

**GCA EVOLUTION™ SYSTEM
GEOTHERMAL HEAT PUMP
WITH PURON ADVANCE™ (R-454B) REFRIGERANT
Sizes 24, 36, 48, 60, 72**



Product Data



Features & Benefits

Energy Efficiency

- 3.8 - 4.4 COP, 18.5 - 27.0 EER (Closed Loop)
- 4.5 - 5.2 COP, 22.0 - 31.5 EER (Open Loop)
- Optional supplemental domestic water heating
- All sizes meet Energy Star requirements

Comfort

- Two-stage scroll compressor
- Variable speed ECM blower motor

Control

- Microprocessor control
- Compatible with Evolution™ Connex™ System Control
- Units equipped with A2L Dissipation Sensor and dissipation control features.

Sound

- Fully insulated cabinet with closed cell foam
- Compressor blanket

Reliability, Quality and Durability

- Non-ozone depleting, low global warming potential Puron Advance™ refrigerant
- Tin plated copper tubing in air coil

Flexibility and Installation

- Unit available in vertical and horizontal configurations
- Enhanced blower mounting configuration for increased serviceability
- Enhanced hinged electrical panel for increased component accessibility
- Enhanced evaporator coil configuration for increased serviceability

Indoor Air Quality

- MERV 8, 2" filter

Model Number Nomenclature

Position>>>	1-2	3	4-5	6	7	8	9	10	11	12	13	14	15	16	
	GC	A	24	V	T	L	C	D	C	C	1	D	X	1	
Model															Revision Level
GC = Premium tier Communicating Pkg Unit															1 = Original
Refrigerant Type															Future Use
A= Puron Advance™ R-454B															
Size															Dissipation System
24, 36, 48, 60, 72															D = with Dissipation Control X = w/o Dissipation Control
Cabinet Configuration															Voltage
V= Vertical H = Horizontal															1 = 208-230/60/1
Discharge Air Configuration															Air Coil Coating
T = Top (vertical) E = End (horizontal) S = Side (horizontal)															C = Coated Tin plated hair pins
Return Air Configuration															Fan/Motor Options
L = Left R = Right															C = Constant Airflow
															Hot Water Option
															D = with Desuperheater X = without Desuperheater
															Coax Options
															C = Copper (source) N = Cupronickel (source)

Puron
ADVANCE™



Use of the AHRI Certified
TM Mark indicates a
manufacturer's
participation in the
program For verification
of certification for individual
products, go to
www.ahridirectory.org.



ISO 9001
Quality



Accessories

Factory Installed Options

- **Cupro-nickel Coil** - Recommended in conditions anticipating moderate scale formation or in brackish water (such as open-loop applications).
- **Domestic Hot Water Heat Recovery Package:** - Used to heat domestic hot water using the wasted heat from the hot compressed gas of the compressor.

Field Installed Accessories

- **Smart Start** - A factory installed start-up device that improves efficiency as much as 65% and helps reduce wear and tear on the compressor during start-up.
- **Electric Heater Kit** - The Electric Heater Kit is a field installable electric resistance heater kit designed for the GCA series heat pumps.

NOTE: See Geothermal Accessory Catalog for the full selection of available field-installed accessories.

Aux. Heat Size Compatibility (Kw)				
Model Size	KWBEH0301N		KWBEH0301B	
	5	10	15	20
24	•	•	—	—
36	•	•	•	—
48	•	•	•	•
60	•	•	•	•
72	•	•	•	•

• = Heater kit compatible / — = Heater kit not compatible

Physical Data

Description	Unit Size				
	24	36	48	60	72
Compressor Type (Qty 1)	Scroll	Scroll	Scroll	Scroll	Scroll
Max Water Working Pressure (PSIG)*	400	400	400	400	400
ECM Fan Motor & Blower					
Fan Motor Type	Constant CFM	Constant CFM	Constant CFM	Constant CFM	Constant CFM
Fan Motor (HP)	VT: 0.33 HZ: 0.50	0.75	0.75	1.00	1.00
Blower Wheel Size (Dia. x W)	10x8	11x9	11x9	VT: 12x12 HZ: 11x9	VT: 12x12 HZ: 11x9
Water Connection Size (Includes Economizer Option)					
FPT	0.75	0.75	1	1	1
Coaxial Coil Volume (gal)	0.28	0.46	0.46	1.09	1.09
Vertical Cabinet					
Refrigeration Charge (oz)	33.5 (2.1)	45 (2.8)	56.5 (3.5)	89 (5.6)	89 (5.6)
Air Coil Dimensions (H x W)	20x16.5	28x21	36x27	42x27	42x27
Standard Filter - 1" Throwaway (L x H)	19x27	24x30	18x30	24x30 & 18x30	24x30 & 18x30
Optional Filter - 2" MERV 8 or 13 (L x H)	19x27	24x30	18x30	24x30 & 18x30	24x30 & 18x30
Optional Filter - 4" MERV 13 (L x H)	19x27	24x30	18x30	24x30 & 18x30	24x30 & 18x30
Weight - Operating (lbs)	219	255	324	397	401
Weight - Shipping (lbs)	243	280	350	424	428
Horizontal Cabinet					
Refrigeration Charge (oz)	31 (1.9)	42.5 (2.7)	52 (3.3)	91 (5.7)	91 (5.7)
Air Coil Dimensions (H x W)	15 x 22	16 x 27.5	18 x 31	20 x 50	20 x 50
Standard Filter - 1" Throwaway (L x H)	18x30	20x34	20x24 (Qty 2)	20x25 (Qty 2)	20x25 (Qty 2)
Optional Filter - 2" MERV 8 or 13 (L x H)	18x30	20x34	20x24 (Qty 2)	20x25 (Qty 2)	20x25 (Qty 2)
Optional Filter - 4" MERV 13 (L x H)	18x30	20x34	20x24 (Qty 2)	20x25 (Qty 2)	20x25 (Qty 2)
Weight - Operating (lbs)	213	263	319	366	414
Weight - Shipping (lbs)	237	288	345	393	441

*. Max working pressure with water valve is 300 PSIG for all units 400 PSIG / 2758 Kpa; 300 PSIG / 2068 Kpa

UNIT ELECTRICAL DATA

Model	Voltage Code	Voltage/Hz/Phase	Voltage Min/Max	Quantity	Compressor		Blower Motor		Total Unit FLA	Min. Circuit Amps	MOP
					RLA	LRA	FLA	HP			
GCA24	1	208-230/1/60	197/253	1	10.3	62	4.4	0.33	14.7	17.3	25
GCA36	1	208-230/1/60	197/253	1	14.6	90	8.4	0.75	23.0	26.7	40
GCA48	1	208-230/1/60	197/253	1	18.3	138	8.4	0.75	26.7	31.3	45
GCA60	1	208-230/1/60	197/253	1	25.2	147.3	9.1	1	34.3	40.6	60
GCA72	1	208-230/1/60	197/253	1	28.0	166	9.1	1	37.1	44.1	70

AHRI RATINGS (13256-1)

GCA with ECM Constant Airflow				Water Loop Heat Pump				Ground Water Heat Pump				FL Cooling 77°F		FL Heating 32°F	
				Cooling 86°F		Heating 68°F		Cooling 59°F		Heating 50°F		PL Cooling 68°F		PL Heating 41°F	
Series	Water Coil Option	Model Number	Load	Capacity BTU/h	EER BTU/W-h	Capacity BTU/h	COP	Capacity BTU/h	EER BTU/W-h	Capacity BTU/h	COP	Capacity BTU/h	EER BTU/W-h	Capacity BTU/h	COP
GCA	Copper	024-VT	Full	25000	16.50	28500	5.60	27000	24.00	23000	4.80	25500	18.50	18000	4.00
			Part	18000	18.50	20000	6.20	20000	31.50	16000	5.00	19500	27.00	14000	4.40
	Copper	024-HZ	Full	25000	16.50	28500	5.60	27000	24.00	23000	4.80	25500	18.50	18000	4.00
			Part	18000	18.50	20000	6.20	20000	31.50	16000	5.00	19500	27.00	14000	4.40
	Copper	036	Full	37500	16.00	44000	5.60	40500	24.00	37000	5.00	39000	18.50	28000	4.00
			Part	27000	18.00	31500	6.20	29000	30.00	26000	5.20	29000	25.50	22000	4.40
	Copper	048	Full	49500	16.00	58000	5.60	53500	23.00	48000	5.00	51000	18.00	38000	4.00
			Part	36000	18.00	41000	6.20	39000	29.50	33500	5.20	38000	25.00	29500	4.40
	Copper	060	Full	61500	16.00	75000	5.60	67500	23.50	62000	5.00	63000	18.00	48000	4.00
			Part	45000	18.50	53000	6.20	49500	31.00	43000	5.20	48500	26.00	37500	4.40
	Copper	070-VT	Full	68000	15.00	86000	5.10	75000	22.00	71000	4.50	70000	17.00	55000	3.80
			Part	51000	16.50	64000	5.60	57000	27.00	52000	4.70	56000	23.00	45000	4.20
	Copper	070-HZ	Full	68000	15.00	86000	5.10	75000	22.00	71000	4.50	70000	17.00	55000	3.80
			Part	51000	16.50	64000	5.60	57000	27.00	52000	4.70	56000	23.00	45000	4.20
GCA	Cu-Ni	024-VT	Full	24500	16.50	28000	5.60	26500	24.00	22500	4.80	25000	18.50	17500	4.00
			Part	17500	18.50	19500	6.20	19500	31.50	15500	5.00	19000	27.00	13500	4.40
	Cu-Ni	024-HZ	Full	24500	16.50	28000	5.60	26500	24.00	22500	4.80	25000	18.50	17500	4.00
			Part	17500	18.50	19500	6.20	19500	31.50	15500	5.00	19000	27.00	13500	4.40
	Cu-Ni	036	Full	37000	16.00	43500	5.60	40000	23.50	36500	5.00	38500	18.30	27500	4.00
			Part	26500	18.00	31000	6.20	28500	29.50	25500	5.20	28500	25.30	21500	4.40
	Cu-Ni	048	Full	49000	15.50	57500	5.60	53000	22.50	47500	5.00	50500	17.50	37500	4.00
			Part	35500	17.50	40500	6.20	38500	29.00	33000	5.20	37500	24.50	29000	4.40
	Cu-Ni	060	Full	61000	16.00	75000	5.60	67000	23.00	61500	5.00	62500	18.00	47500	4.00
			Part	44500	18.50	53000	6.20	49000	30.50	42500	5.20	48000	26.00	37000	4.40
	Cu-Ni	070-VT	Full	68000	15.00	86000	5.10	74000	21.50	71000	4.50	70000	16.80	55000	3.80
			Part	51000	16.50	64000	5.60	57000	26.50	52000	4.70	55000	22.80	45000	4.20
	Cu-Ni	070-HZ	Full	68000	15.00	86000	5.10	74000	21.50	71000	4.50	70000	16.80	55000	3.80
			Part	51000	16.50	64000	5.60	57000	26.50	52000	4.70	55000	22.80	45000	4.20

