

LIST PRICES

Add appropriate expansion valve price(s) from page 14 of this price sheet when unit coolers are for use with KramerSaver or Thermobank condensing units. Liquid line solenoid and mechanical room T-Stat prices (shipped loose) are already included in the list price for KramerSaver or Thermobank condensing units. **All** system accessories and optional component prices must be added when evaporators are used with Next-Gen and Next-Gen II condensing units.

ALL PRODUCTS, EXCEPT SURFACE COILS AND PARTS, ARE SHIPPED F.O.B. POINT OF SHIPMENT WITH FULL FREIGHT ALLOWED ON SINGLE ORDERS WITH A NET PRICE VALUE OF \$10,000 OR MORE, WITHIN THE CONTINENTAL USA (EXCLUDING ALASKA AND HAWAII). BUYER WILL BEAR ALL ADDITIONAL COSTS FOR SPECIAL ROUTING AND HANDLING REQUESTS. (See page 37).

SEE THE BACK COVER FOR "CONDITIONS OF SALE AND WARRANTY"

EVAPORATORS

	<u>PAGE</u>
Air Defrost Evaporators - Next-Gen All-Temp Low Profile (Model KL6A)	2
Air Defrost Evaporators - Medium Silhouette (Models MSA, CSA, DSA)	3
Air Defrost Evaporators - Height Saver, Coolmaster (Models HSA, CM, CCM, DCM)	4
Electric Defrost Evaporators - Next-Gen All-Temp Low Profile (Model KL6E)	5
Electric Defrost Evaporators - Medium Silhouette (Models MSE, CSE)	6
Electric Defrost Evaporators - Height Saver (HSE), Coolmaster (KED, CED)	7
Hot Gas Defrost Evaporators - Next-Gen All-Temp Low Profile (KL6G, KL6H)	8
Hot Gas Defrost Evaporators - Med. Silhouette - Rev. Cycle (CSG, MSG) & Thermobank - (CSG -T, MSG -T)	9
Hot Gas Defrost Evaporators - Thermobank - Coolmaster (Models TV, CTV)	10
Low Air Velocity - Nomenclature, Prices, Options (Model KWF)	11, 12, 13

CONDENSING UNITS

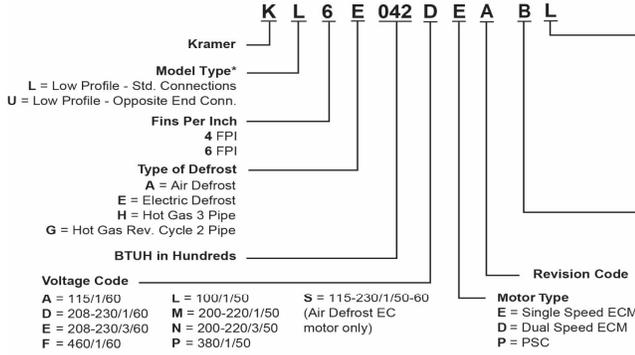
Pricing Examples	14
System Accessories (TXV, LLS, T-Stat, Evaporator Defrost Controls, Heat Exchangers)	14
1/2 to 6 H.P. Next-Gen Kompact Air Cooled Condensing Units - Hermetic Compressor Models	15
1/2 to 6 H.P. Next-Gen Kompact Air Cooled Condensing Units - Scroll Compressor Models	16
1/2 to 6 H.P. Legacy K-Series Air Cooled Condensing Units - Semi-Hermetic Compressor Models	16
Next-Gen Kompact / Legacy K-Series Options	17
3 thru 22 HP NEXT-GEN II Condensing Units - Discus™, Scroll™ and Bitzer	18, 19, 20
3 thru 22 HP NEXT-GEN II Condensing Unit Electric Defrost Kits	20
3 thru 22 HP NEXT-GEN II Condensing Unit Options	21
15 thru 100 HP QV-Series Condensing Units™	22, 23, 24, 25, 26, 27, 28, 29
Thermobank Condensing Units - Hot Gas Defrost	29, 30
Thermobank Standard Features	31
Thermobank Options	32
1/2 to 6 H.P. Next-Gen WC-Series Water Cooled Condensing Units - Hermetic and Scroll Compressor Models	33, 34
3 thru 40 H.P. KW Series Water Cooled Condensing Units	35
Electric Defrost / Hot Gas Defrost Kits (See pg 20 for Next-Gen II and pg 28-29 for QV-Series ED Kits)	36, 37
Freight Surcharges	37
APEX Self-Contained Units	38

AIR COOLED CONDENSERS

Quantum Air™ Remote Air Cooled Condensers Features and Options	39
Air Cooled Condenser Nomenclature	40
Small Condensers and Small Condenser Options	41
Quantum Air™ Large Condensers - 1140 RPM 1.5 H.P., 850 RPM 1.5 H.P.	42
Quantum Air™ Large Condensers - 850 RPM 1 H.P., 550 RPM 1/3 H.P.	43
Quantum Air™ Large Condensers - 1200 and 900 RPM VSEC Motors	44
Large Condenser Options	45

Due to ongoing product development, specification and prices are subject to change without notice.

**NEXT-GEN ALL-TEMP
LOW PROFILE UNIT COOLERS**



* NOTE: Refrigerant and electrical connection locations have been changed for the Next-Gen All-Temp design. Standard connections ("L") are now opposite of the legacy All-Temp models. Mirror image connections ("U" - same end as legacy All-Temp models) are available only as built-to-order base units with no installed options.

STANDARD FEATURES

- Textured aluminum construction
- Flush ceiling mount with slotted hangers and hinged access end panels
- Face mounted heaters and fixed defrost termination, fan delay and heater safety controls
- Single or dual voltage EC motors. Optional Dual speed available

- All units are provided with sweat refrigerant connections
- U. L. approved black plastic fan guards and deep draw venturi provide optimal air flow
- All units suitable for use with R404A, R407A, R407C, R407F, R448A, R449A/B. Can be configured for use with CO₂ DX or Glycol

ORDERING INFORMATION

1. Model number
2. Motor Type
3. Motor electrical (voltage/phase/frequency)
4. Heater electrical (voltage/phase/frequency)

5. Units with mounted components require the following information: Refrigerant type, evaporator temperature and T.D.

NO. OF FANS	MODEL NUMBER	Electronically Commutated Motors†					Single Speed PSC Motors					EcoNet® Command Center (Shipped loose) (Remote Mount Display for EcoNet Control Package). See note 9 below.	
		Configurable Model - Single speed operation (Motor code "E". No accessories mounted)	Configurable Model - Dual speed operation (Motor code "D". No accessories mounted)	EcoNet® Control Package Pre-Assembled with factory mounted accessories - Assembly Code E (Motor code "D"). See note 8 below.	Pre-Assembled with factory mounted accessories - Assembly Code L or M (Motor code "E" or "D"). See notes 1, 2 & 3 below.	Configurable Model - Single speed operation (Motor code "P". No accessories mounted)	Pre-Assembled with factory mounted accessories - Assembly Code L or M (Motor code "P"). See notes 1, 2 & 3 below.	EcoNet® Control Package Pre-Assembled with factory mounted accessories - Assembly Code E (Motor code "P"). See note 8 below.	Configurable Model - Single speed operation (Motor code "P". No accessories mounted)	Pre-Assembled with factory mounted accessories - Assembly Code L or M (Motor code "P"). See notes 1, 2 & 3 below.	EcoNet® Control Package Pre-Assembled with factory mounted accessories - Assembly Code E (Motor code "P"). See note 8 below.		
		115V/208-230V/1 (Voltage code "S")	115V/208-230V/1 (Voltage code "S")	115V/208-230V/1 (Voltage code "S")	115V/1 (Voltage code "A")	115V/1 (Voltage code "A")	115V/1 (Voltage code "A")	115V/1 (Voltage code "A")	208-230V/1 (Voltage code "D")	208-230V/1 (Voltage code "D")	208-230V/1 (Voltage code "D")		460V/1 (Voltage code "F")
1	KL6A041* KL6A052* KL6A066*	\$1,823 1,872 2,172	\$1,823 1,872 2,172	\$3,689 3,738 4,038	\$2,890 2,939 3,253	\$1,442 1,496 1,796	\$2,509 2,563 2,863	\$3,308 3,362 3,662	\$1,498 1,518 1,929	\$2,565 2,585 2,996	\$3,364 3,384 3,795	\$1,678 1,706 2,117	\$941 941 941
2	KL6A073* KL6A094* KL6A117* KL6A130*	2,838 3,215 3,378 3,607	2,838 3,215 3,378 3,607	4,704 5,081 5,244 5,473	3,905 4,282 4,445 4,674	2,063 2,439 2,654 2,907	3,130 3,507 3,721 3,974	3,929 4,305 4,520 4,773	2,226 2,478 2,689 2,950	3,293 3,545 3,756 4,017	4,092 4,344 4,555 4,816	\$2,609 2,864 3,045 3,319	941 941 941 941
3	KL6A141* KL6A161* KL6A181*	4,364 4,846 5,282	4,364 4,846 5,282	6,230 6,712 7,148	5,431 5,913 6,349	3,241 3,694 4,153	4,308 4,761 5,221	5,107 5,560 6,019	3,287 3,756 4,213	4,354 4,823 5,281	5,153 5,622 6,079	3,841 4,322 4,774	941 941 941
4	KL6A195* KL6A235* KL6A260*	5,689 6,900 7,519	5,689 6,900 7,519	7,555 8,766 9,385	6,756 7,967 8,586	4,483 5,221 5,475	5,550 6,288 6,542	6,349 7,087 7,341	4,542 5,636 5,898	5,609 6,703 6,966	6,408 7,502 7,764	5,138 6,468 6,600	941 941 941
5	KL6A295* KL6A330* KL6A390*	8,624 9,256 10,392	8,624 9,256 10,392	10,490 11,122 12,258	9,691 10,323 11,460	6,515 6,898 8,042	7,943 8,326 9,469	8,381 8,764 9,908	7,039 7,450 8,546	8,466 8,877 9,973	8,905 9,316 10,412	8,077 8,616 9,711	941 941 941

NO. OF FANS	MODEL NUMBER	Baked Epoxy Coil Coating (Other coatings are also available. Contact Applications for a special quote). See note 6 below.	Insulated Drain Pan	Heat Exchanger (Shipped loose) selected @ 10° T.D./R407A		Unit Cooler Approx. Ship Wt (LBS)
				Model	List Price	
				1	KL6A041* KL6A052* KL6A066*	
2	KL6A073* KL6A094* KL6A117* KL6A130*	639 661 694 727	741 741 741 741	HX-50 HX-50 HX-75 HX-75	199 199 273 273	52 55 58 58
3	KL6A141* KL6A161* KL6A181*	984 1,011 1,039	899 899 899	HX-75 HX-75 HX-100	273 273 349	72 78 85
4	KL6A195* KL6A235* KL6A260*	1,080 1,132 1,185	1,034 1,034 1,034	HX-100 HX-150 HX-150	349 403 403	115 124 147
5	KL6A295* KL6A330* KL6A390*	1,398 1,731 1,796	1,180 1,341 1,341	HX-150 HX-250 HX-250	403 557 557	218 257 262

†Electronically Commutated motors are not available for 380V, 460V, or 575V. Use PSC motors for 460V volts. Use EC motors for 100-230V 50HZ operations.

†These models utilize dual voltage EC motors that are configurable for single or dual speed operation. Dual speed EC motors are compliant with California Title 24 regulations.

†Dual speed motor operation employs a relay to control motor speed. LLS voltage must match the voltage applied to the motor. Electric default: dual speed relay voltage is 230V.

†Specify motor speed: single (motor code E) or dual speed (motor code D) at time of order. (115 and 230 volt dual speed relays are both included with S voltage code.)

* Refer to nomenclature example to complete the model number.

‡ Reference the catalog for 3 phase heater availability.

1. Pre-Assembly code L indicates that the unit includes factory mounted txv, liquid line solenoid, mechanical room t-stat.
2. Pre-Assembled code M designates a Master unit for a 2 evaporator Master / Slave evaporator setup. A master unit includes a mounted txv, liquid line solenoid, mechanical room t-stat
3. For Pre-Assembled code T (mounted TXV only), select a configurable model then add \$393 for up to 3 ton requirement or \$691 for 4 to 9 ton mounted txv to price of the configurable unit.
4. See page 17 for expansion valve pricing.
5. \$332 List adder for adjustable termination/fan delay control in lieu of a fixed controls.
6. Baked epoxy coating covers the coil only. Contact Application Engineering for coated housing or alternate coil coating. ElectroFin, Bronz-Glow and Heresite are available coating options.
7. Electric default: Dual speed relay voltage is 230V.
8. EcoNet® Control package includes: Sporlan EEV; suction pressure transducer; suction, entering air, coil temp thermistors; local on-board two-row LCD display and push button adjustments. Controller replaces TXV, liquid solenoid valve, room thermostat, defrost termination and fan delay, and time clock.
9. EcoNet Command Center can only be used with EcoNet Enabled Unit Coolers (EcoNet Control package installed). The EcoNet Command Center is an intuitive touchscreen interface allowing complete control of individual and grouped EcoNet Enabled Unit Coolers (up to 32 devices including the Command Center). The remote mount display allows for EcoNet Enabled Unit Coolers to be programmed, monitored and troubleshot outside of the space being cooled. The Command Center is shipped separately and includes everything in the box needed to wall mount the display.

AIR DEFROST EVAPORATORS

MEDIUM SILHOUETTE

Model Number	BTU/HR @ 10° TD	Electronically Commutated Motors†						PSC Motors					
		Single Speed		Dual Speed		Variable Speed		Single Speed					
		115V/1	230V/1	115V/1	230V/1	460V/1**	115V/1	230V/1	460V/1	575V/1			
4 FPI													
MSA-126	12,600	\$5,189	\$5,277	\$5,650	\$5,810	\$6,229	No longer available	\$4,540	\$4,640	\$4,807	\$4,903		
MSA-169	16,900	6,292	6,403	6,753	6,936	7,354		5,080	5,195	5,351	5,458		
MSA-224	22,400	7,750	7,913	8,442	8,713	9,340		6,327	6,502	7,150	7,293		
MSA-287	28,700	9,564	9,928	10,257	10,728	11,355		8,214	8,604	9,050	9,230		
MSA-340	34,000	12,094	12,359	12,663	12,927	13,311		10,115	10,369	10,693	10,907		
MSA-395	39,500	13,664	14,337	14,232	14,905	15,288		11,842	12,502	13,113	13,377		
MSA-465	46,500	16,868	17,066	17,722	17,920	18,493		13,951	14,142	14,982	15,281		
MSA-585	58,500	17,704	18,265	18,558	19,117	19,692		15,066	15,614	16,639	16,973		

6 FPI													
CSA-145	14,500	\$5,402	\$5,472	\$5,863	\$6,005	\$6,424	No longer available	\$4,709	\$4,790	\$4,988	\$5,087		
CSA-191	19,100	6,538	6,552	7,000	7,085	7,504		5,243	5,256	5,484	5,594		
CSA-240	24,000	8,056	8,233	8,749	9,032	9,661		6,598	6,788	7,163	7,308		
CSA-305	30,500	9,924	10,191	10,615	10,989	11,618		8,493	8,777	9,071	9,253		
CSA-370	37,000	12,594	12,945	13,163	13,513	13,896		10,464	10,796	11,165	11,387		
CSA-415	41,500	14,254	14,485	15,106	15,339	15,912		12,230	12,465	12,731	12,986		
CSA-490	49,000	17,510	17,879	18,363	18,732	19,306		14,549	14,905	15,550	15,861		
CSA-620	62,000	18,385	18,681	19,239	19,534	20,108		15,571	15,856	16,695	17,029		

8 FPI													
DSA-151	15,100	\$5,588	\$5,672	\$6,050	\$6,205	\$6,623	No longer available	\$4,898	\$4,994	\$5,187	\$5,292		
DSA-210	21,000	6,739	6,823	7,202	7,355	7,774		5,563	5,648	5,727	5,842		
DSA-260	26,000	8,342	8,470	9,033	9,269	9,898		6,933	7,073	7,436	7,588		
DSA-320	32,000	10,203	10,611	10,895	11,410	12,038		8,943	9,388	9,485	9,675		
DSA-410	41,000	12,977	13,493	13,545	14,063	14,445		10,874	11,366	11,601	11,833		
DSA-450	45,000	14,703	15,042	15,272	15,610	15,993		12,546	12,869	13,259	13,526		
DSA-540	54,000	18,111	18,732	18,964	19,585	20,160		15,093	15,690	16,014	16,333		
DSA-690	69,000	18,968	19,367	19,822	20,220	20,794		16,453	16,847	17,410	17,759		

EC = Electronically Commutated Motors PSC = Permanent Split Capacitor

Units with dual speed motors include a relay which controls motor speed when wired to the room T-stat. Field wiring is required unless the T-Stat is mounted on the unit.

Dual speed EC motors are compliant with California Title 24 regulations.

** These 460V/1 models use 1/3 HP motors for all units.

Contact Application Engineering for coated housing prices.

† EC motors are not available in 575V.

\$344 List adder for adjustable termination/fan delay control in lieu of a fixed controls.

Specify voltage and motor type when ordering. See CSA, DSA and MSA Series brochures for nomenclature, voltage code and motor codes.

	MODEL NUMBER	Insulated Drain Pan	HEAT. EXCHANGER @ 10° T.D./R404A		APPROX SHIP WT. (LBS)
			MODEL	LIST	
4 FPI	MSA-126	\$2,001	HX-50	\$199	115
	MSA-169	2,001	HX-75	273	130
	MSA-224	2,244	HX-100	349	280
	MSA-287	2,244	HX-150	403	310
	MSA-340	2,001	HX-150	403	345
	MSA-395	2,001	HX-150	403	375
	MSA-465	2,244	HX-250	557	400
	MSA-585	2,244	HX-250	557	505
6 FPI	CSA-145	\$2,001	HX-75	\$273	120
	CSA-191	2,001	HX-75	273	140
	CSA-240	2,244	HX-100	349	290
	CSA-305	2,244	HX-150	403	320
	CSA-370	2,001	HX-150	403	360
	CSA-415	2,244	HX-150	403	395
	CSA-490	2,244	HX-250	557	415
	CSA-620	2,244	HX-250	557	520
8 FPI	DSA-151	\$2,001	HX-75	\$273	125
	DSA-210	2,001	HX-75	273	145
	DSA-260	2,244	HX-100	349	295
	DSA-320	2,244	HX-150	403	330
	DSA-410	2,001	HX-150	403	370
	DSA-450	2,001	HX-250	557	390
	DSA-540	2,244	HX-250	557	430
	DSA-690	2,244	HX-250	557	540

AIR DEFROST EVAPORATORS

HEIGHT SAVER						
Model Number	BTU/HR @ 10° TD	Single Speed EC Motors [†]		Single Speed PSC Motors	Insulated Drain Pan	Approx. Ship WT. (LBS)
		115V/1	230V/1	115V PSC ¹		

6 FPI

HSA-65	6,500	\$3,133	\$3,259	\$2,253	\$4,517	90
HSA-85	8,500	3,972	4,044	2,748	4,517	95
HSA-95	9,500	4,381	4,618	3,072	4,517	100
HSA-103	10,300	4,630	4,794	3,432	5,362	120
HSA-123	12,300	5,415	5,594	3,803	5,362	125
HSA-142	14,200	5,940	6,128	4,052	5,362	130
HSA-159	15,900	6,447	6,679	4,558	6,024	145
HSA-193	19,300	7,537	7,749	5,032	5,362	150
HSA-218	21,800	8,361	8,632	5,649	6,024	160
HSA-233	23,300	10,021	10,284	6,872	7,258	180

8 FPI

HSA-74	7,400	\$3,197	\$3,520	\$2,298	\$4,517	95
HSA-90	9,000	4,051	4,368	2,803	4,517	100
HSA-100	10,000	4,468	4,988	3,133	4,517	105
HSA-110	11,000	4,722	5,177	3,500	5,362	125
HSA-130	13,000	4,886	6,042	3,879	5,362	130
HSA-156	15,600	6,058	6,619	4,133	5,362	135
HSA-164	16,400	6,574	7,213	4,650	6,024	150
HSA-212	21,200	7,688	8,370	5,134	5,362	155
HSA-240	24,000	8,521	10,778	5,762	6,024	165
HSA-250	25,000	10,222	11,107	7,011	7,258	185

1. PSC motors are not available for models with 230V/1 requirements. Use models with EC motors for 230V/1 applications.

[†] EC motors are not Available in 460V/1.

Dual speed EC motors are not available for HSA models.

All units are provided with sweat refrigerant connections.

230V/1/60 models also valid for 208V/1/60

EC = Electronically Commutated Motors PSC = Permanent Split Capacitor

460V motors are not available for HSA models.

Use EC motors for 50HZ operation.

Specify voltage (A = 115/1 or D = 230/1) and motor type (P = PSC or E =ECM) when ordering.

COOLMASTER					
MODEL NUMBER	BTU/HR @ 10° TD	LIST PRICE 208-230 or 460/3	HEAT EXCHANGER		Approx. Ship WT. (LBS)
			MODEL	PRICE	

4 FPI

CM-450D	45,500	\$12,594	HX-250	\$557	500
CM-620D	62,700	14,717	HX-250	557	600
CM-850D	85,500	19,429	HX-350	570	900
CM-1100D	107,900	22,454	HX-500	906	1,000
CM-1250D	123,500	30,025	HX-500	906	1,150
CM-1350D	136,600	31,610	HX-500	906	1,500
CM-1600D	159,900	34,483	LHX-15	2,483	1,700
CM-1800D	182,200	36,947	LHX-20	2,658	2,000
CM-2100D	212,500	45,216	LHX-20	2,658	2,200

6 FPI

CCM-520D	51,400	\$13,118	HX-250	\$557	510
CCM-710D	70,825	15,491	HX-350	570	615
CCM-970D	97,125	20,238	HX-350	570	920
CCM-1220D	122,250	23,389	HX-500	906	1,025
CCM-1390D	139,400	31,480	HX-500	906	1,180
CCM-1550D	154,500	33,272	LHX-15	2,483	1,530
CCM-1810D	180,450	35,920	LHX-15	2,483	1,740
CCM-2060D	205,650	38,486	LHX-20	2,658	2,600
CCM-2400D	239,900	47,099	LHX-20	2,658	2,700

8 FPI

DCM-560D	55,975	\$13,250	HX-250	\$557	535
DCM-770D	77,075	15,800	HX-350	570	640
DCM-1060D	105,750	23,071	HX-350	570	950
DCM-1330D	133,050	26,665	HX-500	906	1,055
DCM-1520D	151,750	32,424	HX-500	906	1,225
DCM-1680D	167,950	33,939	LHX-15	2,483	1,580
DCM-1960D	196,450	38,794	LHX-15	2,483	1,800
DCM-2240D	223,850	42,143	LHX-20	2,658	2,650
DCM-2620D	261,500	49,455	LHX-20	2,658	2,800

ELECTRIC DEFROST EVAPORATORS

NEXT-GEN ALL-TEMP • ELECTRIC DEFROST MODELS

NO. OF FANS	MODEL NUMBER	Electronically Commutated Motors ^{††}				Single Speed PSC Motors				EcoNet® Command Center (Shipped loose) (Remote Mount Display for EcoNet Control Package). See note 9 below.
		Configurable Model Single speed operation (Motor code "E". No accessories mounted)	Configurable Model Dual speed operation (Motor code "D". No accessories mounted)	EcoNet® Control Package Pre-Assembled with factory mounted accessories - Assembly Code E (Motor code "D"). See note 8 below.	Pre-Assembled with factory mounted accessories - Assembly Code L or M (Motor code "E" or "D"). See notes 1, 2 & 3.	Configurable Model - Single speed operation (Motor code "P". No accessories mounted)	EcoNet® Control Package Pre-Assembled with factory mounted accessories - Assembly Code E (Motor code "P"). See note 8 below.	Pre-Assembled with factory mounted accessories - Assembly Code L or M (Motor code "P"). See notes 1, 2 & 3 below.	Configurable Model - Single speed operation (Motor code "P". No accessories mounted)	
		208-230V/1 or 3ph‡ (Voltage code "D" or "E")	208-230V/1 or 3ph‡ (Voltage code "D" or "E")	208-230V/1 (Voltage code "D")	208-230V/1 or 3ph‡ (Voltage code "D" or "E")	208-230V/1 or 3ph‡ (Voltage code "D" or "E")	208-230V/1 (Voltage code "D")	208-230V/1 or 3ph‡ (Voltage code "D" or "E")	460V/1 (Voltage code "F")	

4 FPI

1	KL4E027* KL4E032* KL4E038*	\$1,630 2,037 2,562	\$1,630 2,037 2,562	\$3,496 3,903 4,428	\$2,697 3,104 3,629	\$1,453 1,723 2,217	\$3,319 3,589 4,083	\$2,520 2,790 3,284	\$1,732 2,002 2,504	\$941 941 941
2	KL4E051* KL4E064* KL4E080*	3,125 3,923 4,469	3,125 3,923 4,469	4,991 5,789 6,335	4,991 4,990 5,536	2,773 3,222 3,726	4,639 5,088 5,592	3,840 4,289 4,793	3,064 3,549 4,035	941 941 941
3	KL4E094* KL4E110*	5,026 5,883	5,026 5,883	6,892 7,749	6,093 6,950	3,999 4,679	5,865 6,545	5,066 5,746	4,773 5,534	941 941
4	KL4E125* KL4E141*	6,628 7,478	6,628 7,478	8,494 9,344	7,695 8,545	5,264 5,937	7,130 7,803	6,331 7,004	6,307 6,996	941 941
5	KL4E155*	8,309	8,309	10,175	9,428	6,616	8,482	8,043	7,717	941
6	KL4E195* KL4E230*	9,959 11,468	9,959 11,468	11,825 13,334	11,078 12,541	8,321 9,285	10,187 11,151	9,749 10,712	9,761 10,727	941 941

6 FPI

1	KL6E035* KL6E042* KL6E049*	\$2,535 2,819 3,103	\$2,535 2,819 3,103	\$4,401 4,685 4,969	\$3,602 3,886 4,170	\$2,178 2,429 2,715	\$4,044 4,295 4,581	\$3,245 3,496 3,782	\$2,481 2,705 3,084	\$941 941 941
2	KL6E066* KL6E077* KL6E090* KL6E105*	3,910 4,113 4,234 4,960	3,910 4,113 4,234 4,960	5,776 5,979 6,100 6,826	4,977 5,180 5,301 6,027	3,156 3,349 3,508 4,093	5,022 5,215 5,374 5,959	4,223 4,416 4,575 5,161	3,524 3,964 4,166 4,462	941 941 941 941
3	KL6E121* KL6E142*	5,547 6,329	5,547 6,329	7,413 8,195	6,614 7,396	4,422 5,198	6,288 7,064	5,489 6,265	5,267 6,076	941 941
4	KL6E162* KL6E182*	7,422 8,190	7,422 8,190	9,288 10,056	8,489 9,257	5,917 6,686	7,783 8,552	6,984 7,753	6,953 7,808	941 941
5	KL6E200*	9,212	9,212	11,078	10,330	7,447	9,313	8,874	8,655	941
6	KL6E244* KL6E281*	10,806 11,964	10,806 11,964	12,672 13,830	12,234 13,391	8,534 9,724	10,400 11,590	9,961 11,151	9,950 11,283	941 941

NO. OF FANS	MODEL NUMBER	Contact Applications for Coil Coating prices for electric defrost models	Insulated Drain Pan	Heat Exchanger (Shipped loose) selected @10° T.D./R407A		Unit Cooler Approx. Ship Wt. (LBS)
				Model	List Price	

4 FPI

1	KL4E027* KL4E032* KL4E038*	C/F C/F C/F	\$587	HX-25 HX-25 HX-25	\$169 169 169	40 42 46
2	KL4E051* KL4E064* KL4E080*	C/F C/F C/F	741	HX-25 HX-50 HX-50	169 199 199	50 52 55
3	KL4E094* KL4E110*	C/F C/F	899	HX-50 HX-50	199 199	79 84
4	KL4E125* KL4E141*	C/F C/F	1,034	HX-75 HX-75	273 273	124 144
5	KL4E155*	C/F	1,180	HX-75	273	191
6	KL4E195* KL4E230*	C/F C/F	1,341	HX-100 HX-150	349 403	257 262

6 FPI

1	KL6E035* KL6E042* KL6E049*	C/F C/F C/F	\$587	HX-25 HX-25 HX-25	\$169 169 169	41 44 47
2	KL6E066* KL6E077* KL6E090* KL6E105*	C/F C/F C/F C/F	741	HX-50 HX-50 HX-50 HX-50	199 199 199 199	52 55 58 62
3	KL6E121* KL6E142*	C/F C/F	899	HX-75 HX-75	273 273	78 85
4	KL6E162* KL6E182*	C/F C/F	1,034	HX-75 HX-100	273 349	124 147
5	KL6E200*	C/F	1,180	HX-100	349	195
6	KL6E244* KL6E281*	C/F C/F	1,341	HX-150 HX-150	403 403	238 238

^{††} Electronically Commutated motors are not available for 380V, 460V, or 575V. Use PSC motors for 460V volts. Use EC motors for 100-230V 50Hz operations.

^{†††} These models utilize dual voltage EC motors that are configurable for single or dual speed operation. **Dual speed EC motors are compliant with California Title 24 regulations.**

^{††††} Dual speed motor operation employs a relay to control motor speed. LLS voltage must match the voltage applied to the motor. **Electric default: Dual speed relay voltage is 230V.**

^{†††††} Specify operating voltage 230V/1 (voltage code D) or 230/3 (voltage code E) and motor speed, single (motor code E) or dual speed (motor code D) operation at time of order. (All motors are single phase.)

* Refer to nomenclature example - page 2 - to complete the model number.

‡ Reference the catalog for 3 phase heater availability.

1. Pre-Assembled code L indicates that the unit includes factory mounted txv, liquid line solenoid, mechanical room t-stat.

2. Pre-Assembled code M designates a **Master unit** for a 2 evaporator Master / Slave evaporator setup. A master unit includes a mounted txv, liquid line solenoid, mechanical room t-stat and copper tee. Code M models are to be matched with an identical model, suffix code T, in order to complete the Master/Slave combination. See note 3 for description of code T models.

