.9)	11.08	11.08	1.22	6.68	6.68	0.54	7.10	7.10	0.48	7.33	7.33	0.42	7.81	7.81	0.36					

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB ° F (° C)	EVAP. AIR		105 (40.5)				85 (35)				75 (23.9)				65 (18.3)			
	EWS ° F (° C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	
			Total	Sensit			Total	Sensit			Total	Sensit			Total	Sensit		
75 (23.9)	72 (22.2)	608	19.25	8.01	1.62	608	25.24	10.26	1.88	634	26.68	10.84	1.61	708	28.11	11.43	1.34	
	67 (19.4)		17.48	10.88	1.63		22.98	13.18	1.89		24.31	13.92	1.63		25.64	14.68	1.38	
	63 (17.2)		16.21	13.13	1.64		21.29	15.45	1.90		22.54	16.31	1.65		23.79	17.21	1.41	
	57 (13.9)		15.18	15.18	1.65		19.10	18.78	1.90		20.23	19.83	1.66		21.37	20.92	1.44	
	57 (13.9)		19.12	10.84	1.61		25.12	13.12	1.88		26.55	13.85	1.60		27.98	14.60	1.33	
80 (26.7)	72 (22.2)	608	17.42	13.69	1.63	608	22.91	16.02	1.89	634	24.24	16.91	1.63	708	25.56	17.83	1.38	
	67 (19.4)		16.26	15.91	1.64		21.26	18.28	1.90		22.51	19.29	1.65		23.76	20.35	1.41	
	63 (17.2)		16.12	16.12	1.64		20.08	20.08	1.90		21.23	21.23	1.66		22.41	22.41	1.42	
	57 (13.9)		15.62	6.37	1.16		16.33	6.64	1.03		17.27	7.02	0.91		18.26	7.42	0.78	
	57 (13.9)		14.19	8.25	1.17		14.88	8.57	1.04		15.74	9.03	0.94		16.66	9.56	0.82	
75 (23.9)	72 (22.2)	437	13.12	9.74	1.18	437	13.79	10.07	1.05	452	14.60	10.61	0.96	510	15.46	11.23	0.85	
	67 (19.4)		11.80	11.80	1.18		12.35	12.27	1.06		13.08	12.91	0.97		13.87	13.68	0.88	
	63 (17.2)		15.55	8.23	1.16		16.25	8.52	1.02		17.19	8.98	0.91		18.17	9.50	0.78	
	57 (13.9)		14.14	10.11	1.17		14.83	10.44	1.04		15.69	10.99	0.94		16.60	11.63	0.82	
	57 (13.9)		13.11	11.59	1.18		13.77	11.94	1.05		14.58	12.56	0.96		15.44	13.30	0.85	
80 (26.7)	72 (22.2)	437	12.51	12.51	1.18	437	13.05	13.05	1.05	452	13.78	13.78	0.97	510	14.60	14.60	0.86	
	67 (19.4)		6.36	2.59	0.47		9.26	3.75	0.47		9.75	3.95	0.47		10.23	4.15	0.43	
	63 (17.2)		10.72	6.18	0.76		8.39	4.68	0.48		8.84	4.89	0.49		9.27	5.09	0.47	
	57 (13.9)		9.90	7.24	0.76		7.74	5.40	0.49		8.15	5.61	0.51		8.56	5.83	0.49	
	57 (13.9)		8.82	8.81	0.77		6.85	6.46	0.49		7.22	6.68	0.52		7.59	6.90	0.52	
75 (23.9)	72 (22.2)	342	11.79	6.17	0.75	342	9.23	4.68	0.47	250	9.72	4.88	0.47	250	10.20	5.09	0.43	
	67 (19.4)		10.69	7.53	0.76		8.37	5.60	0.48		8.81	5.82	0.49		9.25	6.03	0.47	
	63 (17.2)		9.88	8.60	0.76		7.72	6.32	0.49		8.14	6.54	0.51		8.54	6.76	0.49	
	57 (13.9)		9.35	9.35	0.77		7.09	7.09	0.49		7.40	7.40	0.52		7.70	7.70	0.51	
	57 (13.9)		3.18	1.29	0.24		8.99	3.64	0.47		9.59	3.89	0.48		9.99	4.06	0.44	
80 (26.7)	72 (22.2)	342	10.72	6.18	0.76	342	8.13	4.46	0.48	222	8.68	4.76	0.50	229	9.04	4.92	0.48	
	67 (19.4)		9.90	7.24	0.76		7.49	5.09	0.49		8.00	5.44	0.51		8.34	5.58	0.50	
	63 (17.2)		8.82	8.81	0.77		6.63	6.02	0.49		7.09	6.43	0.52		7.39	6.56	0.52	
	57 (13.9)		11.79	6.17	0.75		8.96	4.47	0.47		9.55	4.76	0.47		9.96	4.92	0.44	
	57 (13.9)		10.69	7.53	0.76		8.11	5.28	0.48		8.66	5.63	0.50		9.02	5.78	0.48	
75 (23.9)	72 (22.2)	342	9.88	8.60	0.76	342	7.48	5.91	0.49	222	7.99	6.31	0.51	229	8.33	6.44	0.50	
	67 (19.4)		9.35	9.35	0.77		6.73	6.73	0.49		7.19	7.19	0.52		7.40	7.40	0.52	
	63 (17.2)		3.18	1.29	0.24		8.99	3.64	0.47		9.59	3.89	0.48		9.99	4.06	0.44	
	57 (13.9)		10.72	6.18	0.76		8.13	4.46	0.48		8.68	4.76	0.50		9.04	4.92	0.48	
	57 (13.9)		9.90	7.24	0.76		7.49	5.09	0.49		8.00	5.44	0.51		8.34	5.58	0.50	
80 (26.7)	72 (22.2)	342	8.82	8.81	0.77	342	6.63	6.02	0.49	222	7.09	6.43	0.52	229	7.39	6.56	0.52	
	67 (19.4)		11.79	6.17	0.75		8.96	4.47	0.47		9.55	4.76	0.47		9.96	4.92	0.44	
	63 (17.2)		10.69	7.53	0.76		8.11	5.28	0.48		8.66	5.63	0.50		9.02	5.78	0.48	
	57 (13.9)		9.88	8.60	0.76		7.48	5.91	0.49		7.99	6.31	0.51		8.33	6.44	0.50	
	57 (13.9)		9.35	9.35	0.77		6.73	6.73	0.49		7.19	7.19	0.52		7.40	7.40	0.52	

