GEOSTAR

SPECIFICATION CATALOG

GEOTHERMAL HEAT PUMPS

ASTON SERIES

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GS/GT Series

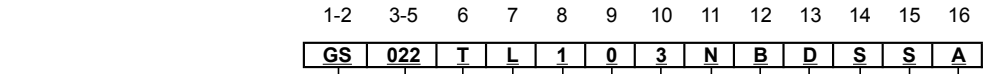
The GS/GT Series products established a new industry standard for efficiency, performance, reliability and quiet operation. The GS/GT Series line is available in eleven single speed sizes (0.75 to 6 tons) with high efficiency rotary or scroll compressors. The product is also available in five dual capacity sizes (2 to 6 tons) with Copeland UltraTech™ Scroll compressors.

All GS/GT Series units utilize ozone-safe R-410A refrigerant to meet the most stringent EPA requirements. Coated air coils add durability and longer life. ECM2.3 blowers are used to increase comfort and efficiency. A sophisticated microprocessor control sequences all components during operation for optimum performance, and provides easy-to-use troubleshooting features with fault lights and on-board diagnostics. An Emerson Comfort Alert is also included to monitor compressor operation and faults. Unit configurations include vertical top, bottom, or rear discharge (left or right return) and horizontal units with left or right return, side or end discharge. Heavy-gauge metal cabinets are fully insulated and coated with an attractive and durable white paint for long lasting protection.

GS/GT Series products are performance-certified to AHRI ISO 13256-1 standards, are ETL listed, and are ENERGYSTAR® qualified.

As a leader in the industry, we are dedicated to innovation, quality and customer satisfaction. In fact, every unit built is exposed to a wide range of quality control procedures throughout the assembly process and is then subjected to a rigorous battery of computerized run tests to certify that it meets or exceeds performance standards for efficiency and safety, and will perform flawlessly at startup. As further affirmation of our quality standards, each unit carries our exclusive Quality Assurance emblem, signed by the final test technician.

Model Nomenclature



Family
GS = Single Speed
GT = Two Stage

Unit Capacity
MBTUH

Discharge Air Configuration
T = Top Discharge (Vertical)
B = Bottom (Vertical)
E = End (Horizontal)
S = Side (Horizontal)
R = Rear Discharge (022-072 Vertical Only)

Return Air Configuration
L = Left Painted
R = Right Painted

Voltage
0 = 208-230/60/1 - commercial
1 = 208-230/60/1 - residential
2 = 265/60/1 - commercial
3 = 208-230/60/3 - commercial
4 = 460/60/3 - commercial

Hot Water Option
0 = No Hot Water Generation, No GeoStart
1 = Hot Water Generation with Factory Installed Pump, No GeoStart - residential
2 = Hot Water Generation without Factory Installed Pump (018-072 Only), No GeoStart - commercial
3 = No Hot Water Generation, GeoStart [1]
4 = Hot Water Generation with Factory Installed Pump (022-072 Only), GeoStart - residential [1]
5 = Hot Water Generation without Factory Installed Pump, GeoStart - commercial [1]

Vintage
A = 009-072
B = Residential Vertical Top Discharge and Horizontal 022-026-030

Non-Standard Option Details
S = Standard

Non-Standard Options
S = Microprocessor

Cabinet Options
D = White Cabinet

Sound Kit
B = Blanket

Coax Options
C = Copper
N = Cupronickel

Blower Options
0 = PSC***
1 = ECM Blower*
2 = Oversized ECM Blower Option (036, 038, 042, 048, 049 Only)
3 = Oversized PSC (022, 030, 036, 042, 048 Only)

* Not available on 009-012
*** Not available on dual capacity models, nor 265V 030
[1] Not available in model sizes 009-018

AHRI Data

PSC Motors

AHRI/ASHRAE/ISO 13256-1
English (IP) Units

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
				Cooling EWT 86°F		Heating EWT 68°F		Cooling EWT 59°F		Heating EWT 50°F		Cooling Brine Full Load 77°F Part Load 68°F		Heating Brine Full Load 32°F Part Load 41°F	
		gpm	cfm	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
009	Single	3.0	350	9,300	14.5	12,100	5.2	10,800	22.2	10,100	4.3	9,800	16.7	7,700	3.4
012	Single	3.5	400	11,700	15.4	14,000	4.9	14,000	25.5	11,900	4.2	12,500	18.0	9,500	3.6
015	Single	4.0	500	14,400	15.5	17,800	4.7	16,200	26.0	14,900	4.4	14,600	18.0	11,700	3.7
018	Single	5.0	600	18,000	15.1	22,500	5.0	20,700	25.5	18,400	4.4	18,500	18.0	14,500	3.6
022	Single	8.0	750	20,200	17.0	24,600	6.0	22,600	28.0	19,800	5.0	21,000	20.2	14,600	3.8
030	Single	8.0	900	27,300	18.2	32,400	5.5	29,900	27.0	25,800	4.8	28,800	21.1	19,800	3.7
036	Single	9.0	1200	34,100	17.5	37,800	5.5	38,200	25.7	30,100	4.7	34,600	19.6	24,000	4.0
042	Single	11.0	1300	40,000	16.3	43,900	5.3	44,400	24.5	34,800	4.6	41,500	18.5	27,500	3.7
048	Single	12.0	1500	46,400	15.5	55,200	5.0	51,000	22.5	45,000	4.3	48,700	17.2	35,000	3.6
060	Single	15.0	1800	64,000	15.9	69,500	4.9	71,400	24.0	55,000	4.2	66,000	18.2	43,000	3.6
070	Single	18.0	2000	70,400	15.0	84,300	4.7	79,000	21.6	66,000	4.0	73,200	17.1	52,000	3.4

11/19/10

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
Heating capacities based upon 68°F DB, 59°F WB entering air temperature
All ratings based upon 208V operation

ECM2.3 Motors

AHRI/ASHRAE/ISO 13256-1
English (IP) Units

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
				Cooling EWT 86°F		Heating EWT 68°F		Cooling EWT 59°F		Heating EWT 50°F		Cooling Brine Full Load 77°F Part Load 68°F		Heating Brine Full Load 32°F Part Load 41°F	
		gpm	cfm	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
026	Full	8	950	25,600	15.7	30,400	5.4	29,000	24.0	25,300	5.0	27,100	18.4	18,900	4.1
	Part	7	750	19,400	18.5	22,600	6.2	21,700	30.8	18,100	5.2	21,300	26.4	16,000	4.6
038	Full	9	1300	38,600	17.1	41,800	5.5	39,400	24.0	34,700	4.9	40,000	19.8	26,600	4.1
	Part	8	1150	27,500	19.4	29,600	6.4	30,200	31.7	24,800	5.3	30,000	28.0	22,200	4.8
049	Full	12	1400	47,900	15.8	57,000	5.1	53,000	22.6	47,000	4.7	49,600	18.0	37,300	4.0
	Part	11	1200	35,800	18.0	41,800	6.0	37,600	28.3	34,000	5.2	38,700	25.0	31,000	4.5
064	Full	16	1800	64,100	16.0	72,100	5.0	70,700	22.2	56,200	4.5	67,600	17.8	45,400	3.8
	Part	14	1500	47,000	18.1	50,500	5.7	51,500	29.0	39,400	4.7	51,100	25.6	34,000	4.1
072	Full	18	2000	71,000	14.9	86,400	5.0	79,200	20.1	67,500	4.3	73,000	16.8	54,000	3.7
	Part	16	1800	54,000	16.6	62,900	5.2	62,000	25.0	50,500	4.4	58,400	22.7	44,200	4.0
015	Single	4.0	500	14,400	16.4	18,500	5.2	16,300	26.3	14,800	4.7	14,200	18.5	11,800	3.8
018	Single	5.0	600	18,000	16.5	23,000	5.3	21,000	26.3	18,900	4.7	18,500	19.0	14,500	3.9
022	Single	8.0	800	20,600	17.4	24,600	6.0	23,000	29.5	19,800	5.0	21,200	20.5	14,600	3.9
030	Single	8.0	1000	27,700	18.8	32,400	5.7	30,300	28.7	25,800	5.0	29,000	21.7	20,000	3.9
036	Single	9.0	1200	34,500	19.4	37,900	6.0	37,000	29.8	30,100	5.0	35,000	21.8	24,000	4.3
042	Single	11.0	1300	40,400	18.8	43,900	5.8	45,000	29.3	34,800	5.1	41,800	21.0	27,500	4.1
048	Single	12.0	1500	47,000	17.0	55,200	5.4	51,600	26.0	45,100	4.8	49,200	19.5	35,000	3.9
060	Single	15.0	1800	64,200	17.2	69,500	5.2	71,700	26.0	55,000	4.6	66,000	19.2	43,000	3.8
070	Single	18.0	2000	70,400	16.0	84,300	5.0	79,000	23.8	66,000	4.4	73,200	18.1	52,000	3.6

11/19/10

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
Heating capacities based upon 68°F DB, 59°F WB entering air temperature
All ratings based upon 208V operation

AHRI Data cont.

Energy Star Compliance Table

Model	Tier 1		Tier 2	
	Ground Water	Ground Loop	Ground Water	Ground Loop
009	P	P	P	
012	P	P	P	P
015	E, P	E, P	E, P	E, P
018	E, P	E, P	E, P	E, P
024	E, P	E, P	E, P	E, P
030	E, P	E, P	E, P	E, P
036	E, P	E, P	E, P	E, P
042	E, P	E, P	E, P	E, P
048	E, P	E, P	E, P	E, P
060	E, P	E, P	E, P	E, P
070	E, P	E, P	E, P	E
026	E	E	E	E
038	E	E	E	E
049	E	E	E	E
064	E	E	E	E
072	E	E	E	E

1/4/11

E - Unit with ECM2.3 Blower
P - Unit with PSC Blower

Energy Star Rating Criteria
In order for water-source heat pumps to be Energy Star rated they must meet or exceed the minimum efficiency requirements listed below. Please note there are 3 Tier levels that dictate minimum efficiency for water source heat pumps. Only one tier level is active at a given moment.

Tier 1: 12/1/2009 – 12/31/2010

Water-to-Air	**EER**	**COP**
Ground Loop	14.1	3.3
Ground Water	16.2	3.6
Water-to-Water		
Ground Loop	15.1	3.0
Ground Water	19.1	3.4

Tier 2: 1/1/2011 – 12/31/2011

Water-to-Air	**EER**	**COP**
Ground Loop	16.1	3.5
Ground Water	18.2	3.8
Water-to-Water		
Ground Loop	15.1	3.0
Ground Water	19.1	3.4

Tier 3: 1/1/2012 – No Effective End Date Published

Water-to-Air	**EER**	**COP**
Ground Loop	17.1	3.6
Ground Water	21.1	4.1
Water-to-Water		
Ground Loop	16.1	3.1
Ground Water	20.1	3.5

AHRI Data cont.

The performance standard AHRI/ASHRAE/ISO 13256-1 became effective January 1, 2000 and replaces ARI Standards 320, 325, and 330. This new standard has three major categories: Water Loop (comparable to ARI 320), Ground Water (ARI 325), and Ground Loop (ARI 330). Although these standards are similar there are some differences:

Unit of Measure: The Cooling COP

The cooling efficiency is measured in EER (US version measured in Btuh per Watt. The Metric version is measured in a cooling COP (Watt per Watt) similar to the traditional COP measurement.

Water Conditions Differences

Entering water temperatures have changed to reflect the centigrade temperature scale. For instance the water loop heating test is performed with 68°F (20°C) water rounded down from the old 70°F (21.1°C).

Air Conditions Differences

Entering air temperatures have also changed (rounded down) to reflect the centigrade temperature scale. For instance the cooling tests are performed with 80.6°F (27°C) dry bulb and 66.2°F (19°C) wet bulb entering air instead of the traditional 80°F (26.7°C) DB and 67°F (19.4°C) WB entering air temperatures. 80.6/66.2 data may be converted to 80/67 using the entering air correction table. This represents a significantly lower relative humidity than the old 80/67 of 50% and will result in lower latent capacities.

Pump Power Correction Calculation

Within each model, only one water flow rate is specified for all three groups and pumping Watts are calculated using the following formula. This additional power is added onto the existing power consumption.

- Pump power correction = (gpm x 0.0631) x (Press Drop x 2990) / 300
  Where 'gpm' is waterflow in gpm and 'Press Drop' is the pressure drop through the unit heat exchanger at rated water flow in feet of head.

Blower Power Correction Calculation

Blower power is corrected to zero external static pressure using the following equation. The nominal airflow is rated at a specific external static pressure. This effectively reduces the power consumption of the unit and increases cooling capacity but decreases heating capacity. These Watts are significant enough in most cases to increase EER and COPs fairly dramatically over ARI 320, 325, and 330 ratings.

- Blower Power Correction = (cfm x 0.472) x (esp x 249) / 300
  Where 'cfm' is airflow in cfm and 'esp' is the external static pressure at rated airflow in inches of water gauge.

ISO Capacity and Efficiency Calculations

The following equations illustrate cooling calculations:

- ISO Cooling Capacity = Cooling Capacity (Btuh) + (Blower Power Correction (Watts) x 3.412)
- ISO EER Efficiency (W/W) = ISO Cooling Capacity (Btuh) x 3.412 / [Power Input (Watts) - Blower Power Correction (Watts) + Pump Power Correction (Watt)]

The following equations illustrate heating calculations:

- ISO Heating Capacity = Heating Capacity (Btuh) - (Blower Power Correction (Watts) x 3.412)
- ISO COP Efficiency (W/W) = ISO Heating Capacity (Btuh) x 3.412 / [Power Input (Watts) - Blower Power Correction (Watts) + Pump Power Correction (Watt)]

Comparison of Test Conditions

	ARI 320	ISO/AHRI 13256-1 WLHP	ARI 325	ISO/AHRI 13256-1 GWHP	ARI 330	ISO/AHRI 13256-1 GLHP
Cooling						
Entering Air - DB/WB °F	80/67	80.6/66.2	80/67	80.6/66.2	80/67	80.6/66.2
Entering Water - °F	85	86	50/70	59	77	77
Fluid Flow Rate	*	**	**	**	**	**
Heating						
Entering Air - DB/WB °F	70	68	70	68	70	68
Entering Water - °F	70	68	50/70	50	32	32
Fluid Flow Rate	*	**	**	**	**	**

Note *: Flow rate is set by 10°F rise in standard cooling test Note **: Flow rate is specified by the manufacturer
Part load entering water conditions not shown.
WLHP = Water Loop Heat Pump; GWHP = Ground Water Heat Pump; GLHP = Ground Loop Heat Pump

Conversions:

Airflow (lps) = CFM x 0.472; WaterFlow (lps) = GPM x 0.0631;
ESP (Pascals) = ESP (in wg) x 249; Press Drop (Pascals) = Press Drop (ft hd) x 2990

Design Features

What's New?

- Ultra High AHRI/ISO 13256-1 Ratings.
  - 28 EER & 4.8 COP (size 038).
- High efficiency rotary or scroll in single speed units.
  - Sizes 009, 012, 015, 018,022, 030, 036, 042, 048, 060, 070.
- Copeland UltraTech™ Compressors in dual capacity units.
  - Modulating, switches from low to high without delay.
  - 67% capacity first stage.
  - 2-ton dual capacity now available.
  - Sizes 026, 038, 049, 064, 072.
- Comfort Alert Control Module.
  - Monitors compressor operation and communicates with control board.
- Foil faced cleanable insulation.
- Double isolation mounted compressors.
- Text based thermostats with ComforTalk, communicate with control box
- Improved air coil service access.
- Coated air coil.
- ThermaShield coated coaxial heat exchanger and hot water generator.
- Optional GeoStart soft starter
  - Reduces start current (LRA) by 60-70%
  - Allows heat pump to go "off grid" more easily
  - Reduces light flicker and start-up noise
  - Improves compressor's start behavior

Application Flexibility

- Safe, efficient operation in a wide range of liquid temperatures (20°F to 120°F) and flow rates (as low as 1.5 GPM/ton in open loop applications when EWT >50°F).
- Top or rear air discharge for upflow or bottom discharge for counterflow installations in vertical units, side or end discharge for horizontal units.
- True left or right return air locations—vertical units include filter rack/duct collar.
- Variable-speed ECM2.3 blowers permit various duct applications.
- Narrow cabinet for easy movement through doorways.
- Internally trapped condensate piping for neat, compact installation (vertical upflow units only).
- Optional field-installed auxiliary electric heater.
- Corner-located electrical box for field wiring from two sides.
- Fuse-protected loop pump power block for easy wiring.
- Loop pump slaving feature allows multiple units to share one flow center.
- Relay to control field-mounted accessories.
- Field-selectable freeze sensing setting for well or closed loop systems.

Operating Efficiencies

- AHRI/ISO 13256-1 rating for heating COPs, cooling EERs and low water flow requirements.
- Optional hot water generator with internal pump generates hot water at considerable savings while improving overall system efficiency.
- High-stability expansion valve delivers optimum refrigerant flow over a wide range of conditions and provides bidirectional operation without troublesome check valves.
- Efficient rotary or scroll compressors operate quietly.
- Oversized coaxial tube water-to-refrigerant heat exchanger operates at low liquid pressure drops.
- Convoluted copper water tube functions efficiently at low flow rates.
- Oversized rifled copper tube/lanced aluminum fin air-to-refrigerant heat exchanger provides high efficiencies at low-face velocity.
- Large, low-RPM blowers with variable-speed motors provide quiet and efficient air movement with high static capability.
- Utilizes the ozone-friendly R-410A refrigerant which produces higher efficiencies and warmer discharge air temperatures.

Service Advantages

- Removable panels: three for the compressor compartment and one (on horizontals) or two (on verticals) for the air handling compartment to provide quick access to all internal components with ductwork in place.
- Easily accessible thermal expansion valve.
- Brass, swivel-type water connections for quick connection union, and elimination of wrenches and sealants during installation.
- Insulated divider and separate air handling/compressor access panels permit service testing without air bypass.
- Designed for front access in tight applications.
- LED fault and status lights with memory for easy diagnostics.
- Detachable thermostat connection strip for wiring convenience.
- Hot water pump shut-off switch for easy startup and service.
- Control box and blower motors have quick-attach wiring plugs for easy removal.
- Internal drop-out blower with permanently-lubricated ball bearing motor.
- High- and low-pressure service ports in refrigerant circuit.
- Blower and transformer powered from auxiliary heat supply (when installed) to provide emergency heat with open compressor circuit breaker.

Design Features cont.

Product Quality

- Heavy-gauge steel cabinets are painted with durable powder coat paint for long lasting beauty and service.
- Coaxial heat exchanger, refrigerant suction lines, hot water generator coil, and all water pipes are fully insulated to reduce condensation problems in low temperature operation.
- Coated air coils for extended life.
- Noise reduction features include double isolation mounted compressors and soft starting blower motors; insulated compressor compartment; interior cabinet insulation using 1/2-inch foil lined glass fiber. All units include compressor blanket for quiet operation.
- Safety features include high- and low-pressure refrigerant controls to protect the compressor; condensate overflow protection; freeze sensing to safeguard the coaxial heat exchanger; blower start detection; hot water high-limit hot water generator pump shutdown; Comfort Alert compressor monitoring; fault lockout enables emergency heat and prevents compressor operation until thermostat or circuit breaker is reset.

Microprocessor Benefits

- Digital auto-changeover thermostat with 3-stage heating/2-stage cooling holds precise temperature and provides varying blower speed control.
- Component sequencing delays for quiet startup, shutdown, and timed staging of auxiliary electric heat.
- ECM2.3 blower speed control provides higher supply air temperature in heating, better dehumidification in cooling, and quiet operation at reduced airflows in all modes.
- Hot water limit prevents scalding, and pump shuts down automatically when full unit capacity is needed for heating.

Options & Accessories

- Cupronickel heat exchangers for open loop applications
- Optional hot water generator with internally mounted pump and water heater plumbing connector
- Electronic auto-changeover thermostat with 3-stage heating/2-stage cooling and indicator LEDs
- 24 volt 1-inch electronic air cleaner
- 90% efficient, cleanable electrostatic filters
- Closed loop flow center
- Auxiliary electric heater
- Hose kits
- Filter rack/duct collar for horizontal units
- Additional accessory relay
- Oversized ECM2.3 blower motor
- Oversized PSC blower motor
- GeoStart soft starter

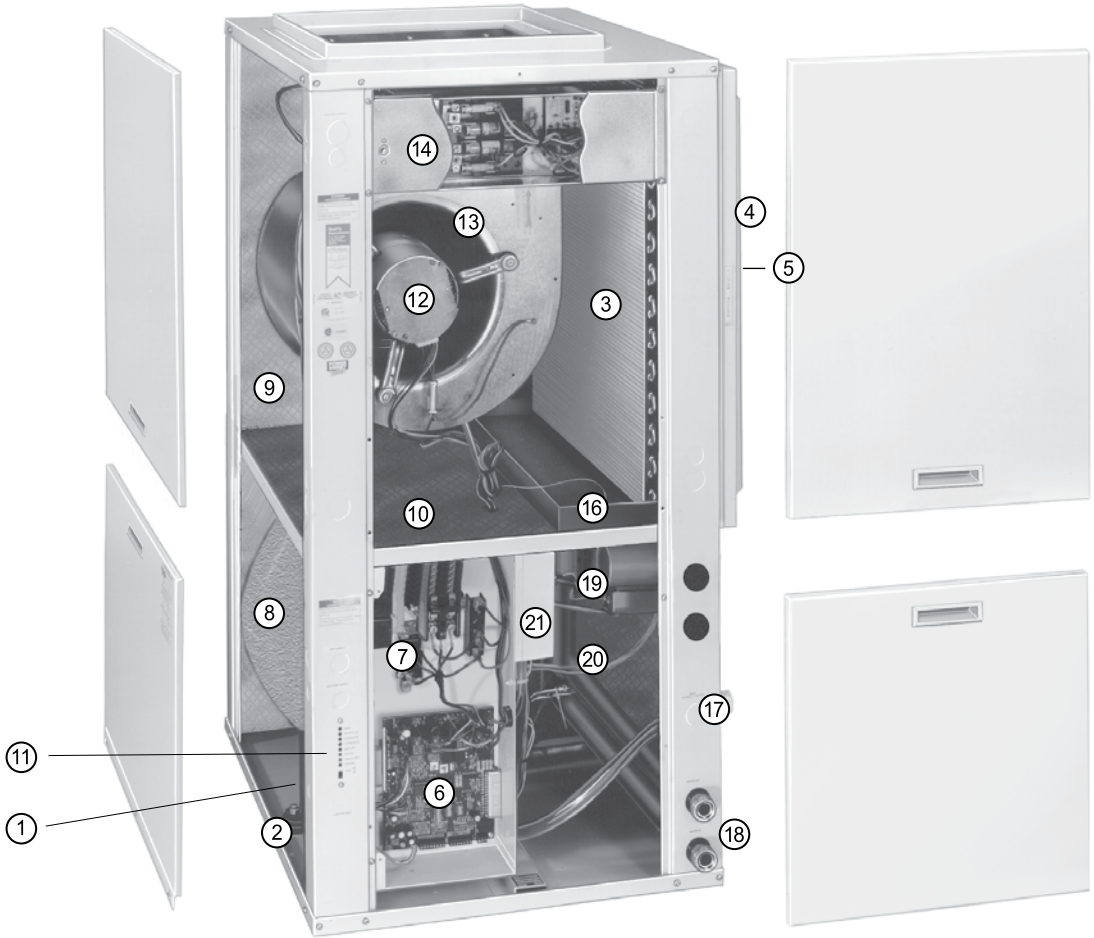
Manufacturing Quality

- All units are computer run-tested, with conditioned source water, in all modes to ensure efficiency and reliability.
- All refrigerant brazing is performed in a nitrogen atmosphere.
- All units are deep evacuated to less than 150 microns prior to refrigerant charging.
- All joints are helium leak-tested to ensure an annual leak rate of less than 1/4 ounce.
- All major components bar coded. Eliminating possibility of mis-matched parts built into unit.
- All assembly technicians thoroughly trained in proper quality procedures.
- Focus on geothermal products enables company to dedicate all resources to product.

Unit Components

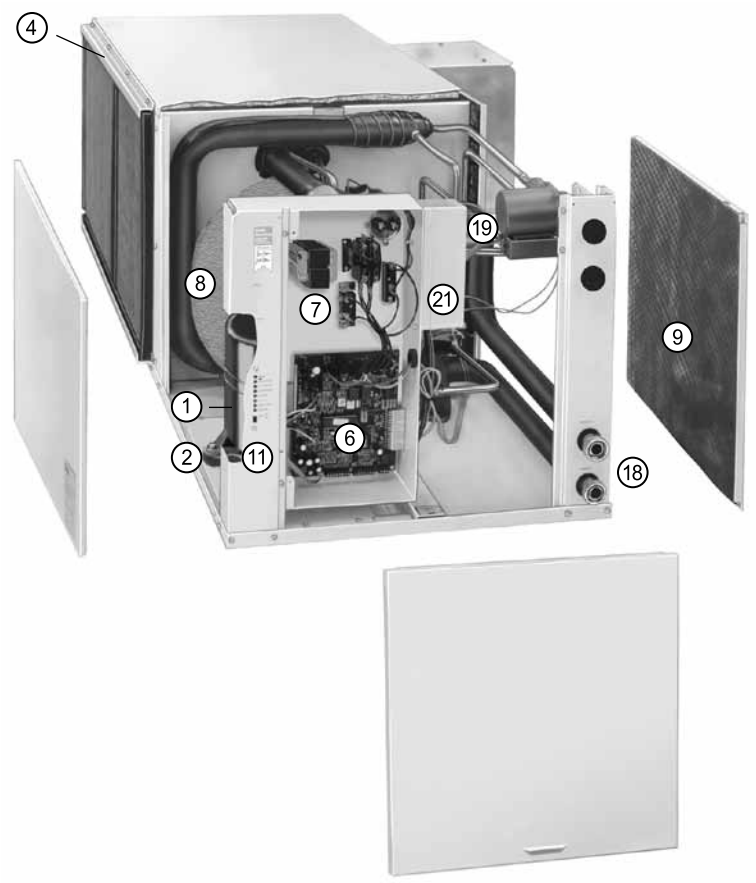
1. High efficiency rotary or scroll (single speed), Copeland UltraTech™ (dual capacity)
2. Double isolation plate for compressor mounting
3. Coated air coil
4. Factory mounted filter rack
5. MERV 7 pleated filter standard
6. Microprocessor control
7. Comfort Alert compressor monitor
8. Copper heat exchanger (optional cupronickel) with ThermaShield coating
9. Fully insulated with foil lined material
10. Insulated divider panel
11. Fault and status LEDs
12. ECM2.3 or PSC blower motor
13. Oversize blower wheel
14. Internally mounted auxiliary heater (vertical units)
15. Internally mounted control for auxiliary heater, external strips (horizontal units)
16. Plastic drain pan with overflow protection
17. Internally trapped condensate (vertical units)
18. Brass swivel water connections
19. Optional hot water generator with internal pump
20. Easy access to expansion valve
21. Optional GeoStart™ soft starter

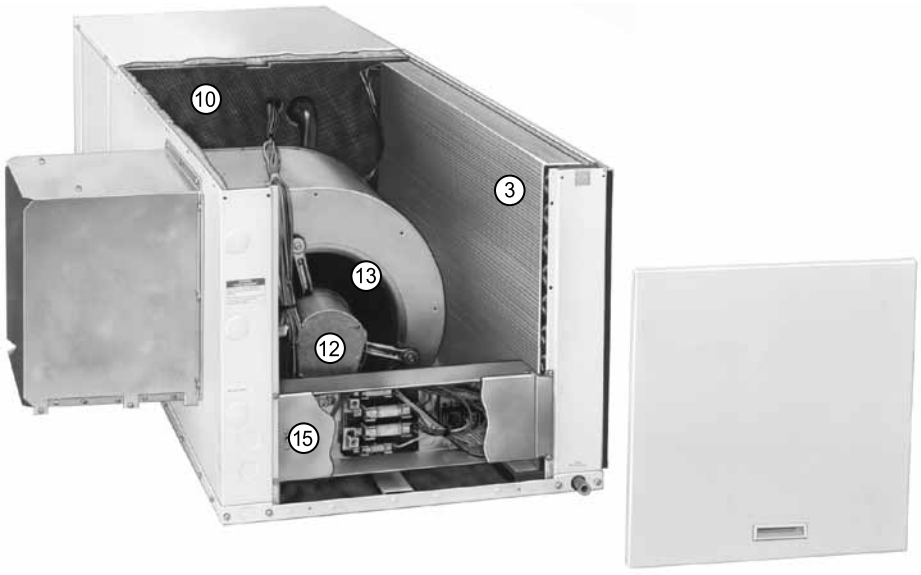
Vertical



Unit Components cont.

Horizontal

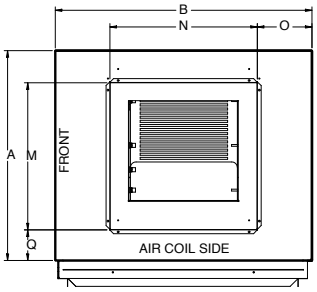




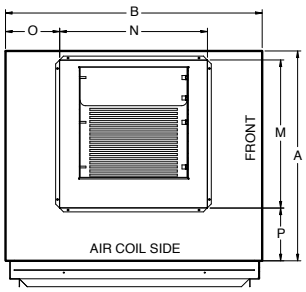
Vertical Dimensional Data

Top Air Discharge

Legend
AP = Alternate Service Panel
BP = Blower Service Panel
CP = Control Access Panel
CMP = Compressor Service Panel

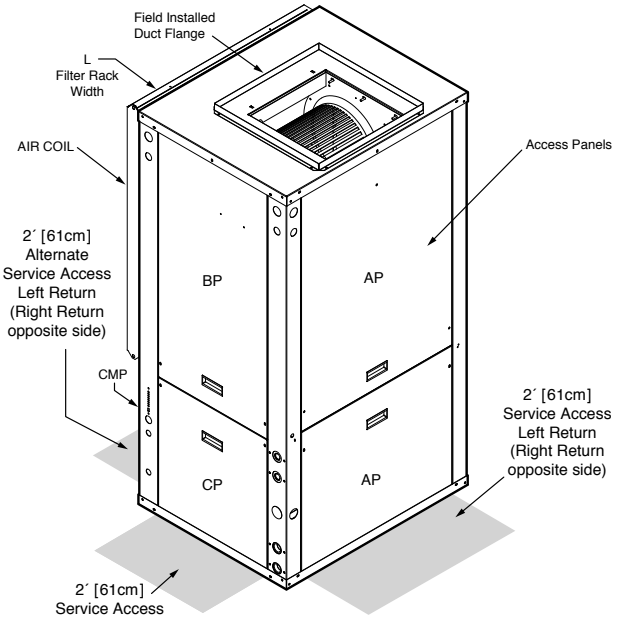


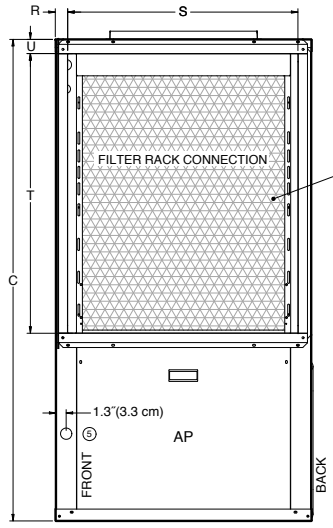
TOP VIEW - RIGHT RETURN



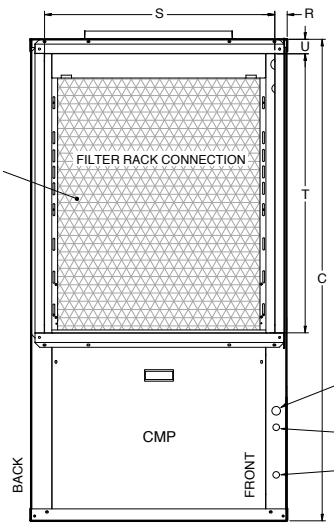
TOP VIEW - LEFT RETURN

LEFT RETURN

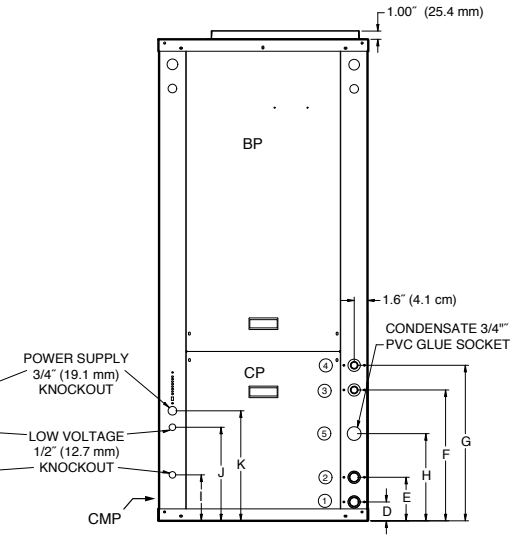




RIGHT VIEW - RIGHT RETURN



LEFT VIEW - LEFT RETURN



FRONT VIEW

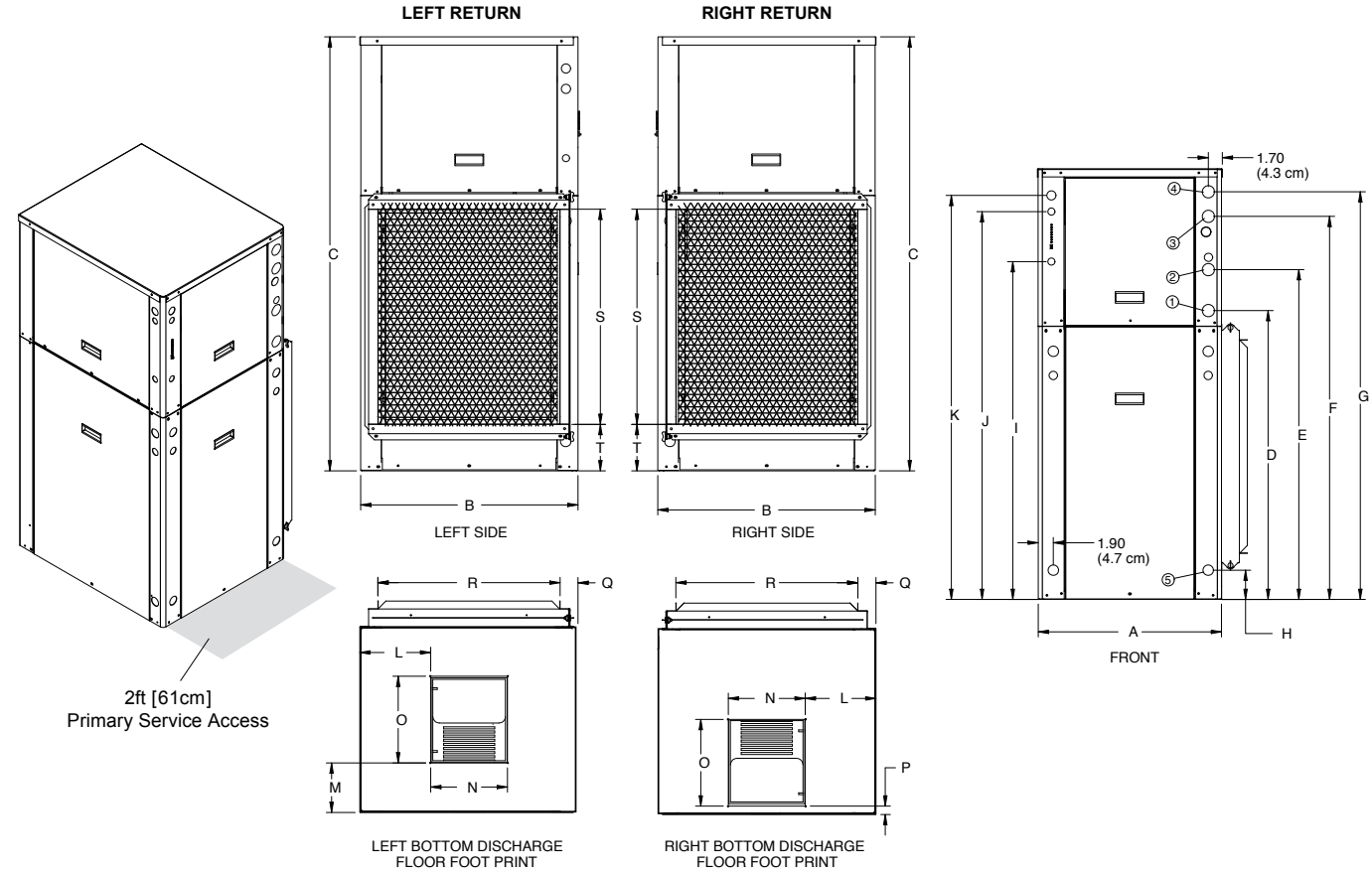
Vertical Models		Overall Cabinet			Water Connections							Electrical Knockouts			L	Discharge Connection duct flange installed (±0.10 in)					Return Connection using std deluxe filter rack (±0.10 in)			
		A	B	C	1 D	2 E	3 F	4 G	5 H			I 1/2" cond	J 1/2" cond	K 3/4" cond		M	N	O	P	Q	R	S	T	U
		Width	Depth	Height*	In	Out	HWG In	HWG Out	Cond-ensate	Loop Water FPT	HWG FPT	Low Voltage	Ext Pump	Power Supply	Filter Rack Width	Supply Width	Supply Depth					Return Depth	Return Height	
009-012	in.	22.2	22.5	34.5	2.3	5.3	11.9	14.9	8.6	1/2"	1/2"	3.8	9.7	11.7	2.2	10.0	10.0	6.1	8.8	11.8	2.4	18.1	14.2	1.7
	cm.	56.4	57.2	87.6	5.9	13.5	30.2	37.8	21.8	12.7 mm	12.7 mm	9.7	24.6	29.7	5.5	25.4	25.4	15.5	22.4	30.0	6.1	46.0	36.1	4.4
015-018	in.	22.5	26.5	39.4	2.3	5.3	13.4	16.4	9.6	3/4"	1/2"	5.1	10.8	12.8	2.2	14.0	14.0	6.3	7.8	5.9	2.0	22.0	18.0	2.0
	cm.	57.2	67.3	100.1	5.8	13.5	34.0	41.7	24.3	19.05 mm	12.7 mm	13.0	27.4	32.5	5.5	35.6	35.6	16.0	19.8	14.9	5.1	55.9	45.7	5.1
022-030	in.	22.5	26.5	48.4	2.3	7.3	13.4	16.4	10.3	3/4"	1/2"	5.1	10.8	12.8	2.2	14.0	14.0	6.3	7.8	5.9	2.3	22.0	26.0	2.0
	cm.	57.2	67.3	122.9	5.8	18.5	34.0	41.7	26.2	19.05 mm	12.7 mm	13.0	27.4	32.5	5.5	35.6	35.6	16.0	19.8	15.0	5.8	55.9	66.0	5.1
036-072	in.	25.5	31.2	58.4	2.3	7.3	15.9	18.9	10.6	1"	1/2"	6.5	12.3	17.9	2.2	18.0	18.0	6.9	6.5	3.7	1.7	28.1	34.0	2.0
	cm.	64.8	79.2	148.3	5.8	18.5	40.4	48.0	26.9	25.4 mm	12.7 mm	16.5	31.2	45.5	5.5	45.7	45.7	17.5	16.5	9.4	4.3	71.4	86.4	5.1

Rev.: 03/11/10

Condensate is 3/4 in. PVC female glue socket and is switchable from side to front
Vertical unit shipped with 1 in. (field adjustable to 2 in.) duct collar/filter rack extending from unit 3.25 in. and is suitable for duct connection.
Discharge flange is field installed and extends 1 in. (25.4 mm) from cabinet
Residential cabinets are supplied with 1 in. swivel on loop water lines and 1/2 in. I.D. female sweat connections on HWG water lines.

Vertical Dimensional Data cont.

Bottomflow



Bottomflow Models		Overall Cabinet			Water Connections							Electrical Knockouts			Discharge Connection duct flange installed (±0.10 in)					Return Connection using std deluxe filter rack (±0.10 in)			
					1	2	3	4	5			I	J	K									
		A	B	C	D	E	F	G	H	Loop	HWG	1/2" cond	1/2" cond	3/4" cond	L	M	N	O	P	Q	R	S	T
		Width	Depth	Height	In	Out	HWG In	HWG Out	Condensate	Water FPT	FPT	Low Voltage	Ext Pump	Power Supply			Supply Width	Supply Depth			Return Depth	Return Height	
022-030	in.	22.5	26.5	52.5	35.3	40.2	46.7	49.7	3.6	**3/4 in.**	1/2 in.	39.2	47.0	49.0	8.6	6.0	9.3	10.5	1.0	2.2	22.2	26.0	5.6
	cm.	57.2	67.3	133.4	89.7	102.1	118.6	126.2	9.1	19.1 mm	12.7 mm	99.6	119.4	124.5	21.8	15.2	23.6	26.7	2.5	5.6	56.4	66.0	14.2
036-072	in.	25.5	31.5	62.5	43.4	48.4	57.0	60.0	3.6	**1 in.**	1/2 in.	47.2	54.9	56.9	9.1	4.8	13.4	13.6	1.5	1.6	28.1	34.0	5.6
	cm.	64.8	80.0	158.8	110.2	122.9	144.8	152.4	9.1	25.4 mm	22.7 mm	119.8	139.5	144.6	23.1	12.2	34.0	34.5	3.8	4.1	71.4	86.4	14.2

Condensate is 3/4 in. PVC female glue socket and is switchable from side to front

Rev.: 03/11/10

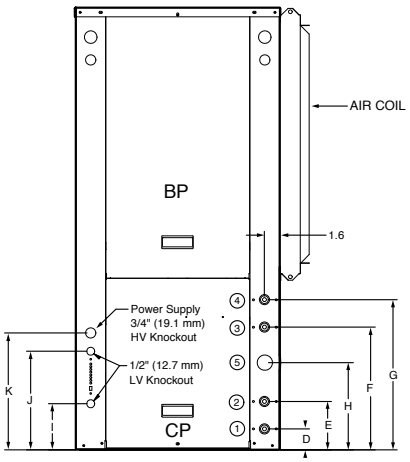
Vertical bottomflow unit shipped with deluxe 1 in. (field adjustable to 2 in.) duct collar/filter rack extending from unit 3.25 in. and is suitable for duct connection.

036-072 Bottomflow units use 30 in. x 36 in. air filter

Residential cabinets are supplied with 1 in. swivel on loop water lines and 1/2 in. I.D. female sweat connections on HWG water lines.

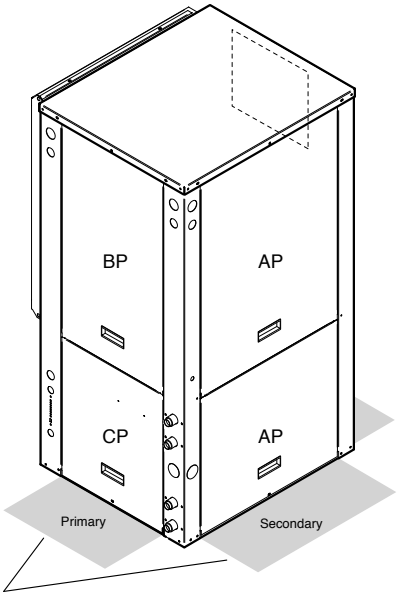
Vertical Dimensional Data cont.

Rear Air Discharge

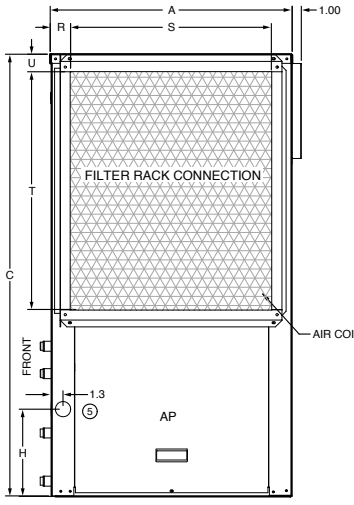


FRONT VIEW
Right Return

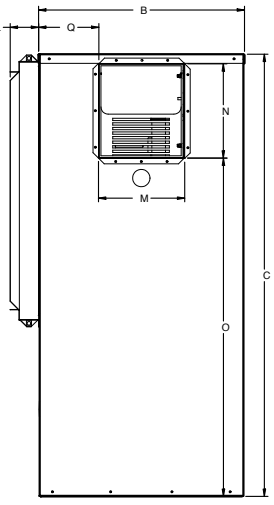
Legend
AP = Alternate Service Panel
BP = Blower Service Panel
CP = Control Access Panel
CMP = Compressor Service Panel



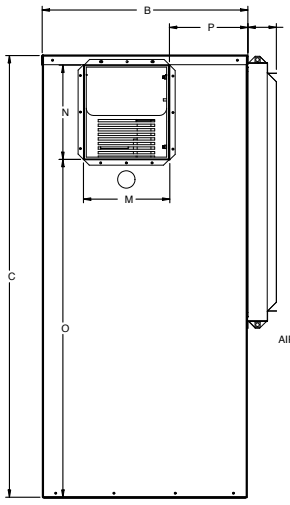
2ft [61cm]
Service Access Points



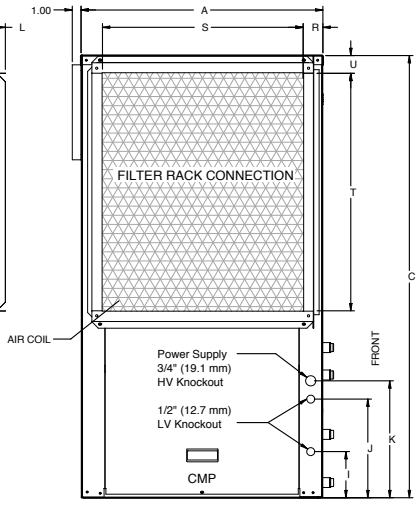
SIDE VIEW
Right Return



REAR VIEW
Right Return



REAR VIEW
Left Return



SIDE VIEW
Left Return

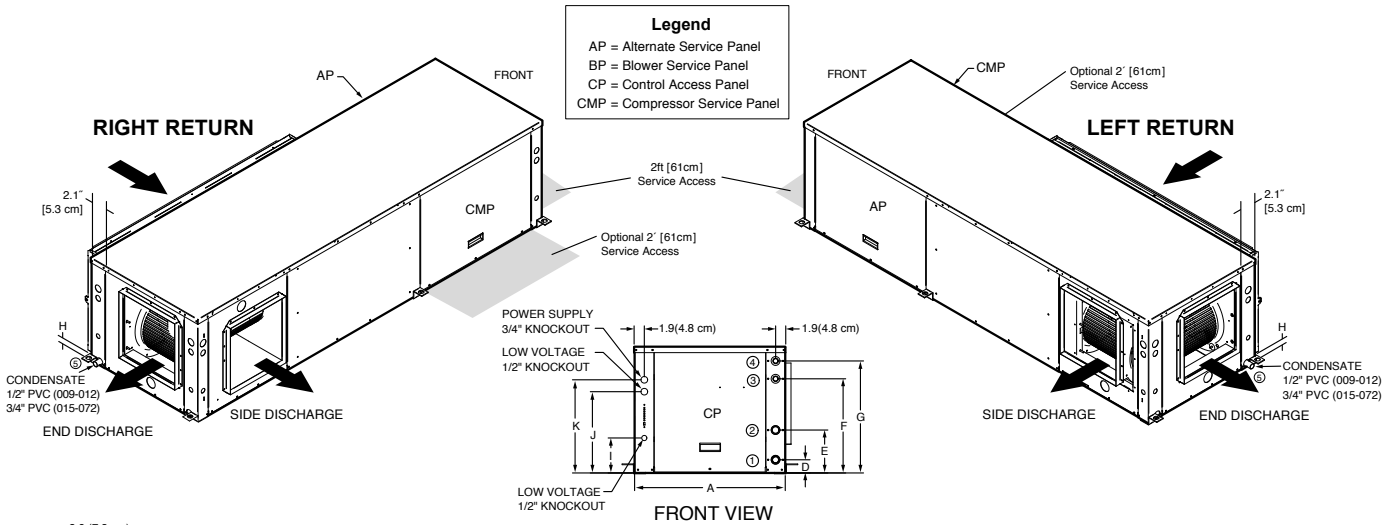
Vertical Models		Overall Cabinet			Water Connections							Electrical Knockouts				L	Discharge Connection duct flange installed (±0.10 in)					Return Connection using std deluxe filter rack (±0.10 in)			
		A	B	C	1 D	2 E	3 F	4 G	5 H	Loop		I	J	K	KK		M	N	O	P	Q	R	S	T	U
												1/2" cond	1/2" cond	3/4" cond	3/4" cond										
		Width	Depth	Height*	In	Out	HWG In	HWG Out	Cond-ensate	Water FPT	HWG FPT	Low Voltage	Ext Pump	Power Supply	Power Supply	Filter Rack Width	Supply Width	Supply Depth					Return Depth	Return Height	
022-030	in.	22.3	26.5	48.4	2.3	7.3	13.4	16.4	10.4	3/4"	1/2"	5.1	10.8	12.8	N/A	2.2	9.5	10.4	37.0	8.5	6.5	2.1	22.0	26.0	2.0
	cm.	56.6	67.3	122.9	5.8	18.5	34.0	41.7	26.4	19.05 mm	12.7 mm	13.0	27.4	32.5	N/A	5.5	24.1	26.4	94.0	21.6	16.5	5.3	55.9	66.0	5.1
036-072	in.	25.5	31.2	58.4	2.3	7.3	15.9	18.9	11.6	1"	1/2"	5.6	11.4	13.4	3.7	2.2	13.3	13.6	43.4	9.1	8.1	1.6	28.1	34.0	1.7
	cm.	64.8	79.2	148.3	5.8	18.5	40.4	48.0	29.5	25.4 mm	12.7 mm	14.2	29.0	34.0	9.4	5.5	33.8	34.5	110.2	23.1	20.6	4.1	71.4	86.4	4.3

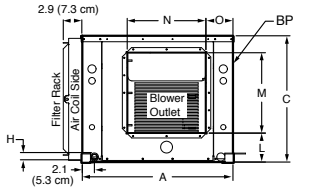
Rev.: 03/11/10

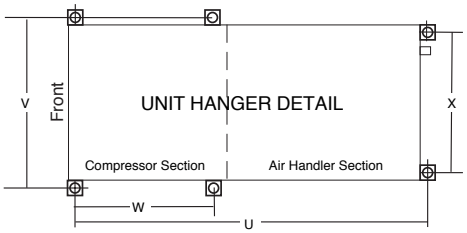
Condensate is 3/4 in. PVC female glue socket and is switchable from side to front
Vertical unit shipped with 1 in. (field adjustable to 2 in.) duct collar/filter rack extending from unit 3.25 in. and is suitable for duct connection.
Discharge flange is field installed and extends 1 in. (25.4 mm) from cabinet

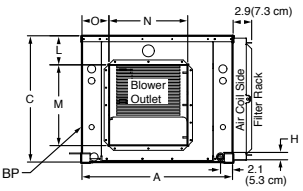
Residential cabinets are supplied with 1 in. swivel on loop water lines and 1/2 in. I.D. female sweat connections on HWG water lines.

