

OLD

# KRACK

## Vertical Discharge Air-cooled Condensing Units 10 Models—9 to 40 hp

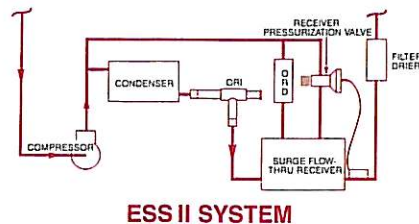


Krack's new KB Series air-cooled condensing units are flexibly designed to meet varying application requirements. Expandable, pre-engineered units give you the performance you need without "specials" pricing. Value added standard features include unique energy saving systems, Discus™ compressors and a whole lot more.

### Designed for unequalled energy savings

Like other systems that operate at low head pressure, the KB Series is an energy saver—but with one important difference—Krack's exclusive ESS-II, an improved energy saving design. This adjustable floating head pressure system features a FLOW-THRU Surge receiver which maintains added subcooling from enhanced condenser circuitry. What's more, the large storage capacity of Krack's unique receiver design eliminates the need to periodically add winter charge. And, since its minimum head pressure setting is adjustable, the ESS-II system works for all special applications.

Additionally, the KB Series' flexible coil selection system permits larger condenser surface to be used to increase capacity or to further reduce energy consumption. It's the kind of application adaptability you expect from Krack.



**ESS II SYSTEM**

### Features:

- All-weather mill galvanized housing with large service panels and rigging slots for easy installation
- Semi-hermetic Copeland Discus™ compressors with overload protection. All units include oil level sight glass, discharge service valves, high/low pressure control, manual reset oil safety switch and crankcase heater.
- High efficiency staggered copper tube condenser
- Direct drive 24" dia. fans—weather resistant 1140 RPM motors with sealed bearings and internal overload protection
- Krack "Safe Start" low ambient system

- Condenser cleanout access panels
- Solid compressor mounting on sturdy frame for minimal vibration and sound transmission
- Weather resistant, factory wired control panel
- U.L. listed

### Options

- ESS-II energy saving minimum head pressure, low ambient control
- Serviceable liquid line drier & sight glass
- Liquid line solenoid valve
- Serviceable suction line filter
- Suction accumulator
- KOR oil separator
- Insulated receiver
- Off-cycle defrost timer
- Electric defrost controls
- Fused disconnect
- Door interlock
- Polyester coated condenser fins
- Alternate compressors
- Compressor capacity modulation
- Oversized condenser
- Oversized receiver

# CAPACITY DATA

## R22 HIGH/MEDIUM TEMPERATURE PERFORMANCE

SATURATED SUCTION TEMPERATURES																			
				+40°F		+35°F		+30°F		+25°F		+20°F		+15°F		+10°F		+5°F	
UNIT MODEL	COMP. MODEL	NO. OF FANS	OUTSIDE AMB.	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW
KBD10M2 * 22B	3DB-1000	2	95 105	136.5 127.4	12.1 12.9	126.0 117.5	11.4 12.3	114.7 106.9	11.0 11.7	104.1 97.0	10.6 11.2	94.1 87.7	10.1 10.7	84.8 79.0	9.6 10.1	76.4 71.1	9.1 9.6	68.3 63.6	8.6 9.1
KBD12M2 * 23B	3DF-1200	2	95 105	159.4 151.0	14.5 15.3	147.8 137.7	13.7 14.6	134.4 125.2	13.1 13.9	121.8 113.4	12.5 13.2	109.9 102.4	11.9 12.5	98.8 92.1	11.2 11.9	88.6 82.6	10.6 11.2	78.4 73.1	10.1 10.6
KBD15M2 * 23B	3DS-1500	2	95 105	184.4 172.5	16.0 17.1	168.4 157.7	15.4 16.4	153.2 143.6	14.7 15.7	139.0 130.4	14.1 15.0	125.7 118.0	13.4 14.3	113.3 106.4	12.8 13.5	101.2 95.1	12.1 12.8	90.2 84.9	11.4 12.0
KBD20M2 * 24E	4DA-2000	2	95 105	200.2 184.1	17.0 18.1	181.5 167.3	16.3 17.3	164.1 151.5	15.5 16.5	148.6 136.8	14.8 15.6	133.3 123.1	14.0 14.7	119.2 110.4	13.2 13.8	105.8 99.3	12.4 13.0	94.3 87.6	11.6 12.2
KBD25M2 * 33E	4DH-2500	3	90 95	254.0 236.4	22.3 23.8	232.1 215.6	21.3 22.6	210.6 195.3	20.3 21.5	193.2 178.6	19.1 20.2	172.0 158.7	18.1 19.1	152.9 140.8	17.1 18.0	135.7 124.3	16.1 17.0	119.6 109.1	15.1 15.9
KBD30M2 * 34E	4DJ-3000	3	95 105	301.7 278.1	27.2 28.9	275.1 253.4	25.9 27.5	249.8 230.6	24.6 26.1	225.8 207.8	23.3 24.6	203.2 186.9	22.1 23.3	181.9 167.4	20.8 21.9	162.2 149.3	19.6 20.6	142.6 132.2	18.4 19.4
KBD35M2 * 44F	6DG-3500	4	95 105	395.5 369.3	36.2 38.7	360.3 336.5	34.5 36.8	333.9 311.7	32.6 34.7	303.5 283.5	31.1 33.0	275.1 257.2	29.5 31.3	248.7 232.6	28.0 29.6	224.2 209.8	26.6 28.0	200.1 187.3	25.1 26.4
KBD40M2 * 44F	6DJ-4000	4	95 105	433.0 403.3	40.5 43.0	397.5 370.6	38.6 40.9	363.9 337.4	36.7 38.8	330.1 312.6	34.8 36.5	304.3 283.7	32.7 34.6	274.9 256.4	31.0 32.7	246.5 230.8	29.3 30.8	221.5 205.2	27.6 29.0