NOTES: GLHP ratings require an extended range option.
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.

Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.

ELECTRIC HEATER ELECTRICAL DATA

Constant Airflow ECM Blower Motor				1st Data Plate			5KW Electric Heat Full Load						2nd Data Plate			
													5kW Unit Data Plate Values			
Model	Voltage Code	Voltage/Hz/ Phase	Voltage Min/Max	Min. Circuit Amps	MOP Calc	MOP	Heater WATTS		Heater AMPS		MCA		208V MCA	240V MCA	208V MOP	240V MOP
							208 V	240 V	208 V	240 V	208 V	240 V				
24 VT	1	208-230/1/60	197/253	12.9	23.2	20	3.6k	4.8k	17.3	20.0	27.1	30.5	27.1	30.5	30.0	35.0
24 HZ	1	208-230/1/60	197/253	12.9	23.2	20	3.6k	4.8k	17.3	20.3	27.9	31.3	27.9	31.3	30.0	35.0
48	1	208-230/1/60	197/253	22.9	41.2	40	3.6k	4.8k	17.3	20.0	32.1	35.5	32.1	35.5	35.0	40.0
60	1	208-230/1/60	197/253	31.5	56.7	50	3.6k	4.8k	17.3	20.0	33.0	36.4	33.0	36.4	35.0	40.0
70	1	208-230/1/60	197/253	35.0	63.0	60	3.6k	4.8k	17.3	20.0	33.0	36.4	33.0	36.4	35.0	40.0
Constant Airflow ECM Blower Motor				1st Data Plate			10 KW Electric Heat + Blower						2nd Data Plate			
													10kW Unit Data Plate Values			
Model	Voltage Code	Voltage/Hz/ Phase	Voltage Min/Max	Min. Circuit Amps	MOP Calc	MOP	Heater WATTS		Heater AMPS		MCA		208V MCA	240V MCA	208V MOP	240V MOP
							208 V	240 V	208 V	240 V	208 V	240 V				
24 VT	1	208-230/1/60	197/253	12.9	23.2	20	7.2k	9.6k	34.7	40.0	48.9	55.5	48.9	55.5	50.0	60.0
24 HZ	1	208-230/1/60	197/253	12.9	23.2	20	7.2k	9.6k	34.7	40.0	19.6	56.3	49.6	56.3	50.0	60.0
48	1	208-230/1/60	197/253	22.9	41.2	40	7.2k	9.6k	34.7	40.0	53.9	61.4	53.9	61.4	60.0	70.0
60	1	208-230/1/60	197/253	31.5	56.7	50	7.2k	9.6k	34.7	40.0	54.8	61.4	54.8	61.4	60.0	70.0
70	1	208-230/1/60	197/253	35.0	63.0	60	7.2k	9.6k	34.7	40.0	54.8	61.4	54.8	61.4	60.0	70.0
Constant Airflow ECM Blower Motor				1st Data Plate			15 KW Electric Heat + Blower						2nd Data Plate			
													15kW Unit Data Plate Values			
Model	Voltage Code	Voltage/Hz/ Phase	Voltage Min/Max	Min. Circuit Amps	MOP Calc	MOP	Heater WATTS		Heater AMPS		MCA		208V MCA	240V MCA	208V MOP	240V MOP
							208 V	240 V	208 V	240 V	208 V	240 V				
24 VT	1	208-230/1/60	197/253	12.9	23.2	20										
24 HZ	1	208-230/1/60	197/253	12.9	23.2	20										
36	1	208-230/1/60	197/253	18.3	32.9	30	10.8k	14.4k	52.0	60.0	75.5	85.5	75.5	85.5	80.0	90.0
48	1	208-230/1/60	197/253	22.9	41.2	40	10.8k	14.4k	52.0	60.0	75.5	85.5	75.5	85.5	80.0	90.0
60	1	208-230/1/60	197/253	31.5	56.7	50	10.8k	14.4k	52.0	60.0	76.4	86.4	76.4	86.4	80.0	90.0
70	1	208-230/1/60	197/253	35	63	60	10.8k	14.4k	52.0	60.0	76.4	86.4	76.4	86.4	80.0	90.0
Constant Airflow ECM Blower Motor				1st Data Plate			20 KW Electric Heat + Blower						2nd Data Plate			
													20kW Unit Data Plate Values			
Model	Voltage Code	Voltage/Hz/ Phase	Voltage Min/Max	Min. Circuit Amps	MOP Calc	MOP	Heater WATTS		Heater AMPS		MCA		208V MCA	240V MCA	208V MOP	240V MOP
							208 V	240 V	208 V	240 V	208 V	240 V				
24 VT	1	208-230/1/60	197/253	12.9	23.2	20										
24 HZ	1	208-230/1/60	197/253	12.9	23.2	20										
36	1	208-230/1/60	197/253	18.3	32.9	30										
48	1	208-230/1/60	197/253	22.9	41.2	40	14.4k	19.2k	69.3	80.0	97.1	110.5	97.2	110.5	100.0	125.0
60	1	208-230/1/60	197/253	31.5	56.7	50	14.4k	19.2k	69.3	80.0	98.0	111.4	98.0	111.4	100.0	125.0
70	1	208-230/1/60	197/253	35.0	63.0	60	14.4k	19.2k	69.3	80.0	98.0	111.4	98.0	111.4	100.0	125.0