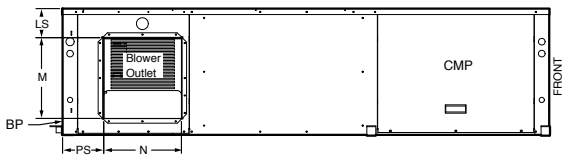
Horizontal Dimensional Data

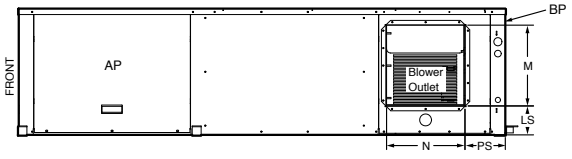


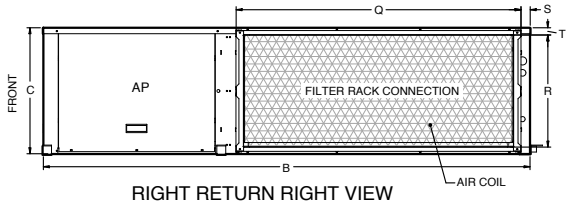


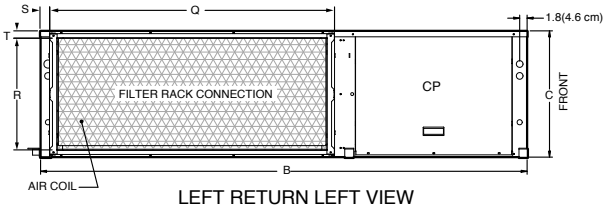












Horizontal Models		Overall Cabinet			Water Connections							Electrical Knockouts			Discharge Connection duct flange installed (±0.10 in)					Return Connection using std deluxe filter rack (±0.10 in)				Unit Hanger Dimensions			
		A	B	C	1 D	2 E	3 F	4 G	5 H	Loop		I 1/2" cond	J 1/2" cond	K 3/4" cond	L	M	N	O	P	Q	R	S	T	U	V	W	X
		Width	Depth	Height*	In	Out	HWG In	HWG Out	Cond-ensate	Water FPT	HWG FPT	Low Voltage	Ext Pump	Power Supply		Supply Height	Supply Depth			Return Depth	Return Height						
009-012	in.	22.5	44.0	17.3	2.3	5.3	11.9	14.9	0.8	1/2"	N/A	3.8	9.7	11.7	5.9	7.3	9.7	5.8	5.8	17.9	14.6	1.8	1.2	44.8	25.1	21.0	21.4
	cm.	57.2	111.8	43.9	5.8	13.5	30.2	37.8	2.1	12.7 mm		9.7	24.6	29.7	15.0	18.5	24.6	14.7	14.7	45.5	37.2	4.5	3.1	113.7	63.7	53.3	54.4
015-018	in.	22.5	53.0	19.3	2.3	5.3	13.8	16.8	0.8	3/4"	1/2"	5.9	11.6	13.6	7.0	10.5	9.5	8.2	8.2	21.8	16.5	2.27	1.10	53.8	25.1	25.0	21.4
	cm.	57.2	134.6	49.0	5.8	13.5	35.1	42.7	2.1	19.05 mm	12.7 mm	14.9	29.5	34.5	17.8	26.7	24.1	20.8	20.8	55.4	41.9	5.8	2.8	136.5	63.7	63.5	54.4
022-030	in.	22.5	63.0	19.3	2.3	5.3	13.8	13.8	0.8	3/4"	1/2"	5.9	13.7	15.7	6.5	10.5	9.4	6.5	5.8	30.5	16.9	2.8	1.7	63.4	24.8	25.3	21.1
	cm.	57.2	160.0	49.0	5.8	13.5	35.1	35.1	2.1	19.05 mm	12.7 mm	14.9	34.7	39.8	16.6	26.5	23.8	16.5	14.6	77.3	42.9	7.1	4.4	161.0	63.0	64.3	53.6
036-038	in.	25.5	72.0	21.3	2.2	7.2	15.8	18.8	0.8	1"	1/2"	5.9	13.7	15.7	4.9	13.6	13.2	4.6	6.8	35.5	18.9	2.8	1.7	72.4	27.8	29.3	24.1
	cm.	64.8	182.9	54.1	5.6	18.3	40.2	47.8	2.1	25.4 mm	12.7 mm	14.9	34.7	39.8	12.4	34.6	33.5	11.6	17.2	90.0	47.9	7.1	4.4	183.9	70.6	74.4	61.2
042-049	in.	25.5	77.0	21.3	2.2	7.2	15.8	18.8	0.8	1"	1/2"	5.9	13.7	15.7	4.9	13.6	13.2	4.6	6.8	40.5	18.9	2.8	1.7	77.4	27.8	29.3	24.1
	cm.	64.8	195.6	54.1	5.6	18.3	40.2	47.8	2.1	25.4 mm	12.7 mm	14.9	34.7	39.8	12.4	34.6	33.5	11.6	17.2	102.7	47.9	7.1	4.4	196.6	70.6	74.4	61.2
060-072	in.	25.5	82.0	21.3	2.2	7.2	15.8	18.8	0.8	1"	1/2"	5.9	13.7	15.7	4.9	13.6	13.2	4.6	6.8	45.5	18.9	2.8	1.7	82.4	27.8	29.3	24.1
	cm.	64.8	208.3	54.1	5.6	18.3	40.2	47.8	2.1	25.4 mm	12.7 mm	14.9	34.7	39.8	12.4	34.6	33.5	11.6	17.2	115.4	47.9	7.1	4.4	209.3	70.6	74.4	61.2

Condesate 3/4" PVC stub extends from cabinet approximately 1.5" [38.1 mm]

Rev.: 6/30/10

Horizontal unit shipped with 1" (field adjustable to 2") duct collar/filter rack extending from unit 2.88" and is suitable for duct connection.

Discharge flange is field installed and extends 1" [25.4 mm] from cabinet

Residential cabinets are supplied with 1 in. swivel on loop water lines and 1/2 in. I.D. female sweat connections on HWG water lines.

Physical Data - Single Speed

Model		Single Speed										
		GS009	GS012	GS015	GS018	GS022	GS030	GS036	GS042	GS048	GS060	GS070
Compressor (1 each)		LG Rotary				Copeland Scroll						
Factory Charge R410a, oz [kg] Vertical		29 [0.82]	42 [1.19]	38 [1.08]	40 [1.13]	58 [1.64]	62 [1.76]	82 [2.32]	82 [2.32]	98 [2.78]	110 [3.12]	146 [4.14]
Factory Charge R410a, oz [kg] Horizontal		29 [0.82]	42 [1.19]	38 [1.08]	40 [1.13]	60 [1.70]	66 [1.87]	82 [2.32]	82 [2.32]	98 [2.78]	94 [2.67]	122 [3.46]
Blower Motor & Blower												
Blower Motor Type/Speeds	ECM2.3	Not Available		ECM2.3 Variable Speed								
	PSC	PSC 4 Speeds		PSC 3 Speeds								
Blower Motor- hp [W]	ECM2.3	Not Available		1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1 [746]	1 [746]
	PSC	1/10 [75]	1/10 [75]	1/6 [134]	1/6 [134]	1/5 [149]	1/3 [249]	1/2 [373]	1/2 [373]	1/2 [373]	1 [746]	1 [746]
Optional - Oversized PSC Blower Motor - hp [W]	PSC	Not Available				1/3 [249]	1/3 [249]	1/2 [373]	3/4 [560]	3/4 [560]	N/A	N/A
Blower Wheel Size (Dia x W), in. [mm]	ECM2.3	Not Available		9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
	PSC	6 x 8 [152 x 203]	6 x 8 [152 x 203]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	10 x 10 [254 x 254]	10 x 10 [254 x 254]	10 x 10 [254 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Coax and Water Piping												
Water Connections Size - FPT - in [mm]		1/2" [12.7]	1/2" [12.7]	3/4" [19.05]	3/4" [19.05]	3/4" [19.05]	3/4" [19.05]	1" [25.4]	1" [25.4]	1" [25.4]	1" [25.4]	1" [25.4]
HWG Connection Size - FPT - in [mm]		Not Available			1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]
Coax & Piping Water Volume - gal [l]		0.18 [0.7]	0.35 [1.3]	0.40 [1.5]	0.40 [1.5]	0.7 [2.6]	1.0 [3.8]	1.3 [4.9]	1.3 [4.9]	1.6 [6.1]	1.6 [6.1]	2.3 [8.7]
Vertical												
Air Coil Dimensions (H x W), in. [mm]		12 x 16 [305 x 406]	16 x 16 [406 x 406]	19 x 20 [483 x 508]	19 x 20 [483 x 508]	28 x 20 [711 x 542]	28 x 20 [711 x 542]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	32 x 25 [813 x 635]	36 x 25 [914 x 635]	36 x 25 [914 x 635]
Air Coil Total Face Area, ft2 [m2]		1.3 [0.121]	1.8 [0.167]	2.6 [0.242]	2.6 [0.242]	3.9 [0.362]	3.9 [0.362]	4.9 [0.451]	5.6 [0.570]	5.6 [0.570]	6.3 [0.641]	6.3 [0.641]
Air Coil Tube Size, in [mm]		5/16 [7.9]	3/8 [9.5]	5/16 [7.9]	5/16 [7.9]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows		3	3	3	3	3	3	3	3	3	4	4
Filter Standard - 1" [24mm] Pleated MERV8 Throwaway, in [mm]		1 - 16 x 20 [406 x 508]	1 - 16 x 20 [406 x 508]	1 - 20 x 22 [508 x 559]	1 - 20 x 22 [508 x 559]	28 x 24 [712 x 610]	28 x 24 [712 x 610]	30 x 36 [762 x 914]	30 x 36 [762 x 914]	30 x 36 [762 x 914]	30 x 36 [762 x 914]	30 x 36 [762 x 914]
Weight - Operating, lb [kg]		145 [66]	175 [79]	200 [91]	210 [95]	303 [137]	318 [144]	363 [165]	378 [171]	418 [189]	453 [205]	478 [217]
Weight - Packaged, lb [kg]		152 [69]	185 [84]	210 [95]	220 [100]	313 [142]	328 [149]	373 [169]	388 [176]	428 [194]	463 [210]	488 [221]
Horizontal												
Air Coil Dimensions (H x W), in. [mm]		12 x 16 [305 x 406]	16 x 16 [406 x 406]	18 x 21 [457 x 533]	18 x 21 [457 x 533]	18 x 30 [457 x 762]	18 x 30 [457 x 762]	20 x 35 [508 x 889]	20 x 40 [508 x 1016]	20 x 40 [508 x 1016]	20 x 45 [508 x 1143]	20 x 45 [508 x 1143]
Air Coil Total Face Area, ft2 [m2]		1.3 [0.121]	1.8 [0.167]	2.6 [0.242]	2.6 [0.242]	3.9 [0.362]	3.9 [0.362]	4.9 [0.451]	5.6 [0.570]	5.6 [0.570]	6.3 [0.641]	6.3 [0.641]
Air Coil Tube Size, in [mm]		5/16 [7.9]	3/8 [9.5]	5/16 [7.9]	5/16 [7.9]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows		3	3	3	3	3	3	3	3	3	3	3
Filter Standard - 1" [25mm] Pleated MERV8 Throwaway, in [mm]		1 - 16 x 20 [406 x 508]	1 - 16 x 20 [406 x 508]	1 - 18 x 24 [457 x 610]	1 - 18 x 24 [457 x 610]	1 - 18 x 32 [457 x 813]	1 - 18 x 32 [457 x 813]	1 - 20 x 37 [686 x 940]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]
Weight - Operating, lb [kg]		145 [66]	175 [79]	200 [91]	210 [95]	305 [138]	320 [145]	368 [167]	383 [174]	423 [192]	458 [208]	483 [219]
Weight - Packaged, lb [kg]		152 [69]	185 [84]	210 [95]	220 [100]	320 [145]	335 [152]	383 [174]	398 [180]	438 [199]	473 [214]	498 [226]

6/15/2007

Physical Data - Dual Capacity

Model	Dual Capacity				
	GT026	GT038	GT049	GT064	GT072
Compressor (1 each)	Copeland 2-speed Scroll, UltraTech				
Factory Charge R410a, oz [kg] Vertical	62 [1.76]	78 [2.21]	89 [2.52]	122 [3.46]	140 [3.97]
Factory Charge R410a, oz [kg] Horizontal	60 [1.70]	76 [2.16]	89 [2.52]	124 [3.52]	160 [4.54]
ECM2.3 Blower Motor & Blower					
Blower Motor Type/Speeds	ECM2.3 Variable Speed				
Blower Motor- hp [W]	1/2 [373]	1/2 [373]	1/2 [373]	1 [746]	1 [746]
Blower Wheel Size (Dia x W), in. [mm]	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Coax and Water Piping					
Water Connections Size - FPT - in [mm]	3/4" [19.05]	1" [25.4]	1" [25.4]	1" [25.4]	1" [25.4]
HWG Connection Size - FPT - in [mm]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]
Coax & Piping Water Volume - gal [l]	0.7 [2.6]	1.3 [4.9]	1.6 [6.1]	1.6 [6.1]	2.3 [8.7]
Vertical					
Air Coil Dimensions (H x W), in. [mm]	28 x 20 [711 x 542]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	36 x 25 [914 x 635]	36 x 25 [914 x 635]
Air Coil Total Face Area, ft2 [m2]	3.9 [0.362]	4.9 [0.451]	5.6 [0.570]	6.3 [0.641]	6.3 [0.641]
Air Coil Tube Size, in [mm]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows	3	3	3	4	4
Filter Standard - 1" [25mm] Pleated MERV8 Throwaway, in [mm]	28 x 24 [712 x 610]	30 x 36 [762 x 914]	30 x 36 [762 x 914]	30 x 36 [762 x 914]	30 x 36 [762 x 914]
Weight - Operating, lb [kg]	303 [137]	368 [167]	418 [189]	463 [210]	478 [217]
Weight - Packaged, lb [kg]	313 [142]	378 [171]	428 [194]	473 [214]	488 [221]
Horizontal					
Air Coil Dimensions (H x W), in. [mm]	18 x 30 [457 x 762]	20 x 35 [508 x 889]	20 x 40 [508 x 1016]	20 x 45 [508 x 1143]	20 x 45 [508 x 1143]
Air Coil Total Face Area, ft2 [m2]	3.9 [0.362]	4.9 [0.451]	5.6 [0.570]	6.3 [0.641]	6.3 [0.641]
Air Coil Tube Size, in [mm]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows	3	3	3	4	4
Filter Standard - 1" [25mm] Pleated MERV8 Throwaway, in [mm]	1 - 18 x 32 [457 x 813]	1 - 20 x 37 [686 x 940]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]
Weight - Operating, lb [kg]	305 [138]	373 [169]	423 [192]	468 [212]	483 [219]
Weight - Packaged, lb [kg]	320 [145]	388 [176]	438 [199]	483 [219]	498 [226]

6/15/2007

Electrical Data

ECM2.3 Motor

Model	Rated Voltage	Voltage Min/Max	Compressor			Blower Motor FLA	Total Unit FLA	Min Circ Amp	Max Fuse/ HACR
			MCC	RLA	LRA				
GS015	208-230/60/1	197/253	na	6.2	29.0	4.0	10.2	11.8	15
	265/60/1	238/292	na	5.6	28.0	4.1	9.7	11.1	15
GS018	208-230/60/1	197/253	na	8.4	33.5	4.0	12.4	14.5	20
	265/60/1	238/292	na	7.3	28.0	4.1	11.4	13.2	20
GS022	208-230/60/1	197/253	14.0	9.0	48.0	4.0	13.0	15.2	20
	265/60/1	238/292	13.0	8.3	40.0	4.1	12.4	14.5	20
GS030	208-230/60/1	197/253	20.0	12.8	58.3	4.0	16.8	20.0	30
	265/60/1	238/292	14.9	9.5	87.0	4.1	13.6	16.0	25
GS036	208-230/60/1	197/253	22.0	14.1	73.0	4.0	18.1	21.6	35
	265/60/1	238/292	17.5	11.2	60.0	4.1	15.3	18.1	25
	208-230/60/3	187/253	13.9	8.9	58.0	4.0	12.9	15.1	20
	460/60/3	414/506	6.5	4.2	28.0	4.1	8.3	9.4	10
GS036*	208-230/60/1	197/253	22.0	14.1	73.0	7.0	21.1	24.6	35
	265/60/1	238/292	17.5	11.2	60.0	6.9	18.1	20.9	30
	208-230/60/3	187/253	13.9	8.9	58.0	7.0	15.9	18.1	25
	460/60/3	414/506	6.5	4.2	28.0	6.9	11.1	12.2	15
GS042	208-230/60/1	197/253	26.0	16.6	79.0	4.0	20.6	24.8	40
	208-230/60/3	187/253	16.3	10.4	73.0	4.0	14.4	17.0	25
	460/60/3	414/506	9.0	5.8	38.0	4.1	9.9	11.3	15
GS042*	208-230/60/1	197/253	26.0	16.6	79.0	7.0	23.6	27.8	40
	208-230/60/3	187/253	16.3	10.4	73.0	7.0	17.4	20.0	30
	460/60/3	414/506	9.0	5.8	38.0	6.9	12.7	14.1	15
GS048	208-230/60/1	197/253	31.0	19.8	109.0	4.0	23.8	28.8	45
	208-230/60/3	187/253	21.2	13.6	83.1	4.0	17.6	21.0	30
	460/60/3	414/506	9.5	6.1	41.0	4.1	10.2	11.7	15
GS048*	208-230/60/1	197/253	31.0	19.8	109.0	7.0	26.8	31.8	50
	208-230/60/3	187/253	21.2	13.6	83.1	7.0	20.6	24.0	35
	460/60/3	414/506	9.5	6.1	41.0	6.9	13.0	14.5	20
GS060	208-230/60/1	197/253	41.2	26.4	134.0	7.0	33.4	40.0	60
	208-230/60/3	187/253	24.9	15.9	110.0	7.0	22.9	26.9	40
	460/60/3	414/506	12.1	7.7	52.0	6.9	14.6	16.6	20
GS070	208-230/60/1	197/253	47.0	30.1	158.0	7.0	37.1	44.6	70
	208-230/60/3	187/253	32.0	20.5	155.0	7.0	27.5	32.6	50
	460/60/3	414/506	15.0	9.6	75.0	6.9	16.5	18.9	25
GT026	208-230/60/1	197/253	16.0	10.2	52.0	4.0	14.2	16.8	25
GT038	208-230/60/1	197/253	26.0	16.6	82.0	4.0	20.6	24.8	40
	208-230/60/3	187/253	17.4	11.1	58.0	4.0	15.1	17.9	25
	460/60/3	414/506	7.0	4.5	29.0	4.1	8.6	9.7	10
GT038*	208-230/60/1	197/253	26.0	16.6	82.0	7.0	23.6	27.8	40
	208-230/60/3	187/253	17.4	11.1	58.0	7.0	18.1	20.9	30
	460/60/3	414/506	7.0	4.5	29.0	6.9	11.4	12.5	15
GT049	208-230/60/1	197/253	33.0	21.1	96.0	4.0	25.1	30.4	50
	208-230/60/3	187/253	21.0	13.4	88.0	4.0	17.4	20.8	30
	460/60/3	414/506	10.0	6.4	41.0	4.1	10.5	12.1	15
GT049*	208-230/60/1	197/253	33.0	21.1	96.0	7.0	28.1	33.4	50
	208-230/60/3	187/253	21.0	13.4	88.0	7.0	20.4	23.8	35
	460/60/3	414/506	10.0	6.4	41.0	6.9	13.3	14.9	20
GT064	208-230/60/1	197/253	40.0	25.6	118.0	7.0	32.6	39.0	60
	208-230/60/3	187/253	27.5	17.6	123.0	7.0	24.6	29.0	45
	460/60/3	414/506	14.0	9.0	62.0	6.9	15.9	18.1	25
GT072	208-230/60/1	197/253	42.5	27.2	150.0	7.0	34.2	41.0	60

HACR circuit breaker in USA only
the compressor data for 265 V NS022 is preliminary:
*With optional 1 HP ECM2.3 motor

3/24/2007

Electrical Data cont.

PSC Motor

Model	Rated Voltage	Voltage Min/Max	Compressor			Blower Motor FLA	Total Unit FLA	Min Circ Amp	Max Fuse/ HACR
			MCC	RLA	LRA				
GS009	208-230/60/1	197/253	N/A	4.8	21.0	0.6	5.4	6.6	10
	265/60/1	238/292	N/A	4.3	22.0	0.6	4.9	6.0	10
GS012	208-230/60/1	197/253	N/A	5.9	25.0	0.6	6.5	8.0	10
	265/60/1	238/292	N/A	5.3	22.0	0.6	5.9	7.2	10
GS015	208-230/60/1	197/253	N/A	6.2	29.0	1.1	7.3	8.9	15
	265/60/1	238/292	N/A	5.6	28.0	1.0	6.6	8.0	10
GS018	208-230/60/1	197/253	N/A	8.4	33.5	1.1	9.5	11.6	20
	265/60/1	238/292	N/A	7.3	28.0	1.0	8.3	10.1	15
GS022	208-230/60/1	197/253	14.0	9.0	48.0	1.2	10.2	12.4	20
	265/60/1	238/292	13.0	8.3	40.0	1.1	9.4	11.5	15
GS022**	208-230/60/1	197/253	14.0	9.0	48.0	1.5	10.5	12.7	20
	265/60/1	238/292	13.0	8.3	40.0	2.0	10.3	12.4	20
GS030	208-230/60/1	197/253	20.0	12.8	58.3	1.5	14.3	17.5	30
GS030**	208-230/60/1	197/253	20.0	12.8	58.3	2.2	15.0	18.2	30
	265/60/1	238/292	14.9	9.5	87.0	2.0	11.5	13.9	20
GS036	208-230/60/1	197/253	22.0	14.1	73.0	2.8	16.9	20.4	30
	265/60/1	238/292	17.5	11.2	60.0	2.0	13.2	16.0	25
	208-230/60/3	187/253	13.9	8.9	58.0	2.8	11.7	13.9	20
	460/60/3	414/506	6.5	4.2	28.0	1.4	5.6	6.7	10
GS036**	208-230/60/1	197/253	22.0	14.1	73.0	3.5	17.6	21.1	35
	265/60/1	Not Available							
	208-230/60/3	187/253	13.9	8.896	58.0	3.5	12.396	14.6	20
	460/60/3	414/506	6.5	4.2	28.0	1.8	6.0	7.1	10
GS042	208-230/60/1	197/253	26.0	16.6	79.0	3.5	20.1	24.3	40
	208-230/60/3	187/253	16.3	10.4	73.0	3.5	13.9	16.5	25
	460/60/3	414/506	9.0	5.8	38.0	1.8	7.6	9.0	10
	575/60/3	517/633	5.9	3.8	36.5	1.4	5.2	6.1	10
GS042**	208-230/60/1	197/253	26.0	16.6	79.0	4.6	21.2	25.4	40
	208-230/60/3	187/253	16.3	10.4	73.0	4.6	15.0	17.6	25
	460/60/3	414/506	9.0	5.8	38.0	2.3	8.1	9.5	15
	575/60/3	517/633	5.9	3.8	36.5	1.9	1.9	6.6	10
GS048	208-230/60/1	197/253	31.0	19.8	109.0	3.5	23.3	28.3	45
	208-230/60/3	187/253	21.2	13.6	83.1	3.5	17.1	20.5	30
	460/60/3	414/506	9.5	6.1	41.0	1.8	7.9	9.4	15
	575/60/3	517/633	7.8	5.0	34.0	1.4	6.4	7.6	10
GS048**	208-230/60/1	197/253	31.0	19.8	109.0	4.6	24.4	29.4	45
	208-230/60/3	187/253	21.2	13.6	83.1	4.6	18.2	21.6	35
	460/60/3	414/506	9.5	6.1	41.0	2.3	8.4	9.9	15
	575/60/3	517/633	7.8	5.0	34.0	1.9	6.9	8.1	10
GS060	208-230/60/1	197/253	41.2	26.4	134.0	5.9	32.3	38.9	60
	208-230/60/3	187/253	24.9	15.9	110.0	5.9	21.8	25.8	40
	460/60/3	414/506	12.1	7.7	52.0	3.0	10.7	12.7	20
	575/60/3	517/633	8.9	5.7	38.9	1.9	7.6	9.0	10
GS070	208-230/60/1	197/253	47.0	30.1	158.0	5.9	36.0	43.5	70
	208-230/60/3	187/253	32.0	20.5	155.0	5.9	26.4	31.5	50
	460/60/3	414/506	15.0	9.6	75.0	3.0	12.6	15.0	20
	575/60/3	517/633	11.9	7.6	54.0	1.9	9.5	11.4	15

3/24/2007

HACR circuit breaker in USA only
the compressor data for 265 V NS022 is preliminary:
**With optional High-static PSC motor

Auxiliary Heat Ratings

Model	KW		Stages	BTU/HR		Min CFM	GS/GT Series Compatibility						
	208V	230V		208V	230V		009-012	015	018	022	026 - 030	036 - 049	060 - 072
EAS(H)4	2.9	3.8	1	9,700	12,900	250	•						
EAM(H)5	3.6	4.8	1	12,300	16,300	450		•	•	•	•		
EAM(H)8	5.7	7.6	2	19,400	25,900	550			•	•	•		
EAM(H)10	7.2	9.6	2	24,600	32,700	650					•		
EAL(H)10	7.2	9.6	2	24,600	32,700	1100						•	•
EAL(H)15	10.8	14.4	3	36,900	49,100	1250						•	•
EAL(H)15-3	10.8	14.4	3	36,900	49,100	1250						•	•
EAL(H)20	14.4	19.2	4	49,200	65,500	1500							•

"H" is used in part number for horizontal units

Auxiliary Heat Electrical Data

Model	Supply Circuit	Heater Amps		Min Circuit Amp		Max Fuse (USA)		Max Fuse (CAN)		Max CKT BRK		Supply Wire	
		208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V	208 V	240 V	Min AWG	Max FT
Single Speed													
EAS(H)4	Single	13.7	15.8	17.9	20.5	20	20	20	20	20	20	12	80
EAM(H)5	Single	17.3	20	26.7	30	30	30	30	30	30	30	10	90
EAM(H)8	Single	27.5	31.7	39.3	44.6	40	45	40	45	40	50	6	140
EAM(H)10	Single	34.7	40	48.3	55	50	60	50	60	50	60	6	120
EAL(H)10	Single	34.7	40	53.3	60	60	60	60	60	60	60	6*	110
EAL(H)15	Single	52.0	60	75	85	80	90	80	90	70	100	4*	120
	L1/L2	34.7	40	53.3	60	60	60	60	60	60	60	6*	110
	L3/L4	17.3	20	21.7	25	25	25	25	25	20	30	10	100
EAL(H)20	Single	69.3	80	96.7	110	100	110	100	110	100	100	2*	140
	L1/L2	34.7	40	53.3	60	60	60	60	60	60	60	6*	110
	L3/L4	34.7	40	43.3	50	45	50	45	50	40	50	6	130
Dual Capacity													
EAL(H)10	Single	34.7	40	53.3	60	60	60	60	60	60	60	6*	110
EAL(H)15	Single	52.0	60	75	85	80	90	80	90	70	100	4*	120
	L1/L2	34.7	40	53.3	60	60	60	60	60	60	60	6*	110
	L3/L4	17.3	20	21.7	25	25	25	25	25	20	30	10	100
EAL(H)20	Single	69.3	80	96.7	110	100	110	100	110	100	100	2*	140
	L1/L2	34.7	40	53.3	60	60	60	60	60	60	60	6*	110
	L3/L4	34.7	40	43.3	50	45	50	45	50	40	50	6	130

All heaters rated single phase 60 cycle and include unit blower load
All fuses type "D" time delay (or HACR circuit breaker in USA)
Wire length based on one-way measurement with 2% voltage drop
Wire sizes based on 60°C (*90°C) copper conductor
"H" is used in part numbers for horizontal units

Blower Performance Data - PSC

Standard PSC Motor

Model	Blower Spd	Blower Size	Motor	Airflow (cfm) at External Static Pressure (in. wg)															
				0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.00
GS009	H	6 x 8	1/10	480	450	440	420	410	380	360	340	330	310	300	-	-	-	-	-
	MH			440	410	400	380	370	350	330	310	300	280	270	-	-	-	-	-
	ML*			395	370	360	340	330	310	290	280	270	250	240	-	-	-	-	-
	L			325	310	300	280	270	250	240	230	220	210	200	-	-	-	-	-
GS012	**H**	6 x 8	1/10	480	450	440	420	410	380	360	340	330	310	300	-	-	-	-	-
	MH*			440	410	400	380	370	350	330	310	300	280	270	-	-	-	-	-
	ML			395	370	360	340	330	310	290	280	270	250	240	-	-	-	-	-
	L			325	310	300	280	270	250	240	230	220	210	200	-	-	-	-	-
GS015	H	9 x 7	1/6	845	835	825	815	800	790	775	755	735	710	680	565	-	-	-	-
	M			735	730	725	715	705	700	690	675	660	630	600	485	-	-	-	-
	L			620	615	610	605	600	590	580	565	550	520	490	-	-	-	-	-
GS018	H	9 x 7	1/6	845	835	825	815	800	790	775	755	735	710	680	565	-	-	-	-
	M			735	730	725	715	705	700	690	675	660	630	600	485	-	-	-	-
	L			620	615	610	605	600	590	580	565	550	520	490	-	-	-	-	-
GS022	H	9 x 7	1/5	1110	1095	1080	1065	1045	1020	995	970	945	915	880	810	-	-	-	-
	M			850	845	835	825	815	805	795	775	755	735	715	-	-	-	-	-
	L			750	745	740	735	725	715	700	685	670	650	630	-	-	-	-	-
GS030	H	9 x 7	1/3	1290	1270	1245	1220	1190	1160	1125	1090	1055	1020	985	880	760	-	-	-
	M			1100	1090	1075	1060	1045	1020	995	970	940	910	875	785	625	-	-	-
	L			910	905	900	895	885	875	865	850	835	810	780	710	560	-	-	-
GS036	H	9 x 7	1/2	1665	1640	1610	1580	1550	1515	1480	1450	1415	1315	1215	1090	980	-	-	-
	M			1465	1445	1425	1400	1375	1350	1325	1260	1190	1140	1090	990	890	-	-	-
	L			1130	1115	1100	1090	1075	1035	995	965	930	895	860	795	730	-	-	-
GS042	H	10 x 10	1/2	2010	1975	1940	1905	1870	1825	1780	1735	1690	1640	1590	1470	1210	-	-	-
	M			1670	1650	1630	1610	1590	1560	1530	1495	1460	1425	1390	1190	1080	-	-	-
	L			1220	1215	1210	1295	1200	1180	1160	1130	1100	1060	1020	930	-	-	-	-
GS048	H	10 x 10	1/2	2010	1975	1940	1905	1870	1825	1780	1735	1690	1640	1590	1470	1210		-	-
	M			1670	1650	1630	1610	1590	1560	1530	1495	1460	1425	1390	1190	1080	-	-	-
	L			1220	1215	1210	1295	1200	1180	1160	1130	1100	1060	1020	930	-	-	-	-
GS060	H	11 x 10	1	2430	2400	2365	2330	2290	2255	2215	2180	2140	2095	2045	1945	1835	1715	1510	1330
	M			2265	2235	2205	2175	2145	2110	2070	2035	2000	1960	1915	1825	1730	1605	1440	1260
	L			2075	2050	2020	1995	1965	1940	1915	1885	1850	1820	1785	1720	1610	1505	1335	1175
GS070	**H**	11 x 10	1	2430	2400	2365	2330	2290	2255	2215	2180	2140	2095	2045	1945	1835	1715	1510	1330
	M			2265	2235	2205	2175	2145	2110	2070	2035	2000	1960	1915	1825	1730	1605	1440	1260
	L			2075	2050	2020	1995	1965	1940	1915	1885	1850	1820	1785	1720	1610	1505	1335	1175

2/15/08

Factory settings are in Bold

Air flow values are with dry coil and standard filter

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [fpm] = Airflow [cfm] / Face Area [sq ft]).

Then for velocities of 200 fpm reduce the static capability by 0.03 in. wg, 300 fpm by 0.08 in. wg, 400 fpm by 0.12in. wg. and 500 fpm by 0.16 in. wg.

Optional High Static PSC Motor

Model	Blower Spd	Blower Size	Motor HP	Airflow (cfm) at External Static Pressure (in. wg)															
				0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.00
GS022	H	9 x 7	1/3	1290	1270	1245	1220	1190	1160	1125	1090	1055	1020	985	880	760	-	-	-
	M			1100	1090	1075	1060	1045	1020	995	970	940	910	875	785	625	-	-	-
	L			910	905	900	895	885	875	865	850	835	810	780	710	560	-	-	-
GS030	H	9 x 7	1/2	1365	1340	1325	1305	1280	1250	1215	1180	1140	1100	1055	960	850	-	-	-
	M			1040	1040	1035	1030	1020	1005	990	970	945	915	885	810	735	-	-	-
	L			880	880	880	880	875	870	860	840	820	800	775	730	480	-	-	-
GS036	H	9 x 7	1/2	1930	1905	1875	1840	1805	1765	1725	1680	1635	1530	1425	1270	1150	1025	-	-
	M			1635	1620	1600	1580	1555	1530	1505	1465	1425	1335	1240	1135	1035	775	-	-
	L			1230	1230	1225	1215	1200	1165	1130	1095	1060	1035	1005	935	795	675	-	-
GS042	H	10 x 10	3/4	2115	2075	2035	1980	1920	1900	1880	1840	1795	1730	1660	1390	1225	1070	-	-
	M			2005	1980	1950	1910	1865	1815	1765	1725	1685	1585	1485	1315	1140	1025	-	-
	L			1860	1835	1805	1780	1750	1715	1675	1635	1590	1540	1490	1260	1115	980	-	-
GS048	H	10 x 10	3/4	2115	2075	2035	1980	1920	1900	1880	1840	1795	1730	1660	1390	1225	1070	-	-
	M			2005	1980	1950	1910	1865	1815	1765	1725	1685	1585	1485	1315	1140	1025	-	-
	L			1860	1835	1805	1780	1750	1715	1675	1635	1590	1540	1490	1260	1115	980	-	-

2/15/08

Factory settings are in Bold

High-Static option not available for GS060 and GS070

* - Denotes setting for 265 V operation.

Air flow values are with dry coil and standard filter

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [fpm] = Airflow [cfm] / Face Area [sq ft]).

Then for velocities of 200 fpm reduce the static capability by 0.03 in. wg, 300 fpm by 0.08 in. wg, 400 fpm by 0.12in. wg. and 500 fpm by 0.16 in. wg.

Blower Performance Data - ECM2.3

Single Speed

MODEL	MAX ESP	AIR FLOW DIP SWITCH SETTINGS											
		1	2	3	4	5	6	7	8	9	10	11	12
015	0.50	300 L	400	500 M	600 H	700							
018	0.50	300	400 L	500	600 M	700 H	800						
022	0.50		400	500 L	600 M	700	800 H	900	1000	1100	1200		
030	0.50		400	500 L	600	700 M	800	900 H	1000	1100	1200		
036	0.50	650	750	850 L	1000	1100 M	1200	1300 H	1400	1500			
36 w/1hp*	0.75	800	1000 L	1100 M	1300 H	1500	1600	1800					
042	0.50	650	800	900 L	1050	1150 M	1250	1350	1450 H	1550			
42 w/1hp*	0.75	800	900 L	1000	1200 M	1400 H	1600	1700	1850	2000	2200	2300	2400
048	0.50	650	800	900	1050 L	1150	1250	1350 M	1450	1550 H			
48 w/1hp*	0.75	800	900	1000 L	1200	1400 M	1600 H	1700	1850	2000	2200	2300	2400
060	0.75	800	950	1100 L	1300	1500 M	1750	1950 H	2100	2300			
070	0.75	800	950	1100 L	1300	1500	1750 M	1950	2100 H	2300			

Factory settings are at recommended L-M-H DIP switch locations
M-H settings MUST be located within boldface CFM range
Lowest and Highest DIP switch settings are assumed to be L and H respectively

CFM is controlled within ±5% up to the maximum ESP
Max ESP includes allowance for wet coil and standard filter

5/25/07

Dual Capacity

MODEL	MAX ESP	AIR FLOW DIP SWITCH SETTINGS											
		1	2	3	4	5	6	7	8	9	10	11	12
026	0.50		400	500 L	600	700 M	800	900 H	1000	1100	1200		
038	0.50	650	750 L	850	1000	1100 M	1200	1300 H	1400	1500			
38 w/1hp*	0.75	800 L	1000	1100 M	1300 H	1500	1600	1800					
049	0.50	650	800 L	900	1050	1150	1250	1350 M	1450	1550 H			
49 w/1hp*	0.75	800 L	900	1000	1200	1400 M	1600 H	1700	1850	2000	2200	2300	2400
064	0.75	800	950 L	1100	1300	1500 M	1750	1950 H	2100	2300			
072	0.75	800	950	1100 L	1300	1500	1750 M	1950	2100 H	2300			

Factory settings are at recommended L-M-H DIP switch locations
M-H settings MUST be located within boldface CFM range
Lowest and Highest DIP switch settings are assumed to be L and H respectively

CFM is controlled within ±5% up to the maximum ESP
Max ESP includes allowance for wet coil and standard filter

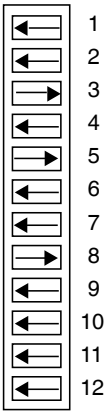
5/30/06

A 12-position DIP switch package on the control allows the airflow levels to be set for low, medium, and high speed when using the ECM2.3 blower motor. Only three of the DIP switches can be in the "on" position.

- The first "on" switch (the lowest position number) determines the low speed blower setting.
- The second "on" switch determines the medium speed blower setting.
- The third "on" switch determines the high speed blower setting.

The example to the right shows SW1 on the control board configured for the following 042 airflow settings.

- Low Speed Blower: 900 CFM
- Medium Speed Blower: 1150 CFM
- High Speed Blower: 1450 CFM



Reference Calculations

Heating Calculations:	Cooling Calculations:
$LWT = EWT - \frac{HE}{GPM \times 500}$	$LWT = EWT + \frac{HR}{GPM \times 500}$
$LAT = EAT + \frac{HC}{CFM \times 1.08}$	$LAT\ (DB) = EAT\ (DB) - \frac{SC}{CFM \times 1.08}$
$TH = HC + HW$	$LC = TC - SC$
	$S/T = \frac{SC}{TC}$

Legend and Notes

ABBREVIATIONS AND DEFINITIONS:

CFM = airflow, cubic feet/minute
EWT = entering water temperature, Fahrenheit
GPM = water flow in gallons/minute
WPD = water pressure drop, PSI and feet of water
EAT = entering air temperature, Fahrenheit (dry bulb/wet bulb)
HC = air heating capacity, MBTUH
TC = total cooling capacity, MBTUH
SC = sensible cooling capacity, MBTUH
KW = total power unit input, kilowatts
HR = total heat of rejection, MBTUH
HE = total heat of extraction, MBTUH
HW = hot water generator capacity, MBTUH
EER = Energy Efficient Ratio
= BTU output/Watt input
COP = Coefficient of Performance
= BTU output/BTU input
LWT = leaving water temperature, °F
LAT = leaving air temperature, °F
TH = total heating capacity, MBTUH
LC = latent cooling capacity, MBTUH
S/T = sensible to total cooling ratio

Notes to Performance Data Tables

The following notes apply to all capacity data tables:

- Performance ratings are based on 80ºF DB / 67ºF WB EAT for cooling and 70ºF DB EAT for heating.
- Three flow rates are shown for each unit. The lowest flow rate shown is used for geothermal open loop/well water systems with a minimum of 50ºF EWT. The middle flow rate shown is the minimum geothermal closed loop flow rate. The highest flow rate shown is optimum for geothermal closed loop systems and the suggested flow rate for boiler/tower applications.
- The hot water generator numbers are based on a flow rate of 0.4 GPM/ton of rated capacity with an EWT of 90ºF.
- Entering water temperatures below 40ºF assumes 15% antifreeze solution.
- For non-standard EAT conditions, apply the appropriate correction factors found in the Correction Factors tables.
- Interpolation between EWT, GPM and CFM data is permissible, extrapolation is not.

Operating Limits

Operating Limits	Cooling		Heating	
	(°F)	(°C)	(°F)	(°C)
Air Limits				
Min. Ambient Air	45	7.2	45	7.2
Rated Ambient Air	80	26.7	70	21.1
Max. Ambient Air	100	37.8	85	29.4
Min. Entering Air	50	10.0	40	4.4
Rated Entering Air db/wb	80.6/66.2	27/19	68	20.0
Max. Entering Air db/wb	110/83	43/28.3	80	26.7
Water Limits				
Min. Entering Water	30	-1.1	20	-6.7
Normal Entering Water	50-110	10-43.3	30-70	-1.1
Max. Entering Water	120	48.9	90	32.2

NOTE: Minimum/maximum limits are only for start-up conditions, and are meant for bringing the space up to occupancy temperature. Units are not designed to operate at the minimum/maximum conditions on a regular basis. The operating limits are dependent upon three primary factors: 1) water temperature, 2) return air temperature, and 3) ambient temperature. When any of the factors are at the minimum or maximum levels, the other two factors must be at the normal level for proper and reliable unit operation.

Correction Factor Tables

Air Flow Corrections (Dual Capacity Part Load)

Airflow		Cooling				Heating		
CFM Per Ton of Clg	% of Nominal	Total Cap	Sens Cap	Power	Heat of Rej	Htg Cap	Power	Heat of Ext
240	60	0.922	0.778	0.956	0.924	0.943	1.239	0.879
275	69	0.944	0.830	0.962	0.944	0.958	1.161	0.914
300	75	0.957	0.866	0.968	0.958	0.968	1.115	0.937
325	81	0.970	0.900	0.974	0.970	0.977	1.075	0.956
350	88	0.982	0.933	0.981	0.980	0.985	1.042	0.972
375	94	0.991	0.968	0.991	0.991	0.993	1.018	0.988
400	**100**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**
425	106	1.007	1.033	1.011	1.008	1.007	0.990	1.010
450	113	1.013	1.065	1.023	1.015	1.012	0.987	1.018
475	119	1.017	1.099	1.037	1.022	1.018	0.984	1.025
500	125	1.020	1.132	1.052	1.027	1.022	0.982	1.031
520	130	1.022	1.159	1.064	1.030	1.025	0.979	1.034

5/30/06

Air Flow Corrections (Dual Capacity Full Load & Single Speed)

Airflow		Cooling				Heating		
CFM Per Ton of Clg	% of Nominal	Total Cap	Sens Cap	Power	Heat of Rej	Htg Cap	Power	Heat of Ext
240	60	0.922	0.786	0.910	0.920	0.943	1.150	0.893
275	69	0.944	0.827	0.924	0.940	0.958	1.105	0.922
300	75	0.959	0.860	0.937	0.955	0.968	1.078	0.942
325	81	0.971	0.894	0.950	0.967	0.977	1.053	0.959
350	88	0.982	0.929	0.964	0.978	0.985	1.031	0.973
375	94	0.992	0.965	0.982	0.990	0.993	1.014	0.988
400	**100**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**
425	106	1.007	1.034	1.020	1.010	1.007	0.990	1.011
450	113	1.012	1.065	1.042	1.018	1.013	0.983	1.020
475	119	1.017	1.093	1.066	1.026	1.018	0.980	1.028
500	125	1.019	1.117	1.092	1.033	1.023	0.978	1.034
520	130	1.020	1.132	1.113	1.038	1.026	0.975	1.038

5/30/06

Cooling Capacity Corrections

Entering Air WB ºF	Total Clg Cap	Sensible Cooling Capacity Multipliers - Entering DB ºF										Power Input	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
55	0.898	0.723	0.866	1.048	1.185	*	*	*	*	*	*	0.985	0.913
60	0.912		0.632	0.880	1.078	1.244	1.260	*	*	*	*	0.994	0.927
65	0.967			0.694	0.881	1.079	1.085	1.270	*	*	*	0.997	0.972
66.2	0.983			0.655	0.842	1.040	1.060	1.232	*	*	*	0.999	0.986
67	**1.000**			0.616	0.806	**1.000**	1.023	1.193	1.330	*	*	**1.000**	**1.000**
70	1.053				0.693	0.879	0.900	1.075	1.250	1.404	*	1.003	1.044
75	1.168					0.687	0.715	0.875	1.040	1.261	1.476	1.007	1.141

NOTE: *Sensible capacity equals total capacity at conditions shown.

