

## TECHNICAL GUIDE

SINGLE PIECE FAN COIL/AIR HANDLER

**FOR USE WITH SPLIT SYSTEM COOLING  
ONLY ELECTRIC OR HYDRONIC HEAT AND  
HEAT PUMPS**

MODELS:

MSPS (PSC Motor)

MSVT (Constant Torque Motor)

MSVE (ECM Motor)

SEE PAGE 2 FOR MODEL NOMENCLATURE



Due to continuous product improvements, these specifications are subject to change without notice.

Visit us at [www.mortx.com](http://www.mortx.com) (click Suntherm logo)  
For the most up to date technical information.

### DESCRIPTION:

This fan coil/air handler provides the flexibility for installation in any upflow or horizontal application. These versatile models may be used for split system cooling or heat pump operation. Compact cabinets along with return air options in both the upflow and horizontal positions allow this unit to fit into tight spaces such as closets, attics, and crawl spaces.

### NOTE:

These units are AHRI rated with most manufacturers condensing units, contact the point of purchase, or factory for certified performance ratings.

### FEATURES:

**CABINET**-The cabinet is constructed of heavy gauge galvanized steel. Standard cabinets are pre-painted steel for the top, coil and blower doors, the cabinet wrapper is heavy gauge embossed galvanized steel. Options are available for fully painted cabinets. The cabinet is insulated with 1" R-4.5 insulation to prevent sweating and to improve efficiency. Units can be ordered to meet 2% air leakage codes where required.

**BLOWERS**-Blowers are sized to both circulate air quietly and efficiently. All blower/motor combinations are fully factory tested in our labs to optimize air flow and power usage. Available motors include standard 3 speed PSC type motors, 5 tap constant torque motors, and full variable speed Electronically Commutated Motors (ECM).

**COILS**-Mortex Products, Inc. has manufactured its own coils for over 50 years. Using the latest in heat transfer technology, our rifled copper tube/aluminum fin coils produce high performance ratings and provide long lasting quality. All coils are pressure tested with nitrogen at 500 psig underwater. All copper coils are UL and ETL certified at 2500 psig burst test pressure. All coils are fully tested in our own Psychometric environmental chambers. Contact factory for other tube and fin options.

**TXV'S**-Factory or field mounted, bolt on Thermostat Expansion Valves are available in either R-22 or R-410A. Our TXV's are all non-adjustable and have been optimized per Mortex specifications for performance and efficiency.

**ELECTRIC HEATERS**-Electric heaters are available from 5 to 20 KW with or without circuit breakers, NOTE: Circuit breakers are required per UL over 10 KW. Electric heaters can be factory installed or provided as a field installed accessory.

**HYDRONIC HEAT**-Optional hot water coils are available for all models. These coils are also manufactured at Mortex and are available in 2,3,4 rows, see heating performance tables for further data.

**Form: MS-061509-001-(TG)**

## UNIT NOMENCLATURE

<b>MS</b>	<b>VE</b>	<b>36</b>	<b>15</b>	<b>B</b>	<b>862T</b>	<b>AA</b>
<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>

<b>I</b>	Series: MS=Multi-position Single Piece US=Upflow Single Piece
<b>II</b>	Motor Type: PS=Standard PSC VT=Variable Speed Constant Torque VE=Variable ECM (Electronic Commutated Motor)
<b>III</b>	Unit Size (Capacity In MBTUH): 12 Thru 24 Small Cabinet (44) 25 Thru 36 Medium Cabinet (45) 37 Thru 60 Large Cabinet (18) OS=No Cooling Small Cabinet (44) OM=No Cooling Medium Cabinet (44) OL=No Cooling Large Cabinet(18)
<b>IV</b>	Heating Configuration: 00=Cooling Only XX=Electric Heating Capacity In KW 2P=2 Row HW Coil With Pump 3P=3 Row HW Coil With Pump 4P=4 Row HW Coil With Pump 2N=2 Row HW Coil No Pump 3N=3 Row HW Coil No Pump 4N=4 Row HW Coil No Pump
<b>V</b>	Voltage: A=120v 1 Ph. 50/60 Hz. B=208/230v 1 Ph. 50/60 Hz. Contact Factory For Other Voltage Availability
<b>VI</b>	Evaporator Coil Configuration: 862T=DX Coil Geometry And Metering Device (Refer To Coil Nomenclature) 8K2N=CW Coil Geometry (Refer To Coil Nomenclature)
<b>VII</b>	Option Code: AA= Standard Configuration

