



# KES **New Generation "D"** Condensing Units

## PRODUCT DATA & SPECIFICATIONS

Bulletin K40-KESD-PDS-5  
Part # 1108867



**PRODUCT SUPPORT**  
web: [www.k-rp.com/kes](http://www.k-rp.com/kes)  
email: [smcu@k-rp.com](mailto:smcu@k-rp.com)  
call: 1-844-893-3222 x521

scan:



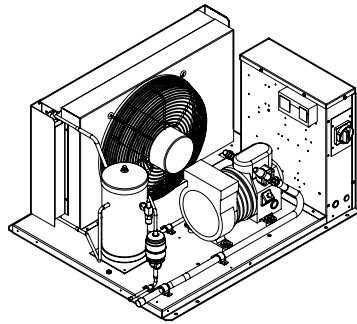
**60**  
Hz

Indoor/Outdoor  
Air-Cooled Semi-Hermetic  
Condensing Units

3 to 22 HP -  
High, Medium and Low  
Temperature Refrigeration

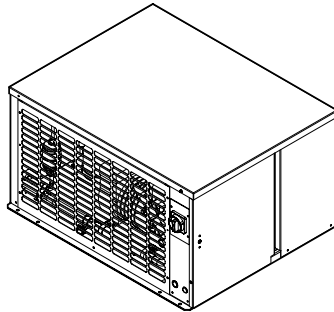


INCLUDES MODELS FOR DOE & NRCAN  
**AWEF-COMPLIANT APPLICATIONS**



Indoor Unit

Outdoor Unit



**SMARTSPEED™**

FAN MOTOR TECHNOLOGY  
See Page 4 for details



INCLUDES RATINGS FOR  
**LOW GWP**  
REFRIGERANTS

**LIMITROL+**

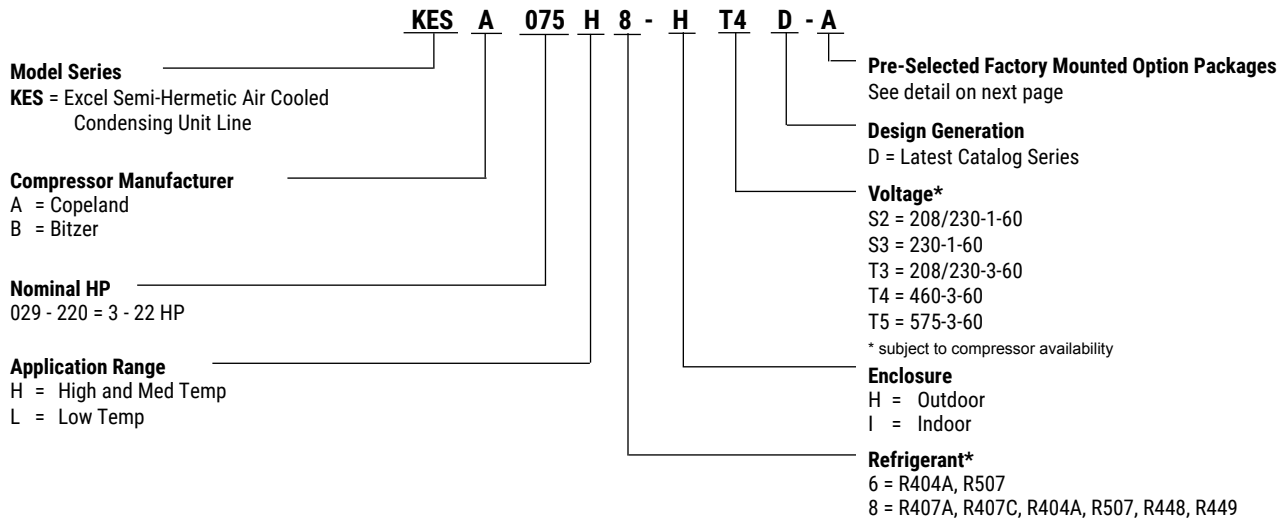
FLOATING HEAD PRESSURE CONTROL SYSTEM  
See Page 5 for details

## CONTENTS

	Page
Nomenclature.....	2
Features, Options and Pre-Selected Option Packages.....	2 - 3
<b>SMARTSPEED™</b> Fan Motor Technology .....	4
<b>LIMITROL+</b> Floating Head Pressure Control System.....	5
Capacity Data (Imperial and <i>Metric</i> ).....	6 - 28
Electrical Data.....	29 - 32
Annual Walk-In Energy Factor (AWEF) Ratings.....	33 - 34
Dimensional Data.....	35 - 39
Specifications.....	40
Wiring Diagrams.....	41 - 45
Wiring Diagrams - Models with <b>SMARTSPEED™</b> .....	46
Project Information.....	47
Product Support Resources.....	BACK

# NOMENCLATURE

# KES - SEMI-HERMETIC CONDENSING UNITS



## STANDARD FEATURES

### Indoor Unit:

- Compatible with Low GWP Refrigerants
- Weatherproof electrical control box with compressor contactor and fused control circuit
- Spring mounted accessible semi-hermetic compressor with suction and discharge vibration eliminator
- High efficiency enhanced tube and fin condenser design
- Energy efficient PSC condenser fan motor
- Receiver with fusible plug and liquid shut off valve
- Fixed high pressure switch and adjustable low pressure control
- Receiver inlet and outlet shutoff valve (8HP and above)
- Suction service valve
- Pre-formed copper tubing

- Unit leak tested and shipped with Helium holding charge
- Electronic liquid injection on L8 units
- Painted cabinet

### Outdoor Unit: All Standard Features of Indoor Unit, Plus:

- Painted outdoor weather-resistant housing with removable hood
- Flooded head pressure control (adjustable)
- Crankcase heater
- Fan cycling control (all 2 fan models)




## AVAILABLE OPTIONS

- Suction accumulator
- Suction accumulator with boil-out coil
- Discharge line Check valve
- Oil separator
- Oil separator c/w oil return filter & solenoid valve
- Receiver inlet ball valve (standard on 2 fan models)
- Heated and Insulated receiver
- Over-sized receiver
- Sealed liquid line filter drier & sight-glass
- Ball valve - liquid line (shipped loose)
- Insulated suction lines
- Leg Kits
- Discharge air hood
- Sub cooling circuit on 5 - 22 HP models
- Variable speed EC motors as head pressure control (see Bulletin K40-HPC-AG or <http://docs.k-rp.com/1101110.pdf> for details)
- QuickVac Evacuation and Refrigerant Recovery Valves
- Liquid line solenoid valve-(with standard 230 volt coil) - shipped loose

- Compressor Circuit breaker
- Current sensing relay - for use with oil safety control (where applicable)
- Defrost heater contactor c/w fuse block
- Evaporator Fan contactor c/w fuse block
- Disconnect switch
- Disconnect Fusing
- Pump down toggle switch
- Lock out control circuit
- Time delay relay for compressor
- Mechanical Time Clock
- Defrost Kit
- Electronic Voltage/Phase Monitor
- **SmartSpeed Fan Motor Technology (see page 4)**
- **Limitrol+ Floating Head Pressure Control System (see page 5 or Bulletin K40-HPC-AG or <http://docs.k-rp.com/1101113.pdf> for details)**

**PRE-SELECTED FACTORY MOUNTED  
OPTION PACKAGES**

**KES - SEMI-HERMETIC CONDENSING UNITS**

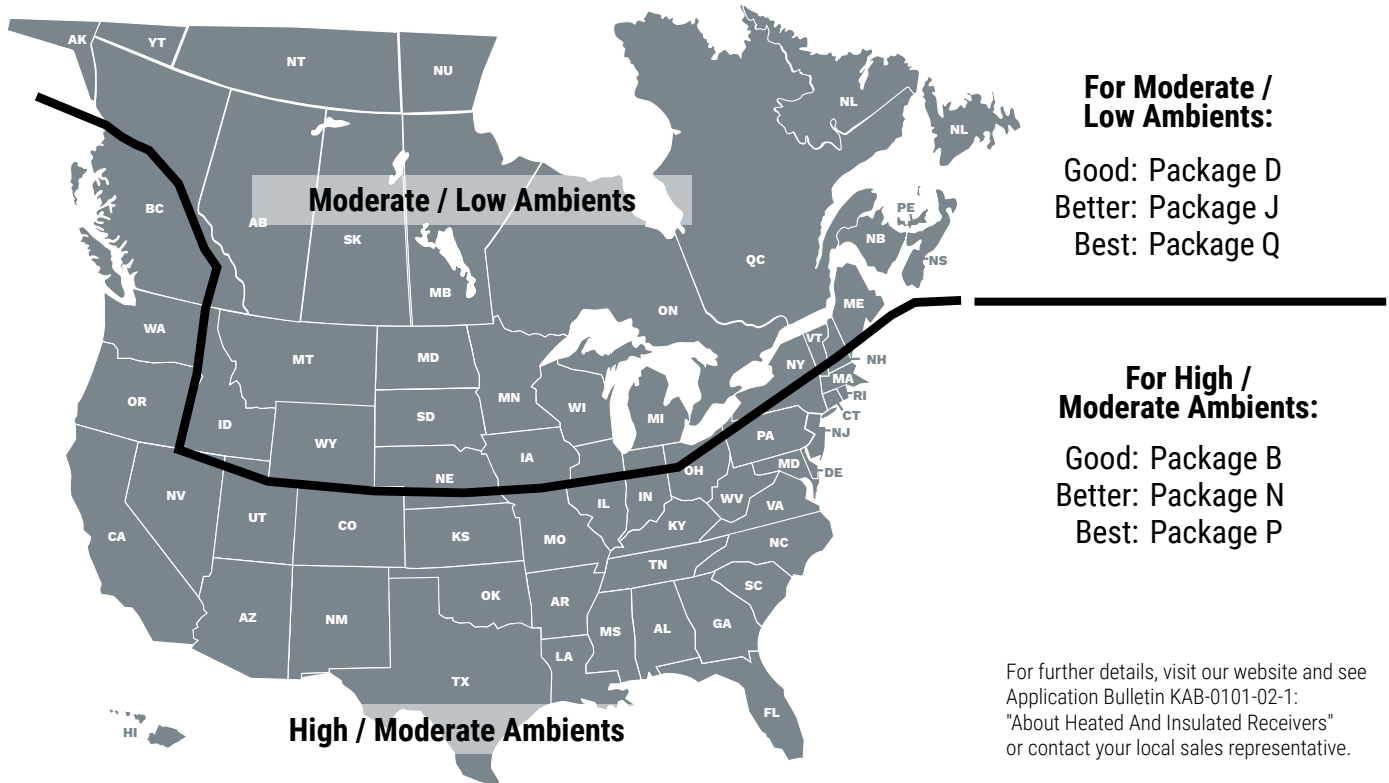
	<b>For High / Moderate Ambients</b>	<b>For Moderate / Low Ambients</b>
<b>GOOD</b> 	<b>Package B:</b> + Liquid Line Filter Drier <sup>1</sup> & Sight Glass	<b>Package D:</b> + Liquid Line Filter Drier <sup>1</sup> & Sight Glass + Heated and Insulated Receiver
<b>BETTER</b> 	<b>Package N:</b> + Liquid Line Filter Drier <sup>1</sup> & Sight Glass + Suction Accumulator w/o Heat Exchanger	<b>Package J:</b> + Liquid Line Filter Drier <sup>1</sup> & Sight Glass + Suction Accumulator w/o Heat Exchanger + Heated and Insulated Receiver
<b>BEST</b> 	<b>Package P:</b> + Liquid Line Filter Drier <sup>1</sup> & Sight Glass + Suction Accumulator w/o Heat Exchanger + Suction Filter <sup>2</sup> + Non-Fused Disconnect	<b>Package Q:</b> + Liquid Line Filter Drier <sup>1</sup> & Sight Glass + Suction Accumulator w/o Heat Exchanger + Suction Filter <sup>2</sup> + Non-Fused Disconnect + Heated and Insulated Receiver

<sup>1</sup> Liquid Line Filter Drier: Sealed on ALL One Fan Model Units, Replaceable on ALL Two Fan Model Units.

<sup>2</sup> Suction Filter: Sealed on ALL One Fan Model Units, Replaceable on ALL Two Fan Model Units.

**For information on Evaporator Defrost Kits and Fuse Packages, visit [www.k-rp.com/dfk](http://www.k-rp.com/dfk)**

**RECOMMENDATIONS FOR SELECTING  
FACTORY MOUNTED OPTION PACKAGES**



For further details, visit our website and see Application Bulletin KAB-0101-02-1: "About Heated And Insulated Receivers" or contact your local sales representative.

**US Patent No.  
9,297,567**

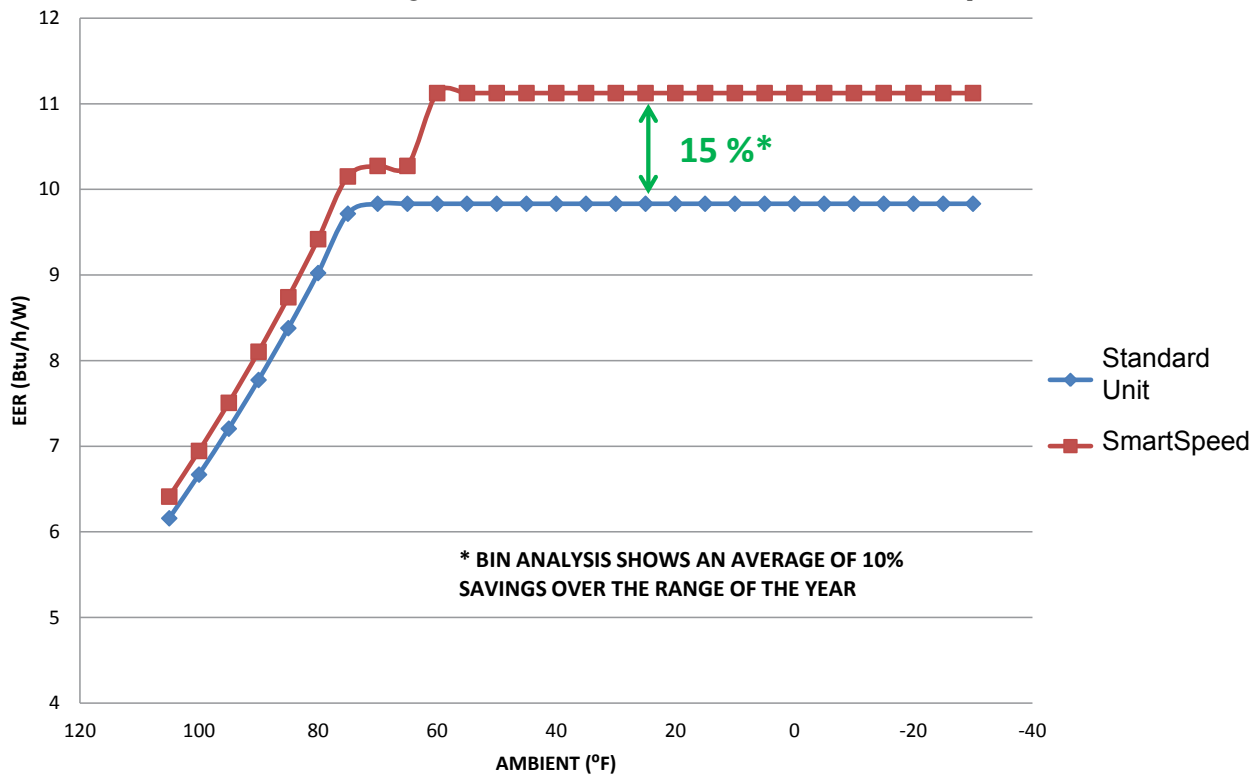
**SMARTSPEED™**  
FAN MOTOR TECHNOLOGY



**DESIGN FEATURES**

- No special controls required. No worries about wind or cold climates.
- Ambients above 55°F - EC motor operates at full speed, crankcase heater and heated + insulated receiver disabled from control circuit
- Ambients below 55°F - EC motor operates at low speed, crankcase heater and heated + insulated receiver enabled from control circuit

**Condensing Unit EER - Standard Unit vs. SmartSpeed**



**Refer to  
Pages 45  
For Wiring Details**

<b>Condensing Unit with SmartSpeed Power Consumption Per Motor</b>		
<b>Chassis Size</b> (see pages 34-38)	<b>Ambients above 55°F.</b> Fan Full Speed. Crankcase and Receiver Heaters Off.	<b>Ambients below 55°F.</b> Fan Low Speed. Crankcase and Receiver Heaters On.
3,4	362 W	76 W
5	630 W	152 W
6	1180 W	240 W

# LIMITROL+

FLOATING HEAD PRESSURE CONTROL SYSTEM

- **Reduces compressor energy consumption and run time**
  - **EC motor technology further saves energy and reduces electrical requirements**
- **Lowered environmental impact through reduced refrigerant use**
  - **Stable system performance in lower ambients**

**What is Limitrol+?** Limitrol+ combines various technologies into a responsive system that floats head pressure, saving energy and reduces environmental impact.

Unlike competitive systems, Limitrol+ combines variable speed EC motor technology, condenser portioning and various systems modifications to provide the ultimate in performance and control.

As a result, Limitrol+ functions in much colder ambients where previous systems have proven ineffective.

**What does it do?** Conventional head pressure control systems maintain a constant head pressure regardless of ambient temperatures. Limitrol+ intelligently responds to ambient conditions to float head pressure without sacrificing system performance at lower temperatures.

**What are its applications?**

- Condensing units over 5 HP
- Ideally suited and most effective in applications with fluctuating ambients
- Perfect for installations where reduced refrigerant charges are desired or required.

**How much can Limitrol+ save you?**

MODEL	Philadelphia, PA		New York, NY		Boston, MA		Charlotte, NC		Atlanta, GA		Los Angeles, CA		St Louis, MO		St. Paul, MN		Toronto, ON	
	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$
<b>5 HP Cooler</b>	22	616	23	1,099	25	1,081	18	474	16	521	16	835	20	624	25	798	27	638
<b>7.5 HP Cooler</b>	21	1,008	22	1,805	23	1,707	18	843	17	954	17	1,499	19	1,053	24	1,270	25	1,000
<b>10 HP Cooler</b>	18	1,204	18	2,131	20	2,095	15	975	14	1,089	18	2,446	16	1,227	20	1,529	21	1,223
<b>15 HP Cooler</b>	19	1,852	20	3,300	21	3,170	16	1,567	15	1,767	19	3,570	17	1,916	22	2,337	22	1,834
<b>6 HP Freezer</b>	24	903	25	1,621	26	1,548	21	753	20	848	23	1,548	22	928	26	1,119	27	891
<b>7.5 HP Freezer</b>	21	994	21	1,783	23	1,726	17	800	16	891	18	1,591	19	1,012	23	1,255	24	1,004
<b>13 HP Freezer</b>	19	1,425	19	2,535	21	2,450	16	1,150	15	1,286	15	2,110	17	1,471	21	1,798	22	1,428
<b>15 HP Freezer</b>	18	1,602	19	2,846	20	2,717	16	1,312	15	1,479	14	2,224	17	1,672	20	2,009	21	1,587

\* The above is a BIN Hour Analysis. Weather data was used from ASHRAE Weather Data Viewer and electrical rates for each city are based on data from EIA (U.S. Energy Information Administration).

\*\* Above numbers do not include refrigerant savings, and further cost savings can be expected.

For more information on Limitrol+ Floating Head Pressure Control System visit [k-rp.com/limitrol](http://k-rp.com/limitrol) or see Bulletin K40-LIMITROL-AG (<https://docs.k-rp.com/1101113.pdf>)

For more information on Head Pressure Control, please refer to our “Head Pressure Control Application Guide” Bulletin K40-HPC-AG (<https://docs.k-rp.com/1101110.pdf>)

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R404A R507 High Temperature - COPELAND**

Model KESA	Saturated Suction		Capacity BTU/h					
	Temperature		Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESA050H8  Compressor Model 2DC3R53KE	40	4.4	64100	60900	57800	54700	51600	48600
	35	1.7	58800	55900	53000	50200	47400	44600
	30	-1.1	53700	51100	48400	45800	43300	40700
	25	-3.9	48900	46400	44100	41700	39300	37000
	20	-6.7	44200	42000	39900	37700	35600	33500
	15	-9.4	39800	37800	35900	34000	32100	30200
	10	-12.2	35600	33900	32200	30400	28700	27000
	5	-15.0	31800	30200	28700	27100	25600	24100
	0	-17.8	28200	26800	25400	24100	22700	21400
KESA051H8  Compressor Model 2DD3R63KE	40	4.4	73300	69700	66200	62600	59000	55400
	35	1.7	67600	64300	61000	57800	54500	51200
	30	-1.1	62000	59000	56100	53100	50100	47000
	25	-3.9	56600	53900	51200	48500	45800	43000
	20	-6.7	51500	49000	46500	44100	41600	39100
	15	-9.4	46500	44300	42100	39900	37600	35400
	10	-12.2	41800	39800	37800	35900	33900	31900
	5	-15.0	37400	35700	33900	32100	30400	28600
	0	-17.8	33400	31800	30200	28700	27100	25600
KESA075H8  Compressor Model 2DL3R78KE	40	4.4	84200	80100	76000	72000	67900	63900
	35	1.7	78000	74300	70500	66800	63100	59400
	30	-1.1	72000	68500	65100	61700	58300	54900
	25	-3.9	66100	63000	59900	56800	53700	50600
	20	-6.7	60400	57600	54800	52000	49100	46300
	15	-9.4	54900	52400	49900	47300	44800	42300
	10	-12.2	49800	47500	45200	42900	40600	38300
	5	-15.0	44900	42800	40700	38700	36700	34600
	0	-17.8	40300	38400	36600	34800	32900	31100
KESA077H8  Compressor Model 2DA3R89KE	40	4.4	105000	99800	94800	89900	85000	80200
	35	1.7	96500	91900	87400	82900	78500	74000
	30	-1.1	88600	84500	80400	76300	72200	68100
	25	-3.9	81100	77400	73600	69900	66200	62500
	20	-6.7	74000	70600	67200	63900	60500	57200
	15	-9.4	67300	64300	61200	58200	55100	52100
	10	-12.2	61000	58300	55500	52700	50000	47300
	5	-15.0	55100	52600	50100	47600	45100	42700
	0	-17.8	49500	47300	45100	42800	40500	38300
KESA080H8  Compressor Model 3DA3R10ME	40	4.4	118000	112000	107000	101000	96100	90800
	35	1.7	109000	104000	98900	94000	89200	84300
	30	-1.1	100000	95700	91300	86900	82500	78100
	25	-3.9	92000	87900	83900	80000	76000	72000
	20	-6.7	84100	80400	76900	73300	69800	66200
	15	-9.4	76500	73300	70100	67000	63800	60600
	10	-12.2	69400	66500	63700	60900	58100	55200
	5	-15.0	62600	60100	57600	55200	52600	50000
	0	-17.8	56300	54100	51900	49700	47500	45100
KESA100H8  Compressor Model 3DB3R12ME	40	4.4	132000	126000	120000	114000	107000	101000
	35	1.7	123000	117000	111000	106000	100000	94300
	30	-1.1	114000	109000	103000	98100	92900	87600
	25	-3.9	105000	100000	95500	90700	86000	81200
	20	-6.7	96600	92300	88000	83600	79300	75000
	15	-9.4	88500	84600	80700	76800	72900	69000
	10	-12.2	80700	77300	73800	70300	66700	63200
	5	-15.0	73400	70200	67100	63900	60800	57600
	0	-17.8	66300	63500	60700	57900	55000	52100
KESA120H8  Compressor Model 3DF3R15ME	40	4.4	177000	168000	160000	152000	144000	136000
	35	1.7	163000	156000	148000	141000	134000	126000
	30	-1.1	151000	144000	137000	130000	123000	117000
	25	-3.9	138000	132000	126000	120000	114000	108000
	20	-6.7	127000	121000	115000	110000	104000	99000
	15	-9.4	115000	110000	105000	101000	95600	90700
	10	-12.2	105000	100000	96000	91600	87100	82700
	5	-15.0	95000	91000	87000	83100	79100	75200
	0	-17.8	85700	82100	78600	75000	71500	67900

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# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R404A R507 High Temperature - COPELAND (cont'd)

Model KESA	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESA150H8  Compressor Model 3DS3R17ME	40	4.4	190000	181000	172000	163000	154000	146000
	35	1.7	176000	168000	160000	152000	144000	136000
	30	-1.1	163000	155000	148000	140000	133000	126000
	25	-3.9	150000	143000	136000	130000	123000	116000
	20	-6.7	137000	131000	125000	119000	113000	107000
	15	-9.4	126000	120000	115000	109000	104000	98500
	10	-12.2	114000	109000	105000	99700	94900	90000
	5	-15.0	104000	99300	95000	90600	86300	81900
	0	-17.8	93700	89700	85800	81900	78100	74200
KESA200H8  Compressor Model 4DANR18ME	40	4.4	197000	187000	177000	167000	157000	148000
	35	1.7	184000	174000	165000	155000	146000	137000
	30	-1.1	170000	161000	152000	143000	135000	127000
	25	-3.9	157000	148000	140000	132000	124000	116000
	20	-6.7	144000	136000	128000	121000	113000	106000
	15	-9.4	131000	124000	117000	110000	103000	96400
	10	-12.2	119000	112000	106000	99200	93000	87100
	5	-15.0	107000	101000	95200	89300	83600	78200
	0	-17.8	96400	90800	85300	79900	74700	69800