11/10/09

Heating Capacity Corrections

Ent Air DB °F	Heating Corrections		
	Htg Cap	Power	Heat of Ext
45	1.062	0.739	1.158
50	1.050	0.790	1.130
55	1.037	0.842	1.096
60	1.025	0.893	1.064
65	1.012	0.945	1.030
68	1.005	0.976	1.012
70	**1.000**	**1.000**	**1.000**
75	0.987	1.048	0.970
80	0.975	1.099	0.930

11/10/09

GS009 - Performance Data

Single Speed PSC (350 CFM)

EWT °F	Flow Rate GPM	Water Pressure Drop		HEATING - EAT 70 °F					COOLING - EAT 80/67 °F					
		PSI	FT/HD	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER
20	1.5	2.0	4.5	Operation not recommended					Operation not recommended					
	2.0	3.6	8.3											
	3.0	7.0	16.2	6.4	0.66	4.2	84.9	2.83						
30	1.5	1.9	4.4	Operation not recommended					Operation not recommended					
	2.0	3.5	8.1	7.4	0.68	5.1	87.5	3.15	12.0	7.8	0.65	0.39	13.3	31.2
	3.0	6.9	15.9	7.3	0.69	5.0	87.3	3.11	11.6	7.5	0.65	0.39	12.9	29.9
40	1.5	1.9	4.3	Operation not recommended					Operation not recommended					
	2.0	3.4	7.9	8.2	0.70	5.9	89.8	3.43	11.7	7.7	0.66	0.43	13.2	27.5
	3.0	6.7	15.5	8.4	0.71	6.1	90.3	3.50	11.6	7.6	0.65	0.41	13.0	28.3
50	1.5	1.8	4.2	9.0	0.72	6.5	91.7	3.64	11.4	7.6	0.67	0.49	13.0	23.4
	2.0	3.4	7.8	9.2	0.72	6.7	92.3	3.72	11.5	7.6	0.67	0.47	13.0	24.4
	3.0	6.5	15.0	9.6	0.73	7.1	93.4	3.86	11.6	7.7	0.66	0.43	13.1	26.8
60	1.5	1.8	4.0	10.1	0.74	7.6	94.6	3.99	10.9	7.4	0.68	0.55	12.7	19.7
	2.0	3.3	7.6	10.3	0.74	7.8	95.3	4.06	10.9	7.4	0.68	0.54	12.7	20.4
	3.0	6.4	14.8	10.8	0.75	8.2	96.5	4.21	11.1	7.4	0.67	0.50	12.7	22.0
70	1.5	1.7	3.9	11.2	0.76	8.6	97.6	4.31	10.4	7.1	0.69	0.62	12.4	16.7
	2.0	3.2	7.5	11.4	0.76	8.9	98.3	4.39	10.4	7.1	0.69	0.60	12.4	17.2
	3.0	6.3	14.6	11.9	0.77	9.3	99.6	4.54	10.5	7.1	0.68	0.57	12.4	18.4
80	1.5	1.7	3.8	12.5	0.78	9.9	101.1	4.70	9.9	6.9	0.70	0.70	12.2	14.1
	2.0	3.2	7.3	12.8	0.78	10.2	101.9	4.78	9.9	6.9	0.70	0.69	12.2	14.4
	3.0	6.2	14.2	13.2	0.79	10.6	103.0	4.90	9.8	6.9	0.70	0.64	12.0	15.4
90	1.5	1.6	3.7	14.0	0.80	11.3	105.0	5.12	9.4	6.7	0.71	0.79	12.1	11.9
	2.0	3.1	7.2	14.3	0.81	11.6	105.8	5.20	9.4	6.7	0.71	0.78	12.1	12.1
	3.0	6.0	13.9	14.5	0.81	11.8	106.4	5.24	9.2	6.7	0.73	0.71	11.6	13.0
100	1.5	1.6	3.6	Operation not recommended					Operation not recommended					
	2.0	3.0	7.0						9.0	6.5	0.72	0.88	12.0	10.2
	3.0	5.9	13.6						8.6	6.5	0.75	0.81	11.4	10.6
110	1.5	1.5	3.5						Operation not recommended					
	2.0	3.0	6.9						8.6	6.2	0.73	1.00	11.9	8.6
	3.0	5.7	13.2						8.0	6.3	0.78	0.91	11.1	8.8
120	1.5	1.5	3.4						Operation not recommended					
	2.0	2.9	6.8						8.2	6.0	0.74	1.13	12.0	7.2
	3.0	5.6	12.9						7.5	6.0	0.80	1.03	10.9	7.2

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS012 - Performance Data

Single Speed PSC (400 CFM)

EWT °F	Flow RATE GPM	Water Pressure Drop		HEATING - EAT 70 °F					COOLING - EAT 80/67 °F					
		PSI	FT/HD	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER
20	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.3											
	3.5	1.7	3.9	7.5	0.79	4.8	85.3	2.76						
30	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.3	9.0	0.81	6.3	88.8	3.25	16.3	10.3	0.63	0.44	17.8	37.2
	3.5	1.7	3.9	9.1	0.82	6.3	89.1	3.25	16.5	10.3	0.62	0.42	18.0	39.7
40	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.3	10.0	0.83	7.2	91.1	3.52	15.8	10.1	0.64	0.50	17.4	31.4
	3.5	1.7	3.9	10.3	0.84	7.4	91.7	3.59	16.0	10.1	0.63	0.47	17.6	34.4
50	1.5	0.3	0.7	10.6	0.84	7.8	92.5	3.70	15.0	10.0	0.66	0.62	17.1	24.3
	2.5	1.0	2.3	11.0	0.85	8.2	93.5	3.81	15.2	9.9	0.65	0.56	17.1	27.0
	3.5	1.7	3.8	11.4	0.85	8.5	94.4	3.91	15.5	9.9	0.64	0.51	17.2	30.1
60	1.5	0.3	0.7	11.8	0.86	8.9	95.2	4.03	14.5	9.7	0.67	0.70	16.9	20.8
	2.5	1.0	2.3	12.2	0.86	9.3	96.3	4.15	14.7	9.7	0.66	0.65	16.9	22.7
	3.5	1.7	3.8	12.7	0.87	9.8	97.4	4.27	14.9	9.7	0.65	0.60	16.9	25.0
70	1.5	0.3	0.7	12.9	0.87	10.0	98.0	4.34	14.1	9.4	0.67	0.78	16.7	18.1
	2.5	1.0	2.3	13.5	0.88	10.5	99.2	4.47	14.2	9.5	0.67	0.73	16.7	19.5
	3.5	1.7	3.8	14.0	0.89	11.0	100.4	4.61	14.4	9.6	0.67	0.68	16.7	21.1
80	1.5	0.3	0.7	14.3	0.89	11.3	101.2	4.70	13.6	9.2	0.68	0.88	16.6	15.5
	2.5	1.0	2.2	14.9	0.90	11.9	102.6	4.86	13.8	9.3	0.68	0.83	16.6	16.5
	3.5	1.6	3.8	15.3	0.91	12.2	103.4	4.93	13.9	9.4	0.68	0.77	16.5	18.0
90	1.5	0.3	0.7	15.8	0.91	12.8	104.7	5.09	13.2	9.0	0.68	0.99	16.5	13.4
	2.5	1.0	2.2	16.5	0.92	13.4	106.3	5.26	13.3	9.2	0.69	0.95	16.5	14.1
	3.5	1.6	3.8	16.6	0.93	13.5	106.4	5.25	13.4	9.2	0.69	0.86	16.3	15.5
100	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.2						12.9	9.0	0.70	1.08	16.5	11.9
	3.5	1.6	3.7						13.0	9.1	0.70	0.96	16.2	13.5
110	1.5	0.3	0.7						Operation not recommended					
	2.5	1.0	2.2						12.4	8.8	0.71	1.22	16.5	10.2
	3.5	1.6	3.6						12.6	8.9	0.71	1.06	16.2	11.9
120	1.5	0.3	0.7						Operation not recommended					
	2.5	1.0	2.2						12.0	8.6	0.72	1.39	16.7	8.6
	3.5	1.5	3.5						12.1	8.7	0.72	1.17	16.0	10.3

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS015 - Performance Data

Single Speed PSC (500 CFM)

EWT °F	Flow Rate GPM	Water Pressure Drop		HEATING - EAT 70 °F					COOLING - EAT 80/67 °F					
		PSI	FT/HD	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER
20	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.7											
	4.0	2.7	6.1	10.5	0.97	7.2	87.4	3.18						
30	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.7	11.3	1.01	7.9	88.8	3.28	16.2	10.5	0.65	0.53	18.0	30.7
	4.0	2.6	6.1	11.4	1.01	8.0	89.1	3.33	15.3	10.0	0.65	0.52	17.1	29.3
40	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.7	12.4	1.03	9.0	91.0	3.54	16.7	10.9	0.66	0.60	18.7	27.8
	4.0	2.6	6.0	12.7	1.03	9.3	91.6	3.63	16.4	10.7	0.66	0.58	18.3	28.3
50	2.0	0.6	1.4	13.3	1.05	9.7	92.6	3.71	16.9	11.3	0.67	0.71	19.3	23.9
	3.0	1.6	3.7	13.7	1.05	10.1	93.3	3.82	17.1	11.4	0.66	0.67	19.4	25.6
	4.0	2.6	6.0	14.1	1.05	10.5	94.1	3.92	17.4	11.5	0.66	0.63	19.5	27.5
60	2.0	0.6	1.4	14.7	1.07	11.1	95.2	4.03	16.1	10.9	0.68	0.80	18.8	20.0
	3.0	1.6	3.7	15.2	1.07	11.5	96.1	4.14	16.3	11.0	0.67	0.76	18.9	21.3
	4.0	2.6	6.0	15.6	1.08	12.0	96.9	4.25	16.5	11.1	0.67	0.73	19.0	22.8
70	2.0	0.6	1.4	16.1	1.09	12.4	97.8	4.34	15.2	10.5	0.69	0.90	18.3	16.9
	3.0	1.6	3.7	16.6	1.10	13.0	98.8	4.45	15.4	10.6	0.69	0.86	18.3	18.0
	4.0	2.6	6.0	17.2	1.11	13.5	99.8	4.56	15.7	10.6	0.68	0.82	18.4	19.1
80	2.0	0.6	1.4	17.7	1.11	14.0	100.8	4.70	14.5	10.2	0.70	1.02	17.9	14.3
	3.0	1.6	3.7	18.4	1.12	14.6	102.1	4.81	14.7	10.2	0.70	0.97	17.9	15.1
	4.0	2.6	5.9	18.8	1.13	15.0	102.8	4.89	14.9	10.4	0.70	0.92	18.0	16.1
90	2.0	0.6	1.4	19.5	1.13	15.7	104.2	5.08	13.7	9.9	0.72	1.14	17.6	12.0
	3.0	1.6	3.6	20.3	1.14	16.4	105.6	5.19	13.9	9.8	0.71	1.10	17.6	12.6
	4.0	2.6	5.9	20.4	1.15	16.5	105.7	5.21	14.2	10.1	0.71	1.03	17.6	13.8
100	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.6						13.2	9.5	0.72	1.25	17.4	10.6
	4.0	2.5	5.9						13.3	9.8	0.74	1.15	17.1	11.6
110	2.0	0.6	1.4						Operation not recommended					
	3.0	1.6	3.6						12.5	9.2	0.73	1.41	17.3	8.9
	4.0	2.5	5.9						12.4	9.5	0.76	1.27	16.7	9.8
120	2.0	0.6	1.4						Operation not recommended					
	3.0	1.6	3.6						11.9	8.8	0.74	1.60	17.3	7.5
	4.0	2.5	5.8						11.2	9.2	0.82	1.40	15.9	8.0

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS018 - Performance Data

Single Speed PSC (600 CFM)

EWT °F	Flow Rate GPM	Water Pressure Drop		HEATING - EAT 70 °F						COOLING - EAT 80/67 °F						
		PSI	FT/HD	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	3.0	1.6	3.8	Operation not recommended						Operation not recommended						
	4.0	2.9	6.8													
	5.0	4.3	9.9	12.7	1.19	8.7	87.6	3.12	1.4							
30	3.0	1.6	3.7	Operation not recommended						Operation not recommended						
	4.0	2.9	6.7	14.4	1.27	10.1	90.2	3.32	1.5	19.5	12.9	0.66	0.77	22.1	25.4	--
	5.0	4.2	9.7	14.6	1.28	10.3	90.5	3.35	1.5	18.8	12.4	0.66	0.75	21.4	25.1	--
40	3.0	1.6	3.6	Operation not recommended						Operation not recommended						
	4.0	2.9	6.6	15.9	1.33	11.4	92.5	3.51	1.6	19.9	13.0	0.65	0.82	22.7	24.4	--
	5.0	4.2	9.6	16.3	1.34	11.8	93.1	3.56	1.6	19.8	12.7	0.64	0.76	22.3	25.9	--
50	3.0	1.6	3.6	17.1	1.37	12.4	94.3	3.64	1.7	20.1	13.2	0.65	0.96	23.3	21.0	0.9
	4.0	2.9	6.6	17.5	1.39	12.8	95.0	3.70	1.7	20.4	13.1	0.64	0.87	23.3	23.5	0.9
	5.0	4.2	9.6	17.9	1.40	13.2	95.7	3.76	1.8	20.7	13.1	0.63	0.78	23.3	26.6	0.9
60	3.0	1.5	3.5	19.0	1.44	14.2	97.4	3.88	1.9	19.2	12.6	0.66	1.01	22.6	19.0	1.1
	4.0	2.8	6.5	19.4	1.45	14.5	98.0	3.92	1.9	19.4	12.6	0.65	0.95	22.6	20.4	1.1
	5.0	4.1	9.5	19.8	1.47	14.9	98.6	3.96	2.0	19.6	12.6	0.64	0.89	22.6	22.0	1.0
70	3.0	1.5	3.5	21.0	1.50	16.0	100.4	4.11	2.1	18.3	12.1	0.66	1.07	21.9	17.2	1.3
	4.0	2.8	6.5	21.4	1.52	16.3	101.0	4.13	2.1	18.4	12.1	0.66	1.04	21.9	17.8	1.3
	5.0	4.1	9.5	21.7	1.54	16.6	101.6	4.14	2.2	18.5	12.1	0.66	1.01	21.9	18.4	1.2
80	3.0	1.5	3.4	23.3	1.56	18.1	104.0	4.38	2.4	17.5	11.6	0.66	1.13	21.3	15.5	1.7
	4.0	2.8	6.4	23.7	1.59	18.3	104.5	4.37	2.4	17.5	11.6	0.67	1.13	21.3	15.4	1.6
	5.0	4.1	9.4	24.0	1.61	18.6	105.1	4.39	2.5	17.7	11.8	0.67	1.13	21.5	15.6	1.5
90	3.0	1.5	3.4	25.9	1.63	20.4	108.0	4.65	2.8	16.7	11.1	0.66	1.19	20.7	14.1	2.2
	4.0	2.8	6.4	26.1	1.66	20.5	108.3	4.61	2.8	16.6	11.2	0.67	1.24	20.8	13.4	2.0
	5.0	4.0	9.2	26.3	1.67	20.7	108.6	4.61	2.8	16.8	11.4	0.68	1.26	21.1	13.4	1.9
100	3.0	1.4	3.3	Operation not recommended						Operation not recommended						
	4.0	2.7	6.3							15.8	10.7	0.68	1.36	20.4	11.7	2.5
	5.0	4.0	9.1							15.8	11.1	0.70	1.39	20.4	11.3	2.3
110	3.0	1.4	3.2							Operation not recommended						
	4.0	2.7	6.2							15.0	10.3	0.69	1.48	20.0	10.1	3.2
	5.0	3.9	9.0							14.7	10.7	0.73	1.52	19.8	9.7	3.0
120	3.0	1.4	3.2							Operation not recommended						
	4.0	2.7	6.2							14.3	9.9	0.70	1.62	19.7	8.8	4.0
	5.0	3.9	8.9							13.7	10.2	0.75	1.68	19.4	8.2	3.6

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS022 - Performance Data

Single Speed PSC (700 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	EAT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	EAT	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	3.0	0.9	2.2	Operation not recommended							Operation not recommended							
	4.5	1.8	4.2															
	6.0	2.9	6.8	70	12.9	1.32	8.4	87.1	2.87	1.5								
30	3.0	0.9	2.1	Operation not recommended							Operation not recommended							
	4.5	1.7	4.0	70	15.2	1.33	10.7	90.1	3.35	1.6	80/67	23.4	17.4	0.75	0.83	26.2	28.3	---
	6.0	2.8	6.6	70	15.4	1.34	10.8	90.4	3.36	1.6	80/67	23.7	17.4	0.74	0.80	26.4	29.5	---
40	3.0	0.9	2.0	Operation not recommended							Operation not recommended							
	4.5	1.7	3.9	70	17.8	1.36	13.2	93.6	3.86	1.8	80/67	24.2	17.4	0.72	0.89	27.2	27.3	---
	6.0	2.8	6.4	70	18.1	1.37	13.5	94.0	3.89	1.8	80/67	24.5	17.4	0.71	0.86	27.4	28.4	---
50	3.0	0.9	2.0	70	19.4	1.36	14.7	95.6	4.18	2.0	80/67	24.7	17.1	0.69	1.01	28.2	24.4	1.2
	4.5	1.6	3.8	70	20.3	1.38	15.6	96.8	4.29	2.0	80/67	25.0	17.3	0.69	0.97	28.3	25.8	1.1
	6.0	2.7	6.2	70	20.7	1.39	15.9	97.3	4.35	2.1	80/67	25.2	17.3	0.68	0.94	28.4	26.7	1.1
60	3.0	0.8	1.9	70	21.8	1.39	17.1	98.9	4.60	2.2	80/67	23.9	16.9	0.71	1.11	27.7	21.4	1.4
	4.5	1.6	3.7	70	22.9	1.42	18.0	100.3	4.72	2.3	80/67	24.1	17.1	0.71	1.06	27.8	22.7	1.3
	6.0	2.6	6.0	70	23.3	1.43	18.4	100.8	4.77	2.3	80/67	24.4	17.1	0.70	1.04	27.9	23.5	1.3
70	3.0	0.8	1.8	70	24.3	1.43	19.4	102.2	4.99	2.5	80/67	23.6	16.7	0.71	1.25	27.8	18.9	1.7
	4.5	1.5	3.6	70	25.5	1.46	20.5	103.8	5.11	2.5	80/67	23.8	16.9	0.71	1.19	27.9	20.1	1.7
	6.0	2.5	5.8	70	25.9	1.47	20.9	104.3	5.15	2.6	80/67	24.0	16.9	0.70	1.15	28.0	20.8	1.6
80	3.0	0.8	1.8	70	26.6	1.48	21.5	105.1	5.27	2.8	80/67	22.6	16.4	0.73	1.39	27.3	16.2	2.2
	4.5	1.5	3.4	70	27.8	1.51	22.7	106.8	5.41	2.8	80/67	22.8	16.6	0.73	1.32	27.3	17.3	2.1
	6.0	2.4	5.6	70	28.3	1.52	23.1	107.4	5.45	2.9	80/67	23.0	16.6	0.72	1.29	27.4	17.9	2.0
90	3.0	0.7	1.7	70	28.8	1.53	23.6	108.1	5.53	3.1	80/67	20.9	15.9	0.76	1.55	26.2	13.5	2.7
	4.5	1.4	3.3	70	30.1	1.55	24.8	109.8	5.67	3.2	80/67	21.1	16.1	0.77	1.47	26.1	14.3	2.6
	6.0	2.3	5.4	70	30.7	1.57	25.3	110.5	5.71	3.3	80/67	21.3	16.1	0.76	1.44	26.2	14.8	2.4
100	3.0	0.7	1.7	Operation not recommended							Operation not recommended							
	4.5	1.4	3.2								80/67	20.2	15.7	0.78	1.66	25.8	12.2	3.2
	6.0	2.2	5.2								80/67	20.3	15.7	0.77	1.61	25.9	12.6	3.0
110	3.0	0.7	1.6								Operation not recommended							
	4.5	1.3	3.1								80/67	18.0	15.2	0.84	1.85	24.3	9.7	3.9
	6.0	2.2	5.0								80/67	18.2	15.2	0.83	1.80	24.3	10.1	3.7
120	3.0	0.7	1.5								Operation not recommended							
	4.5	1.3	2.9								80/67	16.7	14.6	0.88	2.08	23.8	8.0	4.7
	6.0	2.1	4.8								80/67	16.9	14.6	0.87	2.02	23.8	8.3	4.4

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS030 - Performance Data

Single Speed PSC (900 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	EAT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	EAT	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	4.0	1.5	3.5	Operation not recommended							Operation not recommended							
	6.0	3.1	7.2															
	8.0	5.2	12.1	70	17.6	1.67	11.9	88.1	3.09	2.0								
30	4.0	1.5	3.4	Operation not recommended							Operation not recommended							
	6.0	3.0	7.0	70	20.2	1.66	14.6	90.8	3.57	2.2	80/67	26.4	18.9	0.71	1.06	30.0	24.9	---
	8.0	5.1	11.8	70	20.7	1.68	14.9	91.2	3.61	2.2	80/67	26.9	18.8	0.70	1.03	30.4	26.1	---
40	4.0	1.4	3.3	Operation not recommended							Operation not recommended							
	6.0	2.9	6.8	70	23.7	1.70	17.9	94.4	4.07	2.4	80/67	28.7	20.4	0.71	1.14	32.6	25.1	---
	8.0	4.9	11.4	70	24.2	1.72	18.3	94.9	4.12	2.5	80/67	29.1	20.3	0.70	1.11	32.9	26.1	---
50	4.0	1.4	3.2	70	25.9	1.74	20.0	96.6	4.36	2.6	80/67	30.7	21.8	0.71	1.29	35.1	23.8	1.5
	6.0	2.8	6.6	70	26.8	1.75	20.8	97.6	4.49	2.7	80/67	30.8	21.9	0.71	1.25	35.0	24.7	1.4
	8.0	4.8	11.1	70	27.4	1.76	21.3	98.1	4.55	2.8	80/67	31.2	21.9	0.70	1.22	35.3	25.5	1.4
60	4.0	1.4	3.1	70	29.1	1.80	23.0	99.9	4.75	3.0	80/67	30.0	21.4	0.72	1.40	34.7	21.4	1.8
	6.0	2.8	6.4	70	30.1	1.81	23.9	101.0	4.89	3.0	80/67	30.0	21.5	0.71	1.35	34.7	22.2	1.7
	8.0	4.6	10.7	70	30.7	1.82	24.5	101.6	4.93	3.1	80/67	30.4	21.5	0.71	1.32	34.9	22.9	1.6
70	4.0	1.3	3.0	70	32.4	1.87	26.0	103.3	5.08	3.3	80/67	30.1	21.7	0.72	1.54	35.4	19.5	2.2
	6.0	2.7	6.2	70	33.5	1.88	27.1	104.5	5.22	3.4	80/67	30.2	21.7	0.72	1.49	35.3	20.3	2.1
	8.0	4.5	10.4	70	34.1	1.90	27.6	105.1	5.24	3.5	80/67	30.6	21.8	0.71	1.46	35.5	20.9	2.0
80	4.0	1.3	2.9	70	35.1	1.93	28.5	106.1	5.32	3.7	80/67	28.9	21.4	0.74	1.70	34.7	17.0	2.8
	6.0	2.6	5.9	70	36.4	1.95	29.7	107.4	5.46	3.8	80/67	29.0	21.4	0.74	1.64	34.6	17.7	2.7
	8.0	4.3	10.0	70	36.9	1.98	30.2	108.0	5.48	3.9	80/67	29.3	21.5	0.73	1.61	34.8	18.2	2.5
90	4.0	1.2	2.8	70	37.9	2.01	31.0	108.9	5.51	4.2	80/67	26.7	20.2	0.76	1.87	33.1	14.3	3.5
	6.0	2.5	5.7	70	39.3	2.04	32.3	110.4	5.64	4.3	80/67	26.9	20.2	0.75	1.80	33.0	14.9	3.3
	8.0	4.2	9.6	70	39.9	2.06	32.8	111.0	5.66	4.4	80/67	27.1	20.3	0.75	1.77	33.2	15.3	3.2
100	4.0	1.2	2.7	Operation not recommended							Operation not recommended							
	6.0	2.4	5.5								80/67	25.6	20.2	0.79	2.01	32.5	12.8	4.1
	8.0	4.0	9.3								80/67	25.9	20.3	0.78	1.97	32.6	13.1	3.9
110	4.0	1.1	2.6								Operation not recommended							
	6.0	2.3	5.3								80/67	21.7	18.9	0.87	2.22	29.3	9.8	5.0
	8.0	3.9	8.9								80/67	22.0	19.0	0.87	2.17	29.4	10.1	4.7
120	4.0	1.1	2.5								Operation not recommended							
	6.0	2.2	5.1								80/67	21.0	18.3	0.87	2.47	29.5	8.5	6.0
	8.0	3.7	8.6								80/67	21.3	18.3	0.86	2.42	29.5	8.8	5.7

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS036 - Performance Data

Single Speed PSC (1250 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	EAT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	EAT	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	5.0	1.0	2.4	Operation not recommended							Operation not recommended							
	7.0	2.1	4.9															
	9.0	3.6	8.2	70	21.8	1.99	15.0	86.1	3.21	2.4								
30	5.0	1.0	2.3	Operation not recommended							Operation not recommended							
	7.0	2.1	4.7	70	24.5	1.99	17.7	88.1	3.60	2.6	80/67	30.3	21.8	0.72	1.27	34.7	23.9	---
	9.0	3.5	8.0	70	25.0	2.01	18.1	88.5	3.64	2.7	80/67	30.8	21.7	0.70	1.23	35.0	25.1	---
40	5.0	1.0	2.3	Operation not recommended							Operation not recommended							
	7.0	2.0	4.6	70	28.4	2.04	21.5	91.1	4.09	3.0	80/67	33.3	24.2	0.73	1.37	38.0	24.3	---
	9.0	3.4	7.8	70	29.0	2.06	22.0	91.5	4.14	3.0	80/67	33.8	24.1	0.71	1.33	38.3	25.3	---
50	5.0	1.0	2.2	70	30.9	2.07	23.8	92.9	4.37	3.2	80/67	35.9	26.2	0.73	1.55	41.2	23.3	1.7
	7.0	1.9	4.5	70	32.0	2.08	24.9	93.7	4.51	3.3	80/67	36.0	26.3	0.73	1.49	41.1	24.1	1.6
	9.0	3.3	7.5	70	32.6	2.10	25.5	94.2	4.56	3.4	80/67	36.5	26.3	0.72	1.46	41.5	25.0	1.6
60	5.0	0.9	2.1	70	34.7	2.11	27.5	95.7	4.81	3.6	80/67	35.7	26.8	0.75	1.67	41.4	21.4	2.1
	7.0	1.9	4.3	70	35.9	2.12	28.6	96.6	4.95	3.7	80/67	35.8	26.8	0.75	1.61	41.2	22.2	2.0
	9.0	3.1	7.3	70	36.6	2.15	29.2	97.1	4.99	3.8	80/67	36.2	26.9	0.74	1.58	41.6	22.9	1.9
70	5.0	0.9	2.1	70	38.6	2.16	31.3	98.6	5.24	4.1	80/67	36.2	27.8	0.77	1.83	42.4	19.7	2.6
	7.0	1.8	4.2	70	40.0	2.18	32.6	99.6	5.38	4.2	80/67	36.3	27.8	0.77	1.77	42.3	20.5	2.5
	9.0	3.0	7.0	70	40.7	2.20	33.2	100.1	5.41	4.3	80/67	36.7	27.9	0.76	1.73	42.6	21.2	2.4
80	5.0	0.9	2.0	70	41.8	2.20	34.3	101.0	5.57	4.6	80/67	35.3	27.7	0.78	2.01	42.1	17.6	3.3
	7.0	1.7	4.0	70	43.4	2.23	35.8	102.1	5.71	4.7	80/67	35.4	27.7	0.78	1.93	42.0	18.3	3.1
	9.0	2.9	6.8	70	44.1	2.25	36.4	102.6	5.73	4.8	80/67	35.8	27.8	0.78	1.90	42.3	18.9	3.0
90	5.0	0.8	1.9	70	45.3	2.25	37.6	103.5	5.89	5.1	80/67	33.1	26.8	0.81	2.19	40.6	15.1	4.1
	7.0	1.7	3.9	70	47.0	2.28	39.2	104.8	6.03	5.3	80/67	33.3	26.8	0.81	2.11	40.5	15.8	3.9
	9.0	2.8	6.6	70	47.7	2.31	39.8	105.3	6.05	5.4	80/67	33.6	27.0	0.80	2.08	40.7	16.2	3.7
100	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	7.0	1.6	3.8								80/67	32.3	26.6	0.82	2.34	40.3	13.8	4.8
	9.0	2.7	6.3								80/67	32.7	26.7	0.82	2.29	40.5	14.2	4.6
110	5.0	0.8	1.8								Operation not recommended							
	7.0	1.6	3.6								80/67	29.1	24.7	0.85	2.57	37.8	11.3	5.9
	9.0	2.6	6.1								80/67	29.4	24.8	0.85	2.51	38.0	11.7	5.6
120	5.0	0.7	1.7								Operation not recommended							
	7.0	1.5	3.5								80/67	27.2	24.4	0.89	2.84	36.9	9.6	7.1
	9.0	2.5	5.8								80/67	27.6	24.4	0.89	2.78	37.0	9.9	6.7

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS042 - Performance Data

Single Speed PSC (1350 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	EAT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	EAT	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	5.0	0.8	1.9	Operation not recommended							Operation not recommended							
	8.0	2.3	5.3															
	11.0	4.4	10.3	70	25.4	2.41	17.1	87.4	3.09	3.7								
30	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	8.0	2.2	5.1	70	29.3	2.45	21.0	90.1	3.51	3.9	80/67	41.0	28.4	0.69	1.76	47.0	23.3	---
	11.0	4.3	10.0	70	29.7	2.45	21.4	90.4	3.56	4.0	80/67	41.4	28.4	0.68	1.72	47.3	24.1	---
40	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	8.0	2.1	4.9	70	33.3	2.52	24.7	92.9	3.88	4.3	80/67	42.7	30.3	0.71	1.85	49.0	23.1	---
	11.0	4.2	9.7	70	33.9	2.52	25.3	93.3	3.94	4.4	80/67	43.1	30.3	0.70	1.80	49.3	23.9	---
50	5.0	0.7	1.7	70	35.8	2.52	27.2	94.6	4.16	4.7	80/67	43.3	31.3	0.72	2.05	50.3	21.1	2.6
	8.0	2.1	4.8	70	37.3	2.57	28.5	95.6	4.26	4.8	80/67	43.8	31.6	0.72	1.97	50.5	22.2	2.5
	11.0	4.1	9.4	70	38.0	2.58	29.3	96.1	4.33	5.0	80/67	44.2	31.6	0.71	1.92	50.8	23.0	2.4
60	5.0	0.7	1.7	70	39.3	2.57	30.5	97.0	4.48	5.3	80/67	43.1	32.0	0.74	2.22	50.6	19.4	3.2
	8.0	2.0	4.6	70	41.1	2.63	32.1	98.2	4.58	5.4	80/67	43.6	32.4	0.74	2.12	50.9	20.5	3.0
	11.0	3.9	9.1	70	42.0	2.65	33.0	98.8	4.66	5.6	80/67	44.1	32.4	0.73	2.07	51.1	21.3	2.9
70	5.0	0.7	1.6	70	42.7	2.63	33.7	99.3	4.76	6.0	80/67	43.1	33.1	0.77	2.41	51.4	17.9	4.0
	8.0	1.9	4.5	70	44.8	2.70	35.5	100.7	4.86	6.1	80/67	43.8	33.4	0.76	2.31	51.7	19.0	3.8
	11.0	3.8	8.8	70	45.9	2.73	36.6	101.5	4.94	6.3	80/67	44.3	33.4	0.75	2.25	51.9	19.7	3.6
80	5.0	0.7	1.6	70	45.9	2.65	36.9	101.5	5.09	6.7	80/67	41.4	32.3	0.78	2.64	50.4	15.6	5.1
	8.0	1.9	4.3	70	48.4	2.73	39.0	103.2	5.18	6.9	80/67	42.1	32.6	0.77	2.52	50.7	16.7	4.8
	11.0	3.7	8.5	70	49.8	2.77	40.3	104.1	5.28	7.1	80/67	42.6	32.6	0.77	2.46	50.9	17.3	4.6
90	5.0	0.7	1.5	70	49.1	2.68	40.0	103.7	5.37	7.5	80/67	39.0	31.4	0.80	2.91	48.9	13.4	6.4
	8.0	1.8	4.2	70	51.8	2.78	42.4	105.6	5.47	7.8	80/67	39.8	31.7	0.80	2.77	49.3	14.4	6.1
	11.0	3.5	8.2	70	53.5	2.82	43.9	106.7	5.57	8.0	80/67	40.2	31.7	0.79	2.70	49.4	14.9	5.8
100	5.0	0.6	1.5	Operation not recommended							Operation not recommended							
	8.0	1.7	4.0								80/67	38.2	31.1	0.81	3.04	48.6	12.6	7.5
	11.0	3.4	7.9								80/67	38.6	31.1	0.81	2.96	48.7	13.0	7.2
110	5.0	0.6	1.4								Operation not recommended							
	8.0	1.7	3.9								80/67	34.6	28.8	0.83	3.35	46.1	10.3	9.2
	11.0	3.3	7.6								80/67	35.0	28.8	0.82	3.26	46.1	10.7	8.8
120	5.0	0.6	1.3								Operation not recommended							
	8.0	1.6	3.7								80/67	32.5	28.4	0.88	3.68	45.1	8.8	11.1
	11.0	3.2	7.3								80/67	32.8	28.4	0.87	3.58	45.1	9.2	10.6

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS048 - Performance Data

Single Speed PSC (1500 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	EAT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	EAT	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	6.0	1.1	2.6	Operation not recommended							Operation not recommended							
	9.0	2.3	5.4															
	12.0	4.0	9.2	70	32.8	3.05	22.4	90.2	3.15	4.8								
30	6.0	1.1	2.5	Operation not recommended							Operation not recommended							
	9.0	2.3	5.3	70	37.5	3.13	26.8	93.1	3.51	5.2	80/67	49.7	34.1	0.69	1.94	56.3	25.6	---
	12.0	3.9	9.0	70	38.0	3.13	27.3	93.5	3.56	5.3	80/67	50.2	34.1	0.68	1.89	56.6	26.6	---
40	6.0	1.1	2.5	Operation not recommended							Operation not recommended							
	9.0	2.2	5.1	70	43.0	3.23	32.0	96.6	3.90	5.7	80/67	51.5	36.0	0.70	2.10	58.7	24.5	---
	12.0	3.8	8.7	70	43.8	3.24	32.7	97.0	3.96	5.8	80/67	52.1	36.0	0.69	2.05	59.0	25.5	---
50	6.0	1.0	2.4	70	46.2	3.26	35.1	98.5	4.16	6.2	80/67	52.5	37.4	0.71	2.40	60.7	21.9	3.1
	9.0	2.1	4.9	70	48.1	3.32	36.7	99.7	4.25	6.4	80/67	53.1	37.8	0.71	2.30	60.9	23.1	2.9
	12.0	3.7	8.4	70	49.0	3.33	37.7	100.3	4.31	6.5	80/67	53.6	37.8	0.70	2.24	61.3	23.9	2.8
60	6.0	1.0	2.3	70	50.8	3.33	39.5	101.4	4.48	7.0	80/67	51.1	37.0	0.72	2.63	60.1	19.4	3.7
	9.0	2.1	4.8	70	53.1	3.41	41.5	102.8	4.57	7.2	80/67	51.8	37.3	0.72	2.52	60.4	20.6	3.6
	12.0	3.5	8.2	70	54.4	3.43	42.7	103.6	4.64	7.4	80/67	52.3	37.3	0.71	2.45	60.7	21.4	3.4
70	6.0	1.0	2.2	70	55.5	3.41	43.9	104.3	4.78	7.9	80/67	50.8	37.4	0.74	2.91	60.7	17.4	4.7
	9.0	2.0	4.6	70	58.2	3.51	46.3	105.9	4.87	8.1	80/67	51.5	37.8	0.73	2.78	61.0	18.6	4.5
	12.0	3.4	7.9	70	59.7	3.54	47.7	106.9	4.95	8.3	80/67	52.1	37.8	0.73	2.70	61.3	19.3	4.2
80	6.0	0.9	2.1	70	59.4	3.46	47.5	106.6	5.03	8.8	80/67	48.5	36.6	0.75	3.23	59.5	15.0	5.9
	9.0	1.9	4.5	70	62.5	3.58	50.3	108.6	5.11	9.1	80/67	49.4	36.9	0.75	3.07	59.8	16.1	5.6
	12.0	3.3	7.6	70	64.3	3.62	51.9	109.7	5.20	9.4	80/67	49.9	36.9	0.74	2.99	60.1	16.7	5.4
90	6.0	0.9	2.1	70	63.2	3.52	51.2	109.0	5.26	9.9	80/67	45.1	34.9	0.77	3.57	57.3	12.6	7.4
	9.0	1.9	4.3	70	66.8	3.66	54.3	111.2	5.35	10.2	80/67	46.0	35.2	0.77	3.39	57.6	13.6	7.1
	12.0	3.2	7.4	70	68.9	3.71	56.2	112.5	5.44	10.6	80/67	46.5	35.2	0.76	3.30	57.7	14.1	6.7
100	6.0	0.9	2.0	Operation not recommended							Operation not recommended							
	9.0	1.8	4.2								80/67	44.3	34.8	0.78	3.76	57.1	11.8	8.8
	12.0	3.1	7.1								80/67	44.8	34.8	0.78	3.65	57.2	12.3	8.4
110	6.0	0.8	1.9								Operation not recommended							
	9.0	1.7	4.0								80/67	39.9	32.3	0.81	4.15	54.0	9.6	10.8
	12.0	3.0	6.8								80/67	40.3	32.3	0.80	4.03	54.0	10.0	10.2
120	6.0	0.8	1.8								Operation not recommended							
	9.0	1.7	3.8								80/67	37.6	31.7	0.84	4.59	53.3	8.2	13.0
	12.0	2.8	6.6								80/67	38.0	31.7	0.83	4.46	53.2	8.5	12.4

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS060 - Performance Data

Single Speed PSC (2000 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	EAT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	EAT	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	9.0	2.5	5.7	Operation not recommended							Operation not recommended							
	12.0	4.0	9.2															
	15.0	5.9	13.5	70	39.6	4.02	25.9	88.3	2.89	5.8								
30	9.0	2.4	5.5	Operation not recommended							Operation not recommended							
	12.0	3.9	8.9	70	44.5	4.02	30.8	90.6	3.24	6.2	80/67	70.2	48.6	0.69	2.91	80.2	24.2	---
	15.0	5.7	13.1	70	45.9	4.12	31.8	91.2	3.26	6.4	80/67	71.4	48.1	0.67	2.74	80.8	26.1	---
40	9.0	2.3	5.3	Operation not recommended							Operation not recommended							
	12.0	3.7	8.7	70	52.5	4.19	38.2	94.3	3.67	6.9	80/67	71.7	49.8	0.69	3.10	82.3	23.1	---
	15.0	5.5	12.7	70	53.7	4.26	39.2	94.9	3.70	7.1	80/67	72.6	49.6	0.68	2.95	82.6	24.6	---
50	9.0	2.2	5.2	70	57.8	4.30	43.1	96.7	3.93	7.5	80/67	72.9	50.5	0.69	3.44	84.6	21.2	4.1
	12.0	3.6	8.4	70	59.2	4.34	44.4	97.4	4.00	7.7	80/67	72.9	51.0	0.70	3.38	84.4	21.6	3.9
	15.0	5.3	12.3	70	60.3	4.38	45.3	97.9	4.03	7.9	80/67	73.6	51.0	0.69	3.23	84.7	22.8	3.7
60	9.0	2.2	5.0	70	64.1	4.42	49.0	99.7	4.25	8.4	80/67	70.5	49.4	0.70	3.63	82.9	19.4	5.0
	12.0	3.5	8.1	70	65.5	4.47	50.3	100.3	4.30	8.7	80/67	70.8	49.6	0.70	3.53	82.9	20.1	4.8
	15.0	5.2	11.9	70	67.3	4.53	51.9	101.2	4.36	8.9	80/67	71.2	49.9	0.70	3.41	82.8	20.9	4.6
70	9.0	2.1	4.9	70	70.6	4.56	55.1	102.7	4.54	9.5	80/67	69.2	49.4	0.71	3.97	82.7	17.4	6.3
	12.0	3.4	7.9	70	71.9	4.60	56.2	103.3	4.58	9.8	80/67	69.9	49.4	0.71	3.83	83.0	18.2	6.0
	15.0	5.0	11.6	70	74.6	4.69	58.6	104.5	4.66	10.0	80/67	69.9	49.9	0.71	3.73	82.6	18.7	5.7
80	9.0	2.0	4.7	70	75.2	4.66	59.3	104.8	4.73	10.7	80/67	66.1	48.0	0.73	4.35	80.9	15.2	8.0
	12.0	3.3	7.6	70	77.8	4.68	61.8	106.0	4.87	11.0	80/67	66.8	48.0	0.72	4.16	81.0	16.0	7.6
	15.0	4.8	11.2	70	79.9	4.82	63.5	107.0	4.86	11.3	80/67	67.1	48.5	0.72	4.05	80.9	16.6	7.2
90	9.0	2.0	4.5	70	80.0	4.78	63.7	107.1	4.91	12.0	80/67	61.6	45.8	0.74	4.74	77.7	13.0	10.0
	12.0	3.2	7.3	70	83.9	4.78	67.6	108.8	5.14	12.4	80/67	62.2	45.8	0.74	4.49	77.5	13.8	9.5
	15.0	4.7	10.8	70	85.5	4.97	68.5	109.6	5.04	12.8	80/67	62.8	46.3	0.74	4.37	77.7	14.4	9.1
100	9.0	1.9	4.4	Operation not recommended							Operation not recommended							
	12.0	3.1	7.1								80/67	59.7	45.0	0.75	4.99	76.7	11.9	11.8
	15.0	4.5	10.4								80/67	60.3	45.5	0.76	4.87	76.9	12.4	11.2
110	9.0	1.8	4.2								Operation not recommended							
	12.0	2.9	6.8								80/67	54.5	41.8	0.77	5.43	73.0	10.0	14.5
	15.0	4.3	10.0								80/67	55.1	42.3	0.77	5.30	73.1	10.4	13.8
120	9.0	1.7	4.0								Operation not recommended							
	12.0	2.8	6.5								80/67	50.8	41.5	0.82	6.09	71.6	8.3	17.5
	15.0	4.2	9.6								80/67	51.7	41.9	0.81	5.92	71.9	8.7	16.7

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS070 - Performance Data

Single Speed PSC (2200 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	EAT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	EAT	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	12.0	3.0	7.0	Operation not recommended							Operation not recommended							
	15.0	4.4	10.2															
	18.0	6.0	13.9	70	46.0	4.54	30.5	89.4	2.97	6.9								
30	12.0	3.0	6.8	Operation not recommended							Operation not recommended							
	15.0	4.3	9.9	70	53.0	4.65	37.2	92.3	3.34	7.4	80/67	73.6	49.7	0.68	2.87	83.4	25.6	---
	18.0	5.8	13.5	70	53.2	4.66	37.3	92.4	3.34	7.6	80/67	74.0	49.1	0.66	2.86	83.8	25.8	---
40	12.0	2.9	6.6	Operation not recommended							Operation not recommended							
	15.0	4.1	9.6	70	61.8	4.80	45.5	96.0	3.77	8.2	80/67	77.3	52.8	0.68	3.11	87.9	24.9	---
	18.0	5.7	13.1	70	62.2	4.82	45.8	96.2	3.78	8.4	80/67	77.9	52.6	0.67	3.09	88.5	25.2	---
50	12.0	2.8	6.4	70	68.1	4.91	51.4	98.7	4.07	8.9	80/67	80.7	55.5	0.69	3.51	92.7	23.0	4.5
	15.0	4.0	9.3	70	69.5	4.95	52.7	99.3	4.12	9.2	80/67	81.2	55.7	0.69	3.41	92.8	23.8	4.3
	18.0	5.5	12.7	70	70.1	4.97	53.2	99.5	4.13	9.4	80/67	82.0	56.0	0.68	3.38	93.5	24.3	4.1
60	12.0	2.7	6.2	70	75.6	5.06	58.3	101.8	4.38	10.0	80/67	77.3	53.7	0.69	3.81	90.3	20.3	5.5
	15.0	3.9	9.0	70	77.8	5.11	60.3	102.7	4.46	10.3	80/67	77.7	53.9	0.69	3.70	90.3	21.0	5.2
	18.0	5.3	12.3	70	78.7	5.14	61.2	103.1	4.48	10.6	80/67	78.7	54.6	0.69	3.65	91.1	21.5	5.0
70	12.0	2.6	6.0	70	83.4	5.22	65.6	105.1	4.69	11.3	80/67	76.8	54.5	0.71	4.19	91.1	18.3	6.9
	15.0	3.8	8.7	70	86.4	5.29	68.4	106.4	4.79	11.6	80/67	77.1	54.6	0.71	4.08	91.0	18.9	6.6
	18.0	5.1	11.9	70	87.7	5.33	69.5	106.9	4.82	11.9	80/67	78.2	55.8	0.71	4.01	91.9	19.5	6.3
80	12.0	2.5	5.8	70	89.2	5.36	70.9	107.5	4.88	12.7	80/67	73.3	52.2	0.71	4.61	89.1	15.9	8.7
	15.0	3.6	8.4	70	93.3	5.46	74.6	109.3	5.00	13.1	80/67	73.6	52.2	0.71	4.49	88.9	16.4	8.3
	18.0	5.0	11.5	70	94.9	5.51	76.1	109.9	5.05	13.5	80/67	74.8	53.8	0.72	4.40	89.8	17.0	7.9
90	12.0	2.4	5.6	70	95.4	5.52	76.5	110.1	5.06	14.3	80/67	67.0	48.5	0.72	5.06	84.3	13.2	10.9
	15.0	3.5	8.1	70	100.5	5.64	81.2	112.3	5.22	14.7	80/67	67.2	48.4	0.72	4.93	84.0	13.6	10.4
	18.0	4.8	11.1	70	102.5	5.70	83.0	113.1	5.27	15.2	80/67	68.6	50.3	0.73	4.81	85.0	14.2	9.9
100	12.0	2.3	5.4	Operation not recommended							Operation not recommended							
	15.0	3.4	7.8								80/67	65.0	47.8	0.74	5.47	83.7	11.9	13.0
	18.0	4.6	10.7								80/67	66.4	50.2	0.75	5.33	84.6	12.5	12.3
110	12.0	2.2	5.2								Operation not recommended							
	15.0	3.3	7.5								80/67	57.4	42.5	0.74	6.03	77.9	9.5	15.9
	18.0	4.4	10.2								80/67	58.8	45.0	0.77	5.85	78.8	10.1	15.1
120	12.0	2.2	5.0								Operation not recommended							
	15.0	3.1	7.2								80/67	54.2	43.1	0.79	6.69	77.1	8.1	19.2
	18.0	4.3	9.8								80/67	55.7	46.0	0.83	6.47	77.8	8.6	18.2

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS015 - Performance Data

Single Speed ECM2.3 (500 CFM)

