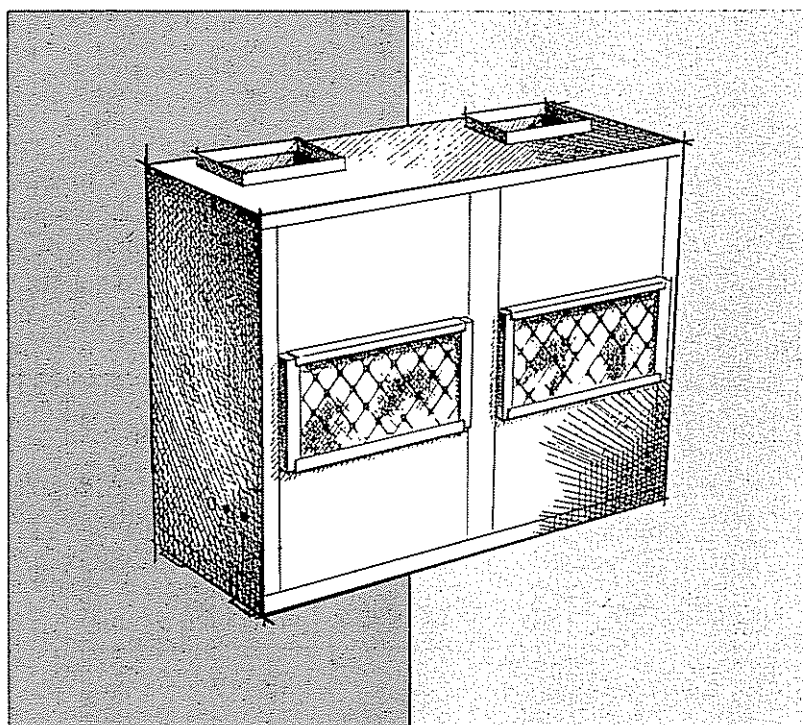
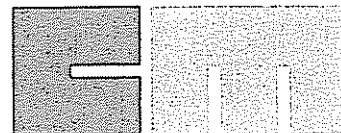


**SERIES 100-240
HEAT RECOVERY
SYSTEMS**



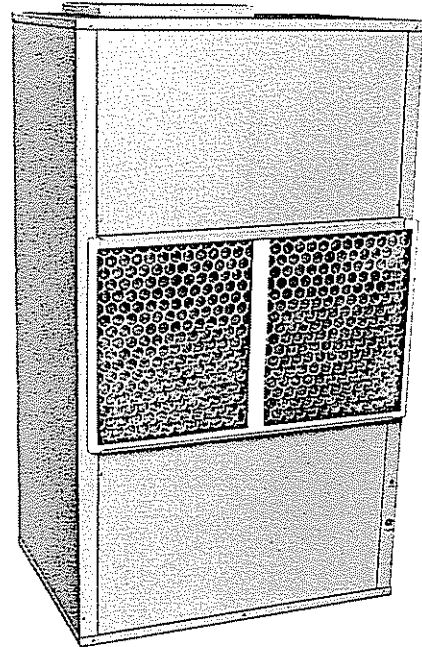
CLIMATE MASTER[®]



ENGINEERING DATA

HEAT RECOVERY SYSTEMS

Vertical Water-to-Air Units



The Climate Master Series 100-240 Heat Recovery Units incorporate the latest technology in the design of large capacity water-to-air reverse cycle units.

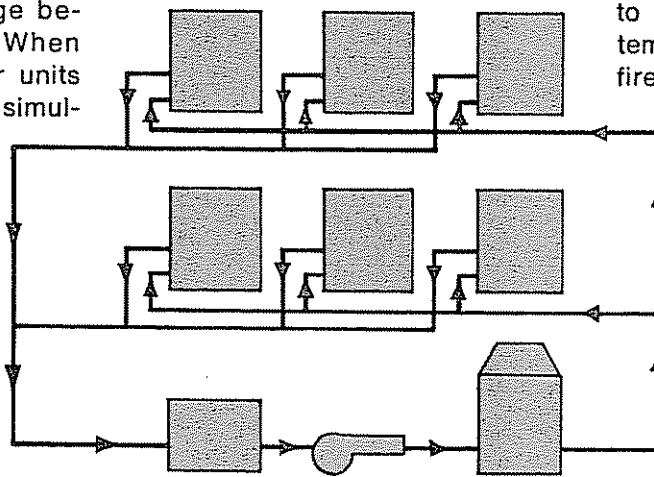
The units are designed for connection to a closed loop water circulatory system with a temperature range between 70°F and 95°F. When interconnected with other units on the loop the diversity of simultaneous heating and cooling with individual control year round provides outstanding performance — designed to give the developer, owner and occupant considerable benefits.

- Low Installation Costs due to simplified controls, no pipe insulation, less space requirements, minimum ducting and piping, reduced electrical installation, economical selection of auxiliary equipment, ease for future "add-ons."
- Economical Operating Costs due to energy transfer from those areas on cooling to those requiring heating, auxiliary heaters and coolers only operate when the system water loop exceeds the limits of 70° to 95°; night set-backs for reduced energy costs; economy ventilation cycles and morning warm-ups.
- Minimum Maintenance Costs — all factory pack-

age equipment easily and simply serviced, no large complex mechanical systems requiring expensive operating personnel, low service requirements due to even operating temperatures.

- Flexibility — a size and shape to meet most designer requirements, lends itself to all-electric no pollution system or supplementary gas or oil fired heaters (minimum size); used for new construction or renovation projects and add-on units can be made at future dates; areas can be individually metered; can be applied in harmony with other systems for maximum diversity.
- Occupant Satisfaction — by having individualized control of heating and cooling year round;

minimum disturbance for maintenance; quietness of operation; immediate load response; zone control for off-hour operations without having to heat or cool the entire building; no seasonal changeover. A system utilizing the simplest form of equipment to recover and use all those energies that once were discarded or not used such as radiant energy of the sun, lighting heat, equipment and people heat, building orientation — an air conditioning system combining all these features for maximum benefit to the owners' investment.



