

Technical Information

PGA*C*2D/E PACKAGE GAS UNITS

- Refer to Service Manual RS6300003 Rev. 1 for installation, operation, and troubleshooting information.
- All safety information must be followed as provided in the Service Manual.
- Refer to the appropriate Parts Catalog for part number information.

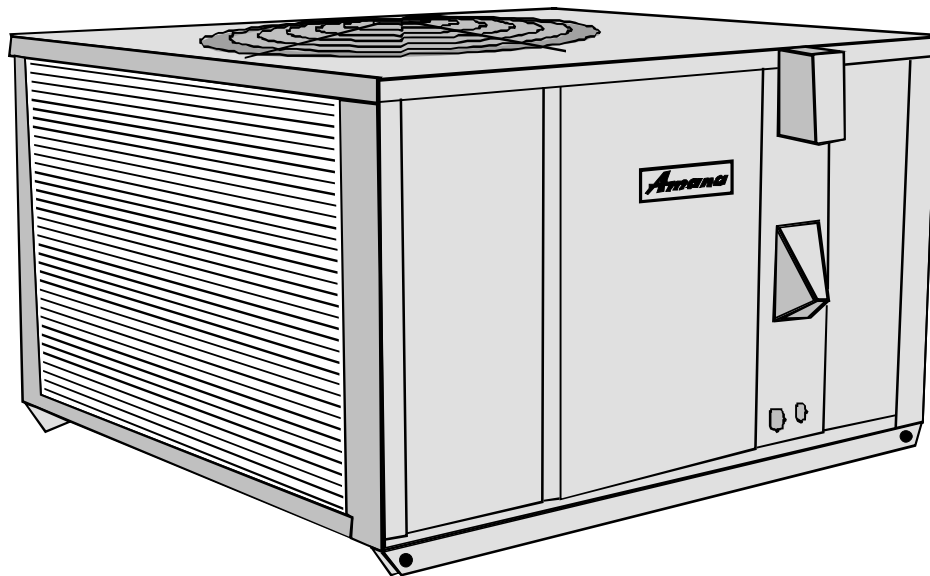
Model and Manufacturing numbers listed in this manual.

<u>MODEL</u>	<u>M/N</u>
PGA60C0902D	P1217301C
PGA60C1152D	P1217302C

PGA60C0902D	P1220301C
PGA60C1152D	P1220302C

PGA60C0902E	P1231901C
PGA60C1152E	P1231902C

PGA60C0902E	P1236201C
PGA60C1152E	P1236202C



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This manual replaces RT6311001 Rev. 0 February 2000.

REV. 1 - New models added to manual.

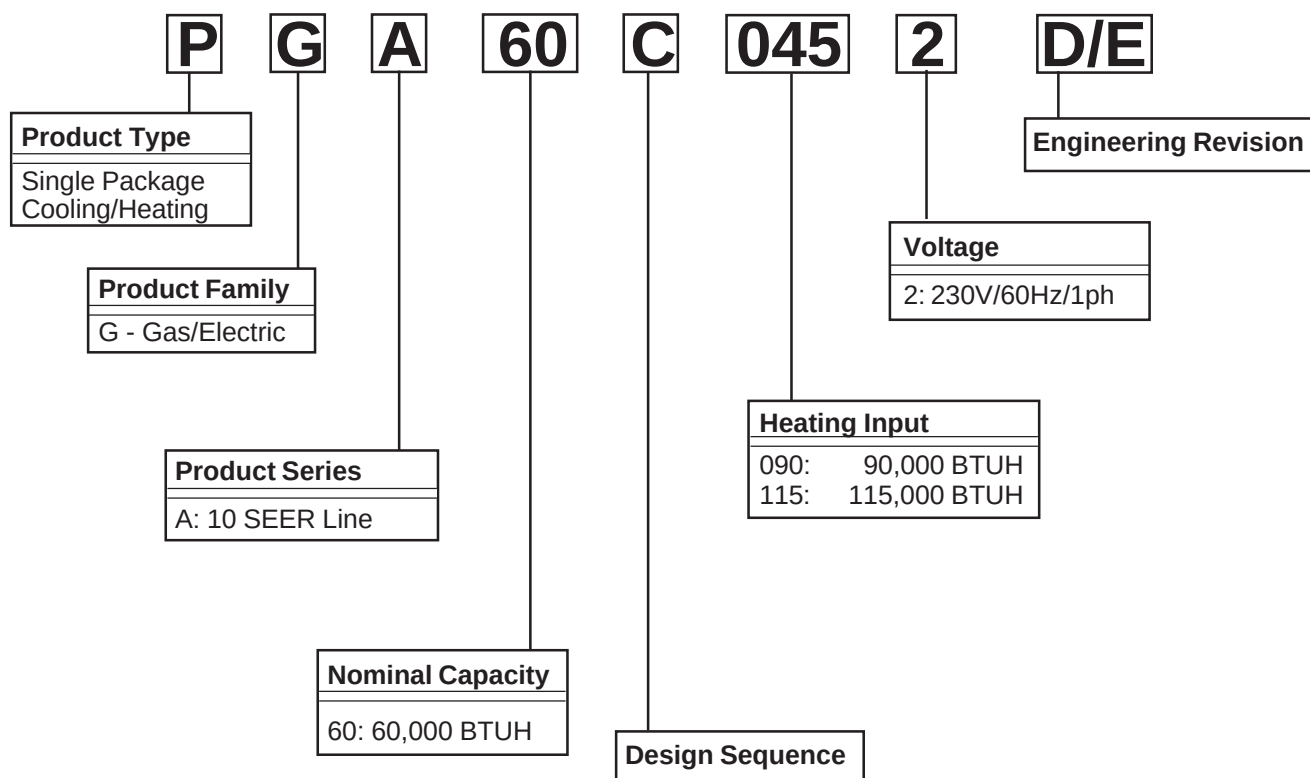
This manual is to be used by qualified HVAC technicians only. Amana does not assume any responsibility for property damage or personal injury due to improper service procedures performed by an unqualified person.

RT6311001
Revision 1
December 2001

PRODUCT IDENTIFICATION

The model and manufacturing number are used for positive identification of component parts used in manufacturing. When engineering and manufacturing changes take place where interchangeability of components are affected, the manufacturing number will change.

It is very important to use the model and manufacturing numbers at all times when requesting service or parts information.



WARNING

IF REPAIRS ARE ATTEMPTED BY UNQUALIFIED PERSONS, DANGEROUS CONDITIONS (SUCH AS EXPOSURE TO ELECTRICAL SHOCK) MAY RESULT. THIS MAY CAUSE SERIOUS INJURY OR DEATH.



CAUTION

AMANA WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SERVICE OR SERVICE PROCEDURES. IF YOU PERFORM SERVICE ON YOUR OWN PRODUCT, YOU ASSUME RESPONSIBILITY FOR ANY PERSONAL INJURY OR PROPERTY DAMAGE WHICH MAY RESULT.

PRODUCT DESIGN

Amana PGA Package Gas Units are designed for outdoor installations only in either residential or light commercial applications.

The connecting ductwork (Supply and Return) can be connected for either horizontal or vertical airflow. In the vertical application a matching Roof Curb is recommended .

A return air filter must be installed behind the return air grille(s) or provision must be made for a filter in an accessible location within the return air duct. The minimum filter area should not be less than those sizes listed in the Specification Section. Under no circumstances should the unit be operated without return air filters.

