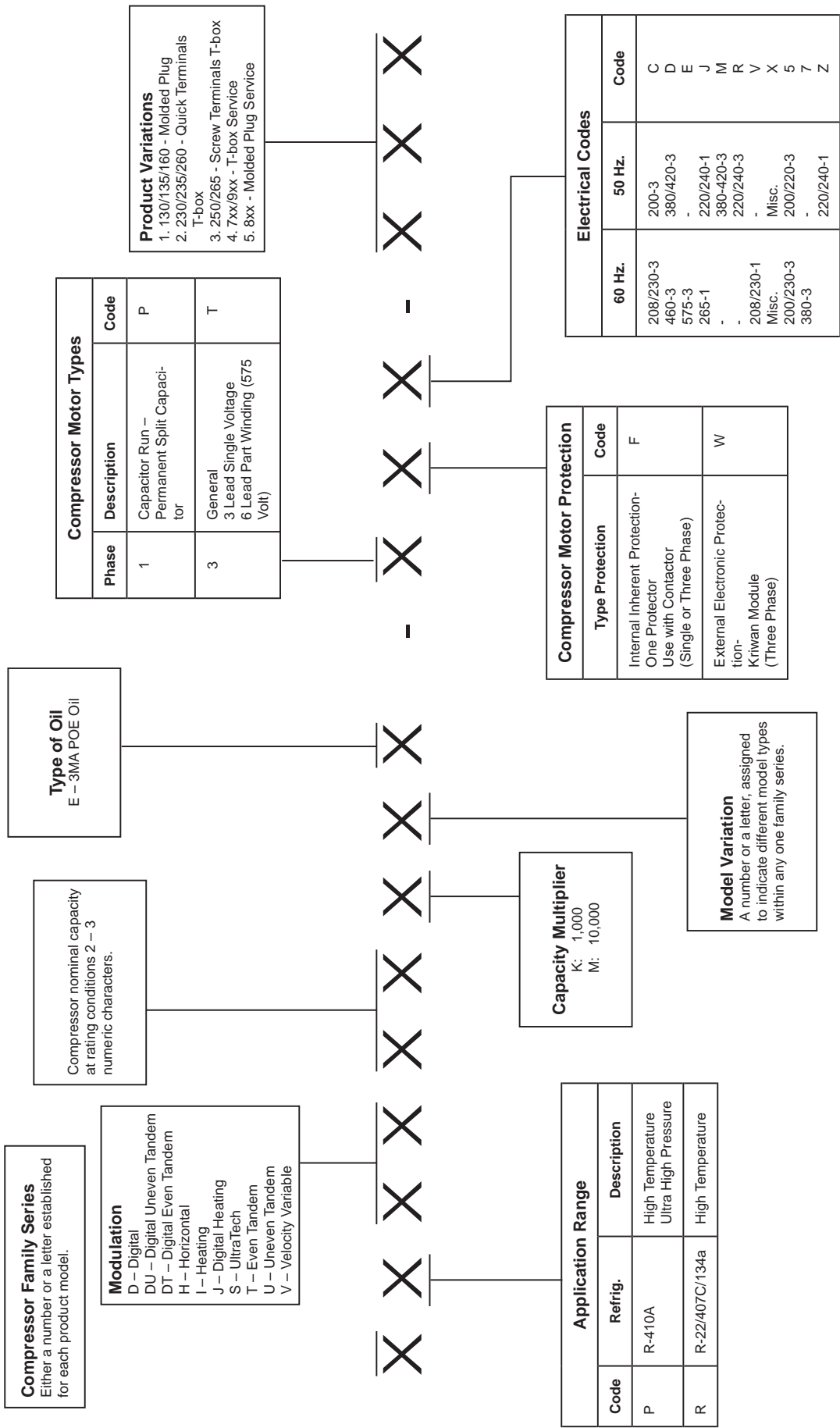


# AC Compressor Product Guide



# NOMENCLATURE • A/C SCROLL MODELS



# NOMENCLATURE • CR7, CR6, CRKF MODELS

**Compressor Family Series**  
 Either a number or a letter established for each product model.

Compressor nominal capacity at rating conditions to two significant digits.

Indicates compressors with polyol ester oil.

XXXXXXXXXXE-XXXX-XXXX

Compressor Motor Types		
Phase	Description	Code
1	Capacitor Run – Permanent Split Capacitor	P
3	Three Phase General – 3 Lead Single Voltage 6 Lead Part Winding (575 Volt)	T

**Product Variations**  
 Numbers will be assigned as follows:

- Number –230 indicates a standard compressor B/M and model number.
- Number –270 indicates a standard compressor B/M with crankcase heater.
- Number –500 series indicates international standard compressor B/M and model number.
- Number –730 indicates a standard OEM service B/M and model number.
- Number –700 and –900 series indicate standard OEM and Wholesaler service B/M and model number.
- For B/M different from –230, –270, and –730, contact Emerson Climate Technologies, Inc. Sales and Service.

Application Range		
Code	Refrig.	Description
R	R-22	High Temp. A/C & Heat Pump
S	R-404A	Med. Temp. Refrigeration
F	R-404A	Low Temp. Refrigeration

