

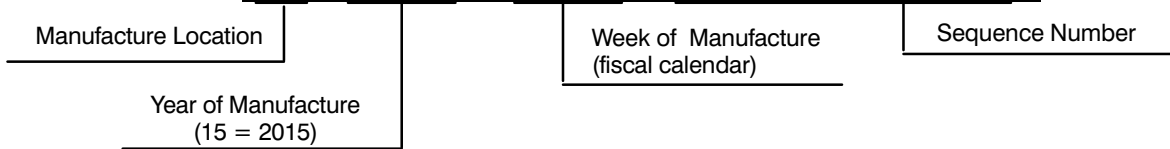
FOR MODELS PRODUCED ON OR AFTER MAY 18, 2015 ONLY!

NOTE: Read the entire instruction manual before starting the installation

This supplement only applies to RGS/RAS 036-072 units manufactured on or after May 18, 2015. To confirm the date of manufacture of a RGS/RAS 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

1	2	3	4	5	6	7	8	9	10
U	1	5	2	1	1	2	3	4	5



C150230

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 RGS/RAS 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 – RGS036–072 Unit Wire/Fuse or HACR Breaker Sizing Data

UNIT	NOM. V-Ph-Hz	IFM TYPE	NO C.O. or UNPWR C.O.								
			NO P.E.				w/ P.E. (pwr fr/ unit)				
			MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE		
					FLA	LRA			FLA	LRA	
RGS036	208/230–3–60	DD-STD	21	30	21	83	23	30	23	85	
		STD	20	30	20	96	22	30	22	98	
		MED	20	30	20	96	22	30	22	98	
		HIGH	20	30	20	107	22	30	22	109	
	460–3–60	STD	11	15	11	49	12	15	12	50	
		MED	11	15	11	49	12	15	12	50	
		HIGH	11	15	11	55	12	15	12	56	
	575–3–60	STD	8	15	8	46	10	15	10	48	
		MED	8	15	8	46	10	15	10	48	
HIGH		8	15	7	50	10	15	10	52		
RGS048	208/230–3–60	DD-STD	25	30	24	93	27	30	27	95	
		STD	24	30	23	106	26	30	26	108	
		MED	24	30	23	106	26	30	26	108	
		HIGH	24	30	23	117	26	30	26	119	
	460–3–60	STD	12	15	11	52	13	15	12	53	
		MED	12	15	11	52	13	15	12	53	
		HIGH	12	15	11	58	13	15	12	59	
	575–3–60	STD	9	15	9	42	11	15	11	44	
		MED	9	15	9	42	11	15	11	44	
		HIGH	9	15	9	46	11	15	11	48	
	RGS060	208/230–3–60	DD-STD	29	40	28	122	31	45	31	124
			STD	27	40	26	133	29	40	28	135
MED			28/28	40/40	28/27	171	30/30	45/45	30/30	173	
HIGH			29	40	28	170	31	45	30	172	
460–3–60		STD	13	20	13	63	14	20	14	64	
		MED	14	20	14	82	15	20	15	83	
		HIGH	14	20	14	82	15	20	15	83	
575–3–60		STD	11	15	10	48	13	15	12	50	
		MED	10	15	10	52	12	15	12	54	
		HIGH	11	15	11	63	13	15	13	65	
RGS072		208/230–3–60	STD	32	50	30	170	34	50	32	172
			MED	35/35	50/50	34/34	212	37/37	50/50	36/36	214
	HIGH		37	50	36	226	39	50	39	228	
	460–3–60	STD	14	20	13	83	15	20	14	84	
		MED	16	20	15	104	17	20	16	105	
		HIGH	17	20	16	111	18	25	18	112	
	575–3–60	STD	11	15	11	68	13	15	13	70	
		MED	12	15	12	79	14	20	14	81	
		HIGH	12	15	12	79	14	20	14	81	

See: Legend and Notes for Tables 1 and 2 on page 7.

