



# LG SCROLL COMPRESSORS

■ Thermal Cut-out

- Compressor Kit includes:
  - Molded Plug
  - Thermal Cut-out
  - Mounting Hardware
  - Warranty Tag
  - Instruction Sheet

■ Molded Plug

■ Competitively Priced

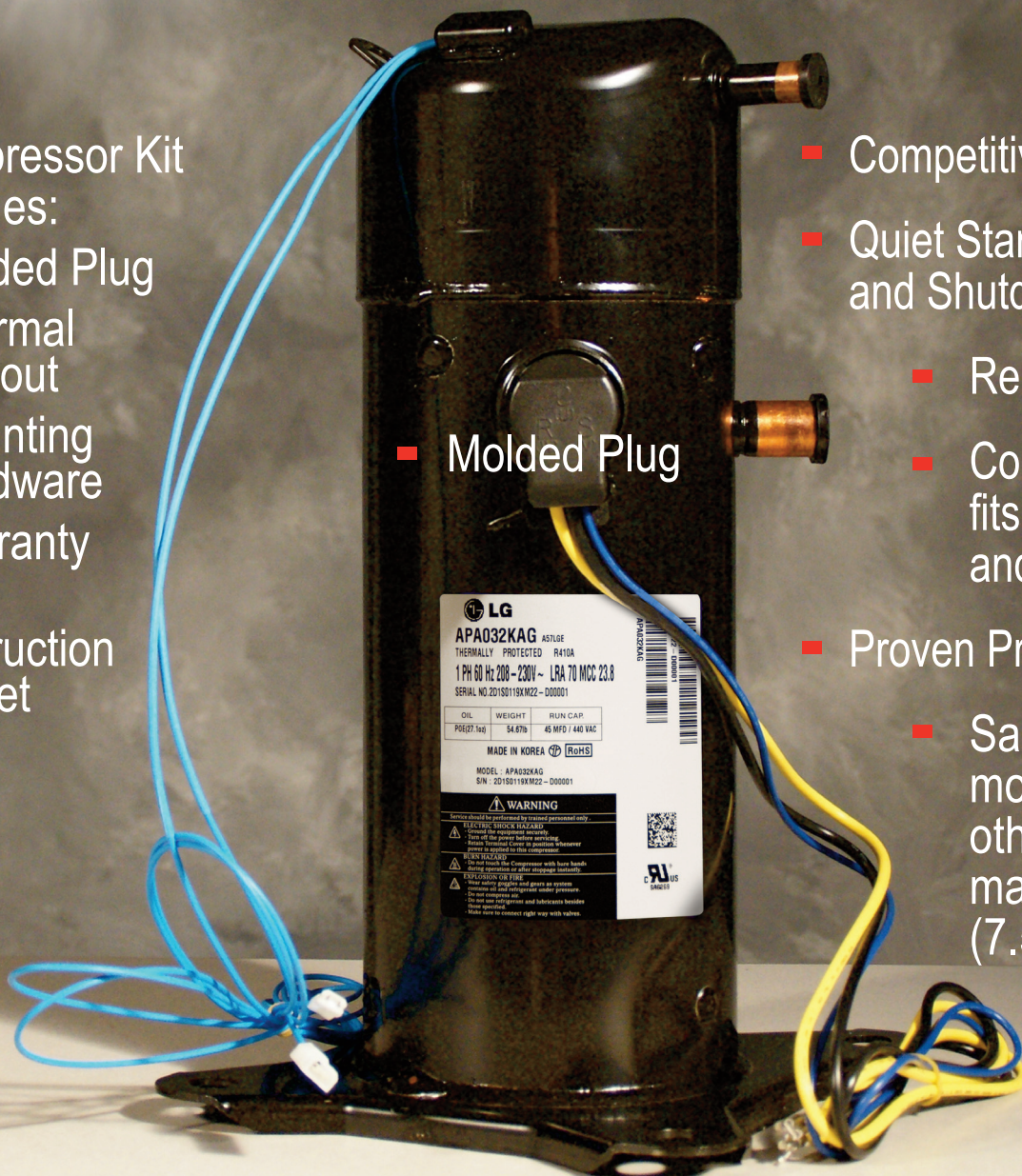
■ Quiet Start-ups and Shutdown

■ Reliable

■ Conveniently fits other makes and models

■ Proven Product

■ Same square mounting as other scroll manufacturers (7.50" x 7.50")



Available through Totaline® Sales Centers.



Universal HVAC/R  
Parts and Supplies



# LG SCROLL COMPRESSORS

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## Product Offering

- Residential AC/HP Applications.
- Single phase, 208-230V, 60Hz.
- Two 3 phase models, 208-230V, 460V, 60Hz.
- 21 models: 11 R-410A Sku's and 10 R-22 Sku's.
- R-410A capacity range 15,200 Btu/hr – 54,000 Btu/hr.
- R-22 capacity range 21,500 Btu/hr – 62,000 Btu/hr.
- Used by major OEM's including; Carrier, ICP and Lennox.

## Product Highlights

- Optimized performance in low load conditions.
- Internal pressure relief.
- Excellent external discharge temperature protection.
- Check valve acts as an anti-reverse rotation device.
- UL and cUL listed.

## Convenient Installation

- Cooling and heat pump applications.
- Minimal piping differences with other scrolls.
- Same square mounting (7.50" x 7.50") as other scroll manufacturers.