**FIELD INSTALLED ELECTRIC HEAT KIT NOMENCLATURE**

I	II	III	IV	V
B	SE	HK	05	B

<b>I</b>	<p><b>TYPE</b> B=Breaker S=No Breaker</p>
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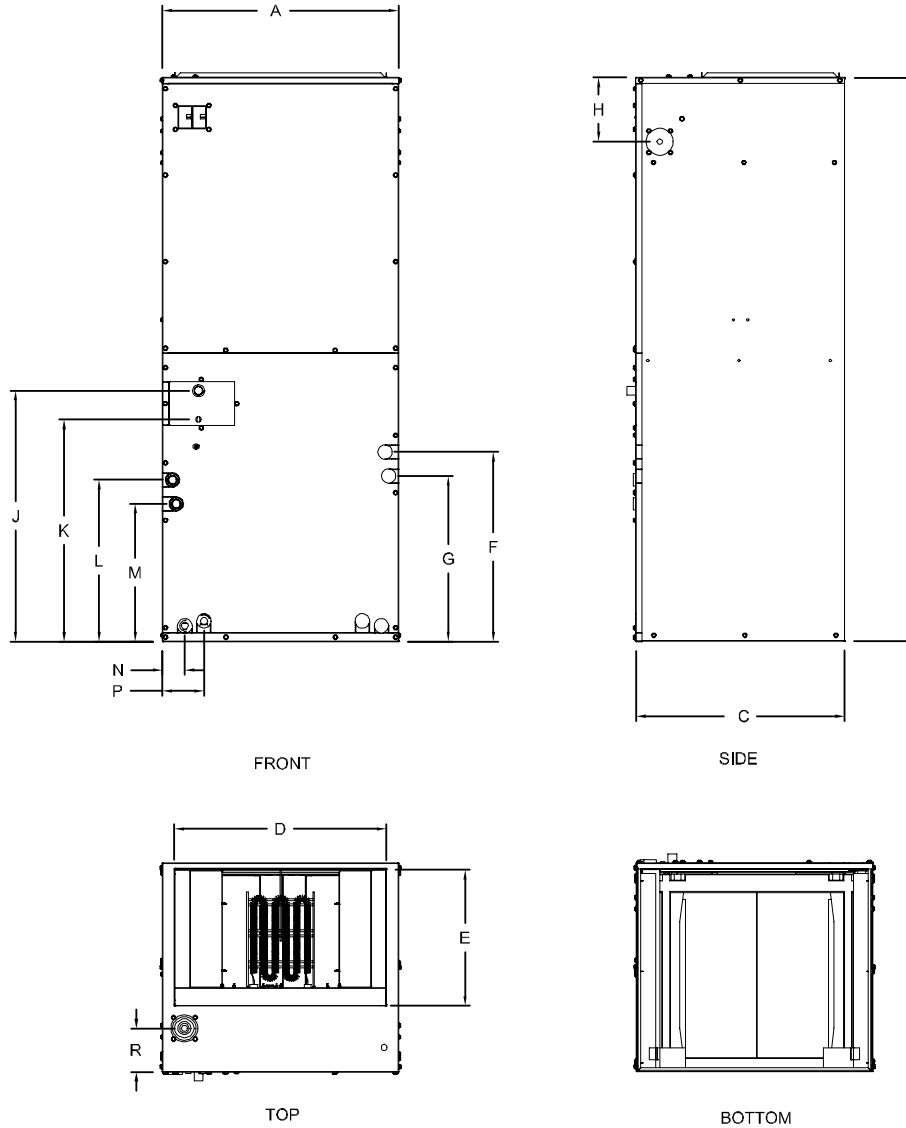
<b>II</b>	<p><b>SERIES</b> SE=Small Cabinet ECM Motor MSVE18,24 ME=Medium Cabinet ECM Motor MSVE25,30,36 LE=Large Cabinet ECM Motor MSVE37,42,48,60 SX=Small Cabinet X-13 Motor MSVT18,24 MX=Medium Cabinet X-13 Motor MSVT25,30,36 LX=Large Cabinet X-13 Motor MSVT37,42,48,60 SP=Small Cabinet PDC Motor MSPS18,24 MP=Medium Cabinet PSC Motor MSPS25,30,36 LP=Large Cabinet PSC Motor MSPS37,42,48,60</p>
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<b>III</b>	<p><b>ACCESSORY</b> HK=Electric Heat Kit</p>
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<b>IV</b>	<p><b>HEATING CAPACITY KW @ 240V/1PH.</b> 05=5 KW 10=10KW 15=15KW 20=20KW</p>
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<b>V</b>	<p><b>VOLTAGE</b> B=208/240V 1PH 50/60HZ</p>
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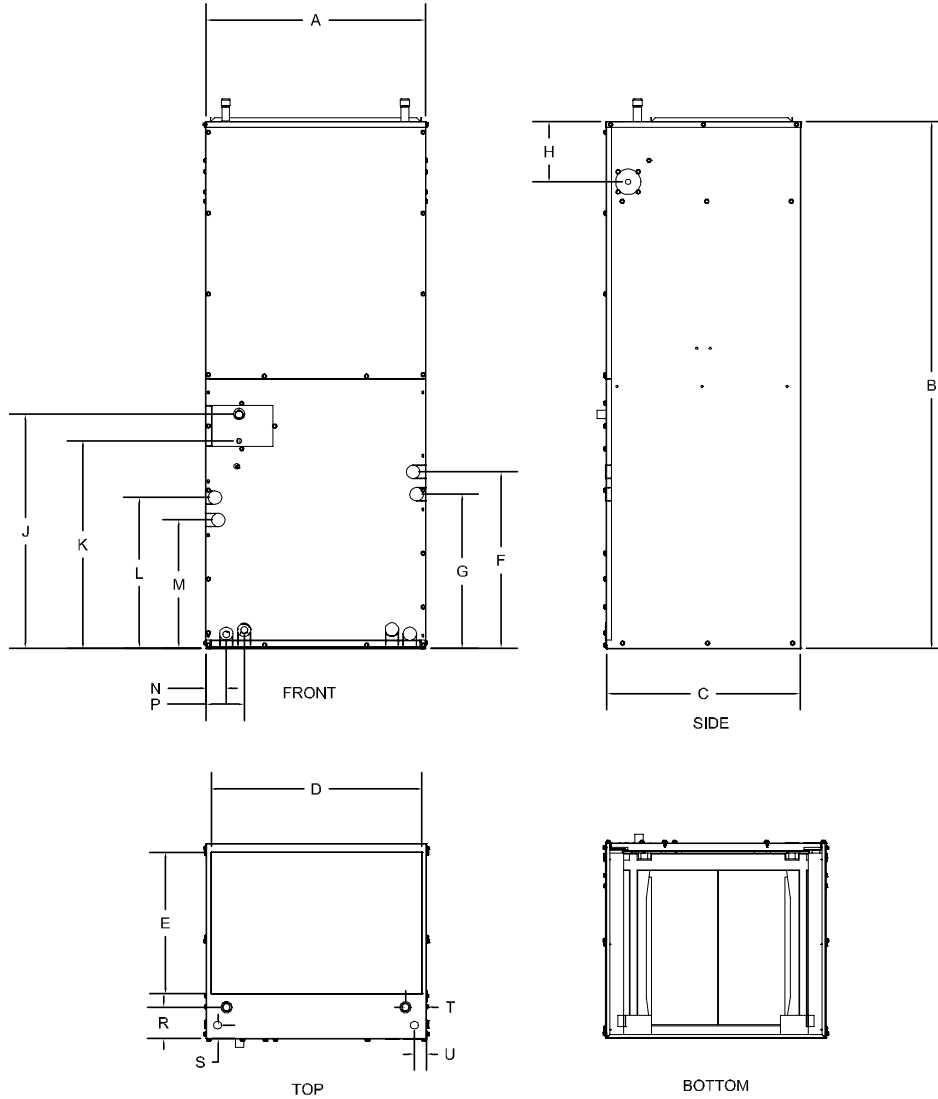
## DIMENSIONAL DATA COOL ONLY OR ELECTRIC HEAT



