KRAMER

Catalog KM-MSE-0412A

MSE Series

Medium Silhouette

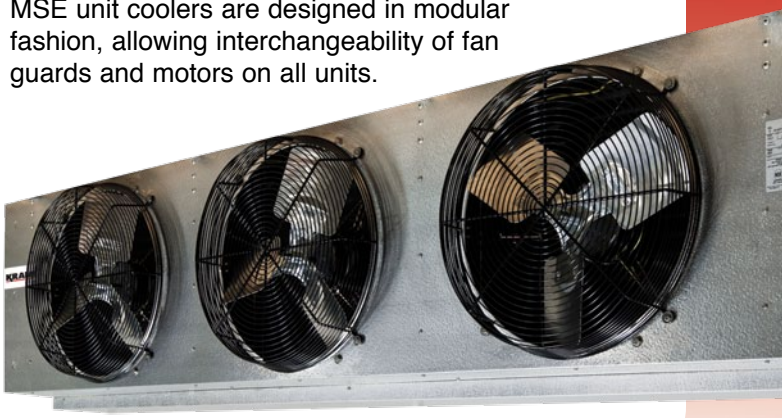
Electric Defrost

MSE model unit coolers are specifically designed for walk-in cooler and freezer applications, incorporating the time proven Kramer-Electric defrost. The positive heat source and ease of service make these units the popular choice in electric defrost units.

These units are suitable for maintaining room temperatures in the range of +35°F to -30°F. The draw-thru air flow design coupled with fin spacing of 4 per inch assures uniform air distribution.

Removable end panels allow easy access to refrigerant and electrical connections. There is ample room within the end compartment for mounting the expansion valve.

MSE unit coolers are designed in modular fashion, allowing interchangeability of fan guards and motors on all units.



c UL us NSF

Features:

EFFICIENT OPERATION

- 4FPI
- Available with PSC or EC motors
- Motor bearings are lubricated for the life of the motor
- Motors have built-in overload protection
- Coils constructed of Copper tubes and Aluminum fins

QUALITY

- Fans and motors specially selected for quietness
- Heated drain pans for positive condensate drainage
- UL & C-UL listed, NSF approved
- Coils tested, dehydrated and sealed at the factory
- Fan guards exceed OSHA requirements

SERVICEABILITY

- Removable end panels for easy access
- Separate fixed defrost and fan delay control factory wired and mounted for optimum performance of each control.

Nomenclature:

MSE - 140 - E P

MEDUIM SILHOUETTE
MODEL - FPI 4
ELECTRIC DEFROST

BTUH IN HUNDREDS

MOTOR CODE:
P = Perm. Split Cap.
E = Electronically Commutated Motor

VOLTAGE CODE:
D = 208-230/1/60
E = 208-230/3/60
F = 460/1/60, G = 460/3/60

Fig. 1

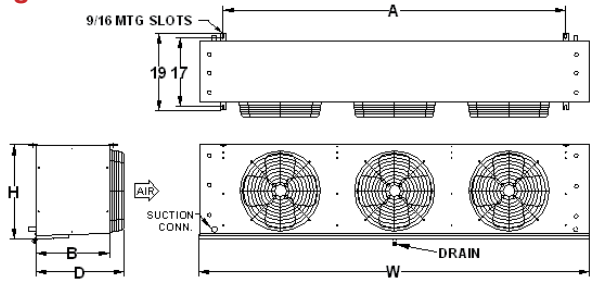
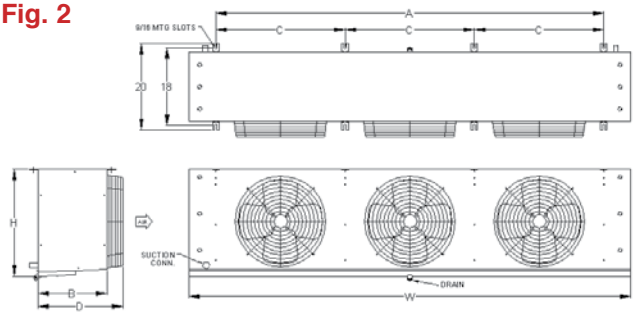


