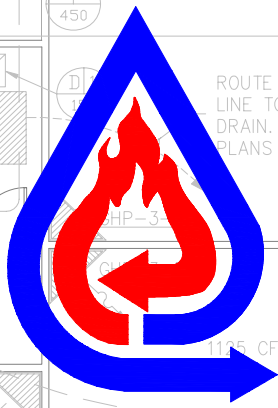


EDUCATION-TECHNOLOGIES



HYDRO-TEMP

Earth Coupled Heat Pumps



HYDRO-TEMP CORPORATION
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A BRIEF HISTORY OF HYDRO-TEMP

Hydro-Temp was formed in 1976, incorporated in 1978, and in 1981 received a patent for a full condensing on demand hot water heat recovery unit.

Hydro-Temp Corporation was also the first geothermal manufacturer to develop a two-speed unit, and then in 1994 was the first company to develop a three-stage unit (multiple compressors). The three-stage unit was developed in response to a growing desire by customers to have a unit that could provide load matching by changing capacity and being able to adapt to a zone dampening system and eliminate the need for bypass dampers in addition to greater moisture removal.

Hydro-Temp has worked with many utility companies all over the United States. The company has been involved in research-related projects with organizations such as the Tennessee Valley Authority, The Electric Power Research Institute, and The National Rural Electric Cooperative Association as well as state wide organizations like Arkansas Electric Cooperatives, Associated Electric Cooperative in Missouri, and Western Massachusetts Electric.

As a manufacturer of earth coupled heat pumps, Hydro-Temp Corporation has dealers and distributors throughout the United States. Hydro-Temp's sister company, Air-Flo Company, is a licensed mechanical contractor in Arkansas, Missouri, Tennessee, Mississippi and Alabama.

IMPORTANT NOTE:

Hydro-Temp is constantly “custom building” new and unique units for its customers across the United States. Many of these new units are not shown in this catalog. If you have a unique application, there is a good chance we have already built a unit similar to what you need. Give us a call, and we’ll be glad to discuss your application with you.

Hydro-Temp design features:



Custom designed for each application

Hydro-Temp designs and builds each unit for the specific application. Consideration is given to the operating and physical requirements for each location. All Hydro-Temp units are designed to operate efficiently with entering water temperatures between 25°F and 110°F.

Hydro-Temp offers a complete range of models, sizes and voltages for all applications, horizontal or vertical, upflow or counter flow suitable for mounting in closets, overhead spaces, outside pad mounting and rooftop locations.

Variable speed blower motor technology offers the capability to fine-tune the blower to unique local situations in ducting and/or CFM requirements

High system efficiencies

Three-stage units with mismatched compressors allow for greater flexibility in matching building heating or cooling requirements.

Thermostatic expansion valves are balanced port with an equalization bleed port to allow compressor start in unloaded condition

Optional desuperheater generates hot water for domestic use at considerable savings while improving overall system efficiency during the cooling season and some savings during the heating season.

Flat brazed plate heat exchanger technology allows greater efficiency with lower head loss than typical coaxial heat exchangers. Brazed plate heat exchangers are available in stainless steel/copper as well as extended corrosion resistant marine grade stainless steel.

The overall efficiency of units with special control technology offers unsurpassed latent cooling capacity (dehumidification)

Engineered for easy serviceability

Large removable panels allow easy access to all components with ductwork in place.

Electrical control box is mounted on hinge pins so that it can easily be swung out of the way or

even removed from the cabinet to allow greater access to other components

High and low pressure ports in refrigeration circuit

Insulated divider and separate access panels into the air handling and compressor section permits operational servicing and testing without having air bypass the air to refrigerant coil

Microprocessor board controls staging of compressors, blower speed, and hot water recovery and provides zone control for up to four zones, as well as interfacing multiple units to DDC systems. Microprocessor board also provides diagnostic capabilities to the servicing technician.

Quality from the ground up

Each Hydro-Temp unit is run tested in all operating modes to insure efficiency and reliability before shipping

Heavy gauge steel cabinet is finished with baked on corrosion resistant epoxy powder coating

All copper tubing is solvent cleaned and all brazing is performed in an inert nitrogen atmosphere

All joints are pressure tested to 500 psi

Noise levels are reduced to minimum by isolating the compressor/s with vibration absorbing mounts in an insulated compartment; blower and motor are isolation mounted and cabinet is insulated throughout with 1" noise absorbing insulation.

Safety controls include high and low pressure refrigerant cutout switches as well as automatic controls to offer protection against freezing

Hydro-Temp options

Corrosion resistant heat exchanger

For open loop installations where the water supply is not PH neutral

Cleanable electrostatic air filter

Custom designed for the specific unit, an easily removed and cleaned permanent filter

Auxiliary electrical heater (internal mount)

As backup or emergency heat this can be built into most units

Desuperheater water heating

Places rejected heat into the hot water tank

Priority (full condensing water heating)

Generates hot water for domestic use by making the most efficient use of your system. In cooling season, rejected heat is placed in hot water tank, and in heating season, utilizes the ground as a thermal source for hot water. Can also operate as a water to water heat pump to generate hot water only.

Dual compressor (load matching)

Two or three speed capability designed to cope with unequal loads in multiple zones.

Oversized water and air heat exchangers

UVC Antibacterial Light

Provides healthier environment by killing airborne bacteria as it passes through the air handler. Also inhibits mold growth in the air coil and drain pan.

CO2 sensor controlled fresh air intake

The CO2 sensor detects higher than desired levels of CO2, and opens a motorized damper to allow outside air to enter the room/building.

Enhanced dehumidification option

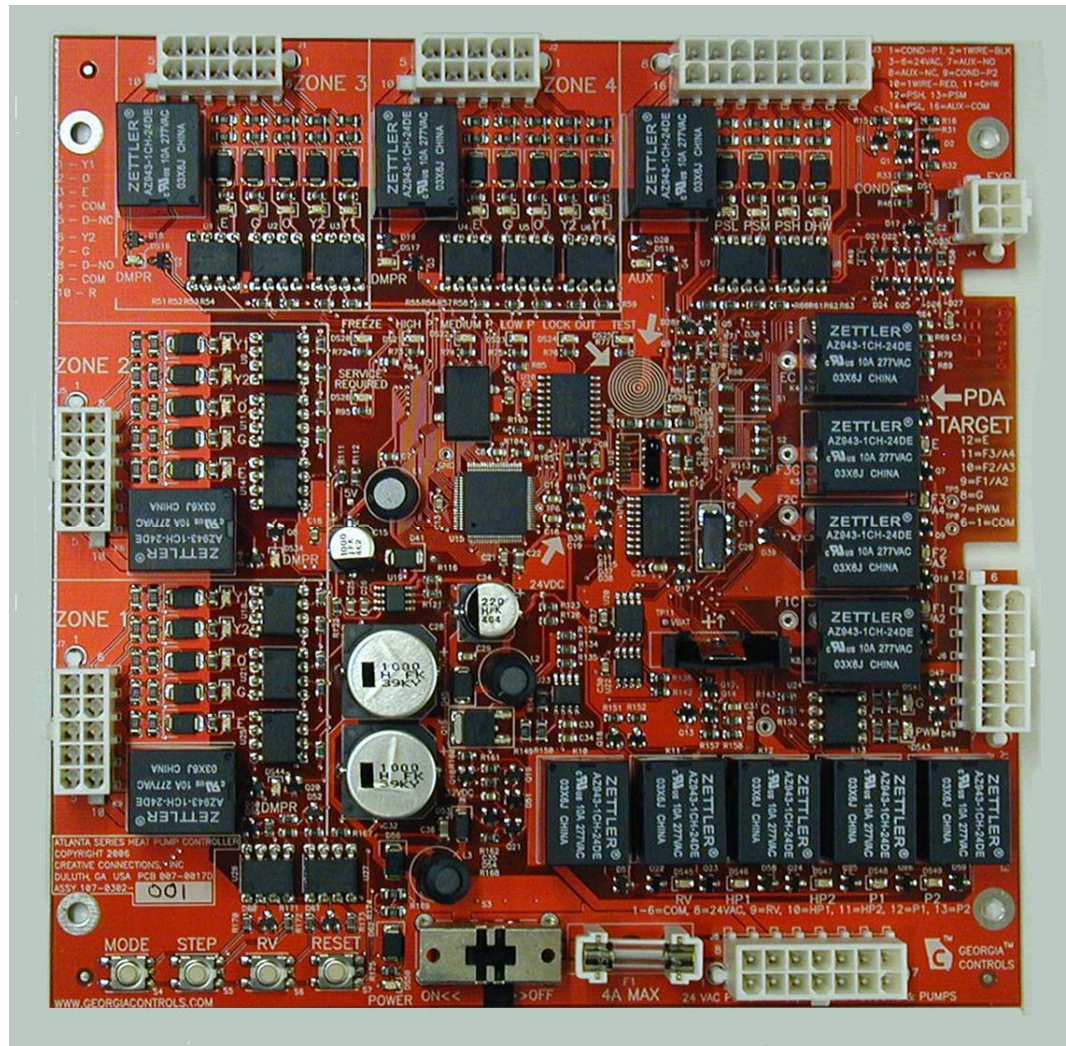
Removes unwanted moisture from conditioned air, helps to prevent mold growth, creates a healthier environment and greater comfort for occupants.



HYDRO-TEMP®

Earth Coupled Heat Pumps

MICROPROCESSOR CONTROL BOARD



The microprocessor board provides all of the control functions for Hydro-Temp systems. Besides controlling the unit in the normal operations of a dual compressor system, priority hot water control and zoning, the microprocessor board provides an easy trouble shooting interface for the service technician. The service technician has the ability to take control of the unit in heat and cooling, selecting individual stages as well as over riding time delays. The onboard LED's provide a history of any faults.

Dual Compressors: A dual compressor system normally consists of both a small and a large compressor. This unique design allows the unit to provide three stages of heating and cooling: stage one uses only the small compressor, stage two uses only the large compressor, and stage three employs both compressors at the same time. Dual compressors run on the same circuit, allowing the small and large compressor to run on coils sized for both compressors -- resulting in increased efficiency. Hydro-Temp Corporation is the only manufacturer in the United States to produce a three stage ground source heat pump. The unit's capacity will vary depending upon a particular structure's needs.

Priority Hot Water: The priority hot water heating option is a patented system that works like a full condenser except that, once the room thermostat is satisfied, the unit will check the hot water tank's thermostat. If the hot water tank needs more heat, the unit will then turn on the compressor to just heat water. When the room thermostat later calls for more heating or cooling, the unit will then switch back and heat or cool. The breaker to the hot water tank is turned off as this system will provide 100% of the hot water needs up to 120 degrees F..

Zone Control: Zone control, or dampering of zones, is also accomplished by the microprocessor board. Each zone damper and thermostat hooks to the control board that will open and close the proper damper and turn the unit on and off. The control board allows one thermostat to call for heat while another calls for cooling. The heating zone will function first while the cooling zone shuts off until the heating zone has been satisfied.

HYDRO-TEMP CORPORATION

EARTH COUPLED HEAT PUMPS

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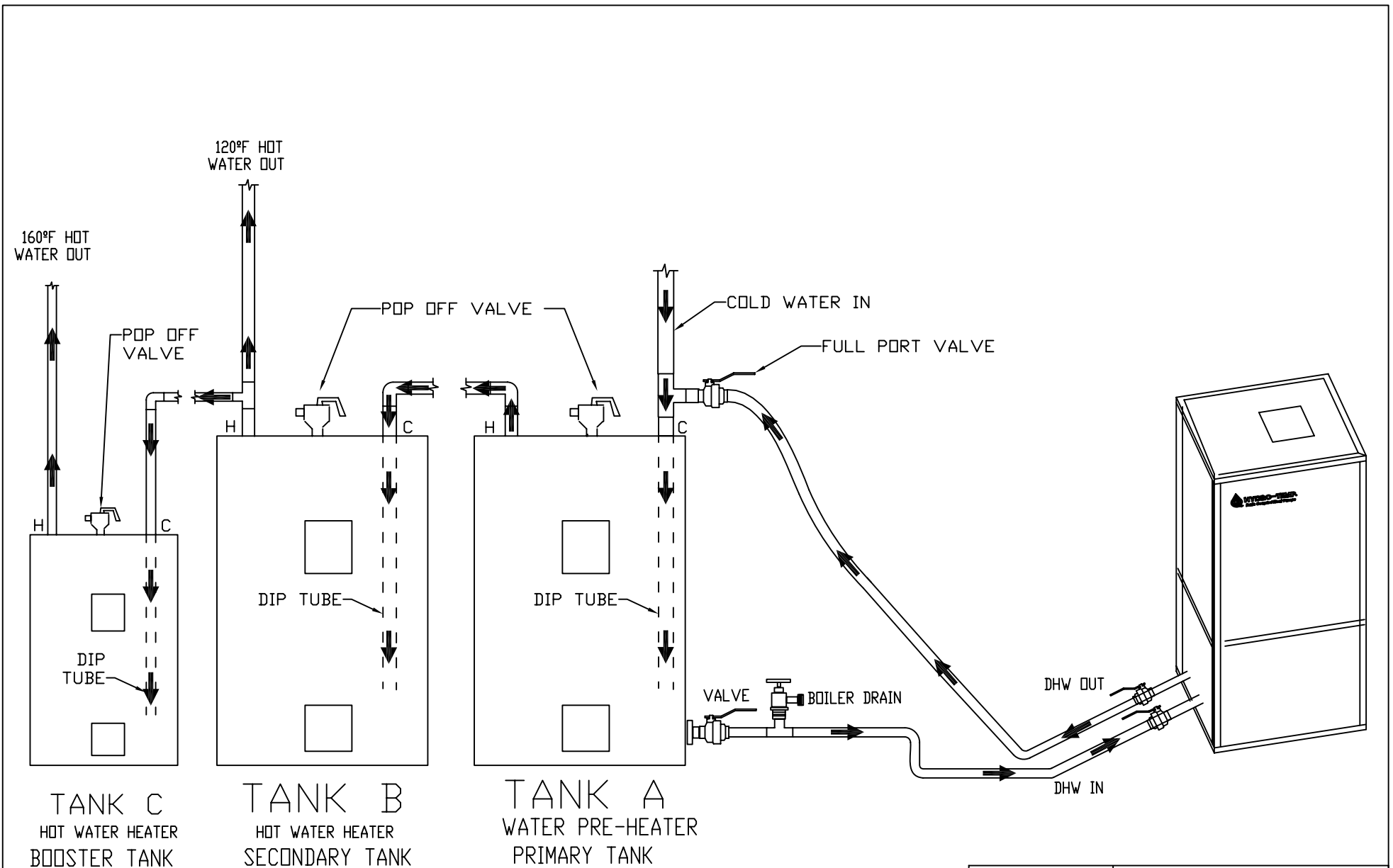

BEST METHOD OF PRODUCING HOT WATER

With the rise in natural gas prices, it has become very important to look at new and existing buildings and evaluate how the building's water is to be heated. Jails and prisons for example, spend more money on water heating than they do on heating /cooling or lighting. With this in mind, Hydro-Temp's unique patented method of heating a building's hot water can play a very important role in lowering the cost of a building's utilities.

On February 10, 1981, Hydro-Temp Corporation received patent # 4,249,390. This patent was awarded because of the unit's ability to transfer 100% of a building's unwanted heat (during the cooling cycle) into the buildings hot water tanks. During the past 20 years we learned that in many cases we could produce 100% of a building's hot water at no cost. In order for this to occur it is important that the priority water heating system be installed on a unit that does a lot of cooling, during both summer and winter. Normally a unit that provides heating and cooling for a kitchen or an internal area of the building will work best. If hot water heating is needed when no cooling is being done that's also okay. The patented priority system will turn itself on in the water-heating mode and produce hot water at approximately one fourth the normal cost of heating water.

Hydro-Temp drawing H003641 illustrates a common method of tying the unit's priority water system into a building's hot water storage system.

In the drawing, cold water is drawn from the bottom of the hot water tank (A) through the priority water heating system where it is heated. This heated water is then returned to the tanks via the cold water "in" lines. By using this method the entire tank can be heated from top to bottom, storing more hot water. Once this water is heated it is then available to feed tank (B). Unlike tank (A), tank (B) has its electric elements powered. The function of this electric element is only to replace the heat loss from tank B. The building's hot water is being totally produced by the Hydro-Temp priority system. Normally, water is heated from 115°F to 120°F with our equipment. In a kitchen application the hot water for the dishwasher may need to be boosted to 160°F. This can easily be accomplished by adding a hot water tank (Tank C) and boosting the temperature of the water from 120°F to 160°F.

HYDRO-TEMP[®]

DWG NAME: Hot Water Concept

DATE: 1/06 SCALE: NTS H003641 TLK

1/2 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	3.4	23	3	1/10	9.4	15	
208/230-3-60	----	----	----	----	----	----	
265/277-1-60	3.3	18.6	3	1/10	9.2	15	
460/480-3-60	----	----	----	----	----	----	

1 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	4.8	26.3	3	1/2	11.1	15	
208/230-3-60	----	----	----	----	----	----	
265/277-1-60	5.5	33	3	1/2	12	15	
460/480-3-60	----	----	----	----	----	----	

1 1/2 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	7.6	45	3	1/2	14.6	20	
208/230-3-60	5.8	51	3	1/2	12.4	15	
265/277-1-60	6.5	44	3	1/2	13.2	15	
460/480-3-60	----	----	----	----	----	----	

2 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	11.5	64	3	1/2	19.5	30	
208/230-3-60	6.5	58	3	1/2	13.2	20	
265/277-1-60	10.4	52	3	1/2	18.1	20	
460/480-3-60	3.4	30	1.5	1/2	7.9	10	

2 1/2 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	14.7	83	3	1/2	23.5	30	
208/230-3-60	11.2	75	3	1/2	19.1	30	
265/277-1-60	14.3	76	3	1/2	23	30	
460/480-3-60	5.3	38	1.5	1/2	10.2	15	

3 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	19.9	115	3	1/2	30	40	
208/230-3-60	13.4	89	3	1/2	21.9	30	
265/277-1-60	14.7	83	3	1/2	23.5	30	
460/480-3-60	5.9	64	1.5	1/2	11	15	

3 1/2 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	19.9	115	4	3/4	31	40	
208/230-3-60	12.4	90	4	3/4	21.6	30	
265/277-1-60	15.4	98	4	3/4	25.4	30	
460/480-3-60	6.2	45	2	3/4	11.4	15	

4 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	24.4	150	4	3/4	36.6	40	
208/230-3-60	16	115	4	3/4	26.1	30	
265/277-1-60	17.3	113	4	3/4	27.7	30	
460/480-3-60	7.4	55	2	3/4	13.4	15	

4 1/2 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	28.9	165	4	3/4	42.2	50	
208/230-3-60	17.3	123	4	3/4	27.7	30	
265/277-1-60	----	----	----	----	----	----	
460/480-3-60	8.9	67	2	3/4	15.2	20	

5 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	28.9	165	5	1	43.2	50	
208/230-3-60	17.3	123	5	1	28.7	40	
265/277-1-60	27.6	160	5	1	41.6	50	
460/480-3-60	8.9	67	2.5	1	15.7	20	

6 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	29	175	5	1	44.7	50	
208/230-3-60	20	146	5	1	33.4	40	
265/277-1-60	----	----	----	----	----	----	
460/480-3-60	13	73	2.5	1	22.2	30	

7 TON		SINGLE STAGE				Min. Circuit Ampacity	Max Fuse Size
Electrical Characteristics	Compressor		Blower				
	RLA	LRA	NPA	HP			
208/230-1-60	----	----	----	----	----	----	
208/230-3-60	21.8	184	4.4	1.5	35.1	40	
265/277-1-60	----	----	----	----	----	----	
460/480-3-60	12.1	86	2.6	1.5	21.1	30	

We at Hydro-Temp are in a continuing process of research and development; therefore, specifications are subject to change without notice.

