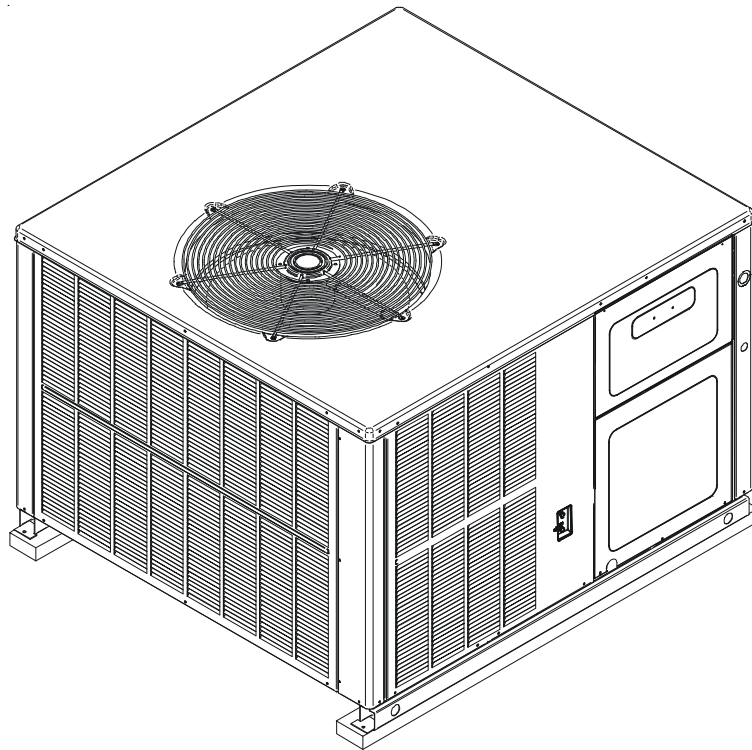


# TECHNICAL MANUAL

## GPH 13 M Series Multi Position Package Heat Pump Units with R410A

- Refer to Service Manual RS6300008 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.
- Models listed on page 3.

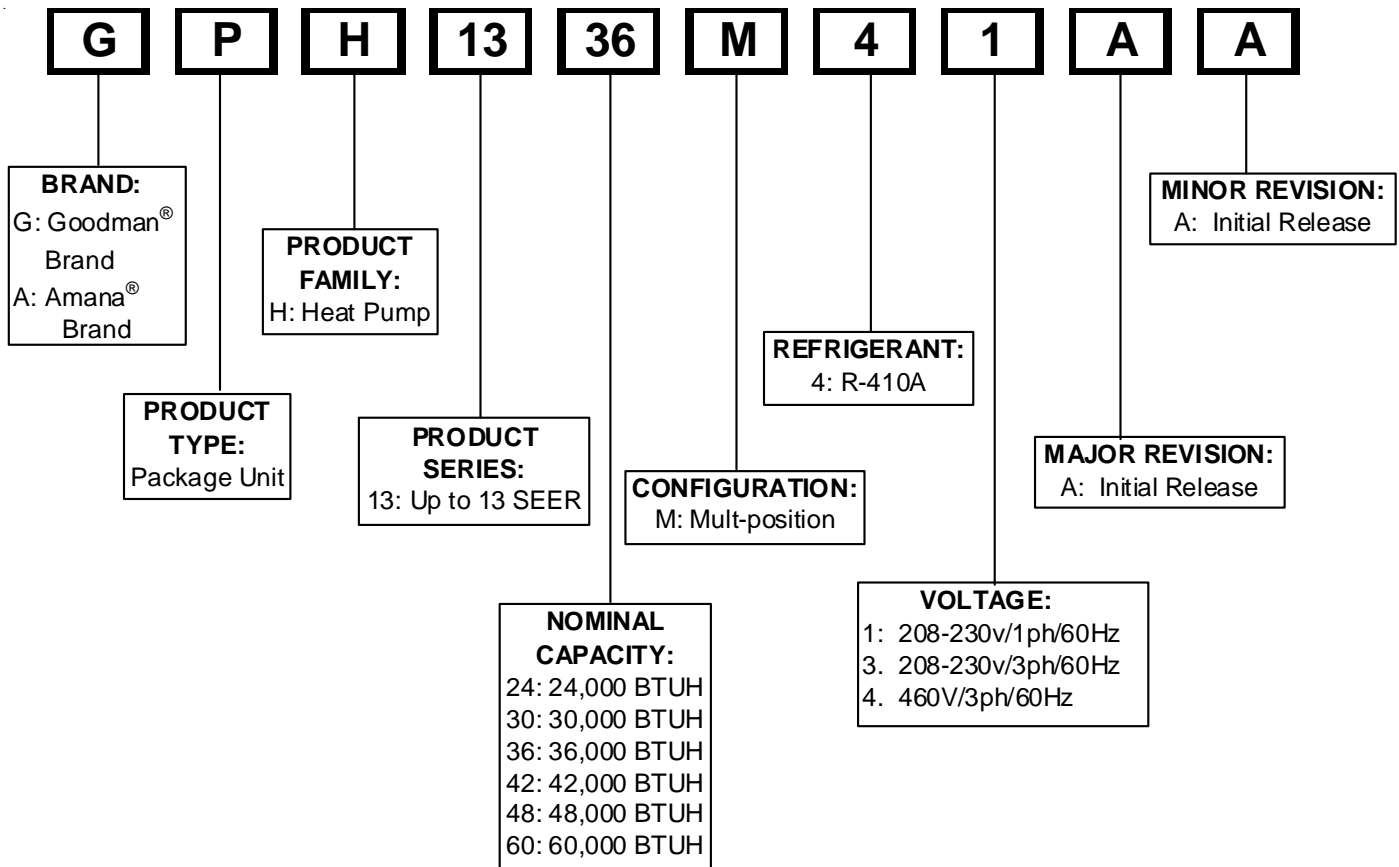


This manual is to be used by qualified, professionally trained HVAC technicians only. Goodman does not assume any responsibility for property damage or personal injury due to improper service procedures or services performed by an unqualified person.

RT6332013r1  
November 2010

# PRODUCT IDENTIFICATION

The model and manufacturing number are used for positive identification of component parts used in manufacturing. Please use these numbers when requesting service or parts information.



**WARNING**

**HIGH VOLTAGE!**

Disconnect ALL power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury or death.

**WARNING**

Goodman will not be responsible for any injury or property damage arising from improper service or service procedures. If you install or perform service on this unit, you assume responsibility for any personal injury or property damage which may result. Many jurisdictions require a license to install or service heating and air conditioning equipment.

**WARNING**

Installation and repair of this unit should be performed ONLY by individuals meeting (at a minimum) the requirements of an "entry level technician" as specified by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI). Attempting to install or repair this unit without such background may result in product damage, personal injury or death.

# PRODUCT IDENTIFICATION

The model and manufacturing number are used for positive identification of component parts used in manufacturing. Please use these numbers when requesting service or parts information.

GPH1324M41AB

GPH1330M41AB

GPH1336M41AB

GPH1342M41AB

GPH1348M41AB

GPH1360M41AB



The United States Environmental Protection Agency (“EPA”) has issued various regulations regarding the introduction and disposal of refrigerants introduced into this unit. Failure to follow these regulations may harm the environment and can lead to the imposition of substantial fines. These regulations may vary by jurisdiction. Should questions arise, contact your local EPA office.



Do not connect or use any device that is not design certified by Goodman for use with this unit. Serious property damage, personal injury, reduced unit performance and/or hazardous conditions may result from the use of such non-approved devices.



To prevent the risk of property damage, personal injury, or death, do not store combustible materials or use gasoline or other flammable liquids or vapors in the vicinity of this appliance.

# PRODUCT DESIGN

GPH13 (M Series) Package Units are designed for outdoor installations only in either residential or light commercial applications and are available in 2, 2.5, 3, 3.5, 4 & 5 ton sizes. They are designed for 208/230 volt single phase 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 and a horizontal duct cover kit is required.

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. A trap must be provided to have proper condensate drainage. (Do not reduce the drain line size).

Refrigerant flow control is achieved by use of restrictor orifices.

All heat pump models also have a suction line accumulator installed between the reversing valve and the compressor. The object of the accumulator is to:

1. Provide a liquid refrigerant storage vessel during prolonged system off cycles.
2. Store excess liquid refrigerant not needed by the system while running.
3. Return oil and saturated vapor to the compressor at a controlled rate.
4. Retain stored excess refrigerant during a sudden system pressure fluctuation such as seen in defrost cycles.

Refrigerant flow control is achieved by use of restrictor orifices. These models use the FasTest Access Fitting System, with a saddle that is either soldered to the suction and liquid lines or is fastened with a locking nut to the access fitting box (core) and then screwed into the saddle. **Do not remove the core from the saddle until the refrigerant charge has been removed. Failure to do so could result in property damage or personal injury.**

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

The outdoor fan motors are single phase capacitor type motors. Some models use PSC type indoor blower motors while others use EEM type blower motors. EEM motors are energized by a 24V signal from the thermostat and are constant torque motors with very low power consumption.

The EEM features an integral control module.

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.

Package Heat Pump indoor sections are designed to accept optional components such as auxiliary electric heaters and circuit breakers. Provisions for these components have been made at time of manufacture.

GPH13 series package units use the Compliant Scroll compressor; there are a number of design characteristics which are different from the traditional reciprocating compressor.

- 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 flood back or flooded start conditions may wash oil from the bearing surfaces causing premature bearing failure.

- These Scroll compressors use "POE" or polyolester oil which is NOT compatible with mineral oil based lubricants like 3GS. "POE" oil must be used if additional oil is required.

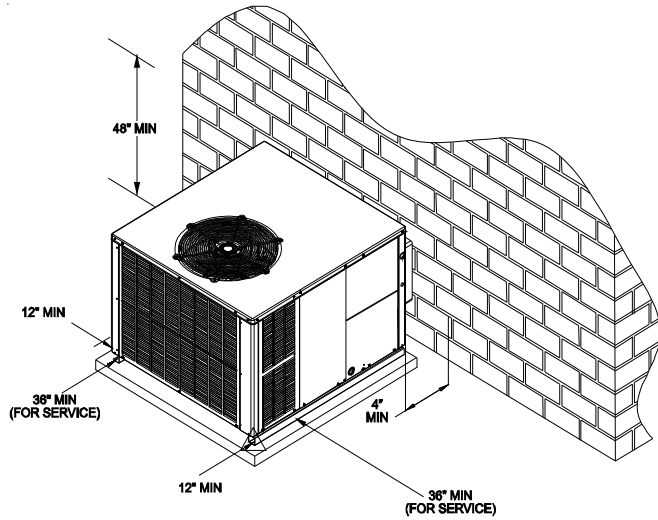
- Compliant scroll compressors perform "quiet" shutdowns that allow the compressor to restart immediately without the need for a time delay. This compressor will restart even if the system has not equalized.

- 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***

**NOTE:** To ensure proper condensate drainage, unit must be installed in a level position.

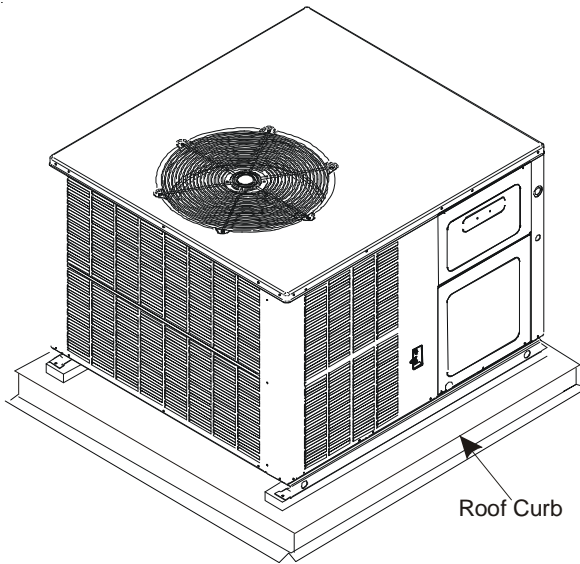
# PRODUCT DESIGN



## Outside Slab Installation -Multi-positional (M)

**NOTE:** Roof overhang should be no more than 36" and provisions made to deflect the warm discharge air out from the overhang.

Minimum clearances are required to avoid air recirculation and keep the unit operating at peak efficiency.



## Rooftop Installation --Multi-positional (M)

**NOTE:** To ensure proper condensate drainage, unit must be installed in a level position.

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 Uniform Mechanical Code Section 305.

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

**⚠ WARNING**

**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 SLING.**

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

**NOTE:** Single phase models require installation of horizontal duct kit #20464501PDGK (medium chassis) and #20464502PDGK (large chassis) when using bottom discharge.

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

**HKR ELECTRICAL DATA**

	Circuit #1		Circuit #2		Actual kW & BTU at 240V
	Minimum Circuit Ampacity at 208 / 240V	Maximum Overcurrent Protection (amps) at 208 / 240V	Minimum Circuit Ampacity at 208 / 240V	Maximum Overcurrent Protection (amps) at 208 / 240V	
<b>GPH1324M41*</b>					
HKR05A, CA	24 / 27	30 / 30	----	----	4.75 / 16,200
HKR08A, CA	33 / 28	40 / 40	----	----	7.00 / 23,800
HKR10A, CA	45 / 51	60 / 60	----	----	9.50 / 32,400
<b>GPH1330M41*</b>					
HKR05A, CA	24 / 27	30 / 30	--	--	4.75 / 16,200
HKR08A, CA	34 / 39	40 / 40	--	--	7.0 / 23,800
HKR10A, CA	45 / 52	60 / 60	--	--	9.5 / 32,400
HKR15A, CA	45 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
<b>GPH1336M41*</b>					
HKR05A, CA	24 / 27	30 / 30	----	----	4.75 / 16,200
HKR08A, CA	34 / 39	40 / 40	----	----	7.00 / 23,800
HKR10A, CA	45 / 52	60 / 60	----	----	9.50 / 32,400
HKR15A, CA	45 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
<b>GPH1342M41*</b>					
HKR05A, CA	24 / 27	30 / 30	--	--	4.75 / 16,200
HKR08A, CA	34 / 39	40 / 40	--	--	7.0 / 23,800
HKR10A, CA	45 / 52	60 / 60	--	--	9.5 / 32,400
HKR15A, CA	45 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
<b>GPH1348M41*</b>					
HKR05A, CA	25 / 28	30 / 30	----	----	4.75 / 16,200
HKR08A, CA	34 / 40	40 / 40	----	----	7.00 / 23,800
HKR10A, CA	46 / 53	60 / 60	----	----	9.50 / 32,400
HKR15A, CA	46 / 52	60 / 60	22 / 25	30 / 30	14.25 / 48,600
HKR20A, CA	46 / 52	60 / 60	43 / 49	60 / 60	19.50 / 66,500
<b>GPH1360M41*</b>					
HKR05A, CA	26 / 30	30 / 30	----	----	4.75 / 16,200
HKR08A, CA	36 / 40	40 / 40	----	----	7.00 / 23,800
HKR10A, CA	48 / 54	60 / 60	----	----	9.50 / 32,400
HKR15A, CA	48 / 54	60 / 60	22 / 25	30 / 30	14.25 / 48,600
HKR20A, CA	48 / 54	60 / 60	43 / 49	60 / 60	19.50 / 66,500