SPECIFICATIONS

1. CABINET

The reinforced cabinet is made of heavy gauge, galvanized steel, and painted electrostatically to prevent corrosion. The interior of the cabinet is lined with high density, coated insulation with improved thermal insulating and acoustical absorption characteristics. The units have access panels for ease of inspection and service to all components.

The control voltage wiring and control box are also accessible from the front of the unit. The supply air opening is provided with a duct collar and the return air incorporates a filter rack permitting removal of the filter in any direction.

Each unit is provided with a high velocity type disposable filter.

2. COMPRESSOR

The Hermetic Compressor is designed inherently for low noise and vibration characteristics with a new double scotch yoke compressor design. It has a solid state motor protection system with sensors in all three motor phases. In addition a crankcase heater will provide protection against liquid refrigerant flood back on start-up.

The compressor is resiliently mounted on rails within the cabinet.

3. REVERSING VALVE

The Electro Magnetic Valve is of all metal hermetic construction and has an easily replaceable, moisture resistant, molded external electric solenoid coil.

4. REFRIGERANT-TO-WATER HEAT EXCHANGER

The counter flow condensing action heat exchanger is coaxial (tube-in-tube) spirally wound with booster fins on the refrigerant side to provide optimum heat transfer and low water pressure drop.

The inner (water) tube is available in copper or cupro-nickel construction designed to withstand water pressure of 500 psi. The outer (refrigerant) tube is made of primed and painted steel. Design working pressure on the refrigerant side is 450 psi.

5. AIR-TO-REFRIGERANT HEAT EXCHANGER

The large face area, fin coil heat exchanger utilizes staggered copper tubes with rippled and corrugated aluminum fins for added heat transfer. The custom designed refrigerant circuiting is designed for high sensible capacity, optimum pressure drops and efficiency.

6. REFRIGERANT CONTROL

The refrigerant flow is accurately metered to the evaporator through a thermostatic expansion valve with multiple distributor tubes to improve performance. The superheat for the valve has been factory set for optimum capacity. The valve also has replaceable power and cage assemblies. The refrigerant circuit is factory pressure and leak tested. Abnormal pressures within the refrigerant circuit are prevented with safety high and low pressure switches. Charging and service ports are provided on the high and low pressure sides of the unit as standard equipment.

7. BLOWER AND MOTOR

The belt driven blower wheel and housing is custom designed for quiet operation and efficient air delivery. The blower is mounted on permanently lubricated, maintenance free ball-bearings. The generously sized Ball Bearing Motor with V-Belt and variable pitch motor pulley is resiliently mounted on an adjustable motor base for easy belt adjustment and/or speed change. The drive package is designed for statics between .30 and 1.25 E.S.P. I.W.G.

8. CONTROLS

The control box, easily accessible from the front panel, includes a 24 volt control transformer, compressor contactor, blower and impedance relays. Completely factory wired, the circuit features a lock-out relay to provide a manual reset at the thermostat in case of interrupted operation by the safety controls.

The Dual Units have a time delay relay which delays starting of the second compressor after the start of the first compressor.

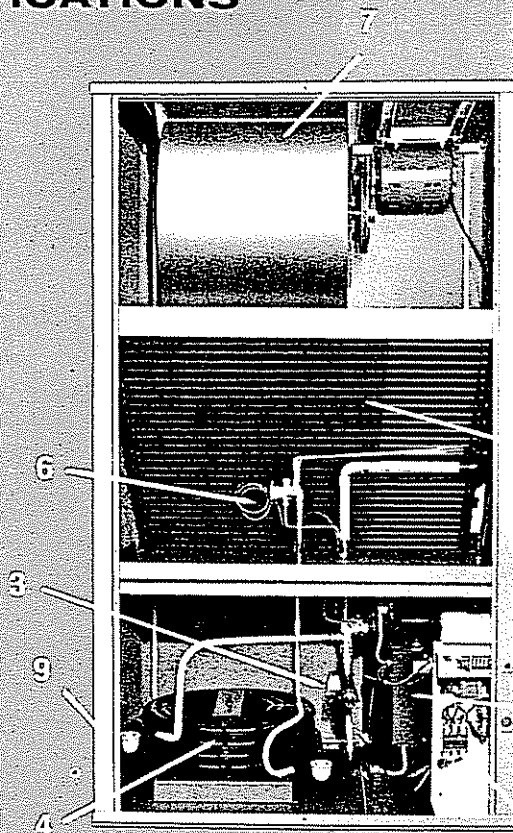
The individual control components are designed for ease of inspection and serviceability. A terminal block is provided for convenient field wiring to the thermostat. A remote thermostat for comfort control is furnished with the unit.

Also available optionally are controls and thermostat for automatic changeover from cooling to heating mode and vice versa.

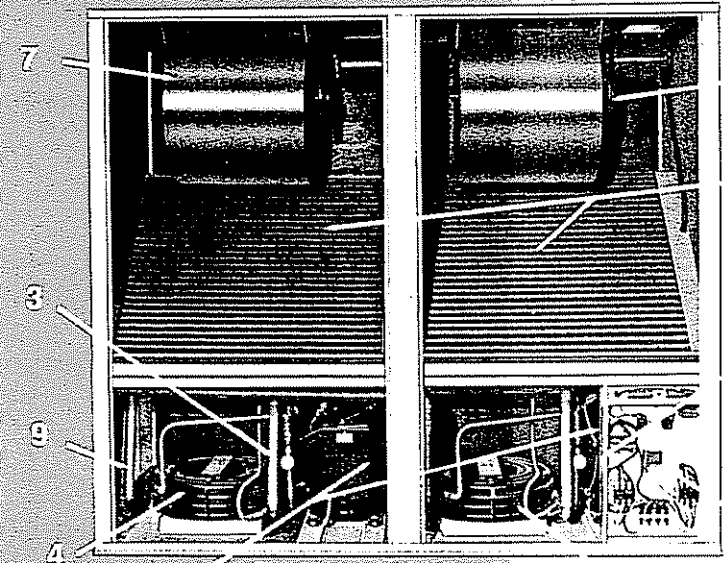
9. PIPING

Dual units incorporate externally stubbed water (FPT) connections for ease of installation.

