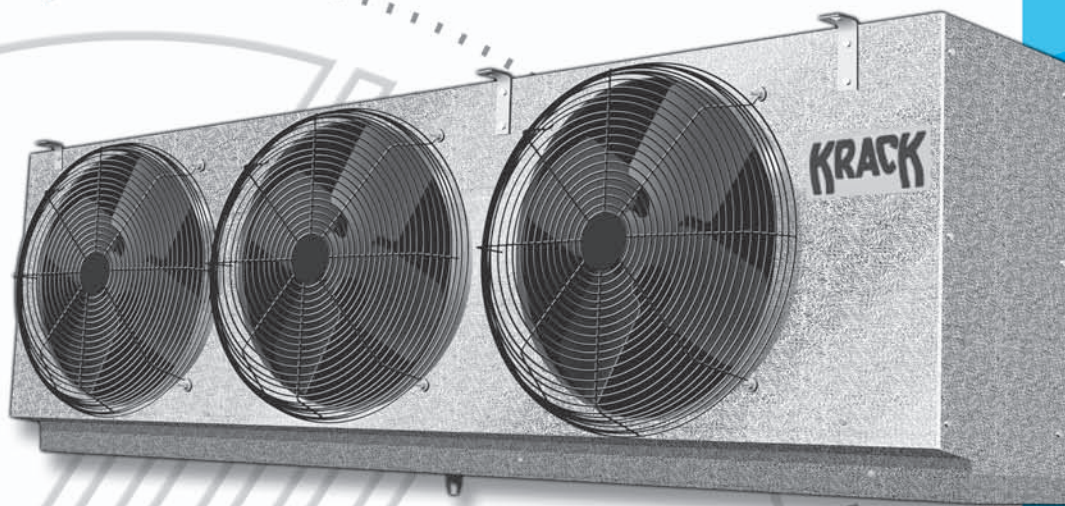


MK/MV SERIES UNIT COOLERS

Technical Data



MK – Medium Profile units
for medium size coolers and freezers

MV – Medium Profile high velocity units
for medium size freezers - low temperature only

BULLETIN: MKMV-0205
SUPERCEDES: MKMV-0901



An **IR** Ingersoll-Rand business
Proven source. Proven solutions.

MK/MV SERIES UNIT COOLERS

Medium Profile unit coolers for medium size Coolers and Freezers

MK SERIES

APPLICATION

- 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.

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

APPLICATION

- The MV Series units are 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.

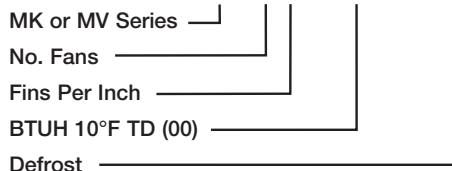
OPTIONAL ACCESSORIES

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

* Shipped Loose

**Factory Mounted or Shipped Loose

MODEL KEY MK-26-152 EDL



A - Air Defrost (MK Only)

EDL - Electric Defrost Coil and Pan

KGE - 2 Pipe Hot Gas Coil, Electric Drain Pan

HGE - 3 Pipe Hot Gas Coil, Electric Drain Pan

KGG - 2 Pipe Hot Gas Drain Pan

HGG - 3 Pipe Gas Drain Pan

SPECIFY WHEN ORDERING

- Complete Model Number
- Refrigerant R22, R404a, or R507
- Room Temperature
- Saturated Suction Temperature
- Electric Service; Motors-Heaters-Control
- Optional Features
- Accessories