3. For Pre-Assembled code T (mounted TXV only), select a configurable model then add \$393 for up to 3 ton requirement or \$691 for 4 to 9 ton mounted txv to price of the configurable unit.

4. See page 14 for expansion valve pricing.

5. \$344 List adder for adjustable termination/fan delay control in lieu of a fixed controls.

6. Contact Application Engineering for coated housing or coil coating. ElectroFin, Bronz-Glow and Heresite are available coating options.

7. Electric default: Dual speed relay voltage is 230V.

8. EcoNet® Control package includes: Sportan EEV; suction pressure transducer; suction, entering air, coil temp thermistors; local on-board two-row LCD display and push button adjustments. Controller replaces TXV, liquid solenoid valve, room thermostat, defrost termination and fan delay, and time clock.

9. EcoNet Command Center can only be used with EcoNet Enabled Unit Coolers (EcoNet Control package installed). The EcoNet Command Center is an intuitive touchscreen interface allowing complete control of individual and grouped EcoNet Enabled Unit Coolers (up to 32 devices including the Command Center). The remote mount display allows for EcoNet Enabled Unit Coolers to be programmed, monitored and troubleshoot outside of the space being cooled. The Command Center is shipped separately and includes everything in the box needed to wall mount the display.

ELECTRIC DEFROST EVAPORATORS

MEDIUM SILHOUETTE

MODEL NUMBER	Electronically Commutated Motors†					Single Speed PSC Motors			Insulated Drain Pan	Heat Exchanger (Shipped loose)		Approx Ship Wt. (LBS)
	Single Speed	Dual Speed		Variable Speed						MODEL	LIST	
	230/1 (A)	230/1 (A)	460V/1 (B) *	230/1 (A)	460V/1 (B) **	230/1 (A)	460/1 (B)	575V/1				

4 FPI

MSE-105	\$5,646	\$6,179	\$6,597	No longer available	\$4,839	\$5,127	\$5,230	\$2,001	HX 150	\$403	120
MSE-140	7,286	7,819	8,238		5,479	5,672	5,786	2,001	HX 150	403	135
MSE-175	8,291	9,090	9,243		6,881	7,416	7,564	2,244	HX 150	403	285
MSE-230	11,397	11,995	12,349		9,547	10,310	10,516	2,001	HX 250	557	315
MSE-325	15,968	16,566	16,920		13,517	14,334	14,619	2,001	HX 350	570	350
MSE-390	16,884	17,781	18,311		14,811	15,808	16,125	2,244	HX 350	570	425
MSE-510	19,223	20,120	20,650		18,004	19,350	19,740	2,244	HX 500	906	530

6 FPI

CSE-130	\$6,043	\$6,575	\$6,995	No longer available	\$4,943	\$5,191	\$5,295	2,001	HX 150	\$403	125
CSE-150	6,341	6,873	7,293		5,620	5,883	6,000	2,001	HX 150	403	140
CSE-185	9,505	10,305	10,933		7,557	8,256	8,422	2,244	HX 150	403	295
CSE-270	11,871	12,469	12,824		10,625	11,203	11,427	2,001	HX 250	557	320
CSE-320	13,422	14,019	14,373		11,509	12,324	12,571	2,001	HX 350	570	365
CSE-385	16,753	17,649	18,180		14,133	14,810	15,106	2,244	HX 350	570	450
CSE-460	17,401	18,298	18,829		15,496	16,596	16,927	2,244	HX 500	906	490
CSE-520	19,733	20,631	21,161		17,664	18,560	18,930	2,244	HX 500	906	535

(A) 230/1 Volt motors and 230/1 or 230/3 Volt heaters.

(B) 460/1 Volt motors and 460/1 or 460/3 Volt heaters.

1. Electric defrost models include fixed defrost termination and fan delay controls.
2. Standard motor wiring is single phase.
3. Standard heater wiring is 3 phase.
4. ** These 460V/1 models use 1/3 HP motors for all units.

† Electronically Commutated motors are not available for 575V applications.

Dual speed EC motors are compliant with California Title 24 regulations.

Specify voltage and motor type when ordering. See MSE and CSE Series brochure for nomenclature, voltage code and motor codes.

Adjustable DTFD List price add per unit - \$344

Air Straightener List price add per fan - \$362

Use EC motors for 50HZ operation.

ELECTRIC DEFROST EVAPORATORS

HEIGHT SAVER

MODEL NUMBER	BTU/HR @ 10° TD	Single Speed EC Motor ¹	Insulated Drain Pan	APPROX. SHIP WT. (LBS)	MODEL NUMBER	BTU/HR @ 10° TD	Single Speed EC Motor ¹	Insulated Drain Pan	APPROX. SHIP WT. (LBS)
		230/1 (A)					230/1 (A)		
4 FPI					6 FPI				
HSE-50	5,000	\$3,661	\$4,517	90	HSE-55	5,500	\$5,068	\$4,517	95
HSE-60	6,000	5,087	4,517	95	HSE-63	6,300	5,233	4,517	100
HSE-66	6,600	5,242	4,517	100	HSE-71	7,100	5,223	4,517	105
HSE-74	7,400	6,003	5,362	120	HSE-79	7,900	6,012	5,362	125
HSE-86	8,600	6,693	5,362	125	HSE-91	9,100	6,728	5,362	130
HSE-94	9,400	6,709	5,362	130	HSE-103	10,300	7,031	5,362	135
HSE-116	11,600	7,003	6,024	145	HSE-125	12,500	7,304	6,024	150
HSE-130	13,000	7,268	5,362	150	HSE-143	14,300	8,426	5,362	155
HSE-144	14,400	8,416	6,024	160	HSE-163	16,300	9,439	6,024	165
HSE-174	17,400	9,453	7,258	180	HSE-219	21,900	11,604	7,258	185

(A) 230/1 Volt motors and heaters.

All models are supplied with a non-adjustable defrost termination and fan delay thermostat mounted and wired.

Adjustable DTFD list add per unit. **\$344**

EC = Electronically Commutated Motors

All units are provided with sweat refrigerant connections.

¹ 460V motors are not available for HSE models.

230V/1/60 models also valid for 208V/1/60

Use EC motors for 50HZ operation. Dual speed EC motors are not available for HSE models.

COOLMASTER

MODEL NUMBER	BTU/HR @ 10° TD	LIST PRICE 208-230/460/3	HEAT EXCHANGER		APPROX. SHIP WT. (LBS)
			MODEL	PRICE	
4 FPI - Standard Fan					
KED-400D	40,000	\$14,731	HX-350	\$570	450
KED-550D	55,000	18,946	HX-500	906	520
KED-750D	75,000	27,669	LHX-15	2,483	790
KED-950D	95,000	31,623	LHX-20	2,658	890
KED-1200D	120,000	36,292	LHX-20	2,658	1,410
KED-1600D	160,000	50,987	LHX-30	3,140	1,810
4 FPI - Pressure Propeller					
KED-400PP	40,000	\$17,055	HX-350	\$570	490
KED-550PP	55,000	21,280	HX-500	906	550
KED-750PP	75,000	30,005	LHX-15	2,483	810
KED-950PP	95,000	34,110	LHX-20	2,658	900
KED-1200PP	120,000	39,792	LHX-20	2,658	1,430
KED-1600PP	160,000	55,653	LHX-30	3,140	1,900
6 FPI - Standard Fan					
CED-450D	45,200	\$15,484	HX-350	\$570	470
CED-620D	62,200	19,838	HX-500	906	540
CED-850D	84,800	28,821	LHX-15	2,483	815
CED-1070D	107,400	32,600	LHX-20	2,658	920
CED-1360D	135,600	37,608	LHX-25	2,846	1,460
CED-1800D	180,800	52,455	LHX-30	3,140	2,170
6 FPI - Pressure Propeller					
CED-450PP	45,200	\$17,518	HX-350	\$570	520
CED-620PP	62,200	22,172	HX-500	906	570
CED-850PP	84,800	31,155	LHX-15	2,483	835
CED-1070PP	107,400	34,934	LHX-20	2,658	930
CED-1360PP	135,600	41,107	LHX-25	2,846	1,480
CED-1800PP	180,800	57,121	LHX-30	3,140	2,260

All models have 3 phase motors and heaters.

Models "KED-1200" and larger and models "CED-1360" and larger are equipped with fused defrost heaters.

All models are supplied with an adjustable defrost termination / fan delay thermostat mounted and wired.

Air Straighteners list adder per **\$486**

Models with Pressure Propeller fans are for use in Blast Freezers with air pressure drop up to 0.5" static pressure.

Models with PP fans are not for use above +25°F room temperature.

NEXT-GEN ALL-TEMP HOT GAS DEFROST EVAPORATORS

HOT GAS DEFROST / REVERSE CYCLE MODELS													
FINS PER INCH (FPI)	NO. OF FANS	MODEL NUMBER	Electronically Commutated Motors†				PSC Motors			Insulated Drain Pan	Heat Exchanger (Shipped loose) selected @10° T.D./R407A		Unit Cooler Approx. Ship Wt. (LBS)
			Configurable Model - <u>Single</u> speed operation (Motor code "E". No accessories mounted)		Configurable Model - <u>Dual</u> speed motor operation (Motor code "D". No accessories mounted.)		Configurable Model - <u>Single</u> speed operation (Motor code "P". No accessories mounted)				Model	List Price	
			115V/1 (Voltage code "A")	208-230V/1 (Voltage code "D")	115V/1 (Voltage code "A")	208-230V/1 (Voltage code "D")	115V/1 (Voltage code "A")	208-230V/1 (Voltage code "D")	460V/1 (Voltage code "F")				
4 F P I	1	KL4G027*	\$1,699	\$1,766	\$1,699	\$1,766	\$1,453	\$1,518	\$2,071	\$587	HX-25	\$169	40
		KL4G032*	2,006	2,070	2,006	2,070	1,717	1,781	2,335	587	HX-25	169	42
		KL4G038*	2,538	2,596	2,538	2,596	2,170	2,228	2,424	587	HX-25	169	46
	2	KL4G051*	3,223	3,334	3,223	3,334	2,665	2,951	3,235	741	HX-25	169	50
		KL4G064*	4,044	4,154	4,044	4,154	3,344	3,447	3,709	741	HX-25	169	52
		KL4G080*	4,546	4,677	4,546	4,677	3,802	3,933	4,213	741	HX-50	199	55
	3	KL4G094*	4,893	5,237	4,893	5,237	3,868	4,295	4,722	899	HX-50	199	79
		KL4G110*	5,727	6,069	5,727	6,069	4,524	4,883	5,336	899	HX-50	199	84
	4	KL4G125*	6,375	6,810	6,375	6,810	5,008	5,572	6,135	1,034	HX-50	199	124
		KL4G141*	7,190	7,626	7,190	7,626	5,649	6,085	6,658	1,034	HX-75	273	144
	5	KL4G155*	7,816	8,351	7,816	8,351	6,121	6,603	7,243	1,180	HX-75	273	191
		KL4G195*	9,594	10,222	9,594	10,222	7,455	8,050	8,856	1,341	HX-100	349	257
6	KL4G230*	11,059	11,821	11,059	11,821	8,876	9,615	10,438	1,341	HX-100	349	262	
	6 F P I	1	KL6G035*	\$2,467	\$2,524	\$2,467	\$2,524	\$2,097	\$2,153	\$2,340	\$587	HX-25	\$169
KL6G042*			2,787	2,852	2,787	2,852	2,396	2,460	2,656	587	HX-25	169	44
KL6G049*			3,145	3,219	3,145	3,219	2,757	2,832	3,029	587	HX-25	169	47
2		KL6G066*	3,776	4,018	3,776	4,018	3,020	3,262	3,636	741	HX-25	169	52
		KL6G077*	4,180	4,420	4,180	4,420	3,419	3,659	4,032	741	HX-50	199	55
		KL6G090*	4,430	4,728	4,430	4,728	3,689	3,988	4,364	741	HX-50	199	58
3		KL6G105*	5,193	5,492	5,193	5,492	4,325	4,706	5,086	741	HX-50	199	62
		KL6G121*	5,453	5,801	5,453	5,801	4,340	4,676	5,233	899	HX-75	273	78
4		KL6G142*	6,383	6,612	6,383	6,612	5,252	5,480	6,039	899	HX-75	273	85
		KL6G162*	7,088	7,535	7,088	7,535	5,582	6,029	6,782	1,034	HX-75	273	124
5		KL6G182*	7,938	8,526	7,938	8,526	6,436	7,024	7,773	1,034	HX-75	273	147
		KL6G200*	8,392	8,923	8,392	8,923	6,542	7,073	8,011	1,180	HX-100	349	195
6	KL6G244*	10,163	10,908	10,163	10,908	7,885	8,645	9,799	1,341	HX-100	349	238	
	KL6G281*	11,318	12,212	11,318	12,212	9,079	9,965	11,101	1,341	HX-100	349	262	

- \$395 List adder for liquid txv bypass check valve, shipped loose. \$606 list price adder for liquid txv bypass check valve - factory mounted.
- Consult factory for installed suction check valve prices.
- Hot Gas reverse cycle includes a fixed defrost termination control and a fixed fan delay control, factory wired.

HOT GAS DEFROST / 3 PIPE DEFROST MODELS													
FINS PER INCH (FPI)	NO. OF FANS	MODEL NUMBER	Electronically Commutated Motors†				PSC Motors			Insulated Drain Pan	Unit Cooler Approx. Ship Wt. (LBS)		
			Configurable Model - <u>Single</u> speed operation (Motor code "E". No accessories mounted)		Configurable Model - <u>Dual</u> speed motor operation (Motor code "D". No accessories mounted.)		Configurable Model - <u>Single</u> speed operation (Motor code "P". No accessories mounted)						
			115V/1 (Voltage code "A")	208-230V/1 (Voltage code "D")	115V/1 (Voltage code "A")	208-230V/1 (Voltage code "D")	115V/1 (Voltage code "A")	208-230V/1 (Voltage code "D")	460V/1 (Voltage code "F")				
4 F P I	1	KL4H027*	\$1,699	\$1,766	\$1,699	\$1,766	\$1,453	\$1,518	\$2,071	\$587	40		
		KL4H032*	2,006	2,070	2,006	2,070	1,717	1,781	2,335	587	42		
		KL4H038*	2,538	2,596	2,538	2,596	2,170	2,228	2,424	587	46		
	2	KL4H051*	3,223	3,334	3,223	3,334	2,665	2,951	3,236	741	50		
		KL4H064*	4,044	4,154	4,044	4,154	3,344	3,447	3,709	741	52		
		KL4H080*	4,546	4,677	4,546	4,677	3,802	3,933	4,213	741	55		
	3	KL4H094*	4,893	5,237	4,893	5,237	3,868	4,295	4,722	899	79		
		KL4H110*	5,727	6,069	5,727	6,069	4,524	4,883	5,337	899	84		
	4	KL4H125*	6,375	6,810	6,375	6,810	5,008	5,572	6,135	1,034	124		
		KL4H141*	7,190	7,626	7,190	7,626	5,649	6,085	6,659	1,034	144		
	5	KL4H155*	7,816	8,351	7,816	8,351	6,121	6,603	7,243	1,180	191		
		KL4H195*	9,594	10,222	9,594	10,222	7,455	8,050	8,857	1,341	257		
6	KL4H230*	11,059	11,821	11,059	11,821	8,876	9,615	10,438	1,341	262			
	6 F P I	1	KL6H035*	\$2,467	\$2,524	\$2,467	\$2,524	\$2,097	\$2,153	\$2,340	\$587	41	
KL6H042*			2,787	2,852	2,787	2,852	2,396	2,460	2,655	587	44		
KL6H049*			3,145	3,219	3,145	3,219	2,757	2,832	3,029	587	47		
2		KL6H066*	3,776	4,018	3,776	4,018	3,020	3,262	3,636	741	52		
		KL6H077*	4,180	4,420	4,180	4,420	3,419	3,659	4,032	741	55		
		KL6H090*	4,430	4,728	4,430	4,728	3,689	3,988	4,364	741	58		
3		KL6H105*	5,193	5,492	5,193	5,492	4,325	4,706	5,086	741	62		
		KL6H121*	5,453	5,801	5,453	5,801	4,340	4,676	5,233	899	78		
4		KL6H142*	6,383	6,612	6,383	6,612	5,252	5,480	6,040	899	85		
		KL6H162*	7,088	7,535	7,088	7,535	5,582	6,029	6,782	1,034	124		
5		KL6H182*	7,938	8,526	7,938	8,526	6,436	7,024	7,773	1,034	147		
		KL6H200*	8,392	8,923	8,392	8,923	6,542	7,073	8,011	1,180	195		
6	KL6H244*	10,163	10,908	10,163	10,908	7,885	8,645	9,800	1,341	238			
	KL6H281*	11,318	12,212	11,318	12,212	9,079	9,965	11,101	1,341	262			

- Hot Gas 3 Pipe Defrost models include a fixed defrost termination control and a fixed fan delay control, factory wired.
- Electronically Commutated motors are not available for 380V, 460V, or 575V. Use PSC motors for 460V volts. Use EC motors for 100-230V 50HZ operations.
- These models utilize single voltage EC motors that are configurable for single or dual speed operation. **Dual speed EC motors are compliant with California Title 24 regulations.**
- Dual speed motor operation employs a relay to control motor speed. LLS voltage must match the voltage applied to the motor. Electric default: dual speed relay voltage is 230V.
- Specify operating voltage and motor speed at time of order.
- \$344 List adder for adjustable termination/fan delay control in lieu of a fixed controls.
- Contact Application Engineering for coated housing or coil coating. ElectroFin, Bronz-Glow and Heresite are available coating options.

HOT GAS DEFROST EVAPORATORS

MEDIUM SILHOUETTE - HOT GAS REVERSE CYCLE

Model Number	Single Speed EC Motors [†]		Dual Speed EC Motors		Variable Speed EC Motors			Single Speed PSC Motors				Insulated Drain Pan	HEAT EXCHANGER		APPROX. SHIP WT. (LBS)
	115V/1	230V/1	230V/1	460V/1**	115V/1	230V/1	460V/1**	115V/1	230V/1	460V/1	575V/1		MODEL	LIST	
4 FPI															
MSG-105R	\$6,967	\$7,361	\$7,500	\$7,918	No longer available			\$5,524	\$5,932	\$6,406	\$6,534	\$2,001	HX 150	\$409	120
MSG-140R	8,477	8,871	9,010	9,428				7,088	7,497	8,097	8,258	2,001	HX 150	\$409	135
MSG-175R	9,743	9,887	10,543	10,695				8,233	8,392	9,105	9,287	2,244	HX 150	\$409	285
MSG-230R	12,804	13,037	13,401	13,755				11,328	11,569	11,934	12,172	2,001	HX 250	409	315
MSG-325R	16,803	17,051	17,401	17,755				14,855	15,100	15,587	15,901	2,001	HX 350	839	350
MSG-390R	19,083	19,417	19,980	20,511				16,474	16,809	17,664	18,018	2,244	HX 350	839	425
MSG-510R	20,862	21,234	21,760	22,290				17,884	18,244	19,581	19,972	2,244	HX 500	839	530

6 FPI															
CSG-130R	\$7,294	\$7,704	\$7,827	\$8,245	No longer available			\$5,746	\$6,167	\$6,476	\$6,603	\$2,001	HX 150	\$409	125
CSG-150R	9,189	9,290	9,722	10,141				7,365	7,463	7,840	7,996	2,001	HX 150	409	140
CSG-185R	10,144	10,303	10,943	11,571				8,611	8,787	9,480	9,669	2,244	HX 150	409	295
CSG-270R	13,160	13,394	13,757	14,111				11,776	12,018	12,774	13,030	2,001	HX 250	409	320
CSG-320R	14,883	15,240	15,482	15,834				12,675	13,023	14,039	14,319	2,001	HX 350	839	365
CSG-385R	17,396	17,645	18,294	18,825				15,193	15,446	16,526	16,856	2,244	HX 350	839	450
CSG-460R	19,625	20,057	20,522	21,052				16,730	17,159	18,533	18,902	2,244	HX 500	839	490
CSG-520R	21,547	22,010	22,443	22,974				18,679	19,137	20,488	20,898	2,244	HX 500	839	535

For adjustable DTFD add - \$344 list per unit.

Reverse Cycle Evaps have TXV bypass check valve and pan circuit/coil check valve installed. Suction check valve is to be supplied & installed by others.

ECM = Electronically Commutated Motors PSC = Permanent Split Capacitor

† These EC Motors are not available in 460V or 575V.

** These 460V/1 models use 1/3 HP motors for all units.

Units with dual speed motors include a relay which controls motor speed when wired to the room T-stat. Field wiring is required unless the T-Stat is mounted on the unit.

Dual speed EC motors are compliant with California Title 24 regulations.

HOT GAS DEFROST EVAPORATORS

MEDIUM SILHOUETTE - THERMOBANK

Model Number	Single Speed EC Motors [†]		Dual Speed EC Motors [†]		Variable Speed EC Motors [†]			Single Speed PSC Motors				Insulated Drain Pan	HEAT EXCHANGER		APPROX. SHIP WT. (LBS)
	115V/1	230V/1	230V/1	460V/1**	115V/1	230V/1	460V/1**	115V/1	230V/1	460V/1	575V/1		MODEL	LIST	
4 FPI															
MSG-105T	\$7,815	\$8,214	\$8,348	\$8,767	No longer available			\$6,372	\$6,785	\$7,255	\$7,400	\$2,001	HX 150	\$403	120
MSG-140T	9,334	9,725	9,867	10,285				7,944	8,350	8,947	9,127	2,001	HX 150	\$403	135
MSG-175T	11,926	12,140	12,725	12,879				10,416	10,645	11,330	11,557	2,244	HX 150	\$403	285
MSG-230T	15,175	15,364	15,772	16,126				13,699	13,895	14,482	14,772	2,001	HX 250	557	315
MSG-325T	19,133	19,470	19,730	20,084				17,186	17,519	18,522	18,895	2,001	HX 350	570	350
MSG-390T	21,949	22,280	22,846	23,377				19,339	19,672	20,901	21,319	2,244	HX 350	570	425
MSG-510T	22,822	23,189	23,718	24,249				19,842	20,199	21,535	21,966	2,244	HX 500	906	530

6 FPI															
CSG-130T	\$8,148	\$8,557	\$8,681	\$9,099	No longer available			\$6,598	\$7,020	\$7,325	\$7,471	\$2,001	HX 150	\$403	125
CSG-150T	10,041	10,141	10,574	10,992				8,216	8,314	8,690	8,835	2,001	HX 150	\$403	140
CSG-185T	12,386	12,594	13,186	13,813				10,853	11,079	11,677	11,894	2,244	HX 150	\$403	295
CSG-270T	15,438	15,820	16,035	16,389				14,054	14,444	15,174	15,319	2,001	HX 250	557	320
CSG-320T	17,237	17,673	17,835	18,188				15,027	15,455	16,449	16,532	2,001	HX 350	570	365
CSG-385T	19,932	20,147	20,828	21,359				17,727	17,950	19,025	19,258	2,244	HX 350	570	450
CSG-460T	23,500	23,862	24,397	24,927				20,606	20,962	22,244	22,525	2,244	HX 500	906	490
CSG-520T	25,339	25,804	26,235	26,766				22,470	22,931	24,193	24,493	2,244	HX 500	906	535

THERMOBANK Medium Silhouette evaporator prices do not include DTFD or other controls.

EC = Electronically Commutated Motors PSC = Permanent Split

† EC motors are not available for 575V applications.

** These 460V/1 models use 1/3 HP motors for all units.

1. See page 14 for prices to add appropriate system accessories.

Units with dual speed motors include a relay which controls motor speed when wired to the room T-stat. Field wiring is required unless the T-Stat is mounted on the unit.

Dual speed EC motors are compliant with California Title 24 regulations.

Specify voltage and motor type when ordering. See MSG and CSG Series brochure for nomenclature, voltage code and motor codes.

HOT GAS DEFROST EVAPORATORS - THERMOBANK

COOLMASTER					
MODEL NUMBER	BTU/HR @ 10° TD	LIST PRICE 208-230/460/3	HEAT EXCHANGER		APPROX. SHIP WT. (LBS)
			MODEL	LIST PRICE	

4 FPI - Standard Fan

TV-400D	40,000	\$17,796	HX-350	\$570	760
TV-550D	55,000	20,388	HX-500	906	860
TV-750D	75,000	27,342	LHX-15	2,483	1,150
TV-950D	95,000	34,973	LHX-15	2,483	1,260
TV-1100D	108,000	36,308	LHX-20	2,658	1,350
TV-1200D	120,000	39,165	LHX-20	2,658	2,130
TV-1400D	140,000	46,644	LHX-25	2,846	2,280
TV-1600D	160,000	60,369	LHX-30	3,140	2,370
TV-1900D	186,000	66,820	LHX-40	3,492	2,580

4 FPI - Pressure Propeller*

TV-400PP	40,000	\$20,130	HX-350	\$570	850
TV-550PP	55,000	22,720	HX-500	906	950
TV-750PP	75,000	29,676	LHX-15	2,483	1,360
TV-950PP	95,000	37,305	LHX-15	2,483	1,440
TV-1100PP	108,000	38,641	LHX-20	2,658	1,580
TV-1200PP	120,000	42,665	LHX-20	2,658	2,430
TV-1400PP	140,000	50,144	LHX-25	2,846	2,530
TV-1600PP	160,000	65,035	LHX-30	3,140	2,670
TV-1900PP	186,000	71,183	LHX-40	3,492	2,780

6 FPI - Standard Fan

CTV-450D	45,200	\$18,425	HX-350	\$570	770
CTV-620D	62,200	21,074	HX-500	906	880
CTV-850D	84,800	30,866	LHX-15	2,483	1,170
CTV-1070D	107,400	36,400	LHX-15	2,483	1,285
CTV-1220D	122,000	41,289	LHX-20	2,658	1,380
CTV-1360D	135,600	45,284	LHX-20	2,658	2,170
CTV-1580D	158,200	48,856	LHX-25	2,846	2,330
CTV-1800D	180,800	61,884	LHX-30	3,140	2,420
CTV-2100D	210,200	69,686	LHX-40	3,492	2,630

6 FPI - Pressure Propeller*

CTV-450PP	45,200	\$20,757	HX-350	\$570	860
CTV-620PP	62,200	23,408	HX-500	906	965
CTV-850PP	84,800	33,200	LHX-15	2,483	1,390
CTV-1070PP	107,400	38,732	LHX-15	2,483	1,465
CTV-1220PP	122,000	43,622	LHX-20	2,658	1,610
CTV-1360PP	135,600	48,784	LHX-20	2,658	2,470
CTV-1580PP	158,200	52,355	LHX-25	2,846	2,580
CTV-1800PP	180,800	66,548	LHX-30	3,140	2,720
CTV-2100PP	210,200	74,351	LHX-40	3,492	2,830

THERMOBANK evaporator price does not include DTFD or other controls.

Air Straighteners list adder per fan. **\$486**

Models with Pressure Propeller fans are for use in Blast Freezers with air pressure drop up to 0.5" static pressure.

Models with PP fans are not for use above +25°F room temperature.

LOW AIR VELOCITY UNIT COOLERS

LOW VELOCITY UNIT COOLER NOMENCLATURE

K
I
W
II
F
III
050
IV
A
V
E
VI
1
VII
B
VIII
1
IX
1
X
A
XI
1
XII
A
XIII

I. Model Series

K – Kramer

II. Unit type

W – Walk In Unit Cooler

III. Series

F – Low Air Velocity

IV. Capacity – Three Number Characters

050, 075, 100, 130, 160, 190, 220, 270, 340

V. Voltage Code

A – 115/1/60
 D – 208-230/1/60
 F – 460/1/60
 L – 100/1/50
 M – 200-220/1/50
 P – 380/1/50
 X – Other

VI. Motor/Fan Type

E – (EC) Electronically Commutated
 P – (PSC) Permanent Split Capacitor
 X – Other

VII. Length in Fans

1, 2, 3, 4, 5, 6

VIII. Coil Density

B – 6 fpi

IX. Coil Material and Coating Options

1 – Aluminum Fins (Al)	} Post Coat Materials
2 – Copper Fins (Cu)	
3 – Al + AST Coating	
4 – Al + Blygold	
5 – Al + Bronz-Glow	
6 – Al + Heresite	
8 – Baked Epoxy Coating	
X – Other	

X. Housing Material and Coatings

1 – Aluminum, Embossed
 3 – White Painted
 6 – Stainless Steel 304
 X – Other

XI. Unit Design Configuration

A – Air Defrost
 E – Electric Defrost
 G – Hot Gas Reverse Cycle Defrost with Drain Pan Loop
 H – Hot Gas Re-Evaporative Defrost with Drain Pan Loop
 K – Hot Gas Reverse Cycle Defrost with 115V Heater
 L – Hot Gas Reverse Cycle Defrost with 208/230V Heater
 X – Other

XII. Not Currently used

XIII. Revision Code – Single Alphanumeric Character

A – Initial Release

* Shaded Pole motors are no longer available.

LOW AIR VELOCITY UNIT COOLERS

BASE MODELS

Model Number	Air Defrost 115/1/60	Fan Configuration	Approx. Net Weight (lbs)
KWF050AE1B11A1A	\$4,181	1 x 1	50
KWF075AE2B11A1A	4,796	1 x 2	75
KWF100AE2B11A1A	6,052	1 x 2	85
KWF130AE3B11A1A	6,915	1 x 3	100
KWF160AE3B11A1A	7,689	1 x 3	110
KWF190AE4B11A1A	9,589	1 x 4	120
KWF220AE4B11A1A	11,024	1 x 4	130
KWF270AE5B11A1A	12,173	1 x 5	150
KWF340AE6B11A1A	15,543	1 x 6	180

POSITION V

Voltage options

Note: "N/A" = Not available, "N/C" = No additional charge, "—" = Base model features, "C/F" = Contact Factory

Voltage Code	Adder/(Deduct) Per Fan Section	Available Based Upon Position VI Motor Options
A – 115/1/60	—	Available for motor codes E, P, S
D – 208-230/1/60	\$54	Available for motor codes E, P, S
F – 460/1/60	18	Available for motor code P only
L – 100/1/50	—	Available for motor codes E, P, S
M – 200-220/1/50	54	Available for motor codes E, P, S
P – 380/1/50	18	Available for motor code P only

POSITION VI

Motor / Fan Type options

Note: "N/A" = Not available, "N/C" = No additional charge, "—" = Base model features, "C/F" = Contact Factory

Motor / Fan Type	Adder/(Deduct) Per Fan Section	Available Based Upon Position V
E - Electronically Commutated - Single Speed	-	Available for A,D,L,M
D - Electronically Commutated - Dual Speed	\$267	Available for A,L
	267	Available for D,M
P - Permanent Split Capacitor - price deduct	477	Available for A,L,D,M,F,P

POSITION VII Length in Fans - No additional charge

POSITION VIII Coil Density - 6 FPI - No additional charge

Position - IX

Coil Material and Coating options

Contact Application Engineering to obtain price quotes for special fin materials or coatings.