Models 200 and 240 are not ARI certified since they do not fall within the 135,000 BTUH scope limitations of ARI certification program.



V-100 Shown
with access panels removed



V-200 Shown
with access panels removed

SYSTEM CONTROLS

Controls for the Climate Master System provide the following functions:

1. Energize the cooler to reject excess heat as necessary to prevent system water temperature from exceeding the maximum limit (approximately 95°).
2. Energize the supplementary heater to add heat as necessary to prevent water temperature from dropping below 70°.
3. Read out and sound alarms if there is a loss of water flow or if the temperature limits reach 70°F or 95°F.

Additional controls such as automatic pump alternators, no-flow relay panels, time-clocks, night thermostats and off hour timers can be added as optional features.



SAMPLE SELECTION

REQUIREMENTS:

1. SELECTION

2. COOLING

3. HEATING

4. OTHER DATA

7700 CFM @ approx. 75° External Static Pressure

460V — 3 Ph Power Supply

COOLING: Entering Air 75° FDB/61° WB

Entering Water 85°F

Leaving Water 100°F

HEATING: Entering Air 75°F

Entering Water 75°F

Flow rate as required on cooling

On the basis of airflow on page 5 the unit tentatively selected is Model V-200. The performance of this is derived as per below.

From table on page 9 the basic capacities for 7000 CFM and 95°F leaving water are:

Total capacity = 170000 BtuH

Sensible capacity = 146200 BtuH

Heat rejection = 236000 BtuH

These capacities are affected by the increased airflow and leaving water temperature. Multipliers for these varying conditions are derived from the graph on page 9 and table on page 5.

Percent on rated airflow = $(7700/7000) \times 100 = 110\%$

Airflow factor Water Temp. factor

Total capacity = $170000 \times 1.018 \times 0.959 = 166000$ BtuH

Sensible capacity = $146200 \times 1.065 \times 0.959 = 149300$ BtuH

Heat rejection = $236000 \times 1.060 \times 0.968 = 242000$ BtuH

GPM required (approx.) = 35

From the table on page 9 the basic heating capacity with 7000 CFM, 70°F entering air 73° entering water and 35 GPM's.

Heating capacity = 196000 BtuH

Heat of absorption = 136000 BtuH

Power input = 182000 BtuH

Correction for the 10% increased airflow on page 5 and 75°F entering water derived from page 9.

Airflow factor Water Temp. factor

Heating capacity = $196000 \times 1.018 \times 0.975 = 194550$ BtuH

Heat of absorption = $136000 \times 1.030 \times 0.985 = 138000$ BtuH

Leaving water temperature is 65°F

a.) The airflow is available with the pulley setting at 3 turns open.

b.) The water pressure drop for 35 GPM is 2.8 Psig as shown on the table on page 6.

c.) The electrical information is available in the table on page 6.

Compressor FLA (each) = 12.8

Blower FLA (each) = 3.3

Min. Circuit Ampacity is 35.4

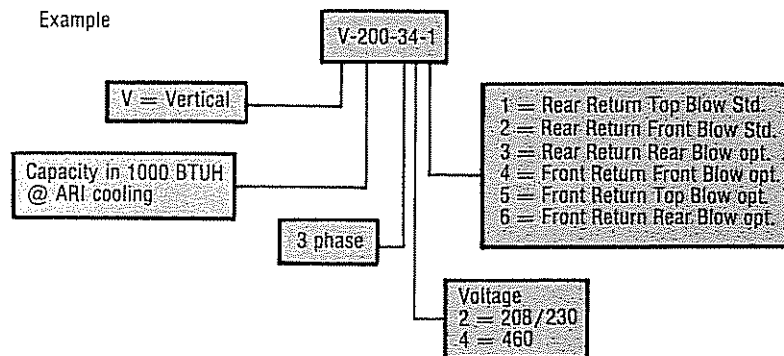
Max. Fuse Size is 45

ORDERING INFORMATION

When specifying and ordering it is important to indicate the following:

1. Configuration
2. Size (capacity in 1000 BTUH @ ARI cooling)
3. Phase and voltage required
4. Discharge and return configuration

Example



In line with policy of product improvement Climate Master reserves the right to change dimensions and ratings.