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 — Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB ° F (° C)	EVAP. AIR ° F (° C)	105 (40.5)				85 (35)				75 (23.9)				65 (18.3)			
		Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM
		Total	Sensit		Total	Sensit		Total	Sensit		Total	Sensit		Total	Sensit		
75 (23.9)	72 (22.2)	35.03	14.21	3.80	36.79	14.91	3.28	38.97	15.79	2.81	41.14	16.67	2.38	43.43	17.61	1.97	
	67 (19.4)	32.03	18.10	3.76	33.69	18.87	3.26	35.70	19.98	2.81	37.69	21.10	2.39	39.83	22.39	2.00	
	63 (17.2)	29.78	21.12	3.72	31.34	21.94	3.23	33.23	23.22	2.80	35.10	24.53	2.40	37.11	26.09	2.02	
	57 (13.9)	26.68	25.51	3.66	28.08	26.39	3.19	29.78	27.92	2.78	31.49	29.50	2.40	33.35	31.47	2.04	
	72 (22.2)	34.90	17.98	3.79	36.65	18.72	3.28	38.82	19.81	2.81	40.98	20.92	2.37	43.26	22.19	1.97	
80 (26.7)	67 (19.4)	31.95	21.83	3.75	33.80	22.64	3.25	35.61	23.95	2.81	37.60	25.30	2.39	39.72	26.91	2.00	
	63 (17.2)	29.73	24.84	3.72	31.29	25.70	3.23	33.16	27.18	2.80	35.04	28.72	2.39	37.04	30.61	2.02	
	57 (13.9)	27.71	27.71	3.68	28.95	28.95	3.20	30.66	30.66	2.78	32.41	32.41	2.40	34.42	34.42	2.04	
	72 (22.2)	21.74	8.83	1.80	22.72	9.22	1.63	24.20	9.82	1.47	25.61	10.39	1.30	27.10	11.00	1.09	
	67 (19.4)	19.76	11.28	1.80	20.72	11.74	1.64	22.09	12.54	1.49	23.39	13.27	1.33	24.77	14.10	1.14	
75 (23.9)	63 (17.2)	18.28	13.20	1.80	19.22	13.70	1.63	20.51	14.65	1.50	21.73	15.51	1.35	23.02	16.51	1.18	
	57 (13.9)	16.37	16.02	1.79	17.25	16.59	1.63	18.42	17.76	1.51	19.53	18.80	1.37	20.72	20.04	1.21	
	72 (22.2)	21.65	11.25	1.80	22.62	11.67	1.63	24.08	12.45	1.47	25.49	13.17	1.29	26.96	13.99	1.09	
	67 (19.4)	19.70	13.69	1.80	20.66	14.18	1.63	22.03	15.15	1.49	23.32	16.03	1.33	24.69	17.07	1.14	
	63 (17.2)	18.26	15.60	1.80	19.20	16.13	1.63	20.48	17.26	1.50	21.70	18.27	1.35	22.99	19.47	1.17	
80 (26.7)	57 (13.9)	17.18	17.18	1.80	17.96	17.96	1.63	19.20	19.20	1.50	20.34	20.34	1.36	21.61	21.61	1.20	
	72 (22.2)	14.50	5.90	0.99	9.48	3.84	0.49	10.07	4.08	0.49	10.66	4.32	0.45	11.47	4.65	0.35	
	67 (19.4)	13.17	7.58	1.00	8.59	4.79	0.50	9.13	5.04	0.52	9.66	5.30	0.49	10.39	5.71	0.41	
	63 (17.2)	12.18	8.91	1.00	7.92	5.53	0.51	8.42	5.80	0.53	8.92	6.07	0.51	9.60	6.55	0.45	
	57 (13.9)	10.89	10.84	1.01	7.02	6.61	0.52	7.46	6.90	0.55	7.91	7.19	0.54	8.52	7.77	0.49	
80 (26.7)	72 (22.2)	14.44	7.57	0.99	9.44	4.79	0.49	10.03	5.04	0.49	10.62	5.30	0.45	11.43	5.71	0.35	
	67 (19.4)	13.13	9.25	1.00	8.56	5.73	0.50	9.10	6.01	0.52	9.64	6.28	0.49	10.36	6.78	0.41	
	63 (17.2)	12.16	10.56	1.00	7.91	6.47	0.51	8.41	6.76	0.53	8.91	7.05	0.51	9.58	7.61	0.45	
	57 (13.9)	11.52	11.52	1.01	7.26	7.26	0.52	7.64	7.64	0.54	8.03	8.03	0.54	8.66	8.66	0.48	
	72 (22.2)	14.50	5.90	0.99	9.35	3.79	0.49	9.88	4.01	0.50	10.62	4.30	0.45	11.47	4.65	0.35	
75 (23.9)	67 (19.4)	13.17	7.58	1.00	8.46	4.68	0.50	8.94	4.90	0.52	9.62	5.27	0.49	10.39	5.71	0.41	
	63 (17.2)	12.18	8.91	1.00	7.80	5.37	0.51	8.25	5.59	0.53	8.88	6.02	0.51	9.60	6.55	0.45	
	57 (13.9)	10.89	10.84	1.01	6.91	6.39	0.52	7.30	6.60	0.55	7.87	7.12	0.54	8.52	7.77	0.49	
	72 (22.2)	14.44	7.57	0.99	9.31	4.68	0.49	9.84	4.90	0.50	10.58	5.27	0.45	11.43	5.71	0.35	
	67 (19.4)	13.13	9.25	1.00	8.44	5.57	0.50	8.92	5.79	0.52	9.60	6.23	0.49	10.36	6.78	0.41	
80 (26.7)	63 (17.2)	12.16	10.56	1.00	7.79	6.26	0.51	8.23	6.48	0.53	8.87	6.98	0.51	9.58	7.61	0.45	
	57 (13.9)	11.52	11.52	1.01	7.08	7.08	0.52	7.39	7.39	0.55	7.97	7.97	0.54	8.66	8.66	0.48	
	72 (22.2)	14.50	5.90	0.99	9.35	3.79	0.49	9.88	4.01	0.50	10.62	4.30	0.45	11.47	4.65	0.35	
	67 (19.4)	13.17	7.58	1.00	8.46	4.68	0.50	8.94	4.90	0.52	9.62	5.27	0.49	10.39	5.71	0.41	
	63 (17.2)	12.18	8.91	1.00	7.80	5.37	0.51	8.25	5.59	0.53	8.88	6.02	0.51	9.60	6.55	0.45	