DIMENSIONAL DATA MULTI-POSITION AIR HANDLER COOL ONLY OR ELECTRIC HEAT															
MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
MS**18, 24	17.50	43.00	21.00	15.50	12.50	13.50	11.00	6.75	16.75	14.00	11.00	10.75	2.00	1.50	5.00
MS**30,36	21.00	48.00	21.00	19.00	12.50	14.50	13.00	6.75	20.00	17.00	12.75	10.30	2.30	4.35	5.00
MS--37,42,48,60	24.50	58.75	21.75	23.35	21.25	19.75	17.25	6.75	26.00	23.00	16.75	14.35	2.30	4.35	4.50

Note: All Dimension Are Approximate. All Dimensions Are Rounded.

## DIMENSIONAL DATA HYDRONIC HEAT



DIMENSIONAL DATA MULTI-POSITION AIR HANDLER HYDRONIC HEAT									
MODEL	A	B	C	D	E	F	G	H	J
MS**18, 24	17.50	43.00	21.00	16.00	15.00	13.50	11.00	6.75	16.75
MS**30,36	21.00	48.00	21.00	19.00	15.00	14.50	13.00	6.75	20.00
MS--37,42,48,60	24.50	58.75	21.75	23.50	15.75	19.75	17.25	6.75	26.00
MODEL	K	L	M	N	P	R	S	T	U
MS**18, 24	14.00	11.00	11.00	2.00	1.50	3.30	1.00	1.50	1.00
MS**30,36	17.00	13.00	10.30	2.30	4.35	3.75	1.75	2.50	1.50
MS--37,42,48,60	23.00	16.75	14.35	2.30	4.35	3.50	1.50	2.25	1.25

Note: All Dimension Are Approximate. All Dimensions Are Rounded



MORTEX PRODUCTS, INC.  
 501 TERMINAL ROAD  
 FORT WORTH, TEXAS 76106  
 Phone 817-624-0820 Fax 817-624-8581

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"
MSVE18,24 Electric	1.5 & 2.0	0.33	240	VA	9 X 6	A	839	832	818	811	801
						B	743	728	716	712	704
						C	704	688	679	672	663
						D	628	619	610	596	586
MSVE18,24 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
MSVE25,30,36 Electric	1.5 Thru 3.0	0.50	240	VB	10 X 7	A	1422	1421	1421	1416	1415
						B	1215	1214	1214	1214	1208
						C	898	889	889	882	869
						D	865	865	865	864	858
MSVE25,30,36 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
MSVE37,42,48,60 Electric	3.0 Thru 5.0	0.75	240	VC	12 X 9	A	1957	1919	1900	1871	1847
						B	1576	1565	1547	1517	1487
						C	1495	1482	1451	1432	1409
						D	1411	1385	1372	1338	1311
MSVE37,42,48,60 Hydronic	3.0 Thru 5.0	1.00	120	VI	12 X 9	A	2014	2007	1992	1968	1952
						B	1856	1839	1806	1788	1761
						C	1651	1632	1603	1584	1564
						D	1461	1440	1407	1396	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"
MSVE18,24 Electric	1.5 & 2.0	0.33	240	VA	9 X 6	A	0.530	0.610	0.650	0.710	0.780
						B	0.430	0.470	0.490	0.520	0.560
						C	0.370	0.430	0.470	0.500	0.530
						D	0.310	0.350	0.380	0.420	0.450
MSVE18,24 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
MSVE25,30,36 Electric	1.5 Thru 3.0	0.50	240	VB	10 X 7	A	1.690	1.730	1.790	1.950	2.030
						B	1.020	1.110	1.190	1.270	1.390
						C	0.580	0.640	0.710	0.780	0.850
						D	0.440	0.510	0.570	0.640	0.690
MSVE25,30,36 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
MSVE37,42,48,60 Electric	3.0 Thru 5.0	0.75	240	VC	12 X 9	A	1.900	1.900	2.100	2.300	2.500
						B	1.100	1.200	1.400	1.500	1.600
						C	0.800	0.900	1.100	1.200	1.200
						D	0.900	1.000	1.200	1.300	1.400
MSVE37,42,48,60 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