**Model Variation**  
 A number or letter, assigned to indicate different model types within any one family series.

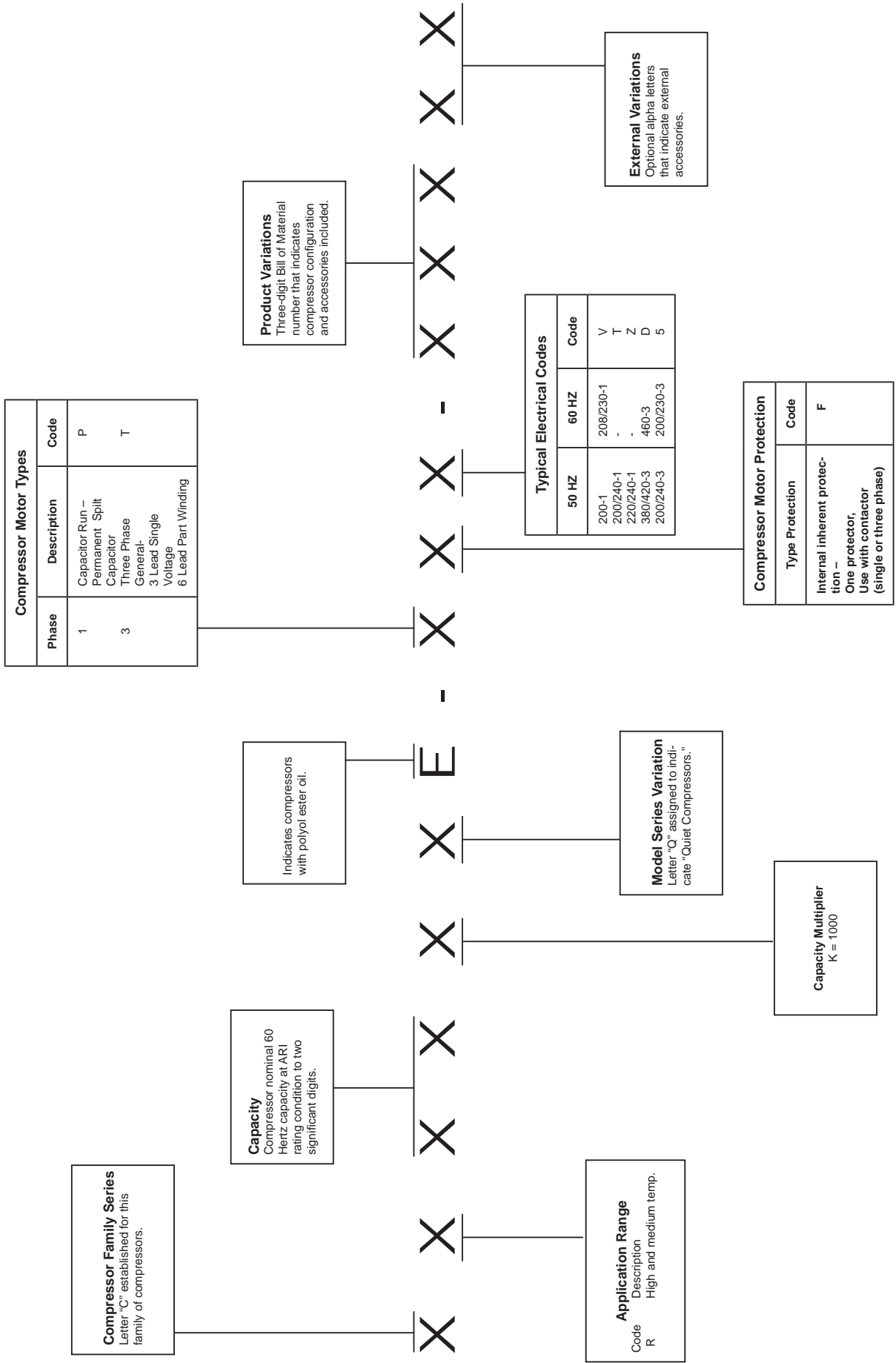
**Capacity Multiplier**  
 K = 1000

Electrical Codes		
60 Hz.	50 Hz.	Code
208/230-3	200/220-3	C
460-3	380/420-3	D
575-3	500-3	E
265-1	220/240-1	J
-	380/420-3	M
208/230-1	200-1	V
-	220/240-1	Z
-	360/460-3	1*
-	180/260-1	2*
200/230-3	200/240-3	5

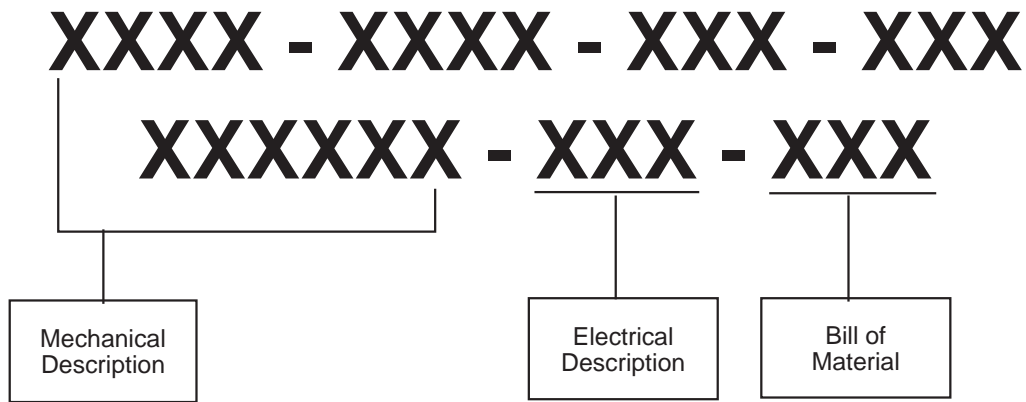
Compressor Motor Protection	
Type Protection	Code
Internal Inherent Protection – One Protector (Single or three phase)	F

\* Wide voltage range for India produced products

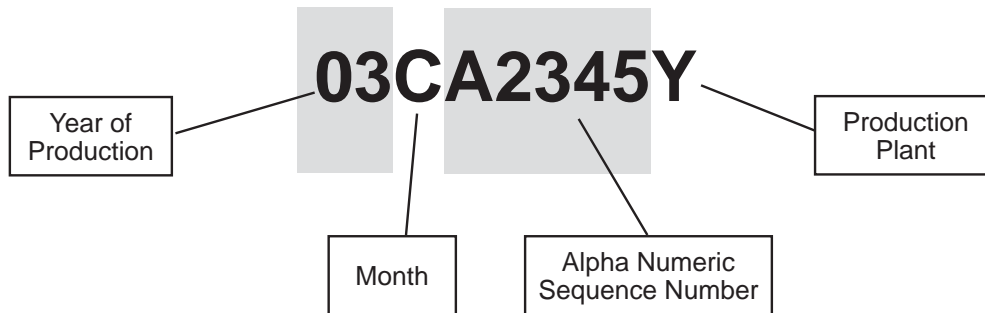
# NOMENCLATURE • CRKQ, CIKQ MODELS



## Copeland® Compressor Model Number



## Copeland® Compressor Serial Number



## Recommended Run Capacitors for Field Replacement of a ZR\* K1 or K2 with a ZR\* K3, K4, or KC

	<b>K1</b>	<b>*K2</b>	<b>K3</b>	<b>K4</b>	<b>KC</b>
ZR18	25µf/370 volt		30µf/370 volt	35µf/370 volt	30µf/370 volt
ZR23	30µf/370 volt		40µf/370 volt	35µf/370 volt	35µf/370 volt
ZR26	35µf/370 volt		40µf/370 volt		30µf/440 volt
ZR28	35µf/370 volt		45µf/370 volt		35µf/440 volt
ZR34	35µf/440 volt		50µf/370 volt		40µf/370 volt
ZR40	35µf/440 volt		55µf/370 volt		40µf/440 volt
ZR46		40µf/440 volt	60µf/370 volt		
ZR49		40µf/440 volt	60µf/370 volt		45µf/440 volt
ZR57		55µf/440 volt	80µf/370 volt		60µf/370 volt
ZR61		55µf/440 volt	80µf/370 volt		60µf/370 volt

