RHS 036–072
SINGLE PACKAGE ROOFTOP
HEAT PUMP UNIT
WITH R–410A REFRIGERANT

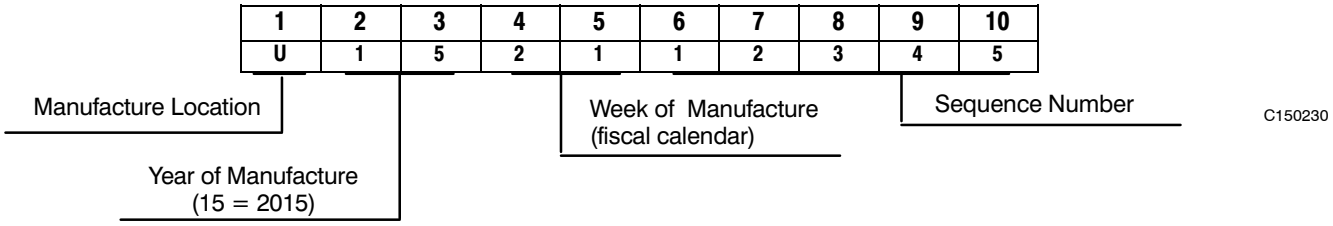
ELECTRICAL DATA SUPPLEMENT

FOR MODELS PRODUCED ON OR AFTER MAY 18, 2015 ONLY!

NOTE: Read the entire instruction manual before starting the installation

This supplement only applies to RHS036–072 units manufactured on or after May 18, 2015. To confirm the date of manufacture of a RHS unit, locate the unit nameplate and check the second thru fifth digits of the Serial Number. If the number listed in the 2nd thru 5th digits of the Serial Number is 1521 or higher KEEP THIS DOCUMENT and use it along with the furnished Installation Instructions. The Serial Number is located directly below the unit's Model Number.

SERIAL NUMBER NOMENCLATURE



SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory–authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloths for brazing operations and have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to the unit. Consult local building codes and appropriate national electrical codes (in USA, ANSI/NFPA70, National Electrical Code (NEC); in Canada, CSA C22.1) for special requirements.

It is important to recognize safety information. This is the safety–alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, CAUTION, and NOTE. These words are used with the safety–alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices, which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

⚠ CAUTION

ELECTRICAL HAZARD

Failure to follow this caution may result in personal injury or product and property damage.

The electrical data contained in this document is only for use with RHS 036–072 units manufactured on or after May 18, 2015. Check the second thru fifth digits of the Serial Number. If the number listed in the 2nd thru 5th digits of the Serial Number is 1521 or higher keep this document.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could cause personal injury or death.

Before performing service or maintenance operations on unit, always turn off main power switch to unit and install lockout tag. Unit may have more than one power switch.

Table 1 – RHS036–072 Unit Wire/Fuse or HACR Breaker Sizing Data

UNIT	NO M. V–Ph–HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER* **A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS036	208/230–3–60	DD–STD	NONE	–	–	25	30	25	97	27	30	27	99
			101A	3.3/4.4	9.2/10.6	37/39	45/45	35/37	106/108	39/40	45/50	37/39	108/110
			102A	4.9/6.5	13.6/15.6	42/45	50/50	40/43	111/113	44/47	50/50	43/45	113/115
			103B	6.5/8.7	18.1/20.9	48/51	50/60	46/49	115/118	50/53	50/60	48/51	117/120
			104B	7.9/10.5	21.9/25.3	53/57	60/60	50/54	119/122	55/59	60/60	52/56	121/124
			105A	12.0/16.0	33.4/38.5	67/73	70/80	63/69	130/136	69/75	70/80	65/71	132/138
		MED	NONE	–	–	23/23	30/30	22/22	126	25/25	30/30	24/24	128
			101A	3.3/4.4	9.2/10.6	35/36	45/45	33/34	135/137	36/38	45/45	35/36	137/139
			102A	4.9/6.5	13.6/15.6	40/42	45/50	38/40	140/142	42/44	50/50	40/42	142/144
			103B	6.5/8.7	18.1/20.9	46/49	50/50	43/46	144/147	48/51	50/60	45/48	146/149
			104B	7.9/10.5	21.9/25.3	50/54	50/60	47/51	148/151	52/56	60/60	50/53	150/153
			105A	12.0/16.0	33.4/38.5	65/71	70/80	61/66	159/165	67/73	70/80	63/68	161/167
		HIGH	NONE	–	–	26/26	30/30	26/26	162	28/28	40/40	28/28	164
			101A	3.3/4.4	9.2/10.6	38/39	45/45	36/38	171/173	40/41	50/50	39/40	173/175
			102A	4.9/6.5	13.6/15.6	43/46	50/50	42/44	176/178	45/48	50/50	44/46	178/180
			103B	6.5/8.7	18.1/20.9	49/52	50/60	47/50	180/183	51/54	60/60	49/52	182/185
			104B	7.9/10.5	21.9/25.3	54/58	60/60	51/55	184/187	56/60	60/60	53/57	186/189
			105A	12.0/16.0	33.4/38.5	68/74	70/80	64/70	195/201	70/76	70/80	66/72	197/203
	460–3–60	DD–STD	NONE	–	–	12	15	12	49	13	15	13	50
			106A	6.0	7.2	21	25	20	56	22	25	22	57
			107A	8.8	10.6	26	30	24	60	27	30	25	61
			108A	11.5	13.8	30	30	28	63	31	35	29	64
			109A	14.0	16.8	33	35	31	66	34	35	33	67
		MED	NONE	–	–	11	15	10	63	12	15	12	64
			106A	6.0	7.2	20	20	19	70	21	25	20	71
			107A	8.8	10.6	24	25	23	74	25	25	24	75
			108A	11.5	13.8	28	30	26	77	29	30	27	78
			109A	14.0	16.8	32	35	30	80	33	35	31	81
		HIGH	NONE	–	–	13	15	12	81	14	15	13	82
			106A	6.0	7.2	22	25	21	88	23	25	22	89
			107A	8.8	10.6	26	30	24	92	27	30	26	93
			108A	11.5	13.8	30	30	28	95	31	35	29	96
			109A	14.0	16.8	34	35	32	98	35	35	33	99
	575–3–60	DD–STD	NONE	–	–	10	15	10	35	12	15	12	37
		MED	NONE	–	–	8	15	7	38	10	15	9	40
		HIGH	NONE	–	–	8	15	8	42	10	15	10	44