## R407A High Temperature - COPELAND

Model KESA	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESA050H8  Compressor Model 2DC3R53KE	40	4.4	63800	61000	58300	55600	53000	50400
	35	1.7	57500	55000	52600	50100	47700	45300
	30	-1.1	51700	49400	47200	44900	42700	40700
	25	-3.9	46300	44200	42200	40100	38200	36300
	20	-6.7	41300	39400	37500	35800	34000	32200
	15	-9.4	36700	35000	33400	31700	30200	28600
	10	-12.2	32400	31000	29500	28100	26700	25400
	5	-15.0	28700	27400	26100	24900	23700	22500
	0	-17.8	25300	24100	23100	22000	21000	20100
KESA051H8  Compressor Model 2DD3R63KE	40	4.4	71700	68600	65600	62700	59800	56900
	35	1.7	64900	62200	59500	56800	54100	51400
	30	-1.1	58700	56100	53600	51200	48700	46300
	25	-3.9	52700	50400	48200	46000	43800	41600
	20	-6.7	47200	45100	43200	41100	39200	37200
	15	-9.4	42100	40200	38500	36700	35000	33400
	10	-12.2	37400	35900	34300	32800	31300	29800
	5	-15.0	33300	31800	30500	29200	28000	26800
	0	-17.8	29500	28400	27200	26100	25200	24100
KESA075H8  Compressor Model 2DL3R78KE	40	4.4	85300	81700	78300	74900	71400	68000
	35	1.7	77800	74600	71400	68200	65100	61900
	30	-1.1	70800	67900	65000	62100	59200	56300
	25	-3.9	64400	61700	59100	56400	53800	51100
	20	-6.7	58300	56000	53600	51200	48700	46300
	15	-9.4	52700	50500	48400	46200	44000	41800
	10	-12.2	47500	45600	43600	41700	39700	37800
	5	-15.0	42500	40900	39100	37300	35600	33800
	0	-17.8	38000	36400	34800	33300	31700	30200
KESA077H8  Compressor Model 2DA3R89KE	40	4.4	105000	101000	96900	92800	88600	84400
	35	1.7	95600	91700	88000	84100	80400	76500
	30	-1.1	86400	83000	79600	76100	72700	69300
	25	-3.9	77900	74800	71700	68500	65400	62300
	20	-6.7	69900	67100	64300	61500	58700	55800
	15	-9.4	62500	60000	57500	54900	52400	49900
	10	-12.2	55600	53400	51200	48900	46600	44400
	5	-15.0	49300	47300	45300	43300	41300	39300
	0	-17.8	43600	41800	40000	38200	36400	34600

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**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R407A High Temperature - COPELAND (cont'd)**

Model KESA	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESA080H8  Compressor Model 3DA3R10ME	40	4.4	123000	118000	113000	108000	103000	98400
	35	1.7	112000	108000	103000	98700	94300	90000
	30	-1.1	102000	97900	93700	89500	85600	81600
	25	-3.9	91900	88200	84400	80700	77100	73500
	20	-6.7	82400	78900	75500	72200	68800	65600
	15	-9.4	73300	70200	67200	64200	61200	58200
	10	-12.2	65000	62200	59400	56600	53900	51300
	5	-15.0	57300	54800	52200	49700	47200	44800
	0	-17.8	50500	48300	45900	43600	41300	39100
KESA100H8  Compressor Model 3DB3R12ME	40	4.4	140000	134000	129000	123000	116000	-
	35	1.7	129000	123000	118000	112000	107000	102000
	30	-1.1	118000	112000	107000	103000	98000	93200
	25	-3.9	106000	102000	97600	93200	88800	84400
	20	-6.7	95700	91700	87800	83800	79900	75900
	15	-9.4	85700	82100	78500	74900	71300	67700
	10	-12.2	76300	73100	69900	66600	63200	60000
	5	-15.0	67800	64800	61900	58900	55800	52800
	0	-17.8	60100	57400	54700	51900	49200	46400
KESA120H8  Compressor Model 3DF3R15ME	40	4.4	176000	168000	161000	154000	147000	139000
	35	1.7	160000	153000	147000	140000	133000	127000
	30	-1.1	145000	139000	133000	127000	121000	115000
	25	-3.9	130000	125000	120000	114000	108000	103000
	20	-6.7	116000	111000	107000	102000	96900	92000
	15	-9.4	103000	99000	94600	90300	85800	81400
	10	-12.2	91300	87500	83500	79600	75600	71700
	5	-15.0	80500	77100	73500	70000	66400	62700
	0	-17.8	71000	67900	64700	61500	58100	54800
KESA150H8  Compressor Model 3DS3R17ME	40	4.4	197000	189000	181000	174000	165000	158000
	35	1.7	180000	173000	165000	159000	152000	145000
	30	-1.1	163000	157000	151000	145000	138000	132000
	25	-3.9	148000	142000	136000	131000	125000	120000
	20	-6.7	133000	128000	123000	118000	112000	108000
	15	-9.4	119000	114000	109000	105000	100000	96100
	10	-12.2	105000	101000	97200	93100	89000	85000
	5	-15.0	93400	89500	85800	82000	78200	74500
	0	-17.8	82300	78700	75200	71700	68200	64700
KESA200H8  Compressor Model 4DANR18ME	40	4.4	211000	203000	193000	183000	174000	163000
	35	1.7	192000	184000	176000	167000	158000	149000
	30	-1.1	175000	167000	160000	152000	144000	135000
	25	-3.9	158000	152000	145000	138000	131000	124000
	20	-6.7	142000	137000	131000	125000	119000	111000
	15	-9.4	128000	123000	118000	112000	107000	101000
	10	-12.2	114000	110000	105000	100000	95700	90600
	5	-15.0	101000	97400	93400	89300	85300	81000
	0	-17.8	89100	85700	82300	78800	75300	71800



# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R448A R449A High Temperature - COPELAND

Model KESA	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESA050H8  Compressor Model 2DC3R53KE	40	4.4	65000	62300	59600	57000	54400	51700
	35	1.7	59000	56500	54100	51600	49200	46800
	30	-1.1	53200	51000	48800	46600	44300	42100
	25	-3.9	47900	45900	43800	41800	39800	37900
	20	-6.7	42800	41100	39200	37300	35600	33800
	15	-9.4	38300	36600	34900	33300	31700	30200
	10	-12.2	33900	32400	31000	29500	28200	26700
	5	-15.0	30100	28700	27500	26200	25000	23800
	0	-17.8	26500	25400	24200	23200	22200	21100
KESA051H8  Compressor Model 2DD3R63KE	40	4.4	72900	69900	67000	64100	61000	-
	35	1.7	66500	63600	60900	58200	55500	-
	30	-1.1	60200	57700	55200	52800	50300	47900
	25	-3.9	54400	52100	49900	47600	45400	43300
	20	-6.7	48900	46900	44800	42800	40900	39000
	15	-9.4	43800	41900	40100	38400	36700	34900
	10	-12.2	39100	37400	35900	34300	32900	31400
	5	-15.0	34700	33400	32000	30700	29400	28200
	0	-17.8	30900	29700	28600	27500	26400	25500
KESA075H8  Compressor Model 2DL3R78KE	40	4.4	86500	83100	79700	76200	72800	69400
	35	1.7	79400	76100	73000	69900	66800	63600
	30	-1.1	72500	69700	66800	64000	61000	58200
	25	-3.9	66100	63500	60900	58300	55700	53100
	20	-6.7	60000	57700	55300	53000	50600	48300
	15	-9.4	54300	52200	50100	47900	45900	43800
	10	-12.2	48900	47000	45100	43300	41300	39400
	5	-15.0	43800	42100	40500	38700	37000	35300
	0	-17.8	39000	37400	36000	34400	32900	31300
KESA077H8  Compressor Model 2DA3R89KE	40	4.4	107000	103000	99100	95000	90800	86600
	35	1.7	97900	94200	90500	86700	82900	79100
	30	-1.1	89000	85600	82300	78800	75400	72000
	25	-3.9	80500	77500	74500	71300	68200	65100
	20	-6.7	72600	69800	67100	64300	61500	58700
	15	-9.4	65100	62600	60200	57600	55100	52600
	10	-12.2	58100	56000	53800	51500	49200	46900
	5	-15.0	51700	49700	47700	45800	43700	41700
	0	-17.8	45800	44000	42200	40500	38600	36800
KESA080H8  Compressor Model 3DA3R10ME	40	4.4	125000	120000	115000	110000	105000	-
	35	1.7	114000	110000	106000	101000	96900	92700
	30	-1.1	105000	101000	96700	92700	88700	84700
	25	-3.9	95300	91600	88000	84200	80600	76900
	20	-6.7	86100	82800	79500	76000	72700	69300
	15	-9.4	77500	74500	71300	68200	65000	61800
	10	-12.2	69300	66500	63500	60600	57600	54600
	5	-15.0	61700	59000	56300	53500	50600	47700
	0	-17.8	54600	52100	49500	46800	44000	41100
KESA100H8  Compressor Model 3DB3R12ME	40	4.4	141000	136000	130000	125000	-	-
	35	1.7	131000	126000	121000	115000	110000	-
	30	-1.1	120000	115000	110000	106000	101000	-
	25	-3.9	109000	105000	101000	96800	92400	-
	20	-6.7	99700	95900	91900	87900	83700	79600
	15	-9.4	90200	86600	83000	79100	75300	71300
	10	-12.2	81000	77800	74400	70800	67200	63400
	5	-15.0	72500	69400	66100	62800	59400	55700
	0	-17.8	64500	61600	58600	55300	51900	48400
KESA120H8  Compressor Model 3DF3R15ME	40	4.4	180000	173000	165000	159000	152000	145000
	35	1.7	164000	158000	152000	146000	138000	132000
	30	-1.1	150000	145000	138000	132000	126000	121000
	25	-3.9	135000	130000	125000	120000	114000	109000
	20	-6.7	122000	118000	112000	108000	103000	97700
	15	-9.4	109000	105000	101000	96200	91600	86900
	10	-12.2	97200	93500	89500	85400	81100	76800
	5	-15.0	86200	82800	79100	75300	71300	67200
	0	-17.8	76300	73100	69700	66000	62200	58200

table continues on next page >>>

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R448A R449A High Temperature - COPELAND (cont'd)**

Model KESA	Saturated Suction Temperature		Capacity BTU/h Ambient Temperature					
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KESA150H8  Compressor Model 3DS3R17ME	40	4.4	202000	194000	186000	179000	172000	-
	35	1.7	185000	179000	172000	164000	157000	-
	30	-1.1	170000	163000	157000	151000	145000	138000
	25	-3.9	154000	148000	142000	136000	131000	126000
	20	-6.7	139000	134000	129000	124000	119000	113000
	15	-9.4	125000	121000	115000	111000	106000	102000
	10	-12.2	111000	107000	103000	99000	94700	90500
	5	-15.0	99200	95400	91400	87600	83600	79700
	0	-17.8	87700	84000	80400	76800	73000	69200
KESA200H8  Compressor Model 4DANR18ME	40	4.4	218000	209000	200000	190000	180000	-
	35	1.7	200000	191000	183000	174000	165000	-
	30	-1.1	182000	175000	166000	159000	151000	142000
	25	-3.9	165000	158000	152000	145000	137000	130000
	20	-6.7	149000	144000	137000	131000	125000	118000
	15	-9.4	134000	129000	124000	119000	112000	107000
	10	-12.2	120000	115000	110000	106000	101000	96000
	5	-15.0	106000	102000	98300	94200	90100	85700
	0	-17.8	93500	90000	86500	83100	79600	75900

**R407C High Temperature - COPELAND**

Model KESA	Saturated Suction Temperature		Capacity BTU/h Ambient Temperature					
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KESA050H8  Compressor Model 2DC3R53KE	40	4.4	63100	60800	58700	56500	54500	52500
	35	1.7	56700	54500	52500	50500	48600	46700
	30	-1.1	50600	48700	46800	44900	43200	41500
	25	-3.9	45100	43400	41600	39800	38200	36600
	20	-6.7	40000	38400	36800	35300	33700	32200
	15	-9.4	35500	33900	32400	31000	29600	28300
	10	-12.2	31300	30000	28600	27200	26000	24900
	5	-15.0	27600	26300	25200	24000	22900	21800
	0	-17.8	24300	23200	22200	21100	20200	19200
KESA051H8  Compressor Model 2DD3R63KE	40	4.4	71200	68800	66500	64100	61900	59700
	35	1.7	64200	61900	59600	57500	55400	53400
	30	-1.1	57500	55400	53400	51400	49400	47500
	25	-3.9	51500	49500	47500	45700	43900	42200
	20	-6.7	45900	44000	42200	40600	38900	37400
	15	-9.4	40700	39000	37400	35900	34400	33100
	10	-12.2	36100	34500	33200	31800	30500	29200
	5	-15.0	31900	30600	29300	28200	27000	26000
	0	-17.8	28300	27100	26100	25100	24000	23200
KESA075H8  Compressor Model 2DL3R78KE	40	4.4	85500	82700	80000	77300	74800	72300
	35	1.7	77300	74700	72200	69700	67300	64900
	30	-1.1	69700	67300	64900	62600	60300	58200
	25	-3.9	62600	60300	58100	56100	54000	52100
	20	-6.7	56100	54000	52000	50100	48300	46600
	15	-9.4	50100	48300	46500	44700	43200	41600
	10	-12.2	44700	43100	41500	39900	38600	37200
	5	-15.0	39800	38400	37000	35800	34600	33500
	0	-17.8	35500	34200	33200	32100	31200	30400
KESA077H8  Compressor Model 2DA3R89KE	40	4.4	104000	101000	97300	94000	90800	87700
	35	1.7	94000	90900	87800	84800	81700	78800
	30	-1.1	84700	81700	78800	76000	73200	70600
	25	-3.9	75900	73200	70500	67900	65400	62900
	20	-6.7	67800	65300	62900	60500	58100	55800
	15	-9.4	60400	58100	55800	53700	51600	49400
	10	-12.2	53600	51600	49500	47500	45600	43600
	5	-15.0	47400	45600	43700	41900	40000	38300
	0	-17.8	41900	40200	38500	36800	35200	33500

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# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R407C High Temperature - COPELAND (cont'd)

Model KESA	Saturated Suction Temperature		Capacity BTU/h					Ambient Temperature	
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F	
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	
KESA080H8  Compressor Model 3DA3R10ME	40	4.4	119000	114000	110000	106000	102000	98400	
	35	1.7	109000	105000	101000	97600	93800	90100	
	30	-1.1	99100	95700	92200	88800	85400	81800	
	25	-3.9	89900	86800	83700	80500	77300	73900	
	20	-6.7	81100	78300	75400	72500	69400	66200	
	15	-9.4	72900	70300	67600	64800	61900	58800	
	10	-12.2	65200	62800	60200	57500	54700	51600	
	5	-15.0	58000	55700	53400	50600	47800	44700	
	0	-17.8	51500	49300	46800	44100	41200	38100	
KESA100H8  Compressor Model 3DB3R12ME	40	4.4	136000	131000	126000	122000	116000	111000	
	35	1.7	125000	121000	116000	111000	107000	102000	
	30	-1.1	114000	110000	106000	102000	98000	93500	
	25	-3.9	104000	101000	96800	93000	89000	84800	
	20	-6.7	94400	91100	87700	84100	80300	76200	
	15	-9.4	85200	82200	79000	75600	72000	68000	
	10	-12.2	76500	73700	70700	67400	63900	60000	
	5	-15.0	68500	65800	62800	59600	56100	52200	
	0	-17.8	61000	58300	55400	52200	48600	44700	
KESA120H8  Compressor Model 3DF3R15ME	40	4.4	171000	164000	158000	152000	147000	140000	
	35	1.7	155000	150000	145000	139000	133000	128000	
	30	-1.1	140000	136000	131000	126000	121000	115000	
	25	-3.9	127000	123000	119000	113000	109000	104000	
	20	-6.7	114000	110000	106000	102000	97800	93100	
	15	-9.4	102000	98800	95100	91100	86900	82400	
	10	-12.2	91100	88000	84400	80700	76600	72200	
	5	-15.0	80900	78000	74700	70900	66900	62400	
	0	-17.8	71700	68800	65500	61900	57700	53100	
KESA150H8  Compressor Model 3DS3R17ME	40	4.4	189000	182000	176000	170000	163000	157000	
	35	1.7	173000	166000	161000	155000	150000	144000	
	30	-1.1	157000	152000	147000	141000	136000	131000	
	25	-3.9	142000	137000	133000	128000	124000	119000	
	20	-6.7	128000	124000	120000	115000	111000	106000	
	15	-9.4	115000	111000	107000	103000	99200	94700	
	10	-12.2	103000	99500	95900	92000	87900	83400	
	5	-15.0	91600	88400	84900	81000	76900	72400	
	0	-17.8	81000	77900	74400	70500	66200	61700	
KESA200H8  Compressor Model 4DANR18ME	40	4.4	209000	199000	188000	178000	168000	159000	
	35	1.7	188000	180000	171000	162000	154000	146000	
	30	-1.1	170000	162000	155000	148000	140000	134000	
	25	-3.9	153000	147000	140000	134000	129000	123000	
	20	-6.7	137000	132000	127000	122000	118000	112000	
	15	-9.4	123000	119000	114000	110000	106000	102000	
	10	-12.2	110000	106000	103000	99400	95900	92500	
	5	-15.0	98200	95000	91700	88600	85400	82300	
	0	-17.8	86900	83800	80800	77800	74700	71400	

# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R404A R507 Low Temperature - COPELAND

Model KESA	Saturated Suction		Capacity BTU/h Ambient Temperature					
	Temperature		85°F	90°F	95°F	100°F	105°F	110°F
	° F	° C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KESA035L6  Compressor Model 2DF3F16KE	0	-17.8	36300	34500	32700	31000	29300	27500
	-5	-20.6	32500	30900	29300	27800	26200	24700
	-10	-23.3	29000	27500	26100	24700	23300	22000
	-15	-26.1	25600	24300	23100	21800	20600	19300
	-20	-28.9	22500	21400	20300	19100	18000	16900
	-25	-31.7	19700	18600	17600	16600	15600	14500
	-30	-34.4	17000	16100	15200	14200	13300	12300
	-35	-37.2	14600	13800	12900	12000	11100	10100
	-40	-40.0	12500	11600	10800	9920	9020	8080
KESA040L6  Compressor Model 2DL3F20KE	0	-17.8	40600	38600	36700	34800	32800	30900
	-5	-20.6	36500	34800	33000	31300	29500	27700
	-10	-23.3	32700	31100	29500	27900	26300	24800
	-15	-26.1	29100	27700	26200	24800	23400	21900
	-20	-28.9	25700	24400	23100	21900	20600	19300
	-25	-31.7	22600	21400	20300	19100	17900	16800
	-30	-34.4	19600	18600	17500	16500	15500	14400
	-35	-37.2	16900	16000	15000	14100	13100	12100
	-40	-40.0	14400	13500	12700	11800	10900	9990
KESA060L6  Compressor Model 2DB3F25KE	0	-17.8	49600	47300	45000	42700	40400	38000
	-5	-20.6	44700	42700	40600	38500	36400	34300
	-10	-23.3	40100	38200	36400	34500	32700	30800
	-15	-26.1	35700	34100	32400	30800	29100	27400
	-20	-28.9	31600	30100	28700	27200	25700	24200
	-25	-31.7	27800	26400	25100	23800	22500	21200
	-30	-34.4	24200	23000	21800	20600	19400	18300
	-35	-37.2	20800	19700	18600	17600	16500	15500
	-40	-40.0	17700	16700	15700	14700	13800	12800
KESA061L6  Compressor Model 3DA3F28KE	0	-17.8	53900	51600	49200	46800	44400	41900
	-5	-20.6	48800	46700	44600	42400	40200	38000
	-10	-23.3	43900	42000	40100	38200	36200	34200
	-15	-26.1	39200	37500	35800	34100	32300	30500
	-20	-28.9	34800	33300	31800	30200	28600	26900
	-25	-31.7	30700	29400	28000	26600	25100	23500
	-30	-34.4	26900	25700	24500	23100	21800	20300
	-35	-37.2	23500	22400	21200	20000	18600	17200
	-40	-40.0	20400	19300	18200	17000	15700	14300
KESA075L6  Compressor Model 3DB3F33KE	0	-17.8	61400	58700	56000	53400	50700	-
	-5	-20.6	55700	53300	50900	48500	46200	-
	-10	-23.3	50300	48100	46000	43900	41800	39700
	-15	-26.1	45100	43200	41300	39400	37500	35600
	-20	-28.9	40300	38600	36800	35100	33400	31600
	-25	-31.7	35700	34200	32600	31000	29400	27800
	-30	-34.4	31400	30000	28600	27100	25600	24100
	-35	-37.2	27400	26100	24800	23400	22000	20600
	-40	-40.0	23700	22500	21200	19900	18500	17100
KESA090L6  Compressor Model 3DF3F40KE	0	-17.8	79000	75600	72300	69000	65600	62300
	-5	-20.6	71200	68300	65300	62300	59300	56300
	-10	-23.3	63900	61300	58600	55900	53300	50600
	-15	-26.1	57000	54700	52300	49900	47500	45100
	-20	-28.9	50600	48500	46400	44200	42100	39900
	-25	-31.7	44600	42700	40800	38900	37000	35000
	-30	-34.4	39000	37300	35600	33900	32200	30400
	-35	-37.2	33900	32400	30800	29300	27600	26000
	-40	-40.0	29300	27900	26400	24900	23400	21900
KESA100L6  Compressor Model 3DS3F46KE	0	-17.8	85700	82100	78500	74800	71000	67100
	-5	-20.6	77800	74600	71300	68000	64500	61000
	-10	-23.3	70200	67400	64500	61500	58400	55100
	-15	-26.1	63100	60600	58000	55300	52500	49500
	-20	-28.9	56400	54100	51800	49400	46800	44100
	-25	-31.7	50000	48100	46000	43800	41500	39000
	-30	-34.4	44100	42400	40500	38500	36300	34000
	-35	-37.2	38600	37000	35300	33500	31500	29300
	-40	-40.0	33400	32000	30500	28700	26900	24800

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# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R404A R507 Low Temperature - COPELAND (cont'd)

Model KESA	Saturated Suction		Capacity BTU/h					Ambient Temperature	
	Temperature		85°F	90°F	95°F	100°F	105°F	110°F	
	° F	° C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	
KESA120L6  Compressor Model 4DANF47KE	0	-17.8	96700	92500	88400	84400	80300	76200	
	-5	-20.6	86700	83000	79400	75800	72200	68500	
	-10	-23.3	77600	74300	71100	67900	64700	61300	
	-15	-26.1	69300	66400	63500	60700	57700	54700	
	-20	-28.9	61600	59100	56500	53900	51200	48300	
	-25	-31.7	54600	52200	49900	47400	44900	42200	
	-30	-34.4	47900	45800	43500	41200	38800	36200	
	-35	-37.2	41600	39500	37400	35100	32700	30100	
	-40	-40.0	35500	33400	31200	29000	26500	23900	
KESA130L6  Compressor Model 4DBNF54KE	0	-17.8	105000	100000	95800	91400	86900	82300	
	-5	-20.6	94100	90100	86200	82200	78200	74100	
	-10	-23.3	84300	80800	77300	73800	70200	66500	
	-15	-26.1	75400	72300	69100	66000	62700	59300	
	-20	-28.9	67100	64300	61500	58600	55600	52500	
	-25	-31.7	59500	56900	54300	51700	48900	45900	
	-30	-34.4	52300	49900	47500	44900	42200	39300	
	-35	-37.2	45400	43100	40800	38300	35600	32700	
	-40	-40.0	38700	36400	34100	31600	28900	25900	
KESA150L6  Compressor Model 4DHNF63KE	0	-17.8	121000	115000	110000	105000	99600	94900	
	-5	-20.6	109000	104000	99200	94500	89900	85600	
	-10	-23.3	98700	94000	89400	85100	80900	76900	
	-15	-26.1	88800	84500	80300	76300	72500	68900	
	-20	-28.9	79600	75600	71700	68100	64600	61300	
	-25	-31.7	70800	67200	63600	60200	57000	54000	
	-30	-34.4	62500	59100	55800	52700	49700	47000	
	-35	-37.2	54400	51200	48200	45300	42600	40000	
	-40	-40.0	46400	43400	40600	37900	35300	33000	
KESA220L6  Compressor Model 4DJNF76KE	0	-17.8	138000	132000	126000	120000	114000	109000	
	-5	-20.6	126000	121000	115000	110000	104000	99300	
	-10	-23.3	115000	110000	104000	99400	94600	89800	
	-15	-26.1	104000	99100	94400	89700	85100	80600	
	-20	-28.9	93500	89000	84600	80300	76000	71700	
	-25	-31.7	83300	79300	75200	71200	67100	63000	
	-30	-34.4	73500	69800	66100	62300	58400	54500	
	-35	-37.2	64000	60600	57100	53600	49800	46000	
	-40	-40.0	54700	51600	48400	44900	41300	37500	

# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R407A Low Temperature - COPELAND