Table 2 – RAS036-072 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.							
			CRHEATER* **A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS036	208/230-3-60	DD-STD	NONE	-	-	21	30	21	83	23	30	23	85
			101A	3.3/4.4	9.2/10.6	21/21	30/30	21/21	83/83	23/24	30/30	23/23	85/85
			102A	4.9/6.5	13.6/15.6	25/27	30/30	23/25	83/83	27/30	30/30	25/27	85/85
			103B	6.5/8.7	18.1/20.9	31/34	35/35	28/31	83/83	33/36	35/40	30/33	85/85
			104B	7.9/10.5	21.9/25.3	35/40	35/40	32/36	83/83	38/42	40/45	34/38	85/85
		105A	12.0/16.0	33.4/38.5	50/56	50/60	45/51	83/83	52/58	60/60	47/53	85/85	
		STD	NONE	-	-	20	30	20	96	22	30	22	98
			101A	3.3/4.4	9.2/10.6	20/20	30/30	20/20	96/96	22/23	30/30	22/22	98/98
			102A	4.9/6.5	13.6/15.6	24/26	30/30	22/24	96/96	26/29	30/30	24/26	98/98
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	96/96	32/35	35/40	29/32	98/98
			104B	7.9/10.5	21.9/25.3	34/39	35/40	31/35	96/96	37/41	40/45	33/37	98/98
		105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	96/96	51/57	60/60	47/52	98/98	
		MED	NONE	-	-	20	30	20	96	22	30	22	98
			101A	3.3/4.4	9.2/10.6	20/20	30/30	20/20	96/96	22/23	30/30	22/22	98/98
			102A	4.9/6.5	13.6/15.6	24/26	30/30	22/24	96/96	26/29	30/30	24/26	98/98
	103B		6.5/8.7	18.1/20.9	30/33	30/35	27/30	96/96	32/35	35/40	29/32	98/98	
	104B		7.9/10.5	21.9/25.3	34/39	35/40	31/35	96/96	37/41	40/45	33/37	98/98	
	105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	96/96	51/57	60/60	47/52	98/98		
	HIGH	NONE	-	-	20	30	20	107	22	30	22	109	
		101A	3.3/4.4	9.2/10.6	20/20	30/30	20/20	107/107	22/23	30/30	22/22	109/109	
102A		4.9/6.5	13.6/15.6	24/26	30/30	22/24	107/107	26/29	30/30	24/26	109/109		
103B		6.5/8.7	18.1/20.9	30/33	30/35	27/30	107/107	32/35	35/40	29/32	109/109		
104B		7.9/10.5	21.9/25.3	34/39	35/40	31/35	107/107	37/41	40/45	33/37	109/109		
105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	107/107	51/57	60/60	47/52	109/109			
460-3-60	STD	NONE	-	-	11	15	11	49	12	15	12	50	
		106A	6.0	7.2	13	15	11	49	14	15	12	50	
		107A	8.8	10.6	17	20	15	49	18	20	16	50	
		108A	11.5	13.8	21	25	19	49	22	25	20	50	
		109A	14.0	16.8	25	25	22	49	26	30	23	50	
	MED	NONE	-	-	11	15	11	49	12	15	12	50	
		106A	6.0	7.2	13	15	11	49	14	15	12	50	
		107A	8.8	10.6	17	20	15	49	18	20	16	50	
		108A	11.5	13.8	21	25	19	49	22	25	20	50	
		109A	14.0	16.8	25	25	22	49	26	30	23	50	
	HIGH	NONE	-	-	11	15	11	55	12	15	12	56	
		106A	6.0	7.2	13	15	11	55	14	15	12	56	
		107A	8.8	10.6	17	20	15	55	18	20	16	56	
		108A	11.5	13.8	21	25	19	55	22	25	20	56	
		109A	14.0	16.8	25	25	22	55	26	30	23	56	
575-3-60	STD	NONE	-	-	8	15	8	46	10	15	10	48	
	MED	NONE	-	-	8	15	8	46	10	15	10	48	
	HIGH	NONE	-	-	8	15	7	50	10	15	10	52	

See: Legend and Notes for Tables 1 and 2 on page 7.

