



---

# MK/MV Series

PRODUCT COOLERS

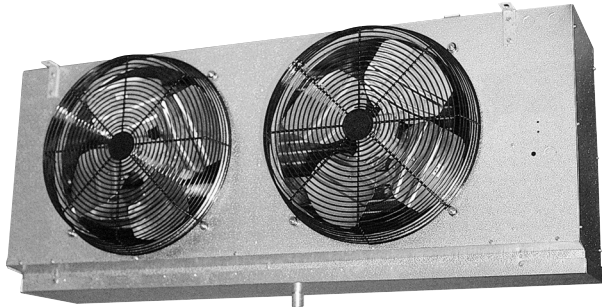
Technical Bulletin



---

Products that provide lasting solutions.

# MK/MV Series Unit Coolers



*Medium Profile Unit Coolers for  
Medium Size Coolers and Freezers*

## **MK SERIES –**

**Designed for rooms that need lower velocity air-flow to avoid throwing water, or require less air volume.**

### **Standard Features**

- Ruggedly constructed cabinets are easily installed from ceilings or on hanger rods.
- Wide capacity range.
- Air defrost for medium temperature rooms.
- Electric or Hot Gas defrost for medium and low temperature rooms.
- 4, 6, and 8 fins per inch spacing.
- Aluminum drain pan and cabinet.
- Coated, corrosion-proof wire fan guards.
- Compartmented fan sections.
- Totally enclosed, lifetime lubricated PSC motors.
- Schraeder valve for easy super heat adjustment.

### **Optional Features**

- Fan motors available with 115V, 230V or 460V single-phase.
- 2, 3, and 4 fan units may be wired for three-phase.
- Electric defrost heater available in 230V single or three-phase and 460V three-phase.
- EC motors.

### **Optional Accessories**

- Long Air-Throw Adapters\*
- Room Thermostat\*
- TEV Thermostatic Expansion Valve\*\*
- Defrost Time Clock\*
- LLSV Liquid Line Solenoid Valve\*
- SLHX Suction Liquid Heat Exchanger\*

\* Shipped Loose

\*\* Factory Mounted or Shipped Loose

## **MV SERIES –**

**Specially designed to deliver low temperature air at extra-high velocity.**

### **Standard Features**

- Ruggedly constructed cabinets are easily installed from ceilings or on hanger rods.
- Wide capacity range.
- Electric defrost for low temperature rooms.
- 4 and 6 fins per inch spacing.
- Aluminum drain pan and cabinet.
- Coated, corrosion-proof wire fan guards.
- Compartmented fan sections.
- Totally enclosed, lifetime lubricated PSC motors.
- Schraeder valve for easy super heat adjustment.

### **Optional Features**

- Fan motors available with 115V, 230V or 460V single-phase.
- 2, 3, and 4 fan units may be wired for three-phase.
- Electric defrost heater available in 230V single or three-phase and 460V three-phase.

### **Optional Accessories**

- Long Air-Throw Adapters\*
- Room Thermostat\*
- TEV Thermostatic Expansion Valve\*\*
- Defrost Time Clock\*
- LLSV Liquid Line Solenoid Valve\*
- SLHX Suction Liquid Heat Exchanger\*
- EC motors.