See: Legend and Notes for Table 1 on page 6.

Table 1 – RHS036–072 Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M. V–Ph–HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER* **A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS048	208/230–3–60	DD–STD	NONE	–	–	26	30	26	94	28	40	28	96
			102A	4.9/6.5	13.6/15.6	43/46	50/50	42/44	108/110	45/48	50/50	44/46	110/112
			103B	6.5/8.7	18.1/20.9	49/53	50/60	47/50	112/115	51/55	60/60	49/52	114/117
			105A	12.0/16.0	33.4/38.5	68/75	70/80	64/70	127/133	70/77	70/80	67/72	129/135
			104B+104B	15.8/21.0	43.8/50.5	81/90	90/90	76/84	182/195	83/92	90/100	79/86	184/197
		MED	NONE	–	–	24/24	30/30	23/23	123	26/26	30/30	26/25	125
			102A	4.9/6.5	13.6/15.6	41/43	50/50	39/41	137/139	43/45	50/50	41/43	139/141
			103B	6.5/8.7	18.1/20.9	47/50	50/50	44/47	141/144	49/52	50/60	46/49	143/146
			105A	12.0/16.0	33.4/38.5	66/72	70/80	62/67	156/162	68/74	70/80	64/70	158/164
			104B+104B	15.8/21.0	43.8/50.5	79/87	80/90	74/81	211/224	81/89	90/90	76/83	213/226
		HIGH	NONE	–	–	27/27	40/40	27/27	159	29/29	40/40	29/29	161
			102A	4.9/6.5	13.6/15.6	44/47	50/50	43/45	173/175	46/49	50/50	45/47	175/177
			103B	6.5/8.7	18.1/20.9	50/54	50/60	48/51	177/180	52/55	60/60	50/53	179/182
			105A	12.0/16.0	33.4/38.5	69/76	70/80	66/71	192/198	71/77	80/80	68/73	194/200
			104B+104B	15.8/21.0	43.8/50.5	82/91	90/100	78/85	247/260	84/92	90/100	80/87	249/262
	460–3–60	DD–STD	NONE	–	–	13	15	13	47	14	20	14	48
			106A	6.0	7.2	22	25	21	54	23	25	22	55
			108A	11.5	13.8	30	30	29	61	31	35	30	62
			109A	14.0	16.8	34	35	32	64	35	35	33	65
			108A+108A	23.0	27.7	48	50	45	102	49	50	46	103
		MED	NONE	–	–	12	15	11	61	13	15	12	62
			106A	6.0	7.2	21	25	19	68	22	25	20	69
			108A	11.5	13.8	29	30	27	75	30	30	28	76
			109A	14.0	16.8	33	35	30	78	34	35	31	79
			108A+108A	23.0	27.7	46	50	43	116	47	50	44	117
		HIGH	NONE	–	–	13	15	13	79	14	20	14	80
			106A	6.0	7.2	22	25	21	86	23	25	22	87
			108A	11.5	13.8	30	30	29	93	31	35	30	94
			109A	14.0	16.8	34	35	32	96	35	35	33	97
			108A+108A	23.0	27.7	48	50	45	134	49	50	46	135
	575–3–60	DD–STD	NONE	–	–	11	15	11	39	13	15	13	41
		MED	NONE	–	–	9	15	8	42	11	15	10	44
		HIGH	NONE	–	–	9	15	9	46	11	15	11	48

See: Legend and Notes for Table 1 on page 6.