**IMPORTANT NOTE:** A separate power supply is required for the HKR heater kit.

**Heating kW Correction Factor**

Supply Voltage	240	230	220	210	208
Correction Factor	1.0	0.93	0.85	0.78	0.76

Multiply rated kW by correction factor to get actual kW

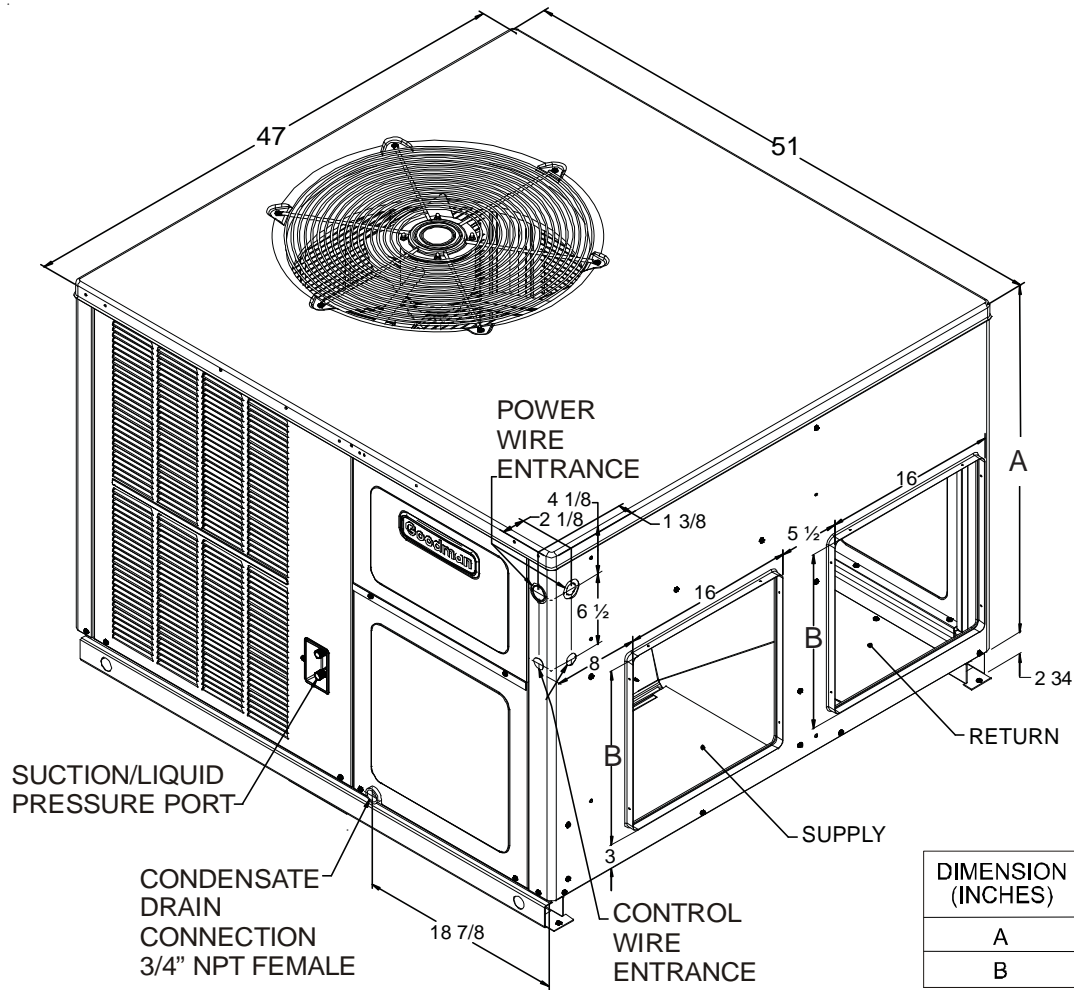


**WARNING**

All wires and overcurrent protection devices are sized for use with electric heaters only and without refrigeration. If heaters are not installed with above wire size, overheating and fire could occur. See PACKAGE UNIT SPECIFICATIONS section for minimum circuit ampacity and maximum overcurrent protection during refrigeration cycle.

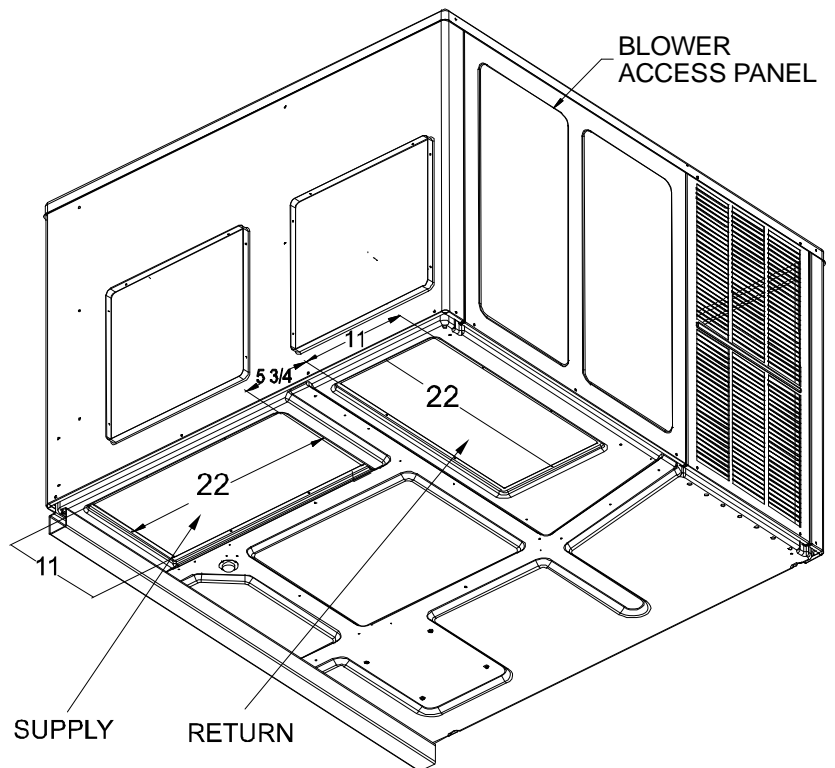
# PRODUCT DIMENSIONS

# GPH13[24-60]M41\*



DIMENSION (INCHES)	MEDIUM	LARGE
A	32	40
B	16	18

- MEDIUM CHASSIS**
- GPH1324M41\*
  - GPH1330M41\*
  - GPH1336M41\*
  - GPH1342M41\*
- LARGE CHASSIS**
- GPH1348M41\*
  - GPH1360M41\*



# PACKAGE HEAT PUMP SPECIFICATIONS GPH13[24-36]M41AB

		GPH1324M41*	GPH1330M41*	GPH1336M41*
<b>COOLING CAPACITY</b>	COOLING CAPACITY, BTUH	24,000	29,000	34600
	SEER / EER	13/11	13/10.8	13/10.9
<b>HEATING RATING</b>	BTU/h (47°)	23000	28800	34200
	BTU/h (17°)	12600	17000	19000
	HSPF	7.7	7.7	7.7
<b>UNIT ELECTRICAL SPECIFICATION</b>	VOLTAGE (NAMEPLATE)	208/230-60-1	208/230-60-1	208/230-60-1
	AMPS	15.8	19.0	21.3
	MIN CIRCUIT AMPACITY	19.0	23.0	25.4
	MAX OVERCURRENT PROTECTION <sup>(1)</sup>	30	35	40
<b>COMPRESSOR</b>	TYPE	SCROLL	SCROLL	SCROLL
	RATED LOAD AMPS	12.8	16.0	16.7
	LOCKED ROTOR AMPS	58.3	77	79
<b>CONDENSER FAN MOTOR</b>	HORSEPOWER	1/4	1/4	1/4
	RPM	830	830	830
	FULL LOAD AMPS	1.5	1.5	1.5
	LOCKED ROTOR AMPS	3	3	3
<b>CONDENSER FAN</b>	BLADE DIAMETER (INCHES)	22/3	22/3	22/4
	NUMBER OF BLADES			
<b>CONDENSER COIL</b>	FACE AREA (SQ. FT.)	17.02	17.02	16.83
	NUMBER OF ROWS	1	1	1
	FINS PER INCH	24	24	22
<b>EVAPORATOR BLOWER MOTOR</b>	HORSEPOWER - NUMBER OF SPEEDS	1/4 - 3	1/3 - 3	1/3 - 3
	FULL LOAD AMPS	1.5	1.5	3.06
	LOCKED ROTOR AMPS	2.13	3.2	4.1
	MOTOR SPEED TAP - COOLING X-13	High	High	High
	RPM	952	869	910
<b>EVAPORATOR BLOWER</b>	DIAMETER X WIDTH (INCHES)	10 x 9	10 x 9	10 x 9
	RATED SCFM COOLING	825	1050	1150
	MAX EXTERNAL STATIC PRESS ("w.c.)	0.5	0.5	0.5
<b>EVAPORATOR COIL</b>	FACE AREA (SQ. FT.)	4.52	4.52	4.52
	NUMBER OF ROWS	4	4	4
	FINS PER INCH	16	16	14
<b>GENERAL INFORMATION</b>	FILTER SIZE *	25 x 25 x 1	25 x 25 x 1	25 x 25 x 1
	DRAIN SIZE (INCHES)	3/4"	3/4"	3/4"
	EXPANSION DEVICE (ID/OD)	0.057/0.045	0.070/0.055	0.071/0.057
	REFRIGERANT CHARGE R410A (OZS.)	110	115	135
	POWER SUPPLY CONDUIT KNOCKOUT SIZE (INCHES)	3/4, 1, 1-1/4	3/4, 1, 1-1/4	3/4, 1, 1-1/4
	LOW VOLTAGE CONDUIT KNOCKOUT SIZE (INCHES)	1/2	1/2	1/2
	LO PRESSURE SWITCH OPENS / CLOSES PSIG	22 / 50	22 / 50	22 / 50
	HI PRESSURE SWITCH - OPENS PSIG OPENS / CLOSES PSIG	660 / 420	660 / 420	660 / 420
	SHIPPING WEIGHT (LBS.)	405	410	435
	OPERATING WEIGHT (LBS.)	395	400	425

<sup>(1)</sup> Maximum Overcurrent Protection Device: **MUST** use Time Delay Fuse or HACR type Circuit Breaker of the same size as noted.

\* Calculated external filter size based on air velocity of 300 ft/min.

Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

Unit specifications are subject to change without notice. **ALWAYS** refer to the units serial plate for the most up-to-date general and electrical information.

**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. Data shown is w/o electric heaters.



# PACKAGE HEAT PUMP SPECIFICATIONS GPH13[42-60]M41AB

		GPH1342M41*	GPH1348M41*	GPH1360M41*
<b>COOLING CAPACITY</b>	COOLING CAPACITY, BTUH	40000	46500	56000
	SEER / EER	13/11	13/11	13/10.9
<b>HEATING RATING</b>	BTU/h (47°)	40000	45500	55500
	BTU/h (17°)	21000	26000	31200
	HSPF	7.7	8.0	8.0
<b>UNIT ELECTRICAL SPECIFICATION</b>	VOLTAGE (NAMEPLATE)	208/230-60-1	208/230-60-1	208/230-60-1
	AMPS	22.4	29.0	35.4
	MIN CIRCUIT AMPACITY	26.8	34.5	42.0
	MAX OVERCURRENT PROTECTION <sup>(1)</sup>	40	50	60
<b>COMPRESSOR</b>	TYPE	SCROLL	SCROLL	SCROLL
	RATED LOAD AMPS	17.9	21.8	26.4
	LOCKED ROTOR AMPS	112	117	134
<b>CONDENSER FAN MOTOR</b>	HORSEPOWER	1/4	1/4	1/4
	RPM	1075	1075	1075
	FULL LOAD AMPS	1.4	1.4	1.4
	LOCKED ROTOR AMPS	2.9	2.9	2.9
<b>CONDENSER FAN</b>	BLADE DIAMETER (INCHES)	22/3	22/3	22/3
	NUMBER OF BLADES			
<b>CONDENSER COIL</b>	FACE AREA (SQ. FT.)	16.83	19.24	21.04
	NUMBER OF ROWS	2	2	2
	FINS PER INCH	16	16	16
<b>EVAPORATOR BLOWER MOTOR</b>	HORSEPOWER - NUMBER OF SPEEDS	1/3 - 3	3/4 - 5	1 - 5
	FULL LOAD AMPS	3.06	5.8	7.6
	LOCKED ROTOR AMPS	4.1	--	--
	MOTOR SPEED TAP - COOLING X-13	High	T2/T3	T2/T3
	RPM	910	1050	1050
<b>EVAPORATOR BLOWER</b>	DIAMETER X WIDTH (INCHES)	10 x 9	10 x 9	10 x 9
	RATED SCFM COOLING	1300	1720	1800
	MAX EXTERNAL STATIC PRESS ("w.c.)	0.5	0.5	0.5
<b>EVAPORATOR COIL</b>	FACE AREA (SQ. FT.)	4.52	6.17	6.17
	NUMBER OF ROWS	4	4	4
	FINS PER INCH	14	14	14
<b>GENERAL INFORMATION</b>	FILTER SIZE *	25 x 25 x 1	(2) 20 x 20 x 1	(2) 20 x 20 x 1
	DRAIN SIZE (INCHES)	3/4"	3/4"	3/4"
	EXPANSION DEVICE (ID/OD)	0.072/0.063	0.080/0.065	0.084/0.076
	REFRIGERANT CHARGE R410A (OZS.)	180	190	220
	POWER SUPPLY CONDUIT KNOCKOUT SIZE (INCHES)	3/4, 1, 1-1/4	3/4, 1, 1-1/4	3/4, 1, 1-1/4
	LOW VOLTAGE CONDUIT KNOCKOUT SIZE (INCHES)	1/2	1/2	1/2
	LO PRESSURE SWITCH OPENS / CLOSES PSIG	22 / 50	22 / 50	22 / 50
	HI PRESSURE SWITCH - OPENS PSIG OPENS / CLOSES PSIG	660 / 420	660 / 420	660 / 420
	SHIPPING WEIGHT (LBS.)	440	520	533
	OPERATING WEIGHT (LBS.)	430	510	523

<sup>(1)</sup> Maximum Overcurrent Protection Device: **MUST** use Time Delay Fuse or HACR type Circuit Breaker of the same size as noted.

\* Calculated external filter size based on air velocity of 300 ft/min.

Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

Unit specifications are subject to change without notice. **ALWAYS** refer to the units serial plate for the most up-to-date general and electrical information.

