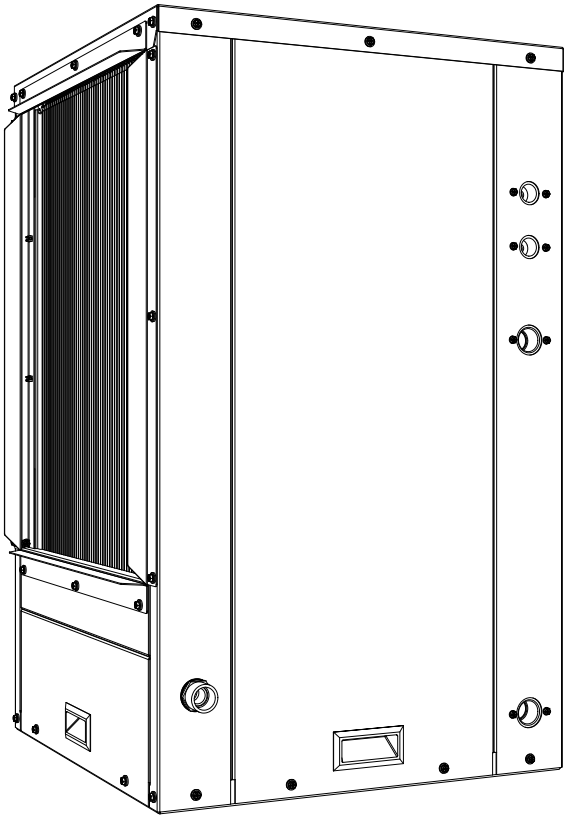
ENERTECH
ENERGY + TECHNOLOGY

Engineering Submittal Data Manual

VS-Single Stage Models
VT-Two Stage Models
Vertical Packaged Systems Water-to-Air Heat Pumps



Project Name: _____
Engineer: _____
Contractor: _____
Architect: _____
Date Received: _____
Date Submitted: _____

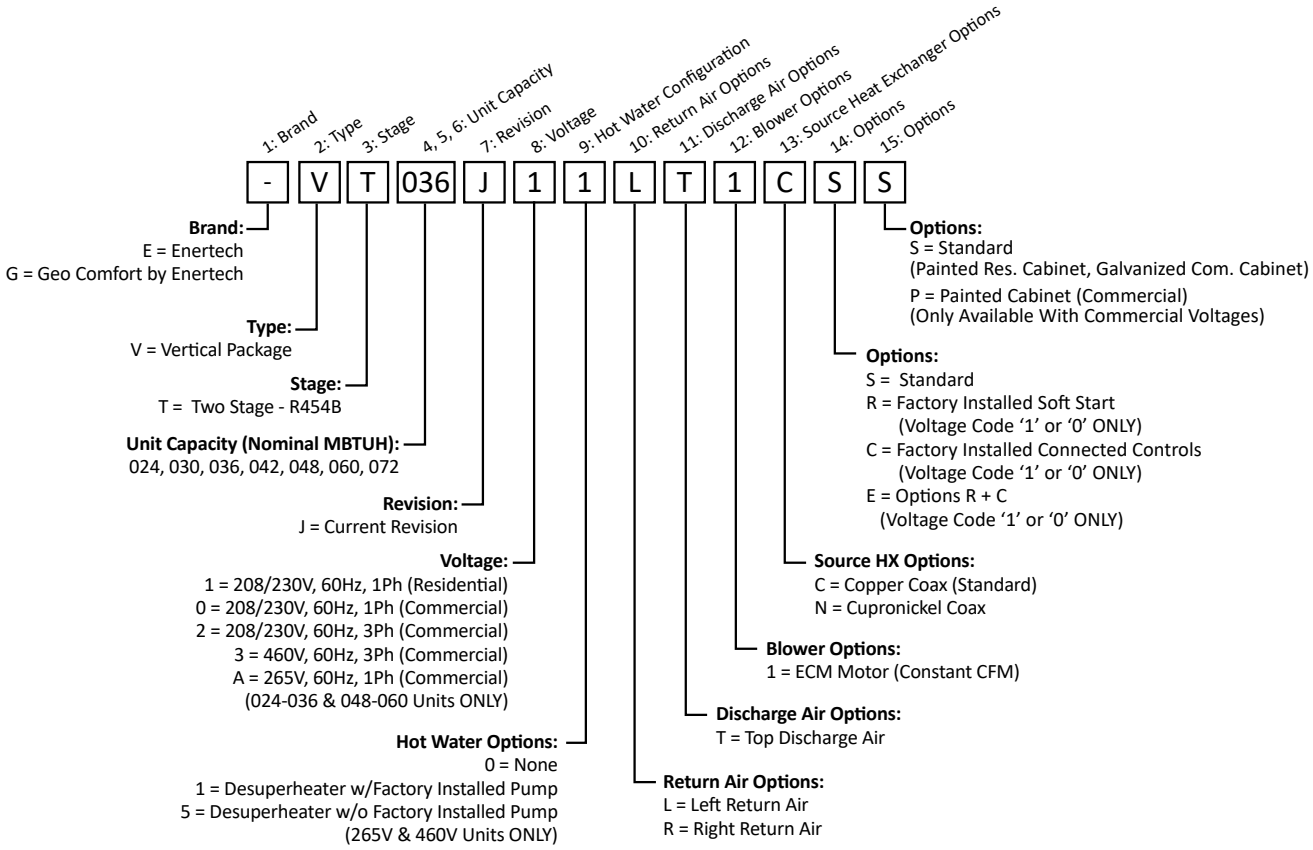
Unit Tag	Model Number

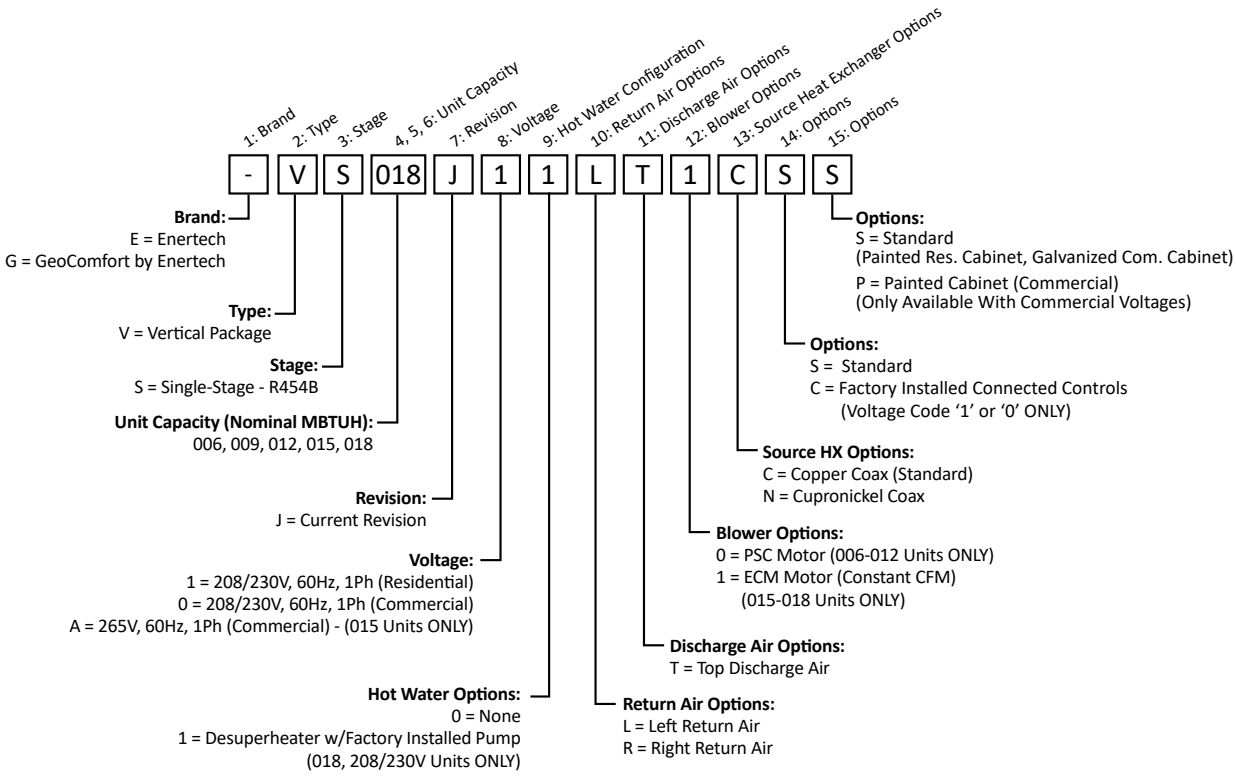
Notes:

20D455-11NN

ENGINEERING SPECIFICATIONS:

Model Nomenclature Decoders





AHRI Performance Data: VT Models

AHRI Performance Data								
Ground Loop Heat Pump								
Model	**Full Load Cooling**		**Full Load Heating**		**Part Load Cooling**		**Part Load Heating**	
	Btu/hr	**EER**	**Btu/hr**	**COP**	**Btu/hr**	**EER**	**Btu/hr**	**COP**
VT024	25,800	18.6	19,400	4.0	19,300	24.2	14,800	3.8
VT030	32,200	18.4	24,300	3.8	25,500	25.8	20,000	4.2
VT036	37,400	17.7	29,500	3.9	28,500	25.2	22,900	4.2
VT042	45,900	18.5	32,400	3.9	35,100	26.0	25,500	4.2
VT048	50,300	18.8	38,500	4.0	37,400	26.6	30,800	4.6
VT060	60,900	17.6	46,300	3.8	46,600	23.6	36,600	4.2
VT072	68,900	15.8	51,800	3.4	55,300	21.1	44,000	3.9
Ground Water Heat Pump								
Model	**Full Load Cooling**		**Full Load Heating**		**Part Load Cooling**		**Part Load Heating**	
	Btu/hr	**EER**	**Btu/hr**	**COP**	**Btu/hr**	**EER**	**Btu/hr**	**COP**
VT024	27,600	23.8	23,900	4.6	19,900	28.4	16,800	4.4
VT030	34,100	23.1	30,300	4.6	26,500	30.4	22,100	4.7
VT036	40,000	22.8	36,900	4.6	29,500	29.8	25,700	4.7
VT042	49,200	24.0	40,100	4.6	36,500	31.4	28,800	4.7
VT048	53,600	24.5	48,500	4.9	39,100	32.6	34,800	5.3
VT060	65,800	21.7	61,300	4.6	48,300	28.1	43,500	4.8
VT072	72,800	19.7	64,700	4.1	56,900	24.5	49,600	4.3
Water Loop Heat Pump								
Model	**Full Load Cooling**		**Full Load Heating**		**Part Load Cooling**		**Part Load Heating**	
	Btu/hr	**EER**	**Btu/hr**	**COP**	**Btu/hr**	**EER**	**Btu/hr**	**COP**
VT024	24,650	17.5	29,100	5.6	18,150	19.8	21,100	6.5
VT030	21,750	16.9	37,150	5.2	23,175	18.9	27,600	5.7
VT036	36,975	16.3	45,500	5.3	27,250	17.9	32,375	5.4
VT042	44,000	16.8	51,725	5.5	32,000	18.5	38,625	6.1
VT048	49,300	16.2	58,400	5.3	34,000	17.9	42,100	6.0
VT060	58,600	15.4	71,700	5.1	42,200	16.6	52,000	5.8
VT072	66,200	13.9	80,025	4.8	50,600	15.2	61,000	5.4

Notes:
Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties.
Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature.
Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.
GLHP - Entering water temperatures Full Load: 32°F heating / 77°F Cooling.
GLHP - Entering water temperatures Part Load: 41°F heating / 68°F Cooling.
GWHP - Entering water temperatures Full Load: 50°F heating / 59°F Cooling.
WLHP - Entering water temperatures Full Load: 68°F heating / 86°F Cooling.

ENGINEERING SPECIFICATIONS:

AHRI Performance Data: VS Models

AHRI Performance Data								
Ground Loop Heat Pump								
Model	**Full Load Cooling**		**Full Load Heating**		**Part Load Cooling**		**Part Load Heating**	
	Btu/hr	**EER**	**Btu/hr**	**COP**	**Btu/hr**	**EER**	**Btu/hr**	**COP**
VS006	7,000	18.6	4,900	3.4	-	-	-	-
VS009	10,900	17.4	8,500	3.6	-	-	-	-
VS012	11,900	18.1	9,400	3.6	-	-	-	-
VS015	16,000	22.3	11,500	4.3	-	-	-	-
VS018	21,700	22.2	15,400	4.0	-	-	-	-
Ground Water Heat Pump								
Model	**Full Load Cooling**		**Full Load Heating**		**Part Load Cooling**		**Part Load Heating**	
	Btu/hr	**EER**	**Btu/hr**	**COP**	**Btu/hr**	**EER**	**Btu/hr**	**COP**
VS006	7,600	25.9	6,500	4.4	-	-	-	-
VS009	11,900	22.1	10,600	4.4	-	-	-	-
VS012	13,400	24.1	12,100	4.3	-	-	-	-
VS015	17,400	31.6	14,400	5.4	-	-	-	-
VS018	23,200	30.5	19,600	5.3	-	-	-	-
Water Loop Heat Pump								
Model	**Full Load Cooling**		**Full Load Heating**		**Part Load Cooling**		**Part Load Heating**	
	Btu/hr	**EER**	**Btu/hr**	**COP**	**Btu/hr**	**EER**	**Btu/hr**	**COP**
VS006	6,800	16.0	8,400	5.5	-	-	-	-
VS009	10,200	16.3	12,425	5.2	-	-	-	-
VS012	12,150	15.7	17,700	5.0	-	-	-	-
VS015	15,775	19.9	23,700	6.4	-	-	-	-
VS018	21,300	20.5	29,100	6.3	-	-	-	-

Notes:
Rated in accordance with ISO Standard 13256-1 which includes Pump Penalties.
Heating capacities based on 68.0°F DB, 59.0°F WB entering air temperature.
Cooling capacities based on 80.6°F DB, 66.2°F WB entering air temperature.
GLHP - Entering water temperatures Full Load: 32°F heating / 77°F Cooling.
GWHP - Entering water temperatures Full Load: 50°F heating / 59°F Cooling.
WLHP - Entering water temperatures Full Load: 68°F heating / 86°F Cooling.

Unit Physical Data

VS Vertical Packaged Unit					
Model Number	**006**	**009**	**012**	**015**	**018**
Compressor Type	Single Stage Rotary				Single Stage Scroll
Fan Wheel (in.)	6 x 8			9 x 7	
Fan Motor PSC (HP)	1/16			N/A	
Fan Motor ECM (HP)	N/A			1/2	
*Refrigerant Charge (oz.)	27	27	27	36	38
Air Coil					
Face Area (Sq. Ft.)	2.02			3.49	
Dimensions (in.)	15.5 x 18.8 x 1			25.4 x 19.8 x 1	
Number of Rows	N/A Micro-Channel Coil				
Shipped Unit Weight (Nominal) lbs.	187			234	240

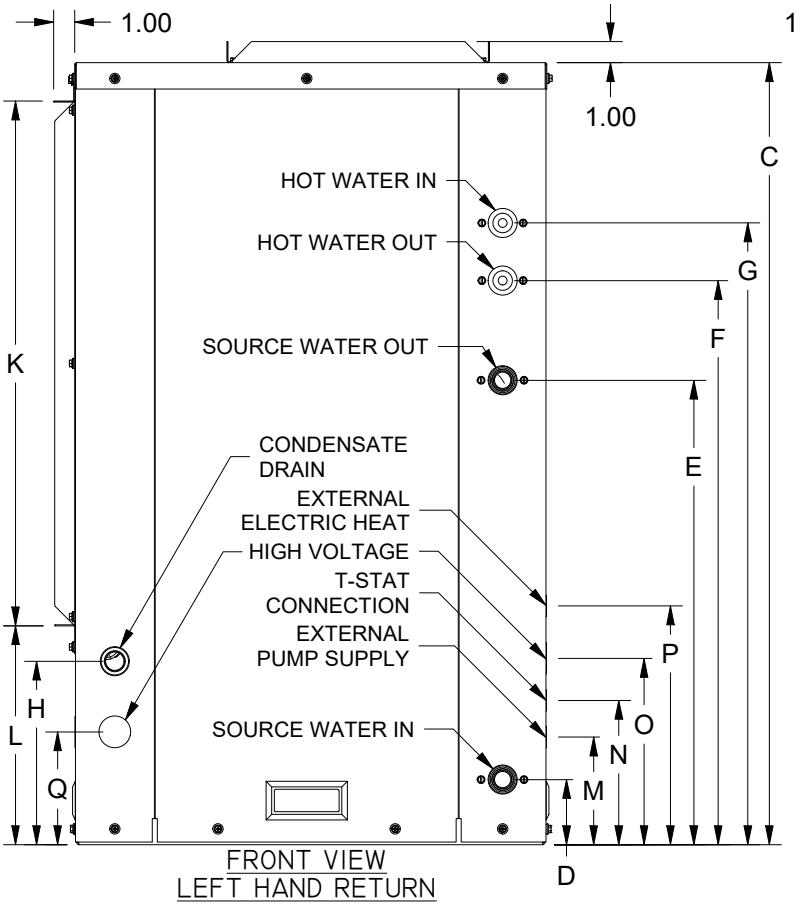
*Always check the unit data plate for actual refrigerant charge volume

VT Vertical Packaged Unit							
Model Number	**024**	**030**	**036**	**042**	**048**	**060**	**072**
Compressor Type	Dual Stage Unloading Scroll						
Fan Wheel (in.)	9 x 7		10 x 8T	11 x 10T			
Fan Motor ECM (HP)	1/2	1/2	3/4	3/4	3/4	1	1
*Refrigerant Charge (oz.)	38	45	47	62	58	62	56
Air Coil							
Face Area (Sq. Ft.)	3.49			4.76			
Dimensions (in.)	25.4 x 19.8 x 1.00			28.9 x 23.7 x 1.26			
Number of Rows	N/A Micro-Channel Coil						
Shipped Unit Weight (Nominal) lbs.	248	265	271	357	361	373	375

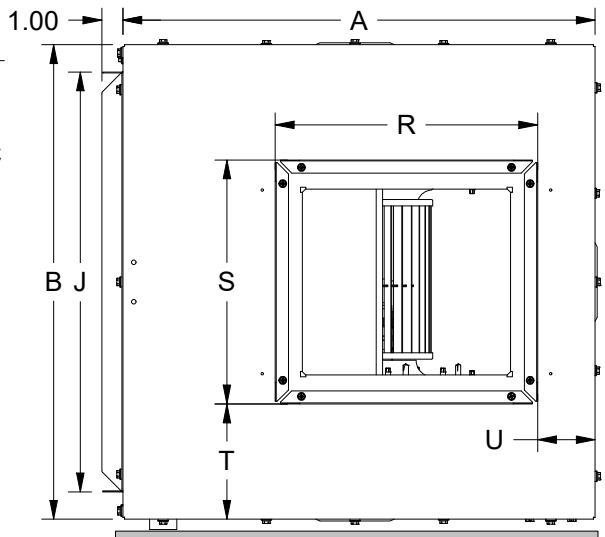
*Always check the unit data plate for actual refrigerant charge volume

ENGINEERING SPECIFICATIONS:

Dimensional Data, Cabinet, Duct Flanges and Installation Clearance

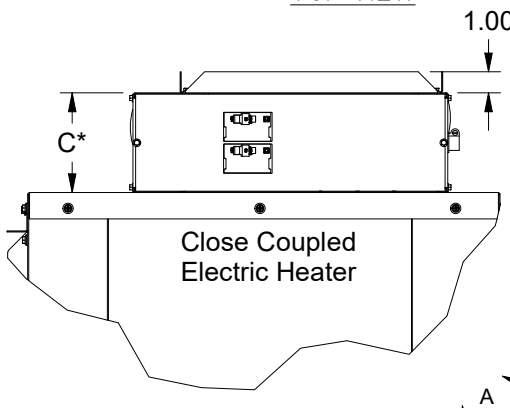


FRONT VIEW
LEFT HAND RETURN



Enertech Recommends A Minimum of 2 to 2 1/2 Feet of Service Area Clearance For Installation And Maintenance.

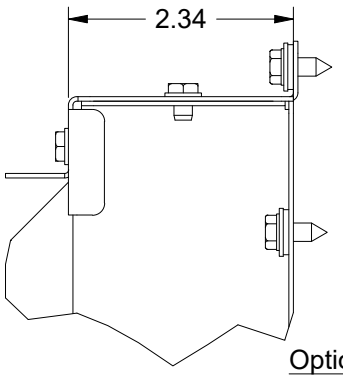
TOP VIEW



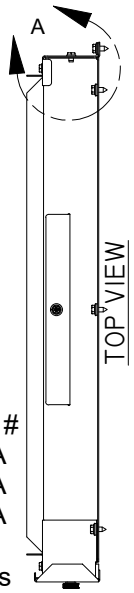
DIMENSIONAL DATA TABLE

MODEL SIZE		006 - 012	015 - 041			042 - 072	
			*	**	***	*	**
OVERALL CABINET	A	21.50	22.50	22.50	22.50	25.00	25.00
	B	21.50	22.50	22.50	22.50	27.88	27.88
Note: Add C* to C For Units With Close Coupled Heater	C	30.00	37.25	37.25	37.25	41.00	41.00
	C*	N/A	4.75	4.75	4.75	6.50	6.50
WATER CONNECTIONS	D	3.10	3.10	13.34	3.10	3.10	12.75
	E	14.125	22.10	22.10	22.10	16.63	16.63
	F	N/A	26.88	26.88	26.88	24.13	24.13
	G	N/A	29.63	29.63	29.63	26.88	26.88
	H	5.375	8.75	8.75	5.38	5.38	5.38
RETURN AIR DIMENSIONS	J	19.50	20.00	20.00	20.00	23.00	23.00
	K	15.50	25.00	25.00	25.00	29.00	29.00
	L	12.67	10.43	10.43	10.43	10.17	10.17
ELECTRICAL KNOCKOUTS	M	5.625	5.13	5.13	5.13	5.13	5.13
	N	7.375	6.88	6.88	6.88	6.88	6.88
	O	9.375	8.88	8.88	8.88	8.88	8.88
	P	11.875	11.38	11.38	11.38	11.38	11.38
	Q	8.375	5.38	5.38	N/A	N/A	N/A
SUPPLY AIR DIMENSIONS	R	12.50	12.50	12.50	12.50	15.98	15.98
	S	11.625	11.63	11.63	11.63	15.98	15.98
Note: Dimensions Are The Same For Units With Close Coupled Heater	T	4.94	5.39	5.39	5.39	5.95	5.95
	U	1.93	2.88	2.88	2.88	1.12	1.12

NOTE:
* UNITS WITHOUT INTERNAL LOOP PUMP
** UNITS WITH INTERNAL LOOP PUMP
*** UNITS WITH COMPOSITE DRAIN PAN



DETAIL A



Optional Filter Rack

Tonnage	Order Item #
006-012	AFR1721A
015-036	AFR2226A
042-072	AFR2430A

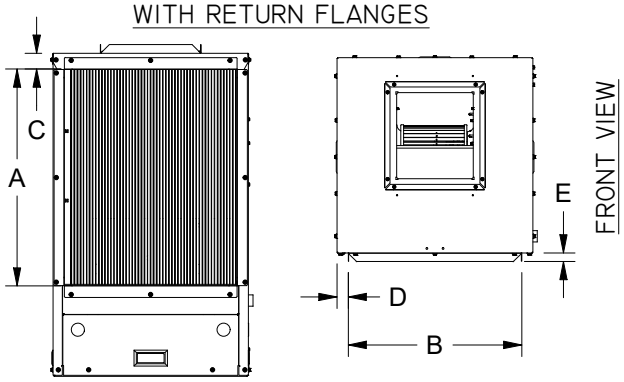
Note:
The Return Duct Dimensions are the same for the Unit and the Filter Rack.
The Deluxe Filter Rack causes the Return Duct to be offset from the Unit by 2.34 inches.
See Detail A

Notes:
Right hand return dimensions are mirrored to the opposite side as the left hand return dimensions.
Commercial units 006-015 Tons have 3/4" FPT source water connections.
Commercial units 018-072 Tons have 1" FPT source water connections
Residential units have 1" Double O-Ring source water connections.
All Desuperheater connections are 3/4" FPT.
All electrical knockouts are sized for 1/2" or 3/4" conduit.
All measurements are in inches.
All drawings are typical, individual models will vary.