EWT °F	Flow Rate GPM	Water Pressure Drop PSI	Water Pressure Drop FT/HD	HEATING - EAT 70°F Airflow CFM	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	COOLING - EAT 80/67 °F Airflow CFM	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER
20	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.7													
	4.0	2.7	6.1	400	10.2	0.95	7.0	91.6	3.15							
				500	10.5	0.97	7.2	87.4	3.18							
30	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.7	400	10.9	0.93	7.8	93.3	3.46	400	15.8	9.4	0.60	0.43	17.2	36.7
				500	11.3	0.94	8.1	88.8	3.49	500	16.2	10.5	0.65	0.46	17.7	35.1
	4.0	2.6	6.1	400	11.1	0.92	8.0	93.6	3.53	400	14.9	9.0	0.60	0.49	16.6	30.7
				500	11.4	0.94	8.2	89.1	3.56	500	15.3	10.0	0.65	0.52	17.1	29.3
40	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.7	400	12.1	0.95	8.9	95.9	3.73	400	16.2	9.8	0.61	0.49	17.9	32.8
				500	12.4	0.97	9.2	91.0	3.77	500	16.7	10.9	0.66	0.53	18.5	31.3
	4.0	2.6	6.0	400	12.4	0.94	9.2	96.6	3.84	400	15.9	9.7	0.61	0.50	17.6	31.5
				500	12.7	0.96	9.5	91.6	3.88	500	16.4	10.7	0.66	0.54	18.2	30.1
50	2.0	0.6	1.4	400	12.9	0.96	9.6	97.8	3.92	400	16.5	10.1	0.62	0.60	18.5	27.5
				500	13.3	0.98	10.0	92.6	3.96	500	16.9	11.3	0.67	0.64	19.1	26.3
	3.0	1.6	3.7	400	13.3	0.97	10.0	98.7	4.02	400	16.7	10.2	0.61	0.56	18.6	29.7
				500	13.7	0.99	10.4	93.3	4.07	500	17.1	11.4	0.66	0.60	19.2	28.4
	4.0	2.6	6.0	400	13.6	0.97	10.4	99.6	4.13	400	16.9	10.3	0.61	0.52	18.7	32.3
				500	14.1	0.99	10.7	94.1	4.17	500	17.4	11.5	0.66	0.56	19.3	30.9
60	2.0	0.6	1.4	400	14.2	0.98	10.9	101.0	4.26	400	15.6	9.8	0.63	0.69	18.0	22.7
				500	14.7	1.00	11.3	95.2	4.30	500	16.1	10.9	0.68	0.74	18.6	21.7
	3.0	1.6	3.7	400	14.7	0.99	11.4	102.0	4.37	400	15.9	9.9	0.62	0.65	18.1	24.4
				500	15.2	1.01	11.8	96.1	4.41	500	16.3	11.0	0.67	0.70	18.7	23.3
	4.0	2.6	6.0	400	15.2	0.99	11.8	103.1	4.47	400	16.1	10.0	0.62	0.61	18.1	26.2
				500	15.6	1.01	12.2	96.9	4.52	500	16.5	11.1	0.67	0.66	18.7	25.1
70	2.0	0.6	1.4	400	15.6	1.00	12.2	104.1	4.58	400	14.8	9.5	0.64	0.78	17.4	19.1
				500	16.1	1.02	12.7	97.8	4.63	500	15.2	10.5	0.69	0.84	18.1	18.2
	3.0	1.6	3.7	400	16.1	1.01	12.7	105.4	4.69	400	15.0	9.5	0.63	0.74	17.5	20.3
				500	16.6	1.03	13.2	98.8	4.74	500	15.4	10.6	0.69	0.80	18.1	19.4
	4.0	2.6	6.0	400	16.7	1.02	13.2	106.6	4.80	400	15.2	9.6	0.63	0.70	17.6	21.7
				500	17.2	1.04	13.7	99.8	4.85	500	15.7	10.6	0.68	0.76	18.2	20.7
80	2.0	0.6	1.4	400	17.2	1.02	13.8	107.8	4.96	400	14.1	9.2	0.65	0.89	17.1	15.8
				500	17.7	1.04	14.2	100.8	5.01	500	14.5	10.2	0.70	0.96	17.7	15.1
	3.0	1.6	3.7	400	17.8	1.03	14.4	109.3	5.07	400	14.3	9.2	0.64	0.85	17.1	16.7
				500	18.4	1.05	14.8	102.1	5.13	500	14.7	10.2	0.70	0.92	17.8	16.0
	4.0	2.6	5.9	400	18.2	1.04	14.7	110.2	5.14	400	14.5	9.3	0.64	0.80	17.2	18.1
				500	18.8	1.06	15.2	102.8	5.20	500	14.9	10.4	0.70	0.86	17.8	17.3
90	2.0	0.6	1.4	400	18.9	1.03	15.5	111.8	5.37	400	13.4	8.9	0.66	1.01	16.8	13.2
				500	19.5	1.06	16.0	104.2	5.42	500	13.7	9.9	0.72	1.09	17.4	12.6
	3.0	1.6	3.6	400	19.7	1.05	16.1	113.5	5.48	400	13.5	8.9	0.65	0.98	16.8	13.8
				500	20.3	1.07	16.7	105.6	5.54	500	13.9	9.8	0.71	1.05	17.5	13.2
	4.0	2.6	5.9	400	19.8	1.06	16.2	113.7	5.47	400	13.8	9.1	0.66	0.90	16.8	15.3
				500	20.4	1.08	16.7	105.7	5.53	500	14.2	10.1	0.71	0.97	17.4	14.6
100	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.6							400	12.9	8.5	0.66	1.13	16.6	11.4
										500	13.2	9.5	0.72	1.21	17.3	10.9
	4.0	2.5	5.9							400	12.9	8.8	0.68	1.01	16.3	12.8
										500	13.3	9.8	0.74	1.08	16.9	12.2
110	2.0	0.6	1.4							Operation not recommended						
	3.0	1.6	3.6							400	12.2	8.2	0.68	1.29	16.5	9.4
										500	12.5	9.2	0.73	1.39	17.2	9.0
	4.0	2.5	5.9							400	12.1	8.5	0.71	1.12	15.8	10.8
										500	12.4	9.5	0.76	1.20	16.5	10.3
120	2.0	0.6	1.4							Operation not recommended						
	3.0	1.6	3.6							400	11.6	8.0	0.69	1.48	16.6	7.8
										500	11.9	8.8	0.74	1.60	17.3	7.5
	4.0	2.5	5.8							400	10.9	8.3	0.76	1.24	15.1	8.8
										500	11.2	9.2	0.82	1.33	15.7	8.4

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS018 - Performance Data

Single Speed ECM2.3 (600 CFM)

EWT °F	Flow Rate GPM	Water Pressure Drop PSI	Water Pressure Drop FT/HD	HEATING - EAT 70°F Airflow CFM	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow CFM	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	3.0	1.8	4.1	Operation not recommended							Operation not recommended							
	4.0	3.0	6.9															
	5.0	4.3	9.9	500	12.3	1.11	8.6	90.8	3.26	1.6								
				600	12.7	1.13	8.9	87.6	3.29	1.5								
30	3.0	1.7	3.9	Operation not recommended							Operation not recommended							
	4.0	3.0	6.8	500	13.9	1.18	10.0	93.8	3.46	1.6	500	19.0	11.6	0.61	0.66	21.2	29.0	--
				600	14.4	1.20	10.3	90.2	3.50	1.6	600	19.5	12.9	0.66	0.70	21.9	27.7	--
	5.0	4.2	9.7	500	14.2	1.19	10.2	94.2	3.50	1.7	500	18.3	11.2	0.61	0.64	20.4	28.7	--
				600	14.6	1.21	10.5	90.5	3.53	1.6	600	18.8	12.4	0.66	0.68	21.1	27.5	--
40	3.0	1.7	3.8	Operation not recommended							Operation not recommended							
	4.0	2.9	6.7	500	15.4	1.24	11.2	96.5	3.65	1.8	500	19.4	11.7	0.60	0.70	21.8	27.6	--
				600	15.9	1.26	11.6	92.5	3.69	1.6	600	20.0	13.0	0.65	0.76	22.5	26.4	--
	5.0	4.2	9.6	500	15.8	1.25	11.6	97.2	3.71	1.8	500	19.2	11.5	0.60	0.65	21.4	29.5	--
				600	16.3	1.27	12.0	93.1	3.74	1.7	600	19.8	12.8	0.65	0.70	22.1	28.2	--
50	3.0	1.6	3.7	500	16.6	1.29	12.3	98.7	3.78	1.9	500	19.6	11.9	0.61	0.83	22.4	23.4	0.9
				600	17.1	1.31	12.7	94.4	3.82	1.7	600	20.1	13.2	0.66	0.90	23.1	22.4	1.0
	4.0	2.9	6.6	500	17.0	1.30	12.6	99.4	3.84	1.9	500	19.8	11.8	0.60	0.75	22.4	26.5	0.8
				600	17.5	1.32	13.1	95.0	3.88	1.8	600	20.4	13.2	0.64	0.81	23.1	25.3	0.9
	5.0	4.2	9.6	500	17.4	1.31	13.0	100.2	3.90	1.9	500	20.1	11.8	0.59	0.66	22.4	30.3	0.8
				600	17.9	1.33	13.4	95.6	3.94	1.9	600	20.7	13.1	0.63	0.71	23.1	29.0	0.9
60	3.0	1.6	3.6	500	18.5	1.35	13.9	102.2	4.02	2.1	500	18.7	11.4	0.61	0.88	21.6	21.2	1.0
				600	19.1	1.37	14.4	97.4	4.06	2.0	600	19.2	12.7	0.66	0.95	22.4	20.3	1.1
	4.0	2.8	6.6	500	18.8	1.36	14.3	102.9	4.06	2.1	500	18.9	11.4	0.60	0.82	21.7	22.9	1.0
				600	19.4	1.39	14.8	98.0	4.10	2.0	600	19.4	12.6	0.65	0.89	22.4	21.9	1.1
	5.0	4.1	9.5	500	19.2	1.38	14.6	103.6	4.09	2.2	500	19.1	11.3	0.59	0.77	21.7	24.8	0.9
				600	19.8	1.40	15.1	98.6	4.13	2.0	600	19.6	12.6	0.64	0.83	22.4	23.7	1.1
70	3.0	1.5	3.5	500	20.4	1.41	15.6	105.7	4.25	2.4	500	17.8	10.9	0.61	0.93	20.9	19.2	1.2
				600	21.0	1.43	16.2	100.4	4.29	2.2	600	18.3	12.1	0.66	1.00	21.7	18.3	1.3
	4.0	2.8	6.5	500	20.7	1.43	15.9	106.4	4.26	2.4	500	17.9	10.9	0.61	0.90	20.9	19.9	1.1
				600	21.4	1.45	16.5	100.9	4.30	2.2	600	18.4	12.1	0.66	0.97	21.7	19.0	1.3
	5.0	4.1	9.5	500	21.1	1.45	16.2	107.0	4.27	2.4	500	18.0	10.9	0.60	0.87	20.9	20.6	1.1
				600	21.7	1.47	16.7	101.5	4.31	2.2	600	18.5	12.1	0.65	0.94	21.7	19.7	1.2
80	3.0	1.5	3.4	500	22.6	1.47	17.7	109.9	4.51	2.7	500	17.0	10.4	0.61	0.98	20.3	17.3	1.6
				600	23.3	1.50	18.3	104.0	4.56	2.5	600	17.5	11.6	0.66	1.05	21.0	16.6	1.7
	4.0	2.8	6.4	500	22.9	1.50	17.9	110.4	4.49	2.7	500	17.0	10.4	0.61	0.99	20.3	17.2	1.5
				600	23.6	1.53	18.5	104.5	4.54	2.4	600	17.5	11.6	0.66	1.06	21.1	16.5	1.6
	5.0	4.1	9.4	500	23.3	1.51	18.2	111.1	4.52	2.7	500	17.2	10.6	0.62	0.96	20.4	17.8	1.4
				600	24.0	1.54	18.8	105.0	4.57	2.5	600	17.7	11.8	0.67	1.04	21.1	17.1	1.5
90	3.0	1.4	3.2	500	25.1	1.54	19.9	114.4	4.78	3.0	500	16.2	10.0	0.62	1.03	19.7	15.7	1.9
				600	25.8	1.57	20.6	107.9	4.83	2.8	600	16.7	11.1	0.67	1.11	20.4	15.0	2.1
	4.0	2.7	6.3	500	25.3	1.57	20.0	114.9	4.73	3.0	500	16.2	10.0	0.62	1.08	19.8	14.9	1.8
				600	26.1	1.60	20.7	108.3	4.78	2.8	600	16.6	11.1	0.67	1.16	20.5	14.3	2.0
	5.0	4.0	9.2	500	25.5	1.57	20.2	115.2	4.75	3.1	500	16.3	10.3	0.63	1.05	19.9	15.5	1.7
				600	26.3	1.61	20.9	108.6	4.80	2.9	600	16.8	11.4	0.68	1.13	20.6	14.8	1.9
100	3.0	1.4	3.1	Operation not recommended							Operation not recommended							
	4.0	2.7	6.2								500	15.3	9.6	0.63	1.19	19.3	12.9	2.2
											600	15.8	10.7	0.68	1.28	20.1	12.4	2.4
	5.0	4.0	9.1								500	15.3	9.9	0.65	1.20	19.4	12.7	2.0
											600	15.8	11.1	0.70	1.29	20.1	12.2	2.3
110	3.0	1.3	3.1								Operation not recommended							
	4.0	2.7	6.1								500	14.6	9.2	0.63	1.30	19.0	11.2	2.9
											600	15.0	10.2	0.68	1.40	19.7	10.7	3.2
	5.0	3.9	9.0								500	14.3	9.6	0.67	1.35	18.9	10.6	2.6
											600	14.7	10.7	0.73	1.45	19.6	10.1	3.0
120	3.0	1.3	2.9								Operation not recommended							
	4.0	2.6	6.1								500	13.8	8.8	0.64	1.43	18.6	9.7	3.5
											600	14.2	9.8	0.69	1.53	19.4	9.3	4.0
	5.0	3.9	8.9								500	13.3	9.2	0.69	1.50	18.4	8.9	3.1
											600	13.7	10.2	0.74	1.62	19.1	8.5	3.5

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

GS022 - Performance Data

Single Speed ECM2.3 (700 CFM)

		WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
EWT °F	Flow gpm	PSI	FT	Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	3.0	0.9	2.2	Operation not recommended							Operation not recommended							
	4.5	1.8	4.2															
	6.0	2.9	6.8	600	12.2	1.16	8.2	88.8	3.06	1.6								
				700	12.3	1.17	8.3	86.3	3.08	1.5								
30	3.0	0.9	2.1	Operation not recommended							Operation not recommended							
	4.5	1.7	4.0	600	14.3	1.17	10.3	92.0	3.56	1.7	600	22.7	15.4	0.68	0.66	25.0	34.6	-
				700	14.6	1.18	10.5	89.3	3.61	1.6	700	23.1	16.8	0.73	0.69	25.5	33.4	-
	6.0	2.8	6.6	600	14.6	1.18	10.5	92.5	3.61	1.8	600	22.9	15.4	0.67	0.64	25.0	35.8	-
				700	14.8	1.19	10.7	89.5	3.62	1.6	700	23.4	16.8	0.72	0.67	25.7	35.0	-
40	3.0	0.9	2.0	Operation not recommended							Operation not recommended							
	4.5	1.7	3.9	600	16.8	1.20	12.7	96.0	4.10	1.9	600	23.5	15.4	0.65	0.72	25.9	32.7	-
				700	17.2	1.21	13.0	92.7	4.17	1.8	700	23.9	16.8	0.70	0.75	26.5	31.7	-
	6.0	2.8	6.4	600	17.1	1.22	13.0	96.4	4.12	2.0	600	23.7	15.4	0.65	0.70	26.0	33.9	-
				700	17.4	1.22	13.3	93.1	4.20	1.8	700	24.2	16.8	0.69	0.73	26.7	33.2	-
50	3.0	0.9	2.0	600	18.3	1.21	14.2	98.2	4.43	2.1	600	23.9	15.1	0.63	0.84	26.8	28.3	1.1
				700	18.6	1.21	14.5	94.7	4.52	1.9	700	24.4	16.5	0.67	0.88	27.4	27.8	1.1
	4.5	1.6	3.8	600	19.2	1.23	15.0	99.6	4.56	2.2	600	24.2	15.3	0.63	0.80	26.9	30.2	1.0
				700	19.6	1.23	15.4	95.9	4.64	2.0	700	24.7	16.6	0.67	0.84	27.5	29.5	1.1
	6.0	2.7	6.2	600	19.5	1.25	15.2	100.0	4.56	2.2	600	24.4	15.3	0.63	0.78	27.1	31.5	0.9
				700	19.9	1.24	15.7	96.4	4.70	2.0	700	24.9	16.6	0.67	0.81	27.7	30.8	1.0
60	3.0	0.8	1.9	600	20.6	1.25	16.3	101.8	4.82	2.3	600	23.2	15.0	0.65	0.94	26.4	24.5	1.3
				700	21.1	1.24	16.8	97.9	4.98	2.2	700	23.6	16.3	0.69	0.98	27.0	24.1	1.4
	4.5	1.6	3.7	600	21.6	1.28	17.2	103.3	4.94	2.4	600	23.4	15.1	0.65	0.89	26.4	26.1	1.2
				700	22.1	1.27	17.8	99.3	5.10	2.2	700	23.9	16.5	0.69	0.93	27.1	25.6	1.3
	6.0	2.6	6.0	600	22.0	1.30	17.5	103.9	4.96	2.5	600	23.6	15.1	0.64	0.87	26.6	27.2	1.1
				700	22.5	1.28	18.1	99.8	5.15	2.3	700	24.1	16.5	0.68	0.90	27.2	26.7	1.2
70	3.0	0.8	1.8	600	23.0	1.31	18.5	105.5	5.17	2.6	600	22.9	14.9	0.65	1.07	26.5	21.4	1.6
				700	23.6	1.28	19.2	101.2	5.40	2.4	700	23.3	16.1	0.69	1.11	27.1	21.0	1.7
	4.5	1.5	3.6	600	24.0	1.33	19.5	107.1	5.29	2.7	600	23.0	15.0	0.65	1.01	26.5	22.8	1.5
				700	24.7	1.31	20.3	102.7	5.52	2.5	700	23.6	16.3	0.69	1.05	27.2	22.4	1.6
	6.0	2.5	5.8	600	24.5	1.35	19.9	107.8	5.32	2.8	600	23.3	15.0	0.64	0.99	26.7	23.6	1.4
				700	25.1	1.32	20.6	103.2	5.57	2.6	700	23.8	16.3	0.69	1.02	27.2	23.3	1.5
80	3.0	0.8	1.8	600	25.0	1.36	20.4	108.6	5.40	2.9	600	21.9	14.5	0.66	1.21	26.0	18.0	2.0
				700	25.8	1.33	21.2	104.1	5.70	2.7	700	22.3	15.8	0.71	1.26	26.6	17.8	2.1
	4.5	1.5	3.4	600	26.1	1.39	21.4	110.3	5.51	3.0	600	22.1	14.7	0.66	1.15	26.0	19.2	1.9
				700	27.0	1.35	22.4	105.7	5.84	2.8	700	22.6	15.9	0.71	1.19	26.6	19.0	2.0
	6.0	2.4	5.6	600	26.6	1.41	21.8	111.0	5.54	3.1	600	22.3	14.7	0.66	1.11	26.1	20.1	1.7
				700	27.4	1.37	22.8	106.3	5.88	2.9	700	22.8	15.9	0.70	1.15	26.7	19.7	1.9
90	3.0	0.7	1.7	600	27.1	1.42	22.2	111.8	5.59	3.3	600	20.3	14.1	0.70	1.38	25.0	14.7	2.5
				700	28.0	1.38	23.3	107.0	5.96	3.0	700	20.7	15.3	0.74	1.42	25.6	14.6	2.6
	4.5	1.4	3.3	600	28.3	1.45	23.3	113.6	5.70	3.4	600	20.5	14.3	0.70	1.30	24.9	15.7	2.3
				700	29.3	1.40	24.5	108.7	6.11	3.1	700	20.9	15.5	0.74	1.34	25.5	15.6	2.5
	6.0	2.3	5.4	600	28.7	1.47	23.7	114.3	5.72	3.5	600	20.7	14.3	0.69	1.26	25.0	16.4	2.1
				700	29.8	1.42	25.0	109.4	6.15	3.2	700	21.1	15.5	0.74	1.30	25.6	16.2	2.4
100	3.0	0.7	1.7	Operation not recommended							Operation not recommended							
	4.5	1.4	3.2								600	19.6	13.9	0.71	1.48	24.6	13.2	2.8
											700	20.0	15.1	0.76	1.52	25.2	13.1	3.1
	6.0	2.2	5.2								600	19.8	13.9	0.70	1.43	24.7	13.8	2.6
											700	20.2	15.1	0.75	1.48	25.2	13.6	2.9
110	3.0	0.7	1.6								Operation not recommended							
	4.5	1.3	3.1								600	17.6	13.4	0.76	1.67	23.2	10.5	3.5
											700	17.9	14.6	0.81	1.71	23.8	10.5	3.8
	6.0	2.2	5.0								600	17.7	13.4	0.76	1.62	23.3	11.0	3.2
											700	18.1	14.6	0.81	1.67	23.8	10.9	3.6
120	3.0	0.7	1.5								Operation not recommended							
	4.5	1.3	2.9								600	16.3	13.0	0.79	1.89	22.8	8.6	4.2
											700	16.6	14.1	0.85	1.94	23.3	8.6	4.5
	6.0	2.1	4.8								600	16.5	13.0	0.79	1.83	22.7	9.0	3.9
											700	16.8	14.1	0.84	1.89	23.3	8.9	4.3

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GS030 - Performance Data

Single Speed ECM2.3 (900 CFM)

		WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
EWT °F	Flow gpm	PSI	FT	Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	4.0	1.5	3.5	Operation not recommended							Operation not recommended							
	6.0	3.1	7.2															
	8.0	5.2	12.1	700	16.8	1.53	11.6	92.3	3.22	2.2								
				900	17.1	1.56	11.8	87.6	3.21	2.0								
30	4.0	1.5	3.4	Operation not recommended							Operation not recommended							
	6.0	3.0	7.0	700	19.3	1.52	14.1	95.5	3.72	2.3	700	25.4	16.3	0.64	0.87	28.4	29.2	-
				900	19.7	1.55	14.4	90.3	3.72	2.1	900	26.1	18.3	0.70	0.94	29.4	27.7	-
	8.0	5.1	11.8	700	19.8	1.54	14.6	96.2	3.78	2.4	700	25.6	16.2	0.63	0.86	28.6	30.0	-
				900	20.1	1.57	14.8	90.7	3.76	2.2	900	26.6	18.2	0.68	0.91	29.7	29.2	-
40	4.0	1.4	3.3	Operation not recommended							Operation not recommended							
	6.0	2.9	6.8	700	22.6	1.57	17.3	99.9	4.21	2.6	700	27.5	17.6	0.64	0.95	30.8	28.9	-
				900	23.2	1.60	17.7	93.8	4.25	2.4	900	28.4	19.7	0.70	1.02	31.8	27.7	-
	8.0	4.9	11.4	700	23.2	1.59	17.7	100.6	4.26	2.7	700	27.8	17.6	0.63	0.94	31.0	29.7	-
				900	23.7	1.61	18.2	94.3	4.30	2.4	900	28.8	19.7	0.68	0.99	32.1	28.9	-
50	4.0	1.4	3.2	700	24.8	1.62	19.3	102.8	4.49	2.8	700	29.4	18.8	0.64	1.10	33.2	26.7	1.4
				900	25.3	1.63	19.8	96.1	4.56	2.6	900	30.3	21.2	0.70	1.17	34.3	25.9	1.5
	6.0	2.8	6.6	700	25.6	1.62	20.1	103.9	4.62	2.9	700	29.5	19.0	0.64	1.06	33.1	27.8	1.3
				900	26.2	1.64	20.7	97.0	4.69	2.7	900	30.4	21.3	0.70	1.13	34.2	26.9	1.4
	8.0	4.8	11.1	700	26.2	1.65	20.5	104.6	4.66	3.0	700	29.8	19.0	0.64	1.04	33.3	28.7	1.2
				900	26.8	1.65	21.2	97.6	4.75	2.7	900	30.8	21.3	0.69	1.10	34.5	27.9	1.3
60	4.0	1.4	3.1	700	27.8	1.68	22.1	106.8	4.84	3.2	700	28.7	18.5	0.64	1.21	32.8	23.8	1.7
				900	28.5	1.69	22.8	99.4	4.96	2.9	900	29.6	20.8	0.70	1.28	34.0	23.1	1.8
	6.0	2.8	6.4	700	28.7	1.70	22.9	108.0	4.95	3.3	700	28.8	18.6	0.65	1.16	32.8	24.7	1.5
				900	29.5	1.70	23.8	100.4	5.10	3.0	900	29.7	20.8	0.70	1.23	33.9	24.1	1.7
	8.0	4.6	10.7	700	29.3	1.72	23.4	108.8	4.98	3.4	700	29.1	18.6	0.64	1.14	33.0	25.5	1.4
				900	30.1	1.72	24.3	101.0	5.14	3.1	900	30.0	20.8	0.69	1.21	34.1	24.9	1.6
70	4.0	1.3	3.0	700	30.9	1.77	24.9	110.9	5.12	3.6	700	28.9	18.7	0.65	1.35	33.5	21.4	2.1
				900	31.8	1.76	25.8	102.7	5.29	3.3	900	29.8	21.0	0.71	1.43	34.6	20.9	2.2
	6.0	2.7	6.2	700	32.0	1.80	25.8	112.3	5.21	3.7	700	29.0	18.8	0.65	1.30	33.4	22.3	1.9
				900	32.9	1.78	26.9	103.9	5.43	3.4	900	29.9	21.0	0.70	1.37	34.5	21.8	2.1
	8.0	4.5	10.4	700	32.5	1.82	26.3	113.0	5.24	3.8	700	29.3	18.8	0.64	1.27	33.6	23.0	1.8
				900	33.5	1.80	27.4	104.5	5.46	3.5	900	30.2	21.1	0.70	1.34	34.8	22.5	2.0
80	4.0	1.3	2.9	700	33.4	1.85	27.1	114.2	5.29	4.0	700	27.7	18.5	0.67	1.51	32.9	18.3	2.6
				900	34.5	1.83	28.3	105.5	5.54	3.7	900	28.6	20.7	0.73	1.58	34.0	18.0	2.7
	6.0	2.6	5.9	700	34.6	1.88	28.2	115.8	5.40	4.1	700	27.8	18.6	0.67	1.45	32.8	19.1	2.4
				900	35.8	1.85	29.5	106.8	5.68	3.8	900	28.7	20.7	0.72	1.52	33.9	18.9	2.6
	8.0	4.3	10.0	700	35.1	1.91	28.6	116.5	5.40	4.3	700	28.1	18.6	0.66	1.42	33.0	19.8	2.2
				900	36.3	1.87	30.0	107.4	5.70	3.9	900	29.0	20.8	0.72	1.49	34.1	19.4	2.5
90	4.0	1.2	2.8	700	36.0	1.95	29.3	117.6	5.40	4.5	700	25.6	17.5	0.68	1.68	31.4	15.2	3.2
				900	37.3	1.91	30.8	108.3	5.73	4.1	900	26.4	19.6	0.74	1.75	32.4	15.1	3.4
	6.0	2.5	5.7	700	37.3	1.98	30.6	119.4	5.52	4.6	700	25.8	17.5	0.68	1.62	31.3	15.9	3.0
				900	38.7	1.94	32.1	109.8	5.86	4.3	900	26.6	19.6	0.74	1.68	32.3	15.8	3.2
	8.0	4.2	9.6	700	37.8	2.01	31.0	120.0	5.51	4.8	700	26.0	17.6	0.68	1.58	31.4	16.4	2.8
				900	39.3	1.96	32.6	110.4	5.87	4.4	900	26.8	19.7	0.73	1.65	32.5	16.2	3.1
100	4.0	1.2	2.7	Operation not recommended							Operation not recommended							
	6.0	2.4	5.5								700	24.6	17.5	0.71	1.83	30.8	13.5	3.7
											900	25.4	19.6	0.77	1.89	31.8	13.4	4.0
	8.0	4.0	9.3								700	24.8	17.6	0.71	1.79	30.9	13.9	3.4
											900	25.6	19.7	0.77	1.85	31.9	13.8	3.8
110	4.0	1.1	2.6	Operation not recommended							Operation not recommended							
	6.0	2.3	5.3								700	21.0	16.5	0.79	2.04	27.9	10.3	4.5
											900	21.6	18.3	0.85	2.10	28.8	10.3	4.9
	8.0	3.9	8.9								700	21.1	16.5	0.78	2.00	27.9	10.6	4.2
											900	21.8	18.4	0.84	2.06	28.8	10.6	4.6
120	4.0	1.1	2.5								Operation not recommended							
	6.0	2.2	5.1								700	20.3	15.9	0.78	2.30	28.1	8.8	5.4
											900	20.9	17.7	0.85	2.36	28.9	8.9	5.8
	8.0	3.7	8.6								700	20.4	16.0	0.78	2.25	28.1	9.1	5.0
											900	21.1	17.7	0.84	2.30	29.0	9.2	5.6

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GS036 - Performance Data

Single Speed ECM2.3 (1250 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	5.0	1.0	2.4	Operation not recommended							Operation not recommended							
	7.0	2.1	4.9															
	9.0	3.6	8.2	1050	20.7	1.82	14.4	88.2	3.32	2.6								
				1250	21.0	1.86	14.7	85.6	3.31	2.4								
30	5.0	1.0	2.3	Operation not recommended							Operation not recommended							
	7.0	2.1	4.7	1050	23.2	1.83	17.0	90.5	3.72	2.8	1050	29.7	19.2	0.65	1.07	33.3	27.8	-
				1250	23.7	1.87	17.3	87.6	3.72	2.6	1250	30.5	21.5	0.70	1.16	34.5	26.4	-
	9.0	3.5	8.0	1050	23.8	1.85	17.5	91.0	3.77	2.9	1050	29.9	19.1	0.64	1.05	33.5	28.6	-
				1250	24.2	1.89	17.8	87.9	3.76	2.7	1250	31.0	21.4	0.69	1.11	34.8	27.8	-
40	5.0	1.0	2.3	Operation not recommended							Operation not recommended							
	7.0	2.0	4.6	1050	26.9	1.88	20.5	93.8	4.19	3.2	1050	32.5	21.3	0.66	1.17	36.5	27.8	-
				1250	27.6	1.91	21.1	90.4	4.23	2.9	1250	33.5	23.9	0.71	1.26	37.8	26.7	-
	9.0	3.4	7.8	1050	27.6	1.91	21.1	94.3	4.24	3.3	1050	32.8	21.3	0.65	1.15	36.7	28.6	-
				1250	28.2	1.93	21.6	90.9	4.28	3.0	1250	33.9	23.9	0.70	1.22	38.1	27.9	-
50	5.0	1.0	2.2	1050	29.3	1.93	22.8	95.9	4.46	3.4	1050	35.1	23.0	0.66	1.35	39.6	26.0	1.7
				1250	30.0	1.94	23.4	92.2	4.52	3.2	1250	36.1	25.9	0.72	1.43	41.0	25.2	1.8
	7.0	1.9	4.5	1050	30.3	1.93	23.7	96.7	4.59	3.5	1050	35.1	23.2	0.66	1.30	39.6	27.1	1.6
				1250	31.1	1.95	24.4	93.0	4.66	3.3	1250	36.2	26.0	0.72	1.38	40.9	26.2	1.7
	9.0	3.3	7.5	1050	31.0	1.96	24.3	97.3	4.63	3.7	1050	35.5	23.2	0.65	1.27	39.8	28.0	1.4
				1250	31.7	1.97	25.0	93.5	4.72	3.3	1250	36.6	26.0	0.71	1.35	41.2	27.2	1.6
60	5.0	0.9	2.1	1050	32.8	1.98	26.1	99.0	4.86	3.9	1050	34.8	23.6	0.68	1.47	39.8	23.7	2.0
				1250	33.7	1.98	26.9	95.0	4.98	3.6	1250	35.8	26.5	0.74	1.56	41.1	23.0	2.1
	7.0	1.9	4.3	1050	33.9	2.00	27.1	99.9	4.97	4.0	1050	34.9	23.7	0.68	1.41	39.7	24.6	1.9
				1250	34.9	2.00	28.1	95.9	5.12	3.7	1250	35.9	26.6	0.74	1.50	41.0	24.0	2.0
	9.0	3.1	7.3	1050	34.6	2.03	27.7	100.5	5.01	4.1	1050	35.2	23.7	0.67	1.39	40.0	25.4	1.7
				1250	35.6	2.02	28.7	96.4	5.17	3.8	1250	36.3	26.6	0.73	1.46	41.3	24.8	1.9
70	5.0	0.9	2.1	1050	36.6	2.04	29.6	102.2	5.24	4.3	1050	35.3	24.5	0.69	1.63	40.8	21.7	2.5
				1250	37.6	2.03	30.7	97.9	5.42	4.0	1250	36.3	27.5	0.76	1.72	42.2	21.1	2.6
	7.0	1.8	4.2	1050	37.8	2.08	30.7	103.3	5.34	4.5	1050	35.4	24.6	0.70	1.57	40.7	22.5	2.3
				1250	38.9	2.05	32.0	98.9	5.57	4.1	1250	36.4	27.5	0.76	1.65	42.1	22.0	2.5
	9.0	3.0	7.0	1050	38.5	2.10	31.3	103.9	5.37	4.6	1050	35.8	24.6	0.69	1.54	41.0	23.3	2.1
				1250	39.6	2.08	32.5	99.3	5.59	4.2	1250	36.8	27.6	0.75	1.62	42.4	22.7	2.4
80	5.0	0.9	2.0	1050	39.5	2.10	32.3	104.8	5.50	4.9	1050	34.4	24.4	0.71	1.81	40.6	19.0	3.1
				1250	40.8	2.07	33.7	100.2	5.76	4.5	1250	35.5	27.4	0.77	1.89	41.9	18.7	3.3
	7.0	1.7	4.0	1050	40.9	2.14	33.6	106.1	5.61	5.0	1050	34.6	24.5	0.71	1.74	40.5	19.9	2.9
				1250	42.3	2.10	35.1	101.3	5.90	4.6	1250	35.6	27.4	0.77	1.82	41.8	19.6	3.1
	9.0	2.9	6.8	1050	41.5	2.17	34.1	106.6	5.62	5.2	1050	34.9	24.5	0.70	1.70	40.7	20.5	2.7
				1250	43.0	2.12	35.7	101.8	5.93	4.8	1250	36.0	27.5	0.76	1.79	42.1	20.1	3.0
90	5.0	0.8	1.9	1050	42.6	2.17	35.2	107.6	5.75	5.4	1050	32.2	23.8	0.74	2.00	39.1	16.1	3.8
				1250	44.1	2.12	36.9	102.7	6.09	5.0	1250	33.3	26.6	0.80	2.08	40.4	16.0	4.1
	7.0	1.7	3.9	1050	44.2	2.21	36.7	109.0	5.88	5.6	1050	32.4	23.8	0.73	1.92	39.0	16.9	3.6
				1250	45.8	2.16	38.5	104.0	6.23	5.2	1250	33.5	26.6	0.79	2.00	40.3	16.8	3.9
	9.0	2.8	6.6	1050	44.8	2.24	37.2	109.5	5.87	5.8	1050	32.8	23.9	0.73	1.88	39.2	17.4	3.3
				1250	46.5	2.18	39.1	104.5	6.25	5.4	1250	33.8	26.7	0.79	1.96	40.5	17.2	3.7
100	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	7.0	1.6	3.8								1050	31.6	23.6	0.75	2.15	38.9	14.7	4.4
											1250	32.5	26.3	0.81	2.23	40.1	14.6	4.8
	9.0	2.7	6.3								1050	31.8	23.7	0.75	2.11	39.0	15.1	4.1
											1250	32.8	26.4	0.81	2.18	40.3	15.0	4.6
110	5.0	0.8	1.8								Operation not recommended							
	7.0	1.6	3.6	Operation not recommended							1050	28.4	22.0	0.77	2.38	36.6	11.9	5.4
											1250	29.3	24.5	0.84	2.45	37.7	11.9	5.8
	9.0	2.6	6.1								1050	28.7	22.1	0.77	2.33	36.6	12.3	5.0
											1250	29.6	24.6	0.83	2.40	37.8	12.3	5.6
120	5.0	0.7	1.7								Operation not recommended							
	7.0	1.5	3.5								1050	26.7	21.7	0.81	2.67	35.8	10.0	6.5
											1250	27.5	24.1	0.88	2.73	36.8	10.1	7.0
	9.0	2.5	5.8								1050	26.8	21.8	0.81	2.61	35.7	10.3	6.0
											1250	27.8	24.2	0.87	2.67	36.9	10.4	6.7

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GS042 - Performance Data

Single Speed ECM2.3 (1350 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	5.0	0.8	1.9	Operation not recommended							Operation not recommended							
	8.0	2.3	5.3															
	11.0	4.4	10.3	1150	24.0	2.19	16.6	89.3	3.22	4.1								
				1350	24.3	2.17	16.9	86.7	3.29	3.7								
30	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	8.0	2.2	5.1	1150	27.9	2.22	20.3	92.5	3.68	4.3	1150	39.9	24.8	0.62	1.40	44.6	28.5	-
				1350	28.3	2.20	20.7	89.4	3.76	3.9	1350	41.7	27.8	0.67	1.48	46.8	28.2	-
	11.0	4.3	10.0	1150	28.3	2.23	20.7	92.8	3.73	4.4	1150	40.3	24.8	0.62	1.36	44.9	29.7	-
				1350	28.7	2.20	21.1	89.7	3.81	4.0	1350	42.2	27.8	0.66	1.44	47.1	29.4	-
40	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	8.0	2.1	4.9	1150	31.8	2.32	23.9	95.6	4.02	4.7	1150	41.6	26.4	0.64	1.49	46.6	27.9	-
				1350	32.3	2.28	24.5	92.1	4.15	4.3	1350	43.4	29.7	0.68	1.57	48.8	27.6	-
	11.0	4.2	9.7	1150	32.4	2.33	24.4	96.1	4.08	4.9	1150	42.0	26.4	0.63	1.44	46.9	29.1	-
				1350	32.9	2.28	25.1	92.5	4.22	4.4	1350	43.8	29.7	0.68	1.52	49.0	28.8	-
50	5.0	0.7	1.7	1150	34.2	2.33	26.3	97.5	4.31	5.1	1150	42.3	27.3	0.65	1.68	48.0	25.1	2.4
				1350	34.8	2.28	27.0	93.8	4.47	4.7	1350	44.0	30.7	0.70	1.77	50.1	24.8	2.6
	8.0	2.1	4.8	1150	35.6	2.38	27.5	98.7	4.38	5.3	1150	42.7	27.6	0.65	1.61	48.2	26.6	2.3
				1350	36.2	2.33	28.3	94.8	4.56	4.8	1350	44.5	31.0	0.70	1.69	50.3	26.3	2.5
	11.0	4.1	9.4	1150	36.3	2.40	28.1	99.3	4.44	5.4	1150	43.1	27.6	0.64	1.56	48.5	27.7	2.1
				1350	37.0	2.34	29.0	95.4	4.63	5.0	1350	44.9	31.0	0.69	1.64	50.5	27.4	2.4
60	5.0	0.7	1.7	1150	37.5	2.40	29.3	100.2	4.59	5.7	1150	42.1	28.0	0.66	1.85	48.5	22.7	3.0
				1350	38.3	2.33	30.3	96.2	4.81	5.3	1350	43.8	31.5	0.72	1.94	50.4	22.5	3.2
	8.0	2.0	4.6	1150	39.2	2.47	30.8	101.6	4.66	5.9	1150	42.7	28.3	0.66	1.76	48.7	24.2	2.8
				1350	40.0	2.39	31.9	97.4	4.90	5.4	1350	44.3	31.8	0.72	1.85	50.6	24.0	3.0
	11.0	3.9	9.1	1150	40.1	2.49	31.6	102.3	4.72	6.1	1150	43.1	28.3	0.66	1.71	48.9	25.2	2.6
				1350	41.0	2.41	32.8	98.1	4.98	5.6	1350	44.8	31.8	0.71	1.80	50.9	24.9	2.9
70	5.0	0.7	1.6	1150	40.7	2.47	32.3	102.8	4.82	6.4	1150	42.3	28.9	0.68	2.05	49.3	20.6	3.7
				1350	41.6	2.39	33.5	98.6	5.10	6.0	1350	43.8	32.5	0.74	2.14	51.1	20.4	4.0
	8.0	1.9	4.5	1150	42.7	2.56	33.9	104.4	4.88	6.6	1150	42.9	29.2	0.68	1.94	49.6	22.1	3.5
				1350	43.7	2.47	35.3	100.0	5.19	6.1	1350	44.5	32.8	0.74	2.04	51.4	21.9	3.8
	11.0	3.8	8.8	1150	43.8	2.59	34.9	105.2	4.95	6.8	1150	43.4	29.2	0.67	1.89	49.8	23.0	3.2
				1350	44.9	2.49	36.4	100.8	5.28	6.3	1350	45.0	32.8	0.73	1.98	51.7	22.7	3.6
80	5.0	0.7	1.6	1150	43.7	2.51	35.2	105.2	5.10	7.2	1150	40.7	28.2	0.69	2.28	48.5	17.9	4.7
				1350	44.9	2.41	36.7	100.8	5.45	6.7	1350	42.1	31.7	0.75	2.38	50.2	17.7	5.0
	8.0	1.9	4.3	1150	46.0	2.62	37.1	107.0	5.15	7.5	1150	41.4	28.5	0.69	2.16	48.8	19.2	4.4
				1350	47.3	2.50	38.8	102.4	5.54	6.9	1350	42.8	32.1	0.75	2.25	50.5	19.0	4.8
	11.0	3.7	8.5	1150	47.3	2.65	38.3	108.1	5.23	7.7	1150	41.9	28.5	0.68	2.10	49.0	20.0	4.1
				1350	48.7	2.53	40.1	103.4	5.64	7.1	1350	43.3	32.1	0.74	2.19	50.7	19.8	4.6
90	5.0	0.7	1.5	1150	46.7	2.56	37.9	107.6	5.34	8.1	1150	38.5	27.4	0.71	2.55	47.2	15.1	5.9
				1350	48.0	2.44	39.7	102.9	5.76	7.5	1350	39.7	30.8	0.78	2.65	48.8	15.0	6.3
	8.0	1.8	4.2	1150	49.2	2.68	40.1	109.6	5.38	8.4	1150	39.3	27.7	0.70	2.41	47.5	16.3	5.5
				1350	50.8	2.55	42.1	104.8	5.85	7.8	1350	40.6	31.1	0.77	2.51	49.1	16.2	6.0
	11.0	3.5	8.2	1150	50.8	2.73	41.5	110.9	5.46	8.6	1150	39.7	27.7	0.70	2.34	47.7	17.0	5.1
				1350	52.4	2.58	43.6	106.0	5.95	8.0	1350	41.0	31.1	0.76	2.43	49.3	16.8	5.7
100	5.0	0.6	1.5	Operation not recommended							Operation not recommended							
	8.0	1.7	4.0								1150	37.9	27.2	0.72	2.68	47.0	14.1	6.9
											1350	38.9	30.5	0.78	2.79	48.4	14.0	7.5
	11.0	3.4	7.9								1150	38.2	27.2	0.71	2.60	47.1	14.7	6.4
											1350	39.3	30.5	0.78	2.70	48.6	14.5	7.1
110	5.0	0.6	1.4	Operation not recommended							Operation not recommended							
	8.0	1.7	3.9								1150	34.5	25.1	0.73	2.99	44.7	11.5	8.4
											1350	35.4	28.2	0.80	3.10	46.0	11.4	9.1
	11.0	3.3	7.6								1150	34.9	25.1	0.72	2.90	44.8	12.0	7.8
											1350	35.8	28.2	0.79	3.01	46.0	11.9	8.7
120	5.0	0.6	1.3	Operation not recommended							Operation not recommended							
	8.0	1.6	3.7								1150	32.5	24.8	0.76	3.33	43.9	9.8	10.2
											1350	33.3	27.9	0.84	3.44	45.0	9.7	11.0
	11.0	3.2	7.3								1150	32.9	24.8	0.76	3.23	43.9	10.2	9.5
											1350	33.6	27.9	0.83	3.34	45.0	10.1	10.5

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GS048 - Performance Data

Single Speed ECM2.3 (1500 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	6.0	1.1	2.6	Operation not recommended							Operation not recommended							
	9.0	2.3	5.4															
	12.0	4.0	9.2	1300	31.6	2.84	21.9	92.5	3.26	5.3								
				1500	32.0	2.82	22.4	89.7	3.33	4.8								
30	6.0	1.1	2.5	Operation not recommended							Operation not recommended							
	9.0	2.3	5.3	1300	36.3	2.92	26.3	95.8	3.64	5.6	1300	47.5	29.7	0.63	1.61	53.0	29.5	-
				1500	36.7	2.90	26.8	92.6	3.71	5.2	1500	49.7	33.4	0.67	1.71	55.6	29.2	-
	12.0	3.9	9.0	1300	36.8	2.93	26.8	96.2	3.68	5.8	1300	48.0	29.7	0.62	1.57	53.3	30.7	-
				1500	37.2	2.90	27.3	93.0	3.76	5.3	1500	50.3	33.4	0.66	1.66	55.9	30.3	-
40	6.0	1.1	2.5	Operation not recommended							Operation not recommended							
	9.0	2.2	5.1	1300	41.7	3.05	31.3	99.7	4.00	6.2	1300	49.4	31.4	0.64	1.77	55.4	27.9	-
				1500	42.2	3.00	32.0	96.1	4.13	5.7	1500	51.6	35.3	0.68	1.87	57.9	27.6	-
	12.0	3.8	8.7	1300	42.4	3.06	31.9	100.2	4.06	6.4	1300	49.9	31.4	0.63	1.72	55.7	29.0	-
				1500	43.0	3.01	32.7	96.5	4.19	5.8	1500	52.1	35.3	0.68	1.81	58.3	28.7	-
50	6.0	1.0	2.4	1300	44.7	3.09	34.1	101.8	4.24	6.7	1300	50.4	32.6	0.65	2.06	57.5	24.5	2.8
				1500	45.4	3.02	35.1	98.0	4.40	6.2	1500	52.5	36.6	0.70	2.17	59.9	24.2	3.0
	9.0	2.1	4.9	1300	46.5	3.16	35.7	103.1	4.32	6.9	1300	51.0	32.9	0.65	1.97	57.7	25.9	2.6
				1500	47.3	3.08	36.7	99.2	4.49	6.4	1500	53.1	37.0	0.70	2.07	60.1	25.7	2.9
	12.0	3.7	8.4	1300	47.4	3.18	36.6	103.8	4.37	7.2	1300	51.5	32.9	0.64	1.91	58.0	27.0	2.5
				1500	48.2	3.10	37.7	99.8	4.56	6.5	1500	53.6	37.0	0.69	2.01	60.5	26.7	2.7
60	6.0	1.0	2.3	1300	49.1	3.18	38.2	105.0	4.52	7.6	1300	49.2	32.2	0.65	2.29	57.0	21.5	3.5
				1500	50.0	3.10	39.5	100.9	4.74	7.0	1500	51.2	36.2	0.71	2.40	59.3	21.3	3.7
	9.0	2.1	4.8	1300	51.3	3.28	40.1	106.5	4.59	7.8	1300	49.9	32.5	0.65	2.18	57.3	22.9	3.2
				1500	52.3	3.18	41.5	102.3	4.83	7.2	1500	51.8	36.6	0.71	2.28	59.6	22.7	3.5
	12.0	3.5	8.2	1300	52.5	3.31	41.2	107.4	4.65	8.0	1300	50.4	32.5	0.65	2.11	57.6	23.8	3.0
				1500	53.6	3.20	42.7	103.1	4.91	7.4	1500	52.3	36.6	0.70	2.22	59.9	23.6	3.3
70	6.0	1.0	2.2	1300	53.6	3.29	42.4	108.2	4.78	8.5	1300	49.0	32.6	0.66	2.56	57.8	19.1	4.3
				1500	54.7	3.17	43.9	103.8	5.05	7.9	1500	50.8	36.6	0.72	2.68	59.9	18.9	4.6
	9.0	2.0	4.6	1300	56.1	3.40	44.5	110.0	4.84	8.8	1300	49.8	32.9	0.66	2.43	58.1	20.5	4.1
				1500	57.4	3.27	46.3	105.5	5.14	8.1	1500	51.6	37.0	0.72	2.55	60.3	20.3	4.4
	12.0	3.4	7.9	1300	57.6	3.44	45.8	111.0	4.91	9.0	1300	50.3	32.9	0.65	2.36	58.3	21.3	3.8
				1500	59.0	3.31	47.7	106.4	5.22	8.3	1500	52.1	37.0	0.71	2.47	60.5	21.1	4.2
80	6.0	0.9	2.1	1300	57.1	3.37	45.6	110.7	4.97	9.6	1300	47.0	31.9	0.68	2.87	56.8	16.4	5.5
				1500	58.6	3.23	47.5	106.2	5.32	8.8	1500	48.6	35.8	0.74	3.00	58.8	16.2	5.8
	9.0	1.9	4.5	1300	60.1	3.50	48.1	112.8	5.03	9.8	1300	47.8	32.2	0.67	2.72	57.1	17.6	5.1
				1500	61.7	3.35	50.3	108.1	5.40	9.1	1500	49.4	36.2	0.73	2.84	59.1	17.4	5.5
	12.0	3.3	7.6	1300	61.8	3.55	49.7	114.0	5.10	10.1	1300	48.3	32.2	0.67	2.64	57.3	18.3	4.8
				1500	63.5	3.39	51.9	109.2	5.49	9.4	1500	49.9	36.2	0.72	2.75	59.3	18.1	5.3
90	6.0	0.9	2.1	1300	60.7	3.45	48.9	113.2	5.16	10.7	1300	43.8	30.4	0.69	3.21	54.8	13.7	6.9
				1500	62.4	3.29	51.2	108.5	5.56	9.9	1500	45.2	34.1	0.76	3.34	56.6	13.5	7.3
	9.0	1.9	4.3	1300	64.1	3.61	51.7	115.6	5.20	11.1	1300	44.7	30.7	0.69	3.03	55.1	14.8	6.4
				1500	66.0	3.43	54.3	110.7	5.64	10.2	1500	46.1	34.5	0.75	3.16	56.9	14.6	7.0
	12.0	3.2	7.4	1300	66.1	3.67	53.5	117.0	5.27	11.4	1300	45.2	30.7	0.68	2.94	55.2	15.4	6.0
				1500	68.1	3.48	56.2	112.0	5.74	10.6	1500	46.6	34.5	0.74	3.06	57.0	15.2	6.6
100	6.0	0.9	2.0	Operation not recommended							Operation not recommended							
	9.0	1.8	4.2								1300	43.2	30.3	0.70	3.40	54.8	12.7	8.0
											1500	44.4	34.0	0.77	3.53	56.5	12.6	8.6
	12.0	3.1	7.1								1300	43.6	30.3	0.69	3.30	54.9	13.2	7.4
											1500	44.9	34.0	0.76	3.42	56.6	13.1	8.2
110	6.0	0.8	1.9	Operation not recommended							Operation not recommended							
	9.0	1.7	4.0								1300	39.1	28.1	0.72	3.78	52.0	10.3	9.8
											1500	40.1	31.6	0.79	3.92	53.4	10.2	10.6
	12.0	3.0	6.8								1300	39.5	28.1	0.71	3.67	52.0	10.8	9.1
											1500	40.5	31.6	0.78	3.80	53.5	10.6	10.1
120	6.0	0.8	1.8								Operation not recommended							
	9.0	1.7	3.8								1300	37.0	27.6	0.74	4.22	51.4	8.8	11.8
											1500	37.9	31.0	0.82	4.36	52.7	8.7	12.8
	12.0	2.8	6.6								1300	37.4	27.6	0.74	4.09	51.3	9.1	11.0
											1500	38.2	31.0	0.81	4.23	52.7	9.0	12.2