A 3/4" pipe is provided for removal of condensate water from the indoor coil. In order to provide proper condensate flow, a drain trap is built into the unit (Do not reduce the drain line size).

Refrigerant flow control is achieved by use of restrictor orifices or thermostatic expansion valves (TXV).

The single phase units use permanent split capacitors (PSC) design compressors. Starting components are therefore not required. A low MFD run capacitor assists the compressor to start and remains in the circuit during operation.

The outdoor fan and indoor blower motors are single phase capacitor type motors.

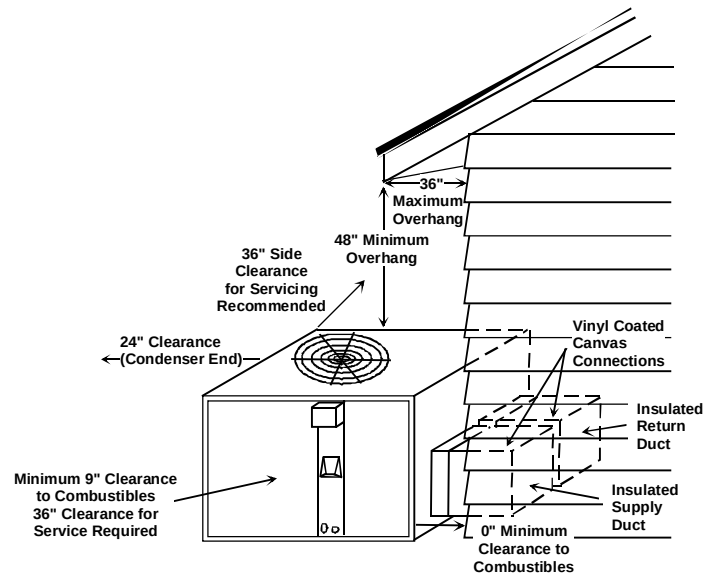
Air for condensing (cooling cycle) or evaporation (heating cycle) is drawn through the outdoor coil by a propeller fan, and is discharged vertically out the top of the unit. The outdoor coil is designed for .0 static. No additional restriction (ductwork) shall be applied.

Conditioned air is drawn through the filter(s), field installed, across the coil and back into the conditioned space by the indoor blower.

All PGA __C units house only Phase 2 Scroll compressors

- Phase 2 Scroll compressors will not have a discharge thermostat.
- Due to their design Scroll compressors are inherently more tolerant of liquid refrigerant. **NOTE:** Even though the compressor section of a Scroll compressor is more tolerant of liquid refrigerant, continued floodback or flooded start conditions may wash oil from the bearing surfaces causing premature bearing failure.
- These Scroll compressors use white oil which is compatible with 3GS. 3GS oil may be used if additional oil is required.
- Phase 2 Scroll compressors, the compressor equalizes within 0.4 seconds after shut down and does not run backward.
- Operating pressures and amp draws may differ from standard reciprocating compressors. This information may be found in the "Cooling Performance Data" section.

Location and Clearances



In installations where the unit is installed above ground level and not serviceable from the ground (Example: Roof Top installations) the installer must provide service platform for service person with rails or guards in accordance with local codes or ordinances or in their absence with the latest edition of the National Fuel Gas Code ANSI Z223.1.

NOTE: Unit can also use roof curb (and platform for leveling, where necessary) to utilize bottom discharge.



TO PREVENT POSSIBLE PROPERTY DAMAGE, THE UNIT SHOULD REMAIN IN AN UPRIGHT POSITION DURING ALL RIGGING AND MOVING OPERATIONS. TO FACILITATE LIFTING AND MOVING IF A CRANE IS USED, PLACE THE UNIT IN AN ADEQUATE CABLE SLIDE.

IMPORTANT: If using bottom discharge with roof curb, ductwork should be attached to the curb prior to installing the unit.

Refer to Roof curb Installation Instructions for proper curb installation. Curbing must be installed in compliance with the National Roofing Contractors Association Manual.

PRODUCT DESIGN

High Altitude Derate

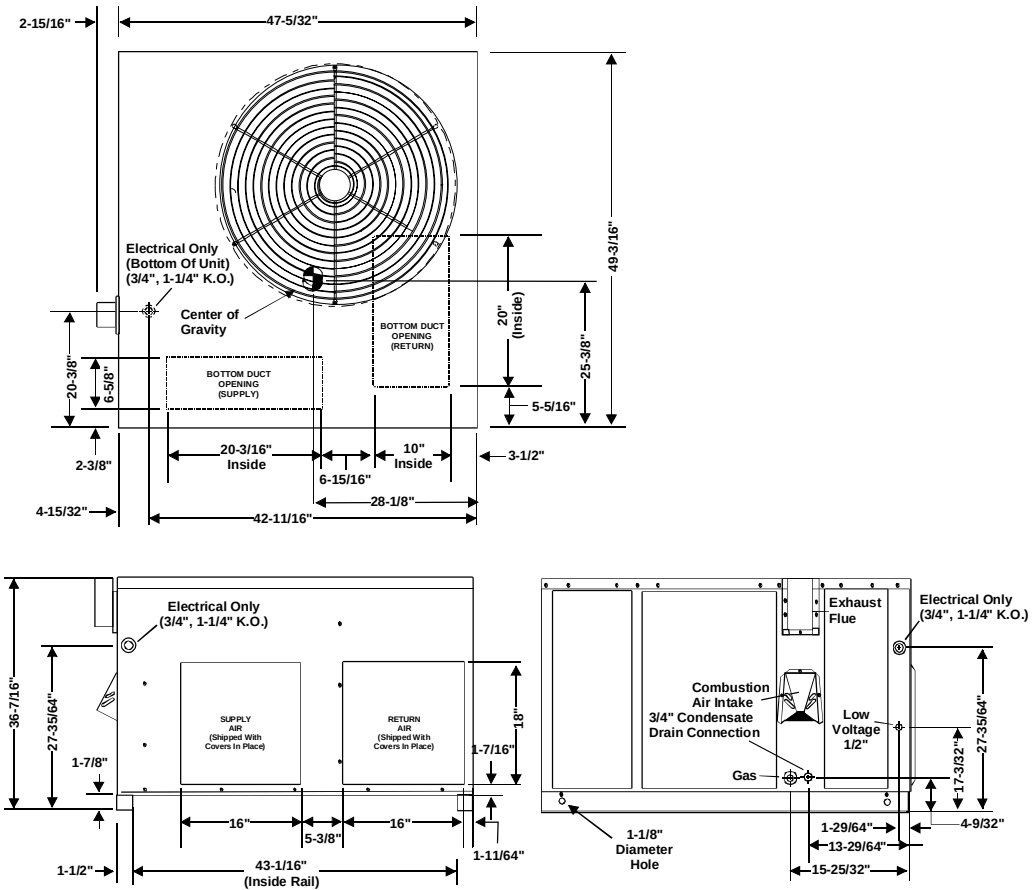
When this package unit is installed at high altitude, the appropriate High Altitude orifice kit must be installed. This is required due to the natural reduction in the density of both the gas fuel and combustion air as altitude increases. The kit will provide the proper design certified input rate within the specified altitude range. High altitude kits are not approved for use in Canada.

High altitude kits are purchased according to the installation altitude and usage of either natural or propane gas. Refer to the previous chart for a tabular listing of appropriate altitude ranges and corresponding manufacturer's high altitude Natural Gas and Propane Gas kits. It is not necessary to change the pressure switch for high altitude operation.