Fig. 2



Capacity Data

MODEL NO.	CFM	CAPACITY DATA — BTU/HR @ 10°T.D. (1) EVAPORATING TEMPERATURE						REFRIG. CHARGE R-404a
		-30°F	-20°F	-10°F	0°F	+10°F	+20°F	
MSE-105	3940	10,000	10,500	11,000	11,300	11,700	12,300	2.6
MSE-140	3620	13,400	14,000	14,600	15,300	15,900	16,600	3.4
MSE-175	5750	16,700	17,500	18,200	19,100	19,800	21,500	3.7
MSE-230	5930	21,900	23,000	24,100	25,200	26,200	27,900	6.3
MSE-325	5430	31,000	32,500	33,800	35,400	36,800	39,000	8.4
MSE-390	8890	37,100	39,000	39,000	42,400	44,100	45,400	9.2
MSE-510	8150	48,600	51,000	53,100	55,400	57,700	58,200	13.8

(1) T.D. is the difference between the box temperature and the refrigerant temperature.

Physical Data

MODEL NO.	FIG.	DIMENSIONS (INCHES) H	W	D	A	B	C	FITTINGS - OD LIQ.	SUCT.	DRAIN	OPTIONAL HEAT EXCH.	APPROX. WT.
MSE-105	1	19	55	18 3/4	42	15	—	1/2	1 1/8	3/4	HX-150	120
MSE-140	1	19	55	18 3/4	42	15	—	1/2	1 1/8	3/4	HX-150	135
MSE-175	1	19	76	18 3/4	63	15	—	1/2	1 1/8	3/4	HX-150	285
MSE-230	2	25	76	20	63	16	—	1/2	1 3/8	3/4	HX-250	315
MSE-325	2	25	76	20	63	16	31	7/8	1 3/8	3/4	HX-350	350
MSE-390	2	25	106	20	93	16	31	7/8	1 5/8	3/4	HX-350	435
MSE-510	2	25	106	20	93	16	31	7/8	1 5/8	3/4	HX-500	530

Electrical Data

MODEL NO.	MOTOR (2) NO.	HP	TOTAL MOTOR AMPS 208-230/1/60 PSC	ECM	460/1/60 PSC	ECM	TOTAL MOTOR WATTS PSC	ECM	HEATER AMPS 230V 1 PH	3 PH	460V 1 PH	3 PH	HEATER WATTS
MSE-105	2	1/8	1.8	1.2	1.0	N/A	282	140	20.3	11.7	10.1	5.9	4685
MSE-140	2	1/8	1.8	1.2	1.0	N/A	282	140	20.3	11.7	10.1	5.9	4685
MSE-175	3	1/8	2.7	1.8	1.5	N/A	423	210	29.5	17.0	14.7	8.5	6774
MSE-230	2	1/3	6.4	4.2	2.6	N/A	714	450	29.5	17.0	14.7	8.5	6774
MSE-325	2	1/3	6.4	4.2	2.6	N/A	714	450	29.5	17.0	14.7	8.5	6774
MSE-390	3	1/3	9.6	6.3	3.9	N/A	1071	675	42.4	24.5	21.2	12.2	9747
MSE-510	3	1/3	9.6	6.3	3.9	N/A	1071	675	42.4	24.5	21.2	12.2	9747

(2) All motors are high efficiency Permanent Split Capacitor (PSC) or Electronically Commutated (EC) motors and have built in thermal overload protection.

Specifications, weights and dimensions subject to change without notice.

Achieved by Changing to More Efficient Unit Cooler Motors
(Based on Energy Cost of $0.10 per kWh)

Energy Savings per Motor

Motor HP and RPM	Standard PSC Motor Input Power Watts/Mtr	Optional EC Motor Input Power Watts/Mtr	Reduced Power Consumption Watts/Mtr PSC to ECM	Run Time Hrs/Day	Motor Energy Savings kWh/Yr	Motor Energy Savings $/Yr	Reduced Box Load MBTU/Yr	Cond. Unit Energy Savings kWh/Yr	Cond. Unit Energy Savings $/Yr	Yearly Savings $/Motor	Pay-back Yrs
1/8-1075	141	70	71	22	570	$57	1,945	374	$37	$94	1.5
1/3-1075	357	225	132	22	1059	$105	3,617	695	$70	$175	0.9

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