## Compressor Refrigerant Charge Limits

Model	Frame Size *	Three Phase Charge Limit **		Single Phase Charge Limit **	
		Lbs	kg	Lbs	kg
ZR16-ZR29KC	53	6	2.7	7.2	3.24
ZR16-ZR24K4	53	6	2.7	7.2	3.24
ZR26-ZR48KC	63	8	3.6	9.6	4.32
ZR18-ZR48K3	63	8	3.6	9.6	4.32
ZR54-ZR81KC	70	10	4.5	12.0	5.40
ZR54-ZR61K3	70	10	4.5	12.0	5.40
ZR16-ZR34KA	53	8	3.6	9.6	4.32
ZR38-ZR54KA	63	10	4.5	12.0	5.40
TANDEM	63	10	4.5	12.0	5.40
TANDEM	70	12	5.5	14.4	6.60

\*Approximate Shell Diameter (e.g. 63 = 6.5 Inches)

\*\*Charge Allowance for System

## Crankcase Heaters, 1.5-7.5 Tons

Copeland® Model	Watts	Volts	Lead Length (in.)	ZRK4	ZRKA	ZRK5	ZRK3	ZRKC	ZRDKC	ZRSK4	ZPK5	ZPK3	ZPKC	ZPSK4	ZPK5
018-0094-01	40	120	21.25	ZR16-24K4	ZR16-34KA	ZR16-32K5					ZP16-31K5				
018-0096-01	40	120	29.25		ZR38-54KA	ZR38-54K5	ZR18-48K3	ZR26-48KC		ZRS43-52K4	ZP34-54K5	ZP16-44K3		ZPS20-40K4	
018-0095-07	70	120	48.25				ZR18-61K3	ZR26-81KC	ZRD36-48KC	ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	ZPD34-54K5
018-0094-00	40	240	21.25	ZR16-24K4	ZR16-34KA	ZR16-32K5					ZP16-31K5				
018-0096-00	40	240	29.25		ZR38-54KA	ZR38-54K5	ZR18-48K3	ZR26-48KC		ZRS43-52K4	ZP34-54K5	ZP16-44K3		ZPS20-40K4	
018-0096-04	40	240	48.25		ZR38-54KA	ZR38-54K5	ZR18-48K3	ZR26-48KC		ZRS43-52K4	ZP34-54K5	ZP16-44K3		ZPS20-40K4	
018-0096-06	40	240	31.75		ZR38-54KA	ZR38-54K5					ZP34-54K5				
018-0095-00	70	240	29.25				ZR18-61K3	ZR26-81KC		ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	
018-0095-03	70	240	29.25				ZR18-61K3	ZR26-81KC		ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	
018-0095-04	70	240	48.25				ZR18-61K3	ZR26-81KC	ZRD36-48KC	ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	ZPD34-54K5
018-0094-02	40	277	21.25		ZR16-34KA	ZR16-32K5					ZP16-31K5				
018-0095-09	70	277	29.25				ZR18-61K3	ZR26-81KC		ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	
018-0095-08	70	400	48.25				ZR18-61K3	ZR26-81KC		ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	
018-0094-03	40	480	21.25		ZR16-34KA	ZR16-32K5					ZP16-31K5				
018-0096-02	40	480	29.25		ZR38-54KA	ZR38-54K5	ZR18-48K3	ZR26-48KC		ZRS43-52K4	ZP34-54K5	ZP16-44K3		ZPS20-40K4	
018-0096-05	40	480	48.25		ZR38-54KA	ZR38-54K5	ZR18-48K3	ZR26-48KC		ZRS43-52K4	ZP34-54K5	ZP16-44K3		ZPS20-40K4	
018-0095-01	70	480	29.25				ZR18-61K3	ZR26-81KC		ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	
018-0095-05	70	480	48.25				ZR18-61K3	ZR26-81KC	ZRD36-48KC	ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	ZPD34-54K5
018-0094-04	40	575	21.25		ZR16-34KA	ZR16-32K5					ZP16-31K5				
018-0096-03	40	575	29.25		ZR38-54KA	ZR38-54K5	ZR18-48K3	ZR26-48KC		ZRS43-52K4	ZP34-54K5	ZP16-44K3		ZPS20-40K4	
018-0095-02	70	575	29.25				ZR18-61K3	ZR26-81KC		ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	
018-0095-06	70	575	48.25				ZR18-61K3	ZR26-81KC		ZRS43-52K4		ZP16-57K3	ZP61-91KC	ZPS20-60K4	

## ZR Single Phase Compressors

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)	MFD	Volts
ZR18K3-PFV	22	18,100	208/230	60	1	47	9.3	30	370
ZR22K3-PFV	22	22,400	208/230	60	1	56	11.4	45	370
ZR24K3-PFV	22	24,500	208/230	60	1	61	13.6	40	370
ZR26K3-PFV	22	26,600	208/230	60	1	67	13.6	40	370
ZR28K3-PFV	22	28,500	208/230	60	1	72.5	15	45	370
ZR30K3-PFV	22	31,100	208/230	60	1	73	15	45	370
ZR32K3-PFV	22	32,600	208/230	60	1	83	16.4	45	370
ZR34K3-PFV	22	34,400	208/230	60	1	88	17.9	50	370
ZR36K3-PFV	22	36,900	208/230	60	1	95	18.4	50	370
ZR40K3-PFV	22	40,600	208/230	60	1	104	20	55	370
ZR42K3-PFV	22	42,800	208/230	60	1	109	20.4	60	370
ZR45K3-PFV	22	46,000	208/230	60	1	137	23.6	60	440
ZR46K3-PFV	22	47,000	208/230	60	1	129	26.4	60	370
ZR47K3-PFV	22	48,200	208/230	60	1	137	21.4	60	440
ZR48K3-PFV	22	49,800	208/230	60	1	137	22.1	60	440
ZR49K3-PFV	22	49,200	208/230	60	1	129	26.4	60	370
ZR52K3-PFV	22	52,000	208/230	60	1	148	27.9	80	370
ZR54K3-PFV	22	55,000	208/230	60	1	148	27.9	80	370
ZR57K3-PFV	22	58,000	208/230	60	1	148	32.1	80	370
ZR61K3-PFV	22	62,000	208/230	60	1	148	32.1	80	370

