

## Multiposition Blower Cabinet- Hydronic Heat

### FEATURES:

- Variable Speed (ECM) modular blower
- Four-Way Multiposition
- Electronic fan control board
- Dry contacts to energize pump and boiler
- Pump timer for recirculation
- Dehumidification selection
- Efficient low continuous fan selection
- Bottom or side returns
- Supports two-stage outdoor units
- Blower assembly slides out for easy maintenance
- Cabinet is heavy gauge galvanized steel, pre-painted a durable neutral gray
- 1" foil faced insulation
- All units are suitable for "0" inch clearance to combustible materials



### OPTIONS

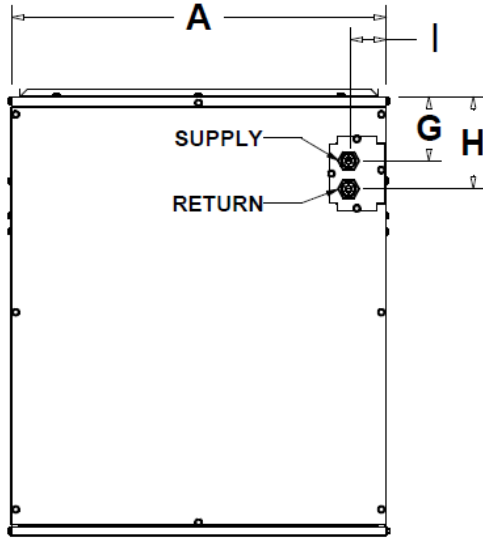
- Hot water circulating pumps
- Matching Summit cased coils
  - Draw-through for AC
  - Blow-through for HP or AC



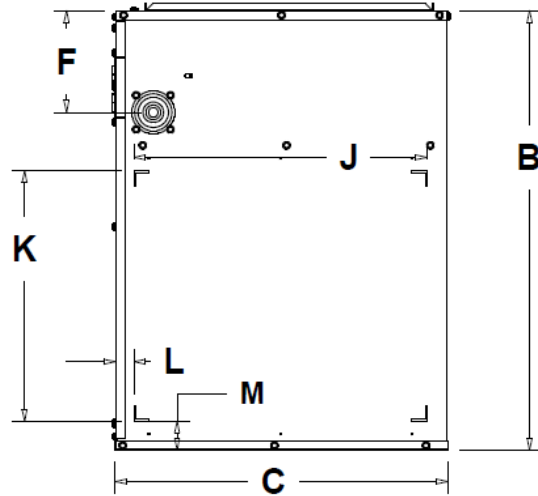
Model Series	Nominal Tons	Motor Hp	Unit Dim in (mm) H x W x D	Ship. Dim. In (mm) H x W x D	Unit Wt lbs/kg Approx	Ship Wt lbs/kg Approx
MMVEOS	1.5 - 2.0	1/3	29 X 17.5 X 21 (737 X 445 X 534)	33 X 21.5 X 25 (838 X 546 X 635)	78/35.4	95/43
MMVEOM	1.5 - 3.0	1/2	29 X 21 X 21 (737 X 534 X 534)	33 X 25 X 25 (838 X 635 X 635)	100/45.4	115/52
MMVEOL	3.5 - 5	1.0	29 X 24 1/2 X 21 3/4 (737 X 622 X 553)	33 X 28.5 X 25 3/4 (838 X 724 X 654)	132/59.9	150/68

Weight will change in each model depending on the number of rows in the coil

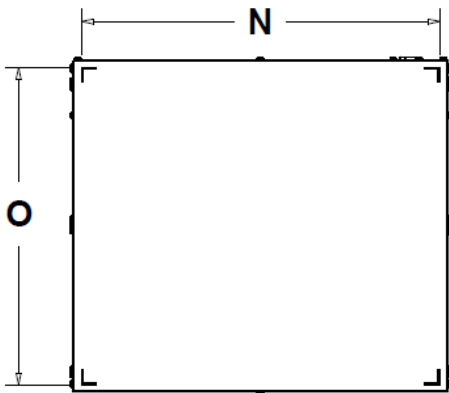
## DIMENSIONAL DATA MODULAR HYDRONIC HEAT



