

# TECHNICAL SUPPORT MANUAL

## 3-Phase Heat Pump Component

### R2H3\*\*GHR

#### Safety Labeling and Signal Words

##### DANGER, WARNING, CAUTION, and NOTE

The signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING**, **CAUTION**, and **NOTE** will be used on product labels and throughout this manual and other manuals that may apply to the product.

**DANGER** – Immediate hazards which **will** result in severe personal injury or death.

**WARNING** – Hazards or unsafe practices which **could** result in severe personal injury or death.

**CAUTION** – Hazards or unsafe practices which **may** result in minor personal injury or product or property damage.

**NOTE** – Used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

##### Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:



##### Signal Words on Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

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#### MODELS

R2H336GHR100  
R2H348GHR100  
R2H360GHR100



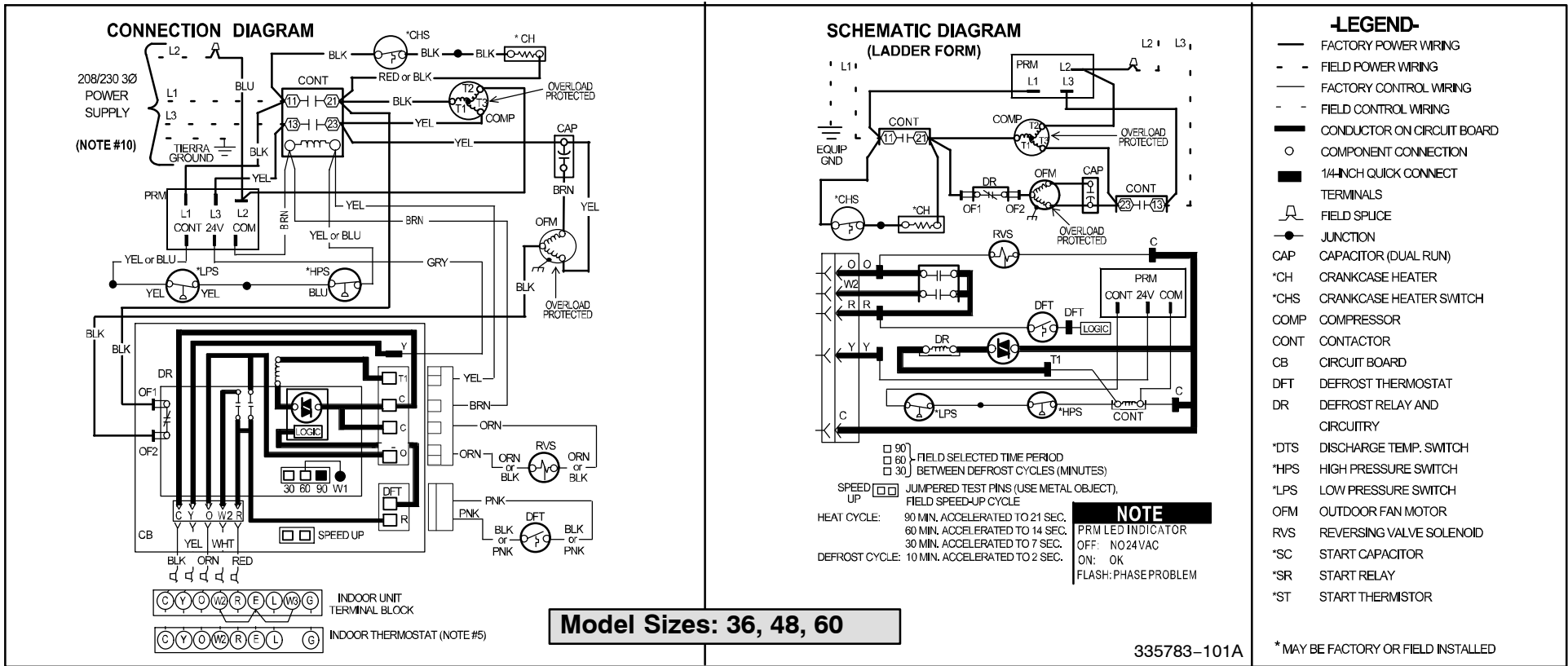
##### DEATH, PERSONAL INJURY, AND/OR PROPERTY DAMAGE HAZARD

Failure to carefully read and follow this warning could result in equipment malfunction, property damage, personal injury and/or death.