Position - X

Housing Material and Coating options

Contact Application Engineering to obtain price quotes for special housing materials or coatings.

LOW AIR VELOCITY UNIT COOLERS

Position - XI

Unit Design Configuration - Horizontal Air Discharge Only

Note: "N/A" = Not available, "N/C" = No additional charge, "—" = Base model features, "C/F" = Contact Factory

ELECTRIC DEFROST - Code E		
Voltage Code	Adder/(Deduct) Per Fan Section	Available Based Upon Position VI Motor Options
A – 115/1/60	N/A	N/A
D – 208-230/1/60	\$269	Available for motor codes E, P, S
F – 460/1/60	364	Available for motor code P only
L – 100/1/50	N/A	N/A
M – 200-220/1/50	269	Available for motor codes E, P, S
P – 380/1/50	364	Available for motor code P only

HOT GAS DEFROST - Reverse Cycle with Hot Gas drain pan loop - Code G		
Voltage Code	Adder/(Deduct) Per Fan Section	Available Based Upon Position VI Motor Options
A – 115/1/60	\$472	Available for motor codes E, P, S
D – 208-230/1/60	472	Available for motor codes E, P, S
F – 460/1/60	472	Available for motor code P only
L – 100/1/50	472	Available for motor codes E, P, S
M – 200-220/1/50	472	Available for motor codes E, P, S
P – 380/1/50	472	Available for motor code P only

HOT GAS DEFROST - Reverse Cycle with electric drain pan heater - Code K or L		
Voltage Code	Adder/(Deduct) Per Fan Section	Available Based Upon Position VI Motor Options
A – 115/1/60	\$308	Available for motor codes E, P, S
D – 208-230/1/60	308	Available for motor codes E, P, S
F – 460/1/60	N/A	N/A
L – 100/1/50	308	Available for motor codes E, P, S
M – 200-220/1/50	308	Available for motor codes E, P, S
P – 380/1/50	N/A	N/A

HOT GAS DEFROST - 3 pipe with Drain Pan loop - Code H		
Voltage Code	Adder/(Deduct) Per Fan Section	Available Based Upon Position VI Motor Options
A – 115/1/60	\$401	Available for motor codes E, P, S
D – 208-230/1/60	401	Available for motor codes E, P, S
F – 460/1/60	401	Available for motor code P only
L – 100/1/50	401	Available for motor codes E, P, S
M – 200-220/1/50	401	Available for motor codes E, P, S
P – 380/1/50	401	Available for motor code P only

Heat Exchanger/Accumulator (HEA) No Longer Available.

Position - XII

INSULATED DRAIN PAN		
Fan Configuration	No Insulation	Insulated Drain Pan ¹
1 X 1	—	\$2,752
1 X 2	—	3,531
1 X 3	—	4,566
1 X 4	—	5,188
1 X 5	—	6,154
1 X 6	—	7,121

1. Insulated Drain Pan not available with stainless steel or galvanized steel pans.

Position - XIII Revision Code: A - Initial Release

Optional Expansion Valves

Balanced Port Expansion Valve - Loose	1/4 thru 3 Tons	\$359
	4 thru 9 Tons	460
Balanced Port Expansion Valve - Mounted	1/4 thru 3 Tons	407
	4 thru 9 Tons	715

Optional Room T-Stat

Type	RANGE	LIST
Mechanical - Loose	-30 to + 100	\$307
Mechanical - Mounted @ Evap	-30 to + 100	333
Electronic - Loose	-30 to + 100	396
Electronic - Mounted @ Evap	-30 to + 100	416

Optional Liquid Line Solenoid Valve

HORSEPOWER RANGE	LOOSE*	MTD*
1/2 thru 3 HP	\$303	\$327
4 thru 8 HP	339	379

SYSTEM PRICING EXAMPLES

Example 1:

5 HP, R-404A +35°F cooler matched with 2 unit coolers,
95°F summer ambient, 10°F winter ambient.

QTY.		LIST PRICE
1	KFDS05M4SEA Outdoor Condensing Unit 230/3/60 53,000 BTUH @ 25° S.T. and 95°F ambient	\$23,664
2	KL6A235-AE Unit Coolers 115V/1/60	13,800
<u>Field installed components</u>		
2	Thermostatic expansion valves	718
1	Liquid line solenoid valve (loose)	379
1	Room thermostat (loose)	307
<u>Optional accessories</u>		
1	Air defrost timer installed	<u>597</u>
TOTAL LIST PRICE		\$39,465
1	4 year Compressor Protection Plan	NET PRICE \$489

Example 2:

10HP, R404A, -10°F Freezer, matched with 2 unit coolers
95°F Summer ambient, 35°F winter ambient

QTY.		LIST PRICE
1	KFDS10L4SEA Outdoor Condensing 230/3/60 50,300 BTUH @ -20° S.T. and 95° ambient	\$37,677
1	DMB35 Electric defrost provisions, factory installed	2,075
2	MSE-325 unit coolers, 230/1/60 EC motors, 230/3/60 defrost 25,150 BTUH each @ 9 T.D.	22,552
<u>Field installed components</u>		
2	Thermostatic expansion valves (loose)	1,596
1	Liquid line solenoid valve (loose)	491
1	Room thermostat (loose)	307
<u>Optional accessories</u>		
1	Suction Accumulator (mounted)	1,243
1	Oil separator (mounted)	1,533
2	HX-350 Heat exchangers (field installed)	<u>1,142</u>
TOTAL LIST PRICE		\$68,616
1	4 year Compressor Protection Plan	NET PRICE \$776

OPTIONAL SYSTEM COMPONENTS

HEAT EXCHANGERS - Shipped Loose

MODEL NUMBER	PART NUMBER	LIST PRICE	CONNECTIONS (inches)		APPROXIMATE LENGTH (inches)
			LIQUID	SUCTION	
HX-25	105065001	\$169	1/4	1/2	12
HX-50	105065003	199	3/8	5/8	13
HX-75	105065004	273	3/8	7/8	14
HX-100	105065005	349	3/8	1-1/8	14
HX-150	105065006	403	1/2	1-1/8	14
HX-250	105065007	557	5/8	1-3/8	14
HX-350	105065008	571	5/8	1-5/8	16
HX-500	105065009	906	7/8	2-1/8	17
LHX-15	105065010	2,484	7/8	2-1/8	30
LHX-20	105065011	2,658	1-1/8	2-1/8	30
LHX-25	105065012	2,846	1-1/8	2-5/8	38

EXPANSION VALVES

BALANCED PORT TXV'S		LIST
1/4 - 3 Tons	Loose	\$359
	Installed	407
4 - 9 Tons	Loose	460
	Installed	715
10 - 30 Tons	Loose	798
	Installed	1,181
Electronic Expansion Valves		LIST
1 to 15 Tons	Loose	\$1,098
	Installed	1,451
16 to 25 Tons	Loose	1,577
	Installed	1,930

1. EEV prices include cable.
2. EEV prices DO NOT include controller.

ECONET® ENABLED UNIT COOLERS - SEE PAGES 2 & 5

ECONET COMMAND CENTER
Remote Mount Display for EcoNet Enabled Unit Coolers[^]

DESCRIPTION	PART NUMBER	LIST EACH
Shipped Loose - EcoNet Command Center for EcoNet Enabled Unit Coolers. Available for NEXT-GEN ALL-TEMP Low Profile (Air or Electric Defrost Models) with EcoNet Control package installed	HETST700SYS	\$941

[^] The **remote mount display** allows for EcoNet Enabled Unit Coolers to be programmed, monitored and troubleshoot outside of the space being cooled. The Command Center is shipped separately and includes everything in the box needed to wall mount the display.

KE2 EVAP- OEM EVAPORATOR DEFROST CONTROL *

DESCRIPTION	PART NUMBER	LIST EACH
Factory Installed - For NEXT-GEN ALL-TEMP Low Profile 115V or 230V/1 (Air or Electric Defrost Models)	0829632	\$4,082

*1Ø units only. **Internally mounted control board**, external display, mounted sensors and EEV.

SURVEILLANT EVAPORATOR DEFROST CONTROL*

DESCRIPTION	PART NUMBER	LIST EACH
Factory Installed - For HSA models - 115V (Air Defrost Only)	08219551	\$5,927
Factory Installed - For HSA/HSE models - 230V/1 (Air or Electric Defrost)	08219552	
Smartgate Router (Shipped Loose)	08219541	\$3,111

*1Ø units only. **Externally mounted control enclosure**, mounted sensors and EEV

ROOM THERMOSTATS

TYPE	RANGE	LIST EACH
Mechanical - Loose	-30°F to + 100°F	\$307
Mechanical - Installed @ Evap		\$333
Electronic - Loose	-30°F to + 100°F	\$396
Electronic - Installed @ Evap		\$416

LIQUID LINE SOLENOID VALVE - LIST PRICE EACH

HORSEPOWER RANGE	LOOSE	MTD*
1/2 thru 3 HP	\$303	\$327
4 thru 8 HP	339	379
9 thru 10 HP	491	626
12 thru 15 HP	605	780
22 HP	772	895

* Mounted at the Evaporator. LLS mounted at the condensing unit is not available.
For multiple evaporator systems, divide condensing unit HP by the number of evaps.

NEXT-GEN K-SERIES KOMPACT • AIR COOLED CONDENSING UNITS

1/2 THRU 6 H.P.

Standard Features (all models)

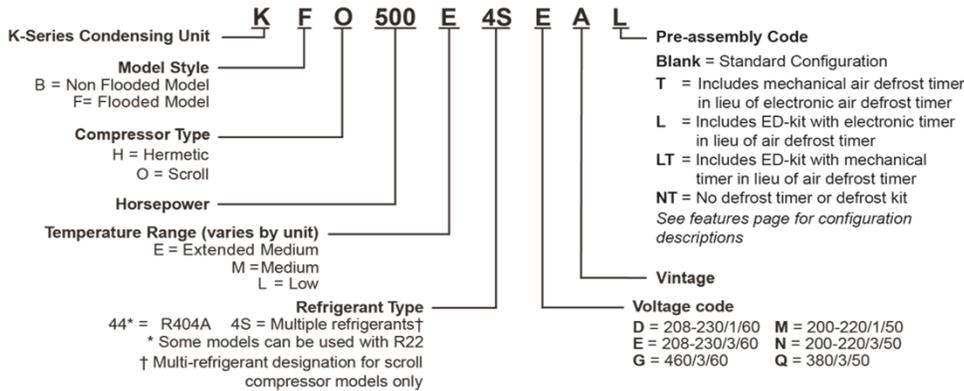
- Hermetic or Scroll compressors
- Weather resistant painted galvanized steel housing on a raised galvanized steel base
- Generously sized condenser. Enhanced Copper tubing / Aluminum fins
- Integrated subcooling loop increases system efficiency
- Easy access liquid & suction line shut off valves mounted external to cabinet
- Liquid receiver with isolation valve and pressure relief plug
- **Liquid line filter/drier and sight glass with moisture indicator**
- Suction line piping (filter optional)
- Encapsulated auto reset high pressure control
- Mild Ambient Fan Cycle control (2 fan KB models only)
- Large electrical control panel with hinged/lift off door
- Color coded wiring with point-to-point wiring diagram
- Crankcase heater
- PSC condenser fan motor(s)
- **Air Defrost Timer on all Medium Temp. standard models**
- **Low temp. standard models include Electric Defrost provisions**
- UL and cUL listed for indoor / outdoor use
- Encapsulated auto reset low pressure control (medium temps)
- Adjustable low pressure control for low temp models

KF models also include a Flooded Head Pressure Control Valve (70°F) as a standard feature

Optional Components

- Electric Defrost on Extended range med. temp models
- Suction line filter
- Mounted replaceable core liquid or suction line filter (4 to 6 HP)
- Suction Accumulator
- Oil Separator (may not be available with accumulator)
- Liquid line piping only (no filter)
- Copper or polyester coated fins
- Electro-Fin coated condenser coil
- Single Speed EC condenser mtr.
- Pump down toggle switch
- Thru-the-door disconnect switch (some models)
- External fused or non-fused disconnect
- Paragon Mechanical timer
- CPC timer
- Phase loss monitor
- Snow / Hail guards

NOMENCLATURE:



NEXT-GEN K-SERIES KOMPACT • HERMETIC COMPRESSOR MODELS

REF TYPE	NOM. H.P.	Model Number	Compressor	KF OUTDOOR FLOODED LIST PRICE (Includes Flooded Head Pressure Control Valve, Liquid Line Kit with Filter/Drier and Sight Glass with Moisture Indicator)					KB INDOOR / OUTDOOR BASE UNIT LIST PRICE (Includes Fan Cycle Head Pressure Control Valve, Liquid Line Kit with Filter/Drier and Sight Glass with Moisture Indicator, and Defrost Timer or Kit)			ECM Cond. Motor Add.	4 Year Compressor Protection Plan	Approx. Ship Wt. (LBS)	
				Standard Model with Defrost Timer or Kit		NT Model - No Defrost Timer or Defrost Kit									
				208-230V/3	208-230V/1	460V/3	208-230V/3	208-230V/1	208-230V/3	208-230V/1	460V/3				
EXTENDED RANGE MEDIUM TEMP R404A	0.50	K*H055E4S	RST45C1E	N/A	\$7,175	N/A	N/A	\$6,599	N/A	N/A	\$6,722	N/A	\$267	\$113 NET	152
	0.75	K*H080E4S	RST55C1E	N/A	7,235	N/A	N/A	6,659	N/A	6,810	N/A	267	113 NET	156	
	0.75	K*H090E4S	RST64C1E	N/A	7,689	N/A	N/A	7,113	N/A	7,219	N/A	267	113 NET	160	
	1.00	K*H100E4S	RST70C1E	\$7,960	8,050	N/A	\$7,384	7,474	\$7,457	7,548	N/A	267	113 NET	167	
	1.25	K*H125E4S	RST97C1E	8,337	8,431	N/A	7,761	7,855	7,842	7,918	N/A	534	127 NET	195	
	1.50	K*H150E44	CS10K6E	8,640	8,667	\$9,179	8,064	8,091	8,152	8,161	\$8,591	534	127 NET	205	
	2.00	K*H200E44	CS12K6E	9,265	9,098	N/A	8,689	8,522	8,759	8,604	N/A	534	139 NET	228	
LOW TEMP R404A	2.50	K*H250E44	CS14K6E	9,624	9,785	10,635	9,048	9,209	9,090	9,252	10,105	534	139 NET	235	
	3.00	K*H300E44	CS18K6E	9,982	10,142	10,867	9,406	9,566	9,324	9,494	10,369	534	153 NET	253	
	3.00	K*H325E44	CS20K6E	10,048	10,249	11,098	9,472	9,673	9,577	9,772	10,632	534	153 NET	273	
LOW TEMP R404A	1.00	K*H100L44	CF04K6E	7,982	7,852	N/A	\$7,287	\$7,157	7,487	7,444	N/A	534	127 NET	195	
	1.50	K*H150L44	CF06K6E	8,022	7,884	8,349	7,327	7,189	7,531	7,475	7,875	534	127 NET	195	
	2.00	K*H200L44	CF09K6E	8,977	8,613	9,122	8,282	7,918	8,467	8,203	8,644	534	139 NET	243	
	3.00	K*H300L44	CF12K6E	11,401	11,246	11,952	10,706	10,551	10,946	10,782	11,487	534	153 NET	255	

§ For R507 models, use equivalent R404A model prices.

* Models 055E4S, 080E4S, and 090E4S are not suitable for use with R507. Use Scroll compressors for refrigerants other than R404A/507.

† Additional price to order optional ECM condenser fan motors. Not available for 460V.

"NT" Pre-Assembly Also Available on Non-Flooded Models

NOTE: An optional Electric Defrost kit must be ordered in lieu of the standard Air Defrost Timer when Extended range medium temperature models are used for low temperature applications.

NEXT-GEN KOMPACT • AIR COOLED CONDENSING UNITS
1/2 THRU 6 H.P. SCROLL COMPRESSORS

Next-Gen **Komcompact** Air Cooled Condensing Units are configured with quiet and reliable scroll compressors.

Models range from 1/2 to 6 horsepower. Refer to page 17 for a list of optional components and publication number KM-KFH for detailed specifications.



NEXT-GEN KOMPACT • SCROLL COMPRESSOR MODELS

Temp Range	NOM H.P.	Model Number	Compressor	KF Flooded Unit LIST PRICE (Includes Flooded Head Pressure Control Valve, Liquid Line Kit with Filter/Drier and Sight Glass with Moisture Indicator)*						KB Non Flooded Unit LIST PRICE (Includes Fan Cycle Head Pressure Control Valve, Liquid Line Kit with Filter/Drier and Sight Glass with Moisture Indicator, and Defrost Timer or Kit)*			4 Year Compressor Protection Plan	Approx. Ship Wt. (LBS)	EC ¹ Motor Adder			
				Standard Model with Defrost Timer or Kit			NT Model - No Defrost Timer or Defrost Kit			208-230V/3	208-230V/1	460/3				208-230V/3	208-230V/1	460/3
				208-230V/3	208-230V/1	460/3	208-230V/3	208-230V/1	460/3									
Medium Temp	0.5	K*O060M4S	ZB06KAE	\$7,996	\$7,902	N/A	\$7,420	\$7,326	N/A	\$7,598	\$7,509	N/A	\$209 NET	195	\$267			
	0.75	K*O080M4S	ZB07KAE	8,563	8,344	N/A	7,987	7,768	N/A	8,169	7,950	N/A	209 NET	195	267			
	1.0	K*O100M4S	ZB08KAE	8,665	8,500	N/A	8,089	7,924	N/A	8,271	8,102	N/A	209 NET	195	267			
	1.0	K*O130E4S	ZS09KAE	8,972	9,000	\$9,877	8,396	8,424	\$9,301	8,567	8,557	\$9,475	209 NET	195	267			
	1.25	K*O150E4S	ZS11KAE	9,120	9,061	10,116	8,544	8,485	9,540	8,711	8,622	9,707	209 NET	205	267			
	1.5	K*O180E4S	ZS13KAE	9,856	10,022	10,602	9,280	9,446	10,026	9,355	9,385	10,148	209 NET	210	267			
	2.0	K*O200E4S	ZS15KAE	10,102	10,033	10,723	9,526	9,457	10,147	9,619	9,552	10,268	209 NET	215	267			
	2.5	K*O250E4S	ZS19KAE	10,356	10,222	10,875	9,780	9,646	10,299	9,882	9,737	10,420	209 NET	230	267			
	3.0	K*O300E4S	ZS21KAE	11,131	10,942	11,597	10,555	10,366	11,021	10,711	10,534	11,203	272 NET	305	476			
	3.5	K*O350E4S	ZS26KAE	12,207	12,018	12,640	11,631	11,442	12,064	11,732	11,539	12,182	272 NET	325	476			
	4.0	K*O400E4S	ZS29KAE	11,944	12,183	13,137	11,368	11,607	12,561	11,516	11,715	12,714	285 NET	352	476			
	4.5	K*O450E4S	ZS33KAE	12,886	13,147	14,183	12,310	12,571	13,607	12,426	12,704	13,623	292 NET	375	476			
5.0	K*O500E4S	ZS38K4E	13,907	13,756	14,338	13,331	13,180	13,762	13,501	13,345	13,902	292 NET	383	476				
6.0	K*O600E4S	ZS45K4E	15,432	N/A	15,866	14,856	N/A	15,290	14,899	N/A	15,407	292 NET	405	476				
Low Temp	1.0	K*O100L4S	ZF03KAE	9,230	9,108	N/A	8,535	8,413	N/A	8,617	8,614	N/A	209 NET	195	267			
	1.3	K*O130L4S	ZF04KAE	9,632	9,504	N/A	8,937	8,809	N/A	9,089	9,045	N/A	209 NET	195	267			
	1.5	K*O160L4S	ZF05KAE	10,063	9,930	N/A	9,368	9,235	N/A	9,571	9,492	N/A	209 NET	195	267			
	2.3	K*O230L4S	ZF07K4E	10,679	10,536	11,585	9,984	9,841	10,890	10,262	10,123	10,937	209 NET	230	267			
	2.5	K*O250L4S	ZF08K4E	11,582	11,379	12,487	10,887	10,684	11,792	11,188	10,984	11,863	209 NET	240	267			
	3.0	K*O300L4S	ZF09K4E	12,004	11,785	12,700	11,309	11,090	12,005	11,610	11,653	12,251	272 NET	245	267			
	3.5	K*O350L4S	ZF11K4E	13,167	13,020	13,600	12,472	12,325	12,905	12,773	12,587	13,207	272 NET	255	267			
	4.0	K*O400L4S	ZF13K4E	14,818	14,670	15,026	14,123	13,975	14,331	14,424	14,277	14,633	285 NET	352	476			
	5.0	K*O500L4S	ZF15K4E	15,241	15,160	15,493	14,546	14,465	14,798	14,848	14,697	15,099	285 NET	367	476			
	6.0	K*O600L4S	ZF18K4E	16,127	N/A	16,386	15,432	N/A	15,691	15,734	N/A	15,992	292 NET	383	476			

¹Additional list price to order optional Electronically Commutated condenser fan motors. Not available for 460V.

* See page 15 for a complete list of features, voltage codes and an example of nomenclature layout.

"NT" Pre-Assembly Also Available on Non-Flooded Models

NOTE: An optional Electric Defrost kit must be ordered in lieu of the standard Air Defrost Timer when Extended Range Medium Temperature Models are used for low temperature applications.

LEGACY KOMPACT • AIR COOLED CONDENSING UNITS (models will be discontinued on 4/1/19)

Standard features for Legacy KE style Indoor / Outdoor models:

- Semi-hermetic compressors
- Heavy gauge galvanized steel weather-proof housing on a raised base
- Compressor Contactor (three phase) or Start Kit (single phase)
- Main Power Block and Control Circuit Fuses
- High-low Pressure Control and Oil Pressure Control (when required)
- Liquid Receiver with Shut-off Valve and Pressure Relief Plug
- Liquid and suction line piping (filters are optional)
- PSC condenser fan motor(s)
- UL and cUL listed.

Standard features for Legacy KL style models:

- Same features as KE models, plus:
- Liquid Line Filter/Drier, Sight Glass & Pre-bent Piping
- Crankcase Heater
- Low ambient Head Pressure Valve
- Air Defrost Timer on 2-1/2 to 3 H.P. Medium & High Temp models
- Electric Defrost Timer with Defrost Contactor/Relay on Low Temp models (ED10-230/1 on 1/2 thru 3 HP)

NOTE: Models will be discontinued on 4/1/19.

SEMI-HERMETIC COMPRESSOR MODELS

REF TYPE	NOM H.P.	Model Number	Compressor	KL OUTDOOR PACKAGE LIST PRICE			KE INDOOR/ OUTDOOR LIST PRICE			4 Year Compressor Protection Plan	Approx. Ship Wt. (LBS)	EC ¹ Motor Adder
				208-230V/3	208-230V/1	460V/3	208-230V/3	208-230V/1	460V/3			
MEDIUM TEMP R404A	0.75	K*S075M44	KAN-007E	\$8,628	\$8,628	N/A	\$7,627	\$7,627	N/A	\$209 NET	215	\$267
	1.0	K*S100M44	KAR-010E	8,883	8,883	N/A	7,324	7,324	N/A	209 NET	220	267
	1.5	K*S150M44	KAG-010E	10,752	N/A	N/A	8,781	N/A	N/A	209 NET	245	534
	2.0	K*S200M44	KAK-02xE	12,624	12,624	N/A	10,925	10,925	N/A	209 NET	270	534
	2.5	K*S250M44	ERC-02xE	13,124	N/A	\$14,352	12,615	N/A	\$13,761	209 NET	385	534
3.0	K*S300M44	ERF-031E	14,693	15,075	15,383	13,498	13,877	14,377	272 NET	415	534	
LOW TEMP R404A	0.50	K*S050L44	KAN-005E	9,239	9,239	N/A	6,728	6,496	N/A	209 NET	189	267
	0.75	K*S075L44	KAM-007E	9,920	9,920	N/A	7,087	6,891	N/A	209 NET	205	267
	1.0	K*S100L44	KAJ-01xE	10,375	10,375	10,739	7,812	7,798	8,114	209 NET	220	267
	1.5	K*S150L44	KAL-01xE	10,825	10,656	11,840	9,121	8,973	10,656	209 NET	248	534
	2.0	K*S200L44	EAV-021E	13,358	13,430	14,147	11,102	11,267	13,286	209 NET	290	534
	3.0	K*S300L44*	LAH-032E	14,846	14,846	15,276	13,349	13,652	14,404	272 NET	383	534

* Model K*S300L44 is not available for 208V/1 (230V only).

¹Additional list price to order optional Electronically Commutated condenser fan motors. Not available for 460V.

LEGACY KOMPACT WITH DISCUS COMPRESSOR

No Longer Available. Select Next Gen II model - See Page 18

NEXT-GEN KOMPACT / LEGACY K-SERIES • AIR COOLED CONDENSING UNITS

1/2 THRU 6 H.P. - OPTIONS

FACTORY INSTALLED OPTIONS

OPTIONS / ACCESSORIES	OPTION NUMBER	H.P. RANGE	KF MODELS	KB MODELS	KL PACKAGE	KE MODELS
CRANKCASE HEATER	CCH-1	1/2 - 6 H.P.	STD.	STD.	STD.	\$215
DEDUCT CRANKCASE HEATER	CCH-DED	1/2 - 6 H.P.	-\$215	-\$215	-\$215	N/A
LIQUID LINE COMPONENTS	LK-MC1	1/2 - 3 H.P.	STD.	STD.	STD.	558
- Filter drier, sight-glass and piping	LK-MC2	4 - 6 H.P.	STD.	STD.	STD.	648
LIQUID LINE ONLY (Deduct liquid line filter and sight glass)	LL-MC1	1/2 - 3 H.P.	-344	-344	N/A	STD.
	LL-MC2	4 - 6 H.P.	-409	-409	N/A	STD.
Replaceable Core Liquid Filter/Dryer (4 - 6 H.P. only) Must add LK for KE unit	RPL-4	4 - 6 H.P.	524	524	524	524
SUCTION LINE COMPONENTS	SK-MC1	1/2 - 3 H.P.	356	356	356	356
- Filter and Piping	SK-MC2	4 - 6 H.P.	423	423	423	423
REPLACEABLE CORE SUCTION FILTER (4 - 6 H.P. only)	RPS-4	4 - 6 H.P.	506	506	506	506
SUCTION LINE ACCUMULATOR - Must add SK option	ASK-3	1/2 - 2 HP	548†	548†	548†	548†
	ASK-4	2½ - 6 H.P.	846†	846†	846†	846†
OIL SEPARATOR 4-6 HP (Due to space limits, may not be available with ASK opt)	OS-4	4 - 6 H.P.	1,440	1,440	1,440	1,440
OVER-SIZED RECEIVER – Refers to Next-Gen CU frame sizes FM1 through FM4. See product catalogue for details. Contact factory for Legacy model oversized receiver prices.	OSR-1	FM1	454	454	Contact Application Engineering for pricing this option	
	OSR-2	FM2	541	541		
	OSR-3	FM3	1,295	1,295		
	OSR-4	FM4	1,329	1,329		
SPRING MOUNT AND DISCHARGE VIBRASORBER - Semi-Hermetics only.	SPR-VB	1/2 - 3 H.P.	N/A	N/A	273	273
- Standard on 4 - 6 H.P. models,		4 - 6 H.P.	N/A	N/A	NLA	NLA
LOW AMBIENT FLOODED HEAD PRESSURE CONTROL	FLD-SF	1/2 - 2 H.P.	STD.	N/A	STD.	395
	FLD-F	2½ - 3 H.P.	STD.	N/A	STD.	395
MILD AMBIENT FAN CYCLE	FC-1	KB all, KE 2 fan only	N/A	STD.	N/A	387
ADJUSTABLE LOW PRESSURE CONTROL (For medium temperature units)	ADJ-LP	1/2 - 6 H.P.	166	166	166	166
ADJUSTABLE HI/LOW PRESSURE CONTROL	204464041	1/2 - 6 H.P.	371	371	371	371
PUMPDOWN TOGGLE SWITCH	PDS	1/2 - 6 H.P.	349	349	349	349
AIR DEFROST TIMER ¹ (Electronic timer is standard. No additional charge to substitute mechanical timer. Specify at time of order.)	TMR ¹	1/2 - 6 H.P.	STD.	STD.	597	597
DEDUCT AIR DEFROST TIMER ¹	DEDUCT TMR ¹	2 1/2 - 6 H.P.	-576	-576	-576	N/A
SUBSTITUTE ED KIT (ED5 THRU ED10) FOR AIR DEFROST TIMER ²	REPLACE TMR ²	1 - 6 H.P. ²	123	123	N/A	N/A
ELEC. DEFR. TIMER WITH BLOCK-OUT RELAY 230/1 ^{††}	ED-5 THRU ED-10	1/2 - 6 H.P.	STD.*	STD.*	STD.*	719
* 2 EVAP ELEC. DEFR. TIMER WITHOUT BLOCK-OUT RELAY 230/1 ^{††}	ED-210-A2	1/2 - 6 H.P.	SPECIFY	SPECIFY	SPECIFY	719
ELECTRIC DEFR. TIMER WITH BLOCK-OUT AND CONTACTOR 230/3 ^{††}	ED-11-B2	1/2 - 6 H.P.	STD.*	STD.*	STD.*	719
DEDUCT STANDARD EVAP ELECTRIC DEFROST COMPONENTS		1/2 - 6 H.P.	-695	-695	-695	N/A
** 2 EVAP ELEC. DEFR. TMR WITH ONE 30 AMP DEFR. CONTACTOR 230/3 ^{††}	ED-211-B2	1/2 - 6 H.P.	SPECIFY	SPECIFY	SPECIFY	719
2 EVAP ELEC. DEFR. TMR WITH ONE 50 AMP DEFR. CONTACTOR 230/3 ^{††}	ED-213-B2	1/2 - 6 H.P.	799	799	799	1,395
2 EVAP. ELEC. DEFR. WITH SEQUENCING & B.O. RELAYS 230/1 ^{††}	ED-20-A2	4 - 6 H.P.	1,273	1,273	1,273	1,992
2 EVAP. ELEC. DEFR. WITH SEQ. & B.O. W/ CONTACTORS 230/3 ^{††}	ED-21-B2	4 - 6 H.P.	1,273	1,273	1,273	1,992
HEATED AND INSULATED RECEIVER	HIR	1/2 - 6 H.P.	742	742	742	742
PHASE LOSS MONITOR	PLM	1/2 - 6 H.P.	1,216	1,216	1,216	1,216
CRANKCASE PRESSURE REGULATING VALVE - (LOOSE ONLY)	CPR-1	1/2 - 6 H.P.	809	809	809	809
POLYESTER COATED CONDENSER FINS	PCF	1/2 - 3 H.P.	1,031	1,031	1,031	1,031
		4 - 6 H.P.	1,340	1,340	1,340	1,340
COPPER FINS OR ELECTRO FIN COATED COIL	CONTACT APPLICATIONS ENGINEERING FOR PRICING					
THRU THE DOOR NON - FUSED DISCONNECT SWITCH	TDNM-1	1/2 - 3 H.P.	522	522	522	522
	TDNM-2	4 - 6 H.P.	692	692	692	692
THRU THE DOOR FUSED DISCONNECT SWITCH	TDFM-1	1/2 - 3 H.P.	N/A	N/A	N/A	N/A
	TDFM-2	4 - 6 H.P.	1,419	1,419	1,419	1,419
EXTERNAL FUSED DISCONNECT (Mounted)	EFDM-1	1/2 - 3 H.P.	587	587	587	587
	EFDM-2	4 - 6 H.P.	1,080	1,080	1,080	1,080

FIELD INSTALLED OPTIONS

OPTIONS AND ACCESSORIES		H.P. RANGE	KF MODELS	KB MODELS	KL MODELS	KE MODELS
EXTERNAL FUSED DISCONNECT (Shipped loose)	EFDL-2	4 - 6 H.P.	\$971	\$971	\$971	\$971
TWO TIERED STACKING RACK	08357263	1/2 - 3 H.P.	10,683	10,683	C/F	C/F
	08357286	4 - 6 H.P.	10,683	10,683	C/F	C/F
SNOW / HAIL GUARDS (Shipped loose)	SG-A	Config. A, FM1	398	398	398	398
	SG-B	Config. B, FM2	439	439	439	439
	SG-C	Config. C, FM3	475	475	475	475
	SG-D	Config. D, FM4	583	583	583	583

Negative numbers represent the price to be deducted from base price if a standard feature is removed.

