

## KWF Series

# Low Velocity Unit Cooler

## Hot Gas Defrost

Model KWF low air velocity unit coolers are ideally suited for products requiring storage temperatures ranging from +28°F to +34°F. They are particularly suited for meat, ice, fruit and vegetable storage or any other product requiring relatively high humidity conditions.

It has been known that two major factors—temperature and humidity—govern the preservation of food, especially meat. The best storage temperature for fresh meat is 30°F with a high relative humidity. Where a 30°F temperature is maintained and humidity is kept at 85 to 90% an ideal condition exists. The meat itself is just above the freezing point, making it firm for more uniform cuts, better sales appeal and less trim waste. High relative humidity with 30° temperature prevents costly loss through shrinkage.

The positive rapid hot gas defrost of the KWF maintains a clean coil which results in minimum room temperature fluctuation.

### Features:

- There are nine models available, ranging in capacity from 5,000 to 34,000 Btuh @ 10° TD
- Rust free heavy gauge embossed Aluminum housing is standard.
- Seamless enhanced Copper tubes are staggered and mechanically expanded into corrugated aluminum fins assuring maximum heat transfer.
- Optional Copper fins are available.
- Available in 208/230V and 460V single phase.
- Fan motors and blades can be easily accessed by lowering the hinged drain pan.
- Standard motors are permanently lubricated with thermal overload protection.
- High efficiency EC motors are standard, PSC or shaded pole motors are optionally available.
- Hot Gas defrost models are designed for use in room temperatures down to 28°F.



## Nomenclature:

<b>K</b>	<b>W</b>	<b>F</b>	<b>130</b>	<b>D</b>	<b>E</b>	<b>3</b>	<b>B</b>	<b>1</b>	<b>1</b>	<b>G</b>	<b>1</b>	<b>A</b>
<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>	<b>VIII</b>	<b>IX</b>	<b>X</b>	<b>XI</b>	<b>XII</b>	<b>XIII</b>

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| <p>I. <b>Brand Name</b><br/>K – Kramer</p> <p>II. <b>Unit type</b><br/>W – Walk In Unit Cooler</p> <p>III. <b>Series</b><br/>F – Low Air Velocity</p> <p>IV. <b>Capacity or Degree of Capacity –</b><br/>050, 075, 100, 130, 160, 190, 220, 270, 340</p> <p>V. <b>Voltage Code</b><br/>A – 115/1/60<br/>D – 208-230/1/60<br/>F – 460/1/60<br/>L – 100/1/50<br/>M – 200-220/1/50<br/>P – 380/1/50<br/>X – Other</p> <p>VI. <b>Motor/Fan Type</b><br/>E – (EC) Electronically Commutated<br/>P – (PSC) Permanent Split Capacitor<br/>S – (SP) Shaded Pole<br/>X – Other</p> <p>VII. <b>Length in Fans</b><br/>1, 2, 3, 4, 5, 6</p> <p>VIII. <b>Coil Density</b><br/>B – 6 fpi<br/>X – Other</p> | <p>IX. <b>Coil Material and Coating Options</b><br/>1 – Aluminum fins (Al)<br/>2 – Copper fins (Cu)<br/>X – Other<br/><b>NOTE:</b> Coil coatings are not available for electric defrost models</p> <p>X. <b>Housing Material Coatings</b><br/>1 – Aluminum, Embossed<br/>2 – Galvanized<br/>3 – White Painted<br/>6 – Stainless Steel 304<br/>X – Other</p> <p>XI. <b>Unit Design Configuration</b><br/>A – Air Defrost<br/>E – Electric Defrost<br/>G – Hot Gas Reverse Cycle Defrost with drain pan loop<br/>H – Hot Gas Re-Evaporative Defrost with drain pan loop<br/>K – Hot Gas Reverse Cycle Defrost with 115V heater<br/>L – Hot Gas Reverse Cycle Defrost with 208/230V heater<br/>X – Other</p> <p>XII. <b>Not Currently Used</b><br/>1 – Standard</p> <p>XIII. <b>Revision Code – Single Alphanumeric Character</b><br/>A – Current Revision</p> |
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# KWF Low Velocity Evaporator