## ZR Three Phase Compressors

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)
ZR22K3-TF5	22	22,100	200/230	60	3	45	7.9
ZR22K3-TFD	22	22,100	460	60	3	22.4	3.9
ZR24K3-TF5	22	24,800	200/230	60	3	55	8.6
ZR24K3-TFD	22	24,800	460	60	3	27	4.3
ZR26K3-TF5	22	26,500	200/230	60	3	55	8.6
ZR26K3-TFD	22	26,200	460	60	3	27	4.3
ZR28K3-TF5	22	28,900	200/230	60	3	63	10
ZR28K3-TFD	22	28,900	460	60	3	31	5
ZR30K3-TF5	22	31,100	200/230	60	3	63	10.7
ZR30K3-TFD	22	31,100	460	60	3	31	5
ZR32K3-TF5	22	32,600	200/230	60	3	77	10.7
ZR32K3-TFD	22	32,600	460	60	3	35	5.4
ZR34K3-TF5	22	34,000	200/230	60	3	77	11.4
ZR34K3-TFD	22	34,000	460	60	3	39	5.7
ZR36K3-TF5	22	36,900	200/230	60	3	77	11.4
ZR36K3-TFD	22	36,900	460	60	3	39	5.7
ZR40K3-TF5	22	40,600	200/230	60	3	88	13.9
ZR40K3-TFD	22	40,600	460	60	3	44	6.4
ZR42K3-TF5	22	42,800	200/230	60	3	88	13.9
ZR42K3-TFD	22	42,800	460	60	3	44	7.1
ZR45K3-TF5	22	45,600	200/230	60	3	91	15.4
ZR45K3-TFD	22	45,600	460	60	3	46	7.9
ZR46K3-TF5	22	46,100	200/230	60	3	120	15
ZR46K3-TFD	22	46,100	460	60	3	49.5	8.2
ZR47K3-TF5	22	47,500	200/230	60	3	91	16.4
ZR47K3-TFD	22	47,500	460	60	3	50	7.9

## ZR Three Phase Compressors (cont.)

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)
ZR48K3-TF5	22	49,100	200/230	60	3	91	16.4
ZR48K3-TFD	22	48,900	460	60	3	50	7.9
ZR49K3-TF5	22	49,200	200/230	60	3	120	15
ZR49K3-TFD	22	49,200	460	60	3	49.5	8.2
ZR52K3-TF5	22	52,000	200/230	60	3	128	17.1
ZR52K3-TFD	22	52,000	460	60	3	49.5	7.5
ZR54K3-TF5	22	54,200	200/230	60	3	123	19.3
ZR54K3-TFD	22	54,500	460	60	3	49.5	7.5
ZR57K3-TF5	22	58,500	200/230	60	3	123	19.3
ZR57K3-TFD	22	58,500	460	60	3	62	9.1
ZR61K3-TF5	22	62,000	200/230	60	3	137	19.3
ZR61K3-TFD	22	62,000	460	60	3	62	9.1
ZR84KC-TF5	22	85,500	200/230	60	3	196	28.6
ZR84KC-TFD	22	85,500	460	60	3	100	14.3
ZR94KC-TF5	22	96,500	200/230	60	3	195	32.1
ZR94KC-TFD	22	96,500	460	60	3	95	16.4
ZR108KC-TF5	22	109,000	200/230	60	3	225	33.6
ZR108KC-TFD	22	109,000	460	60	3	114	17.3
ZR125KC-TF5	22	128,000	200/230	60	3	239	41.4
ZR125KC-TFD	22	128,000	460	60	3	125	19.2
ZR144KC-TF5	22	146,000	200/230	60	3	245	47.1
ZR144KC-TFD	22	146,000	460	60	3	125	20.7
ZR160KC-TFD	22	160,000	460	60	3	150	25
ZR160KC-TW5	22	160,000	200/230	60	3	300	53.6
ZR160KC-TWD	22	160,000	460	60	3	150	24.3
ZR190KC-TFD	22	190,000	460	60	3	179	27.9
ZR190KC-TW5	22	190,000	200/230	60	3	340	58.6
ZR190KC-TWD	22	190,000	460	60	3	173	28.6

## LCS Three Phase Compressors

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)
ZR250KC-TW5	22	250,000	200/230	60	3	505	81.4
ZR250KC-TWC	22	250,000	208/230	60	3	505	81.4
ZR250KC-TWD	22	250,000	460	60	3	225	33.6
ZR250KCE-TW5	22	250,000	200/230	60	3	505	81.4
ZR250KCE-TWC	22	250,000	208/230	60	3	505	81.4
ZR250KCE-TWD	22	250,000	460	60	3	225	33.6
ZR300KC-TW5	22	296,000	200/230	60	3	500	87.9
ZR300KC-TWC	22	296,000	208/230	60	3	500	87.9
ZR300KC-TWD	22	296,000	460	60	3	250	42.9
ZR310KC-TWC	22	306,000	208/230	60	3	605	93.6
ZR310KC-TWD	22	306,000	460	60	3	272	41.4
ZR380KC-TW5	22	379,000	200/230	60	3	599	111.4
ZR380KC-TWC	22	379,000	208/230	60	3	599	111.4
ZR380KC-TWD	22	379,000	460	60	3	310	54.3



## ZP Single Phase Compressors

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)	MFD	Volts
ZP16K3E-PFV	410A	15,500	208/230	60	1	51	11.4	40	370
ZP16K5E-PFV	410A	15,500	208/230	60	1	48	10	30	370
ZP20K3E-PFV	410A	20,300	208/230	60	1	60	14.3	35	370
ZP20K5E-PFV	410A	20,000	208/230	60	1	58.3	15	35	370
ZP21K5E-PFV	410A	21,300	208/230	60	1	58.3	14.3	40	370
ZP23K3E-PFV	410A	23,500	208/230	60	1	61	15	40	370
ZP24K5E-PFV	410A	24,000	208/230	60	1	64	14.3	40	370
ZP25K5E-PFV	410A	25,200	208/230	60	1	73	15.7	40	370
ZP26K3E-PFV	410A	25,700	208/230	60	1	72.5	16.4	45	370
ZP28K5E-PFV	410A	27,900	208/230	60	1	77	17.9	45	370
ZP29K5E-PFV	410A	29,000	208/230	60	1	77	15.7	45	370
ZP31K5E-PFV	410A	31,100	208/230	60	1	79	18.6	45	370
ZP32K3E-PFV	410A	31,300	208/230	60	1	83	17.1	45	370
ZP34K5E-PFV	410A	34,500	208/230	60	1	112	20	45	370
ZP36K3E-PFV	410A	36,200	208/230	60	1	105	20.7	55	370
ZP36K5E-PFV	410A	36,000	208/230	60	1	112	20	45	370
ZP38K3E-PFV	410A	37,800	208/230	60	1	104	21.4	55	370
ZP38K5E-PFV	410A	37,500	208/230	60	1	109	22.1	45	370
ZP39K5E-PFV	410A	39,000	208/230	60	1	109	22.1	45	370
ZP41K3E-PFV	410A	41,000	208/230	60	1	109	22.9	60	370
ZP42K5E-PFV	410A	42,000	208/230	60	1	117	24.3	70	370
ZP44K3E-PFV	410A	44,300	208/230	60	1	134	25.7	60	370
ZP50K3E-PFV	410A	50,500	208/230	60	1	145	30	80	370
ZP51K5E-PFV	410A	51,000	208/230	60	1	134	29.4	70	370
ZP54K3E-PFV	410A	54,500	208/230	60	1	158	30.7	80	370
ZP54K5E-PFV	410A	54,000	208/230	60	1	134	29.3	80	370
ZP57K3E-PFV	410A	57,000	208/230	60	1	158	33.6	80	370