\* Shipped Loose

\*\* Factory Mounted or Shipped Loose



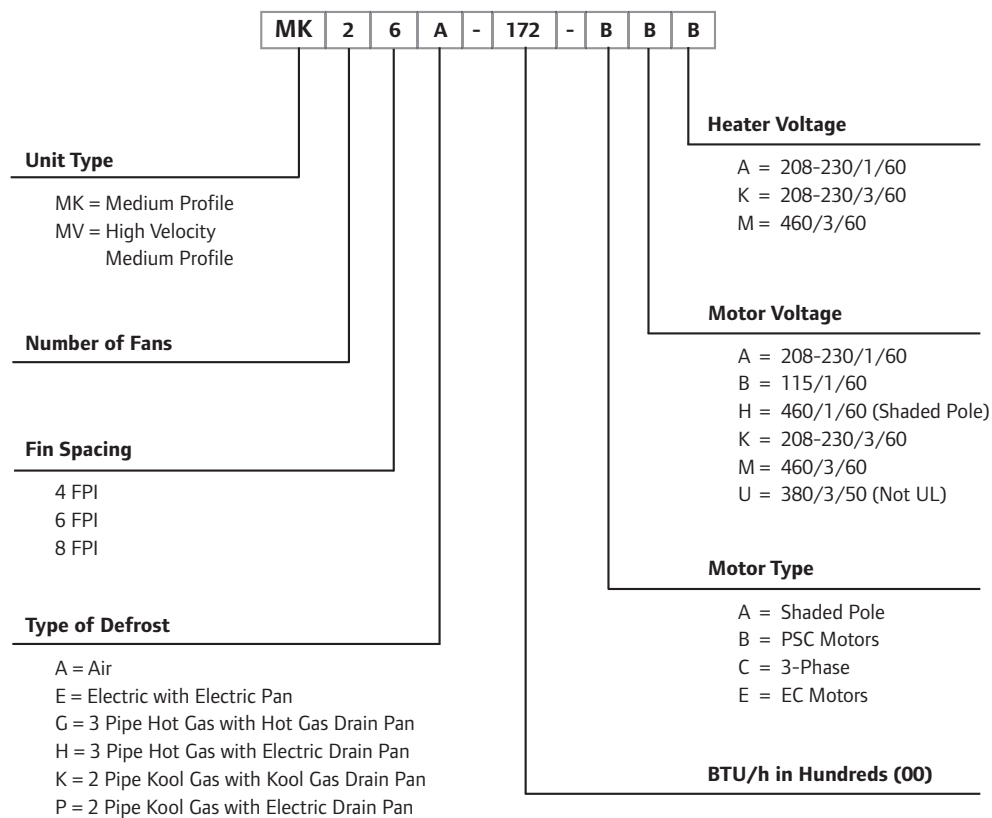
# MK/MV Series Unit Coolers

## Ordering Information

### Specify When Ordering All Models

- Complete model number.
- Refrigerant R22, R404A, or R507.
- Room temperature.
- Saturated suction temperature.
- Electric service; Motors-Heaters-Control.
- Optional features.
- Optional accessories.