SPECIFICATIONS

BLOWER PERFORMANCE

MODEL	MOTOR HP	PULLEY SETTING	CFM @ AVAILABLE EXTERNAL STATIC (I.W.G.)											
			0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
V 100	1½	CLOSED	—	—	—	—	—	—	—	—	3950	3650	3300	—
		1 TURN OPEN	—	—	—	—	—	—	—	3800	3500	3100	—	—
		2 TURNS OPEN	—	—	—	—	—	—	—	3700	3400	3100	—	—
		3 TURNS OPEN	—	—	—	—	3900	3600	3300	—	—	—	—	—
		4 TURNS OPEN	—	—	—	3800	3500	3200	—	—	—	—	—	—
		5 TURNS OPEN	—	4000	3700	3400	3100	—	—	—	—	—	—	—
V 120	2	CLOSED	—	—	—	—	—	—	—	—	—	4250	3950	3600
		1 TURN OPEN	—	—	—	—	—	—	—	4350	4050	3750	—	—
		2 TURNS OPEN	—	—	—	—	—	4400	4150	3900	3600	—	—	—
		3 TURNS OPEN	—	—	—	4500	4300	4000	3750	—	—	—	—	—
		4 TURNS OPEN	—	—	4400	4150	3900	3600	—	—	—	—	—	—
		5 TURNS OPEN	4500	4300	4050	3800	3500	—	—	—	—	—	—	—
V 200	(2) 1½	CLOSED	—	—	—	—	—	—	—	—	7850	7250	6600	—
		1 TURN OPEN	—	—	—	—	—	—	—	7600	7000	6000	—	—
		2 TURNS OPEN	—	—	—	—	—	—	7400	6800	6200	—	—	—
		3 TURNS OPEN	—	—	—	—	7800	7200	6600	—	—	—	—	—
		4 TURNS OPEN	—	—	—	7600	7000	6400	—	—	—	—	—	—
		5 TURNS OPEN	—	8000	7400	6800	6200	—	—	—	—	—	—	—
V240	(2) 2	CLOSED	—	—	—	—	—	—	—	—	—	8500	7900	7200
		1 TURN OPEN	—	—	—	—	—	—	—	8700	8100	7500	—	—
		2 TURNS OPEN	—	—	—	—	—	8800	8300	7500	7200	—	—	—
		3 TURNS OPEN	—	—	—	9000	8600	8000	7500	—	—	—	—	—
		4 TURNS OPEN	—	—	8800	8300	7800	7200	—	—	—	—	—	—
		5 TURNS OPEN	9000	8600	8100	7600	7000	—	—	—	—	—	—	—

CORRECTION FACTORS

A. VARIATION OF AIRFLOW (MODELS 100 & 200)

PERCENT OF RATED CFM	80	85	90	95	100	105	110	115	120
TOTAL COOLING & HEATING CAPACITY MULTIPLIER	.950	.963	.975	.988	1.000	1.009	1.018	1.027	1.035
SENSIBLE COOLING CAPACITY MULTIPLIER	.910	.933	.955	.978	1.000	1.033	1.065	1.098	1.130
COOLING HEAT OF REJECTION MULTIPLIER	.970	.978	.985	.993	1.000	1.030	1.060	1.090	1.120
HEATING MODE HEAT OF ABSORPTION MULTIPLIER	.935	.952	.968	.984	1.000	1.015	1.030	1.045	1.060

B. VARIATION OF AIRFLOW (MODELS 120 & 240)

PERCENT OF RATED CFM	80	85	90	95	100	105	110	115	120
TOTAL COOLING & HEATING CAPACITY MULTIPLIER	.940	.955	.970	.985	1.000	1.005	1.010	1.015	1.020
SENSIBLE COOLING CAPACITY MULTIPLIER	.890	.918	.945	.973	1.000	1.020	1.040	1.060	1.080
COOLING HEAT OF REJECTION MULTIPLIER	.964	.973	.982	.991	1.000	1.026	1.052	1.078	1.104
HEATING MODE HEAT OF ABSORPTION MULTIPLIER	.928	.946	.964	.982	1.000	1.012	1.024	1.036	1.048

WATER PRESSURE DROP DATA

MODEL 100

G.P.M.	13	15	20	25	30	33
P.D. (P.S.I.G.)	1.5	1.8	3.0	5.1	7.8	9.7

MODEL 120

G.P.M.	15	20	25	30	35	40
P.D. (P.S.I.G.)	1.3	1.6	2.3	3.2	4.5	6.1

MODEL 200

G.P.M.	26	30	35	40	45	50	55	60	70
P.D. (P.S.I.G.)	2.0	2.3	2.8	3.5	4.4	5.6	6.8	8.3	10.2

MODEL 240

G.P.M.	30	35	40	45	50	55	60	70	80
P.D. (P.S.I.G.)	1.8	1.9	2.1	2.4	2.8	3.2	3.7	5.0	6.6

MODEL	V100-32	V100-34	V120-32	V120-34	V200-32	V200-34	V240-32	V240-34	
NO. OF CIRCUITS	1	1	1	1	2	2	2	2	
VOLTAGE	208/230	460	208/230	460	208/230	460	208/230	460	
PHASE	3	3	3	3	3	3	3	3	
MIN. CIRCUIT AMPACITY	39	19.3	47.3	23.5	71.4	35.4	86.6	43	
MAX. FUSE SIZE*	60	30	70	35	90	45	110	50	
COMPRESSOR F.L.A. (EA.)	26.4	12.8	31.8	15.9	26.4	12.8	31.8	15.9	
COMPRESSOR L.R.A. (EA.)	194	97	194	97	194	97	194	97	
BLOWER F.L.A. (EA.)	6.0	3.3	7.2	3.6	6.0	3.3	7.2	3.6	
BLOWER MOTOR-HP	1½		2		(2) 1½		(2) 2		
BLOWER WHEEL DIA. (INS.)	15⅞				(2) 15⅞				
BLOWER WHEEL LEN. (INS.)	15¼				(2) 15¼				
REF. TO AIR HEAT EXCHANGER	DEPTH (INS.)	2.1		3.2		2.1		3.2	
	(SQ. FT.) FACE AREA	8.75		9.38		17.5		18.76	
	FINS/INCH	15							

*TIME DELAY TYPE

NOTES: 1.) Minimum voltage for 208/230 volt models is 197 volts.

2.) All models are available with controls suitable for use with an automatic changeover thermostat.

FILTER SIZE

V-100	V-120	V-200	V-240
(1) 24x40x1	(1) 26x40x1	(2) 24x40x1	(2) 26x40x1

OPERATING WEIGHT LBS. APPROX.

