

Multiposition Modular Hydronic Furnace

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 and/or side return(s)
- Supports two-stage outdoor units
- Blower assembly slides out for easy maintenance
- Cabinet is heavy gauge, embossed galvanized steel with grey painted doors and top
- 1" foil faced insulation
- All units are suitable for "0" inch clearance to combustible materials

OPTIONS

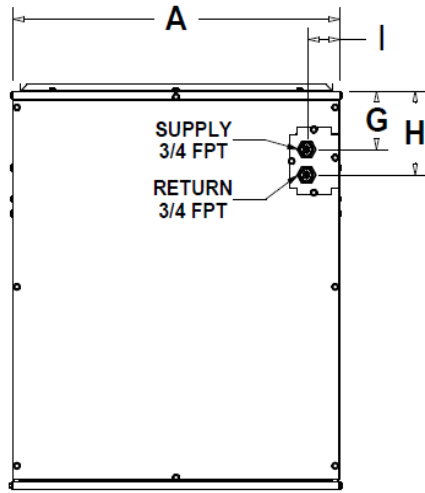
- Hot water circulating pumps
- Matching Summit cased coils
 - Draw-through for AC or HP
 - Blow-through for AC



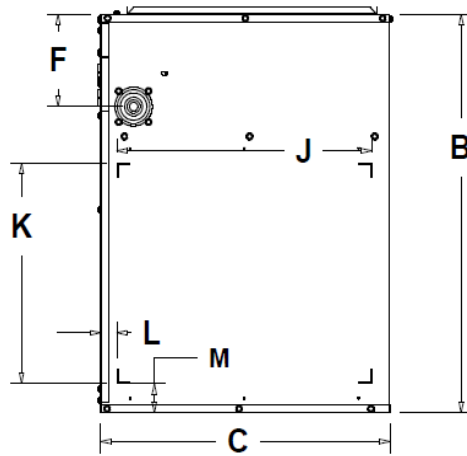
Model Series	Nominal Tons	Motor Hp	Unit Dim in (mm) H x W x D	Ship. Dim. In (mm) H x W x D	Unit Wt lbs/kg Approx	Ship Wt lbs/kg Approx
MMVEOS	1.5 - 2.5	1/3	29 X 17 1/2 X 21 (737 X 445 X 534)	33 X 21 1/2 X 25 (838 X 546 X 635)	78/35.4	95/43
MMVEOM	1.5 - 3.0	1/2	29 X 21 X 21 (737 X 534 X 534)	33 X 25 X 25 (838 X 635 X 635)	100/45.4	115/52
MMVEOL	3.5 - 6	1.0	29 X 24 1/2 X 21 3/4 (737 X 622 X 553)	33 X 28 1/2 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

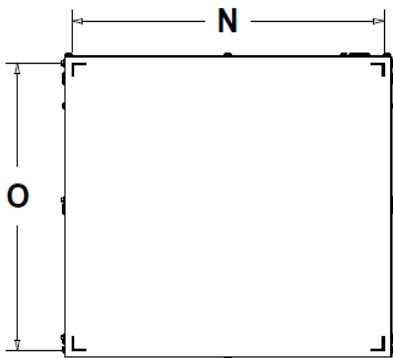
DIMENSIONAL DATA MODULAR HYDRONIC HEAT



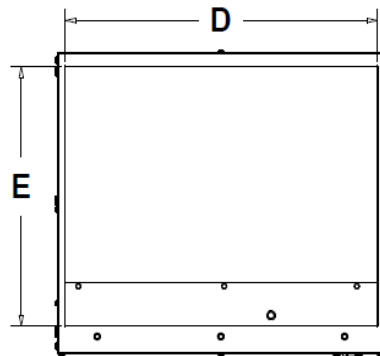
FRONT



**RIGHT SIDE
LEFT SIDE IS MIRROR IMAGE**



BOTTOM



TOP

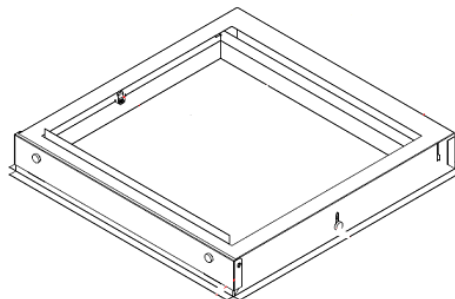
DIMENSIONAL DATA MODULAR AIR HANDLER HYDRONIC HEAT

MODEL	OVERAL DIMENSIONS			TOP PLENUM		SIDE RETURN						BOTTOM RETURN			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MMVEOS	17 1/2	29	21	16	18	6 3/4	3 7/8	5 3/4	2 1/2	19 1/4	16	1 1/8	2 3/16	16 1/2	20
MMVEOM	21	29	21	18 7/8	18	6 3/4	3 7/8	5 3/4	2 1/2	19 1/4	16	1 1/8	2 3/16	20	20
MMVEOL	24 1/2	29	21 3/4	23 1/2	18 3/4	6 3/4	4 1/4	6	2 1/2	19 1/4	16	1 1/8	2 3/16	23 1/2	20 15/16

Note: All Dimension Are Approximate.