**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. Data shown is w/o electric heaters.

# ACCESSORIES

# GPH13[24-60]M41\*

ACCESSORIES - GPC/GPH****M MODELS	
Part Number	Description
OT18-60A	Outdoor Thermostat Kit w/Lockout Stat
OT/EHR18-60	Emergency Heat Relay Kit
HKR	Electric Heat Kit
PGC101/102/103	Roof Curb
PEHH101/102	Horizontal Economizer For Heat Pump, Small and Medium Chassis
PEHH103	Horizontal Economizer For Heat Pump, Large Chassis
PEHC101/102	Horizontal Economizer For A/C, Small and Medium Chassis
PEHC103	Horizontal Economizer For A/C, Large Chassis
PGMDD101/102	Manual 25% Fresh Air Damper Downflow Application, Small and Medium Chassis
PGMDD103	Manual 25% Fresh Air Damper Downflow Application, Large Chassis
PGMDH102	Manual 25% Fresh Air Damper Horizontal Application, Medium Chassis
PGMDH103	Manual 25% Fresh Air Damper Horizontal Application, Large Chassis
PGMDMD101/102	Motorized 25% Fresh Air Damper Downflow Application, Small and Medium Chassis
PGMDMD103	Motorized 25% Fresh Air Downflow Application, Large Chassis
PGMDMH102	Motorized 25% Fresh Air Damper Horizontal Application, Medium Chassis
PGMDMH103	Motorized 25% Fresh Air Damper Horizontal Application, Large Chassis
GPC13MED102	Downflow Economizer For A/C, Medium Chassis
GPC13MED103	Downflow Economizer For A/C, Large Chassis
GPH13MED102	Downflow Economizer For Heat Pump, Medium Chassis
GPH13MED103	Downflow Economizer For Heat Pump, Large Chassis
GPH13MFR102	Internal Filter Rack, Medium Chassis
GPH13MFR103	Internal Filter Rack, Large Chassis
GPGHFR101-103	External Horizontal Filter Rack for Goodman/Amana Gas/Electric and Multi-position Package Units All Chassis
SQRPG101/102	Square to Round Adapter w/ 16" Round Downflow Application, Medium Chassis
SQRPG103	Square to Round Adapter w/ 18" Round Downflow Application, Large Chassis
SQRPGH101/102	Square to Round Adapter w/ 16" Round Horizontal Application, Medium Chassis
SQRPGH103	Square to Round Adapter w/ 18" Round Horizontal Application, Large Chassis
CDK36	Flush Mount Concentric Duct Kit
CDK36515	Flush Mount Concentric Duct Kit w/ Filter
CDK36530	Step Down Concentric Duct Kit
CDK36535	Step Down Concentric Duct Kit w/ Filter
CDK4872	Flush Mount Concentric Duct Kit
CDK4872515	Flush Mount Concentric Duct Kit w/ Filter
CDK4872530	Step Down Concentric Duct Kit
CDK4872535	Step Down Concentric Duct Kit w/ Filter

*NOTE: Complete lineup of thermostats can be found in the Thermostat Specification Sheets.*

# BLOWER PERFORMANCE DATA

# GPH13[24-60]M41\*

Dry Coil Data

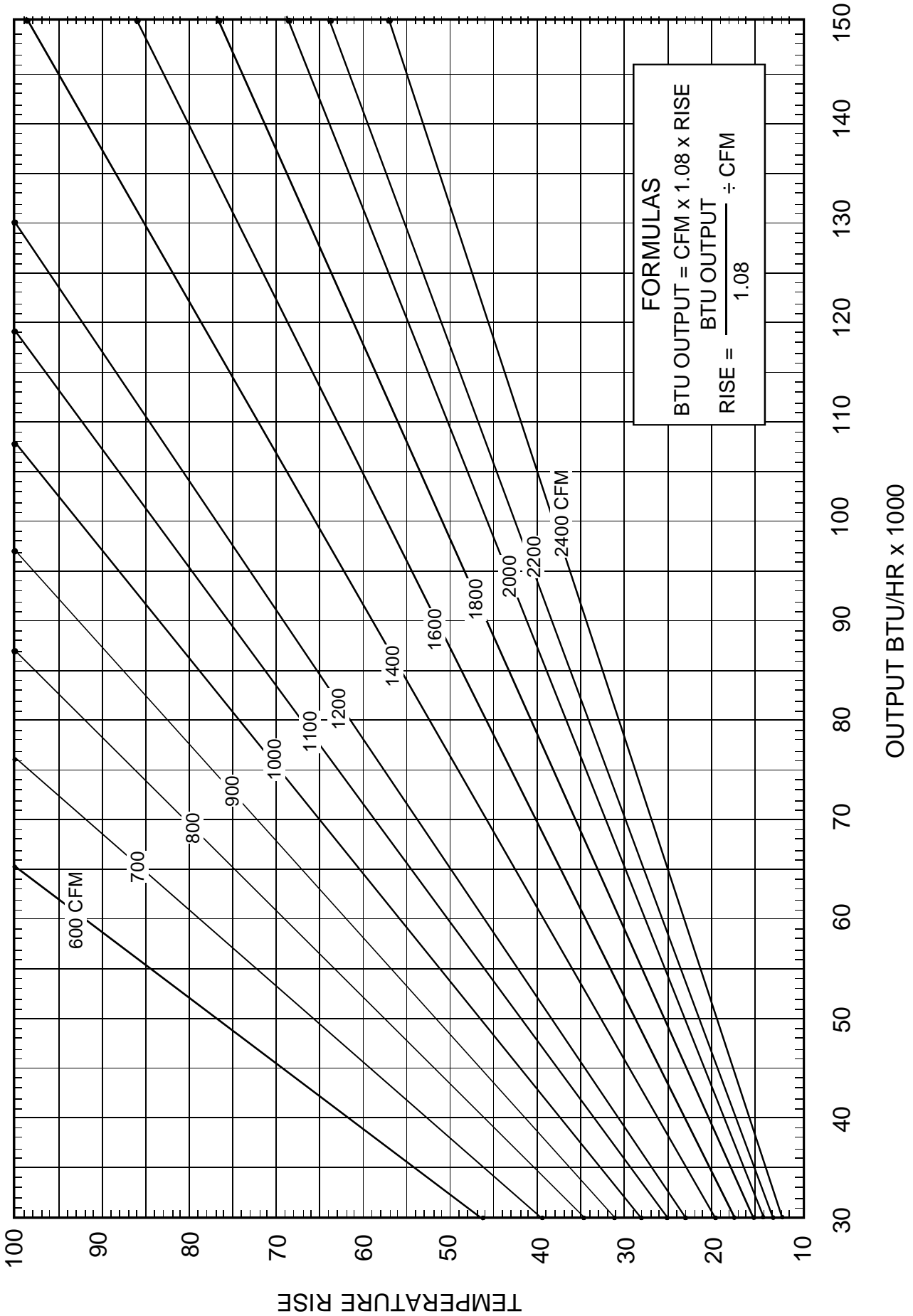
Model	Speed	Volts		E.S.P (In. of H <sub>2</sub> O)							
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
GPH1324M41*	Low	230	CFM	667	596	-----	-----	-----	-----	-----	-----
			WATTS	153	150	-----	-----	-----	-----	-----	-----
	Med	230	CFM	897	841	784	713	610	-----	-----	-----
			WATTS	233	229	224	217	207	-----	-----	-----
	High	230	CFM	1242	1181	1122	1057	982	883	719	617
			WATTS	373	364	354	344	333	318	298	284
GPH1330M41*	Low	230	CFM	1097	1059	1016	959	901	818	648	562
			WATTS	337	330	324	315	305	290	271	257
	Med	230	CFM	1253	1204	1148	1097	1033	952	777	670
			WATTS	397	388	379	369	356	342	313	297
	High	230	CFM	1448	1380	1323	1258	1194	1106	1008	864
			WATTS	499	483	472	459	446	427	410	382
GPH1336M41*	Low	230	CFM	1122	1078	1032	972	915	804	687	558
			WATTS	338	330	321	310	300	283	264	250
	Med	230	CFM	1387	1331	1264	1209	1119	1041	935	748
			WATTS	456	440	428	412	399	382	363	330
	High	230	CFM	1521	1454	1388	1311	1230	1144	1055	939
			WATTS	534	521	510	490	477	461	442	420
GPH1342M41*	Low	230	CFM	1122	1078	1032	972	915	804	687	558
			WATTS	338	330	321	310	300	283	264	250
	Med	230	CFM	1387	1331	1264	1209	1119	1041	935	748
			WATTS	456	440	428	412	399	382	363	330
	High	230	CFM	1521	1454	1388	1311	1230	1144	1055	939
			WATTS	534	521	510	490	477	461	442	420
GPH1348M41*	T1 (G)	230	CFM	1,440	1,395	1,360	1,310	1,265	1,235	1,190	1,130
			WATTS	275	285	295	315	325	335	345	355
	T2 / T3 (W2)	230	CFM	1,795	1,765	1,715	1,695	1,650	1,600	1,500	1,375
			WATTS	475	490	505	520	530	535	510	475
	T4 / T5 (Y)	230	CFM	1,860	1,820	1,785	1,745	1,700	1,625	1,515	1,395
			WATTS	515	530	545	565	570	550	535	485
GPH1360M41*	T1 (G)	230	CFM	1,755	1,720	1,685	1,645	1,615	1,570	1,530	1,465
			WATTS	420	435	455	460	475	490	500	500
	T2 / T3 W2	230	CFM	1,850	1,820	1,775	1,735	1,705	1,675	1,610	1,495
			WATTS	480	500	515	525	535	555	545	520
	T4 / T5 Y	230	CFM	2,180	2,125	2,050	1,975	1,875	1,800	1,655	1,530
			WATTS	770	755	725	700	675	640	575	540

NOTES:

- Data shown is Dry Coil. Wet Coil Pressure Drop is approximate. 0.1" H<sub>2</sub>O, for 2 row indoor coil; 0.2" H<sub>2</sub>O, for 3 row indoor coil; and 0.3" H<sub>2</sub>O, for 4 row indoor coil.
- Data shown does not include filter pressure drop, approx. 0.08" H<sub>2</sub>O.
- ALL MODELS SHOULD RUN NO LESS THAN 350 CFM / TON.
- Reduce airflow by 2% for 208V operation.

# BLOWER PERFORMANCE DATA

BTU OUTPUT vs TEMPERATURE RISE CHART



# COOLING PERFORMANCE DATA

# GPH1324M41\*

## EXPANDED PERFORMANCE DATA

### COOLING OPERATION

MODEL: GPH1324M41\*

Design Subcooling, 10 +/- 2 °F @ the liquid access fitting connection AHR1 95 test conditions. Design Superheat 10 +/- 2 °F @ the compressor suction access fitting connection.

IDB*	Airflow	Outdoor Ambient Temperature																								
		65				75				85				95				105				115				
		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	927	MBh	23.5	24.4	26.7	-	23.0	23.8	26.1	-	22.4	23.2	25.5	-	21.9	22.7	24.8	-	20.8	21.5	23.6	-	19.3	20.0	21.9	-
		S/T	0.77	0.64	0.45	-	0.80	0.67	0.46	-	0.82	0.68	0.47	-	0.85	0.71	0.49	-	0.88	0.73	0.51	-	0.89	0.74	0.51	-
		Delta T	18	16	12	-	18	16	12	-	18	16	12	-	18	16	12	-	18	16	12	-	17	15	11	-
		KW	1.69	1.73	1.78	-	1.82	1.85	1.91	-	1.93	1.97	2.03	-	2.02	2.06	2.13	-	2.10	2.15	2.21	-	2.17	2.22	2.29	-
		AMPS	7.4	7.5	7.7	-	7.8	8.0	8.2	-	8.4	8.5	8.8	-	8.8	9.0	9.3	-	9.3	9.5	9.8	-	9.8	10.0	10.3	-
		HIPR	231	249	263	-	259	279	295	-	295	317	335	-	336	361	382	-	378	407	429	-	417	449	474	-
		LOPR	113	120	131	-	119	127	138	-	124	132	144	-	130	138	151	-	136	145	158	-	141	150	164	-
		MBh	22.8	23.7	25.9	-	22.3	23.1	25.3	-	21.8	22.6	24.7	-	21.2	22.0	24.1	-	20.2	20.9	22.9	-	18.7	19.4	21.2	-
		S/T	0.74	0.61	0.43	-	0.76	0.64	0.44	-	0.78	0.65	0.45	-	0.81	0.67	0.47	-	0.84	0.70	0.48	-	0.84	0.71	0.49	-
		Delta T	19	16	12	-	19	16	12	-	19	16	12	-	19	17	13	-	19	16	12	-	18	15	12	-
723	825	KW	1.68	1.72	1.77	-	1.80	1.84	1.90	-	1.91	1.95	2.01	-	2.00	2.05	2.11	-	2.09	2.13	2.20	-	2.15	2.20	2.27	-
		AMPS	7.3	7.4	7.6	-	7.8	7.9	8.1	-	8.3	8.5	8.7	-	8.8	9.0	9.2	-	9.2	9.4	9.7	-	9.7	9.9	10.2	-
		HIPR	229	246	260	-	257	276	292	-	292	314	332	-	333	358	378	-	374	403	425	-	413	445	470	-
		LOPR	111	119	129	-	118	125	137	-	122	130	142	-	129	137	149	-	135	143	157	-	139	148	162	-
		MBh	21.1	21.8	23.9	-	20.6	21.3	23.4	-	20.1	20.8	22.8	-	19.6	20.3	22.3	-	18.6	19.3	21.1	-	17.3	17.9	19.6	-
		S/T	0.71	0.59	0.41	-	0.73	0.61	0.43	-	0.75	0.63	0.44	-	0.78	0.65	0.45	-	0.81	0.67	0.47	-	0.81	0.68	0.47	-
		Delta T	19	16	12	-	19	17	13	-	19	17	13	-	19	17	13	-	19	17	13	-	18	15	12	-
		KW	1.64	1.68	1.73	-	1.76	1.80	1.85	-	1.87	1.90	1.96	-	1.96	2.00	2.06	-	2.04	2.08	2.14	-	2.10	2.15	2.22	-
		AMPS	7.1	7.3	7.5	-	7.6	7.7	8.0	-	8.1	8.3	8.5	-	8.6	8.8	9.0	-	9.0	9.2	9.5	-	9.5	9.7	10.0	-
		HIPR	222	239	252	-	249	268	283	-	283	305	322	-	323	347	367	-	363	390	412	-	401	431	456	-
LOPR	108	115	126	-	114	122	133	-	119	126	138	-	125	133	145	-	131	139	152	-	135	144	157	-		
75	927	MBh	23.9	24.6	26.7	28.6	23.4	24.1	26.0	27.9	22.8	23.5	25.4	27.3	22.2	22.9	24.8	26.6	21.1	21.8	23.6	25.3	19.6	20.2	21.8	23.4
		S/T	0.88	0.78	0.59	0.38	0.91	0.81	0.61	0.40	0.93	0.83	0.63	0.41	0.96	0.86	0.65	0.42	1.00	0.89	0.68	0.43	1.00	0.90	0.68	0.44
		Delta T	21	19	16	11	21	19	16	11	21	19	16	11	21	20	16	11	21	19	16	11	19	18	15	10
		KW	1.71	1.74	1.79	1.85	1.83	1.87	1.93	1.99	1.94	1.98	2.04	2.11	2.04	2.08	2.14	2.21	2.12	2.16	2.23	2.30	2.19	2.24	2.31	2.38
		AMPS	7.4	7.6	7.7	8.0	7.9	8.0	8.3	8.5	8.4	8.6	8.8	9.1	8.9	9.1	9.4	9.7	9.4	9.6	9.9	10.2	9.9	10.1	10.4	10.7
		HIPR	233	251	265	277	262	282	298	310	298	321	338	353	339	365	386	402	382	411	434	452	422	454	479	500
		LOPR	114	121	132	141	120	128	140	149	125	133	145	154	131	140	152	162	138	146	160	170	142	151	165	176
		MBh	23.2	23.9	25.9	27.8	22.7	23.4	25.3	27.1	22.1	22.8	24.7	26.5	21.6	22.2	24.1	25.8	20.5	21.1	22.9	24.5	19.0	19.6	21.2	22.7
		S/T	0.84	0.75	0.57	0.36	0.87	0.77	0.59	0.38	0.89	0.79	0.60	0.39	0.92	0.82	0.62	0.40	0.95	0.85	0.64	0.41	0.96	0.86	0.65	0.42
		Delta T	22	20	16	11	22	20	17	11	22	20	17	11	22	20	17	11	22	20	16	11	20	19	15	11
75	825	KW	1.70	1.73	1.78	1.83	1.82	1.85	1.91	1.97	1.93	1.97	2.03	2.09	2.02	2.06	2.13	2.20	2.10	2.15	2.21	2.29	2.17	2.22	2.29	2.36
		AMPS	7.4	7.5	7.7	7.9	7.8	8.0	8.2	8.4	8.4	8.5	8.8	9.1	8.8	9.0	9.3	9.6	9.3	9.5	9.8	10.1	9.8	10.0	10.3	10.6
		HIPR	231	249	263	274	259	279	295	307	295	317	335	350	336	361	382	398	378	407	429	448	418	449	474	495
		LOPR	113	120	131	139	119	127	138	147	124	132	144	153	130	138	151	161	136	145	158	168	141	150	164	174
		MBh	21.4	22.1	23.9	25.6	20.9	21.6	23.3	25.0	20.4	21.0	22.8	24.4	19.9	20.5	22.2	23.8	18.9	19.5	21.1	22.7	17.5	18.1	19.6	21.0
		S/T	0.81	0.72	0.55	0.35	0.84	0.75	0.57	0.36	0.86	0.77	0.58	0.37	0.88	0.79	0.60	0.39	0.92	0.82	0.62	0.40	0.93	0.83	0.63	0.40
		Delta T	22	20	17	11	22	20	17	12	22	21	17	12	22	21	17	12	22	20	17	12	21	19	16	11
		KW	1.66	1.69	1.74	1.79	1.78	1.81	1.87	1.92	1.88	1.92	1.98	2.04	1.97	2.01	2.08	2.14	2.05	2.10	2.16	2.23	2.12	2.16	2.23	2.31
		AMPS	7.2	7.3	7.5	7.7	7.7	7.8	8.0	8.3	8.2	8.4	8.6	8.8	8.6	8.8	9.1	9.4	9.1	9.3	9.6	9.9	9.6	9.8	10.0	10.4
		HIPR	224	241	255	266	252	271	286	298	286	308	325	339	326	351	370	386	367	394	417	434	405	436	460	480
LOPR	109	116	127	135	115	123	134	143	120	128	139	148	126	134	146	156	132	140	153	163	137	145	159	169		