## Model Key



# MK/MV Series Unit Coolers

## Air Defrost Medium Profile

### MEDIUM TEMPERATURE

MODEL	CAPACITY (BTUH)		AIR FLOW (CFM)	REFRIGERATION CONNECTIONS 10°F TD @ +25°F SST			DIMENSIONS (IN)			SHIPPING WGT. (LBS)
	@ 10° TD	@ 15° TD		LIQUID ODS	SUCTION ODS	REFRIG CHARGE (LBS)	L	W	H	
MK14A-68	6,800	10,200	3,245	1/2	7/8	2	38.00	19.00	26.75	115
MK14A-94	9,400	14,100	3,060	1/2	7/8	3	38.00	19.00	26.75	125
MK14A-121	12,100	18,150	2,960	1/2	7/8	4	38.00	19.00	26.75	130
MK16A-86	8,600	12,900	2,985	1/2	7/8	2	38.00	19.00	26.75	115
MK16A-118	11,800	17,700	2,815	1/2	7/8	3	38.00	19.00	26.75	125
MK16A-145	14,500	21,750	2,725	1/2	1-1/8	4	38.00	19.00	26.75	130
MK18A-98	9,800	14,700	2,860	1/2	7/8	2	38.00	19.00	26.75	115
MK18A-133	13,300	19,950	2,710	1/2	7/8	3	38.00	19.00	26.75	125
MK18A-160	16,000	24,000	2,625	1/2	1-1/8	4	38.00	19.00	26.75	130
MK24A-188	18,800	28,200	6,120	1/2	1-1/8	5	63.00	19.00	26.75	225
MK24A-242	24,200	36,300	5,920	1/2	1-1/8	6	63.00	19.00	26.75	240
MK26A-172	17,200	25,800	5,970	1/2	1-1/8	4	63.00	19.00	26.75	215
MK26A-236	23,600	35,400	5,630	1/2	1-1/8	5	63.00	19.00	26.75	225
MK26A-290	29,000	43,500	5,450	1/2	1-5/8	6	63.00	19.00	26.75	240
MK28A-196	19,600	29,400	5,720	1/2	1-1/8	4	63.00	19.00	26.75	215
MK28A-266	26,600	39,900	5,420	1/2	1-5/8	5	63.00	19.00	26.75	225
MK28A-320	32,000	48,000	5,250	5/8	1-5/8	6	63.00	19.00	26.75	240
MK34A-363	36,300	54,450	8,880	5/8	1-5/8	8	92.00	19.00	26.75	350
MK36A-354	35,400	53,100	8,445	5/8	1-5/8	7	92.00	19.00	26.75	330
MK36A-435	43,500	65,250	8,175	5/8	1-5/8	8	92.00	19.00	26.75	350
MK38A-393	39,300	58,950	8,130	5/8	1-5/8	7	92.00	19.00	26.75	330
MK38A-480	48,000	72,000	7,875	5/8	1-5/8	8	92.00	19.00	26.75	350
MK44A-484	48,400	72,600	11,840	5/8	1-5/8	11	119.00	19.00	26.75	470
MK46A-580	58,000	87,000	10,900	5/8	1-5/8	11	119.00	19.00	26.75	470
MK48A-640	64,000	96,000	10,500	5/8	1-5/8	11	119.00	19.00	26.75	470

Capacity Ratings are based on sensible heat removal with a TEV fed, medium frosted coil when:

- SST (saturated suction temp.) is above -20°F. Derate 10% for -30°F SST.
- TEV superheat does not exceed 10°F above SST.
- Medium temp. selection – use 10 to 15°F TD. Low temp. selection – use 8 to 12°F TD. (TD is the temp. difference between room and SST.)
- Fan motor heat is not included in ratings – add 940 BTUH per fan to room load for MK units, or 1640 BTUH per fan to room load for MV units.
- Derate 12% for 50 Hertz (0.88 multiplier) or increase TD to compensate for lower fan RPM – use 11.4°F for 10°F TD or 13.6°F for 12°F for TD.

# MK/MV Series Unit Coolers

## Electric Defrost Medium Profile

MEDIUM / LOW TEMPERATURE										
MODEL	CAPACITY (BTUH) @ 10° TD		AIR FLOW (CFM)	REFRIGERATION CONNECTIONS 10°F TD @ +25°F SST			DIMENSIONS (IN)			SHIPPING WGT. (LBS)
	-20 SST	+20 SST		LIQUID ODS	SUCTION ODS	REFRIG CHARGE (LBS)	L	W	H	
MK14E-60	6,000	6,800	3,245	1/2	1-1/8	2	38.00	19.00	26.75	115
MK14E-82	8,200	9,400	3,060	1/2	1-1/8	3	38.00	19.00	26.75	125
MK14E-105	10,500	12,100	2,960	1/2	1-1/8	4	38.00	19.00	26.75	130
MK16E-76	7,600	8,600	2,985	1/2	1-1/8	2	38.00	19.00	26.75	115
MK16E-103	10,300	11,800	2,815	1/2	1-1/8	3	38.00	19.00	26.75	125
MK16E-127	12,700	14,500	2,725	1/2	1-1/8	4	38.00	19.00	26.75	130
MK24E-120	12,000	13,600	6,490	5/8	1-5/8	4	63.00	19.00	26.75	215
MK24E-164	16,400	18,800	6,120	5/8	1-5/8	5	63.00	19.00	26.75	225
MK24E-210	21,000	24,200	5,920	5/8	1-5/8	6	63.00	19.00	26.75	240
MK26E-152	15,200	17,200	5,970	5/8	1-5/8	4	63.00	19.00	26.75	215
MK26E-206	20,600	23,600	5,630	5/8	1-5/8	5	63.00	19.00	26.75	225
MK26E-254	25,400	29,000	5,450	5/8	1-5/8	6	63.00	19.00	26.75	240
MK34E-246	24,600	28,200	9,180	7/8	1-5/8	7	92.00	19.00	26.75	330
MK34E-315	31,500	36,300	8,880	7/8	2-1/8	8	92.00	19.00	26.75	350
MK36E-309	30,900	35,400	8,445	7/8	1-5/8	7	92.00	19.00	26.75	330
MK36E-381	38,100	43,500	8,175	7/8	2-1/8	8	92.00	19.00	26.75	350
MK44E-420	42,000	48,400	11,840	7/8	2-1/8	11	119.00	19.00	26.75	470
MK46E-508	50,800	58,000	10,900	7/8	2-1/8	11	119.00	19.00	26.75	470