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MORTEX PRODUCTS, INC.  
 501 TERMINAL ROAD  
 FORT WORTH, TEXAS 76106  
 Phone 817-624-0820 Fax 817-624-8581

BLOWER PERFORMANCE X-13 MOTOR AIR FLOW											
Model Number	Nominal Tons	Motor HP	Volts 1 Ph. 50/60 Hz.	Motor Code	Blower Wheel	Motor Tap	CFM @ 0.10"	CFM @ 0.20"	CFM @ 0.30"	CFM @ 0.40"	CFM @ 0.50"
MSVT18,24 Electric	1.5 & 2.0	0.33	240	VD	9 X 6	1	795	783	726	709	691
						2	872	865	806	790	775
						3	1002	970	929	884	827
						4	1088	1048	998	938	872
						5	1114	1073	1018	960	888
MSVT18,24 Hydronic	1.5 & 2.0	0.33	120	VJ	9 X 6	1	693	666	657	618	598
						2	753	745	711	693	675
						3	785	753	745	720	702
						4	838	816	808	777	753
						5	874	860	846	816	769
MSVT25,30,36 Electric	1.5 Thru 3.0	0.50	240	VE	10 X 7	1	814	791	752	711	658
						2	846	828	799	768	711
						3	1059	1036	1007	982	957
						4	1152	1136	1104	1087	1053
						5	1247	1213	1192	1167	1136
MSVT25,30,36 Hydronic	1.5 Thru 3.0	0.50	120	VK	10 X 7	1	714	668	639	587	517
						2	872	845	806	782	732
						3	1082	1046	1015	793	951
						4	1156	1122	1094	1065	1028
						5	1313	1262	1226	1156	1077
MSVT37,42,48,60 Electric	3.0 Thru 5.0	0.75	240	VF	12 X 9	1	1339	668	639	587	517
						2	1467	845	806	782	732
						3	1556	1046	1015	793	951
						4	1661	1122	1094	1065	1028
						5	2070	1262	1226	1156	1077
MSVT37,42,48,60 Hydronic	3.0 Thru 5.0	1.00	120	VL	12 X 9	1	1479	1448	1416	1373	1341
						2	1558	1529	1499	1459	1438
						3	1641	1614	1596	1548	1510
						4	1783	1749	1723	1670	1625
						5	1935	1879	1764	1764	1694

BLOWER PERFORMANCE X-13 MOTOR AMPS											
Model Number	Nominal Tons	Motor HP	Volts 1 Ph. 50/60 Hz.	Motor Code	Blower Wheel	Motor Tap	AMPS @ 0.10"	AMPS @ 0.20"	AMPS @ 0.30"	AMPS @ 0.40"	AMPS @ 0.50"
MSVT18,24 Electric	1.5 & 2.0	0.33	240	VD	9 X 6	1	0.370	0.400	0.420	0.430	0.450
						2	0.440	0.470	0.480	0.490	0.520
						3	0.490	0.500	0.530	0.540	0.550
						4	0.510	0.530	0.550	0.580	0.590
						5	0.660	0.670	0.700	0.710	0.720
MSVT18,24 Hydronic	1.5 & 2.0	0.33	120	VJ	9 X 6	1	0.900	0.900	1.000	1.100	1.200
						2	1.100	1.200	1.200	1.200	1.300
						3	1.200	1.200	1.300	1.300	1.310
						4	1.400	1.400	1.500	1.510	1.600
						5	1.600	1.700	1.700	1.710	1.800
MSVT25,30,36 Electric	1.5 Thru 3.0	0.50	240	VE	10 X 7	1	0.650	0.670	0.700	0.720	0.750
						2	0.810	0.840	0.870	0.900	0.940
						3	1.120	1.150	1.180	1.220	1.210
						4	1.350	1.380	1.410	1.440	1.450
						5	1.590	1.610	1.620	1.630	1.660
MSVT25,30,36 Hydronic	1.5 Thru 3.0	0.50	120	VK	10 X 7	1	1.500	1.500	1.600	1.700	1.710
						2	2.300	2.400	2.400	2.410	2.410
						3	2.600	2.600	2.600	2.610	2.620
						4	2.600	2.600	2.610	2.620	2.630
						5	2.700	2.700	2.710	2.710	2.720
MSVT37,42,48,60 Electric	3.0 Thru 5.0	0.75	240	VF	12 X 9	1	0.640	0.640	0.690	0.730	0.770
						2	0.820	0.860	0.900	0.940	1.000
						3	0.960	1.000	1.050	1.090	1.140
						4	1.080	1.120	1.170	1.210	1.290
						5	2.000	2.050	2.090	2.140	2.250
MSVT37,42,48,60 Hydronic	3.0 Thru 5.0	1.00	120	VL	12 X 9	1	2.920	2.970	3.060	3.140	3.250
						2	3.440	3.480	3.590	3.660	3.740
						3	3.950	4.050	4.120	4.210	4.270
						4	5.050	5.120	5.180	5.240	5.270
						5	6.830	6.580	6.260	5.990	5.710