PROPANE AND HIGH ALTITUDE KITS					
Model	Gas	Altitude (Feet)	Kit	Orifice	Manifold Pressure
PGB*C*2D/E	Natural Propane	0 to 6,000	None LPTK09	#43 #55	3.5" w.c. 10.0" w.c.
	Natural Propane	6,001 to 11,000	HANG07 HALP09	#45 #56	3.5" w.c. 10.0" w.c.

Units installed in Canada are certified only to 4500 feet.

PRODUCT DIMENSIONS



PGA60C*2D/E

PACKAGE GAS SPECIFICATIONS

		PGA60C0902D	PGA60C1152D
COOLING CAPACITY	COOLING CAPACITY, BTUH	58,500	58,500
	SEER	10.05	10.05
HEATING CAPACITY	HEATING INPUT BTUH (U.S. & CANADIAN)	92,000	115,000
	HEATING OUTPUT BTUH (U.S. & CANADIAN)	73,600	92,000
	AFUE (%)	80	80
	TEMPERATURE RISE (°F)	45 - 75	45 - 75
UNIT ELECTRICAL SPECIFICATION	VOLTAGE (NAMEPLATE)	208/230-60-1	208/230-60-1
	UNIT AMPS (TOTAL)	33	33
	MINIMUM CIRCUIT AMPACITY	41.1	41.1
	MAXIMUM OVERCURRENT PROTECTION	60	60
HEATING SECTION	NUMBER OF BURNERS	4	5
	ORIFICE SIZE NATURAL	43	43
	ORIFICE SIZE LP	55	55
	PILOT ORIFICE SIZE NAT/LP	.018 / .012	.018 / .012
COMPRESSOR	TYPE	SCROLL	SCROLL
	RATED LOAD AMPS	25	25
	LOCKED ROTOR AMPS	169	169
CONDENSER FAN MOTOR	HORSEPOWER	1/3	1/3
	RPM	1100	1100
	FULL LOAD AMPS	2.4	2.4
	LOCKED ROTOR AMPS	5.4	5.4
CONDENSER FAN	BLADE DIAMETER (INCHES) / NUMBER OF BLADES	26 / 4	26 / 4
	CFM	3000	3000
CONDENSER COIL	FACE AREA - SQ. FT.	12	12
	NUMBER OF ROWS	2	2
	FINS PER INCH	20	20
EVAPORATOR BLOWER MOTOR	HORSEPOWER - NO. OF SPEEDS	1 - 4	1 - 4
	FULL LOAD AMPS	7.4	7.4
	LOCKED ROTOR AMPS	17.5	17.5
	MOTOR SPEED TAP - COOLING	MED - HIGH	MED - HIGH
	RPM / AMPS	1275 / 6.0	1275 / 6.0
EVAPORATOR BLOWER	DIAMETER X WIDTH (INCHES)	10 X 8	10 X 8
	RATED SCFM COOLING	1750	1750
	MAX EXTERNAL STATIC PRESS ("w.c.)	0.5	0.5
EVAPORATOR COIL	FACE AREA - SQ. FT.	5.2	5.2
	NUMBER OF ROWS	4	4
	FINS PER INCH	14	14
	FILTER SIZE - SQ. FT.	5	5
	DRAIN SIZE (INCHES)	3/4	3/4
HEATING LIMITS	PRIMARY LIMIT SETTING (°F)	165	165
	AUXILIARY LIMIT SETTING (°F)	200	200
	ROLLOUT LIMIT SETTING (°F)	325	325
GENERAL INFORMATION	EXPANSION DEVICE	ORIFICE	ORIFICE
	REFRIGERANT CHARGE R-22 (Oz.)	139	139
	POWER SUPPLY ENTRANCE SIZE (INCHES)	3/4 1-1/4	3/4 1-1/4
	LOW VOLTAGE ENTRANCE SIZE (INCHES)	1/2	1/2
	SHIPPING WEIGHT LBS.	478	484
	OPERATING WEIGHT LBS.	458	464
ACCESSORIES	PROPANE GAS CONVERSION KIT	LPTK09	LPTK09
	COMPRESSOR SOUND BLANKET	CSB08A	CSB08A
	HORIZONTAL DUCT COVER KIT (2 COVERS)*	STANDARD	STANDARD
	OVER / UNDER DUCT CONVERSION KIT	PDTR0U6A	PDTR0U6A
	ROOF CURB - GAS ELECTRIC	PRC07A1	PRC07A1
	ROOF CURB - COMBINATION	PRC08A1	PRC08A1

¹ Units installed in Canada are certified only to 4500 feet.

* Units are shipped with horizontal duct covers in place ready for down discharge installations.

* Manufacturing number P1217301C is equipped with 26" fan blade while manufacturing numbers P1217302C, P1220301 & 02C were equipped with 22" fan blades.

** **IMPORTANT:** While this data is presented as a guide, it is important to electrically connect the unit and properly size wires and fuses/circuit breakers in accordance with the National Electrical Code and/or all local codes.

PACKAGE GAS SPECIFICATIONS

		PGA60C0902E	PGA60C1152E
COOLING CAPACITY	COOLING CAPACITY, BTUH	58,500	58,500
	SEER	10.05	10.05
HEATING CAPACITY	HEATING INPUT BTUH (U.S. & CANADIAN)	92,000	115,000
	HEATING OUTPUT BTUH (U.S. & CANADIAN)	73,600	92,000
	AFUE (%)	80	80
	TEMPERATURE RISE (°F)	45 - 75	45 - 75
UNIT ELECTRICAL SPECIFICATION	VOLTAGE (NAMEPLATE)	208/230-60-1	208/230-60-1
	UNIT AMPS (TOTAL)	33	33
	MINIMUM CIRCUIT AMPACITY	41.1	41.1
	MAXIMUM OVERCURRENT PROTECTION	60	60
HEATING SECTION	NUMBER OF BURNERS	4	5
	ORIFICE SIZE NATURAL	43	43
	ORIFICE SIZE LP	55	55
COMPRESSOR	TYPE	SCROLL	SCROLL
	RATED LOAD AMPS	25	25
	LOCKED ROTOR AMPS	169	169
CONDENSER FAN MOTOR	HORSEPOWER	1/3	1/3
	RPM	1100	1100
	FULL LOAD AMPS	2.4	2.4
	LOCKED ROTOR AMPS	5.4	5.4
CONDENSER FAN	BLADE DIAMETER (INCHES) / NUMBER OF BLADES	22 / 4	22 / 4
	CFM	3000	3000
CONDENSER COIL	FACE AREA - SQ. FT.	12	12
	NUMBER OF ROWS	2	2
	FINS PER INCH	20	20
EVAPORATOR BLOWER MOTOR	HORSEPOWER - NO. OF SPEEDS	1 - 4	1 - 4
	FULL LOAD AMPS	7.4	7.4
	LOCKED ROTOR AMPS	17.5	17.5
	MOTOR SPEED TAP - COOLING	MED - HIGH	MED - HIGH
	RPM / AMPS	1275 / 6.0	1275 / 6.0
EVAPORATOR BLOWER	DIAMETER X WIDTH (INCHES)	10 X 8	10 X 8
	RATED SCFM COOLING	1750	1750
	MAX EXTERNAL STATIC PRESS ("w.c.)	0.5	0.5
EVAPORATOR COIL	FACE AREA - SQ. FT.	5.2	5.2
	NUMBER OF ROWS	4	4
	FINS PER INCH	14	14
	FILTER SIZE - SQ. FT.	5	5
	DRAIN SIZE (INCHES)	3/4	3/4
HEATING LIMITS	PRIMARY LIMIT SETTING (°F)	165	165
	AUXILIARY LIMIT SETTING (°F)	200	200
	ROLLOUT LIMIT SETTING (°F)	325	325
GENERAL INFORMATION	EXPANSION DEVICE	ORIFICE	ORIFICE
	REFRIGERANT CHARGE R-22 (Oz.)	139	139
	POWER SUPPLY ENTRANCE SIZE (INCHES)	3/4 1-1/4	3/4 1-1/4
	LOW VOLTAGE ENTRANCE SIZE (INCHES)	1/2	1/2
	SHIPPING WEIGHT LBS.	478	484
	OPERATING WEIGHT LBS.	458	464
ACCESSORIES	PROPANE GAS CONVERSION KIT	LPTK09	LPTK09
	COMPRESSOR SOUND BLANKET	CSB08A	CSB08A
	HORIZONTAL DUCT COVER KIT (2 COVERS)*	STANDARD	STANDARD
	OVER / UNDER DUCT CONVERSION KIT	PDTR0U6A	PDTR0U6A
	ROOF CURB - GAS ELECTRIC	PRC07A1	PRC07A1
	ROOF CURB - COMBINATION	PRC08A1	PRC08A1