CASING RADIATED SOUND DATA

Model	LOAD	Octave Band Sound Power Levels dB, re 10-12 Watts									
		Center Frequency - Hz									Overall AHRI-260:2017 (63Hz-8kHz) (dBA)
		63	125	250	500	1000	2000	4000	8000	Overall	
024-VT	Cooling Full	72	58	56	49	45	41	33	27	72	53
	Heating Full	68	57	58	49	43	38	32	28	69	53
	Cooling Part	70	54	55	49	43	38	34	29	71	52
	Heating Part	67	54	53	46	42	36	31	26	67	50
	FAN Only	59	49	45	45	39	32	25	23	59	45
036-VT	Cooling Full	74	64	54	51	50	43	38	33	75	55
	Heating Full	77	61	54	51	48	42	38	33	77	55
	Cooling Part	76	58	54	49	47	41	38	34	76	54
	Heating Part	78	58	53	48	44	38	35	30	78	54
	FAN Only	62	47	44	44	36	31	24	24	63	44
048-VT	Cooling Full	75	59	54	50	49	42	35	29	75	54
	Heating Full	75	59	55	50	46	42	34	29	75	54
	Cooling Part	75	58	54	49	45	40	33	29	75	53
	Heating Part	74	59	54	49	44	39	32	28	74	53
	FAN Only	63	50	48	41	35	30	24	24	63	44
060-VT	Cooling Full	77	64	56	53	51	45	39	30	77	57
	Heating Full	76	63	57	53	52	44	39	31	76	57
	Cooling Part	76	62	54	50	50	40	34	26	77	55
	Heating Part	75	60	54	50	50	39	33	26	76	55
	FAN Only	66	52	47	44	39	34	27	23	66	47
070-VT	Cooling Full	84	67	57	55	54	45	39	32	84	61
	Heating Full	81	65	58	55	55	45	39	32	81	60
	Cooling Part	83	63	56	52	51	42	35	29	83	59
	Heating Part	81	62	56	52	52	42	35	29	81	58
	FAN Only	68	56	48	46	40	35	28	24	68	48
024-HZ	Cooling Full	78	69	59	49	50	44	37	30	79	58
	Heating Full	74	70	61	53	49	44	36	30	75	58
	Cooling Part	79	64	59	49	45	40	32	27	79	57
	Heating Part	74	64	58	48	46	40	33	27	74	55
	FAN Only	59	46	45	41	36	32	26	23	59	43
036-HZ	Cooling Full	78	68	59	55	53	47	42	35	79	59
	Heating Full	72	67	58	55	52	44	36	31	73	58
	Cooling Part	79	65	59	54	50	42	34	29	79	58
	Heating Part	70	66	57	55	49	41	33	27	72	56
	FAN Only	66	52	48	44	38	32	24	23	66	46
048-HZ	Cooling Full	76	68	57	55	51	45	40	30	77	58
	Heating Full	77	66	58	55	51	44	39	31	77	58
	Cooling Part	76	65	57	53	48	44	35	27	77	56
	Heating Part	77	66	55	53	47	39	34	26	78	56
	FAN Only	68	59	48	46	40	35	29	24	68	49
060-HZ	Cooling Full	79	71	63	57	53	48	44	35	80	61
	Heating Full	80	72	64	58	54	48	45	37	81	62
	Cooling Part	80	65	61	56	49	44	39	31	80	59
	Heating Part	80	64	61	56	49	44	40	31	80	59
	FAN Only	65	58	53	48	42	38	33	25	66	50
072-HZ	Cooling Full	78	70	64	59	54	50	46	36	79	62
	Heating Full	79	71	65	59	54	49	45	37	80	62
	Cooling Part	75	64	62	57	51	45	41	32	76	59
	Heating Part	79	64	62	56	50	45	40	32	79	59
	FAN Only	68	59	55	50	43	39	35	26	69	52

- Notes:**
1. Sound tests are performed at 0.1-.2 external static based on capacity of the units to align with AHRI 600 "Performance Rating of Water/Brine to Air Heat Pump Equipment" as well as DOE proposed rule making.
 2. Sound ratings for all sizes based on constant airflow motor option.
 3. Sound based on standard refrigerant option. No Hot Gas Reheat. No economizer.

DUCTED DISCHARGE SOUND DATA

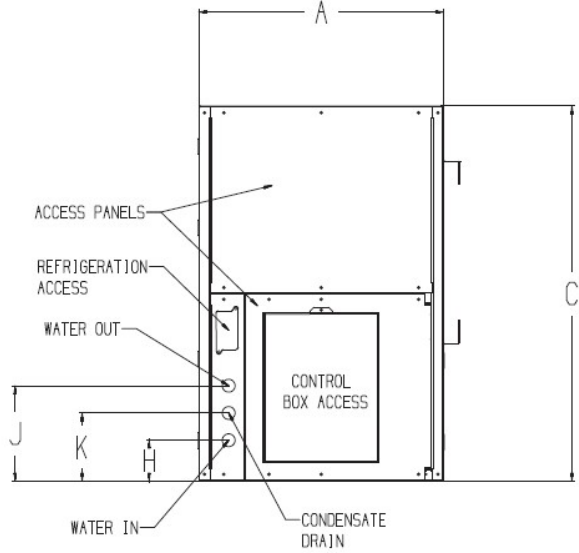
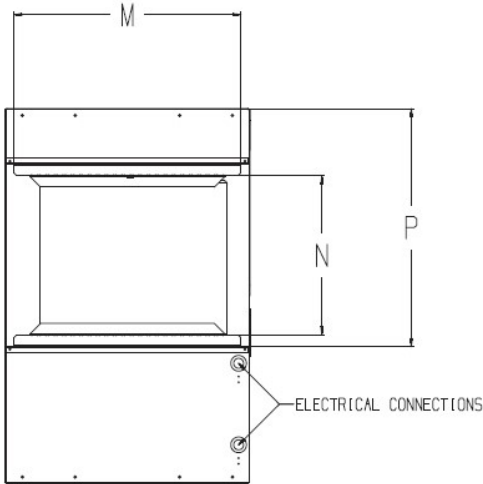
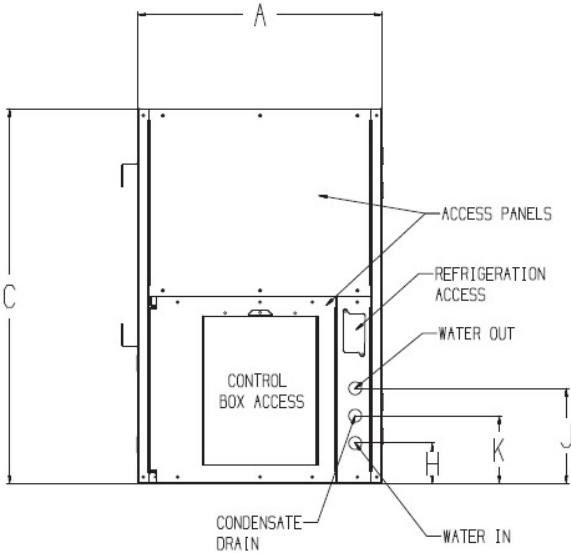
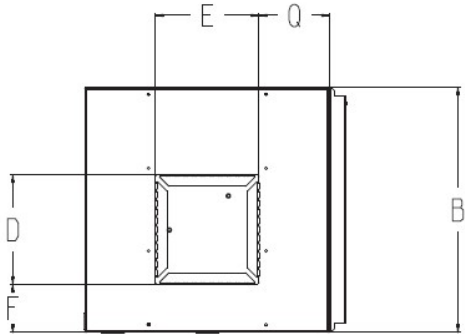
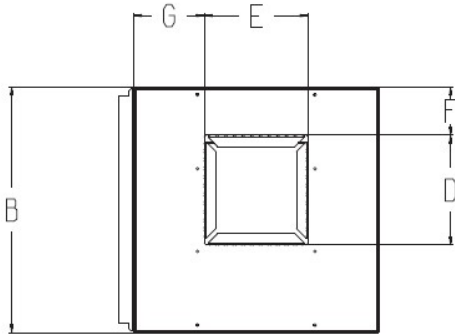
Model	LOAD	Octave Band Sound Power Levels dB, re 10-12 Watts									
		Center Frequency - Hz								Overall	Overall AHRI-260:2017 (63Hz-8kHz) (dBA)
		63	125	250	500	1000	2000	4000	8000		
024-VT	Cooling Full	73	62	62	61	59	56	53	44	74	64
	Heating Full	75	63	63	60	58	55	52	42	76	63
	Cooling Part	71	61	60	60	56	54	49	39	72	62
	Heating Part	69	59	60	57	55	52	47	37	71	60
	FAN Only	63	56	55	55	51	48	42	31	65	56
036-VT	Cooling Full	82	70	66	64	63	61	58	50	82	68
	Heating Full	73	69	64	64	61	59	57	48	76	67
	Cooling Part	76	63	62	59	58	55	51	41	76	63
	Heating Part	75	64	60	58	57	53	49	39	76	62
	FAN Only	70	59	57	55	54	50	45	34	70	58
048-VT	Cooling Full	77	69	64	64	62	60	59	52	78	68
	Heating Full	76	67	64	64	62	60	59	51	77	67
	Cooling Part	76	67	61	59	58	55	52	43	77	63
	Heating Part	77	65	61	59	58	55	52	42	78	63
	FAN Only	72	61	58	57	54	51	48	37	73	59
060-VT	Cooling Full	79	73	70	69	67	66	64	57	81	73
	Heating Full	80	73	71	69	67	66	65	57	82	73
	Cooling Part	79	69	65	65	62	61	58	50	80	68
	Heating Part	77	69	66	64	63	61	58	49	78	68
	FAN Only	75	66	63	63	60	58	54	45	76	63
070-VT	Cooling Full	80	74	71	71	69	68	66	59	83	75
	Heating Full	82	74	72	71	69	67	66	59	83	75
	Cooling Part	79	72	67	67	65	64	62	54	80	71
	Heating Part	82	70	68	67	65	64	62	53	82	71
	FAN Only	75	65	63	62	60	58	55	46	76	65
024-HZ	Cooling Full	76	69	64	65	63	61	59	52	77	69
	Heating Full	76	71	63	63	61	59	57	50	78	67
	Cooling Part	74	64	61	61	59	56	54	45	75	64
	Heating Part	79	65	61	62	58	55	53	43	79	64
	FAN Only	69	57	56	57	54	50	47	37	70	59
036-HZ	Cooling Full	78	73	69	67	66	64	61	52	80	71
	Heating Full	76	70	66	65	63	61	57	48	78	68
	Cooling Part	75	68	64	63	61	58	53	42	77	66
	Heating Part	78	68	62	60	59	56	51	40	78	64
	FAN Only	71	64	62	58	57	53	48	36	73	62
048-HZ	Cooling Full	78	72	68	69	67	66	65	58	80	73
	Heating Full	80	72	68	68	67	65	64	58	81	73
	Cooling Part	76	67	64	64	62	60	58	50	77	67
	Heating Part	79	71	64	63	62	60	58	50	80	67
	FAN Only	71	63	60	60	58	56	53	45	73	63
060-HZ	Cooling Full	80	74	73	71	72	71	70	64	83	77
	Heating Full	80	74	73	71	72	70	70	64	83	77
	Cooling Part	76	70	69	67	66	65	64	57	78	72
	Heating Part	80	71	68	67	67	65	64	58	81	72
	FAN Only	72	67	64	63	63	61	59	51	75	68
072-HZ	Cooling Full	80	75	75	73	73	71	71	65	84	78
	Heating Full	82	74	74	73	73	71	71	66	85	78
	Cooling Part	81	72	70	69	68	66	65	59	82	74
	Heating Part	79	71	70	69	68	66	65	59	81	74
	FAN Only	73	68	65	64	63	61	59	52	75	68