¹ AIR DEFROST TIMER IS STANDARD ON 2-1/2 - 6 HP HIGH/MEDIUM TEMP **KL** MODELS AND STANDARD FOR ALL KF AND KB MED. TEMP. MODELS

² SUBSTITUTE ED KIT (ED5 THRU ED10) FOR AIR DEFROST TIMER. VALID FOR NEXT-GEN EXTENDED RANGE KOMPACT ONLY. APPLIES TO PRE-ASSEMBLY CODES L AND LT. SEE NOMENCLATURE.

* ELECTRIC DEFROST PROVISIONS (ED KIT) FOR ONE EVAP IS A STANDARD FEATURE ON LOW TEMPERATURE UNITS (ED Kits are optional for KE models).

†† REFER TO THE APPROPRIATE EVAPORATOR PRODUCT BULLETIN TO IDENTIFY THE CORRECT E.D. KIT FOR YOUR REQUIREMENT.

NOT ALL E.D. KITS FIT INTO ALL CONTROL PANELS. CONTACT APPLICATIONS ENGINEERING WITH QUESTIONS.

† MUST ADD SK OPTION TO ADD A SUCTION LINE ACCUMULATOR IF SK IS NOT ALREADY INCLUDED (See Kompact-Series publication for details).

NEXT-GEN II AIR COOLED CONDENSING UNITS

3 THRU 22 H.P.



Unit is shown with optional components mounted

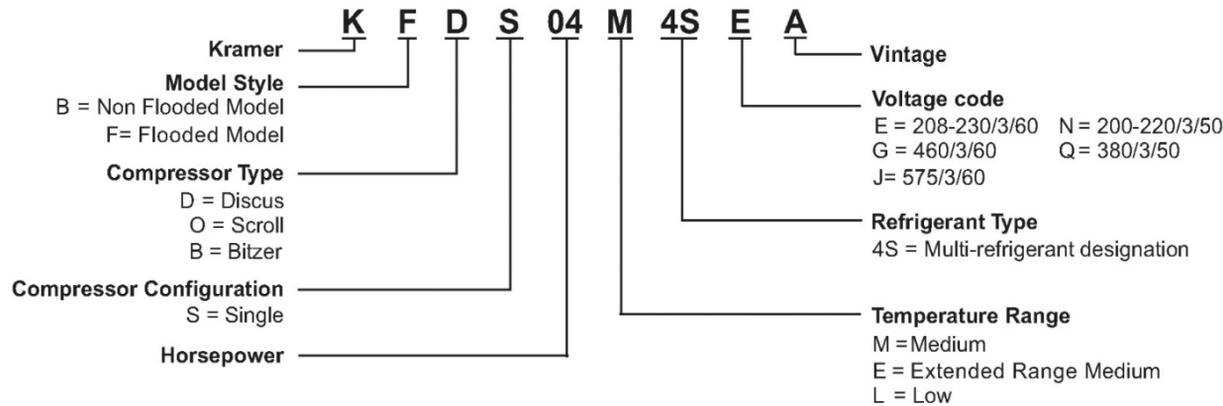
Standard Features (all models):

- Copeland Discus™, Copeland Scroll™ or Bitzer Semi-Hermetic Compressor
- All weather G90 galvanized steel painted enclosure
- Removable side panels for ease of service
- Generously sized high efficiency condenser, with enhanced copper tubes/and aluminum fins
- Liquid line kit with sealed filter/drier and sight glass with moisture indicator
- Easy access base mounted service valves placed external to cabinet
- Dual pressure (auto reset) controls with flexible Reflex® hoses
- Vertical receiver with isolation valves
- Refrigerant pressure relief valve (Larger models in FD2 and FD3 cabinets)
- Integral liquid subcooling circuit
- Suction line piping (filter optional)
- Heavy duty three phase condenser fan motor(s)
- Crankcase heater
- Control circuit fuses
- Pump down toggle switch
- Large electrical panel with hinged door
- 208-230V control voltage
- Color coded point-to-point wiring
- Fan cycling on KB models
- Liquid injection for low temp. Scroll compressors

KF models also include a Flooded Head Pressure Control Valve (70°F) as a standard feature

Optional Features (all models):

- Electronic air defrost timer
- Electric defrost kits
- Mechanical timer in lieu of electronic timer
- 50 Hz timer and/or defrost kit
- Current sensing relay
- Thru the door Non-fused disconnect
- Suction line filter (sealed)
- Suction accumulator
- Replaceable core liquid filter with bypass
- Replaceable core suction filter with bypass
- External fused or non-fused disconnect - loose or mounted
- Refrigerant pressure relief valve (for models in FD1 cabinet)
- Liquid injection / Demand Cooling™ for low temp. Bitzer and Discus compressors
- Heated and insulated receiver (Temp controlled with low pressure bypass timer)
- Oil separator
- Oversized receiver
- Insulated receiver
- Hail / Snow Guard - shipped loose (only)
- 316 Grade stainless steel housing
- Crankcase pressure regulator



Temp Range	Compressor (Discus)	H.P.	Model Number	KF Flooded Unit List Price	VOLTAGE	Model Number	KB Non Flooded List Price	4 Year Compressor Protection Plan	Approx. Ship Wt. (LBS)
Medium Temp Discus	2DC3R53K	04	KFDS04M4SEA	\$23,244	208/230/3/60	KBDS04M4SEA	\$21,747	\$489 NET	825
			KFDS04M4SGA	24,691	460/3/60	KBDS04M4SGA	23,166		
			KFDS04M4SJA	25,186	575/3/60	KBDS04M4SJA	23,653		
	2DD3R63K	05	KFDS05M4SEA	23,664	208/230/3/60	KBDS05M4SEA	22,157	489 NET	850
			KFDS05M4SGA	25,051	460/3/60	KBDS05M4SGA	23,519		
			KFDS05M4SJA	25,681	575/3/60	KBDS05M4SJA	24,137		
	2DL3R78K	06	KFDS06M4SEA	29,389	208/230/3/60	KBDS06M4SEA	27,775	592 NET	1,075
			KFDS06M4SGA	31,435	460/3/60	KBDS06M4SGA	29,783		
			KFDS06M4SJA	32,060	575/3/60	KBDS06M4SJA	30,397		
	2DA3R89K	07	KFDS07M4SEA	30,013	208/230/3/60	KBDS07M4SEA	28,387	600 NET	1,100
			KFDS07M4SGA	31,848	460/3/60	KBDS07M4SGA	30,188		
			KFDS07M4SJA	32,475	575/3/60	KBDS07M4SJA	30,803		
	3DA3R10M	08	KFDS08M4SEA	33,659	208/230/3/60	KBDS08M4SEA	31,965	600 NET	1,130
			KFDS08M4SGA	35,676	460/3/60	KBDS08M4SGA	33,942		
			KFDS08M4SJA	36,403	575/3/60	KBDS08M4SJA	34,656		
	3DB3R12M	10	KFDS10M4SEA	36,094	208/230/3/60	KBDS10M4SEA	34,353	776 NET	1,330
			KFDS10M4SGA	37,962	460/3/60	KBDS10M4SGA	36,186		
			KFDS10M4SJA	38,662	575/3/60	KBDS10M4SJA	36,872		
	3DF3R15M	12	KFDS12M4SEA	39,098	208/230/3/60	KBDS12M4SEA	37,300	932 NET	1,330
			KFDS12M4SGA	40,629	460/3/60	KBDS12M4SGA	38,802		
			KFDS12M4SJA	N/A	575/3/60	KBDS12M4SJA	N/A		
	3DS3R17M	15	KFDS15M4SEA	39,963	208/230/3/60	KBDS15M4SEA	38,908	1,202 NET	1,350
			KFDS15M4SGA	41,313	460/3/60	KBDS15M4SGA	40,256		
			KFDS15M4SJA	42,015	575/3/60	KBDS15M4SJA	40,958		

Voltage codes: E = 208-230/3/60, G = 460V/3/60, J = 575V/3/6

* See next page for condensing units with low temp Discus™ or Scroll™ compressors.

NEXT-GEN II AIR COOLED CONDENSING UNITS

3 THRU 22 H.P. - DISCUS and SCROLL

Temperature Range	Compressor (Discus)	H.P.	Model Number	KF Flooded List Price	VOLTAGE	Model Number	KB Non Flooded List Price	4 Year Compressor Protection Plan	Approx. Ship Wt. (LBS)
Low Temp Discus	2DF3F16K	03	KFDS03L4SEA	\$22,629	208/230/3/60	KBDS03L4SEA	\$21,571	\$329 NET	710
			KFDS03L4SGA	24,196	460/3/60	KBDS03L4SGA	23,139		
			KFDS03L4SJA	24,768	575/3/60	KBDS03L4SJA	23,712		
	2DL3F20K	04	KFDS04L4SEA	24,809	208/230/3/60	KBDS04L4SEA	23,751	489 NET	760
			KFDS04L4SGA	26,398	460/3/60	KBDS04L4SGA	25,341		
			KFDS04L4SJA	26,913	575/3/60	KBDS04L4SJA	25,856		
	2DA3F23K	05	KFDS05L4SEA	25,407	208/230/3/60	KBDS05L4SEA	24,350	489 NET	805
			KFDS05L4SGA	27,213	460/3/60	KBDS05L4SGA	26,157		
			KFDS05L4SJA	27,752	575/3/60	KBDS05L4SJA	26,696		
	3DA3F28K	06	KFDS06L4SEA	27,705	208/230/3/60	KBDS06L4SEA	26,649	592 NET	870
			KFDS06L4SGA	29,524	460/3/60	KBDS06L4SGA	28,469		
			KFDS06L4SJA	30,249	575/3/60	KBDS06L4SJA	29,192		
	3DB3F33K	08	KFDS08L4SEA	31,015	208/230/3/60	KBDS08L4SEA	29,958	600 NET	1,130
			KFDS08L4SGA	32,483	460/3/60	KBDS08L4SGA	31,427		
			KFDS08L4SJA	33,596	575/3/60	KBDS08L4SJA	32,539		
	3DF3F40K	09	KFDS09L4SEA	34,707	208/230/3/60	KBDS09L4SEA	33,651	776 NET	1,275
			KFDS09L4SGA	36,759	460/3/60	KBDS09L4SGA	35,701		
			KFDS09L4SJA	37,487	575/3/60	KBDS09L4SJA	36,429		
	3DS3F46K	10	KFDS10L4SEA	37,677	208/230/3/60	KBDS10L4SEA	36,620	884 NET	1,275
			KFDS10L4SGA	38,328	460/3/60	KBDS10L4SGA	37,271		
			KFDS10L4SJA	39,289	575/3/60	KBDS10L4SJA	38,231		
	4DBNF54K	12	KFDS12L4SEA	38,425	208/230/3/60	KBDS12L4SEA	37,369	932 NET	1,290
			KFDS12L4SGA	39,302	460/3/60	KBDS12L4SGA	38,245		
			KFDS12L4SJA	40,093	575/3/60	KBDS12L4SJA	39,035		
	4DHNF63K	15	KFDS15L4SEA	40,385	208/230/3/60	KBDS15L4SEA	39,332	1,202 NET	1,310
			KFDS15L4SGA	41,028	460/3/60	KBDS15L4SGA	39,972		
			KFDS15L4SJA	41,890	575/3/60	KBDS15L4SJA	40,833		
4DJNF76K	22	KFDS22L4SEA	45,770	208/230/3/60	KBDS22L4SEA	44,713	1,487 NET	1,420	
		KFDS22L4SGA	46,537	460/3/60	KBDS22L4SGA	45,480			
		KFDS22L4SJA	47,721	575/3/60	KBDS22L4SJA	46,665			

Temperature Range	Compressor (Scroll)	H.P.	Model Number	KF Flooded LIST PRICE	VOLTAGE	Model Number	KB Non Flooded List Price	4 Year Compressor Protection Plan	Approx. Ship Wt. (LBS)
Medium Temp Scroll	ZS29KAE	04	KFOS04E4SEA	\$20,958	208/230/3/60	KBOS04E4SEA	\$19,902	\$285 NET	700
			KFOS04E4SGA	22,613	460/3/60	KBOS04E4SGA	21,557		
			KFOS04E4SJA	23,103	575/3/60	KBOS04E4SJA	22,046		
	ZS33KAE	05	KFOS05E4SEA	21,331	208/230/3/60	KBOS05E4SEA	20,274	285 NET	710
			KFOS05E4SGA	22,957	460/3/60	KBOS05E4SGA	21,901		
			KFOS05E4SJA	23,513	575/3/60	KBOS05E4SJA	22,455		
	ZS38K4E	06	KFOS06E4SEA	24,307	208/230/3/60	KBOS06E4SEA	23,250	292 NET	710
			KFOS06E4SGA	26,257	460/3/60	KBOS06E4SGA	25,199		
			KFOS06E4SJA	26,809	575/3/60	KBOS06E4SJA	25,753		
	ZS45K4E	07	KFOS07E4SEA	24,781	208/230/3/60	KBOS07E4SEA	23,724	482 NET	870
			KFOS07E4SGA	26,626	460/3/60	KBOS07E4SGA	25,570		
			KFOS07E4SJA	27,180	575/3/60	KBOS07E4SJA	26,123		
	ZB58K5E	08	KFOS08E4SEA	25,759	208/230/3/60	KBOS08E4SEA	24,215	482 NET	915
			KFOS08E4SGA	27,662	460/3/60	KBOS08E4SGA	26,081		
			KFOS08E4SJA	28,263	575/3/60	KBOS08E4SJA	26,671		
	ZB66K5E	09	KFOS09E4SEA	27,186	208/230/3/60	KBOS09E4SEA	25,615	522 NET	980
			KFOS09E4SGA	28,888	460/3/60	KBOS09E4SGA	27,284		
			KFOS09E4SJA	29,462	575/3/60	KBOS09E4SJA	27,847		
	ZB76K5E	10	KFOS10E4SEA	31,784	208/230/3/60	KBOS10E4SEA	30,124	522 NET	1,085
			KFOS10E4SGA	32,992	460/3/60	KBOS10E4SGA	31,309		
			KFOS10E4SJA	33,669	575/3/60	KBOS10E4SJA	31,974		
	ZB95K5E	13	KFOS13E4SEA	35,200	208/230/3/60	KBOS13E4SEA	33,477	602 NET	1,105
			KFOS13E4SGA	35,281	460/3/60	KBOS13E4SGA	33,556		
			KFOS13E4SJA	36,434	575/3/60	KBOS13E4SJA	34,687		
	ZB114K5E	15	KFOS15E4SEA	39,303	208/230/3/60	KBOS15E4SEA	37,501	615 NET	1,200
			KFOS15E4SGA	41,098	460/3/60	KBOS15E4SGA	39,262		
			KFOS15E4SJA	41,900	575/3/60	KBOS15E4SJA	40,048		

Low Temp Scroll	ZF25K4E	08	KFOS08L4SEA	\$23,881	208/230/3/60	KBOS08L4SEA	\$22,824	\$482 NET	850
			KFOS08L4SGA	25,293	460/3/60	KBOS08L4SGA	24,237		
			KFOS08L4SJA	25,788	575/3/60	KBOS08L4SJA	24,731		
	ZF34K5E	10	KFOS10L4SEA	29,642	208/230/3/60	KBOS10L4SEA	28,585	522 NET	1,025
			KFOS10L4SGA	31,385	460/3/60	KBOS10L4SGA	30,329		
			KFOS10L4SJA	32,029	575/3/60	KBOS10L4SJA	30,972		
	ZF41K5E	13	KFOS13L4SEA	33,503	208/230/3/60	KBOS13L4SEA	32,446	602 NET	1,050
			KFOS13L4SGA	34,076	460/3/60	KBOS13L4SGA	33,020		
			KFOS13L4SJA	35,005	575/3/60	KBOS13L4SJA	33,948		
	ZF49K5E	15	KFOS15L4SEA	34,616	208/230/3/60	KBOS15L4SEA	33,560	615 NET	1,105
			KFOS15L4SGA	35,397	460/3/60	KBOS15L4SGA	34,341		
			KFOS15L4SJA	36,105	575/3/60	KBOS15L4SJA	35,047		

Voltage codes: E = 208-230/3/60, G = 460V/3/60, J = 575V/3/60

Demand Cooling™ is optional for Low Temp. Discus compressors. It's required for non-R404A refrigerants.

* See next Page for Condensing units with Bitzer Compressors
Liquid Injection is standard on Low Temp. Scroll compressors.

**NEXT-GEN II AIR COOLED CONDENSING UNITS
3 THRU 22 H.P. - BITZER**

Temperature Range	Compressor (Bitzer)	H.P.	Model Number	KF Flooded List Price	VOLTAGE	Model Number	KB Non Flooded List Price	4 Year Compressor Protection Plan	Approx. Ship Wt. (LBS)
Medium Temp Bitzer	2DES-3	03	KFBS03E4SEA	\$25,023	208/230/3/60	KBBS03E4SEA	\$23,966	\$489 NET	800
			KFBS03E4SGA	26,664	460/3/60	KBBS03E4SGA	25,607		
			KFBS03E4SJA	26,911	575/3/60	KBBS03E4SJA	25,854		
	2CES-4	04	KFBS04E4SEA	25,418	208/230/3/60	KBBS04E4SEA	24,360	489 NET	825
			KFBS04E4SGA	26,999	460/3/60	KBBS04E4SGA	25,942		
			KFBS04E4SJA	27,383	575/3/60	KBBS04E4SJA	26,325		
	4FES-5	05	KFBS05E4SEA	25,827	208/230/3/60	KBBS05E4SEA	24,772	489 NET	850
			KFBS05E4SGA	27,352	460/3/60	KBBS05E4SGA	26,295		
			KFBS05E4SJA	27,856	575/3/60	KBBS05E4SJA	26,799		
	4EES-6	06	KFBS06E4SEA	28,309	208/230/3/60	KBBS06E4SEA	27,253	592 NET	1,075
			KFBS06E4SGA	29,378	460/3/60	KBBS06E4SGA	28,321		
			KFBS06E4SJA	31,276	575/3/60	KBBS06E4SJA	30,219		
	4DES-7	07	KFBS07E4SEA	30,756	208/230/3/60	KBBS07E4SEA	29,700	600 NET	1,100
			KFBS07E4SGA	31,370	460/3/60	KBBS07E4SGA	30,313		
			KFBS07E4SJA	34,661	575/3/60	KBBS07E4SJA	33,604		
	4CES-9	08	KFBS08E4SEA	35,331	208/230/3/60	KBBS08E4SEA	33,604	600 NET	1,130
			KFBS08E4SGA	37,097	460/3/60	KBBS08E4SGA	35,337		
			KFBS08E4SJA	37,896	575/3/60	KBBS08E4SJA	36,119		
	4TES-12	10	KFBS10E4SEA	35,757	208/230/3/60	KBBS10E4SEA	34,021	776 NET	1,330
			KFBS10E4SGA	37,869	460/3/60	KBBS10E4SGA	36,094		
			KFBS10E4SJA	38,568	575/3/60	KBBS10E4SJA	36,781		
	4PES-15	12	KFBS12E4SEA	37,276	208/230/3/60	KBBS12E4SEA	35,513	932 NET	1,330
			KFBS12E4SGA	39,220	460/3/60	KBBS12E4SGA	37,420		
			KFBS12E4SJA	39,919	575/3/60	KBBS12E4SJA	38,106		
4NES-20	15	KFBS15E4SEA	38,125	208/230/3/60	KBBS15E4SEA	36,345	1,202 NET	1,350	
		KFBS15E4SGA	39,990	460/3/60	KBBS15E4SGA	38,176			
		KFBS15E4SJA	40,685	575/3/60	KBBS15E4SJA	38,857			

Low Temp Bitzer	4FES-3	03	KFBS03L4SEA	\$22,192	208/230/3/60	KBBS03L4SEA	\$21,136	\$302 NET	710
			KFBS03L4SGA	23,062	460/3/60	KBBS03L4SGA	22,005		
			KFBS03L4SJA	23,618	575/3/60	KBBS03L4SJA	22,561		
	4EES-4	04	KFBS04L4SEA	24,389	208/230/3/60	KBBS04L4SEA	23,332	302 NET	760
			KFBS04L4SGA	25,259	460/3/60	KBBS04L4SGA	24,201		
			KFBS04L4SJA	25,815	575/3/60	KBBS04L4SJA	24,758		
	4DES-5	05	KFBS05L4SEA	25,627	208/230/3/60	KBBS05L4SEA	24,570	335 NET	805
			KFBS05L4SGA	26,587	460/3/60	KBBS05L4SGA	25,530		
			KFBS05L4SJA	27,125	575/3/60	KBBS05L4SJA	26,068		
	4CES-6	06	KFBS06L4SEA	30,702	208/230/3/60	KBBS06L4SEA	29,646	349 NET	870
			KFBS06L4SGA	31,947	460/3/60	KBBS06L4SGA	30,891		
			KFBS06L4SJA	32,315	575/3/60	KBBS06L4SJA	31,257		
	4TES-9	08	KFBS08L4SEA	32,840	208/230/3/60	KBBS08L4SEA	31,783	349 NET	1,130
			KFBS08L4SGA	34,035	460/3/60	KBBS08L4SGA	32,979		
			KFBS08L4SJA	34,513	575/3/60	KBBS08L4SJA	33,456		
	4PES-12	09	KFBS09L4SEA	35,160	208/230/3/60	KBBS09L4SEA	34,103	349 NET	1,275
			KFBS09L4SGA	36,289	460/3/60	KBBS09L4SGA	35,232		
			KFBS09L4SJA	37,350	575/3/60	KBBS09L4SJA	36,292		
	4NES-14	10	KFBS10L4SEA	37,514	208/230/3/60	KBBS10L4SEA	36,458	349 NET	1,275
			KFBS10L4SGA	38,644	460/3/60	KBBS10L4SGA	37,586		
			KFBS10L4SJA	39,704	575/3/60	KBBS10L4SJA	38,647		
	4JE-15	12	KFBS12L4SEA	54	208/230/3/60	KBBS12L4SEA	39,378	473 NET	1,290
			KFBS12L4SGA	41,564	460/3/60	KBBS12L4SGA	40,508		
			KFBS12L4SJA	42,624	575/3/60	KBBS12L4SJA	41,568		
4HE-18	15	KFBS15L4SEA	32	208/230/3/60	KBBS15L4SEA	42,366	587 NET	1,310	
		KFBS15L4SGA	44,549	460/3/60	KBBS15L4SGA	43,492			
		KFBS15L4SJA	45,612	575/3/60	KBBS15L4SJA	44,555			
4GE-23	22	KFBS22L4SEA	45,001	208/230/3/60	KBBS22L4SEA	41,234	668 NET	1,420	
		KFBS22L4SGA	46,194	460/3/60	KBBS22L4SGA	45,137			
		KFBS22L4SJA	47,258	575/3/60	KBBS22L4SJA	46,201			

Voltage codes: E = 208-230/3/60, G = 460V/3/60, J = 575V/3/60

Liquid Injection is optional on Low Temp. Bitzer compressors. It's required for non-R404A refrigerants.

3 THRU 22 H.P. CONDENSING UNITS - FACTORY INSTALLED DEFROST KITS

1 EVAPORATOR PER CU	Max Defrost Load (Amps per evap.)	List Price
DMA15	15	\$1,370
DMA20	20	
DMA24	24	
DMA30	30	
DMA35	35	\$1,530
DMA40	40	
DMA48	48	
DMB60	60	\$2,985
DMB96	96	

2 EVAPS PER CU	Max Defrost Load (Amps per evap.)	List Price
DMB35	35	\$2,075
DMB40	40	
DMB48	48	
DMB60	60	
DMB96	96	\$2,985

3 EVAPS PER CU	Max Defrost Load (Amps per evap.)	List Price
DMC35	35	\$3,122
DMC40	40	
DMC48	48	
DMC60	60	\$3,860
DMC96	96	

Note: All electric defrost kits include 1 fan contactor and are suitable for single or three phase loads. Defrost amp values are the maximum load for a kit. Smaller loads may be attached.

3 THRU 22 H.P. CONDENSING UNITS - FACTORY INSTALLED OPTIONS

All options are factory mounted unless otherwise noted.	OPTION NUMBER	H.P. RANGE	LIST PRICE†
Electrical Options			
THROUGH THE DOOR NON-FUSED DISCONNECT SWITCH	TDNM-3	3-10	\$1,670
	TDNM-4	12-22	1,867
EXTERNAL FUSED DISCONNECT - Loose or Mounted	EFDM-2 (230V)	3 - 6	1,080
	EFDM-3 (230V)	7 - 10	1,285
	EFDM-4 (230V)	12 - 22	2,741
	EFDM-2 (460V)	3 - 6	1,269
	EFDM-3 (460V)	7 - 10	2,284
	EFDM-4 (460V)	12 - 22	3,768
MAIN CIRCUIT BREAKER	BKR-2	3 - 6	1,543
	BKR-3	7 - 10	1,943
	BKR-4	12 - 22	2,445
PHASE LOSS MONITOR	PLM	ALL	1,215
ANTI SHORT CYCLE TIMER	ASC	ALL	718
AIR DEFROST TIMER	TMR	ALL	597
CURRENT SENSING RELAY (Run proof)	CSR	All	796
COMPRESSOR UNLOADERS (Suction pressure control. Medium Temp reciprocating compressors only. 1 Step for 3D and larger compressors.)	UNL-1	When Available	2,234

See Page 19 for defrost kit prices.

Mechanical Options			
SUCTION LINE FILTER (Sealed)	SK-5	3 - 8	\$524
	SK-6	9 - 10	888
	SK-7	12 - 22	1,417
REPLACEABLE CORE SUCTION FILTER (With Bypass)	RSK-5	3 - 8	1,178
	RSK-6	9 - 10	1,507
	RSK-7	12 - 22	2,125
REPLACEABLE CORE LIQUID FILTER (With Bypass)	RLK-5	3 - 8	1,236
	RLK-6	9 - 10	1,542
	RLK-7	12 - 22	2,231
SUCTION LINE ACCUMULATOR (Must add Suction line filter option.)	ASK-4	3 - 8	846
	ASK-5	9 - 10	1,243
	ASK-6	12 - 22	2,596
OIL SEPARATOR	OS-1	3 - 6	1,440
	OS-2	7 - 10	1,533
	OS-3	12 - 22	1,802
OVERSIZED RECEIVERS	OSR-1	1 FAN	1,271
	OSR-2	2 FAN	712
	OSR-3	2 FAN TALL	719
PRESSURE RELIEF VALVE (For models built on FD1 cabinet base. Requires Oversized Receiver OSR-1 option)	RV	FD1 Cabinet	322
HEATED AND INSULATED RECEIVER (Temperature controlled with low pressure bypass timer)	HIR	ALL	836
CRANKCASE PRESSURE REGULATOR (Do not use with MOP style TXV's. Must provide refrigerant type, holding temperature, suction temperature, and maximum design capacity.)	CPR VALVE	3 - 5	1,657
		6 - 9	1,837
		10 - 15	3,422
		22	5,356
LIQUID INJECTION / DEMAND COOLING™ (Low Temp. Bitzer and Discus compressors ¹)	LNJ	ALL	2,711
HAIL / SNOW GUARDS (Shipped loose to prevent shipping damage. Requires field installation)	SG-E	1 FAN	1,005
	SG-F	2 FAN	1,374
	SG-G	2 FAN TALL	1,539
2 UNIT STACKING RACK (Shipped empty. Condensing units must be field installed.)	SR-2	1 or 2 FAN	C/A
3 UNIT STACKING RACK (Shipped empty. Condensing units must be field installed.)	SR-3	1 or 2 FAN	C/A

C/A = Contact Application Engineering for a special quote on options not found in the price list.