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GS060 - Performance Data

Single Speed ECM2.3 (2000 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	FT	Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	9.0	2.5	5.7	Operation not recommended							Operation not recommended							
	12.0	4.0	9.2															
	15.0	5.9	13.5	1500	37.7	3.65	25.2	93.3	3.03	6.4								
				2000	38.4	3.71	25.8	87.8	3.03	5.8								
30	9.0	2.4	5.5	Operation not recommended							Operation not recommended							
	12.0	3.9	8.9	1500	42.5	3.65	30.0	96.2	3.41	6.8	1500	72.0	45.8	0.64	2.15	79.3	33.5	-
				2000	43.3	3.71	30.7	90.1	3.42	6.2	2000	69.7	47.2	0.68	2.60	78.5	26.8	-
	15.0	5.7	13.1	1500	43.8	3.74	31.0	97.0	3.43	7.0	1500	72.7	46.0	0.63	2.15	80.0	33.8	-
				2000	44.7	3.81	31.7	90.7	3.44	6.3	2000	70.8	46.7	0.66	2.43	79.1	29.1	-
40	9.0	2.3	5.3	Operation not recommended							Operation not recommended							
	12.0	3.7	8.7	1500	50.1	3.80	37.1	100.9	3.86	7.5	1500	71.8	46.4	0.65	2.39	79.9	30.1	-
				2000	51.3	3.88	38.0	93.7	3.87	6.9	2000	71.1	48.4	0.68	2.79	80.6	25.5	-
	15.0	5.5	12.7	1500	51.5	3.89	38.2	101.8	3.88	7.7	1500	72.5	46.6	0.64	2.38	80.6	30.5	-
				2000	52.5	3.95	39.0	94.3	3.89	7.0	2000	71.9	48.2	0.67	2.64	81.0	27.2	-
50	9.0	2.2	5.2	1500	55.9	3.95	42.5	104.5	4.15	8.1	1500	72.0	47.3	0.66	2.80	81.5	25.7	3.8
				2000	56.5	3.99	42.9	96.2	4.15	7.5	2000	72.2	49.1	0.68	3.13	82.9	23.1	4.0
	12.0	3.6	8.4	1500	56.5	3.94	43.1	104.9	4.21	8.3	1500	72.1	47.4	0.66	2.70	81.3	26.7	3.5
				2000	58.0	4.03	44.2	96.8	4.21	7.7	2000	72.2	49.6	0.69	3.07	82.7	23.5	3.8
	15.0	5.3	12.3	1500	57.9	4.02	44.2	105.8	4.23	8.6	1500	72.9	47.7	0.65	2.68	82.0	27.2	3.3
				2000	59.0	4.07	45.1	97.3	4.25	7.9	2000	73.0	49.6	0.68	2.93	82.9	24.9	3.7
60	9.0	2.2	5.0	1500	61.8	4.08	47.9	108.2	4.44	9.1	1500	68.3	45.2	0.66	3.03	78.7	22.6	4.6
				2000	62.8	4.11	48.8	99.1	4.48	8.4	2000	69.9	48.0	0.69	3.32	81.2	21.1	4.9
	12.0	3.5	8.1	1500	63.3	4.10	49.3	109.1	4.53	9.4	1500	68.5	45.4	0.66	2.92	78.5	23.5	4.3
				2000	64.2	4.15	50.0	99.7	4.53	8.6	2000	70.2	48.2	0.69	3.22	81.2	21.8	4.7
	15.0	5.2	11.9	1500	64.7	4.17	50.5	109.9	4.55	9.6	1500	69.2	45.7	0.66	2.89	79.1	24.0	4.0
				2000	66.0	4.22	51.6	100.6	4.59	8.8	2000	70.6	48.5	0.69	3.10	81.2	22.8	4.4
70	9.0	2.1	4.9	1500	67.9	4.23	53.5	111.9	4.71	10.2	1500	65.7	44.2	0.67	3.40	77.3	19.3	5.8
				2000	69.3	4.25	54.8	102.1	4.78	9.4	2000	68.6	48.0	0.70	3.66	81.1	18.8	6.2
	12.0	3.4	7.9	1500	70.3	4.27	55.7	113.4	4.83	10.5	1500	66.0	44.5	0.67	3.27	77.2	20.2	5.4
				2000	70.6	4.29	56.0	102.7	4.82	9.7	2000	69.3	48.0	0.69	3.52	81.3	19.7	5.9
	15.0	5.0	11.6	1500	71.7	4.33	56.9	114.2	4.84	10.8	1500	66.7	44.8	0.67	3.23	77.7	20.6	5.0
				2000	73.3	4.38	58.3	103.9	4.90	10.0	2000	69.3	48.5	0.70	3.42	81.0	20.3	5.6
80	9.0	2.0	4.7	1500	72.6	4.34	57.7	114.8	4.90	11.5	1500	63.9	43.6	0.68	3.79	76.8	16.9	7.3
				2000	73.9	4.35	59.0	104.2	4.98	10.6	2000	65.6	46.7	0.71	4.04	79.4	16.2	7.8
	12.0	3.3	7.6	1500	75.8	4.42	60.7	116.8	5.03	11.8	1500	64.3	44.0	0.68	3.64	76.7	17.7	6.8
				2000	76.5	4.37	61.6	105.4	5.13	10.9	2000	66.3	46.7	0.70	3.85	79.4	17.2	7.4
	15.0	4.8	11.2	1500	77.0	4.47	61.8	117.6	5.05	12.2	1500	64.9	44.4	0.68	3.58	77.2	18.1	6.4
				2000	78.6	4.51	63.2	106.4	5.11	11.3	2000	66.6	47.1	0.71	3.74	79.3	17.8	7.1
90	9.0	2.0	4.5	1500	77.4	4.47	62.2	117.8	5.07	12.9	1500	60.7	42.3	0.70	4.18	75.0	14.5	9.2
				2000	78.7	4.47	63.4	106.4	5.16	11.9	2000	61.2	44.5	0.73	4.42	76.3	13.8	9.8
	12.0	3.2	7.3	1500	81.5	4.58	65.9	120.3	5.22	13.3	1500	61.2	42.7	0.70	4.01	74.9	15.3	8.6
				2000	82.5	4.47	67.3	108.2	5.41	12.3	2000	61.8	44.5	0.72	4.18	76.0	14.8	9.3
	15.0	4.7	10.8	1500	82.6	4.63	66.9	121.0	5.24	13.7	1500	61.8	43.1	0.70	3.94	75.2	15.7	8.0
				2000	84.1	4.65	68.2	108.9	5.30	12.7	2000	62.4	44.9	0.72	4.06	76.3	15.4	8.9
100	9.0	1.9	4.4	Operation not recommended							Operation not recommended							
	12.0	3.1	7.1								1500	58.7	42.0	0.71	4.57	74.3	12.9	10.7
											2000	59.3	43.7	0.74	4.68	75.3	12.7	11.6
	15.0	4.5	10.4								1500	59.3	42.4	0.72	4.47	74.5	13.3	9.9
											2000	59.9	44.2	0.74	4.55	75.4	13.2	11.0
110	9.0	1.8	4.2	Operation not recommended							Operation not recommended							
	12.0	2.9	6.8								1500	53.7	39.0	0.73	5.06	71.0	10.6	13.1
											2000	54.3	40.6	0.75	5.11	71.7	10.6	14.2
	15.0	4.3	10.0								1500	54.3	39.5	0.73	4.93	71.1	11.0	12.1
											2000	54.8	41.1	0.75	4.98	71.8	11.0	13.5
120	9.0	1.7	4.0	Operation not recommended							Operation not recommended							
	12.0	2.8	6.5								1500	51.7	39.6	0.77	5.75	71.3	9.0	15.8
											2000	50.7	40.3	0.80	5.77	70.3	8.8	17.1
	15.0	4.2	9.6								1500	52.2	40.2	0.77	5.59	71.3	9.3	14.7
											2000	51.5	40.7	0.79	5.60	70.6	9.2	16.3

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GS070 - Performance Data

Single Speed ECM2.3 (2200 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	12.0	3.0	7.0	Operation not recommended							Operation not recommended							
	15.0	4.4	10.2															
	18.0	6.0	13.9	1700	44.7	4.37	29.8	94.3	3.00	7.7								
				2200	45.7	4.46	30.5	89.2	3.01	6.9								
30	12.0	3.0	6.8	Operation not recommended							Operation not recommended							
	15.0	4.3	9.9	1700	51.5	4.47	36.2	98.0	3.38	8.1	1700	68.9	43.1	0.63	2.41	77.1	28.6	-
				2200	52.7	4.57	37.2	92.2	3.38	7.4	2200	73.4	49.3	0.67	2.81	83.0	26.2	-
	18.0	5.8	13.5	1700	51.7	4.49	36.4	98.2	3.38	8.4	1700	69.3	42.6	0.62	2.40	77.5	28.9	-
				2200	52.9	4.58	37.3	92.3	3.39	7.6	2200	73.8	48.7	0.66	2.80	83.4	26.4	-
40	12.0	2.9	6.6	Operation not recommended							Operation not recommended							
	15.0	4.1	9.6	1700	60.1	4.66	44.2	102.7	3.78	8.9	1700	72.7	45.8	0.63	2.64	81.7	27.5	-
				2200	61.5	4.72	45.5	95.9	3.82	8.2	2200	77.1	52.4	0.68	3.05	87.5	25.3	-
	18.0	5.7	13.1	1700	60.5	4.69	44.5	102.9	3.78	9.2	1700	73.2	45.6	0.62	2.63	82.2	27.9	-
				2200	62.0	4.74	45.8	96.1	3.83	8.4	2200	77.7	52.2	0.67	3.03	88.1	25.7	-
50	12.0	2.8	6.4	1700	66.2	4.81	49.8	106.1	4.04	9.7	1700	76.2	48.1	0.63	3.03	86.5	25.1	4.2
				2200	67.9	4.83	51.4	98.6	4.12	8.9	2200	80.5	55.0	0.68	3.45	92.3	23.3	4.5
	15.0	4.0	9.3	1700	67.6	4.85	51.0	106.8	4.08	10.0	1700	76.6	48.4	0.63	2.94	86.6	26.0	3.9
				2200	69.2	4.86	52.7	99.1	4.17	9.2	2200	80.9	55.3	0.68	3.35	92.4	24.2	4.3
	18.0	5.5	12.7	1700	68.2	4.89	51.5	107.1	4.09	10.3	1700	77.3	48.6	0.63	2.91	87.3	26.6	3.7
				2200	69.9	4.89	53.2	99.4	4.19	9.4	2200	81.8	55.6	0.68	3.32	93.1	24.7	4.1
60	12.0	2.7	6.2	1700	73.4	5.00	56.4	110.0	4.30	10.8	1700	73.3	46.6	0.64	3.33	84.6	22.0	5.2
				2200	75.3	4.97	58.3	101.7	4.44	10.0	2200	77.2	53.3	0.69	3.75	89.9	20.6	5.5
	15.0	3.9	9.0	1700	75.5	5.07	58.3	111.1	4.37	11.2	1700	73.6	46.7	0.63	3.24	84.6	22.7	4.8
				2200	77.5	5.03	60.3	102.6	4.52	10.3	2200	77.5	53.5	0.69	3.64	89.9	21.3	5.2
	18.0	5.3	12.3	1700	76.4	5.11	59.0	111.6	4.38	11.5	1700	74.5	47.4	0.64	3.19	85.4	23.3	4.5
				2200	78.4	5.06	61.2	103.0	4.54	10.6	2200	78.5	54.2	0.69	3.59	90.7	21.8	5.0
70	12.0	2.6	6.0	1700	81.0	5.21	63.2	114.1	4.56	12.2	1700	73.0	47.2	0.65	3.72	85.7	19.7	6.5
				2200	83.1	5.13	65.6	105.0	4.75	11.3	2200	76.6	54.1	0.71	4.14	90.7	18.5	6.9
	15.0	3.8	8.7	1700	83.9	5.30	65.8	115.7	4.64	12.6	1700	73.3	47.3	0.65	3.61	85.6	20.3	6.0
				2200	86.2	5.21	68.4	106.3	4.85	11.6	2200	76.9	54.2	0.70	4.02	90.6	19.1	6.5
	18.0	5.1	11.9	1700	85.1	5.35	66.8	116.3	4.66	13.0	1700	74.4	48.4	0.65	3.55	86.5	21.0	5.6
				2200	87.4	5.25	69.5	106.8	4.88	11.9	2200	78.0	55.4	0.71	3.95	91.5	19.7	6.2
80	12.0	2.5	5.8	1700	86.5	5.40	68.0	117.1	4.69	13.7	1700	70.0	45.2	0.65	4.15	84.2	16.9	8.2
				2200	88.9	5.27	70.9	107.4	4.94	12.7	2200	73.2	51.8	0.71	4.56	88.7	16.1	8.7
	15.0	3.6	8.4	1700	90.4	5.52	71.6	119.2	4.80	14.1	1700	70.3	45.2	0.64	4.03	84.0	17.4	7.6
				2200	93.0	5.38	74.6	109.1	5.07	13.1	2200	73.4	51.8	0.71	4.43	88.5	16.6	8.3
	18.0	5.0	11.5	1700	91.8	5.58	72.8	120.0	4.82	14.6	1700	71.5	46.6	0.65	3.95	85.0	18.1	7.1
				2200	94.6	5.42	76.1	109.8	5.11	13.5	2200	74.7	53.4	0.72	4.34	89.5	17.2	7.9
90	12.0	2.4	5.6	1700	92.4	5.62	73.2	120.3	4.82	15.4	1700	64.3	42.0	0.65	4.60	80.0	14.0	10.3
				2200	95.1	5.43	76.5	110.0	5.13	14.3	2200	66.9	48.1	0.72	5.01	84.0	13.4	10.9
	15.0	3.5	8.1	1700	97.3	5.76	77.6	123.0	4.95	15.9	1700	64.5	41.9	0.65	4.48	79.8	14.4	9.6
				2200	100.2	5.56	81.2	112.2	5.28	14.7	2200	67.1	48.0	0.72	4.88	83.7	13.8	10.4
	18.0	4.8	11.1	1700	99.0	5.83	79.1	123.9	4.98	16.4	1700	65.8	43.6	0.66	4.38	80.7	15.0	8.9
				2200	102.2	5.61	83.0	113.0	5.34	15.2	2200	68.4	49.9	0.73	4.76	84.7	14.4	9.9
100	12.0	2.3	5.4	Operation not recommended							Operation not recommended							
	15.0	3.4	7.8								1700	62.6	41.4	0.66	5.05	79.8	12.4	11.9
											2200	64.9	47.4	0.73	5.43	83.4	12.0	12.9
	18.0	4.6	10.7								1700	64.0	43.4	0.68	4.91	80.8	13.0	11.0
											2200	66.3	49.8	0.75	5.28	84.3	12.6	12.2
110	12.0	2.2	5.2								Operation not recommended							
	15.0	3.3	7.5	Operation not recommended							1700	55.5	36.7	0.66	5.62	74.7	9.9	14.6
											2200	57.3	42.2	0.74	5.98	77.7	9.6	15.8
	18.0	4.4	10.2								1700	56.9	38.9	0.68	5.45	75.5	10.4	13.5
											2200	58.7	44.6	0.76	5.80	78.5	10.1	15.0
120	12.0	2.2	5.0								Operation not recommended							
	15.0	3.1	7.2								1700	52.7	37.2	0.71	6.31	74.3	8.4	17.6
											2200	54.2	42.7	0.79	6.65	76.9	8.2	19.1
	18.0	4.3	9.8								1700	54.2	39.8	0.73	6.10	75.0	8.9	16.3
											2200	55.7	45.6	0.82	6.43	77.6	8.7	18.1

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT026 - Performance Data

Dual Capacity ECM2.3 Low Speed (700 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	3.0	0.8	1.9	Operation not recommended							Operation not recommended							
	5.0	2.0	4.7															
	7.0	3.7	8.7	500	11.6	1.05	8.0	91.5	3.23	1.8								
				700	11.8	1.06	8.2	85.6	3.25	1.6								
30	3.0	0.8	1.8	Operation not recommended							Operation not recommended							
	5.0	2.0	4.5	500	13.4	1.07	9.7	94.7	3.67	1.7	500	21.5	14.3	0.66	0.54	23.4	39.7	-
				700	13.6	1.08	10.0	88.0	3.72	1.6	700	21.9	15.6	0.71	0.57	23.8	38.3	-
	7.0	3.6	8.4	500	13.6	1.08	10.0	95.3	3.72	1.8	500	21.6	14.3	0.66	0.53	23.4	41.2	-
				700	13.8	1.08	10.1	88.3	3.73	1.6	700	22.2	15.6	0.70	0.55	24.0	40.2	-
40	3.0	0.8	1.8	Operation not recommended							Operation not recommended							
	5.0	1.9	4.4	500	15.8	1.08	12.1	99.2	4.29	1.8	500	22.3	14.9	0.67	0.60	24.4	37.5	-
				700	16.1	1.08	12.4	91.3	4.36	1.6	700	22.7	16.3	0.71	0.62	24.9	36.4	-
	7.0	3.5	8.2	500	16.0	1.09	12.3	99.7	4.31	1.8	500	22.5	14.9	0.66	0.58	24.5	39.0	-
				700	16.3	1.09	12.6	91.6	4.40	1.7	700	23.0	16.3	0.71	0.60	25.1	38.1	-
50	3.0	0.7	1.7	500	17.1	1.07	13.4	101.6	4.65	1.8	500	22.8	15.3	0.67	0.70	25.2	32.4	0.7
				700	17.4	1.07	13.7	93.0	4.75	1.7	700	23.2	16.7	0.72	0.73	25.7	31.8	0.7
	5.0	1.8	4.3	500	17.9	1.10	14.2	103.2	4.79	1.9	500	23.0	15.4	0.67	0.67	25.3	34.4	0.6
				700	18.3	1.10	14.5	94.1	4.88	1.7	700	23.5	16.8	0.72	0.70	25.8	33.7	0.7
	7.0	3.4	7.9	500	18.2	1.11	14.4	103.6	4.79	2.0	500	23.2	15.4	0.66	0.65	25.4	35.9	0.6
				700	18.6	1.10	14.8	94.6	4.93	1.8	700	23.7	16.8	0.71	0.68	26.0	35.1	0.7
60	3.0	0.7	1.7	500	19.3	1.09	15.6	105.7	5.18	2.0	500	22.0	15.0	0.68	0.79	24.7	27.8	0.9
				700	19.7	1.08	16.0	96.1	5.35	1.9	700	22.5	16.3	0.73	0.82	25.3	27.2	1.0
	5.0	1.8	4.1	500	20.2	1.11	16.4	107.4	5.31	2.1	500	22.2	15.2	0.68	0.75	24.8	29.6	0.9
				700	20.7	1.11	16.9	97.4	5.48	1.9	700	22.7	16.5	0.73	0.78	25.4	29.0	1.0
	7.0	3.3	7.6	500	20.5	1.13	16.7	108.0	5.33	2.1	500	22.5	15.2	0.67	0.73	25.0	30.8	0.8
				700	21.0	1.11	17.2	97.8	5.54	2.0	700	22.9	16.5	0.72	0.76	25.5	30.2	0.9
70	3.0	0.7	1.6	500	21.6	1.10	17.8	110.0	5.73	2.2	500	22.0	15.2	0.69	0.91	25.1	24.3	1.3
				700	22.1	1.08	18.4	99.3	5.99	2.1	700	22.5	16.5	0.74	0.94	25.7	23.8	1.4
	5.0	1.7	4.0	500	22.6	1.13	18.7	111.8	5.87	2.3	500	22.2	15.3	0.69	0.86	25.1	25.9	1.2
				700	23.3	1.11	19.5	100.8	6.13	2.1	700	22.7	16.7	0.74	0.89	25.8	25.5	1.3
	7.0	3.2	7.4	500	23.0	1.14	19.1	112.6	5.91	2.4	500	22.5	15.3	0.68	0.83	25.3	26.9	1.1
				700	23.6	1.12	19.8	101.2	6.18	2.2	700	22.9	16.7	0.73	0.86	25.8	26.5	1.3
80	3.0	0.7	1.6	500	23.5	1.13	19.6	113.5	6.06	2.5	500	20.8	14.7	0.71	1.04	24.3	20.0	1.8
				700	24.2	1.11	20.4	102.0	6.40	2.3	700	21.2	15.9	0.75	1.07	24.9	19.8	1.9
	5.0	1.7	3.9	500	24.5	1.16	20.5	115.4	6.19	2.6	500	20.9	14.8	0.71	0.98	24.3	21.3	1.7
				700	25.3	1.13	21.5	103.5	6.56	2.4	700	21.4	16.1	0.75	1.01	24.9	21.1	1.8
	7.0	3.1	7.1	500	24.9	1.17	20.9	116.2	6.22	2.7	500	21.2	14.8	0.70	0.95	24.5	22.3	1.5
				700	25.7	1.14	21.8	104.0	6.60	2.5	700	21.6	16.1	0.75	0.98	25.0	21.9	1.7
90	3.0	0.7	1.5	500	25.5	1.16	21.5	117.1	6.43	2.8	500	19.0	13.8	0.73	1.18	23.0	16.0	2.4
				700	26.3	1.13	22.5	104.8	6.85	2.6	700	19.4	15.0	0.77	1.22	23.6	15.9	2.5
	5.0	1.6	3.7	500	26.6	1.19	22.5	119.2	6.55	2.9	500	19.2	14.0	0.73	1.12	23.0	17.1	2.2
				700	27.5	1.15	23.6	106.4	7.02	2.7	700	19.6	15.2	0.78	1.15	23.5	17.0	2.4
	7.0	3.0	6.9	500	27.0	1.20	22.9	120.0	6.57	3.0	500	19.4	14.0	0.72	1.08	23.1	17.9	2.1
				700	28.0	1.16	24.0	107.0	7.07	2.8	700	19.8	15.2	0.77	1.12	23.6	17.6	2.3
100	3.0	0.6	1.5	Operation not recommended							Operation not recommended							
	5.0	1.6	3.6								500	18.5	13.9	0.75	1.28	22.9	14.4	2.9
											700	18.9	15.0	0.80	1.32	23.4	14.3	3.1
	7.0	2.9	6.6								500	18.7	13.9	0.74	1.24	22.9	15.1	2.7
											700	19.1	15.0	0.79	1.28	23.4	14.9	3.0
110	3.0	0.6	1.4								Operation not recommended							
	5.0	1.5	3.4	Operation not recommended							500	16.2	12.8	0.79	1.46	21.2	11.1	3.7
											700	16.6	13.9	0.84	1.50	21.7	11.0	4.0
	7.0	2.8	6.4								500	16.4	12.8	0.78	1.41	21.2	11.6	3.4
											700	16.7	13.9	0.83	1.46	21.7	11.5	3.8
120	3.0	0.6	1.3								Operation not recommended							
	5.0	1.4	3.3								500	15.5	12.7	0.82	1.66	21.2	9.4	4.6
											700	15.8	13.7	0.87	1.70	21.6	9.3	4.9
	7.0	2.7	6.1								500	15.6	12.7	0.81	1.60	21.1	9.8	4.2
											700	16.0	13.7	0.86	1.65	21.6	9.7	4.7

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT026 - Performance Data

Dual Capacity ECM2.3 High Speed (900 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	4.0	1.4	3.2	Operation not recommended							Operation not recommended							
	6.0	2.9	6.6															
	8.0	4.8	11.1	700	16.0	1.40	11.2	91.2	3.36	2.1								
				900	16.2	1.41	11.4	86.7	3.38	1.9								
30	4.0	1.4	3.2	Operation not recommended							Operation not recommended							
	6.0	2.8	6.4	700	18.4	1.43	13.5	94.3	3.75	2.2	700	28.7	18.9	0.66	0.96	31.9	30.0	-
				900	18.7	1.45	13.8	89.3	3.80	2.0	900	29.1	20.7	0.71	1.01	32.6	28.9	-
	8.0	4.7	10.8	700	18.7	1.45	13.8	94.8	3.80	2.3	700	28.8	18.9	0.66	0.93	32.0	31.1	-
				900	19.0	1.46	14.0	89.5	3.81	2.1	900	29.5	20.7	0.70	0.97	32.8	30.3	-
40	4.0	1.3	3.1	Operation not recommended							Operation not recommended							
	6.0	2.7	6.2	700	21.4	1.49	16.3	98.3	4.19	2.5	700	29.1	19.4	0.67	1.04	32.6	27.9	-
				900	21.8	1.50	16.7	92.4	4.26	2.3	900	29.6	21.2	0.72	1.09	33.3	27.1	-
	8.0	4.5	10.4	700	21.7	1.51	16.6	98.7	4.22	2.5	700	29.3	19.4	0.66	1.01	32.7	29.0	-
				900	22.1	1.51	17.0	92.8	4.30	2.3	900	29.9	21.2	0.71	1.06	33.5	28.4	-
50	4.0	1.3	3.0	700	23.1	1.53	17.8	100.5	4.42	2.7	700	28.9	19.6	0.68	1.21	33.0	23.8	1.3
				900	23.5	1.53	18.3	94.2	4.51	2.5	900	29.5	21.4	0.73	1.26	33.8	23.4	1.4
	6.0	2.6	6.0	700	24.2	1.56	18.9	102.0	4.54	2.8	700	29.2	19.9	0.68	1.15	33.1	25.3	1.2
				900	24.7	1.56	19.3	95.4	4.63	2.5	900	29.8	21.6	0.73	1.20	33.9	24.8	1.3
	8.0	4.4	10.1	700	24.6	1.58	19.2	102.5	4.54	2.9	700	29.5	19.9	0.67	1.11	33.3	26.4	1.1
				900	25.1	1.57	19.8	95.9	4.68	2.6	900	30.1	21.6	0.72	1.16	34.0	25.8	1.3
60	4.0	1.2	2.9	700	25.9	1.61	20.4	104.3	4.72	3.0	700	28.5	19.5	0.68	1.32	33.0	21.7	1.6
				900	26.5	1.59	21.1	97.3	4.88	2.8	900	29.1	21.2	0.73	1.37	33.8	21.3	1.7
	6.0	2.5	5.8	700	27.2	1.64	21.5	105.9	4.84	3.1	700	28.8	19.7	0.68	1.25	33.0	23.1	1.5
				900	27.8	1.63	22.3	98.6	5.00	2.9	900	29.4	21.5	0.73	1.30	33.9	22.6	1.6
	8.0	4.2	9.8	700	27.6	1.67	21.9	106.5	4.86	3.2	700	29.1	19.7	0.68	1.21	33.2	24.0	1.4
				900	28.3	1.64	22.7	99.1	5.05	2.9	900	29.7	21.5	0.72	1.26	34.0	23.6	1.5
70	4.0	1.2	2.8	700	28.9	1.70	23.2	108.3	5.00	3.4	700	28.2	19.5	0.69	1.46	33.2	19.3	2.0
				900	29.6	1.66	24.0	100.5	5.22	3.1	900	28.7	21.1	0.74	1.52	33.9	18.9	2.1
	6.0	2.4	5.6	700	30.2	1.73	24.3	110.0	5.12	3.5	700	28.4	19.6	0.69	1.38	33.1	20.5	1.8
				900	31.1	1.71	25.3	102.0	5.34	3.2	900	29.1	21.4	0.74	1.44	34.0	20.2	2.0
	8.0	4.1	9.5	700	30.8	1.75	24.8	110.7	5.15	3.6	700	28.7	19.6	0.68	1.35	33.3	21.3	1.7
				900	31.6	1.72	25.7	102.5	5.39	3.3	900	29.3	21.4	0.73	1.39	34.0	21.0	1.9
80	4.0	1.2	2.7	700	31.6	1.80	25.4	111.8	5.14	3.8	700	27.1	19.1	0.71	1.62	32.6	16.7	2.5
				900	32.5	1.75	26.5	103.4	5.43	3.5	900	27.6	20.7	0.75	1.68	33.4	16.5	2.6
	6.0	2.4	5.4	700	32.9	1.84	26.7	113.6	5.25	3.9	700	27.3	19.3	0.71	1.54	32.5	17.8	2.3
				900	34.0	1.79	27.9	105.0	5.56	3.6	900	27.9	21.0	0.75	1.59	33.3	17.6	2.5
	8.0	4.0	9.2	700	33.5	1.86	27.2	114.3	5.28	4.0	700	27.6	19.3	0.70	1.49	32.7	18.6	2.1
				900	34.6	1.81	28.4	105.6	5.60	3.7	900	28.1	21.0	0.75	1.54	33.4	18.3	2.4
90	4.0	1.1	2.6	700	34.3	1.91	27.8	115.4	5.27	4.2	700	25.6	18.5	0.72	1.79	31.7	14.3	3.1
				900	35.5	1.85	29.1	106.5	5.62	3.9	900	26.2	20.0	0.76	1.85	32.5	14.2	3.2
	6.0	2.3	5.2	700	35.8	1.95	29.1	117.4	5.37	4.4	700	25.9	18.7	0.72	1.70	31.7	15.2	2.9
				900	37.1	1.89	30.6	108.1	5.76	4.1	900	26.5	20.3	0.77	1.74	32.4	15.2	3.1
	8.0	3.8	8.8	700	36.4	1.98	29.6	118.1	5.39	4.5	700	26.2	18.7	0.71	1.64	31.8	16.0	2.6
				900	37.7	1.91	31.2	108.8	5.80	4.2	900	26.7	20.3	0.76	1.70	32.5	15.7	2.9
100	4.0	1.1	2.5	Operation not recommended							Operation not recommended							
	6.0	2.2	5.1								700	24.6	18.1	0.74	1.90	31.1	12.9	3.5
											900	25.1	19.7	0.78	1.96	31.8	12.8	3.8
	8.0	3.7	8.5								700	24.9	18.1	0.73	1.84	31.1	13.5	3.3
											900	25.3	19.7	0.78	1.90	31.8	13.3	3.6
110	4.0	1.0	2.4								Operation not recommended							
	6.0	2.1	4.9								700	22.5	17.1	0.76	2.10	29.7	10.7	4.3
											900	23.0	18.6	0.81	2.16	30.4	10.6	4.6
	8.0	3.5	8.2								700	22.8	17.1	0.75	2.04	29.7	11.2	4.0
											900	23.2	18.6	0.80	2.10	30.4	11.0	4.4
120	4.0	1.0	2.3								Operation not recommended							
	6.0	2.0	4.7								700	20.8	16.4	0.79	2.36	28.9	8.8	5.2
											900	21.2	17.8	0.84	2.42	29.5	8.8	5.6
	8.0	3.4	7.9								700	21.0	16.4	0.78	2.28	28.8	9.2	4.8
											900	21.5	17.8	0.83	2.35	29.5	9.1	5.3

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT038 - Performance Data

Dual Capacity ECM2.3 Low Speed (1050 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	4.0	0.9	2.1	Operation not recommended							Operation not recommended							
	6.0	1.7	4.0															
	8.0	2.9	6.7	900	15.6	1.38	10.9	86.0	3.32	2.5								
				1050	16.2	1.41	11.4	84.3	3.37	2.2								
30	4.0	0.9	2.0	Operation not recommended							Operation not recommended							
	6.0	1.7	3.9	900	17.3	1.36	12.6	87.8	3.72	2.4	900	28.6	18.1	0.63	0.76	31.2	37.6	-
				1050	18.0	1.40	13.2	85.9	3.78	2.2	1050	29.4	20.1	0.68	0.78	32.1	37.9	-
	8.0	2.8	6.5	900	18.4	1.39	13.6	88.9	3.87	2.5	900	29.1	18.6	0.64	0.76	31.7	38.5	-
				1050	19.2	1.43	14.3	86.9	3.92	2.3	1050	29.9	20.6	0.69	0.77	32.5	38.8	-
40	4.0	0.8	1.9	Operation not recommended							Operation not recommended							
	6.0	1.6	3.8	900	20.4	1.39	15.7	91.0	4.32	2.5	900	29.8	19.4	0.65	0.83	32.6	36.1	-
				1050	21.1	1.41	16.3	88.6	4.38	2.3	1050	30.7	21.5	0.70	0.84	33.5	36.4	-
	8.0	2.7	6.3	900	21.5	1.42	16.7	92.1	4.44	2.6	900	30.3	19.9	0.66	0.82	33.1	37.0	-
				1050	22.3	1.45	17.3	89.6	4.51	2.4	1050	31.2	22.0	0.71	0.83	34.0	37.4	-
50	4.0	0.8	1.9	900	22.5	1.41	17.7	93.1	4.67	2.6	900	30.8	20.8	0.67	0.94	34.0	32.8	1.0
				1050	23.2	1.43	18.3	90.5	4.75	2.4	1050	31.7	23.0	0.73	0.96	34.9	33.1	1.0
	6.0	1.6	3.7	900	23.3	1.41	18.5	94.0	4.83	2.7	900	31.1	20.9	0.67	0.92	34.2	34.0	0.9
				1050	24.0	1.43	19.1	91.2	4.91	2.5	1050	32.0	23.1	0.72	0.93	35.1	34.2	1.0
	8.0	2.6	6.1	900	24.4	1.45	19.4	95.1	4.94	2.8	900	31.6	21.4	0.68	0.91	34.7	34.8	0.8
				1050	25.1	1.46	20.1	92.1	5.03	2.5	1050	32.5	23.7	0.73	0.92	35.6	35.1	0.9
60	4.0	0.8	1.8	900	25.4	1.44	20.5	96.1	5.17	2.8	900	29.6	20.0	0.68	1.05	33.2	28.2	1.3
				1050	26.0	1.45	21.0	92.9	5.26	2.6	1050	30.4	22.2	0.73	1.07	34.1	28.4	1.4
	6.0	1.5	3.6	900	26.4	1.44	21.5	97.1	5.38	2.9	900	29.9	20.1	0.67	1.02	33.3	29.2	1.2
				1050	27.0	1.44	22.1	93.8	5.48	2.7	1050	30.7	22.3	0.73	1.04	34.2	29.4	1.3
	8.0	2.5	5.9	900	27.3	1.47	22.3	98.1	5.45	3.0	900	30.3	20.7	0.68	1.01	33.8	29.9	1.1
				1050	27.9	1.48	22.9	94.6	5.54	2.8	1050	31.2	22.9	0.73	1.03	34.7	30.2	1.3
70	4.0	0.8	1.8	900	28.2	1.46	23.2	99.0	5.64	3.1	900	29.2	20.3	0.69	1.19	33.3	24.5	1.8
				1050	28.7	1.46	23.7	95.3	5.75	2.9	1050	30.0	22.5	0.75	1.21	34.2	24.7	1.9
	6.0	1.5	3.5	900	29.4	1.46	24.4	100.2	5.91	3.2	900	29.5	20.4	0.69	1.16	33.4	25.4	1.7
				1050	29.9	1.46	25.0	96.4	6.03	3.0	1050	30.3	22.6	0.75	1.18	34.3	25.6	1.9
	8.0	2.5	5.7	900	30.2	1.49	25.1	101.0	5.94	3.3	900	30.0	20.9	0.70	1.15	33.9	26.1	1.6
				1050	30.7	1.49	25.6	97.1	6.05	3.1	1050	30.8	23.2	0.75	1.17	34.8	26.3	1.8
80	4.0	0.7	1.7	900	30.8	1.49	25.7	101.7	6.06	3.5	900	28.1	19.9	0.71	1.36	32.7	20.7	2.5
				1050	31.2	1.48	26.2	97.6	6.18	3.3	1050	28.9	22.0	0.76	1.38	33.6	20.9	2.7
	6.0	1.4	3.3	900	32.3	1.48	27.3	103.2	6.39	3.6	900	28.4	20.0	0.71	1.32	32.9	21.5	2.3
				1050	32.7	1.47	27.7	98.8	6.52	3.4	1050	29.2	22.1	0.76	1.35	33.7	21.7	2.5
	8.0	2.4	5.5	900	32.8	1.51	27.6	103.7	6.35	3.7	900	28.8	20.5	0.71	1.31	33.3	22.0	2.2
				1050	33.1	1.50	28.0	99.2	6.48	3.5	1050	29.6	22.7	0.77	1.33	34.2	22.2	2.4
90	4.0	0.7	1.6	900	33.4	1.52	28.3	104.4	6.47	4.0	900	26.0	18.6	0.71	1.54	31.3	16.9	3.3
				1050	33.7	1.50	28.6	99.7	6.60	3.7	1050	26.8	20.6	0.77	1.57	32.1	17.0	3.5
	6.0	1.4	3.2	900	35.2	1.50	30.0	106.2	6.86	4.1	900	26.3	18.7	0.71	1.50	31.4	17.5	3.1
				1050	35.4	1.48	30.3	101.2	7.00	3.8	1050	27.0	20.7	0.77	1.53	32.2	17.6	3.4
	8.0	2.3	5.3	900	35.3	1.53	30.1	106.3	6.75	4.2	900	26.7	19.2	0.72	1.49	31.8	17.9	2.9
				1050	35.5	1.51	30.3	101.3	6.89	3.9	1050	27.5	21.2	0.77	1.52	32.6	18.1	3.2
100	4.0	0.7	1.6	Operation not recommended							Operation not recommended							
	6.0	1.3	3.1								900	25.4	19.0	0.75	1.72	31.2	14.8	4.1
											1050	26.1	21.0	0.81	1.75	32.0	14.9	4.4
	8.0	2.2	5.1								900	25.8	19.5	0.76	1.70	31.6	15.1	3.8
											1050	26.5	21.6	0.81	1.74	32.4	15.3	4.2
110	4.0	0.7	1.5								Operation not recommended							
	6.0	1.3	3.0								900	22.7	17.9	0.79	1.95	29.4	11.6	5.1
											1050	23.4	19.8	0.85	1.99	30.2	11.7	5.6
	8.0	2.1	4.9								900	23.1	18.3	0.79	1.94	29.7	11.9	4.8
											1050	23.8	20.3	0.85	1.97	30.5	12.0	5.3
120	4.0	0.6	1.5								Operation not recommended							
	6.0	1.2	2.9								900	21.5	17.7	0.82	2.22	29.1	9.7	6.4
											1050	22.1	19.6	0.88	2.26	29.8	9.8	6.9
	8.0	2.0	4.7								900	21.9	18.1	0.83	2.20	29.4	10.0	5.9
											1050	22.5	20.1	0.89	2.24	30.1	10.0	6.6

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT038 - Performance Data

Dual Capacity ECM2.3 High Speed (1250 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	5.0	1.3	3.0	Operation not recommended							Operation not recommended							
	7.0	2.3	5.2															
	9.0	3.5	8.1	1050	22.2	1.93	15.6	89.6	3.37	2.8								
				1250	23.0	1.99	16.2	87.0	3.38	2.6								
30	5.0	1.2	2.9	Operation not recommended							Operation not recommended							
	7.0	2.2	5.1	1050	25.6	1.97	18.9	92.6	3.81	3.0	1050	37.3	22.1	0.59	1.40	42.1	26.8	-
				1250	26.3	2.03	19.4	89.5	3.81	2.8	1250	39.5	24.7	0.63	1.48	44.5	26.7	-
	9.0	3.4	7.9	1050	26.0	1.99	19.2	92.9	3.84	3.1	1050	37.6	24.4	0.65	1.35	42.2	27.8	-
				1250	26.9	2.05	19.9	89.9	3.84	2.8	1250	39.8	27.1	0.68	1.44	44.8	27.6	-
40	5.0	1.2	2.8	Operation not recommended							Operation not recommended							
	7.0	2.1	4.9	1050	29.9	2.09	22.8	96.4	4.20	3.4	1050	38.8	23.7	0.61	1.54	44.0	25.2	-
				1250	30.8	2.13	23.5	92.8	4.24	3.1	1250	40.9	26.4	0.65	1.62	46.4	25.2	-
	9.0	3.3	7.6	1050	30.5	2.11	23.3	96.9	4.24	3.5	1050	39.1	25.7	0.66	1.50	44.2	26.1	-
				1250	31.5	2.15	24.1	93.3	4.29	3.2	1250	41.3	28.6	0.69	1.59	46.7	26.0	-
50	5.0	1.2	2.7	1050	32.4	2.14	25.1	98.6	4.44	3.7	1050	39.0	24.7	0.63	1.83	45.2	21.3	1.9
				1250	33.4	2.17	26.0	94.7	4.51	3.4	1250	41.1	27.5	0.67	1.92	47.6	21.4	2.0
	7.0	2.1	4.8	1050	33.6	2.19	26.1	99.6	4.50	3.8	1050	39.8	25.0	0.63	1.72	45.7	23.1	1.8
				1250	34.6	2.22	27.1	95.7	4.58	3.5	1250	41.9	27.8	0.66	1.81	48.1	23.2	1.9
	9.0	3.2	7.4	1050	34.3	2.21	26.8	100.3	4.56	3.9	1050	40.2	26.7	0.66	1.68	46.0	23.9	1.6
				1250	35.4	2.24	27.8	96.2	4.64	3.6	1250	42.4	29.7	0.70	1.76	48.4	24.0	1.8
60	5.0	1.1	2.6	1050	35.7	2.24	28.1	101.5	4.67	4.1	1050	38.6	25.3	0.66	1.95	45.2	19.8	2.3
				1250	36.9	2.26	29.2	97.3	4.79	3.8	1250	40.5	28.1	0.70	2.03	47.4	19.9	2.4
	7.0	2.0	4.6	1050	37.3	2.31	29.5	102.9	4.74	4.2	1050	39.5	25.6	0.65	1.85	45.8	21.4	2.1
				1250	38.5	2.32	30.6	98.5	4.86	3.9	1250	41.4	28.4	0.69	1.93	48.0	21.5	2.3
	9.0	3.1	7.2	1050	38.2	2.33	30.3	103.7	4.81	4.4	1050	39.9	27.0	0.68	1.80	46.0	22.1	2.0
				1250	39.5	2.34	31.5	99.3	4.94	4.0	1250	41.9	29.9	0.71	1.89	48.3	22.2	2.2
70	5.0	1.1	2.5	1050	39.1	2.36	31.1	104.5	4.85	4.6	1050	38.6	26.2	0.68	2.14	45.8	18.1	2.8
				1250	40.5	2.36	32.4	100.0	5.02	4.3	1250	40.2	29.1	0.72	2.22	47.8	18.2	3.0
	7.0	1.9	4.5	1050	41.1	2.44	32.8	106.3	4.94	4.8	1050	39.5	26.5	0.67	2.04	46.5	19.3	2.6
				1250	42.5	2.44	34.1	101.5	5.10	4.4	1250	41.2	29.3	0.71	2.12	48.5	19.5	2.8
	9.0	3.0	6.9	1050	42.2	2.47	33.8	107.2	5.00	4.9	1050	39.9	27.5	0.69	1.99	46.8	20.0	2.4
				1250	43.6	2.46	35.2	102.3	5.19	4.5	1250	41.7	30.5	0.73	2.07	48.8	20.1	2.7
80	5.0	1.1	2.5	1050	41.6	2.46	33.2	106.7	4.96	5.2	1050	37.2	25.8	0.69	2.32	45.1	16.0	3.5
				1250	43.1	2.44	34.7	101.9	5.17	4.8	1250	38.7	28.7	0.74	2.39	46.8	16.2	3.7
	7.0	1.9	4.3	1050	44.0	2.56	35.3	108.8	5.04	5.3	1050	38.2	26.1	0.68	2.24	45.9	17.1	3.3
				1250	45.5	2.53	36.9	103.7	5.27	4.9	1250	39.8	29.0	0.73	2.31	47.6	17.2	3.6
	9.0	2.9	6.7	1050	45.3	2.59	36.4	109.9	5.12	5.5	1050	38.6	26.8	0.69	2.19	46.1	17.6	3.0
				1250	46.8	2.55	38.1	104.7	5.38	5.1	1250	40.2	29.7	0.74	2.26	47.9	17.8	3.4
90	5.0	1.0	2.4	1050	44.2	2.57	35.4	108.9	5.03	5.8	1050	35.1	25.1	0.71	2.51	43.7	14.0	4.4
				1250	45.7	2.53	37.1	103.9	5.29	5.4	1250	36.4	27.9	0.77	2.57	45.1	14.2	4.6
	7.0	1.8	4.2	1050	46.9	2.69	37.8	111.4	5.12	6.0	1050	36.2	25.4	0.70	2.44	44.5	14.9	4.1
				1250	48.6	2.64	39.6	106.0	5.40	5.5	1250	37.5	28.2	0.75	2.50	46.0	15.0	4.4
	9.0	2.8	6.5	1050	48.4	2.73	39.1	112.7	5.20	6.2	1050	36.6	25.7	0.70	2.39	44.8	15.3	3.8
				1250	50.1	2.66	41.0	107.1	5.52	5.7	1250	37.9	28.4	0.75	2.45	46.3	15.5	4.2
100	5.0	1.0	2.3	Operation not recommended							Operation not recommended							
	7.0	1.7	4.0								1050	34.9	25.2	0.72	2.72	44.1	12.8	5.0
											1250	36.0	28.0	0.78	2.76	45.4	13.0	5.5
	9.0	2.7	6.2								1050	35.2	25.1	0.71	2.67	44.3	13.2	4.7
											1250	36.4	27.8	0.76	2.71	45.6	13.4	5.2
110	5.0	1.0	2.2								Operation not recommended							
	7.0	1.7	3.9								1050	31.9	23.7	0.74	2.97	42.0	10.7	6.1
											1250	32.8	26.3	0.80	2.99	43.0	11.0	6.7
	9.0	2.6	6.0								1050	32.2	23.4	0.73	2.91	42.2	11.1	5.7
											1250	33.1	25.8	0.78	2.95	43.1	11.2	6.3
120	5.0	0.9	2.1								Operation not recommended							
	7.0	1.6	3.7								1050	30.0	23.2	0.77	3.31	41.3	9.1	7.4
											1250	30.7	25.8	0.84	3.31	42.0	9.3	8.0
	9.0	2.5	5.8								1050	30.3	22.6	0.75	3.26	41.4	9.3	6.9
											1250	30.9	24.9	0.81	3.27	42.1	9.5	7.6