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

Filter Kits with 1" Throw away filter, accepts 2"		
For Model	For Bottom Return	For Side Return
MMVEOS	86ET0002 16x20	86MDS003 16x20
MMVEOM	86ET0001 20x20	
MMVEOL	86ET0003 20x24	86MDS003 (requires (2), one on each side)



UNIT SPECIFICATIONS – MMVE				
Model Number		MMVEOS	MMVEOM	MMVEOL
Application		Upflow/Horizontal/Downflow		
Electrical Data	Volts-Phase-Hertz	120/1/60		
	Minimum Circuit Ampacity	2.25	2.90	7.89
	Max, Fuse or Breaker Size (Amps)	10.00	10.00	10.00
Blower Data	Size	10 x 7	10 x 7	12 x 9
	Horsepower	1/3	1/2	1.0
	Full Load Rated Amps	1.80	2.31	6.31
Transformer		120/24 vac 40 VA		

Blower Performance																
Model Number	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"	CFM @ 0.60"	CFM @ 0.70"	CFM @ 0.80"	CFM @ 0.90"	CFM @ 1.00"	
MMVEOS Hydronic Heat	0.33	120	VG	10X7	A	1162	1150	1111	1076	1049	1018	992	965	928	883	
					B	906	916	938	956	975	989	989	956	922	896	
					C	728	732	732	793	789	786	782	771	767	748	
					D	629	629	620	674	665	661	648	629	556	535	
MMVEOM Hydronic Heat	0.50	120	VH	10 X 7	A	1249	1246	1234	1229	1214	1186	1171	1160	1139	1134	
					B	1062	1073	1059	1036	1012	1000	981	978	962	953	
					C	904	893	873	851	837	815	807	796	788	777	
					D	757	749	707	685	667	662	648	634	613	591	
MMVEOL Hydronic Heat	1.00	120	VI	12 X 9	A	2148	2156	2173	2156	2169	2189	2177	2156	2160	2148	
					B	1864	1873	1878	1901	1906	1906	1910	1910	1901	1901	
					C	1665	1670	1676	1686	1696	1702	1702	1702	1696	1686	
					D	1427	1451	1451	1463	1475	1463	1469	1469	1463	1463	

Blower Performance											
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"
MMVEOS Hydronic	1.5 - 2.5	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
MMVEOM Hydronic	1.5 – 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
MMVEOL Hydronic	3.5 – 6.0	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)							EWT	Propylene Glycol Correction Factors (Percent of Concentration)						
	°F	20%	30%	40%	50%	60%	70%		80%	°F	20%	30%	40%	50%	60%
100	0.99	0.96	0.93	0.89	0.85	0.81	0.76	100	0.941	0.912	0.884	0.846	0.808	0.77	0.722
120	0.99	0.96	0.932	0.888	0.854	0.815	0.765	120	0.941	0.912	0.885	0.844	0.812	0.774	0.727
130	0.99	0.96	0.934	0.886	0.858	0.819	0.769	130	0.941	0.912	0.887	0.842	0.815	0.778	0.731
140	0.99	0.96	0.936	0.884	0.863	0.824	0.775	140	0.941	0.912	0.889	0.84	0.819	0.783	0.736
150	0.99	0.96	0.94	0.87	0.87	0.83	0.78	150	0.941	0.912	0.893	0.827	0.827	0.789	0.741
160	0.99	0.962	0.94	0.88	0.872	0.834	0.786	160	0.941	0.914	0.893	0.836	0.828	0.792	0.547
170	0.99	0.964	0.94	0.888	0.874	0.837	0.791	170	0.941	0.915	0.893	0.844	0.83	0.795	0.751
180	0.99	0.966	0.94	0.899	0.876	0.841	0.797	180	0.941	0.917	0.893	0.854	0.832	0.799	0.757
190	0.99	0.968	0.94	0.909	0.878	0.846	0.804	190	0.941	0.919	0.893	0.864	0.834	0.803	0.763
200	0.99	0.97	0.94	0.92	0.88	0.85	0.81	200	0.941	0.922	0.893	0.874	0.836	0.808	0.77