† Phase Loss monitor is a standard feature for K5 Scroll Series CoreSense modules. Extended Range models *OS8E4S thru OS15E4s and Low Temp OS10L4L thru *OS15L4S use K5 Series Scroll compressors.

¹ Liquid Injection is standard on Low Temp. Scroll compressors. Liquid Injection/ Demand Cooling™ is optional for Low Temp. Bitzer and Discus compressors. It's required for non-R404A refrigerants.

QV-SERIES AIR COOLED CONDENSING UNITS

15 THRU 100 H.P.



Standard Features (all models)

- Copeland Discus™ or Bitzer Ecoline compressors
- Available in single, dual or parallel compressor configurations
- Prepaint gray exterior/ G60 galvanized steel outdoor cabinet construction
- Heavy gauge G90 galvanized steel frame
- Award-winning floating coil design with generously sized condensers for energy savings
- Integral subcooling circuit boosts energy efficiency
- Mechanically formed pre-bent tubing reduces potential leaks
- Compatible with multiple refrigerants
- Optimized for high glide refrigerants
- Separate power and control electrical panels
- Swept wing fan/Venturi improves airflow and sound
- Hinged and removable access panels
- Flip top hinged Venturi panels for easy servicing
- Floored compressor cabinet with removable compressor tray
- Color-coded control wiring diagram with diagnostic terminals/ color-coded high and low pressure hoses
- LED control and compressor panel lighting
- 110V service convenience outlet
- Service gauge hooks
- 3 Phase condenser fan motors
- Electronic oil failure control
- Horizontal receiver
- Receiver isolation valves
- Refrigerant relief valve
- Replaceable core liquid line filter
- Suction line and discharge line vibrasorbors
- Liquid line isolation valve with sight glass
- Single point alarm with liquid line solenoid lockout
- Control circuit and condenser fan fusing
- Condenser fan contactors
- UL and cUL listed for outdoor use

Flooded (KF) Models include an adjustable head pressure control valve

Non-Flooded (KB) Models include electronic fan cycling control and a minimum charge monitor

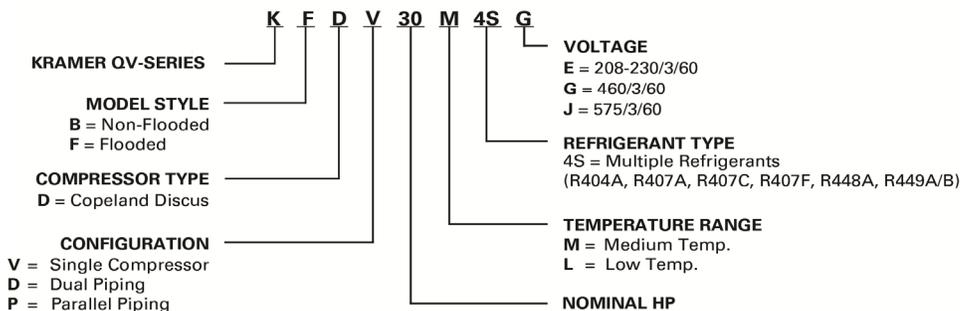
Parallel Compressor Models (KF*P/ KB*P) include an oil management system

Options

- EC fan motors for variable speed
- Air defrost timer or electric defrost components
- Electric defrost kits available for up to 4 evaporators
- Oversized receiver
- ElectroFin®, polyester coated fins or Bronz-Glow coil coating
- Liquid injection on low temp. compressors
- Heated and insulated receiver
- Oil separator with check valve
- Fan cycling control (RF models)
- Suction accumulator
- Liquid filter isolation valve
- Liquid line solenoid valve (Shipped loose)
- Suction isolation valve
- Suction filter isolation valve
- Replaceable core suction filter
- Crankcase pressure regulator
- Hot gas bypass (Discharge tee, regulator or ball valve)
- Heat reclaim (Sporlan 3 way valve)
- Thru-the-door non-fused disconnect switch
- Thru-the-door fused disconnect (200 amp Max)
- Thru-the-door breaker disconnect (200 amp Max)
- Phase loss monitor
- Anti short cycle timer
- Compressor Unloading

QV-SERIES AIR COOLED CONDENSING UNITS - Discus Compressor Models

MODEL NUMBER NOMENCLATURE



NOMINAL COMPRESSOR HP		
SINGLE COMP.	DUAL PIPING	PARALLEL PIPING
15 HP	30 (2) 15 HP	-
20 HP	40 (2) 20 HP	-
22 HP	44 (2) 22 HP	44 (2) 22 HP
25 HP	50 (2) 25 HP	50 (2) 25 HP
27 HP	54 (2) 27 HP	54 (2) 27 HP
30 HP	60 (2) 30 HP	60 (2) 30 HP
35 HP	70 (2) 35 HP	70 (2) 35 HP
40 HP	80 (2) 40 HP	80 (2) 40 HP
50 HP	100 (2) 50 HP	100 (2) 50 HP

QV-SERIES • SINGLE DISCUS COMPRESSOR MODELS

TEMP. RANGE	NOM H.P.	MODEL NUMBER	COMPRESSOR NUMBER (1 Compressor)	FLOODED MODELS (KF)			NON-FLOODED MODELS (KB)			4 Year Compressor Protection Plan (NET PRICE)
				208-230V/3	460V/3	575V/3	208-230V/3	460V/3	575V/3	
Medium Temp.	15	K*DV015M4S	3DS3R17ME	\$45,136	\$45,875	\$46,982	\$44,863	\$45,627	\$46,458	\$1,202
	20	K*DV020M4S	4DBNR20ME	49,956	50,661	51,554	48,894	49,894	51,013	1,487
	25	K*DV025M4S	4DHNR22ME	59,654	60,308	61,549	58,442	59,452	60,564	1,662
	30	K*DV030M4S	4DJNR28ME	69,726	70,486	72,011	65,949	66,767	67,915	1,782
	35	K*DV035M4S	6DHNR35ME	78,968	79,420	81,259	76,054	76,262	77,878	1,877
Low Temp.	40	K*DV040M4S	6DJNR40ME ¹	86,903	88,110	89,544	83,547	84,772	86,563	1,960
	50	K*DV050M4S	6DUNR49ME	N/A	105,187	N/A	N/A	99,895	N/A	2,218
	22	K*DV022L4S	4DJNF76KE	56,116	57,297	58,483	56,107	56,816	58,064	1,487
	27	K*DV027L4S	6DHNF93KE	64,957	65,475	66,611	63,699	64,848	65,629	1,662
	30	K*DV030L4S	6DJNF11ME	71,766	72,427	73,906	70,287	71,463	73,017	1,782
40	K*DV040L4S	6DUNF13ME	N/A	90,183	N/A	N/A	88,710	N/A	2,146	

QV-SERIES • DUAL DISCUS COMPRESSOR MODELS

TEMP. RANGE	NOM H.P.	MODEL NUMBER	COMPRESSOR NUMBER (2 Compressor)	FLOODED MODELS (KF)			NON-FLOODED MODELS (KB)			4 Year Compressor Protection Plan (NET PRICE)
				208-230V/3	460V/3	575V/3	208-230V/3	460V/3	575V/3	
Medium Temp.	30	K*DD030M4S	3DS3R17ME	\$90,274	\$91,751	\$93,964	\$89,726	\$91,253	\$92,917	\$2,402
	40	K*DD040M4S	4DBNR20ME	99,914	101,321	103,109	97,789	99,788	102,025	2,976
	50	K*DD050M4S	4DHNR22ME	119,309	120,617	123,099	116,885	118,906	121,127	3,324
	60	K*DD060M4S	4DJNR28ME	139,452	140,972	144,022	131,897	133,534	135,829	3,565
	70	K*DD070M4S	6DHNR35ME	157,936	158,840	162,517	152,108	152,524	155,755	3,755
Low Temp.	80	K*DD080M4S	6DJNR40ME ¹	173,807	176,219	179,087	167,094	169,543	173,127	3,921
	100	K*DD100M4S	6DUNR49ME	N/A	210,374	N/A	N/A	199,790	N/A	4,437
	44	K*DD044L4S	4DJNF76KE	112,232	114,593	116,966	112,215	113,634	116,126	2,976
	54	K*DD054L4S	6DHNF93KE	129,913	130,950	133,222	127,398	129,696	131,259	3,324
	60	K*DD060L4S	6DJNF11ME	143,532	144,855	147,814	140,574	142,924	146,035	3,565
80	K*DD080L4S	6DUNF13ME	N/A	180,366	N/A	N/A	177,419	N/A	4,290	

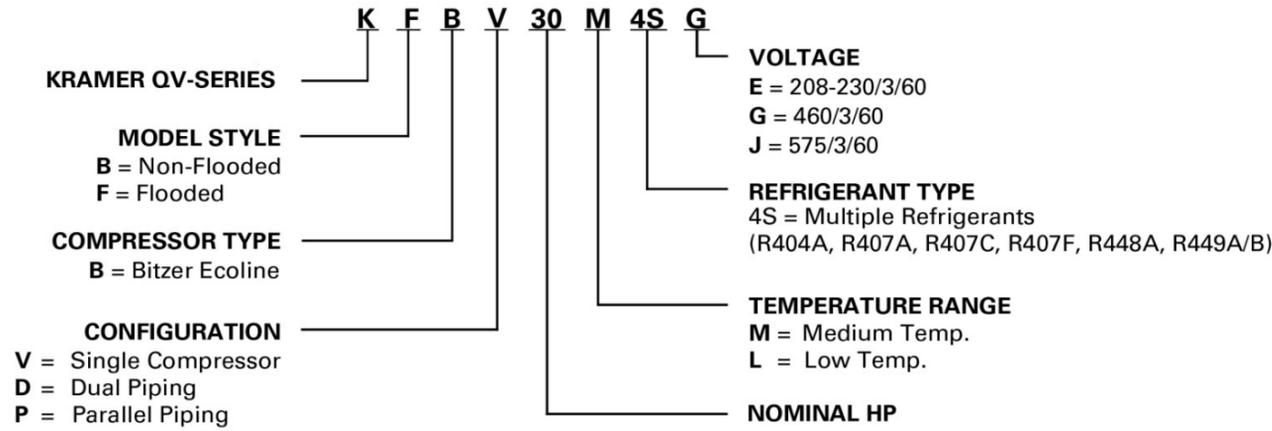
QV-SERIES • PARALLEL PIPED DISCUS COMPRESSOR MODELS

TEMP. RANGE	NOM H.P.	MODEL NUMBER	COMPRESSOR NUMBER (2 Compressor)	FLOODED MODELS (KF)			NON-FLOODED MODELS (KB)			4 Year Compressor Protection Plan (NET PRICE)
				208-230V/3	460V/3	575V/3	208-230V/3	460V/3	575V/3	
Medium Temp.	50	K*DP050M4S	4DHNR22ME	\$134,065	\$135,212	\$137,916	\$131,285	\$133,266	\$135,671	\$3,324
	60	K*DP060M4S	4DJNR28ME	152,960	154,350	157,437	144,199	145,752	147,941	3,565
	70	K*DP070M4S	6DHNR35ME	171,980	172,753	176,208	165,391	165,599	168,558	3,755
	80	K*DP080M4S	6DJNR40ME ¹	186,536	189,443	193,231	179,043	181,984	186,577	3,921
	100	K*DP100M4S	6DUNR49ME	N/A	233,515	N/A	N/A	221,145	N/A	4,437
Low Temp.	44	K*DP044L4S	4DJNF76KE	127,310	129,648	132,242	127,291	128,553	131,286	2,976
	54	K*DP054L4S	6DHNF93KE	144,021	144,877	147,774	141,178	143,476	145,564	3,324
	60	K*DP060L4S	6DJNF11ME	156,744	157,920	161,078	153,445	155,786	159,117	3,565
	80	K*DP080L4S	6DUNF13ME	N/A	200,206	N/A	N/A	196,880	N/A	4,290

¹6DJ3R40ME on 575/3

QV-SERIES AIR COOLED CONDENSING UNITS - Bitzer Compressors

MODEL NUMBER NOMENCLATURE



NOMINAL COMPRESSOR HP		
SINGLE COMP.	DUAL PIPING	PARALLEL PIPING
15 HP	30 (2) 15 HP	-
20 HP	40 (2) 20 HP	-
22 HP	44 (2) 22 HP	44 (2) 22 HP
25 HP	50 (2) 25 HP	50 (2) 25 HP
27 HP	54 (2) 27 HP	54 (2) 27 HP
30 HP	60 (2) 30 HP	60 (2) 30 HP
35 HP	70 (2) 35 HP	70 (2) 35 HP
40 HP	80 (2) 40 HP	80 (2) 40 HP
50 HP	100 (2) 50 HP	100 (2) 50 HP

QV-SERIES • SINGLE BITZER COMPRESSOR MODELS

TEMP. RANGE	NOM H.P.	MODEL NUMBER	COMPRESSOR NUMBER (1 Compressor)	FLOODED MODELS (KF)			NON-FLOODED MODELS (KB)			4 Year Compressor Protection Plan (NET PRICE)
				208-230V/3	460V/3	575V/3	208-230V/3	460V/3	575V/3	
Medium Temp.	15	K*BV015M4S*	4NE-20	\$45,136	\$45,875	46,982	\$44,863	\$45,627	\$46,458	\$1,202
	20	K*BV020M4S*	4JE-22	49,956	50,661	51,554	48,894	49,894	51,013	1,487
	25	K*BV025M4S*	4HE-25	59,654	60,308	61,549	58,442	59,452	60,564	1,662
	30	K*BV030M4S*	4GE-30	69,726	70,486	72,011	65,949	66,767	67,915	1,782
	35	K*BV035M4S*	6HE-35	78,968	79,420	81,259	76,054	76,262	77,878	1,877
	40	K*BV040M4S*	6GE-40	86,903	88,110	89,544	83,547	84,772	86,563	1,960
Low Temp.	50	K*BV050M4S*	6FE-50	N/A	105,187	N/A	N/A	99,895	N/A	2,218
	22	K*BV022L4S*	4GE-23	56,116	57,297	58,483	56,107	56,816	58,064	1,487
	27	K*BV027L4S*	6HE-28	64,957	65,475	66,611	63,699	64,848	65,629	1,662
	30	K*BV030L4S*	6GE-34	71,766	72,427	73,906	70,287	71,463	73,017	1,782
40	K*BV040L4S*	6FE-44	N/A	90,183	N/A	N/A	88,710	N/A	2,146	

QV-SERIES • DUAL BITZER COMPRESSOR MODELS

TEMP. RANGE	NOM H.P.	MODEL NUMBER	COMPRESSOR NUMBER (2 Compressors)	FLOODED MODELS (KF)			NON-FLOODED MODELS (KB)			4 Year Compressor Protection Plan (NET PRICE)
				208-230V/3	460V/3	575V/3	208-230V/3	460V/3	575V/3	
Medium Temp.	30	K*BD030M4S*	4NE-20	\$90,274	\$91,751	\$93,964	\$89,726	\$91,253	\$92,917	\$2,402
	40	K*BD040M4S*	4JE-22	99,914	101,321	103,109	97,789	99,788	102,025	2,976
	50	K*BD050M4S*	4HE-25	119,309	120,617	123,099	116,885	118,906	121,127	3,324
	60	K*BD060M4S*	4GE-30	139,452	140,972	144,022	131,897	133,534	135,829	3,565
	70	K*BD070M4S*	6HE-35	157,936	158,840	162,517	152,108	152,524	155,755	3,755
	80	K*BD080M4S*	6GE-40	173,807	176,219	179,087	167,094	169,543	173,127	3,921
Low Temp.	100	K*BD100M4S*	6FE-50	N/A	210,374	N/A	N/A	199,790	N/A	4,437
	44	K*BD044L4S*	4GE-23	112,232	114,593	116,966	112,215	113,634	116,126	2,976
	54	K*BD054L4S*	6HE-28	129,913	130,950	133,222	127,398	129,696	131,259	3,324
	60	K*BD060L4S*	6GE-34	143,532	144,855	147,814	140,574	142,924	146,035	3,565
80	K*BD080L4S*	6FE-44	N/A	180,366	N/A	N/A	177,419	N/A	4,290	

QV-SERIES • PARALLEL PIPED BITZER COMPRESSOR MODELS

TEMP. RANGE	NOM H.P.	MODEL NUMBER	COMPRESSOR NUMBER (2 Compressors)	FLOODED MODELS (KF)			NON-FLOODED MODELS (KB)			4 Year Compressor Protection Plan (NET PRICE)
				208-230V/3	460V/3	575V/3	208-230V/3	460V/3	575V/3	
Medium Temp.	50	K*BP050M4S	4HE-25	\$134,065	\$135,212	\$137,916	\$131,285	\$133,266	\$135,671	\$3,324
	60	K*BP060M4S	4GE-30	152,960	154,350	157,437	144,199	145,752	147,941	3,565
	70	K*BP070M4S	6HE-35	171,980	172,753	176,208	165,391	165,599	168,558	3,755
	80	K*BP080M4S	6GE-40	186,536	189,443	193,231	179,043	181,984	186,577	3,921
	100	K*BP100M4S	6FE-50	N/A	233,515	N/A	N/A	221,145	N/A	4,437
Low Temp.	44	K*BP044L4S	4GE-23	127,310	129,648	132,242	127,291	128,553	131,286	2,976
	54	K*BP054L4S	6HE-28	144,021	144,877	147,774	141,178	143,476	145,564	3,324
	60	K*BP060L4S	6GE-34	156,744	157,920	161,078	153,445	155,786	159,117	3,565
	80	K*BP080L4S	6FE-44	N/A	200,206	N/A	N/A	196,880	N/A	4,290

QV-SERIES AIR COOLED CONDENSING UNITS • OPTIONS AND ACCESSORIES

QV-SERIES • SINGLE COMPRESSOR MODEL OPTIONS

All options are factory mounted unless otherwise noted.

OPTION FAMILY	OPTION NAME	OPTION AVAILABLE ON MODELS:	LIST PRICE
Compressor Options	Compressor Unloading with Pressure Control for 1 Cycle Bank	BV015M, 020M-30M, 050M; 022L - 040L	\$2,238
	Compressor Unloading with Pressure Control for 2 Cycle Bank	035M & 045M	3,222
	Compressor Unloading: Moduload	DV015M	4,392
	Head Cooling Fan	All Models	1,853
	Liquid Injection	022L - 040L	4,068
Electrical and Control Panel Options	Air Defrost Time Clock	All Medium Temperature Models	597
	Anti-Short Cycle Timer	All Models	516
	Condenser Fan Breaker	015M -030M; 022L - 040L	780
	Condenser Fan Breaker	035M -050M	1,184
	Control Circuit Breaker	All Models	254
	EC Fan Motors with Electronic Variable Speed Control	015M -030M; 022L - 040L	Call Factory
	EC Fan Motors with Electronic Variable Speed Control	035M -050M	Call Factory
	Thru-the-door Fused Disconnect	Models with MOPD < 61A	1,576
	Thru-the-door Fused Disconnect	Models with 61A < MOPD < 101A	2,333
	Thru-the-door Fused Disconnect	Models with 101A < MOPD < 201A	3,997
	Thru-the-door Main Breaker	Models with MOPD ≤ 100A	2,014
	Thru-the-door Main Breaker	Models with 101A < MOPD < 201A	3,267
	Thru-the-door Non-Fused Disconnect	Models with MCA < 59A	1,419
	Thru-the-door Non-Fused Disconnect	Models with 59A < MCA > 99A	2,060
	Thru-the-door Non-Fused Disconnect	Models with 99A < MCA < 199A	3,406
	Phase-Loss Monitor - 250A	230V & 460V	996
	Phase-Loss Monitor - ICM450	230V	1,453
	Phase-Loss Monitor - ICM450	460V	1,033
Refrigeration Options	Crankcase Pressure Regulator Valves	015M	3,498
	Crankcase Pressure Regulator Valves	020M - 040M; 022L - 030L	4,406
	Crankcase Pressure Regulator Valves	050M & 040L	8,742
	Fan Cycling - Temperature or Pressure	All Flooded Models; Standard on Non-Flooded Models	1,571
	Heat Reclaim Valve	All Models	3,637
	Heated & Insulated Receiver	All Models	2,766
	Hot Gas Bypass Tee & Ball Valve	All Models	853
	Hot Gas Bypass Tee, Ball Valve & Regulator	All Models	4,943
	Liquid-line Filter Isolation Valve (Single Valve)	All Models	492
	Liquid Line Solenoid Valve (Shipped loose)	015M - 025M; 022L - 040L	600
	Liquid Line Solenoid Valve (Shipped loose)	030M - 035M	766
	Liquid Line Solenoid Valve (Shipped loose)	040M - 050M	1,159
	Oil Separator with Check Valve	015 - 030	1,999
	Oil Separator with Check Valve	035 - 050	3,559
	Oil Separator with Check Valve & Oil Return Service Kit	015 - 030	3,752
	Oil Separator with Check Valve & Oil Return Service Kit	035 - 050	5,313
	Oversized Receiver	All Models	1,177
	Receiver Level Gauge	All Models	1,460
	Suction Accumulator - Standard	015	2,637
	Suction Accumulator - Standard	020-050	3,049
	Suction Accumulator - Heat Exchanger	015	3,267
	Suction Accumulator - Heat Exchanger	020-050	5,059
	Suction-line Filter - Replaceable Core	015M	1,151
	Suction-line Filter - Replaceable Core	020M - 040M; 022L - 030L	1,435
	Suction-line Filter - Replaceable Core	050M & 040L	1,490
	Suction-line Filter Isolation Valves	015M	807
	Suction-line Filter Isolation Valves	020M - 040M; 022L - 030L	1,299
	Suction-line Filter Isolation Valves	050M & 040L	2,260
	Suction-line Insulation	All Models	1,430

QV-SERIES AIR COOLED CONDENSING UNITS • OPTIONS AND ACCESSORIES

QV-SERIES • DUAL COMPRESSOR MODEL OPTIONS

All options are factory mounted unless otherwise noted.

OPTION FAMILY	OPTION NAME	OPTION AVAILABLE ON MODELS:	LIST PRICE
Compressor Options	Compressor Unloading with Pressure Control for 1 Cycle Bank	BD030M, D040M - D060M, D100M; D044L - D080L	\$4,475
	Compressor Unloading with Pressure Control for 2 Cycle Bank	D070M & D080M	6,443
	Compressor Unloading: Moduload	DD030M	8,783
	Head Cooling Fan	All Models	3,705
	Liquid Injection	D044L - D080L	8,135
Electrical and Control Panel Options	Air Defrost Time Clock	All Medium Temperature Models	1,192
	Anti-Short Cycle Timer	All Models	1,033
	Condenser Fan Breaker	D030M -D060M; D044L - D080L	1,561
	Condenser Fan Breaker	D070M -D100M	2,368
	Control Circuit Breaker	All Models	254
	EC Fan Motors with Electronic Variable Speed Control	D030M -D060M; D044L - D080L	Call Factory
	EC Fan Motors with Electronic Variable Speed Control	D070M -D100M	Call Factory
	Thru-the-door Fused Disconnect	Models with MOPD < 61A	1,576
	Thru-the-door Fused Disconnect	Models with 61A < MOPD < 101A	2,333
	Thru-the-door Fused Disconnect	Models with 101A < MOPD < 201A	3,997
	Thru-the-door Main Breaker	Models with MOPD ≤ 100A	2,014
	Thru-the-door Main Breaker	Models with 101A < MOPD < 201A	3,267
	Thru-the-door Non-Fused Disconnect	Models with MCA < 59A	1,419
	Thru-the-door Non-Fused Disconnect	Models with 59A < MCA > 99A	2,060
	Thru-the-door Non-Fused Disconnect	Models with 99A < MCA < 199A	3,406
	Phase-Loss Monitor -250A	230V & 460V	996
	Phase-Loss Monitor - ICM450	460V	2,067
Refrigeration Options	Crankcase Pressure Regulator Valves	D030M	6,997
	Crankcase Pressure Regulator Valves	D040M - D080M; D044L - D060L	8,811
	Crankcase Pressure Regulator Valves	D100M & D080L	17,483
	Fan Cycling - Temperature or Pressure	All Flooded Models; Standard on Non-Flooded Models	3,143
	Heat Reclaim Valve	All Models	7,274
	Heated & Insulated Receiver	All Models	5,531
	Hot Gas Bypass Tee & Ball Valve	All Models	1,705
	Hot Gas Bypass Tee, Ball Valve & Regulator	All Models	9,885
	Liquid-line Filter Isolation Valve (Single Valve per Circuit)	All Models	984
	Liquid Line Solenoid Valve (Shipped loose)	030M - 050M; 044L - 080L	1,097
	Liquid Line Solenoid Valve (Shipped loose)	060M - 070M	1,532
	Liquid Line Solenoid Valve (Shipped loose)	080M - 100M	2,318
	Oil Separator with Check Valve	D030 - D060	3,998
	Oil Separator with Check Valve	D070 - D100	7,120
	Oil Separator with Check Valve & Oil Return Service Kit	D030 - D060	7,505
	Oil Separator with Check Valve & Oil Return Service Kit	D070 - D100	10,626
	Oversized Receiver	All Models	2,353
	Receiver Level Gauge	All Models	2,922
	Suction Accumulator - Standard	D030	5,274
	Suction Accumulator - Standard	D040-D100	6,099
	Suction Accumulator - Heat Exchanger	D030	6,536
	Suction Accumulator - Heat Exchanger	D040-D100	10,118
	Suction-line Filter - Replaceable Core	D030M	2,302
	Suction-line Filter - Replaceable Core	D040M - D080M; D044L - D060L	2,870
	Suction-line Filter - Replaceable Core	D100M & D080L	2,982
	Suction-line Filter Isolation Valves	D030M	1,615
	Suction-line Filter Isolation Valves	D040M - D080M; D044L - D060L	2,599
	Suction-line Filter Isolation Valves	D100M & D080L	4,521
	Suction-line Insulation	All Models	2,861

QV-SERIES AIR COOLED CONDENSING UNITS • OPTIONS AND ACCESSORIES

QV-SERIES • PARALLEL COMPRESSOR MODEL OPTIONS

All options are factory mounted unless otherwise noted.

OPTION FAMILY	OPTION NAME	OPTION AVAILABLE ON MODELS:	LIST PRICE
Compressor Options	Compressor Unloading with Pressure Control for 1 Cycle Bank	P050M - P060M, P100M; P044L - P080L	\$4,475
	Compressor Unloading with Pressure Control for 2 Cycle Bank	P070M & P080M	6,443
	Head Cooling Fan	All Models	3,705
	Liquid Injection	P044L - P080L	8,135
Electrical and Control Panel Options	Air Defrost Time Clock	All Medium Temperature Models	596
	Anti-Short Cycle Timer	All Models	516
	Condenser Fan Breaker	P050M -P060M; P044L - P080L	780
	Condenser Fan Breaker	P070M -P100M	1,184
	Control Circuit Breaker	All Models	254
	EC Fan Motors with Electronic Variable Speed Control	P050M -P060M; P044L - P080L	Call Factory
	EC Fan Motors with Electronic Variable Speed Control	P070M -P100M	Call Factory
	Thru-the-door Fused Disconnect	Models with MOPD < 61A	1,576
	Thru-the-door Fused Disconnect	Models with 61A < MOPD < 101A	2,333
	Thru-the-door Fused Disconnect	Models with 101A < MOPD < 201A	3,997
	Thru-the-door Main Breaker	Models with MOPD ≤ 100A	2,014
	Thru-the-door Main Breaker	Models with 101A < MOPD < 201A	3,267
	Thru-the-door Non-Fused Disconnect	Models with MCA < 59A	1,419
	Thru-the-door Non-Fused Disconnect	Models with 59A < MCA > 99A	2,060
	Thru-the-door Non-Fused Disconnect	Models with 99A < MCA < 199A	3,406
	Phase-Loss Monitor - 250A	230V & 460V	996
Phase-Loss Monitor - ICM450	460V	2,067	
Refrigeration Options	Crankcase Pressure Regulator Valves	P050M-P60M	8,742
	Crankcase Pressure Regulator Valves	P070M-P100M; P044L - P080L	10,287
	Fan Cycling - Temperature or Pressure	All Flooded Models; Standard on Non-Flooded Models	2,196
	Heat Reclaim Valve	All Models	3,637
	Heated & Insulated Receiver	All Models	2,766
	Hot Gas Bypass Tee & Ball Valve	All Models	853
	Hot Gas Bypass Tee, Ball Valve & Regulator	All Models	4,943
	Liquid-line Filter Isolation Valve (Single Valve)	All Models	492
	Liquid Line Solenoid Valve (Shipped loose)	050M - 060M	1,159
	Liquid Line Solenoid Valve (Shipped loose)	070M - 100M	1,998
	Liquid Line Solenoid Valve (Shipped loose)	044L - 080L	766
	Oversized Receiver	All Models	1,177
	Receiver Level Gauge	All Models	1,460
	Suction Accumulator - Standard	P050M-P60M	3,660
	Suction Accumulator - Standard	P070M-P100M; P044L - P080L	3,983
	Suction Accumulator - Heat Exchanger	P050M-P60M	5,059
	Suction Accumulator - Heat Exchanger	P070M-P100M; P044L - P080L	5,590
	Suction-line Filter - Replaceable Core	P050M-P60M	1,615
	Suction-line Filter - Replaceable Core	P070M-P100M; P044L - P080L	1,788
	Suction-line Filter Isolation Valves	P050M-P60M	2,260
Suction-line Filter Isolation Valves	P070M-P100M; P044L - P080L	3,568	
Suction-line Insulation	All Models	2,861	

QV-SERIES AIR COOLED CONDENSING UNITS • DEFROST KITS

ELECTRIC DEFROST KIT NOMENCLATURE

DL	A	24	-
Defrost Kit Large Condenser	Heater Contactor Quantity A: 1 Heater Contactor B: 2 Heater Contactor C: 3 Heater Contactor D: 4 Heater Contactor	Max Total Heater Amp Value	Special Kit Codes -1: 1 Evaporator with Multiple Heater Feeds -2: 2 Evaporators with Multiple Heater Feeds PP: Pressure Prop Kits for Large Evaporators Kits beginning with "K" are for use with large Kramer evaporators. Models include internal heater branch fusing.