3 TON	TWO STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	7.1	44	7.1	44	3.0	1/2	21.1	30	
208/230-3-60	5.8	51	5.8	51	3.0	1/2	18.2	30	
265/277-1-60	8.6	39	8.6	39	3.0	1/2	24.5	30	
460/480-3-60	----	----	----	----	----	----	----	----	

3 1/2 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	7.1	44	9.8	60	4.0	3/4	25.5	30	
208/230-3-60	6.4	48	6.5	58	4.0	3/4	20.6	30	
265/277-1-60	8.6	39	10.4	52	4.0	3/4	27.7	40	
460/480-3-60	----	----	----	----	----	----	----	----	

4 TON	TWO STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	11.5	64	11.5	64	4.0	3/4	32	40	
208/230-3-60	6.5	58	6.5	58	4.0	3/4	20.7	30	
265/277-1-60	10.4	52	10.4	52	4.0	3/4	29.5	40	
460/480-3-60	3.4	30	3.4	30	2.0	3.4	11.8	15	

4 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	7.1	44	12.3	78	4.0	3/4	28.6	40	
208/230-3-60	6.4	48	8.8	110	4.0	3/4	23.5	30	
265/277-1-60	8.6	39	14.3	76	4.3	3/4	32.6	40	
460/480-3-60	----	----	----	----	----	----	----	----	

4 1/2 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	11.5	64	14.7	83	4.0	3/4	36	40	
208/230-3-60	6.5	58	8.8	110	4.0	3/4	23.6	30	
265/277-1-60	10.4	52	14.3	76	4.0	3/4	34.4	40	
460/480-3-60	3.4	30	4.5	54	2.0	3.4	13.1	15	

5 TON	TWO STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	14.7	8	14.7	83	5.0	1	40.2	50	
208/230-3-60	11.2	75	11.2	75	5.0	1	32.3	40	
265/277-1-60	14.3	76	14.3	76	5.0	1	39.3	50	
460/480-3-60	3.4	30	3.4	30	2.5	1	15.2	20	

5 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	11.5	64	19.9	64	5.0	1	44.8	50	
208/230-3-60	6.5	59	10.7	130	5.0	1	28.3	40	
265/277-1-60	10.4	52	14.7	83	5.0	1	37.2	50	
460/480-3-60	3.4	30	5.9	60	2.5	1	16.7	20	

6 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	11.5	64	24.4	150	5.0	1	50.4	60	
208/230-3-60	11.2	75	12.4	90	5.0	1	35.1	40	
265/277-1-60	10.4	52	17.3	113	5.0	1	40.4	50	
460/480-3-60	5.3	38	6.2	45	2.5	1	19	30	

7 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	19.9	115	24.4	150	8.0	2@3/4	61.8	70	
208/230-3-60	13.4	89	16	115	8.0	2@3/4	44.8	50	
265/277-1-60	14.7	83	17.3	113	8.0	2@3/4	47.7	60	
460/480-3-60	6.2	45	7.4	55	4.0	2@3/4	22.9	30	

8 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	19.9	115	28.9	150	8.0	2@3/4	67.4	80	
208/230-3-60	13.4	89	17.3	123	8.0	2@3/4	46.4	60	
265/277-1-60	14.7	83	27.6	160	8.0	2@3/4	60.6	70	
460/480-3-60	6.2	45	8.9	67	4.0	2@3/4	24.7	30	

9 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	24.4	150	28.9	165	8.0	2@3/4	74.3	90	
208/230-3-60	16	115	17.3	123	8.0	2@3/4	51.4	60	
265/277-1-60	17.3	113	27.6	160	8.0	2@3/4	65.6	80	
460/480-3-60	7.4	55	8.9	67	4.0	2@3/4	25.9	30	

10 TON	THREE STAGE							Min. Circuit Ampacity	Max Fuse Size
	Compressor 1		Compressor 2		Blower				
	RLA	LRA	RLA	LRA	NPA	HP			
208/230-1-60	24.4	150	29	175	10.0	2@1	76.5	90	
208/230-3-60	16	115	20	146	10.0	2@1	56.8	70	
265/277-1-60	27.6	160	27.6	160	10.0	2@1	77.9	90*	
460/480-3-60	7.4	55	13	73	5.0	2@1	34.5	40	

* TWO STAGE

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June 2007



1 Ton

COOLING

Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	3	75/64	14.83	9.69	0.76	17.43	19.50
		80/67	15.60	10.37	0.76	18.18	20.58
		85/70	16.27	11.06	0.77	18.89	21.14
70	3	75/64	13.24	8.90	0.85	16.16	15.51
		80/67	13.93	9.51	0.85	16.83	16.37
		85/70	14.52	10.15	0.86	0.74	16.81
90	3	75/64	11.65	8.09	0.95	14.89	12.30
		80/67	12.25	8.65	0.94	15.47	12.98
		85/70	12.78	9.23	0.96	16.05	13.34
110	4	75/64	10.06	7.27	1.04	13.61	9.67
		80/67	10.58	7.78	1.04	14.12	10.21
		85/70	11.04	8.30	1.05	14.63	10.48

HEATING

Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	3	65	9.63	0.77	6.98	3.65
		70	9.49	0.79	6.77	3.50
		75	9.34	0.81	6.56	3.37
50	3	65	12.45	0.90	9.37	4.06
		70	12.27	0.92	9.11	3.90
		75	12.08	0.95	8.85	3.74
70	3	65	15.27	1.03	11.76	4.36
		70	15.05	1.05	11.45	4.19
		75	14.82	1.08	11.13	4.03
90	3	65	18.09	1.15	14.16	4.61
		70	17.83	1.18	13.79	4.42
		75	17.56	1.21	13.42	4.25

Condensator Water Flow	GPM	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2
1.5 Ton Braze Plate	Press. Drop (FOH)	2.69	0.87	1.06	1.25	1.43	1.62	1.80	1.98	2.17	2.35	2.54	2.86	3.18	3.51	3.83	4.16	4.48
1 Ton Coaxial		2.77	3.41	4.07	4.71	5.36	6.01	6.88	7.76	8.64	9.50	10.40	11.41	12.43	13.44	14.46	15.47	16.72

1 1/2 Ton

COOLING

Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	4.5	75/64	23.57	15.41	1.17	27.58	20.06
		80/67	24.79	16.48	1.17	28.78	21.18
		85/70	25.85	17.58	1.19	29.91	21.75
70	4.5	75/64	20.57	13.82	1.29	24.97	15.97
		80/67	21.63	14.78	1.28	26.01	16.86
		85/70	22.56	15.77	1.30	27.01	17.31
90	4.5	75/64	17.58	12.20	1.40	22.36	12.54
		80/67	18.48	13.05	1.40	23.25	13.24
		85/70	19.28	13.93	1.42	24.12	13.59
110	6	75/64	14.58	10.54	1.52	19.75	9.62
		80/67	15.33	11.27	1.51	20.48	10.16
		85/70	15.99	12.03	1.53	21.22	10.43

HEATING

Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	4.5	65	14.25	1.19	10.17	3.50
		70	14.04	1.22	9.86	3.36
		75	13.83	1.25	9.54	3.23
50	4.5	65	18.70	1.34	14.12	4.09
		70	18.42	1.37	13.73	3.93
		75	18.15	1.41	13.33	3.78
70	4.5	65	23.14	1.48	18.07	4.57
		70	22.80	1.52	17.60	4.39
		75	22.46	1.56	17.13	4.22
90	4.5	65	27.59	1.63	22.02	4.96
		70	27.18	1.67	21.47	4.77
		75	26.77	1.71	20.92	4.58

Condensator Water Flow	GPM	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2
1.5 Ton Braze Plate	Press. Drop (FOH)	2.54	2.86	3.18	3.51	3.83	4.16	4.48	4.81	5.13	5.45	5.78	6.15	6.51	6.88	7.25	7.62	8.08
1.5 Ton Coaxial		3.92	4.34	4.78	5.17	5.59	6.00	6.46	6.93	7.39	7.85	8.31	8.91	9.52	10.12	10.72	11.32	11.92

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June 2007



2 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	6	75/64	29.60	19.35	1.29	34.00	22.99
		80/67	31.13	20.69	1.28	35.51	24.26
		85/70	32.47	22.08	1.30	36.91	24.92
70	6	75/64	26.40	17.73	1.54	31.66	17.12
		80/67	27.76	18.97	1.54	33.00	18.07
		85/70	28.95	20.24	1.56	34.28	18.56
90	6	75/64	23.19	16.10	1.80	29.32	12.92
		80/67	24.39	17.22	1.79	30.49	13.63
		85/70	25.44	18.38	1.82	31.64	14.00
110	8	75/64	19.99	14.45	2.05	26.98	9.75
		80/67	21.02	15.45	2.04	27.99	10.29
		85/70	21.92	16.49	2.07	29.00	10.57

HEATING						
Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	6	65	17.96	1.36	13.31	3.87
		70	17.69	1.39	12.92	3.72
		75	17.42	1.43	12.54	3.57
50	6	65	24.09	1.48	19.01	4.75
		70	23.73	1.52	18.52	4.57
		75	23.37	1.56	18.04	4.39
70	6	65	30.22	1.61	24.71	5.50
		70	29.77	1.65	24.12	5.28
		75	29.32	1.69	23.53	5.08
90	6	65	36.35	1.74	30.41	6.13
		70	35.81	1.78	29.72	5.89
		75	35.27	1.83	29.03	5.66

Condensator Water Flow	GPM	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6
2.5 Ton Brazed Plate	Press. Drop (FOH)	2.38	2.53	2.69	2.84	3.03	3.21	3.40	3.58	3.77	3.99	4.21	4.42	4.64	4.86	5.11	5.36	5.61
2 Ton Coaxial		8.82	9.42	10.02	10.62	11.36	12.01	12.84	13.58	14.32	15.06	15.80	16.54	17.27	18.01	18.75	19.49	20.23

3 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	9	75/64	39.96	26.11	1.98	46.70	20.21
		80/67	42.02	27.93	1.97	48.73	21.34
		85/70	43.82	29.80	2.00	50.64	21.92
70	9	75/64	36.11	24.26	2.35	44.14	15.35
		80/67	37.98	25.95	2.34	45.97	16.21
		85/70	39.61	27.69	2.38	47.73	16.65
90	9	75/64	32.27	22.41	2.73	41.58	11.83
		80/67	33.94	23.96	2.72	43.21	12.49
		85/70	35.39	25.57	2.76	44.81	12.83
110	12	75/64	28.43	20.55	3.10	39.02	9.16
		80/67	29.90	21.98	3.09	40.44	9.67
		85/70	31.18	23.45	3.14	41.89	9.93

HEATING						
Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	9	65	25.64	2.08	18.51	3.60
		70	25.26	2.14	17.95	3.46
		75	24.88	2.19	17.39	3.33
50	9	65	34.63	2.33	26.68	4.36
		70	34.12	2.39	25.96	4.19
		75	33.61	2.45	25.24	4.03
70	9	65	43.62	2.57	34.84	4.98
		70	42.98	2.63	33.97	4.78
		75	42.34	2.70	33.10	4.60
90	9	65	52.62	2.81	43.01	5.49
		70	51.84	2.88	41.98	5.27
		75	51.06	2.95	40.96	5.07

Condensator Water Flow	GPM	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0
3 Ton Brazed Plate	Press. Drop (FOH)	4.44	4.93	5.52	6.10	6.72	7.33	7.94	8.54	9.24	9.93
3 Ton Coaxial		8.66	9.24	9.82	10.40	10.97	11.55	12.13	12.70	13.28	13.86

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3 1/2 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	10.5	75/64	46.69	30.52	2.30	54.54	20.30
		80/67	49.10	32.64	2.29	56.92	21.43
		85/70	51.21	34.83	2.33	59.15	22.01
70	10.5	75/64	42.24	28.38	2.74	51.58	15.44
		80/67	44.42	30.35	2.73	53.72	16.30
		85/70	46.33	32.39	2.77	55.77	16.74
90	10.5	75/64	37.79	26.24	3.17	48.62	11.92
		80/67	39.74	28.06	3.16	50.52	12.58
		85/70	41.45	29.94	3.21	52.40	12.92
110	14	75/64	33.34	24.10	3.61	45.65	9.24
		80/67	35.06	25.78	3.59	47.32	9.76
		85/70	36.57	27.50	3.65	49.02	10.02

HEATING						
Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	10.5	65	32.74	2.65	23.66	3.61
		70	32.26	2.72	22.94	3.47
		75	31.77	2.79	22.23	3.34
50	10.5	65	43.76	2.95	33.66	4.34
		70	43.12	3.03	32.75	4.17
		75	42.47	3.11	31.85	4.01
70	10.5	65	54.78	3.25	43.65	4.93
		70	53.98	3.34	42.56	4.74
		75	53.17	3.42	41.46	4.55
90	10.5	65	65.81	3.56	53.65	5.43
		70	64.84	3.65	52.36	5.21
		75	63.86	3.74	51.08	5.01

Condensator Water Flow	GPM	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.50	15.00
4 Ton Brazed Plate	Press. Drop (FOH)	3.85	4.22	4.59	5.03	5.47	5.91	6.35	6.84	7.32	7.89	8.45
3.5 Ton Coaxial		14.09	15.32	16.56	17.80	19.04	20.27	21.51	22.75	23.98	25.22	26.46

4 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	12	75/64	53.29	35.35	2.62	62.24	20.31
		80/67	56.04	37.81	2.61	64.95	21.44
		85/70	58.45	40.34	2.65	67.50	22.02
70	12	75/64	48.17	32.84	3.12	58.82	15.44
		80/67	50.66	35.12	3.11	61.26	16.30
		85/70	52.83	37.47	3.16	63.60	16.74
90	12	75/64	43.06	30.32	3.62	55.39	11.91
		80/67	45.28	32.43	3.60	57.57	12.57
		85/70	47.22	34.60	3.66	59.70	12.91
110	16	75/64	37.94	27.80	4.11	51.97	9.23
		80/67	39.90	29.73	4.10	53.87	9.74
		85/70	41.61	31.72	4.16	55.80	10.00

HEATING						
Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	12	65	34.62	2.94	24.56	3.45
		70	34.11	3.02	23.79	3.31
		75	33.60	3.09	23.02	3.18
50	12	65	46.90	3.24	35.82	4.24
		70	46.21	3.32	34.84	4.07
		75	45.52	3.41	33.86	3.91
70	12	65	59.18	3.54	47.07	4.90
		70	58.31	3.63	45.89	4.70
		75	57.44	3.72	44.70	4.52
90	12	65	71.47	3.84	58.33	5.45
		70	70.41	3.94	53.96	5.24
		75	63.35	4.04	55.54	5.03

Condensator Water Flow	GPM	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0
4 Ton Brazed Plate	Press. Drop (FOH)	5.03	5.47	5.91	6.35	6.84	7.32	7.89	8.45	9.01	9.57
4 Ton Coaxial		10.33	11.08	12.01	12.93	13.86	14.78	15.70	16.63	17.55	18.48

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5 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	15	75/64	66.58	43.51	3.27	77.74	20.35
		80/67	70.01	46.54	3.26	81.13	21.49
		85/70	73.02	49.66	3.31	84.31	22.07
70	15	75/64	60.17	40.42	3.89	73.43	15.48
		80/67	63.27	43.23	3.87	76.48	16.34
		85/70	65.99	46.13	3.93	79.41	16.78
90	15	75/64	53.76	37.32	4.50	69.13	11.94
		80/67	56.53	39.92	4.49	71.84	12.60
		85/70	58.96	42.59	4.56	74.50	12.94
110	20	75/64	47.35	34.22	5.12	64.82	9.25
		80/67	49.79	36.60	5.10	67.19	9.76
		85/70	51.93	39.06	5.18	69.60	10.03

HEATING

Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	15	65	42.72	3.47	30.87	3.61
		70	42.09	3.56	29.93	3.47
		75	41.46	3.64	29.00	3.33
50	15	65	57.70	3.86	44.49	4.38
		70	56.85	3.96	43.30	4.20
		75	56.00	4.06	42.10	4.04
70	15	65	72.68	4.26	58.11	5.00
		70	71.61	4.37	56.66	4.80
		75	70.54	4.48	55.21	4.61
90	15	65	87.67	4.66	71.73	5.51
		70	86.37	4.78	70.02	5.30
		75	85.07	4.90	68.32	5.09

Condensator Water Flow	GPM	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	20.5	21.0
5 Ton Brazed Plate	Press. Drop (FOH)	4.45	4.80	5.15	5.50	5.84	6.19	6.53	6.90	7.26	7.66	8.05	8.41	8.76	9.24	9.72
5 Ton Coaxial		7.28	7.59	7.91	8.22	8.54	8.83	9.12	9.41	9.70	9.99	10.28	10.57	10.86	11.15	11.43

6 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	18	75/64	81.01	52.94	4.27	95.57	18.97
		80/67	85.18	56.62	4.25	99.69	20.03
		85/70	88.84	60.42	4.32	103.58	20.57
70	18	75/64	73.38	49.29	5.03	90.53	14.60
		80/67	77.16	52.72	5.01	94.24	15.41
		85/70	80.48	56.25	5.08	97.83	15.83
90	18	75/64	65.75	45.65	5.78	85.49	11.37
		80/67	69.14	48.82	5.76	88.80	12.00
		85/70	72.11	52.10	5.85	92.07	12.33
110	24	75/64	58.13	42.01	6.54	80.44	8.89
		80/67	61.12	44.93	6.52	83.35	9.38
		85/70	63.75	47.94	6.62	86.32	9.64

HEATING

Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	18	65	51.28	4.19	39.96	3.59
		70	50.52	4.29	35.83	3.45
		75	49.76	4.40	34.71	3.31
50	18	65	69.26	4.68	53.25	4.34
		70	68.24	4.80	51.82	4.16
		75	67.22	4.92	50.38	4.00
70	18	65	87.25	5.18	69.54	4.94
		70	85.96	5.31	67.80	4.74
		75	84.67	5.44	66.06	4.56
90	18	65	105.24	5.67	85.84	5.44
		70	103.68	5.82	83.78	5.22
		75	102.12	5.96	81.73	5.02

Condensator Water Flow	GPM	17.5	18.0	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5
6 Ton Brazed Plate	Press. Drop (FOH)	6.88	7.25	7.67	8.08	8.50	8.91	9.34	9.77	10.21	10.65	11.09	11.52	12.05	12.58	13.12
6 Ton Coaxial		9.41	9.70	9.99	10.27	10.56	10.86	11.15	11.43	11.72	12.10	12.30	12.59	12.87	13.17	13.45

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7 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	21	75/64	91.82	60.01	4.82	108.25	19.06
		80/67	96.55	64.18	4.80	112.92	20.12
		85/70	100.70	68.48	4.87	117.33	20.67
70	21	75/64	84.19	56.56	5.73	103.76	14.68
		80/67	88.53	60.49	5.71	108.02	15.50
		85/70	92.34	64.54	5.80	112.13	15.92
90	21	75/64	76.57	53.16	6.65	99.26	11.51
		80/67	80.51	56.86	6.63	103.12	12.15
		85/70	83.97	60.66	6.73	106.93	12.48
110	28	75/64	68.94	49.83	7.57	94.77	9.11
		80/67	72.49	53.29	7.54	98.22	9.61
		85/70	76.61	56.86	7.66	101.73	9.88

HEATING

Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	21	65	61.02	5.20	43.24	3.44
		70	60.12	5.33	41.88	3.30
		75	59.22	5.47	40.52	3.18
50	21	65	80.77	5.79	60.96	4.09
		70	79.59	5.94	59.26	3.93
		75	78.39	6.09	57.56	3.77
70	21	65	100.53	6.38	78.69	4.61
		70	99.04	6.55	76.64	4.43
		75	97.55	6.71	74.60	4.26
90	21	65	120.28	6.98	96.41	5.05
		70	118.50	7.16	94.02	4.85
		75	116.72	7.34	91.63	4.66