Unit Dimensional Data

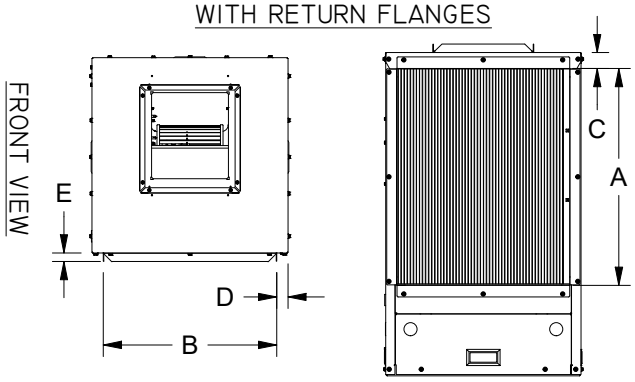
LEFT HAND RETURN MODELS

WITH RETURN FLANGES

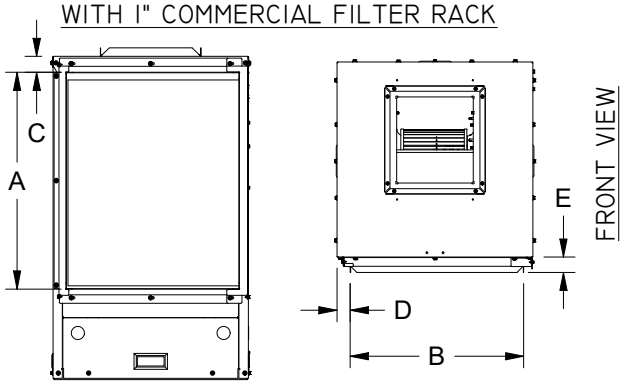


RIGHT HAND RETURN MODELS

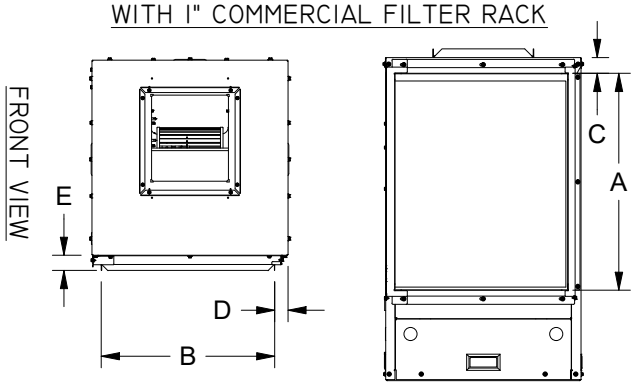
WITH RETURN FLANGES



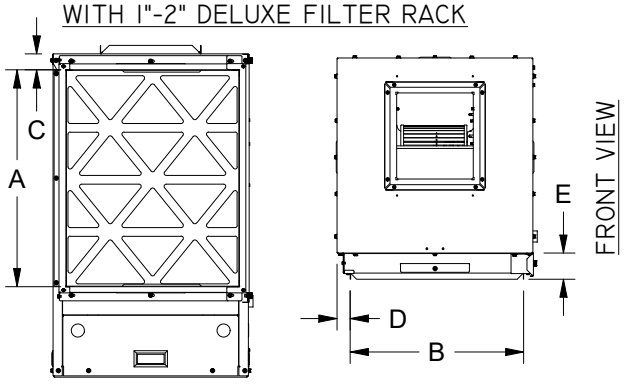
WITH 1" COMMERCIAL FILTER RACK



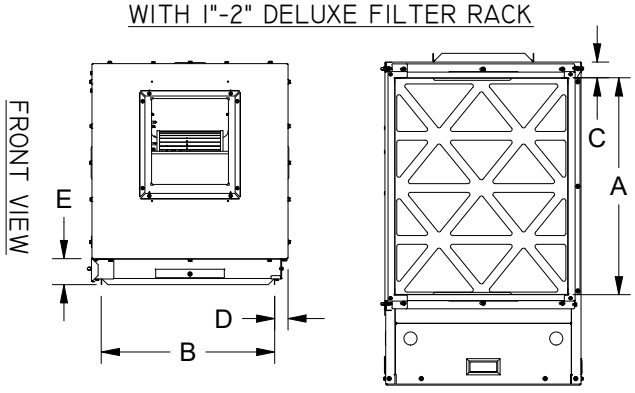
WITH 1" COMMERCIAL FILTER RACK



WITH 1"-2" DELUXE FILTER RACK



WITH 1"-2" DELUXE FILTER RACK



UNIT	DESCRIPTION	A	B	C	D	E
006-012	RETURN DUCT FLANGES	15.50	19.50	1.83	1.00	1.00
	1" COMMERCIAL RACK	15.50	19.50	1.83	1.00	1.75
	1" - 2" DELUXE RACK	15.50	19.50	1.83	1.00	3.00
015-036	RETURN DUCT FLANGES	25.00	20.00	1.83	1.30	1.00
	1" COMMERCIAL RACK	25.00	20.00	1.83	1.30	1.75
	1" - 2" DELUXE RACK	25.00	20.00	1.83	1.30	3.00
042-072	RETURN DUCT FLANGES	29.00	23.00	1.83	3.25	1.83
	1" COMMERCIAL RACK	29.00	23.00	1.83	3.25	1.83
	1" - 2" DELUXE RACK	29.00	23.00	1.83	3.25	1.83

ENGINEERING SPECIFICATIONS:

PSC Fan Performance Data: VS006-012

*VS Series PSC Fan Performance Data														
Model	Motor Speed	Blower Size	Motor HP	CFM Nominal	Static Pressure (inches w.c.)											
					0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80
006/009/012	H	6 x 9	1/16	350 (009, 012)	410	400	400	390	380	375	360	350	335	300	265	
	M/H				370	355	350	340	335	320	300	275				
	M/L			275 (006)	340	330	325	315	305	295	285	275	260			
	L				290	280	270	265	255							

Notes:

1. PSC Blower motors come with 3 or 4 speed taps. To change the speed of the motor to a higher or lower speed, remove the electric box cover that is mounted on the blower. Locate the label on the motor to identify the wire color for each speed. Remove the wire nut on the existing speed and replace with the wire of selected speed.

Fan Performance Data: ECM, VS/VT Units

***VS/*VT Series ECM Fan Performance Data: One & Two-Stage Compressor Units**

Model	Max ESP in. w.c.[2]	Program[3]	Heating Mode		Cooling Mode		Dehumidification Mode		Fan Only	AUX/ EMG Heat	DIP Switch Settings							
			1st	2nd	1st	2nd	1st	2nd			S1	S2	S3	S4	S5	S6	S7	S8
015	1.1	A	-	660	-	660	-	550	330	660	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		B	**-**	**550**	**-**	**550**	**-**	**490**	**290**	**550**	**ON**	**OFF**	**OFF**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**
		C	-	490	-	490	-	400	240	490	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
		D	-	410	-	400	-		200	410	ON	ON	OFF	OFF	ON	ON	OFF	OFF
018	1.1	A	-	750	-	750	-	670	390	740	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
		B	**-**	**700**	**-**	**700**	**-**	**625**	**370**	**640**	**ON**	**ON**	**ON**	**OFF**	**ON**	**ON**	**OFF**	**OFF**
		C	-	675	-	675	-	540	320	580	ON	ON	OFF	OFF	ON	ON	OFF	OFF
		D	-	570	-	570	-	490	250	520	ON	ON	OFF	ON	ON	ON	OFF	OFF
024	1.1	A	700	880	700	880	590	750	450	870	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
		B	**650**	**800**	**650**	**800**	**540**	**680**	**400**	**800**	**ON**	**OFF**	**OFF**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**
		C	570	720	570	720	450	630	340	730	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
		D	520	680	520	680			310	700	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
030	1.1	A	800	1100	825	1100	700	935	575	1100	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
		B	**740**	**1000**	**760**	**1000**	**650**	**850**	**500**	**990**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**
		C	725	900	725	900	600	765	450	890	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
		D	650	800	650	800			400	800	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
036	1.1	A	880	1320	880	1210	750	1030	605	1480	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
		B	**800**	**1200**	**800**	**1100**	**680**	**935**	**550**	**1400**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**	**ON**	**OFF**	**OFF**
		C	720	1080	720	990			495	1270	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
		D	640	990	640	880			440	1140	ON	ON	ON	OFF	ON	ON	OFF	OFF
042	1.1	A	1220	1510	1250	1600	1055	1350	730	1660	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
		B	**1160**	**1400**	**1160**	**1450**	**975**	**1235**	**660**	**1490**	**ON**	**OFF**	**OFF**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**
		C	1000	1220	1025	1300	875	1120	590	1330	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
		D	900	1110	950	1200			490	1220	ON	ON	OFF	OFF	ON	ON	OFF	OFF
048	1.1	A	1380	1710	1380	1770	1175	1500	810	1880	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
		B	**1250**	**1540**	**1270**	**1610**	**1060**	**1345**	**750**	**1720**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**	**ON**	**OFF**	**OFF**
		C	1130	1400	1190	1430	940	1225	670	1540	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
		D	1000	1220	1000	1260			610	1350	ON	ON	ON	OFF	ON	ON	OFF	OFF
060	1.1	A	1850	2180	1800	2200	1500	1850	1030	2190	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
		B	**1680**	**1980**	**1580**	**2000**	**1350**	**1650**	**940**	**1990**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**
		C	1500	1700	1430	1750			820	1770	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
		D	1160	1350	1250	1500			710	1430	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
072	0.9	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		B	**1850**	**2180**	**1800**	**2200**	**1500**	**1850**	**1030**	**2190**	**OFF**	**OFF**	**ON**	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**
		C	1680	1980	1580	2000			940	1990	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
		D	1500	1700	1430	1750			820	1770	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF

Notes:

1. Program **B (Bold Type)** is factory settings and rated CFM. CFM is controlled within 5% up to the Max ESP.

2. Max ESP includes allowance for wet coil and NO FILTER

3. Power must be off to the unit for at least 3 seconds before the ECM motor will recognize a program change.

4. Max ESP for VS015 and VS018 models with external electric heat is 0.9 in. w.c.; for VT024 and VT030 models it is 0.6 in. w.c.; for VT036 (with 5kW or 10kW heater) it is 0.6 in. w.c.; for VT036 (with 15kW heater) it is 0.5 in. w.c.; and for VT042 through VT072 it is 0.9 in. w.c. Exceeding the Max ESP may result in nuisance trips of the electric heat. Thermal limits are rated at 100,000 cycles.

***VS/*VT Series Dehumidification Mode Options**

DIP Switch		Mode	Operation
S9	S10		
ON	OFF	Normal	Dehumidification mode disabled (Normal Htg/Clg CFM)-- Factory setting.
OFF	ON	ODD	On Demand Dehumidification mode (humidistat input at terminal ODD)-- Humidistat
OFF	OFF	Constant Dehum	Constant Dehumidification mode (always uses dehum CFM for cooling and normal CFM for
ON	ON	Not Used	Not an applicable selection.

Notes:

1. To enter dehumidification mode, ODD input should be 0 VAC; for normal cooling CFM, ODD input should be 24 VAC.

2. Heating CFM is not affected by dehumidification mode. When in dehumidification mode, cooling CFM is 85% of normal CFM.

ENGINEERING SPECIFICATIONS:

Unit Electrical Data: PSC, VS006-012

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
VS006	00	208/230	1	19.6/ 17.7	2.7/ 2.4	0.9/ 0.8	0.0	0.0	3.6/ 3.2	4.3/ 3.8	15/ 15
	10	208/230	1	19.6/ 17.7	2.7/ 2.4	0.9/ 0.8	0.0	4.4/ 4.0	8.0/ 7.2	8.7/ 7.8	15/ 15
	A0	265	1	13.5	2.0	0.7	0.0	0.0	2.7	3.2	15
	90	115	1	36.2	4.6	1.5	0.0	0.0	6.1	7.3	15
VS009	00	208/230	1	24.3/ 22.0	4.4/ 4.0	0.9/ 0.8	0.0	0.0	5.3/ 4.8	6.4/ 5.8	15/ 15
	10	208/230	1	24.3/ 22.0	4.4/ 4.0	0.9/ 0.8	0.0	4.4/ 4.0	9.7/ 8.8	10.8/ 9.8	15/ 15
	A0	265	1	23.0	4.0	0.7	0.0	0.0	4.7	5.7	15
	90	115	1	50.0	8.0	1.5	0.0	0.0	9.5	11.5	20
VS012	00	208/230	1	27.6/ 25.0	5.1/ 4.6	0.9/ 0.8	0.0	0.0	6.0/ 5.4	7.3/ 6.6	15/ 15
	10	208/230	1	27.6/ 25.0	5.1/ 4.6	0.9/ 0.8	0.0	4.4/ 4.0	10.4/ 9.4	11.7/ 10.6	15/ 15
	A	265	1	21.0	3.9	0.7	0.0	0.0	4.6	5.6	15

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
3. Min/Max Voltage: 208/230/60 = 187-252, 265/60 = 249-291, 115 = 102-127
4. Units rated at 208/230V are factory wired for 230V. To change to 208V, the red transformer wire (with wire nut) will need to be hooked to the contactor in the position the current orange (230V) wire is. The orange wire will need to be capped off. Refer to wire diagram for details.

*The external loop pump FLA is based on a maximum of two UP26-116F-230V (1/2hp) for 006-012.

Unit Electrical Data: ECM, VS015-018

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
VS015	00	208/230	1	28.8/ 26.0	5.8/ 5.2	3.9/ 3.8	0.0	0.0	9.7/ 9.0	11.2/ 10.3	15/ 15
	10	208/230	1	28.8/ 26.0	5.8/ 5.2	3.9/ 3.8	0.0	4.4/ 4.0	14.1/ 13.0	15.6/ 14.3	20/ 20
	A	265	1	21.0	4.7	3.3	0.0	0.0	8.0	9.2	15
VS018	00	208/230	1	49.9/ 45.1	9.2/ 8.3	3.9/ 3.8	0.0	0.0	13.1/ 12.1	15.4/ 14.2	25/ 20
	01	208/230	1	49.9/ 45.1	9.2/ 8.3	3.9/ 3.8	0.6/ 0.5	0.0	13.7/ 12.6	16.0/ 14.7	25/ 20
	10	208/230	1	49.9/ 45.1	9.2/ 8.3	3.9/ 3.8	0.0	4.4/ 4.0	17.5/ 16.1	19.8/ 18.2	25/ 25
	11	208/230	1	49.9/ 45.1	9.2/ 8.3	3.9/ 3.8	0.6/ 0.5	4.4/ 4.0	18.1/ 16.6	20.4/ 18.7	30/ 25

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
3. Min/Max Voltage: 208/230/60 = 187-252, 265/60 = 249-291
4. Units rated at 208/230V are factory wired for 230V. To change to 208V, the red transformer wire (with wire nut) will need to be hooked to the contactor in the position the current orange (230V) wire is. The orange wire will need to be capped off. Refer to wire diagram for details.

*The external loop pump FLA is based on a maximum of two UP26-116F-230V (1/2hp) for 015-018.

Unit Electrical Data: ECM, VT024-072

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
VT024	00	208/230	1	68.6/ 62.0	11.4/ 10.3	3.9/ 3.8	0.0	0.0	15.3/ 14.1	18.2/ 16.7	30/ 25
	01	208/230	1	68.6/ 62.0	11.4/ 10.3	3.9/ 3.8	0.6/ 0.5	0.0	15.9/ 14.6	18.8/ 17.2	30/ 25
	10	208/230	1	68.6/ 62.0	11.4/ 10.3	3.9/ 3.8	0.0	4.4/ 4.0	19.7/ 18.1	22.6/ 20.7	30/ 30
	11	208/230	1	68.6/ 62.0	11.4/ 10.3	3.9/ 3.8	0.6/ 0.5	4.4/ 4.0	20.3/ 18.6	23.2/ 21.2	35/ 30
	20	208/230	3	61.9/ 56.0	7.0/ 6.3	3.9/ 3.8	0.0	0.0	10.9/ 10.1	12.7/ 11.7	20/ 15
	21	208/230	3	61.9/ 56.0	7.0/ 6.3	3.9/ 3.8	0.6/ 0.5	0.0	11.5/ 10.6	13.3/ 12.2	20/ 15
	30/35	460	3	29.0	3.8	3.3	0.0	0.0	7.1	8.1	15
	A	265	1	52.0	7.8	3.3	0.0	0.0	11.1	13.1	20
VT030	00	208/230	1	90.7/ 82.0	16.1/ 14.6	3.9/ 3.8	0.0	0.0	20.0/ 18.4	24.0/ 22.1	40/ 35
	01	208/230	1	90.7/ 82.0	16.1/ 14.6	3.9/ 3.8	0.6/ 0.5	0.0	20.6/ 18.9	24.6/ 22.6	40/ 35
	10	208/230	1	90.7/ 82.0	16.1/ 14.6	3.9/ 3.8	0.0	4.4/ 4.0	24.4/ 22.4	28.4/ 26.1	45/ 40
	11	208/230	1	90.7/ 82.0	16.1/ 14.6	3.9/ 3.8	0.6/ 0.5	4.4/ 4.0	25.0/ 22.9	29.0/ 26.6	45/ 40
	20	208/230	3	73.0/ 66.0	8.7/ 7.9	3.9/ 3.8	0.0	0.0	12.6/ 11.7	14.8/ 13.7	20/ 20
	21	208/230	3	73.0/ 66.0	8.7/ 7.9	3.9/ 3.8	0.6/ 0.5	0.0	13.2/ 12.2	15.4/ 14.2	20/ 20
	30/35	460	3	39.0	4.8	3.3	0.0	0.0	8.1	9.3	15
	A	265	1	72.0	8.3	3.3	0.0	0.0	11.6	13.7	20
VT036	00	208/230	1	99.5/ 90.0	16.1/ 14.6	5.9/ 5.5	0.0	0.0	22.0/ 20.1	26.0/ 23.8	40/ 35
	01	208/230	1	99.5/ 90.0	16.1/ 14.6	5.9/ 5.5	0.6/ 0.5	0.0	22.6/ 20.6	26.6/ 24.3	40/ 35
	10	208/230	1	99.5/ 90.0	16.1/ 14.6	5.9/ 5.5	0.0	4.4/ 4.0	26.4/ 24.1	30.4/ 27.8	45/ 40
	11	208/230	1	99.5/ 90.0	16.1/ 14.6	5.9/ 5.5	0.6/ 0.5	4.4/ 4.0	27.0/ 24.6	31.0/ 28.3	45/ 40
	20	208/230	3	90.7/ 82.0	10.9/ 9.9	5.9/ 5.5	0.0	0.0	16.8/ 15.4	19.5/ 17.9	30/ 25
	21	208/230	3	90.7/ 82.0	10.9/ 9.9	5.9/ 5.5	0.6/ 0.5	0.0	17.4/ 15.9	20.1/ 18.4	30/ 25
	30/35	460	3	44.3	4.8	4.8	0.0	0.0	9.6	10.8	15
	A	265	1	79.0	12.5	4.8	0.0	0.0	17.3	20.4	30
VT042	00	208/230	1	117.2/ 106.0	20.1/ 18.2	5.9/ 5.5	0.0	0.0	26.0/ 23.7	31.0/ 28.3	50/ 45
	01	208/230	1	117.2/ 106.0	20.1/ 18.2	5.9/ 5.5	0.6/ 0.5	0.0	26.6/ 24.2	31.6/ 28.8	50/ 45
	10	208/230	1	117.2/ 106.0	20.1/ 18.2	5.9/ 5.5	0.0	6.1/ 5.5	32.1/ 29.2	37.1/ 33.8	50/ 50
	11	208/230	1	117.2/ 106.0	20.1/ 18.2	5.9/ 5.5	0.6/ 0.5	6.1/ 5.5	32.7/ 29.7	37.7/ 34.3	50/ 50
	20	208/230	3	126.1/ 114.0	12.7/ 11.5	5.9/ 5.5	0.0	0.0	18.6/ 17.0	21.8/ 19.9	30/ 30
	21	208/230	3	126.1/ 114.0	12.7/ 11.5	5.9/ 5.5	0.6/ 0.5	0.0	19.2/ 17.5	22.4/ 20.4	35/ 30
	30/35	460	3	56.0	6.5	4.8	0.0	0.0	11.3	12.9	15
VT048	00	208/230	1	152.6/ 138.0	20.2/ 18.3	5.9/ 5.5	0.0	0.0	26.1/ 23.8	31.2/ 28.4	50/ 45
	01	208/230	1	152.6/ 138.0	20.2/ 18.3	5.9/ 5.5	0.6/ 0.5	0.0	26.7/ 24.3	31.8/ 28.9	50/ 45
	10	208/230	1	152.6/ 138.0	20.2/ 18.3	5.9/ 5.5	0.0	6.1/ 5.5	32.2/ 29.3	37.3/ 33.9	50/ 50
	11	208/230	1	152.6/ 138.0	20.2/ 18.3	5.9/ 5.5	0.6/ 0.5	6.1/ 5.5	32.8/ 29.8	37.9/ 34.4	50/ 50
	20	208/230	3	123.8/ 112.0	13.2/ 11.9	5.9/ 5.5	0.0	0.0	19.1/ 17.4	22.4/ 20.4	35/ 30
	21	208/230	3	123.8/ 112.0	13.2/ 11.9	5.9/ 5.5	0.6/ 0.5	0.0	19.7/ 17.9	23.0/ 20.9	35/ 30
	30/35	460	3	61.8	6.8	4.8	0.0	0.0	11.6	13.3	20
VT060	00	208/230	1	162.9/ 147.3	27.9/ 25.2	7.4/ 6.9	0.0	0.0	35.3/ 32.1	42.3/ 38.4	70/ 60
	01	208/230	1	162.9/ 147.3	27.9/ 25.2	7.4/ 6.9	0.6/ 0.5	0.0	35.9/ 32.6	42.9/ 38.9	70/ 60
	10	208/230	1	162.9/ 147.3	27.9/ 25.2	7.4/ 6.9	0.0	6.1/ 5.5	41.4/ 37.6	48.4/ 43.9	70/ 60
	11	208/230	1	162.9/ 147.3	27.9/ 25.2	7.4/ 6.9	0.6/ 0.5	6.1/ 5.5	42.0/ 38.1	49.0/ 44.4	70/ 70
	20	208/230	3	165.9/ 150.0	15.3/ 13.8	7.4/ 6.9	0.0	0.0	22.7/ 20.7	26.5/ 24.2	40/ 35
	21	208/230	3	165.9/ 150.0	15.3/ 13.8	7.4/ 6.9	0.6/ 0.5	0.0	23.3/ 21.2	27.1/ 24.7	40/ 35
	30/35	460	3	58.0	6.9	6.0	0.0	0.0	12.9	14.6	20
	A	265	1	133.0	21.5	6.0	0.0	0.0	27.5	32.9	50
VT072	00	208/230	1	183.6/ 166.0	31.0/ 28.0	7.4/ 6.9	0.0	0.0	38.4/ 34.9	46.2/ 41.9	70/ 70
	01	208/230	1	183.6/ 166.0	31.0/ 28.0	7.4/ 6.9	0.6/ 0.5	0.0	39.0/ 35.4	46.8/ 42.4	70/ 70
	10	208/230	1	183.6/ 166.0	31.0/ 28.0	7.4/ 6.9	0.0	6.1/ 5.5	44.5/ 40.4	52.3/ 47.4	80/ 70
	11	208/230	1	183.6/ 166.0	31.0/ 28.0	7.4/ 6.9	0.6/ 0.5	6.1/ 5.5	45.1/ 40.9	52.9/ 47.9	80/ 70
	20	208/230	3	179.5/ 162.3	21.2/ 19.2	7.4/ 6.9	0.0	0.0	28.6/ 26.1	33.9/ 30.9	50/ 50
	21	208/230	3	179.5/ 162.3	21.2/ 19.2	7.4/ 6.9	0.6/ 0.5	0.0	29.2/ 26.6	34.5/ 31.4	50/ 50
	30/35	460	3	70.8	9.1	6.0	0.0	0.0	15.1	17.4	25