Notes:

1. Sound tests are performed at 0.1-.2 external static based on capacity of the units to align with AHRI 600 "Performance Rating of Water/Brine to Air Heat Pump Equipment" as well as DOE proposed rule making.
2. Sound ratings for all sizes based on constant airflow motor option.
3. Sound based on standard refrigerant option. No Hot Gas Reheat. No economizer.

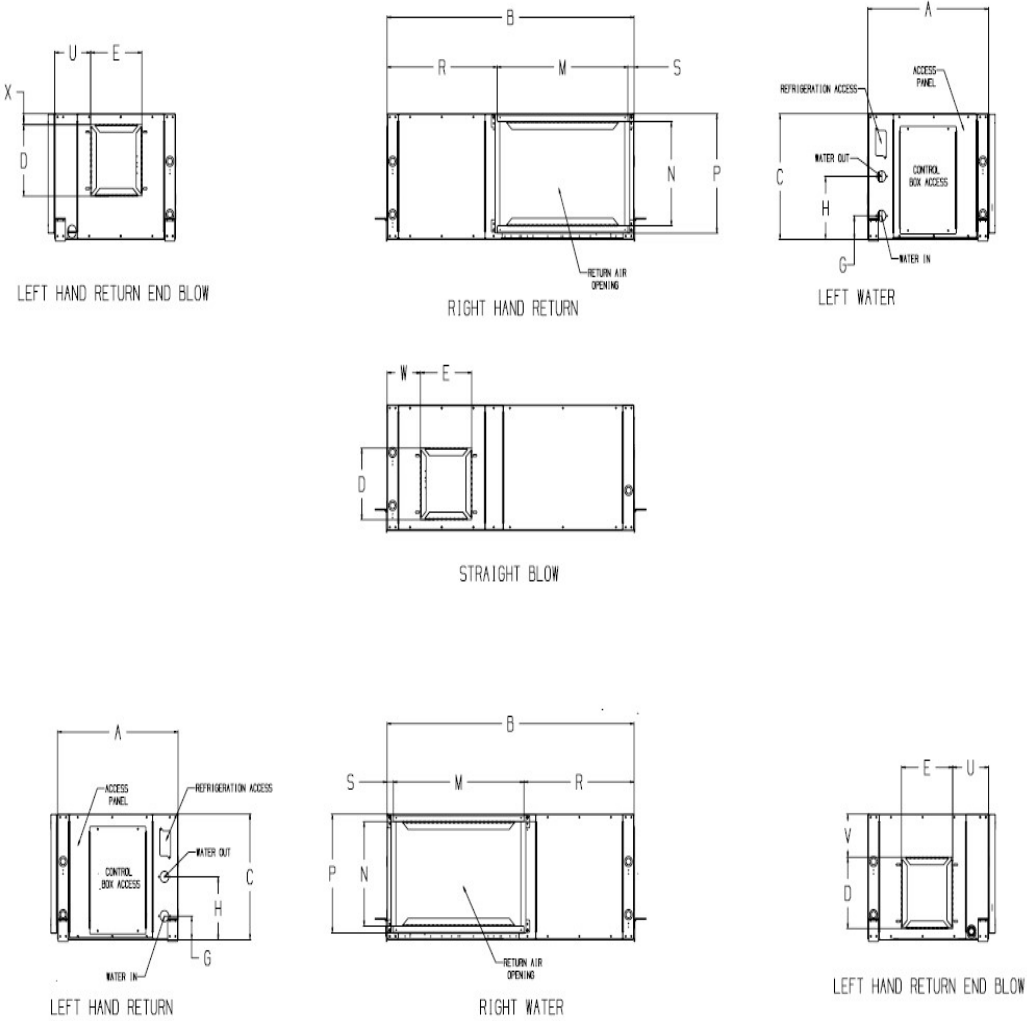
DIMENSIONS - VERTICAL

Model GCA	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	Condenser Water Connections	Recommended Replacement Nominal Filter Size	Condensate Drain Connection
	Width	Depth	Height	Dis- charge Depth	Dis- charge Width	Cabinet Edge to Discharge	Cabinet Edge to Discharge (Left Hand Return)	Water Inlet	Water Outlet	Conden- sate Drain	R/A Duct Width	R/A Duct Flange Height	Filter Rack Height	Cabinet Edge to Discharge (Right Hand Return)			
24V	21.50	26.00	44.00	11.25	10.50	5.75	5.50	3.25	8.50	5.75	18.25	24.75	27.25	5.50	3/4"FPT	19x27	3/4"FPT
36V	24.00	26.00	44.00	11.25	10.50	5.00	6.75	3.25	8.50	5.75	24.00	28.00	30.00	6.75	3/4"FPT	24x30	3/4"FPT
48V	24.00	33.00	51.00	13.50	12.00	8.50	6.00	3.00	8.25	5.50	30.00	34.25	37.25	6.00	1"FPT	18x30	3/4"FPT
60V	25.00	33.00	58.00	13.50	14.75	9.00	6.00	3.00	8.25	5.50	30.00	40.00	42.75	6.00	1"FPT	24x30 & 18x30	3/4"FPT
72V	25.00	33.00	58.00	13.50	14.75	9.00	6.00	3.00	8.25	5.50	30.00	40.00	42.75	6.00	1"FPT	24x30 & 18x30	3/4"FPT



DIMENSIONS - HORIZONTAL

Model GCA	A	B	C	D	E	G	H	M	N	P	R	S	U	V	W	X	Condenser Water Connections	Recommen- ded Replace- ment Nominal Filter Size	Condensate drain connection
	Width	Depth	Height	Discharge Height	Discharge Width	Water Inlet	Water Outlet	R/A Duct Width	R/A Duct Flange Height	Filter Rack Height	Cabinet Front to Filter Rack	Cabinet End to Filter Rack	Side to Discharge (End)	Top to Discharge (FLE & FRS)	End to Discharge (Straight)	Top to Discharge (FRE & FLS)			
24H	21.50	47.00	19.00	11.25	10.50	3.25	8.75	29.25	16.00	18.00	15.50	2.25	5.50	6.03	5.50	1.75	3/4"FPT	18x30	3/4"FPT
36H	24.00	54.00	21.00	12.50	11.75	3.25	8.50	33.25	18.00	20.00	19.50	1.25	6.75	6.81	5.50	1.75	3/4"FPT	20x34	3/4"FPT
48H	24.00	65.00	21.00	12.50	11.75	3.00	8.25	43.50	18.00	20.50	16.00	5.25	6.75	6.75	5.50	1.75	1"FPT	20x24 (Qty 2)	3/4"FPT
60H	24.00	75.25	21.00	12.50	11.75	3.00	8.25	49.50	18.00	20.25	22.50	3.00	6.75	6.82	4.75	1.75	1"FPT	20x25 (Qty 2)	3/4"FPT
72H	24.00	75.25	21.00	12.50	11.75	3.00	8.25	49.50	18.00	20.25	22.50	3.00	6.75	6.82	4.75	1.75	1"FPT	20x25 (Qty 2)	3/4"FPT