¹ Units installed in Canada are certified only to 4500 feet.

* Units are shipped with horizontal duct covers in place ready for down discharge installations.

* Manufacturing numbers P1231901 & 02C and P1236201 & 02C are equipped with 22" fan blades.

** **IMPORTANT:** While this data is presented as a guide, it is important to electrically connect the unit and properly size wires and fuses/circuit breakers in accordance with the National Electrical Code and/or all local codes.

BLOWER PERFORMANCE DATA

Dry Coil Data

HORIZONTAL

PGA60C0902D/E												
UNIT STATIC	LOW			MED-LOW			MED-HIGH			HIGH		
	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE
0.2	1310	880	52	1595	1125	NR	1925	1450	NR	2170	1750	NR
0.3	1290	870	53	1555	1110	NR	1890	1425	NR	2140	1715	NR
0.4	1265	865	54	1535	1090	NR	1875	1400	NR	2095	1695	NR
0.5	1240	850	55	1515	1075	45	1840	1390	NR	2065	1670	NR
0.6	1215	840	56	1475	1060	46	1805	1370	NR	2020	1635	NR
0.7	1185	820	58	1430	1035	48	1770	1335	NR	1970	1625	NR
0.8	1130	795	60	1405	1015	49	1715	1320	NR	1940	1575	NR

DOWNSHOT

PGA60C0902D/E												
UNIT STATIC	LOW			MED-LOW			MED-HIGH			MED-HIGH		
	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE
0.2	1270	860	54	1525	1065	45	1795	1345	NR	1985	1595	NR
0.3	1245	845	55	1480	1060	46	1755	1325	NR	1960	1580	NR
0.4	1220	835	56	1460	1043	47	1720	1305	NR	1930	1560	NR
0.5	1190	825	57	1415	1025	48	1685	1285	NR	1900	1530	NR
0.6	1135	815	60	1390	1015	49	1645	1275	NR	1830	1515	NR
0.7	1110	795	61	1345	995	51	1605	1245	NR	1795	1495	NR
0.8	1080	785	63	1320	985	52	1585	1225	NR	1780	1480	NR

HORIZONTAL

PGA60C1152D/E												
UNIT STATIC	LOW			MED-LOW			MED-HIGH			MED-HIGH		
	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE
0.2	1305	880	65	1590	1125	54	1920	1450	NR	2165	1750	NR
0.3	1285	870	66	1550	1110	55	1885	1425	45	2135	1715	NR
0.4	1260	865	68	1530	1090	56	1870	1400	46	2090	1695	NR
0.5	1235	850	69	1510	1075	56	1835	1390	46	2060	1670	NR
0.6	1210	840	70	1470	1060	58	1800	1370	47	2015	1635	NR
0.7	1180	820	72	1425	1035	60	1765	1335	48	1965	1625	NR
0.8	1125	795	NR	1400	1015	61	1710	1320	50	1935	1575	NR