Installation or repairs made by unqualified persons could result in equipment malfunction, property damage, personal injury and/or death.

The information contained in this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

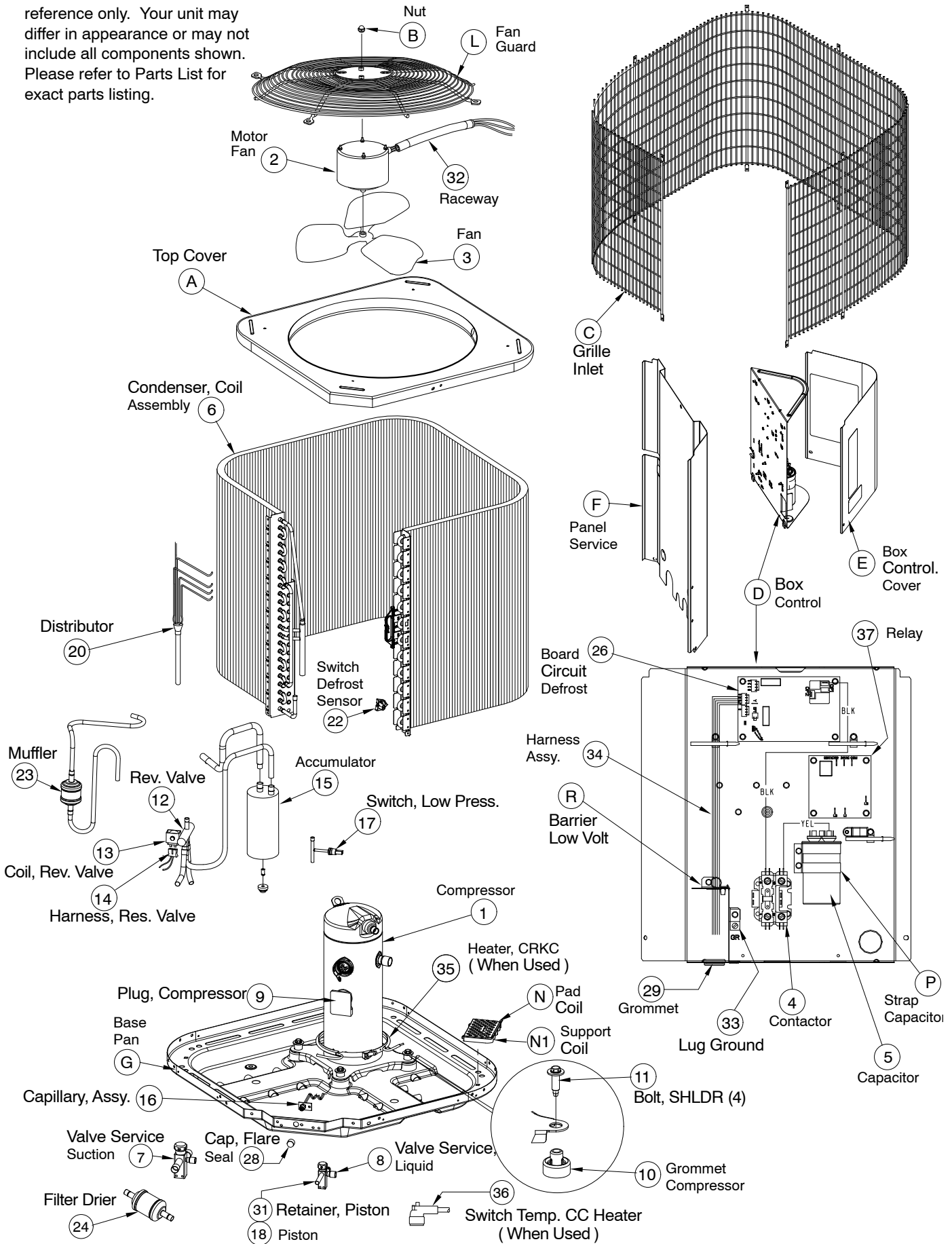
Installation must conform with local building codes and with the National Electrical Code NFPA70 current edition or Canadian Electrical Code Part 1 CSA C.22.1.