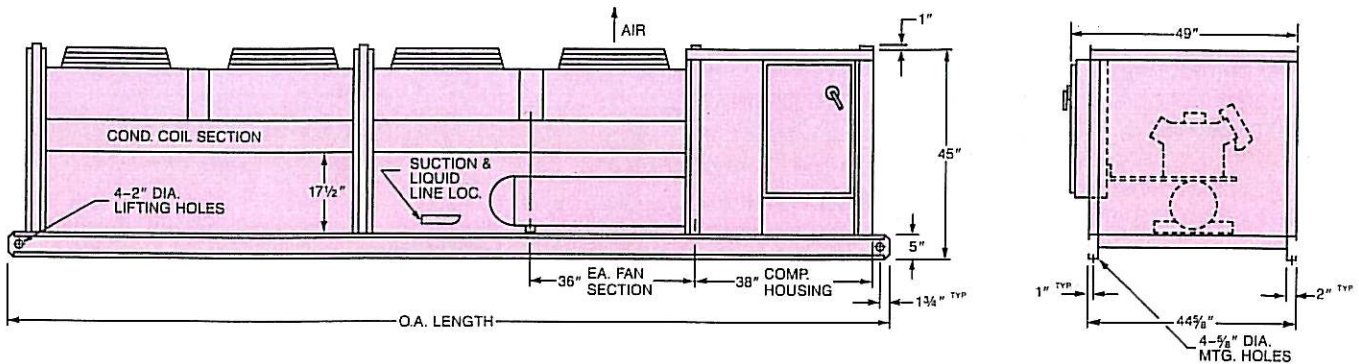
## R22 LOW TEMPERATURE PERFORMANCE

SATURATED SUCTION TEMPERATURES																			
				0°F		-10°F		-15°F		-20°F		-25°F		-30°F		-35°F		-40°F	
UNIT MODEL	COMP. MODEL	NO. OF FANS	OUTSIDE AMB.	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW	NET MBH	KW
KBD9L2 * 23B	3DF-0900	2	95 105	71.8 66.2	9.5 9.9	55.2 50.6	8.4 8.7	48.0 43.7	7.8 8.1	41.4 37.3	7.3 7.5	35.3 31.6	6.7 6.9	29.9 26.5	6.2 6.4	25.0 22.0	5.7 5.9	20.6 18.1	5.3 5.4
KBD10L2 * 23B	3DS-1000	2	95 105	77.4 71.6	10.5 11.1	59.8 54.8	9.2 9.6	52.0 47.5	8.6 9.0	45.0 40.9	8.0 8.3	38.5 34.8	7.5 7.7	32.6 29.4	6.9 7.2	27.3 24.4	6.4 6.6	22.5 20.1	5.9 6.1
KBD13L2 * 23B	4DA-1000	2	95 105	84.7 77.9	11.7 12.4	64.6 58.6	10.2 10.7	55.8 50.2	9.5 9.9	47.6 42.4	8.8 9.0	40.2 35.3	8.1 8.2	33.4 28.7	7.3 7.4	27.1 22.8	6.5 6.5	21.3 17.3	5.7 5.5
KBD15L2 * 33E	4DL-1500	3	95 105	107.1 99.0	14.9 15.8	83.3 76.2	13.1 13.8	72.7 65.7	12.3 12.9	63.0 56.4	11.4 11.9	53.7 48.0	10.6 11.0	45.6 40.2	9.8 10.1	38.1 33.2	9.0 9.2	31.1 26.6	8.2 8.3
KBD22L2 * 33E	4DF-2200	3	95 105	126.1 116.7	17.7 18.7	96.7 89.0	15.4 16.3	84.2 78.2	14.5 15.2	73.9 67.2	13.6 14.2	63.8 58.5	12.7 13.2	54.9 50.0	11.8 12.2	46.3 41.8	10.8 11.1	37.6 33.4	9.7 9.9
KBD27L2 * 43F	6DL-2700	4	95 105	155.2 144.1	21.8 23.1	123.0 113.6	18.9 20.1	107.8 99.1	17.8 18.8	93.9 85.3	16.6 17.4	80.6 73.0	15.4 16.1	68.6 61.5	14.2 14.7	57.3 50.5	12.9 13.2	46.1 39.8	11.5 11.6
KBD30L2 * 44F	6DT-3000	4	95 105	189.1 174.7	26.6 28.2	145.5 134.1	23.5 24.9	127.4 117.3	22.1 23.2	111.2 102.2	20.6 21.6	96.5 87.8	19.2 20.0	82.2 75.1	17.7 18.4	69.3 62.9	16.2 16.7	56.3 50.5	14.7 15.0