MK SERIES UNIT COOLERS

CAPACITY and ELECTRICAL DATA

MK Series – Medium Temperature Room – Air Defrost

MODEL	CAPACITY - BTUH			FAN MOTOR AMPS				
	10°F TD	15°F TD	CFM	115/1	230/1	230/3	460/1	460/3
4 FINS PER INCH								
MK-14-68	6,800	10,200	3,245	3.2	1.6	n/a	0.9	n/a
MK-14-94	9,400	14,100	3,060	3.2	1.6	n/a	0.9	n/a
MK-14-121	12,100	18,150	2,960	3.2	1.6	n/a	0.9	n/a
MK-24-188	18,800	28,200	6,120	6.4	3.2	2.8	1.8	1.6
MK-24-242	24,200	36,300	5,920	6.4	3.2	2.8	1.8	1.6
MK-34-363	36,300	54,450	8,880	9.6	4.8	2.8	2.7	1.6
MK-44-484	48,400	72,600	11,840	12.8	6.4	4.2	3.6	2.4
6 FINS PER INCH								
MK-16-86	8,600	12,900	2,985	3.2	1.6	n/a	0.9	n/a
MK-16-118	11,800	17,700	2,815	3.2	1.6	n/a	0.9	n/a
MK-16-145	14,500	21,750	2,725	3.2	1.6	n/a	0.9	n/a
MK-26-172	17,200	25,800	5,970	6.4	3.2	2.8	1.8	1.6
MK-26-236	23,600	35,400	5,630	6.4	3.2	2.8	1.8	1.6
MK-26-290	29,000	43,500	5,450	6.4	3.2	2.8	1.8	1.6
MK-36-354	35,400	53,100	8,445	9.6	4.8	2.8	2.7	1.6
MK-36-435	43,500	65,250	8,175	9.6	4.8	2.8	2.7	1.6
MK-46-580	58,000	87,000	10,900	12.8	6.4	4.2	3.6	2.4
8 FINS PER INCH								
MK-18-98	9,800	14,700	2,860	3.2	1.6	n/a	0.9	n/a
MK-18-133	13,300	19,950	2,710	3.2	1.6	n/a	0.9	n/a
MK-18-160	16,000	24,000	2,625	3.2	1.6	n/a	0.9	n/a
MK-28-196	19,600	29,400	5,720	6.4	3.2	2.8	1.8	1.6
MK-28-266	26,600	39,900	5,420	6.4	3.2	2.8	1.8	1.6
MK-28-320	32,000	48,000	5,250	6.4	3.2	2.8	1.8	1.6
MK-38-393	39,300	58,950	8,130	9.6	4.8	2.8	2.7	1.6
MK-38-480	48,000	72,000	7,875	9.6	4.8	2.8	2.7	1.6
MK-48-640	64,000	96,000	10,500	12.8	6.4	4.2	3.6	2.4

NOTE:

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 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.

*CORRECTION FACTOR

Power	240/480	208	220/440
Wattage	1.09	0.82	0.91
Amperage	1.04	0.90	0.96

MK Series – Low Temperature Room – Electric or Hot Gas Defrost

MODEL	CAPACITY BTUH@10°F TD			FAN MOTOR AMPS					EDL HEATER AMPS			EDL HTR WATTS		KGE-HGE DRAIN PAN AMPS		
	-20°F SST	+20°F SST	CFM	115/1	230/1	230/3	460/1	460/3	230/1*	230/3*	460/3*	230V*	460V*	115/1	230/1*	WATTS*
4 FINS PER INCH																
MK-14-60	6,000	6,800	3,245	3.2	1.6	n/a	0.9	n/a	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK-14-82	8,200	9,400	3,060	3.2	1.6	n/a	0.9	n/a	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK-14-105	10,500	12,100	2,960	3.2	1.6	n/a	0.9	n/a	12.6	7.5	4.2	2,900	2,900	4.3	2.2	500
MK-24-120	12,000	13,600	6,490	6.4	3.2	2.8	1.8	1.6	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK-24-164	16,400	18,800	6,120	6.4	3.2	2.8	1.8	1.6	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK-24-210	21,000	24,200	5,920	6.4	3.2	2.8	1.8	1.6	24.3	14.3	7.6	5,600	5,600	7.0	3.5	800
MK-34-246	24,600	28,200	9,180	9.6	4.8	2.8	2.7	1.6	28.7	18.3	7.9	6,600	5,700	10.4	5.2	1,200
MK-34-315	31,500	36,300	8,880	9.6	4.8	2.8	2.7	1.6	36.5	21.5	11.3	8,400	8,400	10.4	5.2	1,200
MK-44-420	42,000	48,400	11,840	12.8	6.4	4.2	3.6	2.4	47.8	27.9	14.4	11,000	11,000	12.2	6.1	1,400
6 FINS PER INCH																
MK-16-76	7,600	8,600	2,985	3.2	1.6	n/a	0.9	n/a	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK-16-103	10,300	11,800	2,815	3.2	1.6	n/a	0.9	n/a	10.0	6.5	3.0	2,300	2,000	4.3	2.2	500
MK-16-127	12,700	14,500	2,725	3.2	1.6	n/a	0.9	n/a	12.6	7.5	4.2	2,900	2,900	4.3	2.2	500
MK-26-152	15,200	17,200	5,970	6.4	3.2	2.8	1.8	1.6	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK-26-206	20,600	23,600	5,630	6.4	3.2	2.8	1.8	1.6	19.1	12.2	5.3	4,400	3,800	7.0	3.5	800
MK-26-254	25,400	29,000	5,450	6.4	3.2	2.8	1.8	1.6	24.3	14.3	7.6	5,600	5,600	7.0	3.5	800
MK-36-309	30,900	35,400	8,445	9.6	4.8	2.8	2.7	1.6	28.7	18.3	7.9	6,600	5,700	10.4	5.2	1,200
MK-36-381	38,100	43,500	8,175	9.6	4.8	2.8	2.7	1.6	36.5	21.5	11.3	8,400	8,400	10.4	5.2	1,200
MK-46-508	50,800	58,000	10,900	12.8	6.4	4.2	3.6	2.4	47.8	27.9	14.4	11,000	11,000	12.2	6.1	1,400