- Compressor kit includes:
  - Molded Plug
  - Thermal Cut-out
  - Mounting Hardware
  - Warranty Tag
  - Instruction Sheet

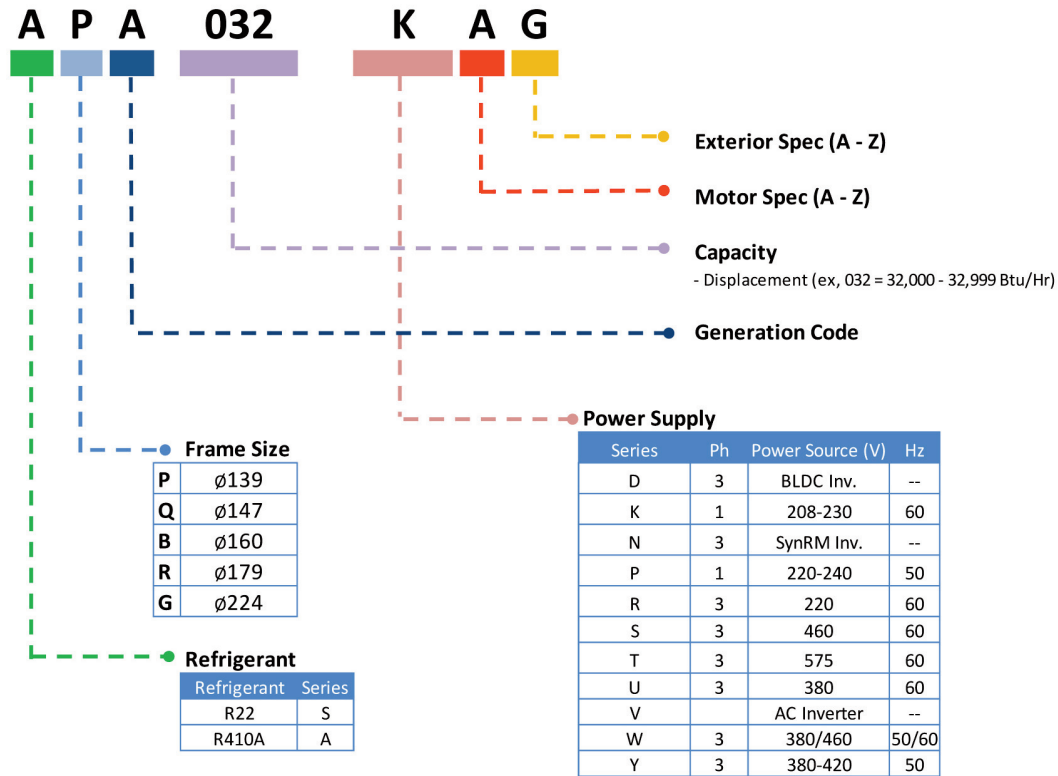
## Features & Benefits

- **Quiet Start-up and Shut Down Device:** Start-up and shut down sound is minimized by a check valve located in the discharge port of the scroll sets – prevents scroll from operating backwards.
- **Discharge Temperature Protection (DTS):** The compressor discharge temperature is monitored by a temperature sensor mounted on the top cap of the compressor. DTS protects against excessively high scroll temperatures due to loss of charge or operating outside the compressor envelope.
- **Internal Motor Overload Protection (OLP):** An inherent protection system sensing both motor winding temperature and motor current; designed to open the common wire on single phase units and stop motor operation if motor high temperature or over current conditions exist.
- **Internal Pressure Relief (IPR):** The internal pressure relief is designed to open when the difference of the suction and discharge pressure is within a certain range, allowing high temperature gas bypass into the motor area and tripping the OLP.
- **Vacuum Protection Device:** An internal protection that opens if a high vacuum condition exists and bypasses high pressure gas to the low pressure. The OLP may trip.

# LG SCROLL COMPRESSORS

Available through Totaline® Sales Centers

## LG Scroll Compressor Part Numbering System



## LG Scroll Compressor Label

**LG Electronics Inc.**

**APA032KAG**

THERMALLY PROTECTED R410A

1 PH 60 Hz 208-230V~ LRA 70 MCC 23.8

SERIAL NO.041S0047VD27-D00001

OIL	WEIGHT	RUN CAP.
POE(27.1oz)	54.67lb	45 MFD / 440 VAC

MADE IN KOREA

MODEL : APA032KAG  
S/N:041S0047VD27-D00001

**WARNING**

Service should be performed by trained personnel only.

**ELECTRIC SHOCK HAZARD**

- Ground the equipment securely.
- Turn off the power before servicing.
- Retain Terminal Cover in position whenever power is applied to this compressor.

**BURN HAZARD**

- Do not touch the Compressor with bare hands during operation or after stoppage instantly.

**EXPLOSION OR FIRE**

- Wear safety goggles and gears as system contains oil and refrigerant under pressure.
- Do not compress air.
- Do not use refrigerant and lubricants besides those specified.
- Make sure to connect right way with valves.