### Low Temperature – Below +30°F Extra High Velocity

MV14E-73	7,300	N/A	4,790	1/2	1-1/8	2	38.00	19.00	26.75	115
MV14E-100	10,000	N/A	4,300	1/2	1-5/8	3	38.00	19.00	26.75	125
MV14E-128	12,800	N/A	4,130	1/2	1-5/8	3	38.00	19.00	26.75	130
MV16E-93	9,300	N/A	4,405	1/2	1-1/8	2	38.00	19.00	26.75	115
MV16E-126	12,600	N/A	3,955	1/2	1-5/8	3	38.00	19.00	26.75	125
MV16E-155	15,500	N/A	3,800	1/2	1-5/8	3	38.00	19.00	26.75	130
MV24E-146	14,600	N/A	9,580	5/8	1-5/8	3	63.00	19.00	26.75	215
MV24E-200	20,000	N/A	8,600	5/8	1-5/8	4	63.00	19.00	26.75	225
MV24E-256	25,600	N/A	8,260	5/8	1-5/8	6	63.00	19.00	26.75	240
MV26E-186	18,600	N/A	8,810	5/8	1-5/8	3	63.00	19.00	26.75	215
MV26E-252	25,200	N/A	7,910	5/8	1-5/8	4	63.00	19.00	26.75	225
MV26E-310	31,000	N/A	7,600	5/8	1-5/8	6	63.00	19.00	26.75	240
MV34E-300	30,000	N/A	12,900	7/8	1-5/8	6	92.00	19.00	26.75	330
MV34E-384	38,400	N/A	12,390	7/8	2-1/8	8	92.00	19.00	26.75	350
MV36E-378	37,800	N/A	11,865	7/8	1-5/8	6	92.00	19.00	26.75	330
MV36E-465	46,500	N/A	11,400	7/8	2-1/8	8	92.00	19.00	26.75	350
MV44E-512	51,200	N/A	16,520	7/8	2-1/8	10	119.00	19.00	26.75	470
MV46E-620	62,000	N/A	15,200	7/8	2-1/8	10	119.00	19.00	26.75	470