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 — Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR °F (°C)	115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**
75 (23.9)	72 (22.2)		32.70	13.63	3.49		34.98	14.48	3.05		37.03	15.26	2.59		39.26	16.11	2.21		41.44	16.95	1.86		43.61	17.78	1.54
	67 (19.4)	1050	31.53	19.22	3.08		31.81	19.44	3.03		33.70	20.30	2.58		35.71	21.22	2.21		37.89	22.14	1.87		39.65	23.05	1.56
	63 (17.2)		27.56	22.83	3.44		29.48	23.32	3.02		31.25	24.26	2.58	1050	33.12	25.24	2.21		34.94	26.21	1.88		36.75	27.17	1.58
	57 (13.9)		25.78	25.78	3.41		27.31	27.31	3.00		28.73	28.73	2.56		30.19	30.19	2.21		31.62	31.62	1.89		33.01	33.01	1.61
	72 (22.2)		32.58	18.47	3.49		34.88	19.41	3.05		36.91	20.26	2.59		39.14	21.19	2.21		41.32	22.11	1.86		43.48	23.02	1.54
80 (26.7)	67 (19.4)	1050	31.43	24.01	3.08		31.71	24.30	3.03		33.60	25.24	2.58		35.61	26.24	2.21		37.59	27.23	1.87		39.55	28.22	1.56
	63 (17.2)		27.61	27.02	3.44		29.49	28.13	3.02		31.23	29.15	2.58	1050	33.10	30.22	2.21		34.91	31.27	1.88		36.70	32.31	1.58
	57 (13.9)		27.36	27.36	3.44		28.98	28.98	3.01		30.45	30.45	2.57		32.00	32.00	2.21		33.49	33.49	1.89		34.96	34.96	1.59
	72 (22.2)		22.96	9.72	2.41		24.70	10.37	2.11		26.36	10.99	1.76		28.08	11.65	1.50		29.77	12.29	1.25		31.45	12.83	1.03
	67 (19.4)	900	20.81	13.49	2.42		22.39	14.22	2.13		23.90	14.93	1.79		25.43	15.65	1.54		26.95	16.37	1.30		28.46	17.09	1.08
75 (23.9)	63 (17.2)		19.24	16.44	2.42		20.68	17.23	2.14		22.09	18.01	1.80	900	23.50	18.79	1.56		24.89	19.57	1.34		26.28	20.35	1.13
	57 (13.9)		18.34	18.34	2.42		19.54	19.54	2.15		20.70	20.70	1.82		21.85	21.85	1.58		22.98	22.98	1.37		24.10	24.10	1.17
	72 (22.2)		22.86	13.49	2.41		24.60	14.23	2.11		26.26	14.93	1.76		27.98	15.67	1.50		29.67	16.39	1.25		31.35	17.12	1.03
	67 (19.4)	900	20.74	17.22	2.42		22.31	18.03	2.13		23.83	18.82	1.79		25.36	19.62	1.54		26.87	20.42	1.30		28.38	21.22	1.08
	63 (17.2)		19.57	19.57	2.42		20.83	20.83	2.14		22.16	21.83	1.80	900	23.54	22.72	1.56		24.92	23.58	1.33		26.29	24.45	1.12
80 (26.7)	57 (13.9)		19.53	19.53	2.42		20.79	20.79	2.14		22.01	22.01	1.80		23.22	23.22	1.56		24.42	24.42	1.34		25.59	25.59	1.14
	72 (22.2)		18.16	7.73	1.96		19.62	8.28	1.73		21.04	8.87	1.47		22.51	9.56	1.25		23.98	10.25	1.03		25.45	10.92	0.81
	67 (19.4)	800	16.42	10.82	1.98		17.74	11.45	1.76		19.06	12.18	1.51		20.38	12.91	1.28		21.70	13.64	1.05		23.02	14.37	0.84
	63 (17.2)		15.19	13.25	1.99		16.40	13.94	1.77		17.61	14.63	1.52	600	18.83	15.36	1.29		20.15	16.09	1.06		21.47	16.92	0.86
	57 (13.9)		14.59	14.59	1.99		15.61	15.61	1.78		16.63	16.63	1.57		17.65	17.65	1.36		18.67	18.67	1.15		19.69	19.69	0.94
80 (26.7)	72 (22.2)		18.08	10.84	1.96		19.54	11.47	1.73		21.00	12.20	1.48		22.47	13.00	1.26		23.94	13.73	1.04		25.41	14.42	0.82
	67 (19.4)	800	16.38	13.89	1.98		17.69	14.60	1.75		19.00	15.31	1.53		20.31	16.02	1.30		21.62	16.73	1.07		22.93	17.44	0.85
	63 (17.2)		15.57	15.57	1.99		16.68	16.66	1.77		17.79	17.77	1.56	600	18.90	18.88	1.35		20.01	19.70	1.14		21.12	20.90	0.91
	57 (13.9)		15.54	15.54	1.99		16.63	16.63	1.77		17.65	17.65	1.56		18.67	18.67	1.35		19.69	19.69	1.14		20.71	20.71	0.91
	72 (22.2)		22.96	9.72	2.41		24.70	10.37	2.11		26.36	10.99	1.76		28.08	11.65	1.50		29.77	12.29	1.25		31.45	12.83	1.03