Table 1 – RHS036–072 Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M. V–Ph–HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER* **A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS060	208/230–3–60	DD–STD	NONE	–	–	29	40	28	121	31	45	30	123
			102A	4.9/6.5	13.6/15.6	46/48	50/50	44/46	135/137	48/50	50/60	46/48	137/139
			104B	7.9/10.5	21.9/25.3	56/60	60/70	53/57	143/146	58/62	60/70	56/59	145/148
			105A	12.0/16.0	33.4/38.5	71/77	80/80	67/72	154/160	73/79	80/80	69/75	156/162
			104B+104B	15.8/21.0	43.8/50.5	84/92	90/100	79/86	209/222	86/94	90/100	81/88	211/224
			104B+105A	19.9/26.5	55.2/63.8	98/109	100/110	92/102	231/249	100/111	100/125	94/104	233/251
		MED	NONE	–	–	30/30	45/40	29/29	186	32/32	45/45	32/31	188
			102A	4.9/6.5	13.6/15.6	47/49	50/60	45/47	200/202	49/51	60/60	47/49	202/204
			104B	7.9/10.5	21.9/25.3	57/61	60/70	55/58	208/211	59/63	60/70	57/60	210/213
			105A	12.0/16.0	33.4/38.5	72/78	80/80	68/73	219/225	74/80	80/80	70/76	221/227
			104B+104B	15.8/21.0	43.8/50.5	85/93	90/100	80/87	274/287	87/95	90/100	82/89	276/289
			104B+105A	19.9/26.5	55.2/63.8	99/110	100/110	93/103	296/314	101/111	110/125	95/105	298/316
		HIGH	NONE	–	–	30/30	45/40	29/29	186	32/32	45/45	32/31	188
			102A	4.9/6.5	13.6/15.6	47/49	50/60	45/47	200/202	49/51	60/60	47/49	202/204
			104B	7.9/10.5	21.9/25.3	57/61	60/70	55/58	208/211	59/63	60/70	57/60	210/213
			105A	12.0/16.0	33.4/38.5	72/78	80/80	68/73	219/225	74/80	80/80	70/76	221/227
			104B+104B	15.8/21.0	43.8/50.5	85/93	90/100	80/87	274/287	87/95	90/100	82/89	276/289
			104B+105A	19.9/26.5	55.2/63.8	99/110	100/110	93/103	296/314	101/111	110/125	95/105	298/316
	460–3–60	DD–STD	NONE	–	–	15	20	14	58	16	20	16	59
			106A	6.0	7.2	24	25	23	65	25	30	24	66
			108A	11.5	13.8	32	35	30	72	33	35	31	73
			109A	14.0	16.8	36	40	34	75	37	40	35	76
			108A+108A	23.0	27.7	50	50	46	113	51	60	47	114
			108A+109A	25.5	30.7	53	60	50	119	54	60	51	120
		MED	NONE	–	–	15	20	15	90	16	20	16	91
			106A	6.0	7.2	24	25	23	97	25	30	24	98
			108A	11.5	13.8	32	35	30	104	33	35	32	105
			109A	14.0	16.8	36	40	34	107	37	40	35	108
			108A+108A	23.0	27.7	50	50	46	145	51	60	48	146
			108A+109A	25.5	30.7	53	60	50	151	54	60	51	152
		HIGH	NONE	–	–	15	20	15	90	16	20	16	91
			106A	6.0	7.2	24	25	23	97	25	30	24	98
			108A	11.5	13.8	32	35	30	104	33	35	32	105
			109A	14.0	16.8	36	40	34	107	37	40	35	108
			108A+108A	23.0	27.7	50	50	46	145	51	60	48	146
			108A+109A	25.5	30.7	53	60	50	151	54	60	51	152
	575–3–60	DD–STD	NONE	–	–	12	15	12	45	14	20	14	47
		MED	NONE	–	–	10	15	10	52	12	15	12	54
		HIGH	NONE	–	–	11	15	11	63	13	15	13	65

See: Legend and Notes for Table 1 on page 6.