1. Symbols are electrical representation only.
2. Compressor and fan motor furnished with inherent thermal protection.
3. To be wired in accordance with National Electric N.E.C. and local codes.
4. N.E.C. class 2, 24 V circuit, min. 40 VA required, 60 VA on units installed with LLS.
5. Connection for typical heat pump thermostat. For other arrangements see installation instructions.
6. Use copper conductors only. Use conductors suitable for at least 75°C (167°F).
7. If indoor section has a transformer with a grounded secondary, connect the grounded side to "C" on the circuit board.
8. If any of the original wire, as supplied, must be replaced, use the same or equivalent wire.
9. Check all electrical connections inside control box for tightness.
10. Do not attempt to operate unit until service valves have been opened.
11. It is imperative to connect 3-phase field power to unit with correct phasing. The Phase Rotation Monitor will not allow the contactor to energize. If phasing is reversed, interchange any two of the three power connections on field side.

<b>R-22 CHARGING CHART</b>								
Measured Liquid Pressure (psig)	Rating Plate (required) Subcooling Temperature °F (°C)							
	°F 5	(°C) 3	°F 10	(°C) 6	°F 15	(°C) 8	°F 20	(°C) 11
	R-22 Required Liquid Line Temperature °F (°C)							
<b>163</b>	83	28	78	26	73	23	68	20
<b>171</b>	86	30	81	27	76	24	71	22
<b>179</b>	89	32	84	29	79	26	74	23
<b>187</b>	92	33	87	31	82	28	77	25
<b>196</b>	95	35	90	32	85	29	80	27
<b>205</b>	98	37	93	34	88	31	83	28
<b>214</b>	101	38	96	36	91	33	86	30
<b>223</b>	104	40	99	37	94	34	89	32
<b>233</b>	107	42	102	39	97	36	92	33
<b>243</b>	110	43	105	41	100	38	95	35
<b>253</b>	113	45	108	42	103	39	98	37
<b>264</b>	116	47	111	44	106	41	101	38
<b>274</b>	119	48	114	46	109	43	104	40
<b>285</b>	122	50	117	47	112	44	107	42
<b>297</b>	125	52	120	49	115	46	110	43
<b>309</b>	128	53	123	51	118	48	113	45

NOTE: This illustration is for reference only. Your unit may differ in appearance or may not include all components shown. Please refer to Parts List for exact parts listing.