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB °F (°C)	EVAP. AIR EWB °F (°C)	189BNV048 / FE4BNB006 Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)														
		105 (40.5)			95 (35)			85 (23.4)			75 (23.9)			65 (18.3)		
		Capacity MBtuh		Total Sys. KW	Capacity MBtuh		Total Sys. KW	Capacity MBtuh		Total Sys. KW	Capacity MBtuh		Total Sys. KW	Capacity MBtuh		Total Sys. KW
		Total	Sensit		Total	Sensit		Total	Sensit		Total	Sensit		Total	Sensit	
ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM	ID SCFM		
75 (23.9)	72 (22.2)	46.42	18.85	4.71	49.80	20.23	4.17	53.09	21.57	3.65	56.46	22.96	3.19	58.44	23.68	2.67
	67 (19.4)	42.40	24.08	4.63	45.50	25.89	4.11	48.51	27.62	3.61	51.61	29.50	3.17	53.38	29.85	2.67
	63 (17.2)	39.38	28.15	4.57	42.27	30.30	4.06	45.08	32.33	3.58	47.99	34.60	3.15	49.62	34.64	2.66
	57 (13.9)	35.31	34.09	4.47	37.94	36.72	3.98	40.49	39.19	3.53	43.14	41.99	3.12	44.52	41.65	2.64
	72 (22.2)	46.28	23.95	4.71	49.62	25.75	4.16	52.90	27.46	3.65	56.25	29.32	3.19	58.25	29.68	2.67
80 (26.7)	67 (19.4)	42.29	29.13	4.63	45.38	31.35	4.10	48.38	33.45	3.61	51.47	35.79	3.17	53.26	35.77	2.67
	63 (17.2)	39.31	33.18	4.57	42.20	35.74	4.06	45.01	38.14	3.58	47.91	40.87	3.15	49.54	40.54	2.66
	57 (13.9)	36.80	36.80	4.51	39.58	39.58	4.01	42.24	42.24	3.55	45.10	45.10	3.13	45.76	45.76	2.65
	72 (22.2)	29.62	12.03	2.44	31.87	12.96	2.16	34.08	13.86	1.91	36.31	14.77	1.66	38.96	15.92	1.43
	67 (19.4)	26.97	15.41	2.44	29.06	16.68	2.16	31.09	17.85	1.92	33.14	19.06	1.68	35.59	20.85	1.46
75 (23.9)	63 (17.2)	24.98	18.04	2.43	26.95	19.58	2.15	28.84	20.96	1.92	30.75	22.40	1.70	33.06	24.69	1.49
	57 (13.9)	22.33	21.88	2.41	24.13	23.80	2.14	25.84	25.48	1.92	27.58	27.24	1.71	29.92	29.92	1.51
	72 (22.2)	29.51	15.35	2.44	31.74	16.60	2.15	33.93	17.76	1.91	36.15	18.96	1.66	38.77	20.72	1.43
	67 (19.4)	26.80	18.70	2.44	28.98	20.29	2.15	31.00	21.72	1.92	33.04	23.21	1.68	35.47	25.60	1.46
	63 (17.2)	34.45	25.97	4.20	28.90	23.17	2.15	28.79	24.81	1.92	30.70	26.53	1.70	33.02	29.42	1.49
80 (26.7)	57 (13.9)	30.79	29.76	4.10	33.37	32.41	3.78	35.77	34.73	3.46	38.24	37.17	3.15	41.59	41.26	2.86
	72 (22.2)	25.60	10.40	1.99	18.27	7.44	0.93	19.44	7.91	0.83	20.67	8.39	0.71	22.04	8.96	0.56