Condensator Water Flow	GPM	20.5	21.0	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5
7.5 Ton Brazed Plate	Press. Drop (FOH)	7.42	7.80	8.18	8.56	8.94	9.32	9.70	10.07	10.45	10.83	11.21	11.58	12.04	12.50	12.96	13.41	13.87
7 Ton Coaxial		15.10	15.65	16.19	16.74	17.29	17.84	18.39	19.86	20.53	21.19	21.85	22.52	23.18	23.85	24.51	25.17	25.84

8 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	24	75/64	101.16	66.11	6.12	122.03	16.54
		80/67	106.37	70.71	6.09	127.16	17.46
		85/70	110.95	75.45	6.19	132.06	17.93
70	24	75/64	93.71	62.95	6.97	117.50	13.44
		80/67	98.53	67.33	6.95	122.23	14.18
		85/70	102.77	71.84	7.05	126.84	14.57
90	24	75/64	86.25	59.88	7.83	112.97	11.01
		80/67	90.69	64.05	7.80	117.31	11.63
		85/70	94.59	68.34	7.92	121.62	11.94
110	32	75/64	78.79	56.95	8.69	108.44	9.07
		80/67	82.85	60.91	8.65	112.38	9.57
		85/70	86.42	64.99	8.79	116.40	9.83

HEATING

Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	21	65	73.06	6.38	51.25	3.36
		70	71.98	6.54	49.61	3.23
		75	70.90	6.70	47.97	3.10
50	24	65	97.46	7.24	72.69	3.94
		70	96.02	7.43	70.61	3.79
		75	94.58	7.62	68.54	3.64
70	24	65	121.86	8.11	94.13	4.40
		70	120.06	8.32	91.61	4.23
		75	118.26	8.53	89.10	4.07
90	24	65	146.26	8.98	115.57	4.78
		70	144.10	9.21	112.62	4.59
		75	141.94	9.44	109.67	4.41

Condensator Water Flow	GPM	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	31.0	32.0	33.0
10 Ton Brazed Plate	Press. Drop (FOH)	4.36	4.50	4.64	4.84	5.03	5.23	5.42	5.62	5.81	6.01	6.20	6.40	6.59	6.99	7.47	7.95
8 Ton Coaxial		12.24	12.71	13.17	13.63	14.09	14.55	15.02	15.48	15.94	16.40	16.86	17.33	17.79	18.71	19.64	20.56

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9 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	27	75/64	111.62	72.95	6.16	132.64	18.12
		80/67	117.37	78.02	6.14	138.31	19.12
		85/70	122.42	83.25	6.23	143.68	19.64
70	27	75/64	104.02	69.88	7.74	130.43	13.44
		80/67	109.38	74.74	7.71	135.69	14.18
		85/70	114.08	79.74	7.83	140.80	14.57
90	27	75/64	96.42	66.94	9.32	128.23	10.34
		80/67	101.39	71.60	9.29	133.07	10.92
		85/70	105.75	76.40	9.43	137.92	11.22
110	36	75/64	88.82	64.20	10.90	126.02	8.15
		80/67	93.40	68.87	10.86	130.45	8.60
		85/70	97.42	73.27	11.03	135.04	8.83

HEATING						
Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	27	65	83.10	7.22	58.39	3.37
		70	81.87	7.41	56.53	3.24
		75	80.64	7.60	54.67	3.11
50	27	65	112.17	8.40	83.43	3.91
		70	110.51	8.62	81.04	3.76
		75	108.85	8.83	78.64	3.61
70	27	65	141.24	9.58	108.47	4.32
		70	139.15	9.83	105.55	4.15
		75	137.06	10.07	102.62	3.99
90	27	65	170.31	10.76	133.51	4.64
		70	167.79	11.03	130.05	4.46
		75	165.27	11.31	126.59	4.28

Condensor Water Flow	GPM	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0
10 Ton Brazed Plate	Press. Drop (FOH)	5.03	5.23	5.42	5.62	5.81	6.01	6.20	6.40	6.59	6.99	7.47	7.95	8.43	8.91	9.39	9.88
10 Ton Coaxial		7.80	7.96	8.11	8.27	8.43	8.59	8.75	8.91	9.07	9.38	9.70	9.99	10.28	10.57	10.86	11.15

10 Ton

COOLING							
Entering Water Temp.	GPM	EA DB/WB	TC	SC	KW	HR	EER
50	30	75/64	132.51	86.61	7.41	157.80	17.88
		80/67	139.34	92.63	7.38	164.53	18.88
		85/70	145.33	98.83	7.50	170.91	19.39
70	30	75/64	120.20	80.75	8.87	150.46	13.55
		80/67	126.39	83.36	8.84	156.54	14.30
		85/70	131.83	92.15	8.97	162.44	14.69
90	30	75/64	107.88	74.90	10.33	143.13	10.44
		80/67	113.44	80.11	10.29	148.55	11.02
		85/70	118.32	85.48	10.45	153.97	11.32
110	40	75/64	95.57	69.08	11.79	135.79	8.11
		80/67	100.49	73.88	11.74	140.56	8.56
		85/70	104.81	78.83	11.93	145.50	8.79

HEATING						
Entering Water Temp.	GPM	EA	HC	KW	HE	COP
30	30	65	91.81	8.19	63.80	3.29
		70	90.45	8.40	61.73	3.16
		75	89.09	8.61	59.65	3.03
50	30	65	123.98	9.37	91.95	3.88
		70	122.15	9.61	89.30	3.73
		75	120.32	9.85	86.64	3.58
70	30	65	156.16	10.54	120.10	4.34
		70	153.85	10.81	116.86	4.17
		75	151.54	11.09	113.63	4.01
90	30	65	188.33	11.72	148.24	4.71
		70	185.55	12.02	144.43	4.52
		75	182.77	12.32	140.62	4.35

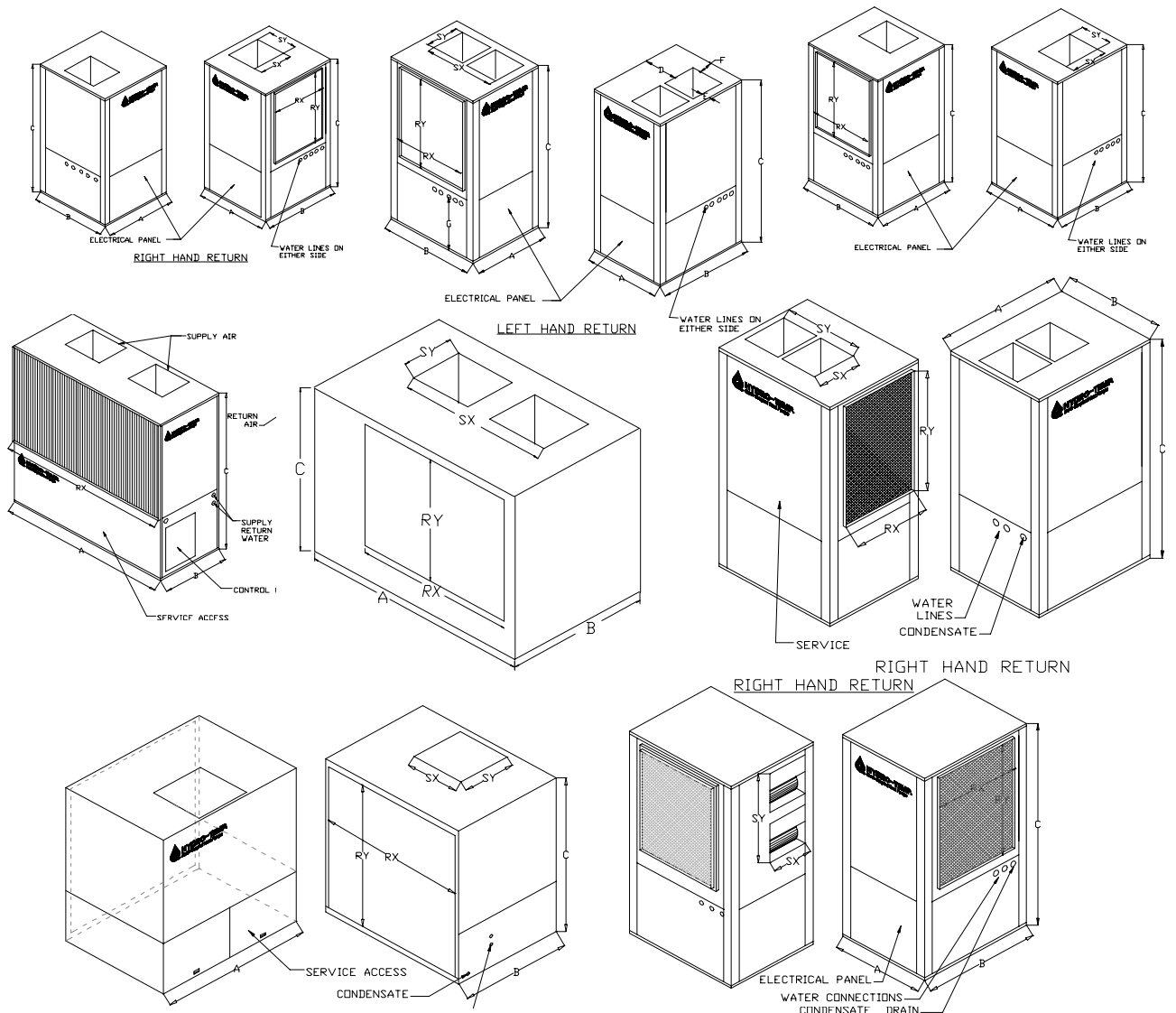
Condensor Water Flow	GPM	29.0	29.5	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0
10 Ton Brazed Plate	Press. Drop (FOH)	6.20	6.40	6.59	6.99	7.47	7.95	8.43	8.91	9.39	9.88	10.38	10.87	11.37	11.89
10 Ton Coaxial		8.75	8.91	9.07	9.38	9.70	9.99	10.28	10.57	10.86	11.15	11.43	11.72	12.01	12.04

We at Hydro-Temp are in a continuing process of research and development; therefore, specifications are subject to change without notice.



HYDRO-TEMP®

Earth Coupled Heat Pumps



The vertical upflow unit is typically designed for a ducted system. The upflow unit is available in sizes from 1 ton through 50 tons or more. The vertical unit is normally set up with the supply air discharging from the top of the unit and return air entering the unit on the side or rear. The flexibility of design allows the unit to leave the factory individually prepared for the specific installation.

Things such as supply air location and direction, return air location and direction, water line entrance, condensate drain and technical service access are all located in the most convenient location for installation and service.

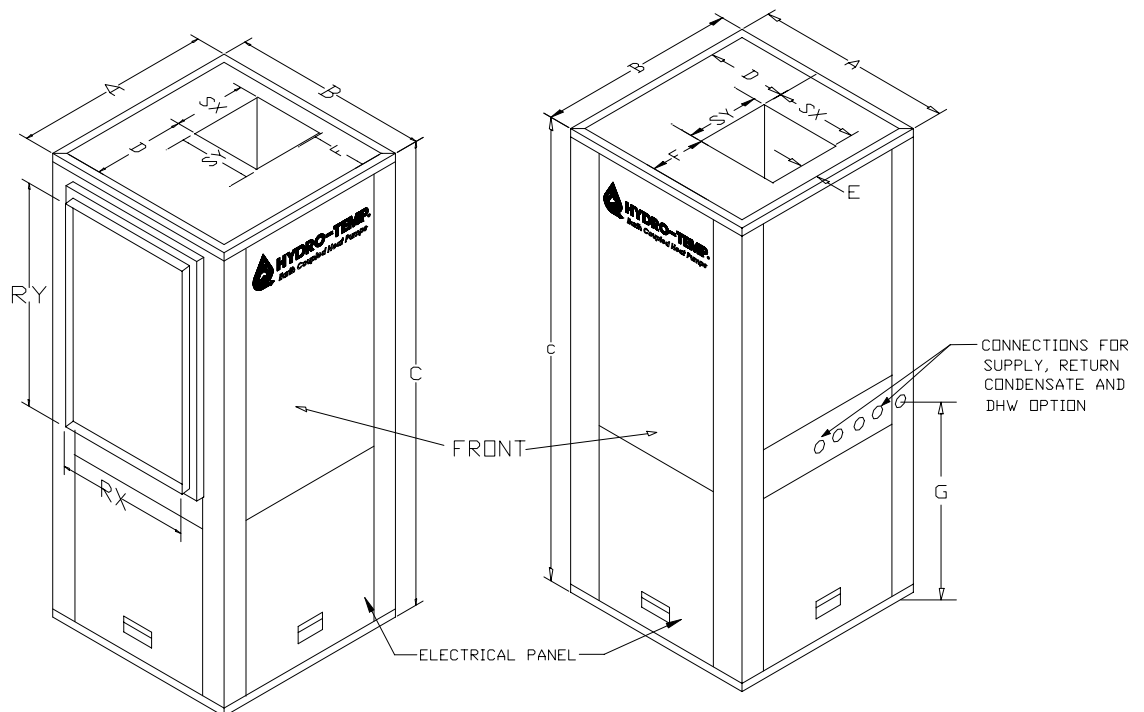
Domestic hot water, internally mounted auxiliary electric heat, U.V. antibacterial lights and electrostatic filters are some of the options available on the vertical upflow unit.



HYDRO-TEMP®

Earth Coupled Heat Pumps

THE STANDARD UPFLOW UNIT



The standard vertical upflow unit is designed for a ducted system. This unit is available in capacities ranging from 1 ton thru 5 tons in single and multiple stage configurations. Domestic hot water and internally mounted auxiliary electric heat are also available with this configuration. Used in homes, schools and a variety of commercial applications, the small footprint of the standard vertical upflow gives considerable latitude in the positioning of the unit. In addition, the flexibility of design allows the unit to leave the factory individually prepared for the specific installation. Such things as return air location, water line entrances, condensate drain, and electrical entrance can be located in the most convenient location for installation and service.

The standard vertical cabinet is designed for easy access for the service technician. The cabinet is constructed of heavy gauge metal and insulated with 1-inch thick insulation for noise suppression.

Standard Vertical Upflow

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heaatcraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates.

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - GE electronically commutated motor

Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

Control - Field mounted 24 volt digital wall thermostat.

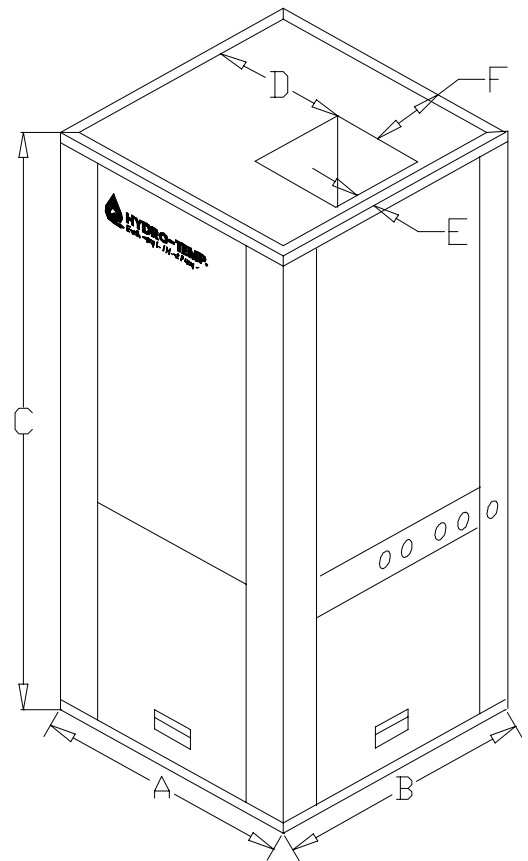
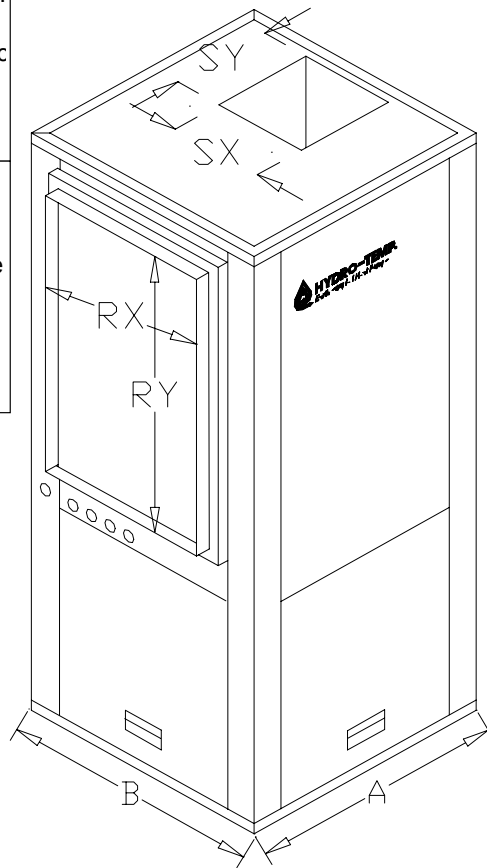
Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- Desuperheater Water Heating
- Priority (Full Condensing) Water Heating
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.
- Auxiliary Electric Heater (Internal Mount)

NOTE:

Available through 5 tons (6 ton unit may be fitted into this cabinet, depending upon selected options).
 Single or Multi stage.
 Return and Water line entry built to customer specifications

Left Hand Return shown. May also be Right Hand return or Rear Return.
 Water Lines may be on either side or on the rear.
 Normal service and maintenance from the front.



Dimensions in Inches

A	B	C	D	E	F			SX	SY	RX	RY	Water Lines	Cond. Line
28	28	60	12	1	6.5			15	15	24	34	1 in/ 1.25 in	3/4 in

LARGE VERTICAL UPFLOW

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heaatcraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates.

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - GE electronically commutated motor (OR) VFD controlled high efficiency motor

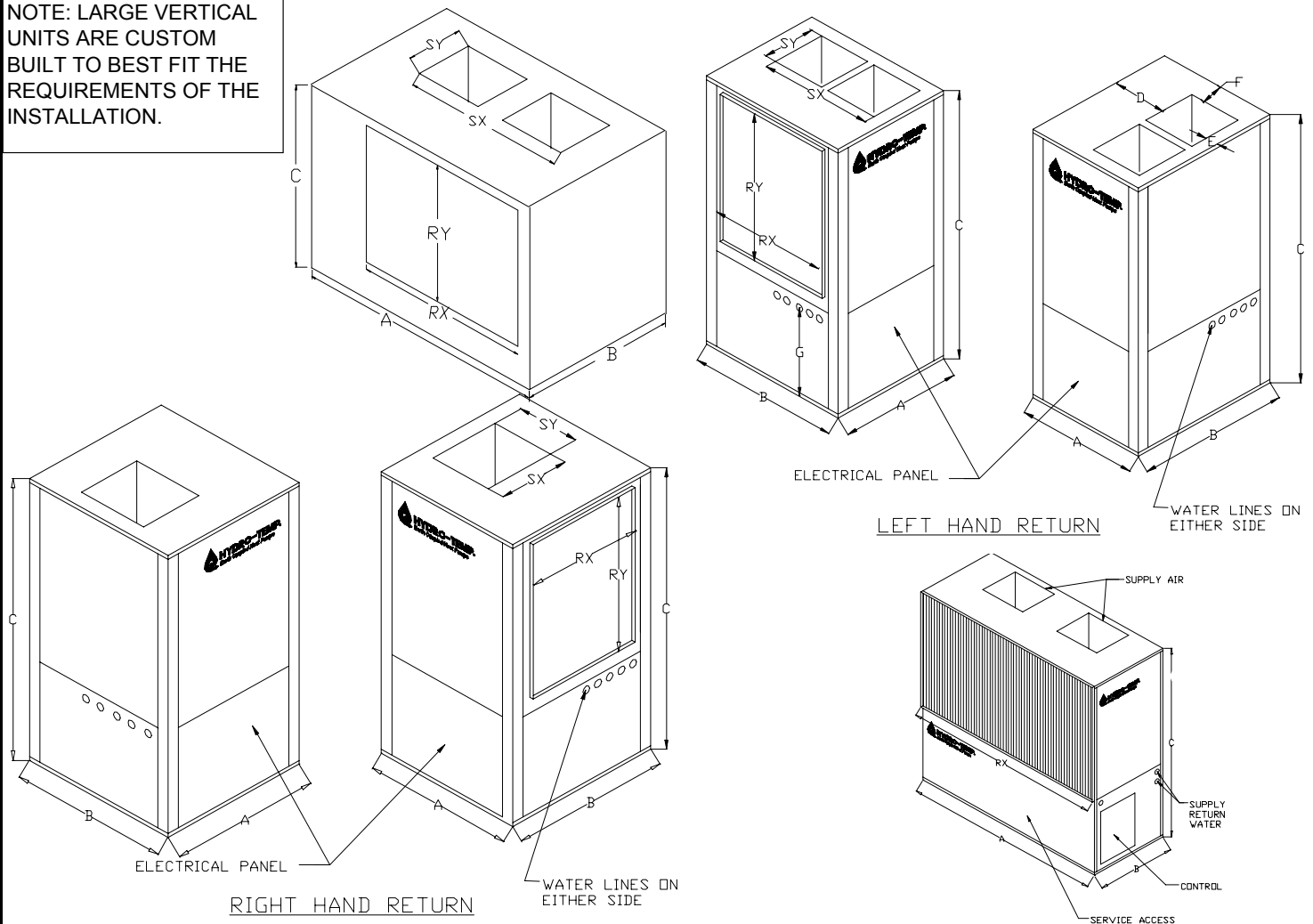
Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- Desuperheater Water Heating
- Priority (Full Condensing) Water Heating
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.
- Auxilliary Electric Heater (Internal Mount)

NOTE: LARGE VERTICAL UNITS ARE CUSTOM BUILT TO BEST FIT THE REQUIREMENTS OF THE INSTALLATION.