When selecting defrost kit, use the next higher amp value above the defrost load.
All kits include 1 fan contactor and are suitable for 1 or 3 phase loads.
Electrical resistance loads greater than 48 amps must be split into multiple circuits.

ELECTRIC DEFROST KIT OPTIONS • SINGLE AND PARALLEL COMPRESSOR MODELS

1 HEATER CONTACTOR		2 HEATER CONTACTORS		3 HEATER CONTACTORS		4 HEATER CONTACTORS	
Defrost Kit Model	List Price (\$US)	Defrost Kit Model	List Price (\$US)	Defrost Kit Model	List Price (\$US)	Defrost Kit Model	List Price (\$US)
DLA24 ¹	\$1,647						
DLA30 ¹	1,712						
DLA35 ¹	1,927	DLB35 ¹	\$2,459	DLC35	\$3,359		
DLA40 ¹	1,927	DLB40 ¹	2,459	DLC40	3,359		
DLA48 ¹	1,927	DLB48 ^{1 4}	2,459	DLC48	3,359		
KDLA53 ¹	2,049						
		DLB60 ^{1 2 4}	2,556	DLC60 ¹	3,359	DLD60	\$3,972
KDLA76 ¹	3,324						
		DLB96 ^{1 2}	3,095	DLC96 ¹	3,562	DLD96	4,004
KDLA100 ¹	3,525					⁵	
		KDLB106 ¹	3,683				
		KDLB152 ¹	3,784	DLC144 ¹	4,854	DLD144 ^{3 5}	4,887
		KDLB200 ¹	4,744			DLD192 ³	5,135

Kramer Large Evaporator Kits include internal heater branch fusing.
Defrost Kit selected for Single and Parallel compressor models is for entire unit. Up to 4 contactors.
¹Defrost Kit Available with Pressure Prop Kit for Large Evaporators (Special Kit Code: PP)
²Defrost Kit Available for Evaporator with Multiple Heater Feeds (Special Kit Code: -1)
³Defrost Kit Available for 2 Evaporators with Multiple Heater Feeds (Special Kit Code: -2)
Defrost Kit Available for Evaporator with Multiple Heater Feeds & Pressure Prop Kit (Special Kit Code: -1PP)
Defrost Kit Available for 2 Evaporators with Multiple Heater Feeds & Pressure Prop Kit (Special Kit Code: -2PP)

ELECTRIC DEFROST KIT OPTIONS • DUAL COMPRESSOR MODELS

1 HEATER CONTACTOR PER		2 HEATER CONTACTORS PER	
Defrost Kit Model	List Price (\$US)	Defrost Kit Model	List Price (\$US)
DLA24 ¹	\$3,293		
DLA30 ¹	3,423		
DLA35 ¹	3,853	DLB35 ¹	\$4,919
DLA40 ¹	3,853	DLB40 ¹	4,919
DLA48 ¹	3,853	DLB48 ¹	4,919
KDLA53 ¹	4,099		
		DLB60 ^{1 2 3}	5,113
KDLA76 ¹	6,648		
		DLB96 ^{1 2 3}	6,189
KDLA100 ¹	7,050		
		KDLB106 ¹	7,365
		KDLB152 ¹	7,567
		KDLB200 ¹	9,490

Kramer Large Evaporator Kits include internal heater branch fusing.
Defrost Kit selected is per compressor for Dual compressor models. Up to 2 contactors/compressor.
¹Defrost Kit Available with Pressure Prop Kit for Large Evaporators (Special Kit Code: PP)
²Defrost Kit Available for Evaporator with Multiple Heater Feeds (Special Kit Code: -1)
³Defrost Kit Available for Evaporator with Multiple Heater Feeds & Pressure Prop Kit (Special Kit Code: -1PP)

QV-SERIES AIR COOLED CONDENSING UNITS • DEFROST KITS

ELECTRIC DEFROST KIT OPTIONS • FUSEBLOCK AND CIRCUIT BREAKERS

MAX HEATER AMPS	1 HEATER CONTACTOR		2 HEATER CONTACTORS		3 HEATER CONTACTORS		4 HEATER CONTACTORS	
	Fuseblock List Price Adder	Circuit Breaker List Price Adder	Fuseblock List Price Adder	Circuit Breaker List Price Adder	Fuseblock List Price Adder	Circuit Breaker List Price Adder	Fuseblock List Price Adder	Circuit Breaker List Price Adder
24	\$115	\$868						
30	154	1,353						
35	154	1,353	\$154	\$1,605	\$231	\$1,722		
40	154	1,353	154	1,605	231	1,722		
48	154	1,353	154	1,605	231	1,722		
53	238	1,630						
60			215	2,698	330	2,847	\$355	\$2,982
76	477	2,914						
96			276	2,714	377	3,629	457	3,740
100	538	3,131						
106			576	3,418				
144					477	3,752	624	4,505
152			651	3,571				
192							627	4,552
200			1,323	4,651				

Dual Compressor Units require 2 Fuseblocks & 2 Circuit Breaker, 1 per compressor. Up to 2 contactors/compressor.

FAN CONTACTOR KIT OPTIONS • SINGLE AND PARALLEL COMPRESSOR MODELS

1 FAN CONTACTOR		
Kit Number	Max Motor Amps	List Price (\$US)
TMR-EF-15A	15	\$910
TMR-EF-30A	30	964

Kit Includes: Defrost Timer & Evaporator Fan Contactor

CTT SERIES THERMOBANK HOT GAS CONDENSING UNITS

MODEL NUMBER NOMENCLATURE

CTT **4** **1200** **L** **44** - **E**
 I II III IV V - VI

I - Series Designator
CTT - Thermobank

IV - Temperature range
L - Low
M - Medium

II - Compressor Code
2 - Copeland Discus
4 - Bitzer

V - Refrigerant Type
44 - R 404A or R507
47 - R407C

III - Nominal HP
EX: 1200 - 12HP

VI - Voltage Code
E - 208-230/3/60
G - 460/3/60
J - 575/3/60

CTT THERMOBANK CONDENSING UNITS

Thermobank Single Fan Units were discontinued 12/31/18.

When ordered as Condensing unit only

REFRIG.	HP	MODEL "CTT" HOT GAS DEFROST	BASIC UNITS			4 Year Compressor Protection Plan (Net Price)† †	SUCTION ACCUM.	OIL SEP.	NON FUSED (1) DISCONNECT		
			230V/3/60	460V/3/60	575V/3/60				230V/3/60	460V/3/60	575V/3/60
MEDIUM TEMP R507 R404A	5	CTT20500M44	Models no longer available.								
	7.5	CTT20700M44									
	8	CTT20800M44									
	10	CTT21000M44									
	12	CTT21200M44									
	15	CTT21500M44	\$61,119	\$62,393	\$63,640	\$1,202	\$2,595	\$1,802	\$2,271	\$2,791	\$2,791
	20	CTT22000M44	68,469	73,054	74,747	1,487	2,595	2,986	2,271	2,791	2,791
	25	CTT22500M44	86,944	89,615	91,409	1,662	3,251	2,986	2,271	2,791	2,791
	30	CTT23000M44	93,706	96,941	98,883	1,782	3,251	2,986	3,812	4,278	4,278
	35	CTT23500M44	104,342	107,257	109,402	1,877	3,251	2,986	3,812	4,278	4,278
	40	CTT24000M44	113,317	117,084	119,428	1,960	3,251	2,986	3,812	4,278	4,278
	50	† CTT25000M44	172,324	175,427	178,936	3,345	4,706	INCL	-	5,137	5,137
	60	† CTT26000M44	204,277	207,372	211,519	3,565	4,706	INCL	-	5,137	5,137
70	† CTT27000M44	256,070	262,039	267,279	3,755	4,706	INCL	-	-	-	
LOW TEMP R507 R404A	4	CTT20400L44	Models no longer available.								
	5	CTT20500L44									
	6	CTT20600L44									
	8	CTT20800L44									
	9	CTT20900L44									
	10	CTT21000L44									
	12	CTT21200L44	\$80,304	\$82,516	\$84,168	\$932	\$2,595	\$1,802	\$2,140	\$2,348	\$2,348
	15	CTT21500L44	\$64,302	\$66,361	\$67,688	\$1,202	\$2,595	\$1,802	\$2,271	\$2,791	\$2,791
	22	CTT22200L44	74,700	76,898	78,436	1,487	2,595	1,802	2,271	2,791	2,791
	27	CTT22700L44	88,306	91,126	92,949	1,662	3,251	2,986	2,271	2,791	2,791
	30	CTT23100L44	100,572	103,667	105,741	1,782	3,251	2,986	3,812	4,278	4,278
	44	† CTT24400L44	146,333	148,874	151,852	2,976	4,706	INCL	3,812	4,278	4,278
	50	† CTT25400L44	171,044	175,091	178,592	3,345	4,706	INCL	-	5,137	5,137
60	† CTT26200L44	190,931	192,707	196,562	3,565	4,706	INCL	-	-	-	

When ordered with Evaporators and system accessories

REFRIG.	HP	MODEL "CTT" HOT GAS DEFROST	BASIC UNITS			4 Year Compressor Protection Plan (Net Price)† †	SUCTION ACCUM.	OIL SEP.	NON FUSED (1) DISCONNECT		
			230V/3/60	460V/3/60	575V/3/60				230V/3/60	460V/3/60	575V/3/60
MEDIUM TEMP R507 R404A	5	CTT20500M44	Models no longer available.								
	7.5	CTT20700M44									
	8	CTT20800M44									
	10	CTT21000M44									
	12	CTT21200M44									
	15	CTT21500M44	\$50,932	\$51,993	\$53,033	\$1,202	\$2,595	\$1,802	\$2,271	\$2,791	\$2,791
	20	CTT22000M44	57,057	60,878	60,878	1,487	2,595	2,996	2,271	2,791	2,791
	25	CTT22500M44	72,452	74,679	76,174	1,662	3,251	2,996	2,271	2,791	2,791
	30	CTT23000M44	78,089	80,785	82,402	1,782	3,251	2,996	3,812	4,278	4,278
	35	CTT23500M44	86,951	89,379	91,168	1,877	3,251	2,996	3,812	4,278	4,278
	40	CTT24000M44	94,431	97,570	99,522	1,960	3,251	2,996	3,812	4,278	4,278
	50	† CTT25000M44	147,664	150,323	153,330	3,345	4,706	INCL	-	5,137	5,137
	60	† CTT26000M44	175,044	177,696	181,250	3,565	4,706	INCL	-	5,137	5,137
70	† CTT27000M44	219,426	224,540	229,031	3,755	4,706	INCL	-	-	-	
LOW TEMP R507 R404A	4	CTT20400L44	Models no longer available.								
	5	CTT20500L44									
	6	CTT20600L44									
	8	CTT20800L44									
	9	CTT20900L44									
	10	CTT21000L44									
	12	CTT21200L44	\$68,024	\$68,285	\$71,078	\$932	\$2,595	\$1,802	\$2,140	\$2,348	\$2,348
	15	CTT21500L44	\$53,584	\$56,406	\$57,749	\$1,202	\$2,595	\$1,802	\$2,271	\$2,791	\$2,791
	22	CTT22200L44	62,249	64,081	65,363	1,487	2,595	1,802	2,271	2,791	2,791
	27	CTT22700L44	73,589	75,938	77,456	1,673	3,251	2,986	2,271	2,791	2,791
	30	CTT23100L44	83,809	86,388	88,118	1,782	3,251	2,986	3,812	4,278	4,278
	44	† CTT24400L44	121,945	124,061	136,669	2,976	4,706	INCL	3,812	4,278	4,278
	50	† CTT25400L44	142,537	145,908	160,733	3,345	4,706	INCL	-	5,137	5,137
60	† CTT26200L44	159,110	160,590	176,906	3,565	4,706	INCL	-	-	-	

THERMOBANK HOT GAS DEFROST

STANDARD FEATURES

1. HI-LO PRESSURE SWITCH, SYSTEM 450 ELECTRONIC CONTROLLER – CONTROLS LOW-PRESSURE; FAN CYCLING PRESSURE; DISCHARGE SOLENOID VALVE; POST DEFROST; DEFROST TERMINATION AND DEFROST TERMINATION SWITCH
2. ELECTRONIC OIL PRESSURE CONTROL
3. CONTACTORS AND OVERLOAD PROTECTORS
4. SUCTION AND DISCHARGE VIBRATION ELIMINATORS
5. SYSTEM PUMP-DOWN SWITCH
6. CRANKCASE HEATER
7. THERMOBANK IMMERSION HEATER WITH INTEGRAL/ADJUSTABLE THERMOSTAT
8. FUSED CONTROL CIRCUIT TRANSFORMER (460V UNITS)
9. WEATHERPROOF HOUSING
10. OVERSIZED LIQUID RECEIVER W/ SERVICE VALVE
11. PRESSURE RELIEF VALVE
12. SUCTION LINE FILTER - REPLACEABLE CORE TYPE (4 to 70 H.P. models)
13. LIQUID LINE DRIER - REPLACEABLE CORE TYPE (4 to 70 H.P. models)
14. DEFROST TIMER WITH REQUIRED HOT GAS DEFROST CONTROLS
15. LIQUID LINE SOLENOID VALVE (Shipped Loose)
16. HOT GAS SOLENOID (Shipped Loose)
17. ELECTRONIC ROOM THERMOSTAT (Shipped Loose)
18. REFFLEX FLEXIBLE CONTROL HOSES
19. CONTROL CIRCUIT TRANSFORMER (460V UNITS ONLY)
20. SUB CIRCUIT FUSING
21. PERFORATED CONTROL PANEL INSERT AND WIRING TRAYS
22. ADJUSTABLE FLOODED HEAD PRESSURE CONTROL VALVES
23. DISCHARGE CHECK VALVE
24. HIGH EFFICIENCY CONDENSER COIL WITH 3/8" O.D. ENHANCED TUBES AND INTEGRAL SUBCOOLING CIRCUIT
25. ENERGY EFFICIENT 1 HP 850 RPM CONDENSER FAN MOTORS
26. HIGH PRESSURE OIL MANAGEMENT SYSTEM (PARALLEL PIPED COMPRESSOR UNITS)

NOTES:

When ordering Thermobank Systems with Evaporators – The price of the Thermostatic Expansion Valve needs to be added to the price of the selected evaporator – see page 14 for system accessories.

See page 32 for additional options.

THERMOBANK OPTIONS

DESCRIPTION	H.P RANGE	LIST PRICE
ANTI - SHORT CYCLE TIMER (PRICE IS PER COMPRESSOR)	All	\$718
EVAPORATOR FAN CONTACTOR	All	342
GAUGE KIT, HIGH, LOW, AND OIL PRESSURE (PRICE IS PER COMPRESSOR)	All	1,728
OVERSIZED RECEIVER - 1500 THROUGH 2200 MODELS	15 - 22 H.P.	789
OVERSIZED RECEIVER - 2500 THROUGH 4400 MODELS	25 - 44 H.P.	2,225
OVERSIZED RECEIVER - 5000 AND LARGER MODELS	40 - 80 H.P.	1110*
PHASE LOSS MONITOR (PRICE IS BASED ON 1 PER UNIT)	All	1,215
SPRING LOADED PRESSURE RELIEF VALVE	All	322
SINGLE POINT ALARM	All	400
MECHANICAL ROOM THERMOSTAT (A19AAA-49C) Part# 204464001 (shipped loose)	All	306
ELECTRONIC ROOM THERMOSTAT (A419ABC-1C) Part# 204464206 (shipped loose)	All	396
TIMER INSTALL CHARGE FOR AIR DEFROST SYSTEMS	All	306
CRANKCASE PRESSURE REGULATOR (Mounted)	4 - 5 H.P.	1,657
	6 - 9 H.P.	1,837
	10 - 12 H.P.	3,422

4 YEAR COMPRESSOR PROTECTION PLAN

4 Year Compressor Protection Plan covers defects in factory material or workmanship.
 Defective compressor, with serial number tag intact, must be returned to an authorized wholesaler.
 Compressor Protection Plan does not include external parts, controls, refrigerant, shipping, labor or product loss.

* NOT AVAILABLE FOR THE 7000 MODELS

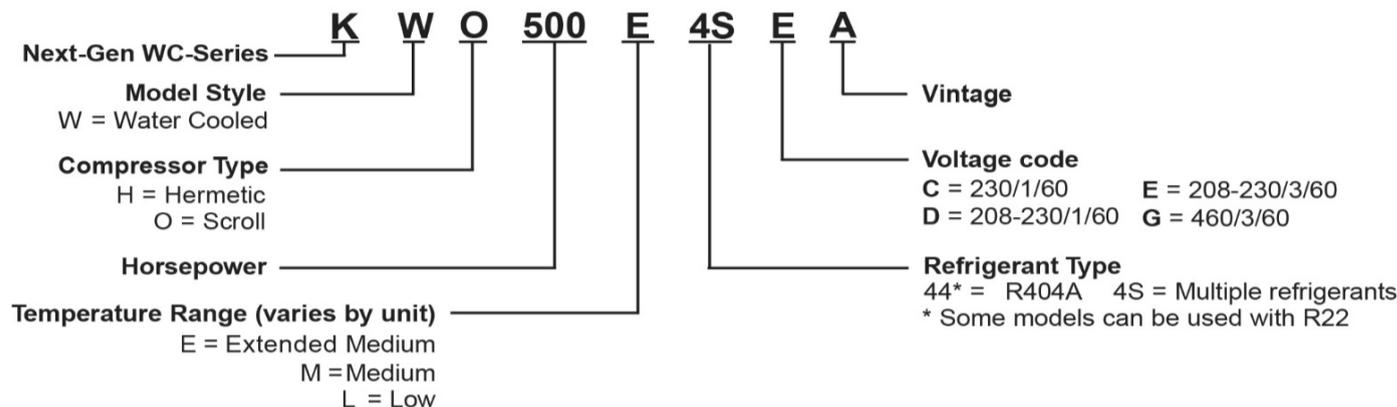
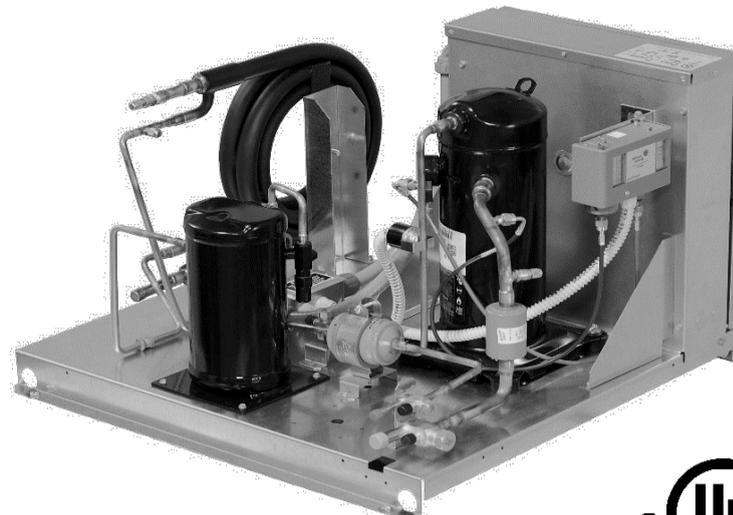
NEXT-GEN WC-SERIES™ • INDOOR WATER COOLED CONDENSING UNITS

1/2 THRU 6 H.P.

Standard Features (all models)

- Hermetic or Scroll compressors
- Galvanized steel base
- High efficiency water cooled coaxial condenser and heat exchange
- Mechanically formed pre-bent tubing for reduced leak potential
- **Liquid line kit with filter/drier and sight glass with moisture indicator**
- Suction line piping (filter optional)
- Suction and discharge service valves (as required)
- Base mounted shut-off valves
- Color-coded point-to-point wiring
- Large electrical control panel with hinged/removable door
- Refrigerant receiver with isolation valve and pressure relief plug
- Adjustable high and low pressure controls
- Control transformer (460V to 230V) as required
- Compressor contactor (1Ø or 3Ø), start kit (1Ø)
- Crankcase heater
- **Electronic defrost timer with defrost contactor/ relay on low temp. models (2 evaps. Maximum)**
- **Electronic air defrost timer (Medium temperature models)**

For defrost provisions see pages 36 & 37



NEXT-GEN WC-SERIES • HERMETIC COMPRESSOR MODELS

Temp Range	NOM H.P.	Model Number	Compressor	BASE LIST PRICE (Includes Liquid Line Kit with Filter/Drier and Sight Glass with Moisture Indicator, and Defrost Timer or Kit)			Water Reg. Valve‡	Sealed Suction Line Filter	Suction Accum. ^	Pump Down Switch	4 Year Comp. Protection Plan	Approx. Ship Wt. (LBS)
				208-230V/3	208-230V/1	460V/3						
Medium Temp	1/2	KWH055E4S	RST45C1E	N/A	\$4,753	N/A	\$467	\$356	\$548	\$349	\$113 NET	152
	1/2	KWH080E4S	RST55C1E	N/A	4,851	N/A	467	356	548	349	113 NET	156
	3/4	KWH090E4S	RST64C1E	N/A	4,996	N/A	467	356	548	349	113 NET	160
	3/4	KWH100E4S	RST70C1E	\$5,580	5,396	N/A	467	356	548	349	113 NET	167
	1	KWH125E4S	RST97C1E	5,738	5,784	N/A	467	356	548	349	127 NET	195
	1-1/2	KWH150E44	CS10K6E	5,900	5,624	\$6,582	467	356	548	349	127 NET	205
	2	KWH200E44	CS12K6E	6,746	6,210	N/A	467	356	548	349	139 NET	228
	2-1/2	KWH250E44	CS14K6E	7,148	6,665	7,592	506	356	548	349	139 NET	235
Low Temp	3	KWH300E44	CS18K6E	8,169	7,887	8,492	506	423	846	349	153 NET	253
	3	KWH325E44	CS20K6E	8,575	8,266	8,856	506	423	846	349	153 NET	273
	1-1/2	KWH150L44	CF06K6E	5,805	5,654	N/A	467	356	548	349	127 NET	195
	2	KWH200L44	CF09K6E	6,023	5,873	6,496	467	356	548	349	139 NET	243
	3	KWH300L44	CF12K6E	8,536	8,335	8,674	506	423	846	349	153 NET	255

ADDITIONAL OPTIONS FOR NEXT-GEN WC-SERIES UNITS

DESCRIPTION	LIST PRICE
ANTI-SHORT CYCLE TIMER	\$718
GAUGE KIT, HIGH, LOW, AND OIL PRESSURE	2,009
PHASE LOSS MONITOR	1,216
CUPRONICKEL HEAT EXCHANGER AND WATER PIPING	CF
ELECTRONIC OIL PRESSURE CONTROL (SOPC)	877
TWO-TIERED STACKING RACK	CF

^ For pre-piped Suction Accumulator, the Sealed Suction Line Filter option must also be ordered.
CF = Contact Factory for pricing

‡ OPTIONAL FIELD INSTALLED WATER REGULATING VALVE (ALL MODELS) SHIPPED LOOSE

The V46 pressure-actuated water-regulating valve size estimates are based on 65°F to 85°F coil inlet water temperature and the refrigerant pressure at 105°F saturated condensing. An adjustable water-pressure reducing valve (0 to 50 psi) is required upstream from the V46 valve, to reduce the inlet water pressure and achieve the required flowrates. Refer to the V46 Pressure-Actuated Water-Regulating Valve Product Bulletin, LIT-125687 on the Johnson Control QuickLIT website for complete information on sizing and adjusting V46 valves.

Water Flowrates (GPM)	Water Regulating Valve
1.5 to 11.5	V46AA-1C
11.5 to 21	V46AB-1C

NEXT-GEN WC-SERIES™ • INDOOR WATER COOLED CONDENSING UNITS
1/2 THRU 6 H.P.

NEXT-GEN WC-SERIES • SCROLL COMPRESSOR MODELS

Temp Range	NOM H.P.	Model Number	Compressor	BASE LIST PRICE (Includes Liquid Line Kit with Filter/Drier and Sight Glass with Moisture Indicator, and Defrost Timer or Kit)*			Water Reg. Valve‡	Sealed Suction Line Filter	Suction Accum.^	Pump Down Switch	4 Year Comp. Protection Plan	Approx. Ship Wt. (LBS)
				208-230V/3	208-230V/1	460V/3						
Medium Temp	1/2	KWO060M4S	ZB06KAE	\$8,991	\$8,979	N/A	\$467	\$356	\$548	\$349	\$209 NET	195
	1/2	KWO080M4S	ZB07KAE	9,098	9,067	N/A	467	356	548	349	209 NET	195
	1	KWO100M4S	ZB08KAE	9,216	9,156	N/A	467	356	548	349	209 NET	195
	1-1/3	KWO130E4S	ZS09KAE	9,350	9,257	\$9,692	467	356	548	349	209 NET	195
	1-1/2	KWO150E4S	ZS11KAE	9,997	9,903	10,339	467	356	548	349	209 NET	205
	1-3/4	KWO180E4S	ZS13KAE	10,232	10,138	10,574	467	356	548	349	209 NET	210
	2	KWO200E4S	ZS15KAE	10,408	10,315	10,750	467	356	548	349	209 NET	215
	2-1/2	KWO250E4S	ZS19KAE	10,548	10,433	10,953	506	356	548	349	209 NET	230
	3	KWO300E4S	ZS21KAE	10,727	10,591	11,197	506	423	846	349	272 NET	305
	3-1/2	KWO350E4S	ZS26KAE	11,397	11,254	11,732	506	423	846	349	272 NET	325
	4	KWO400E4S	ZS29KAE	11,773	11,612	12,096	568	423	846	349	285 NET	352
	4-1/2	KWO450E4S	ZS33KAE	11,626	11,463	12,048	568	423	846	349	292 NET	375
6	KWO500E4S	ZS38K4E	12,203	12,038	12,724	879	423	846	349	292 NET	383	
6 1/2	KWO600E4S	ZS45K4E	14,086	N/A	14,312	879	423	846	349	292 NET	405	
Low Temp	1	KWO100L4S	ZF03KAE	9,927	9,408	N/A	467	356	548	349	209 NET	230
	1-1/3	KWO130L4S	ZF04KAE	10,100	9,639	N/A	467	356	548	349	209 NET	230
	1-1/2	KWO160L4S	ZF05KAE	10,337	9,937	N/A	467	356	548	349	209 NET	230
	2	KWO230L4S	ZF07KAE	10,638	10,499	10,971	467	356	548	349	209 NET	230
	2-1/2	KWO250L4S	ZF08K4E	11,014	10,862	11,132	506	356	548	349	209 NET	240
	3	KWO300L4S	ZF09K4E	11,289	11,125	12,641	506	423	846	349	272 NET	245
	3-1/2	KWO350L4S	ZF11K4E	11,795	11,628	12,071	506	423	846	349	272 NET	255
	4	KWO400L4S	ZF13K4E	12,286	12,130	12,565	568	423	846	349	285 NET	352
	5	KWO500L4S	ZF15K4E	12,438	12,286	12,727	879	423	846	349	285 NET	367
6	KWO600L4S	ZF18K4E	14,022	N/A	14,785	879	423	846	349	292 NET	383	

ADDITIONAL OPTIONS FOR NEXT-GEN WC-SERIES UNITS

DESCRIPTION	LIST PRICE
ANTI-SHORT CYCLE TIMER	\$718
GAUGE KIT, HIGH, LOW, AND OIL PRESSURE	2,009
PHASE LOSS MONITOR	1,216
CUPRONICKEL HEAT EXCHANGER AND WATER PIPING	CF
ELECTRONIC OIL PRESSURE CONTROL (SOPC)	877
TWO-TIERED STACKING RACK	CF

* See page 34 for a complete list of features, voltage codes and an example of nomenclature layout.

^ For pre-piped Suction Accumulator, the Sealed Suction Line Filter option must also be ordered.

CF = Contact Factory for pricing

‡ OPTIONAL FIELD INSTALLED WATER REGULATING VALVE (ALL MODELS) SHIPPED LOOSE

The V46 pressure-actuated water-regulating valve size estimates are based on 65°F to 85°F coil inlet water temperature and the refrigerant pressure at 105°F saturated condensing. An adjustable water-pressure reducing valve (0 to 50 psi) is required upstream from the V46 valve, to reduce the inlet water pressure and achieve the required flowrates. Refer to the V46 Pressure-Actuated Water-Regulating Valve Product Bulletin, LIT-125687 on the Johnson Control QuickLIT website for complete information on sizing and adjusting V46 valves.

Water Flowrates (GPM)	Water Regulating Valve
1.5 to 11.5	V46AA-1C
11.5 to 21	V46AB-1C

KW SERIES INDOOR WATER COOLED CONDENSING UNITS 3 THRU 40 H.P. AND KW SCROLL MODELS

NOTE: 7 thru 40 HP models are being discontinued. Last day to order is 3/28/19.

REFR. TYPE	NOM. H.P.	MODEL NUMBER	LIST PRICE		WATER REG. VALVE‡	LK	* SK	^ SUCTION LINE ACCUM.	OIL SEPERATOR	4 YEAR COMP. PROTECTION PLAN	APPRX. SHIP WT (LBS)
			230/3	460/3							
DISCUS COMPRESSOR											
MED. TEMP. R404A	5.0	KWD5M44	\$19,951	\$22,085	\$879	\$653	\$524	\$846	\$1,440	\$600 NET	485
	5.0	KWD6M44	21,471	23,679	879	653	524	846	1,440	600 NET	495
	7.5	KWD7M44	22,985	25,403	1,204	653	524	846	1,533	600 NET	540
	7.5	KWD8M44	25,171	27,351	1,204	653	524	846	1,533	600 NET	590
	10.0	KWD10M44	29,580	30,582	1,204	879	888	1,243	1,533	776 NET	780
	12.0	KWD12M44	32,051	32,624	1,555	1,102	1,417	2,596	1,802	932 NET	790
	15.0	KWD15M44	33,029	34,014	1,555	1,102	1,417	2,596	1,802	1,169 NET	800
	20.0	KWD20M44	37,939	38,669	1,555	1,102	1,417	2,596	1,802	1,487 NET	835
	25.0	KWD25M44	43,788	44,397	1,555	1,288	1,417	3,251	2,986	1,673 NET	1,050
LOW TEMP. R404A	3.0	KWD3L44	17,181	19,104	879	653	524	846	1,440	329 NET	390
	4.0	KWD4L44	18,415	20,273	879	653	524	846	1,440	489 NET	465
	5.0	KWD5L44	19,298	20,733	879	653	524	846	1,440	489 NET	485
	6.0	KWD6L44	21,651	22,840	879	653	524	846	1,440	592 NET	530
	8.0	KWD8L44	23,606	25,241	1,204	653	524	846	1,533	600 NET	590
	9.0	KWD9L44	26,124	27,921	1,204	879	888	1,243	1,533	776 NET	620
	10.0	KWD10L44	28,819	29,488	1,204	879	888	1,243	1,533	776 NET	795
	12.0	KWD12L44	32,005	32,391	1,204	1,102	1,417	2,596	1,802	932 NET	820
	15.0	KWD15L44	34,859	35,274	1,555	1,102	1,417	2,596	1,802	1,202 NET	845
MED. TEMP. R404A	27.0	KWD27L44	57,727	58,126	1,555	1,288	1,417	3,251	2,986	1,673 NET	1,255
	30.0	KWD30L44	59,885	60,700	1,555	1,288	1,417	3,251	2,986	1,782 NET	1,310
	SEMI-HERMETIC COMPRESSOR										
	3.0	KWS3M44	Models no longer available.								
3.0	KWS3L44	Models no longer available.									