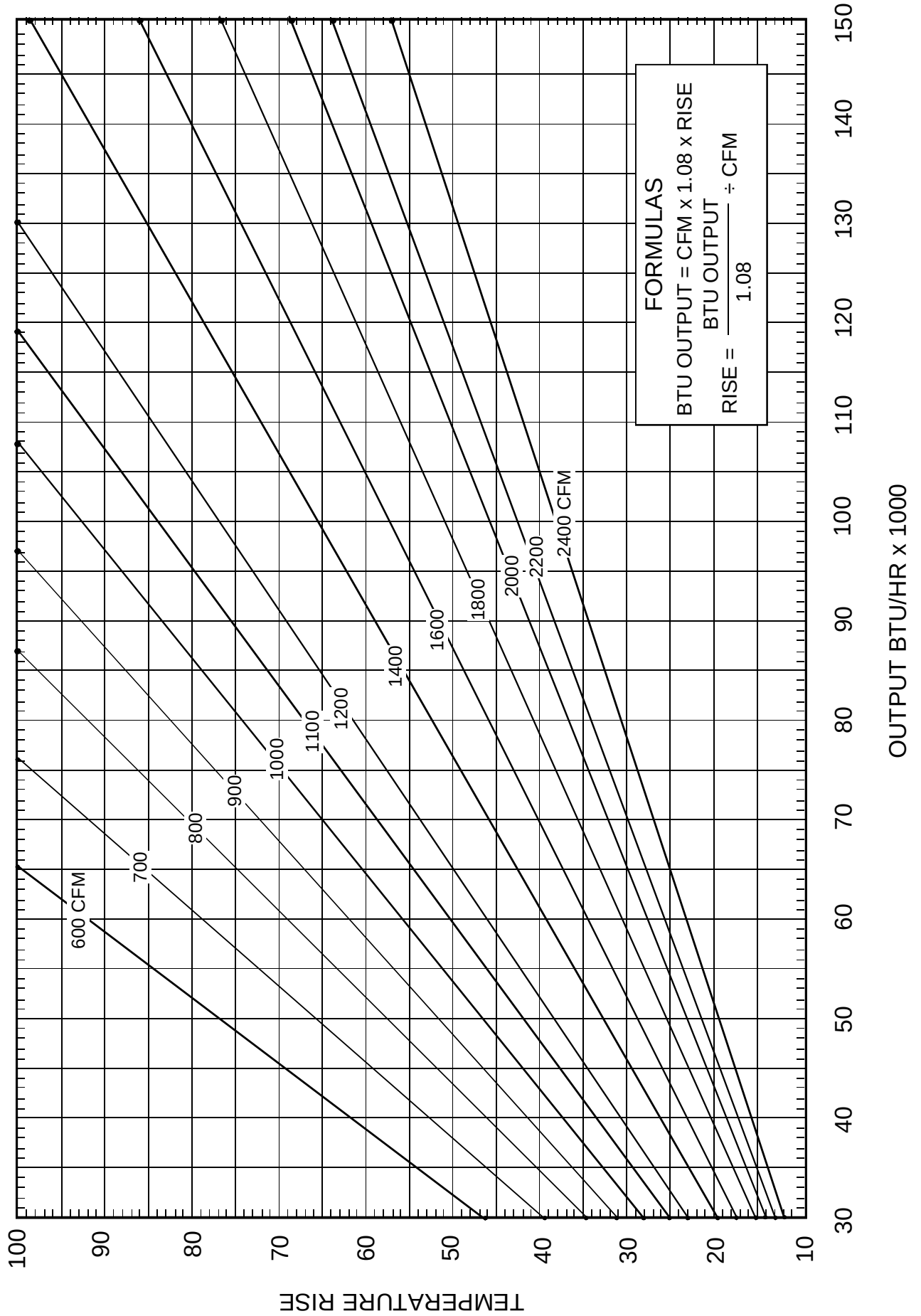
DOWNSHOT

PGA60C1152D/E												
UNIT STATIC	LOW			MED-LOW			MED-HIGH			MED-HIGH		
	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE	CFM	WATTS	RISE
0.2	1265	860	67	1520	1065	56	1790	1345	48	1980	1595	NR
0.3	1240	845	69	1475	1060	58	1755	1325	49	1955	1580	NR
0.4	1215	835	70	1455	1043	59	1715	1305	50	1925	1560	NR
0.5	1185	825	72	1410	1025	60	1680	1285	51	1895	1530	45
0.6	1130	815	75	1385	1015	62	1640	1275	52	1825	1515	47
0.7	1105	795	NR	1340	995	64	1600	1245	53	1790	1495	48
0.8	1075	785	NR	1315	985	65	1580	1225	54	1775	1480	48

* NR Not Recommended

BLOWER PERFORMANCE DATA

BTU OUTPUT vs TEMPERATURE RISE CHART



COOLING PERFORMANCE DATA

EXPANDED PERFORMANCE DATA

EXPANDED PERFORMANCE DATA

COOLING OPERATION

MODEL: PGA60C

Outdoor Ambient Temperature																															
65					75					85					95					105					115						
IDB*	Airflow	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71		
70	2050	MBh	56.5	58.6	64.1	-	55.2	57.2	62.7	-	53.9	55.8	61.2	-	52.5	54.5	59.7	-	49.9	51.7	56.7	-	46.2	47.9	52.5	-	46.2	47.9	52.5	-	
		S/T	0.72	0.60	0.42	-	0.75	0.62	0.43	-	0.77	0.64	0.44	-	0.79	0.66	0.46	-	0.82	0.68	0.47	-	0.83	0.69	0.48	-	0.83	0.69	0.48	-	
		Delta T	18	16	12	-	18	16	12	-	18	16	12	-	19	16	12	-	18	16	12	-	17	15	11	-	17	15	11	-	
		KW	5.23	5.32	5.47	-	5.57	5.67	5.83	-	5.87	5.98	6.15	-	6.14	6.26	6.44	-	6.36	6.49	6.68	-	6.56	6.69	6.89	-	6.56	6.69	6.89	-	
		AMPS	27.2	27.6	28.1	-	28.5	29.0	29.6	-	30.1	30.6	31.3	-	31.5	32.0	32.7	-	32.8	33.4	34.2	-	34.2	34.8	35.6	-	34.2	34.8	35.6	-	
		HI PR	171	184	194	-	192	206	218	-	218	235	248	-	248	267	282	-	279	301	318	-	309	332	351	-	309	332	351	-	
		LO PR	63	67	73	-	66	70	77	-	69	73	80	-	72	77	84	-	76	81	88	-	78	83	91	-	78	83	91	-	
70	1850	MBh	55.7	57.7	63.2	-	54.4	56.3	61.7	-	53.1	55.0	60.3	-	51.8	53.7	58.8	-	49.2	51.0	55.9	-	45.6	47.2	51.7	-	45.6	47.2	51.7	-	
		S/T	0.69	0.58	0.40	-	0.71	0.60	0.41	-	0.73	0.61	0.42	-	0.76	0.63	0.44	-	0.79	0.66	0.45	-	0.79	0.66	0.46	-	0.79	0.66	0.46	-	
		Delta T	19	17	13	-	19	17	13	-	19	17	13	-	19	17	13	-	19	17	13	-	18	16	12	-	18	16	12	-	
		KW	5.20	5.30	5.44	-	5.54	5.65	5.80	-	5.84	5.95	6.12	-	6.11	6.23	6.40	-	6.33	6.46	6.64	-	6.53	6.66	6.85	-	6.53	6.66	6.85	-	
		AMPS	27.1	27.5	28.0	-	28.4	28.9	29.5	-	30.0	30.5	31.1	-	31.3	31.9	32.6	-	32.7	33.2	34.0	-	34.0	34.6	35.4	-	34.0	34.6	35.4	-	
		HI PR	170	183	193	-	190	205	216	-	217	233	246	-	247	265	280	-	277	299	315	-	307	330	348	-	307	330	348	-	
		LO PR	62	66	72	-	66	70	76	-	68	73	79	-	72	76	83	-	75	80	87	-	78	83	90	-	78	83	90	-	
70	1750	MBh	54.8	56.8	62.3	-	53.5	55.5	60.8	-	52.3	54.2	59.4	-	51.0	52.9	57.9	-	48.4	50.2	55.0	-	44.9	46.5	51.0	-	44.9	46.5	51.0	-	
		S/T	0.67	0.56	0.38	-	0.69	0.58	0.40	-	0.71	0.59	0.41	-	0.73	0.61	0.42	-	0.76	0.63	0.44	-	0.76	0.64	0.44	-	0.76	0.64	0.44	-	
		Delta T	19	17	13	-	19	17	13	-	19	17	13	-	20	17	13	-	19	17	13	-	18	16	12	-	18	16	12	-	
		KW	5.14	5.24	5.38	-	5.48	5.58	5.73	-	5.77	5.88	6.05	-	6.03	6.15	6.32	-	6.25	6.38	6.56	-	6.44	6.57	6.76	-	6.44	6.57	6.76	-	