## ZP Three Phase Compressors

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)
ZP20K3E-TF5	410A	20,200	200/230	60	3	55	8.6
ZP20K3E-TFD	410A	19,900	460	60	3	22.4	4.4
ZP23K3E-TF5	410A	23,400	200/230	60	3	63	9.3
ZP23K3E-TFD	410A	23,400	460	60	3	27	5
ZP24K5E-TF5	410A	24,000	200/230	60	3	58	9.3
ZP24K5E-TFD	410A	24,000	460	60	3	28	5.7
ZP25K5E-TF5	410A	25,200	200/230	60	3	58	9.9
ZP25K5E-TFD	410A	25,200	460	60	3	28	4.6
ZP26K3E-TF5	410A	25,500	200/230	60	3	63	11.6
ZP28K5E-TF5	410A	27,900	200/230	60	3	71	11.1
ZP29K5E-TF5	410A	29,000	200/230	60	3	71	10
ZP29K5E-TFD	410A	29,000	460	60	3	38	6.3
ZP31K5E-TF5	410A	31,200	200/230	60	3	73	11.6
ZP31K5E-TFD	410A	31,200	460	60	3	38	6.4
ZP32K3E-TF5	410A	31,800	200/230	60	3	77	12.9
ZP32K3E-TFD	410A	30,500	460	60	3	35	5.7
ZP34K5E-TF5	410A	34,600	200/230	60	3	88	14.7
ZP34K5E-TFD	410A	34,600	460	60	3	44	6.6
ZP36K3E-TF5	410A	36,200	200/230	60	3	88	15
ZP36K3E-TFD	410A	35,600	460	60	3	39	7.1
ZP36K5E-TF5	410A	36,000	200/230	60	3	88	15.1
ZP36K5E-TFD	410A	36,000	460	60	3	44	6.6
ZP38K3E-TF5	410A	37,600	200/230	60	3	88	15
ZP38K3E-TFD	410A	37,600	460	60	3	46	7.9
ZP38K5E-TF5	410A	38,100	200/230	60	3	83.1	15.1
ZP38K5E-TFD	410A	38,100	460	60	3	41	6.8
ZP39K5E-TF5	410A	39,000	200/230	60	3	83.1	14.6
ZP39K5E-TFD	410A	39,000	460	60	3	41	6.8
ZP41K3E-TF5	410A	41,200	200/230	60	3	91	16.2
ZP41K3E-TFD	410A	40,700	460	60	3	46	7.9
ZP42K5E-TF5	410A	41,900	200/230	60	3	83.1	15.3
ZP42K5E-TFD	410A	41,900	460	60	3	41	6.9
ZP44K3E-TF5	410A	44,300	200/230	60	3	91	17.9
ZP44K3E-TFD	410A	44,300	460	60	3	46	7.9
ZP50K3E-TF5	410A	51,500	200/230	60	3	123	19.6
ZP50K3E-TFD	410A	51,500	460	60	3	62	10.7
ZP51K5E-TF5	410A	51,500	200/230	60	3	110	17.8
ZP51K5E-TFD	410A	51,500	460	60	3	52	8.6
ZP54K3E-TF5	410A	54,500	200/230	60	3	137	20.2
ZP54K3E-TFD	410A	54,400	460	60	3	62	10
ZP54K5E-TF5	410A	54,300	200/230	60	3	110	17.4
ZP54K5E-TFD	410A	54,300	460	60	3	52	8.6
ZP57K3E-TF5	410A	58,000	200/230	60	3	155	22.9
ZP57K3E-TFD	410A	58,000	460	60	3	75	10.7
ZP61KCE-TF5	410A	61,500	200/230	60	3	123	21.2
ZP61KCE-TFD	410A	61,500	460	60	3	62	10.9

## ZP Three Phase Compressors

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)
ZP67KCE-TF5	410A	67,500	200/230	60	3	149	25
ZP67KCE-TFD	410A	67,000	460	60	3	75	11.8
ZP72KCE-TF5	410A	72,000	200/230	60	3	164	25.9
ZP72KCE-TFD	410A	72,000	460	60	3	75	12.5
ZP83KCE-TF5	410A	83,000	200/230	60	3	164	27.9
ZP83KCE-TFD	410A	83,000	460	60	3	100	13.6
ZP90KCE-TF5	410A	90,500	200/230	60	3	195	32.9
ZP90KCE-TFD	410A	90,500	460	60	3	95	16.4
ZP103KCE-TF5	410A	105,000	200/230	60	3	225	33.6
ZP103KCE-TFD	410A	105,000	460	60	3	114	18.6
ZP120KCE-TF5	410A	123,000	200/230	60	3	239	37.1
ZP120KCE-TFD	410A	123,000	460	60	3	125	20
ZP137KCE-TF5	410A	137,000	200/230	60	3	245	53.6
ZP137KCE-TFD	410A	135,000	460	60	3	125	20.7
ZP154KCE-TFD	410A	155,000	460	60	3	150	25
ZP154KCE-TW5	410A	155,000	200/230	60	3	300	57.1
ZP154KCE-TWD	410A	155,000	460	60	3	150	25.7
ZP180KCE-TWC	410A	180,000	208/230	60	3	425	59.1
ZP180KCE-TWD	410A	180,000	460	60	3	187	26.4
ZP181KCE-TWD	410A	178,000	460	60	3	110	26.4
ZP182KCE-TFD	410A	183,000	460	60	3	179	29.3
ZP182KCE-TW5	410A	183,000	200/230	60	3	340	62.1
ZP182KCE-TWD	410A	183,000	460	60	3	173	30
ZP235KCE-TWC	410A	235,000	208/230	60	3	505	82.4
ZP235KCE-TWD	410A	235,000	460	60	3	225	33.9
ZP285KCE-TW5	410A	278,000	200/230	60	3	500	99.3
ZP285KCE-TWC	410A	278,000	208/230	60	3	500	99.3
ZP285KCE-TWD	410A	278,000	460	60	3	250	47.9
ZP295KCE-TWC	410A	294,000	208/230	60	3	605	95
ZP295KCE-TWD	410A	294,000	460	60	3	272	46.7
ZP385KCE-TW5	410A	385,000	200/230	60	3	599	122.1
ZP385KCE-TWC	410A	385,000	208/230	60	3	599	122.1
ZP385KCE-TWD	410A	385,000	460	60	3	310	60.7