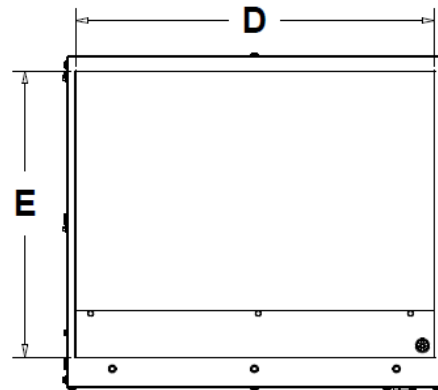
FRONT



RIGHT SIDE  
LEFT SIDE IS MIRROR IMAGE



BOTTOM



TOP

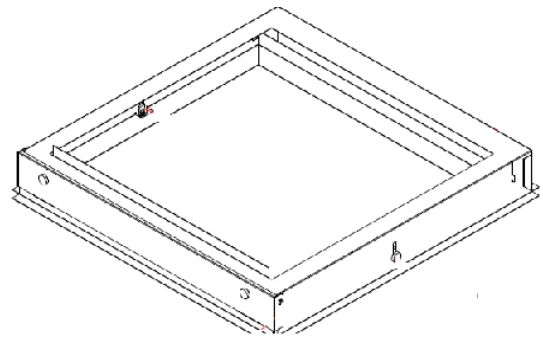
DIMENSIONAL DATA MODULAR AIR HANDLER															
MODEL	OVERALL DIMENSIONS			TOP PLENUM		SIDE RETURN						BOTTOM RETURN			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MMVEOS	17.50	29.00	21.00	16.00	18.00	6.75	3.88	5.75	2.50	19.25	16.50	1.13	1.94	16.50	20.00
MMVEOM	21.00	29.00	21.00	18.88	18.00	6.75	3.88	5.75	2.50	19.25	16.50	1.13	1.94	20.00	20.00
MMVEOL	24.50	29.00	21.75	23.50	18.75	6.75	4.25	6.00	2.50	19.25	16.40	1.13	1.94	23.50	20.94