Table 1 – RHS036–072 Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

UNIT	NO M. V–Ph–HZ	IFM-TYPE	ELEC. HTR			NO C.O. or UNPWR C.O.							
						NO P.E.				w/ P.E. (pwrd fr/unit)			
			CRHEATER* **A00	Nom (kW)	FLA	MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RHS072	208/230–3–60	STD	NONE	–	–	32	50	30	159	34	50	32	161
			102A	4.9/6.5	13.6/15.6	49/51	60/60	46/48	173/175	51/53	60/60	48/50	175/177
			104B	7.9/10.5	21.9/25.3	59/63	60/70	55/59	181/184	61/65	70/70	58/62	183/186
			105A	12.0/16.0	33.4/38.5	73/80	80/80	69/75	192/198	75/82	80/90	71/77	194/200
			104B+104B	15.8/21.0	43.8/50.5	86/95	90/100	81/88	247/260	88/97	90/100	83/91	249/262
			104B+105A	19.9/26.5	55.2/63.8	101/111	110/125	94/104	269/287	103/113	110/125	96/106	271/289
		MED	NONE	–	–	35/35	50/50	34/34	212	37/37	50/50	36/36	214
			102A	4.9/6.5	13.6/15.6	52/54	60/60	50/52	226/228	54/56	60/60	52/54	228/230
			104B	7.9/10.5	21.9/25.3	62/66	70/70	59/63	234/237	64/68	70/80	61/65	236/239
			105A	12.0/16.0	33.4/38.5	77/83	80/90	72/78	245/251	79/85	80/90	75/80	247/253
			104B+104B	15.8/21.0	43.8/50.5	90/98	90/100	84/92	300/313	92/100	100/100	86/94	302/315
			104B+105A	19.9/26.5	55.2/63.8	104/115	110/125	97/107	322/340	106/116	110/125	100/109	324/342
		HIGH	NONE	–	–	35/35	50/50	34/34	212	37/37	50/50	36/36	214
			102A	4.9/6.5	13.6/15.6	52/54	60/60	50/52	226/228	54/56	60/60	52/54	228/230
			104B	7.9/10.5	21.9/25.3	62/66	70/70	59/63	234/237	64/68	70/80	61/65	236/239
			105A	12.0/16.0	33.4/38.5	77/83	80/90	72/78	245/251	79/85	80/90	75/80	247/253
			104B+104B	15.8/21.0	43.8/50.5	90/98	90/100	84/92	300/313	92/100	100/100	86/94	302/315
			104B+105A	19.9/26.5	55.2/63.8	104/115	110/125	97/107	322/340	106/116	110/125	100/109	324/342
	460–3–60	STD	NONE	–	–	14	20	13	77	15	20	14	78
			106A	6.0	7.2	23	25	22	84	24	30	23	85
			108A	11.5	13.8	31	35	29	91	32	35	30	92
			109A	14.0	16.8	35	35	33	94	36	40	34	95
			108A+108A	23.0	27.7	49	50	45	132	50	50	46	133
			108A+109A	25.5	30.7	52	60	49	138	53	60	50	139
		MED	NONE	–	–	16	20	15	104	17	20	16	105
			106A	6.0	7.2	25	30	23	111	26	30	25	112
			108A	11.5	13.8	33	35	31	118	34	35	32	119
			109A	14.0	16.8	37	40	35	121	38	40	36	122
			108A+108A	23.0	27.7	50	50	47	159	51	60	48	160
			108A+109A	25.5	30.7	54	60	50	165	55	60	52	166
		HIGH	NONE	–	–	16	20	15	104	17	20	16	105
			106A	6.0	7.2	25	30	23	111	26	30	25	112
			108A	11.5	13.8	33	35	31	118	34	35	32	119
			109A	14.0	16.8	37	40	35	121	38	40	36	122
			108A+108A	23.0	27.7	50	50	47	159	51	60	48	160
			108A+109A	25.5	30.7	54	60	50	165	55	60	52	166
	575–3–60	STD	NONE	–	–	11	15	10	64	13	15	12	66
		MED	NONE	–	–	12	15	12	79	14	20	14	81
		HIGH	NONE	–	–	12	15	12	79	14	20	14	81

See: Legend and Notes for Table 1 on page 6.

Legend and Notes for Table 1

LEGEND:

BRKR	–	Circuit breaker
CO	–	Convenience outlet
DD	–	Direct drive (indoor fan motor)
DISC	–	Disconnect
FLA	–	Full load amps
IFM	–	Indoor fan motor
LRA	–	Locked rotor amps
MCA	–	Minimum circuit amps
MOCP	–	MAX FUSE or HACR Breaker
PE	–	Power exhaust
UNPWR CO	–	Unpowered convenient outlet

NOTES:

1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
2. **Unbalanced 3-Phase Supply Voltage**
   Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 230-3-60

AB = 224 v
BC = 231 v
AC = 226 v

$$\text{Average Voltage} = \frac{(224 + 231 + 226)}{3} = \frac{681}{3}$$

$$= 227$$

Determine maximum deviation from average voltage.
(AB) 227 – 224 = 3 v
(BC) 231 – 227 = 4 v
(AC) 227 – 226 = 1 v
Maximum deviation is 4 v.
Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{4}{227}$$

$$= 1.76\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.