## CR Single Phase Compressors

Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)	MFD	Volts
CR14K7-PFV	22	14,100	208/230	60	1	35	6.9	35	370
CR16K6-PFV	22	16,300	208/230	60	1	49	9.6	25	370
CR16K7-PFV	22	16,200	208/230	60	1	39	8.4	35	370
CR16KQ-PFV	22	15,700	208/230	60	1	38	7.9	25	440
CR18K6-PFV	22	18,000	208/230	60	1	49	10.4	25	370
CR18K7-PFV	22	17,500	208/230	60	1	40	8.6	35	370
CR18KQ-PFV	22	18,400	208/230	60	1	41	9	30	440
CR19K7-PFV	22	19,300	208/230	60	1	43	10.2	30	370
CR20K6-PFV	22	19,600	208/230	60	1	50	10.6	30	370
CR20KQ-PFV	22	19,800	208/230	60	1	54	10.4	30	370
CR21K7-PFV	22	21,000	208/230	60	1	51	11.3	30	370
CR22K6-PFV	22	22,100	208/230	60	1	50	10.9	30	370
CR22KQ-PFV	22	21,800	208/230	60	1	51.5	11.1	35	440
CR23K7-PFV	22	22,600	208/230	60	1	49	10.8	40	370
CR24K6-PFV	22	24,500	208/230	60	1	61	12.4	35	370
CR24K7-PFV	22	24,300	208/230	60	1	60	12	40	370
CR24KQ-PFV	22	23,900	208/230	60	1	70.5	13.6	35	440
CR26K6-PFV	22	26,200	208/230	60	1	76.1	13.6	35	370
CR28K6-PFV	22	28,200	208/230	60	1	75	15.3	35	370
CR28K7-PFV	22	28,300	208/230	60	1	73	13.6	35	440
CR28KQ-PFV	22	27,300	208/230	60	1	70.5	15	35	440
CR30K6-PFV	22	30,000	208/230	60	1	82	16	35	370
CR30KQ-PFV	22	29,500	208/230	60	1	78	15.4	35	440
CR30KQE-PFV	22	29,400	208/230	60	1	78	15.4	35	440
CR31K7-PFV	22	30,700	208/230	60	1	82	16.1	35	440
CR32K6-PFV	22	32,000	208/230	60	1	82	16.1	35	440
CR33KQ-PFV	22	32,700	208/230	60	1	75	16	40	440
CR34K6-PFV	22	34,500	208/230	60	1	96	16.6	50	370
CR34KQ-PFV	22	34,000	208/230	60	1	84	16.7	40	440
CR35K6-PFV	22	35,000	208/230	60	1	96	18	40	370
CR35K7-PFV	22	35,300	208/230	60	1	89	18.2	35	440
CR36KQ-PFV	22	36,300	208/230	60	1	93	17.6	40	440
CR37KQ-PFV	22	36,800	208/230	60	1	100	18.6	40	370
CR38K6-PFV	22	38,200	208/230	60	1	105	19	40	440
CR41KQ-PFV	22	41,700	208/230	60	1	109.6	19.4	50	440
CR42K6-PFV	22	41,900	208/230	60	1	102	20.4	40	440
CR47KQ-PFV	22	47,500	208/230	60	1	132	24.6	45	440
CR53KQ-PFV	22	53,300	208/230	60	1	140	28.9	60	440

## CR Three Phase Compressors

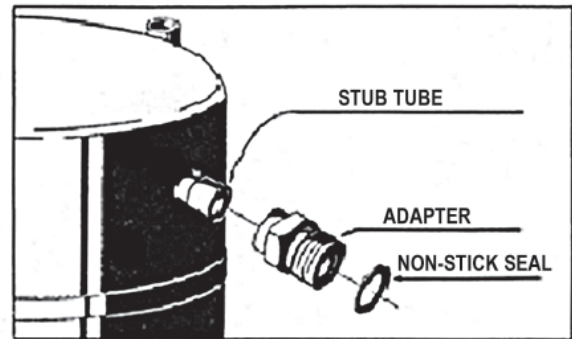
Model	Ref	Cap (BTU)	Volts	Hz	Ph	LRA	RLA (MCC/1.4)
CR18KQ-TF5	22	18,400	200/230	60	3	49	6.1
CR22K6-TF5	22	22,000	200/230	60	3	51	7.5
CR24K6-TF5	22	24,000	200/230	60	3	55	7.7
CR24KQ-TF5	22	23,300	200/230	60	3	51	7.5
CR28K6-TF5	22	28,100	200/230	60	3	68	10
CR28K6-TFD	22	28,100	460	60	3	34	4.8
CR28K7-TF5	22	27,700	200/230	60	3	65.5	10
CR28KQ-TF5	22	27,300	200/230	60	3	60.5	8.9
CR30K6-TF5	22	29,800	200/230	60	3	65.5	10.4
CR30K6-TFD	22	29,800	460	60	3	33	4.9
CR31K7-TF5	22	30,000	200/230	60	3	66	9.1
CR32K6-TF5	22	31,900	200/230	60	3	70	10
CR32K6-TFD	22	31,900	460	60	3	33	5.1
CR32KQ-TF5	22	31,400	200/230	60	3	63	9.9
CR33KQ-TF5	22	32,000	200/230	60	3	69	10.6
CR33KQ-TFD	22	32,000	460	60	3	31.6	4.7
CR34KQ-TF5	22	33,900	200/230	60	3	67	11.8
CR34KQ-TFD	22	33,500	460	60	3	29.2	5.4
CR35K6-TF5	22	34,900	200/230	60	3	75	11.4
CR35K6-TFD	22	34,900	460	60	3	40	4.8
CR36KQ-TF5	22	35,200	200/230	60	3	68	12.4
CR36KQ-TFD	22	35,700	460	60	3	34.5	5.5
CR37KQ-TF5	22	36,400	200/230	60	3	85	11.1
CR38K6-TF5	22	37,900	200/230	60	3	85	11.9
CR41KQ-TF5	22	40,700	200/230	60	3	80	13.1
CR42K6-TF5	22	41,700	200/230	60	3	91	14
CR42K6-TFD	22	41,700	460	60	3	42	6.4
CR47KQ-TF5	22	47,200	200/230	60	3	97	16.1
CR53KQ-TF5	22	53,200	200/230	60	3	107	18.2

## Commercial Scroll Protection Module

Obsolete Part #	Replacement Part #	Service Replacement Kit #	Voltage	Notes
071-0615-01	071-0649-01	998-0520-04	24v	ZR250/300 ZP235/285
071-0615-00	071-0649-00	998-0520-00	115v/230v	ZR250/300 ZP235/285
071-0620-00	071-0650-00	971-0547-01	115v/230v	3 Phase Loss protection
NA	071-0641-01	971-0641-01	24v	ZR160/190 ZP154/182
NA	071-0641-00	971-0641-00	115v/230v	ZR160/190 ZP154/182