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
3. Min/Max Voltage: 208/230/60 = 187-252, 460/60 = 432-502, 265/60 = 249-291
4. Units rated at 208/230V are factory wired for 230V. To change to 208V, the red transformer wire (with wire nut) will need to be hooked to the contactor in the position the current orange (230V) wire is. The orange wire will need to be capped off. Refer to wire diagram for details.
5. See Wiring Diagrams for proper 460V power.

*The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 042-072 and two pumps for 024-036.

ENGINEERING SPECIFICATIONS:

Filter Performance

The blower performance data in the ECM Blower Performance table is WITHOUT FILTER. To determine the approximate blower performance WITH FILTER apply the filter pressure drop value for the filter being used or calculate the pressure drop as follows:

Below is typical filter performance data and should only be used as a guideline. Actual performance may vary between manufacturers.

Filter Performance Data			
Model	**Return Size**		
	Height (in.)	Width (in.)	Area (ft^2)
024	26	21	3.8
036	28	26	5.1
048			
060	32	26	5.8
072			
Filter Type	**Thickness (in.)**	**Rated Velocity (fpm)**	**Initial Resistance (in. w.c.)**
MERV 8	1	300	0.21
MERV 11	2	500	0.24
MERV 13	3	500	0.43

Filter Pressure Drop Formula

$$\text{Filter } \Delta P_S = \left| \frac{\frac{[\text{CFM}]}{\text{Area}}}{\text{Rated Velocity}} \right| \text{X Initial Resistance}$$

Applying Filter Pressure Drop to Determine Total ESP

To determine the Total ESP of a unit with the filter in place, follow the steps below:

1. Select the filter type and determine Rated Velocity and Initial Resistance
2. For the model being considered determine Max ESP, CFM and Return Area
3. Determine Filter pressure drop (ΔPs) using the equation above.
4. Measure (or calculate) the ESP without filter in place
5. Calculate Total ESP = Measured ESP + Filter Pressure Drop
6. Total ESP should be less than or equal to Max ESP

Example: For an VT060 at an air flow of 1960 CFM calculate the filter pressure drop with a 2" MERV 11 filter and determine Total ESP and compare to Max ESP.

CFM = 1960
Area = 5.8 ft2
Rated Velocity = 500 fpm
Initial Resistance = 0.24 in.w.c.
Measured ESP without filter = 0.53

1. 1960 CFM ÷ 5.8 ft2 = 338 fpm
2. 338 fpm ÷ 500 fpm = 0.676
3. 0.676 x 0.24 in.w.c. = 0.16 in.w.c. = Filter Pressure Drop
4. Total ESP is 0.53 + 0.16 = 0.69 in.w.c. which is less than the 1.2 in.w.c. Max ESP

Example: For an VT036 at an air flow of 1420 CFM calculate the filter pressure drop with a 2" MERV 13 filter and determine Total ESP and compare to Max ESP.

CFM = 1420
Area = 5.1 ft2
Rated Velocity = 500 fpm
Initial Resistance = 0.43 in.w.c.
Measured ESP without filter = 0.53

1. 1420 CFM ÷ 5.1 ft2 = 278 fpm
2. 278 fpm ÷ 500 fpm = 0.556
3. 0.556 x 0.43 in.w.c. = 0.24 in.w.c. = Filter Pressure Drop
4. Total ESP is 0.36 + 0.24 = 0.6 in.w.c. which is less than the 1.1 in.w.c. Max ESP

Glossary of Terms	
CFM = Airflow, Cubic Feet/Minute	HR = Total Heat Of Rejection, Btu/hr
COP = Coefficient of Performance = BTU Output / BTU Input	KW = Total Power Unit Input, Kilowatts
HE = Total Heat Of Extraction, Btu/hr	LAT = Leaving Air Temperature, Fahrenheit
EAT = Entering Air Temperature, Fahrenheit (Dry Bulb/Wet Bulb)	LC = Latent Cooling Capacity, Btu/hr
EER = Energy Efficiency Ratio = BTU output/Watts input	SC = Sensible Cooling Capacity, Btu/hr
EWT = Entering Source Water Temperature, Fahrenheit	LWT = Leaving Source Water Temperature, Fahrenheit
ELT = Entering Load Water Temperature, Fahrenheit	LLT = Leaving Load Water Temperature, Fahrenheit
GPM = Water Flow, Gallons Per Minute	TC = Total Cooling Capacity, Btu/hr
HC = Total Heating Capacity, Btu/hr	WPD = Water Pressure Drop, PSI & Feet of Water

Sensible Cooling Corrections Factor					
EAT (WB) °F	EAT (DB) °F				
	70	75	80	85	90
55	1.094	1.189	NA	NA	NA
60	0.901	1.101	1.273	NA	NA
65	0.692	0.899	1.099	1.305	NA
67	0.612	0.815	1.000	1.223	1.416
70	NA	0.837	0.891	1.099	1.302
75	NA	NA	0.681	0.879	1.088

Cooling Correction Factors			
EAT (WB) °F	TC	HR	kW
55	0.8215	0.8293	0.8635
60	0.8955	0.9001	0.9205
65	0.9701	0.9715	0.9774
67	1.0000	1.0000	1.0000
70	1.0446	1.0425	1.0335
75	1.1179	1.1124	1.0878

Heating and Cooling Calculations	
Heating	Cooling
LAT = EAT + $\frac{HC}{CFM \times 1.08}$	LAT (DB) = EAT (DB) - $\frac{SC}{CFM \times 1.08}$
LWT = EWT - $\frac{HE}{GPM \times 500}$	LWT = EWT + $\frac{HR}{GPM \times 500}$
LC = TC - SC	

Heating Correction Factors			
EAT °F	HC	HE	kW
50	1.0465	1.1188	0.8024
55	1.0351	1.0918	0.8436
60	1.0253	1.0645	0.8928
65	1.0108	1.0300	0.9454
70	1.0000	1.0000	1.0000
75	0.9895	0.9701	1.0553
80	0.9742	0.9489	1.0518

ENGINEERING SPECIFICATIONS:

Water Flow Selection

Proper flow rate is crucial for reliable operation of geothermal heat pumps. The performance data shows three flow rates for each entering water temperature (EWT column). The general "rule of thumb" when selecting flow rates is the following:

Top flow rate: Open loop systems (1.5 to 2.0 gpm per ton)

Middle flow rate: Minimum closed loop system flow rate (2.25 to 2.50 gpm/ton)

Bottom flow rate: Nominal (optimum) closed loop system flow rate (3.0 gpm/ton)

Although the industry standard is adequate in most areas of North America, it is important to consider the application type before applying this "rule of thumb." Antifreeze is generally required for all closed loop (geothermal) applications. Extreme Southern U.S. locations are the only exception. Open loop (well water) systems cannot use antifreeze, and must have enough flow rate in order to avoid freezing conditions at the Leaving Source Water Temperature (LWT) connection.

Calculations must be made for all systems without antifreeze to determine if the top flow rate is adequate to prevent LWT at or near freezing conditions. The following steps should be taken in making this calculation:

1. Determine minimum EWT based upon your geographical area.
2. Go to the performance data table for the heat pump model selected and look up the Heat of Extraction (HE) at the "rule of thumb" water flow rate (GPM) and at the design Entering Air Temperature (EAT).
3. Calculate the temperature difference (TD) based upon the HE and GPM of the model.
4. TD = HE / (GPM x 485).
5. Calculate the LWT.
6. LWT = EWT - TD.
7. If the LWT is below 35-38°F, there is potential for freezing conditions if the flow rate or water temperature is less than ideal conditions, and the flow rate must be increased.

Example 1:
EWT = 50 °F
Model VT024 with a ECM fan. Flow rate = 6 GPM.
Air Flow = 810 CFM. HE = 19,600 Btuh.
TD = 19,600 / (6 x 485) = 6.7 °F
LWT = 50 - 6.7 = 43.3°F
water flow rate is acceptable.

Example 2:
EWT = 40 °F
Model VT024 with a ECM fan. Flow rate = 6 GPM.
Air Flow = 710 CFM. HE = 16,800 Btuh.
TD = 16,800 / (6 x 485) = 5.8 °F
LWT = 40 - 5.8 = 34.2 °F
Water flow rate must be increased to avoid freezing.

Performance Data Notes:

1. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485).
2. Heating data is based on 70 °F EAT. Cooling data is based on 80/67 °F EAT. Any condition outside performance table(s) requires correction factor(s).
3. Performance data is accurate within ±15%.
4. Unit performance testing is ran without hot water generation.
5. The capacity data includes fan power but does not include pump power. It also does not reflect any fan or pump power corrections for AHRI/ISO rating conditionsPerformance data is based upon the lower voltage of dual voltage rated units.
6. Interpolation of unit performance data is permissible; extrapolation is not.
7. Performance data is a result of lab testing and is not related to warranty.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.
9. See Flow Rate Selection above for proper application.
10. Continued research and development may result in a change to the current product design and specifications without notice.

Model VS006, 1/2 Ton, PSC Blower, Full Load Performance Data

Coming Soon

ENGINEERING SPECIFICATIONS:

Model VS009, 3/4 Ton, PSC Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	2.3	3.0	6.9	260	93.1	6.4	4.2	0.69	2.75	Operation Not Recommended						
				300	90.8	6.7	4.5	0.67	2.92							
30	1.1	1.6	3.6	260	93.0	6.4	4.2	0.68	2.76							
				300	90.7	6.7	4.5	0.67	2.93							
	1.7	2.2	5.1	260	94.4	6.8	4.6	0.69	2.88							
				300	92.0	7.1	4.9	0.68	3.07							
	2.3	2.9	6.8	260	95.2	7.0	4.8	0.70	2.95							
				300	92.7	7.3	5.1	0.68	3.14							
40	1.1	1.5	3.4	260	96.8	7.5	5.2	0.71	3.10	260	57.7	10.1	6.2	11.7	0.47	21.3
				300	94.1	7.8	5.5	0.69	3.30	300	59.1	10.6	6.7	12.3	0.47	22.2
	1.7	2.1	4.7	260	98.4	7.9	5.6	0.72	3.24	Operation Not Recommended						
				300	95.6	8.2	6.0	0.70	3.45							
	2.3	2.7	6.3	260	99.3	8.2	5.8	0.72	3.32							
				300	96.4	8.5	6.2	0.71	3.53							
50	1.1	1.4	3.3	260	100.5	8.5	6.2	0.71	3.53	260	56.1	10.5	6.7	12.4	0.52	20.1
				300	97.4	8.8	6.6	0.69	3.75	300	57.6	11.1	7.2	12.9	0.53	21.0
	1.7	2.0	4.5	260	102.4	9.0	6.7	0.72	3.70	260	55.9	10.7	6.7	12.4	0.49	22.0
				300	99.1	9.4	7.1	0.70	3.93	300	57.4	11.2	7.3	13.0	0.49	23.0
	2.3	2.6	6.0	260	103.4	9.3	7.0	0.72	3.78	260	55.9	10.7	6.7	12.4	0.47	22.9
				300	100.1	9.7	7.4	0.71	4.02	300	57.4	11.3	7.3	12.9	0.47	24.0
60	1.1	1.4	3.1	260	104.1	9.5	7.1	0.75	3.73	260	55.7	10.5	6.8	12.6	0.59	17.8
				300	100.7	9.9	7.5	0.73	3.97	300	57.2	11.0	7.3	13.1	0.59	18.6
	1.7	1.9	4.3	260	106.2	10.1	7.7	0.76	3.91	260	55.4	10.7	6.8	12.6	0.55	19.5
				300	102.6	10.5	8.1	0.74	4.16	300	57.0	11.2	7.4	13.1	0.55	20.3
	2.3	2.5	5.7	260	107.4	10.4	8.0	0.76	4.00	260	55.4	10.7	6.8	12.5	0.53	20.3
				300	103.6	10.8	8.4	0.75	4.26	300	57.0	11.2	7.4	13.1	0.53	21.2
70	1.1	1.3	3.0	260	107.5	10.5	8.0	0.76	4.03	260	55.9	10.3	6.7	12.6	0.66	15.4
				300	103.8	10.9	8.5	0.74	4.28	300	57.4	10.8	7.2	13.1	0.67	16.1
	1.7	1.8	4.2	260	109.8	11.1	8.6	0.77	4.22	260	55.7	10.4	6.8	12.5	0.62	16.8
				300	105.9	11.6	9.1	0.75	4.48	300	57.2	10.9	7.3	13.1	0.62	17.6
	2.3	2.4	5.5	260	111.1	11.5	9.0	0.78	4.31	260	55.7	10.4	6.8	12.5	0.59	17.6
				300	107.0	11.9	9.5	0.76	4.59	300	57.2	10.9	7.3	13.0	0.59	18.4
80	1.1	1.3	2.9	260	110.8	11.4	8.9	0.78	4.29	260	56.5	9.9	6.5	12.4	0.74	13.2
				300	106.7	11.8	9.4	0.76	4.57	300	58.0	10.4	7.1	12.9	0.75	13.8
	1.7	1.7	4.0	260	113.3	12.1	9.5	0.79	4.49	260	56.3	10.0	6.6	12.4	0.69	14.5
				300	109.0	12.6	10.1	0.77	4.78	300	57.8	10.5	7.1	12.9	0.69	15.1
	2.3	2.3	5.3	260	114.7	12.5	9.9	0.79	4.60	260	56.3	10.0	6.6	12.3	0.66	15.1
				300	110.2	13.0	10.5	0.78	4.89	300	57.8	10.5	7.1	12.9	0.67	15.8
90	1.1	1.2	2.8	260	113.9	12.3	9.7	0.79	4.55	260	57.3	9.4	6.3	12.3	0.83	11.3
				300	109.6	12.8	10.3	0.77	4.84	300	58.7	9.9	6.8	12.7	0.83	11.9
	1.7	1.7	3.9	260	116.7	13.0	10.4	0.80	4.76	260	57.1	9.6	6.4	12.2	0.77	12.4
				300	112.0	13.5	11.0	0.78	5.06	300	58.5	10.0	6.9	12.7	0.77	13.0
	2.3	2.2	5.2	260	118.2	13.5	10.9	0.81	4.87	260	57.1	9.6	6.4	12.1	0.74	12.9
				300	113.4	14.0	11.4	0.79	5.18	300	58.5	10.1	6.9	12.6	0.74	13.5
100	1.1	1.2	2.7	Operation Not Recommended						260	58.1	8.9	6.1	12.0	0.92	9.6
										300	59.5	9.3	6.6	12.5	0.92	10.1
	1.7	1.6	3.7							260	58.0	9.0	6.1	11.9	0.85	10.6
										300	59.3	9.5	6.6	12.4	0.85	11.0
	2.3	2.1	4.9							260	58.0	9.0	6.1	11.8	0.82	11.0
										300	59.3	9.5	6.6	12.3	0.82	11.5
110	1.1	1.2	2.7							260	59.0	8.2	5.8	11.7	1.01	8.1
										300	60.3	8.6	6.3	12.1	1.01	8.5
	1.7	1.6	3.6							260	58.8	8.4	5.9	11.5	0.94	8.9
										300	60.2	8.8	6.4	12.0	0.94	9.3
	2.3	2.1	4.8							260	58.8	8.4	5.9	11.4	0.90	9.3
										300	60.2	8.8	6.4	11.9	0.90	9.7
120	1.1	1.1	2.6							260	59.7	7.5	5.6	11.3	1.11	6.7
										300	61.0	7.9	6.1	11.7	1.11	7.0
	1.7	1.5	3.6							260	59.6	7.6	5.7	11.1	1.03	7.4
										300	60.8	8.0	6.1	11.5	1.03	7.7
	2.3	2.0	4.7							260	59.6	7.6	5.7	11.0	0.99	7.7
										300	60.8	8.0	6.1	11.4	0.99	8.0

Model VS012, 1 Ton, PSC Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	3.0	4.6	10.6	310	96.0	8.7	5.9	0.85	2.98	Operation Not Recommended						
				350	93.0	8.7	6.0	0.83	3.06							
30	1.5	2.0	4.7	310	96.2	8.7	5.9	0.85	3.00							
				350	93.1	8.7	6.0	0.82	3.09							
	2.3	3.2	7.4	310	97.4	9.1	6.3	0.86	3.09							
				350	94.2	9.1	6.4	0.84	3.18							
	3.0	4.5	10.3	310	98.0	9.3	6.5	0.87	3.14							
				350	94.8	9.3	6.6	0.84	3.23							
40	1.5	1.9	4.3	310	100.7	10.2	7.3	0.89	3.38	310	52.3	14.6	9.1	16.5	0.52	28.0
				350	97.1	10.2	7.4	0.86	3.48	350	54.0	15.1	9.7	17.0	0.52	29.0
	2.3	2.9	6.7	310	102.1	10.7	7.8	0.90	3.48	Operation Not Recommended						
				350	98.3	10.7	7.8	0.87	3.58							
	3.0	4.0	9.3	310	102.8	10.9	8.0	0.91	3.53							
				350	99.0	10.9	8.1	0.88	3.64							
50	1.5	1.7	4.0	310	105.2	11.7	8.8	0.89	3.87	310	51.9	14.7	9.3	16.8	0.59	24.6
				350	101.1	11.7	8.9	0.86	3.99	350	53.7	15.2	9.8	17.4	0.60	25.5
	2.3	2.7	6.3	310	106.8	12.2	9.3	0.90	3.99	310	51.6	14.9	9.4	17.0	0.55	27.0
				350	102.5	12.2	9.4	0.87	4.11	350	53.4	15.5	9.9	17.5	0.55	28.0
	3.0	3.8	8.8	310	107.7	12.5	9.6	0.91	4.05	310	51.5	15.0	9.4	17.0	0.53	28.4
				350	103.3	12.5	9.7	0.88	4.17	350	53.2	15.6	10.0	17.6	0.53	29.3
60	1.5	1.7	3.8	310	109.5	13.2	10.0	0.96	4.00	310	52.7	14.1	9.0	16.6	0.69	20.5
				350	104.9	13.1	10.1	0.93	4.12	350	54.4	14.6	9.5	17.2	0.69	21.2
	2.3	2.6	6.0	310	111.3	13.8	10.6	0.98	4.12	310	52.4	14.4	9.1	16.7	0.64	22.6
				350	106.5	13.7	10.7	0.95	4.25	350	54.1	14.9	9.6	17.2	0.64	23.3
	3.0	3.6	8.3	310	112.3	14.1	10.9	0.98	4.19	310	52.3	14.5	9.1	16.7	0.61	23.7
				350	107.4	14.1	11.0	0.95	4.32	350	54.0	15.0	9.7	17.3	0.61	24.5
70	1.5	1.6	3.6	310	114.0	14.7	11.4	1.00	4.28	310	53.7	13.5	8.7	16.3	0.78	17.1
				350	108.9	14.6	11.5	0.97	4.40	350	55.4	14.0	9.2	16.8	0.79	17.7
	2.3	2.5	5.7	310	116.0	15.3	12.0	1.02	4.40	310	53.4	13.7	8.8	16.3	0.73	18.8
				350	110.7	15.3	12.1	0.99	4.53	350	55.1	14.2	9.3	16.8	0.73	19.5
	3.0	3.4	7.9	310	117.2	15.7	12.4	1.03	4.48	310	53.3	13.8	8.8	16.3	0.70	19.7
				350	111.7	15.7	12.5	1.00	4.61	350	55.0	14.3	9.3	16.8	0.70	20.4
80	1.5	1.5	3.5	310	119.1	16.4	13.0	1.05	4.57	310	54.6	12.8	8.4	16.0	0.88	14.5
				350	113.4	16.3	13.0	1.01	4.71	350	56.2	13.3	8.9	16.4	0.89	15.0
	2.3	2.4	5.4	310	121.3	17.1	13.7	1.06	4.71	310	54.3	13.1	8.5	16.0	0.82	15.9
				350	115.4	17.1	13.7	1.03	4.85	350	55.9	13.5	9.0	16.5	0.82	16.5
	3.0	3.3	7.5	310	122.6	17.5	14.1	1.07	4.78	310	54.2	13.2	8.5	16.0	0.79	16.7
				350	116.5	17.5	14.1	1.04	4.93	350	55.8	13.6	9.0	16.5	0.79	17.2
90	1.5	1.4	3.3	310	124.3	18.1	14.6	1.09	4.85	310	55.4	12.2	8.1	15.7	0.99	12.3
				350	118.0	18.0	14.6	1.06	5.00	350	56.9	12.7	8.6	16.1	0.99	12.8
	2.3	2.3	5.2	310	126.8	18.9	15.3	1.11	5.00	310	55.1	12.4	8.2	15.7	0.91	13.6
				350	120.2	18.9	15.4	1.07	5.14	350	56.7	12.9	8.7	16.1	0.92	14.0
	3.0	3.1	7.2	310	128.2	19.4	15.8	1.12	5.08	310	55.0	12.5	8.2	15.6	0.88	14.2
				350	121.4	19.3	15.8	1.08	5.23	350	56.6	13.0	8.7	16.1	0.88	14.7
100	1.5	1.4	3.1	Operation Not Recommended						310	56.3	11.6	7.8	15.4	1.10	10.5
										350	57.8	12.0	8.3	15.8	1.10	10.8
	2.3	2.1	4.9							310	56.0	11.8	7.9	15.3	1.02	11.5
										350	57.5	12.2	8.4	15.8	1.02	11.9
	3.0	2.9	6.7							310	55.9	11.9	7.9	15.3	0.98	12.1
										350	57.4	12.3	8.4	15.7	0.98	12.5
110	1.5	1.3	3.0							310	57.3	10.8	7.5	15.0	1.22	8.8
										350	58.7	11.2	7.9	15.4	1.23	9.1
	2.3	2.0	4.7							310	57.1	11.0	7.6	14.9	1.13	9.7
										350	58.5	11.4	8.0	15.3	1.14	10.0
	3.0	2.8	6.5							310	57.0	11.1	7.6	14.9	1.09	10.1
										350	58.4	11.5	8.0	15.3	1.09	10.5
120	1.5	1.3	2.9							310	58.2	10.1	7.2	14.8	1.35	7.4
										350	59.5	10.5	7.6	15.1	1.36	7.7
	2.3	2.0	4.5							310	58.0	10.3	7.3	14.6	1.25	8.2
										350	59.3	10.7	7.7	15.0	1.26	8.4
	3.0	2.7	6.2							310	57.9	10.4	7.3	14.5	1.20	8.6
										350	59.2	10.8	7.7	14.9	1.21	8.8