Table 2 – RAS036–072 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.							
			CRHEATER* **A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS048	208/230—3—60	DD-STD	NONE	–	–	25	30	24	93	27	30	27	95
			102A	4.9/6.5	13.6/15.6	25/27	30/30	24/25	93/93	27/30	30/30	27/27	95/95
			103B	6.5/8.7	18.1/20.9	31/34	35/35	28/31	93/93	33/36	40/40	30/33	95/95
			105A	12.0/16.0	33.4/38.5	50/56	50/60	45/51	93/93	52/58	60/60	47/53	95/95
			104B+104B	15.8/21.0	43.8/50.5	63/71	70/80	57/65	93/93	65/73	70/80	59/67	95/95
		STD	NONE	–	–	24	30	23	106	26	30	26	108
			102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	106/106	26/29	30/30	26/26	108/108
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	106/106	32/35	35/40	29/32	108/108
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	106/106	51/57	60/60	47/52	108/108
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	106/106	64/72	70/80	59/66	108/108
		MED	NONE	–	–	24	30	23	106	26	30	26	108
			102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	106/106	26/29	30/30	26/26	108/108
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	106/106	32/35	35/40	29/32	108/108
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	106/106	51/57	60/60	47/52	108/108
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	106/106	64/72	70/80	59/66	108/108
		HIGH	NONE	–	–	24	30	23	117	26	30	26	119
			102A	4.9/6.5	13.6/15.6	24/26	30/30	23/24	117/117	26/29	30/30	26/26	119/119
			103B	6.5/8.7	18.1/20.9	30/33	30/35	27/30	117/117	32/35	35/40	29/32	119/119
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	117/117	51/57	60/60	47/52	119/119
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	117/117	64/72	70/80	59/66	119/119
460—3—60	STD	NONE	–	–	12	15	11	52	13	15	12	53	
		106A	6.0	7.2	13	15	11	52	14	15	12	53	
		108A	11.5	13.8	21	25	19	52	22	25	20	53	
		109A	14.0	16.8	25	25	22	52	26	30	23	53	
		108A+108A	23.0	27.7	38	40	35	52	40	40	36	53	
	MED	NONE	–	–	12	15	11	52	13	15	12	53	
		106A	6.0	7.2	13	15	11	52	14	15	12	53	
		108A	11.5	13.8	21	25	19	52	22	25	20	53	
		109A	14.0	16.8	25	25	22	52	26	30	23	53	
		108A+108A	23.0	27.7	38	40	35	52	40	40	36	53	
	HIGH	NONE	–	–	12	15	11	58	13	15	12	59	
		106A	6.0	7.2	13	15	11	58	14	15	12	59	
		108A	11.5	13.8	21	25	19	58	22	25	20	59	
		109A	14.0	16.8	25	25	22	58	26	30	23	59	
		108A+108A	23.0	27.7	38	40	35	58	40	40	36	59	
575—3—60	STD	NONE	–	–	9	15	9	42	11	15	11	44	
	MED	NONE	–	–	9	15	9	42	11	15	11	44	
	HIGH	NONE	–	–	9	15	9	46	11	15	11	48	

See: Legend and Notes for Tables 1 and 2 on page 7.