## Performance Data

### 60 Hz Capacity Data

Model	Fan Data			Capacity								Charge (Lbs) 404A	Suction Conn. OD (inches)	Unit Weight (lbs.)
	No	CFM	m <sup>3</sup> /hr	10°F TD	5.6°C TD	15°F TD	8.3°C TD	50-55°F DB 55% RH, 20° TD		10.0-12.8°C DB 55% RH, 11.1° TD				
				Btuh	Watts	Btuh	Watts	Total	Sensible	Total	Sensible			
				Btuh	Btuh	Btuh	Btuh	Watts	Watts	Watts	Watts			
KWF050	1	580	990	5,000	1,470	7,500	2,200	10,000	9,200	2,930	2,690	1.2	1 1/8	50
KWF075	2	850	1,440	7,500	2,200	11,250	3,300	15,000	13,800	4,390	4,040	2.3	1 1/8	75
KWF100	2	1,110	1,890	10,000	2,930	15,000	4,390	20,000	18,400	5,860	5,390	2.5	1 1/8	75
KWF130	3	1,750	2,970	13,000	3,810	19,500	5,710	26,000	23,920	7,610	7,000	3.4	1 1/8	100
KWF160	3	1,720	2,922	16,000	4,690	24,000	7,030	32,000	29,440	9,370	8,620	4.6	1 1/8	110
KWF190	4	2,330	3,960	19,000	5,560	28,500	8,350	38,000	34,960	11,130	10,240	4.6	1 1/8	120
KWF220	4	2,290	3,890	22,000	6,440	33,000	9,660	44,000	40,480	12,880	11,850	6.1	1 1/8	130
KWF270	5	2,840	4,830	27,000	7,910	40,500	11,860	54,000	49,680	15,810	15,810	7.0	1 1/8	150
KWF340	6	3,430	5,830	34,000	9,960	51,000	14,930	68,000	62,560	19,910	18,320	9.0	1 1/8	180