ENGINEERING SPECIFICATIONS:

Model VS015, 1.25 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	3.8	2.4	5.5	520	88.5	10.3	7.6	0.83	3.62	Operation Not Recommended						
				590	86.4	10.3	7.7	0.82	3.71							
	1.9	1.2	2.8	520	88.7	10.4	7.7	0.83	3.66							
				590	86.5	10.4	7.8	0.81	3.75							
30	2.8	1.6	3.7	520	89.7	10.9	8.2	0.84	3.82							
				590	87.4	11.0	8.3	0.82	3.92							
	3.8	2.2	5.1	520	90.0	11.1	8.4	0.84	3.88							
				590	87.7	11.2	8.5	0.82	3.97							
	1.9	1.1	2.5	520	91.4	11.9	9.2	0.85	4.12	530	57.4	19.0	12.7	20.7	0.50	37.9
				590	88.9	11.9	9.3	0.83	4.22	610	59.1	19.3	13.6	21.1	0.51	37.9
40	2.8	1.5	3.5	520	92.5	12.5	9.8	0.85	4.30	Operation Not Recommended						
				590	89.9	12.6	9.9	0.84	4.41							
	3.8	2.0	4.7	520	92.9	12.7	10.0	0.85	4.36							
				590	90.3	12.8	10.1	0.84	4.47							
	1.9	1.0	2.4	520	94.4	13.6	10.9	0.85	4.70	530	57.0	19.0	13.0	21.1	0.59	32.1
				590	91.6	13.6	11.0	0.83	4.81	610	58.7	19.3	13.8	21.4	0.60	32.1
50	2.8	1.4	3.3	520	95.7	14.3	11.6	0.85	4.90	530	56.8	19.3	13.1	21.2	0.55	35.2
				590	92.7	14.4	11.7	0.84	5.03	610	58.5	19.6	13.9	21.6	0.56	35.2
	3.8	1.9	4.4	520	96.1	14.5	11.8	0.85	4.97	530	56.7	19.5	13.1	21.3	0.52	37.6
				590	93.1	14.6	11.9	0.84	5.10	610	58.4	19.8	14.0	21.7	0.53	37.6
	1.9	1.0	2.2	520	97.7	15.4	12.6	0.88	5.13	530	57.5	18.3	12.7	20.7	0.70	26.1
				590	94.6	15.5	12.7	0.86	5.26	610	59.2	18.6	13.5	21.1	0.71	26.1
60	2.8	1.3	3.1	520	99.2	16.2	13.4	0.89	5.36	530	57.4	18.5	12.8	20.8	0.65	28.6
				590	95.9	16.3	13.6	0.87	5.49	610	59.0	18.9	13.6	21.2	0.66	28.6
	3.8	1.8	4.2	520	99.7	16.5	13.7	0.89	5.43	530	57.2	18.8	12.9	20.9	0.61	30.6
				590	96.3	16.6	13.8	0.87	5.57	610	58.9	19.1	13.7	21.3	0.62	30.6
	1.9	0.9	2.1	520	101.3	17.4	14.5	0.90	5.67	530	58.3	17.3	12.3	20.1	0.82	21.2
				590	97.7	17.5	14.7	0.88	5.82	610	59.9	17.6	13.1	20.5	0.83	21.2
70	2.8	1.3	2.9	520	102.9	18.3	15.4	0.90	5.93	530	58.1	17.6	12.3	20.2	0.75	23.3
				590	99.1	18.4	15.6	0.89	6.07	610	59.7	17.9	13.2	20.5	0.77	23.3
	3.8	1.7	3.9	520	103.4	18.6	15.7	0.91	6.01	530	58.0	17.8	12.4	20.3	0.71	24.9
				590	99.6	18.7	15.9	0.89	6.16	610	59.6	18.1	13.2	20.6	0.73	24.9
	1.9	0.9	2.0	520	104.8	19.3	16.5	0.91	6.21	530	59.0	16.3	11.9	19.5	0.93	17.5
				590	100.8	19.4	16.6	0.89	6.36	610	60.5	16.6	12.6	19.9	0.95	17.5
80	2.8	1.2	2.8	520	106.6	20.3	17.5	0.92	6.48	530	58.8	16.6	11.9	19.5	0.86	19.2
				590	102.4	20.4	17.6	0.90	6.64	610	60.4	16.8	12.7	19.9	0.88	19.2
	3.8	1.6	3.7	520	107.2	20.7	17.8	0.92	6.57	530	58.7	16.8	12.0	19.6	0.82	20.5
				590	102.9	20.8	17.9	0.90	6.74	610	60.3	17.1	12.8	19.9	0.83	20.5
	1.9	0.8	1.9	520	108.2	21.3	18.4	0.93	6.73	530	59.6	15.3	11.5	18.9	1.05	14.5
				590	103.9	21.4	18.5	0.91	6.90	610	61.1	15.6	12.2	19.2	1.07	14.5
90	2.8	1.1	2.6	520	110.3	22.4	19.5	0.93	7.03	530	59.5	15.5	11.6	18.9	0.97	15.9
				590	105.6	22.5	19.6	0.91	7.20	610	61.0	15.8	12.3	19.2	0.99	15.9
	3.8	1.5	3.6	520	110.9	22.7	19.8	0.93	7.13	530	59.4	15.7	11.6	18.9	0.92	17.0
				590	106.2	22.8	20.0	0.92	7.30	610	60.9	16.0	12.4	19.2	0.94	17.0
	1.9	0.8	1.8	Operation Not Recommended						530	60.4	14.2	11.0	18.3	1.18	12.0
										610	61.9	14.5	11.8	18.6	1.20	12.0
100	2.8	1.1	2.5							530	60.3	14.4	11.1	18.2	1.09	13.2
										610	61.7	14.7	11.9	18.5	1.11	13.2
	3.8	1.4	3.3							530	60.2	14.6	11.2	18.2	1.03	14.1
										610	61.6	14.9	11.9	18.5	1.05	14.1
	1.9	0.7	1.7							530	61.3	13.1	10.6	17.6	1.32	9.9
										610	62.6	13.3	11.3	17.9	1.34	9.9
110	2.8	1.0	2.4							530	61.1	13.3	10.6	17.5	1.22	10.8
										610	62.5	13.5	11.3	17.8	1.24	10.8
	3.8	1.4	3.2							530	61.0	13.5	10.7	17.4	1.16	11.6
										610	62.4	13.7	11.4	17.7	1.17	11.6
	1.9	0.7	1.6							530	61.9	12.1	10.2	17.1	1.47	8.1
										610	63.2	12.3	10.9	17.4	1.50	8.1
120	2.8	1.0	2.3							530	61.8	12.2	10.3	16.9	1.36	8.9
										610	63.1	12.5	11.0	17.2	1.38	8.9
	3.8	1.3	3.0							530	61.6	12.4	10.4	16.8	1.29	9.6
										610	63.0	12.6	11.0	17.1	1.31	9.6

Model VS018, 1.5 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	4.5	3.3	7.5	650	90.2	14.1	10.5	1.15	3.59	Operation Not Recommended						
				710	88.7	14.2	10.7	1.12	3.72							
30	2.3	1.9	4.3	650	90.4	14.2	10.6	1.14	3.65							
				710	88.9	14.3	10.9	1.11	3.79							
	3.4	2.5	5.7	650	91.6	15.0	11.4	1.14	3.83							
				710	89.9	15.1	11.6	1.11	3.98							
	4.5	3.1	7.1	650	92.2	15.4	11.8	1.15	3.93							
				710	90.5	15.5	12.1	1.12	4.08							
40	2.3	1.7	4.0	650	93.4	16.3	12.7	1.15	4.15	670	56.1	24.6	17.0	27.0	0.73	33.9
				710	91.6	16.4	12.9	1.12	4.31	740	58.3	25.0	17.1	27.5	0.76	32.8
	3.4	2.3	5.2	650	94.7	17.2	13.6	1.15	4.36	Operation Not Recommended						
				710	92.8	17.3	13.8	1.12	4.53							
	4.5	2.9	6.6	650	95.4	17.6	14.0	1.15	4.47							
				710	93.4	17.8	14.3	1.12	4.64							
50	2.3	1.6	3.8	650	96.3	18.3	14.7	1.15	4.66	670	55.7	24.7	17.3	27.4	0.83	29.5
				710	94.3	18.4	15.0	1.12	4.84	740	57.9	25.0	17.4	27.9	0.87	28.5
	3.4	2.1	4.9	650	97.7	19.3	15.7	1.15	4.90	670	55.5	24.9	17.4	27.4	0.76	32.7
				710	95.6	19.4	16.0	1.12	5.08	740	57.7	25.3	17.5	27.9	0.80	31.6
	4.5	2.7	6.2	650	98.5	19.8	16.2	1.15	5.02	670	55.4	25.1	17.5	27.4	0.72	34.7
				710	96.3	20.0	16.5	1.12	5.21	740	57.7	25.4	17.6	27.9	0.76	33.5
60	2.3	1.5	3.6	650	99.4	20.4	16.8	1.18	5.06	670	55.9	24.0	17.1	27.1	0.96	25.1
				710	97.2	20.6	17.1	1.15	5.25	740	58.1	24.4	17.2	27.6	1.00	24.2
	3.4	2.0	4.7	650	101.0	21.6	17.9	1.19	5.32	670	55.8	24.3	17.3	27.1	0.87	27.7
				710	98.7	21.8	18.2	1.15	5.52	740	58.0	24.6	17.3	27.6	0.92	26.8
	4.5	2.6	5.9	650	101.9	22.1	18.5	1.19	5.45	670	55.7	24.4	17.3	27.1	0.83	29.4
				710	99.4	22.3	18.8	1.16	5.66	740	57.9	24.8	17.4	27.6	0.87	28.4
70	2.3	1.5	3.4	650	102.8	22.8	19.1	1.21	5.51	670	56.4	23.1	16.8	26.7	1.10	21.0
				710	100.3	23.0	19.4	1.18	5.72	740	58.6	23.4	16.9	27.2	1.15	20.3
	3.4	1.9	4.5	650	104.6	24.0	20.3	1.22	5.79	670	56.3	23.3	16.9	26.6	1.00	23.2
				710	101.9	24.3	20.6	1.18	6.01	740	58.4	23.7	17.0	27.1	1.05	22.5
	4.5	2.5	5.7	650	105.5	24.7	21.0	1.22	5.93	670	56.2	23.5	17.0	26.6	0.95	24.7
				710	102.8	24.9	21.3	1.18	6.16	740	58.4	23.8	17.0	27.1	1.00	23.8
80	2.3	1.4	3.3	650	106.3	25.2	21.4	1.25	5.93	670	57.0	22.1	16.4	26.2	1.26	17.5
				710	103.5	25.5	21.8	1.21	6.15	740	59.1	22.4	16.5	26.7	1.32	16.9
	3.4	1.9	4.3	650	108.3	26.6	22.8	1.25	6.23	670	56.8	22.3	16.5	26.0	1.15	19.4
				710	105.4	26.8	23.1	1.22	6.46	740	58.9	22.6	16.6	26.6	1.21	18.7
	4.5	2.4	5.4	650	109.3	27.3	23.5	1.25	6.38	670	56.8	22.4	16.6	26.0	1.09	20.5
				710	106.3	27.6	23.9	1.22	6.62	740	58.9	22.8	16.6	26.5	1.14	19.9
90	2.3	1.4	3.1	650	109.9	27.8	23.9	1.28	6.34	670	57.6	21.0	16.0	25.7	1.44	14.5
				710	106.9	28.0	24.2	1.25	6.57	740	59.6	21.3	16.0	26.3	1.51	14.0
	3.4	1.8	4.1	650	112.1	29.3	25.4	1.29	6.66	670	57.5	21.2	16.1	25.5	1.32	16.1
				710	108.9	29.6	25.8	1.25	6.91	740	59.5	21.5	16.1	26.1	1.38	15.5
	4.5	2.3	5.2	650	113.3	30.1	26.2	1.29	6.82	670	57.4	21.4	16.1	25.4	1.25	17.0
				710	110.0	30.4	26.6	1.26	7.08	740	59.4	21.7	16.2	26.0	1.31	16.5
100	2.3	1.3	3.0	Operation Not Recommended						670	58.3	19.9	15.4	25.3	1.65	12.0
										740	60.3	20.2	15.5	25.8	1.74	11.6
	3.4	1.7	3.9							670	58.2	20.1	15.5	25.0	1.51	13.2
										740	60.2	20.4	15.6	25.6	1.59	12.8
	4.5	2.1	4.9							670	58.1	20.2	15.6	24.9	1.43	14.1
										740	60.1	20.5	15.7	25.4	1.51	13.6
110	2.3	1.3	2.9							670	59.2	18.6	14.8	24.8	1.90	9.8
										740	61.1	18.8	14.9	25.3	1.99	9.4
	3.4	1.6	3.8							670	59.1	18.8	14.9	24.4	1.73	10.8
										740	61.0	19.0	15.0	25.0	1.82	10.4
	4.5	2.1	4.7							670	59.0	18.9	15.0	24.3	1.64	11.5
										740	60.9	19.2	15.0	24.8	1.72	11.1
120	2.3	1.3	2.9							670	60.0	16.9	14.3	24.0	2.16	7.8
										740	61.8	17.2	14.3	24.6	2.27	7.5
	3.4	1.6	3.7							670	59.9	17.1	14.4	23.5	1.97	8.6
										740	61.7	17.3	14.4	24.1	2.07	8.3
	4.5	2.0	4.7							670	59.8	17.2	14.4	23.3	1.87	9.1
										740	61.6	17.4	14.5	23.9	1.97	8.8

ENGINEERING SPECIFICATIONS:

Model VT024, 2 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	6.0	4.9	11.3	710	93.2	17.6	13.0	1.42	3.63	Operation Not Recommended						
				810	90.3	17.6	13.0	1.40	3.67							
30	3.0	2.4	5.6	710	93.3	17.7	13.2	1.40	3.70							
				810	90.3	17.6	13.2	1.38	3.74							
	4.5	3.5	8.1	710	94.3	18.5	13.9	1.41	3.82							
				810	91.3	18.4	13.9	1.39	3.87							
	6.0	4.6	10.5	710	94.9	18.9	14.3	1.42	3.89							
				810	91.8	18.9	14.3	1.40	3.94							
40	3.0	2.2	5.2	710	96.4	20.0	15.5	1.42	4.13	740	55.3	29.8	18.9	33.5	0.96	30.8
				810	93.1	20.0	15.5	1.40	4.17	850	57.2	30.3	20.0	34.1	0.99	30.5
	4.5	3.1	7.3	710	97.6	20.9	16.3	1.44	4.26	Operation Not Recommended						
				810	94.1	20.9	16.3	1.42	4.31							
	6.0	4.2	9.8	710	98.2	21.4	16.8	1.45	4.34							
				810	94.7	21.4	16.8	1.43	4.39							
50	3.0	2.1	4.8	710	99.8	22.6	18.1	1.42	4.65	740	54.8	29.8	19.2	33.9	1.11	26.9
				810	96.0	22.5	18.1	1.40	4.71	850	56.8	30.3	20.4	34.5	1.13	26.6
	4.5	2.9	6.8	710	101.1	23.6	19.0	1.44	4.81	740	54.7	30.3	19.4	34.2	1.03	29.5
				810	97.2	23.5	19.0	1.42	4.86	850	56.6	30.8	20.5	34.8	1.05	29.2
	6.0	4.0	9.2	710	101.9	24.2	19.6	1.45	4.89	740	54.6	30.4	19.4	34.1	0.98	30.9
				810	97.8	24.1	19.6	1.43	4.95	850	56.6	30.9	20.5	34.7	1.01	30.6
60	3.0	2.0	4.6	710	103.5	25.5	20.6	1.52	4.89	740	55.2	28.8	18.9	33.5	1.26	22.9
				810	99.3	25.4	20.6	1.50	4.95	850	57.2	29.3	20.0	34.1	1.29	22.7
	4.5	2.8	6.4	710	105.0	26.6	21.7	1.54	5.06	740	55.1	29.4	19.0	33.7	1.17	25.1
				810	100.6	26.5	21.7	1.52	5.11	850	57.0	29.9	20.2	34.3	1.20	24.9
	6.0	3.7	8.6	710	105.9	27.2	22.3	1.55	5.15	740	55.0	29.4	19.1	33.6	1.12	26.3
				810	101.3	27.1	22.3	1.53	5.21	850	57.0	29.9	20.2	34.2	1.15	26.0
70	3.0	1.9	4.3	710	107.5	28.5	23.4	1.59	5.24	740	55.8	27.7	18.4	32.9	1.42	19.4
				810	102.8	28.4	23.4	1.57	5.30	850	57.7	28.2	19.5	33.5	1.46	19.2
	4.5	2.6	6.1	710	109.2	29.8	24.7	1.61	5.41	740	55.7	28.3	18.6	33.1	1.32	21.3
				810	104.3	29.7	24.6	1.59	5.47	850	57.6	28.7	19.7	33.7	1.36	21.1
	6.0	3.6	8.2	710	110.2	30.5	25.3	1.62	5.51	740	55.6	28.3	18.6	33.0	1.27	22.3
				810	105.1	30.4	25.3	1.60	5.57	850	57.5	28.8	19.7	33.6	1.30	22.1
80	3.0	1.8	4.1	710	111.6	31.6	26.3	1.67	5.53	740	56.4	26.7	18.0	32.5	1.61	16.6
				810	106.4	31.5	26.3	1.65	5.60	850	58.2	27.1	19.1	33.0	1.65	16.4
	4.5	2.5	5.8	710	113.5	33.0	27.7	1.69	5.72	740	56.2	27.2	18.2	32.6	1.49	18.2
				810	108.0	32.9	27.6	1.67	5.78	850	58.1	27.6	19.2	33.2	1.53	18.0
	6.0	3.4	7.9	710	114.5	33.8	28.4	1.70	5.82	740	56.2	27.2	18.2	32.4	1.43	19.0
				810	108.9	33.7	28.4	1.68	5.88	850	58.0	27.7	19.3	33.0	1.46	18.8
90	3.0	1.7	4.0	710	115.8	34.8	29.2	1.75	5.81	740	56.9	25.5	17.6	32.0	1.81	14.1
				810	110.0	34.6	29.2	1.73	5.87	850	58.7	26.0	18.7	32.6	1.86	13.9
	4.5	2.4	5.6	710	117.8	36.3	30.7	1.77	6.00	740	56.7	26.0	17.8	32.1	1.68	15.4
				810	111.8	36.2	30.7	1.75	6.07	850	58.5	26.4	18.8	32.6	1.72	15.3
	6.0	3.3	7.5	710	119.0	37.2	31.6	1.78	6.10	740	56.7	26.1	17.8	31.9	1.61	16.1
				810	112.8	37.1	31.5	1.76	6.18	850	58.5	26.5	18.9	32.4	1.65	16.0
100	3.0	1.6	3.8	Operation Not Recommended						740	57.6	24.2	17.1	31.5	2.05	11.8
										850	59.3	24.6	18.2	32.0	2.10	11.7
	4.5	2.3	5.2							740	57.4	24.7	17.2	31.4	1.90	12.9
										850	59.2	25.1	18.3	32.0	1.95	12.8
	6.0	3.0	7.0							740	57.4	24.7	17.3	31.2	1.82	13.5
										850	59.1	25.1	18.3	31.8	1.87	13.4
110	3.0	1.6	3.6							740	58.4	22.7	16.5	30.8	2.31	9.8
										850	60.1	23.0	17.4	31.4	2.37	9.7
	4.5	2.2	5.0							740	58.3	23.1	16.6	30.6	2.14	10.7
										850	60.0	23.5	17.5	31.2	2.20	10.6
	6.0	2.9	6.8							740	58.3	23.1	16.6	30.4	2.05	11.2
										850	60.0	23.5	17.6	31.0	2.11	11.1
120	3.0	1.5	3.5							740	59.2	21.2	15.9	30.2	2.60	8.1
										850	60.8	21.5	16.8	30.8	2.67	8.0
	4.5	2.1	4.9							740	59.1	21.6	16.0	30.0	2.42	8.9
										850	60.7	21.9	16.9	30.6	2.48	8.8
	6.0	2.8	6.6							740	59.1	21.6	16.0	29.7	2.31	9.3
										850	60.7	22.0	16.9	30.3	2.37	9.2