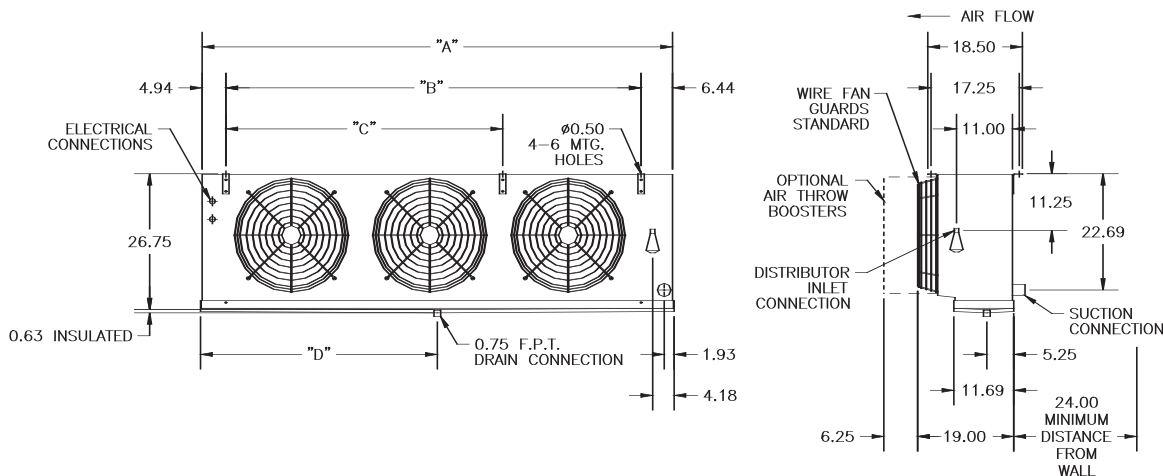
MV SERIES UNIT COOLERS

CAPACITY and ELECTRICAL DATA (Continued)