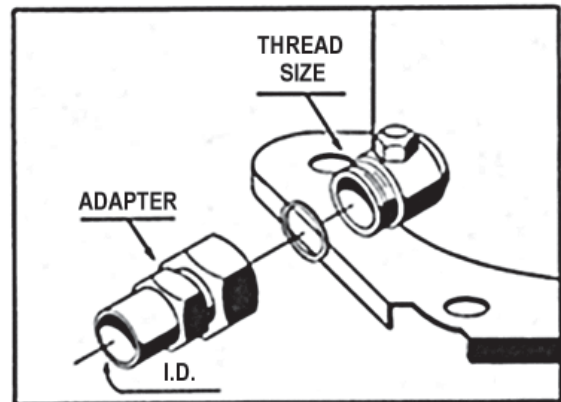
### Stub Tube to Rotalock

Stub Tube I.D.	Thread Size	Non-Stick Seal	Adapter Kit*
3/8"	1" - 14	020-0028-00	998-0034-14
1/2"	1" - 14	020-0028-00	998-0034-15
5/8"	1" - 14	020-0028-00	998-0034-16
3/4"	1-1/4" - 12	020-0028-02	998-0034-01
7/8"	1-1/4" - 12	020-0028-02	998-0034-02
1-1/8"	1-3/4" - 12	020-0025-03	998-0034-03
1-3/8"	1-3/4" - 12	020-0028-03	998-0034-04
1-5/8"	2-1/4" - 12	020-0941-00	998-0034-06



### Rotalock to Stub Tube

Thread Size	Stub Tube I.D.	Non-Stick Seal	Adapter Kit*
1" - 14	1/2"	020-0028-00	998-0034-18
1" - 14	5/8"	020-0028-00	998-0034-17
1-1/4" - 12	3/4"	020-0028-02	998-0034-07
1-1/4" - 12	7/8"	020-0028-02	998-0034-08
1-1/4" - 12	1-1/8"	020-0028-02	998-0034-09
1-3/4" - 12	1-1/8"	020-0028-03	998-0034-10
1-3/4" - 12	1-3/8"	020-0028-03	998-0034-13
2-1/4" - 12	1-3/8"	020-0941-00	998-0034-11
2-1/4" - 12	1-5/8"	020-0941-00	998-0034-12



\* Adapter kit includes the adapter and the appropriate non-stick seal.

### Service Molded Plug Reference Guide

Part Number	Description	Wire		Wire Size - Color		
		Lead Length	Lead End	L1/C	L2/S	L3/R
529-0060-02	Fits ZR and CR models	42 inches	Stripped	12 ga black	12 ga yellow	12 ga red
<b>529-0060-04*</b>	<b>Fits ZR and CR models</b>	<b>42 Inches</b>	<b>Stripped</b>	<b>10 ga black</b>	<b>10 ga yellow</b>	<b>10 ga red</b>
529-0060-05	Fits ZR and CR models	28 inches	Connectors	14 ga black	14 ga blue	14 ga red
529-0060-06	Fits ZR and CR models	48 inches	Connectors	14 ga black	14 ga blue	14 ga red
529-0061-00	Low voltage UltraTech™ solenoid cable with rectifier	54 inches	Stripped	20 ga red	20 ga black	n/a
529-0062-00	Low voltage UltraTech™ solenoid cable without rectifier (CA2 only)	54 inches	Connectors	20 ga red	20 ga black	n/a

\*Most common part number

# Refrigerants and lubricants approved for use in Copeland™ compressors

	Refrigerants	Similar to	Application		Preferred	Lubricant choices		Comments
			Retrofit	New		Alternate #1	Alternate #2	
Ozone depleting	CFR-12		L,M		MIN	AB & MIN		Phased out in 1996
	CFR-502		L,M		MIN	AB & MIN	POE-32	Phased out in 1996
	HCFCR-22		L,M,H		MIN	AB & MIN	POE-32	No new equipment 2010
Interims	HCFC R401A	R-12	M,H		AB & MIN	POE-32 & MIN	POE-32	Service only Suva™ MP39
	HCFC R-401B	R-12	L,M		AB & MIN	POE-32 & MIN	POE-32	Service only Suva MP66
	HCFC R-402A	R-502	L,M		AB & MIN	POE-32 & MIN	POE-32	Service only Suva HP80
	HCFC R-402B	R-502	L,M		AB & MIN	POE-32 & MIN	POE-32	Service only Suva HP81
	HCFC R-408A	R-502	L,M		AB & MIN	POE-32 & MIN	POE-32	Service only FX10
	HCFC R-409A	R-12	L,M		AB & MIN	POE-32 & MIN	POE-32	Service only FX56
	HCFC R-134a	R-12	M,H		POE-32			
	HCFC R-404A	R-502	L,M		POE-32			Suva HP62, Forane™ FX70
Non-ozone depleting	HCFC R-507	R-502	L,M		POE-32			Genetron™ AZ50
	HCFC R-407A	R-22	L,M		POE-32			
	HCFC R-407C	R-22	L,M,H		POE-32			Suva 9000/KLEA 66
	HCFC R-407F	R-22	L,M		POE-32			Discus™ and select refrigeration scroll models (ZF/ZB)
	HCFC R-427A	R-22	L,M		POE-32			Discus supermarket racks only.
	HFC R-410A			Discus = L,M Scroll = M,H	POE-32			ZP & ZB KCP Copeland Scroll™ models and certain Discus models only
	HFC R-422A/D	R-22	L,M		POE-32	MIN	AB	Discus supermarket racks only
	HFC R-438A	R-22	L,M		POE-32	MIN	AB	Discus supermarket racks only; ISCEON™ MO99
	R-704 helium			Cryogenic	PAG			ZC Copeland Scroll models only
	R-744 CO <sub>2</sub>			Sub-critical	POE-68			4MTLS Discus and ZO Copeland Scroll models for CO <sub>2</sub>
R-290 propane			Trans-critical	POE-68			4MTLS semi-hermetic compressors for medium temp trans-critical applications	
			L,M		POE-22		For use with specific Copeland compressors designed for R-290, excluding models manufactured in India	
					POE-32		For use with specific Copeland compressors manufactured in India for R-290	