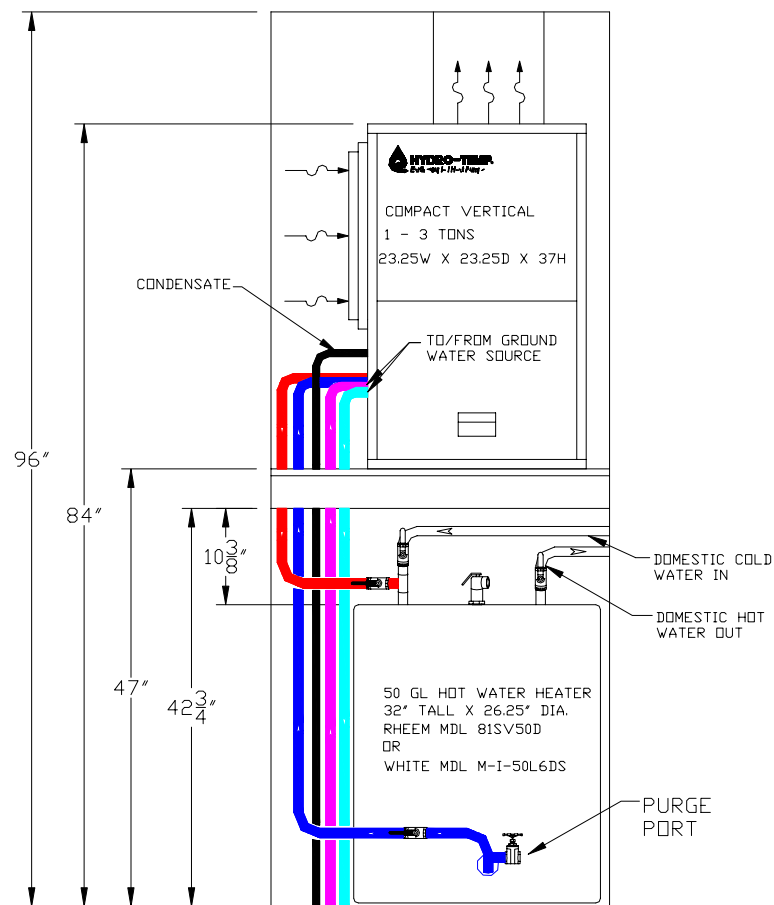
PLEASE NOTE: ALL LARGE UNITS (OVER 6 TONS) ARE CUSTOM BUILT. THE UNIT WILL BE DESIGNED TO FIT THE REQUIREMENTS OF THE INTENDED LOCATION. VARIOUS FACTORS MAY CAUSE THE CABINET SIZE TO CHANGE. PLEASE CONTACT HYDRO-TEMP FOR HELP IN DESIGNING YOUR UNIT AND DETERMINING THE EXACT DIMENSIONS.



HYDRO-TEMP®

Earth Coupled Heat Pumps

THE COMPACT UPFLOW UNIT



The Compact Vertical Upflow Unit is designed for those small areas with minimal mechanical space. By placing the unit above the water heater in a common closet, plumbing runs are greatly reduced while still maintaining serviceability. The Compact Vertical Unit is available in single stage configuration only. Desuperheater or Priority (Full Condensing) water heating is available.

COMPACT VERTICAL UPFLOW

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heatcraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - GE electronically commutated motor

Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

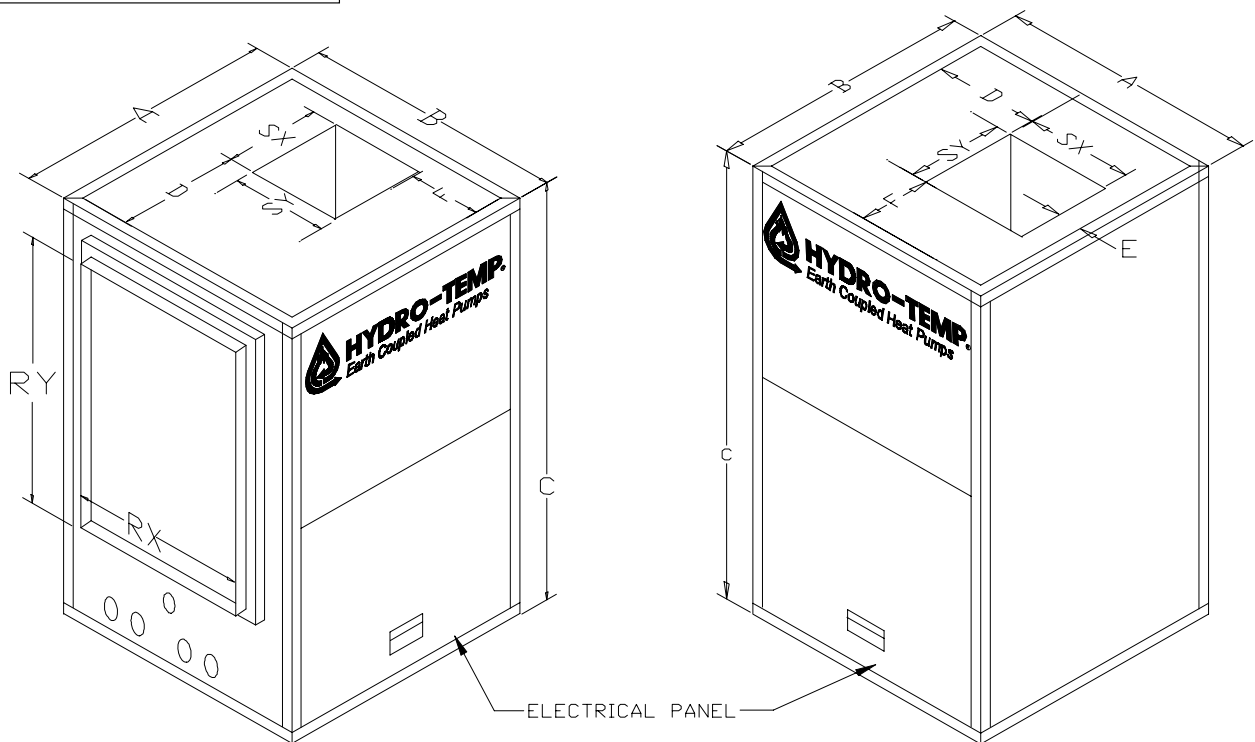
Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- Desuperheater Water Heating
- Priority (Full Condensing) Water Heating
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.

NOTE:

Available through 3 tons
Single stage only.
Designed to share closet with "Low Boy"
Water Heater for how water production.
Fully servicable from front



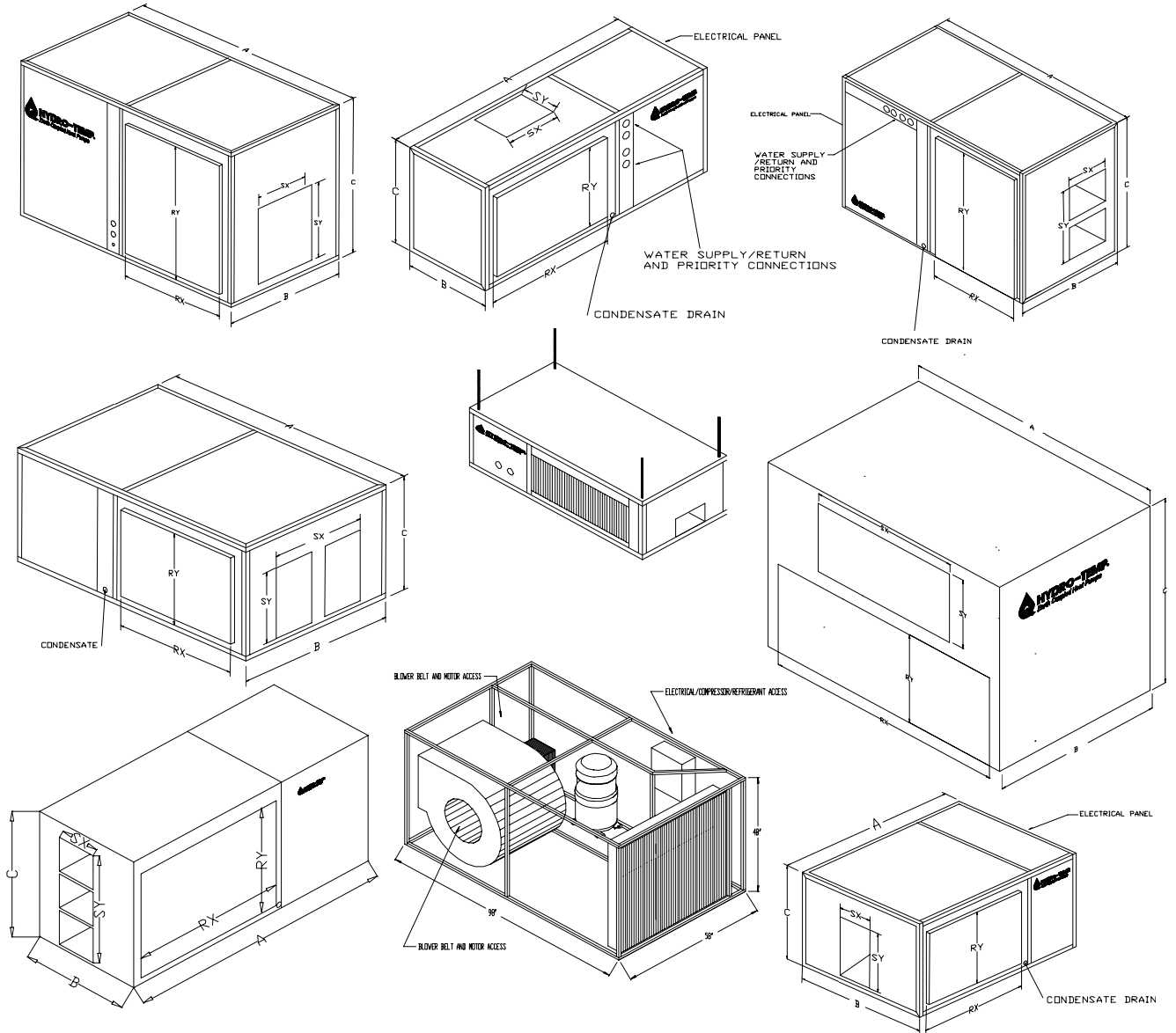
Dimensions in Inches

A	B	C	D	E	F	G	H	SX	SY	RX	RY	Water Lines	Cond. Line
23.25	23.25	37	7	3	3	3	2.25	11.9	10.4	18	23	1 in	3/4 in



HYDRO-TEMP®

Earth Coupled Heat Pumps



The horizontal unit is typically designed for a ducted system. The horizontal unit is available in sizes from 1 ton through 50 tons or more. The horizontal unit is normally set up with the supply air discharging from one end of the unit and return air entering the unit on the side. The flexibility of design allows the unit to leave the factory individually prepared for the specific installation. Things such as supply air location and direction, return air location and direction, water line entrance, condensate drain and technical service access are all located in the most convenient location for installation and service.

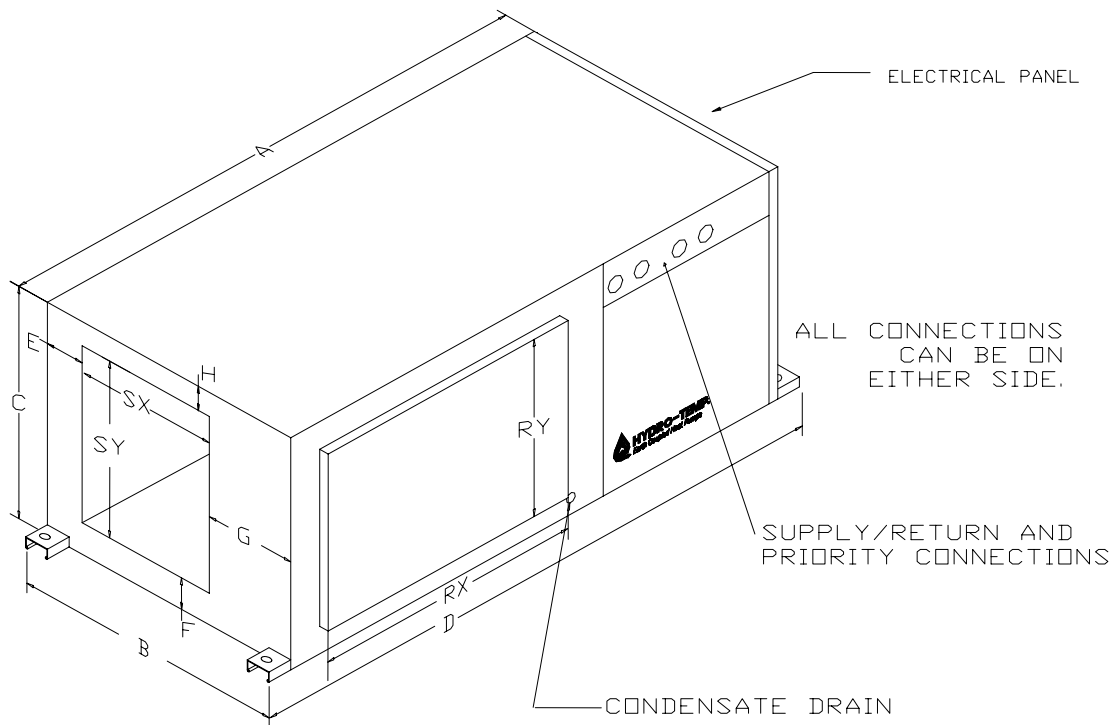
Domestic hot water, internally mounted auxiliary electric heat, U.V. antibacterial lights and electrostatic filters are some of the options available on the horizontal unit.



HYDRO-TEMP®

Earth Coupled Heat Pumps

THE STANDARD HORIZONTAL UNIT



LEFT HAND RETURN

The standard horizontal unit is designed for a ducted system. This unit is available in capacities ranging from 1 ton thru 5 tons in single and multiple stage configurations. Domestic hot water and internally mounted auxiliary electric heat are also available with this configuration. Used in homes, schools and a variety of commercial applications, the small footprint of the standard horizontal unit gives considerable latitude in the positioning of the unit. In addition, the flexibility of design allows the unit to leave the factory individually prepared for the specific installation. Such things as return air location, water line entrances, condensate drain, and electrical entrance can be located in the most convenient location for installation and service.

The standard horizontal cabinet is designed for easy access for the service technician. The cabinet is constructed of heavy gauge metal and insulated with 1 inch thick insulation for noise suppression.

STANDARD HORIZONTAL

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heatacraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - GE electronically commutated motor

Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- Desuperheater Water Heating
- Priority (Full Condensing) Water Heating
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.
- Auxiliary Electric Heater (Internal Mount)

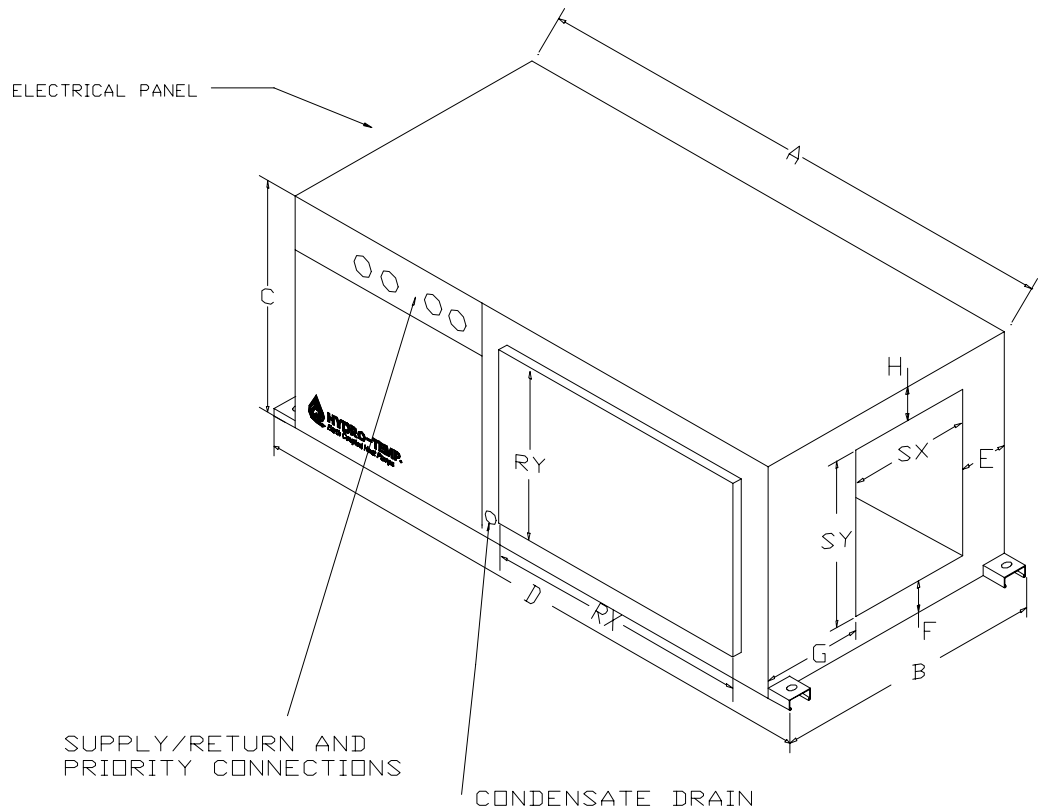
NOTE:

Available through 5 tons (6 ton unit may be fitted into this cabinet, depending upon selected options).

Single or Multi stage.

Return and Water line entry built to customer specifications

Right Hand Return shown. May also be Left Hand return. Water Lines may be on either side. Normal service and maintenance from the end opposite the supply.