MV Series – Low Temperature Room – Electric Defrost

MODEL	CAPACITY BTUH@10°F TD -20°F SST	CFM	FAN MOTOR AMPS					EDL HEATER AMPS			EDL HTR WATTS	
			115/1	230/1	230/3	460/1	460/3	230/1*	230/3*	460/3*	230V*	460V*
4 FINS PER INCH												
MV-14-73	7,300	4,790	6.0	3.0	n/a	1.5	n/a	10.0	6.5	3.0	2,300	2,000
MV-14-100	10,000	4,300	6.0	3.0	n/a	1.5	n/a	10.0	6.5	3.0	2,300	2,000
MV-14-128	12,800	4,130	6.0	3.0	n/a	1.5	n/a	12.6	7.5	4.2	2,900	2,900
MV-24-146	14,600	9,580	12.0	6.0	5.2	3.0	2.6	19.1	12.2	5.3	4,400	3,800
MV-24-200	20,000	8,600	12.0	6.0	5.2	3.0	2.6	19.1	12.2	5.3	4,400	3,800
MV-24-256	25,600	8,260	12.0	6.0	5.2	3.0	2.6	24.3	14.3	7.6	5,600	5,600
MV-34-300	30,000	12,900	18.0	9.0	5.2	4.5	2.6	28.7	18.3	7.9	6,600	5,700
MV-34-384	38,400	12,390	18.0	9.0	5.2	4.5	2.6	36.5	21.5	11.3	8,400	8,400
MV-44-512	51,200	16,520	12/12**	12.0	7.9	6.0	4.0	47.8	27.9	14.4	11,000	11,000
6 FINS PER INCH												
MV-16-93	9,300	4,405	6.0	3.0	n/a	1.5	n/a	10.0	6.5	3.0	2,300	2,000
MV-16-126	12,600	3,955	6.0	3.0	n/a	1.5	n/a	10.0	6.5	3.0	2,300	2,000
MV-16-155	15,500	3,800	6.0	3.0	n/a	1.5	n/a	12.6	7.5	4.2	2,900	2,900
MV-26-186	18,600	8,810	12.0	6.0	5.2	3.0	2.6	19.1	12.2	5.3	4,400	3,800
MV-26-252	25,200	7,910	12.0	6.0	5.2	3.0	2.6	19.1	12.2	5.3	4,400	3,800
MV-26-310	31,000	7,600	12.0	6.0	5.2	3.0	2.6	24.3	14.3	7.6	5,600	5,600
MV-36-378	37,800	11,865	18.0	9.0	5.2	4.5	2.6	28.7	18.3	7.9	6,600	5,700
MV-36-465	46,500	11,400	18.0	9.0	5.2	4.5	2.6	36.5	21.5	11.3	8,400	8,400
MV-46-620	62,000	15,200	12/12**	12.0	7.9	6.0	4.0	47.8	27.9	14.4	11,000	11,000

**Total 24



UNIT DIMENSIONS

MODEL	"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: 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)

INSTALLATION DATA

MK Series – Medium Temperature Room – Air Defrost

MODEL	10°F @ +25°SST		KG-HG Tee ODS	Refrig. Charge	Approx. Ship Weight
	LIQ. ODS	SUCT. ODS			
MK-14-68A	1/2	7/8	1/2	2.1	115
MK-14-94A	1/2	7/8	1/2	3.1	125
MK-14-121A	1/2	7/8	1/2	4.1	130
MK-24-188A	1/2	1-1/8	5/8	6.2	225
MK-24-242A	1/2	1-1/8	5/8	8.2	240
MK-34-363A	5/8	1-5/8	7/8	12.3	350
MK-44-484A	5/8	1-5/8	7/8	16.4	470
MK-16-86A	1/2	7/8	1/2	2.1	115
MK-16-118A	1/2	7/8	1/2	3.1	125
MK-16-145A	1/2	1-1/8	1/2	4.1	130
MK-26-172A	1/2	1-1/8	5/8	4.2	215
MK-26-236A	1/2	1-1/8	5/8	6.2	225
MK-26-290A	1/2	1-5/8	5/8	8.2	240
MK-36-354A	5/8	1-5/8	7/8	9.3	330
MK-36-435A	5/8	1-5/8	7/8	12.3	350
MK-46-580A	5/8	1-5/8	7/8	16.4	470
MK-18-98A	1/2	7/8	1/2	2.1	115
MK-18-133A	1/2	7/8	1/2	3.1	125
MK-18-160A	1/2	1-1/8	1/2	4.1	130
MK-28-196A	1/2	1-1/8	5/8	4.2	215
MK-28-266A	1/2	1-5/8	5/8	6.2	225
MK-28-320A	5/8	1-5/8	5/8	8.2	240
MK-38-393A	5/8	1-5/8	7/8	9.3	330
MK-38-480A	5/8	1-5/8	7/8	12.3	350
MK-48-640A	5/8	1-5/8	7/8	16.4	470