Table 2 – RAS036–072 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.							
			CRHEATER* **A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS060	208/230–3–60	DD-STD	NONE	–	–	29	40	28	122	31	45	31	124
			102A	4.9/6.5	13.6/15.6	29/29	40/40	28/28	122/122	31/32	45/45	31/31	124/124
			104B	7.9/10.5	21.9/25.3	37/42	40/45	34/38	122/122	40/44	45/45	36/40	124/124
			105A	12.0/16.0	33.4/38.5	52/58	60/60	47/53	122/122	54/60	60/60	49/55	124/124
			104B+104B	15.8/21.0	43.8/50.5	65/73	70/80	59/67	122/122	67/75	70/80	61/69	124/124
		104B+105A	19.9/26.5	55.2/63.8	79/90	80/90	72/82	122/122	81/92	90/100	74/84	124/124	
		STD	NONE	–	–	27	40	26	133	29	40	28	135
			102A	4.9/6.5	13.6/15.6	27/27	40/40	26/26	133/133	29/29	40/40	28/28	135/135
			104B	7.9/10.5	21.9/25.3	34/39	40/40	31/35	133/133	37/41	40/45	33/37	135/135
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	133/133	51/57	60/60	47/52	135/135
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	133/133	64/72	70/80	59/66	135/135
		104B+105A	19.9/26.5	55.2/63.8	76/87	80/90	69/79	133/133	78/89	80/90	72/82	135/135	
		MED	NONE	–	–	28/28	40/40	28/27	171	30/30	45/45	30/30	173
			102A	4.9/6.5	13.6/15.6	28/28	40/40	28/27	171/171	30/31	45/45	30/30	173/173
			104B	7.9/10.5	21.9/25.3	36/40	40/40	33/37	171/171	39/43	45/45	35/39	173/173
	105A		12.0/16.0	33.4/38.5	51/57	60/60	46/52	171/171	53/59	60/60	49/54	173/173	
	104B+104B		15.8/21.0	43.8/50.5	64/72	70/80	58/66	171/171	66/74	70/80	60/68	173/173	
	104B+105A	19.9/26.5	55.2/63.8	78/89	80/90	71/81	171/171	80/91	90/100	74/83	173/173		
	HIGH	NONE	–	–	29	40	28	170	31	45	30	172	
		102A	4.9/6.5	13.6/15.6	29/29	40/40	28/28	170/170	31/32	45/45	30/30	172/172	
104B		7.9/10.5	21.9/25.3	37/41	40/45	34/38	170/170	40/44	45/45	36/40	172/172		
105A		12.0/16.0	33.4/38.5	52/58	60/60	47/53	170/170	54/60	60/60	49/55	172/172		
104B+104B		15.8/21.0	43.8/50.5	65/73	70/80	59/67	170/170	67/75	70/80	61/69	172/172		
104B+105A	19.9/26.5	55.2/63.8	79/90	80/90	72/82	170/170	81/92	90/100	74/84	172/172			
460–3–60	STD	NONE	–	–	13	20	13	63	14	20	14	64	
		106A	6.0	7.2	13	20	13	63	14	20	14	64	
		108A	11.5	13.8	21	25	19	63	22	25	20	64	
		109A	14.0	16.8	25	25	22	63	26	30	23	64	
		108A+108A	23.0	27.7	38	40	35	63	40	40	36	64	
		108A+109A	25.5	30.7	42	45	38	63	43	45	39	64	
	MED	NONE	–	–	14	20	14	82	15	20	15	83	
		106A	6.0	7.2	14	20	14	82	15	20	15	83	
		108A	11.5	13.8	22	25	20	82	23	25	21	83	
		109A	14.0	16.8	26	30	23	82	27	30	24	83	
		108A+108A	23.0	27.7	39	40	36	82	41	45	37	83	
		108A+109A	25.5	30.7	43	45	39	82	44	45	40	83	
	HIGH	NONE	–	–	14	20	14	82	15	20	15	83	
		106A	6.0	7.2	14	20	14	82	15	20	15	83	
		108A	11.5	13.8	22	25	20	82	23	25	21	83	
109A		14.0	16.8	26	30	23	82	27	30	24	83		
108A+108A		23.0	27.7	39	40	36	82	41	45	37	83		
108A+109A	25.5	30.7	43	45	39	82	44	45	40	83			
575–3–60	STD	NONE	–	–	11	15	10	48	13	15	12	50	
	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 Tables 1 and 2 on page 7.