Model KESA	Saturated Succion		Capacity BTU/h					Ambient Temperature	
	Temperature		85°F	90°F	95°F	100°F	105°F	110°F	
	° F	° C	(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	
KESA035L8  Compressor Model 2DF3F16KE	0	-17.8	31100	29600	28100	26800	25400	24000	
	-5	-20.6	27000	25700	24500	23200	21900	20700	
	-10	-23.3	23400	22300	21100	20000	18900	17900	
	-15	-26.1	20300	19200	18200	17200	16200	15200	
	-20	-28.9	17400	16500	15500	14700	13900	12900	
	-25	-31.7	14800	14100	13200	12400	11700	10900	
	-30	-34.4	12500	11800	11000	10300	9640	8960	
	-35	-37.2	10300	9650	8990	8350	7710	7090	
	-40	-40.0	8210	7590	6980	6370	5790	5210	
KESA040L8  Compressor Model 2DL3F20KE	0	-17.8	35700	34100	32600	31000	29300	27600	
	-5	-20.6	31600	30100	28700	27200	25700	24200	
	-10	-23.3	27600	26400	25100	23700	22400	21000	
	-15	-26.1	24000	22900	21600	20500	19300	18100	
	-20	-28.9	20600	19500	18500	17400	16400	15300	
	-25	-31.7	17500	16600	15600	14700	13800	12800	
	-30	-34.4	14600	13800	12900	12200	11300	10600	
	-35	-37.2	12000	11200	10500	9880	9230	8590	
	-40	-40.0	9570	8960	8380	7840	7330	6840	
KESA060L8  Compressor Model 2DB3F25KE	0	-17.8	43900	42100	40300	38500	36500	34700	
	-5	-20.6	38600	37100	35400	33700	31900	30100	
	-10	-23.3	33900	32300	30900	29300	27700	26100	
	-15	-26.1	29600	28100	26800	25400	24000	22600	
	-20	-28.9	25600	24400	23100	21800	20600	19300	
	-25	-31.7	21900	20900	19700	18700	17600	16500	
	-30	-34.4	18600	17600	16700	15800	14800	14000	
	-35	-37.2	15400	14600	13900	13100	12300	11700	
	-40	-40.0	12400	11800	11100	10500	9990	9460	
KESA061L8  Compressor Model 3DA3F28KE	0	-17.8	49500	47300	45000	42800	40600	38400	
	-5	-20.6	43600	41600	39600	37600	35500	33400	
	-10	-23.3	38200	36400	34500	32700	30800	28900	
	-15	-26.1	33400	31700	29900	28200	26500	24700	
	-20	-28.9	28900	27300	25700	24200	22500	20900	
	-25	-31.7	24800	23300	21800	20400	18800	17200	
	-30	-34.4	20900	19500	18200	16700	15200	13800	
	-35	-37.2	17300	16100	14700	13300	11900	10400	
	-40	-40.0	13900	12600	11300	9940	8560	7140	
KESA075L8  Compressor Model 3DB3F33KE	0	-17.8	57400	55000	52700	50400	48100	-	
	-5	-20.6	50900	48700	46400	44200	42100	-	
	-10	-23.3	45000	42900	40800	38700	36600	34700	
	-15	-26.1	39700	37700	35700	33700	31700	29800	
	-20	-28.9	34800	32900	30900	29000	27100	25300	
	-25	-31.7	30100	28400	26500	24700	22900	21100	
	-30	-34.4	25700	24000	22300	20600	18800	17000	
	-35	-37.2	21400	19800	18200	16500	14800	13100	
	-40	-40.0	17200	15600	14100	12500	10800	9160	
KESA090L8  Compressor Model 3DF3F40KE	0	-17.8	75500	72200	69000	65700	62400	59000	
	-5	-20.6	66600	63600	60600	57500	54500	51500	
	-10	-23.3	58400	55700	52900	50200	47400	44500	
	-15	-26.1	50900	48400	45900	43400	40700	38100	
	-20	-28.9	44100	41800	39500	37100	34700	32200	
	-25	-31.7	37900	35700	33600	31300	29100	26800	
	-30	-34.4	32100	30000	28000	25900	23700	21500	
	-35	-37.2	26700	24700	22800	20700	18600	16500	
	-40	-40.0	21400	19500	17600	15600	13700	11600	
KESA100L8  Compressor Model 3DS3F46KE	0	-17.8	81500	77900	74300	70800	67200	63500	
	-5	-20.6	71900	68700	65400	62200	58800	55400	
	-10	-23.3	63200	60200	57200	54200	51100	48000	
	-15	-26.1	55100	52400	49700	46800	44000	41200	
	-20	-28.9	47800	45300	42700	40100	37500	34800	
	-25	-31.7	41100	38700	36300	33800	31400	28900	
	-30	-34.4	34800	32600	30300	27900	25600	23200	
	-35	-37.2	28900	26800	24600	22400	20100	17700	
	-40	-40.0	23200	21200	19100	16900	14700	12400	

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# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R407A Low Temperature - COPELAND (cont'd)

Model KESA	Saturated Suction Temperature		Capacity BTU/h Ambient Temperature					
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KESA120L8 Compressor Model 4DANF47KE	0	-17.8	89900	86000	81900	77800	73600	69400
	-5	-20.6	79600	76000	72300	68600	64800	60800
	-10	-23.3	69800	66600	63300	59900	56300	52700
	-15	-26.1	60700	57800	54700	51600	48300	44900
	-20	-28.9	52200	49500	46600	43800	40700	37700
	-25	-31.7	44200	41700	39200	36400	33700	30800
	-30	-34.4	36900	34500	32200	29700	27100	24300
	-35	-37.2	30100	28000	25800	23400	20900	18300
	-40	-40.0	24200	22100	20000	17600	15200	12700
KESA130L8 Compressor Model 4DBNF54KE	0	-17.8	97900	93600	89100	84600	80000	75300
	-5	-20.6	86700	82800	78800	74700	70500	66200
	-10	-23.3	76200	72700	69000	65200	61300	57200
	-15	-26.1	66300	63000	59600	56200	52600	48800
	-20	-28.9	56900	54000	50900	47700	44300	41000
	-25	-31.7	48300	45600	42700	39700	36600	33400
	-30	-34.4	40200	37800	35100	32300	29400	26400
	-35	-37.2	33000	30700	28100	25500	22800	19800
	-40	-40.0	26400	24200	21800	19300	16700	13900
KESA150L8 Compressor Model 4DHNF63KE	0	-17.8	110000	105000	100000	95400	90600	85700
	-5	-20.6	98300	93900	89500	85100	80600	76200
	-10	-23.3	87200	83200	79200	75200	71200	67100
	-15	-26.1	76700	73100	69500	65800	62200	58500
	-20	-28.9	66800	63600	60400	57000	53700	50300
	-25	-31.7	57600	54700	51800	48700	45700	42600
	-30	-34.4	49100	46500	43800	41000	38200	35300
	-35	-37.2	41300	38900	36300	33800	31200	28600
	-40	-40.0	34100	31900	29500	27200	24700	22200
KESA220L8 Compressor Model 4DJNF76KE	0	-17.8	137000	131000	125000	119000	112000	-
	-5	-20.6	121000	116000	110000	104000	98400	92500
	-10	-23.3	106000	101000	96100	90700	85400	79900
	-15	-26.1	92700	88100	83400	78500	73600	68700
	-20	-28.9	80400	76200	72000	67700	63200	58700
	-25	-31.7	69400	65700	62100	58200	54300	50200
	-30	-34.4	59900	56700	53600	50200	46800	43300
	-35	-37.2	51800	49100	46500	43800	41000	38000
	-40	-40.0	45300	43300	41300	39100	36900	34400

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R448A R449A Low Temperature - COPELAND**

Model KESA	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESA035L8  Compressor Model 2DF3F16KE	0	-17.8	32400	31100	29600	28100	26800	25300
	-5	-20.6	28400	27000	25700	24500	23200	21900
	-10	-23.3	24600	23400	22300	21100	20000	18900
	-15	-26.1	21300	20300	19200	18200	17200	16200
	-20	-28.9	18400	17400	16500	15500	14700	13800
	-25	-31.7	15800	14900	14100	13200	12400	11700
	-30	-34.4	13400	12600	11900	11100	10400	9680
	-35	-37.2	11200	10600	9860	9170	8490	7840
	-40	-40.0	9260	8600	7940	7300	6670	6070
KESA040L8  Compressor Model 2DL3F20KE	0	-17.8	37300	35800	34100	32600	30900	29100
	-5	-20.6	33100	31600	30100	28700	27100	25500
	-10	-23.3	29000	27700	26400	25100	23600	22300
	-15	-26.1	25200	24000	22900	21600	20400	19100
	-20	-28.9	21700	20700	19600	18500	17400	16300
	-25	-31.7	18500	17500	16600	15600	14700	13800
	-30	-34.4	15600	14800	14000	13100	12300	11400
	-35	-37.2	13000	12300	11600	10800	10100	9450
	-40	-40.0	10800	10100	9490	8880	8320	7780
KESA060L8  Compressor Model 2DB3F25KE	0	-17.8	45700	43900	42100	40200	38300	36300
	-5	-20.6	40200	38600	37000	35200	33500	31700
	-10	-23.3	35400	33800	32300	30800	29200	27500
	-15	-26.1	31000	29500	28100	26700	25200	23700
	-20	-28.9	26900	25600	24400	23000	21700	20400
	-25	-31.7	23200	22100	20800	19600	18500	17300
	-30	-34.4	19700	18600	17500	16500	15400	14400
	-35	-37.2	16300	15300	14400	13400	12500	11600
	-40	-40.0	13000	12100	11100	10300	9510	8740
KESA061L8  Compressor Model 3DA3F28KE	0	-17.8	51700	49500	47100	44900	42600	40200
	-5	-20.6	45600	43600	41500	39400	37300	35100
	-10	-23.3	40000	38100	36200	34200	32300	30300
	-15	-26.1	34900	33200	31400	29600	27800	25900
	-20	-28.9	30200	28700	27000	25300	23600	21900
	-25	-31.7	26000	24600	23100	21500	20000	18400
	-30	-34.4	22300	20900	19500	18100	16600	15100
	-35	-37.2	19000	17600	16400	15000	13500	12200
	-40	-40.0	16100	14800	13500	12300	10900	9570
KESA075L8  Compressor Model 3DB3F33KE	0	-17.8	59900	57400	55000	52700	50400	48200
	-5	-20.6	53100	50800	48500	46300	44100	42000
	-10	-23.3	47000	44800	42600	40500	38400	36300
	-15	-26.1	41500	39400	37400	35300	33300	31300
	-20	-28.9	36400	34400	32400	30500	28600	26600
	-25	-31.7	31700	29800	27900	26000	24200	22300
	-30	-34.4	27300	25500	23600	21800	20100	18300
	-35	-37.2	23100	21400	19600	17900	16100	14400
	-40	-40.0	19100	17400	15800	14000	12300	10500
KESA090L8  Compressor Model 3DF3F40KE	0	-17.8	78900	75600	72200	69000	65500	62200
	-5	-20.6	69600	66600	63600	60500	57400	54300
	-10	-23.3	61100	58400	55700	52800	49900	47000
	-15	-26.1	53400	50900	48400	45800	43100	40300
	-20	-28.9	46500	44100	41700	39300	36800	34200
	-25	-31.7	40100	37900	35600	33300	31000	28600
	-30	-34.4	34300	32200	30000	27800	25600	23300
	-35	-37.2	29000	27000	24900	22800	20600	18400
	-40	-40.0	24000	22100	20100	18000	15900	13700
KESA100L8  Compressor Model 3DS3F46KE	0	-17.8	85100	81500	77800	74200	70600	66800
	-5	-20.6	75200	71900	68600	65200	61800	58400
	-10	-23.3	66200	63100	60100	56900	53800	50600
	-15	-26.1	57900	55000	52300	49400	46400	43500
	-20	-28.9	50300	47800	45000	42400	39700	37000
	-25	-31.7	43500	41100	38500	36000	33400	30800
	-30	-34.4	37200	34900	32600	30100	27600	25100
	-35	-37.2	31400	29200	26900	24600	22200	19700
	-40	-40.0	26000	23900	21600	19400	17000	14600

*table continues on next page >>>*



**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R448A R449A Low Temperature - COPELAND (cont'd)**

Model KESA	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESA120L8  Compressor Model 4DANF47KE	0	-17.8	93600	89700	85700	81500	77200	72800
	-5	-20.6	83000	79400	75700	71800	67900	63800
	-10	-23.3	72900	69600	66200	62700	59000	55300
	-15	-26.1	63300	60400	57200	54100	50700	47100
	-20	-28.9	54500	51800	48900	45900	42800	39600
	-25	-31.7	46400	43900	41200	38400	35500	32400
	-30	-34.4	39100	36600	34100	31500	28800	25900
	-35	-37.2	32400	30200	27800	25300	22700	20000
KESA130L8  Compressor Model 4DBNF54KE	0	-17.8	102000	97700	93200	88600	83900	79100
	-5	-20.6	90400	86500	82400	78200	73800	69400
	-10	-23.3	79500	75800	72100	68300	64300	60200
	-15	-26.1	69100	65800	62400	58800	55100	51300
	-20	-28.9	59500	56500	53300	50000	46600	43100
	-25	-31.7	50700	47900	44900	41900	38600	35300
	-30	-34.4	42600	40000	37300	34300	31300	28100
	-35	-37.2	35500	33000	30300	27600	24700	21600
KESA150L8  Compressor Model 4DHNF63KE	0	-17.8	114000	109000	104000	99500	94700	89800
	-5	-20.6	102000	97700	93200	88700	84300	79900
	-10	-23.3	90700	86700	82600	78500	74400	70500
	-15	-26.1	80100	76400	72700	69000	65200	61400
	-20	-28.9	70100	66700	63300	59700	56300	52700
	-25	-31.7	60700	57500	54300	51000	47700	44300
	-30	-34.4	51800	48700	45700	42500	39300	36100
	-35	-37.2	43300	40300	37300	34200	31100	27900
KESA220L8  Compressor Model 4DJNF76KE	0	-17.8	142000	135000	130000	124000	118000	111000
	-5	-20.6	125000	120000	114000	108000	103000	97200
	-10	-23.3	110000	105000	100000	94800	89600	84200
	-15	-26.1	96900	92200	87400	82400	77500	72500
	-20	-28.9	84600	80200	75700	71100	66400	61600
	-25	-31.7	73300	69100	64800	60500	56000	51500
	-30	-34.4	62500	58600	54500	50300	46100	41800
	-35	-37.2	52100	48300	44400	40400	36300	32200
	-40	-40.0	41800	38100	34400	30600	26600	22600

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R404A R507 High Temperature - BITZER**

Model KESB	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESB030H8  Compressor Model 2EES-3	40	4.4	42300	40300	38300	36300	34300	32300
	35	1.7	38900	37000	35200	33300	31500	29600
	30	-1.1	35600	33900	32200	30500	28800	27000
	25	-3.9	32500	31000	29400	27800	26200	24700
	20	-6.7	29600	28200	26800	25300	23900	22400
	15	-9.4	26900	25600	24300	23000	21700	20300
	10	-12.2	24300	23200	22000	20800	19600	18300
	5	-15.0	21900	20900	19800	18700	17600	16500
	0	-17.8	19700	18700	17700	16800	15800	14800
KESB035H8  Compressor Model 2DES-3	40	4.4	50900	48500	46100	43700	41300	38900
	35	1.7	46700	44500	42300	40100	37900	35600
	30	-1.1	42800	40800	38700	36700	34600	32600
	25	-3.9	39100	37200	35400	33500	31600	29700
	20	-6.7	35600	33900	32200	30500	28800	27000
	15	-9.4	32300	30800	29200	27700	26100	24500
	10	-12.2	29300	27900	26500	25000	23600	22200
	5	-15.0	26400	25100	23900	22600	21300	20000
	0	-17.8	23700	22600	21400	20200	19100	17900
KESB040H8  Compressor Model 2CES-4	40	4.4	60100	57200	54400	51500	48700	45800
	35	1.7	55200	52600	50000	47300	44700	42000
	30	-1.1	50600	48200	45800	43400	41000	38500
	25	-3.9	46400	44200	41900	39700	37500	35200
	20	-6.7	42300	40300	38300	36300	34200	32100
	15	-9.4	38600	36700	34900	33000	31100	29200
	10	-12.2	35000	33300	31700	30000	28300	26500
	5	-15.0	31700	30200	28600	27100	25600	24000
	0	-17.8	28500	27200	25800	24400	23000	21600
KESB050H8  Compressor Model 4FES-5	40	4.4	66400	63300	60100	56900	53700	50500
	35	1.7	61200	58300	55400	52400	49500	46500
	30	-1.1	56200	53500	50900	48200	45400	42700
	25	-3.9	51500	49100	46600	44100	41600	39100
	20	-6.7	47000	44800	42600	40300	38000	35800
	15	-9.4	42800	40800	38700	36700	34600	32600
	10	-12.2	38700	36900	35100	33300	31400	29600
	5	-15.0	35000	33400	31700	30100	28400	26700
	0	-17.8	31400	30000	28600	27100	25600	24100
KESB060H8  Compressor Model 4EES-6	40	4.4	78600	74800	71000	67300	63500	59700
	35	1.7	72500	69000	65600	62100	58600	55000
	30	-1.1	66800	63600	60300	57100	53900	50600
	25	-3.9	61300	58300	55400	52400	49400	46500
	20	-6.7	56100	53400	50700	48000	45200	42500
	15	-9.4	51100	48700	46200	43800	41300	38800
	10	-12.2	46500	44200	42000	39800	37500	35300
	5	-15.0	42000	40000	38000	36000	34000	31900
	0	-17.8	37900	36100	34300	32400	30600	28800
KESB076H8  Compressor Model 4DES-7	40	4.4	101400	96900	92400	87900	83300	78800
	35	1.7	93200	89000	84900	80700	76500	72300
	30	-1.1	85400	81600	77800	73900	70100	66200
	25	-3.9	78100	74600	71100	67500	64000	60400
	20	-6.7	71200	68000	64800	61500	58300	55000
	15	-9.4	64700	61800	58800	55900	53000	50000
	10	-12.2	58600	55900	53300	50600	47900	45300
	5	-15.0	52900	50500	48100	45700	43300	40800
	0	-17.8	47500	45400	43200	41000	38900	36700
KESB090H8  Compressor Model 4CES-9	40	4.4	117800	112600	107500	102300	97200	92100
	35	1.7	108300	103500	98700	94000	89200	84400
	30	-1.1	99300	94900	90500	86100	81600	77200
	25	-3.9	90900	86800	82700	78600	74600	70500
	20	-6.7	82900	79200	75400	71700	67900	64200
	15	-9.4	75400	72000	68600	65100	61700	58300
	10	-12.2	68400	65300	62100	59000	55900	52700
	5	-15.0	61800	58900	56100	53300	50400	47600
	0	-17.8	55600	53000	50400	47900	45300	42700

table continues on next page >>>

# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R404A R507 High Temperature - BITZER (cont'd)

Model KESB	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESB100H8  Compressor Model 4VES-10	40	4.4	122600	116900	111300	105600	100000	94400
	35	1.7	112500	107300	102000	96800	91600	86400
	30	-1.1	103100	98200	93300	88500	83700	78900
	25	-3.9	94100	89600	85100	80700	76300	71800
	20	-6.7	85700	81600	77400	73300	69300	65200
	15	-9.4	77700	74000	70200	66400	62700	59000
	10	-12.2	70300	66800	63400	59900	56500	53100
	5	-15.0	63200	60100	57000	53900	50800	47700
	0	-17.8	56700	53800	51000	48200	45400	42600
KESB120H8  Compressor Model 4TES-12	40	4.4	160000	152900	145900	138800	131800	124800
	35	1.7	146800	140200	133700	127200	120700	114200
	30	-1.1	134300	128200	122200	116100	110100	104200
	25	-3.9	122400	116900	111300	105800	100200	94700
	20	-6.7	111300	106200	101100	96000	90900	85800
	15	-9.4	100800	96100	91400	86800	82200	77500
	10	-12.2	90900	86600	82400	78200	74000	69800
	5	-15.0	81700	77800	74000	70100	66300	62500
	0	-17.8	73000	69500	66100	62600	59200	55800
KESB150H8  Compressor Model 4PES-15	40	4.4	177900	169700	161600	153500	145500	137500
	35	1.7	163200	155600	148100	140600	133100	125700
	30	-1.1	149300	142300	135300	128400	121500	114600
	25	-3.9	136100	129700	123200	116800	110400	104100
	20	-6.7	123700	117800	111800	105900	100100	94200
	15	-9.4	112000	106500	101100	95700	90300	85000
	10	-12.2	100900	96000	91000	86100	81200	76300
	5	-15.0	90600	86100	81600	77100	72600	68200
	0	-17.8	80900	76800	72700	68700	64700	60700
KESB200H8  Compressor Model 4NES-20	40	4.4	201800	192700	183500	174400	165300	156300
	35	1.7	185800	177300	168800	160300	151900	143500
	30	-1.1	170600	162700	154800	147000	139200	131400
	25	-3.9	156100	148900	141600	134400	127100	119900
	20	-6.7	142400	135800	129100	122400	115800	109200
	15	-9.4	129500	123400	117300	111200	105100	99100
	10	-12.2	117300	111700	106100	100600	95100	89500
	5	-15.0	105800	100700	95700	90600	85600	80600
	0	-17.8	95000	90400	85900	81300	76800	72300

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R407A High Temperature - BITZER**

Model KESB	Saturated Suction Temperature		Capacity BTU/h					
			Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESB030H8  Compressor Model 2EES-3	40	4.4	42100	40500	38900	37200	35600	33900
	35	1.7	37900	36400	34800	33400	31800	30400
	30	-1.1	34000	32700	31200	29800	28500	27000
	25	-3.9	30500	29100	27900	26600	25400	24100
	20	-6.7	27100	26000	24900	23700	22600	21400
	15	-9.4	24200	23100	22000	21000	20000	18900
	10	-12.2	21400	20500	19600	18600	17700	16600
	5	-15.0	18900	18100	17300	16300	15500	14700
	0	-17.8	16700	15900	15100	14400	13500	12800
KESB035H8  Compressor Model 2DES-3	40	4.4	50900	48900	47000	45000	43100	41100
	35	1.7	45800	43900	42100	40400	38600	36700
	30	-1.1	41000	39300	37600	36100	34400	32800
	25	-3.9	36700	35200	33700	32100	30700	29100
	20	-6.7	32800	31300	30000	28600	27200	25900
	15	-9.4	29100	27900	26600	25400	24100	22900
	10	-12.2	25900	24800	23600	22500	21300	20200
	5	-15.0	22900	21800	20800	19800	18800	17800
	0	-17.8	20100	19200	18300	17400	16400	15600
KESB040H8  Compressor Model 2CES-4	40	4.4	61400	59000	56700	54300	52000	49700
	35	1.7	55100	52900	50900	48700	46500	44400
	30	-1.1	49400	47400	45400	43600	41600	39600
	25	-3.9	44200	42400	40700	38800	37000	35300
	20	-6.7	39500	37900	36200	34600	33000	31400
	15	-9.4	35200	33700	32200	30800	29200	27800
	10	-12.2	31300	30000	28600	27200	25900	24600
	5	-15.0	27700	26500	25300	24000	22900	21700
	0	-17.8	24400	23400	22300	21200	20200	19000
KESB050H8  Compressor Model 4FES-5	40	4.4	65300	62700	60100	57500	54900	52400
	35	1.7	58900	56500	54100	51700	49300	47000
	30	-1.1	52900	50800	48500	46300	44100	42000
	25	-3.9	47400	45400	43400	41400	39400	37400
	20	-6.7	42400	40600	38700	36900	35000	33300
	15	-9.4	37900	36200	34400	32800	31100	29500
	10	-12.2	33600	32100	30600	29000	27600	26000
	5	-15.0	29700	28400	26900	25600	24200	22900
	0	-17.8	26200	25000	23700	22500	21200	20100
KESB060H8  Compressor Model 4EES-6	40	4.4	80100	76900	73600	70400	67300	64100
	35	1.7	72100	69200	66100	63200	60300	57400
	30	-1.1	64800	62100	59400	56700	54000	51300
	25	-3.9	58100	55600	53100	50600	48300	45800
	20	-6.7	52000	49700	47400	45200	43000	40800
	15	-9.4	46400	44300	42200	40200	38200	36200
	10	-12.2	41300	39400	37500	35700	33800	32000
	5	-15.0	36600	34900	33200	31500	29800	28300
	0	-17.8	32300	30800	29300	27800	26300	24800
KESB076H8  Compressor Model 4DES-7	40	4.4	101000	97100	93300	89400	85600	81800
	35	1.7	91300	87700	84100	80600	77100	73600
	30	-1.1	82300	79000	75700	72500	69300	66000
	25	-3.9	73900	71000	68000	65000	62100	59100
	20	-6.7	66400	63600	60800	58100	55400	52700
	15	-9.4	59300	56800	54300	51800	49400	46900
	10	-12.2	52800	50500	48300	46100	43800	41600
	5	-15.0	46900	44800	42700	40800	38700	36700
	0	-17.8	41400	39500	37800	35900	34100	32200
KESB090H8  Compressor Model 4CES-9	40	4.4	120000	116000	111000	106000	102000	97400
	35	1.7	109000	105000	100000	96100	91900	87800
	30	-1.1	98200	94200	90400	86500	82700	78900
	25	-3.9	88400	84900	81300	77800	74300	70800
	20	-6.7	79400	76100	72900	69700	66600	63300
	15	-9.4	71100	68100	65200	62300	59400	56600
	10	-12.2	63500	60800	58100	55500	52900	50300
	5	-15.0	56600	54100	51700	49300	47000	44600
	0	-17.8	50100	47900	45800	43700	41500	39400

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**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R407A High Temperature - BITZER (cont'd)**

Model KESB	Saturated Suction Temperature		Capacity BTU/h			Ambient Temperature		
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)
KESB100H8  Compressor Model 4VES-10	40	4.4	124000	119000	114000	109000	104000	99300
	35	1.7	112000	108000	103000	98400	93800	89200
	30	-1.1	101000	96900	92700	88400	84100	80000
	25	-3.9	90900	87000	83100	79200	75400	71400
	20	-6.7	81500	77900	74400	70800	67300	63800
	15	-9.4	72800	69600	66400	63100	59900	56700
	10	-12.2	64800	61900	58900	56000	53000	50100
	5	-15.0	57400	54700	52100	49400	46800	44200
	0	-17.8	50600	48200	45800	43400	41000	38600
KESB120H8  Compressor Model 4TES-12	40	4.4	160000	154000	148000	141000	135000	129000
	35	1.7	144000	138000	132000	127000	121000	115000
	30	-1.1	129000	124000	119000	114000	108000	103000
	25	-3.9	116000	111000	106000	101000	96700	92000
	20	-6.7	103000	99000	94700	90400	86100	81800
	15	-9.4	92000	88200	84200	80400	76500	72600
	10	-12.2	81700	78200	74800	71200	67700	64300
	5	-15.0	72400	69200	66000	62900	59700	56600
	0	-17.8	63800	60900	58100	55200	52400	49600
KESB150H8  Compressor Model 4PES-15	40	4.4	181000	174000	167000	159000	152000	145000
	35	1.7	163000	156000	149000	142000	136000	129000
	30	-1.1	146000	139000	133000	127000	121000	115000
	25	-3.9	130000	124000	119000	113000	108000	102000
	20	-6.7	116000	111000	106000	100000	95400	90300
	15	-9.4	103000	98200	93600	88900	84300	79800
	10	-12.2	91000	86800	82700	78400	74300	70200
	5	-15.0	80300	76400	72700	69000	65200	61500
	0	-17.8	70500	67100	63600	60200	56900	53600
KESB200H8  Compressor Model 4NES-20	40	4.4	211000	202000	194000	185000	177000	169000
	35	1.7	189000	181000	173000	166000	158000	150000
	30	-1.1	169000	162000	155000	148000	141000	134000
	25	-3.9	151000	145000	138000	132000	125000	119000
	20	-6.7	135000	129000	123000	117000	111000	106000
	15	-9.4	120000	114000	109000	104000	98600	93400
	10	-12.2	106000	101000	96600	91800	87000	82400
	5	-15.0	93800	89400	85200	80900	76600	72400
	0	-17.8	82500	78600	74800	70900	67100	63200

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R448A R449A High Temperature - BITZER**