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 501 TERMINAL ROAD  
 FORT WORTH, TEXAS 76106  
 Phone 817-624-0820 Fax 817-624-8581

BLOWER PERFORMANCE PSC MOTOR AIR FLOW											
Model Number	Nominal Tons	Motor HP	Volts 1 Ph. 50/60 Hz.	Motor Code	Blower Wheel	Motor Tap	CFM @ 0.10"	CFM @ 0.20"	CFM @ 0.30"	CFM @ 0.40"	CFM @ 0.50"
MSPS18,24 Electric	1.5 & 2.0	0.33	240	SA	9 X 6	Low	859	822	776	735	674
						Med	925	881	835	779	726
						High	982	931	885	828	757
MSPS18,24 Hydronic	1.5 & 2.0	0.33	120	SJ	9 X 6	Low	772	731	683	635	569
						Med	815	764	718	665	598
						High	836	791	739	678	612
MSPS25,30,36 Electric	2.0 Thru 3.0	0.50	240	SB	10 X 7	Low	1087	1070	1035	999	941
						Med	1280	1230	1169	1115	1035
						High	1448	1378	1304	1222	1154
MSPS25,30,36 Hydronic	2.0 Thru 3.0	0.50	120	SK	10 X 7	Low	930	956	969	950	917
						Med	1206	1190	1154	1105	1043
						High	1412	1355	1281	1217	1139
MSPS37,42,48,60 Electric	3.0 Thru 5.0	0.75	240	SC	12 X 9	Low	1462	1452	1432	1402	1371
						Med	1756	1723	1689	1664	1612
						High	2092	2029	1979	1898	1852
MSPS37,42,48,60 Hydronic	3.0 Thru 5.0	0.75	120	SM	12 X 9	Low	1091	1087	1084	1078	1051
						Med	1456	1446	1446	1446	1426
						High	2231	2171	2103	2040	1989

BLOWER PERFORMANCE PSC MOTOR AMPS											
Model Number	Nominal Tons	Motor HP	Volts 1 Ph. 50/60 Hz.	Motor Code	Blower Wheel	Motor Tap	AMPS @ 0.10"	AMPS @ 0.20"	AMPS @ 0.30"	AMPS @ 0.40"	AMPS @ 0.50"
MSPS18,24 Electric	1.5 & 2.0	0.33	240	SA	9 X 6	Low	1.50	1.40	1.30	1.20	1.10
						Med	1.60	1.50	1.40	1.30	1.20
						High	1.80	1.80	1.70	1.60	1.60
MSPS18,24 Hydronic	1.5 & 2.0	0.33	120	SJ	9 X 6	Low	2.80	2.60	2.50	2.30	2.20
						Med	3.10	2.90	2.80	2.70	2.50
						High	3.70	3.60	3.50	3.40	3.30
MSPS25,30,36 Electric	2.0 Thru 3.0	0.50	240	SB	10 X 7	Low	2.70	2.40	2.30	2.10	1.90
						Med	2.80	2.60	2.40	2.30	2.10
						High	3.20	3.10	3.00	2.80	2.70
MSPS25,30,36 Hydronic	2.0 Thru 3.0	0.50	120	SK	10 X 7	Low	5.90	5.30	5.10	4.70	4.30
						Med	6.50	5.90	5.50	5.10	4.70
						High	6.70	6.30	6.00	5.70	5.40
MSPS37,42,48,60 Electric	3.0 Thru 5.0	0.75	240	SC	12 X 9	Low	3.70	3.50	3.40	3.30	3.20
						Med	4.40	4.10	4.00	3.90	3.70
						High	5.10	4.60	4.50	4.30	4.20
MSPS37,42,48,60 Hydronic	3.0 Thru 5.0	0.75	120	SM	12 X 9	Low	7.60	7.30	7.00	6.90	6.50
						Med	9.80	9.30	8.90	8.70	8.20
						High	13.40	12.90	12.60	12.10	11.90