**ALUS**

## LG Scroll Compressor Box Label

6.18in (157mm)

**APA032KAG**

COMPRESSOR : SCROLL 208/230/60/1, R410A

Nominal Capacity at Rated Conditions( In Thousands) Btu / hr : 30.5

Run Cap. MFD/VAC : 45/440

INCLUDES : COMPRESSOR, SINGLE HARNESS, GASKET, TERMINAL COVER, THERMISTOR ASSEMBLY, SENSOR COVER, RETURN LABEL AND INSTRUCTION SHEET

Made in Korea

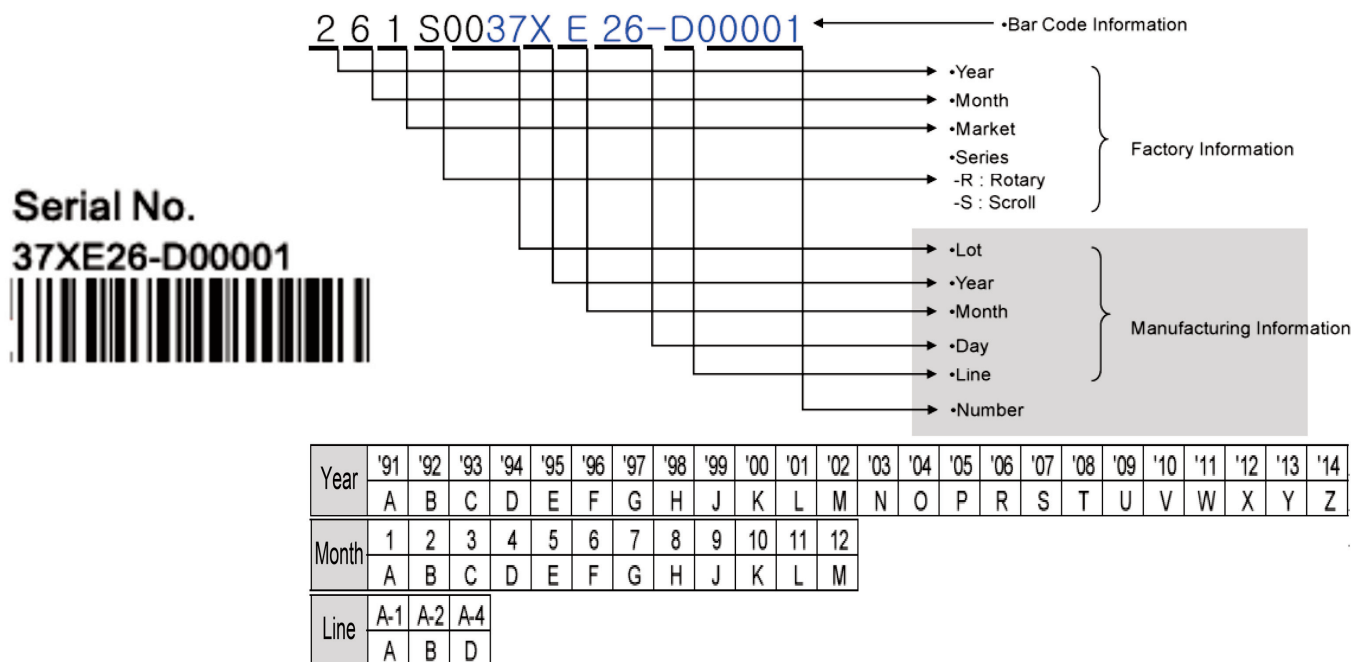
1EA

Serial No. 37XE26-D00001

4.17in (106mm)



## LG Scroll Compressor Serial Number Composition



## Frequently Asked Questions

- Q1.** Can a competitor's aftermarket compressor be subbed for in-warranty replacements on OEM compressors?
- A1.** No – in-warranty replacement of an OEM compressor in Carrier®, Bryant® and Payne® equipment must use the specified service replacement compressor from EPIC in order to be accepted in the warranty system
- Q2.** Are LG Compressors a drop-in replacement in non-warranty applications for other major brands of compressors?
- A2.** Yes – they are designed to have the same footprint, and piping differences are insignificant to allow for subbing in the field.
- Q3.** What is the service parts warranty on LG Compressors?
- A3.** All LG Compressors are covered by a standard 1-year warranty. Extended warranties for 2-5 years are available on all models.
- Q4.** Are all LG compressors supplied with a molded plug?
- A4.** Yes – one made specifically for the LG product line and supplied with the service compressor.
- Q5.** Is the LG molded plug interchangeable with other scroll manufacturers?
- A5.** No – it can only be used on LG product
- Q6.** Are “alternative refrigerants” approved for use with LG compressors in residential applications?
- A6.** No - alternative refrigerants are not approved for use in Carrier®, Bryant® and Payne® equipment regardless of compressors' brand.

# LG SCROLL COMPRESSORS

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## LG Scroll Compressor Technical Detail for R-410A Models

R-410A SERVICE MODEL	CAPACITY BTU/HR	APPL	PHASE	VOLTAGE	HZ	RUN CAP MFD/VOLTS	OIL TYPE	POE VG32 CHARGE (OZ.)
APA016KAC	15,200	AC/HP	1	208-230	60	35/370	POE	27.1
APA020KAC	19,500	AC/HP	1	208-230	60	35/370	POE	27.1
APA024KAB	22,400	AC/HP	1	208-230	60	40/370	POE	27.1
APA029KAC	28,000	AC/HP	1	208-230	60	45/440	POE	27.1
APA032KAG	30,500	AC/HP	1	208-230	60	45/440	POE	27.1
AQA038KAB	37,700	AC/HP	1	208-230	60	60/440	POE	43.3
AQA039KAC	39,000	AC/HP	1	208-230	60	60/440	POE	43.3
AQA042KAE	41,500	AC/HP	1	208-230	60	70/440	POE	43.3
ABA049KAB	48,000	AC/HP	1	208-230	60	70/440	POE	50.7
ABA051KAF	51,500	AC/HP	1	208-230	60	75/440	POE	50.7
ABA054KAC	54,000	AC/HP	1	208-230	60	80/440	POE	50.7