\* Entering Indoor Dry Bulb Temperature  
 High and low pressures are measured at the liquid and suction access fittings.  
 NOTE: Shaded area is ACCA (TVA) conditions  
 KW = Total system power  
 AMPS: Unit amps (comp.+ evaporator + condenser fan motors)

EXPANDED PERFORMANCE DATA

COOLING OPERATION

Design Subcooling, 10 +/-2 °F @ the liquid access fitting connection AHR1 95 test conditions. Design Superheat 10 +/- 2 °F @ the compressor suction access fitting connection.

IDB* Airflow	Outdoor Ambient Temperature																									
	65				75				85				105				115									
	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71						
927	MBh	24.3	24.9	26.6	28.4	23.8	24.3	26.0	27.7	23.2	23.7	25.3	27.1	22.6	23.1	24.7	26.4	21.5	22.0	23.5	25.1	19.9	20.4	21.8	23.3	
	S/T	0.96	0.90	0.73	0.55	1.00	0.93	0.76	0.57	1.00	0.96	0.78	0.58	1.00	1.00	0.80	0.60	1.00	1.00	0.84	0.62	1.00	1.00	0.84	0.63	
	Delta T	23	22	19	15	24	23	20	16	23	23	20	16	22	23	20	16	21	22	19	16	20	20	18	15	
	KW	1.72	1.76	1.81	1.86	1.85	1.88	1.94	2.00	2.06	1.96	2.00	2.06	2.12	2.05	2.10	2.16	2.23	2.14	2.18	2.25	2.32	2.21	2.25	2.33	2.40
	AMPS	7.5	7.6	7.8	8.0	7.9	8.1	8.3	8.6	8.9	8.5	8.7	8.9	9.2	9.0	9.2	9.4	9.7	9.5	9.7	9.9	10.3	9.9	10.2	10.4	10.8
	HI PR	236	254	268	279	265	285	301	314	301	324	342	357	343	369	389	406	386	415	438	457	426	458	484	505	
825	LO PR	115	122	133	142	121	129	141	150	126	134	147	156	133	141	154	164	139	148	161	172	144	153	167	178	
	MBh	23.6	24.1	25.8	27.6	23.1	23.6	25.2	26.9	22.5	23.0	24.6	26.3	22.0	22.5	24.0	25.7	20.9	21.3	22.8	24.4	19.3	19.8	21.1	22.6	
	S/T	0.92	0.86	0.70	0.52	0.95	0.89	0.73	0.54	0.97	0.91	0.74	0.56	1.00	0.94	0.77	0.57	1.00	0.98	0.80	0.60	1.00	0.99	0.80	0.60	
	Delta T	24	23	20	16	24	23	20	16	24	23	20	16	24	24	21	16	22	23	20	16	22	22	19	15	
	KW	1.71	1.74	1.79	1.85	1.83	1.87	1.93	1.99	1.94	1.98	2.04	2.11	2.04	2.08	2.15	2.21	2.12	2.16	2.23	2.30	2.19	2.24	2.31	2.38	
	AMPS	7.4	7.6	7.7	8.0	7.9	8.0	8.3	8.5	8.4	8.6	8.8	9.1	8.9	9.1	9.4	9.7	9.4	9.6	9.9	10.2	9.9	10.1	10.4	10.7	
723	HI PR	233	251	265	277	262	282	298	310	298	321	339	353	339	365	386	402	382	411	434	452	422	454	479	500	
	LO PR	114	121	132	141	120	128	140	149	125	133	145	155	131	140	152	162	138	146	160	170	142	151	165	176	
	MBh	21.8	22.3	23.8	25.5	21.3	21.8	23.3	24.9	20.8	21.3	22.7	24.3	20.3	20.7	22.2	23.7	19.3	19.7	21.0	22.5	17.9	18.2	19.5	20.8	
	S/T	0.88	0.83	0.67	0.50	0.92	0.86	0.70	0.52	0.94	0.88	0.72	0.54	0.97	0.91	0.74	0.55	1.01	0.94	0.77	0.57	1.01	0.95	0.77	0.58	
	Delta T	25	24	20	16	25	24	21	17	25	24	21	17	25	24	21	17	25	24	21	17	23	22	19	15	
	KW	1.67	1.70	1.75	1.81	1.79	1.83	1.88	1.94	1.90	1.93	1.99	2.06	1.99	2.03	2.09	2.16	2.07	2.11	2.18	2.25	2.14	2.18	2.25	2.32	
85	AMPS	7.3	7.4	7.6	7.8	7.7	7.9	8.1	8.3	8.3	8.4	8.6	8.9	8.7	8.9	9.1	9.4	9.2	9.4	9.6	9.9	9.6	9.8	10.1	10.4	
	HI PR	226	244	257	268	254	273	289	301	289	311	328	342	329	354	374	390	370	398	421	439	409	440	465	485	
	LO PR	110	117	128	136	117	124	135	144	121	129	141	150	127	135	148	157	133	142	155	165	138	147	160	171	
	MBh	24.8	25.2	26.4	28.2	24.2	24.7	25.8	27.6	23.6	24.1	25.2	26.9	23.0	23.5	24.6	26.2	21.9	22.3	23.4	24.9	20.3	20.7	21.6	23.1	
	S/T	1.00	0.97	0.88	0.71	1.00	1.00	0.91	0.74	1.00	1.00	0.93	0.76	1.00	1.00	0.96	0.78	1.00	1.00	0.95	0.81	1.00	1.00	0.82		
	Delta T	25	24	23	20	24	24	23	20	23	24	23	20	23	23	23	20	22	22	23	20	20	20	21	19	
927	KW	1.73	1.77	1.82	1.88	1.86	1.90	1.96	2.02	1.97	2.01	2.07	2.14	2.07	2.11	2.18	2.25	2.15	2.20	2.27	2.34	2.22	2.27	2.35	2.42	
	AMPS	7.5	7.7	7.9	8.1	8.0	8.2	8.4	8.6	8.6	8.7	9.0	9.3	9.1	9.2	9.5	9.8	9.5	9.7	10.0	10.3	10.0	10.2	10.5	10.9	
	HI PR	238	256	271	282	267	288	304	317	304	327	345	360	346	372	393	410	389	419	442	462	430	463	489	510	
	LO PR	116	123	135	144	123	130	142	152	127	136	148	158	134	142	155	166	140	149	163	174	145	154	169	179	
	MBh	24.0	24.5	25.7	27.4	23.5	23.9	25.1	26.8	22.9	23.4	24.5	26.1	22.4	22.8	23.9	25.5	21.2	21.7	22.7	24.2	19.7	20.1	21.0	22.4	
	S/T	0.96	0.93	0.84	0.68	1.00	0.96	0.87	0.70	1.00	0.99	0.89	0.72	1.00	1.00	0.92	0.74	1.00	1.00	0.95	0.77	1.00	1.00	0.96	0.78	
825	Delta T	26	25	24	21	26	26	24	21	26	26	24	21	26	25	24	21	24	24	24	21	22	22	23	19	
	KW	1.72	1.76	1.81	1.86	1.85	1.88	1.94	2.00	1.96	2.00	2.06	2.12	2.05	2.10	2.16	2.23	2.14	2.18	2.25	2.32	2.21	2.25	2.33	2.40	
	AMPS	7.5	7.6	7.8	8.0	7.9	8.1	8.3	8.6	8.5	8.7	8.9	9.2	9.0	9.2	9.4	9.7	9.5	9.7	9.9	10.3	9.9	10.2	10.4	10.8	
	HI PR	236	254	268	279	265	285	301	314	301	324	342	357	343	369	389	406	386	415	438	457	426	458	484	505	
	LO PR	115	122	133	142	121	129	141	150	126	134	147	156	133	141	154	164	139	148	161	172	144	153	167	178	
	MBh	22.2	22.6	23.7	25.3	21.7	22.1	23.1	24.7	21.2	21.6	22.6	24.1	20.6	21.0	22.0	23.5	19.6	20.0	20.9	22.3	18.2	18.5	19.4	20.7	
723	S/T	0.93	0.89	0.81	0.65	0.96	0.93	0.84	0.68	0.98	0.95	0.86	0.70	1.00	0.98	0.89	0.72	1.00	1.00	0.92	0.75	1.00	1.00	0.93	0.75	
	Delta T	26	26	24	21	26	26	25	21	27	26	25	21	26	26	25	21	25	25	24	21	23	24	23	20	
	KW	1.68	1.72	1.77	1.82	1.80	1.84	1.90	1.95	1.91	1.95	2.01	2.07	2.00	2.05	2.11	2.18	2.08	2.13	2.20	2.27	2.15	2.20	2.27	2.34	
	AMPS	7.3	7.4	7.6	7.9	7.8	7.9	8.1	8.4	8.3	8.5	8.7	9.0	8.8	9.0	9.2	9.5	9.2	9.4	9.7	10.0	9.7	9.9	10.2	10.5	
	HI PR	229	246	260	271	257	276	292	304	292	314	332	346	332	358	378	394	374	402	425	443	413	445	470	490	
	LO PR	111	119	129	138	118	125	137	146	122	130	142	151	129	137	149	159	135	143	156	167	139	148	162	172	

\* Entering Indoor Dry Bulb Temperature  
 High and low pressures are measured at the liquid and suction access fittings.  
 NOTE: Shaded area is AHR1 Rating Conditions  
 KW = Total system power  
 AMPS: Unit amps (comp.+ evaporator + condenser fan motors)

# COOLING PERFORMANCE DATA

# GPH1330M41\*

## EXPANDED PERFORMANCE DATA

## EXPANDED PERFORMANCE DATA

## MODEL: GPH1330M41\*

## COOLING OPERATION

Design Subcooling, 10 +/-2 °F @ the liquid access fitting connection AHRI 95 test conditions. Design Superheat 10 +/- 2 °F @ the compressor or suction access fitting connection.

