

# HEPAir

# Performance Data - Vertical Series

Model Number		VERTICAL 75	VERTICAL 120	VERTICAL 180	VERTICAL 220
<b>Cooling Capacity DX-Evaporator Coil</b>					
Entering Conditions 80°F DB / 67°F WB [26.7°C DB / 51% RH]					
Total	Btu/h [kW]	122,200 [35.8]	155,400 [45.5]	218,000 [63.8]	311,550 [91.2]
Sensible	Btu/h [kW]	97,250 [28.5]	139,200 [40.8]	163,750 [47.9]	266,950 [78.2]
Coil Leaving Air Temperature	°F [°C]	59.6 [15.3]	61.8 [16.6]	58.5 [14.7]	61.0 [16.1]
Evaporator Temperature	°F [°C]	49.0 [9.4]	53.5 [11.9]	49.0 [9.4]	51.0 [10.6]
<b>Compressor</b>					
Compressor Type	-	Scroll	Scroll	Scroll	Scroll
Model Number / Refrigerant Type	-	ZB38 / R-22	ZB45 / R-22	ZB45 / R-22	ZB45 / R-22
Number of Compressors	-	2	2	3	4
Compressor(s) Capacity at 55 Evap/120 Cond. Power	Btu/h [kW]	145,220 [42.5]	170,540 [49.9]	255,810 [75.0]	341,080 [100.0]
	Watts	9,240	11,400	17,100	22,800
<b>Evaporator Coil</b>					
Material Copper Tubing (.375 O.D.) / Aluminum Fins (10FPI, Type - Flat)					
Face Area	sq.ft [m <sup>2</sup> ]	10.3 [0.96]	17.9 [1.67]	17.9 [1.67]	31.1 [2.89]
Rows of Coil	-	6	6	6	6
Face Velocity	FPM [m/s]	427 [2.17]	394 [2.00]	394 [2.00]	415 [2.11]
<b>Cooling Capacity - Chilled Water Coil</b>					
Entering Conditions 80°F DB / 67°F WB [26.7°C DB / 51% RH]					
Total	Btu/h [kW]	136,500 [39.9]	197,900* [57.9]*	281,800 [82.6]	371,900** [108.9]**
Sensible	Btu/h [kW]	119,400 [34.9]	153,500* [44.9]*	238,200 [69.8]	307,000** [90.0]**
Water Flow Rate	GPM [Ltr/S]	27.3 [1.7]	39.6* [2.5]*	56.8 [3.6]	75.7** [4.8]**
Pressure drop coil + Valve	PSI [kPa]	6.8 [46.9]	12.5* [86.3]*	11.6 [80]	12.8** [88.3]**
CWS/CWR 44.6 F / 54.5 F					
<b>Fan Capacity</b>					
Airflow Volume at Sea Level	CFM [m <sup>3</sup> /h]	4,410 [7,500]	7,060 [12,000]	7,060 [12,000]	12,950 [22,000]
Fan Model C90 at 60 Hz, Motor HP (Total)	h.p. [kW]	3.8 [2.8]	7.5 [5.6]	7.5 [5.6]	11.4 [8.5]
Total Static Pressure	in.wg [Pa]	2.6 [640]	3.1 [780]	3.1 [780]	2.7 [680]
Fan Control Type	-	Multi-Stage Transformer			
Airflow Volume at Sea Level	CFM [m <sup>3</sup> /h]	4,410 [7,500]	7,060 [12,000]	7,060 [12,000]	12,950 [22,000]
Fan Model V90 at 60 Hz, Motor HP (Total)	h.p. [kW]	5.8 [4.3]	11.3 [8.4]	11.3 [8.4]	17.3 [12.9]
Total Static Pressure	in.wg [Pa]	3.5 [860]	4.1 [1020]	4.1 [1020]	3.5 [880]
Number of Fan/Motor Combinations	-	1	2	2	3
Fan Control Type	-	Frequency Drive			
<b>Filter</b>					
Quantity	-	1	3	3	3
Nominal Size	in. [mm]	24 x 28 [605 x 690]	24 x 28 [605 x 690]	24 x 28 [605 x 690]	24 x 38 [605 x 940]
Quantity	-	2			1
Nominal Size	in. [mm]	10 x 28 [245 x 690]			10 x 38 [245 x 940]
Thickness	in. [mm]	2 [48]	2 [48]	2 [48]	2 [48]
Type / Efficiency		Pleated/30%	Pleated/30%	Pleated/30%	Pleated/30%
<b>Cabinet</b>					
Construction Powder coated double wall galvanized steel					
Weight	lb [kg]	995 [451]	1300 [590]	1600 [726]	2000 [907]
Width	in. [mm]	52 11/64 [1,325]	82 7/8 [2,105]	82 7/8 [2,105]	93 5/16 [2,370]
Depth	in. [mm]	33 15/32 [850]	33 15/32 [850]	33 15/32 [850]	43 5/16 [1,100]
Height	in. [mm]	76 49/64 [1,950]	76 49/64 [1,950]	76 49/64 [1,950]	76 49/64 [1,950]
<b>Options</b>					
<b>Electric-Reheat</b>					
Capacity	KW [Btu/h]	14.0 [47,813]	24.5 [83,672]	24.5 [83,672]	28.0 [95,625]
Control Voltage	VAC	24	24	24	24
<b>Hot Water Reheat - Hot Water Coil</b>					
Entering Conditions 64.4°F DB					
Total Heating Capacity	Btu/h [kW]	129,700 [38]	167,200* [48.9]*	242,250 [70.9]	279,800** [81.9]**
Water Flow Rate	GPM [Ltr/S]	7.5 [0.47]	9.7* [0.61]*	14.0 [0.88]	15.8** [1.0]**
Pressure drop coil + Valve	PSI [kPa]	14.9 [102.8]	16.5* [113.9]*	11.0 [75.9]	9.7** [66.9]**
HWS/HWR 158 F / 122 F					
<b>Steam Generating Humidifier</b>					
Capacity	lb/h kg/h	10 [4.5]	20 [9.1]	25 [11.3]	25 [11.3]
Number of Steam Generators	-	1	1	1	1
Model Number	-	MES-U 10	MES-U 20	MES-U 25	MES-U 25
Steam Generator Rating	kW	3.4	6.8	8.5	8.5
Minimum Supply Water Pressure (City Water)	psi [kPa]	30 [207]	30 [207]	30 [207]	30 [207]
<b>Air-Cooled Condenser</b>					
Selecton Criteria 120°F Condensing / 95°F Ambient (25°F TD)					
Capacity Required	Btu/h [kW]	174,261 [51.0]	206,370 [60.4]	309,555 [90.6]	412,740 [120.9]
Condenser Capacity at 25 Deg F T.D.	Btu/h [kW]	174,750 [51.2]	199,750 [58.5]	332,500 [97.4]	428,500 [125.5]
Standard Minimum Ambient Temperature	°F [°C]	-20 [-29]	-20 [-29]	-20 [-29]	-20 [-29]
Net Weight	lb [kg]	510 [231]	530 [240]	625 [284]	880 [400]
<b>Notes</b>					
EDB - Entering Dry Bulb Temperature		CWS - Chilled Water Supply Temperature		HWS - Hot Water Supply Temperature	
EWB - Entering Wet Bulb Temperature		CWR - Chilled Water Return Temperature		HWR - Hot Water Return Temperature	
TD - Temperature Difference					
* - Value rating at 5300 CFM					
** - Values rating at 10,600 CFM					