## LG Scroll Compressor R-410A Offering with Legacy Part Numbers (see note below)

Refrigerant	Legacy Part Number	OEM Part Number	Service Part Number
R-410A	-	-	APA016KAC
R-410A	-	-	APA020KAC
R-410A	-	-	APA024KAB
R-410A	RLC2821	APA029KAB	APA029KAC
R-410A	RLC3021	APA032KAD	APA032KAG
R-410A	RLC3721	AQA038KAA	AQA038KAB
R-410A	RLC3921	AQA039KAA	AQA039KAC
R-410A	-	AQA042KAB	AQA042KAE
R-410A	-	-	ABA049KAB
R-410A	RLC5221	ABA051KAE	ABA051KAF
R-410A	-	ABA054KAB	ABA054KAC

**Note:** Service part numbers will be sold upon inventory depletion of corresponding legacy part numbers.

## LG Scroll Compressor Technical Detail for R-22 and R-407C Models

R-22 SERVICE MODEL	CAPACITY BTU/HR	APPL	PHASE	VOLTAGE	HZ	RUN CAP MFD/VOLTS	OIL TYPE	MINERAL CHARGE (OZ.)
SQA022KAZ	21,500	AC/HP	1	208-230	60	35/440	POE	37.2
SQA026KAZ	26,100	AC/HP	1	208-230	60	35/440	POE	37.2
SQA032KAZ	32,300	AC/HP	1	208-230	60	45/440	POE	37.2
SQA038KAZ	37,000	AC/HP	1	208-230	60	50/440	POE	37.2
SQA042KAZ	41,200	AC/HP	1	208-230	60	50/440	POE	37.2
SR047KBZ	47,600	AC/HP	1	208-230	60	60/440	POE	55.8
SRA053KAZ	53,500	AC/HP	1	208-230	60	70/440	POE	55.8
SR057KCZ	58,000	AC/HP	1	208-230	60	70/440	POE	55.8
SR061RBO	62,000	AC/HP	3	208-230	60	-	4GSI	68.8
SR061SAB	61,500	AC/HP	3	460	60	-	4GSI	63.5

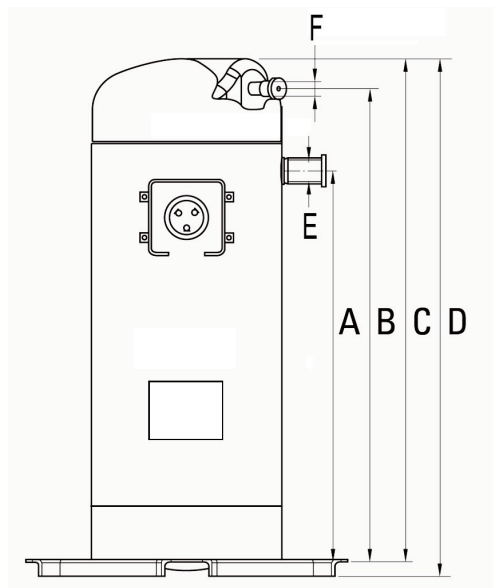
## LG Scroll Compressor Accessories (see note below)

Description	Legacy Part Number	Service Part Number	Comments
Thermal Cut Out	RTC0061	AGG74119701	For use on all models
Molded Plug Assy	RMP0051	AGG74119801	For use on all R-410A models
Molded Plug Assy	-	AGG74119802	For use on all R-22 SQA models
Molded Plug Assy	-	AGG74119803	For use on all R-22 SRA/SR models
Molded Plug Assy	-	AGG74119804	For use on all R-22 SR 3 phase models
40W, 240V Crankcase Heater	-	P041-4443	For use on APA, AQA, ABA, SQA models
70W, 240V Crankcase Heater	-	HT32BH857	For use on all R-22 SRA/SR models

**Note:** Service part numbers will be sold upon inventory depletion of corresponding legacy part numbers.



## LG Scroll Compressor Dimensions



## LG Scroll Compressor Weight, Dimensions and Connection Size for R-410A Models

SERVICE MODEL	WEIGHT (LBS.)	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	SUCTION E	DISCHARGE F
APA016KAC	56	9.83	14.93	16.01	16.41	3/4	1/2
APA020KAC	56	9.83	14.93	16.01	16.41	3/4	1/2
APA024KAB	56	9.83	14.93	16.01	16.41	3/4	1/2
APA029KAC	56	9.83	14.93	16.01	16.41	3/4	1/2
APA032KAG	56	9.83	14.93	16.01	16.41	3/4	1/2
AQA038KAB	64	11.94	16.42	17.46	18.01	7/8	1/2
AQA039KAC	64	11.94	16.42	17.46	18.01	7/8	1/2
AQA042KAE	64	11.94	16.42	17.46	18.01	7/8	1/2
ABA049KAB	78	11.69	16.37	17.68	18.23	7/8	1/2
ABA051KAF	78	11.69	16.37	17.68	18.23	7/8	1/2
ABA054KAC	79	11.69	16.37	17.68	18.23	7/8	1/2