	67 (19.4)	23.27	13.31	1.99	16.64	9.65	0.95	17.72	10.17	0.86	18.84	10.76	0.75	20.11	11.51	0.61
	63 (17.2)	21.53	15.58	1.99	15.45	11.39	0.97	16.45	11.96	0.88	17.49	12.62	0.77	18.68	13.53	0.65
	57 (13.9)	19.26	18.92	1.98	13.90	13.90	0.98	14.76	14.58	0.90	15.69	15.35	0.81	16.77	16.48	0.70
75 (23.9)	72 (22.2)	25.60	10.40	1.99	18.26	7.44	0.93	19.44	7.91	0.83	20.67	8.39	0.71	22.04	8.96	0.56
	67 (19.4)	23.27	13.31	1.99	16.64	9.65	0.95	17.72	10.17	0.86	18.84	10.76	0.75	20.11	11.51	0.61
	63 (17.2)	21.53	15.58	1.99	15.45	11.39	0.97	16.45	11.96	0.88	17.49	12.62	0.77	18.68	13.53	0.65
	57 (13.9)	19.26	18.92	1.98	13.90	13.90	0.98	14.76	14.58	0.90	15.69	15.35	0.81	16.77	16.48	0.70
	72 (22.2)	25.60	10.40	1.99	18.26	7.44	0.93	19.44	7.91	0.83	20.67	8.39	0.71	22.04	8.96	0.56
80 (26.7)	67 (19.4)	23.27	13.31	1.99	16.64	9.65	0.95	17.72	10.17	0.86	18.84	10.76	0.75	20.11	11.51	0.61
	63 (17.2)	21.53	15.58	1.99	15.45	11.39	0.97	16.45	11.96	0.88	17.49	12.62	0.77	18.68	13.53	0.65
	57 (13.9)	19.26	18.92	1.98	13.90	13.90	0.98	14.76	14.58	0.90	15.69	15.35	0.81	16.77	16.48	0.70
	72 (22.2)	25.60	10.40	1.99	18.26	7.44	0.93	19.44	7.91	0.83	20.67	8.39	0.71	22.04	8.96	0.56
	67 (19.4)	23.27	13.31	1.99	16.64	9.65	0.95	17.72	10.17	0.86	18.84	10.76	0.75	20.11	11.51	0.61
75 (23.9)	63 (17.2)	21.53	15.58	1.99	15.45	11.39	0.97	16.45	11.96	0.88	17.49	12.62	0.77	18.68	13.53	0.65
	57 (13.9)	19.26	18.92	1.98	13.90	13.90	0.98	14.76	14.58	0.90	15.69	15.35	0.81	16.77	16.48	0.70
	72 (22.2)	25.60	10.40	1.99	18.26	7.44	0.93	19.44	7.91	0.83	20.67	8.39	0.71	22.04	8.96	0.56
	67 (19.4)	23.27	13.31	1.99	16.64	9.65	0.95	17.72	10.17	0.86	18.84	10.76	0.75	20.11	11.51	0.61
	63 (17.2)	21.53	15.58	1.99	15.45	11.39	0.97	16.45	11.96	0.88	17.49	12.62	0.77	18.68	13.53	0.65
80 (26.7)	57 (13.9)	19.26	18.92	1.98	13.90	13.90	0.98	14.76	14.58	0.90	15.69	15.35	0.81	16.77	16.48	0.70
	72 (22.2)	25.60	10.40	1.99	18.26	7.44	0.93	19.44	7.91	0.83	20.67	8.39	0.71	22.04	8.96	0.56
	67 (19.4)	23.27	13.31	1.99	16.64	9.65	0.95	17.72	10.17	0.86	18.84	10.76	0.75	20.11	11.51	0.61
	63 (17.2)	21.53	15.58	1.99	15.45	11.39	0.97	16.45	11.96	0.88	17.49	12.62	0.77	18.68	13.53	0.65
	57 (13.9)	19.26	18.92	1.98	13.90	13.90	0.98	14.76	14.58	0.90	15.69	15.35	0.81	16.77	16.48	0.70