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT049 - Performance Data

Dual Capacity ECM2.3 Low Speed (1350 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	5.0	0.9	2.2	Operation not recommended							Operation not recommended							
	8.0	2.0	4.6															
	11.0	3.4	7.8	1150	22.5	2.07	15.4	88.1	3.18	4.2								
				1350	23.3	2.10	16.2	86.0	3.25	3.8								
30	5.0	0.9	2.1	Operation not recommended							Operation not recommended							
	8.0	1.9	4.4	1150	25.9	2.11	18.7	90.9	3.60	4.3	1150	35.9	21.1	0.59	1.19	40.0	30.2	-
				1350	26.7	2.13	19.5	88.3	3.68	3.9	1350	37.2	24.9	0.67	1.27	41.5	29.4	-
	11.0	3.3	7.6	1150	26.6	2.13	19.3	91.4	3.66	4.4	1150	36.0	21.0	0.58	1.11	39.8	32.4	-
				1350	27.5	2.16	20.2	88.9	3.74	4.0	1350	37.0	24.8	0.67	1.18	41.0	31.3	-
40	5.0	0.9	2.0	Operation not recommended							Operation not recommended							
	8.0	1.9	4.3	1150	29.8	2.19	22.3	94.0	3.99	4.5	1150	38.0	23.0	0.61	1.31	42.4	28.9	-
				1350	30.8	2.19	23.4	91.1	4.13	4.2	1350	39.2	27.1	0.69	1.38	44.0	28.3	-
	11.0	3.2	7.4	1150	30.8	2.20	23.2	94.8	4.09	4.7	1150	38.1	23.0	0.60	1.23	42.3	31.0	-
				1350	31.8	2.22	24.2	91.8	4.20	4.2	1350	39.2	27.1	0.69	1.30	43.6	30.2	-
50	5.0	0.9	2.0	1150	30.8	2.18	23.4	94.8	4.14	4.8	1150	38.7	24.6	0.64	1.69	44.5	22.9	1.6
				1350	31.8	2.18	24.4	91.8	4.28	4.4	1350	39.9	29.0	0.73	1.76	45.9	22.6	1.7
	8.0	1.8	4.2	1150	33.2	2.25	25.6	96.8	4.32	4.9	1150	39.6	24.7	0.62	1.47	44.6	27.0	1.5
				1350	34.5	2.24	26.9	93.7	4.52	4.5	1350	40.8	29.1	0.71	1.54	46.0	26.5	1.6
	11.0	3.1	7.2	1150	34.5	2.27	26.8	97.8	4.46	5.1	1150	39.8	24.7	0.62	1.38	44.5	28.8	1.4
				1350	35.7	2.27	27.9	94.5	4.61	4.6	1350	41.0	29.1	0.71	1.45	46.0	28.2	1.5
60	5.0	0.8	1.9	1150	33.7	2.27	26.0	97.1	4.36	5.2	1150	38.5	24.6	0.64	1.82	44.8	21.1	2.2
				1350	34.9	2.25	27.2	94.0	4.55	4.8	1350	39.7	28.9	0.73	1.91	46.2	20.9	2.4
	8.0	1.8	4.0	1150	36.5	2.32	28.6	99.4	4.60	5.4	1150	39.2	24.7	0.63	1.62	44.7	24.2	2.1
				1350	37.9	2.29	30.1	96.0	4.84	5.0	1350	40.4	29.1	0.72	1.69	46.1	23.8	2.3
	11.0	3.0	6.9	1150	38.0	2.34	30.0	100.6	4.76	5.5	1150	39.6	24.8	0.63	1.54	44.9	25.8	1.9
				1350	39.4	2.31	31.5	97.0	4.99	5.1	1350	40.8	29.2	0.72	1.61	46.3	25.4	2.2
70	5.0	0.8	1.8	1150	36.4	2.34	28.4	99.3	4.56	5.8	1150	38.7	25.8	0.67	2.01	45.6	19.3	3.2
				1350	37.9	2.32	30.0	96.0	4.79	5.4	1350	39.9	30.4	0.76	2.10	47.1	19.0	3.4
	8.0	1.7	3.9	1150	39.6	2.39	31.4	101.8	4.86	6.0	1150	39.1	26.1	0.67	1.82	45.3	21.5	3.0
				1350	41.1	2.34	33.1	98.2	5.14	5.5	1350	40.4	30.6	0.76	1.90	46.8	21.2	3.2
	11.0	2.9	6.7	1150	41.4	2.41	33.1	103.3	5.02	6.1	1150	39.8	26.2	0.66	1.74	45.7	22.9	2.7
				1350	42.9	2.36	34.9	99.4	5.33	5.7	1350	41.0	30.8	0.75	1.81	47.2	22.7	3.0
80	5.0	0.8	1.8	1150	38.7	2.40	30.5	101.2	4.72	6.5	1150	37.5	24.7	0.66	2.19	45.0	17.1	4.4
				1350	40.2	2.36	32.2	97.6	4.99	6.0	1350	38.7	29.0	0.75	2.29	46.5	16.9	4.6
	8.0	1.6	3.8	1150	42.0	2.43	33.8	103.8	5.07	6.7	1150	37.7	25.0	0.66	2.04	44.7	18.5	4.1
				1350	43.7	2.37	35.7	100.0	5.41	6.1	1350	38.8	29.4	0.76	2.12	46.1	18.3	4.4
	11.0	2.8	6.5	1150	44.2	2.46	35.8	105.6	5.27	6.9	1150	38.6	25.2	0.65	1.95	45.2	19.8	3.8
				1350	45.9	2.39	37.8	101.5	5.64	6.3	1350	39.7	29.6	0.74	2.03	46.7	19.6	4.2
90	5.0	0.7	1.7	1150	40.8	2.46	32.5	102.9	4.87	7.2	1150	35.4	22.8	0.64	2.40	43.6	14.8	5.8
				1350	42.4	2.40	34.2	99.1	5.18	6.7	1350	36.5	26.7	0.73	2.49	45.0	14.6	6.2
	8.0	1.6	3.6	1150	44.4	2.47	36.0	105.7	5.27	7.4	1150	35.4	23.0	0.65	2.27	43.1	15.6	5.5
				1350	46.2	2.39	38.1	101.7	5.67	6.9	1350	36.4	27.1	0.75	2.35	44.4	15.4	5.9
	11.0	2.7	6.2	1150	46.8	2.50	38.3	107.7	5.50	7.7	1150	36.4	23.3	0.64	2.18	43.8	16.7	5.1
				1350	48.8	2.42	40.6	103.5	5.92	7.1	1350	37.5	27.4	0.73	2.27	45.2	16.5	5.6
100	5.0	0.7	1.7	Operation not recommended							Operation not recommended							
	8.0	1.5	3.5								1150	33.7	23.7	0.70	2.55	42.4	13.2	7.1
											1350	34.8	27.9	0.80	2.65	43.8	13.1	7.7
	11.0	2.6	6.0								1150	35.0	24.1	0.69	2.46	43.4	14.2	6.6
											1350	36.0	28.3	0.79	2.57	44.8	14.0	7.3
110	5.0	0.7	1.6	Operation not recommended							Operation not recommended							
	8.0	1.5	3.4								1150	30.2	22.3	0.74	2.84	39.9	10.6	9.0
											1350	31.3	26.3	0.84	2.96	41.4	10.6	9.7
	11.0	2.5	5.8								1150	31.7	22.8	0.72	2.76	41.1	11.5	8.3
											1350	32.6	26.7	0.82	2.87	42.4	11.3	9.2
120	5.0	0.7	1.5	Operation not recommended							Operation not recommended							
	8.0	1.4	3.3								1150	27.9	21.7	0.78	3.18	38.7	8.8	11.1
											1350	28.9	25.6	0.89	3.31	40.2	8.7	12.0
	11.0	2.4	5.6								1150	29.5	22.2	0.75	3.08	40.0	9.6	10.3
											1350	30.3	26.0	0.86	3.23	41.3	9.4	11.5

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT049 - Performance Data

Dual Capacity ECM2.3 High Speed (1550 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	6.0	1.3	3.0	Operation not recommended							Operation not recommended							
	9.0	2.5	5.7															
	12.0	4.0	9.2	1350	31.3	2.72	22.1	91.5	3.38	5.3								
				1550	32.4	2.80	22.8	89.3	3.38	4.8								
30	6.0	1.2	2.9	Operation not recommended							Operation not recommended							
	9.0	2.4	5.5	1350	35.8	2.85	26.1	94.5	3.68	5.6	1350	47.5	29.3	0.62	1.89	54.0	25.1	-
				1550	36.9	2.94	26.8	92.0	3.68	5.2	1550	50.4	32.6	0.65	2.02	57.3	25.0	-
	12.0	3.9	8.9	1350	36.3	2.88	26.5	94.9	3.70	5.8	1350	48.0	29.3	0.61	1.80	54.2	26.7	-
				1550	37.5	2.97	27.4	92.4	3.71	5.3	1550	50.8	32.5	0.64	1.92	57.4	26.4	-
40	6.0	1.2	2.8	Operation not recommended							Operation not recommended							
	9.0	2.3	5.3	1350	40.8	2.97	30.6	98.0	4.02	6.2	1350	49.3	31.0	0.63	2.09	56.4	23.6	-
				1550	42.0	3.04	31.6	95.1	4.04	5.7	1550	52.1	34.5	0.66	2.21	59.7	23.5	-
	12.0	3.7	8.7	1350	41.5	3.01	31.2	98.5	4.04	6.4	1350	49.8	31.0	0.62	2.00	56.7	24.9	-
				1550	42.9	3.07	32.4	95.6	4.09	5.8	1550	52.6	34.5	0.66	2.12	59.8	24.8	-
50	6.0	1.2	2.7	1350	43.6	3.08	33.1	99.9	4.15	6.7	1350	49.9	31.8	0.64	2.50	58.4	20.0	3.0
				1550	45.0	3.12	34.4	96.9	4.23	6.2	1550	52.5	35.3	0.67	2.63	61.5	20.0	3.2
	9.0	2.2	5.2	1350	45.3	3.14	34.6	101.1	4.23	6.9	1350	50.5	32.2	0.64	2.34	58.4	21.6	2.8
				1550	46.6	3.19	35.8	97.9	4.29	6.4	1550	53.2	35.8	0.67	2.46	61.6	21.7	3.0
	12.0	3.6	8.4	1350	46.2	3.18	35.4	101.7	4.27	7.2	1350	51.0	32.3	0.63	2.25	58.7	22.7	2.6
				1550	47.8	3.22	36.8	98.5	4.35	6.5	1550	53.6	35.9	0.67	2.37	61.7	22.7	2.9
60	6.0	1.1	2.6	1350	47.6	3.21	36.7	102.7	4.35	7.6	1350	49.3	32.1	0.65	2.65	58.4	18.6	3.6
				1550	49.1	3.22	38.1	99.3	4.47	7.0	1550	51.7	35.6	0.69	2.77	61.2	18.7	3.9
	9.0	2.2	5.0	1350	49.8	3.29	38.6	104.1	4.44	7.8	1350	50.1	32.5	0.65	2.50	58.7	20.0	3.4
				1550	51.3	3.30	40.0	100.6	4.55	7.2	1550	52.6	36.1	0.69	2.61	61.5	20.1	3.7
	12.0	3.5	8.1	1350	50.9	3.33	39.6	104.9	4.49	8.0	1350	50.7	32.7	0.65	2.42	58.9	20.9	3.2
				1550	52.6	3.34	41.2	101.4	4.62	7.4	1550	53.1	36.3	0.68	2.53	61.7	21.0	3.5
70	6.0	1.1	2.5	1350	51.5	3.32	40.2	105.4	4.55	8.5	1350	49.0	32.7	0.67	2.90	58.9	16.9	4.6
				1550	53.1	3.31	41.8	101.7	4.70	7.9	1550	51.2	36.3	0.71	3.00	61.5	17.0	4.9
	9.0	2.1	4.9	1350	54.1	3.42	42.4	107.1	4.63	8.8	1350	50.1	33.1	0.66	2.76	59.5	18.2	4.3
				1550	55.8	3.41	44.1	103.3	4.79	8.1	1550	52.3	36.7	0.70	2.86	62.1	18.3	4.6
	12.0	3.4	7.9	1350	55.5	3.47	43.7	108.1	4.69	9.0	1350	50.6	33.3	0.66	2.68	59.8	18.9	4.0
				1550	57.3	3.45	45.5	104.2	4.87	8.3	1550	52.9	37.0	0.70	2.79	62.4	19.0	4.4
80	6.0	1.1	2.5	1350	54.7	3.49	42.7	107.5	4.58	9.6	1350	47.0	32.0	0.68	3.14	57.7	15.0	5.8
				1550	56.4	3.45	44.7	103.7	4.79	8.8	1550	48.9	35.5	0.73	3.23	59.9	15.1	6.1
	9.0	2.0	4.7	1350	57.7	3.62	45.4	109.6	4.67	9.8	1350	48.2	32.3	0.67	3.02	58.5	16.0	5.4
				1550	59.6	3.58	47.4	105.6	4.88	9.1	1550	50.2	35.8	0.71	3.11	60.8	16.2	5.8
	12.0	3.3	7.6	1350	59.4	3.66	46.9	110.7	4.75	10.1	1350	48.7	32.6	0.67	2.95	58.8	16.5	5.0
				1550	61.3	3.62	49.0	106.6	4.97	9.4	1550	50.7	36.2	0.71	3.03	61.0	16.7	5.6
90	6.0	1.0	2.4	1350	57.7	3.66	45.2	109.6	4.62	10.7	1350	44.2	30.7	0.70	3.37	55.7	13.1	7.3
				1550	59.7	3.58	47.4	105.6	4.88	9.9	1550	45.8	34.0	0.74	3.45	57.5	13.3	7.7
	9.0	2.0	4.5	1350	61.3	3.81	48.3	112.0	4.71	11.1	1350	45.5	31.0	0.68	3.28	56.7	13.9	6.8
				1550	63.3	3.73	50.6	107.8	4.98	10.2	1550	47.2	34.4	0.73	3.34	58.6	14.1	7.3
	12.0	3.2	7.3	1350	63.1	3.85	50.0	113.3	4.81	11.4	1350	46.0	31.3	0.68	3.21	56.9	14.3	6.3
				1550	65.3	3.78	52.4	109.0	5.07	10.6	1550	47.6	34.8	0.73	3.28	58.8	14.5	7.0
100	6.0	1.0	2.3	Operation not recommended							Operation not recommended							
	9.0	1.9	4.4								1350	43.4	30.4	0.70	3.64	55.8	11.9	8.4
											1550	44.8	33.6	0.75	3.69	57.4	12.2	9.1
	12.0	3.1	7.1								1350	43.9	30.7	0.70	3.58	56.1	12.2	7.8
											1550	45.3	34.1	0.75	3.63	57.7	12.5	8.7
110	6.0	1.0	2.2								Operation not recommended							
	9.0	1.8	4.2								1350	39.2	28.3	0.72	3.96	52.7	9.9	10.3
											1550	40.3	31.3	0.78	3.99	53.9	10.1	11.2
	12.0	2.9	6.8								1350	39.6	28.7	0.72	3.91	53.0	10.1	9.6
											1550	40.7	31.8	0.78	3.94	54.2	10.3	10.6
120	6.0	0.9	2.1								Operation not recommended							
	9.0	1.7	4.0								1350	36.4	27.1	0.74	4.41	51.4	8.3	12.5
											1550	37.3	29.9	0.80	4.40	52.3	8.5	13.5
	12.0	2.8	6.5								1350	36.8	27.6	0.75	4.36	51.7	8.4	11.6
											1550	37.6	30.5	0.81	4.36	52.5	8.6	12.8

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT064 - Performance Data

Dual Capacity ECM2.3 Low Speed (1500 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	6.0	1.0	2.4	Operation not recommended							Operation not recommended							
	10.0	2.7	6.2															
	14.0	5.1	11.8	1250	25.6	2.55	16.9	89.0	2.95	4.8								
				1500	26.5	2.58	17.7	86.4	3.01	4.4								
30	6.0	1.0	2.3	Operation not recommended							Operation not recommended							
	10.0	2.6	6.0	1250	29.7	2.63	20.8	92.0	3.32	4.9	1250	50.7	29.8	0.59	1.43	55.6	35.4	-
				1500	30.8	2.66	21.7	89.0	3.39	4.5	1500	52.2	34.0	0.65	1.50	57.3	34.9	-
	14.0	5.0	11.5	1250	30.8	2.63	21.8	92.8	3.44	5.0	1250	50.8	29.7	0.59	1.40	55.6	36.4	-
				1500	31.9	2.66	22.8	89.7	3.51	4.6	1500	52.1	33.9	0.65	1.47	57.1	35.4	-
40	6.0	1.0	2.3	Operation not recommended							Operation not recommended							
	10.0	2.5	5.9	1250	35.1	2.72	25.8	96.0	3.78	5.2	1250	52.2	30.5	0.59	1.57	57.5	33.2	-
				1500	36.1	2.73	26.8	92.3	3.88	4.8	1500	53.7	34.7	0.65	1.64	59.3	32.7	-
	14.0	4.8	11.1	1250	36.2	2.73	26.9	96.8	3.89	5.3	1250	52.3	30.5	0.58	1.54	57.6	34.1	-
				1500	37.2	2.74	27.9	93.0	3.99	4.9	1500	53.7	34.7	0.65	1.62	59.2	33.3	-
50	6.0	0.9	2.2	1250	39.5	2.76	30.1	99.3	4.19	5.4	1250	53.4	31.0	0.58	1.82	59.6	29.4	2.0
				1500	40.6	2.76	31.1	95.0	4.31	5.0	1500	55.0	35.2	0.64	1.92	61.6	28.7	2.1
	10.0	2.5	5.7	1250	40.1	2.81	30.5	99.7	4.18	5.6	1250	53.6	31.2	0.58	1.75	59.6	30.6	1.8
				1500	41.0	2.79	31.5	95.3	4.30	5.2	1500	55.1	35.4	0.64	1.84	61.4	30.0	2.0
	14.0	4.7	10.8	1250	41.3	2.83	31.7	100.6	4.28	5.8	1250	53.7	31.2	0.58	1.72	59.6	31.2	1.7
				1500	42.2	2.81	32.6	96.1	4.40	5.3	1500	55.3	35.4	0.64	1.80	61.4	30.7	1.9
60	6.0	0.9	2.1	1250	44.0	2.85	34.2	102.6	4.52	6.0	1250	51.5	30.3	0.59	2.03	58.5	25.4	2.8
				1500	44.9	2.83	35.2	97.7	4.65	5.5	1500	53.1	34.2	0.64	2.13	60.3	24.9	2.9
	10.0	2.4	5.5	1250	45.3	2.90	35.4	103.6	4.58	6.2	1250	51.7	30.6	0.59	1.97	58.5	26.3	2.6
				1500	46.0	2.86	36.3	98.4	4.72	5.7	1500	53.3	34.5	0.65	2.06	60.3	25.9	2.8
	14.0	4.5	10.4	1250	46.4	2.93	36.4	104.4	4.65	6.4	1250	52.0	30.6	0.59	1.93	58.5	27.0	2.4
				1500	47.1	2.89	37.3	99.1	4.79	5.8	1500	53.5	34.6	0.65	2.01	60.4	26.6	2.7
70	6.0	0.9	2.0	1250	48.3	2.94	38.3	105.8	4.81	6.6	1250	50.6	30.6	0.61	2.29	58.5	22.1	3.9
				1500	49.1	2.89	39.2	100.3	4.98	6.1	1500	52.2	34.3	0.66	2.39	60.3	21.8	4.2
	10.0	2.3	5.3	1250	50.3	2.99	40.1	107.3	4.93	6.8	1250	50.9	30.9	0.61	2.23	58.5	22.8	3.7
				1500	50.9	2.93	40.9	101.4	5.10	6.3	1500	52.5	34.8	0.66	2.33	60.4	22.6	4.0
	14.0	4.4	10.1	1250	51.3	3.02	41.0	108.0	4.97	7.0	1250	51.3	31.0	0.61	2.18	58.7	23.5	3.4
				1500	51.9	2.96	41.8	102.0	5.14	6.5	1500	52.8	34.9	0.66	2.28	60.6	23.2	3.8
80	6.0	0.9	2.0	1250	52.4	3.03	42.0	108.8	5.06	7.4	1250	48.4	29.6	0.61	2.59	57.3	18.7	5.4
				1500	52.9	2.97	42.7	102.6	5.22	6.8	1500	49.9	33.0	0.66	2.68	59.0	18.6	5.7
	10.0	2.2	5.1	1250	55.3	3.08	44.8	111.0	5.26	7.6	1250	48.8	29.9	0.61	2.53	57.5	19.3	5.1
				1500	55.6	2.99	45.4	104.3	5.45	7.0	1500	50.3	33.4	0.66	2.63	59.3	19.1	5.5
	14.0	4.2	9.8	1250	56.0	3.12	45.3	111.5	5.25	7.9	1250	49.2	30.1	0.61	2.49	57.6	19.7	4.7
				1500	56.2	3.03	45.8	104.7	5.43	7.3	1500	50.7	33.6	0.66	2.58	59.5	19.7	5.2
90	6.0	0.8	1.9	1250	56.3	3.12	45.7	111.7	5.29	8.3	1250	44.9	28.1	0.63	2.93	54.9	15.3	7.2
				1500	56.5	3.04	46.1	104.8	5.44	7.6	1500	46.2	31.2	0.67	3.01	56.5	15.3	7.7
	10.0	2.1	5.0	1250	60.1	3.17	49.3	114.5	5.56	8.5	1250	45.4	28.3	0.62	2.86	55.1	15.8	6.8
				1500	60.1	3.06	49.7	107.1	5.77	7.9	1500	46.7	31.6	0.68	2.96	56.8	15.8	7.3
	14.0	4.1	9.4	1250	60.5	3.22	49.5	114.8	5.51	8.8	1250	45.7	28.6	0.63	2.83	55.3	16.1	6.3
				1500	60.4	3.11	49.8	107.3	5.70	8.1	1500	47.2	31.8	0.67	2.91	57.1	16.2	7.0
100	6.0	0.8	1.8	Operation not recommended							Operation not recommended							
	10.0	2.1	4.8								1250	43.5	28.4	0.65	3.27	54.6	13.3	8.8
											1500	44.8	31.4	0.70	3.36	56.2	13.3	9.5
	14.0	3.9	9.1								1250	43.9	28.8	0.66	3.23	54.9	13.6	8.2
											1500	45.3	31.8	0.70	3.31	56.6	13.7	9.1
110	6.0	0.8	1.8								Operation not recommended							
	10.0	2.0	4.6								1250	39.1	26.8	0.69	3.71	51.8	10.6	11.1
											1500	40.4	29.5	0.73	3.78	53.3	10.7	12.1
	14.0	3.8	8.7								1250	39.7	27.3	0.69	3.65	52.1	10.9	10.3
											1500	40.9	29.9	0.73	3.73	53.6	11.0	11.5
120	6.0	0.7	1.7								Operation not recommended							
	10.0	1.9	4.4								1250	36.6	27.0	0.74	4.20	50.9	8.7	13.8
											1500	37.7	29.4	0.78	4.25	52.2	8.9	14.9
	14.0	3.6	8.4								1250	37.1	27.5	0.74	4.15	51.3	8.9	12.8
											1500	38.3	29.9	0.78	4.20	52.6	9.1	14.2

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT064 - Performance Data

Dual Capacity ECM2.3 High Speed (1800 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	8.0	1.8	4.2	Operation not recommended							Operation not recommended							
	12.0	3.8	8.8															
	16.0	6.5	15.1	1500	38.6	3.49	26.7	93.8	3.24	6.0								
				1800	39.5	3.65	27.1	90.3	3.17	5.5								
30	8.0	1.8	4.1	Operation not recommended							Operation not recommended							
	12.0	3.7	8.6	1500	44.5	3.50	32.6	97.5	3.72	6.4	1500	66.4	42.5	0.64	2.35	74.4	28.3	-
				1800	45.7	3.73	33.0	93.5	3.60	5.8	1800	67.1	46.3	0.69	2.49	75.6	26.9	-
	16.0	6.4	14.7	1500	45.1	3.59	32.9	97.8	3.68	6.6	1500	67.1	42.9	0.64	2.31	75.0	29.1	-
				1800	46.2	3.76	33.4	93.8	3.60	6.0	1800	67.6	46.6	0.69	2.45	76.0	27.5	-
40	8.0	1.7	4.0	Operation not recommended							Operation not recommended							
	12.0	3.6	8.3	1500	51.2	3.74	38.5	101.6	4.02	7.0	1500	69.0	43.6	0.63	2.70	78.2	25.6	-
				1800	52.4	3.90	39.1	96.9	3.94	6.5	1800	70.1	47.5	0.68	2.87	79.8	24.4	-
	16.0	6.2	14.2	1500	52.0	3.80	39.0	102.1	4.01	7.3	1500	69.7	44.1	0.63	2.65	78.8	26.3	-
				1800	53.2	3.93	39.7	97.4	3.96	6.6	1800	70.7	47.9	0.68	2.82	80.3	25.1	-
50	8.0	1.7	3.8	1500	54.6	3.89	41.3	103.7	4.12	7.6	1500	70.2	44.0	0.63	3.16	80.9	22.2	3.9
				1800	55.8	4.01	42.1	98.7	4.08	7.0	1800	71.6	47.8	0.67	3.36	83.1	21.3	4.2
	12.0	3.5	8.1	1500	57.8	3.97	44.2	105.7	4.27	7.8	1500	70.9	44.4	0.63	3.09	81.4	22.9	3.7
				1800	58.9	4.06	45.1	100.3	4.25	7.2	1800	72.3	48.3	0.67	3.28	83.5	22.0	4.0
	16.0	6.0	13.8	1500	58.7	4.01	45.1	106.3	4.29	8.1	1500	71.6	44.9	0.63	3.04	82.0	23.6	3.4
				1800	60.0	4.11	46.0	100.9	4.28	7.4	1800	73.0	48.7	0.67	3.23	84.0	22.6	3.8
60	8.0	1.6	3.7	1500	61.3	4.15	47.1	107.8	4.32	8.5	1500	68.6	43.6	0.64	3.41	80.2	20.1	4.8
				1800	62.6	4.22	48.2	102.2	4.34	7.9	1800	70.3	47.4	0.67	3.62	82.7	19.4	5.1
	12.0	3.4	7.8	1500	64.1	4.22	49.7	109.6	4.45	8.8	1500	69.2	44.0	0.64	3.34	80.6	20.7	4.5
				1800	65.5	4.28	50.9	103.7	4.48	8.1	1800	71.0	47.8	0.67	3.55	83.1	20.0	4.8
	16.0	5.8	13.4	1500	65.5	4.27	50.9	110.4	4.49	9.1	1500	69.9	44.5	0.64	3.28	81.1	21.3	4.1
				1800	66.9	4.32	52.2	104.4	4.54	8.3	1800	71.7	48.3	0.67	3.49	83.6	20.6	4.6
70	8.0	1.6	3.6	1500	68.0	4.45	52.8	112.0	4.48	9.6	1500	69.1	44.0	0.64	3.79	82.1	18.3	6.0
				1800	69.5	4.47	54.2	105.7	4.55	8.9	1800	71.3	47.8	0.67	4.03	85.0	17.7	6.4
	12.0	3.3	7.5	1500	70.5	4.51	55.1	113.5	4.57	9.9	1500	69.8	44.4	0.64	3.71	82.5	18.8	5.6
				1800	72.1	4.52	56.6	107.1	4.67	9.1	1800	72.1	48.2	0.67	3.95	85.5	18.3	6.1
	16.0	5.6	12.9	1500	72.3	4.57	56.7	114.6	4.64	10.2	1500	70.5	44.8	0.64	3.65	82.9	19.3	5.2
				1800	73.9	4.57	58.4	108.0	4.75	9.4	1800	72.7	48.7	0.67	3.88	86.0	18.7	5.8
80	8.0	1.5	3.5	1500	74.7	4.74	58.5	116.1	4.62	10.8	1500	65.1	42.5	0.65	4.11	79.1	15.8	7.6
				1800	76.4	4.71	60.3	109.3	4.75	10.0	1800	67.5	46.2	0.68	4.38	82.5	15.4	8.0
	12.0	3.2	7.3	1500	76.5	4.80	60.1	117.2	4.67	11.1	1500	65.8	42.9	0.65	4.03	79.6	16.3	7.1
				1800	78.3	4.75	62.1	110.3	4.83	10.3	1800	68.2	46.6	0.68	4.28	82.8	15.9	7.7
	16.0	5.4	12.5	1500	78.8	4.86	62.2	118.6	4.75	11.5	1500	66.4	43.3	0.65	3.96	79.9	16.8	6.6
				1800	80.7	4.80	64.4	111.5	4.93	10.6	1800	68.9	47.1	0.68	4.22	83.3	16.3	7.3
90	8.0	1.4	3.3	1500	81.5	5.06	64.2	120.3	4.71	12.1	1500	59.9	40.9	0.68	4.40	74.9	13.6	9.5
				1800	83.4	4.99	66.4	112.9	4.90	11.2	1800	62.6	44.5	0.71	4.69	78.6	13.3	10.1
	12.0	3.0	7.0	1500	82.5	5.12	65.1	120.9	4.73	12.5	1500	60.6	41.3	0.68	4.32	75.3	14.0	8.9
				1800	84.6	5.01	67.5	113.5	4.95	11.6	1800	63.1	44.9	0.71	4.59	78.8	13.7	9.6
	16.0	5.2	12.0	1500	85.4	5.18	67.7	122.7	4.83	12.9	1500	61.2	41.8	0.68	4.24	75.6	14.4	8.2
				1800	87.6	5.06	70.3	115.1	5.07	11.9	1800	63.8	45.3	0.71	4.52	79.3	14.1	9.2
100	8.0	1.4	3.2	Operation not recommended							Operation not recommended							
	12.0	2.9	6.8								1500	58.9	40.2	0.68	4.77	75.2	12.3	11.0
											1800	61.7	43.7	0.71	5.08	79.0	12.1	12.0
	16.0	5.0	11.6								1500	59.4	40.7	0.68	4.68	75.4	12.7	10.2
											1800	62.3	44.2	0.71	5.00	79.3	12.5	11.4
110	8.0	1.3	3.1								Operation not recommended							
	12.0	2.8	6.5	Operation not recommended							1500	52.1	36.8	0.71	5.10	69.5	10.2	13.5
											1800	54.9	39.9	0.73	5.44	73.4	10.1	14.6
	16.0	4.8	11.2								1500	52.6	37.2	0.71	5.01	69.6	10.5	12.5
											1800	55.3	40.4	0.73	5.35	73.6	10.3	13.9
120	8.0	1.3	3.0								Operation not recommended							
	12.0	2.7	6.3								1500	50.7	37.4	0.74	5.63	69.9	9.0	16.3
											1800	53.6	40.7	0.76	6.01	74.1	8.9	17.7
	16.0	4.6	10.7								1500	51.1	37.8	0.74	5.52	70.0	9.3	15.2
											1800	54.1	41.1	0.76	5.91	74.3	9.2	16.8

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT072 - Performance Data

Dual Capacity ECM2.3 Low Speed (1700 CFM)

EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	10.0	2.3	5.4	Operation not recommended							Operation not recommended							
	13.0	3.6	8.2															
	16.0	5.0	11.6	1400	32.1	3.40	20.5	91.2	2.76	6.0								
				1700	33.6	3.44	21.9	88.3	2.86	5.4								
30	10.0	2.3	5.3	Operation not recommended							Operation not recommended							
	13.0	3.5	8.0	1400	35.8	3.43	24.1	93.7	3.06	6.0	1400	54.9	33.6	0.61	1.81	61.1	30.3	-
				1700	37.6	3.47	25.8	90.5	3.18	5.5	1700	56.8	38.6	0.68	1.93	63.4	29.4	-
	16.0	4.9	11.3	1400	37.4	3.43	25.7	94.7	3.20	6.2	1400	55.0	33.5	0.61	1.74	61.0	31.6	-
				1700	39.2	3.47	27.3	91.3	3.31	5.6	1700	56.6	38.5	0.68	1.87	63.0	30.2	-
40	10.0	2.2	5.1	Operation not recommended							Operation not recommended							
	13.0	3.4	7.8	1400	42.1	3.53	30.1	97.9	3.50	6.4	1400	57.5	35.5	0.62	1.99	64.2	28.9	-
				1700	44.0	3.54	31.9	94.0	3.64	5.9	1700	59.3	40.6	0.68	2.11	66.5	28.1	-
	16.0	4.7	11.0	1400	43.6	3.54	31.5	98.8	3.61	6.6	1400	57.6	35.5	0.62	1.93	64.1	29.9	-
				1700	45.6	3.55	33.4	94.8	3.76	6.0	1700	59.3	40.6	0.68	2.05	66.3	28.9	-
50	10.0	2.1	4.9	1400	47.1	3.57	34.9	101.2	3.87	6.7	1400	59.5	37.1	0.62	2.29	67.3	25.9	2.2
				1700	49.2	3.53	37.2	96.8	4.08	6.2	1700	61.3	42.1	0.69	2.41	69.6	25.4	2.4
	13.0	3.3	7.5	1400	47.8	3.61	35.5	101.6	3.88	6.9	1400	59.7	37.4	0.63	2.22	67.2	26.9	2.1
				1700	49.7	3.59	37.5	97.1	4.06	6.4	1700	61.5	42.5	0.69	2.33	69.5	26.4	2.3
	16.0	4.6	10.6	1400	49.2	3.63	36.8	102.5	3.97	7.1	1400	59.8	37.4	0.63	2.16	67.2	27.7	1.9
				1700	51.3	3.61	39.0	97.9	4.17	6.5	1700	61.6	42.5	0.69	2.27	69.4	27.1	2.2
60	10.0	2.1	4.8	1400	52.4	3.68	39.8	104.6	4.17	7.4	1400	57.8	36.6	0.63	2.52	66.4	22.9	3.2
				1700	54.6	3.61	42.3	99.7	4.43	6.8	1700	59.5	41.4	0.70	2.63	68.5	22.6	3.4
	13.0	3.2	7.3	1400	53.8	3.72	41.1	105.6	4.24	7.6	1400	58.0	37.0	0.64	2.44	66.4	23.8	3.0
				1700	56.0	3.66	43.5	100.5	4.49	7.0	1700	59.8	41.8	0.70	2.55	68.5	23.4	3.2
	16.0	4.4	10.3	1400	55.1	3.76	42.2	106.4	4.29	7.9	1400	58.3	37.1	0.64	2.39	66.4	24.4	2.7
				1700	57.3	3.69	44.7	101.2	4.54	7.2	1700	60.1	41.9	0.70	2.49	68.6	24.1	3.0
70	10.0	2.0	4.6	1400	57.8	3.82	44.7	108.2	4.44	8.2	1400	57.4	37.2	0.65	2.82	67.0	20.4	4.5
				1700	60.1	3.70	47.5	102.7	4.76	7.6	1700	59.0	41.9	0.71	2.93	69.0	20.2	4.7
	13.0	3.0	7.0	1400	60.0	3.85	46.8	109.7	4.56	8.4	1400	57.7	37.7	0.65	2.73	67.0	21.2	4.2
				1700	62.3	3.74	49.5	103.9	4.88	7.8	1700	59.4	42.4	0.71	2.84	69.1	20.9	4.5
	16.0	4.3	9.9	1400	61.0	3.91	47.7	110.4	4.57	8.7	1400	58.0	37.8	0.65	2.69	67.2	21.6	3.9
				1700	63.4	3.80	50.4	104.5	4.89	8.0	1700	59.9	42.5	0.71	2.78	69.4	21.5	4.3
80	10.0	1.9	4.5	1400	62.2	3.91	48.9	111.2	4.66	9.1	1400	54.8	36.4	0.66	3.14	65.5	17.4	6.2
				1700	64.5	3.77	51.6	105.1	5.01	8.4	1700	56.4	40.7	0.72	3.23	67.4	17.5	6.5
	13.0	2.9	6.8	1400	65.5	3.96	52.0	113.3	4.85	9.4	1400	55.2	36.8	0.67	3.06	65.6	18.0	5.8
				1700	67.9	3.80	54.9	107.0	5.23	8.7	1700	56.8	41.1	0.72	3.15	67.6	18.0	6.2
	16.0	4.2	9.6	1400	66.3	4.02	52.6	113.8	4.83	9.7	1400	55.6	37.0	0.67	3.01	65.9	18.5	5.3
				1700	68.5	3.87	55.3	107.3	5.19	9.0	1700	57.4	41.4	0.72	3.10	67.9	18.5	5.9
90	10.0	1.9	4.3	1400	66.8	4.03	53.1	114.2	4.86	10.2	1400	50.5	34.6	0.68	3.49	62.4	14.5	8.3
				1700	69.0	3.86	55.9	107.6	5.24	9.4	1700	52.1	38.3	0.74	3.56	64.3	14.6	8.8
	13.0	2.8	6.6	1400	71.1	4.09	57.2	117.0	5.10	10.5	1400	51.1	34.9	0.68	3.42	62.7	14.9	7.7
				1700	73.5	3.88	60.3	110.0	5.55	9.8	1700	52.6	38.8	0.74	3.49	64.6	15.1	8.4
	16.0	4.0	9.3	1400	71.6	4.14	57.5	117.3	5.07	10.8	1400	51.6	35.2	0.68	3.36	63.1	15.3	7.2
				1700	73.8	3.96	60.3	110.2	5.47	10.1	1700	53.2	39.1	0.74	3.44	64.9	15.5	7.9
100	10.0	1.8	4.2	Operation not recommended							Operation not recommended							
	13.0	2.7	6.3								1400	49.0	34.8	0.71	3.86	62.1	12.7	10.0
											1700	50.6	38.5	0.76	3.91	63.9	12.9	10.8
	16.0	3.9	8.9								1400	49.6	35.2	0.71	3.80	62.6	13.0	9.3
											1700	51.1	38.9	0.76	3.85	64.3	13.3	10.3
110	10.0	1.7	4.0	Operation not recommended							Operation not recommended							
	13.0	2.6	6.1								1400	43.5	32.6	0.75	4.31	58.2	10.1	12.7
											1700	45.0	35.9	0.80	4.33	59.8	10.4	13.7
	16.0	3.7	8.6								1400	44.3	33.1	0.75	4.26	58.8	10.4	11.8
											1700	45.6	36.4	0.80	4.28	60.2	10.7	13.1
120	10.0	1.7	3.8	Operation not recommended							Operation not recommended							
	13.0	2.5	5.8								1400	40.7	31.8	0.78	4.87	57.3	8.4	15.7
											1700	42.2	34.8	0.83	4.84	58.7	8.7	17.0
	16.0	3.6	8.2								1400	41.5	32.3	0.78	4.78	57.8	8.7	14.6
											1700	42.7	35.4	0.83	4.78	59.0	8.9	16.2

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

GT072 - Performance Data

Dual Capacity ECM2.3 High Speed (2200 CFM)

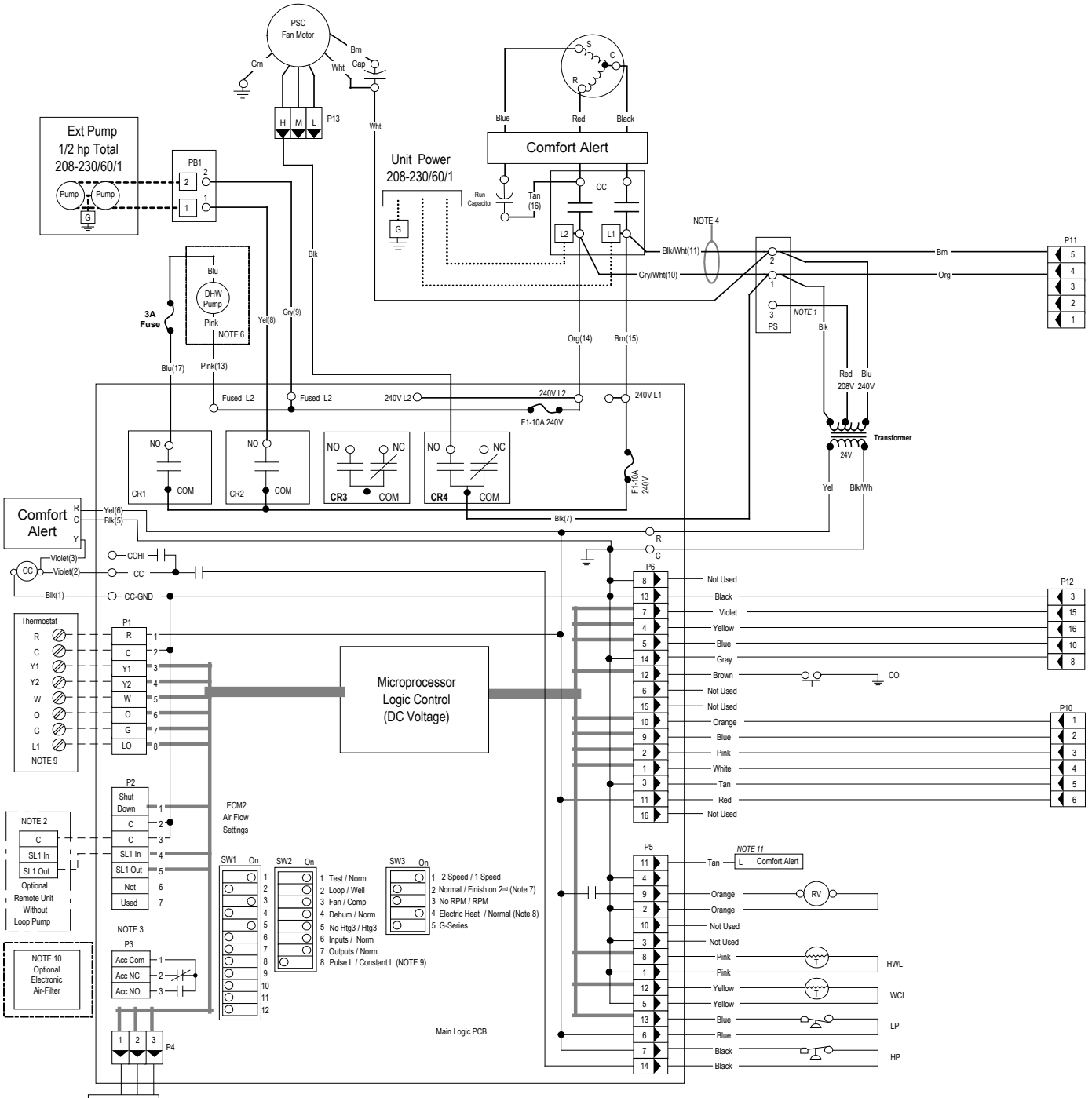
EWT °F	Flow gpm	WPD PSI	WPD FT	HEATING - EAT 70°F Airflow cfm	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	COOLING - EAT 80/67 °F Airflow cfm	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
20	12.0	3.3	7.6	Operation not recommended							Operation not recommended							
	15.0	4.6	10.7															
	18.0	6.2	14.3	1850	44.9	4.15	30.8	92.5	3.17	7.8								
				2200	46.6	4.42	31.5	89.6	3.09	7.1								
30	12.0	3.2	7.4	Operation not recommended							Operation not recommended							
	15.0	4.5	10.4	1850	52.1	4.31	37.4	96.1	3.54	8.2	1850	71.7	43.7	0.61	2.55	80.4	28.1	-
				2200	53.9	4.59	38.3	92.7	3.45	7.6	2200	73.0	47.6	0.65	2.71	82.3	27.0	-
	18.0	6.0	13.9	1850	52.5	4.35	37.7	96.3	3.54	8.5	1850	72.4	44.5	0.61	2.51	81.0	28.9	-
				2200	54.5	4.63	38.7	92.9	3.45	7.7	2200	73.8	47.9	0.65	2.66	82.8	27.7	-
40	12.0	3.1	7.1	Operation not recommended							Operation not recommended							
	15.0	4.4	10.1	1850	60.4	4.58	44.8	100.2	3.87	9.1	1850	74.6	46.6	0.62	3.08	85.1	24.2	-
				2200	62.5	4.79	46.1	96.3	3.82	8.4	2200	76.0	50.6	0.67	3.27	87.1	23.3	-
	18.0	5.8	13.5	1850	61.2	4.63	45.4	100.7	3.88	9.4	1850	75.3	47.4	0.63	3.02	85.6	24.9	-
				2200	63.4	4.84	46.8	96.7	3.84	8.5	2200	76.8	51.0	0.66	3.22	87.7	23.9	-
50	12.0	3.0	6.9	1850	64.3	4.77	48.0	102.2	3.95	9.8	1850	75.9	48.4	0.64	3.74	88.7	20.3	4.3
				2200	66.5	4.94	49.6	98.0	3.94	9.1	2200	77.5	52.6	0.68	3.97	91.1	19.5	4.6
	15.0	4.2	9.8	1850	67.9	4.86	51.3	104.0	4.10	10.1	1850	76.7	48.9	0.64	3.66	89.2	21.0	4.0
				2200	70.2	5.02	53.0	99.5	4.10	9.3	2200	78.2	53.2	0.68	3.89	91.5	20.1	4.4
	18.0	5.7	13.1	1850	69.1	4.92	52.3	104.6	4.12	10.5	1850	77.5	49.9	0.64	3.60	89.8	21.5	3.7
				2200	71.4	5.07	54.1	100.0	4.13	9.6	2200	79.0	53.7	0.68	3.83	92.1	20.6	4.1
60	12.0	2.9	6.7	1850	72.3	5.08	54.9	106.2	4.17	11.0	1850	74.6	48.5	0.65	3.97	88.1	18.8	5.3
				2200	74.6	5.18	56.9	101.4	4.22	10.2	2200	76.1	52.4	0.69	4.22	90.6	18.0	5.6
	15.0	4.1	9.5	1850	75.5	5.17	57.8	107.8	4.28	11.4	1850	75.3	49.0	0.65	3.89	88.6	19.4	4.9
				2200	77.9	5.25	60.0	102.8	4.35	10.5	2200	76.9	53.0	0.69	4.13	91.0	18.6	5.3
	18.0	5.5	12.7	1850	77.2	5.23	59.3	108.6	4.32	11.7	1850	76.1	49.8	0.65	3.82	89.2	19.9	4.5
				2200	79.7	5.31	61.6	103.5	4.40	10.8	2200	77.7	53.6	0.69	4.07	91.6	19.1	5.1
70	12.0	2.8	6.5	1850	80.3	5.40	61.9	110.2	4.36	12.4	1850	74.5	49.5	0.66	4.42	89.6	16.9	6.6
				2200	82.9	5.44	64.3	104.9	4.47	11.5	2200	76.1	53.2	0.70	4.70	92.1	16.2	7.0
	15.0	4.0	9.1	1850	83.2	5.48	64.5	111.6	4.44	12.8	1850	75.3	50.0	0.66	4.33	90.0	17.4	6.1
				2200	85.8	5.49	67.1	106.1	4.58	11.8	2200	76.8	53.7	0.70	4.60	92.5	16.7	6.7
	18.0	5.3	12.2	1850	85.3	5.55	66.4	112.7	4.50	13.2	1850	76.1	50.5	0.66	4.25	90.6	17.9	5.7
				2200	88.1	5.55	69.2	107.1	4.65	12.1	2200	77.6	54.4	0.70	4.53	93.1	17.1	6.3
80	12.0	2.7	6.3	1850	87.5	5.76	67.8	113.8	4.45	14.0	1850	71.3	48.2	0.68	4.75	87.5	15.0	8.3
				2200	90.3	5.72	70.8	108.0	4.63	12.9	2200	72.8	52.1	0.72	5.05	90.0	14.4	8.8
	15.0	3.8	8.8	1850	89.5	5.83	69.6	114.8	4.50	14.4	1850	72.0	48.6	0.68	4.65	87.9	15.5	7.8
				2200	92.4	5.76	72.7	108.9	4.70	13.3	2200	73.5	52.5	0.71	4.95	90.3	14.9	8.4
	18.0	5.1	11.8	1850	92.2	5.91	72.1	116.2	4.57	14.8	1850	72.8	49.4	0.68	4.57	88.4	15.9	7.2
				2200	95.3	5.82	75.4	110.1	4.80	13.7	2200	74.3	53.1	0.71	4.87	90.9	15.3	8.0
90	12.0	2.6	6.0	1850	94.7	6.13	73.8	117.4	4.53	15.7	1850	66.7	45.8	0.69	4.96	83.6	13.4	10.5
				2200	97.8	6.00	77.3	111.2	4.77	14.5	2200	68.0	49.7	0.73	5.28	86.1	12.9	11.1
	15.0	3.7	8.5	1850	96.0	6.19	74.9	118.0	4.54	16.2	1850	67.3	46.2	0.69	4.86	83.9	13.9	9.8
				2200	99.1	6.03	78.5	111.7	4.82	15.0	2200	68.7	50.2	0.73	5.18	86.3	13.3	10.6
	18.0	4.9	11.4	1850	99.3	6.28	77.9	119.7	4.63	16.7	1850	68.0	47.1	0.69	4.78	84.4	14.2	9.1
				2200	102.6	6.10	81.8	113.2	4.93	15.4	2200	69.4	50.7	0.73	5.09	86.8	13.6	10.1
100	12.0	2.5	5.8	Operation not recommended							Operation not recommended							
	15.0	3.6	8.2								1850	64.5	45.5	0.71	5.36	82.8	12.0	12.1
											2200	65.8	49.2	0.75	5.71	85.3	11.5	13.1
	18.0	4.8	11.0								1850	65.2	46.2	0.71	5.27	83.2	12.4	11.2
											2200	66.6	49.7	0.75	5.61	85.7	11.9	12.5
110	12.0	2.4	5.6								Operation not recommended							
	15.0	3.4	7.9								1850	57.6	42.1	0.73	5.60	76.7	10.3	14.8
											2200	58.8	45.4	0.77	5.96	79.1	9.9	16.1
	18.0	4.6	10.6								1850	58.2	42.6	0.73	5.51	77.0	10.6	13.8
											2200	59.4	45.8	0.77	5.86	79.4	10.2	15.3
120	12.0	2.3	5.4								Operation not recommended							
	15.0	3.3	7.6								1850	54.5	40.9	0.75	6.15	75.5	8.9	17.9
											2200	55.7	44.1	0.79	6.54	78.0	8.5	19.4
	18.0	4.4	10.2								1850	55.2	41.3	0.75	6.04	75.8	9.1	16.6
											2200	56.3	44.5	0.79	6.42	78.2	8.8	18.5

IMPORTANT NOTE: Refer to the Notes to Capacity Tables for additional information.