Model VT024, 2 Ton, ECM Blower, Part Load Performance Data

EWT	Flow	WPD		Part Load Heating						Part Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	4.0	3.1	7.1	600	88.7	12.3	8.5	1.09	3.30	Operation Not Recommended						
				680	86.6	12.3	8.6	1.06	3.41							
30	2.0	1.8	4.1	600	88.8	12.3	8.5	1.08	3.33							
				680	86.7	12.4	8.7	1.05	3.44							
	3.0	2.3	5.4	600	89.8	12.9	9.2	1.07	3.53							
				680	87.6	13.0	9.4	1.05	3.64							
	4.0	3.0	6.9	600	90.3	13.3	9.6	1.07	3.64							
				680	88.1	13.4	9.8	1.04	3.76							
40	2.0	1.7	3.9	600	91.5	14.1	10.4	1.05	3.92	610	57.4	21.8	14.2	24.0	0.57	38.3
				680	89.1	14.2	10.6	1.03	4.04	700	58.6	22.4	15.5	24.7	0.58	38.8
	3.0	2.2	5.0	600	92.7	14.8	11.2	1.05	4.15	Operation Not Recommended						
				680	90.1	14.9	11.4	1.02	4.28							
	4.0	2.7	6.3	600	93.3	15.3	11.6	1.04	4.28							
				680	90.7	15.4	11.8	1.02	4.41							
50	2.0	1.6	3.7	600	94.5	16.1	12.4	1.05	4.46	610	57.0	21.5	14.5	24.1	0.68	31.7
				680	91.8	16.2	12.6	1.03	4.60	700	58.3	22.2	15.7	24.8	0.69	32.1
	3.0	2.1	4.8	600	95.8	16.9	13.2	1.05	4.73	610	56.8	22.1	14.6	24.5	0.60	36.8
				680	93.0	17.0	13.4	1.02	4.88	700	58.1	22.8	15.8	25.2	0.61	37.3
	4.0	2.6	6.0	600	96.6	17.4	13.7	1.04	4.88	610	56.7	22.2	14.7	24.4	0.56	39.3
				680	93.6	17.5	13.9	1.02	5.03	700	58.0	22.9	15.9	25.1	0.57	39.8
60	2.0	1.5	3.5	600	97.9	18.3	14.6	1.05	5.11	610	57.4	20.7	14.2	23.7	0.81	25.3
				680	94.8	18.4	14.8	1.02	5.26	700	58.7	21.3	15.4	24.4	0.83	25.7
	3.0	2.0	4.6	600	99.4	19.2	15.5	1.04	5.41	610	57.2	21.3	14.3	24.0	0.72	29.5
				680	96.1	19.4	15.7	1.02	5.58	700	58.5	21.9	15.5	24.7	0.73	29.8
	4.0	2.5	5.8	600	100.2	19.8	16.1	1.04	5.58	610	57.1	21.3	14.4	23.9	0.68	31.5
				680	96.8	19.9	16.3	1.01	5.75	700	58.4	22.0	15.6	24.6	0.69	31.9
70	2.0	1.5	3.4	600	101.4	20.6	16.8	1.06	5.71	610	57.9	19.8	13.9	23.4	0.97	20.4
				680	97.9	20.7	17.0	1.03	5.88	700	59.1	20.4	15.1	24.0	0.99	20.6
	3.0	1.9	4.4	600	103.1	21.7	17.9	1.05	6.05	610	57.7	20.4	14.0	23.6	0.86	23.7
				680	99.4	21.8	18.1	1.02	6.24	700	59.0	21.0	15.2	24.2	0.87	24.0
	4.0	2.4	5.6	600	104.0	22.3	18.5	1.05	6.24	610	57.6	20.4	14.1	23.4	0.81	25.3
				680	100.2	22.4	18.8	1.02	6.43	700	58.8	21.0	15.3	24.1	0.82	25.6
80	2.0	1.4	3.3	600	104.9	22.8	19.1	1.06	6.30	610	58.4	19.0	13.6	23.1	1.14	16.5
				680	101.0	23.0	19.3	1.04	6.50	700	59.5	19.5	14.8	23.7	1.16	16.8
	3.0	1.8	4.3	600	106.7	24.0	20.3	1.05	6.68	610	58.2	19.5	13.7	23.2	1.01	19.2
				680	102.6	24.2	20.5	1.03	6.89	700	59.4	20.1	14.9	23.9	1.03	19.5
	4.0	2.3	5.4	600	107.8	24.8	21.0	1.05	6.89	610	58.1	19.5	13.8	23.0	0.95	20.6
				680	103.6	24.9	21.2	1.03	7.10	700	59.3	20.1	15.0	23.7	0.96	20.8
90	2.0	1.4	3.2	600	108.4	25.1	21.3	1.06	6.92	610	58.9	18.1	13.3	22.9	1.34	13.5
				680	104.1	25.3	21.6	1.04	7.13	700	60.0	18.6	14.4	23.5	1.36	13.7
	3.0	1.8	4.1	600	110.4	26.5	22.6	1.06	7.33	610	58.7	18.6	13.4	22.9	1.18	15.7
				680	105.9	26.6	22.9	1.03	7.56	700	59.8	19.2	14.6	23.5	1.20	15.9
	4.0	2.2	5.2	600	111.6	27.2	23.4	1.06	7.56	610	58.6	18.7	13.5	22.7	1.11	16.8
				680	106.9	27.4	23.7	1.03	7.79	700	59.7	19.2	14.6	23.3	1.13	17.0
100	2.0	1.4	3.1	Operation Not Recommended						610	59.6	17.0	12.9	22.5	1.55	10.9
										700	60.7	17.5	13.9	23.1	1.58	11.1
	3.0	1.7	4.0							610	59.4	17.5	13.0	22.4	1.37	12.7
										700	60.5	18.0	14.1	23.0	1.40	12.9
	4.0	2.1	4.9							610	59.3	17.6	13.0	22.1	1.29	13.6
										700	60.4	18.1	14.1	22.8	1.31	13.8
110	2.0	1.3	3.0							610	60.5	15.7	12.3	22.0	1.79	8.7
										700	61.5	16.2	13.3	22.5	1.82	8.9
	3.0	1.7	3.9							610	60.3	16.2	12.4	21.7	1.58	10.2
										700	61.4	16.7	13.4	22.3	1.61	10.3
	4.0	2.1	4.8							610	60.2	16.2	12.5	21.4	1.48	10.9
										700	61.3	16.7	13.5	22.0	1.51	11.0
120	2.0	1.3	2.9							610	61.1	14.5	11.9	21.5	2.04	7.1
										700	62.1	14.9	12.9	22.1	2.07	7.1
	3.0	1.6	3.7							610	60.9	14.9	12.0	21.2	1.80	8.2
										700	62.0	15.3	13.0	21.7	1.83	8.3
	4.0	2.0	4.6							610	60.8	14.9	12.1	20.8	1.69	8.8
										700	61.9	15.4	13.1	21.4	1.72	8.9

ENGINEERING SPECIFICATIONS:

Model VT030, 2.5 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	7.5	4.2	9.6	840	95.7	23.3	16.9	1.91	3.57	Operation Not Recommended						
				960	92.4	23.2	17.1	1.86	3.66							
30	3.8	2.1	4.9	840	95.6	23.3	16.9	1.90	3.59							
				960	92.4	23.2	17.1	1.85	3.68							
	5.6	3.0	6.9	840	96.9	24.4	18.0	1.93	3.70							
				960	93.5	24.3	18.1	1.87	3.80							
	7.5	3.9	9.0	840	97.5	24.9	18.5	1.94	3.76							
				960	94.0	24.9	18.6	1.89	3.86							
40	3.8	2.0	4.7	840	99.0	26.3	19.8	1.97	3.91	880	55.5	36.4	22.7	41.0	1.32	27.6
				960	95.3	26.3	19.9	1.92	4.01	1000	57.1	37.7	24.2	42.4	1.36	27.6
	5.6	2.8	6.4	840	100.4	27.6	20.9	2.00	4.04	Operation Not Recommended						
				960	96.6	27.5	21.1	1.95	4.14							
	7.5	3.7	8.5	840	101.1	28.3	21.5	2.02	4.10							
				960	97.2	28.2	21.7	1.96	4.20							
50	3.8	1.9	4.4	840	102.7	29.7	23.1	1.97	4.41	880	55.6	35.8	22.6	40.9	1.49	23.9
				960	98.6	29.6	23.3	1.92	4.52	1000	57.2	37.1	24.0	42.4	1.54	23.9
	5.6	2.7	6.1	840	104.3	31.1	24.5	2.00	4.55	880	55.4	36.3	22.8	41.1	1.40	25.8
				960	100.0	31.1	24.6	1.95	4.67	1000	57.0	37.6	24.2	42.6	1.45	25.9
	7.5	3.5	8.1	840	105.1	31.9	25.1	2.02	4.62	880	55.3	36.5	22.9	41.2	1.35	27.0
				960	100.7	31.8	25.3	1.96	4.74	1000	56.9	37.8	24.4	42.7	1.40	27.0
60	3.8	1.8	4.2	840	106.8	33.4	26.2	2.15	4.55	880	55.9	34.8	22.3	40.5	1.66	21.0
				960	102.1	33.3	26.3	2.09	4.67	1000	57.5	36.1	23.7	42.0	1.71	21.0
	5.6	2.5	5.8	840	108.6	35.0	27.7	2.18	4.70	880	55.7	35.3	22.5	40.7	1.56	22.7
				960	103.7	34.9	27.8	2.12	4.82	1000	57.3	36.6	23.9	42.2	1.61	22.7
	7.5	3.3	7.7	840	109.5	35.8	28.5	2.20	4.77	880	55.6	35.6	22.6	40.8	1.50	23.7
				960	104.5	35.7	28.6	2.14	4.89	1000	57.1	36.9	24.1	42.2	1.55	23.8
70	3.8	1.7	4.0	840	111.0	37.2	29.7	2.25	4.84	880	56.4	33.7	21.9	40.0	1.84	18.3
				960	105.8	37.1	29.8	2.19	4.96	1000	57.9	35.0	23.3	41.5	1.90	18.3
	5.6	2.4	5.5	840	112.9	39.0	31.4	2.28	4.99	880	56.2	34.2	22.0	40.1	1.73	19.7
				960	107.5	38.9	31.5	2.22	5.12	1000	57.7	35.4	23.5	41.6	1.79	19.8
	7.5	3.2	7.4	840	113.9	39.9	32.2	2.30	5.07	880	56.1	34.5	22.2	40.2	1.67	20.6
				960	108.4	39.8	32.3	2.24	5.20	1000	57.6	35.7	23.6	41.6	1.72	20.7
80	3.8	1.7	3.9	840	115.1	40.9	33.0	2.36	5.07	880	57.0	32.4	21.3	39.5	2.06	15.7
				960	109.3	40.8	33.1	2.30	5.19	1000	58.5	33.6	22.7	40.9	2.13	15.7
	5.6	2.3	5.3	840	117.2	42.9	34.9	2.40	5.23	880	56.8	32.9	21.5	39.5	1.93	17.0
				960	111.3	42.8	35.0	2.34	5.36	1000	58.3	34.1	22.9	40.9	2.00	17.0
	7.5	3.1	7.1	840	118.3	43.9	35.8	2.42	5.31	880	56.7	33.1	21.6	39.5	1.86	17.7
				960	112.2	43.8	35.9	2.35	5.44	1000	58.2	34.3	23.0	40.9	1.93	17.8
90	3.8	1.6	3.7	840	119.1	44.6	36.3	2.48	5.26	880	57.7	30.9	20.7	38.8	2.31	13.3
				960	112.9	44.5	36.4	2.41	5.39	1000	59.1	32.1	22.0	40.2	2.39	13.4
	5.6	2.2	5.2	840	121.5	46.7	38.3	2.52	5.43	880	57.5	31.4	20.8	38.8	2.17	14.4
				960	115.0	46.6	38.5	2.45	5.57	1000	58.9	32.5	22.2	40.2	2.24	14.4
	7.5	3.0	6.8	840	122.7	47.8	39.4	2.54	5.51	880	57.4	31.6	21.0	38.7	2.09	15.1
				960	116.0	47.7	39.5	2.47	5.65	1000	58.8	32.8	22.3	40.1	2.16	15.1
100	3.8	1.6	3.7	Operation Not Recommended						880	58.4	29.3	20.0	38.1	2.60	11.2
										1000	59.7	30.4	21.3	39.5	2.69	11.3
	5.6	2.2	5.0							880	58.2	29.7	20.2	38.0	2.44	12.1
										1000	59.6	30.8	21.5	39.3	2.52	12.2
	7.5	2.8	6.5							880	58.1	29.9	20.3	37.9	2.35	12.7
										1000	59.5	31.0	21.6	39.3	2.43	12.7
110	3.8	1.6	3.6							880	59.2	27.6	19.3	37.4	2.92	9.4
										1000	60.5	28.6	20.5	38.7	3.01	9.4
	5.6	2.1	4.9							880	59.0	28.0	19.5	37.2	2.74	10.2
										1000	60.3	29.0	20.7	38.5	2.83	10.2
	7.5	2.8	6.3							880	58.9	28.2	19.6	37.1	2.64	10.6
										1000	60.2	29.2	20.8	38.4	2.72	10.7
120	3.8	1.5	3.5							880	60.3	25.9	18.3	36.9	3.27	7.9
										1000	61.5	26.9	19.4	38.3	3.38	7.9
	5.6	2.1	4.8							880	60.1	26.3	18.4	36.6	3.07	8.5
										1000	61.4	27.2	19.6	37.9	3.17	8.5
	7.5	2.7	6.2							880	60.0	26.5	18.5	36.5	2.96	8.9
										1000	61.3	27.4	19.7	37.8	3.06	8.9

Model VT030, 2.5 Ton, ECM Blower, Part Load Performance Data

EWT	Flow	WPD		Part Load Heating						Part Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	5.0	2.6	6.0	650	92.7	15.9	11.1	1.45	3.22	Operation Not Recommended						
				740	90.0	16.0	11.3	1.40	3.34							
30	2.5	1.6	3.7	650	92.4	15.7	10.9	1.44	3.19							
				740	89.8	15.8	11.2	1.40	3.31							
	3.8	2.1	4.8	650	93.7	16.7	11.8	1.45	3.36							
				740	91.0	16.8	12.1	1.41	3.48							
	5.0	2.6	5.9	650	94.5	17.2	12.3	1.46	3.45							
				740	91.6	17.3	12.6	1.41	3.58							
40	2.5	1.6	3.6	650	95.8	18.1	13.3	1.47	3.62	670	55.6	26.9	17.2	29.6	0.79	34.2
				740	92.8	18.2	13.5	1.42	3.75	760	57.1	27.8	18.4	30.5	0.79	34.9
	3.8	2.0	4.6	650	97.3	19.2	14.3	1.48	3.81	Operation Not Recommended						
				740	94.1	19.3	14.5	1.43	3.95							
	5.0	2.4	5.6	650	98.2	19.8	14.9	1.48	3.91							
				740	94.9	19.9	15.1	1.44	4.06							
50	2.5	1.5	3.5	650	99.4	20.6	15.8	1.47	4.12	670	55.5	26.6	17.3	29.8	0.92	28.7
				740	96.0	20.7	16.0	1.42	4.27	760	57.0	27.4	18.4	30.7	0.93	29.3
	3.8	1.9	4.4	650	101.1	21.8	16.9	1.48	4.33	670	55.2	27.2	17.5	30.1	0.83	32.7
				740	97.5	22.0	17.2	1.43	4.49	760	56.7	28.1	18.6	31.0	0.84	33.4
	5.0	2.3	5.4	650	102.1	22.5	17.6	1.48	4.45	670	55.1	27.3	17.6	30.0	0.79	34.7
				740	98.4	22.7	17.9	1.44	4.62	760	56.6	28.2	18.7	31.0	0.79	35.4
60	2.5	1.5	3.4	650	103.1	23.2	18.2	1.52	4.48	670	56.0	25.7	16.9	29.4	1.08	23.6
				740	99.2	23.4	18.5	1.47	4.64	760	57.4	26.5	18.1	30.3	1.10	24.1
	3.8	1.9	4.3	650	105.0	24.6	19.5	1.53	4.71	670	55.7	26.3	17.1	29.7	0.98	26.8
				740	100.9	24.7	19.8	1.48	4.88	760	57.2	27.1	18.3	30.6	0.99	27.4
	5.0	2.3	5.2	650	106.2	25.4	20.3	1.54	4.84	670	55.6	26.4	17.2	29.6	0.92	28.5
				740	101.9	25.5	20.6	1.49	5.02	760	57.1	27.2	18.3	30.5	0.93	29.1
70	2.5	1.4	3.3	650	106.8	25.8	20.7	1.55	4.90	670	56.6	24.6	16.5	29.0	1.27	19.3
				740	102.5	26.0	21.0	1.50	5.08	760	58.0	25.4	17.6	29.8	1.28	19.8
	3.8	1.8	4.2	650	109.0	27.4	22.2	1.56	5.15	670	56.4	25.2	16.7	29.2	1.14	22.0
				740	104.4	27.5	22.5	1.51	5.34	760	57.8	26.0	17.8	30.0	1.16	22.5
	5.0	2.2	5.1	650	110.2	28.2	23.0	1.56	5.29	670	56.2	25.3	16.8	29.0	1.08	23.3
				740	105.5	28.4	23.3	1.51	5.49	760	57.7	26.1	17.9	29.9	1.09	23.8
80	2.5	1.4	3.2	650	110.4	28.4	23.2	1.57	5.31	670	57.2	23.6	16.1	28.6	1.48	15.9
				740	105.7	28.5	23.5	1.52	5.51	760	58.6	24.3	17.1	29.4	1.49	16.2
	3.8	1.8	4.1	650	112.8	30.1	24.8	1.58	5.58	670	57.0	24.2	16.3	28.7	1.33	18.1
				740	107.8	30.2	25.1	1.53	5.79	760	58.4	24.9	17.3	29.5	1.35	18.5
	5.0	2.2	5.0	650	114.2	31.0	25.7	1.58	5.73	670	56.9	24.2	16.3	28.5	1.26	19.2
				740	109.0	31.2	26.1	1.54	5.95	760	58.3	25.0	17.4	29.4	1.27	19.6
90	2.5	1.4	3.2	650	114.0	30.9	25.6	1.59	5.71	670	57.9	22.5	15.6	28.3	1.71	13.1
				740	108.9	31.1	25.9	1.54	5.92	760	59.2	23.2	16.7	29.1	1.73	13.4
	3.8	1.7	4.0	650	116.6	32.7	27.4	1.60	6.00	670	57.6	23.0	15.8	28.3	1.54	14.9
				740	111.1	32.9	27.7	1.55	6.22	760	59.0	23.8	16.8	29.1	1.56	15.2
	5.0	2.1	4.9	650	118.1	33.8	28.4	1.60	6.17	670	57.5	23.1	15.9	28.1	1.46	15.8
				740	112.5	33.9	28.8	1.55	6.40	760	58.9	23.9	16.9	28.9	1.47	16.1
100	2.5	1.4	3.1	Operation Not Recommended						670	58.6	21.3	15.1	27.9	1.97	10.7
										760	59.9	21.9	16.1	28.7	1.99	11.0
	3.8	1.7	3.9							670	58.4	21.8	15.3	27.8	1.78	12.2
										760	59.7	22.5	16.3	28.6	1.80	12.5
	5.0	2.0	4.6							670	58.3	21.8	15.3	27.5	1.68	13.0
										760	59.6	22.6	16.3	28.3	1.70	13.2
110	2.5	1.3	3.1							670	59.5	19.8	14.5	27.5	2.26	8.7
										760	60.7	20.5	15.4	28.2	2.28	8.9
	3.8	1.7	3.8							670	59.2	20.3	14.6	27.2	2.03	10.0
										760	60.5	21.0	15.6	27.9	2.06	10.2
	5.0	2.0	4.5							670	59.1	20.4	14.7	26.9	1.92	10.6
										760	60.4	21.1	15.7	27.6	1.94	10.8
120	2.5	1.3	3.1							670	60.3	18.4	13.9	27.0	2.56	7.1
										760	61.5	19.0	14.8	27.7	2.59	7.3
	3.8	1.6	3.8							670	60.1	18.8	14.1	26.6	2.31	8.1
										760	61.3	19.4	15.0	27.3	2.33	8.3
	5.0	1.9	4.5							670	60.0	18.9	14.1	26.2	2.18	8.6
										760	61.2	19.5	15.0	26.9	2.21	8.8

ENGINEERING SPECIFICATIONS:

Model VT036, 3 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	9.0	5.2	11.9	1060	95.3	28.5	20.7	2.45	3.41	Operation Not Recommended						
				1210	92.6	29.1	21.3	2.44	3.49							
30	4.5	2.5	5.7	1060	94.8	28.0	20.3	2.42	3.39							
				1210	92.2	28.6	20.9	2.42	3.46							
	6.8	3.7	8.5	1060	96.0	29.4	21.6	2.45	3.52							
				1210	93.2	30.0	22.2	2.44	3.59							
	9.0	4.9	11.3	1060	96.9	30.4	22.5	2.47	3.60							
				1210	94.0	31.0	23.1	2.47	3.68							
40	4.5	2.3	5.4	1060	98.4	32.2	24.2	2.49	3.78	990	53.7	44.7	27.5	50.3	1.59	28.0
				1210	95.4	32.8	24.9	2.49	3.86	1130	55.8	45.3	28.8	51.0	1.64	27.6
	6.8	3.4	7.9	1060	99.8	33.7	25.8	2.51	3.93	Operation Not Recommended						
				1210	96.7	34.4	26.4	2.51	4.01							
	9.0	4.6	10.6	1060	100.8	34.8	26.8	2.54	4.02							
				1210	97.5	35.5	27.5	2.53	4.11							
50	4.5	2.2	5.1	1060	102.0	36.1	28.2	2.49	4.25	990	53.8	44.1	27.3	50.4	1.81	24.3
				1210	98.5	36.8	29.0	2.49	4.33	1130	55.9	44.7	28.7	51.1	1.86	23.9
	6.8	3.2	7.5	1060	103.5	37.9	30.0	2.51	4.41	990	53.7	44.4	27.5	50.3	1.68	26.4
				1210	99.9	38.6	30.7	2.51	4.51	1130	55.8	45.0	28.8	51.0	1.73	26.0
	9.0	4.4	10.1	1060	104.6	39.1	31.2	2.54	4.52	990	53.6	44.8	27.5	50.4	1.61	27.7
				1210	100.9	39.9	31.9	2.53	4.61	1130	55.7	45.4	28.9	51.2	1.66	27.3
60	4.5	2.1	4.9	1060	105.2	39.8	31.6	2.62	4.46	990	54.2	42.9	26.9	49.8	2.01	21.3
				1210	101.5	40.6	32.4	2.61	4.55	1130	56.3	43.5	28.2	50.6	2.07	21.0
	6.8	3.1	7.1	1060	106.9	41.8	33.5	2.64	4.63	990	54.1	43.3	27.1	49.7	1.86	23.1
				1210	103.0	42.6	34.3	2.64	4.73	1130	56.1	43.8	28.4	50.5	1.92	22.8
	9.0	4.2	9.6	1060	108.2	43.2	34.8	2.66	4.74	990	54.0	43.6	27.1	49.8	1.79	24.3
				1210	104.1	44.0	35.7	2.66	4.84	1130	56.1	44.2	28.4	50.6	1.84	23.9
70	4.5	2.0	4.7	1060	108.8	43.8	35.3	2.71	4.74	990	54.8	41.4	26.3	49.1	2.23	18.5
				1210	104.6	44.7	36.2	2.71	4.83	1130	56.8	41.9	27.6	49.8	2.30	18.2
	6.8	2.9	6.8	1060	110.7	46.0	37.4	2.73	4.92	990	54.6	41.7	26.4	48.9	2.08	20.1
				1210	106.3	46.9	38.3	2.73	5.03	1130	56.7	42.3	27.7	49.6	2.14	19.7
	9.0	4.0	9.2	1060	112.0	47.5	38.9	2.76	5.04	990	54.6	42.1	26.5	48.9	1.99	21.1
				1210	107.5	48.5	39.8	2.76	5.14	1130	56.6	42.6	27.8	49.7	2.05	20.7
80	4.5	1.9	4.5	1060	113.0	48.6	39.7	2.85	4.99	990	55.5	39.7	25.6	48.3	2.51	15.8
				1210	108.4	49.6	40.7	2.85	5.09	1130	57.5	40.2	26.8	49.1	2.58	15.5
	6.8	2.8	6.5	1060	115.1	51.0	42.0	2.88	5.19	990	55.3	40.0	25.7	48.0	2.33	17.2
				1210	110.3	52.0	43.0	2.87	5.29	1130	57.3	40.6	27.0	48.8	2.40	16.9
	9.0	3.8	8.8	1060	116.6	52.7	43.6	2.91	5.31	990	55.3	40.4	25.8	48.0	2.23	18.0
				1210	111.6	53.7	44.7	2.90	5.42	1130	57.3	40.9	27.0	48.8	2.30	17.7
90	4.5	1.9	4.3	1060	117.4	53.6	44.2	3.01	5.21	990	56.2	38.0	24.8	47.6	2.82	13.4
				1210	112.3	54.6	45.3	3.01	5.32	1130	58.1	38.4	26.0	48.3	2.90	13.2
	6.8	2.7	6.2	1060	119.7	56.2	46.7	3.04	5.41	990	56.1	38.3	24.9	47.2	2.62	14.6
				1210	114.4	57.3	47.9	3.04	5.53	1130	58.0	38.8	26.2	48.0	2.69	14.3
	9.0	3.6	8.4	1060	121.4	58.1	48.5	3.07	5.54	990	56.0	38.6	25.0	47.2	2.51	15.3
				1210	115.9	59.2	49.7	3.07	5.66	1130	58.0	39.1	26.2	47.9	2.59	15.1
100	4.5	1.8	4.2	Operation Not Recommended						990	57.0	36.1	24.0	46.9	3.16	11.4
										1130	58.9	36.6	25.2	47.6	3.26	11.2
	6.8	2.6	5.9							990	56.9	36.4	24.1	46.4	2.94	12.3
										1130	58.7	36.9	25.3	47.2	3.03	12.1
	9.0	3.4	7.9							990	56.8	36.7	24.2	46.3	2.82	13.0
										1130	58.7	37.2	25.4	47.1	2.90	12.7
110	4.5	1.8	4.1							990	57.9	34.0	23.0	46.1	3.55	9.5
										1130	59.7	34.5	24.2	46.9	3.66	9.4
	6.8	2.5	5.8							990	57.8	34.3	23.2	45.5	3.30	10.3
										1130	59.5	34.7	24.3	46.3	3.40	10.2
	9.0	3.4	7.7							990	57.7	34.6	23.2	45.3	3.17	10.9
										1130	59.5	35.0	24.4	46.1	3.26	10.7
120	4.5	1.7	4.0							990	59.1	31.5	21.8	45.1	4.02	7.8
										1130	60.8	31.9	22.9	45.9	4.14	7.7
	6.8	2.4	5.6							990	59.0	31.8	21.9	44.4	3.74	8.4
										1130	60.6	32.2	23.0	45.2	3.85	8.3
	9.0	3.3	7.6							990	58.9	32.0	22.0	44.2	3.59	8.9
										1130	60.6	32.4	23.1	45.0	3.69	8.7

Model VT036, 3 Ton, ECM Blower, Part Load Performance Data

EWT	Flow	WPD		Part Load Heating						Part Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	6.0	3.2	7.3	730	94.1	19.3	12.8	1.87	3.02	Operation Not Recommended						
				830	92.0	20.0	13.6	1.82	3.21							
30	3.0	1.8	4.2	730	94.1	19.2	13.0	1.79	3.14							
				830	92.0	20.0	13.9	1.75	3.34							
	4.5	2.4	5.6	730	95.5	20.4	14.1	1.80	3.31							
				830	93.2	21.1	15.0	1.76	3.51							
	6.0	3.1	7.2	730	96.3	21.0	14.7	1.81	3.40							
				830	94.0	21.8	15.6	1.76	3.61							
40	3.0	1.8	4.1	730	98.0	22.4	16.0	1.81	3.61	740	53.6	32.6	20.6	36.0	0.98	33.2
				830	95.5	23.2	17.0	1.77	3.83	850	55.7	33.5	21.8	37.0	0.99	34.0
	4.5	2.3	5.3	730	99.6	23.7	17.3	1.82	3.80	Operation Not Recommended						
				830	97.0	24.5	18.3	1.78	4.04							
	6.0	2.9	6.8	730	100.6	24.4	18.0	1.83	3.91							
				830	97.9	25.3	19.0	1.79	4.15							
50	3.0	1.7	3.9	730	101.6	25.2	18.8	1.81	4.07	740	53.8	32.1	20.4	36.1	1.15	27.9
				830	98.8	26.1	19.9	1.77	4.32	850	55.8	33.0	21.6	37.0	1.16	28.5
	4.5	2.2	5.1	730	103.4	26.7	20.2	1.82	4.28	740	53.4	32.6	20.7	36.2	1.03	31.4
				830	100.5	27.6	21.4	1.78	4.55	850	55.5	33.5	21.9	37.2	1.04	32.1
	6.0	2.8	6.5	730	104.5	27.5	21.1	1.83	4.41	740	53.4	33.0	20.7	36.4	0.97	34.1
				830	101.4	28.5	22.2	1.79	4.68	850	55.5	34.0	22.0	37.4	0.97	34.8
60	3.0	1.6	3.8	730	105.0	27.9	21.3	1.88	4.36	740	54.3	31.1	20.0	35.7	1.34	23.1
				830	101.9	29.0	22.5	1.83	4.63	850	56.4	32.0	21.2	36.7	1.35	23.6
	4.5	2.1	4.9	730	107.0	29.5	22.9	1.88	4.60	740	54.0	31.6	20.3	35.8	1.21	26.0
				830	103.8	30.6	24.1	1.84	4.88	850	56.0	32.5	21.5	36.7	1.22	26.6
	6.0	2.7	6.3	730	108.2	30.5	23.8	1.89	4.73	740	54.0	32.0	20.3	35.9	1.13	28.2
				830	104.8	31.6	25.1	1.84	5.02	850	56.0	32.9	21.5	36.9	1.14	28.8
70	3.0	1.6	3.6	730	108.7	30.9	24.1	1.90	4.75	740	55.0	29.9	19.5	35.3	1.57	19.0
				830	105.3	32.0	25.4	1.86	5.05	850	57.0	30.7	20.6	36.2	1.58	19.4
	4.5	2.0	4.7	730	110.9	32.7	25.9	1.91	5.01	740	54.7	30.3	19.7	35.2	1.42	21.4
				830	107.3	33.9	27.2	1.86	5.32	850	56.6	31.2	20.9	36.2	1.43	21.8
	6.0	2.6	6.0	730	112.2	33.7	26.9	1.92	5.15	740	54.6	30.7	19.8	35.3	1.33	23.1
				830	108.5	34.9	28.2	1.87	5.47	850	56.6	31.6	20.9	36.3	1.33	23.7
80	3.0	1.5	3.5	730	112.9	34.2	27.2	1.98	5.07	740	55.7	28.5	18.9	34.8	1.83	15.6
				830	109.1	35.5	28.6	1.93	5.38	850	57.6	29.4	20.1	35.7	1.84	15.9
	4.5	2.0	4.6	730	115.3	36.2	29.1	1.98	5.34	740	55.4	29.0	19.2	34.6	1.65	17.5
				830	111.3	37.5	30.6	1.94	5.67	850	57.3	29.8	20.3	35.5	1.66	17.9
	6.0	2.5	5.9	730	116.8	37.3	30.2	1.99	5.49	740	55.3	29.4	19.2	34.7	1.54	19.0
				830	112.7	38.7	31.7	1.95	5.83	850	57.2	30.2	20.4	35.6	1.55	19.4
90	3.0	1.5	3.4	730	117.3	37.8	30.5	2.05	5.40	740	56.4	27.1	18.4	34.3	2.11	12.8
				830	113.2	39.2	32.0	2.00	5.73	850	58.3	27.9	19.4	35.1	2.13	13.1
	4.5	1.9	4.5	730	120.1	40.0	32.6	2.06	5.69	740	56.1	27.5	18.6	34.0	1.91	14.4
				830	115.7	41.4	34.2	2.01	6.04	850	58.0	28.3	19.7	34.9	1.92	14.7
	6.0	2.5	5.7	730	121.7	41.2	33.8	2.07	5.85	740	56.1	27.9	18.6	34.0	1.78	15.6
				830	117.1	42.8	35.5	2.02	6.21	850	58.0	28.7	19.7	34.9	1.80	15.9
100	3.0	1.5	3.4	Operation Not Recommended						740	57.4	25.6	17.7	33.8	2.43	10.5
										850	59.1	26.3	18.7	34.6	2.45	10.7
	4.5	1.8	4.3							740	57.1	26.0	17.9	33.4	2.19	11.8
										850	58.8	26.7	18.9	34.2	2.21	12.1
	6.0	2.4	5.4							740	57.0	26.3	17.9	33.3	2.05	12.8
										850	58.8	27.1	19.0	34.1	2.06	13.1
110	3.0	1.4	3.3							740	58.4	23.9	16.9	33.3	2.78	8.5
										850	60.1	24.6	17.8	34.1	2.80	8.7
	4.5	1.8	4.2							740	58.1	24.2	17.1	32.7	2.50	9.6
										850	59.8	25.0	18.1	33.5	2.52	9.9
	6.0	2.3	5.3							740	58.0	24.6	17.1	32.5	2.34	10.4
										850	59.8	25.3	18.1	33.3	2.36	10.7
120	3.0	1.4	3.2							740	59.3	22.0	16.1	32.7	3.16	6.9
										850	60.9	22.6	17.1	33.4	3.18	7.1
	4.5	1.8	4.1							740	59.1	22.3	16.3	32.0	2.85	7.8
										850	60.7	23.0	17.3	32.7	2.87	8.0
	6.0	2.3	5.2							740	59.0	22.6	16.4	31.7	2.67	8.4
										850	60.7	23.3	17.3	32.4	2.69	8.6

ENGINEERING SPECIFICATIONS:

Model VT042, 3.5 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	10.5	5.5	12.6	1190	94.5	31.5	23.2	2.49	3.71	Operation Not Recommended						
				1360	91.4	31.5	23.3	2.41	3.82							
30	5.3	1.3	3.0	1190	94.6	31.6	23.3	2.47	3.75							
				1360	91.5	31.5	23.5	2.39	3.86							
	7.9	3.1	7.2	1190	95.8	33.2	24.7	2.51	3.86							
				1360	92.5	33.1	24.9	2.44	3.97							
	10.5	5.2	12.0	1190	96.4	34.0	25.4	2.54	3.92							
				1360	93.1	33.9	25.6	2.46	4.03							
40	5.3	1.1	2.6	1190	97.8	35.8	27.1	2.57	4.07	1260	55.6	52.1	32.6	58.3	1.77	29.3
				1360	94.3	35.7	27.3	2.50	4.19	1440	57.7	53.3	34.2	59.7	1.83	29.0
	7.9	2.7	6.2	1190	99.2	37.6	28.8	2.62	4.20	Operation Not Recommended						
				1360	95.5	37.5	29.0	2.54	4.32							
	10.5	4.6	10.6	1190	100.0	38.5	29.6	2.65	4.26							
				1360	96.2	38.4	29.8	2.57	4.38							
50	5.3	1.0	2.4	1190	101.6	40.6	32.0	2.57	4.62	1260	55.8	51.1	32.4	58.1	2.01	25.4
				1360	97.6	40.6	32.2	2.50	4.75	1440	57.8	52.3	33.9	59.5	2.07	25.2
	7.9	2.4	5.6	1190	103.2	42.7	33.8	2.62	4.76	1260	55.8	51.6	32.5	58.1	1.88	27.4
				1360	99.0	42.6	34.0	2.54	4.90	1440	57.8	52.7	34.0	59.5	1.94	27.1
	10.5	4.2	9.7	1190	104.0	43.7	34.8	2.65	4.83	1260	55.6	51.8	32.8	58.1	1.80	28.7
				1360	99.7	43.6	35.0	2.57	4.97	1440	57.6	53.0	34.3	59.5	1.86	28.3
60	5.3	1.0	2.2	1190	105.9	46.1	36.6	2.83	4.77	1260	56.0	49.8	32.1	57.6	2.23	22.2
				1360	101.3	46.0	36.8	2.75	4.91	1440	58.0	50.9	33.6	58.9	2.31	22.0
	7.9	2.3	5.3	1190	107.6	48.4	38.7	2.88	4.92	1260	56.0	50.2	32.2	57.5	2.09	24.0
				1360	102.9	48.3	38.9	2.80	5.05	1440	58.0	51.4	33.7	58.9	2.16	23.7
	10.5	3.9	9.1	1190	108.6	49.6	39.8	2.91	4.99	1260	55.8	50.5	32.5	57.5	2.01	25.1
				1360	103.7	49.5	40.0	2.82	5.13	1440	57.8	51.6	34.0	58.8	2.08	24.8
70	5.3	0.9	2.1	1190	110.0	51.4	41.4	2.96	5.08	1260	56.4	48.2	31.6	56.8	2.49	19.3
				1360	104.9	51.3	41.6	2.88	5.22	1440	58.4	49.3	33.1	58.2	2.57	19.1
	7.9	2.1	4.9	1190	112.0	54.0	43.8	3.02	5.24	1260	56.3	48.7	31.7	56.7	2.33	20.8
				1360	106.7	53.9	44.0	2.93	5.38	1440	58.3	49.7	33.2	58.1	2.41	20.6
	10.5	3.7	8.5	1190	113.0	55.3	45.0	3.05	5.31	1260	56.2	48.9	32.0	56.6	2.24	21.8
				1360	107.6	55.2	45.2	2.96	5.46	1440	58.2	50.0	33.4	58.0	2.31	21.6
80	5.3	0.8	1.9	1190	113.6	56.0	45.6	3.09	5.31	1260	56.9	46.5	31.0	56.0	2.78	16.7
				1360	108.0	55.9	45.8	3.00	5.46	1440	58.8	47.5	32.5	57.4	2.87	16.5
	7.9	2.0	4.6	1190	115.7	58.8	48.2	3.15	5.47	1260	56.8	46.9	31.1	55.9	2.60	18.0
				1360	109.9	58.7	48.4	3.05	5.62	1440	58.8	47.9	32.5	57.2	2.69	17.8
	10.5	3.5	8.0	1190	116.8	60.2	49.5	3.18	5.55	1260	56.6	47.1	31.3	55.7	2.50	18.8
				1360	110.9	60.1	49.7	3.08	5.70	1440	58.6	48.1	32.8	57.1	2.58	18.6
90	5.3	0.8	1.8	1190	116.9	60.2	49.5	3.21	5.50	1260	57.4	44.6	30.3	55.3	3.11	14.3
				1360	110.9	60.1	49.7	3.12	5.65	1440	59.3	45.6	31.8	56.7	3.22	14.1
	7.9	1.9	4.4	1190	119.2	63.2	52.3	3.27	5.66	1260	57.3	45.0	30.4	55.0	2.91	15.4
				1360	113.0	63.1	52.5	3.17	5.83	1440	59.2	46.0	31.8	56.4	3.01	15.2
	10.5	3.3	7.5	1190	120.4	64.8	53.7	3.30	5.75	1260	57.1	45.2	30.6	54.8	2.80	16.1
				1360	114.0	64.7	53.9	3.21	5.91	1440	59.1	46.2	32.1	56.2	2.90	15.9
100	5.3	0.7	1.6	Operation Not Recommended						1260	57.8	42.7	29.7	54.6	3.49	12.2
										1440	59.7	43.6	31.1	56.0	3.61	12.0
	7.9	1.7	3.9							1260	57.8	43.0	29.7	54.3	3.27	13.1
										1440	59.7	44.0	31.1	55.6	3.38	13.0
	10.5	3.0	7.0							1260	57.6	43.2	30.0	54.0	3.14	13.7
										1440	59.5	44.2	31.4	55.4	3.25	13.6
110	5.3	0.7	1.6							1260	58.4	40.6	29.0	54.0	3.92	10.3
										1440	60.2	41.5	30.3	55.3	4.05	10.2
	7.9	1.7	3.8							1260	58.3	40.9	29.0	53.5	3.67	11.1
										1440	60.2	41.9	30.4	54.8	3.80	11.0
	10.5	2.9	6.8							1260	58.2	41.1	29.3	53.2	3.53	11.6
										1440	60.0	42.0	30.6	54.5	3.65	11.5
120	5.3	0.7	1.5							1260	59.2	38.1	27.9	53.1	4.41	8.6
										1440	61.0	38.9	29.2	54.5	4.56	8.5
	7.9	1.6	3.7							1260	59.2	38.4	27.9	52.5	4.13	9.3
										1440	60.9	39.3	29.2	53.8	4.27	9.2
	10.5	2.8	6.5							1260	59.0	38.6	28.1	52.1	3.97	9.7
										1440	60.8	39.5	29.4	53.4	4.10	9.6

Model VT042, 3.5 Ton, ECM Blower, Part Load Performance Data

EWT	Flow	WPD		Part Load Heating						Part Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	7.0	2.6	5.9	1020	89.9	22.0	15.6	1.89	3.41	Operation Not Recommended						
				1160	87.6	22.1	15.9	1.83	3.54							
30	3.5	0.4	0.8	1020	89.8	21.8	15.5	1.87	3.40							
				1160	87.5	21.9	15.8	1.82	3.53							
	5.3	1.3	3.1	1020	90.9	23.1	16.7	1.89	3.57							
				1160	88.5	23.2	17.0	1.83	3.71							
	7.0	2.5	5.7	1020	91.6	23.8	17.4	1.90	3.67							
				1160	89.1	24.0	17.8	1.84	3.81							
40	3.5	0.3	0.7	1020	92.9	25.2	18.8	1.91	3.87	1030	56.7	39.1	25.6	42.9	1.06	36.7
				1160	90.2	25.3	19.1	1.85	4.01	1180	58.6	40.0	26.9	43.8	1.08	37.0
	5.3	1.2	2.7	1020	94.2	26.7	20.2	1.92	4.06	Operation Not Recommended						
				1160	91.4	26.8	20.6	1.86	4.21							
	7.0	2.1	5.0	1020	95.0	27.6	21.1	1.94	4.17							
				1160	92.1	27.7	21.4	1.88	4.33							
50	3.5	0.3	0.7	1020	96.2	28.9	22.5	1.91	4.43	1030	56.8	38.3	25.5	42.7	1.26	30.3
				1160	93.2	29.1	22.8	1.85	4.60	1180	58.7	39.1	26.8	43.6	1.28	30.5
	5.3	1.1	2.4	1020	97.8	30.6	24.1	1.92	4.66	1030	56.7	38.9	25.6	42.9	1.13	34.2
				1160	94.6	30.8	24.5	1.86	4.83	1180	58.6	39.8	26.9	43.8	1.15	34.5
	7.0	2.0	4.5	1020	98.7	31.6	25.1	1.94	4.78	1030	56.4	39.3	25.8	43.1	1.07	36.7
				1160	95.4	31.8	25.5	1.88	4.96	1180	58.4	40.2	27.2	44.0	1.09	36.9
60	3.5	0.3	0.6	1020	99.8	32.8	26.1	1.99	4.84	1030	57.1	36.9	25.1	42.1	1.48	24.8
				1160	96.3	33.0	26.5	1.93	5.02	1180	59.0	37.7	26.4	43.0	1.51	25.0
	5.3	1.0	2.2	1020	101.5	34.7	28.0	2.00	5.08	1030	57.0	37.5	25.2	42.2	1.34	28.0
				1160	97.9	34.9	28.4	1.94	5.27	1180	58.9	38.4	26.5	43.1	1.36	28.2
	7.0	1.8	4.2	1020	102.6	35.9	29.1	2.02	5.22	1030	56.8	37.9	25.5	42.4	1.26	30.1
				1160	98.8	36.1	29.5	1.95	5.41	1180	58.7	38.8	26.8	43.3	1.28	30.3
70	3.5	0.3	0.6	1020	103.3	36.7	29.9	2.02	5.32	1030	57.6	35.4	24.6	41.5	1.74	20.4
				1160	99.4	36.9	30.3	1.96	5.52	1180	59.4	36.2	25.9	42.3	1.76	20.5
	5.3	0.9	2.1	1020	105.3	38.8	32.0	2.04	5.59	1030	57.4	36.0	24.7	41.5	1.56	23.0
				1160	101.2	39.1	32.4	1.97	5.80	1180	59.3	36.8	26.0	42.4	1.59	23.1
	7.0	1.7	3.9	1020	106.4	40.1	33.3	2.05	5.74	1030	57.2	36.4	25.0	41.6	1.48	24.6
				1160	102.2	40.4	33.7	1.99	5.95	1180	59.1	37.2	26.3	42.5	1.50	24.8
80	3.5	0.2	0.5	1020	106.6	40.3	33.5	2.04	5.78	1030	58.1	33.9	24.0	40.9	2.02	16.7
				1160	102.4	40.6	33.9	1.98	5.99	1180	59.8	34.7	25.3	41.7	2.05	16.8
	5.3	0.8	1.9	1020	108.8	42.7	35.8	2.06	6.07	1030	57.9	34.5	24.2	40.8	1.82	18.9
				1160	104.3	42.9	36.2	2.00	6.30	1180	59.7	35.2	25.4	41.6	1.85	19.0
	7.0	1.6	3.6	1020	110.1	44.1	37.2	2.07	6.23	1030	57.7	34.9	24.4	40.8	1.72	20.2
				1160	105.4	44.4	37.6	2.01	6.46	1180	59.5	35.6	25.7	41.7	1.75	20.4
90	3.5	0.2	0.5	1020	109.8	43.9	36.9	2.06	6.23	1030	58.6	32.3	23.4	40.3	2.34	13.7
				1160	105.2	44.1	37.4	2.00	6.46	1180	60.4	33.0	24.6	41.1	2.38	13.8
	5.3	0.8	1.8	1020	112.2	46.5	39.5	2.08	6.54	1030	58.5	32.8	23.5	40.1	2.11	15.5
				1160	107.3	46.7	39.9	2.02	6.79	1180	60.3	33.5	24.8	40.9	2.15	15.6
	7.0	1.4	3.3	1020	113.6	48.0	41.0	2.09	6.72	1030	58.3	33.2	23.8	40.0	1.99	16.6
				1160	108.5	48.3	41.4	2.03	6.97	1180	60.1	33.9	25.0	40.9	2.02	16.7
100	3.5	0.2	0.5	Operation Not Recommended						1030	59.3	30.4	22.7	39.6	2.70	11.2
										1180	61.0	31.0	23.8	40.4	2.74	11.3
	5.3	0.7	1.6							1030	59.2	30.9	22.8	39.2	2.44	12.6
										1180	60.9	31.6	24.0	40.0	2.47	12.7
	7.0	1.3	3.0							1030	59.0	31.2	23.0	39.1	2.30	13.5
										1180	60.7	31.9	24.2	39.9	2.33	13.6
110	3.5	0.2	0.4							1030	60.1	28.2	21.8	38.7	3.09	9.1
										1180	61.7	28.8	23.0	39.5	3.14	9.1
	5.3	0.7	1.5							1030	60.0	28.7	21.9	38.2	2.79	10.2
										1180	61.6	29.3	23.1	39.0	2.83	10.3
	7.0	1.2	2.8							1030	59.8	29.0	22.1	37.9	2.63	11.0
										1180	61.4	29.6	23.3	38.7	2.67	11.0
120	3.5	0.2	0.4							1030	60.9	25.8	21.0	37.8	3.51	7.3
										1180	62.4	26.4	22.0	38.5	3.57	7.3
	5.3	0.6	1.4							1030	60.8	26.3	21.1	37.0	3.17	8.2
										1180	62.3	26.8	22.2	37.8	3.22	8.3
	7.0	1.2	2.7							1030	60.6	26.5	21.3	36.7	2.99	8.8
										1180	62.2	27.1	22.4	37.5	3.03	8.9