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor. **Stage 1** – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

189BNV049 / CNPV*6024AL* - 315(A,J)V066155 Comfort + Dehumidify Mode
 Condenser Entering Air Temperature F (°C)

EDB °F (°C)	EVAP. AIR EWB °F (°C)	105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
		Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM
		Total	Sensit			Total	Sensit			Total	Sensit			Total	Sensit			Total	Sensit		
75 (23.9)	⁷² (22.2)	46.89	19.03	4.05	49.03	19.99	3.61	50.82	20.67	3.20	52.44	21.29	2.83	54.18	21.99	2.52	1110	1184	1196	1200	1236
	⁶⁷ (19.4)	42.37	24.54	3.98	44.50	25.79	3.55	46.13	26.47	3.14	47.59	27.05	2.77	49.16	27.84	2.47					
	⁶³ (17.2)	39.20	28.86	3.94	41.17	30.33	3.51	42.67	31.00	3.10	44.02	31.54	2.74	45.47	32.41	2.44					
	⁵⁷ (13.9)	35.30	35.19	3.89	37.12	36.99	3.46	38.37	37.72	3.05	39.47	38.20	2.69	40.73	39.17	2.39					
	⁷² (22.2)	46.59	24.56	4.05	48.93	25.81	3.61	50.72	26.49	3.20	52.34	27.07	2.83	54.08	27.87	2.52					
80 (26.7)	⁶⁷ (19.4)	42.29	30.00	3.98	44.41	31.53	3.55	46.04	32.21	3.14	47.51	32.74	2.77	49.07	33.63	2.47	1110	1184	1196	1200	1236
	⁶³ (17.2)	39.24	34.32	3.94	41.22	36.08	3.51	42.71	36.75	3.10	44.03	37.24	2.74	45.49	38.20	2.44					
	⁵⁷ (13.9)	37.41	37.41	3.92	39.33	39.33	3.49	40.47	40.47	3.07	41.42	41.42	2.71	42.65	42.65	2.41					
	⁷² (22.2)	30.83	12.50	2.33	32.85	13.32	2.05	34.76	14.09	1.82	36.68	14.86	1.61	39.12	15.87	1.43					
	⁶⁷ (19.4)	27.87	15.62	2.33	29.56	16.69	2.04	31.29	17.62	1.81	33.04	18.56	1.60	35.28	20.03	1.43					
75 (23.9)	⁶³ (17.2)	25.33	18.03	2.32	27.09	19.29	2.03	28.71	20.34	1.81	30.31	21.41	1.61	32.39	23.23	1.44	744	801	842	887	1001
	⁵⁷ (13.9)	22.97	21.65	2.32	23.97	23.17	2.03	25.40	24.38	1.81	26.83	25.65	1.61	28.78	28.01	1.44					
	⁷² (22.2)	30.77	15.75	2.33	32.78	16.79	2.05	34.69	17.72	1.82	36.60	18.67	1.61	39.04	20.14	1.43					
	⁶⁷ (19.4)	27.61	18.83	2.33	29.50	20.12	2.04	31.23	21.20	1.81	32.98	22.32	1.60	35.21	24.23	1.43					
	⁶³ (17.2)	25.33	21.25	2.32	27.10	22.73	2.03	28.71	23.93	1.81	30.32	25.17	1.61	32.41	27.44	1.43					
80 (26.7)	⁵⁷ (13.9)	23.54	23.54	2.32	25.21	25.21	2.03	26.63	26.63	1.81	28.08	28.08	1.61	30.35	30.35	1.44	744	801	842	887	1001
	⁷² (22.2)	23.83	9.66	1.63	17.67	7.17	1.02	19.19	7.80	0.93	20.76	8.45	0.80	22.37	9.11	0.61					
	⁶⁷ (19.4)	21.23	12.07	1.64	15.73	8.59	1.01	17.11	9.31	0.93	18.52	10.05	0.81	19.97	10.81	0.63					
	⁶³ (17.2)	19.35	13.95	1.64	14.34	9.71	1.00	15.61	10.49	0.93	16.90	11.30	0.82	18.23	12.13	0.66					
	⁵⁷ (13.9)	17.03	16.78	1.63	12.49	11.34	0.99	13.61	12.23	0.94	14.76	13.14	0.84	15.94	14.09	0.69					
75 (23.9)	⁷² (22.2)	23.77	12.23	1.63	17.63	8.73	1.02	19.16	9.45	0.93	20.73	10.20	0.80	22.33	10.97	0.61	662	457	482	508	535
	⁶⁷ (19.4)	21.18	14.61	1.64	15.71	10.14	1.01	17.08	10.95	0.93	18.49	11.79	0.81	19.94	12.65	0.63					
	⁶³ (17.2)	19.36	16.50	1.64	14.33	11.25	1.00	15.59	12.13	0.93	16.89	13.04	0.82	18.22	13.97	0.66					
	⁵⁷ (13.9)	18.08	18.08	1.63	12.74	12.74	0.99	13.79	13.79	0.94	14.88	14.88	0.83	16.03	15.95	0.69					
	⁷² (22.2)	23.83	9.66	1.63	17.67	7.17	1.02	19.19	7.80	0.93	20.76	8.45	0.80	22.37	9.11	0.61					