Model KESB	Saturated Suction Temperature		Capacity BTU/h Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESB030H8  Compressor Model 2EES-3	40	4.4	43300	41600	39800	38200	36400	-
	35	1.7	39000	37400	35900	34300	32700	31100
	30	-1.1	35200	33700	32200	30800	29300	27900
	25	-3.9	31500	30200	28900	27600	26200	24900
	20	-6.7	28200	27000	25800	24500	23400	22200
	15	-9.4	25200	24100	23000	21900	20800	19700
	10	-12.2	22500	21400	20500	19400	18400	17500
	5	-15.0	20000	19000	18100	17200	16300	15400
	0	-17.8	17600	16700	15900	15200	14400	13500
KESB035H8  Compressor Model 2DES-3	40	4.4	52300	50200	48200	46100	44100	42000
	35	1.7	47100	45200	43300	41400	39500	37600
	30	-1.1	42300	40600	38900	37100	35400	33700
	25	-3.9	38000	36400	34800	33200	31600	30100
	20	-6.7	34000	32600	31100	29600	28200	26700
	15	-9.4	30400	29000	27700	26400	25100	23800
	10	-12.2	26900	25800	24600	23400	22300	21000
	5	-15.0	23900	22900	21800	20700	19700	18600
	0	-17.8	21100	20200	19200	18300	17300	16300
KESB040H8  Compressor Model 2CES-4	40	4.4	63000	60500	58100	55600	53100	-
	35	1.7	56800	54500	52200	49900	47700	45400
	30	-1.1	51000	48900	46800	44700	42700	40700
	25	-3.9	45800	43900	41900	40000	38200	36300
	20	-6.7	41000	39200	37400	35800	34000	32300
	15	-9.4	36600	34900	33400	31800	30300	28700
	10	-12.2	32600	31200	29700	28300	26900	25500
	5	-15.0	28900	27700	26400	25200	23800	22600
	0	-17.8	25700	24500	23400	22300	21100	20000
KESB050H8  Compressor Model 4FES-5	40	4.4	68600	65900	63200	60500	57800	55200
	35	1.7	62100	59600	57100	54600	52100	49700
	30	-1.1	56100	53800	51500	49200	46900	44600
	25	-3.9	50500	48400	46300	44200	42100	40000
	20	-6.7	45300	43500	41600	39600	37800	35900
	15	-9.4	40700	38900	37200	35500	33700	32000
	10	-12.2	36400	34800	33200	31600	30100	28500
	5	-15.0	32400	31000	29500	28100	26700	25300
	0	-17.8	28800	27500	26200	25000	23600	22400
KESB060H8  Compressor Model 4EES-6	40	4.4	83300	79900	76500	73100	69800	-
	35	1.7	75200	72100	69000	65800	62800	59700
	30	-1.1	67800	64900	62100	59300	56500	53700
	25	-3.9	61000	58300	55700	53100	50600	48000
	20	-6.7	54800	52400	50000	47600	45300	43000
	15	-9.4	49100	46900	44800	42600	40500	38400
	10	-12.2	43900	41900	39900	38100	36100	34100
	5	-15.0	39100	37300	35600	33800	32000	30400
	0	-17.8	34700	33200	31500	30000	28400	26800
KESB076H8  Compressor Model 4DES-7	40	4.4	104000	99900	95900	91800	87800	83700
	35	1.7	94100	90400	86600	82900	79100	75400
	30	-1.1	85100	81500	78100	74700	71200	67800
	25	-3.9	76600	73400	70300	67200	64100	60800
	20	-6.7	68800	65900	63100	60200	57300	54500
	15	-9.4	61800	59100	56500	53900	51300	48700
	10	-12.2	55100	52700	50300	47900	45700	43300
	5	-15.0	49100	46900	44700	42600	40500	38400
	0	-17.8	43500	41500	39600	37600	35800	33800
KESB090H8  Compressor Model 4CES-9	40	4.4	124000	119000	114000	109000	104000	-
	35	1.7	112000	108000	103000	98600	94100	89800
	30	-1.1	101000	97100	93100	88900	84900	80800
	25	-3.9	91300	87600	83800	80100	76300	72700
	20	-6.7	82300	78800	75400	72000	68500	65200
	15	-9.4	73800	70700	67600	64500	61500	58300
	10	-12.2	66100	63300	60500	57700	54900	52100
	5	-15.0	59100	56500	54000	51400	48900	46400
	0	-17.8	52500	50200	47900	45700	43400	41200

Shaded Area Restriction: 20°F Max Superheat

*table continues on next page >>>*

# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R448A R449A High Temperature - BITZER (cont'd)

Model KESB	Saturated Suction Temperature		Capacity BTU/h Ambient Temperature					
	° F	° C	85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESB100H8  Compressor Model 4VES-10	40	4.4	129000	124000	119000	113000	108000	-
	35	1.7	117000	112000	107000	102000	96900	92000
	30	-1.1	105000	101000	96100	91500	87000	82600
	25	-3.9	94500	90400	86200	82100	78000	73800
	20	-6.7	84800	81000	77200	73400	69700	65900
	15	-9.4	75800	72400	68800	65500	62100	58700
	10	-12.2	67600	64400	61300	58200	55100	52100
	5	-15.0	60000	57200	54400	51600	48800	46000
	0	-17.8	53000	50400	47900	45400	43000	40500
KESB120H8  Compressor Model 4TES-12	40	4.4	165000	159000	152000	145000	139000	132000
	35	1.7	149000	142000	136000	130000	124000	118000
	30	-1.1	133000	128000	122000	117000	111000	105000
	25	-3.9	119000	114000	109000	104000	99000	94000
	20	-6.7	107000	102000	97300	92800	88100	83600
	15	-9.4	95000	90800	86500	82400	78300	74200
	10	-12.2	84300	80600	76900	73100	69400	65600
	5	-15.0	74700	71300	67900	64600	61300	57900
	0	-17.8	65900	62900	59900	56900	53900	50900
KESB150H8  Compressor Model 4PES-15	40	4.4	187000	179000	171000	163000	156000	148000
	35	1.7	168000	160000	153000	146000	139000	132000
	30	-1.1	150000	143000	137000	130000	124000	117000
	25	-3.9	134000	128000	122000	116000	110000	104000
	20	-6.7	119000	114000	108000	103000	97200	91800
	15	-9.4	106000	101000	95800	90800	85900	81000
	10	-12.2	93600	89000	84600	80200	75700	71300
	5	-15.0	82600	78500	74500	70500	66500	62600
	0	-17.8	72600	69000	65300	61800	58100	54600
KESB200H8  Compressor Model 4NES-20	40	4.4	219000	210000	201000	192000	-	-
	35	1.7	197000	188000	180000	172000	164000	-
	30	-1.1	176000	169000	161000	154000	146000	139000
	25	-3.9	157000	151000	144000	137000	130000	123000
	20	-6.7	140000	134000	128000	122000	116000	110000
	15	-9.4	125000	119000	114000	108000	103000	97100
	10	-12.2	111000	106000	101000	95800	90800	85900
	5	-15.0	98200	93600	89100	84700	80200	75700
	0	-17.8	86600	82600	78500	74600	70600	66700

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R407C High Temperature - BITZER**

Model KESB	Saturated Suction Temperature		Capacity BTU/h					Ambient Temperature	
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F	
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	
KESB030H8  Compressor Model 2EES-3	40	4.4	40800	39100	37500	35900	34300	32700	
	35	1.7	36700	35300	33800	32300	30900	29400	
	30	-1.1	33100	31700	30400	29100	27800	26500	
	25	-3.9	29600	28500	27200	26100	25000	23700	
	20	-6.7	26500	25500	24400	23400	22300	21200	
	15	-9.4	23700	22800	21700	20800	19900	18900	
	10	-12.2	21000	20200	19300	18500	17700	16800	
	5	-15.0	18600	17900	17200	16300	15600	14800	
	0	-17.8	16400	15700	15100	14400	13600	13000	
KESB035H8  Compressor Model 2DES-3	40	4.4	40800	39100	37500	35900	34300	32700	
	35	1.7	36700	35300	33800	32300	30900	29400	
	30	-1.1	33100	31700	30400	29100	27800	26500	
	25	-3.9	29600	28500	27200	26100	25000	23700	
	20	-6.7	26500	25500	24400	23400	22300	21200	
	15	-9.4	23700	22800	21700	20800	19900	18900	
	10	-12.2	21000	20200	19300	18500	17700	16800	
	5	-15.0	18600	17900	17200	16300	15600	14800	
	0	-17.8	16400	15700	15100	14400	13600	13000	
KESB040H8  Compressor Model 2CES-4	40	4.4	58700	56400	54100	51800	49500	47200	
	35	1.7	52800	50800	48700	46600	44500	42400	
	30	-1.1	47400	45600	43700	41800	39900	38100	
	25	-3.9	42500	40900	39200	37500	35900	34200	
	20	-6.7	38100	36600	35000	33600	32000	30600	
	15	-9.4	34000	32700	31300	30000	28600	27200	
	10	-12.2	30300	29000	27900	26600	25500	24200	
	5	-15.0	26800	25800	24600	23600	22600	21400	
	0	-17.8	23600	22700	21700	20800	19900	18800	
KESB050H8  Compressor Model 4FES-5	40	4.4	62500	60000	57400	54900	52300	49800	
	35	1.7	56500	54100	51800	49500	47200	44900	
	30	-1.1	50900	48800	46700	44500	42400	40400	
	25	-3.9	45700	43800	41900	40000	38200	36200	
	20	-6.7	40900	39200	37500	35800	34100	32400	
	15	-9.4	36500	34900	33500	31900	30400	28900	
	10	-12.2	32400	31100	29600	28300	26900	25600	
	5	-15.0	28700	27500	26200	25000	23700	22600	
	0	-17.8	25300	24100	23000	21800	20800	19700	
KESB060H8  Compressor Model 4EES-6	40	4.4	75700	72600	69400	66200	63000	59900	
	35	1.7	68300	65500	62600	59700	56900	54000	
	30	-1.1	61600	59000	56400	53800	51200	48600	
	25	-3.9	55300	52900	50600	48300	46000	43600	
	20	-6.7	49600	47400	45300	43300	41200	39000	
	15	-9.4	44300	42400	40500	38600	36700	34800	
	10	-12.2	39400	37600	36000	34300	32600	30900	
	5	-15.0	34800	33400	31800	30300	28800	27200	
	0	-17.8	30700	29300	28000	26600	25200	23800	
KESB076H8  Compressor Model 4DES-7	40	4.4	96300	92500	88600	84900	81000	77300	
	35	1.7	87000	83600	80100	76600	73200	69800	
	30	-1.1	78500	75400	72300	69200	66000	62900	
	25	-3.9	70600	67800	65000	62200	59400	56600	
	20	-6.7	63200	60700	58200	55600	53100	50600	
	15	-9.4	56500	54300	52000	49700	47400	45100	
	10	-12.2	50200	48300	46200	44200	42100	40000	
	5	-15.0	44500	42600	40900	39000	37100	35400	
	0	-17.8	39200	37500	35900	34200	32600	30900	
KESB090H8  Compressor Model 4CES-9	40	4.4	114000	110000	105000	101000	96300	91800	
	35	1.7	104000	99400	95400	91300	87200	83100	
	30	-1.1	93600	89900	86100	82500	78700	75100	
	25	-3.9	84300	81000	77700	74400	71000	67700	
	20	-6.7	75800	72800	69800	66800	63800	60800	
	15	-9.4	67800	65200	62500	59800	57100	54500	
	10	-12.2	60500	58100	55700	53400	51000	48600	
	5	-15.0	53800	51600	49500	47300	45100	43100	
	0	-17.8	47500	45600	43700	41700	39800	37900	

*table continues on next page >>>*



**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R407C High Temperature - BITZER (cont'd)**

Model KESB	Saturated Suction Temperature		Capacity BTU/h					Ambient Temperature	
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F	
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	
KESB100H8  Compressor Model 4VES-10	40	4.4	119000	115000	110000	105000	100000	95400	
	35	1.7	108000	104000	99200	94700	90300	85900	
	30	-1.1	97400	93400	89300	85300	81200	77200	
	25	-3.9	87700	83900	80300	76600	72900	69300	
	20	-6.7	78600	75300	72000	68600	65200	61900	
	15	-9.4	70300	67300	64300	61300	58200	55100	
	10	-12.2	62600	59900	57100	54400	51700	48900	
	5	-15.0	55400	53000	50500	48000	45700	43200	
	0	-17.8	48800	46600	44400	42200	39900	37800	
KESB120H8  Compressor Model 4TES-12	40	4.4	152000	146000	140000	134000	128000	122000	
	35	1.7	136000	131000	126000	120000	115000	109000	
	30	-1.1	123000	118000	113000	108000	103000	97900	
	25	-3.9	110000	105000	101000	96400	91900	87500	
	20	-6.7	98100	94100	90100	86000	82000	77900	
	15	-9.4	87500	83800	80200	76500	72900	69200	
	10	-12.2	77600	74400	71100	67800	64600	61300	
	5	-15.0	68600	65700	62800	59800	56900	54000	
	0	-17.8	60400	57700	55100	52500	49800	47200	
KESB150H8  Compressor Model 4PES-15	40	4.4	172000	165000	158000	151000	144000	136000	
	35	1.7	154000	148000	141000	135000	128000	122000	
	30	-1.1	138000	132000	126000	120000	115000	109000	
	25	-3.9	123000	118000	113000	107000	102000	96700	
	20	-6.7	110000	105000	100000	95500	90700	85800	
	15	-9.4	97700	93300	89000	84700	80300	75900	
	10	-12.2	86400	82600	78600	74700	70800	66900	
	5	-15.0	76100	72700	69200	65600	62100	58600	
	0	-17.8	66800	63500	60400	57300	54100	51000	
KESB200H8  Compressor Model 4NES-20	40	4.4	199000	191000	183000	175000	167000	159000	
	35	1.7	179000	171000	164000	157000	149000	142000	
	30	-1.1	160000	153000	147000	140000	133000	127000	
	25	-3.9	143000	137000	131000	125000	119000	113000	
	20	-6.7	128000	122000	117000	111000	106000	100000	
	15	-9.4	114000	109000	104000	98700	93700	88800	
	10	-12.2	101000	96300	91800	87400	82900	78400	
	5	-15.0	88900	85000	80900	77000	72900	69000	
	0	-17.8	78100	74600	70900	67400	63800	60200	

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R404A R507 Low Temperature - BITZER**

Model KESB	Saturated Suction Temperature		Capacity BTU/h					
	° F	° C	Ambient Temperature					
			85°F (29.4°C)	90°F (32.2°C)	95°F (35°C)	100°F (37.8°C)	105°F (40.6°C)	110°F (43.3°C)
KESB030L6  Compressor Model 2CES-3	0	-17.8	27500	26200	24800	23500	22100	20700
	-5	-20.6	24700	23500	22300	21100	19800	18600
	-10	-23.3	22100	21000	19900	18800	17700	16600
	-15	-26.1	19700	18700	17700	16700	15700	14700
	-20	-28.9	17400	16500	15600	14700	13800	12900
	-25	-31.7	15200	14400	13600	12800	12000	11200
	-30	-34.4	13200	12500	11800	11100	10300	9600
	-35	-37.2	11300	10700	10000	9400	8800	8100
	-40	-40.0	9500	8900	8400	7800	7200	6700
KESB031L6  Compressor Model 4FES-3	0	-17.8	29100	27600	26200	24800	23300	21800
	-5	-20.6	26100	24800	23500	22300	21000	19600
	-10	-23.3	23300	22200	21100	19900	18800	17600
	-15	-26.1	20700	19800	18700	17700	16700	15700
	-20	-28.9	18400	17500	16600	15700	14800	13900
	-25	-31.7	16100	15400	14600	13800	13000	12200
	-30	-34.4	14100	13400	12700	12000	11300	10600
	-35	-37.2	12200	11600	11000	10400	9700	9100
	-40	-40.0	10400	9900	9400	8800	8300	7700
KESB039L6  Compressor Model 4EES-4	0	-17.8	36700	34900	33100	31300	29500	27700
	-5	-20.6	32900	31300	29700	28100	26500	24900
	-10	-23.3	29400	28000	26600	25100	23700	22200
	-15	-26.1	26200	24900	23600	22300	21100	19800
	-20	-28.9	23100	22000	20900	19800	18600	17500
	-25	-31.7	20300	19300	18300	17300	16300	15300
	-30	-34.4	17700	16900	16000	15100	14200	13300
	-35	-37.2	15300	14600	13800	13000	12200	11400
	-40	-40.0	13100	12400	11700	11000	10300	9600
KESB050L6  Compressor Model 4DES-5	0	-17.8	44200	42100	40000	37900	35800	33700
	-5	-20.6	39800	37900	36000	34100	32200	30300
	-10	-23.3	35600	33900	32200	30500	28800	27100
	-15	-26.1	31700	30200	28700	27200	25700	24100
	-20	-28.9	28100	26700	25400	24000	22700	21300
	-25	-31.7	24700	23500	22300	21100	19900	18700
	-30	-34.4	21500	20500	19400	18400	17300	16200
	-35	-37.2	18600	17700	16700	15800	14900	13900
	-40	-40.0	15900	15100	14300	13400	12600	11800
KESB060L6  Compressor Model 4CES-6	0	-17.8	51100	48600	46100	43700	41300	38900
	-5	-20.6	46000	43800	41500	39300	37100	34900
	-10	-23.3	41200	39200	37200	35200	33200	31200
	-15	-26.1	36800	34900	33100	31300	29500	27800
	-20	-28.9	32600	30900	29300	27700	26100	24500
	-25	-31.7	28700	27200	25700	24300	22900	21400
	-30	-34.4	25000	23700	22400	21100	19800	18600
	-35	-37.2	21600	20400	19300	18100	17000	15900
	-40	-40.0	18400	17400	16400	15300	14300	13400
KESB080L6  Compressor Model 4TES-9	0	-17.8	66500	63200	59900	56600	53400	50200
	-5	-20.6	59600	56600	53600	50600	47700	44800
	-10	-23.3	53000	50300	47700	45000	42400	39700
	-15	-26.1	47000	44500	42100	39700	37400	35000
	-20	-28.9	41300	39100	37000	34800	32700	30600
	-25	-31.7	36000	34100	32200	30300	28400	26500
	-30	-34.4	31200	29400	27700	26000	24300	22600
	-35	-37.2	26700	25100	23600	22100	20600	19100
	-40	-40.0	22500	21100	19800	18400	17100	15700
KESB100L6  Compressor Model 4PES-12	0	-17.8	72900	69100	65300	61500	57700	53900
	-5	-20.6	65200	61700	58300	54800	51400	48000
	-10	-23.3	58000	54800	51700	48600	45500	42400
	-15	-26.1	51200	48400	45500	42700	39900	37200
	-20	-28.9	44900	42300	39800	37300	34800	32300
	-25	-31.7	39000	36700	34400	32200	29900	27700
	-30	-34.4	33600	31500	29400	27400	25400	23500
	-35	-37.2	28500	26700	24800	23000	21200	19500
	-40	-40.0	23800	22200	20500	18900	17300	15700
KESB120L6  Compressor Model 4NES-14	0	-17.8	84000	79600	75300	70900	66600	62200
	-5	-20.6	75600	71600	67700	63700	59800	55800
	-10	-23.3	67600	64000	60500	56900	53300	49800
	-15	-26.1	60100	56900	53700	50500	47300	44100
	-20	-28.9	53100	50200	47400	44500	41600	38800
	-25	-31.7	46600	44000	41400	38800	36300	33700
	-30	-34.4	40500	38100	35800	33500	31200	29000
	-35	-37.2	34800	32700	30600	28500	26500	24500
	-40	-40.0	29500	27600	25700	23900	22000	20200

# SELECTION CAPACITY DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## R407A Low Temperature - BITZER

Model KESB	Saturated Suction Temperature		Capacity BTU/h					Ambient Temperature	
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F	
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	
KESB030L8  Compressor Model 2CES-3	0	-17.8	23900	22900	21700	20700	19600	18600	
	-5	-20.6	21100	20100	19100	18200	17200	16300	
	-10	-23.3	18500	17500	16700	15900	15000	14200	
	-15	-26.1	16100	15200	14500	13800	12900	12200	
	-20	-28.9	13900	13100	12500	11800	11100	10500	
	-25	-31.7	11900	11200	10600	9980	9450	8820	
	-30	-34.4	10100	9450	8930	8400	7880	7350	
	-35	-37.2	8400	7880	7350	6930	6410	5990	
	-40	-40.0	6830	6410	5990	5570	5150	4730	
KESB031L8  Compressor Model 4FES-3	0	-17.8	24600	23300	22100	20900	19600	18500	
	-5	-20.6	21400	20300	19200	18200	17000	16000	
	-10	-23.3	18600	17600	16600	15600	14700	13800	
	-15	-26.1	16100	15100	14300	13400	12500	11700	
	-20	-28.9	13800	12900	12200	11300	10600	9870	
	-25	-31.7	11700	10900	10200	9450	8820	8190	
	-30	-34.4	9660	9030	8400	7770	7250	6620	
	-35	-37.2	7880	7350	6830	6200	5670	5150	
	-40	-40.0	6300	5780	5250	4830	4310	3890	
KESB039L8  Compressor Model 4EES-4	0	-17.8	31400	29800	28200	26800	25300	23800	
	-5	-20.6	27400	26000	24600	23300	21900	20600	
	-10	-23.3	23800	22600	21300	20100	18900	17700	
	-15	-26.1	20600	19400	18400	17200	16200	15100	
	-20	-28.9	17600	16600	15600	14700	13800	12800	
	-25	-31.7	14900	14100	13200	12300	11400	10700	
	-30	-34.4	12500	11800	10900	10200	9450	8720	
	-35	-37.2	10300	9560	8930	8190	7560	6930	
	-40	-40.0	8300	7670	7040	6410	5880	5250	
KESB050L8  Compressor Model 4DES-5	0	-17.8	38100	36300	34500	32800	31100	29400	
	-5	-20.6	33500	31900	30300	28800	27200	25600	
	-10	-23.3	29300	27900	26500	25000	23600	22300	
	-15	-26.1	25500	24300	22900	21600	20400	19200	
	-20	-28.9	22100	20800	19600	18600	17400	16400	
	-25	-31.7	18800	17700	16700	15800	14700	13800	
	-30	-34.4	15900	14900	14000	13100	12300	11300	
	-35	-37.2	13100	12300	11600	10700	9980	9140	
	-40	-40.0	10600	9870	9240	8510	7770	7140	
KESB060L8  Compressor Model 4CES-6	0	-17.8	45900	43800	41700	39700	37700	35700	
	-5	-20.6	40500	38600	36800	34900	33100	31300	
	-10	-23.3	35600	33900	32200	30600	29000	27400	
	-15	-26.1	31100	29500	28000	26600	25200	23700	
	-20	-28.9	27000	25600	24300	23000	21700	20500	
	-25	-31.7	23200	21900	20800	19600	18500	17400	
	-30	-34.4	19700	18700	17600	16600	15500	14600	
	-35	-37.2	16500	15500	14600	13800	12800	12000	
	-40	-40.0	13500	12700	11900	11100	10300	9560	
KESB080L8  Compressor Model 4TES-9	0	-17.8	61200	58400	55700	52800	50100	47400	
	-5	-20.6	53900	51300	48800	46300	43900	41400	
	-10	-23.3	47100	44800	42600	40300	38100	35900	
	-15	-26.1	41000	38900	36900	34900	32900	30900	
	-20	-28.9	35200	33300	31500	29700	27900	26100	
	-25	-31.7	29800	28200	26600	25000	23400	21800	
	-30	-34.4	25000	23500	22100	20600	19200	17700	
	-35	-37.2	20400	19100	17700	16500	15200	14000	
	-40	-40.0	16200	14900	13800	12600	11400	10400	
KESB100L8  Compressor Model 4PES-12	0	-17.8	67100	63700	60500	57100	54000	50700	
	-5	-20.6	58800	55800	52800	49900	46900	44100	
	-10	-23.3	51200	48500	45800	43200	40500	37900	
	-15	-26.1	44200	41800	39400	37000	34500	32200	
	-20	-28.9	37700	35600	33400	31200	29100	27100	
	-25	-31.7	31800	29800	27800	25900	24000	22200	
	-30	-34.4	26300	24500	22700	21000	19300	17600	
	-35	-37.2	21100	19500	18000	16400	14900	13300	
	-40	-40.0	16400	14900	13400	12100	10700	9350	
KESB120L8  Compressor Model 4NES-14	0	-17.8	78000	74200	70600	66900	63200	59600	
	-5	-20.6	68700	65300	62000	58600	55300	52100	
	-10	-23.3	60100	57000	54000	51000	48100	45200	
	-15	-26.1	52200	49500	46700	44100	41500	38900	
	-20	-28.9	44800	42400	40000	37600	35300	33000	
	-25	-31.7	38100	35900	33700	31600	29500	27400	
	-30	-34.4	31800	29800	27900	26000	24200	22300	
	-35	-37.2	25900	24200	22500	20700	19000	17400	
	-40	-40.0	20500	18900	17300	15800	14300	12800	