V-100	V-120	V-200	V-240
870	1000	1700	1950

PIPING CONNECTIONS

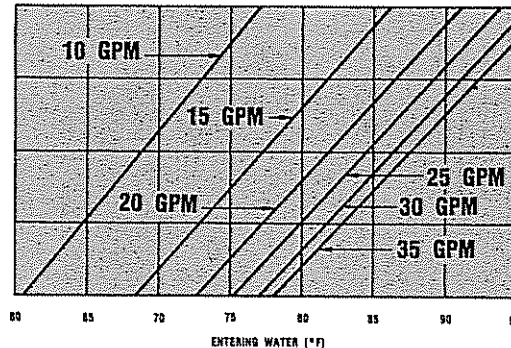
	V-100	V-120	V-200	V-240
Water Inlet	1¼	1¼	1½	1½
Water Outlet	1¼	1¼	1½	1½
Drain	1	1	1	1

COOLING

In accordance with
ARI 240-67:
Cooling Capacity
100,000 BTUH*
Power Input 9700 Watts
Unit E.E.R. 10.3
*Basic capacities with
3500 CFM of
80°F DB/67° entering air
13.3 GPM of Water
entering at 75°F
leaving at 95°F

ENTERING AIR (°F) WET BULB	BASED ON 3500 CFM & 95°F LEAVING WATER						HEAT OF REJECTION (BTUH)
	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH) for ENTERING AIR °F DRY BULB					
		75	80	85	90	95	
61	85,000	73,100	81,600	—	—	—	118,000
64	93,000	69,000	79,100	89,300	—	—	125,500
67	100,000	63,000	74,000	85,000	—	—	132,500
70	106,000	—	67,700	78,000	89,000	—	139,000
73	112,000	—	—	72,800	84,000	93,000	145,000
76	117,000	—	—	—	73,500	89,500	150,500
79	121,000	—	—	—	65,300	74,500	156,000

VARIATION OF ENTERING WATER TEMPERATURE AND FLOW RATE MULTIPLIER

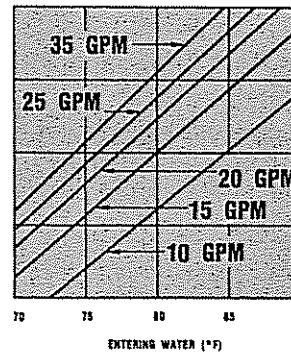


LEAVING WATER (°F)	TOTAL & SENSIBLE CAPACITY MULTIPLIER	HEAT REJECTION MULTIPLIER	POWER INPUT (WATTS)
105	0.915	0.940	10,200
100	0.959	0.968	9,950
95	1.000	1.000	9,700
90	1.031	1.022	9,400
85	1.059	1.041	9,100

HEATING

In accordance with ARI 240-67:
Heating Capacity 85,000 BTUH*
Power Input 8200 Watts
*Based on 3500 CFM of
70°F Entering Air
13.3 GPM of
60°F Entering Water
Unit C.O.P. 3.04

VARIATION OF ENTERING WATER TEMPERATURES & FLOW RATE



LEAVING WATER (°F)	HEATING CAPACITY (BTUH)	HEAT OF ABSORPTION (BTUH)	POWER INPUT (WATTS)
80	119,000	86,000	10,500
76	111,000	79,000	10,000
70	104,000	73,500	9,500
65	98,000	68,000	9,100
60	92,500	63,000	8,700

VARIATION OF ENTERING AIR TEMPERATURES ON HEATING MODE

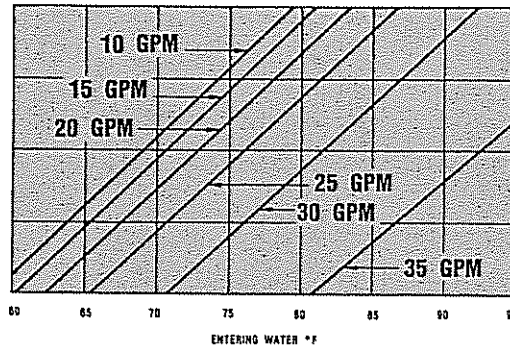
ENTERING AIR (°F)	60	65	70	75	80
HEATING CAPACITY MULTIPLIER	1.06	1.03	1.000	0.975	0.960
HEAT OF ABSORPTION MULTIPLIER	1.08	1.04	1.000	0.985	0.970
POWER INPUT MULTIPLIER	0.98	0.99	1.000	1.030	1.060

COOLING

In accordance with
ARI 240-67:
Cooling Capacity
120,000 BTUH*
Power Input 12,400 Watts
Unit E.E.R. 9.8
*Basic capacities with
4200 CFM of
80°F DB/67°F WB
entering air
16.2 GPM of Water
entering at 75°F
leaving at 95°F

ENTERING AIR (°F) WET BULB	BASED ON 4200 CFM & 95°F LEAVING WATER						HEAT OF REJECTION (BTUH)
	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH) for ENTERING AIR °F DRY BULB					
		75	80	85	90	95	
61	108,000	94,000	104,800	—	—	—	147,500
64	114,000	86,500	99,200	111,700	—	—	155,000
67	120,000	78,000	91,000	104,500	—	—	162,000
70	125,000	—	82,500	95,000	107,500	—	169,000
73	130,000	—	—	84,500	97,500	110,000	176,000
76	134,000	—	—	—	85,800	100,000	183,000
79	138,000	—	—	—	73,200	88,900	189,500

**VARIATION OF
ENTERING WATER
TEMPERATURE AND
FLOW RATE
MULTIPLIER**

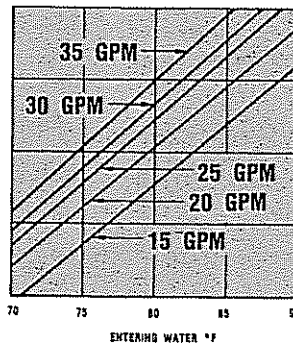


TOTAL & SENSIBLE CAPACITY MULTIPLIER	HEAT REJECTION MULTIPLIER	POWER INPUT (WATTS)
0.920	0.940	13,200
0.970	0.975	12,750
1.000	1.000	12,400
1.028	1.024	12,100
1.052	1.043	11,900