		AMPS	26.8	27.2	27.8	-	28.1	28.6	29.2	-	29.7	30.2	30.8	-	31.0	31.5	32.2	-	32.3	32.9	33.6	-	33.7	34.2	35.0	-	33.7	34.2	35.0	-	
		HI PR	167	180	190	-	187	201	213	-	213	229	242	-	242	261	276	-	273	294	310	-	301	324	342	-	301	324	342	-	
		LO PR	61	65	71	-	65	69	75	-	67	71	78	-	71	75	82	-	74	79	86	-	76	81	89	-	76	81	89	-	
75	2050	MBh	57.4	59.1	64.0	68.7	56.1	57.8	62.5	67.1	54.8	56.4	61.0	65.5	53.4	55.0	59.6	63.9	50.8	52.3	56.6	60.7	47.0	48.4	52.4	56.2	47.0	48.4	52.4	56.2	
		S/T	0.82	0.73	0.55	0.36	0.85	0.76	0.57	0.37	0.87	0.78	0.59	0.38	0.90	0.80	0.61	0.39	0.93	0.83	0.63	0.41	0.94	0.84	0.64	0.41	0.94	0.84	0.64	0.41	
		Delta T	21	19	16	11	21	20	16	11	21	20	16	11	22	20	16	11	21	20	16	11	20	18	15	10	20	18	15	10	
		KW	5.26	5.36	5.50	5.66	5.61	5.71	5.87	6.04	5.91	6.03	6.20	6.38	6.18	6.30	6.49	6.68	6.41	6.54	6.73	6.93	6.61	6.74	6.94	7.15	6.61	6.74	6.94	7.15	
		AMPS	27.3	27.7	28.3	29.0	28.7	29.2	29.8	30.5	30.3	30.8	31.5	32.3	31.7	32.2	32.9	33.8	33.1	33.6	34.4	35.3	34.4	35.0	35.8	36.8	34.4	35.0	35.8	36.8	
		HI PR	173	186	196	205	194	208	220	230	220	237	250	261	251	270	285	297	282	304	321	335	312	336	354	370	312	336	354	370	
		LO PR	63	67	73	78	67	71	78	83	83	69	74	81	86	73	78	85	90	76	81	89	95	79	84	92	98	79	84	92	98
75	1850	MBh	56.6	58.3	63.1	67.7	55.3	56.9	61.6	66.1	54.0	55.6	60.1	64.5	52.7	54.2	58.7	63.0	50.0	51.5	55.7	59.8	46.3	47.7	51.6	55.4	46.3	47.7	51.6	55.4	
		S/T	0.78	0.70	0.53	0.34	0.81	0.73	0.55	0.35	0.83	0.75	0.56	0.36	0.86	0.77	0.58	0.37	0.89	0.80	0.60	0.39	0.90	0.81	0.61	0.39	0.90	0.81	0.61	0.39	
		Delta T	22	20	17	11	22	21	17	12	22	21	17	12	23	21	17	12	22	20	17	12	21	19	16	11	21	19	16	11	
		KW	5.24	5.33	5.48	5.63	5.58	5.69	5.84	6.01	5.89	6.00	6.17	6.35	6.15	6.27	6.45	6.64	6.38	6.50	6.69	6.89	6.58	6.71	6.90	7.11	6.58	6.71	6.90	7.11	
		AMPS	27.2	27.6	28.2	28.9	28.6	29.0	29.7	30.4	30.2	30.7	31.3	32.1	31.5	32.1	32.8	33.6	32.9	33.5	34.2	35.2	34.3	34.9	35.7	36.7	34.3	34.9	35.7	36.7	
		HI PR	171	184	195	203	192	207	219	228	219	235	249	259	249	268	283	295	280	302	319	332	310	333	352	367	310	333	352	367	
		LO PR	63	67	73	78	66	71	77	82	82	69	73	80	85	72	77	84	90	76	81	88	94	79	84	91	97	79	84	91	97
75	1750	MBh	55.7	57.4	62.1	66.7	54.5	56.1	60.7	65.1	53.2	54.7	59.2	63.6	51.9	53.4	57.8	62.0	49.3	50.7	54.9	58.9	45.6	47.0	50.9	54.6	45.6	47.0	50.9	54.6	
		S/T	0.76	0.68	0.51	0.33	0.78	0.70	0.53	0.34	0.80	0.72	0.54	0.35	0.83	0.74	0.56	0.36	0.86	0.77	0.58	0.37	0.87	0.78	0.59	0.38	0.87	0.78	0.59	0.38	
		Delta T	22	20	17	12	22	21	17	12	22	21	17	12	23	21	17	12	22	21	17	12	21	19	16	11	21	19	16	11	
		KW	5.18	5.27	5.41	5.56	5.52	5.62	5.77	5.94	5.81	5.92	6.09	6.27	6.08	6.19	6.37	6.56	6.30	6.42	6.61	6.81	6.49	6.62	6.81	7.02	6.49	6.62	6.81	7.02	
		AMPS	27.0	27.4	27.9	28.6	28.3	28.7	29.4	30.1	29.9	30.3	31.0	31.8	31.2	31.7	32.4	33.3	32.6	33.1	33.9	34.8	33.9	34.5	35.3	36.2	33.9	34.5	35.3	36.2	
		HI PR	169	181	191	200	189	203	215	224	215	231	244	255	245	264	278	290	276	297	313	327	304	328	346	361	304	328	346	361	
		LO PR	62	66	72	76	65	69	76	81	81	68	72	79	84	71	76	83	88	75	79	87	92	77	82	90	95	77	82	90	95