# MK/MV Series Unit Coolers

## Electric or Hot Gas Defrost Medium Profile

### LOW / MEDIUM TEMPERATURE

MODEL	CAPACITY (BTUH) @ 10° TD		AIR FLOW (CFM)	REFRIGERATION CONNECTIONS 10°F TD @ +25°F SST				DIMENSIONS (IN)			SHIPPING WGT. (LBS)
	-20 SST	+20 SST		LIQUID ODS	SUCTION ODS	KG-HG-TEE ODS	REFRIG CHARGE (LBS)	L	W	H	
MK14( )-60	6,000	6,800	3,245	1/2	1-1/8	1/2	2	38.00	19.00	26.75	115
MK14( )-82	8,200	9,400	3,060	1/2	1-1/8	1/2	3	38.00	19.00	26.75	125
MK14( )-105	10,500	12,100	2,960	1/2	1-1/8	1/2	4	38.00	19.00	26.75	130
MK16( )-76	7,600	8,600	2,985	1/2	1-1/8	1/2	2	38.00	19.00	26.75	115
MK16( )-103	10,300	11,800	2,815	1/2	1-1/8	1/2	3	38.00	19.00	26.75	125
MK16( )-127	12,700	14,500	2,725	1/2	1-1/8	1/2	4	38.00	19.00	26.75	130
MK24( )-120	12,000	13,600	6,490	5/8	1-5/8	5/8	4	63.00	19.00	26.75	215
MK24( )-164	16,400	18,800	6,120	5/8	1-5/8	5/8	5	63.00	19.00	26.75	225
MK24( )-210	21,000	24,200	5,920	5/8	1-5/8	5/8	6	63.00	19.00	26.75	240
MK26( )-152	15,200	17,200	5,970	5/8	1-5/8	5/8	4	63.00	19.00	26.75	215
MK26( )-206	20,600	23,600	5,630	5/8	1-5/8	5/8	5	63.00	19.00	26.75	225
MK26( )-254	25,400	29,000	5,450	5/8	1-5/8	5/8	6	63.00	19.00	26.75	240
MK34( )-246	24,600	28,200	9,180	7/8	1-5/8	7/8	7	92.00	19.00	26.75	330
MK34( )-315	31,500	36,300	8,880	7/8	2-1/8	7/8	8	92.00	19.00	26.75	350
MK36( )-309	30,900	35,400	8,445	7/8	1-5/8	7/8	7	92.00	19.00	26.75	330
MK36( )-381	38,100	43,500	8,175	7/8	2-1/8	7/8	8	92.00	19.00	26.75	350
MK44( )-420	42,000	48,400	11,840	7/8	2-1/8	7/8	11	119.00	19.00	26.75	470
MK46( )-508	50,800	58,000	10,900	7/8	2-1/8	7/8	11	119.00	19.00	26.75	470

\*Available Types of Defrost: (K) KGG - 2 Pipe Kool Gas with Kool Gas Pan, (H) HGE - 3 Pipe Hot Gas with Electric Pan, (G) HGG - 3 Pipe Hot Gas with Hot Gas Pan, (P) KGE - 2 Pipe Kool Gas with Electric Pan

## Electric Data

### MK MOTOR OPTIONS

PSC STANDARD MOTOR						EC MOTOR				SHADED POLE			
115/1		230/1		230/3*		115/1		230/1		460/1		460/3*	
AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
<b>1 Fan</b>													
3.2	193	1.6	202	-	-	1.9	137	1.1	129	0.9	205	-	-
<b>2 Fan</b>													
6.4	385	3.2	404	2.8	404	3.7	273	2.1	257	1.8	410	1.6	410
<b>3 Fan</b>													
9.6	528	4.8	607	2.8	607	5.6	410	3.2	386	2.7	615	1.6	615
<b>4 Fan</b>													
12.8	770	6.4	809	4.2	809	7.4	546	4.2	514	3.6	820	2.4	820

### MV MOTOR OPTIONS

<b>1 Fan</b>													
4.2	414	3.0	417	-	-	4.5	359	2.5	353	1.5	430	-	-
<b>2 Fan</b>													
8.5	827	6.0	833	5.2	833	9.0	717	5.0	707	3.0	860	2.6	860
<b>3 Fan</b>													
12.7	1241	9.0	1250	5.2	1250	13.5	1076	7.5	1060	4.5	1290	2.6	1290
<b>4 Fan</b>													
16.9	1655	12.0	1666	7.9	1666	18.0	1434	10.1	1414	5.0	1720	4.0	1720

NOTE: 3-Phase options are single phase motors wired for 3-phase operation.