ENGINEERING SPECIFICATIONS:

Model VT048, 4 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	12.0	7.4	17.0	1440	92.9	35.7	26.3	2.79	3.75	Operation Not Recommended						
				1640	90.2	35.7	26.5	2.74	3.82							
30	6.0	2.0	4.7	1440	92.7	35.3	26.0	2.76	3.74							
				1640	89.9	35.3	26.2	2.72	3.81							
	9.0	4.3	10.0	1440	93.8	36.9	27.5	2.80	3.85							
				1640	90.9	37.0	27.7	2.76	3.93							
	12.0	6.8	15.6	1440	94.5	38.1	28.6	2.84	3.93							
				1640	91.6	38.2	28.8	2.79	4.00							
40	6.0	1.7	4.0	1440	95.9	40.3	30.7	2.88	4.10	1510	58.1	55.3	35.2	62.5	2.05	26.9
				1640	92.8	40.4	30.9	2.83	4.18	1720	59.7	56.4	37.2	63.8	2.12	26.5
	9.0	3.8	8.7	1440	97.1	42.2	32.4	2.92	4.23	Operation Not Recommended						
				1640	93.9	42.3	32.6	2.87	4.31							
	12.0	6.2	14.4	1440	98.0	43.6	33.7	2.96	4.32							
				1640	94.7	43.7	33.9	2.91	4.40							
50	6.0	1.6	3.7	1440	99.6	46.0	36.3	2.88	4.68	1510	58.0	54.9	35.4	62.8	2.30	23.8
				1640	96.0	46.0	36.5	2.83	4.77	1720	59.6	55.9	37.4	64.2	2.38	23.5
	9.0	3.5	8.0	1440	100.9	48.1	38.3	2.92	4.83	1510	57.9	55.4	35.5	62.9	2.16	25.7
				1640	97.2	48.2	38.5	2.87	4.92	1720	59.5	56.5	37.5	64.3	2.23	25.2
	12.0	5.8	13.3	1440	102.0	49.7	39.8	2.96	4.92	1510	58.0	55.4	35.4	62.7	2.08	26.6
				1640	98.1	49.8	40.0	2.91	5.01	1720	59.6	56.5	37.4	64.0	2.15	26.2
60	6.0	1.5	3.4	1440	103.4	51.9	41.4	3.14	4.85	1510	58.3	53.1	34.8	61.9	2.54	20.9
				1640	99.4	52.0	41.6	3.08	4.94	1720	59.9	54.2	36.8	63.3	2.63	20.6
	9.0	3.2	7.5	1440	105.0	54.4	43.7	3.18	5.00	1510	58.2	53.7	34.9	61.9	2.38	22.5
				1640	100.7	54.4	43.9	3.13	5.09	1720	59.8	54.7	36.9	63.3	2.47	22.1
	12.0	5.3	12.3	1440	106.1	56.1	45.3	3.22	5.10	1510	58.3	53.7	34.9	61.7	2.30	23.3
				1640	101.7	56.2	45.6	3.17	5.19	1720	59.9	54.7	36.8	63.0	2.38	22.9
70	6.0	1.4	3.2	1440	107.2	57.8	46.8	3.28	5.15	1510	58.8	51.2	34.0	60.9	2.81	18.2
				1640	102.7	57.9	47.1	3.23	5.25	1720	60.3	52.2	36.0	62.2	2.91	17.9
	9.0	3.0	7.0	1440	108.9	60.5	49.3	3.33	5.32	1510	58.7	51.7	34.2	60.8	2.64	19.6
				1640	104.2	60.6	49.6	3.28	5.42	1720	60.3	52.7	36.1	62.2	2.73	19.3
	12.0	5.0	11.6	1440	110.2	62.5	51.2	3.38	5.42	1510	58.8	51.7	34.1	60.5	2.54	20.3
				1640	105.4	62.6	51.5	3.32	5.52	1720	60.3	52.7	36.0	61.8	2.64	20.0
80	6.0	1.3	3.0	1440	110.8	63.4	51.9	3.44	5.40	1510	59.3	49.4	33.3	60.1	3.12	15.8
				1640	105.9	63.5	52.2	3.38	5.50	1720	60.8	50.3	35.1	61.4	3.23	15.5
	9.0	2.9	6.6	1440	112.7	66.4	54.7	3.49	5.57	1510	59.2	49.9	33.4	60.0	2.93	16.9
				1640	107.6	66.5	55.0	3.43	5.67	1720	60.7	50.8	35.3	61.3	3.04	16.7
	12.0	4.7	10.9	1440	114.1	68.6	56.7	3.54	5.68	1510	59.3	49.9	33.3	59.6	2.83	17.6
				1640	108.8	68.7	57.0	3.48	5.78	1720	60.8	50.8	35.2	60.9	2.93	17.3
90	6.0	1.2	2.8	1440	114.2	68.8	56.7	3.60	5.60	1510	59.8	47.5	32.4	59.5	3.49	13.6
				1640	108.9	68.9	57.0	3.54	5.70	1720	61.3	48.4	34.3	60.8	3.62	13.3
	9.0	2.7	6.2	1440	116.3	72.0	59.8	3.65	5.77	1510	59.7	48.0	32.6	59.3	3.28	14.6
				1640	110.7	72.2	60.1	3.59	5.88	1720	61.2	48.9	34.4	60.6	3.40	14.4
	12.0	4.5	10.3	1440	117.8	74.4	62.0	3.70	5.89	1510	59.8	48.0	32.5	58.9	3.16	15.1
				1640	112.1	74.5	62.3	3.64	6.00	1720	61.3	48.9	34.3	60.2	3.28	14.9
100	6.0	1.1	2.5	Operation Not Recommended						1510	60.4	45.4	31.5	58.8	3.92	11.5
										1720	61.8	46.3	33.3	60.2	4.05	11.4
	9.0	2.5	5.7							1510	60.3	45.9	31.6	58.5	3.68	12.4
										1720	61.8	46.8	33.4	59.8	3.81	12.2
	12.0	4.1	9.5							1510	60.4	45.9	31.5	58.0	3.55	12.9
										1720	61.8	46.8	33.3	59.3	3.67	12.7
110	6.0	1.0	2.4							1510	61.1	42.9	30.4	57.9	4.40	9.7
										1720	62.5	43.7	32.1	59.3	4.55	9.6
	9.0	2.4	5.4							1510	61.0	43.3	30.5	57.4	4.13	10.4
										1720	62.4	44.2	32.2	58.8	4.27	10.3
	12.0	3.9	9.1							1510	61.1	43.3	30.4	57.0	3.98	10.8
										1720	62.5	44.2	32.1	58.3	4.13	10.7
120	6.0	1.0	2.3							1510	61.9	40.3	29.1	57.1	4.94	8.1
										1720	63.2	41.0	30.7	58.4	5.12	8.0
	9.0	2.3	5.2							1510	61.8	40.7	29.2	56.5	4.64	8.7
										1720	63.1	41.4	30.9	57.8	4.80	8.6
	12.0	3.8	8.8							1510	61.9	40.7	29.1	55.9	4.48	9.0
										1720	63.2	41.4	30.8	57.2	4.64	8.9

Model VT048, 4 Ton, ECM Blower, Part Load Performance Data

EWT	Flow	WPD		Part Load Heating						Part Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	8.0	3.7	8.5	1190	88.2	23.4	16.6	2.02	3.38	Operation Not Recommended						
				1360	86.1	23.7	17.0	1.99	3.49							
30	4.0	0.9	2.0	1190	88.1	23.3	16.5	2.01	3.39							
				1360	86.1	23.6	16.9	1.97	3.50							
	6.0	2.0	4.7	1190	89.1	24.5	17.7	2.02	3.56							
				1360	86.9	24.8	18.2	1.98	3.67							
	8.0	3.5	8.0	1190	89.7	25.3	18.5	2.03	3.64							
				1360	87.4	25.6	18.9	1.99	3.76							
40	4.0	0.7	1.7	1190	91.3	27.4	20.5	2.05	3.92	1210	58.8	40.5	27.3	44.5	1.12	36.1
				1360	88.9	27.7	21.0	2.01	4.04	1380	60.3	41.1	28.9	45.2	1.15	35.5
	6.0	1.8	4.1	1190	92.4	28.8	21.9	2.05	4.11	Operation Not Recommended						
				1360	89.9	29.2	22.4	2.02	4.24							
	8.0	3.1	7.1	1190	93.1	29.7	22.8	2.07	4.21							
				1360	90.5	30.1	23.3	2.03	4.34							
50	4.0	0.7	1.6	1190	94.6	31.6	24.7	2.05	4.52	1210	58.7	39.8	27.4	44.5	1.33	29.9
				1360	91.8	32.0	25.2	2.01	4.66	1380	60.2	40.4	29.0	45.2	1.37	29.5
	6.0	1.6	3.8	1190	95.8	33.2	26.3	2.05	4.74	1210	58.6	40.6	27.6	44.8	1.21	33.6
				1360	92.9	33.6	26.9	2.02	4.89	1380	60.1	41.2	29.2	45.6	1.24	33.1
	8.0	2.8	6.6	1190	96.7	34.3	27.3	2.07	4.86	1210	58.6	40.9	27.5	45.0	1.15	35.5
				1360	93.6	34.7	27.9	2.03	5.01	1380	60.1	41.5	29.1	45.7	1.19	35.0
60	4.0	0.6	1.4	1190	97.8	35.7	28.6	2.10	4.97	1210	59.2	38.3	26.8	43.8	1.56	24.4
				1360	94.6	36.1	29.2	2.06	5.13	1380	60.7	38.9	28.4	44.5	1.61	24.1
	6.0	1.5	3.5	1190	99.2	37.6	30.5	2.11	5.22	1210	59.1	39.0	27.0	44.0	1.42	27.4
				1360	95.9	38.0	31.1	2.07	5.38	1380	60.6	39.6	28.5	44.7	1.46	27.0
	8.0	2.6	6.0	1190	100.2	38.8	31.6	2.12	5.35	1210	59.1	39.3	26.9	44.1	1.36	29.0
				1360	96.7	39.3	32.2	2.08	5.51	1380	60.6	39.9	28.5	44.8	1.40	28.5
70	4.0	0.6	1.3	1190	101.1	40.0	32.8	2.13	5.50	1210	59.7	36.6	26.1	42.9	1.83	19.9
				1360	97.6	40.5	33.4	2.09	5.68	1380	61.2	37.1	27.6	43.6	1.89	19.6
	6.0	1.4	3.2	1190	102.7	42.1	34.9	2.13	5.77	1210	59.6	37.3	26.2	43.1	1.67	22.3
				1360	99.0	42.6	35.5	2.09	5.95	1380	61.1	37.8	27.8	43.8	1.72	22.0
	8.0	2.4	5.5	1190	103.8	43.4	36.2	2.15	5.92	1210	59.6	37.6	26.2	43.1	1.59	23.6
				1360	99.9	43.9	36.8	2.11	6.10	1380	61.1	38.1	27.7	43.8	1.64	23.2
80	4.0	0.5	1.2	1190	104.6	44.5	37.2	2.16	6.03	1210	60.2	34.8	25.4	42.2	2.14	16.3
				1360	100.7	45.1	37.9	2.12	6.22	1380	61.7	35.3	26.9	42.9	2.20	16.0
	6.0	1.3	3.0	1190	106.4	46.8	39.5	2.17	6.32	1210	60.1	35.5	25.6	42.2	1.94	18.2
				1360	102.3	47.4	40.3	2.13	6.52	1380	61.5	36.0	27.1	42.9	2.00	18.0
	8.0	2.2	5.1	1190	107.6	48.3	41.0	2.18	6.48	1210	60.1	35.8	25.6	42.2	1.85	19.3
				1360	103.3	48.9	41.7	2.14	6.68	1380	61.6	36.3	27.1	42.9	1.91	19.0
90	4.0	0.5	1.1	1190	108.2	49.1	41.7	2.20	6.53	1210	60.7	32.9	24.8	41.4	2.47	13.3
				1360	103.8	49.7	42.4	2.16	6.74	1380	62.1	33.4	26.3	42.1	2.54	13.1
	6.0	1.2	2.7	1190	110.2	51.7	44.2	2.21	6.85	1210	60.6	33.6	24.9	41.3	2.25	14.9
				1360	105.6	52.3	45.0	2.17	7.07	1380	62.0	34.1	26.4	42.0	2.31	14.7
	8.0	2.1	4.8	1190	111.5	53.3	45.8	2.22	7.02	1210	60.6	33.8	24.9	41.2	2.14	15.7
				1360	106.7	54.0	46.6	2.18	7.24	1380	62.0	34.3	26.4	41.9	2.20	15.5
100	4.0	0.4	1.0	Operation Not Recommended						1210	61.4	30.7	24.0	40.4	2.83	10.8
										1380	62.7	31.2	25.4	41.1	2.92	10.6
	6.0	1.1	2.4							1210	61.3	31.3	24.1	40.1	2.58	12.1
										1380	62.6	31.7	25.5	40.8	2.65	11.9
	8.0	1.9	4.4							1210	61.3	31.5	24.1	40.0	2.46	12.8
										1380	62.6	32.0	25.5	40.7	2.53	12.6
110	4.0	0.4	0.9							1210	62.2	28.0	22.9	39.0	3.23	8.6
										1380	63.5	28.4	24.3	39.7	3.33	8.5
	6.0	1.0	2.3							1210	62.1	28.5	23.1	38.5	2.94	9.7
										1380	63.4	28.9	24.4	39.2	3.02	9.5
	8.0	1.8	4.1							1210	62.1	28.7	23.0	38.3	2.80	10.2
										1380	63.4	29.2	24.4	39.0	2.88	10.1
120	4.0	0.4	0.9							1210	63.0	24.9	21.9	37.4	3.67	6.7
										1380	64.2	25.3	23.2	38.1	3.77	6.6
	6.0	0.9	2.2							1210	62.9	25.4	22.0	36.7	3.33	7.6
										1380	64.1	25.7	23.3	37.4	3.43	7.5
	8.0	1.7	3.9							1210	62.9	25.6	22.0	36.4	3.18	8.0
										1380	64.1	26.0	23.3	37.1	3.27	7.9

ENGINEERING SPECIFICATIONS:

Model VT060, 5 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	15.0	9.9	22.8	1660	95.5	46.1	33.1	3.75	3.59	Operation Not Recommended						
				1900	92.4	46.4	33.6	3.72	3.65							
30	7.5	2.8	6.5	1660	95.4	46.0	33.1	3.74	3.60							
				1900	92.3	46.3	33.5	3.71	3.66							
	11.3	5.9	13.5	1660	96.6	48.1	35.0	3.80	3.70							
				1900	93.4	48.4	35.4	3.77	3.77							
	15.0	9.1	20.9	1660	97.1	49.0	35.8	3.82	3.75							
				1900	93.8	49.3	36.3	3.79	3.81							
40	7.5	2.4	5.5	1660	99.0	52.5	39.0	3.90	3.94	1670	56.3	66.7	42.5	75.9	2.67	24.9
				1900	95.5	52.9	39.5	3.87	4.00	1910	58.6	67.3	43.8	77.1	2.82	23.8
	11.3	5.1	11.8	1660	100.3	54.9	41.2	3.97	4.05	Operation Not Recommended						
				1900	96.7	55.3	41.7	3.93	4.12							
	15.0	8.4	19.3	1660	100.9	56.0	42.1	3.99	4.11							
				1900	97.2	56.3	42.6	3.95	4.18							
50	7.5	2.2	5.1	1660	102.7	59.2	45.7	3.90	4.44	1670	55.4	68.1	44.2	78.3	2.98	22.8
				1900	98.8	59.6	46.2	3.87	4.52	1910	57.8	68.8	45.6	79.6	3.15	21.8
	11.3	4.8	11.0	1660	104.2	62.0	48.2	3.97	4.58	1670	55.3	68.8	44.4	78.5	2.81	24.5
				1900	100.1	62.4	48.7	3.93	4.65	1910	57.7	69.5	45.8	79.7	2.96	23.4
	15.0	7.8	18.0	1660	104.9	63.2	49.3	3.99	4.64	1670	55.3	69.2	44.4	78.5	2.71	25.4
				1900	100.7	63.6	49.8	3.95	4.71	1910	57.7	69.8	45.8	79.7	2.86	24.3
60	7.5	2.1	4.8	1660	106.4	65.9	51.2	4.24	4.55	1670	55.6	66.7	43.8	78.0	3.29	20.2
				1900	102.0	66.4	51.8	4.20	4.63	1910	58.0	67.4	45.2	79.3	3.47	19.3
	11.3	4.5	10.3	1660	108.1	69.0	54.0	4.31	4.69	1670	55.5	67.4	44.0	78.1	3.10	21.7
				1900	103.5	69.5	54.6	4.27	4.77	1910	57.9	68.1	45.4	79.3	3.27	20.8
	15.0	7.3	16.8	1660	108.8	70.3	55.2	4.33	4.75	1670	55.5	67.8	44.0	78.1	2.99	22.6
				1900	104.1	70.8	55.8	4.29	4.83	1910	57.9	68.4	45.4	79.3	3.16	21.6
70	7.5	2.0	4.5	1660	110.3	73.0	57.5	4.44	4.81	1670	56.1	64.5	42.9	76.9	3.63	17.7
				1900	105.4	73.4	58.1	4.40	4.89	1910	58.4	65.2	44.3	78.3	3.83	17.0
	11.3	4.2	9.7	1660	112.2	76.3	60.6	4.51	4.96	1670	56.0	65.2	43.1	76.9	3.41	19.1
				1900	107.1	76.9	61.2	4.47	5.04	1910	58.3	65.9	44.5	78.2	3.61	18.2
	15.0	6.9	15.8	1660	112.9	77.8	61.9	4.54	5.02	1670	56.0	65.5	43.1	76.9	3.30	19.8
				1900	107.8	78.3	62.6	4.49	5.10	1910	58.3	66.2	44.4	78.1	3.49	18.9
80	7.5	1.8	4.3	1660	114.5	80.6	64.2	4.68	5.04	1670	56.6	62.3	42.0	76.0	4.02	15.5
				1900	109.1	81.1	64.9	4.63	5.13	1910	58.9	62.9	43.3	77.3	4.24	14.8
	11.3	4.0	9.2	1660	116.6	84.3	67.7	4.75	5.19	1670	56.5	63.0	42.2	75.9	3.78	16.6
				1900	111.0	84.9	68.4	4.71	5.28	1910	58.8	63.6	43.5	77.2	3.99	15.9
	15.0	6.5	15.0	1660	117.4	85.9	69.1	4.78	5.26	1670	56.5	63.3	42.2	75.7	3.65	17.3
				1900	111.7	86.5	69.9	4.73	5.35	1910	58.8	63.9	43.5	77.1	3.86	16.5
90	7.5	1.7	4.0	1660	118.8	88.3	71.0	4.93	5.24	1670	57.1	60.0	41.2	75.1	4.46	13.4
				1900	112.9	88.9	71.7	4.89	5.33	1910	59.3	60.6	42.4	76.6	4.71	12.8
	11.3	3.8	8.7	1660	121.0	92.4	74.8	5.01	5.40	1670	57.0	60.6	41.3	74.9	4.20	14.4
				1900	114.9	93.0	75.6	4.96	5.49	1910	59.2	61.3	42.6	76.3	4.43	13.8
	15.0	6.2	14.2	1660	122.0	94.1	76.4	5.04	5.47	1670	57.0	60.9	41.3	74.8	4.06	15.0
				1900	115.7	94.8	77.2	4.99	5.56	1910	59.2	61.5	42.6	76.1	4.28	14.3
100	7.5	1.5	3.6	Operation Not Recommended						1670	57.7	57.4	40.1	74.2	4.97	11.5
										1910	59.9	57.9	41.3	75.7	5.25	11.0
	11.3	3.5	8.0							1670	57.6	58.0	40.3	73.8	4.67	12.4
										1910	59.8	58.6	41.5	75.3	4.94	11.8
	15.0	5.7	13.2							1670	57.6	58.3	40.3	73.6	4.52	12.8
										1910	59.8	58.8	41.5	75.0	4.77	12.3
110	7.5	1.5	3.4							1670	58.5	54.2	38.7	72.9	5.56	9.7
										1910	60.6	54.7	39.9	74.5	5.87	9.3
	11.3	3.3	7.7							1670	58.4	54.8	38.8	72.4	5.23	10.4
										1910	60.5	55.3	40.1	74.0	5.52	10.0
	15.0	5.5	12.7							1670	58.4	55.0	38.8	72.1	5.06	10.8
										1910	60.5	55.6	40.0	73.6	5.34	10.4
120	7.5	1.4	3.3							1670	59.3	50.7	37.1	71.8	6.26	8.0
										1910	61.3	51.2	38.3	73.4	6.61	7.7
	11.3	3.2	7.4							1670	59.2	51.2	37.3	71.1	5.89	8.6
										1910	61.3	51.7	38.5	72.7	6.22	8.3
	15.0	5.3	12.3							1670	59.2	51.5	37.3	70.7	5.70	9.0
										1910	61.3	52.0	38.5	72.3	6.01	8.6