### 50 Hz Capacity Data\*

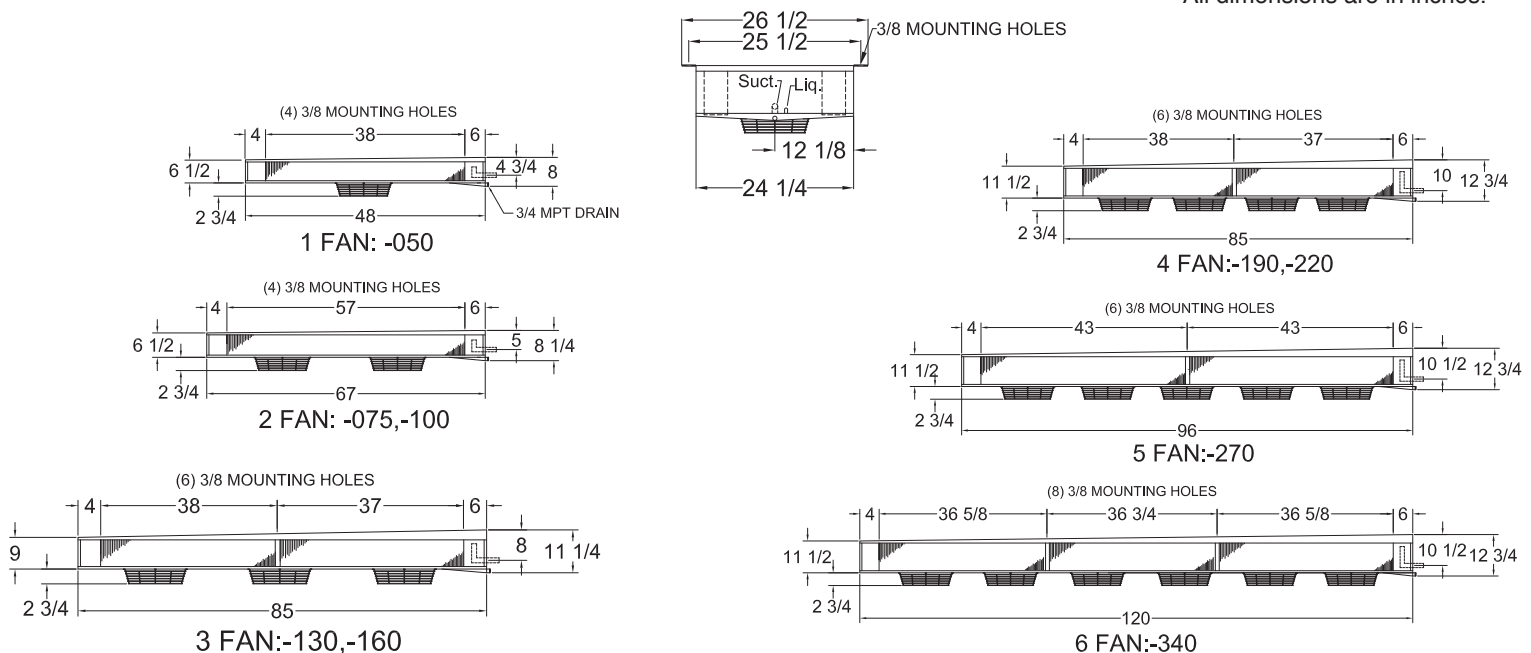
Model	Fan Data			Capacity								Charge (Lbs) 404A	Suction Conn. OD (inches)	Unit Weight (lbs.)
	No	CFM	m <sup>3</sup> /hr	10°F TD	5.6°C TD	15°F TD	8.3°C TD	50-55°F DB 55% RH, 20° TD		10.0-12.8°C DB 55% RH, 11.1° TD				
				Btuh	Watts	Btuh	Watts	Total	Sensible	Total	Sensible			
				Btuh	Btuh	Btuh	Btuh	Watts	Watts	Watts	Watts			
KWF050	1	480	820	4,600	1,350	6,900	2,000	9,200	8,460	2,700	2,480	1.2	1 1/8	50
KWF075	2	710	1,200	6,900	2,020	10,350	3,040	13,800	12,700	4,040	3,720	2.3	1 1/8	75
KWF100	2	920	1,570	9,200	2,700	13,800	4,040	18,400	16,930	5,390	4,960	2.5	1 1/8	75
KWF130	3	1,460	2,470	12,000	3,510	17,900	5,250	23,900	22,010	7,000	6,440	3.4	1 1/8	100
KWF160	3	1,430	2,430	14,700	4,320	22,100	6,470	29,400	27,090	8,620	7,930	4.6	1 1/8	110
KWF190	4	1,930	3,290	17,000	5,120	26,200	7,680	35,000	32,160	10,240	9,420	4.6	1 1/8	120
KWF220	4	1,900	3,230	20,000	5,930	30,400	8,890	40,500	37,240	11,850	10,900	6.1	1 1/8	130
KWF270	5	2,360	4,010	25,000	7,280	37,300	10,910	49,700	45,710	14,550	14,550	7.0	1 1/8	150
KWF340	6	2,850	4,840	31,000	9,160	46,900	13,740	62,600	57,560	18,320	16,850	9.0	1 1/8	180

\*Use 60 Hz capacity and airflow values for units with EC motors

## Dimensional Data

### End View

\*All dimensions are in inches.