COOLING PERFORMANCE

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA24 COOLING PERFORMANCE - PART LOAD @ 650 CFM									
50	3	3.2	1.4	75/63	20.1	15.8	22.0	0.7	28.61
				80/67	21.3	16.2	23.3	0.7	30.67
				85/71	22.6	16.6	24.6	0.7	32.87
	4.5	6.2	2.7	75/63	20.7	16.0	22.5	0.6	32.42
				80/67	22.0	16.5	23.8	0.6	35.15
				85/71	23.4	16.9	25.1	0.6	38.06
	6	10.2	4.4	75/63	21.1	16.2	22.8	0.6	34.75
				80/67	22.4	16.6	24.1	0.6	37.89
				85/71	23.8	17.0	25.4	0.6	41.37
60	3	3.0	1.3	75/63	19.1	15.4	21.3	0.8	23.78
				80/67	20.3	15.8	22.5	0.8	25.43
				85/71	21.6	16.2	23.8	0.8	27.12
	4.5	5.9	2.5	75/63	19.7	15.6	21.8	0.7	26.62
				80/67	21.0	16.1	23.0	0.7	28.69
				85/71	22.3	16.4	24.3	0.7	30.94
	6	9.6	4.2	75/63	20.1	15.7	22.0	0.7	28.3
				80/67	21.3	16.2	23.3	0.7	30.67
				85/71	22.7	16.6	24.6	0.7	33.26
70	3	2.8	1.2	75/63	18.2	14.9	20.6	0.9	19.9
				80/67	19.3	15.4	21.8	0.9	21.21
				85/71	20.5	15.8	23.0	0.9	22.6
	4.5	5.6	2.4	75/63	18.8	15.1	21.0	0.8	22.08
				80/67	20.0	15.6	22.2	0.8	23.74
				85/71	21.2	16.1	23.5	0.8	25.44
	6	9.1	3.9	75/63	19.1	15.3	21.2	0.8	23.35
				80/67	20.3	15.7	22.5	0.8	25.21
				85/71	21.6	16.3	23.8	0.8	27.15
80	3	2.6	1.1	75/63	17.2	14.6	19.9	1.0	16.64
				80/67	18.3	15.0	21.1	1.0	17.77
				85/71	19.4	15.5	22.2	1.0	18.88
	4.5	5.3	2.3	75/63	17.8	14.7	20.3	1.0	18.38
				80/67	18.9	15.3	21.5	1.0	19.7
				85/71	20.1	15.8	22.7	1.0	21.11
	6	8.6	3.7	75/63	18.0	14.8	20.5	0.9	19.37
				80/67	19.2	15.4	21.7	0.9	20.83
				85/71	20.5	15.8	23.0	0.9	22.43
90	3	2.5	1.1	75/63	16.2	14.1	19.2	1.2	13.94
				80/67	17.3	14.7	20.3	1.2	14.86
				85/71	18.4	15.2	21.5	1.2	15.82
	4.5	5.0	2.2	75/63	16.7	14.4	19.6	1.1	15.29
				80/67	17.8	14.9	20.7	1.1	16.4
				85/71	19.0	15.3	21.9	1.1	17.59
	6	8.2	3.6	75/63	17.0	14.5	19.8	1.1	16.06
				80/67	18.2	14.9	20.9	1.0	17.31
				85/71	19.4	15.4	22.2	1.0	18.59
100	3	2.4	1.0	75/63	15.3	13.8	18.7	1.3	11.68
				80/67	16.2	14.3	19.6	1.3	12.43
				85/71	17.3	14.8	20.8	1.3	13.24
	4.5	4.7	2.1	75/63	15.7	13.9	18.9	1.2	12.73
				80/67	16.8	14.5	20.0	1.2	13.64
				85/71	17.9	14.9	21.2	1.2	14.64
	6	7.8	3.4	75/63	15.9	14.1	19.1	1.2	13.32
				80/67	17.1	14.6	20.2	1.2	14.34
				85/71	18.2	15.1	21.4	1.2	15.41

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	3	2.3	1.0	75/63	14.3	13.4	18.1	1.5	9.75
				80/67	15.2	13.9	19.0	1.5	10.38
				85/71	16.2	14.4	20.1	1.5	11.06
	4.5	4.5	2.0	75/63	14.7	13.6	18.3	1.4	10.59
				80/67	15.7	14.1	19.3	1.4	11.33
				85/71	16.8	14.6	20.4	1.4	12.15
	6	7.4	3.2	75/63	15.0	13.7	18.5	1.4	11.06
				80/67	16.0	14.1	19.5	1.3	11.89
				85/71	17.1	14.7	20.6	1.3	12.76

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA24 COOLING PERFORMANCE - FULL LOAD @ 800 CFM									
50	3	3.1	1.3	75/63	26.3	20.0	29.6	1.2	22.62
				80/67	27.9	20.5	31.3	1.2	23.76
				85/71	29.7	21.0	33.1	1.2	24.9
	4.5	6.2	2.7	75/63	27.2	20.4	30.2	1.1	25.84
				80/67	29.0	20.9	32.0	1.1	27.4
				85/71	30.8	21.4	33.9	1.1	29.01
	6	10.1	4.4	75/63	27.7	20.7	30.5	1.0	27.82
				80/67	29.5	21.3	32.4	1.0	29.67
				85/71	31.4	21.6	34.3	1.0	31.63
60	3	2.9	1.3	75/63	25.3	19.5	28.9	1.3	19.52
				80/67	26.8	20.0	30.5	1.3	20.46
				85/71	28.4	20.7	32.2	1.3	21.39
	4.5	5.8	2.5	75/63	26.1	19.9	29.5	1.2	22.02
				80/67	27.8	20.4	31.2	1.2	23.3
				85/71	29.5	21.1	33.0	1.2	24.6
	6	9.5	4.1	75/63	26.6	20.1	29.8	1.1	23.52
				80/67	28.3	20.7	31.6	1.1	25.03
				85/71	30.2	21.2	33.4	1.1	26.6
70	3	2.8	1.2	75/63	24.2	19.1	28.2	1.4	16.87
				80/67	25.7	19.7	29.8	1.5	17.66
				85/71	27.3	20.1	31.5	1.5	18.47
	4.5	5.5	2.4	75/63	25.0	19.4	28.7	1.3	18.93
				80/67	26.6	20.0	30.4	1.3	19.98
				85/71	28.3	20.6	32.2	1.3	21.03
	6	9.0	3.9	75/63	25.5	19.6	29.0	1.3	20.12
				80/67	27.1	20.2	30.8	1.3	21.34
				85/71	28.8	20.8	32.5	1.3	22.57
80	3	2.6	1.1	75/63	23.0	18.7	27.5	1.6	14.56
				80/67	24.5	19.2	29.0	1.6	15.25
				85/71	26.0	19.8	30.7	1.6	15.91
	4.5	5.2	2.3	75/63	23.9	19.0	28.0	1.5	16.26
				80/67	25.4	19.6	29.6	1.5	17.14
				85/71	27.1	20.1	31.3	1.5	18.06
	6	8.5	3.7	75/63	24.3	19.2	28.3	1.4	17.24
				80/67	25.9	19.8	29.9	1.4	18.25
				85/71	27.6	20.3	31.7	1.4	19.31
90	3	2.5	1.1	75/63	21.9	18.2	26.8	1.8	12.53
				80/67	23.4	18.7	28.4	1.8	13.13
				85/71	24.8	19.4	29.9	1.8	13.74
	4.5	4.9	2.1	75/63	22.7	18.6	27.3	1.6	13.96
				80/67	24.2	19.2	28.9	1.6	14.7
				85/71	25.8	19.6	30.5	1.7	15.48
	6	8.1	3.5	75/63	23.2	18.7	27.5	1.6	14.77
				80/67	24.7	19.2	29.2	1.6	15.64
				85/71	26.3	19.9	30.8	1.6	16.49
100	3	2.3	1.0	75/63	20.8	17.8	26.2	1.9	10.73
				80/67	22.2	18.4	27.7	2.0	11.29
				85/71	23.6	19.0	29.3	2.0	11.88
	4.5	4.7	2.0	75/63	21.6	18.1	26.6	1.8	11.93
				80/67	23.1	18.6	28.2	1.8	12.58
				85/71	24.6	19.2	29.8	1.8	13.3
	6	7.7	3.4	75/63	22.0	18.2	26.8	1.7	12.61
				80/67	23.5	18.8	28.4	1.8	13.34
				85/71	25.0	19.4	30.1	1.8	14.08

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	3	2.2	1.0	75/63	19.7	17.3	25.7	2.1	9.2
				80/67	21.1	17.8	27.2	2.2	9.72
				85/71	22.4	18.6	28.7	2.2	10.21
	4.5	4.5	1.9	75/63	20.4	17.5	26.0	2.0	10.15
				80/67	21.8	18.3	27.5	2.0	10.77
				85/71	23.4	18.8	29.1	2.0	11.42
	6	7.4	3.2	75/63	20.8	17.8	26.2	1.9	10.7
				80/67	22.3	18.4	27.7	2.0	11.38
				85/71	23.8	19.1	29.4	2.0	12.09