KW Series 1/2 to 6 H.P. Scroll models are no longer available. Use Next-Gen WC-Series models instead.

REFR. TYPE	NOM. H.P.	MODEL NUMBER	LIST PRICE			WATER REG. VALVE‡	CLEANABLE CONDENSER	LK	* SK	^ SUCTION LINE ACCUM.	OIL SEPERATOR	4 YEAR COMP. PROTECTION PLAN	APPRX. SHIP WT (LBS)										
			230/3	230/1	460/3																		
MED. TEMP. R404A	1.0	KWO100M44	KW Series 1/2 to 6 H.P. Scroll models are no longer available. Use Next-Gen WC-Series models instead.																				
	1.5	KWO150M44																					
	2.0	KWO200M44																					
	2.5	KWO250M44																					
	3.0	KWO315M44																					
	3.0	KWO350M44																					
	4.0	KWO400M44																					
	6.0	KWO600M44																					
	6.5	KWO650M44																					
7.5	KWO7M44	18,995	N/A	19,497	1,204	C/F	653	524	846	1,533	482 NET	405											
7.5	KWO8M44	23,668	N/A	25,378	1,204	C/F	653	524	846	1,533	482 NET	450											
10.0	KWO10M44	29,391	N/A	30,232	1,204	C/F	879	888	1,243	1,533	522 NET	665											
13.0	KWO13M44	29,913	N/A	30,817	1,555	C/F	1,102	1,417	2,596	1,802	602 NET	675											
LOW TEMP. R404A	2.0	KWO200L44	KW Series 1/2 to 6 H.P. Scroll models are no longer available. Use Next-Gen WC-Series models instead.																				
	2.5	KWO250L44																					
	3.0	KWO300L44																					
	3.0	KWO301L44																					
	4.0	KWO400L44																					
	5.0	KWO500L44																					
	6.0	KWO600L44																					
	7.5	KWO8L44											18,990	N/A	20,489	1,204	C/F	653	524	846	1,533	482 NET	470
	10.0	KWO10L44											23,860	N/A	25,629	1,204	C/F	879	888	1,243	1,533	522 NET	645
13.0	KWO13L44	26,689	N/A	27,562	1,555	C/F	1,102	1,417	2,596	1,802	602 NET	670											

* Suction line assembly option must be ordered to receive the Suction Accumulator pre-piped.

C/F = Consult the factory for pricing.

^ For pre-piped Suction Accumulator, the SK option must also be ordered.

‡ Water Reg. Valve shipped Loose for field installation.

OPTIONAL PIPING COMPONENTS			
* LIQUID LINE KIT		* SUCTION LINE KIT	
HP	Kit Num	HP	Kit Num
3 - 8	LK-4	3 - 8	SK-4
9 - 10	LK-5	9 - 10	SK-5
12 - 22	LK-6	12 - 22	SK-6
25 - 40	LK-7	25 - 40	SK-7

See pages 17 & 21 for piping component pricing.

ADDITIONAL OPTIONS FOR KW UNITS	
DESCRIPTION	LIST PRICE
ANTI-SHORT CYCLE TIMER	\$718
GAUGE KIT, HIGH, LOW, AND OIL PRES.	2,009
PHASE LOSS MONITOR	1,216
OVERSIZED CONTROL PANEL (OCP)	686
ELECTRONIC OIL PRESSURE CONTROL (SOPC)	877
TWO-TIERED STACKING OPTION - KWH and KWS	C/F
TWO-TIERED STACKING OPTION - KWD	C/F

ELECTRIC DEFROST KIT COMPONENTS

(See page 20 for Next-Gen II and page 28-29 for QV-Series Defrost Kits)

The Kramer **Electric Defrost System** provides unique features that other defrost systems lack. These energy saving features are as follows:

- The auxiliary switch on 3 phase systems and block-out relays on 1 phase systems prevents the defrost heaters from energizing when the compressor is in operation. This feature holds the maximum amp draw to the largest single load that the system will draw, and therefore reduces the electrical service requirement to the condensing unit.
- On multiple evaporator systems, individual defrost contactors are used in conjunction with sequencing relays* to allow each evaporator to terminate defrost independently. This efficient method of defrost saves electricity, and reduces the potential of overheating and steaming the evaporators. In addition, the amount of heat added to the room is kept to a minimum, reducing the run time of the condensing unit.

KIT NUMBER	TIMER	AUXILIARY SWITCH	BLOCK-OUT RELAY	† DEFROST HEATER CONTACTOR (1)	‡ FAN CONTACTOR	SEQUENCING RELAY
ED-5	1	—	1-15A	—	—	—
ED-6	1	—	1-20A	—	—	—
ED-7	1	—	1-25A	—	—	—
ED-10	1	—	1-30A	—	—	—
ED-210	1	—	1-30A	—	—	—
ED-11	1	1	—	1-30A	—	—
ED-211	1	1	—	1-30A	—	—
ED-12	1	1	—	1-30A	1-25A	—
ED-13	1	1	—	1-50A	—	—
ED-213	1	1	—	1-50A	—	—
ED-14	1	1	—	1-50A	1-25A	—
ED-15	1	1	—	2-75A	—	—
ED-16	1	1	—	2-75A	1-25A	—
ED-17	1	1	—	1-15A	1-25A	—
ED-18	1	1	—	1-20A	1-20A	—
ED-20	1	—	1-30A	—	—	2
ED-21	1	1	—	2-15A	—	2
ED-22	1	1	—	2-15A	1-25A	2
ED-23	1	1	—	2-25A	—	2
ED-24	1	1	—	2-25A	1-25A	2
ED-25	1	1	—	2-50A	—	2
ED-26	1	1	—	2-50A	1-25A	2
ED-27	1	1	—	2-75A	—	2
ED-28	1	1	—	2-75A	1-25A	2
ED-30	1	—	1-30A	—	—	3
ED-31	1	1	—	3-10A	—	3
ED-32	1	1	—	3-10A	1-25A	3
ED-33	1	1	—	3-15A	—	3
ED-34	1	1	—	3-15A	1-25A	3
ED-35	1	1	—	3-30A	—	3
ED-36	1	1	—	3-30A	1-25A	3
ED-37	1	1	—	3-75A	—	3
ED-38	1	1	—	3-75A	1-40A	3

TIMER

Initiates the defrost cycle. Also used as over ride protection for defrost termination.

AUXILIARY SWITCH

Mounted on the compressor contactor, it prevents the defrost contactor from operating whenever the compressor is energized.

BLOCK-OUT RELAY

Serves the same function as auxiliary switch, except used when defrost contactor is not required (single phase only).

FAN CONTACTOR

Used with 460V motors or when 230V motors are wired for 3 phase power.

DEFROST CONTACTOR

Carries amperage load for heaters. Contactor selection is based on the maximum resistive load rating of the contactor.

SEQUENCING RELAYS

Provides interconnection of multiple unit coolers on a single system so that each unit cooler is allowed to individually terminate defrost on temperature.

* Except for ED-210, ED-211, ED-213

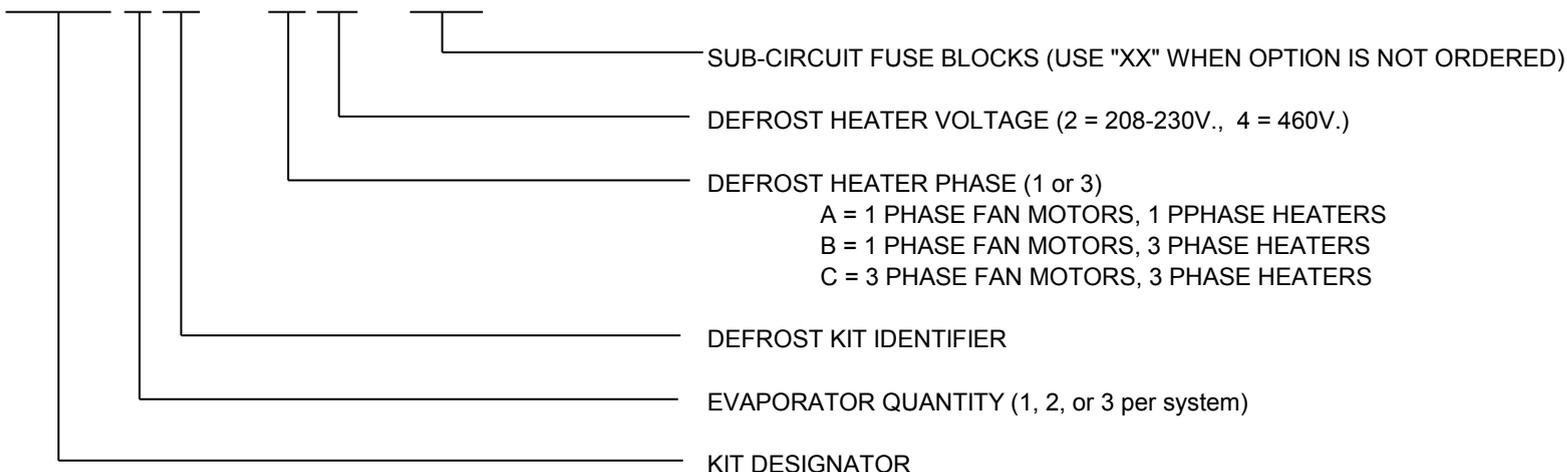
† Heater contactor amperage is based on its resistive rating.

‡ Fan motor contactor amperage is based on its inductive rating.

ELECTRIC DEFROST KIT NOMENCLATURE

(See page 20 for Next-Gen II and page 28-29 for QV-Series Defrost Kits)

ED 12 - A2 - FB



ELECTRIC DEFROST PROVISIONS

(See page 20 for Next-Gen II and page 28-29 for QV-Series Defrost Kits)

QTY OF UNIT COOLERS	DESCRIPTION	† DEFROST KIT NUMBER				LIST PRICE	
		1 PH. FANS 1 PH. HTRS	1 PH. FANS 3 PH. HTRS	230 V.	460 V.	LOOSE OR MOUNTED	‡ SUB-CIRC. FUSE BLOCKS (LESS FUSES)
				3 PH. FANS 3 PH. HTRS	3 PH. FANS 3 PH. HTRS		

DEFROST KITS WHEN THE EVAPORATOR FAN MOTORS ARE WIRED FOR 230/1.

ONE UNIT COOLER PER SYSTEM	Up to 15 Amps Heater (w/ relay)	ED5-A2-XX	N/A	N/A	N/A	\$719	N/A
	20 Amps Heater (w/ relay)	ED6-A2-XX	N/A	N/A	N/A	719	N/A
	25 Amps Heater (w/ relay)	ED7-A2-XX	N/A	N/A	N/A	719	N/A
	Up to 30 Amps Heater (w/ relay)	ED10-A2-XX	N/A	N/A	N/A	719	N/A
	30 Amps - Heater (w/ contactors)	N/A	ED11-B2-XX	N/A	N/A	719	\$180
	50 Amps - Heater	ED13-A2-XX	ED13-B2-XX	N/A	N/A	1,395	180
	75 Amps Heater	ED15-A2-XX	ED15-B2-XX	N/A	N/A	2,138	210
TWO UNIT COOLERS PER SYSTEM	Up to 30 Amps Heater (w/ relay)	ED210-A2-XX	N/A	N/A	N/A	719	N/A
	30 Amps Heater	ED211-A2-XX	ED211-B2-XX	N/A	N/A	719	180
	50 Amps Heater	ED213-A2-XX	ED213-B2-XX	N/A	N/A	1,395	219
	Up to 15 Amps Heaters each (w/ relays)	ED20-A2-XX	N/A	N/A	N/A	1,992	N/A
	15 Amps Heaters each	ED21-A2-XX	ED21-B2-XX	N/A	N/A	1,992	323
	25 Amps Heaters each (w/ relays)	ED23-A2-XX	N/A	N/A	N/A	2,046	323
	25 Amps Heaters each (w/ contactors)	N/A	ED23-B2-XX	N/A	N/A	2,046	323
	50 Amps Heaters each	ED25-A2-XX	ED25-B2-XX	N/A	N/A	2,295	323
75 Amps Heaters each	ED27-A2-XX	ED27-B2-XX	N/A	N/A	3,125	420	
THREE UNIT COOLERS PER SYSTEM	Up to 10 Amps Heaters each (w/ relays)	ED30-A2-XX	N/A	N/A	N/A	2,712	N/A
	16 Amps Heaters each (w/ relays)	ED31-A2-XX	N/A	N/A	N/A	2,712	398
	16 Amps Heaters each (w/ relays)	ED33-A2-XX	N/A	N/A	N/A	2,712	398
	16 Amps Heaters each (w/ contactors)	N/A	ED33-B2-XX	N/A	N/A	2,712	398
	30 Amps Heaters each (w/ relays)	ED35-A2-XX	N/A	N/A	N/A	3,043	398
	30 Amps Heaters each (w/ contactors)	N/A	ED35-B2-XX	N/A	N/A	3,043	398
	50 Amps Heaters each	ED37-A2-XX	ED37-B2-XX	N/A	N/A	3,459	473

DEFROST KITS WHEN THE EVAPORATOR FAN MOTORS ARE WIRED FOR 230/3, 460/3, OR 460/1.

ONE UNIT COOLER	Up to 25 Amps Heater	ED17-A4-XX	N/A	N/A	N/A	\$1,454	\$298
	30 Amps Heater	ED12-A4-XX	ED12-BX-XX	ED12-C2-XX	ED12-C4-XX	1,454	298
	50 Amps Heater	N/A	ED14-BX-XX	ED14-C2-XX	ED14-C4-XX	1,701	298
	75 Amps Heater	N/A	N/A	ED16-C2-XX	ED16-C4-XX	2,339	348
TWO UNIT COOLERS	Up to 15 Amps Heaters per Unit Cooler	N/A	ED22-BX-XX	ED22-C2-XX	ED22-C4-XX	2,446	398
	25 Amps Heaters per Unit Cooler	N/A	ED24-BX-XX	ED24-C2-XX	ED24-C4-XX	2,446	398
	50 Amps Heaters per Unit Cooler	N/A	ED26-BX-XX	ED26-C2-XX	ED26-C4-XX	2,578	455
	75 Amps Heaters per Unit Cooler	N/A	N/A	ED28-C2-XX	N/A	3,329	554
THREE UNIT COOLERS	Up to 10 Amps Heaters per Unit Cooler	N/A	ED32-BX-XX	ED32-C2-XX	ED32-C4-XX	3,122	529
	16 Amps Heaters per Unit Cooler	N/A	ED34-BX-XX	ED34-C2-XX	ED34-C4-XX	3,122	529
	30 Amps Heaters per Unit Cooler	N/A	ED36-BX-XX	ED36-C2-XX	ED36-C4-XX	3,860	529
	50 Amps Heaters per Unit Cooler	N/A	ED38-BX-XX	ED38-C2-XX	ED38-C4-XX	4,287	633

† Replace "XX" with "FB" when ordering the sub-circuit fuse block option. For description of "ED" kit nomenclature see page 35.

‡ Sub-circuit fuse block price includes fuse blocks installed in the condensing unit, **less fuses**, for evaporator(s) motors and defrost heaters.

Sub-circuit fusing option is not available for 1/2 to 6 HP Minicon models due to space limitations in the control panel.

* Add "FB" suffix to ED kit part number when pricing sub-circuit fuse block option.

†† ED-Kits are supplied as mounted components and not available as a "ship loose" accessory.

FREIGHT SURCHARGES

The following freight surcharges will be applied to orders when applicable. For delivery and post delivery issues, the customer will be notified and a second invoice will be generated.

BASIC LTL SURCHARGES	NET †
Delivery Notification / Call before delivery	\$77
Lift Gate Service	239
Saturday Delivery Request	542
*Failed/Refused delivery attempt (minimum)	110
*Failed/Refused delivery attempt (Maximum)	1,360
Re-Consignment fee	102
Storage (Per 100 LBS for each calendar day)	5.00

BASIC CONTRACT HAUL SURCHARGES	NET†
Cancelled truck not used	\$2,419
Reconsignment fee	867
Reconsignment cost per mile (\$1566 Minimum)	4.00
Delay in unloading (4 hours or more past an appointment)	1,686

† Net prices are not to be discounted.

* Refused Delivery fee will be calculated @ 13.00 cents per 100 LBS, subject to Minimum and Maximum charges shown above (per incident).

† Net prices are not to be discounted.

APEX • TOP MOUNTED REFRIGERATION SYSTEM

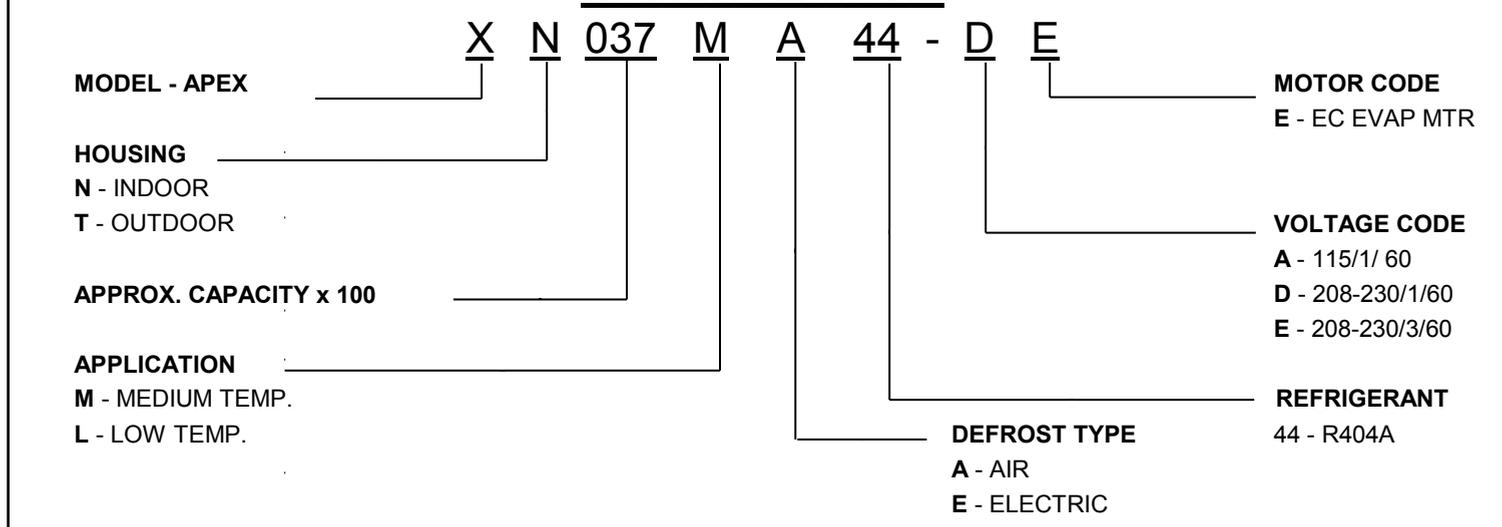
Medium Temperature - Air Defrost

Model Number	Indoor List Price EC Evap Mtr	Outdoor List Price EC Evap Mtr	Indoor Power Cord	Volts/Ph./Hz	INDOOR NET / SHIP WT. (LBS.)	OUTDOOR NET / SHIP WT. (LBS.)	4 Year Compressor Protect. Plan Net Price
XN026MA44AE	\$5,918	N/A	Yes	115/1/60	120 / 185	N/A	\$84
XN029MA44AE	6,482	N/A	Yes	115/1/60	120 / 185	N/A	84
XN037MA44AE	6,685	N/A	Yes	115/1/60	125 / 190	N/A	84
XN050MA44AE	8,844	N/A	Yes	115/1/60	210 / 305	N/A	84
X*050MA44DE	8,851	\$10,052	Yes	208-230/1/60	210 / 305	220 / 360	84
X*068MA44DE	10,237	11,007	Yes	208-230/1/60	220 / 315	230 / 370	84
X*076MA44DE	10,937	11,983	Yes	208-230/1/60	220 / 315	230 / 375	84
X*106MA44DE	13,029	13,477	Yes	208-230/1/60	295 / 420	310 / 485	86
X*106MA44EE	12,223	13,432	No	208-230/3/60	305 / 430	320 / 495	86
X*134MA44DE	14,585	14,754	No	208-230/1/60	310 / 435	325 / 500	104
X*134MA44EE	13,367	14,668	No	208-230/3/60	310 / 435	325 / 500	104

Low Temperature - Electric Defrost

Model Number	Indoor List Price EC Evap Mtr	Outdoor List Price EC Evap Mtr	Indoor Power Cord	Volts/Ph./Hz	INDOOR NET / SHIP WT. (LBS.)	OUTDOOR NET / SHIP WT. (LBS.)	4 Year Compressor Protect. Plan Net Price
XN018LE44AE	\$9,682	N/A	Yes	115/1/60	140 / 200	N/A	\$84
X*024LE44AE	11,007	N/A	Yes	115/1/60	210 / 305	N/A	84
X*024LE44DE	11,670	\$11,549	Yes	208-230/1/60	210 / 305	225 / 365	84
X*031LE44DE	11,624	12,982	Yes	208-230/1/60	245 / 340	255 / 400	84
X*043LE44DE	12,943	14,873	Yes	208-230/1/60	245 / 340	255 / 400	86
X*051LE44DE	14,852	16,792	Yes	208-230/1/60	315 / 445	320 / 510	86
X*051LE44EE	14,848	16,656	No	208-230/3/60	315 / 445	320 / 510	86
X*068LE44DE	15,936	17,884	No	208-230/1/60	320 / 450	335 / 515	101
X*068LE44EE	15,923	17,872	No	208-230/3/60	320 / 450	335 / 515	101

NOMENCLATURE



Saving Time and Money

- Fully factory assembled, charged and tested.
- No piping or loose components to install which saves you labor cost \$\$\$.
- PSC condenser motors for all units.
- Adjustable digital controller is preset for typical cooler or freezer applications.
- **Two-year warranty on all parts***
See Apex IOM M900 for full Warranty Statement
* Insert character for housing code or motor code as applicable

Quick Installation

- Installs in a fraction of the time it takes for a typical split refrigeration systems.
- The supply/return register mounts flush with a standard 4" ceiling panel which provides for more storage in your cooler or freezer.
- Condensate is evaporated so no drain line is required on indoor models.
- Outdoor models come standard with a roof and drain line connection (see drawing in KM-XNT).



Standard Features

- Inverter Duty rail mounted motors
- Vertical air flow
- Motors with inherent thermal overload protection
- 3/8" refrigerant saving copper tube, aluminum fin coils*
- 650 PSIG working pressure
- Vinyl coated heavy gauge steel fan guards
- Swept wing fan/Venturi improves airflow and sound
- Hinged Venturi panels for easy servicing
- Hinged leg design for simple installation
- Proprietary floating coil design
- Thru-the-door non-fused disconnect switch
- Heavy gauge painted galvanized steel construction
- Heavy duty lifting eyes for equipment rigging
- UL and cUL listed for outdoor use
- LED control panel lighting
- California Title 24 compliant - see pages 43-44 for applicable models and details

Options

- Fan cycling head pressure control
- Flooded head pressure control
- Subcooling circuit
- Horizontal air flow
- Multi-circuited coils
- Wide selection of fin coatings and materials
- Individual motor fusing
- Individual or paired motor contactors
- EMS control options
- Variable frequency drives
- Multiple control panel locations
- Multiple refrigerant options
- Thru-the-door fused disconnect
- Main circuit breaker disconnect
- Leg height up to 46" (18" standard)
- Fixed box style legs (25")

QUANTUM AIR™ LARGE AIR COOLED CONDENSERS NOMENCLATURE (Pages 42-45)

K	D	D	0	8	7	G	D	3	A	
1	2	3	4	5	6	7	8	9	10	
Position Number and Description										
1	Model Series - K = Kramer					8	Motor			
2	Unit Type - D = Condenser						B – 1140 RPM, 1.5 HP Motor			
3	Width						D – 850 RPM, 1.5 HP Motor			
	S = Single Wide						L – 850 RPM 1 HP Motor			
	D = Double Wide						E – 550 RPM, 1/3 HP Motor			
4-6	Capacity (MBTUH)**						G – 900 RPM Variable Speed EC Motor (Rail Mtd.)			
7	Voltage Code						K – 1200 RPM Variable Speed EC Motor (Rail Mtd.)			
	E – 208-230V/3/60		N – 200-220V/3/50			9	(Enclosed Motors are an option available for certain			
	G – 460V/3/60		Q – 380V/3/50			10	Voltage/RPM combinations)			
	J – 575V/3/60		X – Other - Non-catalogued				Number of Fans Long - 1 to 7			
							Vintage Code			

SMALL AIR COOLED CONDENSERS NOMENCLATURE (Page 41)

K	D	S	007	D	A	2	B	1	2	A	1	A
I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
I. Model Series	K – Kramer						IX. Coil Material and Coating Options*					
II. Unit Type	D – Condenser							1 – Aluminum fins				
III. Series	S – Single fan wide							2 – Copper fins				
IV. Capacity – Three Number Characters								3 – Al + AST coating				
V. Voltage Code	A – 115V/1/60		H – 575V/1/60				6 – Al + Heresite					
	D – 208-230V/1/60		X – Other				7 – Al + Polyester coat - Pre Coated Fin Material					
	E – 208-230V/3/60						X – Other					
	F – 460V/1/60		Codes D, E, F, and G can				X. Housing Material and Coatings*					
	G – 460V/3/60		be used with 50 or 60 Hz power				1 – Aluminum					
VI. Motor/Fan Type	A – 1140 RPM, 0.33 HP, Metal Blade							7 – Stainless Steel 316L				
	C – 850 RPM, 0.25 HP, Metal Blade							2 – Galvanized				
	H – 1140 RPM, 0.5 HP Totally Enclosed, Metal Blade							X – Other				
	X – Other							XI. Unit Design Configuration				
VII. Length in Fans – 1 or 2								A – Vertical Fan Discharge, Standard Legs				
VIII. Coil Density	A – 8 fpi		D – 14 fpi				E – Vertical Fan Discharge, 30" Legs					
	B – 10 fpi		X – Other				N – Horizontal Fan Discharge, Standard Legs					
	C – 12 fpi						XII. Circuit Splitting Options					
							1 – Full					
							2 – 50/50					
							X – Other					
							XIII. Revision Code – Single Alphanumeric Character					
							A – Initial Release					

* Contact Application Engineering to obtain price quotes for special fin materials or coatings.

When ordering please specify: Motor Voltage, Control Voltage (24, 115V or 208V), Internal or External Control Power, Design Ambient Temperature, the number of compressor systems and FPI required. Also provide the Refrigerant type, THR, T.D. for each compressor system.

SMALL AIR COOLED CONDENSERS

1075 RPM .33 HP MOTORS			
Model Number	10 FPI List Price	Fan Configuration	Approx. Net Weight (lbs.)
KDS001DA1B12A1A	\$2,346	1 x 1	80
KDS002DA1B12A1A	3,078	1 x 1	86
KDS003DA1B12A1A	3,439	1 x 1	107
KDS005DA1B12A1A	6,285	1 x 1	116
KDS007DA2B12A1A	7,870	1 x 2	164
KDS009DA2B12A1A	9,634	1 x 2	179
KDS011DA2B12A1A	10,816	1 x 2	195

850 RPM .25 HP MOTORS			
Model Number	10 FPI List Price	Fan Config.	Approx. Net Weight (lbs.)
KDS001DC1B12A1A	\$2,573	1 x 1	80
KDS002DC1B12A1A	3,691	1 x 1	86
KDS003DC1B12A1A	4,221	1 x 1	107
KDS004DC1B12A1A	6,662	1 x 1	116
KDS006DC2B12A1A	8,216	1 x 2	164
KDS008DC2B12A1A	10,330	1 x 2	179
KDS009DC2B12A1A	11,228	1 x 2	195

1075 RPM .33 HP MOTORS - Totally Enclosed			
Model Number	10 FPI List Price	Fan Config.	Approx. Net Weight (lbs.)
KDS001DH1B12A1A	\$3,414	1 x 1	80
KDS002DH1B12A1A	4,147	1 x 1	86
KDS003DH1B12A1A	4,508	1 x 1	107
KDS005DH1B12A1A	7,352	1 x 1	116
KDS007DH2B12A1A	10,006	1 x 2	164
KDS009DH2B12A1A	11,769	1 x 2	179
KDS011DH2B12A1A	12,951	1 x 2	195

POSITION V - Available Voltage Options*

Voltage Code	Adders Per Fan Section	Available Based Upon Position VI - Motor Options
A-115/1/60	N/C	Only available with motor option A
D-208-230/1/60	—	Available with motor options A & C
E-208-230/3/60	\$132	Available with motor options A, C, & H
F-460/1/60	N/C	Available with motor options A & C
G-460/3/60	132	Available with motor options A, C, & H
H-575/1/60	52	Only available with motor option A

Note: "N/A" = Not available, "N/C" = No additional charge, "—" = Base Model Feature

POSITION VI - Available Motor / Fan Type Options

Motor Type	Adder Per Fan	Available Based Upon Position V - Voltage Options
A- 1075, 0.33HP	—	Available in Voltage codes A, D, E, F, G, H
C- 850 RPM, 0.25HP	—	Available in Voltage codes D, E, F, G
H - 1075, 0.5 HP	—	Available in Voltage codes E, G

Note: "N/A" = Not available, "N/C" = No additional charge, "—" = Base Model Feature

Position - VII - Indicates Length in Fans (1 or 2)

Position - VIII - Coil Density Options Price Add or Deduct (8FPI)

Fan Configuration	A - 8 FPI	B - 10 FPI	C - 12 FPI	D - 14 FPI
1 X 1	(\$391)	—	\$407	\$814
1 X 2	(\$782)	—	\$814	\$1,625

Note: "N/A" = Not available, "N/C" = No additional charge, "—" = Base Model Feature

Position - IX - Coil Material and Coating Options**

Aluminum fins (Standard) / Copper fins / Other

No Coating (Standard) / Al + AST coating / Al + Heresite coating / Al + Polyester coat - Pre Coated Fin Material / Other

Position - X - Housing Material and Coating Options**

Galvanized (Standard) / Aluminum / Stainless Steel 316L / Other

Position - XI - Unit Design Configuration

Leg Configuration	Fan Config. 1 x 1	Fan Config. 1 x 2
A – Vertical Fan Discharge, Standard 15" Legs	—	—
E – Vertical Fan Discharge, 30" Legs	\$147	\$294
N – Horizontal Fan Discharge, Standard Legs	—	—

Position - XII - Circuit Splitting Options**

Full (Standard) / 50/50 / Multi-Circuiting / Subcooling Circuit / Other

Available Options**

Fan cycling head pressure control (2 fan model only)

Variable speed fan control (header end fan only)

Flooded head pressure control (shipped loose)

Notes:

* Codes D, E, F and G can be used with 50 or 60 Hz power.