# MK/MV Series Unit Coolers

## Electric/Hot Gas Defrost Heater Data

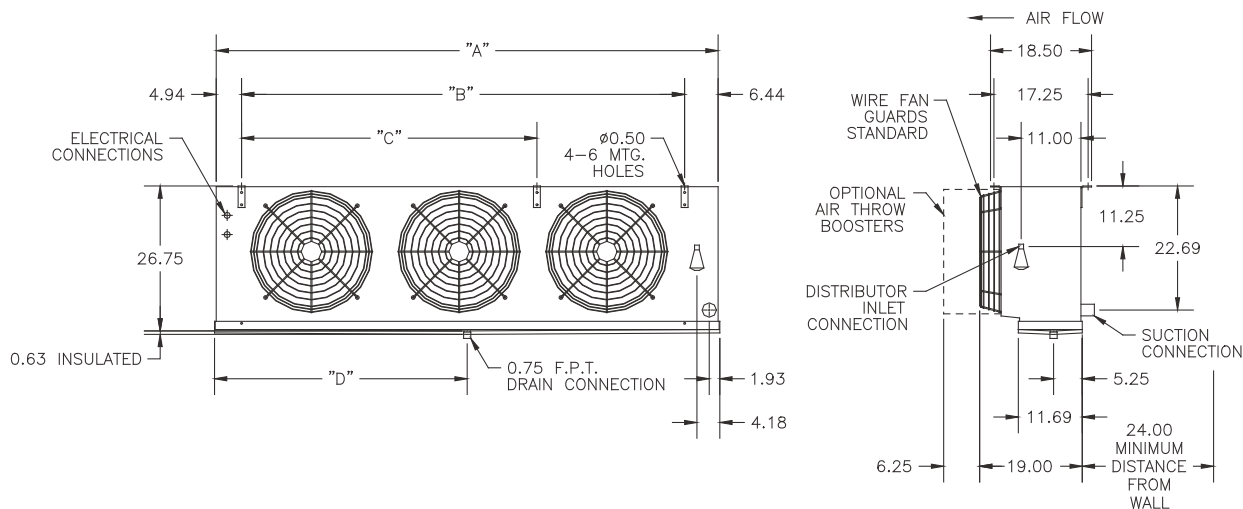
LOW / MEDIUM TEMPERATURE								
MODEL	EDL HEATER AMPS (E)			EDL HEATER WATTS (E)		KGE-HGE DRAIN PAN (H,P)		
	230/1*	230/3*	460/3*	230V*	460V*	AMPS		
						115/1	230/1*	WATTS*
MK14( )-60	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK14( )-82	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK14( )-105	12.6	7.5	4.2	2,900	2,900	4.3	2.2	500
MK16( )-76	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK16( )-103	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK16( )-127	12.6	7.5	4.2	2,900	2,900	4.3	2.2	500
MK24( )-120	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK24( )-164	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK24( )-210	24.3	14.3	7.6	5,600	5,600	7.0	3.5	800
MK26( )-152	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK26( )-206	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK26( )-254	24.3	14.3	7.6	5,600	5,600	7.0	3.5	800
MK34( )-246	28.7	18.3	7.9	6,600	5,700	10.4	5.2	1,200
MK34( )-315	36.5	21.5	11.3	8,400	8,400	10.4	5.2	1,200
MK36( )-309	28.7	18.3	7.9	6,600	5,700	10.4	5.2	1,200
MK36( )-381	36.5	21.5	11.3	8,400	8,400	10.4	5.2	1,200
MK44( )-420	47.8	27.9	14.4	11,000	11,000	12.2	6.1	1,400
MK46( )-508	47.8	27.9	14.4	11,000	11,000	12.2	6.1	1,400