Ratings include "Demand Cooling"™

\*Insert voltage code from model key

# ELECTRICAL AND PHYSICAL DATA

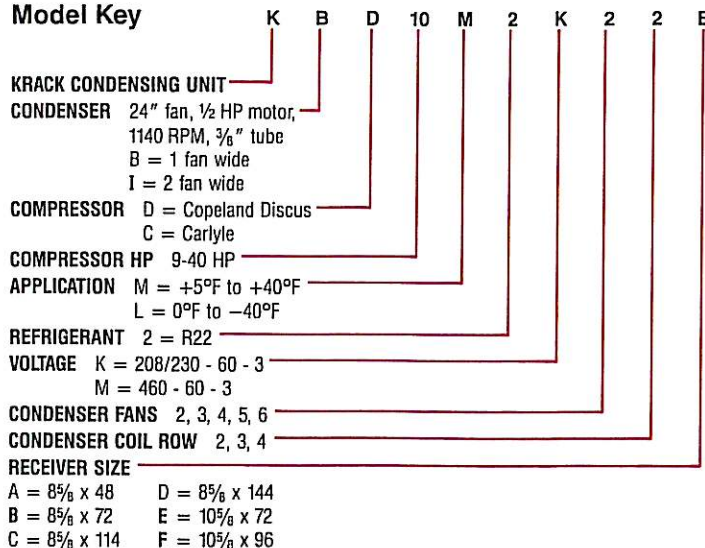


R-22 MEDIUM TEMPERATURE UNITS 95° AMB. +20° EVAP. 208-230/3/60							CONNECTIONS		STD. RECEIVER		
KRACK UNIT MODEL NO.	O.A. LENGTH	COP. COMP. MODEL NO.	NET MBH	COMP. RLA	FAN AMPS	UNIT** AMPACITY	LIQUID O.D.	SUCT. O.D.	DIA. LENGTH	LBS. OF R-22*	UNIT SHIP WEIGHT
KBD10M2*22B	118.5	3DB-1000	94.1	43.6	5.2	51	7/8	1 1/8			1275
KBD12M2*23B	118.5	3DF-1000	109.9	48.2	5.2	56	7/8	1 1/8	8 5/8 x 72	125	1300
KBD15M2*23B	118.5	3DS-1500	125.7	59.6	5.2	67	7/8	1 1/8			1600
KBD20M2*24E	118.5	4DA-2000	133.3	66.6	5.2	74	1 1/8	2 1/8			2000
KBD25M2*33E	154.5	4DH-2500	172.0	82.2	7.8	93	1 1/8	2 1/8	10 3/4 x 72	192	2350
KBD30M2*34E	154.3	4DJ-3000	203.2	94.0	7.8	105	1 1/8	2 1/8			2475
KBD35M2*44F	190.5	6DG-3500	275.1	125.0	10.4	138	1 1/8	2 5/8	10 3/4 x 96	258	2925
KBD40M2*44F	190.5	6DJ-4000	304.3	141.0	10.4	154	1 3/8	2 5/8			3300