IDB* Airflow	Outdoor Ambient Temperature																								
	65				75				85				95				105				115				
	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	Entering Indoor Wet Bulb Temperature																								
	1180																								
	MBh	28.4	29.5	32.3	-	27.8	28.8	31.5	-	27.1	28.1	30.8	-	26.4	27.4	30.0	-	25.1	26.0	28.5	-	23.3	24.1	26.4	-
	S/T	0.77	0.64	0.45	-	0.80	0.67	0.46	-	0.82	0.68	0.47	-	0.85	0.71	0.49	-	0.88	0.73	0.51	-	0.88	0.74	0.51	-
	Delta T	17	15	11	-	17	15	11	-	17	15	11	-	17	15	11	-	17	15	11	-	16	14	11	-
	KW	2.20	2.24	2.31	-	2.36	2.41	2.48	-	2.50	2.55	2.63	-	2.63	2.68	2.76	-	2.73	2.79	2.88	-	2.82	2.88	2.97	-
	AMPS	9.5	9.7	9.9	-	10.1	10.3	10.6	-	10.9	11.1	11.4	-	11.5	11.7	12.0	-	12.1	12.4	12.7	-	12.7	13.0	13.4	-
	HIPR	232	249	263	-	260	280	296	-	296	318	336	-	337	363	383	-	379	408	431	-	419	451	476	-
	LOPR	109	116	126	-	115	122	134	-	120	127	139	-	126	134	146	-	132	140	153	-	136	145	158	-
	1050																								
MBh	27.6	28.6	31.3	-	26.9	27.9	30.6	-	26.3	27.3	29.9	-	25.7	26.6	29.1	-	24.4	25.3	27.7	-	22.6	23.4	25.6	-	
S/T	0.74	0.61	0.43	-	0.76	0.64	0.44	-	0.78	0.65	0.45	-	0.81	0.67	0.47	-	0.84	0.70	0.48	-	0.84	0.70	0.49	-	
Delta T	18	15	12	-	18	16	12	-	18	16	12	-	18	16	12	-	18	16	12	-	17	14	11	-	
KW	2.18	2.23	2.29	-	2.34	2.39	2.46	-	2.48	2.53	2.61	-	2.60	2.66	2.74	-	2.71	2.77	2.85	-	2.80	2.86	2.95	-	
AMPS	9.4	9.6	9.9	-	10.1	10.3	10.5	-	10.8	11.0	11.3	-	11.4	11.6	12.0	-	12.0	12.3	12.6	-	12.6	12.9	13.3	-	
HIPR	229	247	261	-	257	277	293	-	293	315	333	-	334	359	379	-	375	404	426	-	415	446	471	-	
LOPR	108	115	125	-	114	121	132	-	118	126	137	-	124	132	144	-	130	139	151	-	135	143	156	-	
920																									
MBh	25.5	26.4	28.9	-	24.9	25.8	28.2	-	24.3	25.2	27.6	-	23.7	24.6	26.9	-	22.5	23.3	25.6	-	20.8	21.6	23.7	-	
S/T	0.71	0.59	0.41	-	0.73	0.61	0.42	-	0.75	0.63	0.44	-	0.78	0.65	0.45	-	0.81	0.67	0.47	-	0.81	0.68	0.47	-	
Delta T	18	16	12	-	18	16	12	-	18	16	12	-	18	16	12	-	18	16	12	-	17	15	11	-	
KW	2.14	2.18	2.24	-	2.29	2.33	2.41	-	2.42	2.47	2.55	-	2.54	2.60	2.68	-	2.64	2.70	2.78	-	2.73	2.79	2.88	-	
AMPS	9.2	9.4	9.7	-	9.8	10.0	10.3	-	10.5	10.7	11.0	-	11.1	11.4	11.7	-	11.7	12.0	12.3	-	12.3	12.6	12.9	-	
HIPR	223	240	253	-	250	269	284	-	284	306	323	-	324	348	368	-	364	392	414	-	402	433	457	-	
LOPR	105	111	121	-	110	117	128	-	115	122	133	-	121	128	140	-	126	134	147	-	131	139	152	-	
75	Entering Indoor Dry Bulb Temperature																								
	1180																								
	MBh	28.9	29.8	32.2	34.6	28.2	29.1	31.5	33.8	27.6	28.4	30.7	33.0	26.9	27.7	30.0	32.2	25.5	26.3	28.5	30.5	23.7	24.4	26.4	28.3
	S/T	0.88	0.78	0.59	0.38	0.91	0.81	0.61	0.40	0.93	0.83	0.63	0.41	0.96	0.86	0.65	0.42	1.00	0.89	0.68	0.43	1.00	0.90	0.68	0.44
	Delta T	20	18	15	10	20	18	15	10	20	18	15	10	20	19	15	10	20	18	15	10	18	17	14	10
	KW	2.22	2.26	2.33	2.40	2.38	2.43	2.50	2.58	2.52	2.57	2.65	2.74	2.65	2.70	2.79	2.88	2.75	2.81	2.90	2.99	2.84	2.91	3.00	3.10
	AMPS	9.6	9.8	10.0	10.3	10.2	10.4	10.7	11.0	10.9	11.2	11.5	11.8	11.6	11.8	12.1	12.5	12.2	12.5	12.8	13.2	12.8	13.1	13.5	13.9
	HIPR	234	252	266	277	263	283	299	311	299	322	340	354	340	366	387	403	383	412	435	454	423	455	481	501
	LOPR	110	117	128	136	116	124	135	144	121	128	140	149	127	135	147	157	133	141	154	164	137	146	160	170
	1050																								
MBh	28.1	28.9	31.3	33.6	27.4	28.2	30.5	32.8	26.8	27.5	29.8	32.0	26.1	26.9	29.1	31.2	24.8	25.5	27.6	29.7	23.0	23.6	25.6	27.5	
S/T	0.84	0.75	0.57	0.36	0.87	0.77	0.59	0.38	0.89	0.79	0.60	0.39	0.92	0.82	0.62	0.40	0.95	0.85	0.64	0.41	0.96	0.86	0.65	0.42	
Delta T	21	19	15	11	21	19	16	11	21	19	16	11	21	19	16	11	21	19	16	11	19	18	15	10	
KW	2.20	2.24	2.31	2.38	2.36	2.41	2.48	2.56	2.50	2.55	2.63	2.72	2.63	2.68	2.76	2.85	2.73	2.79	2.88	2.97	2.82	2.88	2.97	3.07	
AMPS	9.5	9.7	9.9	10.3	10.1	10.3	10.6	10.9	10.9	11.1	11.4	11.7	11.5	11.7	12.0	12.4	12.1	12.4	12.7	13.1	12.7	13.0	13.4	13.8	
HIPR	232	249	263	275	260	280	296	308	296	318	336	351	337	363	383	399	379	408	431	449	419	451	476	496	
LOPR	109	116	126	135	115	122	134	142	120	127	139	148	126	134	146	155	132	140	153	163	136	145	158	168	
920																									
MBh	25.9	26.7	28.9	31.0	25.3	26.0	28.2	30.3	24.7	25.4	27.5	29.5	24.1	24.8	26.8	28.8	22.9	23.6	25.5	27.4	21.2	21.8	23.6	25.4	
S/T	0.81	0.72	0.55	0.35	0.83	0.75	0.57	0.36	0.86	0.77	0.58	0.37	0.88	0.79	0.60	0.38	0.92	0.82	0.62	0.40	0.92	0.83	0.63	0.40	
Delta T	21	19	16	11	21	19	16	11	21	19	16	11	21	20	16	11	21	19	16	11	20	18	15	10	
KW	2.15	2.19	2.26	2.33	2.31	2.35	2.42	2.50	2.44	2.49	2.57	2.65	2.56	2.62	2.70	2.78	2.67	2.72	2.81	2.90	2.75	2.81	2.90	3.00	
AMPS	9.3	9.5	9.7	10.0	9.9	10.1	10.4	10.7	10.6	10.8	11.1	11.5	11.2	11.4	11.8	12.1	11.8	12.1	12.4	12.8	12.4	12.7	13.0	13.5	
HIPR	225	242	256	267	252	272	287	299	287	309	326	340	327	352	371	387	368	396	418	436	406	437	462	481	
LOPR	106	112	123	131	112	119	130	138	116	123	135	143	122	130	141	151	128	136	148	158	132	140	153	163	

\* Entering Indoor Dry Bulb Temperature  
High and low pressures are measured at the liquid and suction access fittings.

NOTE: Shaded area is ACCA (TVA) conditions

KW = Total system power  
AMPS: Unit amps (comp.+ evaporator + condenser fan motors)

Design Subcooling, 10 +/- 2 °F @ the liquid access fitting connection AHR1 95 test conditions. Design Superheat 10 +/- 2 °F @ the compressor suction access fitting connection.

IDB*	Airflow	Outdoor Ambient Temperature																													
		65					75					85					95					105					115				
		59	63	67	71	75	59	63	67	71	75	59	63	67	71	75	59	63	67	71	75	59	63	67	71	75	59	63	67	71	75
80	1180	MBh	29.4	30.1	32.1	34.3	38.7	29.4	31.4	33.5	35.5	28.0	28.7	30.6	32.7	27.4	28.0	29.9	31.9	31.9	26.0	26.6	28.4	30.3	24.1	24.6	26.3	28.1	28.1		
		S/T	0.96	0.90	0.73	0.55	1.00	0.93	0.76	0.57	1.00	0.96	0.78	0.58	1.00	1.00	1.00	0.80	0.60	0.60	1.00	1.00	0.83	0.62	1.00	1.00	0.84	0.63	0.63		
		Delta T	22	21	18	15	22	21	19	15	15	22	21	19	15	21	22	22	19	15	20	21	18	15	19	19	17	14	14		
		KW	2.23	2.28	2.35	2.42	2.40	2.45	2.52	2.60	2.60	2.54	2.59	2.67	2.76	2.67	2.72	2.81	2.90	2.90	2.78	2.83	2.92	3.02	2.87	2.93	3.02	3.12	3.12		
		AMPS	9.6	9.8	10.1	10.4	10.3	10.5	10.8	11.1	11.0	11.2	11.6	11.9	11.9	11.7	11.9	12.2	12.6	12.6	12.3	12.6	12.9	13.3	12.9	13.2	13.6	14.0	14.0		
		HIPR	236	255	269	280	265	286	302	315	302	325	343	358	344	344	370	391	407	407	387	416	439	458	427	460	486	506	506		
		LOPR	111	118	129	137	117	125	136	145	122	130	142	151	128	136	149	158	158	134	143	156	166	139	148	161	172	172			
1050	1050	MBh	28.6	29.2	31.2	33.3	27.9	28.5	30.5	32.6	27.2	27.8	29.7	31.8	26.6	27.1	29.0	31.0	31.0	25.2	25.8	27.6	29.5	23.4	23.9	25.5	27.3	27.3			
		S/T	0.92	0.86	0.70	0.52	0.95	0.89	0.72	0.54	0.97	0.91	0.74	0.56	1.00	0.94	0.77	0.57	0.57	1.00	0.98	0.80	0.60	1.00	0.99	0.80	0.60	0.60			
		Delta T	23	22	19	15	23	22	19	15	23	22	19	15	23	22	19	16	16	22	22	21	19	15	20	21	18	14	14		
		KW	2.22	2.26	2.33	2.40	2.38	2.43	2.50	2.58	2.52	2.57	2.65	2.74	2.65	2.70	2.79	2.88	2.75	2.81	2.90	2.78	2.83	2.92	2.85	2.91	3.00	3.10	3.10		
		AMPS	9.6	9.8	10.0	10.3	10.2	10.4	10.7	11.0	10.9	11.2	11.5	11.8	11.6	11.8	12.1	12.5	12.5	12.2	12.5	12.8	13.2	12.8	13.1	13.5	13.9	13.9			
		HIPR	234	252	266	278	263	283	299	311	299	322	340	354	340	366	387	403	403	383	412	435	454	423	455	481	501	501			
		LOPR	110	117	128	136	116	124	135	144	121	128	140	149	127	135	147	157	157	133	141	154	164	137	146	160	170	170			
920	920	MBh	26.4	26.9	28.8	30.8	25.7	26.3	28.1	30.0	25.1	25.7	27.4	29.3	24.5	25.1	26.8	28.6	28.6	23.3	23.8	25.4	27.2	21.6	22.0	23.6	25.2	25.2			
		S/T	0.88	0.83	0.67	0.50	0.92	0.86	0.70	0.52	0.94	0.88	0.72	0.54	0.97	0.91	0.74	0.55	0.55	1.01	0.94	0.77	0.57	1.01	0.95	0.77	0.58	0.58			
		Delta T	23	22	19	15	24	23	20	16	24	23	20	16	24	23	20	16	16	23	22	20	16	22	21	18	15	15			
		KW	2.17	2.21	2.28	2.34	2.32	2.37	2.44	2.52	2.46	2.51	2.59	2.67	2.58	2.64	2.72	2.81	2.69	2.74	2.83	2.92	2.78	2.84	2.93	3.02	3.02				
		AMPS	9.4	9.5	9.8	10.1	10.0	10.2	10.5	10.8	10.7	10.9	11.2	11.6	11.3	11.5	11.9	12.2	11.9	12.2	12.5	12.9	12.9	12.5	12.8	13.2	13.6	13.6			
		HIPR	227	244	258	269	255	274	290	302	290	312	329	344	330	355	375	391	371	400	422	440	440	410	442	466	486	486			
		LOPR	107	113	124	132	113	120	131	139	117	125	136	145	123	131	143	152	152	129	137	150	159	133	142	155	165	165			

IDB*	Airflow	Outdoor Ambient Temperature																													
		65					75					85					95					105					115				
		59	63	67	71	75	59	63	67	71	75	59	63	67	71	75	59	63	67	71	75	59	63	67	71	75	59	63	67	71	75
85	1180	MBh	29.9	30.5	31.9	34.1	29.2	29.8	31.2	33.3	28.5	29.1	30.5	32.5	27.8	28.4	29.7	31.7	31.7	26.4	27.0	28.2	30.1	24.5	25.0	26.2	27.9	27.9			
		S/T	1.00	0.97	0.88	0.71	1.00	1.00	0.91	0.74	1.00	1.00	0.93	0.76	1.00	1.00	0.96	0.78	0.78	1.00	1.00	0.83	0.61	1.00	1.00	0.83	0.61	0.61			
		Delta T	23	23	22	19	23	23	22	19	22	23	22	19	22	22	22	19	19	21	21	22	19	19	19	19	20	18			
		KW	2.25	2.30	2.37	2.44	2.42	2.46	2.54	2.62	2.56	2.61	2.70	2.78	2.69	2.75	2.83	2.92	2.80	2.86	2.95	3.04	2.89	2.95	3.05	3.15	3.15				
		AMPS	9.7	9.9	10.2	10.5	10.4	10.6	10.9	11.2	11.1	11.3	11.7	12.0	11.8	12.0	12.3	12.7	12.4	12.7	13.0	13.5	13.0	13.3	13.7	14.2	14.2				
		HIPR	239	257	271	283	268	288	305	318	305	328	346	361	347	374	395	411	391	420	444	463	432	464	490	511	511				
		LOPR	112	119	130	139	119	126	138	147	123	131	143	152	129	138	150	160	160	136	144	157	168	140	149	163	173	173			
1050	1050	MBh	29.1	29.6	31.0	33.1	28.4	28.9	30.3	32.3	27.7	28.2	29.6	31.6	27.0	27.6	28.9	30.8	30.8	25.7	26.2	27.4	29.2	23.8	24.2	25.4	27.1	27.1			
		S/T	0.96	0.93	0.84	0.68	1.00	0.96	0.87	0.70	1.00	0.99	0.89	0.72	1.00	1.00	0.92	0.74	0.74	1.00	1.00	0.95	0.77	1.00	1.00	0.96	0.78	0.78			
		Delta T	24	24	23	20	25	24	23	20	24	24	23	20	24	24	23	20	20	22	23	23	20	21	21	21	18	18			
		KW	2.23	2.28	2.35	2.42	2.40	2.45	2.52	2.60	2.54	2.59	2.67	2.76	2.67	2.72	2.81	2.90	2.78	2.83	2.92	3.02	2.87	2.93	3.02	3.12	3.12				
		AMPS	9.6	9.8	10.1	10.4	10.3	10.5	10.8	11.1	11.0	11.2	11.6	11.9	11.7	11.9	12.2	12.6	12.3	12.6	12.9	13.3	12.9	13.2	13.6	14.0	14.0				
		HIPR	236	255	269	280	265	286	302	315	302	325	343	358	344	370	391	407	407	387	416	439	458	427	460	486	506	506			
		LOPR	111	118	129	137	117	125	136	145	122	130	142	151	128	136	149	158	158	134	143	156	166	139	148	161	172	172			
920	920	MBh	26.8	27.3	28.6	30.5	26.2	26.7	28.0	29.8	25.6	26.1	27.3	29.1	24.9	25.4	26.6	28.4	28.4	23.7	24.2	25.3	27.0	22.0	22.4	23.4	25.0	25.0			
		S/T	0.93	0.89	0.81	0.65	0.96	0.93	0.84	0.68	0.98	0.95	0.86	0.70	1.00	0.98	0.88	0.72	0.72	1.00	1.00	0.92	0.75	1.00	1.00	0.93	0.75	0.75			
		Delta T	25	24	23	20	25	25	23	20	25	25	23	20	25	25	24	20	20	24	24	24	23	20	22	22	19	19			
		KW	2.18	2.23	2.29	2.36	2.34	2.39	2.46	2.54	2.48	2.53	2.61	2.69	2.60	2.66	2.74	2.83	2.71	2.77	2.85	2.95	2.80	2.86	2.95	3.05	3.05				
		AMPS	9.4	9.6	9.9	10.2	10.0	10.2	10.5	10.9	10.8	11.0	11.3	11.7	11.4	11.6	12.0	12.3	12.0	12.3	12.6	13.0	12.6	12.9	13.3	13.7	13.7				
		HIPR	229	247	261	272	257	277	293	305	293	315	333	347	333	359	379	395	375	404	426	445	414	446	471	491	491				
		LOPR	108	115	125	133	114	121	132	141	118	126	137	146	124	132	144	154	154	130	139	151	161	135	143	156	167	167			

Entering Indoor Dry Bulb Temperature

High and low pressures are measured at the liquid and suction access fittings.