Table 2 – RAS036–072 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.							
			CRHEATER* **A00	Nom (kW)	FLA	NO P.E.				w/ P.E. (pwrd fr/unit)			
						MCA	MAX FUSE or HACR BRKR	DISC. SIZE		MCA	MAX FUSE or HACR BRKR	DISC. SIZE	
								FLA	LRA			FLA	LRA
RAS072	208/230–3–60	STD	NONE	–	–	32	50	30	170	34	50	32	172
			102A	4.9/6.5	13.6/15.6	32/32	50/50	30/30	170/170	34/34	50/50	32/32	172/172
			104B	7.9/10.5	21.9/25.3	34/39	50/50	31/35	170/170	37/41	50/50	33/37	172/172
			105A	12.0/16.0	33.4/38.5	49/55	50/60	44/50	170/170	51/57	60/60	47/52	172/172
			104B+104B	15.8/21.0	43.8/50.5	62/70	70/70	56/64	170/170	64/72	70/80	59/66	172/172
		104B+105A	19.9/26.5	55.2/63.8	76/87	80/90	69/79	170/170	78/89	80/90	72/82	172/172	
		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	35/35	50/50	34/34	212/212	37/37	50/50	36/36	214/214
			104B	7.9/10.5	21.9/25.3	38/42	50/50	35/39	212/212	41/45	50/50	37/41	214/214
			105A	12.0/16.0	33.4/38.5	53/59	60/60	48/54	212/212	55/61	60/70	50/56	214/214
			104B+104B	15.8/21.0	43.8/50.5	66/74	70/80	60/68	212/212	68/76	70/80	62/70	214/214
		104B+105A	19.9/26.5	55.2/63.8	80/91	80/100	73/83	212/212	82/93	90/100	75/85	214/214	
		HIGH	NONE	–	–	37	50	36	226	39	50	39	228
			102A	4.9/6.5	13.6/15.6	37/37	50/50	36/36	226/226	39/39	50/50	39/39	228/228
			104B	7.9/10.5	21.9/25.3	41/45	50/50	37/41	226/226	43/48	50/50	40/43	228/228
	105A		12.0/16.0	33.4/38.5	55/62	60/70	51/56	226/226	58/64	60/70	53/59	228/228	
	104B+104B		15.8/21.0	43.8/50.5	68/77	70/80	63/70	226/226	71/79	80/80	65/72	228/228	
	104B+105A	19.9/26.5	55.2/63.8	83/93	90/100	76/86	226/226	85/96	90/100	78/88	228/228		
	460–3–60	STD	NONE	–	–	14	20	13	83	15	20	14	84
			106A	6.0	7.2	14	20	13	83	15	20	14	84
			108A	11.5	13.8	21	25	19	83	22	25	20	84
			109A	14.0	16.8	25	25	22	83	26	30	23	84
			108A+108A	23.0	27.7	38	40	35	83	40	40	36	84
		108A+109A	25.5	30.7	42	45	38	83	43	45	39	84	
MED		NONE	–	–	16	20	15	104	17	20	16	105	
		106A	6.0	7.2	16	20	15	104	17	20	16	105	
		108A	11.5	13.8	23	25	21	104	24	25	22	105	
		109A	14.0	16.8	27	30	24	104	28	30	25	105	
		108A+108A	23.0	27.7	40	40	37	104	42	45	38	105	
108A+109A		25.5	30.7	44	45	40	104	45	45	41	105		
HIGH		NONE	–	–	17	20	16	111	18	25	18	112	
		106A	6.0	7.2	17	20	16	111	18	25	18	112	
		108A	11.5	13.8	24	25	22	111	26	30	23	112	
	109A	14.0	16.8	28	30	25	111	29	30	27	112		
	108A+108A	23.0	27.7	42	45	38	111	43	45	39	112		
108A+109A	25.5	30.7	45	50	41	111	47	50	43	112			
575–3–60	STD	NONE	–	–	11	15	11	68	13	15	13	70	
	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 Tables 1 and 2 on page 7.

Legend and Notes for Tables 1 and 2

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:

- 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

$$\begin{aligned} \text{Average Voltage} &= \frac{(224 + 231 + 226)}{3} = \frac{681}{3} \\ &= 227 \end{aligned}$$

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.

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{4}{227} \\ &= 1.76\% \end{aligned}$$

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.