R-22 LOW TEMPERATURE UNITS 95° AMB. -20° EVAP. 208-230/3/60							CONNECTIONS		STD. RECEIVER		
KRACK UNIT MODEL NO.	O.A. LENGTH	COP. COMP. MODEL NO.	NET MBH	COMP. RLA	FAN AMPS	UNIT** AMPACITY	LIQUID O.D.	SUCT. O.D.	DIA. LENGTH	LBS. OF R-22*	UNIT SHIP WEIGHT
KBD9L2*23B	118.5	3DF-0900	41.4	39.0	5.2	47	5/8	1 1/8			950
KBD10L2*23B	118.5	3DS-1000	45.0	42.0	5.2	50	7/8	1 1/8	8 5/8 x 72	125	1075
KBD13L2*23B	118.5	4DA-1000	47.6	42.0	5.2	50	7/8	2 1/8			1350
KBD15L2*33E	154.5	4DL-1500	63.0	52.6	7.8	62	7/8	2 1/8	10 3/4 x 72	192	1575
KBD22L2*33E	154.5	4DT-2200	73.9	66.0	7.8	77	1 1/8	2 1/8			2275
KBD27L2*43F	190.5	6DL-2700	93.9	80.8	10.4	93	1 1/8	2 5/8	10 3/4 x 96	258	2375
KBD30L2*44F	190.5	6DT-3000	111.2	95.6	10.4	109	1 1/8	2 5/8			2525

FOR 440-460/3/60 POWER, MULT. ELECT. INFO BY .5  
 \*WHEN FILLED TO 80% CAPACITY.  
 \*\*DOES NOT INCLUDE ELECT. DEFROST POWER.

## Model Key



# APPLICATION GUIDELINES

## Roof Mounting

Unit should be mounted so vertical air discharge is not obstructed. Three feet clearance on all sides for service is recommended. The unit should be securely attached to a level supporting framework.

## Ground Mounting

The unit should be set on a level concrete pad. Three feet clearance on all sides for service is recommended. Liquid-suction heat exchangers are required at the bottom of the vertical risers. Liquid risers outside the refrigerated space should be insulated. For vertical rise in excess of 30 feet, consult factory.

## Liquid Solenoid Valve

Liquid solenoid valves are required at each evaporator. Solenoid valves should not be located at the condensing unit liquid outlet.

## Piping

Refrigerant piping should be installed following good piping practices and in accordance with existing piping codes. Care should be taken to avoid hydraulic lock-up. Suction lines must be sized for proper oil return.

## Special Applications

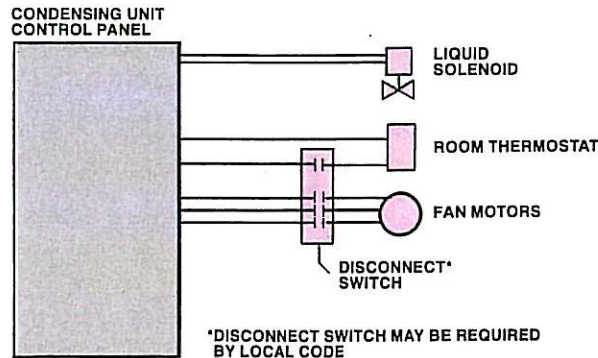
Factory approval must be requested for applications using flooded evaporator liquid feeds, ice makers, ice builders, various dairy processing equipment, i.e. which may require oversized receivers, remote start-stop control, and special oil return provisions.

## MATCHED SYSTEMS CONSIST OF THE FOLLOWING COMPONENTS:

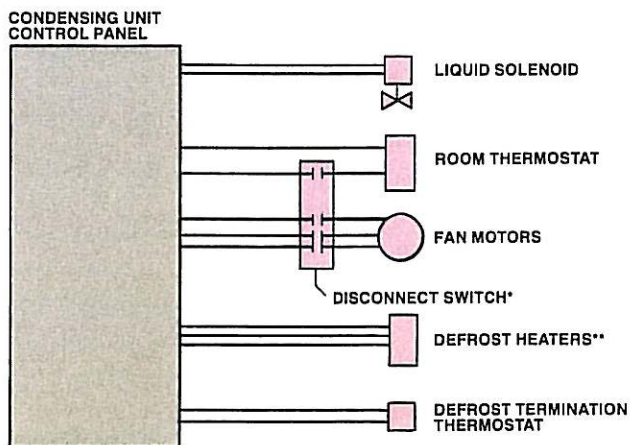
- Condensing Unit
- Unit Cooler
- Defrost Controls
- Thermostatic Expansion Valve
- Liquid Solenoid Valve
- Liquid Suction Heat Exchanger
- Room Thermostat

The diagrams below show typical air defrost and electric defrost field wiring requirements.

AIR DEFROST WITH SINGLE EVAPORATOR



ELECTRIC DEFROST WITH SINGLE EVAPORATOR



\*\*MAXIMUM CURRENT DRAW IS 48 AMPS. ABOVE 48 AMPS CONSULT FACTORY.



**Krack Corporation**

401 S. Rohlwing Road (Route 53) • Addison, Illinois 60101  
 Phone: (708) 629-7500  
 Fax: (708) 629-0168