NOTE: Shaded area is AHR1 Rating Conditions

KW = Total system power  
AMPS: Unit amps (comp. + evaporator + condenser fan motors)



EXPANDED PERFORMANCE DATA

COOLING OPERATION

MODEL: GPH1336M41\*

Design Subcooling, 9 +/2 °F @ the liquid access fitting connection. Design Superheat 7+/-2 °F @ the compressor suction access fitting connection.

Table with columns for IDB\*, Airflow, and sub-cooling parameters (S/T, Delta T, KW, AMPS, HI PR, LO PR) across different outdoor ambient temperatures (75, 85, 105, 115).

\* Entering Indoor Dry Bulb Temperature NOTE: Shaded area is ACCA (TVA) conditions High and low pressures are measured at the liquid and suction access fittings. KW = Total system power AMPS: Unit amps (comp.+ evaporator + condenser fan motors)

# COOLING PERFORMANCE DATA

# GPH1336M41 \*

## EXPANDED PERFORMANCE DATA

MODEL: GPH1336M41\*

COOLING OPERATION

Design Subcooling, 9 +/2 °F @ the liquid access fitting connection. AHR1 95 test conditions. Design Superheat 7+/-2 °F @ the compressor suction access fitting connection.

IDB*	Airflow	Outdoor Ambient Temperature																									
		65				75				85				105				115									
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71						
80	1292	MBh	35.1	35.9	38.3	41.0	34.3	35.0	37.4	40.0	33.5	34.2	36.5	39.0	32.6	33.4	35.6	38.1	31.0	31.7	33.9	36.2	28.7	29.4	31.4	33.5	
		S/T	0.92	0.86	0.70	0.52	0.95	0.89	0.73	0.54	1.00	0.92	0.75	0.56	1.00	0.95	0.77	0.58	1.00	1.00	0.80	0.60	1.00	1.00	0.81	0.60	
		Delta T	23	22	19	15	23	22	19	15	24	22	19	15	23	22	20	16	22	22	23	19	15	20	21	18	14
		KW	2.56	2.61	2.69	2.77	2.75	2.80	2.89	2.98	2.91	2.97	3.06	3.16	3.05	3.12	3.22	3.32	3.18	3.25	3.35	3.46	3.28	3.36	3.46	3.58	
		AMPS	10.7	11.0	11.3	11.6	11.5	11.7	12.0	12.4	12.3	12.6	13.3	13.7	13.1	13.3	13.7	14.2	13.8	14.1	14.5	15.0	14.5	14.8	15.3	15.8	
	1150	HI PR	242	261	275	287	272	292	309	322	309	333	351	366	352	379	400	417	396	426	450	469	437	471	497	518	
		LO PR	114	121	132	141	121	128	140	149	125	133	145	155	132	140	153	163	138	147	160	171	143	152	166	176	
		MBh	34.1	34.8	37.2	39.8	33.3	34.0	36.3	38.8	32.5	33.2	35.5	37.9	31.7	32.4	34.6	37.0	30.1	30.8	32.9	35.1	27.9	28.5	30.4	32.5	
		S/T	0.88	0.82	0.67	0.50	0.91	0.85	0.69	0.52	0.93	0.87	0.71	0.53	0.96	0.90	0.73	0.55	1.00	0.94	0.76	0.57	1.00	0.94	0.77	0.57	
		Delta T	24	23	20	16	24	23	20	16	24	23	20	16	24	23	20	16	24	23	20	16	22	22	22	19	15
1008	KW	2.54	2.59	2.67	2.75	2.72	2.78	2.86	2.95	2.89	2.95	3.04	3.13	3.03	3.09	3.19	3.29	3.15	3.22	3.32	3.43	3.26	3.33	3.43	3.55		
	AMPS	10.7	10.9	11.2	11.5	11.4	11.6	12.0	12.3	12.2	12.5	12.8	13.3	13.0	13.2	13.6	14.1	13.7	14.0	14.4	14.9	14.4	14.7	15.2	15.7		
	HI PR	240	258	272	284	269	289	306	319	306	329	348	363	348	375	396	413	392	422	445	465	433	466	492	513		
	LO PR	113	120	131	140	119	127	139	148	124	132	144	153	130	139	151	161	137	145	159	169	141	150	164	175		
	MBh	31.4	32.1	34.3	36.7	30.7	31.4	33.5	35.8	30.0	30.6	32.7	35.0	29.3	29.9	31.9	34.1	27.8	28.4	30.3	32.4	25.7	26.3	28.1	30.0		

IDB*	Airflow	Outdoor Ambient Temperature																									
		65				75				85				105				115									
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71						
85	1292	MBh	35.7	36.4	38.1	40.7	34.9	35.6	37.2	39.7	34.0	34.7	36.3	38.8	33.2	33.9	35.5	37.8	31.6	32.2	33.7	35.9	29.2	29.8	31.2	33.3	
		S/T	0.96	0.93	0.84	0.68	1.00	0.96	0.87	0.71	1.00	0.99	0.89	0.72	1.00	1.00	0.92	0.75	1.00	1.00	0.96	0.78	1.00	1.00	0.96	0.78	
		Delta T	24	24	23	20	25	24	23	20	24	24	23	20	24	24	23	20	22	23	23	20	21	21	21	19	19
		KW	2.58	2.63	2.71	2.79	2.77	2.82	2.91	3.00	2.93	2.99	3.09	3.18	3.08	3.14	3.24	3.35	3.20	3.27	3.38	3.49	3.31	3.38	3.49	3.61	
		AMPS	10.8	11.0	11.4	11.7	11.6	11.8	12.1	12.5	12.4	12.7	13.1	13.5	13.2	13.4	13.8	14.3	13.9	14.2	14.6	15.1	14.6	15.0	15.4	15.9	
	1150	HI PR	245	263	278	290	274	295	312	325	312	336	355	370	355	383	404	421	400	430	454	474	442	475	502	524	
		LO PR	115	123	134	143	122	130	141	151	127	135	147	156	133	141	154	164	139	148	162	172	144	153	167	178	
		MBh	34.7	35.3	37.0	39.5	33.9	34.5	36.1	38.6	33.1	33.7	35.3	37.6	32.2	32.9	34.4	36.7	30.6	31.2	32.7	34.9	28.4	28.9	30.3	32.3	
		S/T	0.92	0.89	0.80	0.65	0.95	0.92	0.83	0.67	0.98	0.94	0.85	0.69	1.00	0.97	0.88	0.71	1.00	1.00	0.91	0.74	1.00	1.00	0.92	0.75	
		Delta T	25	25	24	21	26	25	24	21	26	25	24	21	26	26	24	21	24	25	24	21	23	23	23	22	19
1008	KW	2.56	2.61	2.69	2.77	2.75	2.80	2.89	2.98	2.91	2.97	3.06	3.16	3.05	3.12	3.22	3.32	3.18	3.25	3.35	3.46	3.28	3.36	3.46	3.58		
	AMPS	10.7	11.0	11.3	11.6	11.5	11.7	12.0	12.4	12.3	12.6	12.9	13.4	13.1	13.3	13.7	14.2	13.8	14.1	14.5	15.0	14.5	14.8	15.3	15.8		
	HI PR	242	261	275	287	272	292	309	322	309	333	351	366	352	379	400	417	396	426	450	469	437	471	497	518		
	LO PR	114	121	132	141	121	128	140	149	125	133	145	155	132	140	153	163	138	147	160	171	143	152	166	176		
	MBh	32.0	32.6	34.2	36.4	31.3	31.9	33.4	35.6	30.5	31.1	32.6	34.7	29.8	30.3	31.8	33.9	28.3	28.8	30.2	32.2	26.2	26.7	28.0	29.8		

Entering Indoor Dry Bulb Temperature  
High and low pressures are measured at the liquid and suction access fittings.  
NOTE: Shaded area is AHR1 Rating Conditions  
KW = Total system power  
AMPS: Unit amps (comp.+ evaporator + condenser fan motors)



Design Subcooling, 10 +/-2 °F @ the liquid access fitting connection AHR1 95 test conditions. Design Superheat 10 +/-2 °F @ the compressor suction access fitting connection.

Table with columns for IDB\* (80, 1139, 1461) and Airflow, and a grid of performance metrics for 65, 75, 85, 95, 105, 115 ambient temperatures across various parameters like MBh, S/T, Delta T, KW, AMPS, HI PR, LO PR.

Table with columns for IDB\* (85) and Airflow, and a grid of performance metrics for 65, 75, 85, 95, 105, 115 ambient temperatures across various parameters like MBh, S/T, Delta T, KW, AMPS, HI PR, LO PR.

\* Entering Indoor Dry Bulb Temperature NOTE: Shaded area is AHR1 Rating Conditions High and low pressures are measured at the liquid and suction access fittings.

KW = Total system power AMPS: Unit amps (comp.+ evaporator + condenser fan motors)

# COOLING PERFORMANCE DATA

# GPH1348M41\*

## MODEL: GPH1348M41\* EXPANDED PERFORMANCE DATA COOLING OPERATION

Design Subcooling, 12 +/-2 °F @ the liquid access fitting connection AHR1 95 test conditions. Design Superheat 9 +/-2 °F @ the compressor suction access fitting connection.