### HEATING PERFORMANCE DATA - Hot Water Coils :

HOT WATER COIL MODEL	HOT WATER CAPACITIES @ 70°F ENTERING AIR TEMPERATURE ENTERING WATER TEMPERATURE							CFM	GPM	PRESS. DROP WATER (FT-WTR)	PRESS. DROP AIR (IWC)
	120°F	130°F	140°F	150°F	160°F	170°F	180°F				
MMVEOS4N 4 Row	19,255	23,199	27,165	31,151	35,153	39,169	43,197	500	3.0	0.40	0.13
	20,102	24,202	28,320	32,455	36,603	40,764	44,935		4.0	0.66	
	20,632	24,827	29,038	33,264	37,501	41,749	46,006		5.0	0.98	
	21,500	25,920	30,368	34,839	39,331	43,843	48,369	600	3.0	0.40	0.18
	22,633	27,263	31,918	36,594	41,288	45,998	50,721		4.0	0.66	
	23,353	28,115	32,898	37,700	42,518	47,349	52,192		5.0	0.98	
	23,447	28,279	33,145	38,041	42,962	47,906	52,868	700	3.0	0.40	0.23
	24,867	29,968	35,098	40,255	45,433	50,632	55,847		4.0	0.66	
	25,781	31,052	36,349	41,668	47,007	52,364	57,737		5.0	0.98	
	25,152	30,348	35,583	40,853	46,151	51,475	56,822	800	3.0	0.40	0.29
	26,856	32,376	37,933	43,521	49,134	54,771	60,427		4.0	0.66	
	27,967	33,696	39,457	45,245	51,057	56,891	62,741		5.0	0.98	
26,660	32,179	37,741	43,342	48,977	54,640	60,327	900	3.0	0.40	0.35	
28,640	34,540	40,481	46,456	52,462	58,494	64,549		4.0	0.66		
29,947	36,094	42,277	48,493	54,736	61,002	67,290		5.0	0.98		
MMVEOM4N 4 Row	22,512	27,137	31,792	36,471	41,172	45,893	50,629	600	3.0	0.27	0.13
	23,696	28,542	33,414	38,306	43,217	48,144	53,085		4.0	0.44	
	24,442	29,242	34,428	39,451	44,490	49,542	54,607		5.0	0.66	
	26,446	31,910	37,414	42,953	48,523	54,120	59,739	800	3.0	0.27	0.20
	28,268	34,078	39,926	45,806	51,713	57,645	63,597		4.0	0.44	
	29,449	35,481	41,545	47,638	53,757	59,896	66,054		5.0	0.66	
	28,070	33,880	39,737	45,633	51,566	57,528	63,516	900	3.0	0.27	0.24
	30,202	36,424	42,688	48,989	55,322	61,682	68,067		4.0	0.44	
	31,603	38,089	44,613	51,171	57,758	64,370	71,004		5.0	0.66	
	29,517	35,637	41,809	48,025	54,281	60,568	66,885	1,000	3.0	0.27	0.29
	31,952	38,545	45,187	51,870	58,590	65,341	72,118		4.0	0.44	
	33,569	40,470	47,416	54,401	61,417	68,463	75,534		5.0	0.66	
	31,987	38,638	45,350	52,113	58,923	65,771	72,650	1,200	3.0	0.27	0.39
	34,994	42,239	49,540	56,893	64,287	71,722	79,187		4.0	0.44	
	37,034	44,671	52,362	60,101	67,881	75,696	83,541		5.0	0.66	
	34,024	41,115	48,271	55,487	62,755	70,064	77,412	1,400	3.0	0.27	0.50
	37,560	45,353	53,213	61,132	69,100	77,113	85,161		4.0	0.44	
	39,999	48,268	56,600	64,989	73,425	81,903	90,417		5.0	0.66	
39,579	47,729	55,934	64,186	74,479	80,808	89,167	1,200	5.0	0.50	0.26	
41,155	49,605	58,105	66,650	75,233	83,849	92,494		6.0	0.69		
42,339	51,012	59,731	68,492	77,288	86,114	94,968		7.0	0.90		
42,868	51,718	60,632	69,604	78,623	87,684	96,780	1,400	5.0	0.50	0.34	
44,801	54,022	63,304	72,640	82,022	91,442	100,897		6.0	0.69		
46,268	55,768	65,325	74,931	84,582	94,268	103,989		7.0	0.90		
45,723	55,182	64,714	74,311	83,963	93,662	103,404	1,600	5.0	0.50	0.42	
48,000	57,900	67,872	77,903	87,990	98,121	108,292		6.0	0.69		
49,742	59,977	70,277	80,637	91,048	101,501	111,992		7.0	0.90		
48,229	58,224	68,301	78,449	88,657	98,921	109,229	1,800	5.0	0.50	0.51	
50,833	61,337	71,921	82,573	93,287	104,050	114,856		6.0	0.69		
52,842	63,735	74,703	85,739	96,829	107,970	119,154		7.0	0.90		
50,450	60,920	71,479	82,117	92,823	103,585	114,397	2,000	5.0	0.50	0.60	
53,367	64,411	75,545	86,752	98,025	109,359	120,737		6.0	0.69		
55,633	67,118	78,689	90,333	102,039	113,804	125,613		7.0	0.90		
51,468	62,159	72,939	83,803	94,736	105,729	116,772	2,100	5.0	0.50	0.66	
54,536	65,830	77,218	88,683	100,218	111,811	123,457		6.0	0.69		
56,927	68,689	80,540	92,467	104,460	116,512	128,611		7.0	0.90		
52,435	63,330	74,322	85,398	96,548	107,758	119,021	2,200	5.0	0.50	0.71	
55,648	67,180	78,808	90,520	102,301	114,144	126,041		6.0	0.69		
58,162	70,186	82,303	94,501	106,769	119,096	131,474		7.0	0.90		

Nomenclature											
Multiposition	M	M	V	E	O	S	2	N	A	A	A
<b>Style</b>											
M	Modular										
<b>Motor Design</b>											
V	Variable Speed										
P	PSC										
<b>Motor Type</b>											
E	2.3 ECM DC Variable speed										
T	Constant Torque X-13 DC										
S	Standard PSC										
<b>Application</b>											
O	Heating only										
<b>Cabinet</b>											
S	Small Cabinet (17.5" wide)										
M	Medium cabinet (21" wide)										
L	Large cabinet (24 1/2" wide)										
2, 3, 4	<b>Coil Rows</b>										
<b>Pump</b>											
N	No Pump installed										
P	Pump factory installed										
<b>Voltage</b>											
A	115 volt										
B	230 volt										
<b>Options</b>											
A	Standard (Options customizable)										
<b>Options</b>											
A	Standard (Options customizable)										

Filter Kits with 1" Throw away filter, accepts 2"		
For Model	For Bottom Return	For Side Return
MMVEOS	86ET0002	86MDS003
MMVEOM	86ET0001	86MDS003
MMVEOL	86ET0003	86MDS003 (requires (2), one on each side)



UNIT SPECIFICATIONS - BLOWER COILS					
Model Number		MMVEOS	MMVEOM	MMVEOL	
Application		Upflow/Horizontal/Downflow			
Electrical		Volts-Phase-Hertz			
Data		120/1/60			
		Minimum Circuit Ampacity	8.28	11.20	18.40
		Time Delay Fuse (Amps)	15.00	15.00	20.00
		Max, Fuse or Breaker Size (Amps)	15.00	15.00	20.00
Blower		Size			
Data		10 x 7	10 x 7	12 x 9	
		Horsepower	1/3	1/2	1.0
		Full Load Rated Amps	7.2	9.8	16
Transformer		120/24 vac 40 VA			