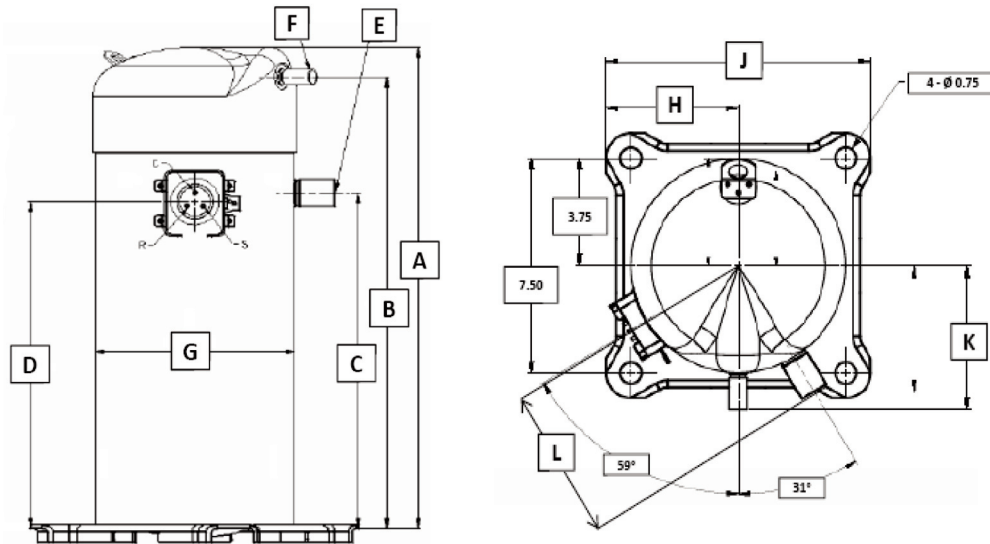
## LG Scroll Compressor Weight, Dimensions and Connection Size for R-22 Models

SERVICE MODEL	WEIGHT (LBS.)	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	SUCTION E	DISCHARGE F
SQA022KAZ	60	11.12	15.41	16.49	16.90	3/4	1/2
SQA026KAZ	60	11.12	15.41	16.49	16.90	3/4	1/2
SQA032KAZ	60	11.12	15.41	16.49	16.90	3/4	1/2
SQA038KAZ	61	11.12	15.41	16.49	16.90	3/4	1/2
SQA042KAZ	61	11.12	15.41	16.49	16.90	3/4	1/2
SR047KBZ	96	12.79	17.24	18.39	18.94	7/8	1/2
SRA053KAZ	96	12.79	17.24	18.39	18.94	7/8	1/2
SRA057KCZ	96	12.79	17.24	18.39	18.94	7/8	1/2
SR061RBD	84	11.50	15.90	17.56	18.11	7/8	1/2
SR061SAB	80	11.50	15.90	17.56	18.11	7/8	1/2

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## Scroll Compressor Line Drawing Example



		Copeland Scroll Compressor		LG Scroll Compressor	
	Dimensions (inches)	R22	R410A	R22	R410A
Model		ZR25K5-PFV	ZP24K5E-PFV	SQA026KAZ	APA024KAB
Overall Height	A	15.26	15.28	16.49	16.01
Discharge Height	B	14.24	14.27	15.41	14.94
Suction Height	C	10.09	10.37	10.35	9.84
Plug Height	D	9.98	10.27	11.12	10.19
Suction	E	0.76	0.76	0.76	0.76
Discharge	F	0.50	0.50	0.50	0.50
Circumference	G	5.50	5.50	6.04	5.72
Center to Mtg Plate end	H	4.50	4.50	4.62	4.62
Mtg Plate Width	J	9.69	9.69	9.24	9.24
Center to Discharge stub	K	4.06	4.06	4.53	4.20
Center to Suction stub	L	3.93	3.93	3.69	4.11

		Copeland Scroll Compressor		LG Scroll Compressor	
	Dimensions (inches)	R22	R410A	R22	R410A
Model		ZR54K5-PFV	ZP54K5E-PFV	SRA053KAZ	ABA054KAC
Overall Height	A	16.43	16.47	18.39	17.68
Discharge Height	B	15.42	15.46	17.24	16.37
Suction Height	C	11.16	11.62	12.79	11.70
Plug Height	D	10.95	11.41	12.48	11.90
Suction	E	0.88	0.88	0.88	0.88
Discharge	F	0.50	0.50	0.50	0.50
Circumference	G	6.51	6.58	7.26	6.53
Center to Mtg Plate end	H	4.78	4.63	4.62	4.62
Mtg Plate Width	J	9.69	9.69	9.24	9.24
Center to Discharge stub	K	4.55	4.55	5.02	4.61
Center to Suction stub	L	4.40	4.40	4.39	4.73



## Competitive Cross Reference - LG to Copeland and Danfoss R-410A Models

R-410A Models - Single Phase, 208-230 Volt, 60 Hz								
LG Scroll Compressors			Copeland Scroll Compressors			Danfoss Scroll Compressors		
LG Part Number	CAPACITY BTU/HR	RUN CAP MFD/VOLTS	COPELAND Part Number	CAPACITY BTU/HR	RUN CAP MFD/VOLTS	DANFOSS Part Number	CAPACITY BTU/HR	RUN CAP MFD/VOLTS
APA016KAC	15,200	35/370	ZP16K5E-PFV	15,500	30/370	N/A	N/A	N/A
APA020KAC	19,500	35/370	ZP20K5E-PFV	20,000	35/370	N/A	N/A	N/A
APA024KAB	22,400	40/370	ZP24K5E-PFV	24,000	40/370	N/A	N/A	N/A
APA029KAC	28,000	45/440	ZP28K5E-PFV	27,900	45/370	HRH029U1LP6	29,000	45/370
APA032KAG	30,500	45/440	ZP31K5E-PFV	31,100	45/370	HRH029U1LP6	29,000	45/370
AQA038KAB	37,700	60/440	ZP38K5E-PFV	37,500	45/370	HRH036U1LP6	35,404	55/370
AQA039KAC	39,000	60/440	ZP39K5E-PFV	39,000	45/370	HRH039U1LP6	39,510	60/370
AQA042KAE	41,500	70/440	ZP42K5E-PFV	42,000	70/370	HRH039U1LP6	39,510	60/370
ABA049KAB	48,000	70/440	ZP49K5E-PFV	49,400	70/370	HRH051U1LP6	51,798	70/370
ABA051KAF	51,500	75/440	ZP51K5E-PFV	51,000	70/370	HRH051U1LP6	51,798	70/370
ABA054KAC	54,000	80/440	ZP54K5E-PFV	54,000	80/370	HRH054U1LP6	54,498	80/370