IDB*	Airflow	Outdoor Ambient Temperature																								
		65				75				85				95												
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71									
70	1933	MBh	45.6	47.2	51.7	-	44.5	46.1	50.5	-	43.4	45.0	49.3	-	42.4	43.9	48.1	-	40.3	41.7	45.7	-	37.3	38.7	42.4	-
		S/T	0.80	0.66	0.46	-	0.82	0.69	0.48	-	0.85	0.71	0.49	-	0.87	0.73	0.50	-	0.91	0.76	0.52	-	0.91	0.76	0.53	-
		Delta T	17	15	11	-	17	15	11	-	17	15	11	-	18	15	12	-	17	15	11	-	16	14	11	-
		KW	3.29	3.36	3.46	-	3.53	3.61	3.72	-	3.75	3.83	3.95	-	3.94	4.03	4.16	-	4.11	4.20	4.33	-	4.25	4.34	4.48	-
		AMPS	13.7	14.0	14.4	-	14.6	14.9	15.4	-	15.7	16.1	16.5	-	16.7	17.1	17.6	-	17.6	18.0	18.6	-	18.6	19.0	19.6	-
		HI PR	240	259	273	-	270	290	307	-	307	330	349	-	350	376	397	-	393	423	447	-	434	468	494	-
		LO PR	109	116	126	-	115	122	133	-	119	127	139	-	125	133	146	-	131	140	153	-	136	145	158	-
		MBh	44.2	45.9	50.2	-	43.2	44.8	49.1	-	42.2	43.7	47.9	-	41.2	42.7	46.7	-	39.1	40.5	44.4	-	36.2	37.5	41.1	-
		S/T	0.76	0.63	0.44	-	0.79	0.66	0.45	-	0.81	0.67	0.47	-	0.83	0.69	0.48	-	0.86	0.72	0.50	-	0.87	0.73	0.50	-
		Delta T	18	16	12	-	18	16	12	-	18	16	12	-	19	16	12	-	18	16	12	-	17	15	11	-
KW	3.26	3.33	3.43	-	3.51	3.58	3.69	-	3.72	3.80	3.92	-	3.91	4.00	4.12	-	4.07	4.16	4.30	-	4.21	4.30	4.44	-		
AMPS	13.6	13.8	14.2	-	14.5	14.8	15.2	-	15.6	15.9	16.4	-	16.6	16.9	17.4	-	17.5	17.9	18.4	-	18.4	18.8	19.4	-		
HI PR	238	256	271	-	267	288	304	-	304	327	345	-	346	372	393	-	389	419	442	-	430	463	489	-		
LO PR	108	114	125	-	114	121	132	-	118	126	137	-	124	132	144	-	130	138	151	-	135	143	156	-		
MBh	40.8	42.3	46.4	-	39.9	41.3	45.3	-	38.9	40.4	44.2	-	38.0	39.4	43.1	-	36.1	37.4	41.0	-	33.4	34.6	38.0	-		
S/T	0.73	0.61	0.42	-	0.76	0.63	0.44	-	0.78	0.65	0.45	-	0.80	0.67	0.46	-	0.83	0.70	0.48	-	0.84	0.70	0.49	-		
Delta T	18	16	12	-	18	16	12	-	18	16	12	-	19	16	12	-	18	16	12	-	17	15	11	-		
KW	3.19	3.25	3.35	-	3.42	3.50	3.60	-	3.63	3.71	3.83	-	3.82	3.90	4.02	-	3.97	4.06	4.19	-	4.11	4.20	4.33	-		
AMPS	13.3	13.5	13.9	-	14.2	14.5	14.9	-	15.2	15.6	16.0	-	16.2	16.5	17.0	-	17.1	17.4	18.0	-	18.0	18.4	18.9	-		
HI PR	231	249	262	-	259	279	294	-	295	317	335	-	336	361	381	-	378	406	429	-	417	449	474	-		
LO PR	104	111	121	-	110	117	128	-	115	122	133	-	120	128	140	-	126	134	146	-	130	139	152	-		
75	1933	MBh	46.3	47.7	51.6	55.4	45.3	46.6	50.4	54.1	44.2	45.5	49.2	52.8	43.1	44.4	48.0	51.6	41.0	42.2	45.6	49.0	37.9	39.1	42.3	45.4
		S/T	0.90	0.81	0.61	0.39	0.94	0.84	0.63	0.41	0.96	0.86	0.65	0.42	0.99	0.89	0.67	0.43	1.00	0.92	0.70	0.45	1.00	0.93	0.70	0.45
		Delta T	20	18	15	10	20	19	15	11	20	19	15	11	20	19	15	11	20	19	15	10	18	17	14	10
		KW	3.31	3.38	3.49	3.60	3.56	3.64	3.75	3.87	3.78	3.86	3.99	4.12	3.98	4.06	4.19	4.33	4.14	4.23	4.37	4.51	4.28	4.38	4.52	4.67
		AMPS	13.8	14.1	14.5	14.9	14.7	15.1	15.5	16.0	15.9	16.2	16.7	17.2	16.8	17.2	17.7	18.3	17.8	18.2	18.7	19.4	18.8	19.2	19.8	20.4
		HI PR	243	261	276	288	273	293	310	323	310	334	352	367	353	380	401	419	397	427	451	471	439	472	499	520
		LO PR	110	117	127	136	116	123	135	143	121	128	140	149	127	135	147	157	133	141	154	164	137	146	159	170
		MBh	45.0	46.3	50.1	53.8	43.9	45.2	49.0	52.6	42.9	44.2	47.8	51.3	41.9	43.1	46.6	50.1	39.8	40.9	44.3	47.6	36.8	37.9	41.0	44.0
		S/T	0.86	0.77	0.58	0.38	0.89	0.80	0.60	0.39	0.92	0.82	0.62	0.40	0.95	0.85	0.64	0.41	0.98	0.88	0.66	0.43	0.99	0.89	0.67	0.43
		Delta T	21	19	16	11	21	19	16	11	21	19	16	11	21	19	16	11	21	19	16	11	19	18	15	10
KW	3.29	3.36	3.46	3.57	3.53	3.61	3.72	3.84	3.75	3.83	3.95	4.08	3.94	4.03	4.16	4.29	4.11	4.20	4.33	4.48	4.25	4.34	4.48	4.63		
AMPS	13.7	14.0	14.4	14.8	14.6	14.9	15.4	15.9	15.7	16.1	16.6	17.1	16.7	17.1	17.6	18.2	17.7	18.0	18.6	19.2	18.6	19.0	19.6	20.3		
HI PR	241	259	273	285	270	290	307	320	307	330	349	364	350	376	397	414	393	423	447	466	435	468	494	515		
LO PR	109	116	126	134	115	122	133	142	119	127	139	148	125	133	146	155	131	140	153	162	136	145	158	168		
MBh	41.5	42.8	46.3	49.7	40.6	41.8	45.2	48.5	39.6	40.8	44.1	47.4	38.6	39.8	43.0	46.2	36.7	37.8	40.9	43.9	34.0	35.0	37.9	40.7		
S/T	0.83	0.74	0.56	0.36	0.86	0.77	0.58	0.38	0.88	0.79	0.60	0.38	0.91	0.82	0.62	0.40	0.95	0.85	0.64	0.41	0.95	0.85	0.65	0.42		
Delta T	21	19	16	11	21	20	16	11	21	20	16	11	21	20	16	11	21	20	16	11	20	18	15	10		
KW	3.21	3.28	3.38	3.48	3.45	3.52	3.63	3.75	3.66	3.74	3.86	3.98	3.85	3.93	4.06	4.19	4.01	4.09	4.22	4.36	4.14	4.23	4.37	4.52		
AMPS	13.4	13.6	14.0	14.5	14.3	14.6	15.0	15.5	15.4	15.7	16.1	16.7	16.3	16.6	17.1	17.7	17.2	17.6	18.1	18.7	18.1	18.5	19.1	19.8		
HI PR	233	251	265	277	262	282	298	310	298	320	338	353	339	365	385	402	382	411	434	452	422	454	479	500		
LO PR	105	112	122	130	111	118	129	138	116	123	134	143	122	129	141	150	127	136	148	158	132	140	153	163		

Entering Indoor Dry Bulb Temperature  
High and low pressures are measured at the liquid and suction access fittings.

NOTE: Shaded area is ACCA (TVA) conditions  
KW = Total system power  
AMPS: Unit amps (comp.+ evaporator + condenser fan motors)









# HEATING PERFORMANCE DATA

# GPH13[24-42]M41\*

## EXPANDED PERFORMANCE DATA

MODEL: GPH1324M41\*

HEATING OPERATION

	Outdoor Ambient Temperature																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	28.9	27.4	25.8	24.1	23.0	22.3	20.7	19.1	16.7	15.4	14.2	13.4	12.9	11.6	10.3	9.0	7.6	6.3
Delta T	32.4	30.7	28.9	27.0	25.8	25.0	23.2	21.4	18.8	17.3	15.9	15.1	14.5	13.0	11.5	10.1	8.6	7.0
KW	2.14	2.10	2.06	2.01	1.99	1.97	1.94	1.89	2.32	2.26	2.21	2.18	2.16	2.10	2.05	2.00	1.95	1.89
AMPS	10.4	9.8	9.2	8.8	8.5	8.4	8.0	7.7	7.4	7.1	6.9	6.7	6.7	6.4	6.1	5.8	5.5	5.1
COP	3.96	3.82	3.67	3.50	3.38	3.30	3.13	2.95	2.11	1.99	1.88	1.80	1.75	1.61	1.47	1.31	1.15	0.97
EER	13.5	13.1	12.5	12.0	11.5	11.3	10.7	10.1	7.2	6.8	6.4	6.2	6.0	5.5	5.0	4.5	3.9	3.3
HI PR	379	364	350	334	326	320	308	295	283	270	260	253	249	239	230	221	213	205
LO PR	135	126	118	108	102	98	90	80	73	65	57	53	51	43	37	31	27	22

Above information is for nominal CFM and 70 degree indoor dry bulb. Instantaneous capacity listed.

MODEL: GPH1330M41\*

HEATING OPERATION

	Outdoor Ambient Temperature																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	36.2	34.3	32.3	30.2	28.8	27.9	25.9	23.9	21.2	19.6	18.0	17.0	16.4	14.7	13.0	11.4	9.7	7.9
Delta T	31.9	30.2	28.4	26.6	25.4	24.6	22.9	21.1	18.7	17.3	15.9	15.0	14.4	13.0	11.5	10.0	8.6	7.0
KW	2.74	2.68	2.63	2.58	2.55	2.53	2.48	2.43	2.29	2.24	2.19	2.17	2.15	2.10	2.05	2.00	1.95	1.90
AMPS	13.6	12.7	12.0	11.4	11.1	10.9	10.4	9.9	9.6	9.2	8.9	8.7	8.6	8.2	7.8	7.5	7.0	6.5
COP	3.87	3.74	3.59	3.42	3.30	3.23	3.06	2.88	2.71	2.55	2.40	2.30	2.23	2.05	1.86	1.66	1.46	1.22
EER	13.2	12.8	12.3	11.7	11.3	11.0	10.5	9.8	9.2	8.7	8.2	7.9	7.6	7.0	6.4	5.7	5.0	4.2
HI PR	375	359	346	330	323	316	304	292	280	267	256	250	246	236	227	218	210	203
LO PR	131	122	114	105	99	95	88	78	70	63	55	51	49	42	36	30	27	21

Above information is for nominal CFM and 70 degree indoor dry bulb. Instantaneous capacity listed.

MODEL: GPH1336M41\*

HEATING OPERATION

	Outdoor Ambient Temperature																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	43.0	40.7	38.3	35.8	34.2	33.1	30.8	28.4	24.4	22.6	20.8	19.6	18.9	17.0	15.0	13.1	11.2	9.2
Delta T	34.6	32.8	30.8	28.8	27.5	26.7	24.8	22.9	19.7	18.2	16.7	15.8	15.2	13.6	12.1	10.6	9.0	7.4
KW	3.10	3.04	2.98	2.92	2.89	2.86	2.81	2.75	2.36	2.31	2.26	2.24	2.22	2.17	2.12	2.07	2.02	1.97
AMPS	15.4	14.4	13.6	12.9	12.5	12.3	11.7	11.1	10.7	10.3	9.9	9.7	9.6	9.2	8.7	8.3	7.8	7.2
COP	4.06	3.92	3.76	3.58	3.46	3.39	3.21	3.02	3.03	2.86	2.69	2.57	2.50	2.29	2.08	1.85	1.62	1.36
EER	13.9	13.4	12.8	12.2	11.8	11.6	11.0	10.3	10.4	9.8	9.2	8.8	8.5	7.8	7.1	6.3	5.5	4.6
HI PR	403	386	371	355	347	340	327	314	300	287	276	269	264	254	244	234	226	218
LO PR	137	127	119	109	103	99	91	81	73	66	58	54	52	44	38	32	28	22

Above information is for nominal CFM and 70 degree indoor dry bulb. Instantaneous capacity listed.

MODEL: GPH1342M41\*

HEATING OPERATION

	Outdoor Ambient Temperature																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	50.3	47.6	44.8	41.9	40.0	38.8	36.0	33.2	27.5	25.4	23.4	22.1	21.3	19.1	16.9	14.8	12.6	10.3
Delta T	35.8	33.9	31.9	29.8	28.5	27.6	25.6	23.6	19.6	18.1	16.7	15.7	15.1	13.6	12.0	10.5	9.0	7.3
KW	3.58	3.52	3.45	3.38	3.34	3.31	3.25	3.18	2.31	2.27	2.23	2.20	2.18	2.14	2.09	2.05	2.01	1.96
AMPS	17.6	16.5	15.6	14.8	14.3	14.1	13.4	12.8	12.3	11.9	11.4	11.2	11.1	10.6	10.0	9.6	9.0	8.3
COP	4.11	3.96	3.80	3.62	3.50	3.42	3.24	3.05	3.48	3.27	3.07	2.94	2.85	2.61	2.36	2.11	1.84	1.54
EER	14.0	13.5	13.0	12.4	12.0	11.7	11.1	10.4	11.9	11.2	10.5	10.0	9.7	8.9	8.1	7.2	6.3	5.3
HI PR	323	310	298	285	278	273	262	252	241	230	221	216	212	204	196	188	181	175
LO PR	141	131	122	112	106	102	94	84	75	67	59	55	53	45	39	33	29	22

Above information is for nominal CFM and 70 degree indoor dry bulb. Instantaneous capacity listed.

## 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 (Delta T). Low and high side pressures and power will not change.
2. As indoor CFM decreases, a slight increase will occur in indoor temperature drop (Delta T). 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 (**Delta T**) value shown.

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

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

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

# HEATING PERFORMANCE DATA

# GPH13[48-60]M41\*

## EXPANDED PERFORMANCE DATA

MODEL: GPH1348M41\*

HEATING OPERATION

	Outdoor Ambient Temperature																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	-5	-10	
MBh	57.2	54.1	51.0	47.6	45.5	44.1	41.0	37.8	32.8	30.2	27.8	26.3	25.3	22.7	20.1	17.6	15.0	12.3
Delta T	30.8	29.1	27.4	25.6	24.5	23.7	22.0	20.3	17.6	16.3	15.0	14.2	13.6	12.2	10.8	9.5	8.1	6.6
KW	3.90	3.83	3.75	3.68	3.63	3.60	3.53	3.46	2.48	2.43	2.38	2.36	2.34	2.29	2.24	2.19	2.14	2.09
AMPS	19.0	17.7	16.7	15.8	15.3	15.0	14.3	13.7	13.1	12.6	12.1	11.9	11.8	11.2	10.6	10.1	9.5	8.7
COP	4.29	4.14	3.97	3.79	3.66	3.58	3.39	3.20	3.86	3.64	3.42	3.27	3.17	2.91	2.63	2.35	2.05	1.72
EER	14.7	14.1	13.6	13.0	12.5	12.2	11.6	10.9	13.2	12.4	11.7	11.2	10.8	9.9	9.0	8.0	7.0	5.9
HI PR	372	357	343	328	320	314	302	290	278	265	255	249	244	235	226	217	209	202
LO PR	130	121	113	104	98	95	87	77	70	62	55	51	49	42	36	30	26	21

Above information is for nominal CFM and 70 degree indoor dry bulb. Instantaneous capacity listed.

MODEL: GPH1360M41\*

HEATING OPERATION

	Outdoor Ambient Temperature																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	-5	-10	
MBh	69.8	66.0	62.2	58.1	55.5	53.8	50.0	46.1	39.1	36.1	33.3	31.4	30.3	27.1	24.1	21.0	17.9	14.7
Delta T	35.9	34.0	32.0	29.9	28.5	27.7	25.7	23.7	20.1	18.6	17.1	16.2	15.6	14.0	12.4	10.8	9.2	7.5
KW	4.80	4.71	4.62	4.53	4.47	4.44	4.35	4.26	2.41	2.36	2.32	2.30	2.28	2.24	2.20	2.16	2.12	2.08
AMPS	24.1	22.5	21.2	20.1	19.4	19.1	18.1	17.3	16.7	16.0	15.4	15.0	14.9	14.2	13.4	12.8	12.0	11.0
COP	4.25	4.10	3.94	3.76	3.63	3.55	3.36	3.17	4.76	4.47	4.19	4.00	3.88	3.54	3.20	2.84	2.47	2.06
EER	14.5	14.0	13.5	12.8	12.4	12.1	11.5	10.8	16.3	15.3	14.3	13.7	13.2	12.1	10.9	9.7	8.4	7.1
HI PR	385	369	354	339	331	325	312	300	287	274	263	257	252	243	233	224	216	208
LO PR	134	124	116	107	101	97	89	80	72	64	56	52	50	43	37	31	27	21

Above information is for nominal CFM and 70 degree indoor dry bulb. Instantaneous capacity listed.

## 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 (Delta T). Low and high side pressures and power will not change.
2. As indoor CFM decreases, a slight increase will occur in indoor temperature drop (Delta T). 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 (**Delta T**) value shown.