HEATING

In accordance with ARI 240-67:
Heating Capacity: 102,000 BTUH*
Power Input 9700 Watts
*Based on 4200 CFM of
70°F Entering Air
16.2 GPM of
60°F Entering Water
Unit C.O.P. 3.08

**VARIATION OF
ENTERING WATER
TEMPERATURES
& FLOW RATE**



HEATING CAPACITY (BTUH)	HEAT OF ABSORPTION (BTUH)	POWER INPUT (WATTS)
146,000	114,000	12,400
136,000	102,000	12,000
127,000	93,000	11,550
119,000	86,000	11,050
112,000	80,000	10,500

**VARIATION OF
ENTERING AIR
TEMPERATURES
ON HEATING
MODE**

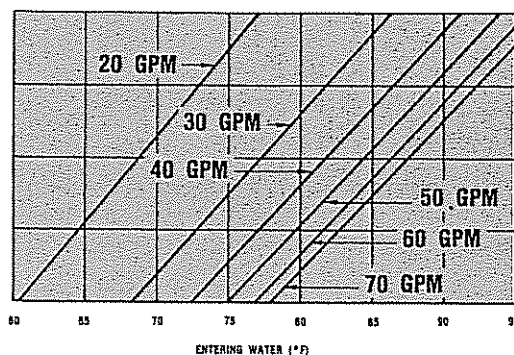
ENTERING AIR (°F)	60	65	70	75	80
HEATING CAPACITY MULTIPLIER	1.06	1.03	1.00	0.975	0.960
HEAT OF ABSORPTION MULTIPLIER	1.08	1.04	1.00	0.985	0.970
POWER INPUT MULTIPLIER	0.98	0.99	1.00	1.030	1.060

COOLING

In accordance with
ARI 240-67:
Cooling Capacity
200,000 BTUH*
Power Input 19,400 Watts
Unit E.E.R. 10.3
*Basic capacities with
7000 CFM of
80°F DB/67°F WB
entering air
26.5 GPM of Water
entering at 75°F
leaving at 95°F

ENTERING AIR (°F) WET BULB	BASED ON 7000 CFM & 95°F LEAVING WATER						HEAT OF REJECTION (BTUH)
	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH) for ENTERING AIR °F DRY BULB					
		75	80	85	90	95	
61	170,000	146,200	163,200	—	—	—	236,000
64	186,000	138,000	158,200	178,600	—	—	251,000
67	200,000	126,000	148,000	170,000	—	—	265,000
70	212,000	—	135,400	156,000	178,000	—	278,000
73	214,000	—	—	145,600	168,000	186,000	290,000
76	234,000	—	—	—	147,000	179,000	301,000
79	242,000	—	—	—	130,600	149,000	312,000

**VARIAION OF
ENTERING WATER
TEMPERATURE AND
FLOW RATE
MULTIPLIER**

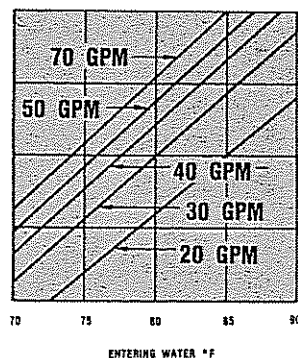


TOTAL & SENSIBLE CAPACITY MULTIPLIER	HEAT REJECTION MULTIPLIER	POWER INPUT (WATTS)
0.915	0.940	20,400
0.959	0.968	19,900
1.000	1.000	19,400
1.031	1.022	18,800
1.059	1.041	18,200

HEATING

In accordance with ARI 240-67:
Heating Capacity: 170,000 BTUH*
Power Input: 16,400 Watts
*Based on 7000 CFM of
70°F Entering Air
26.6 GPM of
60°F Entering Water
Unit C.O.P. 3.04

**VARIAION OF
ENTERING WATER
TEMPERATURES
& FLOW RATE**



HEATING CAPACITY (BTUH)	HEAT OF ABSORPTION (BTUH)	POWER INPUT (WATTS)
238,000	172,000	21,000
222,000	158,000	20,000
208,000	147,000	19,000
196,000	136,000	18,200
185,000	126,000	17,400

**VARIAION OF
ENTERING AIR
TEMPERATURES
ON HEATING
MODE**

ENTERING AIR (°F)	60	65	70	75	80
HEATING CAPACITY MULTIPLIER	1.06	1.03	1.000	0.975	0.960
HEAT OF ABSORPTION MULTIPLIER	1.08	1.04	1.000	0.985	0.970
POWER INPUT MULTIPLIER	0.98	0.99	1.000	1.030	1.060

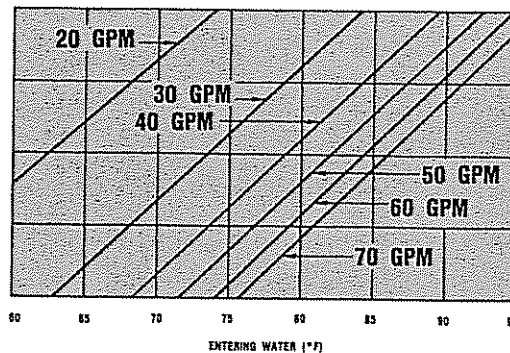
COOLING

In accordance with
ARI 240-67:
Cooling Capacity
240,000 BTUH*
Power Input 24,800 Watts
Unit E.E.R. 9.8

*Basic capacities with
8400 CFM of
32.4 GPM of Water
entering at 75°F
leaving at 95°F