BLOWER PERFORMANCE ECM-2.3 MOTOR AIR FLOW											
Model Number	Nominal Tons	Motor HP	Volts 1 Ph. 50/60 Hz.	Motor Code	Blower Wheel	Jumper	CFM @ 0.10"	CFM @ 0.20"	CFM @ 0.30"	CFM @ 0.40"	CFM @ 0.50"
MSVEOS Hydronic	1.5 & 2.0	0.33	120	VG	10X7	A	884	884	884	880	880
						B	799	792	789	789	789
						C	691	691	691	691	690
						D	589	589	589	589	584
MSVEOM Hydronic	1.5 Thru 3.0	0.50	120	VH	10 X 7	A	1294	1255	1200	1137	1058
						B	1131	1104	1075	1082	1023
						C	974	942	909	853	831
						D	808	769	736	702	657
MSVEOL Hydronic	3.0 Thru 5.0	1.00	120	VI	12 X 9	A	2001	1994	1994	1987	1972
						B	1820	1820	1820	1804	1796
						C	1587	1599	1604	1604	1604
						D	1385	1385	1385	1385	1385

BLOWER PERFORMANCE ECM-2.3 MOTOR AMPS											
Model Number	Nominal Tons	Motor HP	Volts 1 Ph. 50/60 Hz.	Motor Code	Blower Wheel	Jumper	AMPS @ 0.10"	AMPS @ 0.20"	AMPS @ 0.30"	AMPS @ 0.40"	AMPS @ 0.50"
MSVEOS Hydronic	1.5 & 2.0	0.33	120	VG	10X7	A	3.120	3.470	3.730	4.060	4.370
						B	2.440	2.710	2.950	3.240	3.620
						C	1.760	2.090	2.400	2.690	2.910
						D	1.270	1.530	1.810	2.090	2.310
MSVEOM Hydronic	1.5 Thru 3.0	0.50	120	VH	10 X 7	A	3.700	3.800	3.700	3.500	3.400
						B	2.700	2.800	3.000	3.100	3.200
						C	1.900	2.000	2.100	2.100	2.300
						D	1.200	1.300	1.500	1.600	1.700
MSVEOL Hydronic	3.0 Thru 5.0	1.00	120	VI	12 X 9	A	6.240	6.400	6.690	7.110	6.310
						B	4.970	5.130	5.320	5.510	5.650
						C	3.540	3.750	3.860	4.120	4.330
						D	2.580	2.720	2.850	3.070	3.290

EWT	Ethylene Glycol Correction Factors (Percent of Concentration)						
	20%	30%	40%	50%	60%	70%	80%
100	0.990	0.960	0.930	0.890	0.850	0.810	0.760
120	0.990	0.960	0.932	0.888	0.854	0.815	0.765
130	0.990	0.960	0.934	0.886	0.858	0.819	0.769
140	0.990	0.960	0.936	0.884	0.863	0.824	0.775
150	0.990	0.960	0.940	0.870	0.870	0.830	0.780
160	0.990	0.962	0.940	0.880	0.872	0.834	0.786
170	0.990	0.964	0.940	0.888	0.874	0.837	0.791
180	0.990	0.966	0.940	0.899	0.876	0.841	0.797
190	0.990	0.968	0.940	0.909	0.878	0.846	0.804
200	0.990	0.970	0.940	0.920	0.880	0.850	0.810

EWT	Propylene Glycol Correction Factors (Percent of Concentration)						
	20%	30%	40%	50%	60%	70%	80%
100	0.941	0.912	0.884	0.846	0.808	0.770	0.722
120	0.941	0.912	0.885	0.844	0.812	0.774	0.727
130	0.941	0.912	0.887	0.842	0.815	0.778	0.731
140	0.941	0.912	0.889	0.840	0.819	0.783	0.736
150	0.941	0.912	0.893	0.827	0.827	0.789	0.741
160	0.941	0.914	0.893	0.836	0.828	0.792	0.747
170	0.941	0.915	0.893	0.844	0.830	0.795	0.751
180	0.941	0.917	0.893	0.854	0.832	0.799	0.757
190	0.941	0.919	0.893	0.864	0.834	0.803	0.763
200	0.941	0.922	0.893	0.874	0.836	0.808	0.770