HOT WATER CAPACITY-BOILER LOOP 65°F EAT 180°F EWT 20°F Δt (NO PUMP)

MODEL	CFM	GPM	BTUH	LAT °F	LWT °F	APD IWC	WPD FT	ROWS	FPI
SMALL CABINET 1.5 & 2.0 TON									
MMVEOS2N	500	2.7	26,290	116.5	160	0.07	1.2	2	10
	600	3.0	29,630	113.5		0.09	1.5		
	700	3.4	32,690	111.1		0.12	1.8		
	800	3.6	35,510	108.9		0.15	2.1		
	900	3.9	38,140	107.1		0.19	2.4		
MMVEOS3N	500	4.0	39,000	137.0		0.10	1.2	3	
	600	4.6	44,500	133.4		0.14	1.5		
	700	5.1	49,600	130.3		0.18	1.8		
	800	5.6	54,300	127.6		0.23	2.2		
	900	6.0	58,700	125.7		0.28	2.5		
MMVEOS4N	500	4.9	47,500	152.6		0.13	2.1	4	
	600	5.6	54,740	149.1		0.18	2.7		
	700	6.3	61,510	146.0		0.23	3.3		
	800	7.0	67,890	143.3		0.29	4.0		
	900	7.6	73,928	140.7		0.35	4.6		
MEDIUM CABINET 2.0, 2.5, 3.0 TON									
MMVEOM2N	600	3.4	33,080	118.8	160	0.07	1.8	2	
	800	4.1	40,000	114.1		0.11	1.1		
	900	4.4	42,780	111.8		0.14	1.2		
	1000	4.7	45,680	110.1		0.16	1.4		
	1200	5.2	51,010	107.2		0.23	1.7		
	1400	5.7	55,830	104.8		0.29	2.1		
MMVEOM3N	600	4.7	45,530	138.0		0.10	1.5	3	
	800	5.7	56,060	132.6		0.16	2.2		
	900	6.2	60,500	130.0		0.21	2.5		
	1000	6.7	65,020	128.0		0.25	2.9		
	1200	7.5	73,410	124.4		0.34	3.7		
	1400	8.3	81,080	121.4		0.44	1.4		
MMVEOM4N	600	5.6	54,160	148.2		0.15	3.1	4	
	800	6.9	67,160	142.4		0.24	4.4		
	900	7.5	73,140	139.9		0.29	4.9		
	1000	8.1	78,830	137.7		0.34	5.2		
	1200	9.2	89,455	133.7		0.46	5.7		
	1400	10.2	99,230	130.4		0.60	6.6		
LARGE CABINET 3.0, 3.5, 4.0, 5.0 TON									
MMVEOL2N	1200	6.1	59,100	113.4	160	0.12	2.0	2	
	1400	6.7	65,130	110.9		0.15	2.4		
	1600	7.3	70,690	108.7		0.19	2.8		
	1800	7.8	75,860	106.9		0.24	3.2		
	2000	8.3	80,690	105.2		0.28	3.9		
	2100	8.5	83,000	104.4		0.31	4.2		
	2200	8.6	83,400	99.9		0.53	2.4		
MMVEOL3N	1200	8.5	83,040	131.8		0.18	1.1	3	
	1400	9.5	92,390	128.9		0.23	1.4		
	1600	10.4	101,100	126.3		0.29	1.6		
	1800	11.2	109,250	124.0		0.36	1.9		
	2000	12.0	116,930	121.9		0.43	8.4		
	2100	12.4	120,600	120.0		0.46	8.9		
	2200	12.3	119,560	115.1		0.79	5.8		
MMVEOL4N	1200	10.1	98,890	144.0		0.23	1.7	4	
	1400	11.4	111,020	141.1		0.31	2.1		
	1600	12.6	122,430	138.6		0.39	2.5		
	1800	13.7	133,200	136.2		0.47	3.0		
	2000	14.7	143,400	134.1		0.57	12.7		
	2100	15.4	147,245	132.0		0.46	13.9		
	2200	15.1	147,400	126.8		1.05	9.5		