## Competitive Cross Reference - LG to Copeland and Danfoss R-22 Models

R-22 Models - Single Phase, 208-230 Volt, 60 Hz								
LG Scroll Compressors			Copeland Scroll Compressors			Danfoss Scroll Compressors		
LG Part Number	CAPACITY BTU/HR	RUN CAP MFD/VOLTS	COPELAND Part Number	CAPACITY BTU/HR	RUN CAP MFD/VOLTS	DANFOSS Part Number	CAPACITY BTU/HR	RUN CAP MFD/VOLTS
SQA022KAZ	21,500	35/440	ZR21K5E-PFV	21,000	35/370	N/A	N/A	N/A
SQA026KAZ	26,100	35/440	ZR25K5E-PFV	25,300	40/370	HRM025T1LP6	25,000	45/370
SQA032KAZ	32,300	45/440	ZR32K5E-PFV	32,600	50/370	HRM034U1LP6	34,103	45/370
SQA038KAZ	37,000	50/440	ZR38K5E-PFV	38,000	55/370	HRM038U1LP6	37,999	55/370
SQA042KAZ	41,200	50/440	ZR42K5E-PFV	42,200	55/370	HRM042U1LP6	42,005	60/370
SR047KBZ	47,600	60/440	ZR48K5E-PFV	48,200	60/440	HRM048U1LP6	47,706	60/370
SRA053KAZ	53,500	70/440	ZR54K5E-PFV	53,500	80/370	HRM054U1LP6	53,705	70/370
SR057KCZ	58,000	70/440	ZR57K3E-EFV	58,000	80/370	HRM058U1LP6	57,705	80/370

R-22 Models - Three Phase, 208-230/ 460 Volt, 60 Hz					
LG Scroll Compressors		Copeland Scroll Compressors		Danfoss Scroll Compressors	
LG Part Number	CAPACITY BTU/HR	COPELAND Part Number	CAPACITY BTU/HR	DANFOSS Part Number	CAPACITY BTU/HR
SR061RBD	62,000	ZR57/61K3-TF5	58,500/62,000	HRM058/60U2LP6	57,808/59,723
SR061SAB	61,500	ZR57/61K3-TFD	58,500/62,000	HRM058/60U4LP6	57,808/59,723

# LG R-22 Competitive Cross-Reference

**10 LG R-22 MODELS REPLACE 59 COPELAND & 36 DANFOSS/SCROLL TECH MODELS**

**Competitive Cross-reference Sheet**

LG Model	ARI Capacity	Copeland Model	ARI Capacity	Danfoss / Scroll Tech Model	ARI Capacity
<b>SQA022KAZ</b>	<b>21,500</b>	ZR21KA-PFV	21,000		
		<b>ZR21K5E-PFV</b>	21,000		
		ZR22K3-PFV	22,400		
		ZR22KC-PFV	22,000		
		ZR23K1-PFV	22,900		
		ZR22K4-PFV	22,000		
<b>SQA026KAZ</b>	<b>26,100</b>	ZR24K3-PFV	24,500		
		ZR24K4-PFV	24,400		
		ZR24KC-PFV	24,300		
		<b>ZR25K5E-PFV</b>	25,300		
		ZR26K3-PFV	26,600		
		ZR26KA-PFV	26,000		
		ZR26KC-PFV	26,500	HRM025T1	25,000
		ZR28K3-PFV	28,500		
		<b>ZR28K5E-PFV</b>	28,400		
		ZR28KA-PFV	28,400		
<b>SQA032KAZ</b>	<b>32,300</b>	ZR29KC-PFV	28,500		
		ZR30K3-PFV	31,100		
		ZR30KC-PFV	31,100		
		ZR32K3-PFV	32,600		
		<b>ZR32K5E-PFV</b>	32,600		
		ZR32KA-PFV	32,600	HRM032U1	32,000
		ZR34K3-PFV	34,400	HRM034U1	34,103
		ZR34KA-PFV	34,400	SRC340	33,700
<b>SQA038KAZ</b>	<b>37,000</b>	ZR34KC-PFV	34,300	XCD340	34,103
		ZR36K3-PFV	36,900	XCD380	37,999
		ZR36KC-PFV	36,900	HRM038U1	37,999
		<b>ZR38K5E-PFV</b>	38,000	SCD380	37,400
		ZR38KA-PFV	38,000	SCD400	39,700
		ZR40K3-PFV	40,600	HRM040U1	39,999
		ZR40KC-PFV	40,600	XCD400	39,999
<b>SQA042KAZ</b>	<b>41,200</b>	ZR42K3-PFV	42,800		
		<b>ZR42K5E-PFV</b>	42,200		
		ZR42KA-PFV	42,200	SCD420	41,700
		ZR42KC-PFV	42,000	HRM042U1	42,005
		ZR44KA-PFV	44,000	XCD420	42,005
		<b>ZR44K5E-PFV</b>	44,000		
<b>SR047KBZ</b>	<b>47,600</b>	ZR45KC-PFV	46,000	SRD450AC	44,100
		ZR45K3-PFV	46,000	HRM045U1	45,001
		ZR46K3-PFV	47,200	XCD450	45,001
		ZR47K3-PFV	48,200		
		<b>ZR48K5E-PFV</b>	48,200		
		ZR47KC-PFV	47,500	HRM047U1	47,000
		ZR48K3-PFV	49,800	HRM048U1	47,706
		ZR48KC-PFV	49,500	SRD480AC	48,000
		ZR49K3-PFV	49,200	XRD480	47,706
<b>SRA053KAZ</b>	<b>53,500</b>	ZR52K3-PFV	52,000		
		ZR54K3-PFV	55,000	HRM054U1	53,705
		<b>ZR54K5E-PFV</b>	53,500	SRD540	54,100
		ZR54KA-PFV	53,500	XRD540	53,705
		ZR54KC-PFV	55,000		
<b>SR057KCZ</b>	<b>58,000</b>	<b>ZR57K3E-PFV</b>	58,000	SRD/XRD580	57,900
		<b>ZR57KCE-PFV</b>	57,500	HRM058U1	57,705
		<b>ZR61K3E-PFV</b>	62,000	SRD/XRD600	60,000
		<b>ZR61KCE-PFV</b>	62,000	HRM060U1	59,757
<b>SR061RBD</b>	<b>62,000</b>	<b>ZR57K3E-TF5</b>	58,000	SRY/XRY580	57,900
		<b>ZR61K3E-TF5</b>	62,000	HRM058U2	57,808
<b>SR061SAB</b>	<b>61,500</b>			HRM060U2	9,723
		<b>ZR57K3E-TFD</b>	58,000	SRH/XRH600	60,000
		<b>ZR61K3E-TFD</b>	62,000	HRM058U4	57,808
				HRM060U4	59,723