LOW TEMPERATURE					
MODEL	EDL HEATER AMPS (E)			EDL HEATER WATTS (E)	
	230/1*	230/3*	460/3*	230V*	460V*
MV14E-73	10.0	6.5	3.0	2,300	2,000
MV14E-100	10.0	6.5	3.0	2,300	2,000
MV14E-128	12.6	7.5	4.2	2,900	2,900
MV16E-93	10.0	6.5	3.0	2,300	2,000
MV16E-126	10.0	6.5	3.0	2,300	2,000
MV16E-155	12.6	7.5	4.2	2,900	2,900
MV24E-146	19.1	12.2	5.3	4,400	3,800
MV24E-200	19.1	12.2	5.3	4,400	3,800
MV24E-256	24.3	14.3	7.6	5,600	5,600
MV26E-186	19.1	12.2	5.3	4,400	3,800
MV26E-252	19.1	12.2	5.3	4,400	3,800
MV26E-310	24.3	14.3	7.6	5,600	5,600
MV34E-300	28.7	18.3	7.9	6,600	5,700
MV34E-384	36.5	21.5	11.3	8,400	8,400
MV36E-378	28.7	18.3	7.9	6,600	5,700
MV36E-465	36.5	21.5	11.3	8,400	8,400
MV44E-512	47.8	27.9	14.4	11,000	11,000
MV46E-620	47.8	27.9	14.4	11,000	11,000

*CORRECTION FACTOR			
POWER	240/480	208	220/440
WATTAGE	1.09	0.82	0.91
AMPERAGE	1.04	0.90	0.96

# MK/MV Series Unit Coolers

## Dimensional Data



**NOTE:** Unit should be located a minimum of 24" from walls for best results.

Optional air throw booster(s) produce:

60 ft. air throw (MK)

75 ft. air throw (MV)

### UNIT DIMENSIONS

SIZE	A	B	C	D
1 FAN	38.375	27.000	—	19.188
2 FAN	63.375	54.000	—	32.688
3 FAN	92.375	81.000	54.000	46.188
4 FAN	119.375	108.000	54.000	59.688

Note: Dimensions in inches.

## Common Replacement Parts

### MK SERIES

PART	PART #
MOTOR 115/230V	4410137
MOTOR 460V	4410156
FAN BLADE	4780316
FAN GUARD	4914790
AIR BOOSTER	4968156
EC MOTOR 115V	4410725
EC MOTOR 230V	4410726

### MV SERIES

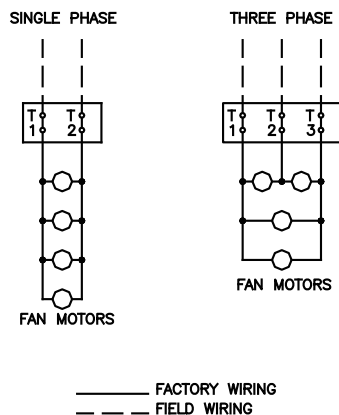
PART	PART #
MOTOR 115/230V	4410166
MOTOR 460V	4410167
FAN BLADE	4780317
FAN GUARD	4914790
AIR BOOSTER	4968156
MOTOR 115/230V	4410725
MOTOR 460V	4410726