## Legend:

- MIN: Mineral Oil (Copeland 468WMO, Calumet RO15, Chevron/Texaco Capella WF32, Sonneborn Suniso 3G5) Mineral oils are interchangeable for "top off" purposes  
 AB: Alkyl Benzene Oil (Copeland Ultra 200, Shirieve Zerol 200 TD, Sonneborn Suniso AKB200A, Shell 2212)  
 POE 32: Polyolester Oil (Copeland Ultra 32-3MAF, Lubrizol Emkarate RL32-3MAF, Parker EMKARATE RL32-3MAF / (Virginia) LE323MAF, Nu Calgon 4314-66 (EMKARATE RL32-3MAF)  
 Hatcol 22 CC, Copeland Ultra 22 CC & Mobil Arctic 22 CC (last three are approved for "top off" only, 32-3MAF preferred)  
 POE 22: RL22H, RL22HB  
 PAG: Polyalkylene Glycol Oil (Lubrizol RPAG 62, UCON LB300X)  
 POE-32 & MIN: Minimum 50% POE  
 AB & MIN: Minimum 50% Alkyl Benzene  
 POE-68: Emkarate RL68HB oil for use with R-744 CO<sub>2</sub> applications  
 L: Low Temperature Application (Refrigeration) For R-407A, R-407C, R-407F, R-422A/D, R-427A, R-438A, Demand Cooling™ is required for low temperature application - See AE guidelines for details  
 M: Medium Temperature Application (Refrigeration)  
 H: High Temperature Application (Air-Conditioning, Heat Pump, Refrigeration)

Spectronics AR-GLO 4/E Fluorescent Leak Detection Dye is approved for HFC/POE and HCFC/Mineral Oil usage at the manufacturer's recommended concentrations.

**CAUTION:** POE must be handled carefully and the proper protective equipment (gloves, eye protection, etc.) must be used when handling POE lubricant. POE must not come into contact with any surface or material that might be harmed by POE, including without limitation, certain polymers (e.g. PVC/CPVC and polycarbonate).

**For specific product availability and performance data refer to Emerson Climate Technologies, Inc. sales literature**  
**Refer To Application Engineering bulletins, change-over guidelines And MSDS sheets for additional information at EmersonClimate.com**



# Copeland Scroll™ Service Compressor Specification Chart

Model	ARI Capacity Btu/hr	RLA Amps TF5/TFD	Run Cap. MFD/Volts	Diameter Inches (A)	Suction Height Inches (B)	Discharge Height Inches (C)	Height Inches (D)	Weight Lbs.	Suction Diameter Inches
ZR16K5-PFV	15,500	9.3	30/370	5.5	10.1	14.2	15.3	47	3/4
ZR18K5-PFV	18,000	10.7	30/370	5.5	10.1	14.2	15.3	47	3/4
ZR21K5-PFV	21,000	12.0	35/370	5.5	10.1	14.2	15.3	47	3/4
ZR21K5-TF5/D	21,000	8.6/4.3	N/A	5.5	10.1	14.2	15.3	45	3/4
ZR25K5-PFV	25,300	15.0	40/370	5.5	10.1	14.2	15.3	50	3/4
ZR25K5-TF5/D	25,300	8.9/4.6	N/A	5.5	10.1	14.2	15.3	48	3/4
ZR28K5-PFV	28,400	15.7	45/370	5.5	10.1	14.2	15.3	50	3/4
ZR28K5-TF5/D	28,400	11.1/5.7	N/A	5.5	10.1	14.2	15.3	48	3/4
ZR32K5-PFV	32,600	17.1	50/370	5.5	10.1	14.2	15.3	50	3/4
ZR32K5-TF5/D	32,600	12/6.4	N/A	5.5	10.1	14.2	15.3	49	3/4
ZR38K5-PFV	38,000	21.4	55/370	6.5	11.1	15.4	16.4	64	7/8
ZR38K5-TF5/D	38,000	13.6/6.4	N/A	6.5	11.1	15.4	16.4	60	7/8
ZR42K5-PFV	42,200	22.1	55/370	6.5	11.1	15.4	16.4	68	7/8
ZR42K5-TF5/D	42,200	14.3/6.4	N/A	6.5	11.1	15.4	16.4	61	7/8
ZR48K5-PFV	48,200	24.3	60/440	6.5	11.1	15.4	16.4	72	7/8
ZR48K5-TF5/D	48,200	17.1/7.9	N/A	6.5	11.1	15.4	16.4	68	7/8
ZR54K5-PFV	53,500	28.2	80/370	6.5	11.1	15.4	16.4	73	7/8
ZR54K5-TF5/D	53,500	17.1/7.9	N/A	6.5	11.1	15.4	16.4	69	7/8
ZR57K3-PFV	58,000	32.1	80/370	7.3	11.68	16.13	18	90	7/8
ZR57K3-TF5/D	58,500	19.3/9.1	N/A	7.3	11.68	16.13	18	85	7/8
ZR61K3-PFV	62,000	32.1	80/370	7.3	11.68	16.13	18	90	7/8
ZR61K3-TF5/D	62,000	19.3/9.1	N/A	7.3	11.68	16.13	18	85	7/8

Mounting pattern 7.5"x7.5" (same as previous Copeland Scroll models)

## Rotalock™ Kit Part Numbers

		Adapter	Seal
<b>Suction</b>	3/4" to 1-1/4"-12	998-0034-01	020-0028-02
<b>Suction</b>	7/8" to 1-1/4"-12	998-0034-02	020-0028-02
<b>Discharge</b>	1/2" to 1"-14	998-0034-15	020-0028-00

## Additional information

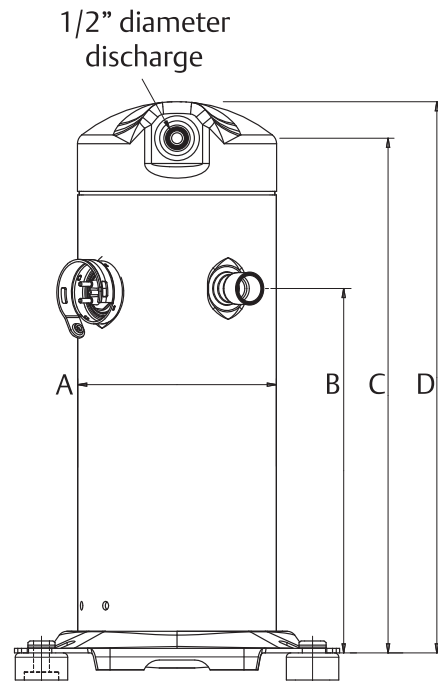
Copeland Scroll ZRK5 compressors are offered in an -800 bill-of-material option, such as ZR25K5-PFV-800, that includes the compressor with a 42 inch molded plug wiring harness, mounting parts and installation instructions.

Other available information includes:

A/C Compressor Product Guide (2008ECT-113)

ZRK5 Product Brochure (2009ECT-98)

For complete product details and additional information, visit [EmersonClimate.com](http://EmersonClimate.com) and select Online Product Information (OPI) or [CopelandScroll.com](http://CopelandScroll.com).



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