**SELECTION CAPACITY DATA**

**KES - SEMI-HERMETIC CONDENSING UNITS**

**R448A R449A Low Temperature - BITZER**

Model KESB	Saturated Suction Temperature		Capacity BTU/h					Ambient Temperature	
	° F	° C	85°F	90°F	95°F	100°F	105°F	110°F	
			(29.4°C)	(32.2°C)	(35°C)	(37.8°C)	(40.6°C)	(43.3°C)	
KESB030L8  Compressor Model 2CES-3	0	-17.8	25100	23900	22800	21600	20600	19400	
	-5	-20.6	22200	21100	20100	19000	18100	17000	
	-10	-23.3	19400	18500	17600	16700	15800	14900	
	-15	-26.1	17000	16200	15300	14500	13800	12900	
	-20	-28.9	14800	14100	13300	12600	11900	11100	
	-25	-31.7	12700	12100	11400	10700	10100	9450	
	-30	-34.4	10800	10300	9660	9140	8510	7980	
	-35	-37.2	9140	8610	8090	7560	7040	6510	
	-40	-40.0	7460	7040	6620	6090	5670	5250	
KESB031L8  Compressor Model 4FES-3	0	-17.8	27000	25700	24500	23200	21900	20700	
	-5	-20.6	23800	22600	21500	20400	19200	18200	
	-10	-23.3	20900	19800	18800	17700	16800	15900	
	-15	-26.1	18200	17300	16400	15400	14600	13800	
	-20	-28.9	15800	15000	14200	13300	12600	11800	
	-25	-31.7	13500	12800	12100	11400	10700	9980	
	-30	-34.4	11600	10900	10300	9660	9030	8400	
	-35	-37.2	9660	9140	8510	7980	7460	6930	
	-40	-40.0	7980	7460	6930	6410	5900	5460	
KESB039L8  Compressor Model 4EES-4	0	-17.8	33700	32100	30500	28900	27300	25800	
	-5	-20.6	29600	28200	26800	25300	23900	22600	
	-10	-23.3	25900	24700	23300	22100	20800	19500	
	-15	-26.1	22600	21400	20300	19100	18100	16900	
	-20	-28.9	19500	18500	17500	16500	15400	14500	
	-25	-31.7	16800	15900	14900	14100	13100	12300	
	-30	-34.4	14300	13400	12600	11900	11000	10300	
	-35	-37.2	12000	11200	10500	9770	9140	8400	
	-40	-40.0	9770	9140	8510	7880	7250	6720	
KESB050L8  Compressor Model 4DES-5	0	-17.8	39900	38000	36100	34300	32400	30700	
	-5	-20.6	35300	33500	31800	30100	28600	26900	
	-10	-23.3	31000	29400	27900	26500	25000	23500	
	-15	-26.1	27100	25700	24400	23000	21600	20400	
	-20	-28.9	23500	22300	21000	19800	18700	17400	
	-25	-31.7	20200	19100	18000	16900	15900	14800	
	-30	-34.4	17100	16200	15200	14300	13300	12400	
	-35	-37.2	14400	13400	12600	11800	10900	10200	
	-40	-40.0	11800	11000	10200	9450	8720	7980	
KESB060L8  Compressor Model 4CES-6	0	-17.8	47900	45700	43500	41400	39200	37100	
	-5	-20.6	42400	40400	38400	36500	34500	32700	
	-10	-23.3	37400	35600	33800	32100	30300	28700	
	-15	-26.1	32900	31200	29600	28000	26600	25000	
	-20	-28.9	28700	27200	25700	24400	23000	21600	
	-25	-31.7	24800	23500	22300	21000	19700	18600	
	-30	-34.4	21200	20100	18900	17900	16800	15800	
	-35	-37.2	18000	16900	16000	14900	14000	13000	
	-40	-40.0	14900	14000	13100	12200	11300	10600	
KESB080L8  Compressor Model 4TES-9	0	-17.8	63400	60400	57400	54500	51600	48600	
	-5	-20.6	56000	53200	50600	47900	45300	42600	
	-10	-23.3	49100	46700	44300	41900	39500	37200	
	-15	-26.1	42800	40600	38500	36300	34200	32100	
	-20	-28.9	37100	35100	33200	31300	29400	27500	
	-25	-31.7	31700	30000	28400	26700	25000	23300	
	-30	-34.4	26900	25400	23800	22400	20800	19300	
	-35	-37.2	22500	21100	19700	18400	17000	15600	
	-40	-40.0	18400	17200	16000	14700	13400	12300	
KESB100L8  Compressor Model 4PES-12	0	-17.8	69500	65900	62400	58800	55300	51900	
	-5	-20.6	61100	57900	54700	51500	48300	45300	
	-10	-23.3	53300	50500	47700	44800	42000	39200	
	-15	-26.1	46300	43800	41200	38600	36100	33600	
	-20	-28.9	39900	37600	35300	33000	30800	28600	
	-25	-31.7	34000	31900	29900	27800	25800	23800	
	-30	-34.4	28600	26800	24900	23100	21300	19500	
	-35	-37.2	23600	21900	20400	18700	17100	15500	
	-40	-40.0	19100	17500	16100	14600	13200	11800	
KESB120L8  Compressor Model 4NES-14	0	-17.8	81300	77300	73200	69100	65000	60900	
	-5	-20.6	71800	68100	64500	60900	57200	53600	
	-10	-23.3	63200	59900	56600	53300	50100	46800	
	-15	-26.1	55200	52300	49400	46400	43600	40600	
	-20	-28.9	48000	45400	42700	40100	37500	35000	
	-25	-31.7	41300	39000	36500	34200	31900	29600	
	-30	-34.4	35100	33000	30900	28900	26800	24800	
	-35	-37.2	29400	27500	25700	23800	21900	20200	
	-40	-40.0	24200	22500	20800	19100	17400	15900	

## Standard Models - COPELAND

Model KESA		Compressor Model No.	Power Supply	Compressor		Condenser Fan Motor			Unit	
				RLA	LRA	Quantity	Watts	FLA	MCA	MOP
KESA050H8-*	T3D	2DC3R53KE-TFC	208-230/3/60	22.3	120	1	400	2.1	30.0	50
	T4D	2DC3R53KE-TFD	460/3/60	10.4	60	1	400	1.1	14.1	20
	T5D	2DC3R53KE-TFE	575/3/60	7.7	49	1	400	0.9	10.5	15
KESA051H8-*	T3D	2DD3R63KE-TFC	208-230/3/60	22.3	120	1	400	2.1	30.0	50
	T4D	2DD3R63KE-TFD	460/3/60	10.5	60	1	400	1.1	14.2	20
	T5D	2DD3R63KE-TFE	575/3/60	7.9	49	1	400	0.9	10.8	15
KESA075H8-*	T3D	2DL3R78KE-TFC	208-230/3/60	31.6	169	1	400	2.1	41.6	70
	T4D	2DL3R78KE-TFD	460/3/60	13.8	85	1	400	1.1	18.4	30
	T5D	2DL3R78KE-TFE	575/3/60	13.2	67	1	400	0.9	17.4	30
KESA077H8-*	T3D	2DA3R89KE-TFC	208-230/3/60	32.0	169	2	800	4.2	44.2	70
	T4D	2DA3R89KE-TFD	460/3/60	14.1	85	2	800	2.2	19.8	30
	T5D	2DA3R89KE-TFE	575/3/60	13.3	67	2	800	1.8	18.4	30
KESA080H8-*	T3D	3DA3R10ME-TFC	208-230/3/60	41.0	215	2	800	4.2	55.5	90
	T4D	3DA3R10ME-TFD	460/3/60	20.0	106	2	800	2.2	27.2	45
	T5D	3DA3R10ME-TFE	575/3/60	16.5	84	2	800	1.8	22.4	35
KESA100H8-*	T3D	3DB3R12ME-TFC	208-230/3/60	43.6	215	2	800	4.2	58.7	100
	T4D	3DB3R12ME-TFD	460/3/60	20.0	106	2	800	2.2	27.2	45
	T5D	3DB3R12ME-TFE	575/3/60	16.5	84	2	800	1.8	22.4	35
KESA120H8-*	T3D	3DF3R15ME-TFC	208-230/3/60	48.1	275	2	1560	7.2	67.3	110
	T4D	3DF3R15ME-TFD	460/3/60	23.6	138	2	1560	3.4	32.9	50
KESA150H8-*	T3D	3DS3R17ME-TFC	208-230/3/60	59.6	275	2	1560	7.2	81.7	125
	T4D	3DS3R17ME-TFD	460/3/60	29.0	138	2	1560	3.4	39.7	60
	T5D	3DS3R17ME-TFE	575/3/60	23.6	110	2	1560	2.8	32.3	50
KESA200H8-*	T3D	4DANR18ME-TSK	208-230/3/60	63.6	308	2	1560	7.2	86.7	150
	T4D	4DANR18ME-TSK	460/3/60	31.8	154	2	1560	3.4	43.2	70
	T5D	4DANR18ME-TSE	575/3/60	24.5	135	2	1560	2.8	33.4	50
KESA035L 6/8-*	T3D	2DF3F16KE-TFC	208-230/3/60	16.0	102	1	400	2.1	22.1	35
	T4D	2DF3F16KE-TFD	460/3/60	7.9	52	1	400	1.1	11.0	15
	T5D	2DF3F16KE-TFE	575/3/60	6.7	41	1	400	0.9	9.3	15
KESA040L 6/8-*	T3D	2DL3F20KE-TFC	208-230/3/60	26.3	161	1	400	2.1	35.0	60
	T4D	2DL3F20KE-TFD	460/3/60	10.2	60	1	400	1.1	13.9	20
	T5D	2DL3F20KE-TFE	575/3/60	7.7	49	1	400	0.9	10.5	15
KESA060L 6/8-*	T3D	2DB3F25KE-TFC	208-230/3/60	28.2	161	1	400	2.1	37.4	60
	T4D	2DB3F25KE-TFD	460/3/60	13.3	80	1	400	1.1	17.7	30
	T5D	2DB3F25KE-TFE	575/3/60	9.6	63	1	400	0.9	12.9	20
KESA061L 6/8-*	T3D	3DA3F28KE-TFC	208-230/3/60	26.8	150	1	400	2.1	35.6	60
	T4D	3DA3F28KE-TFD	460/3/60	12.0	77	1	400	1.1	16.1	25
	T5D	3DA3F28KE-TFE	575/3/60	10.5	62	1	400	0.9	14.0	20
KESA075L 6/8-*	T3D	3DB3F33KE-TFC	208-230/3/60	30.7	161	1	400	2.1	40.5	70
	T4D	3DB3F33KE-TFD	460/3/60	15.7	83	1	400	1.1	20.7	35
	T5D	3DB3F33KE-TFE	575/3/60	11.0	67	1	400	0.9	14.7	25
KESA090L 6/8-*	T3D	3DF3F40KE-TFC	208-230/3/60	37.0	215	2	800	4.2	50.5	80
	T4D	3DF3F40KE-TFD	460/3/60	16.7	106	2	800	2.2	23.1	40
	T5D	3DF3F40KE-TFE	575/3/60	15.7	84	2	800	1.8	21.4	35
KESA100L 6/8-*	T3D	3DS3F46KE-TFC	208-230/3/60	41.4	215	2	800	4.2	56.0	90
	T4D	3DS3F46KE-TFD	460/3/60	18.6	106	2	800	2.2	25.5	40
	T5D	3DS3F46KE-TFE	575/3/60	16.2	84	2	800	1.8	22.1	35
KESA120L 6/8-*	T3D	4DANF47KE-TSK	208/230/3/60	45.0	220	2	1560	7.2	63.5	100
	T4D	4DANF47KE-TSK	460/3/60	22.5	110	2	1560	3.4	31.5	50
	T5D	4DANF47KE-TSE	575/3/60	17.6	106	2	1560	2.8	24.8	40
KESA130L 6/8-*	T3D	4DBNF54KE-TSK	208/230/3/60	51.3	220	2	1560	7.2	71.3	110
	T4D	4DBNF54KE-TSK	460/3/60	25.6	110	2	1560	3.4	35.4	60
	T5D	4DBNF54KE-TSE	575/3/60	17.4	106	2	1560	2.8	24.6	40
KESA150L 6/8-*	T3D	4DHNF63KE-TSK	208/230/3/60	52.6	278	2	1560	7.2	73.0	125
	T4D	4DHNF63KE-TSK	460/3/60	26.3	139	2	1560	3.4	36.3	60
	T5D	4DHNF63KE-TSE	575/3/60	20.9	113	2	1560	2.8	28.9	40
KESA220L 6/8-*	T3D	4DJNF76KE-TSK	208/230/3/60	64.3	374	2	1560	7.2	87.6	150
	T4D	4DJNF76KE-TSK	460/3/60	32.1	187	2	1560	3.4	43.5	70
	T5D	4DJNF76KE-TSE	575/3/60	29.1	135	2	1560	2.8	39.2	60

\* I = Indoor, H = Outdoor. Above listed RLA value is based on UL rating method and may differ from published compressor RLA data.

# ELECTRICAL DATA

## Models with Optional SMARTSPEED™ EC Motors or LIMITROL Ⓢ † - COPELAND

Model KESA		Compressor Model No.	Power Supply	Compressor		ECM Condenser Fan Motor			Unit	
				RLA	LRA	Quantity	Watts	FLA	MCA	MOP
KESA050H8-*	T3D	2DC3R53KE-TFC	208-230/3/60	22.3	120	1	315	3.5	31.4	50
	T4D	2DC3R53KE-TFD	460/3/60	10.4	60	1	315	1.8	14.8	20
	T5D	2DC3R53KE-TFE	575/3/60	7.7	49	1	315	1.4	11.0	15
KESA051H8-*	T3D	2DD3R63KE-TFC	208-230/3/60	22.3	120	1	315	3.5	31.4	50
	T4D	2DD3R63KE-TFD	460/3/60	10.5	60	1	315	1.8	14.9	25
	T5D	2DD3R63KE-TFE	575/3/60	7.9	49	1	315	1.4	11.3	15
KESA075H8-*	T3D	2DL3R78KE-TFC	208-230/3/60	31.6	169	1	315	3.5	43.0	70
	T4D	2DL3R78KE-TFD	460/3/60	13.8	85	1	315	1.8	19.1	30
	T5D	2DL3R78KE-TFE	575/3/60	13.2	67	1	315	1.4	17.9	30
KESA077H8-*	T3D	2DA3R89KE-TFC	208-230/3/60	32.0	169	2	630	7.0	47.0	70
	T4D	2DA3R89KE-TFD	460/3/60	14.1	85	2	630	3.6	21.2	35
	T5D	2DA3R89KE-TFE	575/3/60	13.3	67	2	630	2.8	19.4	30
KESA080H8-*	T3D	3DA3R10ME-TFC	208-230/3/60	41.0	215	2	630	7.0	58.3	90
	T4D	3DA3R10ME-TFD	460/3/60	20.0	106	2	630	3.6	28.6	45
	T5D	3DA3R10ME-TFE	575/3/60	16.5	84	2	630	2.8	23.4	35
KESA100H8-*	T3D	3DB3R12ME-TFC	208-230/3/60	43.6	215	2	630	7.0	61.5	100
	T4D	3DB3R12ME-TFD	460/3/60	20.0	106	2	630	3.6	28.6	45
	T5D	3DB3R12ME-TFE	575/3/60	16.5	84	2	630	2.8	23.4	35
KESA120H8-*	T3D	3DF3R15ME-TFC	208-230/3/60	48.1	275	2	1180	10.6	70.7	110
	T4D	3DF3R15ME-TFD	460/3/60	23.6	138	2	1180	5.4	34.9	50
KESA150H8-*	T3D	3DS3R17ME-TFC	208-230/3/60	59.6	275	2	1180	10.6	85.1	125
	T4D	3DS3R17ME-TFD	460/3/60	29.0	138	2	1180	5.4	41.7	70
	T5D	3DS3R17ME-TFE	575/3/60	23.6	110	2	1180	4.2	33.7	50
KESA200H8-*	T3D	4DANR18ME-TSK	208-230/3/60	63.6	308	2	1180	10.6	90.1	150
	T4D	4DANR18ME-TSK	460/3/60	31.8	154	2	1180	5.4	45.2	70
	T5D	4DANR18ME-TSE	575/3/60	24.5	135	2	1180	4.2	34.8	50
KESA035L 6/8-*	T3D	2DF3F16KE-TFC	208-230/3/60	16.8	102	1	315	3.5	24.5	40
	T4D	2DF3F16KE-TFD	460/3/60	8.1	52	1	315	1.8	11.9	20
	T5D	2DF3F16KE-TFE	575/3/60	6.7	41	1	315	1.4	9.8	15
KESA040L 6/8-*	T3D	2DL3F20KE-TFC	208-230/3/60	26.3	161	1	315	3.5	36.4	60
	T4D	2DL3F20KE-TFD	460/3/60	10.2	60	1	315	1.8	14.6	20
	T5D	2DL3F20KE-TFE	575/3/60	7.7	49	1	315	1.4	11.0	15
KESA060L 6/8-*	T3D	2DB3F25KE-TFC	208-230/3/60	28.2	161	1	315	3.5	38.8	60
	T4D	2DB3F25KE-TFD	460/3/60	13.3	80	1	315	1.8	18.4	30
	T5D	2DB3F25KE-TFE	575/3/60	9.6	63	1	315	1.4	13.4	20
KESA061L 6/8-*	T3D	3DA3F28KE-TFC	208-230/3/60	26.8	150	1	315	3.5	37.0	60
	T4D	3DA3F28KE-TFD	460/3/60	12.0	77	1	315	1.8	16.8	25
	T5D	3DA3F28KE-TFE	575/3/60	10.5	62	1	315	1.4	14.5	25
KESA075L 6/8-*	T3D	3DB3F33KE-TFC	208-230/3/60	30.7	161	1	315	3.5	41.9	70
	T4D	3DB3F33KE-TFD	460/3/60	15.7	83	1	315	1.8	21.4	35
	T5D	3DB3F33KE-TFE	575/3/60	11.0	67	1	315	1.4	15.2	25
KESA090L 6/8-*	T3D	3DF3F40KE-TFC	208-230/3/60	37.0	215	2	630	7	53.3	90
	T4D	3DF3F40KE-TFD	460/3/60	16.7	106	2	630	3.5	24.4	40
	T5D	3DF3F40KE-TFE	575/3/60	15.7	84	2	630	2.8	22.4	35
KESA100L 6/8-*	T3D	3DS3F46KE-TFC	208-230/3/60	41.4	215	2	630	7	58.8	100
	T4D	3DS3F46KE-TFD	460/3/60	18.6	106	2	630	3.5	26.8	45
	T5D	3DS3F46KE-TFE	575/3/60	16.2	84	2	630	2.8	23.1	35
KESA120L 6/8-*	T3D	4DANF47KE-TSK	208/230/3/60	45.0	220	2	1180	10.6	66.9	100
	T4D	4DANF47KE-TSK	460/3/60	22.5	110	2	1180	5.4	33.5	50
	T5D	4DANF47KE-TSE	575/3/60	17.6	106	2	1180	4.2	26.2	40
KESA130L 6/8-*	T3D	4DBNF54KE-TSK	208/230/3/60	51.3	220	2	1180	10.6	74.7	125
	T4D	4DBNF54KE-TSK	460/3/60	25.6	110	2	1180	5.4	37.4	60
	T5D	4DBNF54KE-TSE	575/3/60	17.4	106	2	1180	4.2	26.0	40
KESA150L 6/8-*	T3D	4DHNF63KE-TSK	208/230/3/60	52.6	278	2	1180	10.6	76.4	125
	T4D	4DHNF63KE-TSK	460/3/60	26.3	139	2	1180	5.4	38.3	60
	T5D	4DHNF63KE-TSE	575/3/60	20.9	113	2	1180	4.2	30.3	50
KESA220L 6/8-*	T3D	4DJNF76KE-TSK	208/230/3/60	64.3	374	2	1180	10.6	91.0	150
	T4D	4DJNF76KE-TSK	460/3/60	32.1	187	2	1180	5.4	45.5	70
	T5D	4DJNF76KE-TSE	575/3/60	29.1	135	2	1180	4.2	40.6	60

\* I = Indoor, H = Outdoor.

Above listed RLA value is based on UL rating method and may differ from published compressor RLA data.

460& 575V models use a 230V EC motor with transformer

† LIMITROL Ⓢ available only on units 5HP and above.

## Standard Models - BITZER

Model KESB	Compressor Model No.	Power Supply	Compressor		Condenser Fan Motor			Unit		
			RLA	LRA	Quantity	Watts	FLA	MCA	MOP	
KESB030H8-*	S2D	2EES-3-2EU-Y	208-230/1/60	28.8	109	1	400	2.1	38.1	60
	T3D	2EES-3-2DU-Y	208-230/3/60	17.3	97	1	400	2.1	23.7	40
	T4D	2EES-3-4SU-Y	460/3/60	7.3	39.5	1	400	1.1	10.2	15
	T5D	2EES-3-5SU-Y	575/3/60	5.9	28.5	1	400	0.9	8.3	15
KESB035H8-*	S2D	2DES-3-2EU-Y	208-230/1/60	29.6	113	1	400	2.1	39.1	60
	T3D	2DES-3-2DU-Y	208-230/3/60	18.8	97	1	400	2.1	25.6	40
	T4D	2DES-3-4SU-Y	460/3/60	8.1	39.5	1	400	1.1	11.2	15
	T5D	2DES-3-5SU-Y	575/3/60	5.7	28.5	1	400	0.9	8.0	15
KESB040H8-*	T3D	2CES-4-2DU-Y	208-230/3/60	22.4	115.5	1	400	2.1	30.1	50
	T4D	2CES-4-4SU-Y	460/3/60	9.1	47.5	1	400	1.1	12.5	20
	T5D	2CES-4-5SU-Y	575/3/60	7.3	34	1	400	0.9	10.0	15
KESB050H8-*	T3D	4FES-5-2DU-1Y	208-230/3/60	29.9	163	1	400	2.1	39.5	60
	T4D	4FES-5-4SU-1Y	460/3/60	14.6	66.5	1	400	1.1	19.4	30
	T5D	4FES-5-5SU-1Y	575/3/60	9.7	48	1	400	0.9	13.0	20
KESB060H8-*	T3D	4EES-6-2DU-1Y	208-230/3/60	34.6	163	1	400	2.1	45.4	70
	T4D	4EES-6-4SU-1Y	460/3/60	14.9	66.5	1	400	1.1	19.7	30
	T5D	4EES-6-5SU-1Y	575/3/60	10.5	48	1	400	0.9	14.0	20
KESB076H8-*	T3D	4DES-7-2DU-1Y	208-230/3/60	38.1	215	2	800	4.2	51.8	80
	T4D	4DES-7-4SU-1Y	460/3/60	17.0	88	2	800	2.2	23.5	40
	T5D	4DES-7-5SU-1Y	575/3/60	12.3	63.5	2	800	1.8	17.2	25
KESB090H8-*	T3D	4CES-9-2DU-1Y	208-230/3/60	42.1	215	2	800	4.2	56.8	90
	T4D	4CES-9-4SU-1Y	460/3/60	19.0	88	2	800	2.2	26.0	40
	T5D	4CES-9-5SU-1Y	575/3/60	15.2	63.5	2	800	1.8	20.8	35
KESB100H8-*	T3D	4VES-10-2NU-1Y	208-230/3/60	47.4	222	2	800	4.2	63.5	110
	T4D	4VES-10-2NU-1Y	460/3/60	21.4	111	2	800	2.2	29.0	50
	T5D	4VES-10-5PU-1Y	575/3/60	17.1	89	2	800	1.8	23.2	40
KESB120H8-*	T3D	4TES-12-2NU-1Y	208-230/3/60	52.1	252	2	1560	7.2	72.3	110
	T4D	4TES-12-2NU-1Y	460/3/60	23.6	126	2	1560	3.4	32.9	50
	T5D	4TES-12-5PU-1Y	575/3/60	18.9	101	2	1560	2.8	26.4	45
KESB150H8-*	T3D	4PES-15-2NU-1Y	208-230/3/60	60.0	294	2	1560	7.2	82.2	125
	T4D	4PES-15-2NU-1Y	460/3/60	27.1	147	2	1560	3.4	37.3	60
	T5D	4PES-15-5PU-1Y	575/3/60	21.8	117	2	1560	2.8	30.1	50
KESB200H8-*	T3D	4NES-20-2NU-1Y	208-230/3/60	71.1	352	2	1560	7.2	96.1	150
	T4D	4NES-20-2NU-1Y	460/3/60	32.1	176	2	1560	3.4	43.5	70
	T5D	4NES-20-5PU-1Y	575/3/60	26.3	140	2	1560	2.8	35.7	60
KESB030L 6/8-*	T3D	2CES-3-2DU-Y	208-230/3/60	16.5	97	1	400	2.1	22.7	35
	T4D	2CES-3-4SU-Y	460/3/60	7.0	39.5	1	400	1.1	9.9	15
	T5D	2CES-3-5SU-Y	575/3/60	5.6	28.5	1	400	0.9	7.9	15
KESB031L 6/8-*	T3D	4FES-3-2DU-1Y	208-230/3/60	22.2	115.5	1	400	2.1	29.9	50
	T4D	4FES-3-4SU-1Y	460/3/60	9.0	47.5	1	400	1.1	12.4	20
	T5D	4FES-3-5SU-1Y	575/3/60	6.9	34	1	400	0.9	9.5	15
KESB039L 6/8-*	T3D	4EES-4-2DU-1Y	208-230/3/60	24.8	142	1	400	2.1	33.1	50
	T4D	4EES-4-4SU-1Y	460/3/60	10.3	58	1	400	1.1	14.0	20
	T5D	4EES-4-5SU-1Y	575/3/60	8.3	41.5	1	400	0.9	11.3	15
KESB050L 6/8-*	T3D	4DES-5-2DU-1Y	208-230/3/60	25.4	163	1	400	2.1	33.9	50
	T4D	4DES-5-4SU-1Y	460/3/60	12.0	66.5	1	400	1.1	16.1	25
	T5D	4DES-5-5SU-1Y	575/3/60	10.0	48	1	400	0.9	13.4	20
KESB060L 6/8-*	T3D	4CES-6-2DU-1Y	208-230/3/60	30.8	215	1	400	2.1	40.6	70
	T4D	4CES-6-4SU-1Y	460/3/60	15.8	88	1	400	1.1	20.9	35
	T5D	4CES-6-5SU-1Y	575/3/60	12.5	63.5	1	400	0.9	16.5	25
KESB080L 6/8-*	T3D	4TES-9-2NU-1Y	208-230/3/60	34.8	180	2	800	4.2	47.7	80
	T4D	4TES-9-2NU-1Y	460/3/60	15.7	90	2	800	2.2	21.8	35
	T5D	4TES-9-5PU-1Y	575/3/60	13.6	72	2	800	1.8	18.8	30
KESB100L 6/8-*	T3D	4PES-12-2NU-1Y	208-230/3/60	42.7	222	2	800	4.2	57.6	100
	T4D	4PES-12-2NU-1Y	460/3/60	19.3	111	2	800	2.2	26.3	45
	T5D	4PES-12-5PU-1Y	575/3/60	16.0	89	2	800	1.8	21.8	35
KESB120L 6/8-*	T3D	4NES-14-2NU-1Y	208-230/3/60	49.0	252	2	800	4.2	65.5	110
	T4D	4NES-14-2NU-1Y	460/3/60	22.1	126	2	800	2.2	29.8	50
	T5D	4NES-14-5PU-1Y	575/3/60	17.7	101	2	800	1.8	23.9	40

\* I = Indoor, H = Outdoor. Above listed RLA value is based on UL rating method and may differ from published compressor RLA data.