MK Series – Low Temperature – Electric or Hot Gas Defrost

MODEL	10°T.D. @ -20°SST		KG-HG Tee ODS	Refrig. Charge	Approx. Ship Weight
	LIQ. ODS	SUCT. ODS			
MK-14-60	1/2	1-1/8	1/2	2.2	115
MK-14-82	1/2	1-1/8	1/2	3.2	125
MK-14-105	1/2	1-1/8	1/2	4.3	130
MK-24-120	5/8	1-5/8	5/8	4.4	215
MK-24-164	5/8	1-5/8	5/8	6.4	225
MK-24-210	5/8	1-5/8	5/8	8.6	240
MK-34-246	7/8	1-5/8	7/8	9.6	330
MK-34-315	7/8	2-1/8	7/8	12.9	350
MK-44-420	7/8	2-1/8	7/8	17.2	470
MK-16-76	1/2	1-1/8	1/2	2.2	115
MK-16-103	1/2	1-1/8	1/2	3.2	125
MK-16-127	1/2	1-1/8	1/2	4.3	130
MK-26-152	5/8	1-5/8	5/8	4.4	215
MK-26-206	5/8	1-5/8	5/8	6.4	225
MK-26-254	5/8	1-5/8	5/8	8.6	240
MK-36-309	7/8	1-5/8	7/8	9.6	330
MK-36-381	7/8	2-1/8	7/8	12.9	350
MK-46-508	7/8	2-1/8	7/8	17.2	470

MK/MV SERIES UNIT COOLERS

INSTALLATION DATA

MV Series – Low Temperature – Electric Defrost

MODEL	10°T.D. @ -20°SST		Refrig. Charge	Approx. Ship Weight
	LIQ. ODS	SUCT. ODS		
MV-14-73 EDL	1/2	1-1/8	2.2	115
MV-14-100 EDL	1/2	1-5/8	3.2	125
MV-14-128 EDL	1/2	1-5/8	4.3	130
MV-24-146 EDL	5/8	1-5/8	4.4	215
MV-24-200 EDL	5/8	1-5/8	6.4	225
MV-24-256 EDL	5/8	1-5/8	8.6	240
MV-34-300 EDL	7/8	1-5/8	9.6	330
MV-34-384 EDL	7/8	2-1/8	12.9	350
MV-44-512 EDL	7/8	2-1/8	17.2	470
MV-16-93 EDL	1/2	1-1/8	2.2	115
MV-16-126 EDL	1/2	1-5/8	3.2	125
MV-16-155 EDL	1/2	1-5/8	4.3	130
MV-26-186 EDL	5/8	1-5/8	4.4	215
MV-26-252 EDL	5/8	1-5/8	6.4	225
MV-26-310 EDL	5/8	1-5/8	8.6	240
MV-36-378 EDL	7/8	1-5/8	9.6	330
MV-36-465 EDL	7/8	2-1/8	12.9	350
MV-40-620 EDL	7/8	2-1/8	17.2	470