Rev: 10/10/06

Wiring Schematics - Residential

GS Series - Single Speed Wiring Schematic - 208-230/60/1 - PSC



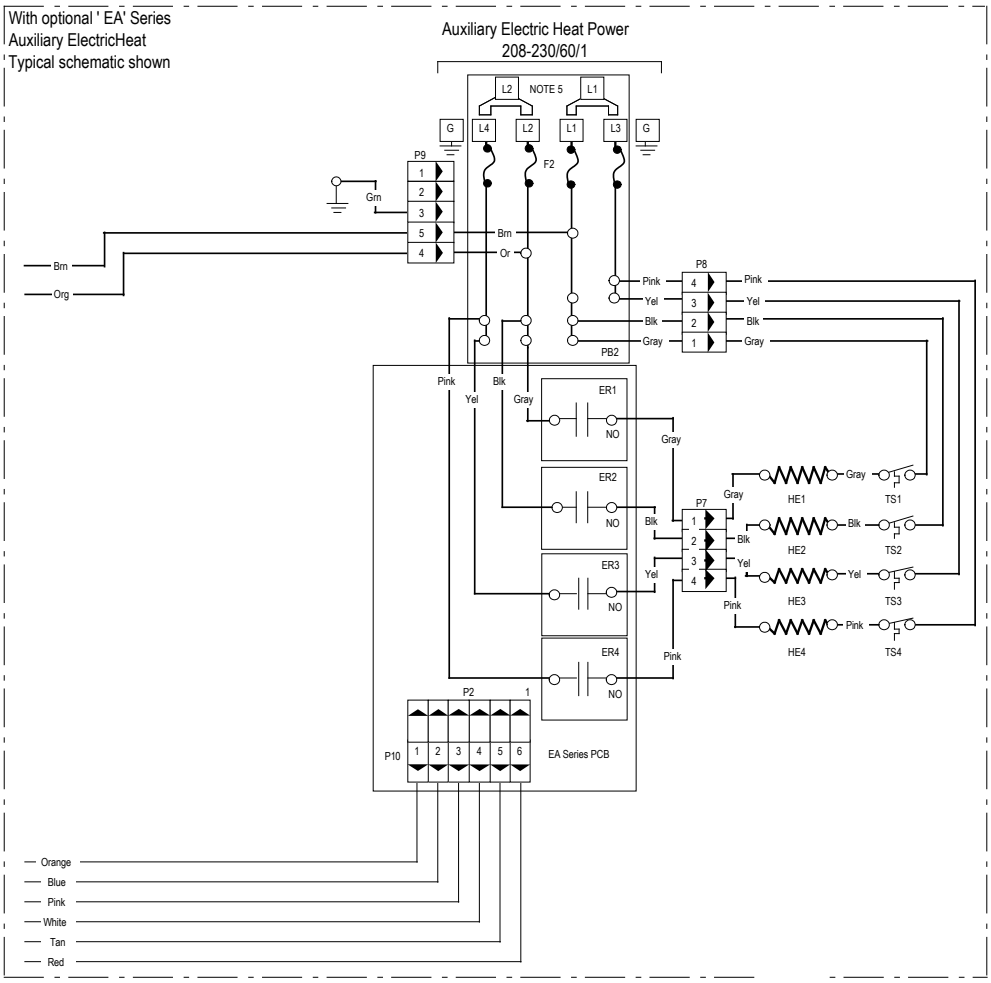
LED	Normal Display Mode	Diagnostic Modes			
		Current Fault Status	Inputs	Outputs	Outputs2
	Field Selection Dips - #1 On, #6 On, #7 On	#1 Off, #6 On, #7 On	#6 Off, #7 On	#6 On, #7 Off	#6 Off, #7 Off
Drain	Drain pan overflow Lockout	Drain pan overflow	Y1	Compressor Lo	Blower Lo
Water Flow	WCL thermistor (loop<15°F,well<30°F) Lockout	WCL thermistor (loop<15°F,well<30°F)	Y2	Compressor Hi	Blower Med
High Press	High Pressure	High Pressure	O	RV	Blower Hi
Low Press / CA	Low Pressure / Comfort Alert	Low Pressure / Comfort Alert	G	FAN	Aux Heat #1
Air Flow / Fan	ECM2 RPM < 100 rpm Lockout	ECM2 RPM < 100 rpm	W	DHW Pump	Aux Heat #2
Status	Microprocessor malfunction*	Not Used	SL1	Loop Pump 1	AuxHeat #3
DHW Limit	HWL thermistor > 130°F	HWL thermistor > 130°F	SL2	Loop Pump 2	Aux Heat #4
DHW off	DHW pump switch off	DHW pump switch off	--	--	--

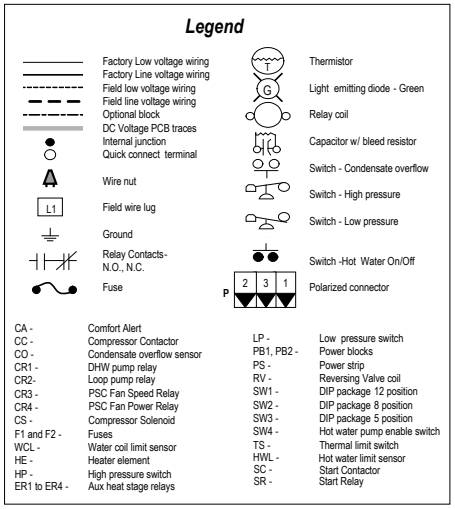
*Green LED not flashing

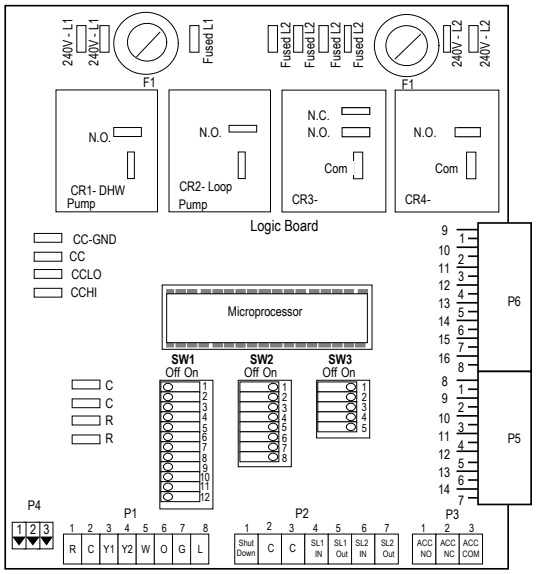
Comfort Alert Status		
LED	Flash Code	Description
Green	Solid	Module Has Power
Red	Solid	Y1 Present But Compressor Not Running
Yellow	Code 1	Long Run Time
	Code 2	System Pressure Trip
	Code 3	Short Cycling
	Code 4	Locked Rotor
	Code 5	Open Circuit
	Code 6	Open Start Circuit
	Code 7	Open Run Circuit
	Code 8	Welded Contactor
	Code 9	Low Voltage

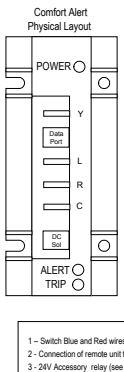
Wiring Schematics - Residential cont.

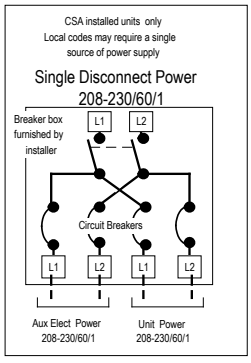
GS Series - Single Speed Wiring Schematic - 208-230/60/1 - PSC cont.











Notes:
1 – Switch Blue and Red wires for 208V operation.
2 - Connection of remote unit that does not have a loop pump for slave operation.
3 - 24V Accessory relay (see SW2 - 3 for description of operation)
4 - The blk/wh and gray/wh wires are removed when Aux Heat is installed.
5 - Buss lugs L1 and L2 can be removed and dual power wire sets connected directly to box lugs L 1, L2, and L3, L4.
6 - DHW pump only in models with hot water generation option.
7 – This Switch allows the unit to down stage with the t -stat when OFF and finish on second stage when ON. Finish second stage reduces stage changing in recip dual capacity compressors and should be ON for unzoned Dual Cap G-Series 2 speed units.
8 – SW3-4 should be in the OFF position when using the 17P501A01 electric heat board and should be ON when using the 17P514A01 electric heat board.
9 – SW2-8 must be in the OFF position for pulsed "L" lockout signal and in the ON position for constant "L" lockout signal.
10 - When optional electronic air -filter is installed, power for the electronic air -filter is provided by P-2-2 and 24 VAC.
11- Comfort Alert fault output to the Control Board

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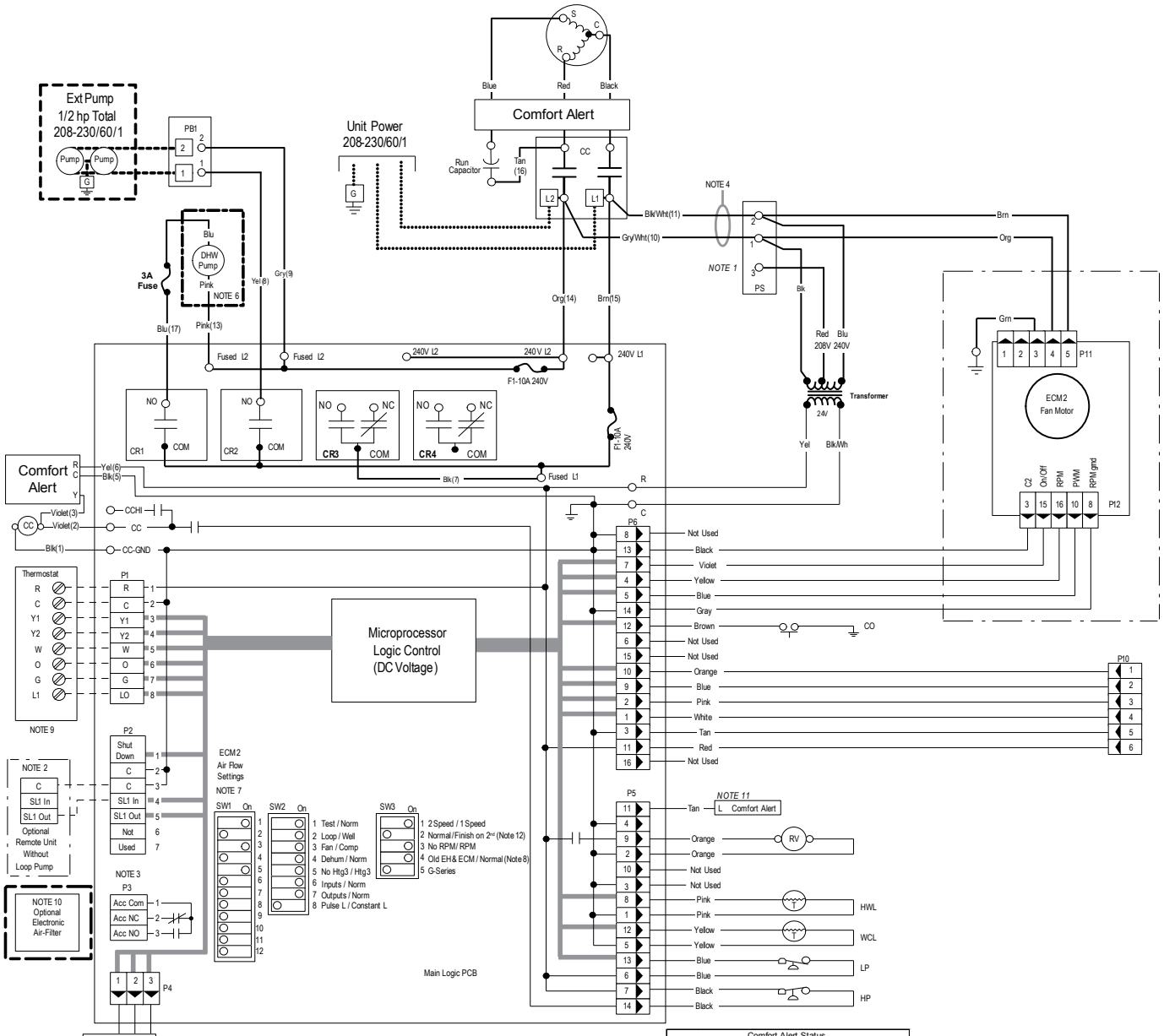
Wiring Schematics - Residential cont.

Single Speed - 208-230/60/1



LED	Normal Display Mode	Diagnostic Modes			
		Current Fault Status	Inputs	Outputs	Outputs2
	Field Selection Dips - #1 On, #6 On, #7 On	#1 Off, #6 On , #7 On	#6 Off, #7 On	#6 On, #7 Off	#6 Off, #7 Off
Drain	Drain pan overflow Lockout	Drain pan overflow	Y1	Compressor Lo	Blower Lo
Water Flow	WCL thermistor (loop <15°F well <30°F) Lockout	WCL thermistor (loop<15°F, well<30°F)	Y2	Compressor Hi	Blower Med
High Press	High Pressure	High Pressure	O	RV	Blower Hi
Low Press/ CA	Low Pressure / Comfort Alert	Low Pressure / Comfort Alert	G	FAN	Aux Heat#1
Air Flow / Fan	ECM2 RPM < 100 rpm Lockout	ECM2 RPM < 100 rpm	W	DHW Pump	Aux Heat#2
Status	Microprocessor malfunction *	Not Used	SL1	Loop Pump1	AuxHeat #3
DHW Limit	HWL thermistor > 130 °F	HWL thermistor >130°F	SL2	Loop Pump2	Aux Heat#4
DHW off	DHW pump switch off	DHW pump switch off	--	--	--

*Status LED not flashing

Comfort Alert Status		
LED	Flash Code	Description
Green or Blue	Solid	Module Has Power
Red	Solid	Y1 Present But Compressor Not Running
Yellow	Code 1	Long Run Time
	Code 2	System Pressure Trip
	Code 3	Short Cycling
	Code 4	Locked Rotor
	Code 5	Open Circuit
	Code 6	Open Start Circuit
	Code 7	Open Run Circuit
	Code 8	Welded Contactor
	Code 9	Low Voltage

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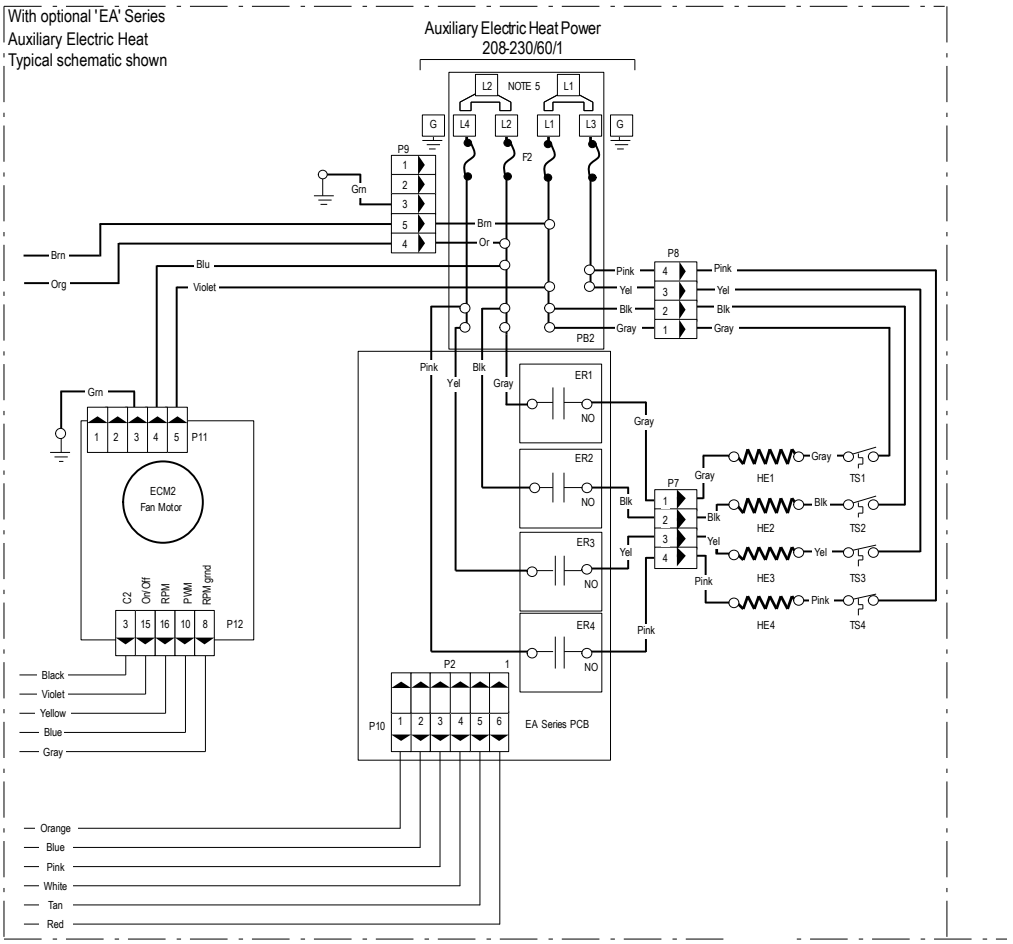
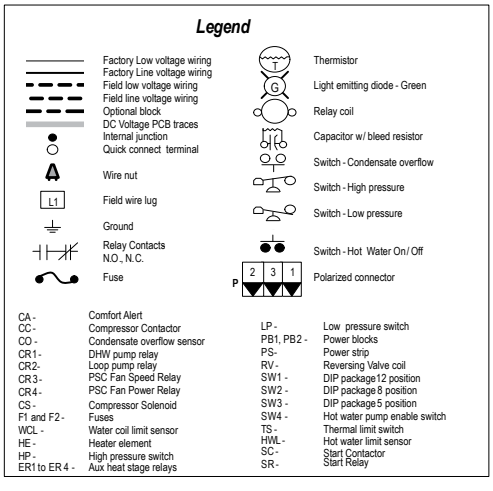
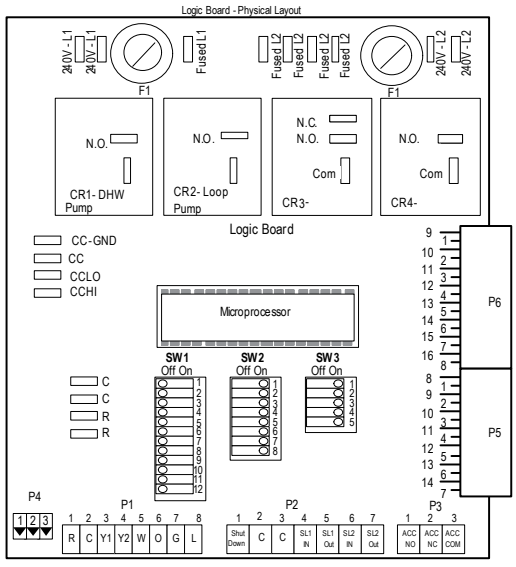
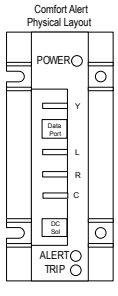
Wiring Schematics - Residential cont.

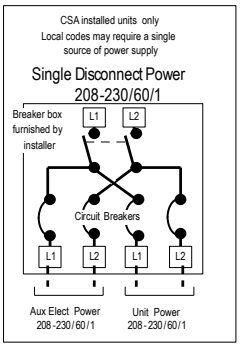
Single Speed - 208-230/60/1 cont.











Notes:

1 - Switch Blue and Red wires for 208 V operation.
2 - Connection of remote unit that does not have a loop pump for slave operation.
3 - 24V Accessory relay (see SW 2 - 3 for description of operation)
4 - The blk/wh and gray/wh wires are removed when Aux Heat is installed.
5 - Buss lugs L1 and L 2 can be removed and dual power wire sets connected directly to box lugs L1 , L2 , and L3, L4.
6 - DHW pump only in models with hot water generation option.
7 - Air Flow Configuration Example: SW1 configured for dip 1 as low, dip 3 as medium , and dip 5 as high Speed ECM2 fan
8 - SW 3-4 should be in the OFF position when using ECM motor and 17P501A01 electric heat board and should be ON when using ECM2 with 17P514 A01 electric heat board
9 - SW 2-8 must be in the OFF position for pulsed "L" lockout signal and in the ON position for constant "L" lockout signal
10 - When optional electronic air - filter is installed, power for the electronic air -filter is provided by P2- 2 and VAC24.
11 - Comfort Alert fault output to the Control Board
12 - This Switch allows the unit to down stage with the t -stat when OFF and finish on second stage when ON. Finish second stage reduces stage changing in recip dual capacity compressors and should be ON for unzoned Dual Cap E - Series or P- Series 2 speed units.
13 - Status LED may be Green or Blue depending on model.

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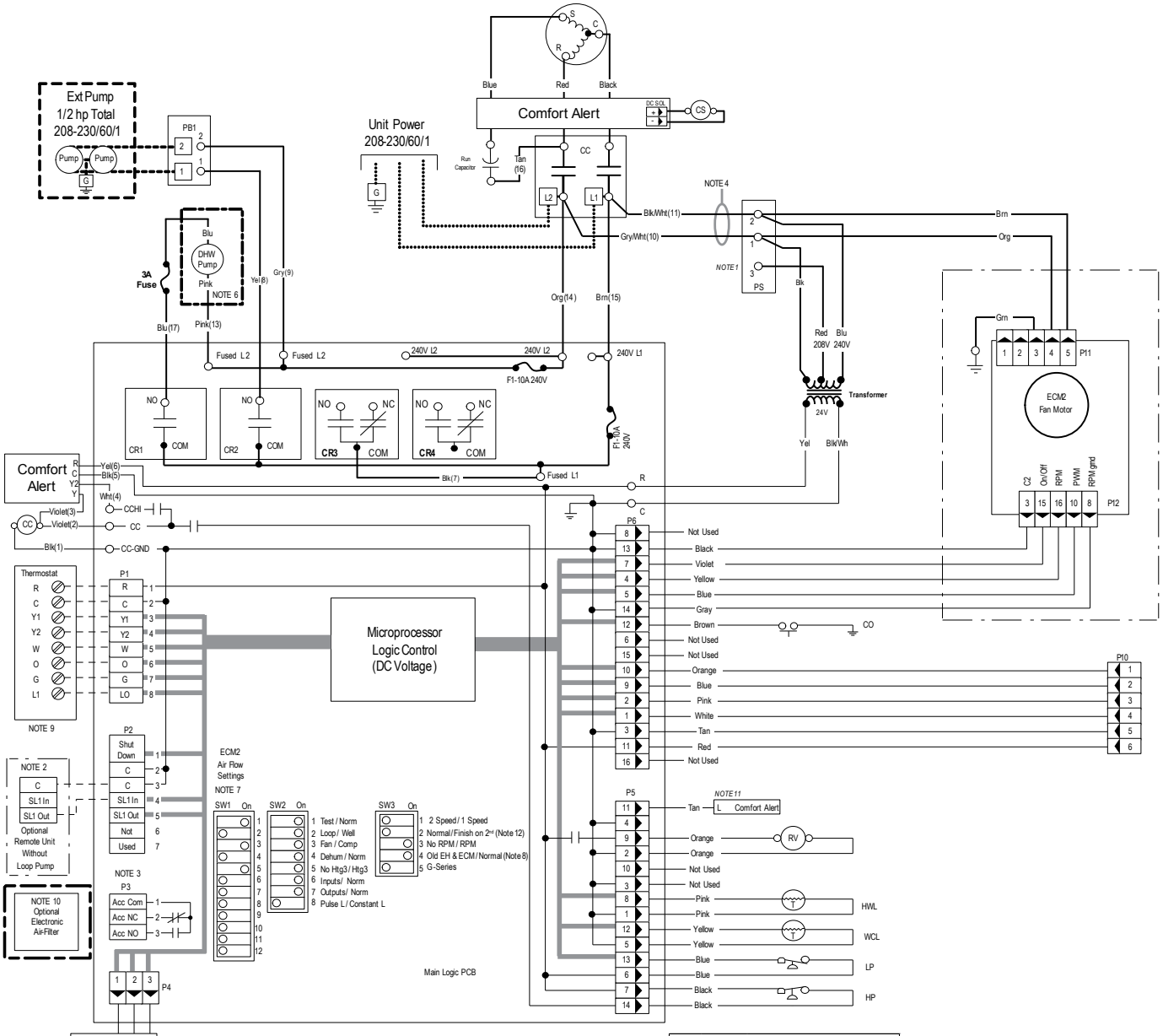
Wiring Schematics - Residential cont.

Dual Capacity - 208-230/60/1



LED	Normal Display Mode	Diagnostic Modes			
		Current Fault Status	Inputs	Outputs	Outputs2
	Field Selection Dips- #1 On , #6 On, #7 On	#1 Off, #6 On, #7 On	#6 Off, #7 On	#6 On, #7 Off	#6 Off, #7 Off
Drain	Drain pan overflow Lockout	Drain pan overflow	Y1	Compressor Lo	Blower Lo
Water Flow	WCL thermistor (loop<15°F, well<30°F) Lockout	WCL thermistor(loop<15°F, well<30°F)	Y2	Compressor Hi	Blower Med
High Press	High Pressure	High Pressure	O	RV	Blower Hi
Low Press/CA	Low Pressure / Comfort Alert	Low Pressure / Comfort Alert	G	FAN	Aux Heat#1
Air Flow / Fan	ECM2 RPM < 100 rpm Lockout	ECM2 RPM< 100 rpm	W	DHW Pump	Aux Heat#2
Status	Microprocessor malfunction*	Not Used	SL1	Loop Pump1	AuxHeat#3
DHW Limit	HWL thermistor> 130°F	HWL thermistor> 130°F	SL2	Loop Pump2	Aux Heat#4
DHW off	DHW pump switch off	DHW pump switch off	--	--	--

*Status LED not flashing

Comfort Alert Status		
LED	Flash Code	Description
Green or Blue	Solid	Module Has Power
Red	Solid	Y1 Present But Compressor Not Running
Yellow	Code 1	Long Run Time
	Code 2	System Pressure Trip
	Code 3	Short Cycling
	Code 4	Locked Rotor
	Code 5	Open Circuit
	Code 6	Open Start Circuit
	Code 7	Open Run Circuit
	Code 8	Welded Contactor
	Code 9	Low Voltage

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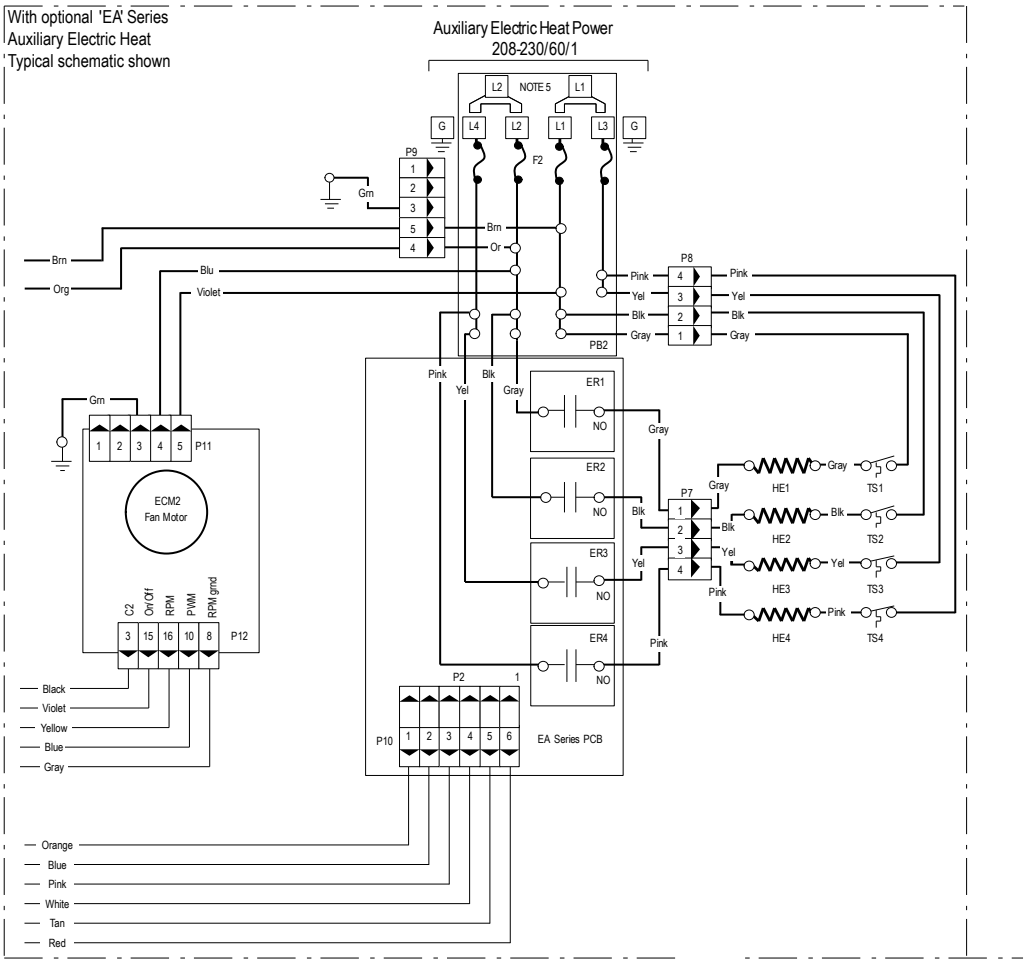
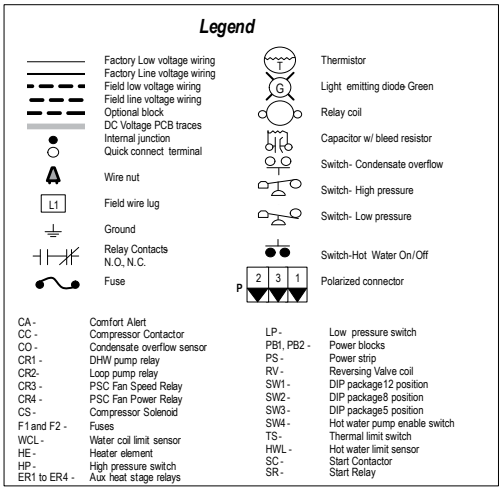
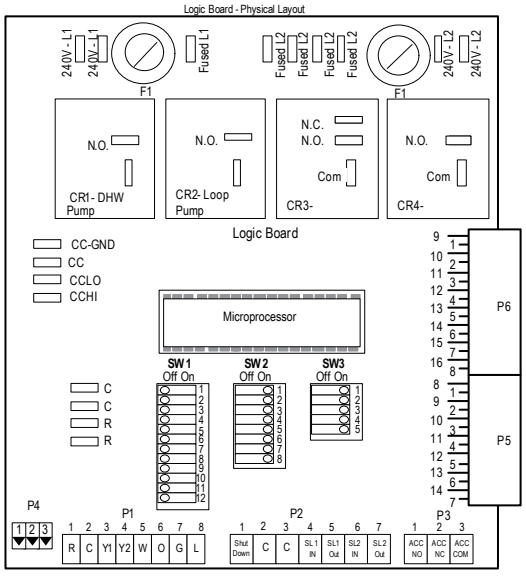
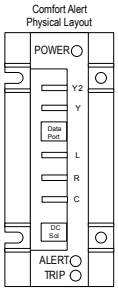
Wiring Schematics - Residential cont.

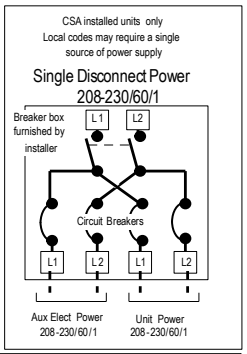
Dual Capacity - 208-230/60/1 cont.











Notes:

1 - Switch Blue and Red wires for 208V operation.
2 - Connection of remote unit that does not have a loop pump for slave operation.
3 - 24V Accessory relay (see SW 2 - 3 for description of operation)
4 - The blk/ wh and gray / wh wires are removed when Aux Heat is installed.
5 - Buss lugs L1 and L 2 can be removed and dual power wire sets connected directly to box lugs L1 , L 2, and L3, L4.
6 - DHW pump only in models with hot water generation option.
7 - Air Flow Configuration Example: SW 1 configured for dip 1 as low, dip 3 as medium , and dip 5 as high Speed ECM2 fan
8 - SW 3 - 4 should be in the OFF position when using ECM motor and 17P501A01 electric heat board and should be ON when using ECM2 with 17P514A01 electric heat board
9 - SW 2 - 8 must be in the OFF position for pulsed "L" lockout signal and in the ON position for constant "L" lockout signal.
10 - When optional electronic air - filter is installed, power for the electronic air - filter is provided by P2- 2 and 24 VAC.
11 - Comfort Alert fault output to the Control Board
12 - This Switch allows the unit to down stage with the t - stat when OFF and finish on second stage when ON . Finish second stage reduces stage changing in recip dual capacity compressors and should be ON for unzoned Dual Cap G- Series 2 speed units.
13 - Status LED may be Green or Blue depending on model .

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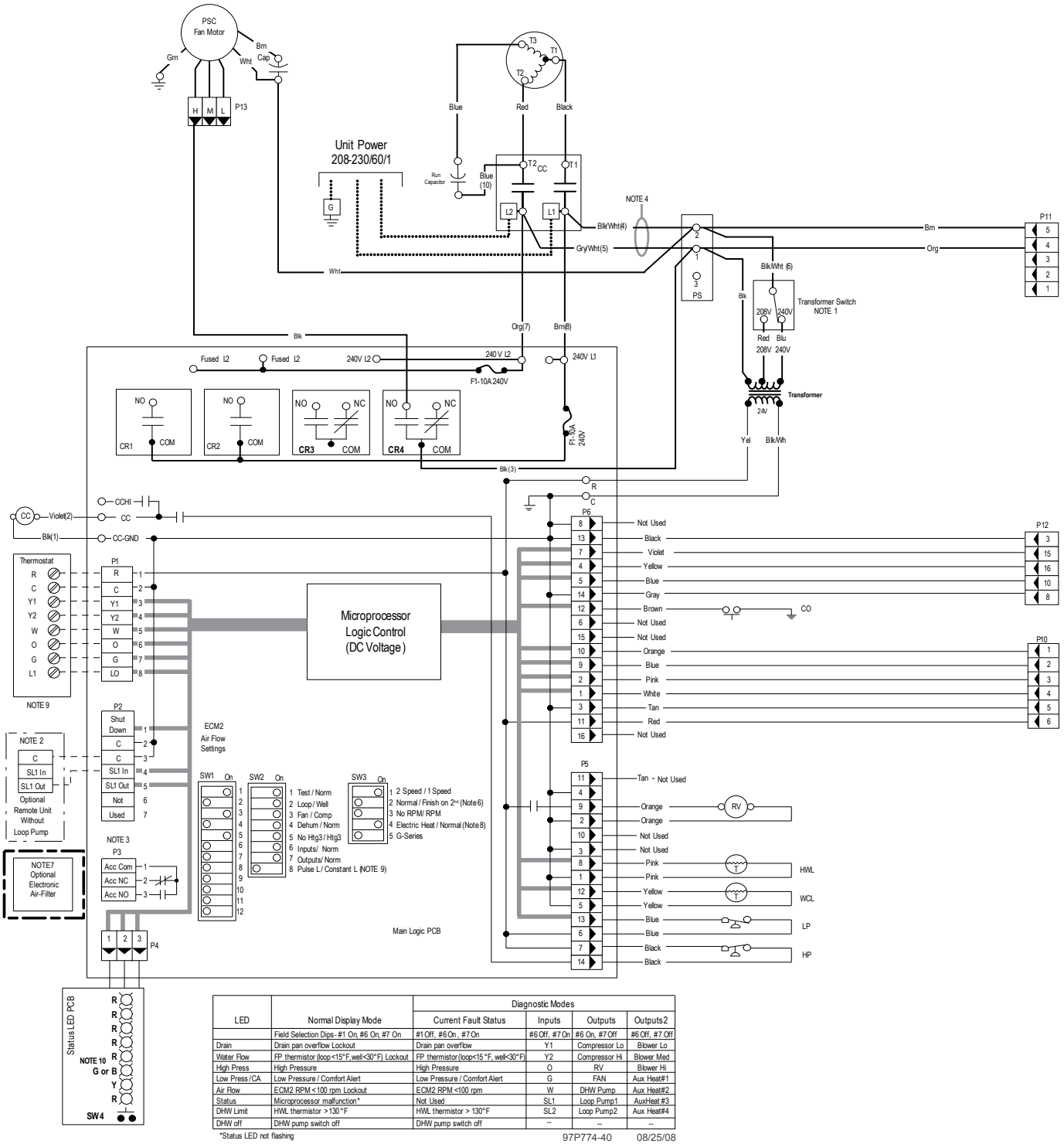
Wiring Schematics - Commercial

Single Speed - 208-230/60/1



LED	Normal Display Mode	Diagnostic Modes			
		Current Fault Status	Inputs	Outputs	Outputs2
	Field Selection Dips - #1 On, #6 On, #7 On	#1 Off, #6 On , #7 On	#6 Off, #7 On	#6 On, #7 Off	#6 Off, #7 Off
Drain	Drain pan overflow Lockout	Drain pan overflow	Y1	Compressor Lo	Blower Lo
Water Flow	FP thermistor (loop<15°F,well<30°F) Lockout	FP thermistor(loop<15 °F, well<30°F)	Y2	Compressor Hi	Blower Med
High Press	High Pressure	High Pressure	O	RV	Blower Hi
Low Press / CA	Low Pressure / Comfort Alert	Low Pressure / Comfort Alert	G	FAN	Aux Heat#1
Air Flow	ECM2 RPM < 100 rpm Lockout	ECM2 RPM <100 rpm	W	DHW Pump	Aux Heat#2
Status	Microprocessor malfunction*	Not Used	SL1	Loop Pump1	AuxHeat #3
DHW Limit	HWL thermistor > 130 °F	HWL thermistor > 130°F	SL2	Loop Pump2	Aux Heat#4
DHW off	DHW pump switch off	DHW pump switch off	--	--	--

*Status LED not flashing

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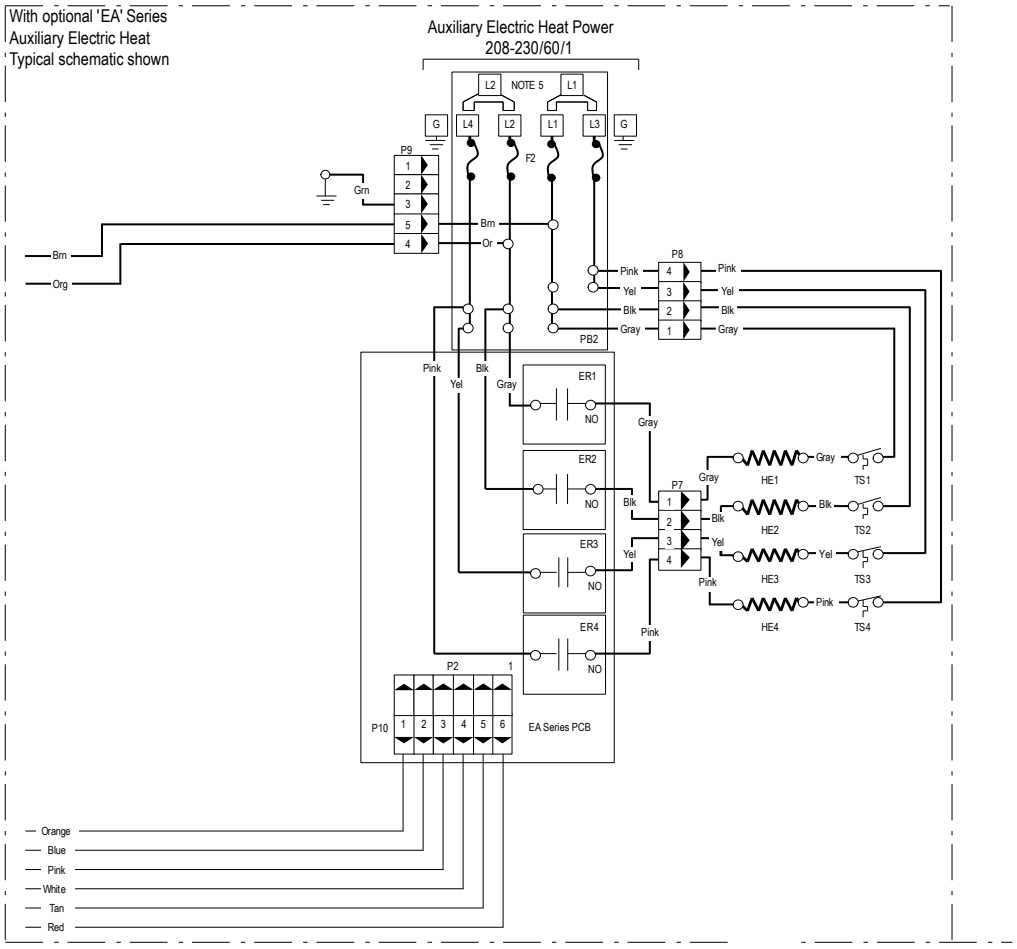
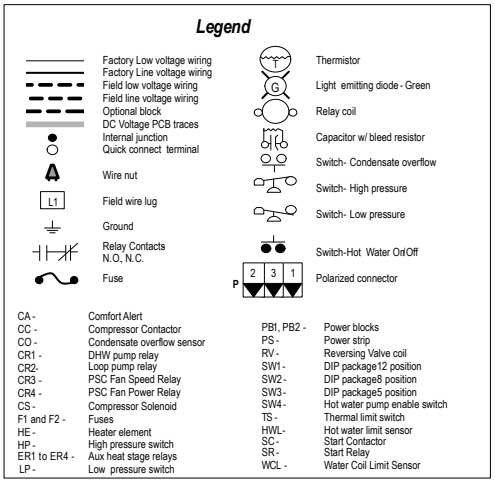
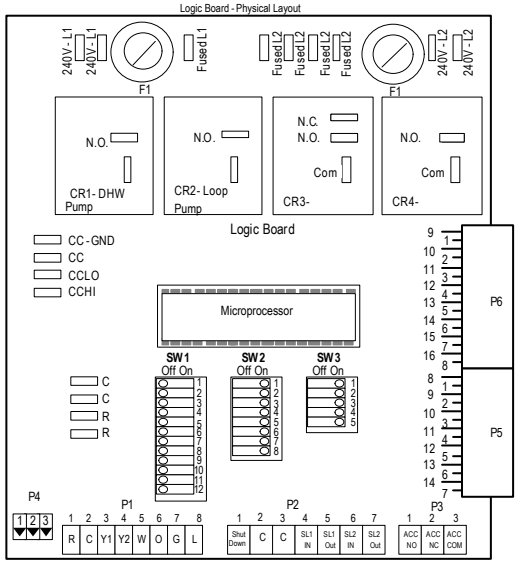
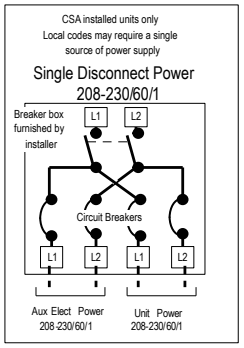
Wiring Schematics - Commercial cont.

Single Speed - 208-230/60/1 cont.









Notes:

1 - Place switch to 208V position to operate unit at 208V.
2 - Connection of remote unit that does not have a loop pump for slave operation.
3 - 24 V Accessory relay (see SW 2- 3 for description of operation)
4 - The blk /wh and gray/wh wires are removed when Aux Heat is installed.
5 - Buss lugs L 1 and L 2 can be removed and dual power wire sets connected directly to box lugs L1 , L2 , and L3, L 4.
6 - This Switch allows the unit to down stage with the t - stat when OFF and finish on second stage when ON. Finish second stage reduces stage changing in recip dual capacity compressors and should be ON for unzoned Dual Cap G-Series 2 speed units.
7 - When optional electronic air -filter is installed, power for the electronic air -filter is provided by P2- 2 and 24 VAC.
8 - SW3- 4 should be in the OFF position when using the 17P501 A01 electric heat board and should be ON when using the 17P514 A01 electric heat board .
9 - SW 2-8 must be in the OFF position for pulsed "L" lockout signal and in the ON position for constant "L" lockout signal .
10 - Status LED may be Green or Blue depending on model.

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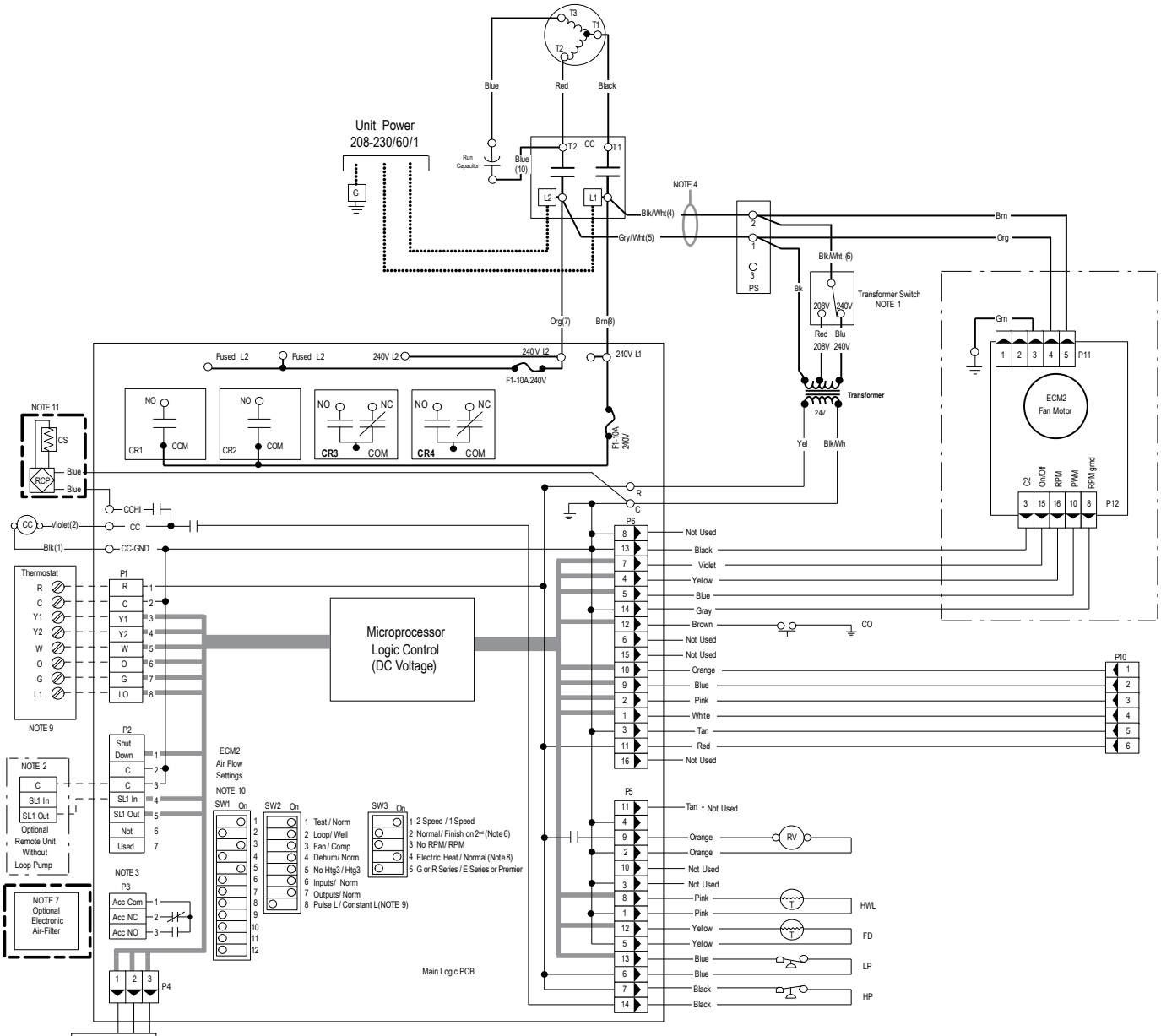
Wiring Schematics - Commercial cont.