Models with Optional SMARTSPEED™ EC Motors or LIMITROL  † - BITZER

Model KESB		Compressor Model No.	Power Supply	Compressor		Condenser Fan Motor			Unit	
				RLA	LRA	Quantity	Watts	FLA	MCA	MOP
KESB030H8-*	S2D	2EES-3-2EU-Y	208-230/1/60	28.8	109	1	400	3.5	38.1	60
	T3D	2EES-3-2DU-Y	208-230/3/60	17.3	97	1	400	3.5	23.7	40
	T4D	2EES-3-4SU-Y	460/3/60	7.3	39.5	1	400	1.8	10.2	15
	T5D	2EES-3-5SU-Y	575/3/60	5.9	28.5	1	400	1.4	8.3	15
KESB035H8-*	S2D	2DES-3-2EU-Y	208-230/1/60	29.6	113	1	400	3.5	39.1	60
	T3D	2DES-3-2DU-Y	208-230/3/60	18.8	97	1	400	3.5	25.6	40
	T4D	2DES-3-4SU-Y	460/3/60	8.1	39.5	1	400	1.8	11.2	15
	T5D	2DES-3-5SU-Y	575/3/60	5.7	28.5	1	400	1.4	8.0	15
KESB040H8-*	T3D	2CES-4-2DU-Y	208-230/3/60	22.4	115.5	1	400	3.5	30.1	50
	T4D	2CES-4-4SU-Y	460/3/60	9.1	47.5	1	400	1.8	12.5	20
	T5D	2CES-4-5SU-Y	575/3/60	7.3	34	1	400	1.4	10.0	15
KESB050H8-*	T3D	4FES-5-2DU-1Y	208-230/3/60	29.9	163	1	400	3.5	39.5	60
	T4D	4FES-5-4SU-1Y	460/3/60	14.6	66.5	1	400	1.8	19.4	30
	T5D	4FES-5-5SU-1Y	575/3/60	9.7	48	1	400	1.4	13.0	20
KESB060H8-*	T3D	4EES-6-2DU-1Y	208-230/3/60	34.6	163	1	400	3.5	45.4	70
	T4D	4EES-6-4SU-1Y	460/3/60	14.9	66.5	1	400	1.8	19.7	30
	T5D	4EES-6-5SU-1Y	575/3/60	10.5	48	1	400	1.4	14.0	20
KESB076H8-*	T3D	4DES-7-2DU-1Y	208-230/3/60	38.1	215	2	800	7.0	51.8	80
	T4D	4DES-7-4SU-1Y	460/3/60	17.0	88	2	800	3.6	23.5	40
	T5D	4DES-7-5SU-1Y	575/3/60	12.3	63.5	2	800	2.8	17.2	25
KESB090H8-*	T3D	4CES-9-2DU-1Y	208-230/3/60	42.1	215	2	800	7.0	56.8	90
	T4D	4CES-9-4SU-1Y	460/3/60	19.0	88	2	800	3.6	26.0	40
	T5D	4CES-9-5SU-1Y	575/3/60	15.2	63.5	2	800	2.8	20.8	35
KESB100H8-*	T3D	4VES-10-2NU-1Y	208-230/3/60	47.4	222	2	800	7.0	63.5	110
	T4D	4VES-10-2NU-1Y	460/3/60	21.4	111	2	800	3.6	29.0	50
	T5D	4VES-10-5PU-1Y	575/3/60	17.1	89	2	800	2.8	23.2	40
KESB120H8-*	T3D	4TES-12-2NU-1Y	208-230/3/60	52.1	252	2	1560	10.6	72.3	110
	T4D	4TES-12-2NU-1Y	460/3/60	23.6	126	2	1560	5.4	32.9	50
	T5D	4TES-12-5PU-1Y	575/3/60	18.9	101	2	1560	4.2	26.4	45
KESB150H8-*	T3D	4PES-15-2NU-1Y	208-230/3/60	60.0	294	2	1560	10.6	82.2	125
	T4D	4PES-15-2NU-1Y	460/3/60	27.1	147	2	1560	5.4	37.3	60
	T5D	4PES-15-5PU-1Y	575/3/60	21.8	117	2	1560	4.2	30.1	50
KESB200H8-*	T3D	4NES-20-2NU-1Y	208-230/3/60	71.1	352	2	1560	10.6	96.1	150
	T4D	4NES-20-2NU-1Y	460/3/60	32.1	176	2	1560	5.4	43.5	70
	T5D	4NES-20-5PU-1Y	575/3/60	26.3	140	2	1560	4.2	35.7	60
KESB030L 6/8-*	T3D	2CES-3-2DU-Y	208-230/3/60	16.5	97	1	400	3.5	22.7	35
	T4D	2CES-3-4SU-Y	460/3/60	7.0	39.5	1	400	1.8	9.9	15
	T5D	2CES-3-5SU-Y	575/3/60	5.6	28.5	1	400	1.4	7.9	15
KESB031L 6/8-*	T3D	4FES-3-2DU-1Y	208-230/3/60	22.2	115.5	1	400	3.5	29.9	50
	T4D	4FES-3-4SU-1Y	460/3/60	9.0	47.5	1	400	1.8	12.4	20
	T5D	4FES-3-5SU-1Y	575/3/60	6.9	34	1	400	1.4	9.5	15
KESB039L 6/8-*	T3D	4EES-4-2DU-1Y	208-230/3/60	24.8	142	1	400	3.5	33.1	50
	T4D	4EES-4-4SU-1Y	460/3/60	10.3	58	1	400	1.8	14.0	20
	T5D	4EES-4-5SU-1Y	575/3/60	8.3	41.5	1	400	1.4	11.3	15
KESB050L 6/8-*	T3D	4DES-5-2DU-1Y	208-230/3/60	25.4	163	1	400	3.5	33.9	50
	T4D	4DES-5-4SU-1Y	460/3/60	12.0	66.5	1	400	1.8	16.1	25
	T5D	4DES-5-5SU-1Y	575/3/60	10.0	48	1	400	1.4	13.4	20
KESB060L 6/8-*	T3D	4CES-6-2DU-1Y	208-230/3/60	30.8	215	1	400	3.5	40.6	70
	T4D	4CES-6-4SU-1Y	460/3/60	15.8	88	1	400	1.8	20.9	35
	T5D	4CES-6-5SU-1Y	575/3/60	12.5	63.5	1	400	1.4	16.5	25
KESB080L 6/8-*	T3D	4TES-9-2NU-1Y	208-230/3/60	34.8	180	2	800	7.0	47.7	80
	T4D	4TES-9-2NU-1Y	460/3/60	15.7	90	2	800	3.6	21.8	35
	T5D	4TES-9-5PU-1Y	575/3/60	13.6	72	2	800	2.8	18.8	30
KESB100L 6/8-*	T3D	4PES-12-2NU-1Y	208-230/3/60	42.7	222	2	800	7.0	57.6	100
	T4D	4PES-12-2NU-1Y	460/3/60	19.3	111	2	800	3.6	26.3	45
	T5D	4PES-12-5PU-1Y	575/3/60	16.0	89	2	800	2.8	21.8	35
KESB120L 6/8-*	T3D	4NES-14-2NU-1Y	208-230/3/60	49.0	252	2	800	7.0	65.5	110
	T4D	4NES-14-2NU-1Y	460/3/60	22.1	126	2	800	3.6	29.8	50
	T5D	4NES-14-5PU-1Y	575/3/60	17.7	101	2	800	2.8	23.9	40

\* I = Indoor, H = Outdoor.

Above listed RLA value is based on UL rating method and may differ from published compressor RLA data.

460 &amp; 575V models use a 230V EC motor with transformer

† LIMITROL  available only on units 5HP and above.



**Annual Walk-In Energy Factor Ratings - COPELAND - High/Medium Temperature**

If a numerical value is listed in the table below, the following statement applies to that corresponding model: "This refrigeration system is designed and certified for use in walk-in cooler applications."

Unit Model KESA	Power Supply	Outdoor Models				Indoor Models			
		R404A	R407A	R448A	R407C	R404A	R407A	R448A	R407C
		R507		R449A		R507		R449A	
050H8- * T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
050H8- * T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
050H8- * T5D	575/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
051H8- * T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
051H8- * T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
051H8- * T5D	575/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
075H8- * T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
075H8- * T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
075H8- * T5D	575/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
077H8- * T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
077H8- * T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
077H8- * T5D	575/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
080H8- * T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
080H8- * T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
080H8- * T5D	575/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
100H8- * T3D	208-230/3/60	7.60	7.60	7.60	7.60	-	5.61	5.61	5.61
100H8- * T4D	460/3/60	7.60	7.60	7.60	7.60	-	5.61	5.61	5.61
100H8- * T5D	575/3/60	7.60	7.60	7.60	7.60	-	5.61	5.61	5.61
120H8- *T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
120H8- *T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
120H8- *T5D	575/3/60	-	-	-	-	-	-	-	-
150H8- *T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
150H8- *T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
150H8- *T5D	575/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
200H8- *T3D	208-230/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
200H8- *T4D	460/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61
200H8- *T5D	575/3/60	7.60	7.60	7.60	7.60	5.61	5.61	5.61	5.61

- = Non-compliant model

**Annual Walk-In Energy Factor Ratings - COPELAND - Low Temperature**

If a numerical value is listed in the table below, the following statement applies to that corresponding model: "This refrigeration system is designed and certified for use in walk-in freezer applications."

Unit Model KESA	Power Supply	Outdoor Models			Indoor Models		
		R404A	R407A	R448A	R404A	R407A	R448A
		R507		R449A	R507		R449A
035L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.40	2.40	2.40
035L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.40	2.40	2.40
035L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.40	2.40	2.40
040L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.40	2.40	2.40
040L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.40	2.40	2.40
040L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.40	2.40	2.40
060L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.40	2.40	2.40
060L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.40	2.40	2.40
060L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.40	-	2.40
061L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.40	2.40	2.40
061L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.40	2.40	2.40
061L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.40	2.40	2.40
075L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.40	2.40	2.40
075L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.40	2.40	2.40
075L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.40	2.40	2.40
090L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.40	2.40	2.40
090L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.40	2.40	2.40
090L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.40	2.40	2.40
100L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.40	2.40	2.40
100L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.40	2.40	2.40
100L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.40	2.40	2.40
120L 6/8- *T3D	208/230/3/60	3.15	3.15	3.15	-	-	-
120L 6/8- *T4D	460/3/60	3.15	3.15	3.15	-	-	-
120L 6/8- *T5D	575/3/60	3.15	3.15	3.15	-	-	-
130L 6/8- *T3D	208/230/3/60	3.15	3.15	3.15	-	-	-
130L 6/8- *T4D	460/3/60	3.15	3.15	3.15	-	-	-
130L 6/8- *T5D	575/3/60	3.15	3.15	3.15	-	-	-
150L 6/8- *T3D	208/230/3/60	3.15	3.15	3.15	-	-	-
150L 6/8- *T4D	460/3/60	3.15	3.15	3.15	-	-	-
150L 6/8- *T5D	575/3/60	3.15	3.15	3.15	-	-	-
220L 6/8- *T3D	208/230/3/60	3.15	3.15	3.15	-	-	-
220L 6/8- *T4D	460/3/60	3.15	3.15	3.15	-	-	-
220L 6/8- *T5D	575/3/60	3.15	3.15	3.15	-	-	-

- = Non-compliant model

**Annual Walk-In Energy Factor Ratings - BITZER - High/Medium Temperature**

If a numerical value is listed in the table below, the following statement applies to that corresponding model: "This refrigeration system is designed and certified for use in walk-in cooler applications."

Unit Model KESB	Power Supply	Outdoor Models				Indoor Models			
		R404A	R407A	R448A	R407C	R404A	R407A	R448A	R407C
		R507		R449A		R507		R449A	
030H8- * S2D	208-230/1/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
030H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
030H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
030H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
035H8- * S2D	208-230/1/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
035H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
035H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
035H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
040H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
040H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
040H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
050H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
050H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
050H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
060H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
060H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
060H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
076H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
076H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
076H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
090H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
090H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
090H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
100H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
100H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
100H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
120H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
120H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
120H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
150H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
150H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
150H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
200H8- * T3D	208-230/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
200H8- * T4D	460/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61
200H8- * T5D	575/3/60	7.61	7.61	7.61	7.61	5.61	5.61	5.61	5.61

- = Non-compliant model

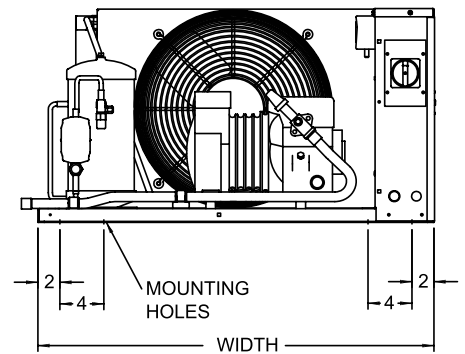
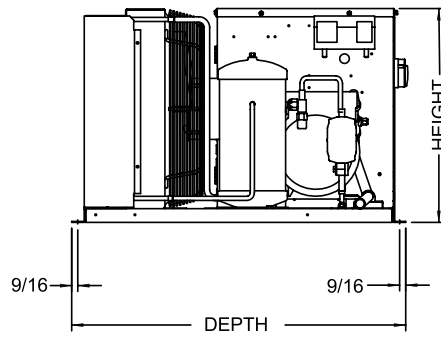
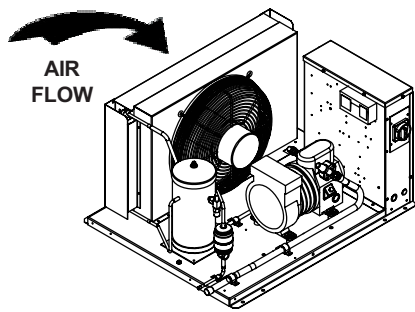
**Annual Walk-In Energy Factor Ratings - BITZER - Low Temperature**

If a numerical value is listed in the table below, the following statement applies to that corresponding model: "This refrigeration system is designed and certified for use in walk-in freezer applications."

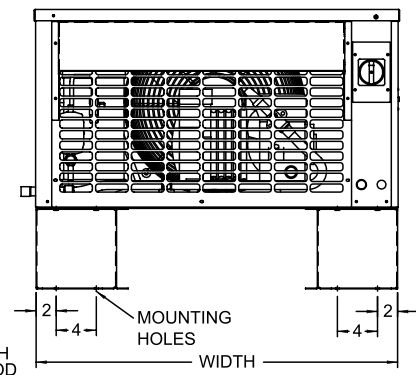
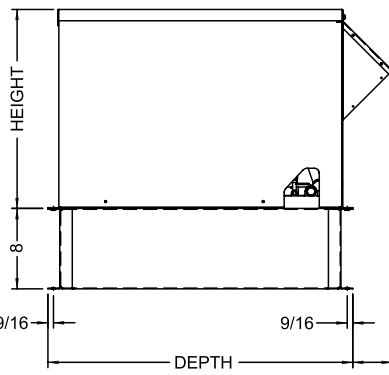
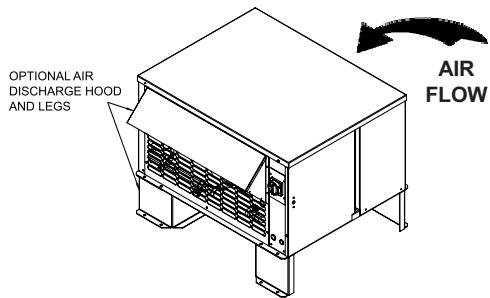
Unit Model KESB	Power Supply	Outdoor Models			Indoor Models		
		R404A	R407A	R448A	R404A	R407A	R448A
		R507		R449A	R507		R449A
030L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
030L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
030L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4
031L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
031L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
031L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4
039L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
039L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
039L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4
050L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
050L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
050L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4
060L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
060L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
060L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4
080L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
080L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
080L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4
100L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
100L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
100L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4
120L 6/8- * T3D	208-230/3/60	3.15	3.15	3.15	2.4	2.4	2.4
120L 6/8- * T4D	460/3/60	3.15	3.15	3.15	2.4	2.4	2.4
120L 6/8- * T5D	575/3/60	3.15	3.15	3.15	2.4	2.4	2.4

- = Non-compliant model

**Drawing A: 1 Fan Models, Chassis 1 and 2**

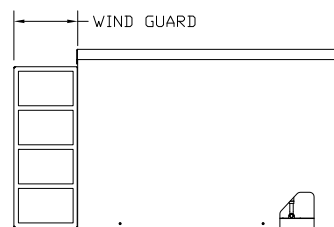
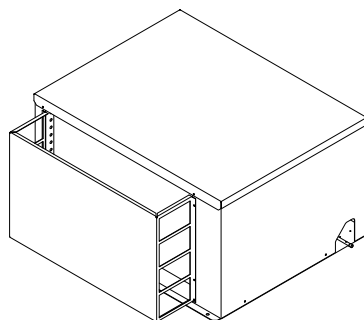


**INDOOR DIMENSIONS**



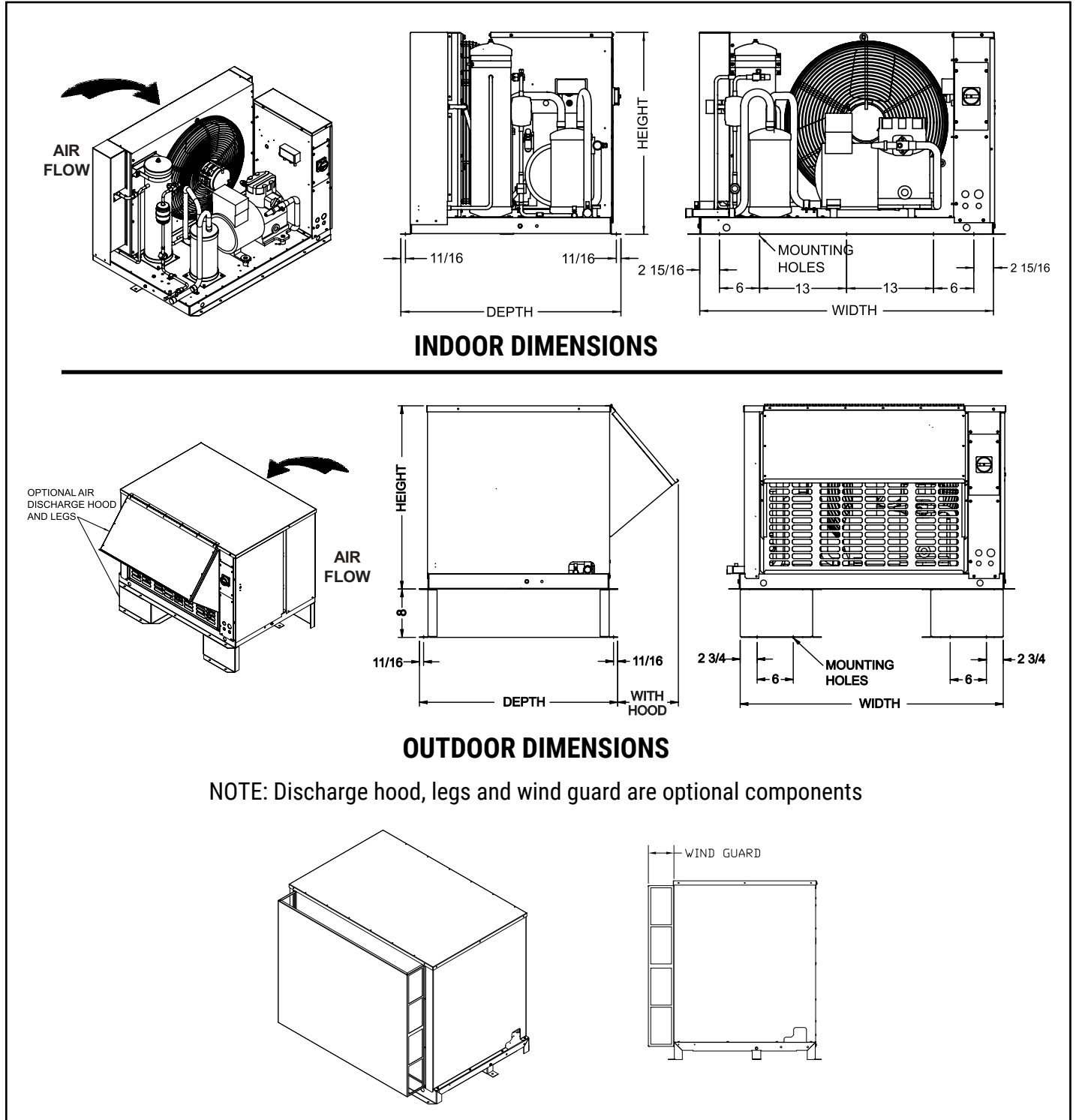
**OUTDOOR DIMENSIONS**

NOTE: Discharge hood, legs and wind guard are optional components



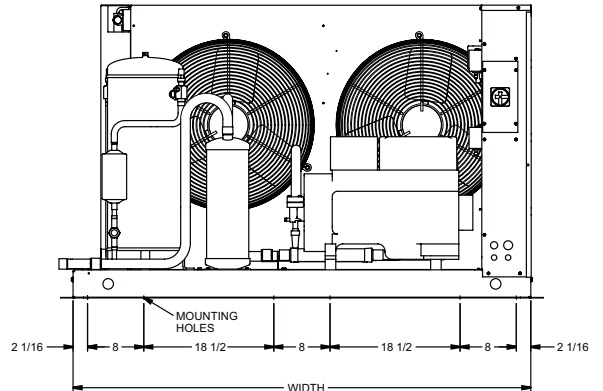
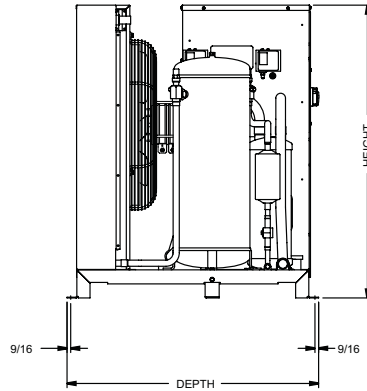
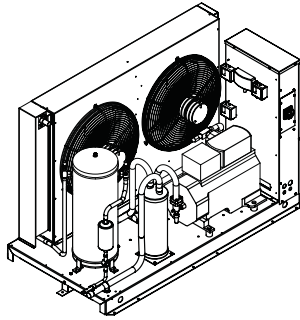
**REFER TO PAGE 39 FOR DIMENSIONAL DATA FOR SPECIFIC MODELS**

**Drawing B: 1 Fan Models, Chassis 3 and 4**

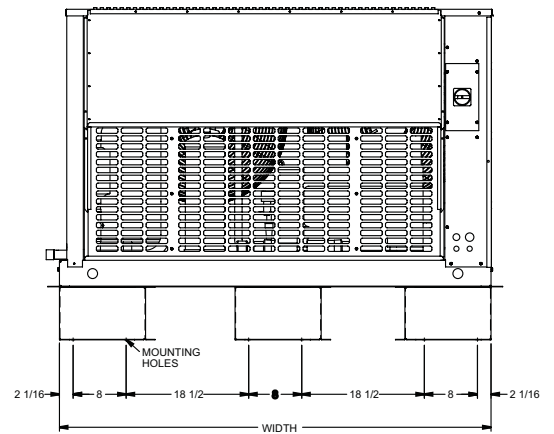
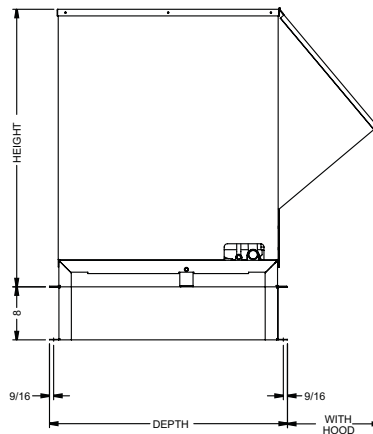
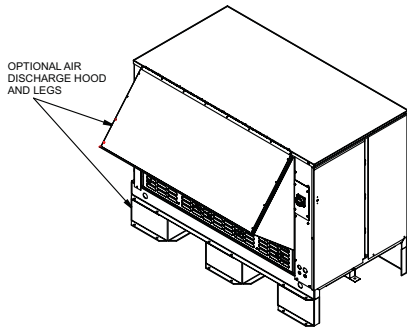


**REFER TO PAGE 39 FOR  
DIMENSIONAL DATA FOR SPECIFIC MODELS**

**Drawing C: 2 Fan Models, Chassis 5**

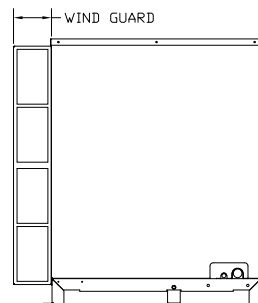
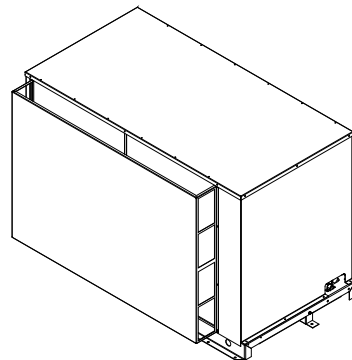


**INDOOR DIMENSIONS**



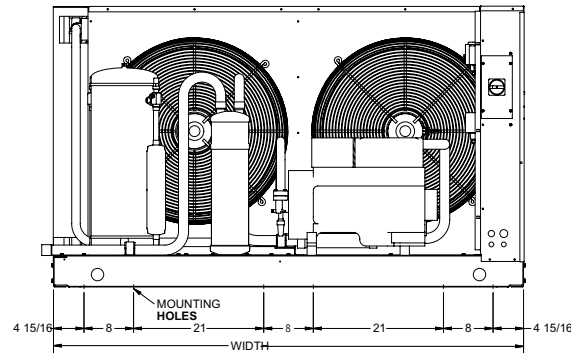
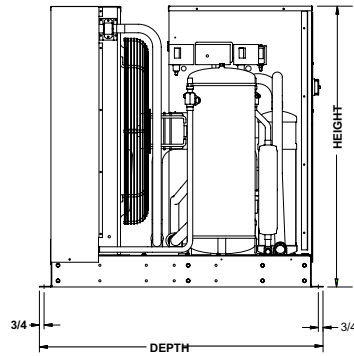
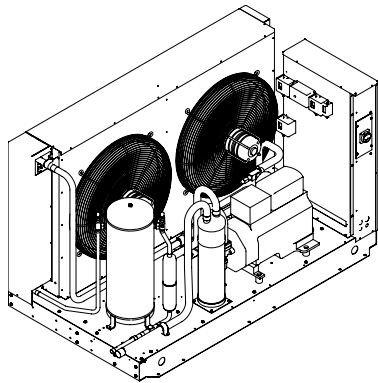
**OUTDOOR DIMENSIONS**