PFV models are 208/230-1-60 • TF5 models are 208/230-3-60

**Bolded models are latest Copeland design.**

• TFD models are 460-3-60

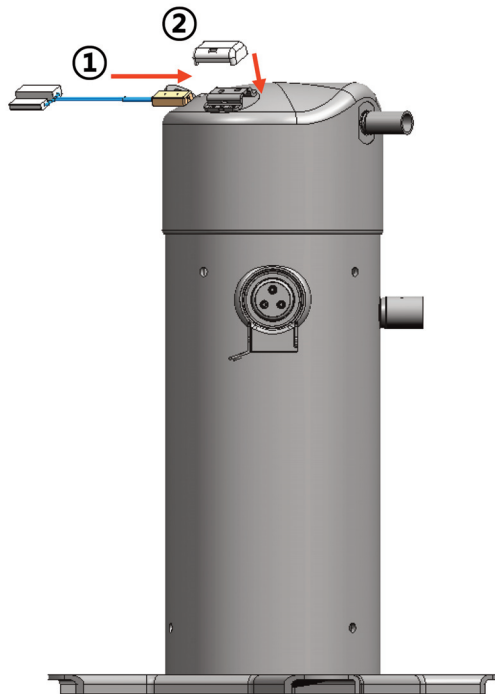


## 4 Easy Steps to Replace a Discharge Temperature Sensor



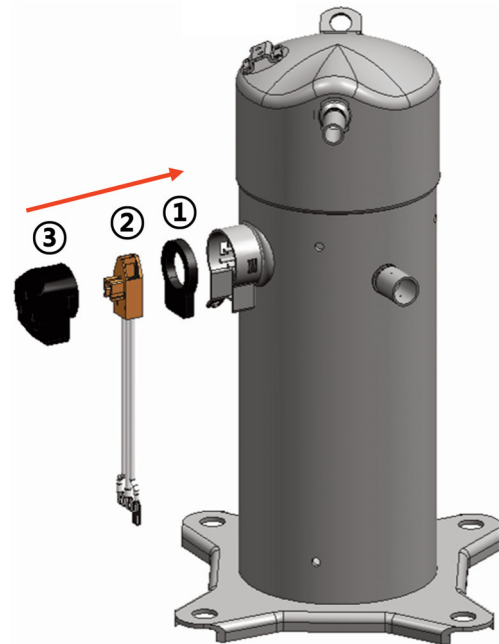
1. Locate top cap and discharge temperature sensor.
2. Carefully remove sensor cover.
3. Expose the sensor holder.
4. Slide out the sensor, slide in replacement, and reinstall the cover.

## LG Scroll Compressor Thermal Protector and Molded Plug Assemblies



**Figure 1 - Thermal Protector Assembly**

1. Insert "Thermistor" into the bracket with rounded surface facing upwards
2. Press down "Thermistor Cover" firmly until clicked



**Figure 2 - Molded Plug Assembly**

1. Insert "Gasket" around the terminals
2. Insert "Harness (Molded plug)" to terminal pins
3. Press down "Terminal Cover" firmly until clicked

**NOTE:** The two blue leads from the Discharge Temperature Switch (DTS) located on top of the compressor are to be wired in series between the High Pressure Switch (HPS) and Low Pressure Switch (LPS) (Safety Circuit) utilizing insulated quick disconnects. See wiring diagrams in Figures 3 & 4 on the next page and connection sequence in Figure 1 for reference.

**NOTE:** Molded plug is not interchangeable with plugs from other manufacturers. Always see connection sequence in Figure 2 for reference.

**NOTE:** Reference enclosed wiring diagrams and unit wiring diagrams in owner's manual to aid in reattaching electrical connections.