Dual Capacity - 208-230/60/1



LED	Normal Display Mode	Diagnostic Modes			
		Current Fault Status	Inputs	Outputs	Outputs2
	Field Selection Dips #1 On, #6 On, #7 On	#1 Off, #6 On, #7 On	#6 Off, #7 On	#6 On , #7 Off	#6 Off, #7 Off
Drain	Drain pan overflow Lockout	Drain pan overflow	Y1	Compressor Lo	Blower Lo
Water Flow	FD thermistor (loop< 15° F,well <30° F) Lockout	FD thermistor (loop<15° F, well <30° F)	Y2	Compressor Hi	Blower Med
High Press	High Pressure	High Pressure	O	RV	Blower Hi
Low Press/ CA	Low Pressure / Comfort Alert	Low Pressure / Comfort Alert	G	FAN	Aux Heat#1
Air Flow	ECM2 RPM< 100 rpm Lockout	ECM2 RPM < 100 rpm	W	DHW Pump	Aux Heat#2
Status	Microprocessor malfunction*	Not Used	SL1	Loop Pump1	AuxHeat #3
DHW Limit	HWL thermistor > 130°F	HWL thermistor > 130°F	SL2	Loop Pump2	Aux Heat#4
DHW off	DHW pump switch off	DHW pump switch off	--	--	--

*Green LED not flashing

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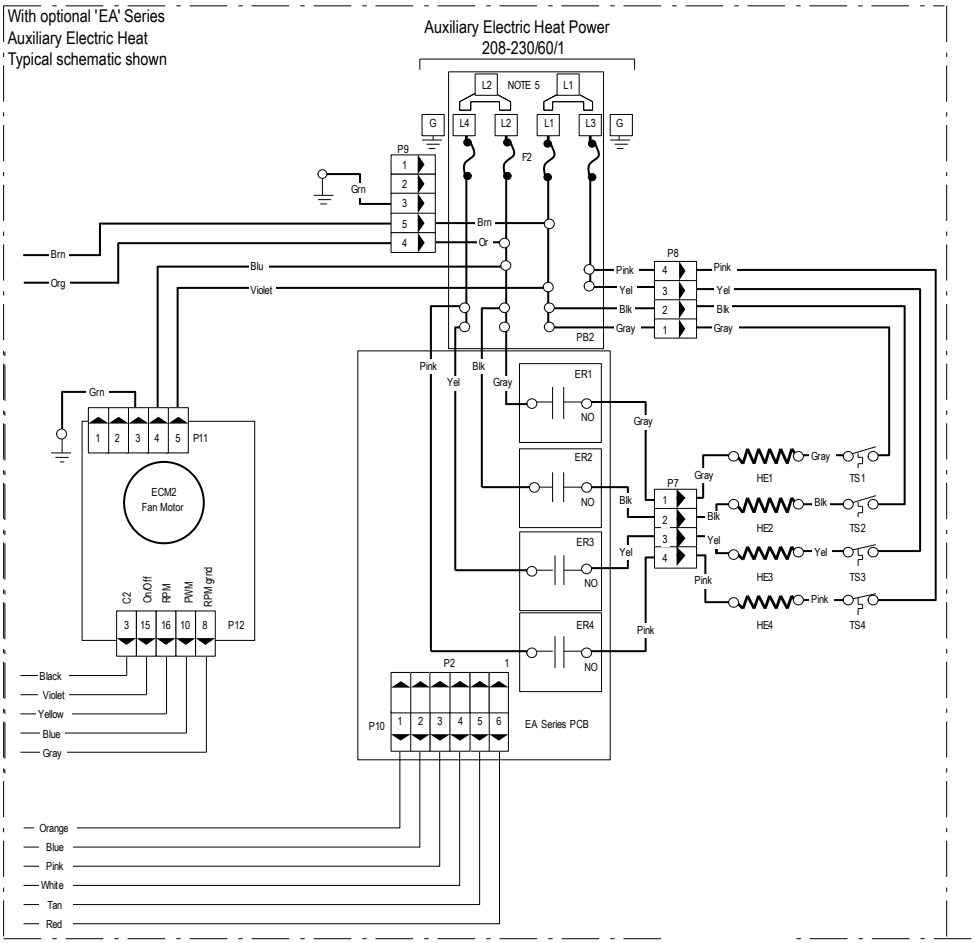
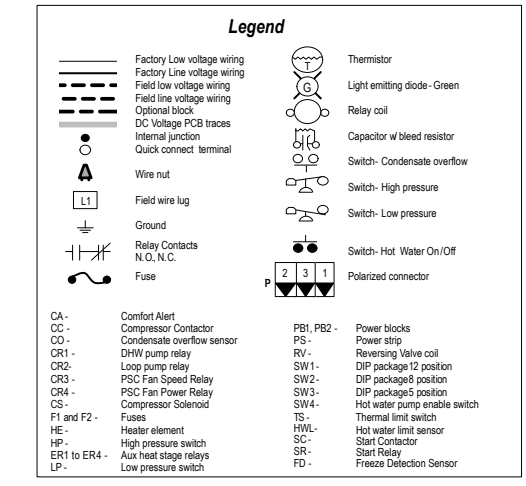
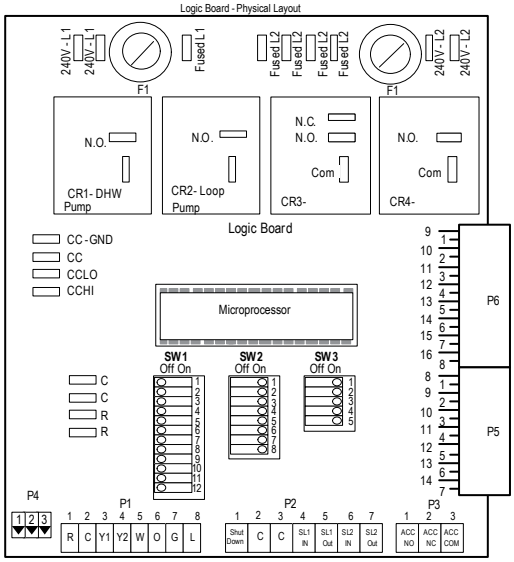
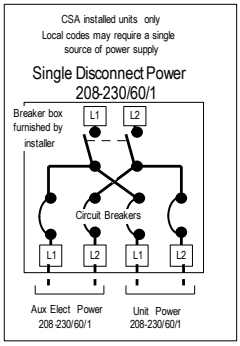
Wiring Schematics - Commercial cont.

Dual Capacity - 208-230/60/1 cont.









Notes:

1 - Place switch to 208V position to operate unit at 208V.
2 - Connection of remote unit that does not have a loop pump for slave operation.
3 - 24V Accessory relay (see SW2 - 3 for description of operation)
4 - The blk/wh and gray/wh wires are removed when Aux Heat is installed.
5 - Buss lugs L1 and L2 can be removed and dual power wire sets connected directly to box lugs L1, L2, and L3, L4.
6 - This Switch allows the unit to down stage with the t-stat when OFF and finish on second stage when ON. Finish second stage reduces stage changing in recip dual capacity compressors and should be ON for unzoned Dual Cap 2 speed units.
7 - When optional electronic air-filter is installed, power for the electronic air- filter is provided by P2 24VAC.
8 - SW3 -4 should be in the OFF position when using the 17P501 A01 electric heat board and should be ON when using the 17P514 A01 electric heat board .
9 - SW2-8 must be in the OFF position for pulsed "L" lockout signal and in the ON position for constant "L" lockout signal.
10 - Air Flow Configuration Example: SW1 configured for dip 1 as low, dip 3 as medium, and dip 5 Speed ECM2 fan
11 - Dual Capacity units only.
12 - Status LED may be Green or Blue depending on model .

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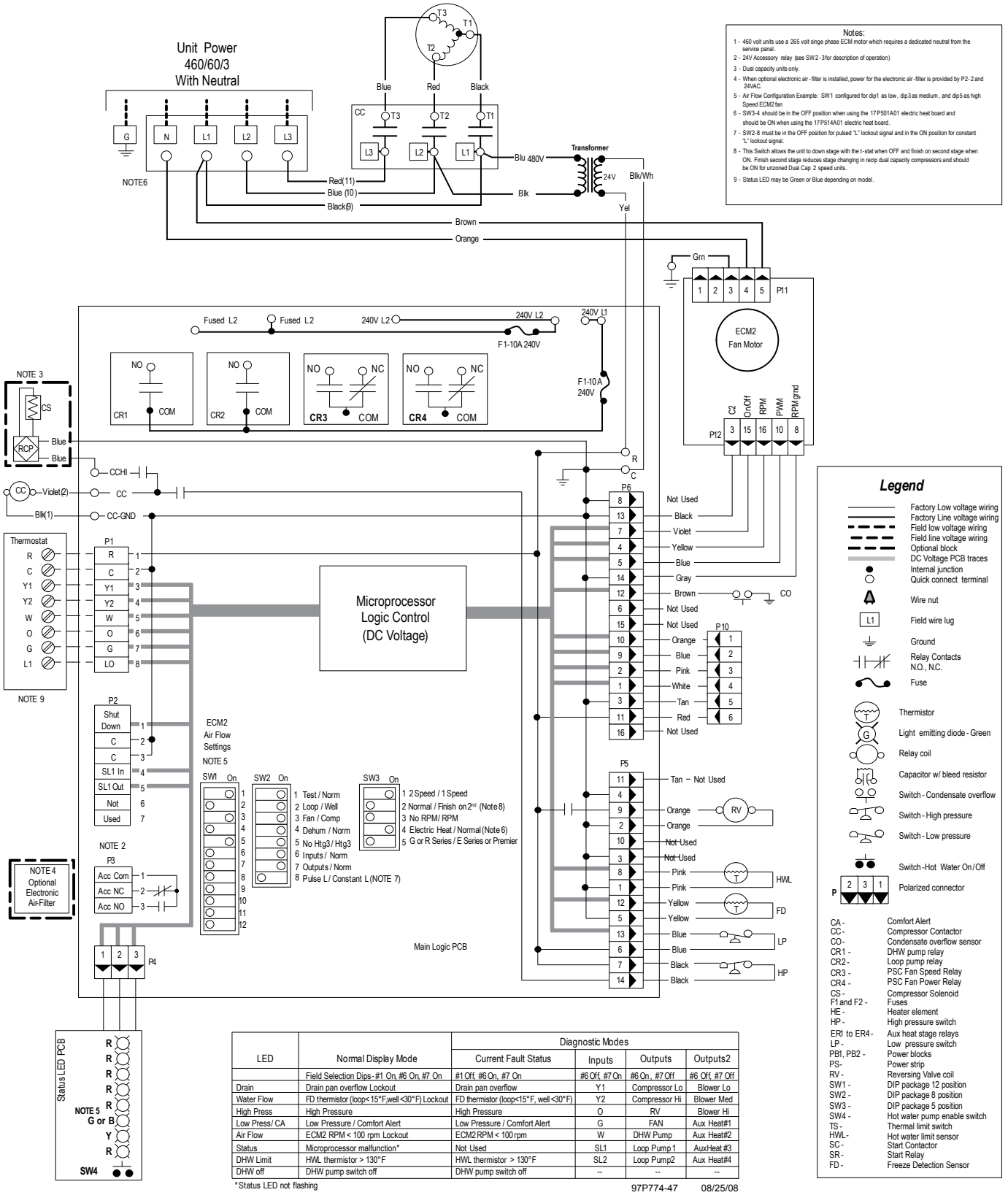
Wiring Schematics - Commercial cont.

Dual Capacity ECM2.3 - 460/60/3



Notes:

1 - 460 volt units use a 265 volt singe phase ECM motor which requires a dedicated neutral from the service panal.
2 - 24V Accessory relay (see SW2 - 3 for description of operation)
3 - Dual capacity units only.
4 - When optional electronic air - filter is installed, power for the electronic air -filter is provided by P2- 2 and 24VAC.
5 - Air Flow Configuration Example: SW1 configured for dip1 as low, dip3 as medium, and dip5 as high Speed ECM2 fan
6 - SW3-4 should be in the OFF position when using the 17P501A01 electric heat board and should be ON when using the 17P514A01 electric heat board.
7 - SW2-8 must be in the OFF position for pulsed "L" lockout signal and in the ON position for constant "L" lockout signal.
8 - This Switch allows the unit to down stage with the t-stat when OFF and finish on second stage when ON. Finish second stage reduces stage changing in recip dual capacity compressors and should be ON for unzoned Dual Cap 2 speed units.
9 - Status LED may be Green or Blue depending on model.

Legend

- Factory Low voltage wiring
- Factory Line voltage wiring
- Field low voltage wiring
- Field line voltage wiring
- Optional block
- DC Voltage PCB traces
- Internal junction
- Quick connect terminal
- Wire nut
- Field wire lug
- Ground
- Relay Contacts N.O., N.C.
- Fuse
- Thermistor
- Light emitting diode - Green
- Relay coil
- Capacitor w/ bleed resistor
- Switch - Condensate overflow
- Switch - High pressure
- Switch - Low pressure
- Switch - Hot Water On / Off
- Polarized connector

CA -	Comfort Alert
CC -	Compressor Contactor
CO -	Condensate overflow sensor
CR1 -	DHW pump relay
CR2 -	Loop pump relay
CR3 -	PSC Fan Speed Relay
CR4 -	PSC Fan Power Relay
CS -	Compressor Solenoid
F1 and F2 -	Fuses
HE -	Heater element
HP -	High pressure switch
ER1 to ER4 -	Aux heat stage relays
LP -	Low pressure switch
PB1, PB2 -	Power blocks
PS -	Power strip
RV -	Reversing Valve coil
SW1 -	DIP package 12 position
SW2 -	DIP package 8 position
SW3 -	DIP package 5 position
SW4 -	Hot water pump enable switch
TS -	Thermal limit switch
HWL -	Hot water limit sensor
SC -	Start Contactor
SR -	Start Relay
FD -	Freeze Detection Sensor

LED	Normal Display Mode	Diagnostic Modes			
		Current Fault Status	Inputs	Outputs	Outputs2
	Field Selection Dips - #1 On, #6 On, #7 On	#1 Off, #6 On, #7 On	#6 Off, #7 On	#6 On , #7 Off	#6 Off, #7 Off
Drain	Drain pan overflow Lockout	Drain pan overflow	Y1	Compressor Lo	Blower Lo
Water Flow	FD thermistor (loop< 15°F,well <30°F) Lockout	FD thermistor (loop<15°F, well <30°F)	Y2	Compressor Hi	Blower Med
High Press	High Pressure	High Pressure	O	RV	Blower Hi
Low Press/ CA	Low Pressure / Comfort Alert	Low Pressure / Comfort Alert	G	FAN	Aux Heat#1
Air Flow	ECM2 RPM < 100 rpm Lockout	ECM2 RPM < 100 rpm	W	DHW Pump	Aux Heat#2
Status	Microprocessor malfunction*	Not Used	SL1	Loop Pump 1	AuxHeat #3
DHW Limit	HWL thermistor > 130°F	HWL thermistor > 130°F	SL2	Loop Pump2	Aux Heat#4
DHW off	DHW pump switch off	DHW pump switch off	--	--	--

*Status LED not flashing

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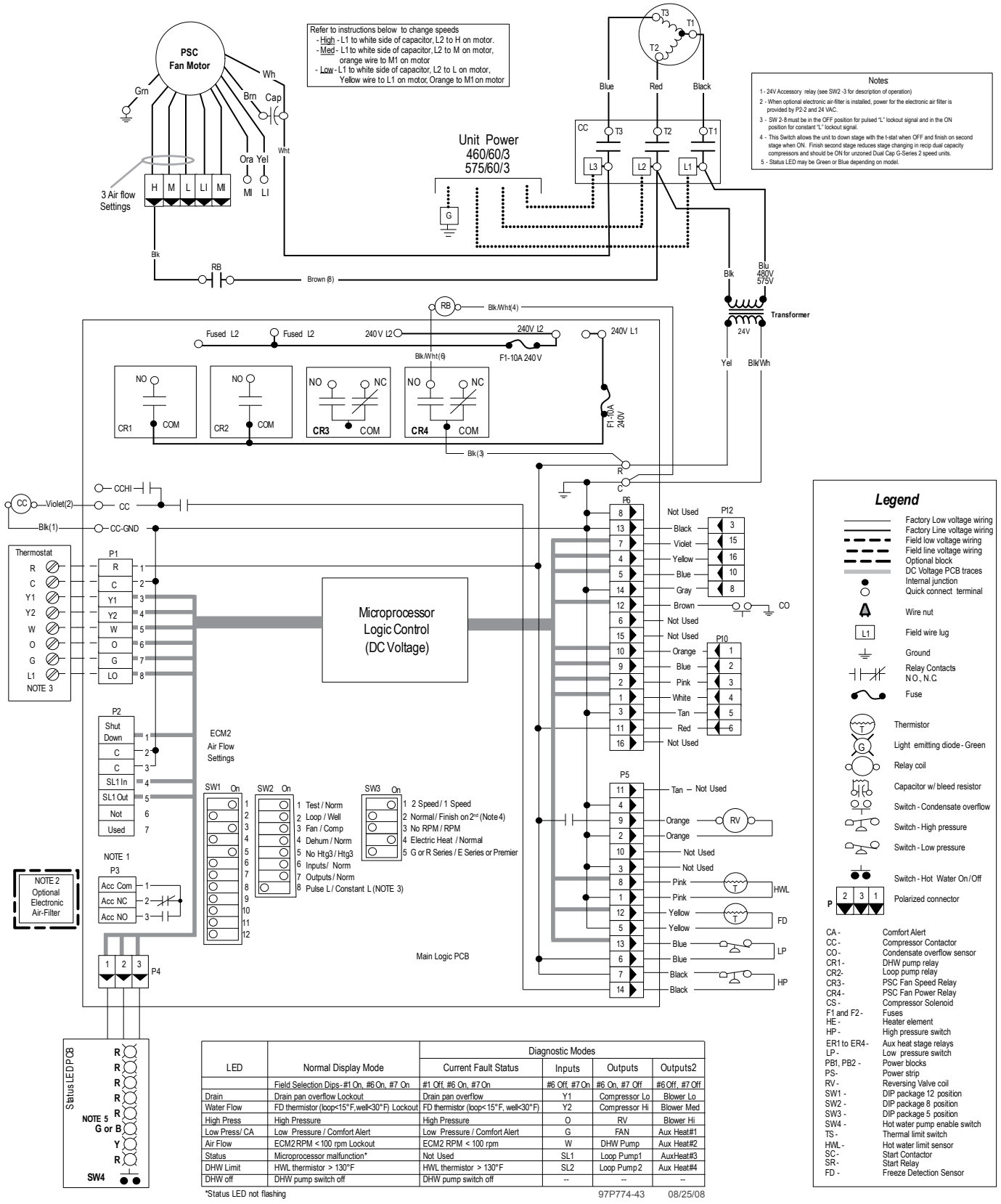
Wiring Schematics - Commercial cont.

Single Speed PSC - 460-575/60/3



LED	Normal Display Mode	Diagnostic Modes			
		Current Fault Status	Inputs	Outputs	Outputs2
	Field Selection Dips - #1 On, #6 On, #7 On	#1 Off, #6 On, #7 On	#6 Off, #7 On	#6 On, #7 Off	#6 Off, #7 Off
Drain	Drain pan overflow Lockout	Drain pan overflow	Y1	Compressor Lo	Blower Lo
Water Flow	FD thermistor (loop<15°F,well<30°F) Lockout	FD thermistor (loop< 15° F, well<30°F)	Y2	Compressor Hi	Blower Med
High Press	High Pressure	High Pressure	O	RV	Blower Hi
Low Press/ CA	Low Pressure / Comfort Alert	Low Pressure / Comfort Alert	G	FAN	Aux Heat#1
Air Flow	ECM2 RPM < 100 rpm Lockout	ECM2 RPM < 100 rpm	W	DHW Pump	Aux Heat#2
Status	Microprocessor malfunction*	Not Used	SL1	Loop Pump1	AuxHeat#3
DHW Limit	HWL thermistor > 130°F	HWL thermistor > 130°F	SL2	Loop Pump 2	Aux Heat#4
DHW off	DHW pump switch off	DHW pump switch off	--	--	--

*Status LED not flashing

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Microprocessor Control

Startup

The unit will not operate until all the inputs and safety controls are checked for normal conditions. At first power-up, a four minute delay is employed before the compressor is energized.

Component Sequencing Delays

Components are sequenced and delayed for optimum space conditioning performance.

Accessory Relay

An accessory relay on the control board allows for field connection of solenoid valves, electronic air cleaners, etc. The accessory relay has a normally open output and a normally closed output.

Short Cycle Protection

The control employs a minimum "off" time of four minutes to provide for short cycle protection of the compressor.

Condensate Overflow Protection

The GS/GT Series control board incorporates an impedance sensing liquid sensor at the top of the drain pan. Upon a continuous 30-second sensing of the condensate, compressor operation is suspended (see Fault Retry), and the condensate overflow lockout LED begins flashing.

Shutdown Mode

A 24VAC common signal to the “shutdown” input on the control board puts the unit into shutdown mode. Compressor, hot water pump and blower operation are suspended.

Safety Controls

The GS/GT Series control receives separate signals for a high pressure switch for safety, a low pressure switch to prevent loss of charge damage, and a low suction temperature thermistor for freeze sensing. Upon a continuous 30-second measurement of the fault (immediate for high pressure), compressor operation is suspended, the appropriate lockout LED begins flashing. (Refer to the "Fault Retry" section below.)

Testing

The GS/GT Series control allows service personnel to shorten most timing delays for faster diagnostics. (Refer to the Field Selection DIP switch SW2-1 on the Wiring Schematic pages.)

Fault Retry

All faults (except for low RPM faults with the ECM2.3 blower motor) are retried twice before finally locking the unit out. An output signal is made available for a fault LED at the thermostat. The “fault retry” feature is designed to prevent nuisance service calls.

Diagnostics

The GS/GT Series control board allows all inputs and outputs to be displayed on the LEDs for fast and simple control board diagnosis. (Refer to the Field Selection DIP Switch SW2-1 on the Wiring Schematic pages.)

Resistance Heat Control (208-230 Units)

The electric heat control module contains the appropriate high-voltage control relays. Control signals energize the relays in the proper sequence, and the LED display board indicates which stages are energized.

Hot Water High Limit (Domestic Hot Water Option)

This mode occurs when the hot water input temperature is at or above 130°F for 30 continuous seconds. The DHW limit status LED on the unit illuminates and the hot water pump de-energizes. Hot water pump operations resume on the next compressor cycle or after 15 minutes of continuous compressor operation during the current thermostat demand cycle.

Hot Water Justification

Since compressor hot gas temperature is dependant on loop temperature in cooling mode, loop temperatures may be too low to allow proper heating of water. The control will monitor water and refrigerant temperatures to determine if conditions are satisfactory for heating water. The DHW limit status LED on the unit illuminates when conditions are not favorable for heating water.

Heating Operation

Heat, 1st Stage (Y1)

The blower motor is started on low speed immediately (PSC ON), the loop pump is energized 5 seconds after the “Y1” input is received, and the compressor is energized on low capacity 10 seconds after the “Y1” input. The blower is switched to medium speed 15 seconds after “Y1” input (ECM2.3 only). The hot water pump is cycled 30 seconds after the "Y1" input.

Heat, 2nd Stage (Y1,Y2) Single-Speed Units

The hot water pump is de-energized, which directs all heat to satisfying the thermostat, and the blower changes to high speed 15 seconds after the "Y2" input (ECM2.3 only).

Heat, 2nd Stage (Y1,Y2) Dual Capacity Units

The second stage compressor will be activated 5 seconds after receiving a “Y2” input as long as the minimum first stage compressor run time of 1 minute has expired. The ECM2.3 blower changes from medium to high speed 15 seconds after the “Y2” input.

The Comfort Alert will delay the second stage compressor until 5 seconds after it receives a “Y2” from the board.

Heat, 3rd Stage (Y1,Y2,W) Single-Speed Units

The first stage of resistance heat is energized 10 seconds after “W” input, and with continuous 3rd stage demand, the additional stages of resistance heat engage sequentially every 5 minutes.

Microprocessor Control cont.

Heat, 3rd Stage (Y1,Y2,W) Dual Capacity Units

The hot water pump is de-energized which directs all heat to satisfy the thermostat. The 1st stage of resistance heat is energized 10 seconds after “W” input, and with continuous 3rd stage demand, the additional stages of resistance heat engage sequentially every 5 minutes.

Emergency Heat (W only)

The blower is started on high speed, and the first stage of resistance heat is energized 10 seconds after the "W" input. Continuing demand will engage the additional stages of resistance heat sequentially every 2 minutes.

Cooling Operation

In all cooling operations, the reversing valve directly tracks the “O” input. Thus, anytime the “O” input is present, the reversing valve will be energized.

Cool, 1st Stage (Y1,O)

The blower motor and hot water pump are started immediately, the loop pump(s) is energized 5 seconds after the “Y1” input is received. The compressor will be energized (on low capacity for Dual Capacity units) 10 seconds after the “Y1” input. The ECM2.3 blower will shift from low to medium speed 15 seconds after the “Y1” input (85% of medium speed if in dehumidification mode).

Cool, 2nd Stage (Y1, Y2, O) Single Speed Units

The blower changes to high speed (85% of high speed if in dehumidification mode) 15 seconds after the “Y2” input (ECM2.3 only).

Cool, 2nd Stage (Y1, Y2, O) Dual Capacity Units

The second stage compressor will be activated 5 seconds after receiving a “Y2” input as long as the minimum first stage compressor run time of 1 minute has expired. The ECM2.3 blower changes to high speed 15 seconds after the “Y2” input. (85% of high speed if in dehumidification mode). The Comfort Alert will delay the second stage compressor until 5 seconds after it receives a “Y2” from the board.

Blower (G only)

The blower starts on low speed. Regardless of blower input “G” from thermostat, the blower will remain on low speed for 30 seconds at the end of each heating, cooling or emergency heat cycle.

A DIP switch on the GS/GT Series control allows field selection of 15% reduced blower speeds for cooling in the dehumidification mode or medium and high blower speeds for cooling in the normal mode.

NOTE: Blower speed can change automatically only with an ECM2.3 Motor.

ECM2.3 Airflow Selection DIP Switches (SW1)

A 12-position DIP switch package on the GS/GT Series control allows the airflow levels to be set for low, medium and high speed. (Refer to the ECM2.3 Blower Table in the Blower Performance Data section.)

Only three of the DIP switches can be in the “on” position. The first “on” switch (the lowest position number) determines the “low speed blower” setting. The second “on” switch determines the “medium speed blower” setting, and the third “on” switch determines the “high speed blower” setting, (see the ECM2.3 Blower Table in the Blower Performance Data section).

Lockout Conditions

During lockout mode, the appropriate unit and thermostat lockout LEDs will illuminate. The compressor, loop pump, hot water pump, and accessory outputs are de-energized. Unless the lockout is caused by an ECM2.3 low RPM fault, the blower will continue to run on low speed. If the thermostat calls for heating, emergency heat operation will occur.

Comfort Alert lockouts cannot be reset at the thermostat. All other lockout modes can be reset at the thermostat after turning the unit off, then on, which restores normal operation but keeps the unit lockout LED illuminated. Interruption of power to the unit will reset a lockout without a waiting period and clear all lockout LEDs.

High Pressure

This lockout mode occurs when the normally closed safety switch is opened momentarily (set at 600 PSI).

Low Pressure

This lockout mode occurs when the normally closed low pressure switch is opened for 30 continuous seconds (set at 40 PSI). A low pressure fault may also be indicated when a Comfort Alert lockout has occurred.

Freeze Sensing (Water Flow)

This lockout mode occurs when the freeze thermistor temperature is at or below the selected freeze sensing point (well 30°F or loop 15°F) for 30 continuous seconds.

Condensate Overflow

This lockout mode occurs when the condensate overflow level has been reached for 30 continuous seconds.

Blower RPM

The control board monitors blower RPM to sense operation. This lockout mode occurs if the blower RPM falls below the low RPM limit (100 RPM) for 30 continuous seconds.

Microprocessor Control cont.

Compressor Monitoring/Comfort Alert

The Comfort Alert displays abnormal compressor conditions through a unique flash code and communicates the conditions to the heat pump microprocessor control. The heat pump microprocessor will determine which fault to act on and ignore. Fault codes 2 (system pressure), 4 (locked rotor), 6 (open start circuit), and 7 (open run circuit) will result in a lockout. All other fault codes are passive. All compressor alerts are displayed on the module by flashing the yellow Alert LED a specific number of times consecutively followed by a pause, and then repeated. The number of consecutive flashes or “Flash Code” correlates to a specific abnormal condition. The red “TRIP” LED means there is a thermostat demand signal “Y” present but the compressor is not running. The green “POWER” LED means the module has power.

Green "POWER" LED - module has power
Red "TRIP" LED - Thermostat "Y" demand signal is present, but the compressor is not running.

Comfort Alert Flash Codes		
Yellow "ALERT" LED	**LED Description**	**Cause**
Flash Code 1	Long Run Time	Eighteen consecutive hours of compressor run time
Flash Code 2	System Pressure Trip	Not applicable
Flash Code 3	Short Cycling	Compressor run time of less than 3 minutes on 4 consecutive cycles
Flash Code 4	Locked Rotor	Four consecutive compressor protector trips indicating compressor won't start
Flash Code 5	Open Circuit	"Y" thermostat demand signal with no compressor current
Flash Code 6	Open Start Circuit	"Y" thermostat demand signal with no current in the start circuit
Flash Code 7	Open Run Circuit	"Y" thermostat demand signal with no current in the run circuit
Flash Code 8	Welded Contactor	Current detected with no "Y" thermostat demand signal present
Flash Code 9	Low Voltage	Less than 17 VAC detected in control circuit

* Flash code number corresponds to a number of LED flashes, followed by a pause and then repeated.

* TRIP and ALERT LEDs flashing at the same time indicates control circuit voltage is too low for operation.

* Reset ALERT flash code by removing 24 VAC power from module.

* Last ALERT flash code is displayed for 1 minute after module is powered on.

Resetting Comfort Alert Codes

Alert codes can be reset manually by cycling power off and on to the Comfort Alert module. Alert codes will reset automatically if conditions return to normal.

Flash Code Number	LED Description	Automatic Reset of Alert Codes
Flash Code 1	Long Run Time	Thirty "alert free" on and off cycles to reset automatically
Flash Code 2	System Pressure Trip	Not applicable
Flash Code 3	Short Cycling	Four "alert free" on and off cycles to reset automatically
Flash Code 4	Locked Rotor	Four "alert free" on and off cycles to reset automatically
Flash Code 5	Open Circuit	One "alert free" on and off cycles to reset automatically
Flash Code 6	Open Start Circuit	One "alert free" on and off cycles to reset automatically
Flash Code 7	Open Run Circuit	One "alert free" on and off cycles to reset automatically
Flash Code 8	Welded Contactor	One "alert free" on and off cycles to reset automatically
Flash Code 9	Low Voltage	Resets when voltage rises above 19 VAC

* Reset ALERT flash code by removing 24 VAC power from module.

Microprocessor Control cont.

Thermostat Displays

Fault Flash

When using a TA32W02 or TP32W03 thermostat and SW2-8 is in the pulsing “L” position, FaultFlash will enable a user to view the thermostat and count the fault indicator flashes to determine the lockout condition the unit is experiencing.

ComforTalk

When using a TP32U03G, 04G or 05G thermostat and SW2-8 is in the pulsing “L” position, ComforTalk will enable the user to view the thermostat and determine the fault. The thermostat can be configured to show either lockout text or lockout codes.

The LED board on the front of the unit will display all lockouts. The Low Pressure LED will flash for a low pressure condition or a Comfort Alert fault. If the low pressure lockout was caused by Comfort Alert codes 4, 6 or 7, then the Comfort Alert will be flashing. If no Comfort Alert code is visible, then it is a low pressure lockout.

The following tables show the codes that will be displayed on the different ComforTalk and FaultFlash thermostats.

FaultFlash Thermostats

TA32W02 and TP32W03 Thermostats	
Thermostat Display Lockout Code	Lockout Description
2 Flashes	High Pressure Fault
3 Flashes	Low Pressure Fault
4 Flashes	Not Applicable
5 Flashes	Water Flow Fault
6 Flashes	Not Applicable
7 Flashes	Condensate Fault
8 Flashes	Voltage out of Range
9 Flashes	RPM Fault
10 Flashes	Comfort Alert Compressor Module Fault

Lockout code 10 - see Comfort Alert module to determine the specific flash code for compressor abnormalities.

ComforTalk Thermostats

TP32U03, TP32U04 and TP32U05 Thermostats	
Thermostat Display Lockout Code	Lockout Description
"High Pressure" or "E2"	High Pressure Fault
"Low Pressure" or "E3"	Low Pressure Fault
"E4"	Not Applicable
"Water Flow" or "E5"	Water Flow Fault
"E6"	Not Applicable
"Condensate" or "E7"	Condensate Fault
"Voltage Range" or "E8"	Voltage out of Range
"RPM" or "E9"	RPM Fault
"Comfort Alert" or "E10"	Comfort Alert Compressor Module Fault

These thermostats can be configured to display the lockout condition "text" or error number.

* A slow flash of 1 second on and off means the heat pump microprocessor SW2-1 is configured for "Test Mode" or thermostat is miswired.

Lockout code 10 - see Comfort Alert module to determine the specific flash code for compressor abnormalities.

Operation Logic Data Table

OPERATION LOGIC	HEATING				COOLING		BLOWER ON	SL1 - IN ON
	STG1	STG2	STG3	EMERG	STG1	STG2		
SINGLE SPEED UNITS								
Compressor	On	On	On	Off	On	On	-	-
ECM2.3 Normal	Med	High	High	High	Med	High	Low	-
ECM2.3 Dehumidify	Med	High	High	High	85% Med	85% High	Low	-
PSC	On	On	On	On	On	On	On	-
Rev Valve	Off	Off	Off	Off	On	On	-	-
Loop Pump	On	On	On	Off	On	On	-	On
DHW Pump	On	Off	Off	Off	On	On	-	-
Aux Heater	Off	Off	Staged	Staged	Off	Off	-	-
Secondary 1- Out	On	On	On	Off	On	On	-	-
Emerg LED	Off	Off	Off	On	Off	Off	Off	-
T-Stat Signal	Y1	Y1, Y2	Y1, Y2, W	W	Y1, O	Y1, Y2, O	G	-
DUAL CAPACITY UNITS								
Compressor-Lo	On	Off	Off	Off	On	Off	-	-
Compressor-Hi	Off	On	On	Off	Off	On	-	-
ECM2.3 Normal	Med	High	High	High	Med	High	Low	-
ECM2.3 Dehumidify	Med	High	High	High	85% Med	85% High	Low	-
Rev Valve	Off	Off	Off	Off	On	On	-	-
Loop Pumps	On	On	On	Off	On	On	-	On
DHW Pump	On	On	Off	Off	On	On	-	-
Aux Heater	Off	Off	Staged	Staged	Off	Off	-	-
Secondary 1- Out	On	On	On	Off	On	On	-	-
Secondary 2- Out	Off	On	On	Off	Off	On	-	-
Emerg LED	Off	Off	Off	On	Off	Off	-	-
T-Stat Signal	Y1	Y1, Y2	Y1, Y2, W	W	Y1, O	Y1, Y2, O	G	-

Pressure Drop

Single Speed Models

Model	GPM	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
009	1.5	1.9	1.8	1.7	1.6	1.5
	2.0	3.5	3.4	3.2	3.1	3.0
	3.0	6.9	6.5	6.3	6.0	5.7
012	1.5	0.3	0.3	0.3	0.3	0.3
	2.5	1.0	1.0	1.0	1.0	1.0
	3.5	1.7	1.7	1.7	1.6	1.6
015	2.0	0.6	0.6	0.6	0.6	0.6
	3.0	1.6	1.6	1.6	1.6	1.6
	4.0	2.6	2.6	2.6	2.6	2.5
018	3.0	1.6	1.6	1.5	1.5	1.4
	4.0	2.9	2.9	2.8	2.8	2.7
	5.0	4.2	4.2	4.1	4.0	3.9
022	3	0.9	0.9	0.8	0.7	0.7
	4.5	1.7	1.6	1.5	1.4	1.3
	6	2.8	2.7	2.5	2.3	2.2
	8	4.7	4.4	4.1	3.9	3.6
030	4	1.5	1.4	1.3	1.2	1.1
	6	3.0	2.8	2.7	2.5	2.3
	8	5.1	4.8	4.5	4.2	3.9
	10	7.7	7.2	6.8	6.3	5.8
036	5	1.0	1.0	0.9	0.8	0.8
	7	2.1	1.9	1.8	1.7	1.6
	9	3.6	3.3	3.0	2.8	2.6
	12	6.3	5.9	5.5	5.1	4.8
042	5	0.8	0.7	0.7	0.7	0.6
	8	2.1	2.1	1.9	1.8	1.7
	11	4.2	4.1	3.8	3.5	3.3
	14	7.6	6.7	6.3	5.8	5.4
048	6	1.1	1.0	1.0	0.9	0.8
	9	2.3	2.1	2.0	1.9	1.7
	12	3.9	3.7	3.4	3.2	3.0
	16	6.7	6.3	5.9	5.5	5.1
060	9	2.4	2.2	2.1	2.0	1.8
	12	3.9	3.6	3.4	3.2	2.9
	15	5.7	5.3	5.0	4.7	4.3
	20	9.5	8.9	8.3	7.8	7.2
070	12	3.0	2.8	2.6	2.4	2.2
	15	4.4	4.0	3.8	3.5	3.3
	18	6.0	5.5	5.1	4.8	4.4
	24	9.7	9.1	8.5	7.9	7.3

5/25/07

Dual Capacity Models

Model	GPM	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
026 full load	4	1.4	1.3	1.2	1.1	1.0
	6	2.8	2.6	2.4	2.3	2.1
	8	4.7	4.4	4.1	3.8	3.5
	10	7.0	6.6	6.2	5.8	5.3
026 part load	3	0.8	0.7	0.7	0.7	0.6
	5	2.0	1.8	1.7	1.6	1.5
	7	3.6	3.4	3.2	3.0	2.8
	9	5.8	5.5	5.1	4.8	4.4
038 full load	5	1.2	1.2	1.1	1.0	1.0
	7	2.2	2.1	1.9	1.8	1.7
	9	3.4	3.2	3.0	2.8	2.6
	11	4.9	4.6	4.3	4	3.7
038 part load	4	0.9	0.8	0.8	0.7	0.7
	6	1.7	1.6	1.5	1.4	1.3
	8	2.8	2.6	2.5	2.3	2.1
	10	4.2	3.9	3.7	3.4	3.2
049 full load	6	1.2	1.2	1.1	1.0	1.0
	9	2.4	2.2	2.1	2.0	1.8
	12	3.9	3.6	3.4	3.2	2.9
	15	5.7	5.3	5	4.7	4.3
049 part load	5	0.9	0.9	0.8	0.8	0.7
	8	2.0	1.8	1.7	1.6	1.5
	11	3.4	3.1	2.9	2.8	2.5
	14	5.0	4.7	4.4	4.1	3.8
064 full load	8	1.8	1.7	1.6	1.4	1.3
	12	3.8	3.5	3.3	3.0	2.8
	16	6.5	6.0	5.6	5.2	4.8
	20	9.7	9.1	8.5	8.0	7.4
064 part load	6	1.0	0.9	0.9	0.8	0.8
	10	2.6	2.5	2.3	2.1	2.0
	14	5.0	4.7	4.4	4.1	3.8
	18	8.1	7.6	7.1	6.6	6.1
072 full load	12	3.2	3.0	2.8	2.6	2.4
	15	4.5	4.2	4.0	3.7	3.4
	18	6.0	5.7	5.3	4.9	4.6
	21	7.8	7.3	6.8	6.4	5.9
072 part load	10	2.3	2.1	2.0	1.9	1.7
	13	3.6	3.3	3.0	2.8	2.6
	16	5.0	4.6	4.3	4.0	3.7
	19	6.5	6.2	5.8	5.4	5.0

5/30/06

Engineering Guide Specifications

General

Furnish and install Water Source Heat Pumps, as indicated on the plans. Equipment shall be completely assembled, piped and internally wired. Capacities and characteristics as listed in the schedule and the specifications that follow. The reverse cycle heating/cooling units shall be either suspended type with horizontal air inlet and discharge or floor mounted type with horizontal air inlet and vertical upflow, downflow, or rear air discharge. Units shall be AHRI/ISO 13256-1 certified and listed by a nationally recognized safety-testing laboratory or agency, such as ETL Testing Laboratory. Each unit shall be computer run-tested at the factory with conditioned water and operation verified to catalog data. Each unit shall be mounted on a pallet and shipped in a corrugated box or stretch-wrapped. The units shall be designed to operate with entering liquid temperature between 20°F and 120°F [-6.7°C and 48.9°C].

Casing & Cabinet

The cabinet shall be fabricated from heavy-gauge galvanized steel and finished with corrosion-resistant powder coating. This corrosion protection system shall meet the stringent 1000 hour salt spray test per ASTM B117. The interior shall be insulated with 1/2-inch thick, multi-density, cleanable aluminum foil coated glass fiber with edges sealed or tucked under flanges to prevent the introduction of glass fibers into the discharge air. Standard cabinet panel insulation must meet NFPA 90A requirements, air erosion and mold growth limits of UL-181, stringent fungal resistance test per ASTM-C1071 and ASTM G21, and shall meet zero level bacteria growth per ASTM G22. Unit insulation must meet these stringent requirements or unit(s) will not be accepted.

One (horizontal) or two (vertical) blower and three compressor compartment access panels shall be 'lift-out' removable with supply and return ductwork in place. The internal component layout shall provide for service access from the front side for restricted installations.

A duct collar shall be provided on the supply air opening. Standard size 1 in. [2.5 cm] MERV 7 pleated filters shall be provided with each unit. Vertical units shall have a return air filter rack/duct collar; the horizontal units shall have a filter bracket. each field convertible from 1 in. [2.5 cm] to 2 in. [5.1 cm]. The upflow vertical units shall have a removable insulated divider panel between the air handling section and the compressor section to minimize the transmission of compressor noise and to permit operational service testing without air bypass. Vertical units shall be supplied with left or right horizontal air inlet and top, bottom, or rear vertical air discharge. Horizontal units shall be supplied with left or right air inlet and side or end air discharge.

The compressor shall be double isolation mounted using selected durometer grommets to provide vibration free compressor mounting.

The drain pan shall be of plastic construction to inhibit corrosion and bacterial growth. Drain outlet shall be located on pan as to allow complete and unobstructed drainage of condensate. The unit as standard will be supplied with solid-state electronic condensate overflow protection. Mechanical float switches WILL NOT be accepted. Vertical units shall be furnished with a PVC slip condensate drain connection and an internal factory installed condensate trap.

Refrigerant Circuit

All units shall contain a sealed refrigerant circuit including a hermetic motor-compressor, bidirectional thermostatic expansion valve, finned tube air-to-refrigerant heat exchanger, reversing valve, coaxial tube water-to-refrigerant heat exchanger, optional hot water generator coil, and service ports.

Compressors shall be high-efficiency single speed rotary or scroll, or dual capacity scroll type designed for heat pump duty and mounted on vibration isolators. Compressor motors shall be single-phase PSC with overload protection. The electro-coated coil shall be sized for low-face velocity and constructed of lanced aluminum fins bonded to rifled copper tubes in a staggered pattern not less than three rows deep for enhanced performance.

The coaxial water-to-refrigerant heat exchanger shall be designed for low water pressure drop and constructed of a convoluted copper (cupronickel option) inner tube and a steel outer tube. Refrigerant to air heat exchangers shall utilize enhanced corrugated lanced aluminum fins and rifled copper tube construction rated to withstand 600 PSIG (4135 kPa) refrigerant working pressure. Refrigerant to water heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 600 PSIG (4135 kPa) working refrigerant pressure and 450 PSIG (3101 kPa) working water pressure.The thermostatic expansion valve shall provide proper superheat over the entire liquid temperature range with minimal "hunting." The valve shall operate bidirectionally without the use of check valves.

The water-to-refrigerant heat exchanger, optional hot water generator coil and refrigerant suction lines shall be insulated to prevent condensation at low liquid temperatures.

Blower Motor & Assembly

The blower shall be a direct drive centrifugal type with a dynamically balanced wheel. The housing and wheel shall be designed for quiet low outlet velocity operation. The blower housing shall be removable from the unit without disconnecting the supply air ductwork for servicing of the blower motor. The blower motor shall be a three-speed PSC or variable-speed ECM2.3 type. The ECM2.3 blower motor shall be soft starting, shall maintain constant CFM over its operating static range, and shall provide 12 CFM settings. The blower motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermostatic overload protection. ECM2.3 motors shall be long-life ball bearing type.

Engineering Guide Specifications cont.

Electrical

A control box shall be located within the unit compressor compartment and shall contain a 75VA transformer, 24 Volt activated, 2 pole compressor contactor, terminal block for thermostat wiring and solid-state controller for complete unit operation. Electromechanical operation WILL NOT be accepted. Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 Volt and provide heating or cooling as required by the remote thermostat/sensor. A microprocessor-based controller that interfaces with a multi-stage electronic thermostat to monitor and control unit operation shall be provided. The control shall provide operational sequencing, blower speed control, blower failure high and low pressure switch monitoring, freeze sensing, hot water limit thermistor sensing, condensate overflow sensing, auxiliary heat staging, lockout mode control, hot water and loop pump control, LED status and fault indicators, fault memory, field selectable options, and accessory output. The lockout signal output shall have a pulsed option so that DDC systems can read specific lockout conditions from the control. An integrally mounted ComfortAlert compressor sensing module shall provide monitoring for open start, open run, locked rotor, welded contactor and short cycle conditions.

A detachable terminal block with screw terminals will be provided for field control wiring. All units shall have knockouts for entrance of low and line voltage wiring. The blower motor and control box shall be harness plug wired for easy removal.

Optional GeoStart (Compressor Soft Starter) - shall be factory installed for use in applications that require low starting amps, reduced compressor start-up noise, off-grid, and improved start-up behavior. GeoStart shall reduce normal starting current by 60% on 208/60/1 units.

Piping

Supply and return water connections shall be 1 in. [25.4 mm] FPT brass swivel fittings, which provide a union and eliminate the need for pipe wrenches and sealants when making field connections. The optional hot water generator connections shall have sweat type connections. All water piping shall be insulated to prevent condensation at low liquid temperatures, on the vertical upflow units, the condensate connection shall be a 3/4 in. [19.1 mm] PVC socket with internally-trapped hose that can be routed to front or side locations.

Hanger Kit (field-installed horizontal units only)

The hanger kit shall consist of galvanized steel brackets, bolts, lock washers, and isolators and shall be designed to fasten to the unit bottom panel for suspension from 3/8-inch threaded rods. Unit sizes 022-072 shall include six brackets.

Options & Accessories

Cupronickel Heat Exchanger

An optional cupronickel water-to-refrigerant heat exchanger shall be provided.

Hot Water Generator

An optional heat reclaiming hot water generator coil of vented double-wall copper construction suitable for potable water shall be provided. The coil and hot water circulating pump shall be factory mounted inside the unit with integral electronic high limit temperature monitoring and external on/off switch.

Thermostat (field-installed)

A multi-stage auto-changeover electronic digital thermostat shall be provided. The thermostat shall offer three heating and two cooling stages with precise temperature control. An OFF-HEAT-AUTO-COOL-EMERG system switch, OFF-AUTO blower switch, and indicating LEDs shall be provided. The thermostat shall display in °F or °C.

Electronic Air Cleaner (field-installed)

A 1 in. [25 mm] electronic air cleaner, cleanable 97% efficiency at 0.3 microns and larger, shall be provided in lieu of the standard throwaway filter. The initial pressure drop across the filter shall not exceed 0.2 in. w.g. at 300 fpm force velocity.

Electrostatic Air Cleaner (field-installed)

A 1 in. [25 mm] electrostatic air cleaner, cleanable 90% efficiency, shall be provided in lieu of the standard throwaway filter. The initial pressure drop across the filter shall not exceed 0.15 in. w.g. at 300 fpm force velocity.

Earth Loop Flow Center (field-installed)

A self-contained module shall provide all liquid flow, fill and connection requirements for ground source closed loop systems up to 20 GPM. The pumps shall be wired to a power block located in the nearest unit. The heat pump units shall contain low voltage pump slaving control so that two units may share one flow center.

Auxiliary Heater (field-installed)

An electric resistance heater shall provide supplemental and/or emergency heating capability. Vertical units shall have the control panel and resistance heater coil assembly mounted internally. For horizontal units, the control panel shall be mounted internally while the resistance heater coil assembly shall be mounted externally. A low voltage plug shall be provided in each unit for quick auxiliary heat connection. The heater shall operate in sequenced stages as controlled by the unit's microprocessor. The heater shall feed line voltage power to the unit blower and transformer to provide emergency heat capability in the event of an open compressor circuit breaker.

Product:	**Aston Series**
Type:	Geothermal Heat Pumps
Size:	0.75 - 6 Tons Single Speed 2 - 6 Tons Dual Capacity
Document Type:	Specification Catalog
Part Number:	SC1000AG
Release Date:	02/11