HOT WATER CAPACITY WITH FACTORY PUMP 65 ° F EAT @ STATED EWT

MODEL	CFM	GPM	BTUH 120 °F	BTUH 130 °F	BTUH 140 °F	BTUH 150 °F	BTUH 160 °F	APD IWC	ROWS	FPI
SMALL CABINET 1.5 & 2.0 TON										
MMVEOS2N	500	4.0	13,600	16,200	18,840	21,510	24,200	0.07	2	10
	600		14,890	17,760	20,660	23,600	26,570	0.09		
	700		15,990	19,090	22,230	25,430	28,620	0.12		
	800		16,960	20,250	23,600	26,990	30,420	0.15		
	900		17,810	21,280	24,810	28,390	32,010	0.19		
MMVEOS3N	500	4.0	18,160	21,580	25,000	28,500	32,000	0.10	3	
	600		20,170	24,000	27,840	31,700	35,600	0.14		
	700		21,900	26,000	30,280	34,500	38,800	0.18		
	800		23,400	27,900	29,300	34,160	41,600	0.23		
	900		24,800	29,500	34,300	39,640	44,000	0.28		
MMVEOS4N	500	4.0	21,870	25,930	30,015	34,110	38,225	0.13	4	
	600		24,620	29,215	33,820	38,460	43,115	0.18		
	700		27,050	32,108	37,195	42,305	47,440	0.23		
	800		29,210	34,680	40,190	45,725	51,295	0.29		
	900		31,140	36,990	42,845	48,800	54,755	0.35		
MEDIUM CABINET 2.0, 2.5, 3.0 TON										
MMVEOM2N	600	4.0	16,210	16,320	22,460	25,630	28,820	0.07	2	
	800		18,620	22,220	25,860	29,540	33,260	0.11		
	900		19,620	23,420	27,270	31,170	35,110	0.13		
	1,000		20,510	24,500	28,540	32,630	36,770	0.16		
	1,200		22,050	26,350	30,720	35,150	39,630	0.22		
	1,400		23,340	27,910	32,550	37,260	42,040	0.29		
MMVEOM3N	600	4.0	21,010	25,000	29,030	33,090	37,190	0.10	3	
	800		24,490	29,180	33,930	38,720	43,560	0.16		
	900		25,940	30,920	35,960	41,060	46,210	0.20		
	1,000		27,230	32,470	37,780	43,160	48,580	0.24		
	1,200		29,440	35,140	40,910	46,760	52,670	0.33		
	1,400		31,270	37,350	43,510	49,750	56,070	0.43		
MMVEOM4N	600	4.0	24,840	29,415	34,005	38,605	43,200	0.15	4	
	800		29,770	35,270	40,785	46,315	51,860	0.24		
	900		31,895	37,790	43,710	49,645	55,595	0.29		
	1,000		33,836	40,100	46,385	52,685	59,010	0.34		
	1,200		37,260	44,165	51,104	58,065	65,045	0.46		
	1,400		40,195	47,660	55,150	62,670	70,220	0.60		
LARGE CABINET 3.0, 3.5, 4.0. 5.0 TON										
MMVEOL2N	1,200	7.0	28,770	34,300	39,900	45,550	51,260	0.12	2	
	1,400		30,880	36,840	42,880	48,980	55,140	0.15		
	1,600		32,720	39,050	45,470	51,970	58,540	0.19		
	1,800		34,340	41,010	47,770	54,620	61,550	0.24		
	2,000		35,780	42,750	49,820	56,990	64,240	0.28		
	2,100		36,450	43,550	50,770	58,820	65,480	0.31		
	2,200		36,700	43,800	50,900	58,000	65,200	0.53		
MMVEOL3N	1,200	7.0	37,800	45,010	52,290	59,640	67,050	0.18	3	
	1,400		40,860	48,690	56,600	64,590	72,660	0.23		
	1,600		43,530	51,890	60,360	68,910	77,550	0.29		
	1,800		45,870	54,710	63,640	72,720	81,870	0.36		
	2,000		47,960	57,220	66,610	76,110	85,710	0.43		
	2,100		48,920	58,380	67,970	77,670	87,480	0.46		
	2,200		49,500	58,900	68,300	77,900	87,500	0.79		
MMVEOL4N	1,200	7.0	44,170	52,530	60,960	69,460	78,020	0.23	4	
	1,400		48,080	57,220	66,640	75,750	85,130	0.31		
	1,600		51,490	61,310	71,230	81,250	91,340	0.39		
	1,800		54,490	64,910	75,450	86,090	96,820	0.47		
	2,000		57,160	68,120	79,200	90,400	101,710	0.57		
	2,100		58,380	69,590	80,930	93,380	103,750	0.62		
	2,200		59,200	70,400	81,600	92,900	104,400	1.05		