NOTE: Discharge hood, legs and wind guard are optional components

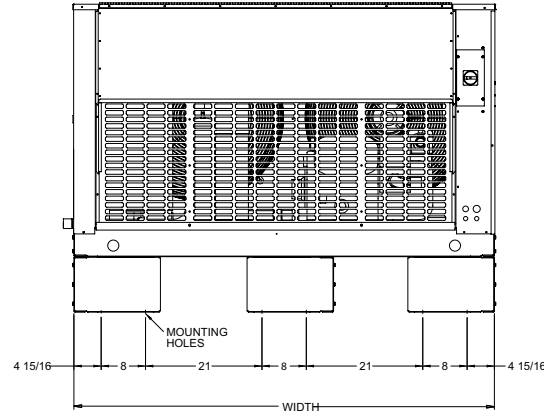
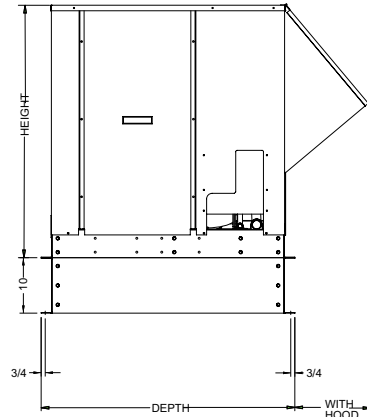
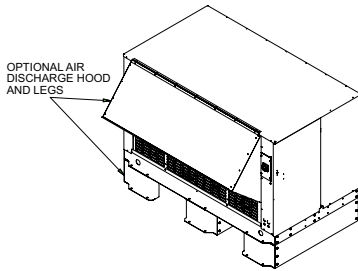


**REFER TO PAGE 39 FOR DIMENSIONAL DATA FOR SPECIFIC MODELS**

**Drawing D: 2 Fan Models, Chassis 6**

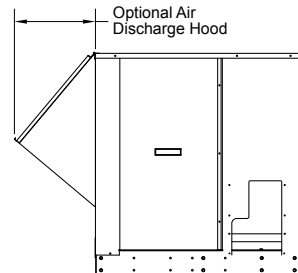
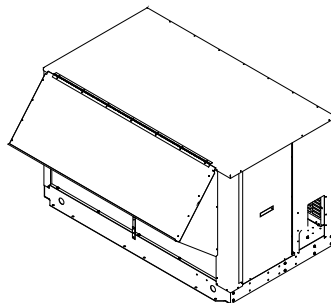


**INDOOR DIMENSIONS**



**OUTDOOR DIMENSIONS**

NOTE: Discharge hood, legs and wind guard are optional components



**REFER TO PAGE 39 FOR  
DIMENSIONAL DATA FOR SPECIFIC MODELS**

# DIMENSIONAL DATA

# KES - SEMI-HERMETIC CONDENSING UNITS

## COPELAND Models

Model KESA	Chassis (see details below)	Outdoor Models								Indoor Models					
		Width		Depth				Height		Width		Depth		Height	
				Base		Hood, add:									
		Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
KESA050H8	4	52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESA051H8		52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESA075H8		52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESA077H8	5	65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESA080H8		65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESA100H8		65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESA120H8	6	75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESA150H8		75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESA200H8		75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESA035L 6/8	3	43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESA040L 6/8		43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESA060L 6/8	4	52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESA061L 6/8		52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESA075L 6/8		52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESA090L 6/8	5	65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESA100L 6/8		65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESA120L 6/8	6	75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESA130L 6/8		75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESA150L 6/8		75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESA220L 6/8		75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156

## BITZER Models

Model KESB	Chassis (see details below)	Outdoor Models								Indoor Models					
		Width		Depth				Height		Width		Depth		Height	
				Base		Hood, add:									
		Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
KESB030H8	3	43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESB035H8		43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESB040H8		43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESB050H8	4	52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESB060H8		52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESB076H8	5	65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESB090H8		65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESB100H8		65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESB120H8	6	75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESB150H8		75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESB200H8		75 7/8	1927	45 3/4	1162	59	1511	45 1/2	1156	75 7/8	1927	45 3/4	1162	45 17/32	1156
KESB030L 6/8	3	43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESB031L 6/8		43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESB039L 6/8		43 7/8	1114	32 7/8	835	43	1092	30 3/8	772	43 7/8	1114	32 7/8	835	30 3/16	767
KESB050L 6/8	4	52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESB060L 6/8		52 1/8	1324	35 7/8	911	43	1092	41 7/8	1064	52 1/8	1324	35 7/8	911	41 11/16	1059
KESB080L 6/8	5	65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESB100L 6/8		65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059
KESB120L 6/8		65 1/8	1654	35 7/8	911	43	1092	41 7/8	1064	65 1/8	1654	35 7/8	911	41 11/16	1059

Chassis	Drawing	See Page #
1	A	35
2	A	35
3	B	36
4	B	36
5	C	37
6	D	38

# SPECIFICATIONS

# KES - SEMI-HERMETIC CONDENSING UNITS

## COPELAND Models

Model KESA	Unit Connections				R404A Receiver Capacity 90% Full *		Approx. Shipping Weight			
	Suction (OD)		Liquid (OD)		Lbs.	Kgs	Outdoor Models		Indoor Models	
	Inches	mm	Inches	mm			Lbs.	Kgs	Lbs.	Kgs
KESA050H8	1 1/8	29	1/2	13	31	14.1	766	347	721	327
KESA051H8	1 1/8	29	1/2	13	31	14.1	769	349	724	328
KESA075H8	1 3/8	35	5/8	16	31	14.1	780	354	735	333
KESA077H8	1 3/8	35	5/8	16	54	24.5	885	401	830	376
KESA080H8	1 3/8	35	5/8	16	54	24.5	885	401	830	376
KESA100H8	1 3/8	35	5/8	16	54	24.5	885	401	830	376
KESA120H8	1 3/8	35	7/8	22	76	34.5	1085	492	1030	467
KESA150H8	1 3/8	35	7/8	22	76	34.5	1085	492	1030	467
KESA200H8	1 3/8	35	7/8	22	76	34.5	1085	492	1030	467
KESA035L 6/8	1 1/8	29	1/2	13	22	10.0	588	267	543	246
KESA040L 6/8	1 1/8	29	1/2	13	22	10.0	618	280	573	260
KESA060L 6/8	1 1/8	29	1/2	13	31	14.1	781	354	736	334
KESA061L 6/8	1 3/8	35	5/8	16	31	14.1	819	371	774	351
KESA075L 6/8	1 3/8	35	5/8	16	31	14.1	827	375	782	355
KESA090L 6/8	1 3/8	35	5/8	16	54	24.5	885	401	830	376
KESA100L 6/8	1 3/8	35	5/8	16	54	24.5	885	401	830	376
KESA120L 6/8	1 5/8	41	7/8	22	76	34.5	1185	538	1130	513
KESA130L 6/8	1 5/8	41	7/8	22	76	34.5	1185	538	1130	513
KESA150L 6/8	1 5/8	41	7/8	22	76	34.5	1185	538	1130	513
KESA220L 6/8	2 1/8	54	7/8	22	76	34.5	1185	538	1130	513

## BITZER Models

Model KESB	Unit Connections				R404A Receiver Capacity 90% Full *		Approx. Shipping Weight			
	Suction (OD)		Liquid (OD)		Lbs.	Kgs	Outdoor Models		Indoor Models	
	Inches	mm	Inches	mm			Lbs.	Kgs	Lbs.	Kgs
KESB030H8	1 1/8	29	1/2	13	22	10.0	437	198	392	178
KESB035H8	1 1/8	29	1/2	13	22	10.0	449	204	404	183
KESB040H8	1 1/8	29	1/2	13	22	10.0	452	205	407	185
KESB050H8	1 1/8	29	5/8	16	31	14.1	648	294	603	274
KESB060H8	1 3/8	35	5/8	16	31	14.1	652	296	607	275
KESB076H8	1 3/8	35	5/8	16	54	24.5	700	318	660	299
KESB090H8	1 3/8	35	5/8	16	54	24.5	750	340	695	315
KESB100H8	1 3/8	35	5/8	16	54	24.5	800	363	745	338
KESB120H8	1 3/8	35	7/8	22	76	34.5	1005	456	950	431
KESB150H8	1 5/8	41	7/8	22	76	34.5	1005	456	950	431
KESB200H8	1 5/8	41	7/8	22	76	34.5	1005	456	950	431
KESB030L 6/8	1 1/8	29	1/2	13	22	10.0	436	198	391	177
KESB031L 6/8	1 1/8	29	1/2	13	22	10.0	463	210	418	190
KESB039L 6/8	1 1/8	29	1/2	13	22	10.0	479	217	434	197
KESB050L 6/8	1 3/8	35	5/8	16	31	14.1	647	293	602	273
KESB060L 6/8	1 3/8	35	5/8	16	31	14.1	658	298	613	278
KESB080L 6/8	1 3/8	35	5/8	16	54	24.5	790	358	735	333
KESB100L 6/8	1 3/8	35	5/8	16	54	24.5	800	363	745	338
KESB120L 6/8	1 3/8	35	5/8	16	54	24.5	805	365	750	340

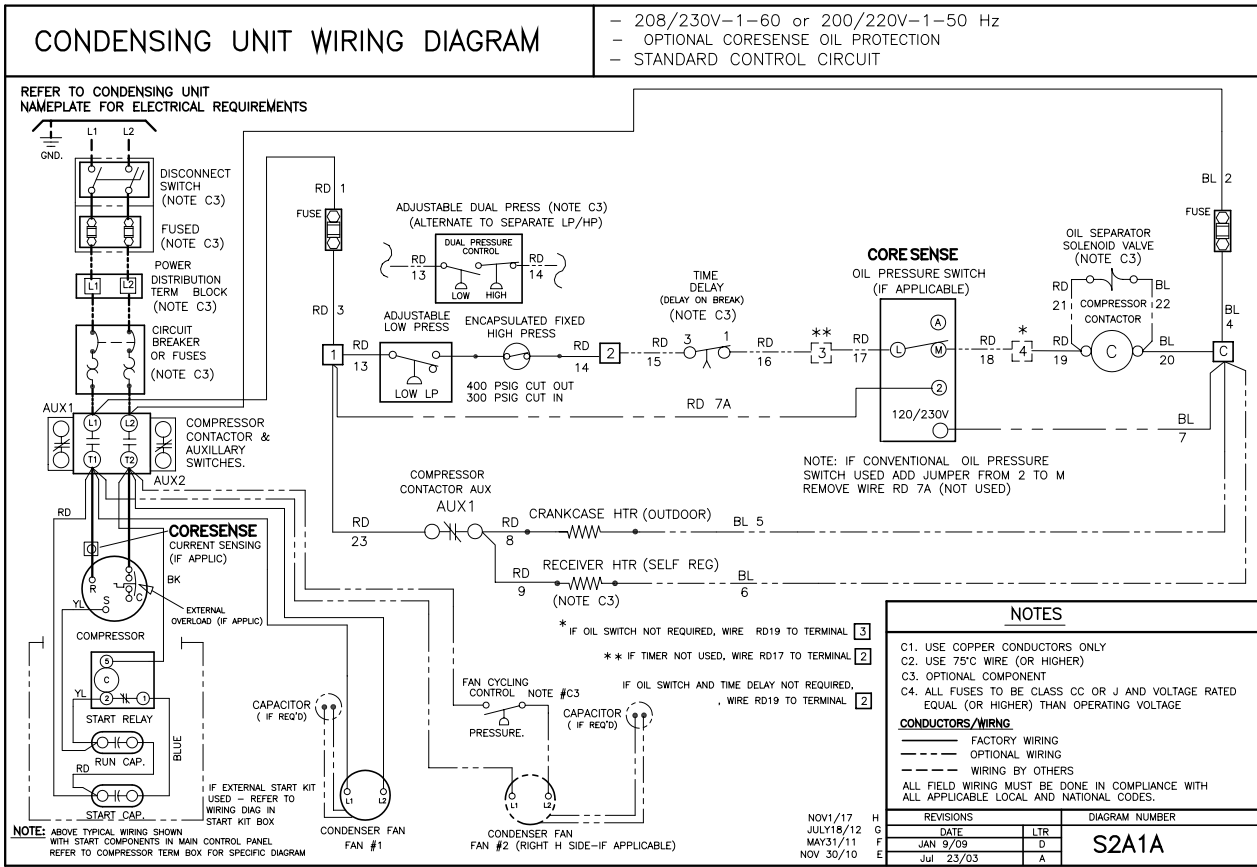
**\* NOTE ON ALTERNATE REFRIGERANTS:**

\* PUBLISHED RECEIVER CAPACITY IS BASED ON R404A ON MODELS USING "8" AS REFRIGERANT CODE.  
FOR ALTERNATE REFRIGERANTS, MULTIPLY R404A VALUE BY THE APPROPRIATE VALUE BELOW:

R407A	R407C	R448A	R449A	R507	R22
1.10	1.10	1.05	1.05	1.00	1.15

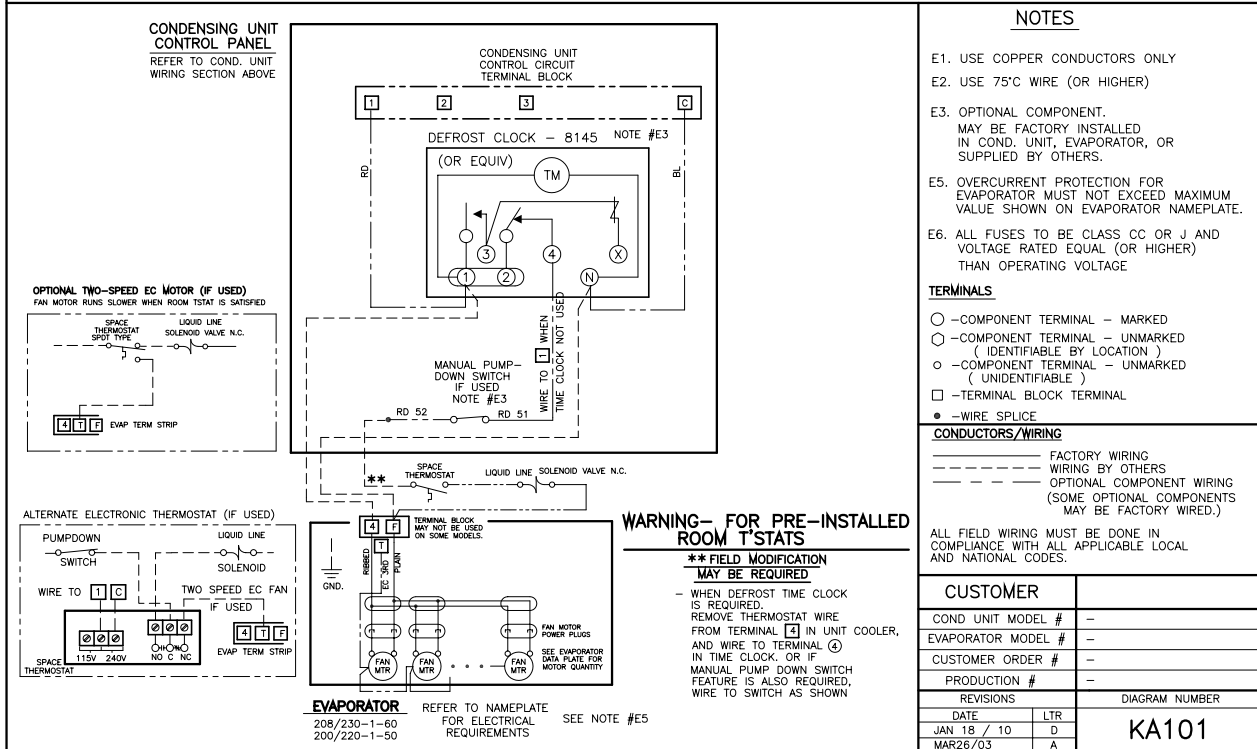


208-230/1/60 Unit with 230V Air Defrost Evaporator

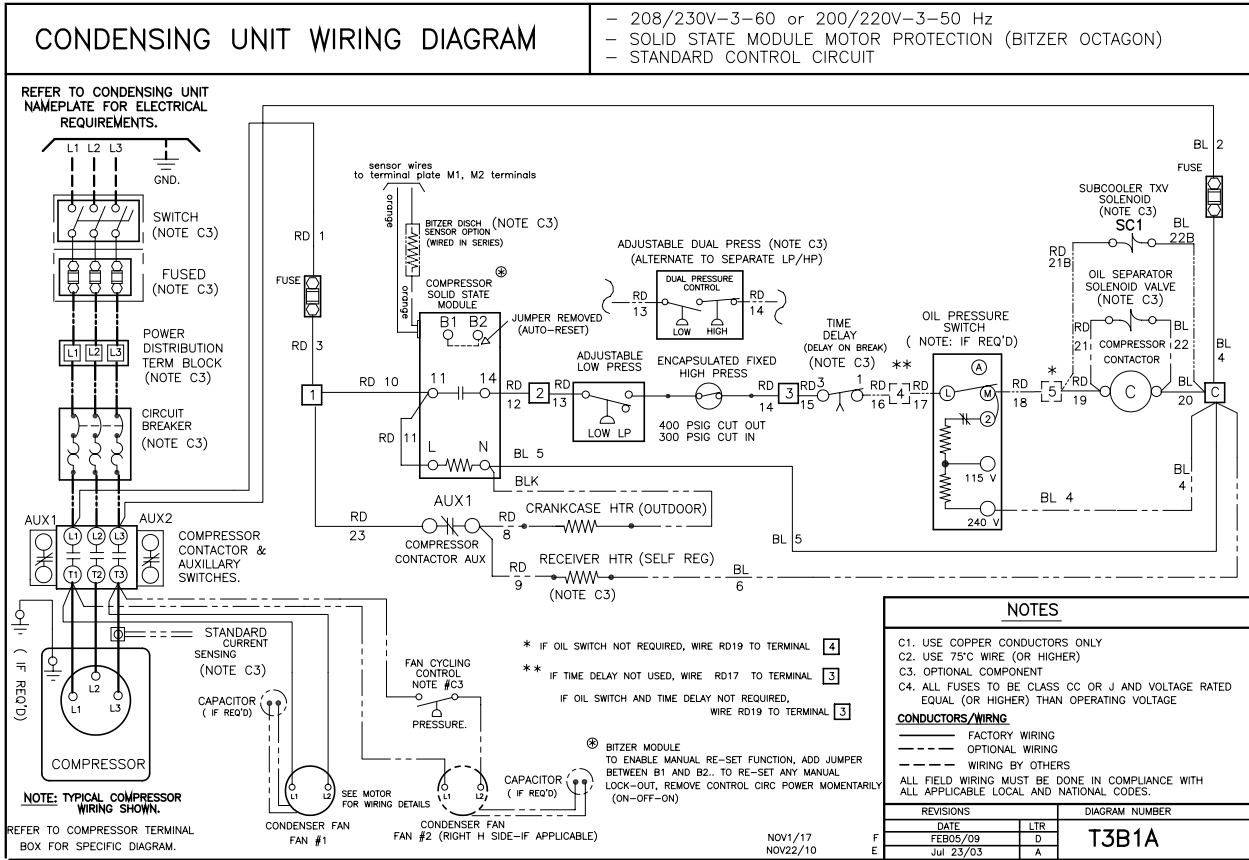


### TYPICAL EVAPORATOR WIRING: FOR SINGLE AIR DEFROST EVAPORATOR— SINGLE POINT

FOR USE WITH: 208/230-1-60, 200/220-1-50 OR 208/230-3-60, 200/220-3-50 CONDENSING UNITS WITH OR WITHOUT DEFROST TIME CLOCK AND FOR TOTAL EVAP FAN AMPS NOT EXCEEDING 12A