Dimensions in Inches

A	B	C	D	E	F	G	H	SX	SY	RX	RY	Water Lines	Cond. Line
67	28	23.25	71	4	3.25	9.4	2.5	15	15	35	24	1 in/ 1.25 in	3/4 in

LARGE HORIZONTAL

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heatacraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - GE electronically commutated motor (OR) VFD controlled high efficiency motor

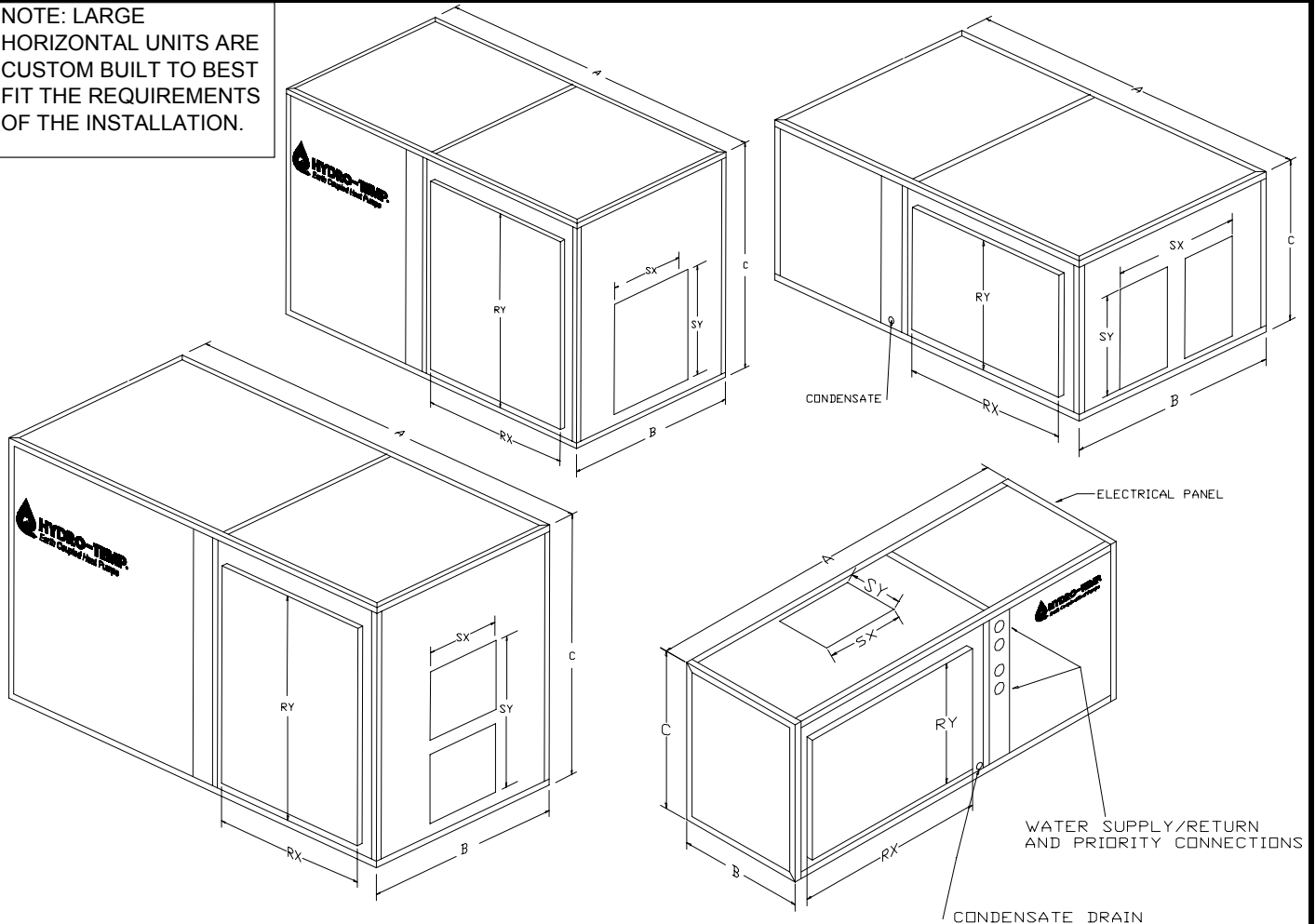
Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- Desuperheater Water Heating
- Priority (Full Condensing) Water Heating
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.
- Auxiliary Electric Heater (Internal Mount)

NOTE: LARGE HORIZONTAL UNITS ARE CUSTOM BUILT TO BEST FIT THE REQUIREMENTS OF THE INSTALLATION.



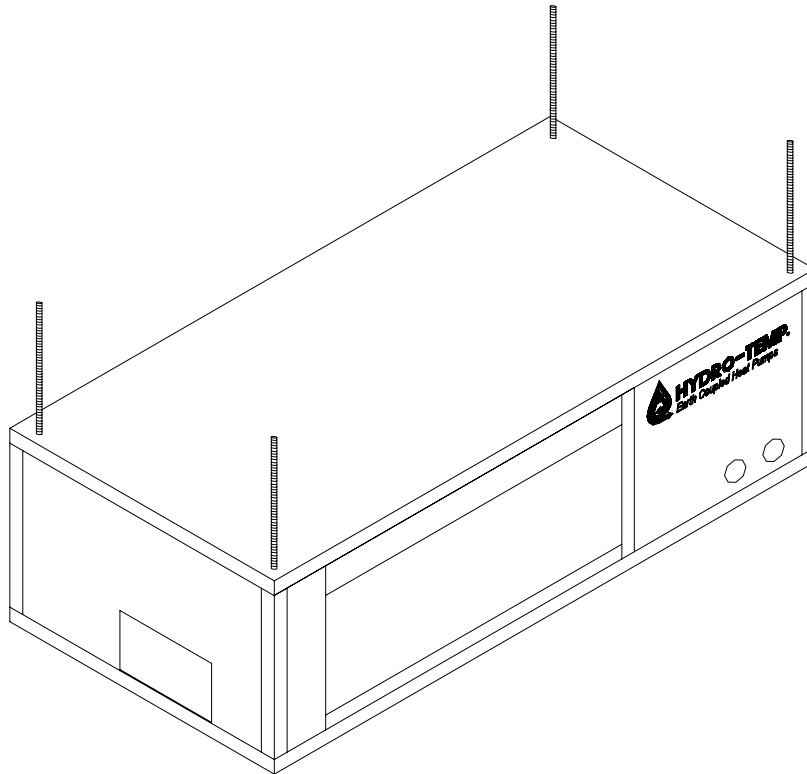
PLEASE NOTE: ALL LARGE UNITS (OVER 6 TONS) ARE CUSTOM BUILT. THE UNIT WILL BE DESIGNED TO FIT THE REQUIREMENTS OF THE INTENDED LOCATION. VARIOUS FACTORS MAY CAUSE THE CABINET SIZE TO CHANGE. PLEASE CONTACT HYDRO-TEMP FOR HELP IN DESIGNING YOUR UNIT AND DETERMINING THE EXACT DIMENSIONS.



HYDRO-TEMP[®]

Earth Coupled Heat Pumps

THE ULTRA LOW PROFILE HORIZONTAL UNIT (ULP)



The Ultra Low Profile (ULP) horizontal unit is designed for a ducted system. This unit is available in capacities up to 1 1/2 tons in single stage configuration only. Domestic hot water and internally mounted auxiliary electric heat are NOT available with this configuration. Designed for the spaces between the joists in overhead situations, the small package makes for a very versatile addition in those areas where space is at a premium. Used in homes, schools and a variety of commercial applications, the small footprint of the ULP horizontal unit gives considerable latitude in the positioning of the unit. In addition, the flexibility of design allows the unit to leave the factory individually prepared for the specific installation. Such things as return air location, water line entrances, condensate drain, and electrical entrance can be located in the most convenient location for installation and service. The Ultra Low Profile horizontal cabinet is designed for easy access for the service technician. The cabinet is constructed of heavy gauge metal and insulated with 1-inch thick insulation for noise suppression.

ULTRA LOW PROFILE HORIZONTAL

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heatcraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - High efficiency motor

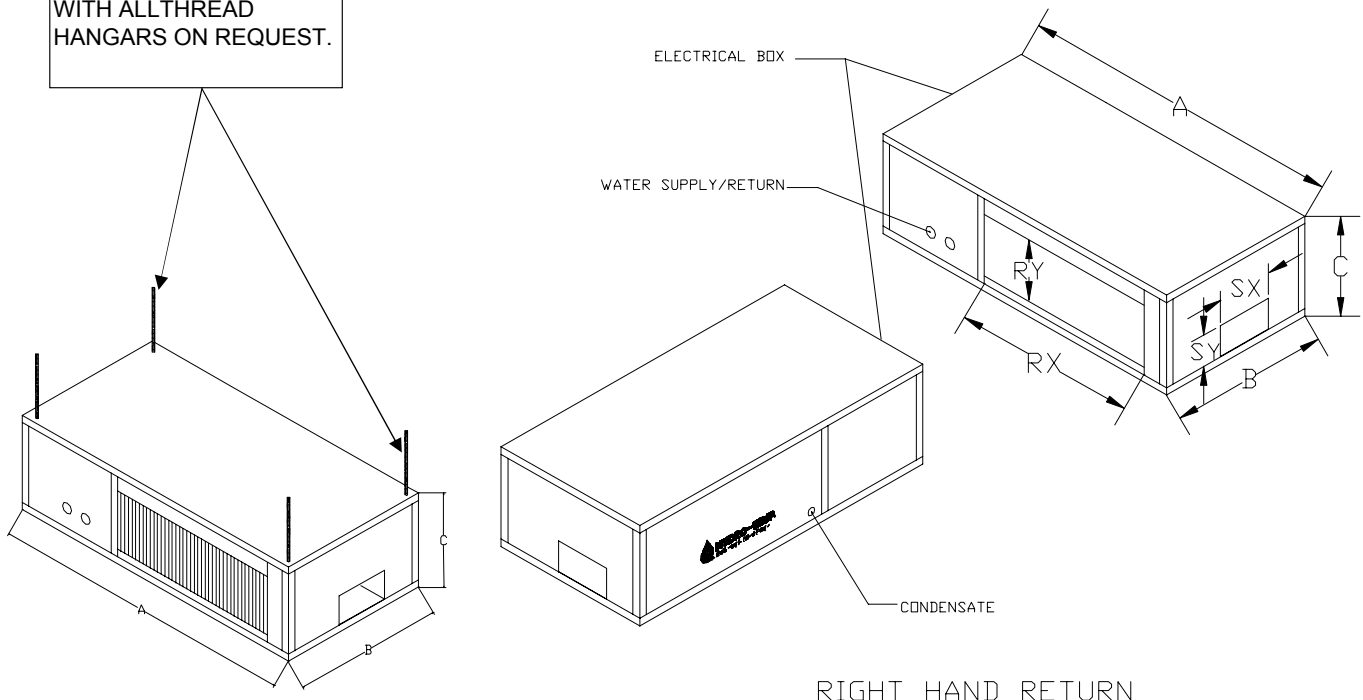
Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- UVC Antibacterial Light
- Enhanced Dehumidification option.

NOTE: MAY BE FITTED WITH ALLTHREAD HANGARS ON REQUEST.



Dimensions in Inches

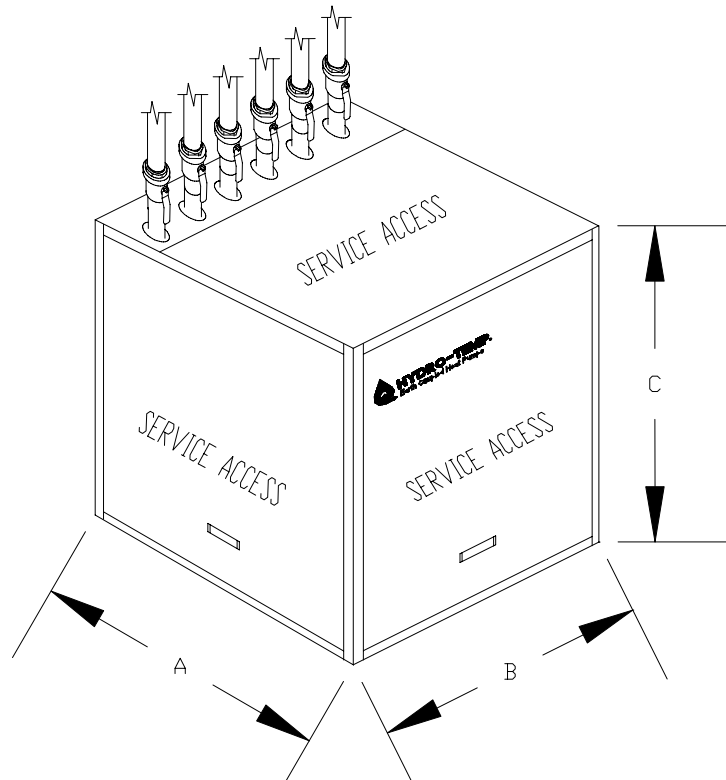
A	B	C	D	E	F			SX	SY	RX	RY	Water Lines	Cond. Line
42	20.5	13						7	4	21	8	3/4 in/ 1 in	3/4 in



HYDRO-TEMP[®]

Earth Coupled Heat Pumps

THE WATER TO WATER UNIT



The water to water unit is usually designed to produce hot water, but can also produce chilled water. This unit is available in capacities ranging from 2 tons and up in single stage configurations. Domestic hot water, swimming pool heating, and infloor heating are some of the typical uses. Used in homes, schools and a variety of commercial applications, the small footprint of the water to water unit gives considerable latitude in the positioning of the unit. In addition, the flexibility of design allows the unit to leave the factory individually prepared for the specific installation. The water line entrances and electrical entrance can be located in the most convenient location for installation and service.

The water to water cabinet is designed for easy access for the service technician. The cabinet is constructed of heavy gauge metal and insulated with 1-inch thick insulation for noise suppression.

WATER TO WATER

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

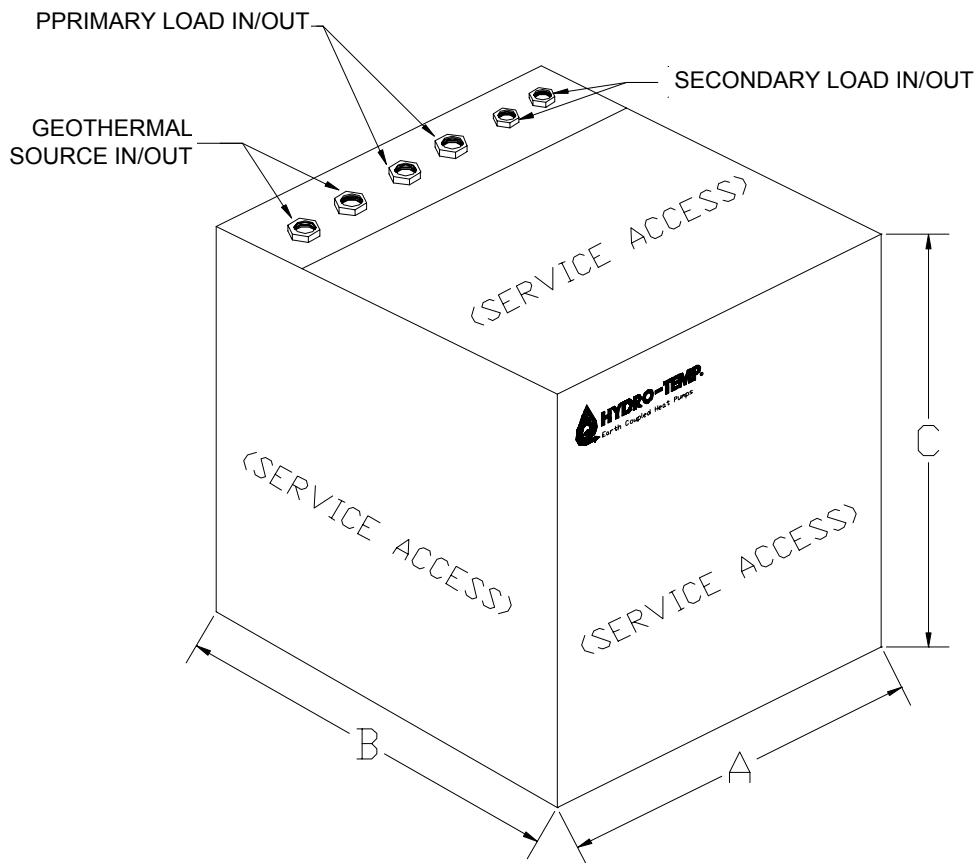
Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Source Side Heat Exchangers - Brazed Plate, with brazed fittings.

Load Side Heat Exchangers - Double wall vented

Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

Control - Field mounted 24 volt digital thermostat.



Dimensions in Inches

2 to 5 ton Single Priority			6 to 8 ton Single Priority			6 to 8 ton Double Priority		
A	B	C	A	B	C	A	B	C
28	28	28	32	32	30	35	40	36



HYDRO-TEMP®
Earth Coupled Heat Pumps

MAKEUP AIR UNITS



HYDRO-TEMP Corporation manufactures a wide variety of Make-up air equipment. These units can be configured vertically, horizontally, indoor or rooftop. These units are available has straight cooling or as heating/cooling. This equipment incorporates fully modulating hot-gas reheat to introduce neutral air into the space during summer operation and has the ability to provide re-cooling, for neutral air during winter operation. This equipment is also available with full or partial energy recovery. Energy recovery is available using enthalpy wheels, plate type, or heat-pipe technology. Current ranges (but not limited) are from 2 ton to 170 ton. Call us with your make-up air needs.



120 Ton Rooftop Make-up Air Unit

General Specifications For Make Up-Air Units

CABINET: Cabinets will be built of quality materials, appropriate for the setting into which the unit will be installed. The cabinet design will be optimized for installation and service. Outdoor cabinets are typically salt spray rated 2" double wall construction with an extruded aluminum frame and indoor units are similar construction with 1" thick multi-density sound absorbing insulation.

DRAINPAN: One piece sloped and welded stainless steel.

REFRIGERATION CIRCUIT: Typical refrigeration circuits include a reversing valve, electronic stepper motor expansion valve, electronic stepper motor modulating hot gas reheat valves and high/low side access valves.

COMPRESSOR: Typical refrigeration circuits include parallel hermetically sealed compressors (scroll, reciprocating or screw). A parallel compressor installation refers to a system of compressors interconnected and working together. Though parallel installation has several benefits, the primary reason is reduced operating cost through greater control of capacity and power consumption. This is achieved by staggering compressor switch-on sequences that allow the parallel system to match its power with the capacity needed. The compressors are equipped with overload protection and are mounted on rubber vibration insulators.

HEAT EXCHANGERS: Stainless steel brazed plate with brazed fittings. Includes cabinet mounted 18 mesh strainer.

AIR COIL: Heatcraft ARI certified, seamless copper filled tube with aluminum lanced fins and aluminum end plates.

BLOWER: Delhi Industries centrifugal blower with forward curved galvanized wheel and enamel finish frame.

BLOWER MOTOR: Baldor motors rated for continuous operation. Blower motors controlled by Cutler-Hammer adjustable frequency drive which includes electronic motor overload protection circuits that are designed to meet the requirements of NEC Article 430-2.

CONTROLS: Automated Logic Controls, BACnet compatible custom programmable highspeed 16 bit processor with 1 mb flash memory and 1 mb of battery backed ram.

ELECTRICAL: Can be configured with built in disconnect, dual point power connection. All internal components are separately fused.