ENTERING AIR (°F) WET BULB	BASED ON 8400 CFM & 95°F LEAVING WATER						HEAT OF REJECTION (BTUH)
	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH) for ENTERING AIR °F DRY BULB					
		75	80	85	90	95	
61	216,000	188,000	209,600	—	—	—	295,000
64	228,000	173,000	198,400	223,400	—	—	310,000
67	240,000	156,000	182,000	209,000	—	—	324,000
70	250,000	—	165,000	190,000	215,000	—	338,000
73	260,000	—	—	169,000	195,000	220,000	352,000
76	368,000	—	—	—	171,600	200,000	366,000
79	267,000	—	—	—	146,400	177,800	379,000

**VARIAION OF
ENTERING WATER
TEMPERATURE AND
FLOW RATE
MULTIPLIER**



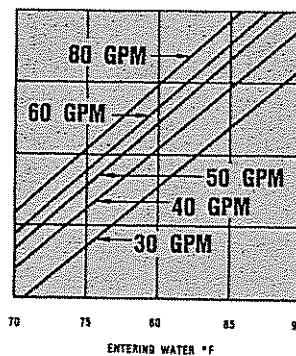
LEAVING WATER (°F)	TOTAL & SENSIBLE CAPACITY MULTIPLIER	HEAT REJECTION MULTIPLIER	POWER INPUT (WATTS)
105	0.920	0.940	26,400
100	0.970	0.975	25,500
95	1.000	1.000	24,800
90	1.028	1.024	24,200
85	1.052	1.043	23,800

HEATING

In accordance with ARI 240-67:
Heating Capacity 204,000 BTUH*
Power Input 19,400 Watts

*Based on
8400 CFM of
70°F Entering Air
32.4 GPM of
60°F Entering Water
Unit C.O.P. 3.08

**VARIAION OF
ENTERING WATER
TEMPERATURES
& FLOW RATE**



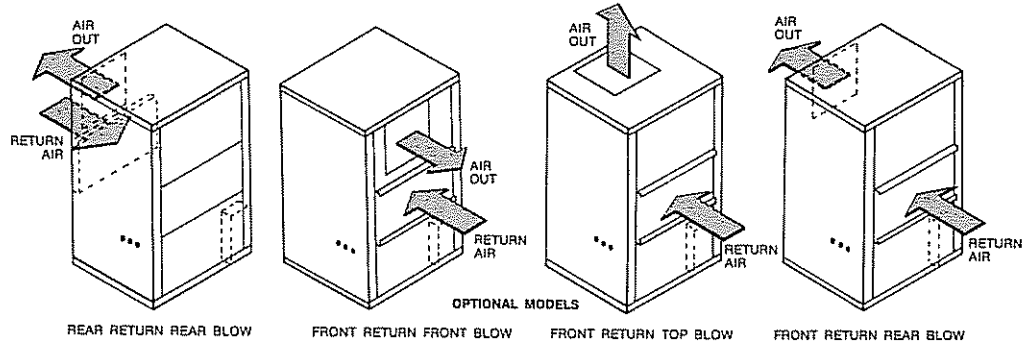
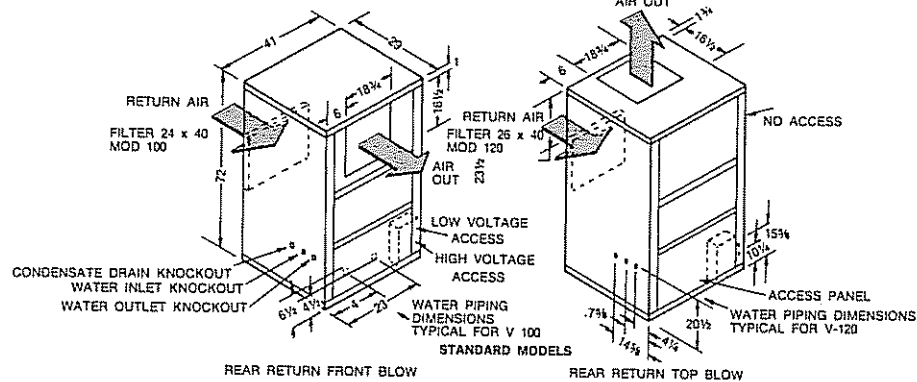
LEAVING WATER °F	HEATING CAPACITY (BTUH)	HEAT OF ABSORPTION (BTUH)	POWER INPUT (WATTS)
80	292,000	228,000	24,800
75	272,000	204,000	24,000
70	254,000	186,000	23,100
65	238,000	172,000	22,100
60	224,000	160,000	21,000