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ELECTRICAL DATA																							
Cabinet Size	Motor Data					Electric Heater Data					Minimum Circuit Ampacity					Maximum Overcurrent Protection							
	Motor Code	Motor HP	Volts 1 Ph	Motor Type	Motor Amps (1)	No Circuits	Kw (2)	Amps 115V	Amps 208V	Amps 208V	Amps 240V	Amps 240V	MCA 115V	MCA 208V	MCA 208V	MCA 240V	MCA 240V	MOCP 115V (3,4)	MOCP 208V (3,4)	MOCP 208V (3,4)	MOCP 240V (3,4)	MOCP 240V (3,4)	
								Cr 1	Cr 1	Cr 2	Cr 1	Cr 2	Cr 1	Cr 1	Cr 2	Cr 1	Cr 1	Cr 2	Cr 1	Cr 1	Cr 2	Cr 1	Cr 1
<b>(42) SMALL CABINET-NOMINAL 1.5 &amp; 2.0 TONS-0 TO 10 Kw</b>																							
MSVE18, 24	VA	0.33	208/240	ECM	2.8	0	0	-	-	-	-	-	-	3.5	-	3.5	-	-	10.0	-	10.0	-	-
						1	5	-	18.0	-	20.8	-	-	25.3	-	28.8	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	47.9	-	54.9	-	-	60.0	-	60.0	-	-
MSVT18,24	VD	0.33	208/240	CTM	2.8	0	0	-	0	-	0	-	-	3.5	-	3.5	-	-	10.0	-	10.0	-	-
						1	5	-	18.0	-	20.8	-	-	25.3	-	28.8	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	47.9	-	54.9	-	-	60.0	-	60.0	-	-
MSPS18,24	SA	0.33	208/240	PSC	2.0	0	0	-	-	-	-	-	-	2.5	-	2.5	-	-	10.0	-	10.0	-	-
						1	5	-	18.0	-	20.8	-	-	24.5	-	28.0	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	47.1	-	54.1	-	-	60.0	-	60.0	-	-
MSVE25, 30, 36	VB	0.50	208/240	ECM	4.3	0	0	-	-	-	-	-	-	5.4	-	5.4	-	-	10.0	-	10.0	-	-
						1	5	-	18.0	-	20.8	-	-	26.8	-	30.3	-	-	35.0	-	40.0	-	-
						1	10	-	36.1	-	41.7	-	-	49.4	-	56.4	-	-	60.0	-	60.0	-	-
MSVT25, 30, 36	VE	0.50	208/240	CTM	4.1	0	0	-	-	-	-	-	-	5.1	-	5.1	-	-	10.0	-	10.0	-	-
						1	5	-	18.0	-	20.8	-	-	26.6	-	30.1	-	-	35.0	-	40.0	-	-
						1	10	-	36.1	-	41.7	-	-	49.2	-	56.2	-	-	60.0	-	70.0	-	-
MSPS25, 30, 36	SB	0.5	208/240	PSC	3.0	0	0	-	-	-	-	-	-	3.8	-	3.8	-	-	10.0	-	10.0	-	-
						1	5	-	18.0	-	20.8	-	-	25.5	-	29.0	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	48.1	-	55.1	-	-	60.0	-	60.0	-	-
<b>(45) MEDIUM CABINET-NOMINAL 2.0, 2.5, 3.0 TONS-0 TO 15 Kw</b>																							
MSVE37, 42, 48, 60	VC	0.75	208/240	ECM	6.8	0	0	-	-	-	-	-	-	8.5	-	8.5	-	-	15.0	-	15.0	-	-
						1	5	-	18.0	-	20.8	-	-	29.3	-	32.8	-	-	35.0	-	40.0	-	-
						1	10	-	36.1	-	41.7	-	-	51.9	-	58.9	-	-	60.0	-	70.0	-	-
MSVT37, 42, 48, 60	VF	0.75	208/240	CTM	6.8	0	0	-	-	-	-	-	-	8.5	-	8.5	-	-	15.0	-	15.0	-	-
						1	5	-	18.0	-	20.8	-	-	29.3	-	26.0	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	45.1	-	52.1	-	-	50.0	-	60.0	-	-
MSPS37, 42, 48, 60	SC	0.75	208/240	PSC	3.6	0	0	-	-	-	-	-	-	4.5	-	4.5	-	-	10.0	-	10.0	-	-
						1	5	-	18.0	-	20.8	-	-	26.1	-	29.6	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	48.7	-	55.7	-	-	60.0	-	60.0	-	-
<b>(18) LARGE CABINET-NOMINAL 3.0, 3.5, 4.0, 5.0 TONS-0 TO 20 Kw</b>																							
MSVE37, 42, 48, 60	VI	1.00	115	ECM	12.8	0	0	12.8	-	-	-	-	-	16.0	-	-	-	-	20.0	-	-	-	-
						1	5	-	18.0	-	20.8	-	-	29.3	-	26.0	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	45.1	-	52.1	-	-	50.0	-	60.0	-	-
MSVT37, 42, 48, 60	VL	1.00	115	CTM	10.9	0	0	10.9	-	-	-	-	-	13.6	-	-	-	-	20.0	-	-	-	-
						1	5	-	18.0	-	20.8	-	-	29.3	-	26.0	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	45.1	-	52.1	-	-	50.0	-	60.0	-	-
MSPS37, 42, 48, 60	SM	0.75	115	PSC	11.0	0	0	11.0	-	-	-	-	-	13.8	-	-	-	-	20.0	-	-	-	-
						1	5	-	18.0	-	20.8	-	-	26.1	-	29.6	-	-	35.0	-	35.0	-	-
						1	10	-	36.1	-	41.7	-	-	48.7	-	55.7	-	-	60.0	-	60.0	-	-

(1) Motor Nameplate Amps

(2) Nominal Kw At 240V (Derate 25% For 208V)

(3) Fuse or HACR Breaker

(4) Maximum Overcurrent Device, Overcurrent Protection Installed On Breaker Models Are Sized Per MCA