OPTIONS AND ACCESSORIES:

Corrosion resistant heat exchanger

Cleanable electrostatic filters

UVC Antibacterial light

CO₂ Sensors



SUBMITTAL DATA

PROJECT CATALOG

02/09/06 UNIT DESIGNATION

MAU-1500

PHYSICAL INFORMATION

10 Ton Make Up Air W/Reheat - 2 Stage	
VUX31B120CLXXK1S	
FAN WHEEL	10.25 x 7
FAN MOTOR	1 HP
Compressor 1	Scroll 5 Tons
Compressor 2	Scroll 5 Tons
Heat/Cool Air Coil	26 X 40 3 ROWS
Reheat Air Coil	26 X 40 3 ROWS
Water Flow	31.0 GPM
Loop Pump/s	3/4 HP
PRESSURE DROP	7.0 Ft of Hd
Water Source HX	10 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	26 x 40
Weight	1250 LBS

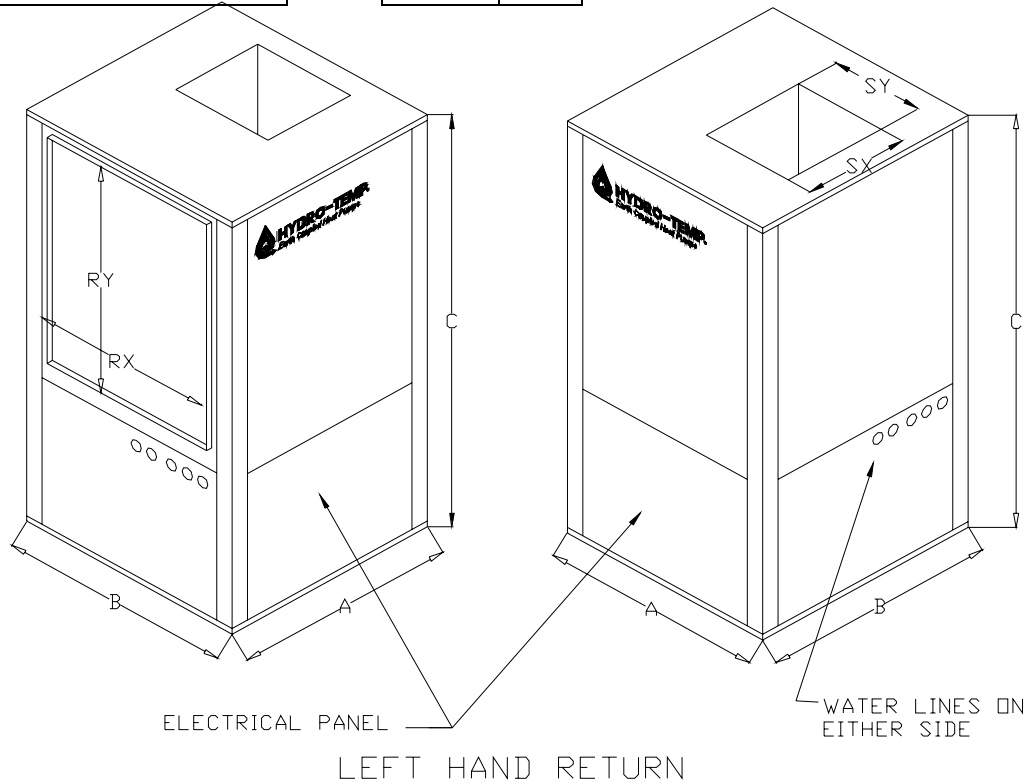
UNIT ELECTRICAL DATA

Unit VOLTAGE 60 HZ	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
230V/1Ø	72.9	80.1	109.0	100	1
208V/3Ø	40.8	45.2	62.5	60	1
460V/3Ø	22.2	24.4	33.3	30	1

Dimensions (Inches)

A	50
B	34
C	73
SX	10
SY	11
RX	26
RY	40

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
10	31	50°F	50,900	4.2	31	85°F	152,901	122,712	56,674	13.9
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1
Internal Static Pressure	0.4
Total Static Pressure	1.4

EXTERNAL STATIC PRESSURE @1217

	0.0"	0.2"	0.4"	0.6"	0.8"	1.0"	1.1"
CFM	1900	1825	1750	1700	1600	1500	1500



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-1750

PHYSICAL INFORMATION

12 Ton Make Up Air W/Reheat - 3 Stage	
VUX31C144CLXXK1S	
FAN WHEEL	10.25 x 7
FAN MOTOR	1 HP
Compressor 1	Scroll 5 Tons
Compressor 2	Scroll 7 Tons
Heat/Cool Air Coil	32 X 19 3 ROWS (X2)
Reheat Air Coil	29 X 19 3 ROWS (X2)
Water Flow	37.0 GPM
Loop Pump/s	3/4 HP
PRESSURE DROP	7.0 Ft of Hd
Water Source HX	12.5 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	32 x 38
Weight	1560 LBS

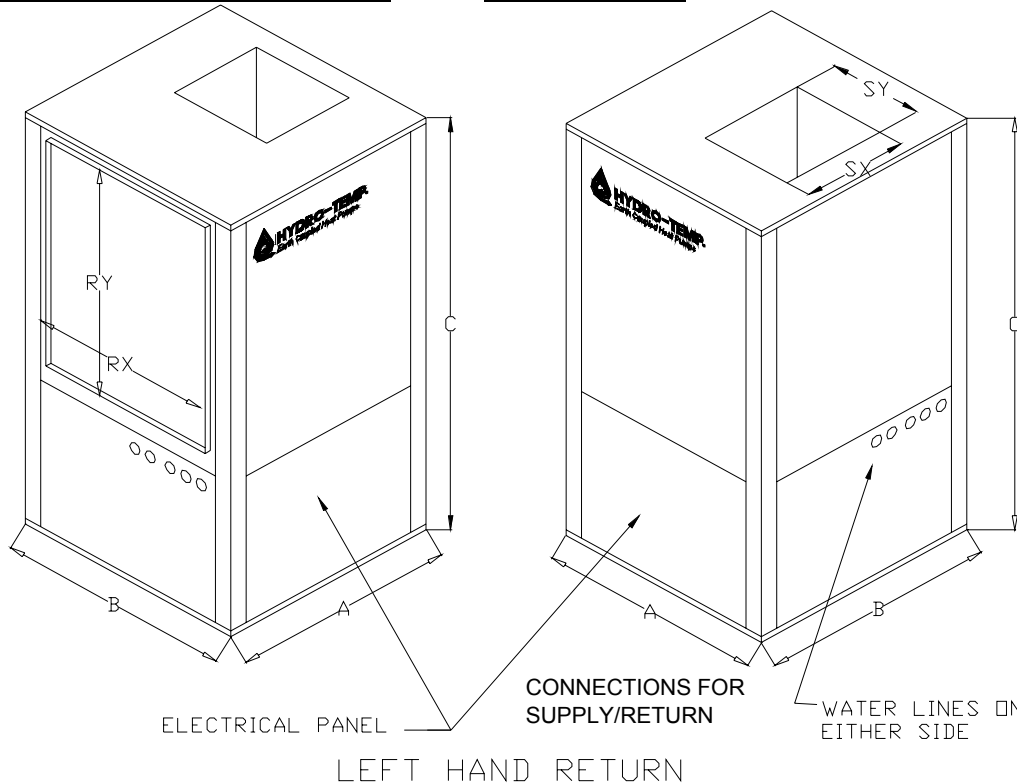
UNIT ELECTRICAL DATA

Unit VOLTAGE	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
60 HZ					
230v/1Ø	N/A	N/A	N/A	N/A	
208V/3Ø	45.3	50.8	72.6	60	1
460V/3Ø	24.3	27.0	38.0	30	1

Dimensions (Inches)

A	54
B	40
C	80
SX	10
SY	11
RX	32
RY	38

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
12	37	50°F	50,900	4.2	37	85°F	184,171	147,727	68,227	13.8
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1
Internal Static Pressure	0.4
Total Static Pressure	1.4

EXTERNAL STATIC PRESSURE @1244 RPM

	0.0"	0.2"	0.4"	0.6"	0.8"	1.0"	1.1"
CFM	2100	2025	1950	1900	1825	1750	1700



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-2000

PHYSICAL INFORMATION

15 Ton Make Up Air W/Reheat - 3 Stage	
HHX31C180CTXXK1S	
FAN WHEEL	11.128 X 8
FAN MOTOR	1 1/2 HP
Compressor 1	SCROLL 5 TONS
Compressor 2	SCROLL 10 TONS
Heat/Cool Air Coil	50X30 6 Rows
Reheat Air Coil	50 x 30 2 Rows
Water Flow	47.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	8.46 Ft of Hd
Water Source HX	15 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	24X30 (x2)
Weight	1800 LBS

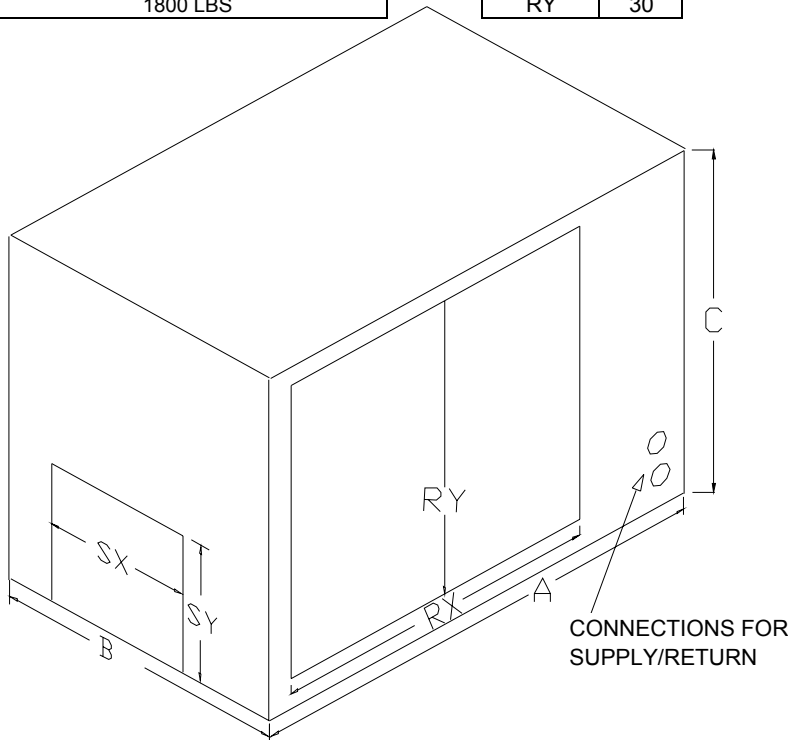
UNIT ELECTRICAL DATA

Unit VOLTAGE	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
60 HZ					
230v/1Ø	N/A	N/A	N/A	N/A	
208V/3Ø	58.4	67.3	103.0	80	1
460V/3Ø	33.2	38.4	59.1	50	1

Dimensions (Inches)

A	96
B	64
C	36
SX	10.5
SY	11.5
RX	50
RY	30

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
15	47	85°F	67,321	4.5	47.0 GPM	85°F	234,553	187,703	86,690	13.7
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.4
Total Static Pressure	1.9

EXTERNAL STATIC PRESSURE @1339 RPM

	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
CFM	2,325	2,275	2,200	2,125	2,050	2,000	1,950



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-4000

PHYSICAL INFORMATION

27 Ton Make Up Air W/Reheat - 3 Stage	
HHX31C300CTXXK1S	
FAN WHEEL	12.5 C 12.5
FAN MOTOR	3 HP
Compressor 1	DANFOSS 10 TONS
Compressor 2	DANFOSS 15 TONS
Heat/Cool Air Coil	58X30 6 Rows
Reheat Air Coil	58X30 2 Rows
Water Flow	82.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	8.7 Ft of Hd
Water Source HX	(2X) 12.5 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	TBD
Weight	3000 LBS

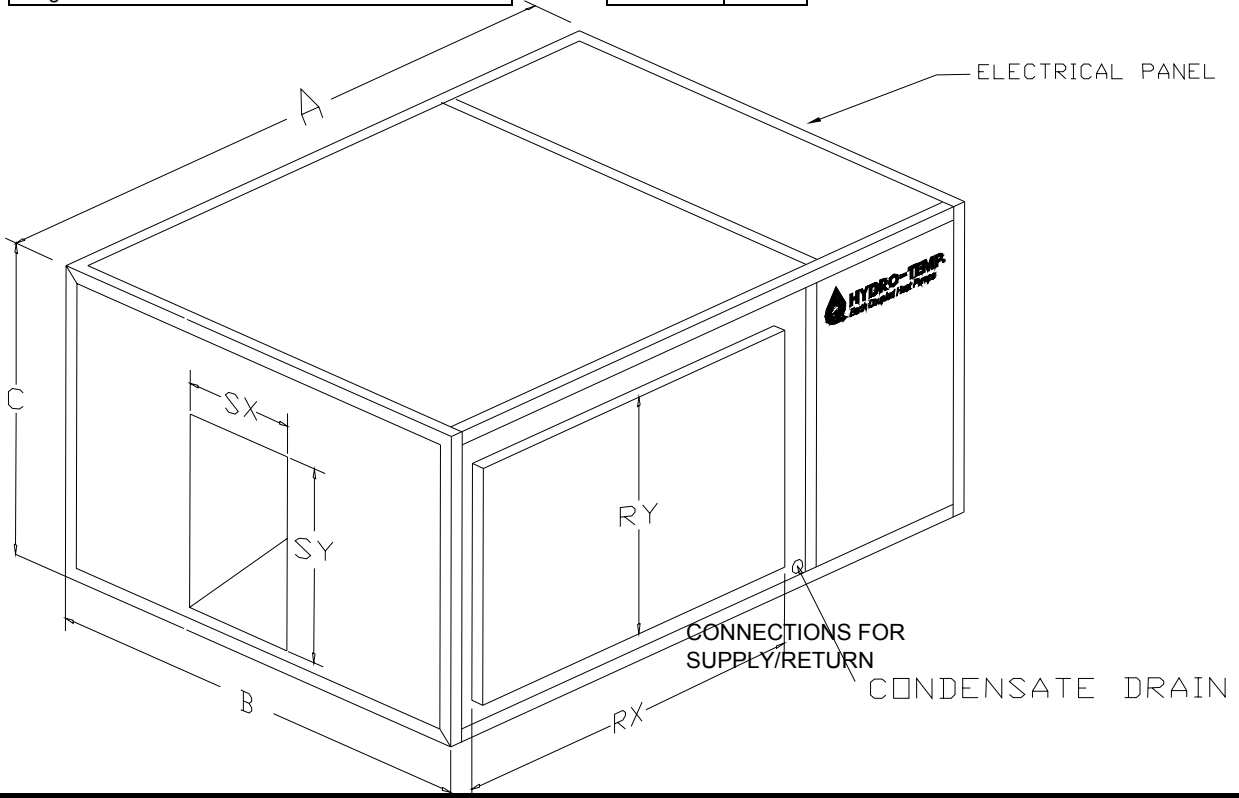
UNIT ELECTRICAL DATA

Unit VOLTAGE	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
60 HZ					
230v/1Ø	N/A	N/A	N/A	N/A	
208V/3Ø	119.7	138.5	213.5	160	1
460V/3Ø	61.5	70.3	105.3	80	1

Dimensions (Inches)

A	106
B	70
C	36
SX	16
SY	14
RX	58
RY	30

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
27	82	85°F	145,200	4.4	82.0 GPM	85°F	412,785	329,600	152,224	13.5
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.5
Total Static Pressure	2.0

EXTERNAL STATIC PRESSURE @1175 RPM

	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
CFM	4,450	4,350	4,250	4,150	4,075	4,000	3,900



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-6000

PHYSICAL INFORMATION

45 Ton Make Up Air W/Reheat - 3 Stage	
HHX31C540CTXXK1S	
FAN WHEEL	15.5 X 15
FAN MOTOR	5 HP
Compressor 1	DANFOSS 15 TONS
Compressor 2	DANFOSS 25 TONS
Heat/Cool Air Coil	70X36 6 Rows
Reheat Air Coil	70X36 2 Rows
Water Flow	135.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	23.3 Ft of Hd
Water Source HX	50 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	TBD
Weight	5400 LBS

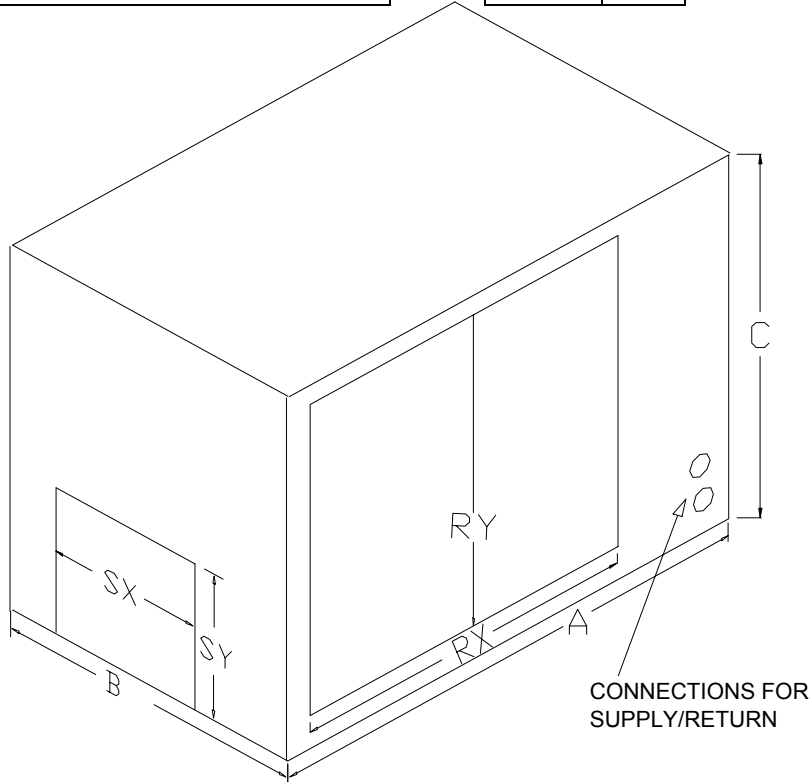
UNIT ELECTRICAL DATA

Unit VOLTAGE 60 HZ	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
230v/1Ø	N/A	N/A	N/A	N/A	
208V/3Ø	177.1	199.1	287.0	240	1
460V/3Ø	91.9	104.2	153.5	120	1

Dimensions (Inches)

A	120
B	72
C	60
SX	19
SY	16
RX	70
RY	36

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
45	135	85°F	215,400	4.3	135	85°F	674,163	538,669	248,781	13.6
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.7
Total Static Pressure	2.2

EXTERNAL STATIC PRESSURE @1100 RPM

	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
CFM	6,550	6,450	6,350	6,275	6,150	6,000	5,900



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-6900

PHYSICAL INFORMATION

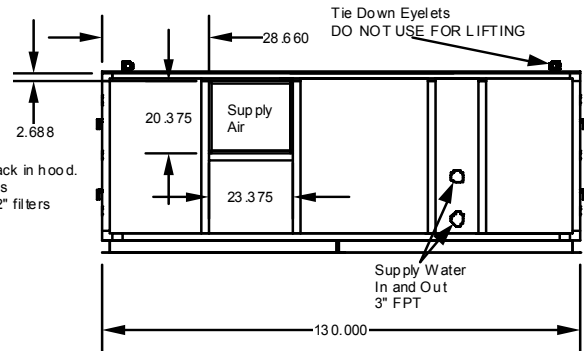
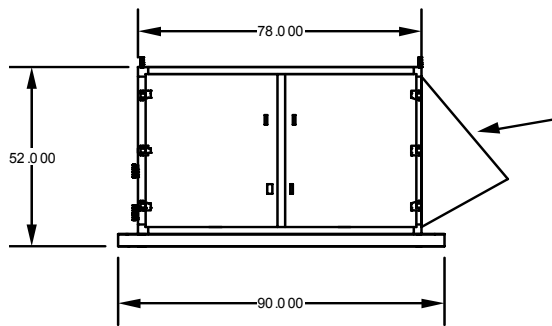
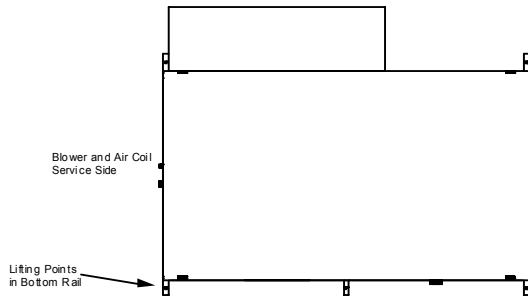
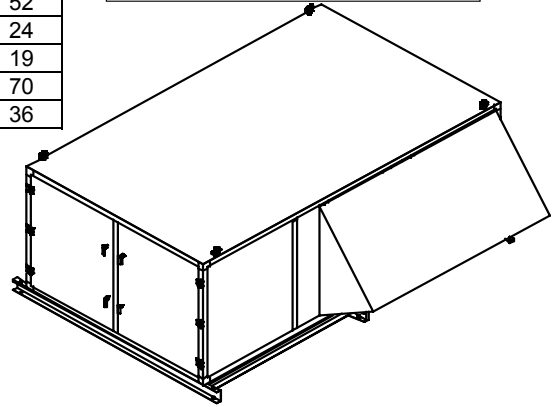
50 Ton Make Up Air W/Reheat - 3 Stage	
HHX41C600CTXXK1S	
FAN WHEEL	18 X 18
FAN MOTOR	5 HP
Compressor 1	DANFOSS 20 TONS
Compressor 2	DANFOSS 25 TONS
Heat/Cool Air Coil	70 X 36 6 Rows
Reheat Air Coil	70 X 36 2 Rows
Water Flow	153.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	18.5 Ft of Hd
Water Source HX	50 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	25X20 (x3)
Weight	6000 LBS