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor. **Stage 1** – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 26

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB ° F (° C)	EVAP. AIR		105 (40.5)				95 (35)				86 (29.4)				76 (23.9)				65 (18.5)			
	EWB ° F (° C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	
			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†			Total	Sens†		Total
75 (23.9)	72		57.74	23.45	6.51		61.60	25.02	5.73		65.43	26.57	5.06		69.11	28.06	4.43		71.73	29.06	3.80	
	67		52.75	29.96	6.32		56.26	31.94	5.56		59.74	33.92	4.89		63.08	35.74	4.28		65.39	36.48	3.66	
	63	1367	49.06	35.05	6.19		52.31	37.35	5.43	1514	55.53	39.67	4.77	1566	58.62	41.74	4.17	1488	60.75	42.26	3.56	
	57		44.14	42.48	6.02		47.05	45.25	5.27		49.93	48.04	4.62		52.69	50.49	4.02		54.52	50.74	3.43	
	(13.9)		57.61	29.82	6.52		61.47	31.80	5.74		65.28	33.78	5.06		68.97	35.61	4.43		71.59	36.37	3.80	
80 (26.7)	72		52.65	36.25	6.32		56.15	38.64	5.56		59.62	41.04	4.89		62.96	43.19	4.28		65.29	43.67	3.66	
	67		48.99	41.31	6.19		52.23	44.02	5.43	1440	55.45	46.75	4.77	1566	58.54	49.15	4.17	1488	60.67	49.42	3.56	
	63	1367	45.90	45.90	6.08		48.92	48.92	5.33		51.93	51.93	4.67		54.72	54.72	4.07		55.91	55.91	3.46	
	57		36.98	15.01	3.25		39.25	15.94	2.79		41.77	16.95	2.44		44.28	17.97	2.13		47.05	19.11	1.87	
	(13.9)		33.40	19.03	3.22		35.55	20.23	2.75		37.83	21.50	2.39		40.10	22.76	2.09		42.62	24.30	1.84	
75 (23.9)	72		30.77	22.16	3.21		32.82	23.59	2.72		34.94	25.04	2.37		37.04	26.50	2.06		39.38	28.36	1.81	
	67	959	27.31	28.75	3.18		29.19	28.48	2.89	1066	31.09	30.22	2.34	1120	32.99	31.96	2.04	1210	35.10	34.26	1.79	
	63		36.89	19.10	3.25		39.15	20.27	2.79		41.66	21.53	2.44		44.17	22.80	2.13		46.93	24.34	1.87	
	57		33.32	23.06	3.22		35.47	24.51	2.75		37.74	26.01	2.39		40.02	27.53	2.09		42.53	29.47	1.84	
	(13.9)		30.72	26.18	3.21		32.77	27.85	2.72	1066	34.89	29.54	2.37	1120	36.99	31.25	2.06	1210	39.33	33.50	1.81	
80 (26.7)	72		27.11	11.00	2.21		19.91	8.07	1.22		20.99	8.50	1.01		22.49	9.11	0.80		24.02	9.73	0.59	
	67		24.28	13.80	2.21		17.69	10.04	1.21		18.67	10.45	1.01		20.04	11.19	0.81		21.43	11.97	0.61	
	63	748	22.21	15.99	2.20		16.05	11.57	1.21	600	16.97	11.96	1.01	647	18.23	12.81	0.82	700	19.53	13.71	0.62	
	57		19.51	19.20	2.20		13.98	13.85	1.20		14.76	14.19	1.02		15.88	15.20	0.84		17.03	16.27	0.65	
	(13.9)		27.04	13.93	2.21		19.86	10.20	1.22		20.94	10.61	1.01		22.43	11.35	0.80		23.96	12.13	0.59	
75 (23.9)	72		24.22	16.71	2.21		17.65	12.16	1.21		18.63	12.54	1.01		19.99	13.42	0.81		21.39	14.35	0.61	
	67		22.18	18.88	2.20		16.04	13.68	1.21	600	16.95	14.04	1.01	647	18.21	15.03	0.82	700	19.50	16.08	0.62	
	63	748	20.65	20.65	2.20		14.90	14.90	1.20		15.50	15.50	1.02		16.63	16.63	0.83		17.82	17.82	0.64	
	57																					
	(13.9)																					

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor. **Stage 1** – Compressor speed limited to stage two at 105 outdoor.