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

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

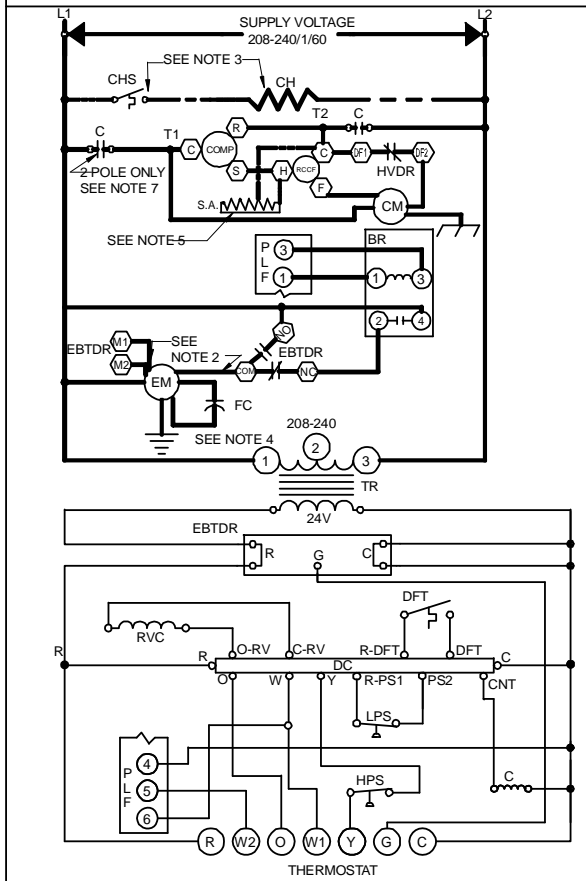
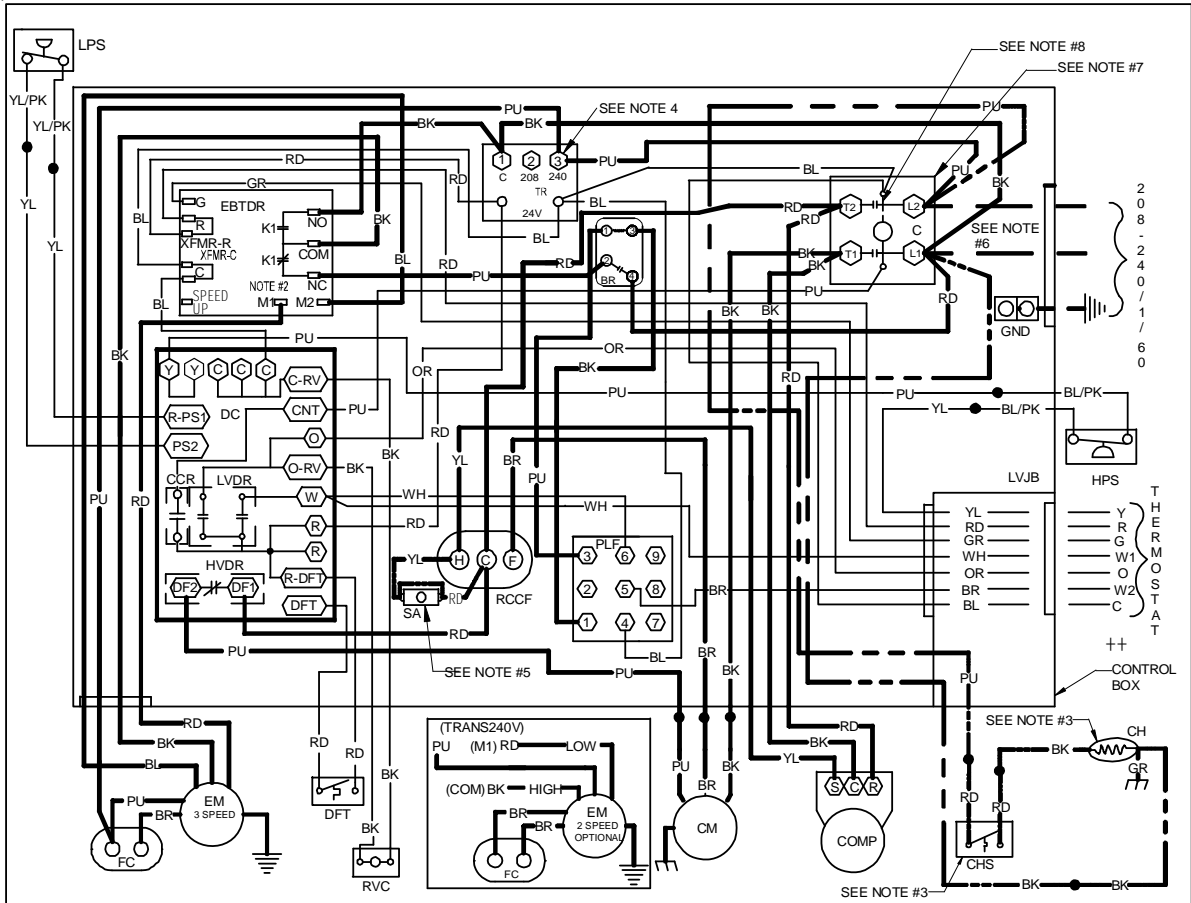
A properly operating unit should be within plus or minus **3 Amps** of the typical value shown.



**HIGH VOLTAGE!**  
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



**WARNING**



COMPONENT LEGEND		FACTORY WIRING
BR	BLOWER INTERLOCK RELAY	— LINE VOLTAGE
C	CONTACTOR	— LOW VOLTAGE
CCR	COMPRESSOR CONTACTOR RELAY	— OPTIONAL HIGH VOLTAGE
CH	CRANKCASE HEATER	— FIELD WIRING
CHS	CRANKCASE HEATER SWITCH	— HIGH VOLTAGE
CM	CONDENSER MOTOR	— LOW VOLTAGE
COMP	COMPRESSOR	
DC	DEFROST CONTROL	
DFT	DEFROST THERMOSTAT	
EBTDR	ELECTRONIC BLOWER TIME DELAY RELAY	
EM	EVAPORATOR MOTOR	
FC	FAN CAPACITOR	
GND	EQUIPMENT GROUND	
HPS	HIGH PRESSURE SWITCH	
HVDR	HIGH VOLTAGE DEFROST RELAY	
LPS	LOW PRESSURE SWITCH	
LVDR	LOW VOLTAGE DEFROST RELAY	
LVJB	LOW VOLTAGE JUNCTION BOX	
PLF	FEMALE PLUG / CONNECTOR	
RVC	REVERSING VALVE COIL	
RCCF	RUN CAPACITOR FOR COMPRESSOR AND FAN	
SA	START ASSIST	
TR	TRANSFORMER	

WIRE CODE	
BK	BLACK
BL	BLUE
BR	BROWN
GR	GREEN
OR	ORANGE
PU	PURPLE
RD	RED
WH	WHITE
YL	YELLOW

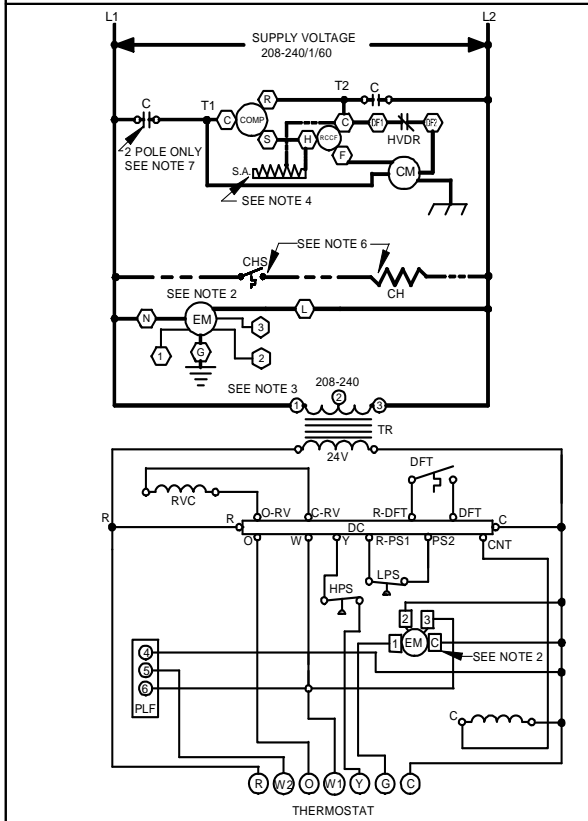
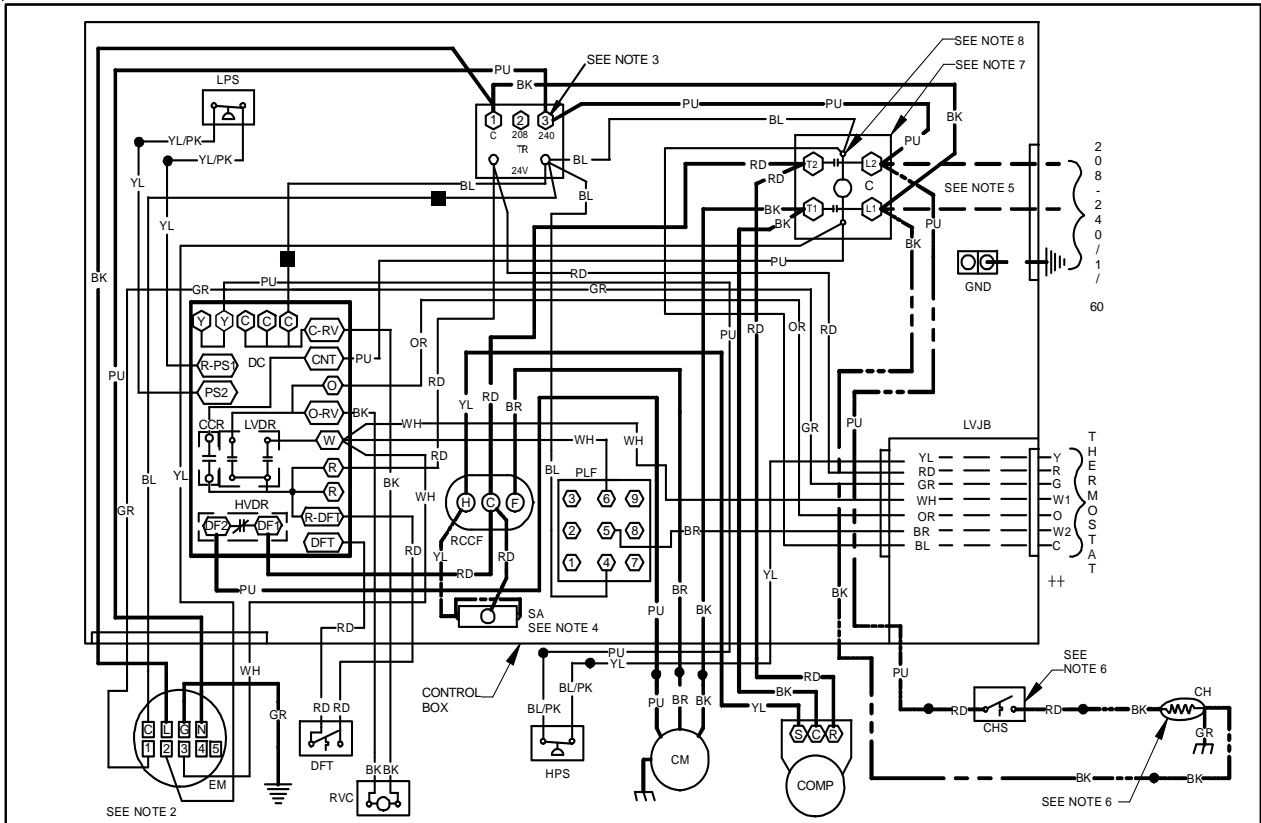
- NOTES:
1. REPLACEMENT WIRE MUST BE SAME SIZE AND TYPE INSULATION AS ORIGINAL (AT LEAST 105°C) USE COPPER CONDUCTOR ONLY.
  2. TO CHANGE EVAPORATOR MOTOR SPEED REPLACE LEAD ON EBTD "COM" WITH LEAD ON EBTD "M1" OR "M2".
  3. CRANKCASE HEATER AND CRANKCASE HEATER SWITCH FACTORY EQUIPPED WHEN REQUIRED.
  4. FOR 208 VOLT TRANSFORMER OPERATION MOVE PURPLE WIRES FROM TERMINAL 3 TERMINAL 2 ON TRANSFORMER.
  5. START ASSIST FACTORY EQUIPPED WHEN REQUIRED.
  6. USE COPPER CONDUCTORS ONLY ++ USE N.E.C. CLASS 2 WIRE.
  7. DOUBLE POLE CONTACTOR SHOWN. SINGLE POLE CONTACTOR COULD BE FACTORY EQUIPPED AS AN ALTERNATE CONFIGURATION.
  8. COMMON SIDE OF CONTACTOR CAN NOT BE GROUNDED OR CONNECTED TO ANY OTHER COMMON (24V).

SEE UNIT RATING PLATE FOR TYPE AND SIZE OF OVER CURRENT PROTECTION

208-240/1/60 0140G01745-A

Wiring is subject to change, always refer to the wiring diagram on the unit for the most up-to-date wiring.

**HIGH VOLTAGE!**  
 DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



COMPONENT LEGEND		FACTORY WIRING	
C	CONTACTOR	—	LINE VOLTAGE
CCR	COMPRESSOR CONTACTOR RELAY	—	LOW VOLTAGE
CH	CRANKCASE HEATER	—	OPTIMAL HIGH
CHS	CRANKCASE HEATER SWITCH	---	VOLTAGE
CM	CONDENSER MOTOR	---	FIELD WIRING
COMP	COMPRESSOR	---	HIGH VOLTAGE
DC	DEFROST CONTROL	---	LOW VOLTAGE
DFT	DEFROST THERMOSTAT		
EM	EVAPORATOR MOTOR		
GND	EQUIPMENT GROUND		
HVDR	HIGH VOLTAGE DEFROST RELAY		
LPS	LOW PRESSURE SWITCH		
LVDR	LOW VOLTAGE DEFROST RELAY		
LVJB	LOW VOLTAGE JUNCTION BOX		
PLF	FEMALE PLUG / CONNECTOR		
RVC	REVERSING VALVE COIL		
RCCF	RUN CAPACITOR FOR COMPRESSOR AND FAN		
SA	START ASSIST		
TR	TRANSFORMER		
HPS	HIGH PRESSURE SWITCH		

- NOTES:**
- REPLACEMENT WIRE MUST BE SAME SIZE AND TYPE INSULATION AS ORIGINAL (AT LEAST 105°C) USE COPPER CONDUCTOR ONLY.
  - TO CHANGE EVAPORATOR MOTOR SPEED MOVE WHITE AND YELLOW LEADS FROM EM\*2 AND \*3 TO \*4 AND \*5. IF BOTH LEADS ARE ENERGIZED, THE HIGHER SPEED SETTING IS USED.
  - FOR 208 VOLT TRANSFORMER OPERATION MOVE PURPLE WIRES FROM TERMINAL 3 TO TERMINAL 2 ON TRANSFORMER.
  - START ASSIST FACTORY EQUIPPED WHEN REQUIRED
  - USE COPPER CONDUCTORS ONLY
  - USE N.E.C. CLASS 2 WIRE
  - CRANKCASE HEATER AND CRANKCASE HEATER SWITCH FACTORY EQUIPPED WHEN REQUIRED.
  - DOUBLE POLE CONTACTOR SHOWN. SINGLE POLE CONTACTOR COULD BE FACTORY EQUIPPED AS AN ALTERNATE CONFIGURATION.
  - COMMON SIDE OF CONTACTOR CAN NOT BE GROUNDED OR CONNECTED TO ANY OTHER COMMON (24V).

SEE UNIT RATING PLATE FOR TYPE AND SIZE OF OVER CURRENT PROTECTION