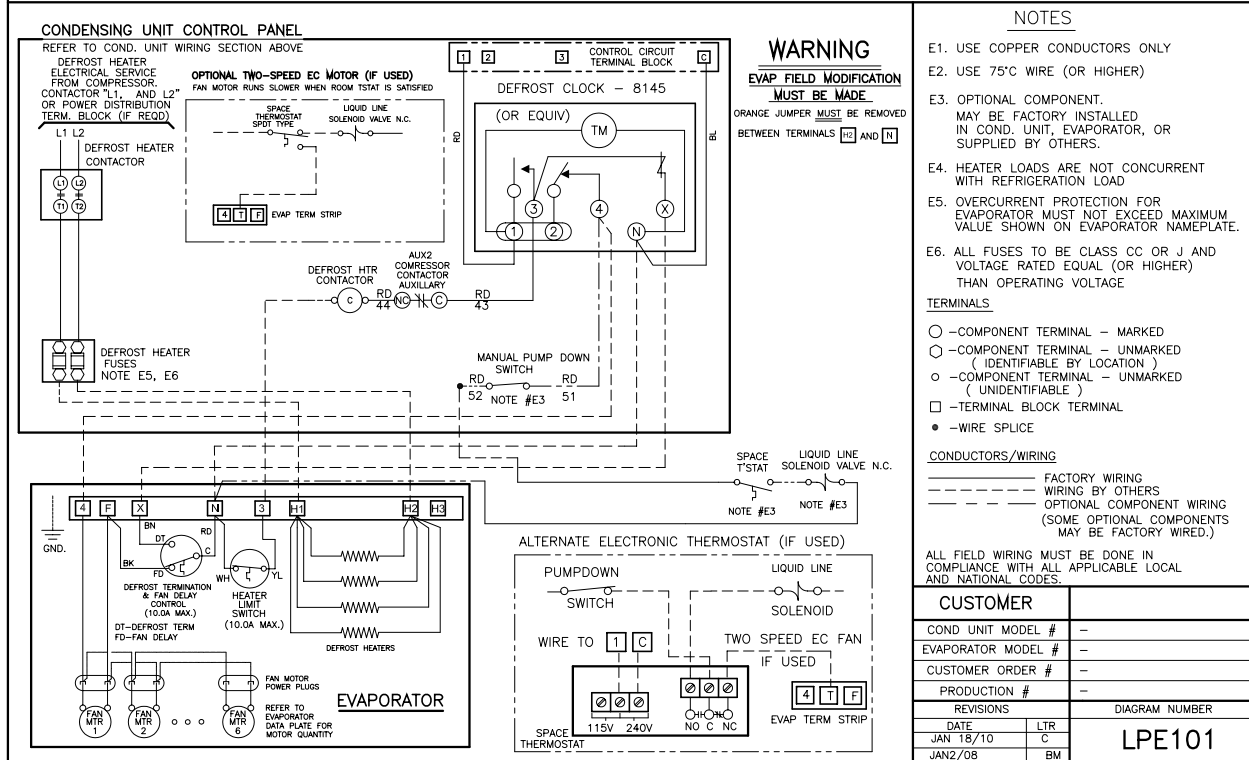


208-230/3/60 Unit with 230V Electric Defrost Evaporator

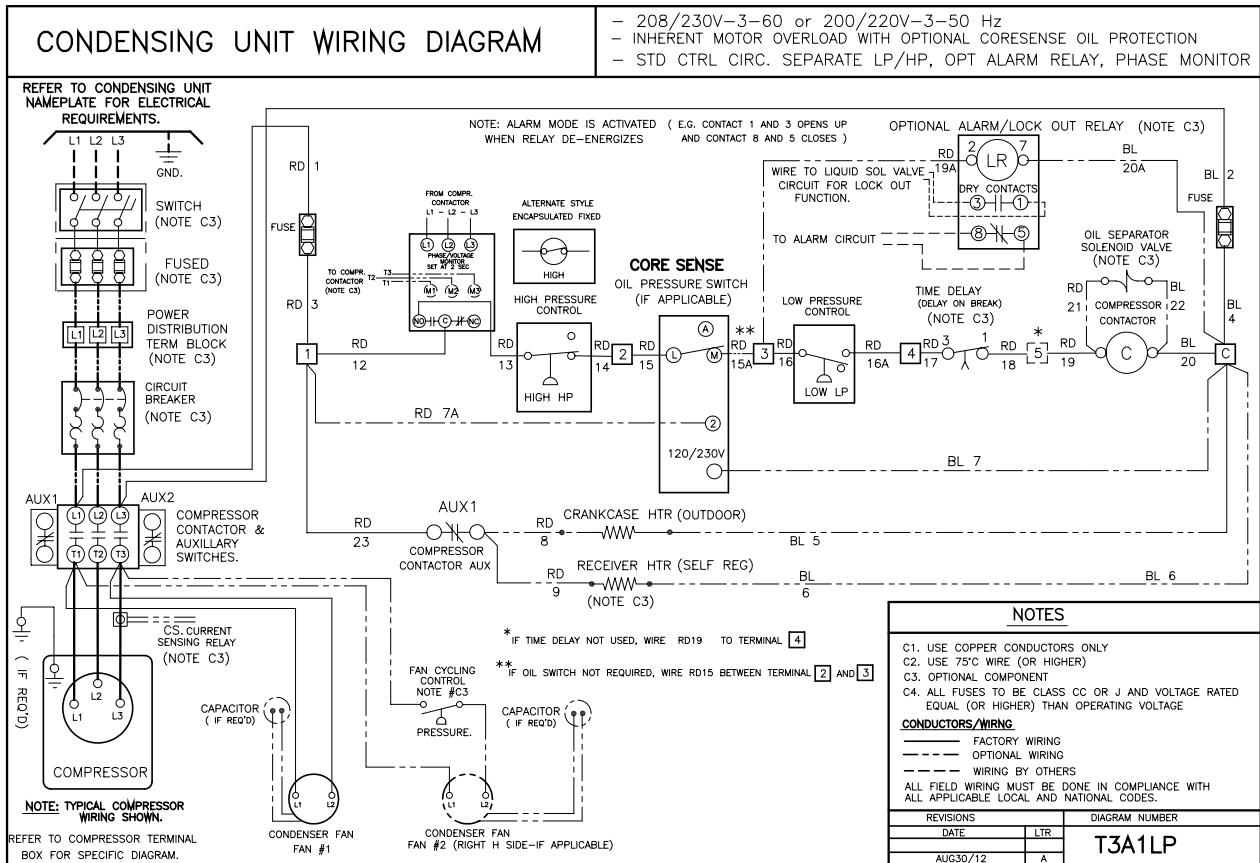


### TYPICAL EVAPORATOR WIRING: FOR SINGLE LOW PROFILE ELECT 1 PHASE DEFROST EVAPORATOR-SINGLE POINT

FOR USE WITH: 230V SINGLE OR THREE PHASE CONDENSING UNITS WITH DEFROST TIME CLOCK, AND DEFROST HEATER CONTACTOR

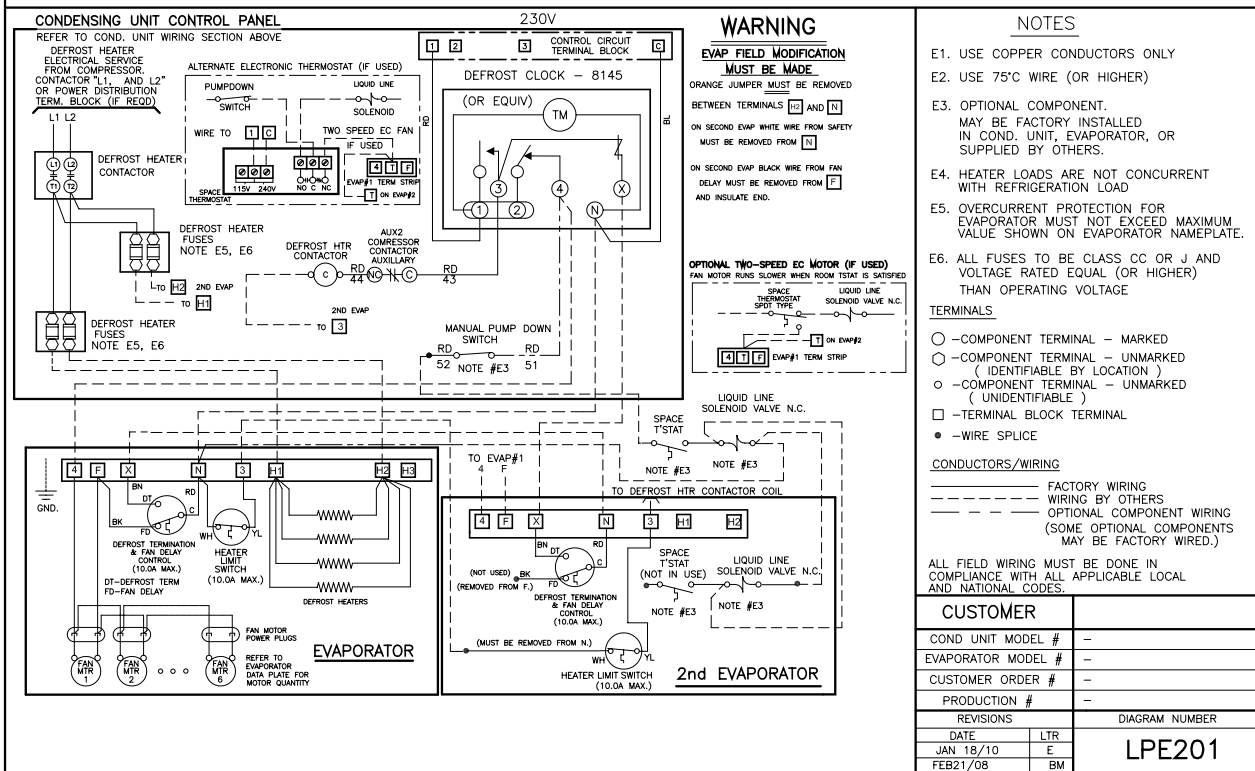


208-230/3/60 Unit with Two (2) 230V Electric Defrost Evaporators

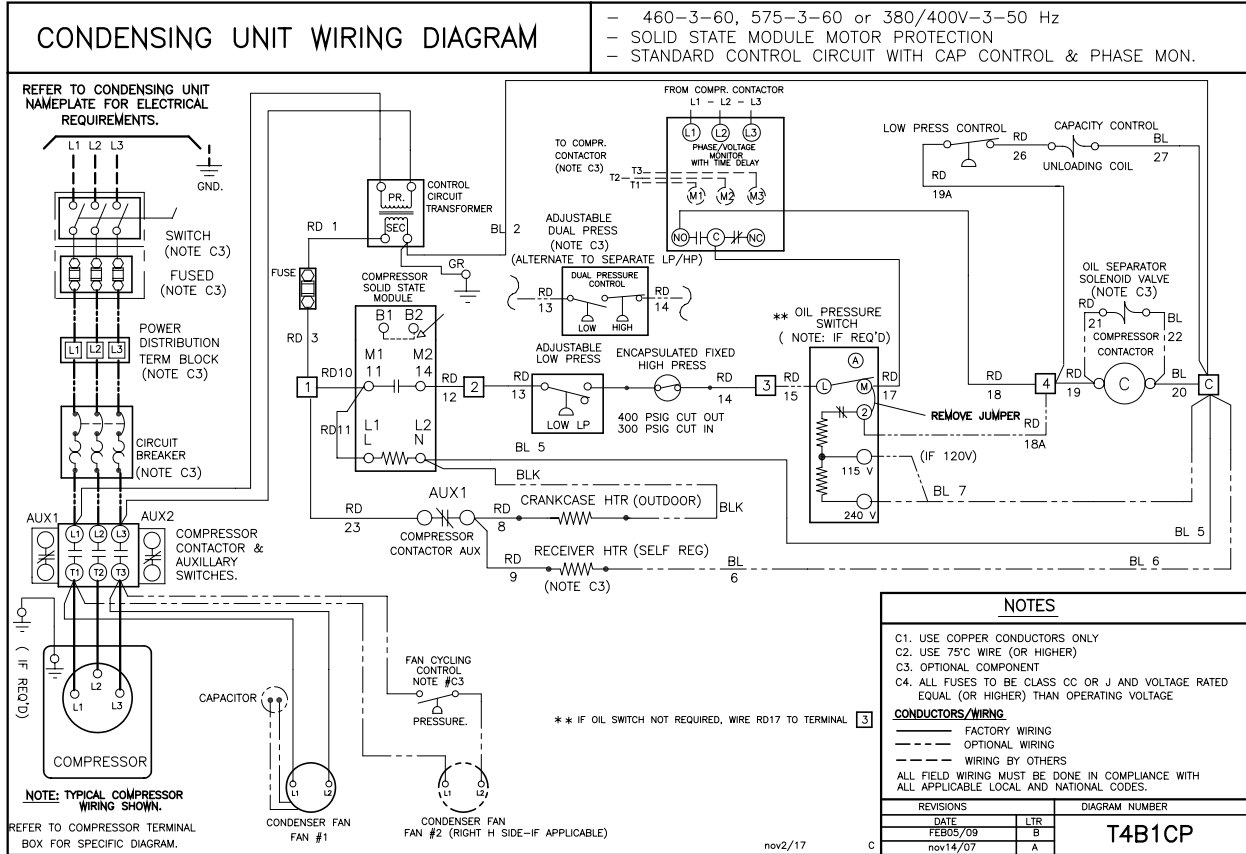


**TYPICAL EVAPORATOR WIRING:** FOR TWO SINGLE LOW PROFILE ELECT DEF 230V 1 PH. EVAPORATORS—SINGLE POINT MAX TOTAL EVAP FAN AMPS—10A

FOR USE WITH: 230V SINGLE OR THREE PHASE CONDENSING UNITS WITH DEFROST TIME CLOCK, AND DEFROST HEATER CONTACTOR

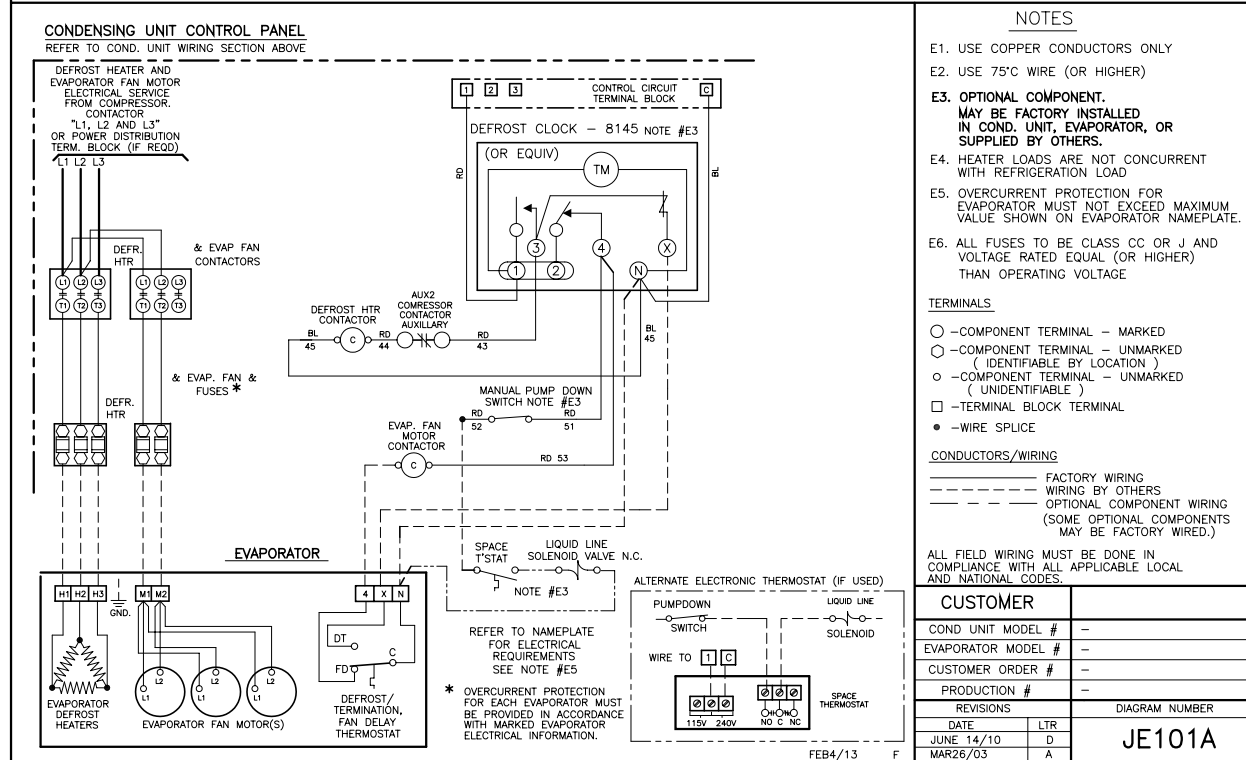


460/3/60 or 575/3/60 Unit with 460V or 575V Electric Defrost Evaporator

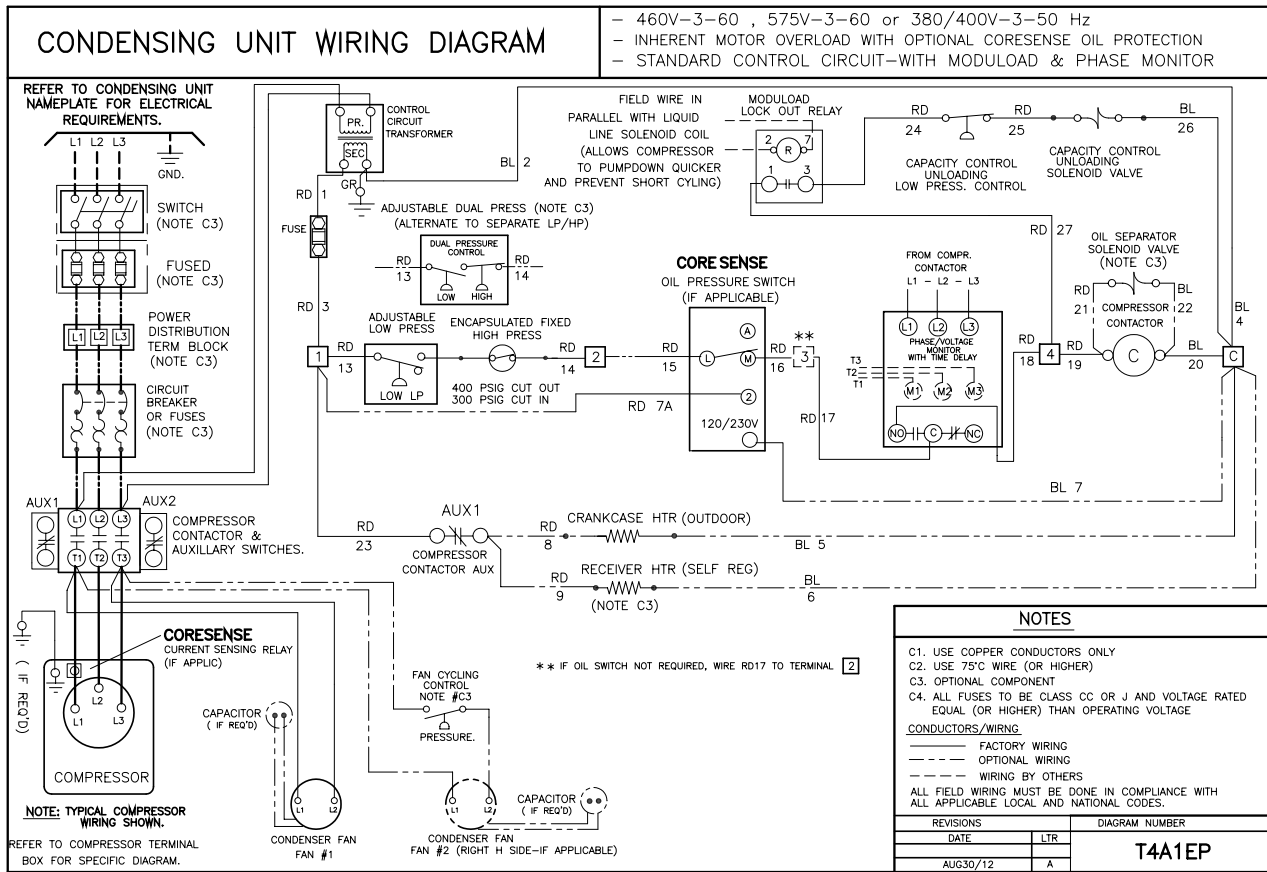


**TYPICAL EVAPORATOR WIRING:** FOR (1) ONE, THREE PHASE MED PROFILE ELECT DEFROST EVAPORATOR - SINGLE POINT

FOR USE WITH: THREE PHASE CONDENSING UNITS WITH DEFROST TIME CLOCK, & EVAP FAN AND DEF. HTR. CONTACTORS.

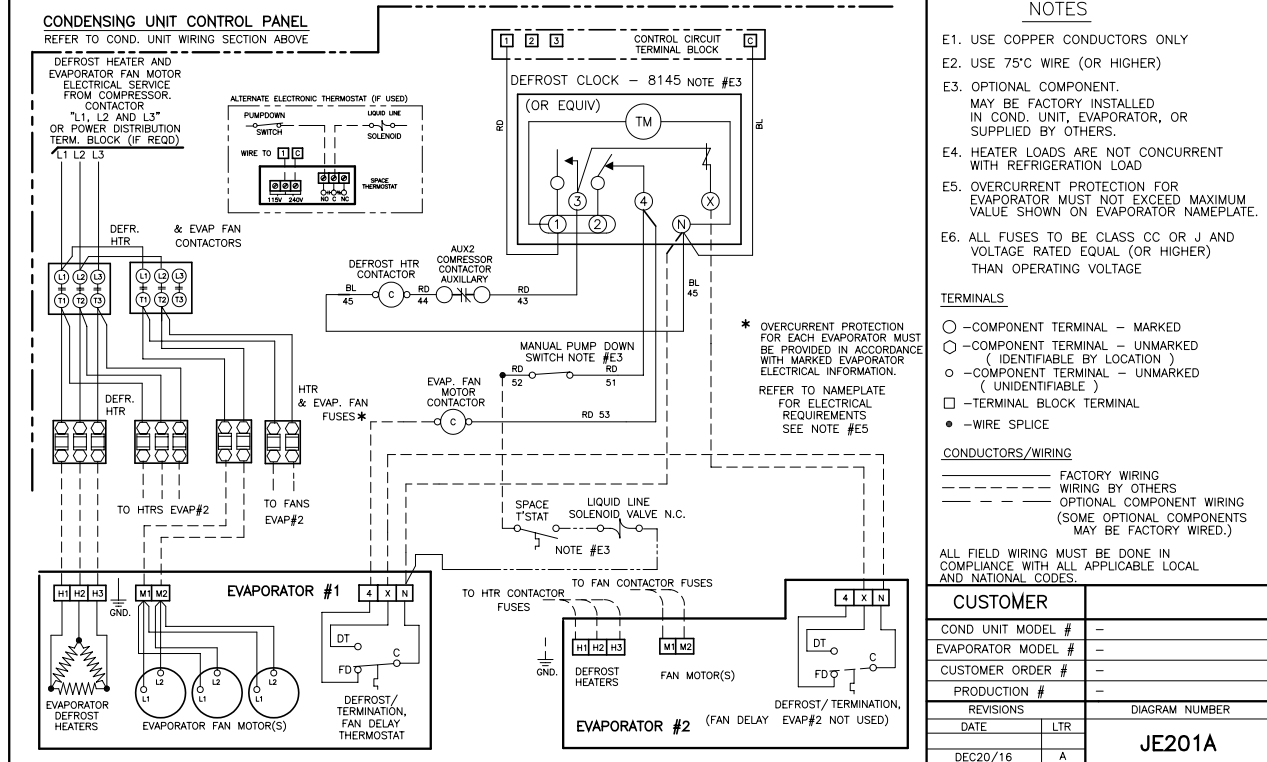


460/3/60 or 575/3/60 Unit with Two (2) 460V or 575V Electric Defrost Evaporator

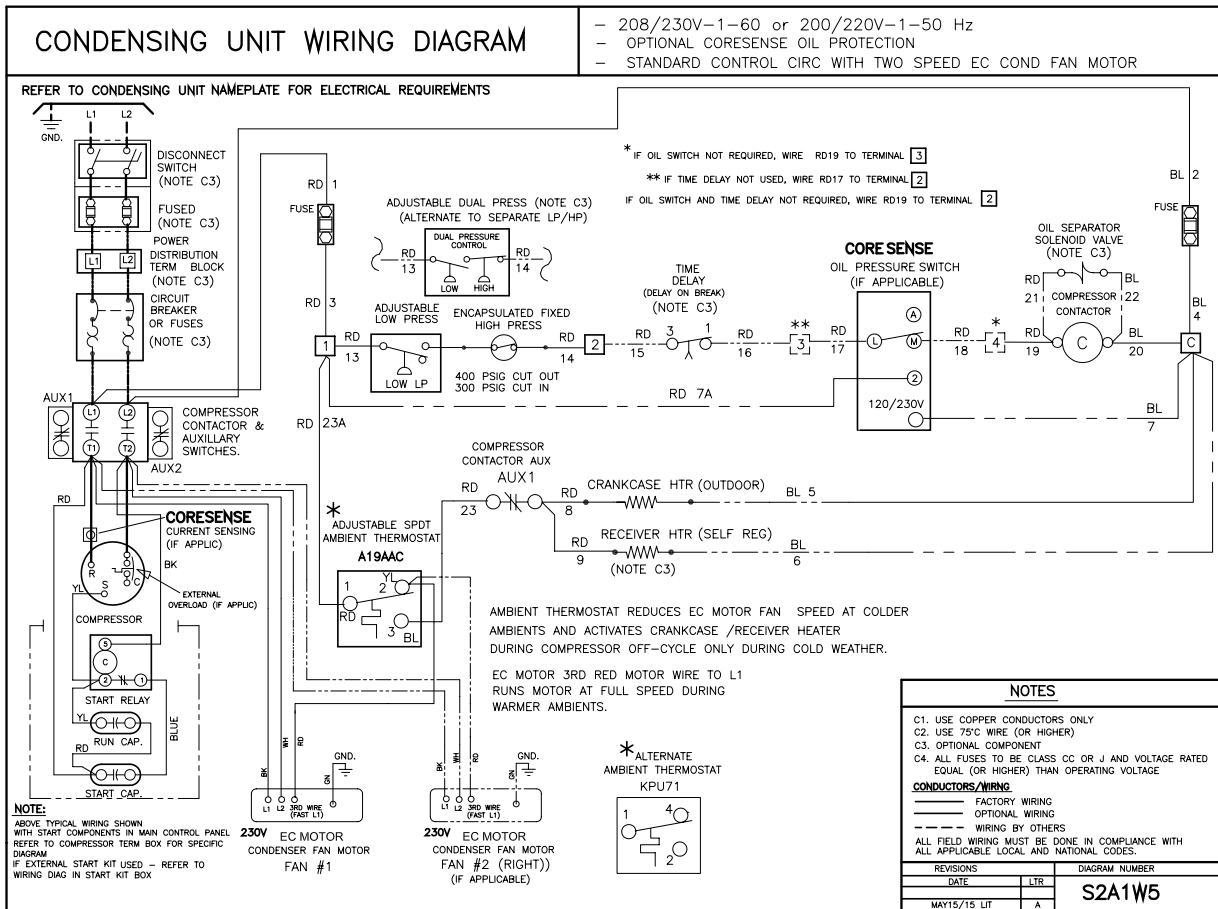


**TYPICAL EVAPORATOR WIRING:** FOR TWO MED PROFILE ELECT DEFROST EVAPORATORS- SINGLE POINT

FOR USE WITH: THREE PHASE CONDENSING UNITS WITH DEFROST TIME CLOCK, & EVAP FAN AND DEFR. HTR. CONTACTORS.

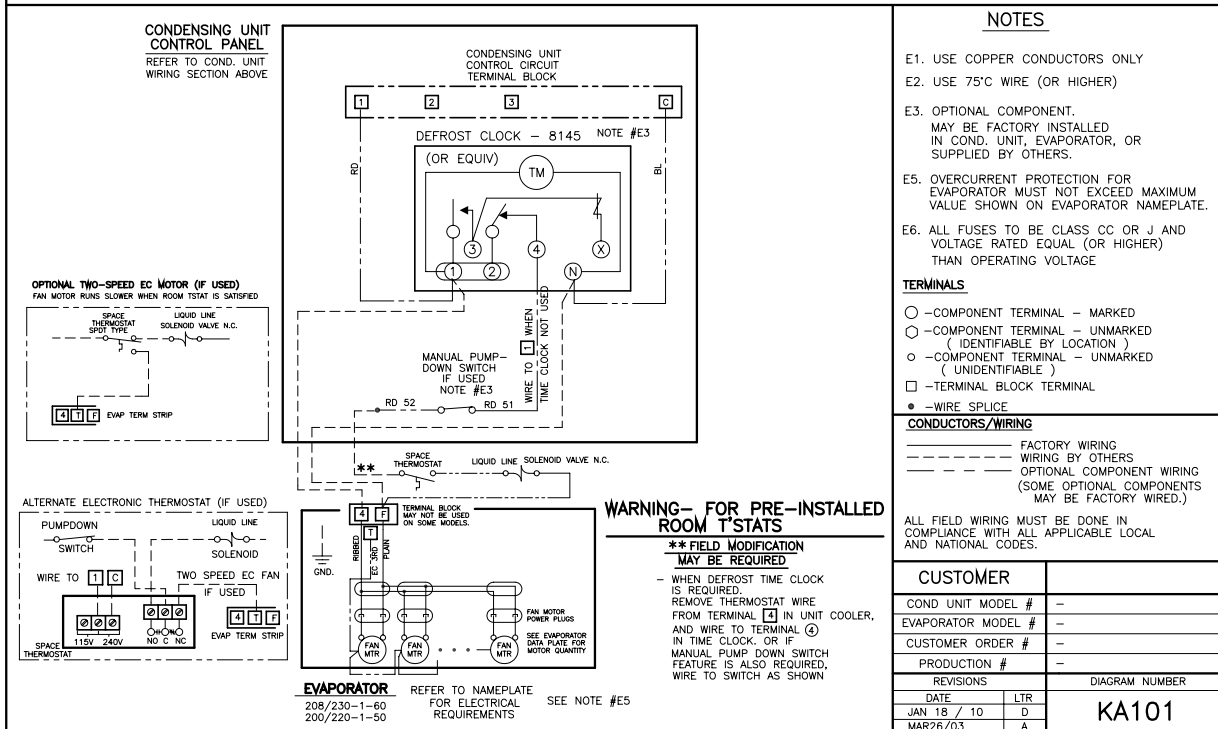


208-230/1/60 Unit with SMARTSPEED™ with 230V Air Defrost Evaporator



### TYPICAL EVAPORATOR WIRING: FOR SINGLE AIR DEFROST EVAPORATOR— SINGLE POINT

FOR USE WITH: 208/230-1-60, 200/220-1-50 OR 208/230-3-60, 200/220-3-50 CONDENSING UNITS  
 WITH OR WITHOUT DEFROST TIME CLOCK AND FOR TOTAL EVAP FAN AMPS NOT EXCEEDING 12A



**PROJECT INFORMATION**

**KES - SEMI-HERMETIC CONDENSING UNITS**

System	
Model Number	Date of Start-Up
Serial Number	Service Contractor
Refrigerant	Phone
Electrical Supply	Fax

  
PRODUCT SUPPORT

*web:* [www.k-rp.com/kes](http://www.k-rp.com/kes)  
*email:* [smcu@k-rp.com](mailto:smcu@k-rp.com)  
*call:* 1-844-893-3222 x521

  
TROUBLESHOOTING


*email:* [troubleshooting@k-rp.com](mailto:troubleshooting@k-rp.com)  
*call:* 1-844-893-3222 x529

  
SERVICE PARTS


*web:* [www.k-rp.com/parts](http://www.k-rp.com/parts)  
*email:* [parts@k-rp.com](mailto:parts@k-rp.com)  
*call:* 1-844-893-3222 x504

  
WARRANTY

*web:* [www.k-rp.com/warranty](http://www.k-rp.com/warranty)  
*email:* [warranty@k-rp.com](mailto:warranty@k-rp.com)  
*call:* 1-844-893-3222 x507

  
ORDERS

*email:* [orders@k-rp.com](mailto:orders@k-rp.com)  
*call:* 1-844-893-3222 x501

  
SHIPPING

*email:* [shipping@k-rp.com](mailto:shipping@k-rp.com)  
*call:* 1-844-893-3222 x503



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Brantford, ON • Longview, TX  
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