* Entering Indoor Dry Bulb Temperature

NOTE: Shaded area is ACCA (TVA) conditions

COOLING PERFORMANCE DATA

EXPANDED PERFORMANCE DATA

COOLING OPERATION

MODEL: PGA60C

Outdoor Ambient Temperature																																			
65						75						85						95						105						115					
IDB*	Airflow	Entering Indoor Wet Bulb Temperature																																	
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71		
80	2050	MBh	58.5	59.7	63.8	68.2	57.1	58.4	62.3	66.6	55.7	57.0	60.9	65.1	54.4	55.6	59.4	63.5	51.7	52.8	56.4	60.3	47.9	48.9	52.3	55.9									
		S/T	0.90	0.84	0.69	0.51	0.93	0.87	0.71	0.53	0.95	0.89	0.73	0.54	0.99	0.92	0.75	0.56	1.00	0.96	0.78	0.58	1.00	0.97	0.79	0.59									
		Delta T	24	23	20	16	24	23	20	16	24	23	20	16	24	23	20	16	23	23	20	16	21	21	18	15									
		KW	5.30	5.40	5.54	5.70	5.65	5.75	5.91	6.08	5.96	6.07	6.24	6.43	6.23	6.35	6.53	6.73	6.46	6.59	6.78	6.98	6.66	6.79	6.99	7.20									
		AMPS	27.5	27.9	28.5	29.1	28.9	29.3	30.0	30.7	30.5	31.0	31.7	32.5	31.9	32.4	33.1	34.0	33.3	33.8	34.6	35.6	34.6	35.2	36.1	37.1									
	1850	HI PR	174	188	198	207	196	211	222	232	223	239	253	264	253	273	288	300	285	307	324	338	315	339	358	373									
		LO PR	64	68	74	79	68	72	78	84	70	75	81	87	74	78	86	91	77	82	90	96	80	85	93	99									
		MBh	57.6	58.9	62.9	67.2	56.3	57.5	61.4	65.7	54.9	56.1	60.0	64.1	53.6	54.8	58.5	62.5	50.9	52.0	55.6	59.4	47.2	48.2	51.5	55.0									
		S/T	0.86	0.81	0.66	0.49	0.89	0.84	0.68	0.51	0.91	0.86	0.70	0.52	0.94	0.88	0.72	0.54	0.98	0.92	0.75	0.56	0.99	0.93	0.75	0.56									
		Delta T	25	24	21	16	25	24	21	17	25	24	21	17	25	24	21	17	25	24	21	16	23	22	19	15									
1750	KW	5.28	5.37	5.52	5.67	5.62	5.73	5.89	6.05	5.93	6.04	6.21	6.39	6.20	6.32	6.50	6.69	6.43	6.55	6.74	6.95	6.62	6.76	6.96	7.17										
	AMPS	27.4	27.8	28.4	29.0	28.8	29.2	29.8	30.6	30.4	30.8	31.5	32.3	31.7	32.3	33.0	33.9	33.1	33.7	34.5	35.4	34.5	35.1	35.9	36.9										
	HI PR	173	186	197	205	194	209	221	230	221	238	251	262	252	271	286	298	283	305	322	336	313	337	355	371										
	LO PR	63	68	74	78	67	71	78	83	70	74	81	86	73	78	85	91	77	82	89	95	79	84	92	98										
	MBh	56.7	58.0	61.9	66.2	55.4	56.6	60.5	64.7	54.1	55.3	59.1	63.1	52.8	53.9	57.6	61.6	50.1	51.2	54.7	58.5	46.4	47.5	50.7	54.2										
85	2050	S/T	0.83	0.78	0.63	0.47	0.86	0.81	0.66	0.49	0.88	0.83	0.67	0.50	0.91	0.85	0.69	0.52	0.94	0.89	0.72	0.54	0.95	0.89	0.73	0.54									
		Delta T	25	24	21	16	25	24	21	17	25	24	21	17	25	24	21	17	25	24	21	17	23	22	19	15									
		KW	5.21	5.31	5.45	5.60	5.56	5.66	5.81	5.98	5.86	5.97	6.14	6.31	6.12	6.24	6.42	6.61	6.35	6.47	6.66	6.86	6.54	6.67	6.87	7.07									
		AMPS	27.1	27.5	28.1	28.7	28.5	28.9	29.5	30.2	30.0	30.5	31.2	32.0	31.4	31.9	32.6	33.5	32.8	33.3	34.1	35.0	34.1	34.7	35.5	36.5									
		HI PR	170	183	193	202	191	206	217	226	217	234	247	257	247	266	281	293	278	300	316	330	308	331	349	364									
	LO PR	62	66	72	77	66	70	77	82	68	73	80	85	72	77	84	89	75	80	88	93	78	83	91	96										
	1850	MBh	59.5	60.6	63.5	67.8	58.1	59.2	62.0	66.2	56.7	57.8	60.6	64.6	55.3	56.4	59.1	63.0	52.6	53.6	56.1	59.9	48.7	49.6	52.0	55.5									
		S/T	0.94	0.91	0.82	0.67	0.98	0.94	0.85	0.69	1.00	0.97	0.87	0.71	1.00	1.00	0.90	0.73	1.00	1.00	0.93	0.76	1.00	1.00	0.94	0.76									
		Delta T	25	25	23	20	25	25	24	20	25	25	24	20	25	25	24	21	24	24	23	20	22	22	22	19									
		KW	5.34	5.43	5.58	5.74	5.69	5.80	5.96	6.13	6.00	6.11	6.29	6.47	6.27	6.40	6.58	6.78	6.51	6.64	6.83	7.04	6.71	6.84	7.05	7.26									
AMPS		27.6	28.1	28.6	29.3	29.0	29.5	30.1	30.9	30.7	31.2	31.9	32.7	32.1	32.6	33.4	34.2	33.5	34.1	34.9	35.8	34.9	35.5	36.3	37.3										
1750	HI PR	176	190	200	209	198	213	225	234	225	242	255	266	256	275	291	303	288	310	327	341	318	342	362	377										
	LO PR	65	69	75	80	68	73	79	84	71	75	82	88	74	79	86	92	78	83	91	96	81	86	94	100										
	MBh	58.6	59.7	62.6	66.8	57.2	58.4	61.1	65.2	55.9	57.0	59.7	63.7	54.5	55.6	58.2	62.1	51.8	52.8	55.3	59.0	48.0	48.9	51.2	54.6										
	S/T	0.90	0.87	0.79	0.64	0.93	0.90	0.81	0.66	0.96	0.92	0.83	0.68	0.99	0.95	0.86	0.70	1.00	0.99	0.89	0.73	1.00	1.00	0.90	0.73										
	Delta T	26	26	24	21	27	26	25	21	27	26	25	21	27	26	25	22	26	26	25	21	24	24	23	20										
1850	KW	5.31	5.41	5.55	5.71	5.66	5.77	5.93	6.10	5.97	6.08	6.26	6.44	6.24	6.36	6.55	6.74	6.47	6.60	6.80	7.00	6.67	6.81	7.01	7.22										
	AMPS	27.5	27.9	28.5	29.2	28.9	29.4	30.0	30.7	30.5	31.0	31.7	32.5	31.9	32.5	33.2	34.1	33.3	33.9	34.7	35.6	34.7	35.3	36.2	37.1										
	HI PR	175	188	199	207	196	211	223	233	223	240	254	265	254	274	289	301	286	308	325	339	316	340	359	374										
	LO PR	64	68	74	79	68	72	79	84	70	75	82	87	74	79	86	91	77	82	90	96	80	85	93	99										
	MBh	57.7	58.8	61.6	65.8	56.4	57.5	60.2	64.2	55.0	56.1	58.8	62.7	53.7	54.7	57.3	61.2	51.0	52.0	54.5	58.1	47.3	48.2	50.5	53.8										
1750	S/T	0.87	0.84	0.76	0.61	0.90	0.87	0.78	0.64	0.92	0.89	0.80	0.65	0.95	0.92	0.83	0.67	0.99	0.96	0.86	0.70	1.00	0.96	0.87	0.71										
	Delta T	26	26	25	21	27	26	25	21	27	26	25	22	27	26	25	22	27	26	25	21	25	24	23	20										
	KW	5.25	5.34	5.49	5.64	5.59	5.70	5.86	6.02	5.90	6.01	6.18	6.36	6.17	6.28	6.47	6.66	6.39	6.52	6.71	6.91	6.59	6.72	6.92	7.13										
	AMPS	27.3	27.7	28.2	28.9	28.6	29.1	29.7	30.4	30.2	30.7	31.4	32.2	31.6	32.1	32.8	33.7	33.0	33.5	34.3	35.2	34.3	34.9	35.7	36.7										
	HI PR	172	185	195	204	193	208	219	229	219	236	249	260	250	269	284	296	281	303	319	333	311	334	353	368										
LO PR	63	67	73	78	67	71	77	82	69	74	80	86	73	77	84	90	76	81	88	94	79	84	91	97											

COOLING PERFORMANCE DATA

PERFORMANCE TEST

All data based upon listed indoor dry bulb temperature. .00 inches external static pressure on coil of outdoor section. Indoor air cubic feet per minute (CFM) as listed in the Performance Data Sheets:

If conditions vary from this, results will change as follows:

1. As indoor dry bulb temperatures increase, a slight increase will occur in indoor air temperature drop (ΔT). Low and high side pressures and power will not change.
2. As indoor CFM decreases, a slight increase will occur in indoor temperature drop (ΔT). A slight decrease will occur in low and high side pressures and power.