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
<b>SMALL CABINET 1.5 &amp; 2.0 TON</b>										
MS**18	500	4	13600	16200	18840	21510	24200	0.07	2	12
	600		14890	17760	20660	23600	26570	0.09		
	700		15990	19090	22230	25410	28620	0.12		
MS**24	600		14890	17760	20660	23600	26570	0.09	2	
	800		16960	20250	23600	26990	30420	0.15		
	900		17810	21280	24810	28390	32010	0.19		
<b>MEDIUM CABINET 2.0, 2.5, 3.0 TON</b>										
MS**25	600	4	16210	16320	22460	25630	28820	0.07	2	12
	800		18620	22220	25860	29540	33260	0.11		
	900		19620	23420	27270	31170	35110	0.13		
	600		21010	25000	29030	33090	37190	0.10	3	
	800		24490	29180	33930	38720	43560	0.16		
	900		25940	30920	35960	41060	46210	0.20		
MS**30	900		19620	23420	27270	31170	35110	0.13	2	
	1000		20510	24500	28540	32630	36770	0.16		
	1200		22050	26350	30720	35150	39630	0.22		
	900		25940	30920	35960	41060	46210	0.20	3	
	1000		27230	32470	37780	43160	48580	0.24		
	1200		29440	35140	40910	46760	52670	0.33		
MS**36	1000	20510	24500	28540	32630	36770	0.16	2		
	1200	22050	26350	30720	35150	39630	0.22			
	1400	23340	27910	32550	37260	42040	0.29			
	1000	27230	32470	37780	43160	48580	0.24	3		
	1200	29440	35140	40910	46760	52670	0.33			
	1400	31270	37350	43510	49750	56070	0.43			
<b>LARGE CABINET 3.0, 3.5, 4.0, 5.0 TON</b>										
MS**37	1000	7	26320	31350	36430	41570	46740	0.09	2	12
	1200		28770	34300	39900	45550	51260	0.12		
	1400		30880	36840	42880	48980	55140	0.15		
	1000		34230	40720	47280	53890	60550	0.13	3	
	1200		37800	45010	52290	59640	67050	0.18		
	1400		40860	48690	56600	64590	72660	0.23		
	1000		39630	47090	54620	62190	69810	0.17	4	
	1200		44170	52530	60960	69460	78020	0.23		
	1400		48080	57220	66440	75750	85130	0.31		
MS**42	1200		28770	34300	39900	45550	51260	0.12	2	
	1400		30880	36840	42880	48980	55140	0.15		
	1600		32720	39050	45470	51970	58540	0.19		
	1200		37800	45010	52290	59640	67050	0.18	3	
	1400		40860	48690	56600	64590	72660	0.23		
	1600		43530	51890	60360	68910	77550	0.29		
	1200		44170	52530	60960	69460	78020	0.23	4	
	1400		48080	57220	66440	75750	85130	0.31		
	1600		51490	61310	71230	81250	91340	0.39		
MS**48	1400	30880	36840	42880	48980	55140	0.15	2		
	1600	32720	39050	45470	51970	58540	0.19			
	1800	34340	41010	47770	54620	61550	0.24			
	1400	40860	48690	56600	64590	72660	0.23	3		
	1600	43530	51890	60360	68910	77550	0.29			
	1800	45870	54710	63670	72720	81870	0.36			
	1400	48080	57220	66440	75750	85130	0.31	4		
	1600	51490	61310	71230	81250	91340	0.39			
	1800	54490	64910	75450	86090	96820	0.47			
MS**60	1800	34340	41010	47770	54620	61550	0.24	2		
	2000	35780	42750	49820	56990	64240	0.28			
	2100	36450	43550	50770	58080	65480	0.31			
	1800	45870	54710	63670	72720	81870	0.36	3		
	2000	47960	57220	66610	76110	85710	0.43			
	2100	48920	58380	67970	77670	87480	0.46			
	1800	54490	64910	75450	86090	96820	0.47	4		
	2000	57160	68120	79200	90400	101710	0.57			
	2100	58380	69590	80930	92390	103750	0.62			