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA36 COOLING PERFORMANCE - PART LOAD @ 970 CFM									
50	4.5	2.3	1.0	75/63	30.9	24.1	34.0	1.0	29.68
				80/67	32.9	24.8	36.0	1.0	31.83
				85/71	34.9	25.5	38.0	1.0	33.91
	7	4.5	1.9	75/63	31.9	24.5	34.7	0.9	33.56
				80/67	33.8	25.2	36.6	0.9	36.24
				85/71	36.0	25.9	38.8	0.9	39.29
	9	7.3	3.2	75/63	32.3	24.6	35.0	0.9	35.80
				80/67	34.4	25.4	37.1	0.9	39.13
				85/71	36.6	26.0	39.2	0.9	42.54
60	4.5	2.1	0.9	75/63	29.5	23.5	33.0	1.2	24.68
				80/67	31.4	24.2	34.9	1.2	26.35
				85/71	33.4	25.0	36.9	1.2	27.97
	7	4.2	1.8	75/63	30.4	23.8	33.6	1.1	27.57
				80/67	32.5	24.5	35.7	1.1	29.75
				85/71	34.5	25.3	37.7	1.1	31.89
	9	6.9	3.0	75/63	30.8	24.0	33.9	1.1	29.20
				80/67	32.9	24.8	36.0	1.0	31.67
				85/71	35.0	25.5	38.1	1.0	34.16
70	4.5	2.0	0.9	75/63	28.0	23.1	32.0	1.4	20.61
				80/67	30.0	23.7	33.9	1.4	22.02
				85/71	32.0	24.3	36.0	1.4	23.40
	7	4.0	1.7	75/63	29.0	23.3	32.6	1.3	22.89
				80/67	30.9	24.0	34.6	1.3	24.60
				85/71	32.9	24.7	36.6	1.3	26.26
	9	6.5	2.8	75/63	29.4	23.4	32.9	1.2	24.11
				80/67	31.3	24.2	34.9	1.2	26.00
				85/71	33.5	24.8	37.0	1.2	28.06
80	4.5	1.9	0.8	75/63	26.7	22.3	31.1	1.5	17.30
				80/67	28.8	22.6	33.1	1.5	18.61
				85/71	29.1	24.3	34.1	1.5	18.86
	7	3.8	1.6	75/63	27.5	22.7	31.6	1.4	19.08
				80/67	29.5	23.2	33.6	1.4	20.52
				85/71	31.9	23.0	35.8	1.4	22.20
	9	6.2	2.7	75/63	27.9	22.8	31.8	1.4	20.04
				80/67	29.8	23.6	33.8	1.4	21.57
				85/71	32.0	24.0	35.9	1.4	23.23
90	4.5	1.8	0.8	75/63	25.3	21.8	30.2	1.7	14.50
				80/67	26.8	23.0	31.9	1.7	15.32
				85/71	27.1	23.6	32.8	1.7	15.50
	7	3.6	1.6	75/63	25.8	22.4	30.5	1.6	15.77
				80/67	27.8	23.0	32.5	1.6	16.99
				85/71	30.6	21.6	34.9	1.6	18.70
	9	5.9	2.6	75/63	26.4	22.2	30.9	1.6	16.67
				80/67	28.0	23.4	32.6	1.6	17.77
				85/71	29.0	24.2	34.0	1.6	18.44
100	4.5	1.7	0.7	75/63	23.9	21.1	29.5	2.0	12.17
				80/67	25.3	22.5	31.0	2.0	12.82
				85/71	28.4	19.5	33.5	2.0	14.36
	7	3.4	1.5	75/63	24.6	21.4	29.8	1.9	13.25
				80/67	25.9	22.8	31.4	1.9	13.98
				85/71	27.2	23.6	32.9	1.9	14.68
	9	5.7	2.5	75/63	24.9	21.6	30.0	1.8	13.85
				80/67	26.2	22.9	31.5	1.8	14.60
				85/71	27.5	23.7	33.1	1.8	15.38

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	4.5	1.6	0.7	75/63	22.5	20.5	28.7	2.2	10.14
				80/67	24.1	21.5	30.4	2.2	10.81
				85/71	24.7	22.8	31.6	2.2	11.07
	7	3.3	1.4	75/63	23.1	21.0	29.0	2.1	10.97
				80/67	24.8	21.7	30.8	2.1	11.83
				85/71	27.5	19.7	33.0	2.1	13.16
	9	5.4	2.3	75/63	23.4	21.1	29.2	2.0	11.45
				80/67	25.2	21.8	31.0	2.0	12.38
				85/71	25.8	23.1	32.1	2.0	12.65

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA36 COOLING PERFORMANCE - FULL LOAD @ 1300 CFM									
50	4.5	2.2	1.0	75/63	40.4	31.4	45.7	1.8	22.82
				80/67	42.9	32.7	48.4	1.8	23.92
				85/71	45.9	33.6	51.5	1.8	25.30
	7	4.4	1.9	75/63	41.6	32.2	46.6	1.6	25.31
				80/67	44.5	33.3	49.6	1.7	26.84
				85/71	47.3	34.6	52.5	1.7	28.41
	9	7.2	3.1	75/63	42.2	32.5	47.0	1.6	26.75
				80/67	45.2	33.6	50.1	1.6	28.48
				85/71	48.4	34.5	53.4	1.6	30.28
60	4.5	2.1	0.9	75/63	38.8	30.8	44.6	1.9	20.05
				80/67	41.2	31.9	47.2	2.0	21.04
				85/71	44.1	32.9	50.1	2.0	22.27
	7	4.2	1.8	75/63	39.9	31.5	45.4	1.8	22.15
				80/67	42.7	32.6	48.3	1.8	23.51
				85/71	45.8	33.5	51.4	1.8	25.03
	9	6.8	3.0	75/63	40.4	32.0	45.7	1.7	23.31
				80/67	43.4	32.9	48.8	1.7	24.89
				85/71	46.5	33.9	51.9	1.8	26.57
70	4.5	2.0	0.9	75/63	36.9	30.6	43.3	2.1	17.43
				80/67	39.4	31.6	45.9	2.1	18.40
				85/71	41.8	33.0	48.5	2.2	19.38
	7	3.9	1.7	75/63	38.3	30.9	44.2	2.0	19.37
				80/67	41.0	31.8	47.0	2.0	20.57
				85/71	43.9	32.9	50.0	2.0	21.93
	9	6.5	2.8	75/63	39.0	31.1	44.7	1.9	20.45
				80/67	41.5	32.4	47.4	1.9	21.67
				85/71	44.6	33.2	50.5	1.9	23.25
80	4.5	1.9	0.8	75/63	35.5	29.6	42.4	2.3	15.26
				80/67	36.9	31.4	44.3	2.3	15.76
				85/71	38.0	32.2	45.9	2.3	16.16
	7	3.7	1.6	75/63	36.6	30.1	43.1	2.2	16.85
				80/67	39.2	31.2	45.8	2.2	17.92
				85/71	41.1	33.2	48.1	2.2	18.78
	9	6.2	2.7	75/63	37.3	30.4	43.6	2.1	17.80
				80/67	39.7	31.7	46.1	2.1	18.87
				85/71	42.7	32.4	49.1	2.1	20.26
90	4.5	1.8	0.8	75/63	33.3	29.6	41.1	2.6	13.00
				80/67	34.8	30.6	43.0	2.6	13.52
				85/71	35.4	31.3	44.3	2.6	13.72
	7	3.6	1.5	75/63	34.5	30.1	41.8	2.4	14.41
				80/67	37.4	30.6	44.6	2.4	15.51
				85/71	37.3	31.9	45.5	2.4	15.52
	9	5.9	2.5	75/63	35.6	29.7	42.5	2.3	15.38
				80/67	38.3	30.4	45.2	2.3	16.48
				85/71	37.8	32.1	45.8	2.3	16.37
100	4.5	1.7	0.7	75/63	31.6	28.9	40.2	2.8	11.19
				80/67	35.8	26.2	43.7	2.9	12.44
				85/71	34.5	31.0	44.0	2.9	12.07
	7	3.4	1.5	75/63	34.1	27.3	41.6	2.7	12.80
				80/67	36.8	27.3	44.3	2.7	13.75
				85/71	35.7	31.4	44.6	2.7	13.41
	9	5.6	2.4	75/63	33.3	29.6	41.1	2.6	12.99
				80/67	35.7	30.9	43.6	2.6	13.90
				85/71	36.4	31.6	45.0	2.6	14.19

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	4.5	1.6	0.7	75/63	30.4	27.9	39.8	3.1	9.70
				80/67	31.7	29.5	41.6	3.2	10.02
				85/71	32.9	30.5	43.3	3.2	10.35
	7	3.2	1.4	75/63	31.2	28.7	40.0	2.9	10.61
				80/67	33.0	29.9	42.2	3.0	11.18
				85/71	33.9	30.8	43.8	3.0	11.47
	9	5.4	2.3	75/63	31.6	28.9	40.2	2.8	11.13
				80/67	35.8	26.4	43.8	2.9	12.48
				85/71	34.7	31.1	44.2	2.8	12.20