Model VT060, 5 Ton, ECM Blower, Part Load Performance Data

EWT	Flow	WPD		Part Load Heating						Part Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	10.0	4.9	11.3	1430	90.0	30.6	21.9	2.69	3.32	Operation Not Recommended						
				1630	87.7	30.8	22.3	2.65	3.40							
30	5.0	1.2	2.7	1430	89.9	30.5	21.8	2.69	3.31							
				1630	87.6	30.7	22.2	2.66	3.38							
	7.5	2.8	6.4	1430	91.0	32.1	23.4	2.71	3.47							
				1630	88.6	32.3	23.8	2.67	3.54							
	10.0	4.7	10.8	1430	91.6	33.1	24.4	2.71	3.57							
				1630	89.1	33.3	24.8	2.68	3.65							
40	5.0	1.0	2.3	1430	92.8	34.9	26.1	2.74	3.72	1390	57.2	51.3	34.1	56.7	1.57	32.6
				1630	90.2	35.2	26.5	2.70	3.81	1590	59.4	50.5	35.2	56.1	1.61	31.3
	7.5	2.4	5.6	1430	94.0	36.8	28.0	2.76	3.90	Operation Not Recommended						
				1630	91.3	37.0	28.4	2.72	3.99							
	10.0	4.1	9.5	1430	94.8	37.9	29.1	2.76	4.01							
				1630	91.9	38.2	29.5	2.73	4.10							
50	5.0	0.9	2.2	1430	96.1	39.9	31.2	2.74	4.26	1390	56.7	51.1	34.8	57.4	1.82	28.0
				1630	93.1	40.2	31.6	2.70	4.36	1590	59.0	50.3	35.9	56.8	1.87	26.8
	7.5	2.2	5.2	1430	97.5	42.1	33.3	2.76	4.47	1390	56.5	52.4	35.1	58.2	1.67	31.3
				1630	94.3	42.4	33.8	2.72	4.56	1590	58.8	51.6	36.2	57.6	1.72	30.0
	10.0	3.8	8.8	1430	98.4	43.4	34.6	2.76	4.59	1390	56.5	53.0	35.2	58.5	1.59	33.3
				1630	95.1	43.7	35.1	2.73	4.70	1590	58.8	52.2	36.3	57.9	1.63	32.0
60	5.0	0.9	2.0	1430	99.8	45.6	36.5	2.85	4.68	1390	57.1	49.3	34.1	56.6	2.11	23.3
				1630	96.4	45.9	37.0	2.81	4.78	1590	59.4	48.6	35.2	56.1	2.17	22.4
	7.5	2.1	4.8	1430	101.4	48.0	39.0	2.87	4.90	1390	56.9	50.6	34.5	57.4	1.94	26.1
				1630	97.8	48.4	39.5	2.83	5.01	1590	59.2	49.9	35.6	56.8	1.99	25.0
	10.0	3.5	8.2	1430	102.4	49.5	40.4	2.87	5.05	1390	56.9	51.2	34.5	57.6	1.84	27.8
				1630	98.6	49.9	41.0	2.83	5.16	1590	59.1	50.4	35.6	57.0	1.89	26.7
70	5.0	0.8	1.9	1430	103.5	51.3	42.1	2.90	5.18	1390	57.8	47.2	33.2	55.6	2.45	19.2
				1630	99.6	51.7	42.7	2.86	5.29	1590	59.9	46.5	34.3	55.1	2.51	18.5
	7.5	1.9	4.5	1430	105.3	54.0	44.8	2.91	5.43	1390	57.5	48.4	33.5	56.1	2.24	21.5
				1630	101.2	54.4	45.4	2.87	5.54	1590	59.7	47.7	34.6	55.6	2.30	20.7
	10.0	3.3	7.6	1430	106.4	55.7	46.5	2.92	5.58	1390	57.5	49.0	33.6	56.3	2.13	23.0
				1630	102.2	56.1	47.1	2.88	5.70	1590	59.7	48.2	34.7	55.7	2.18	22.0
80	5.0	0.8	1.7	1430	107.0	56.5	47.3	2.94	5.64	1390	58.3	45.0	32.4	54.6	2.82	15.9
				1630	102.7	56.9	47.9	2.89	5.76	1590	60.4	44.3	33.4	54.2	2.90	15.3
	7.5	1.8	4.2	1430	108.9	59.5	50.3	2.95	5.91	1390	58.1	46.2	32.7	55.1	2.59	17.8
				1630	104.4	60.0	50.9	2.91	6.03	1590	60.2	45.5	33.8	54.6	2.66	17.1
	10.0	3.1	7.1	1430	110.1	61.4	52.1	2.96	6.08	1390	58.0	46.7	32.8	55.1	2.46	19.0
				1630	105.5	61.8	52.8	2.92	6.21	1590	60.2	46.0	33.8	54.6	2.52	18.2
90	5.0	0.7	1.6	1430	110.3	61.6	52.3	2.97	6.08	1390	58.8	42.9	31.7	53.9	3.24	13.2
				1630	105.6	62.0	52.9	2.93	6.21	1590	60.9	42.2	32.7	53.5	3.33	12.6
	7.5	1.7	3.9	1430	112.4	64.9	55.6	2.98	6.37	1390	58.6	44.0	32.0	54.1	2.97	14.8
				1630	107.5	65.4	56.2	2.94	6.51	1590	60.7	43.4	33.0	53.7	3.05	14.2
	10.0	2.9	6.6	1430	113.7	66.9	57.6	2.99	6.55	1390	58.6	44.5	32.0	54.1	2.82	15.7
				1630	108.7	67.4	58.2	2.95	6.69	1590	60.7	43.8	33.0	53.7	2.90	15.1
100	5.0	0.6	1.4	Operation Not Recommended						1390	59.4	40.6	30.8	53.1	3.71	10.9
										1590	61.4	40.0	31.8	52.8	3.81	10.5
	7.5	1.5	3.5							1390	59.2	41.7	31.1	53.2	3.40	12.2
										1590	61.2	41.0	32.1	52.8	3.49	11.7
	10.0	2.6	6.0							1390	59.2	42.1	31.1	53.1	3.23	13.0
										1590	61.2	41.5	32.1	52.7	3.31	12.5
110	5.0	0.6	1.3							1390	60.2	37.8	29.6	52.1	4.22	8.9
										1590	62.1	37.3	30.6	51.9	4.33	8.6
	7.5	1.4	3.3							1390	60.0	38.8	29.9	51.9	3.87	10.0
										1590	61.9	38.2	30.9	51.7	3.97	9.6
	10.0	2.5	5.7							1390	59.9	39.3	30.0	51.7	3.67	10.6
										1590	61.9	38.7	30.9	51.4	3.77	10.2
120	5.0	0.6	1.3							1390	60.9	34.5	28.5	50.6	4.77	7.2
										1590	62.8	34.0	29.4	50.5	4.90	6.9
	7.5	1.4	3.1							1390	60.7	35.4	28.8	50.2	4.38	8.0
										1590	62.6	34.9	29.7	50.0	4.49	7.7
	10.0	2.3	5.4							1390	60.7	35.8	28.8	49.8	4.16	8.6
										1590	62.6	35.3	29.7	49.7	4.26	8.2

ENGINEERING SPECIFICATIONS:

Model VT072, 6 Ton, ECM Blower, Full Load Performance Data

EWT	Flow	WPD		Full Load Heating						Full Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	18.0	12.9	29.7	1950	93.5	49.1	35.1	4.30	3.35	Operation Not Recommended						
				2230	91.6	51.7	37.5	4.39	3.45							
30	9.0	3.7	8.6	1950	92.9	48.1	34.2	4.26	3.30							
				2230	91.1	50.6	36.4	4.35	3.40							
	13.5	7.6	17.5	1950	93.9	50.1	36.1	4.33	3.39							
				2230	92.0	52.8	38.4	4.41	3.50							
	18.0	11.9	27.5	1950	95.1	52.6	38.2	4.40	3.50							
				2230	93.1	55.3	40.7	4.49	3.61							
40	9.0	3.1	7.2	1950	96.0	54.5	40.1	4.43	3.60	1950	58.0	74.1	46.1	85.6	3.34	22.1
				2230	94.0	57.4	42.7	4.52	3.72	2230	59.6	76.0	48.8	88.1	3.53	21.4
	13.5	6.6	15.3	1950	97.2	56.9	42.3	4.49	3.71	Operation Not Recommended						
				2230	95.0	59.9	45.0	4.59	3.82							
	18.0	11.0	25.3	1950	98.5	59.6	44.8	4.57	3.82							
				2230	96.2	62.8	47.7	4.66	3.94							
50	9.0	2.9	6.7	1950	99.4	61.6	47.2	4.43	4.07	1950	56.9	76.0	48.4	88.6	3.69	20.6
				2230	97.1	64.8	50.2	4.52	4.20	2230	58.6	77.9	51.3	91.2	3.90	19.9
	13.5	6.2	14.2	1950	100.7	64.3	49.7	4.49	4.19	1950	56.8	76.8	48.6	88.8	3.49	22.0
				2230	98.2	67.7	52.8	4.59	4.32	2230	58.5	78.7	51.5	91.4	3.69	21.3
	18.0	10.2	23.5	1950	102.2	67.4	52.6	4.57	4.32	1950	56.8	76.8	48.7	88.4	3.38	22.7
				2230	99.6	70.9	55.8	4.66	4.45	2230	58.5	78.8	51.6	91.0	3.58	22.0
60	9.0	2.7	6.3	1950	102.9	69.0	53.3	4.86	4.16	1950	56.8	75.0	48.7	88.7	4.02	18.6
				2230	100.3	72.7	56.6	4.96	4.29	2230	58.5	76.9	51.6	91.4	4.26	18.0
	13.5	5.7	13.3	1950	104.4	72.0	56.1	4.93	4.28	1950	56.7	75.8	48.9	88.8	3.81	19.8
				2230	101.6	75.8	59.5	5.03	4.41	2230	58.4	77.7	51.8	91.4	4.03	19.2
	18.0	9.5	22.0	1950	106.0	75.5	59.3	5.01	4.41	1950	56.6	75.8	49.0	88.4	3.69	20.5
				2230	103.2	79.5	62.9	5.12	4.55	2230	58.3	77.7	51.9	91.0	3.91	19.8
70	9.0	2.6	5.9	1950	106.4	76.3	59.8	5.10	4.38	1950	57.1	72.7	48.0	87.5	4.38	16.5
				2230	103.5	80.4	63.5	5.21	4.52	2230	58.8	74.5	50.8	90.2	4.63	16.0
	13.5	5.4	12.5	1950	108.0	79.7	62.9	5.18	4.50	1950	57.0	73.4	48.2	87.5	4.15	17.7
				2230	105.0	83.8	66.8	5.29	4.64	2230	58.7	75.3	51.1	90.2	4.39	17.1
	18.0	9.0	20.7	1950	109.8	83.5	66.5	5.27	4.64	1950	57.0	73.4	48.2	87.1	4.02	18.2
				2230	106.7	87.9	70.5	5.37	4.79	2230	58.7	75.3	51.1	89.7	4.25	17.7
80	9.0	2.4	5.6	1950	109.7	83.1	65.9	5.33	4.57	1950	57.6	69.9	46.9	86.2	4.79	14.6
				2230	106.5	87.5	69.9	5.44	4.71	2230	59.3	71.7	49.7	88.8	5.07	14.1
	13.5	5.2	11.9	1950	111.4	86.8	69.3	5.41	4.69	1950	57.5	70.7	47.1	86.1	4.54	15.5
				2230	108.1	91.3	73.5	5.52	4.84	2230	59.2	72.5	49.9	88.7	4.80	15.1
	18.0	8.5	19.7	1950	113.4	90.9	73.2	5.50	4.84	1950	57.5	70.7	47.2	85.6	4.40	16.0
				2230	109.9	95.7	77.6	5.61	4.99	2230	59.1	72.5	50.0	88.2	4.65	15.5
90	9.0	2.3	5.4	1950	112.8	89.7	71.7	5.55	4.73	1950	58.2	67.2	45.8	85.1	5.28	12.7
				2230	109.4	94.4	76.1	5.67	4.88	2230	59.7	68.9	48.5	87.7	5.59	12.3
	13.5	4.9	11.4	1950	114.6	93.5	75.3	5.64	4.86	1950	58.1	67.9	46.0	84.8	5.00	13.5
				2230	111.1	98.5	79.9	5.75	5.01	2230	59.7	69.6	48.8	87.5	5.29	13.1
	18.0	8.2	18.8	1950	116.8	98.0	79.6	5.73	5.01	1950	58.0	67.9	46.1	84.3	4.85	14.0
				2230	113.1	103.2	84.4	5.85	5.17	2230	59.6	69.6	48.8	87.0	5.13	13.5
100	9.0	2.1	4.7	Operation Not Recommended						1950	58.7	64.4	44.6	84.2	5.87	10.9
										2230	60.3	66.0	47.3	86.9	6.21	10.6
	13.5	4.5	10.4							1950	58.6	65.1	44.8	83.8	5.56	11.7
										2230	60.2	66.7	47.5	86.5	5.88	11.3
	18.0	7.6	17.5							1950	58.6	65.1	44.9	83.3	5.39	12.0
										2230	60.1	66.7	47.6	86.0	5.70	11.7
110	9.0	2.0	4.6							1950	59.4	61.2	43.2	83.3	6.57	9.3
										2230	60.9	62.7	45.8	86.1	6.94	9.0
	13.5	4.3	10.0							1950	59.3	61.9	43.4	82.8	6.22	9.9
										2230	60.8	63.4	46.0	85.5	6.58	9.6
	18.0	7.3	16.9							1950	59.3	61.9	43.5	82.1	6.03	10.2
										2230	60.8	63.4	46.1	84.8	6.37	9.9
120	9.0	1.9	4.4							1950	60.5	57.1	40.9	81.7	7.34	7.7
										2230	61.9	58.5	43.4	84.5	7.76	7.5
	13.5	4.2	9.7							1950	60.4	57.7	41.1	81.0	6.95	8.2
										2230	61.8	59.1	43.6	83.8	7.35	8.0
	18.0	7.1	16.4							1950	60.3	57.7	41.2	80.3	6.74	8.5
										2230	61.8	59.1	43.7	83.0	7.13	8.2

Model VT072, 6 Ton, ECM Blower, Part Load Performance Data

EWT	Flow	WPD		Part Load Heating						Part Load Cooling						
		PSI	FT	Aiflow	LAT (DB)	HC	HE	Power	COP	Aiflow	LAT (DB)	TC	SC	HR	Power	EER
°F	GPM			CFM	°F	MBtuh	MBtuh	kW	W/W	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W
25	12.0	6.4	14.8	1650	89.8	35.4	24.5	3.25	3.19	Operation Not Recommended						
				1890	87.5	36.0	25.0	3.26	3.23							
30	6.0	1.6	3.6	1650	89.9	35.6	24.6	3.24	3.21							
				1890	87.6	36.1	25.1	3.25	3.25							
	9.0	3.6	8.3	1650	90.9	37.4	26.4	3.27	3.34							
				1890	88.5	37.9	26.9	3.28	3.39							
	12.0	6.1	14.1	1650	91.4	38.4	27.3	3.29	3.41							
				1890	89.0	39.0	27.9	3.30	3.46							
40	6.0	1.3	3.0	1650	93.1	41.4	30.2	3.33	3.65	1600	57.7	59.1	38.3	66.4	2.12	27.8
				1890	90.5	42.1	30.8	3.33	3.69	1830	59.4	60.2	40.6	67.9	2.21	27.2
	9.0	3.2	7.3	1650	94.3	43.6	32.2	3.36	3.80	Operation Not Recommended						
				1890	91.6	44.2	32.9	3.36	3.85							
	12.0	5.4	12.5	1650	95.0	44.8	33.4	3.38	3.88							
				1890	92.2	45.4	34.0	3.38	3.93							
50	6.0	1.2	2.8	1650	96.6	47.7	36.4	3.33	4.20	1600	57.2	59.0	39.2	67.2	2.40	24.5
				1890	93.6	48.4	37.1	3.33	4.25	1830	58.8	60.2	41.6	68.8	2.51	23.9
	9.0	2.9	6.7	1650	98.0	50.2	38.8	3.36	4.38	1600	57.0	59.8	39.5	67.4	2.21	27.0
				1890	94.8	50.9	39.5	3.36	4.43	1830	58.7	61.0	41.9	69.0	2.31	26.3
	12.0	5.0	11.5	1650	98.8	51.5	40.1	3.38	4.47	1600	57.0	60.2	39.6	67.5	2.12	28.4
				1890	95.5	52.3	40.8	3.38	4.52	1830	58.6	61.4	42.0	69.1	2.21	27.7
60	6.0	1.1	2.6	1650	100.2	54.1	42.2	3.51	4.52	1600	57.5	57.0	38.7	66.3	2.73	20.9
				1890	96.8	54.9	43.0	3.51	4.58	1830	59.1	58.1	41.1	67.9	2.85	20.4
	9.0	2.7	6.3	1650	101.8	56.9	44.9	3.54	4.71	1600	57.3	57.8	39.0	66.4	2.51	22.9
				1890	98.1	57.7	45.7	3.54	4.77	1830	59.0	58.9	41.4	67.9	2.63	22.4
	12.0	4.6	10.7	1650	102.6	58.4	46.3	3.56	4.80	1600	57.3	58.2	39.1	66.4	2.40	24.2
				1890	98.9	59.3	47.2	3.57	4.87	1830	58.9	59.3	41.5	67.9	2.51	23.6
70	6.0	1.0	2.4	1650	103.7	60.3	48.1	3.59	4.92	1600	58.0	54.6	37.9	65.2	3.10	17.5
				1890	99.9	61.2	49.0	3.60	4.99	1830	59.6	55.7	40.2	66.7	3.24	17.1
	9.0	2.5	5.8	1650	105.4	63.4	51.1	3.62	5.13	1600	57.8	55.4	38.1	65.1	2.86	19.3
				1890	101.4	64.4	52.0	3.63	5.20	1830	59.4	56.5	40.4	66.7	2.99	18.8
	12.0	4.3	10.0	1650	106.4	65.2	52.8	3.65	5.24	1600	57.8	55.7	38.3	65.1	2.73	20.3
				1890	102.3	66.2	53.7	3.65	5.30	1830	59.4	56.9	40.6	66.6	2.86	19.8
80	6.0	1.0	2.3	1650	107.0	66.3	53.8	3.66	5.30	1600	58.5	52.3	37.0	64.2	3.54	14.7
				1890	102.8	67.3	54.8	3.67	5.37	1830	60.0	53.3	39.3	65.8	3.70	14.4
	9.0	2.4	5.5	1650	108.9	69.7	57.1	3.69	5.52	1600	58.3	53.0	37.3	64.0	3.26	16.2
				1890	104.5	70.7	58.1	3.70	5.60	1830	59.9	54.1	39.5	65.6	3.41	15.8
	12.0	4.1	9.4	1650	110.0	71.6	58.9	3.72	5.64	1600	58.2	53.3	37.4	63.9	3.11	17.1
				1890	105.4	72.7	60.0	3.73	5.71	1830	59.8	54.4	39.7	65.5	3.26	16.7
90	6.0	0.9	2.1	1650	110.2	72.0	59.3	3.73	5.66	1600	59.0	49.8	36.1	63.4	4.02	12.3
				1890	105.6	73.1	60.4	3.74	5.73	1830	60.5	50.8	38.3	65.0	4.21	12.0
	9.0	2.2	5.2	1650	112.3	75.7	62.9	3.76	5.90	1600	58.9	50.5	36.4	63.0	3.71	13.6
				1890	107.5	76.9	64.0	3.77	5.97	1830	60.4	51.5	38.6	64.6	3.87	13.2
	12.0	3.8	8.8	1650	113.5	77.8	64.9	3.79	6.02	1600	58.8	50.8	36.5	62.8	3.54	14.3
				1890	108.5	79.0	66.0	3.79	6.10	1830	60.3	51.8	38.7	64.4	3.70	13.9
100	6.0	0.8	1.8	Operation Not Recommended						1600	59.7	46.8	34.9	62.2	4.57	10.2
										1830	61.2	47.7	37.0	63.8	4.77	10.0
	9.0	2.0	4.6							1600	59.6	47.4	35.1	61.6	4.21	11.2
										1830	61.0	48.4	37.3	63.2	4.40	11.0
	12.0	3.5	8.0							1600	59.5	47.8	35.3	61.3	4.02	11.8
										1830	61.0	48.7	37.4	62.9	4.20	11.5
110	6.0	0.7	1.7							1600	60.6	43.2	33.3	60.6	5.17	8.3
										1830	62.0	44.1	35.3	62.2	5.40	8.1
	9.0	1.9	4.4							1600	60.5	43.8	33.5	59.8	4.76	9.2
										1830	61.9	44.7	35.5	61.4	4.98	8.9
	12.0	3.3	7.6							1600	60.5	44.1	33.6	59.4	4.55	9.6
										1830	61.9	45.0	35.7	61.0	4.76	9.4
120	6.0	0.7	1.6							1600	61.7	39.8	31.4	59.3	5.84	6.8
										1830	63.0	40.6	33.3	61.0	6.11	6.6
	9.0	1.8	4.2							1600	61.6	40.3	31.6	58.4	5.38	7.4
										1830	62.9	41.1	33.6	60.0	5.63	7.3
	12.0	3.2	7.3							1600	61.5	40.6	31.7	57.9	5.15	7.8
										1830	62.9	41.4	33.7	59.5	5.38	7.6

ENGINEERING SPECIFICATIONS:

Revision Table

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