UNIT ELECTRICAL DATA

Unit	FLA	MCA	MOCP	Recomm Breaker	Number of Electrical feeds to unit
VOLTAGE 60 HZ					
230v/1Ø					
208V/3Ø	180.0	202.0	289.9	240	1
460V/3Ø	92.6	104.9	154.2	120	1

Dimensions (Inches)	
A	130
B	78
C	52
SX	24
SY	19
RX	70
RY	36

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
50	153	85°F	294,772	4.2	153	85°F	764,589	610,476	281,945	13.5
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.7
Total Static Pressure	2.2

EXTERNAL STATIC PRESSURE @824 RPM

CFM	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
	9,400	8,450	7,900	7,600	7,300	6,930	6,700



HYDRO-TEMP
Earth Coupled Heat Pumps

SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-8000

PHYSICAL INFORMATION

55 Ton Make Up Air W/Reheat - 3 Stage	
HHX31C660CTXK1S	
FAN WHEEL	18 X 18
FAN MOTOR	5 HP
Compressor 1	DANFOSS 13 TONS
Compressor 2	DANFOSS 13 TONS
Compressor 3	DANFOSS 25 TONS
Heat/Cool Air Coil	58 X 30 (X2) 6 Rows
Reheat Air Coil	58 X 30 (X2) 2 Rows
Water Flow	137.5 GPM
Loop Pump/s	NONE
PRESSURE DROP	23.3 Ft of Hd
Water Source HX	(3X) 20 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	TBD
Weight	5400 LBS

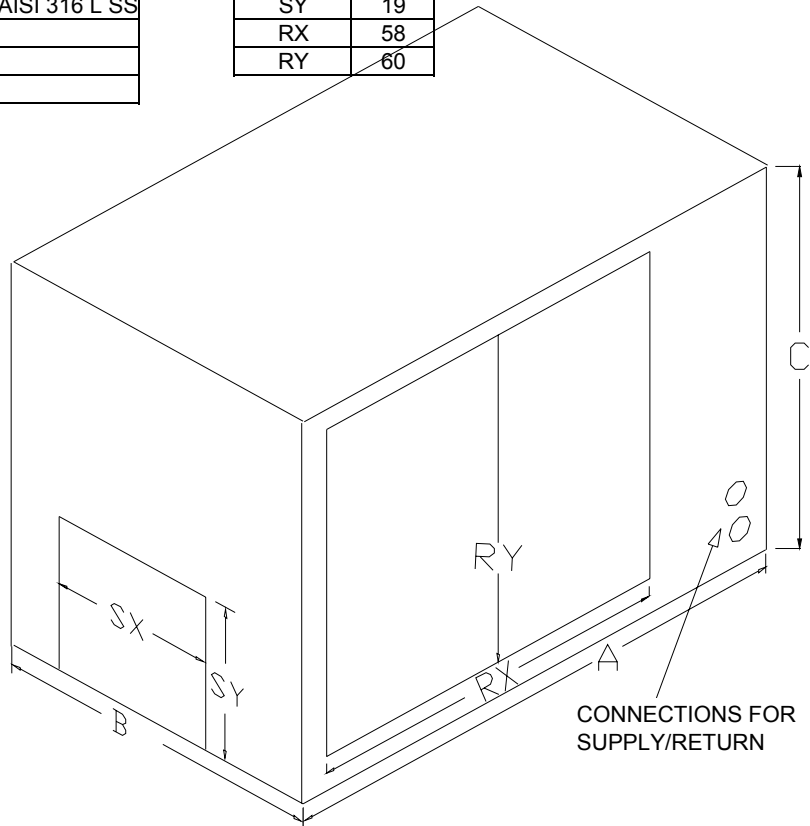
UNIT ELECTRICAL DATA

Unit	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
VOLTAGE 60 HZ					
230v/1Ø					
208V/3Ø	193.5	215.5	303.4	260	1
460V/3Ø	102.7	115.0	164.3	130	1

Dimensions (Inches)

A	110
B	80
C	66
SX	22
SY	19
RX	58
RY	60

DIMENSIONS AND LAYOUT
MAY CHANGE WITH SPECIFIC
SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
55	137.5	85°F	145,200	4.4	137.5	85°F	412,785	329,600	152,224	13.5
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.5
Total Static Pressure	2.0

EXTERNAL STATIC PRESSURE @791 RPM

CFM	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
	8,850	8,600	8,425	8,275	8,175	8,000	7,800



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-6000

PHYSICAL INFORMATION

45 Ton Make Up Air W/Reheat - 3 Stage	
HHX31C540CTXXK1S	
FAN WHEEL	15.5 X 15
FAN MOTOR	5 HP
Compressor 1	DANFOSS 15 TONS
Compressor 2	DANFOSS 25 TONS
Heat/Cool Air Coil	70X36 6 Rows
Reheat Air Coil	70X36 2 Rows
Water Flow	135.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	23.3 Ft of Hd
Water Source HX	50 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	TBD
Weight	5400 LBS

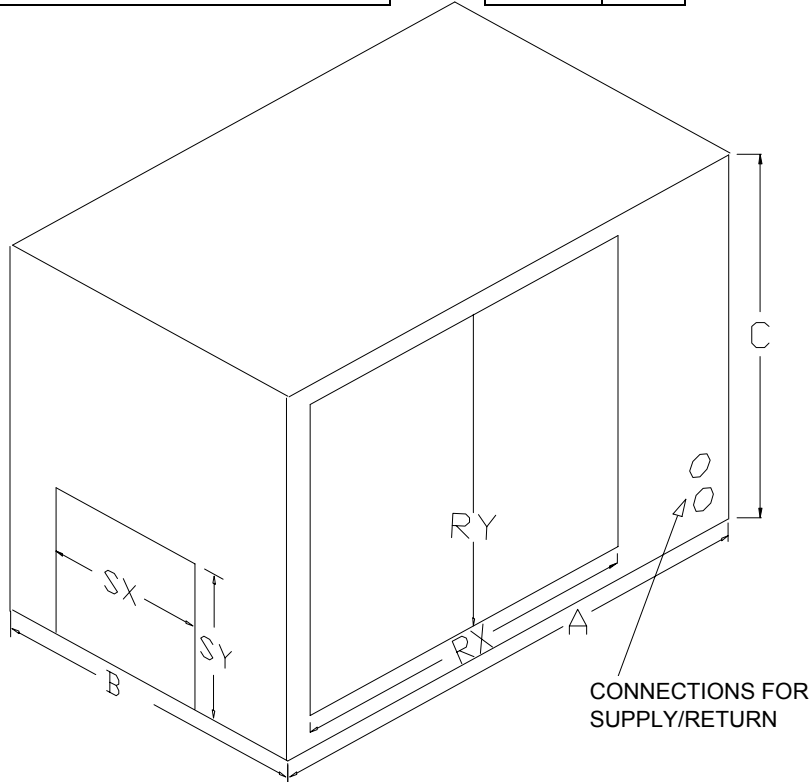
UNIT ELECTRICAL DATA

Unit VOLTAGE 60 HZ	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
230v/1Ø	N/A	N/A	N/A	N/A	
208V/3Ø	177.1	199.1	287.0	240	1
460V/3Ø	91.9	104.2	153.5	120	1

Dimensions (Inches)

A	120
B	72
C	60
SX	19
SY	16
RX	70
RY	36

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



CONNECTIONS FOR SUPPLY/RETURN

PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
45	135	85°F	215,400	4.3	135	85°F	674,163	538,669	248,781	13.6
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.7
Total Static Pressure	2.2

EXTERNAL STATIC PRESSURE @1100 RPM

CFM	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
	6,550	6,450	6,350	6,275	6,150	6,000	5,900



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-10,000

PHYSICAL INFORMATION

70 Ton Make Up Air W/Reheat - 3 Stage	
HHX31C840CTXK1S	
FAN WHEEL	22x22
FAN MOTOR	7.5 HP
Compressor 1	DANFOSS 15 TONS
Compressor 2	DANFOSS 15 TONS
Compressor 3	DANFOSS 15 TONS
Compressor 4	DANFOSS 25 TONS
Heat/Cool Air Coil	63 X 30 (X2) 6 Rows
Reheat Air Coil	60 X 30 (X2) 2 Rows
Water Flow	214.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	5.1 Ft of Hd
Water Source HX	(4X) 20 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	TBD
Weight	7070 LBS

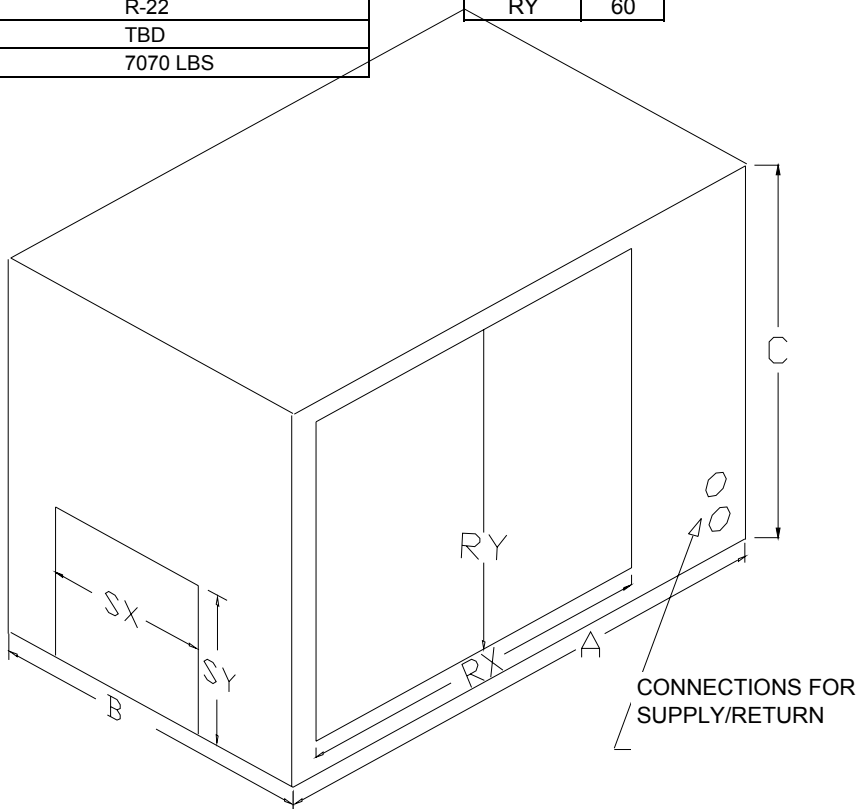
UNIT ELECTRICAL DATA

Unit	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
VOLTAGE 60 HZ					
230v/1Ø					1
208V/3Ø	334.9	356.9	444.8	420	1
460V/3Ø	152.2	161.1	196.8	190	1

Dimensions (Inches)

A	116
B	86
C	66
SX	28
SY	28
RX	63
RY	60

DIMENSIONS AND LAYOUT
MAY CHANGE WITH SPECIFIC
SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
70	214	85°F	215,400	4.3	214	85°F	1,074,887	857,007	395,804	13.4
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.7
Total Static Pressure	2.2

EXTERNAL STATIC PRESSURE @692 RPM

CFM	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
	11,550	11,250	10,950	10,650	10,400	10,000	9,675



HYDRO-TEMP
Earth Coupled Heat Pumps

SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-12,000

PHYSICAL INFORMATION

90 Ton Make Up Air W/Reheat - 3 Stage	
HHX41C1080CTXXK1S	
FAN WHEEL	22x22
FAN MOTOR	7.5 HP
Compressor 1	DANFOSS 20 TONS
Compressor 2	DANFOSS 20 TONS
Compressor 3	DANFOSS 20 TONS
Compressor 4	DANFOSS 20 TONS
Heat/Cool Air Coil	70 X 36 (X2) 6 Rows
Reheat Air Coil	70 X 36 (X2) 2 Rows
Water Flow	268.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	23.1 Ft of Hd
Water Source HX	(2X) 50 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	TBD
Weight	7920 LBS

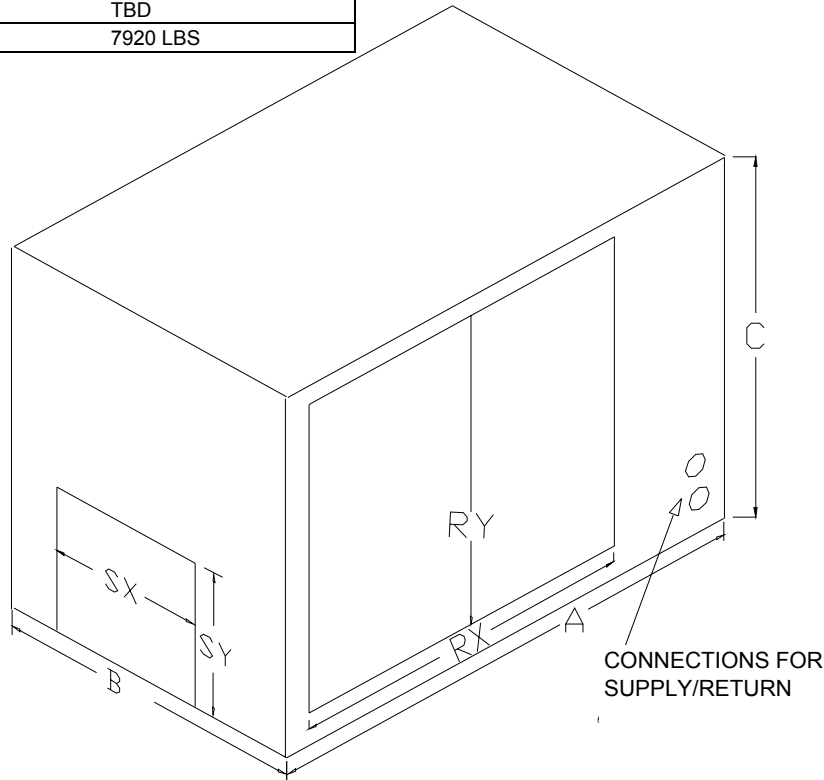
UNIT ELECTRICAL DATA

Unit	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
VOLTAGE 60 HZ					
230v/1Ø					1
208V/3Ø	323.1	342.6	420.5	420	1
460V/3Ø	154.3	163.2	198.9	200	1

Dimensions (Inches)

A	120
B	86
C	78
SX	28
SY	28
RX	63
RY	60

DIMENSIONS AND LAYOUT
MAY CHANGE WITH SPECIFIC
SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
90	268	85°F	294,772	4.2	268	85°F	1,346,166	1,072,428	495,295	13.4
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.7
Total Static Pressure	2.2

EXTERNAL STATIC PRESSURE @692 RPM

CFM	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
	13,300	13,050	12,800	12,550	12,275	12,000	11,750



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-14,000

PHYSICAL INFORMATION

100 Ton Make Up Air W/Reheat - 3 Stage	
HHX41C1200CTXXK1S	
FAN WHEEL	22x22
FAN MOTOR	10 HP
Compressor 1	DANFOSS 25 TONS
Compressor 2	DANFOSS 20 TONS
Compressor 3	DANFOSS 25 TONS
Compressor 4	DANFOSS 20 TONS
Heat/Cool Air Coil	70 X 36 (X2) 6 Rows
Reheat Air Coil	70 X 36 (X2) 2 Rows
Water Flow	305.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	28.2 Ft of Hd
Water Source HX	(2X) 50 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	TBD
Weight	8100 LBS

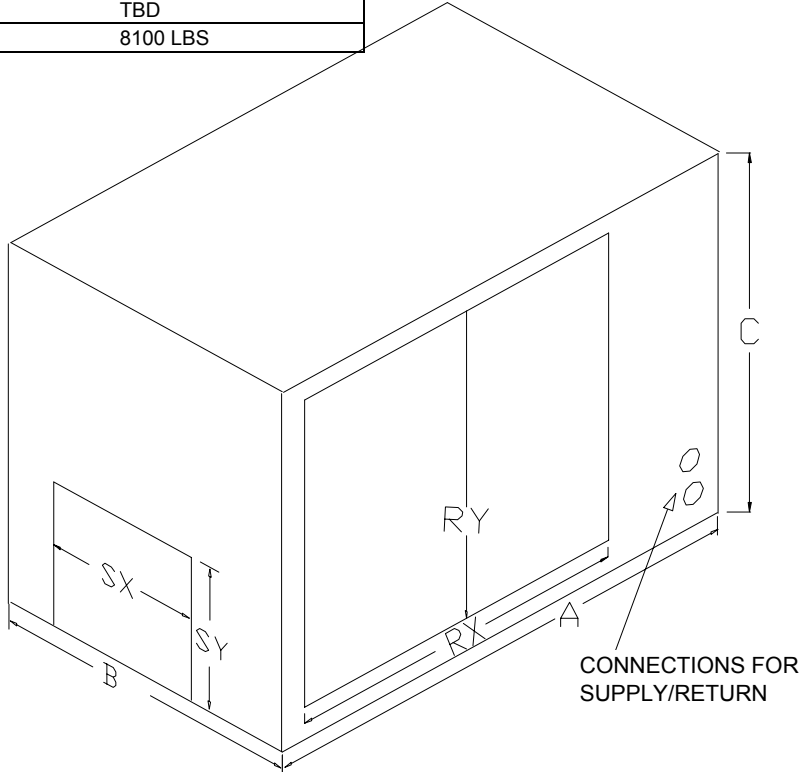
UNIT ELECTRICAL DATA

Unit VOLTAGE 60 HZ	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
230v/1Ø					1
208V/3Ø	384.6	406.6	494.5	480	1
460V/3Ø	198.6	210.9	260.2	260	1

Dimensions (Inches)

A	120
B	88
C	80
SX	28
SY	28
RX	70
RY	72

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
100	305	85°F	376,519	4.3	305	85°F	1,529,178	1,220,952	563,890	13.5
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.7
Total Static Pressure	2.2

EXTERNAL STATIC PRESSURE @722 RPM

CFM	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
	15,150	14,875	14,700	14,450	14,250	14,000	13,750



SUBMITTAL DATA

PROJECT CATALOG

02/09/06

UNIT DESIGNATION

MAU-17,100

PHYSICAL INFORMATION

120 Ton Make Up Air W/Reheat - 3 Stage	
HHX41C1440CTXXK1S	
FAN WHEEL	25X25
FAN MOTOR	15 HP
Compressor 1	DANFOSS 25 TONS
Compressor 2	DANFOSS 25 TONS
Compressor 3	DANFOSS 25 TONS
Compressor 4	DANFOSS 25 TONS
Heat/Cool Air Coil	70 X 36 (X2) 6 Rows
Reheat Air Coil	70 X 36 (X2) 2 Rows
Water Flow	342.0 GPM
Loop Pump/s	NONE
PRESSURE DROP	19.7 Ft of Hd
Water Source HX	(2X) 50 Tons AISI 316 L SS
Refrigerant	R-22
Filter Size	25 X 20 (X6)
Weight	9000 LBS