** Contact Application Engineering to obtain price quotes for special fin materials, coatings, circuit splitting and available options.

1. Horizontal discharge orientation is available using standard leg arrangement code A.

2. Floating coil is not available for small condensers.

QUANTUM AIR™ LARGE CONDENSERS

1140 RPM 1.5 HP MOTORS (Code B)

SINGLE FAN WIDTH						
Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDS004^B1	\$7,286	\$7,721	\$8,142	\$8,563	1 x 1	350
KDS006^B1	9,277	9,711	10,134	10,554	1 x 1	375
KDS007^B1	10,359	10,794	11,215	11,635	1 x 1	400
KDS012^B2	15,237	16,109	16,950	17,792	1 x 2	725
KDS015^B2	20,973	21,845	22,686	23,528	1 x 2	750
KDS018^B2	24,854	25,725	26,566	27,409	1 x 2	775
KDS022^B3	30,672	31,978	33,241	34,504	1 x 3	1,125
KDS027^B3	35,711	37,018	38,281	39,542	1 x 3	1,150
KDS030^B4	42,852	44,594	46,278	47,961	1 x 4	1,500
KDS036^B4	48,474	50,216	51,900	53,583	1 x 4	1,525
KDS039^B5	53,464	55,642	57,746	59,850	1 x 5	1,875
KDS047^B5	62,205	64,381	66,486	68,590	1 x 5	1,900
KDS056^B6	74,440	77,054	79,579	82,104	1 x 6	2,275
KDS065^B7	87,469	90,518	93,464	96,410	1 x 7	2,650

850 RPM 1.5 HP MOTORS (Code D)

SINGLE FAN WIDTH						
Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDS004^D1	\$7,210	\$7,646	\$8,067	\$8,487	1 x 1	350
KDS005^D1	9,218	9,652	10,073	10,494	1 x 1	375
KDS007^D1	10,270	10,706	11,126	11,547	1 x 1	400
KDS010^D2	15,584	16,454	17,298	18,139	1 x 2	725
KDS014^D2	20,911	21,782	22,624	23,466	1 x 2	750
KDS015^D2	23,189	24,060	24,901	25,744	1 x 2	775
KDS021^D3	30,856	32,163	33,425	34,688	1 x 3	1,125
KDS024^D3	34,935	36,242	37,505	38,768	1 x 3	1,150
KDS028^D4	41,908	43,650	45,334	47,017	1 x 4	1,500
KDS032^D4	46,995	48,737	50,421	52,104	1 x 4	1,525
KDS035^D5	51,242	53,419	55,524	57,630	1 x 5	1,875
KDS043^D5	61,512	63,690	65,794	67,899	1 x 5	1,900
KDS052^D6	73,812	76,424	78,950	81,476	1 x 6	2,275
KDS060^D7	86,543	89,591	92,537	95,483	1 x 7	2,650

DOUBLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDD022^B2	\$31,470	\$33,212	\$34,896	\$36,580	2 x 2	1,500
KDD030^B2	41,875	43,617	45,300	46,984	2 x 2	1,525
KDD036^B2	48,765	50,507	52,190	53,874	2 x 2	1,550
KDD045^B3	62,637	65,250	67,775	70,299	2 x 3	2,275
KDD054^B3	73,284	75,897	78,423	80,948	2 x 3	2,300
KDD059^B4	83,864	87,349	90,716	94,083	2 x 4	3,025
KDD072^B4	96,799	100,284	103,651	107,018	2 x 4	3,050
KDD078^B5	106,931	111,285	115,495	119,704	2 x 5	3,775
KDD094^B5	124,597	128,952	133,161	137,370	2 x 5	3,800
KDD113^B6	148,864	154,089	159,141	164,190	2 x 6	4,550
KDD131^B7	175,368	181,463	187,357	193,250	2 x 7	5,300

DOUBLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDD019^D2	\$30,319	\$32,060	\$33,744	\$35,428	2 x 2	1,500
KDD028^D2	41,753	43,495	45,179	46,862	2 x 2	1,525
KDD031^D2	45,598	47,340	49,024	50,707	2 x 2	1,550
KDD041^D3	62,101	64,714	67,240	69,765	2 x 3	2,275
KDD048^D3	70,511	73,124	75,650	78,176	2 x 3	2,300
KDD055^D4	83,907	87,391	90,758	94,126	2 x 4	3,025
KDD065^D4	94,187	97,671	101,039	104,406	2 x 4	3,050
KDD069^D5	102,442	106,796	111,006	115,214	2 x 5	3,775
KDD086^D5	123,243	127,598	131,806	136,016	2 x 5	3,800
KDD103^D6	147,697	152,922	157,972	163,024	2 x 6	4,550
KDD121^D7	173,108	179,204	185,096	190,990	2 x 7	5,300

^ Insert voltage code here.

\$236 List price adder per fan 575/3/60 motors.

\$907 List Price adder (per fan) for Totally Enclosed Motor. 1.5 HP 1140 or 850 RPM, or 1.0 HP 850 RPM only. Not available for 550 RPM models.

^ Insert voltage code here.

575V motors are not available for units with 850RPM, 1.5 HP motors.

QUANTUM AIR™ LARGE CONDENSERS

850 RPM 1.0 HP MOTORS (Code L)[†]

SINGLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDS004 [^] L1	\$6,738	\$7,175	\$7,595	\$8,016	1 x 1	350
KDS006 [^] L1	8,724	9,160	9,581	10,002	1 x 1	375
KDS008 [^] L1	10,429	10,864	11,285	11,706	1 x 1	400
KDS010 [^] L2	14,635	15,506	16,349	17,190	1 x 2	725
KDS012 [^] L2	18,464	19,336	20,177	21,020	1 x 2	750
KDS015 [^] L2	22,325	23,195	24,037	24,879	1 x 2	775
KDS019 [^] L3	29,169	30,475	31,738	33,001	1 x 3	1,125
KDS023 [^] L3	33,383	34,689	35,952	37,214	1 x 3	1,150
KDS026 [^] L4	40,385	42,127	43,811	45,494	1 x 4	1,500
KDS030 [^] L4	45,804	47,546	49,230	50,914	1 x 4	1,525
KDS032 [^] L5	49,185	51,363	53,467	55,571	1 x 5	1,875
KDS040 [^] L5	60,583	62,760	64,864	66,970	1 x 5	1,900
KDS048 [^] L6	73,097	75,710	78,236	80,761	1 x 6	2,275
KDS056 [^] L7	85,538	88,586	91,531	94,478	1 x 7	2,650

550 RPM 1/3 HP MOTORS (Code E)[†]

SINGLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDS004 [^] E1	\$7,782	\$8,217	\$8,638	\$9,059	1 x 1	350
KDS005 [^] E1	9,161	9,597	10,017	10,438	1 x 1	375
KDS006 [^] E1	10,321	10,757	11,177	11,598	1 x 1	400
KDS008 [^] E2	15,340	16,210	17,053	17,894	1 x 2	725
KDS011 [^] E2	20,217	21,088	21,930	22,771	1 x 2	750
KDS012 [^] E2	22,358	23,229	24,072	24,913	1 x 2	775
KDS016 [^] E3	30,942	32,249	33,511	34,774	1 x 3	1,125
KDS018 [^] E3	33,910	35,217	36,480	37,742	1 x 3	1,150
KDS021 [^] E4	42,413	44,155	45,838	47,523	1 x 4	1,500
KDS025 [^] E4	47,555	49,297	50,980	52,664	1 x 4	1,525
KDS028 [^] E5	53,884	56,062	58,167	60,271	1 x 5	1,875
KDS032 [^] E5	59,723	61,900	64,004	66,111	1 x 5	1,900
KDS040 [^] E6	75,991	78,603	81,128	83,655	1 x 6	2,275
KDS046 [^] E7	88,839	91,888	94,834	97,781	1 x 7	2,650

DOUBLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDD017 [^] L2	\$28,199	\$29,940	\$31,623	\$33,308	2 x 2	1,500
KDD026 [^] L2	40,369	42,111	43,794	45,478	2 x 2	1,525
KDD030 [^] L2	45,823	47,564	49,247	50,931	2 x 2	1,550
KDD038 [^] L3	61,041	63,654	66,179	68,704	2 x 3	2,275
KDD046 [^] L3	71,225	73,838	76,363	78,889	2 x 3	2,300
KDD051 [^] L4	81,968	85,452	88,820	92,186	2 x 4	3,025
KDD060 [^] L4	93,356	96,841	100,208	103,575	2 x 4	3,050
KDD063 [^] L5	99,499	103,853	108,063	112,272	2 x 5	3,775
KDD080 [^] L5	122,788	127,143	131,352	135,561	2 x 5	3,800
KDD097 [^] L6	147,471	152,697	157,747	162,799	2 x 6	4,550
KDD113 [^] L7	172,842	178,939	184,832	190,724	2 x 7	5,300

DOUBLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (lbs.)
KDD016 [^] E2	\$32,881	\$34,624	\$36,307	\$37,991	2 x 2	1,500
KDD021 [^] E2	42,413	44,155	45,838	47,523	2 x 2	1,525
KDD025 [^] E2	47,132	48,874	50,558	52,241	2 x 2	1,550
KDD032 [^] E3	65,084	67,696	70,223	72,747	2 x 3	2,275
KDD037 [^] E3	71,278	73,892	76,417	78,943	2 x 3	2,300
KDD043 [^] E4	87,079	90,561	93,930	97,297	2 x 4	3,025
KDD050 [^] E4	97,012	100,494	103,863	107,230	2 x 4	3,050
KDD055 [^] E5	111,086	115,440	119,649	123,858	2 x 5	3,775
KDD063 [^] E5	121,957	126,312	130,521	134,731	2 x 5	3,800
KDD080 [^] E6	154,643	159,869	164,920	169,971	2 x 6	4,550
KDD093 [^] E7	179,820	185,917	191,809	197,703	2 x 7	5,300

[^] Insert voltage code here.

[^] Insert voltage code here.

575V motors are not available for units with 550RPM, 1/3 HP motors.

\$907 List Price adder (per fan) for Totally Enclosed Motor. 1.5 HP 1140 or 850 RPM, or 1.0 HP 850 RPM only. Not available for 550 RPM models.

[†] These models fulfill California Title 24 condenser efficiency requirements when utilizing Variable Frequency Drives and 10 FPI coils.

QUANTUM AIR™ LARGE CONDENSERS

VSEC 1200 RPM (Code K)

SINGLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (LBS.)
KDS005^K1	\$13,219	\$13,654	\$14,075	\$14,496	1 x 1	350
KDS006^K1	15,209	15,644	16,066	16,488	1 x 1	375
KDS008^K1	16,292	16,728	17,148	17,569	1 x 1	400
KDS013^K2	27,104	27,975	28,816	29,658	1 x 2	725
KDS016^K2	32,840	33,711	34,552	35,394	1 x 2	750
KDS019^K2	36,721	37,591	38,433	39,274	1 x 2	775
KDS024^K3	48,471	49,778	51,041	52,304	1 x 3	1,125
KDS028^K3	53,510	54,817	56,079	57,342	1 x 3	1,150
KDS032^K4	66,585	68,327	70,011	71,693	1 x 4	1,500
KDS038^K4	72,207	73,949	75,633	77,316	1 x 4	1,525
KDS041^K5	83,129	85,307	87,411	89,515	1 x 5	1,875
KDS049^K5	91,870	94,047	96,152	98,256	1 x 5	1,900
KDS059^K6	110,039	112,653	115,178	117,703	1 x 6	2,275
KDS069^K7	129,001	132,049	134,996	137,942	1 x 7	2,650

VSEC 900 RPM (Code G)

SINGLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (LBS.)
KDS004^G1	\$13,219	\$13,654	\$14,075	\$14,496	1 x 1	350
KDS005^G1	15,209	15,644	16,066	16,488	1 x 1	375
KDS007^G1	16,292	16,728	17,148	17,569	1 x 1	400
KDS010^G2	27,104	27,975	28,816	29,658	1 x 2	725
KDS014^G2	32,840	33,711	34,552	35,394	1 x 2	750
†KDS015^G2*	36,721	37,591	38,433	39,274	1 x 2	775
KDS021^G3	48,471	49,778	51,041	52,304	1 x 3	1,125
†KDS025^G3*	53,510	54,817	56,079	57,342	1 x 3	1,150
KDS028^G4	66,585	68,327	70,011	71,693	1 x 4	1,500
†KDS033^G4*	72,207	73,949	75,633	77,316	1 x 4	1,525
KDS035^G5	83,129	85,307	87,411	89,515	1 x 5	1,875
†KDS044^G5*	91,870	94,047	96,152	98,256	1 x 5	1,900
†KDS052^G6*	110,039	112,653	115,178	117,703	1 x 6	2,275
†KDS061^G7*	129,001	132,049	134,996	137,942	1 x 7	2,650

DOUBLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (LBS.)
KDD023^K2	\$55,203	\$56,945	\$58,629	\$60,313	2 x 2	1,500
KDD032^K2	65,608	67,350	69,032	70,716	2 x 2	1,525
KDD038^K2	72,498	74,240	75,922	77,606	2 x 2	1,550
KDD047^K3	98,236	100,848	103,373	105,898	2 x 3	2,275
KDD057^K3	108,883	111,495	114,022	116,547	2 x 3	2,300
KDD063^K4	131,329	134,814	138,181	141,548	2 x 4	3,025
KDD075^K4	144,265	147,748	151,116	154,483	2 x 4	3,050
KDD082^K5	166,261	170,617	174,826	179,035	2 x 5	3,775
KDD099^K5	183,929	188,283	192,492	196,702	2 x 5	3,800
KDD118^K6	220,062	225,286	230,338	235,388	2 x 6	4,550
KDD138^K7	258,440	264,536	270,428	276,321	2 x 7	5,300

DOUBLE FAN WIDTH

Model Number	8 FPI	10 FPI	12 FPI	14 FPI	Fans	Approx. Net Weight (LBS.)
KDD020^G2	\$55,203	\$56,945	\$58,629	\$60,313	2 x 2	1,500
KDD028^G2	65,608	67,350	69,032	70,716	2 x 2	1,525
†KDD032^G2*	72,498	74,240	75,922	77,606	2 x 2	1,550
KDD042^G3	98,236	100,848	103,373	105,898	2 x 3	2,275
†KDD049^G3*	108,883	111,495	114,022	116,547	2 x 3	2,300
KDD056^G4	131,329	134,814	138,181	141,548	2 x 4	3,025
†KDD065^G4*	144,265	147,748	151,116	154,483	2 x 4	3,050
KDD070^G5	166,261	170,617	174,826	179,035	2 x 5	3,775
†KDD087^G5*	183,929	188,283	192,492	196,702	2 x 5	3,800
KDD105^G6*	220,062	225,286	230,338	235,388	2 x 6	4,550
†KDD122^G7*	258,440	264,536	270,428	276,321	2 x 7	5,300

^ Insert voltage code here.

^ Insert voltage code here.

† These selected models fulfill California Title 24 condenser efficiency requirements when utilizing 10 FPI coils.

Large Air Cooled Condenser Options

Fan configuration

	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
Disconnect Options													
Through the door non-fused disconnect	STD	STD	STD	STD	STD	STD	STD	STD	STD	STD	STD	STD	STD
Through the door fused disconnect	\$476	476	806	915	1,006	1,100	1,191	915	1,100	1,419	1,741	2,064	2,384
Main Power Circuit Breaker	\$977	977	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,296	1,296	1,296	1,296
Bladed Safety Switch, Non-fused	\$870	870	1,677	1,677	1,677	1,677	1,677	1,677	1,677	2,116	2,116	2,116	2,116
110 VAC - 20 Amp Convenience Outlet powered by separate building feed or transformer	\$351	351	351	351	351	351	351	351	351	351	351	351	351

Fan Cycling Options - Requires Contactor Option	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
Ambient fan cycling [†]	—	\$971	1,324	1,764	2,202	2,643	3,085	970	1,324	1,764	2,202	2,643	3,085
Mechanical Pressure fan cycling (per circuit) W/O Header [†]	—	\$1,460	1,598	2,130	2,663	3,196	3,726	1,460	1,598	2,130	2,663	3,196	3,726
Mechanical Pressure fan cycling (per circuit) W/ Header [†]	—	\$1,861	2,395	2,931	3,467	4,002	4,548	1,861	2,395	2,931	3,467	4,002	4,548
Electronic Pressure fan cycling (per circuit) W/O Header [†]	—	\$1,515	1,899	3,154	4,410	5,664	6,652	1,515	1,899	3,154	4,410	5,664	6,652
Electronic Pressure fan cycling (per circuit) W/ Header [†]	—	\$2,152	3,406	4,661	5,917	6,894	8,101	2,152	3,406	4,661	5,917	6,894	8,101

Note: Header fan is continuous run and not cycled.

Electronic Header End Fan Speed Control - Req. Contactor & Fan Cycle on 1x2 and larger	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
Variable speed header end fan (1 or 2 Circuit) ambient controlled [†]	Contact Factory												
Variable speed header end fan (1 or 2 Circuit) Electronic control - pressure [†]	Contact Factory												

Variable Frequency Drive (VFD)	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
VFD Package - Shipped Loose [†]	C/F												
VFD Package - Factory Mounted [†]	C/F												

Control Boards - Items with this mark also ‡ require the contactor option	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
CPC relay board + xfmr (1x1 thru 2x4 config) ‡	\$3,134	3,134	3,134	3,134	3,134	3,134	3,134	3,134	3,134	3,134	—	—	—
CPC relay boards (2)+ xfmr (2x5 thru 2x7 config) ‡	—	—	—	—	—	—	—	—	—	—	\$5,877	5,877	5,877
CPC relay board condenser split 50/50 (1 board + relay)	\$3,261	3,261	3,261	3,261	3,261	3,261	3,261	3,261	3,261	3,261	3,261	3,261	3,261
CPC analog speed control board and transformer	\$3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281
DANFOSS relay board + xfmr (1x1 thru 2x4 config) ‡	\$3,146	3,146	3,146	3,146	3,146	3,146	3,146	3,146	3,146	3,146	—	—	—
DANFOSS relay boards (2) + xfmr (2x5 thru 2x7 config) ‡	—	—	—	—	—	—	—	—	—	—	6,449	6,449	6,449
DANFOSS relay board condenser split 50/50 (relay) ‡	\$4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620	4,620
DANFOSS analog speed control board and transformer	\$3,633	3,633	3,633	3,633	3,633	3,633	3,633	3,633	3,633	3,633	3,633	3,633	3,633
VSEC Stand alone motor control (C450)	Contact Factory												

Consult Application Engineering For Other Relay Board Options

Control Options	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
Control Circuit Breaker (2P - 15A)	\$314	314	314	314	314	314	314	314	314	314	314	314	314
Control circuit transformer [†]	\$593	593	593	593	593	593	593	593	593	593	593	593	593

Fan Control Options (Contactors)	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
Individual Motor Contactors [†]	\$249	499	746	995	1,242	1,490	1,739	995	1,490	1,986	2,483	2,980	3,476
Paired Motor Contactors [†]	—	—	—	—	—	—	—	\$499	747	996	1,244	1,492	1,742
NEMA rated Contactors - Individual [†]	\$1,023	2,045	3,067	4,088	5,110	6,132	7,154	4,088	6,132	8,175	10,220	12,263	14,307
NEMA rated Contactors - PAIRED [†]	—	—	—	—	—	—	—	\$2,045	3,067	4,088	5,110	6,132	7,154
Individual motor fuses [†]	\$252	503	752	1,003	1,254	1,504	1,754	1,003	1,504	2,006	2,507	3,008	3,509
Paired motor fuses [†]	—	—	—	—	—	—	—	\$503	752	1,003	1,254	1,504	1,754
Individual circuit breakers ^{††}	\$698	1,001	1,489	1,995	2,484	2,990	3,453	1,995	2,990	3,968	4,967	5,964	6,670
Paired circuit breakers ^{††}	—	—	—	—	—	—	—	\$1,001	1,489	1,995	2,484	2,990	3,453
Individual motor terminal boards [†]	\$177	350	524	698	874	1,047	1,220	698	1,047	1,675	2,024	2,370	2,720
Paired motor terminal blocks [†]	—	—	—	—	—	—	—	\$350	524	698	874	1,047	1,220
Fan toggle switches - per fan (to control contactors) [†]	\$105	210	312	415	519	623	727	415	623	831	1,038	1,244	1,451
Fan toggle switches - PAIRED (to control contactors) [†]	—	—	—	—	—	—	—	\$210	312	415	519	623	727
Fan toggle switches - per fan (to control Motors) [†]	\$476	476	476	476	476	476	476	1,673	2,508	3,344	4,180	5,016	5,852
Fan toggle switches - PAIRED (to control Motors) [†]	—	—	—	—	—	—	—	\$836	1,254	1,673	2,091	2,508	2,927

Build Options**	1X1	1X2	1X3	1X4	1X5	1X6	1X7	2X2	2X3	2X4	2X5	2X6	2X7
Horizontal Air Discharge	\$704	1,031	1,517	1,862	2,190	2,519	2,827	2,062	3,003	3,724	4,379	5,036	5,657
Aluminum Housing	\$279	560	839	1,119	1,398	1,678	1,957	1,119	1,678	2,237	2,797	3,355	3,913
Stainless Steel Housing	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A
Leg length - 21" or 30" - Standard Vertical air discharge	\$147	294	439	439	439	541	688	294	439	439	439	541	688
Leg length - 46" (Vertical air discharge only)	\$176	348	520	520	520	640	811	348	520	520	520	640	811
Box Style Leg at every location- 25" (Vertical air discharge only)	\$511	766	1,022	1,276	1,532	1,786	2,042	766	1,022	1,276	1,532	1,786	2,042
Sealtite wiring to motor rail	\$219	272	412	555	685	826	964	555	826	1,100	1,378	1,651	1,916
Sealtite wiring to electrical box	\$727	1,453	2,180	2,905	3,632	4,358	5,085	2,905	4,358	5,810	7,264	8,716	10,169
Condenser Base with 18" legs (Vertical air discharge only)	\$1,782	2,572	3,364	4,817	5,828	6,682	7,760	2,572	3,364	4,817	5,828	6,949	8,072
Condenser Base with 30" or 46" legs (Vertical air discharge only)	\$1,908	2,825	3,740	4,770	6,458	7,409	8,609	2,825	3,740	5,322	6,458	7,705	8,954
Condenser / Receiver Assembly (Vertical air discharge only)	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A
Header End control panel mounting (Specify location change)	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C

Flooded Head Pressure Controls (Shipped loose only)	Number of Controls							
List Price per compressor system [†]	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A
Number of Controls per compressor system [†]	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A
Manifold included [†]	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A

* Multiple valves or manifolds are required for multi-circuit condensers.

** Contact Application Engineering to obtain price quotes for special fin materials or coatings.

N/C = No additional charge for this feature.

C/A = Contact Application engineering for custom price quote.

† This option is not available for condensers with VSEC motors.

†† Units with VSEC motors **include** individual circuit breaker. Paired circuit breakers are not available.

PRINCIPAL TERMS AND CONDITIONS OF SALE

1. **Applicable Law and Terms of Sale:** All orders shall be subject to the following terms and conditions notwithstanding any additional or contrary printed terms and conditions of Buyer. Such additional or contrary terms shall not bind Seller unless accepted in writing even though such terms do not materially alter the terms hereof. No oral statements, warranties, stipulations, representations or terms shall have any binding effect or be any part of the contract whatsoever.
2. **Orders:** All orders must be in writing and will be binding when our order acknowledgment is mailed. Orders are accepted subject to strikes, fires, accidents, and other causes beyond our reasonable control. Acceptance of your order is conditioned upon an agreement to hold us harmless by reason of delivery delays.
3. **Prices:** Prices are subject to change without notice, and all quotations, unless otherwise specified, are binding only for immediate acceptance. Prices are based on material made to Seller's standard tolerances, unless otherwise specified.
4. **Freight:** All products are shipped FOB Point of Shipment with full freight allowed on single orders with a net price value of \$10,000.00 or more, except surface coils and parts, within the continental USA (excluding Alaska and Hawaii). Shipments to destinations outside the continental USA, that meet freight allowance requirements, will incur charges for the additional transport beyond the USA border. Seller reserves the choice of transportation mode, carrier, and shipping point. If special routing (dedicated/contract haul, flatbed delivery, appointment to meet a crane, etc.) is required/requested for a purchase order of \$10,000.00 or greater, Buyer will be assessed a special delivery charge per truck. Charges of \$80 per hour resulting from excessive unloading time, beyond the allotted "free time" (two hours per stop on partial loads and/or full truck loads), as defined by the carrier, is subject to being passed on to the customer. The responsibility of the Seller shall cease upon delivery of product in good condition to a common carrier (TL, LTL, FLATBED, ETC. Since all goods are shipped at Buyer's risk, they should be examined carefully before signing delivery receipt. If common carrier tenders delivery of goods in damaged condition or if packages delivered do not correspond with the number called for on the freight bill, Buyer should insist on common carrier's agent (DRIVER) making notation of the condition of shortages or damage on delivery receipt. The Buyer should never refuse freight from the common carrier. Filing freight claims are under the responsibility of the Buyer, and this will enable them to secure prompt payment of claim for damaged or lost material. Sometimes damage or loss is not readily apparent, so it is suggested that Buyer thoroughly inspect each shipment as soon as it is received for concealed loss or damage. Refer to HTPG's 2019 Freight Policy for further information.
5. **Taxes:** Any sales, use, excise, or similar tax payable by Seller which is or may be imposed by any taxing authority upon manufacture, sale or delivery of goods covered by any order or any increase in rate of any such tax now in force, shall be added to the sales price; if not collected at the time of payment of sales price, Buyer will hold Seller harmless.
6. **Limited Warranty:** Seller warrants against defect in materials and workmanship in products which it manufactures for (1) year from date of installation or up to (18) eighteen months from the date of shipment, whichever event occurs first, when properly installed and operated under normal use. This guarantee does not include any labor or other charges made outside of the Seller's factory for replacement or repair of defective parts unless specifically stated in the body of the Sellers invoice. On parts not manufactured by Seller, such as motors, controls, valves and compressors we extend to the Buyer the same warranties made to us by the manufacturer. Sellers only liability under this warranty or otherwise shall be the repair or replacement (at Seller's option) of non-conforming goods or parts. Seller assumes no liability for incidental or consequential damages such as injury to person or property, or lost profits.
7. **THIS GUARANTEE SUPERSEDES AND IS IN LIEU OF ANY AND ALL OTHER WARRANTIES BY LAW OR CUSTOM, EITHER EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED BY THIS ENUMERATION, ANY GUARANTEE AS TO QUALITY OR FITNESS FOR ANY PARTICULAR PURPOSE, EXCEPT AS SET FORTH ABOVE. NO PERSON, AGENT, OR DEALER IS AUTHORIZED TO GIVE ANY WARRANTIES ON BEHALF OF SELLER NOR TO ASSUME FOR SELLER ANY OTHER LIABILITY IN CONNECTION WITH ANY OF THE SELLER'S PRODUCTS.**
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9. **Cancellations and Returned Goods:** Permission to return any part or product must be obtained from Seller and may be subject to a restocking charge. Credits for new material accepted for return will be at the original sales price or current market price, whichever is lower, less handling and restocking charges. Buyer must prepay all transportation charges. Any costs for putting material in condition for resale will be charged to the Buyer. Shipment of material returned without factory authorization or not properly tagged with a Return Material Authorization Number or not freight prepaid cannot be received by Seller. Obsolete products or material made to special order are not returnable.
10. **Catalog Materials and Drawings:** Seller is not responsible for typographical errors or other errors of omission in Seller's catalogs or drawings.
11. **Late Charge Provision:** Buyer agrees to pay a late charge of 1-1/2% per month (18% per year) for any invoice or bill not paid within (30) thirty days of the date of the billing invoice.
12. **Choices of law, Disputes:** This agreement and the performance of the parties hereunder shall be construed in accordance with and governed by the laws of the State of Georgia and shall be deemed made in the state. Buyer irrevocably consents to the exclusive jurisdiction of the courts of Fulton County, on all matters arising out of or relating to this sale and Buyer further irrevocably consents to service of process by certified mail, return receipt requested, at Buyers address set forth in the order acknowledgement.

The above terms and conditions apply to all orders placed with the Seller. Buyer acknowledges having read and understood these terms and conditions and agrees to abide by them upon placement of any order with the Seller. In the event it becomes necessary to refer the account to a collection agency or to institute legal action to obtain payment of the account, Buyer agrees to pay all reasonable attorney fees and court costs incurred by such action.