NOTES:

- * Tested combination.
- † Total and sensible capacities are net capacities. Blower motor heat has been subtracted.
- ‡ Sensible capacities are shown for both 80°F (27°C) and 75°F (23.4°C) entering air at the indoor coil.
- § For sensible capacities at other than these, deduct 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree below reference temperature, or add 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree above reference temperature.

Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per AHRI standard 210/240–2008. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

** System kw is total of indoor and outdoor unit kilowatts.

NOTE: When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

EWB — Entering Wet Bulb

GUIDE SPECIFICATIONS

GENERAL

System Description

Outdoor-mounted, air-cooled, split-system air conditioning unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air-cooled coil, forward-swept blade propeller-type condenser fan, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a packaged fan coil or coil unit.

Quality Assurance

- Unit will be rated in accordance with the latest edition of AHRI Standard 240.
- Unit will be certified for capacity and efficiency, and listed in the latest AHRI directory.
- Unit construction will comply with latest edition of ASHRAE and with NEC.
- Unit will be constructed in accordance with UL standards and will carry the UL label of approval. Unit will have C-UL approval.
- Unit cabinet will be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 500-hr salt spray test.
- Air-cooled condenser coils are pressure tested and the outdoor units are leak tested.
- Unit constructed in ISO9001 approved facility.

Delivery, Storage, and Handling

- Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

Warranty (for inclusion by specifying engineer)

- U.S. and Canada only.

PRODUCTS

Equipment

- Factory-assembled, single-piece, air-cooled air conditioning unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge Puron® (R-410A) refrigerant, and special features required prior to field start-up.

Unit Cabinet

- Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.

Fans

- Condenser fan will be direct-drive propeller type, forward swept blade, discharging air upward.

AIR-COOLED, SPLIT-SYSTEM AIR CONDITIONER

189BNV

- Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated.
- Shafts will be corrosion resistant.
- Fan blades will be statically and dynamically balanced.
- Condenser fan openings will be equipped with coated steel wire safety guards.

Compressor

- Compressor will be hermetically sealed.
- Compressor will be mounted on rubber vibration isolators.
- Compressor will be covered with a sound absorbing blanket.

Condenser Coil

- Condenser coil will be air cooled.
- Coil will be constructed of aluminum fins mechanically bonded to copper tubes which are then cleaned, dehydrated, and sealed.

Refrigeration Components

- Refrigeration circuit components will include liquid-line front-seating shutoff valve with sweat connections, vapor-line front-seating shutoff valve with sweat connections, system charge of Puron® (R-410A) refrigerant, POE compressor oil, accumulator, charge compensator, electronic expansion valve, and reversing valve.
- Unit will be equipped with high-pressure switch, suction pressure transducer, and filter drier for Puron® refrigerant.

Operating Characteristics

- The capacity of the unit will meet or exceed _____ Btuh at a suction temperature of _____ °F (°C). The power consumption at full load will not exceed _____ kW.
- Combination of the unit and the evaporator or fan coil unit will have a total net cooling capacity of _____ Btuh or greater at conditions of _____ CFM entering air temperature at the evaporator at _____ °F (°C) wet bulb and _____ °F (°C) dry bulb, and air entering the unit at _____ °F (°C).
- The system will have a SEER of _____ Btuh/watt or greater at DOE conditions.

Electrical Requirements

- Nominal unit electrical characteristics will be _____ v, single phase, 60 hz. The unit will be capable of satisfactory operation within voltage limits of _____ v to _____ v.
- Unit electrical power will be single point connection.
- Control circuit will be 24v.
- Compliant with IEC 61000-4-5 Transient Surge Requirement.

Special Features

- Refer to section of this literature identifying accessories and descriptions for specific features and available enhancements.
- Evolution control with appropriate software version is required for full featured operation.

SYSTEM DESIGN SUMMARY

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-in. wc.
2. This product is not qualified for low ambient cooling operation.
Minimum cooling outdoor operating temperatures:
 - Communicating systems: 40°F (4.44°C)
 - Non-communicating systems: 55°F (12.8°C)
3. For reliable operation, unit should be level in all horizontal planes.
4. This unit is qualified for up to 100 ft (30.5 m) equivalent length of line set without additional accessories.
5. If any refrigerant tubing is buried, provide a 6 in. (152.4 mm) vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in. (914.4 mm) may be buried without further consideration. Do not bury refrigerant lines longer than 36 in. (914.4 mm).
6. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
7. Do not apply capillary tube indoor coils to these units.
8. Puron refrigerant TXV required on indoor coil.