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA48 COOLING PERFORMANCE - PART LOAD @ 1300 CFM									
50	6.0	3.2	1.4	75/63	40.2	32.0	44.0	1.3	31.35
				80/67	43.2	32.9	47.0	1.3	33.84
				85/71	46.0	34.2	49.8	1.3	36.18
	9.0	6.4	2.8	75/63	41.7	32.5	45.1	1.2	35.84
				80/67	44.6	33.6	48.1	1.1	39.01
				85/71	47.9	34.5	51.3	1.1	42.36
	12.0	10.5	4.5	75/63	42.4	32.7	45.7	1.1	38.52
				80/67	45.6	33.8	48.8	1.1	42.42
				85/71	48.8	34.9	52.0	1.1	46.22
60	6.0	3.0	1.3	75/63	38.2	31.0	42.4	1.5	25.93
				80/67	40.8	32.1	45.1	1.5	27.74
				85/71	41.4	33.3	46.4	1.5	28.40
	9.0	6.1	2.6	75/63	39.5	31.5	43.4	1.4	29.05
				80/67	42.4	32.6	46.3	1.3	31.54
				85/71	45.5	33.5	49.4	1.3	34.11
	12.0	10.0	4.3	75/63	40.1	31.9	43.8	1.3	30.87
				80/67	43.2	32.9	46.9	1.3	33.81
				85/71	46.1	34.2	49.9	1.3	36.66
70	6.0	2.9	1.2	75/63	36.0	30.1	40.7	1.7	21.48
				80/67	36.3	31.2	41.8	1.7	21.75
				85/71	38.3	32.3	44.0	1.7	23.05
	9.0	5.8	2.5	75/63	37.3	30.6	41.7	1.6	23.93
				80/67	40.0	31.7	44.4	1.6	25.77
				85/71	40.0	32.8	45.3	1.5	26.02
	12.0	9.5	4.1	75/63	37.9	30.9	42.2	1.5	25.31
				80/67	40.6	32.2	45.0	1.5	27.41
				85/71	41.4	33.3	46.4	1.5	28.26
80	6.0	2.7	1.2	75/63	33.1	29.5	38.6	1.9	17.50
				80/67	37.9	26.5	42.7	1.9	19.95
				85/71	36.2	31.6	42.5	1.9	19.16
	9.0	5.5	2.4	75/63	34.0	29.9	39.3	1.8	19.18
				80/67	35.9	31.0	41.5	1.8	20.31
				85/71	37.5	32.0	43.5	1.8	21.37
	12.0	9.1	3.9	75/63	35.6	29.9	40.4	1.7	20.77
				80/67	36.0	31.1	41.6	1.7	21.14
				85/71	38.3	32.3	44.1	1.7	22.71
90	6.0	2.6	1.1	75/63	31.6	28.1	37.5	2.1	14.80
				80/67	35.3	26.2	40.8	2.1	16.45
				85/71	38.5	25.3	43.8	2.1	17.97
	9.0	5.3	2.3	75/63	33.4	27.4	38.8	2.0	16.63
				80/67	36.7	26.5	41.8	2.0	18.29
				85/71	35.2	31.2	41.8	2.0	17.59
	12.0	8.7	3.8	75/63	32.6	29.3	38.3	1.9	16.74
				80/67	34.5	30.5	40.4	1.9	17.75
				85/71	35.9	31.5	42.4	1.9	18.64
100	6.0	2.5	1.1	75/63	29.3	27.4	36.1	2.4	12.20
				80/67	31.5	28.6	38.3	2.4	13.07
				85/71	32.7	30.4	40.2	2.4	13.59
	9.0	5.0	2.2	75/63	30.3	27.8	36.7	2.3	13.33
				80/67	32.6	28.9	39.1	2.3	14.33
				85/71	33.6	30.7	40.7	2.3	14.81
	12.0	8.4	3.6	75/63	30.9	27.9	37.0	2.2	13.98
				80/67	34.5	26.7	40.3	2.2	15.69
				85/71	34.3	30.9	41.2	2.2	15.63

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	6.0	2.4	1.0	75/63	27.2	26.5	34.8	2.7	10.06
				80/67	29.5	27.7	37.1	2.7	10.91
				85/71	31.7	28.9	39.4	2.7	11.73
	9.0	4.8	2.1	75/63	28.1	26.9	35.3	2.6	10.91
				80/67	30.3	28.2	37.6	2.6	11.85
				85/71	32.1	30.2	39.8	2.6	12.59
	12.0	8.0	3.5	75/63	28.6	27.1	35.6	2.5	11.44
				80/67	31.0	28.2	38.0	2.5	12.44
				85/71	33.4	29.6	40.5	2.5	13.48

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA48 COOLING PERFORMANCE - FULL LOAD @ 1675 CFM									
50	6.0	3.1	1.3	75/63	53.3	41.4	60.2	2.3	23.44
				80/67	56.6	43.1	63.7	2.3	24.40
				85/71	60.5	43.8	67.8	2.4	25.40
	9.0	6.3	2.7	75/63	54.8	42.5	61.1	2.1	26.55
				80/67	58.7	43.4	65.2	2.1	27.77
				85/71	62.7	44.8	69.4	2.2	28.98
	12.0	10.3	4.5	75/63	55.9	42.4	61.9	2.0	28.42
				80/67	59.8	44.0	65.9	2.0	29.94
				85/71	63.6	45.5	70.0	2.0	31.22
60	6.0	2.9	1.3	75/63	51.0	40.8	58.6	2.5	20.38
				80/67	54.4	42.3	62.2	2.5	21.35
				85/71	58.2	43.1	66.2	2.6	22.31
	9.0	5.9	2.6	75/63	52.7	41.6	59.7	2.3	22.83
				80/67	56.5	42.6	63.6	2.4	24.03
				85/71	60.4	43.9	67.7	2.4	25.20
	12.0	9.8	4.3	75/63	53.8	41.5	60.5	2.2	24.27
				80/67	57.6	43.1	64.4	2.2	25.67
				85/71	61.3	44.7	68.4	2.3	26.94
70	6.0	2.8	1.2	75/63	49.1	39.7	57.3	2.8	17.84
				80/67	52.4	41.0	60.8	2.8	18.74
				85/71	55.5	43.0	64.3	2.8	19.54
	9.0	5.7	2.5	75/63	50.7	40.4	58.4	2.6	19.84
				80/67	54.3	41.6	62.1	2.6	20.95
				85/71	58.0	43.0	66.0	2.6	22.05
	12.0	9.4	4.1	75/63	51.7	40.7	59.0	2.5	21.01
				80/67	55.3	42.2	62.8	2.5	22.27
				85/71	58.9	43.8	66.6	2.5	23.44
80	6.0	2.7	1.2	75/63	47.0	38.8	56.0	3.0	15.59
				80/67	50.2	40.2	59.5	3.1	16.40
				85/71	51.4	42.3	61.6	3.1	16.70
	9.0	5.4	2.3	75/63	48.6	39.6	57.0	2.8	17.28
				80/67	52.0	40.9	60.6	2.8	18.28
				85/71	54.8	43.5	63.9	2.9	19.08
	12.0	9.0	3.9	75/63	49.3	40.0	57.5	2.7	18.20
				80/67	53.0	41.2	61.3	2.7	19.37
				85/71	56.5	43.0	64.9	2.8	20.46
90	6.0	2.6	1.1	75/63	44.6	38.5	54.6	3.3	13.45
				80/67	47.0	40.2	57.4	3.4	14.01
				85/71	46.8	40.7	58.6	3.4	13.98
	9.0	5.2	2.2	75/63	46.5	38.7	55.7	3.1	14.99
				80/67	50.4	38.7	59.6	3.1	16.06
				85/71	48.5	41.3	59.5	3.1	15.60
	12.0	8.6	3.7	75/63	47.2	39.0	56.1	3.0	15.80
				80/67	50.5	40.8	59.6	3.0	16.80
				85/71	54.0	42.0	63.3	3.0	17.78
100	6.0	2.4	1.0	75/63	42.8	37.1	53.7	3.7	11.67
				80/67	43.0	38.8	55.1	3.7	11.68
				85/71	45.0	40.1	57.7	3.7	12.10
	9.0	5.0	2.2	75/63	43.7	38.5	54.1	3.4	12.78
				80/67	46.9	40.0	57.4	3.5	13.58
				85/71	46.8	40.7	58.6	3.4	13.57
	12.0	8.2	3.6	75/63	45.0	38.0	54.8	3.3	13.62
				80/67	47.9	40.1	58.0	3.3	14.42
				85/71	50.0	41.8	60.7	3.3	14.98

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	6.0	2.4	1.0	75/63	39.4	36.7	52.0	4.1	9.67
				80/67	41.6	38.3	54.7	4.1	10.10
				85/71	48.6	32.3	60.0	4.2	11.51
	9.0	4.8	2.1	75/63	42.3	36.2	53.5	3.8	11.09
				80/67	42.9	38.7	55.2	3.8	11.23
				85/71	44.6	40.0	57.6	3.8	11.60
	12.0	7.9	3.4	75/63	42.8	37.1	53.7	3.7	11.64
				80/67	44.0	39.1	55.8	3.7	11.95
				85/71	45.5	40.3	58.0	3.7	12.33