## 4 Easy Steps to Replace a Discharge Temperature Sensor



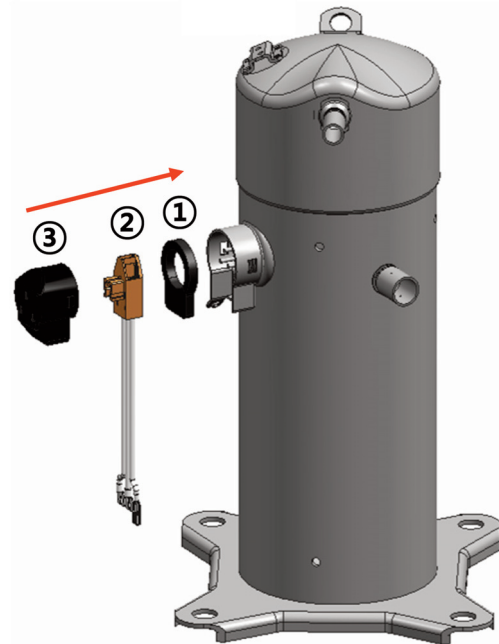
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### Figure 3 - Heat Pump



	FACTORY POWER WIRING	*CHS	CRANKCASE HEATER SWITCH
	FACTORY CONTROL WIRING	COMP	COMPRESSOR
	FIELD CONTROL WIRING	CONT	CONTACTOR
	FIELD POWER WIRING	CB	CIRCUIT BOARD
	CONDUCTOR ON CIRCUIT BOARD	DFT	DEFROST THERMOSTAT
	COMPONENT CONNECTION	DTS	DISCHARGE TEMPERATURE SWITCH
	1/4-IN QUICK CONNECT TERMINALS	DR	DEFROST RELAY AND CIRCUITRY
	FIELD SPLICE	*HPS	HIGH PRESSURE SWITCH
	JUNCTION	*LPS	LOW PRESSURE SWITCH
CAP	CAPACITOR (DUAL RUN)	OFM	OUTDOOR FAN MOTOR
*CH	CRANKCASE HEATER	RVS	REVERSING VALVE SOLENOID
		*SC	START CAPACITOR
		*SR	START RELAY
		*ST	START THERMISTOR

\* MAY BE FACTORY OR FIELD INSTALLED

1. Compressor and fan motor furnished with inherent Thermal protection.
2. To be wired in accordance with national electric Code (N.E.C.) And local codes.
3. N.E.C. Class 2, 24 v circuit, min. 40 va required, 60va on Units installed with lls.
4. Use copper conductors only from disconnect to unit.
5. Must use thermostat and sub-base as stated in Pre-sale literature.
6. If indoor section has a transformer with a grounded secondary, connect the grounded side to "c" on the circuit board.
7. If any of the original wire, as supplied, must be replaced, use the same or equivalent wire.
8. Check all electrical connections inside control box for tightness.
9. Do not attempt to operate unit until service valves have been opened.
10. Use conductors suitable for at least 75°C (167°F).

### CONNECTION DIAGRAM

The diagram illustrates the electrical wiring for a control system. Key components and connections include:

- Power Supply:** 208/230 1Ø, connected to L1 and L2 lines, with an EQUIP GND connection.
- Control Unit (CONT):** Features terminals 11, 21, 23, and 25. It is connected to a compressor (COMP) and a fan (F).
- Relays and Switches:**
  - \*CHS (Common Heat Switch) and \*CH (Common Heat) are connected to the power supply.
  - \*LPS (Low Pressure Switch) and \*LLS (Low Limit Switch) are connected to the power supply.
  - \*HPS (High Pressure Switch) and \*CTD (Circuit Temperature Detector) are connected to the power supply.
  - \*ST (Start) and \*SR (Stop) are connected to the power supply.
- Thermostat (DTS):** Connected to the power supply and the control unit.
- Capacitor (CAP):** Connected to the control unit and the fan.
- Logic Module:** A module with terminals T1, T2, and T3, connected to the power supply and the control unit.
- Wiring:** Wires are color-coded: BLK (Black), BLU (Blue), YEL (Yellow), BRN (Brown), and VIO (Violet). Terminal numbers 1, 2, 5, and 7 are also indicated.
- Notes:**
  - (NOTE #6) refers to the INDOOR THERMOSTAT.
  - (NOTE #3) refers to the INDOOR BLOWER MOTOR.

————	FACTORY POWER WIRING	COMP	COMPRESSOR
————	FACTORY CONTROL WIRING	*CTD	COMPRESSOR TIME DELAY
-----	FIELD CONTROL WIRING	DTS	DISCHARGE TEMPERATURE SWITCH
- - - -	FIELD POWER WIRING	*HPS	HIGH PRESSURE SWITCH
○	COMPONENT CONNECTION	IFR	INDOOR FAN RELAY
⌒	FIELD SPICE	*LLS	LIQUID LINE SOLENOID VALVE
●	JUNCTION	*LPS	LOW PRESSURE SWITCH
CONT	CONTACTOR	OFM	OUTDOOR FAN MOTOR
CAP	CAPACITOR (DUAL RUN)	*SC	START CAPACITOR
*CH	CRANKCASE HEATER	*SR	START RELAY
*CHS	CRANKCASE HEATER SWITCH	*ST	START THERMISTOR

\* MAY BE FACTORY OR FIELD INSTALLED

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. Use copper conductors only. Use conductors suitable for at least 75°C (167°F).
6. Connection for typical cooling only thermostat. For other arrangements see installation Instructions.
7. If indoor section has a transformer with a grounded secondary, connect the grounded side to the BRN/YEL lead.
8. When start relay and start capacitor are installed, start thermistor is not used.
9. If any of the original wire, as supplied must be replaced, use the same or equivalent wire.
10. Check all electrical connections inside control box for tightness.
11. Do not attempt to operate unit until service valves have been opened.
12. Do not rapid cycle compressor. Compressor must be off 3 minutes to allow pressures to equalize between high and low side before starting.

They say...  
a picture is worth a  
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