COMMON REPLACEMENT PARTS LIST

MK SERIES

PART	PART#
MOTOR 115/230V	11513
MOTOR 460V	11524
FAN BLADE	E205691
FAN GUARD	E205672
AIR BOOSTER	CE105018

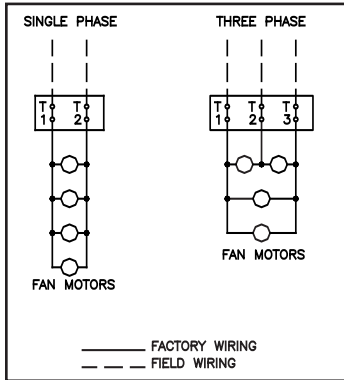
MV SERIES

PART	PART#
MOTOR 115/230V	E205693
MOTOR 460V	E205782
FAN BLADE	E205692
FAN GUARD	E205672
AIR BOOSTER	CE105018

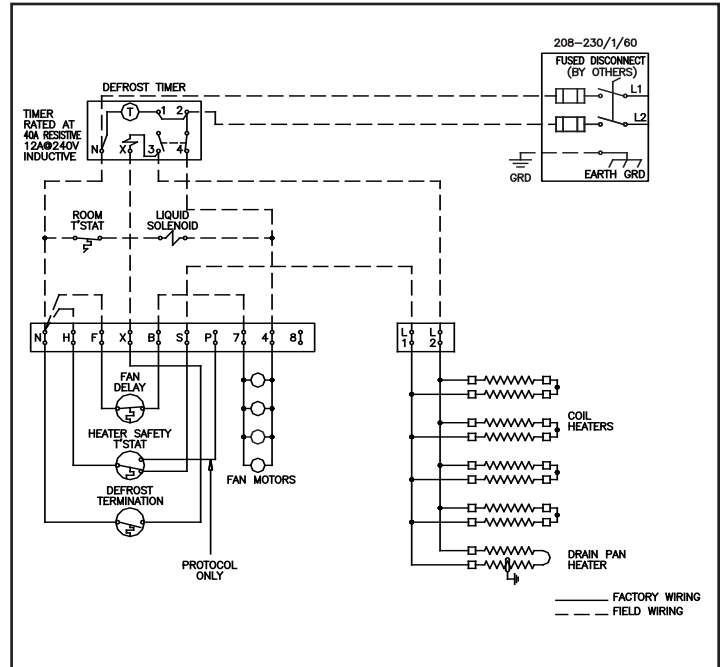
MK/MV SERIES UNIT COOLERS

WIRING DIAGRAMS

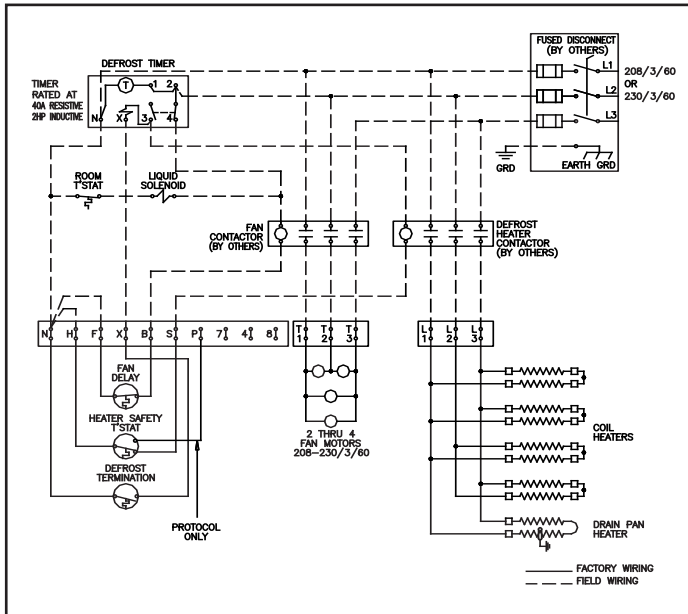
AIR DEFROST WIRING



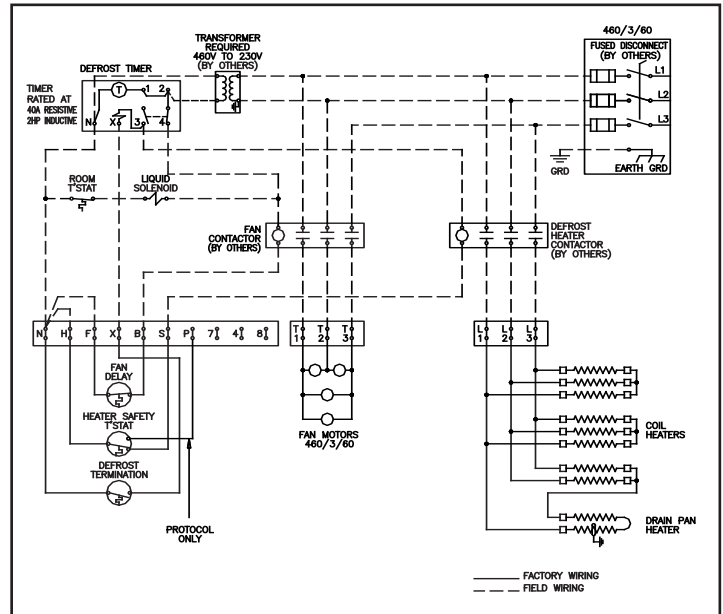
ELECTRIC DEFROST WIRING 208-230/1/60



ELECTRIC DEFROST WIRING 208-230/3/60



ELECTRIC DEFROST WIRING 460/3/60





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