### Other Connections

Liquid - 1/2" OD

Hot Gas 1/2" OD

Drain 3/4" MPT

Ext. Equalizer 1/4" OD

# KWF Low Velocity Evaporator

## Electrical Data

Models 60HZ	Number of Fans	EC Motors				PSC Motors						SP Motors			
		115/1/60		208-230/1/60		115/1/60		208-230/1/60		460/1/60		115/1/60		208-230/1/60	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
KWF050	1	0.6	35	0.3	35	0.4	50	0.3	50	0.2	50	1.2	75	0.5	75
KWF075	2	1.2	70	0.6	70	0.8	100	0.6	100	0.3	100	2.4	150	1.0	150
KWF100	2	1.2	70	0.6	70	0.8	100	0.6	100	0.3	100	2.4	150	1.0	150
KWF130	3	1.8	105	0.9	105	1.2	150	0.9	150	0.5	150	3.6	225	1.5	225
KWF160	3	1.8	105	0.9	105	1.2	150	0.9	150	0.5	150	3.6	225	1.5	225
KWF190	4	2.4	140	1.2	140	1.6	200	1.2	200	0.6	200	4.8	300	2.0	300
KWF220	4	2.4	140	1.2	140	1.6	200	1.2	200	0.6	200	4.8	300	2.0	300
KWF270	5	3.0	175	1.5	175	2.0	250	1.5	250	0.8	250	6.0	375	2.5	375
KWF340	6	3.6	210	1.8	210	2.4	300	1.8	300	0.9	300	7.2	375	3.0	375

Models 50HZ	Number of Fans	EC Motors				PSC Motors						SP Motors			
		100/1/50		200-220/1/50		100/1/50		200-220/1/50		380/1/50		100/1/50		200-220/1/50	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
KWF050	1	0.6	35	0.3	35	0.4	45	0.3	45	0.2	45	1.1	70	0.5	70
KWF075	2	1.2	70	0.6	70	0.7	90	0.5	90	0.3	90	2.2	135	0.9	135
KWF100	2	1.2	70	0.6	70	0.7	90	0.5	90	0.3	90	2.2	135	0.9	135
KWF130	3	1.8	105	0.9	105	1.1	135	0.8	135	0.5	135	3.2	205	1.4	205
KWF160	3	1.8	105	0.9	105	1.1	135	0.8	135	0.5	135	3.2	205	1.4	205
KWF190	4	2.4	140	1.2	140	1.4	180	1.1	180	0.5	180	4.3	270	1.8	270
KWF220	4	2.4	140	1.2	140	1.4	180	1.1	180	0.5	180	4.3	270	1.8	270
KWF270	5	3.0	175	1.5	175	1.8	225	1.4	225	0.7	225	5.4	340	2.3	340
KWF340	6	3.6	210	1.8	210	2.2	270	1.6	270	0.8	270	6.5	340	2.7	340

Models	Optional Drain Pan Heater for Hot Gas				Re-Evap HEA 10°F TD	Re-Evap HEA 15°F TD
	115/1/60		208-230/1/60			
	Amps	Watts	Amps	Watts		
KWF050	2.2	250	2.0	225	HEA 1A	HEA 2A
KWF075	2.2	250	2.0	225	HEA 2A	HEA 2A
KWF100	2.2	250	2.0	225	HEA 2A	HEA 3A
KWF130	5.2	600	4.7	540	HEA 3A	HEA 3A
KWF160	5.2	600	4.7	540	HEA 3A	HEA 3A
KWF190	5.2	600	4.7	540	HEA 3A	HEA 4A
KWF220	5.2	600	4.7	540	HEA 3A	HEA 4A
KWF270	8.7	1,000	7.8	900	HEA 4A	HEA 5A
KWF340	10.9	1,250	7.8	900	HEA 4A	HEA 5A

Note: HEA = Heat Exchanger / Accumulator for Hot Gas Re-Evap systems only.

HEA's are shipped loose for field installation.

Due to ongoing product development, specifications are subject to change without notice.