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	
<b>SMALL CABINET 1.5 &amp; 2.0 TON</b>										
MS**18	500	2.7	26290	116.5	160	0.07	1.2	2	12	
	600	3.0	29630	113.5		0.09	1.5			
	700	3.4	32690	111.1		0.12	1.8			
MS**24	600	3.0	29630	113.5		0.09	1.5			
	800	3.6	35510	108.9		0.15	2.1			
	900	3.9	38140	107.1		0.19	2.4			
<b>MEDIUM CABINET 2.0, 2.5, 3.0 TON</b>										
MS**25	600	3.4	33080	118.8	160	0.07	1.8	2	12	
	800	4.1	40000	114.1		0.11	1.1			
	900	4.4	43120	112.2		0.13	1.2			
	MS**30	600	4.7	45530		138.0	0.10	1.5		3
		800	5.7	56060		132.6	0.16	2.2		
		900	6.2	60880		130.4	0.20	2.6		
MS**36	900	4.4	42780	111.8		0.14	1.2	2		
	1000	4.7	45680	110.1		0.16	1.4			
	1200	5.2	51.01	107.2		0.23	1.7			
	MS**33	900	6.2	60500		130.0	0.21	2.5		3
		1000	6.7	65020		128.0	0.25	2.9		
		1200	7.5	73410		124.4	0.34	3.7		
MS**36	1000	4.7	45680	110.1	0.16	1.4	2			
	1200	5.2	51010	107.2	0.23	1.7				
	1400	5.7	55830	104.8	0.29	2.1				
	MS**39	1000	6.7	65020	128.0	0.25	2.9	3		
		1200	7.5	73410	124.4	0.34	3.7			
		1400	8.3	81080	121.4	0.44	1.4			
<b>LARGE CABINET 3.0, 3.5, 4.0, 5.0 TON</b>										
MS**37	1000	5.4	52500	116.4	160	0.09	1.6	2	12	
	1200	6.1	59100	113.4		0.12	2.0			
	1400	6.7	65130	110.9		0.15	2.4			
	MS**42	1000	7.5	72930		135.2	0.13	3.1		3
		1200	8.5	83040		131.8	0.18	1.1		
		1400	9.5	92390		128.9	0.23	1.4		
	MS**48	1000	8.8	85910		147.2	0.17	1.3		4
		1200	10.1	98890		144.0	0.23	1.7		
		1400	11.4	111020		141.1	0.31	2.1		
MS**42		1200	6.1	59100		113.4	0.12	2.0		2
		1400	6.7	65130		110.9	0.15	2.4		
		1600	7.3	70690		108.7	0.19	2.8		
MS**48	1200	8.5	83040	131.8		0.18	1.1	3		
	1400	9.5	92390	128.9		0.23	1.4			
	1600	10.4	101100	126.3		0.29	1.6			
	MS**54	1200	10.1	98890		144.0	0.23	1.7		4
		1400	11.4	111020		141.1	0.31	2.1		
		1600	12.6	122430		138.6	0.39	2.5		
		MS**48	1400	6.7	65130	110.9	0.15	2.4	2	
			1600	7.3	70690	108.7	0.19	2.8		
			1800	7.8	75860	106.9	0.24	3.2		
MS**48	1400	9.5	92390	128.9	0.23	1.4	3			
	1600	10.4	101100	126.3	0.29	1.6				
	1800	11.2	109250	124.0	0.36	1.9				
	MS**54	1400	11.4	111020	141.1	0.31	2.1	4		
		1600	12.6	122430	138.6	0.39	2.5			
		1800	13.7	133200	136.2	0.47	3.0			
		MS**60	1800	7.8	75860	106.9	0.24	3.2	2	
			2000	8.3	80690	105.2	0.28	1.1		
			2100	8.5	83000	104.4	0.31	1.0		
MS**60	1800	9.5	92390	128.9	0.36	1.9	3			
	2000	12.0	116930	121.9	0.43	2.1				
	2100	12.4	120600	121.0	0.46	2.3				
	MS**66	1800	13.7	133200	136.2	0.47	3.0	4		
		2000	14.7	143400	134.1	0.57	3.4			
		2100	12.4	120600	121.0	0.46	2.3			



MORTEX PRODUCTS, INC.  
501 TERMINAL ROAD  
FORT WORTH, TEXAS 76106  
Phone 817-624-0820 Fax 817-624-8581

**CORRECTION FACTORS FOR GLYCOL**  
CORRECTION FACTORS CALCULATED AT NOMINAL CFM

EWT F	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 F	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

MS-061509-012-(TG)



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 501 TERMINAL ROAD  
 FORT WORTH, TEXAS 76106  
 Phone 817-624-0820 Fax 817-624-8581

CHILLED WATER "A" COIL COOLING CAPACITIES 80/67°F EAT 45°F EWT									
MODEL NO.	CFM	TOTAL	SENS	LATENT	LDB	LWB	GPM	WPD FT.	APD
CW018A8K3	600	26650	17680	8970	52.7	48.5	3.0	1.6	0.021
CW024A8K3	800	32350	22190	10160	54.3	54.0	3.5	2.1	0.036
CW036A8K5	1200	41540	30430	11110	56.5	56.1	4.0	3.3	0.049
CW048A9K9	1600	51940	38600	13340	57.6	56.8	5.5	5.5	0.132
CW060A9K9	2000	63750	47340	16410	58.0	57.0	7.0	8.4	0.195

4 ROW "A" COIL HEATING CAPACITIES										
MODEL NO.	120°F EWT		20°F Δt 68°F EDB			140°F EWT		20°F Δt 68°F EDB		
	BTUH	LAT	GPM	APD	WPD	BTUH	LAT	GPM	APD	WPD
CW018A8K3	23330	103.8	2.3	0.13	1.3	35700	122.9	3.6	0.13	2.9
CW024A8K3	30340	103.0	3.1	0.16	1.9	46660	121.8	4.7	0.16	2.1
CW036A8K5	42790	100.9	4.3	0.25	1.6	66370	119.0	6.7	0.25	3.6
CW048A9K9	58080	101.5	5.9	0.22	2.2	89870	119.8	9.1	0.22	1.8
CW060A9K9	75600	102.9	7.6	0.21	3.8	115190	121.1	11.7	0.21	3.1

MODEL NO.	160°F EWT		20°F Δt 68°F EDB			180°F EWT		20°F Δt 68°F EDB		
	BTUH	LAT	GPM	APD	WPD	BTUH	LAT	GPM	APD	WPD
CW018A8K3	47790	141.5	4.9	0.13	2.5	59730	159.8	6.1	0.13	3.8
CW024A8K3	62590	140.1	6.4	0.16	3.6	78340	158.3	8.0	0.16	2.4
CW036A8K5	89480	136.8	9.1	0.25	2.5	112340	154.3	11.5	0.25	3.8
CW048A9K9	120990	137.7	12.3	0.22	3.1	151770	155.5	15.6	0.22	2.8
CW060A9K9	153970	139.0	15.7	0.21	3.2	192360	156.7	19.7	0.21	4.7

MS-061509-013-(TG)