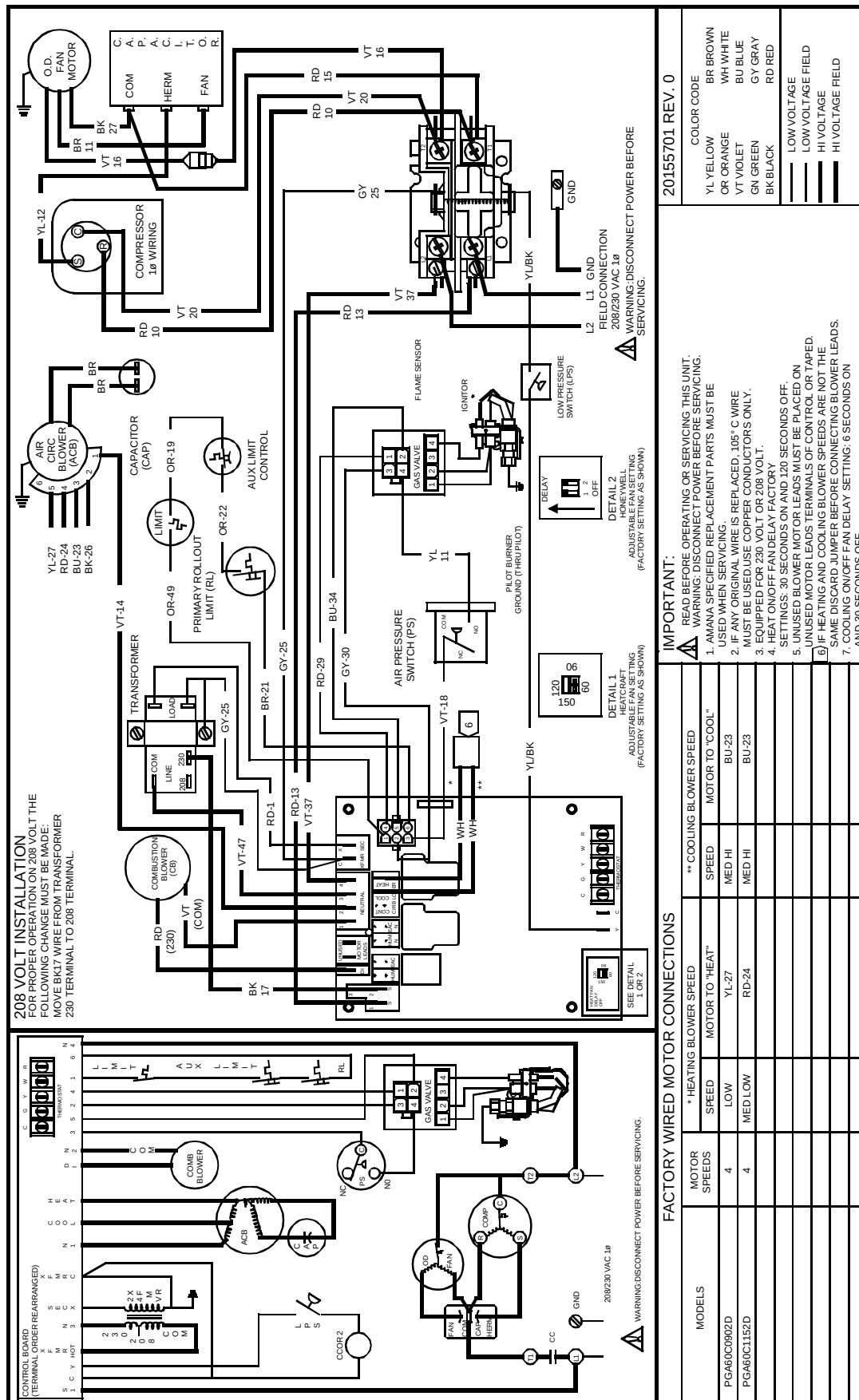
A properly operating unit should be within plus or minus **3 degrees** of the typical (ΔT) value shown.

A properly operating unit should be within plus or minus **7 PSIG** of the **head pressure** shown.

A properly operating unit should be within plus or minus **3 PSIG** of the **suction pressure** shown.

A properly operating unit should be within plus or minus **3 Amps** of the typical value shown.

WIRING DIAGRAMS



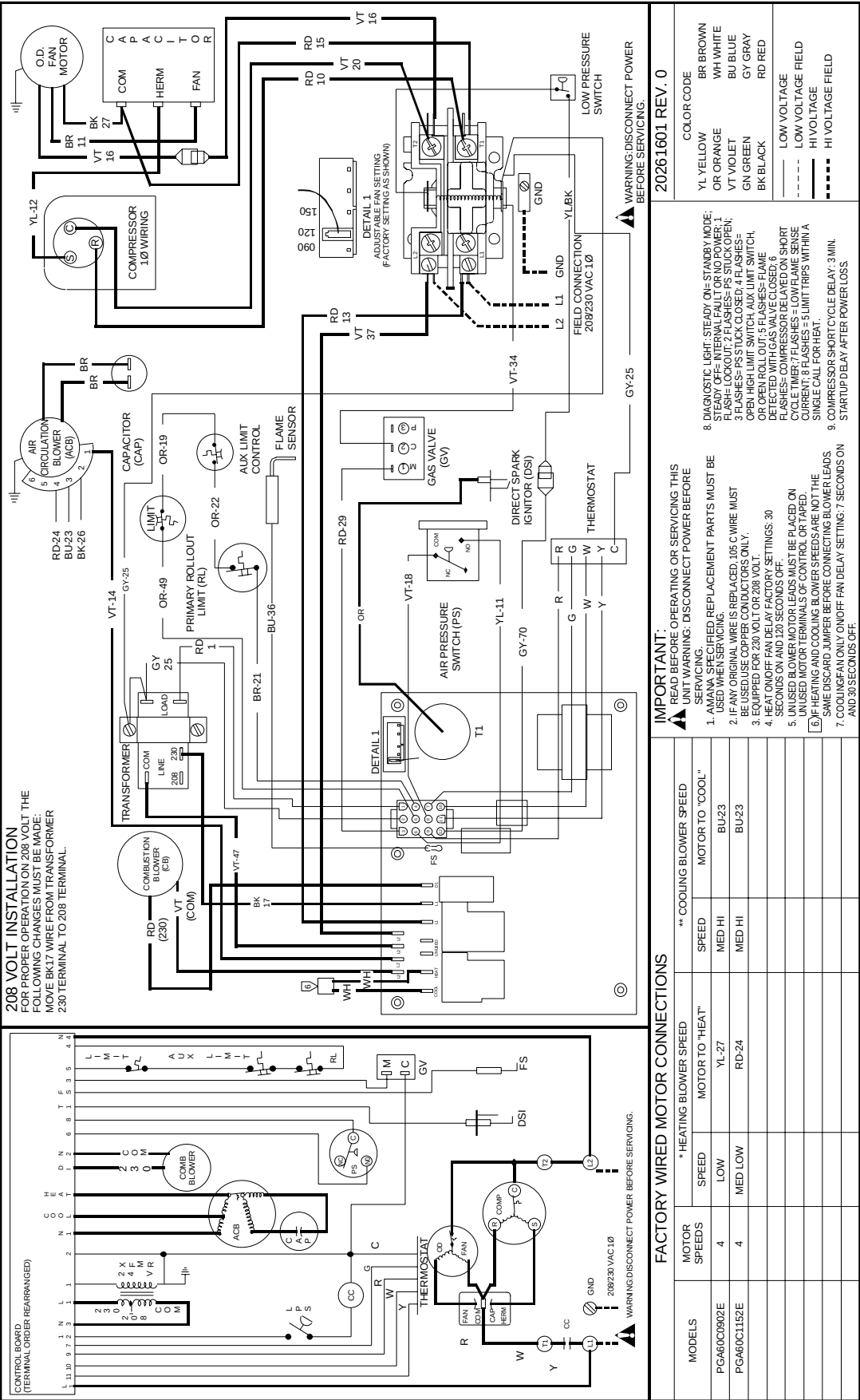
PGA60C0902D and PGA60C1152D
(Manufacturing Numbers P1217301-02C and P1220301-02C)

WARNING

TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.

13 Rev. 1

WIRING DIAGRAMS



PGA60C0902E and PGA60C1152E
(Manufacturing Numbers P1231901-02C and P1236201-02C)

WARNING

TO AVOID POSSIBLE ELECTRICAL SHOCK, PERSONAL INJURY, OR DEATH, DISCONNECT THE POWER BEFORE SERVICING.