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA60 COOLING PERFORMANCE - PART LOAD @ 1575 CFM									
50	7.5	2.8	1.2	75/63	51.3	39.4	56.4	1.7	30.23
				80/67	54.6	40.6	59.7	1.7	32.28
				85/71	58.0	41.5	63.2	1.7	34.51
	11.0	5.7	2.5	75/63	52.7	40.0	57.6	1.6	33.21
				80/67	56.3	41.0	61.1	1.6	35.76
				85/71	59.9	42.0	64.7	1.6	38.47
	15.0	9.3	4.0	75/63	53.6	40.4	58.2	1.5	34.92
				80/67	57.0	41.5	61.7	1.5	37.64
				85/71	60.9	42.6	65.5	1.5	40.65
60	7.5	2.7	1.2	75/63	48.7	38.3	54.4	1.9	25.60
				80/67	51.9	39.4	57.7	1.9	27.34
				85/71	55.1	40.6	60.9	1.9	29.13
	11.0	5.3	2.3	75/63	50.1	38.9	55.5	1.8	28.01
				80/67	53.5	40.1	58.9	1.8	30.10
				85/71	57.0	41.2	62.4	1.8	32.37
	15.0	8.8	3.8	75/63	50.9	39.2	56.1	1.7	29.36
				80/67	54.3	40.4	59.5	1.7	31.65
				85/71	57.9	41.5	63.1	1.7	34.13
70	7.5	2.5	1.1	75/63	46.0	37.2	52.4	2.1	21.59
				80/67	49.1	38.4	55.5	2.1	23.06
				85/71	52.3	39.5	58.8	2.1	24.61
	11.0	5.1	2.2	75/63	47.4	37.7	53.4	2.0	23.55
				80/67	50.6	39.0	56.6	2.0	25.28
				85/71	53.9	40.2	60.0	2.0	27.14
	15.0	8.3	3.6	75/63	48.0	38.0	53.9	2.0	24.61
				80/67	51.4	39.3	57.2	1.9	26.53
				85/71	54.8	40.5	60.7	1.9	28.58
80	7.5	2.4	1.0	75/63	43.3	36.0	50.3	2.4	18.12
				80/67	46.2	37.4	53.4	2.4	19.36
				85/71	49.3	38.6	56.5	2.4	20.65
	11.0	4.8	2.1	75/63	44.6	36.6	51.4	2.3	19.75
				80/67	47.8	38.0	54.5	2.3	21.21
				85/71	51.0	39.1	57.8	2.2	22.77
	15.0	7.9	3.4	75/63	45.3	37.0	51.8	2.2	20.61
				80/67	48.5	38.2	55.1	2.2	22.22
				85/71	51.9	39.3	58.4	2.2	23.93
90	7.5	2.2	1.0	75/63	40.5	34.9	48.4	2.7	15.16
				80/67	43.4	36.3	51.4	2.7	16.21
				85/71	46.4	37.4	54.4	2.7	17.33
	11.0	4.5	2.0	75/63	41.8	35.4	49.3	2.5	16.44
				80/67	44.8	36.7	52.3	2.5	17.68
				85/71	47.9	38.1	55.5	2.5	18.96
	15.0	7.5	3.3	75/63	42.4	35.8	49.7	2.5	17.12
				80/67	45.5	37.1	52.8	2.5	18.47
				85/71	48.7	38.4	56.0	2.4	19.89
100	7.5	2.1	0.9	75/63	37.7	33.8	46.5	3.0	12.59
				80/67	40.5	35.1	49.4	3.0	13.50
				85/71	43.4	36.4	52.3	3.0	14.43
	11.0	4.3	1.9	75/63	38.8	34.3	47.2	2.9	13.59
				80/67	41.8	35.6	50.2	2.9	14.65
				85/71	44.9	36.8	53.4	2.8	15.79
	15.0	7.1	3.1	75/63	39.4	34.6	47.6	2.8	14.14
				80/67	42.3	36.2	50.6	2.8	15.24
				85/71	45.7	37.0	53.9	2.8	16.52

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	Pressure Drop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	7.5	2.1	0.9	75/63	34.6	33.0	44.5	3.4	10.31
				80/67	37.5	34.1	47.4	3.4	11.16
				85/71	40.0	36.2	50.2	3.4	11.90
	11.0	4.1	1.8	75/63	35.8	33.3	45.2	3.2	11.14
				80/67	38.8	34.4	48.3	3.2	12.10
				85/71	41.7	35.8	51.2	3.2	13.02
	15.0	6.8	2.9	75/63	36.5	33.3	45.7	3.1	11.64
				80/67	39.4	34.7	48.7	3.1	12.60
				85/71	42.3	36.2	51.6	3.1	13.57

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
GCA60 COOLING PERFORMANCE - FULL LOAD @ 1950 CFM									
50	7.5	2.8	1.2	75/63	65.7	49.7	74.6	2.9	22.83
				80/67	69.9	51.1	79.0	2.9	23.91
				85/71	74.3	52.7	83.7	3.0	25.17
	11.0	5.7	2.5	75/63	67.5	50.4	75.9	2.7	25.16
				80/67	71.9	51.9	80.5	2.7	26.51
				85/71	76.7	53.2	85.3	2.7	28.07
	15.0	9.3	4.0	75/63	68.4	50.8	76.4	2.6	26.45
				80/67	72.9	52.4	81.1	2.6	27.97
				85/71	77.8	53.3	86.1	2.6	29.68
60	7.5	2.7	1.2	75/63	63.4	48.6	73.2	3.2	20.07
				80/67	67.5	49.9	77.5	3.2	21.04
				85/71	72.0	51.2	82.1	3.2	22.18
	11.0	5.3	2.3	75/63	65.0	49.3	74.2	3.0	21.97
				80/67	69.3	50.8	78.7	3.0	23.16
				85/71	74.2	51.9	83.6	3.0	24.61
	15.0	8.8	3.8	75/63	65.9	49.6	74.8	2.9	23.04
				80/67	70.2	51.4	79.3	2.9	24.34
				85/71	75.2	52.4	84.3	2.9	25.94
70	7.5	2.5	1.1	75/63	60.9	47.5	71.5	3.5	17.59
				80/67	64.8	49.0	75.7	3.5	18.46
				85/71	68.9	50.9	80.0	3.5	19.46
	11.0	5.1	2.2	75/63	62.4	48.3	72.5	3.3	19.19
				80/67	66.5	50.0	76.8	3.3	20.25
				85/71	71.4	50.9	81.7	3.3	21.55
	15.0	8.3	3.6	75/63	63.4	48.7	73.2	3.2	20.13
				80/67	67.7	50.2	77.6	3.2	21.31
				85/71	72.4	51.2	82.4	3.2	22.65
80	7.5	2.4	1.0	75/63	58.3	46.3	70.0	3.8	15.35
				80/67	62.1	48.1	74.0	3.8	16.18
				85/71	66.2	49.6	78.3	3.9	17.03
	11.0	4.8	2.1	75/63	60.1	46.9	71.0	3.6	16.79
				80/67	64.1	48.5	75.3	3.6	17.73
				85/71	68.4	50.1	79.8	3.6	18.83
	15.0	7.9	3.4	75/63	60.8	47.4	71.5	3.5	17.54
				80/67	65.0	48.8	75.8	3.5	18.59
				85/71	69.5	50.3	80.4	3.5	19.79
90	7.5	2.2	1.0	75/63	55.8	45.7	68.5	4.2	13.44
				80/67	59.5	47.1	72.4	4.2	14.15
				85/71	63.7	48.1	76.9	4.3	14.94
	11.0	4.5	2.0	75/63	57.2	46.3	69.3	3.9	14.58
				80/67	61.3	47.6	73.6	4.0	15.49
				85/71	65.4	49.2	77.9	4.0	16.38
	15.0	7.5	3.3	75/63	58.2	46.3	69.9	3.8	15.25
				80/67	62.2	48.0	74.1	3.8	16.19
				85/71	66.7	49.2	78.7	3.9	17.25
100	7.5	2.1	0.9	75/63	53.3	44.5	67.3	4.6	11.68
				80/67	56.9	46.1	71.1	4.6	12.31
				85/71	60.8	47.4	75.3	4.7	13.00
	11.0	4.3	1.9	75/63	54.9	44.8	68.1	4.3	12.72
				80/67	58.7	46.4	72.1	4.4	13.47
				85/71	62.5	48.3	76.1	4.4	14.25
	15.0	7.1	3.1	75/63	55.6	45.5	68.4	4.2	13.25
				80/67	59.4	47.1	72.3	4.2	14.08
				85/71	63.4	48.8	76.7	4.2	14.93

COOLING PERFORMANCE (Continued)

Entering Water °F	Water flow , GPM	Pressure Drop Ft. Water	PressureDrop (Psi)	Cooling					
				Ent.Air °F	Total Btu/hr	Sensible Btu/hr.	Ht.Abs. Btu/hr.	Unit kW	EER
110	7.5	2.0	0.9	75/63	50.5	43.6	65.8	5.0	10.02
				80/67	54.1	45.1	69.8	5.1	10.61
				85/71	57.9	46.5	73.9	5.2	11.22
	11.0	4.1	1.8	75/63	52.1	44.0	66.6	4.8	10.93
				80/67	55.8	45.6	70.7	4.8	11.62
				85/71	59.6	47.2	74.6	4.8	12.30
	15.0	6.8	2.9	75/63	52.9	44.2	67.1	4.6	11.43
				80/67	56.7	45.6	71.1	4.7	12.16
				85/71	60.7	47.4	75.3	4.7	12.93