R2H3**GHR PARTS LIST					
KEY NO.	DESCRIPTION	FAST PARTS NO.	R2H336GHR100	R2H348GHR100	R2H360GHR100
01	COMPRESSOR	ZR34K3TF5130	1	—	—
01	COMPRESSOR	ZR47K3TF5135	—	1	—
01	COMPRESSOR	ZR54K3TF5130	—	—	1
02	MOTOR CONDENSER FAN	1172775	1	—	—
02	MOTOR CONDENSER FAN	1172709	—	1	1
03	FAN BLADE	1172713	1	—	—
03	FAN BLADE	1173854	—	1	1
04	CONTACTOR 30 AMP	1173785	1	1	1
05	CAP 5 MFD 370V	1171727	1	1	1
06	COIL ASSY COND	1179263	1	—	—
06	COIL ASSY COND	1179265	—	1	—
06	COIL ASSY COND	1179266	—	—	1
07	SERVICE VALVE SUCTION	1172727	1	1	1
08	SERVICE VALVE LIQUID	1173681	1	1	1
09	PLUG COMPRESSOR HARNESS	1174082	1	1	1
10	GROMMET COMPRESSOR	1171270	4	4	4
11	BOLT COMPRESSOR MOUNTING	1179201	4	4	4
12	VALVE REVERSING	1175621	1	—	—
12	VALVE REVERSING	1175622	—	1	1
13	COIL REV VALVE 24V	1172574	1	1	1
14	HARNESS ASSY REV VALVE COIL	1175100	1	1	1
15	ACCUMLATOR	1173713	1	—	—
15	ACCUMLATOR	1173719	—	1	—
15	ACCUMLATOR	1174939	—	—	1
16	CAPILLARY ASSY	1174096	1	1	1
17	SWITCH LOW PRESSURE	1175858	1	1	1
18	Piston .063	1174003	1	—	—
18	Piston .073	1174017	—	1	—
18	Piston .076	1173673	—	—	1
20	DISTRUBITOR	1172022	1	—	—
20	DISTRUBITOR	1173667	—	1	—
20	DISTRUBITOR	1174007	—	—	1
22	DEFROST SENSOR	1173637	1	1	1
23	MUFFLER	1173638	1	—	—
23	MUFFLER	1173668	—	1	1
26	BOARD DEFROST CONTROL	1177927	1	1	1
28	CAP FLARE	1172410	1	1	1
29	GROMMET	1179531	1	1	1
31	RETAINER PISTON	1173993	1	1	1
32	RACEWAY	1171428	1	1	1
33	LUG GROUND	1172300	1	1	1
34	HARNESS ASSY	1175084	1	1	1
35	HEATER CRANKCASE	1172357	—	1	—
35	HEATER CRANKCASE	1172358	—	—	1
36	SWITCH TEMP CC HTR	1172359	—	1	1
37	RELAY 3 PH MONITOR	1173408	1	1	1
)	( CLIP ACCUMLATOR	1173640	1	1	1
)	( STRAINER	1175086	1	1	1

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R2H3**GHR PARTS LIST (continued)					
KEY NO.	DESCRIPTION	FAST PARTS NO.	R2H336GHR100	R2H348GHR100	R2H360GHR100
) (	CAP SERVICE KIT 11/16—20	1175650	1	1	1
) (	CAP SERVICE KIT 15/16—20	1175651	1	—	—
) (	CAP SERVICE KIT 1—1/16—20	1175652	—	1	1
) (	CUSHION ACCUMLATOR	1172806	1	1	1
A	PANEL TOP	1176738	1	1	1
B	NUT HEX	1172740	4	4	4
C	GRILLE INLET — MEDIUM	1176988	—	1	—
C	GRILLE INLET — MEDIUM	1176989	1	—	—
C	GRILLE INLET — MEDIUM	1176991	—	—	1
D	BOX CONTROL	1183919	1	1	1
E	KIT CONTROL BOX COVER	1176768	1	1	1
F	PANEL SERVICE	1176740	—	1	—
F	PANEL SERVICE	1176741	1	—	—
F	PANEL SERVICE	1176780	—	—	1
G	PAN BASE	1176764	1	1	1
L	GUARD FAN	1179200	1	1	1
N	SUPPORT COIL	1174068	5	5	5
P	STRAP CAPACITOR	1174073	1	1	1
R	BARRIER LOW VOLT	1176762	1	1	1
) (	SCREW 10 X 1/2 25 PACK	1174880	1	1	1
) (	SCREW HEX HD 10AB 3/8	1176782	10	10	10
) (	SCREW HEX HD 12AB 5/8	1176781	4	4	4
) (	PISTON TOOL RESIZER KIT	1175477	1	1	1
) (	PAINT TOUCH UP 1PT	1174762	1	1	1