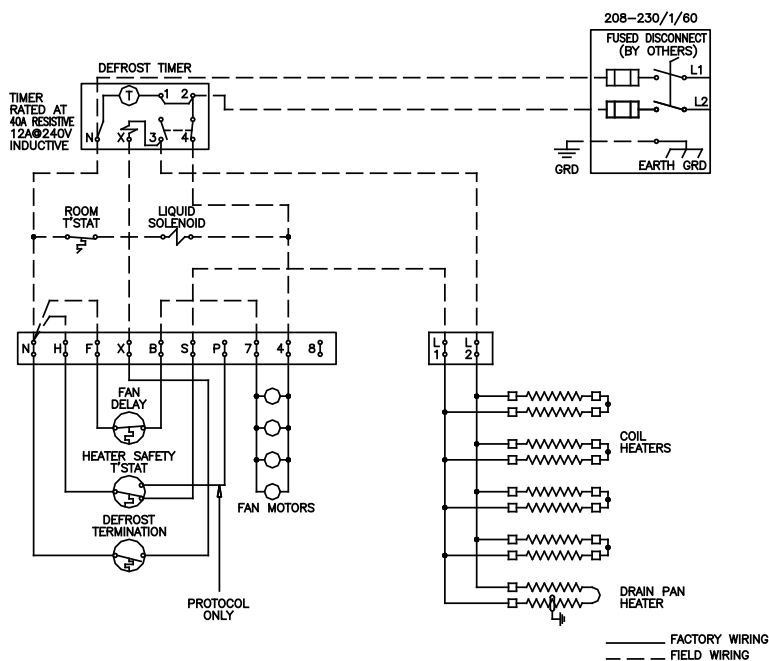
# MK/MV Series Unit Coolers

## Wiring Diagrams

### AIR DEFROST WIRING



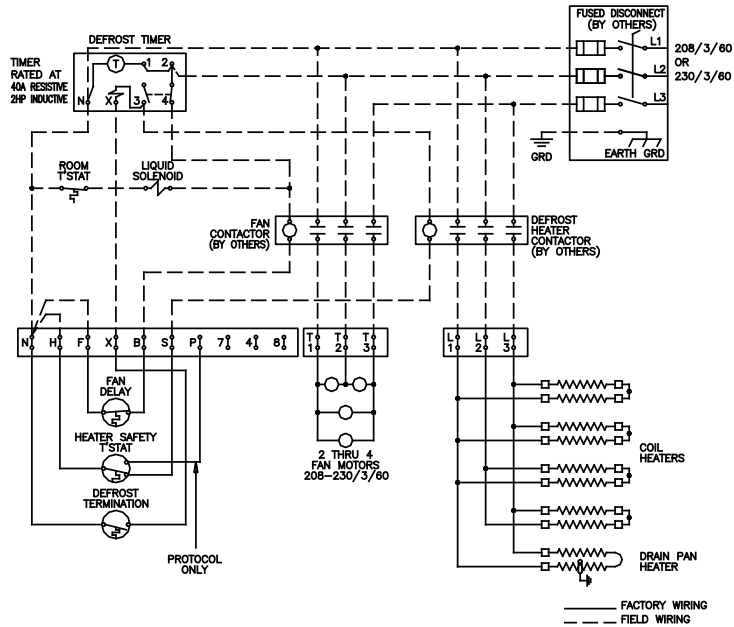
### ELECTRIC DEFROST WIRING 208-230/1/60



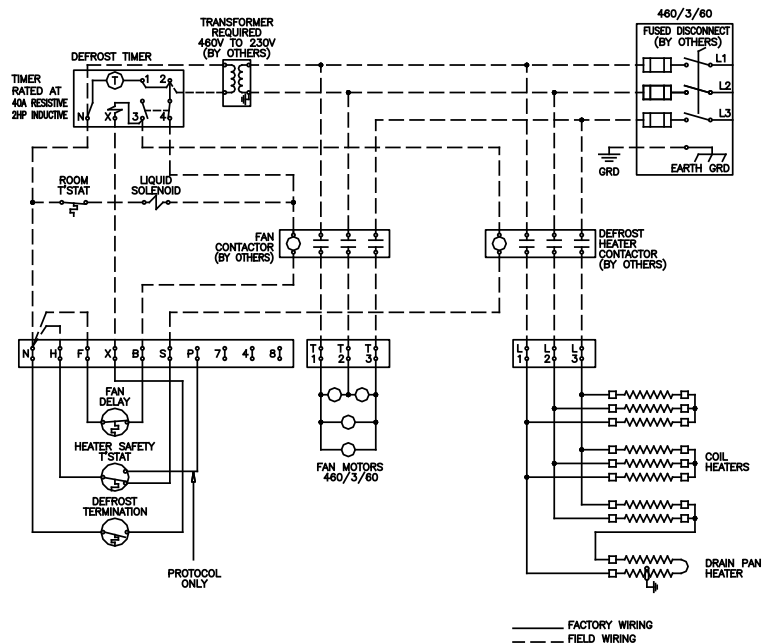
# MK/MV Series Unit Coolers

## Wiring Diagrams

### ELECTRIC DEFROST WIRING 208-230/3/60



### ELECTRIC DEFROST WIRING 208-230/3/60





**Krack Corporation**

1300 North Arlington Heights Rd., Suite 130  
Itasca, IL 60143  
Ph: 630.629.7500

[krack.com](http://krack.com)