**VARIAION OF
ENTERING AIR
TEMPERATURES
ON HEATING
MODE**

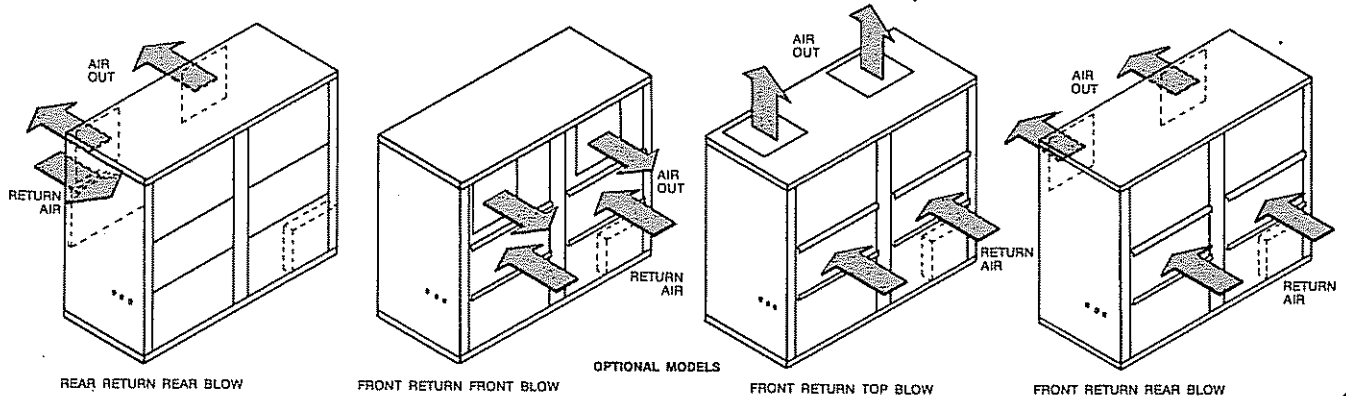
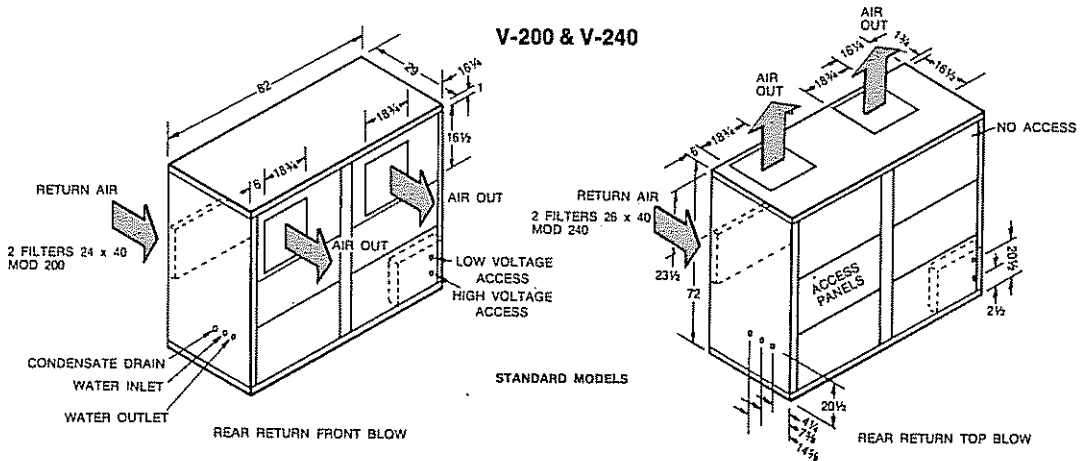
ENTERING AIR (°F)	60	65	70	75	80
HEATING CAPACITY MULTIPLIER	1.06	1.03	1.000	0.975	0.960
HEAT OF ABSORPTION MULTIPLIER	1.08	1.04	1.000	0.985	0.970
POWER INPUT MULTIPLIER	0.98	0.99	1.000	1.030	1.060

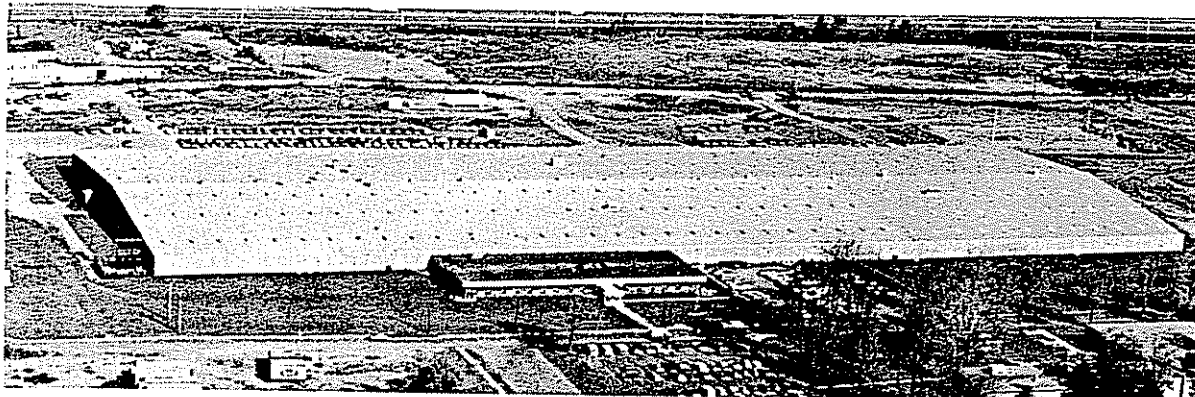
DIMENSIONAL DATA

V-100 & V-120

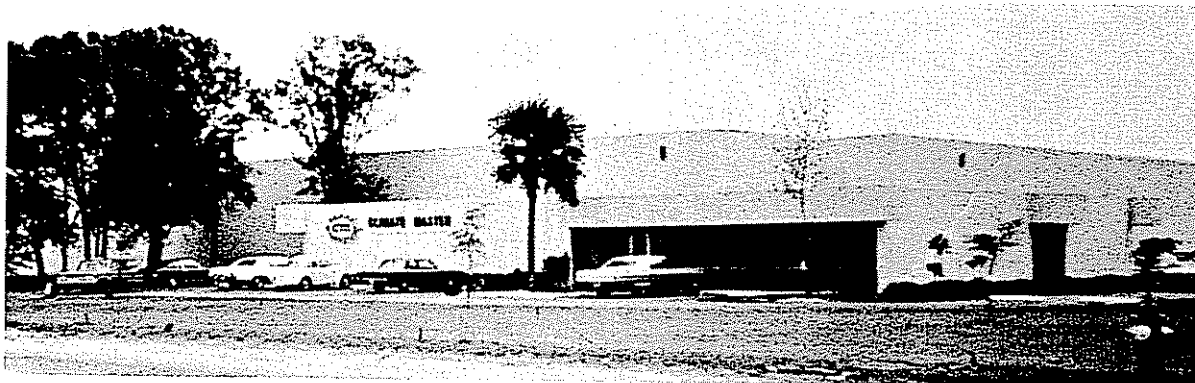


V-200 & V-240





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