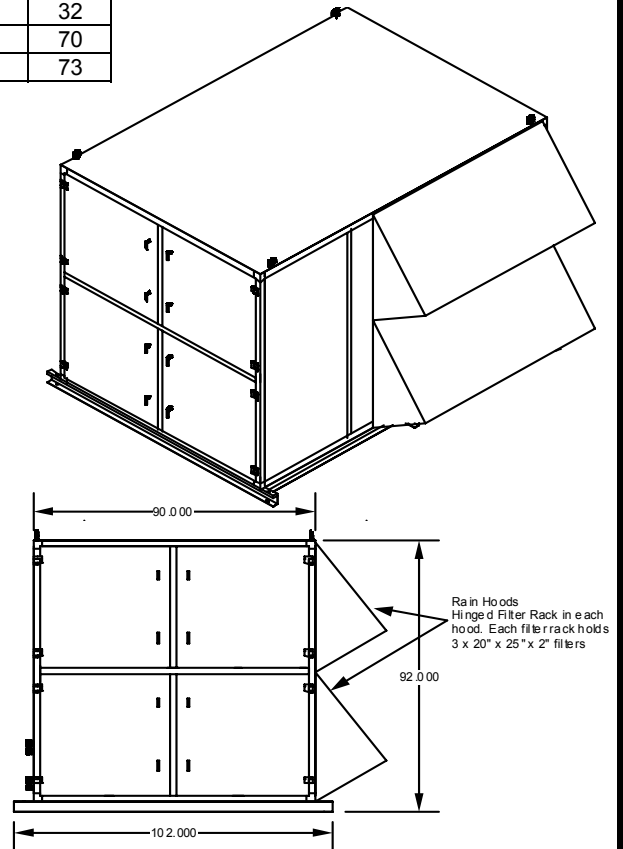
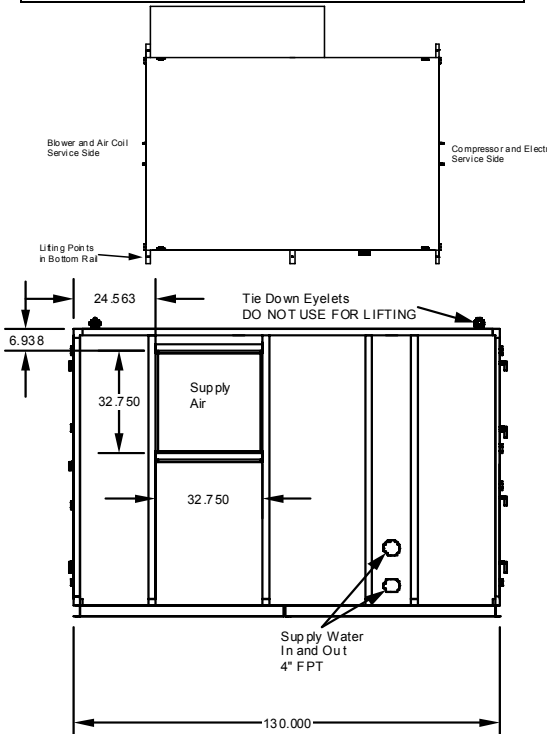
UNIT ELECTRICAL DATA

Unit	FLA	MCA	MOCP	Recomm Breaker	Electrical feeds to unit
VOLTAGE					
60 HZ					
230v/1Ø					1
208V/3Ø					1
460V/3Ø	198.2	222.9	321.5	280	1

Dimensions (Inches)

A	130
B	90
C	92
SX	33
SY	32
RX	70
RY	73

DIMENSIONS AND LAYOUT MAY CHANGE WITH SPECIFIC SITE REQUIREMENTS.



PERFORMANCE DATA

Cabinet Tonnage	HEATING				COOLING					
	GPM	EWT	HC	COP	GPM	EWT	HR	TC	SC	EER
115	342	85°F	376,519	4.3	342	85°F	1,712,191	1,369,476	632,780	13.6
					EADB	EAWB	LADB	LAWB		
					91°F	79°F	55°F	55°F		

External Static Pressure	1.5
Internal Static Pressure	0.7
Total Static Pressure	2.2

EXTERNAL STATIC PRESSURE @668 RPM

CFM	1.0"	1.1"	1.2"	1.3"	1.4"	1.5"	1.6"
	22,100	20,600	19,250	18,500	17,800	17,100	16,700



HYDRO-TEMP®
Earth Coupled Heat Pumps

ROOFTOP UNITS



HYDRO-TEMP Corporation manufactures a wide variety of rooftop units ranging from relatively simple heating and cooling units to large complex units that incorporate fresh air intake coupled with energy recovery heat exchange between the exhaust air and the incoming fresh air. Call us with your rooftop needs.



HYDRO-TEMP[®]

Earth Coupled Heat Pumps



THE CORNER CONSOLE

Designed for the classroom, the Corner Console is an exciting new product in Hydro-Temp's line of geothermal units. Available in sizes from 1 to 5 tons, the unit can be used in new construction as well as retrofitted to existing structures.

The Corner Console is designed and constructed to give a pleasing appearance as well as provide easy access for service and maintenance. The heavy gauge steel cabinet is finished with baked on, corrosion resistant, high quality epoxy powder coating, and is often used as a magnetic bulletin board in the classroom.

The two-piece unit, which stands 95 inches high and takes up only 4 1/2 square feet of floor space, can be fitted with a matching additional front panel to fill in the distance to ceilings that are more than 95 inches from the floor.

The innovative design allows the unit to be installed without ductwork, and without a mechanical closet or enclosure. This can save nearly as much as the cost of the unit. The two-piece design allows the unit to fit through any standard 30-inch wide door.

CORNER CONSOLE

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heaatcraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates.

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - GE electronically commutated motor

Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

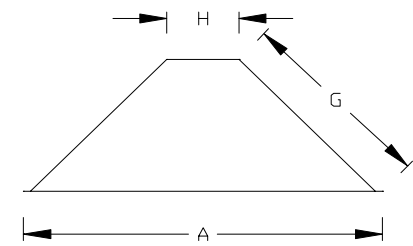
Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

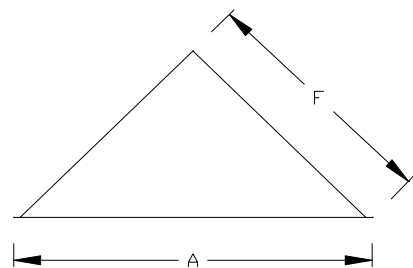
- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.
- Ceiling Trim Kit

NOTE:

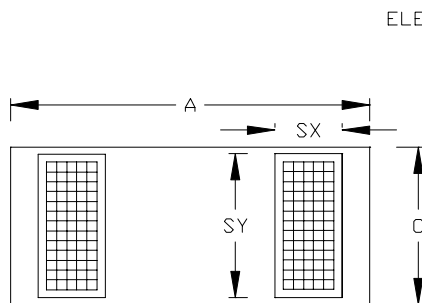
Available through 5 tons
Single stage only.
NO Domestic Hot Water capability.
Water and Electric enter unit from top
(as shown) or bottom



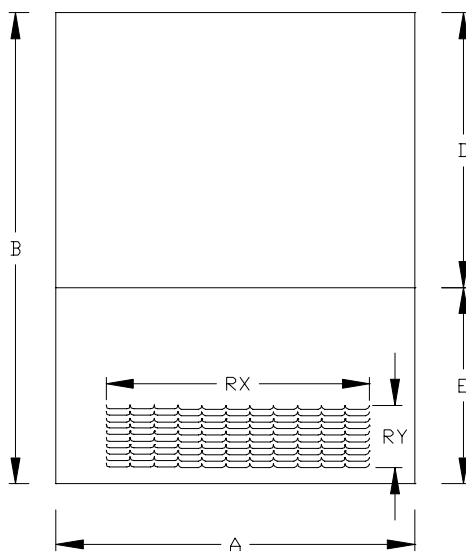
DIFFUSER TOP



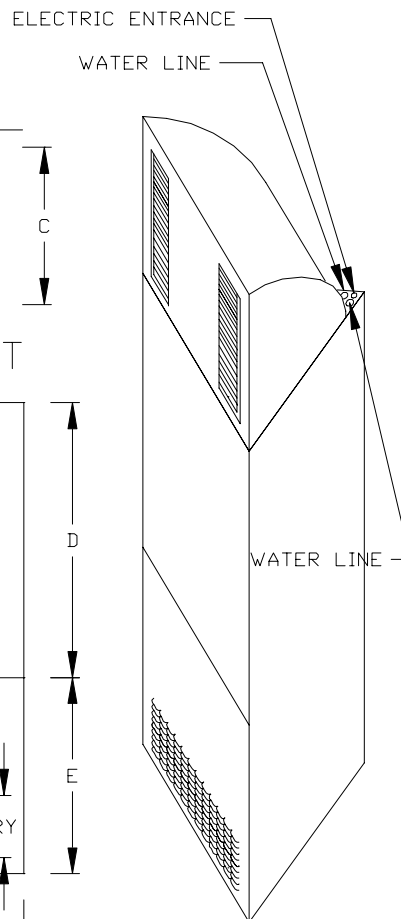
FOOTPRINT



DIFFUSER FRONT



FRONT



Dimensions in Inches

A	B	C	D	E	F	G	H	SX	SY	RX	RY	Water Lines	Cond. Line
53	72	23	42	30	36	28.5	11.75	10	22	43.5	11.5	1 in	3/4 in



HYDRO-TEMP[®]

Earth Coupled Heat Pumps

ENERGY RECOVERY VENTILATOR (ERV)



In response to increasing demand for fresh air induction into classroom spaces, Hydro-Temp Corporation has introduced an Energy Recovery Ventilator designed for the Corner Console.

With the same footprint as the Corner Console, the Energy Recovery Ventilator (ERV) becomes a platform for the Corner Console. Since most classrooms have ceiling heights of 9 ft. or more, this becomes an integral part of the Corner Console installation.

The “cassette” mounted enthalpy wheel and motor are easily removed from the front of the unit for cleaning and service.

It's a rare device that increases health benefits while decreasing operating costs. The ERV accomplishes both by bringing in air that is fresh, but not “raw”. By tempering that incoming air, the ERV reduces the work that the Corner Console would otherwise have to do.



HYDRO-TEMP[®]

Earth Coupled Heat Pumps



The “Cassette” mounted wheel and motor are easily removed from the front of the unit for cleaning and service.



Geothermal Heating and Cooling since 1978

General Specifications

Cabinet - design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Cassette Components

The energy recovery component shall incorporate a rotary wheel air-to air heat exchanger in an insulated cassette frame complete with seals, exhaust back-draft damper and drive motor and drive belt.

Coatings and Desiccants

The total energy recovery wheel shall be coated with silica gel desiccant permanently bonded by a patented and proprietary process without the use of binders or adhesives, which may degrade desiccant performance. The substrate shall be lightweight polymer and shall not degrade nor require additional coatings for application in marine or coastal environments. Coated segments shall be washable with detergent or alkaline coil cleaner and water. Desiccant shall not dissolve nor deliquesce in the presence of water or high humidity.

Wheel Layers

The wheel shall be wound continuously with one flat and one structured layer in an ideal parallel plate geometry providing laminar flow and minimum pressure drop-to-efficiency ratios. The layers shall be effectively captured in stainless steel wheel frames or aluminum and stainless steel segment frames that provide a rigid and self-supporting matrix.

Seals and Belts

All diameter and perimeter seals shall be provided as part of the cassette assembly and shall be factory set. Drive belt(s) of stretch urethane shall be provided for wheel rim drive without the need for external tensioners or adjustment.

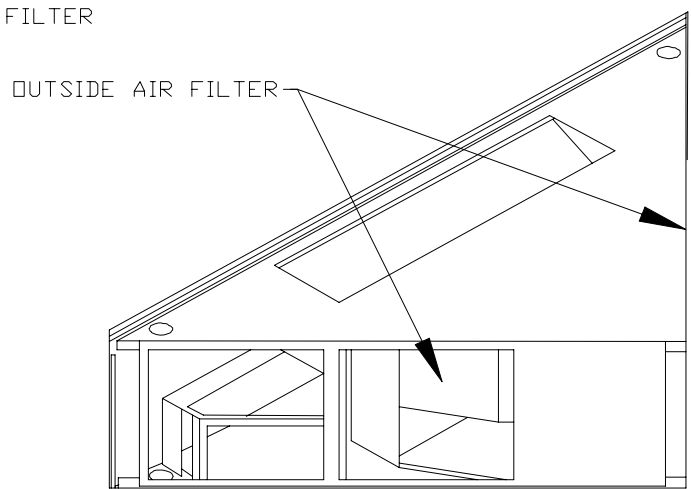
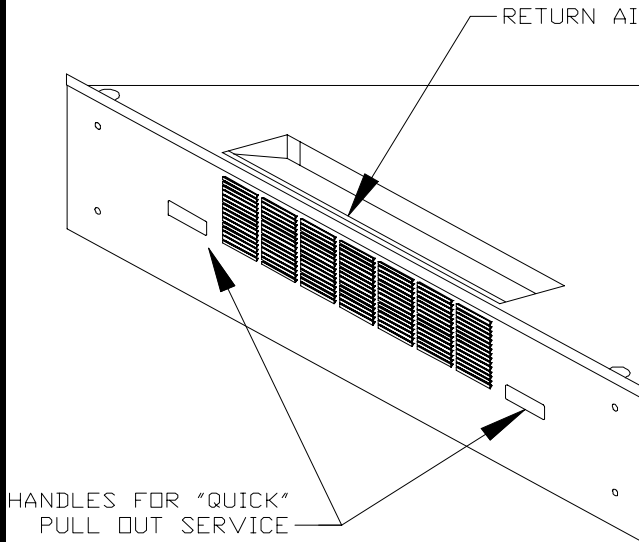
Due to the Airxchange policy of continuous product improvement, specifications for energy recovery components are subject to change without notice.

PHYSICAL INFORMATION

DESCRIPTION	ERV FOR CORNER CONSOLE 1 Speed
MODEL NO	HUX1XA00ARXXKXX
FAN WHEEL	10"Ø (x2)
FAN MOTOR	TubeAxial 200w (x2)
Dessicant Wheel Size	18"
Filter	Electrostatic
Weight	125 LBS

UNIT ELECTRICAL DATA

Unit				ERV POWER SUPPLIED FROM ASSOCIATED CORNER CONSOLE
VOLTAGE	FLA	MCA	MOCP	
60 HZ				
208/1Ø	2.5	3.1	5.0	



OUTSIDE AIR FILTER ON LEFT OR RIGHT, ACCESSED WITH CASSETTE OUT FOR SERVICE

PERFORMANCE DATA

Model Number ERC-1906

DESIGN CONDITIONS

	<u>Dry Bulb, F</u>	<u>Wet Bulb, F</u>	<u>Enthalpy, Btu/lb</u>
SUMMER, Outdoor	96	78	41.53
SUMMER, Indoor	75	63	28.57
WINTER, Outdoor	16	15	5.42
WINTER, Indoor	72	54	22.58

SUPPLY AIR FLOW RATE, cfm	450		
EXHAUST AIR FLOW RATE, cfm	450		
Latent Effectiveness	62.86%		
Sensible Effectiveness	70.90%		
Measured Effectiveness (S/W)	69.60%	72.20%	
Net Effectiveness (S/W)	65.80%	68.40%	

DIMENSIONS:
WIDTH ACROSS FACE 53 IN.
DEPT INTO CORNER 36 IN
HEIGHT 12 IN

SUPPLY AIR CONDITIONS

	Summer	Winter
Dry Bulb Temperature, F	80.5	56.14
Wet Bulb Temperature, F	68.09	44.55
Enthalpy, Btu/lb	32.52	17.45
Relative Humidity, %	53.5	38.1

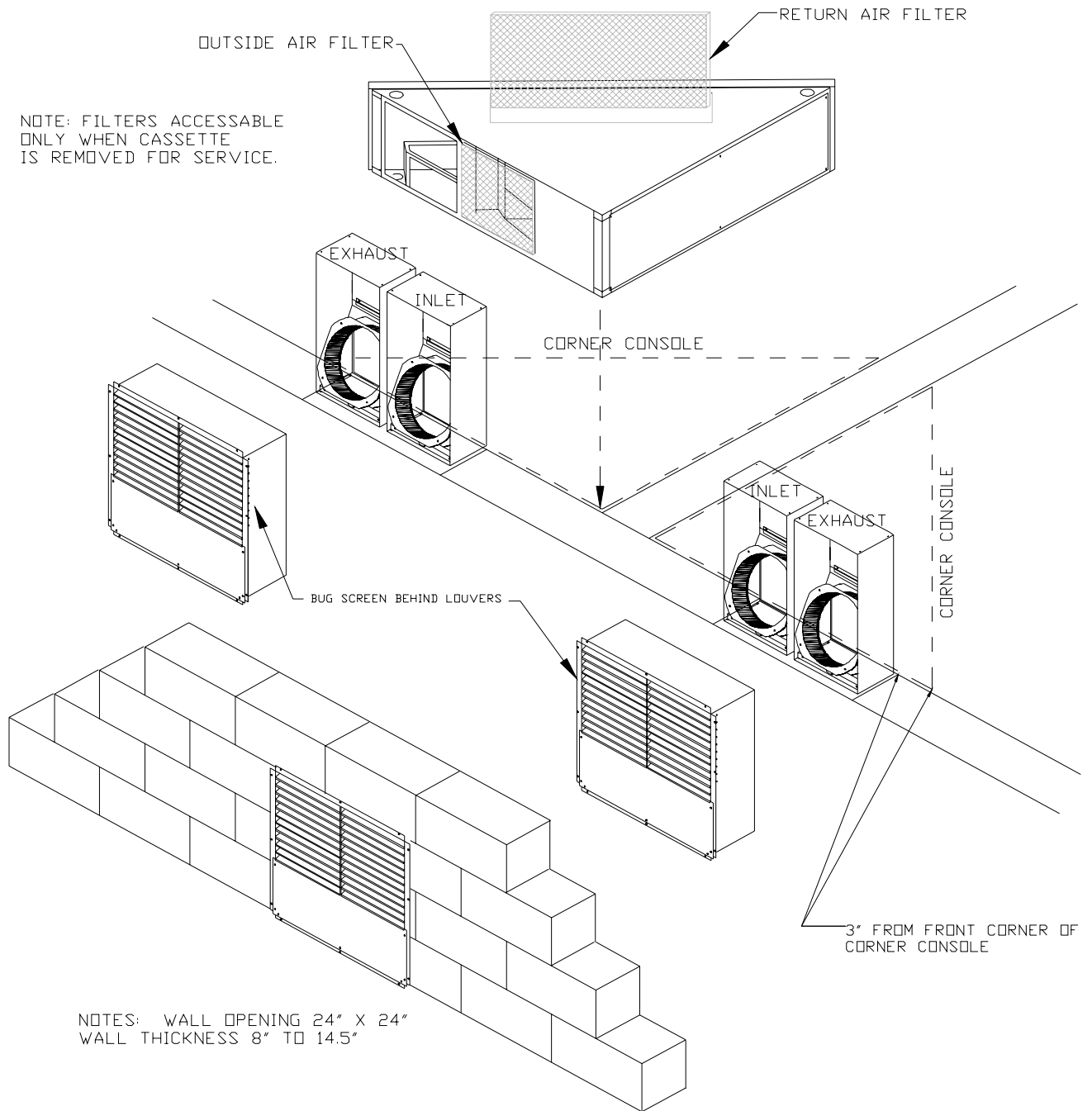
DESIGN LOADS, Btu/h

Outside Air, Sensible	9,808	27,658
Outside Air, Latent	15,414	7,672
Outside Air, Total	25,222	35,330
Total Recovered	16,690	23,853
Net OA Load	8,532	11,747

INSTALLED HVAC REDUCTION

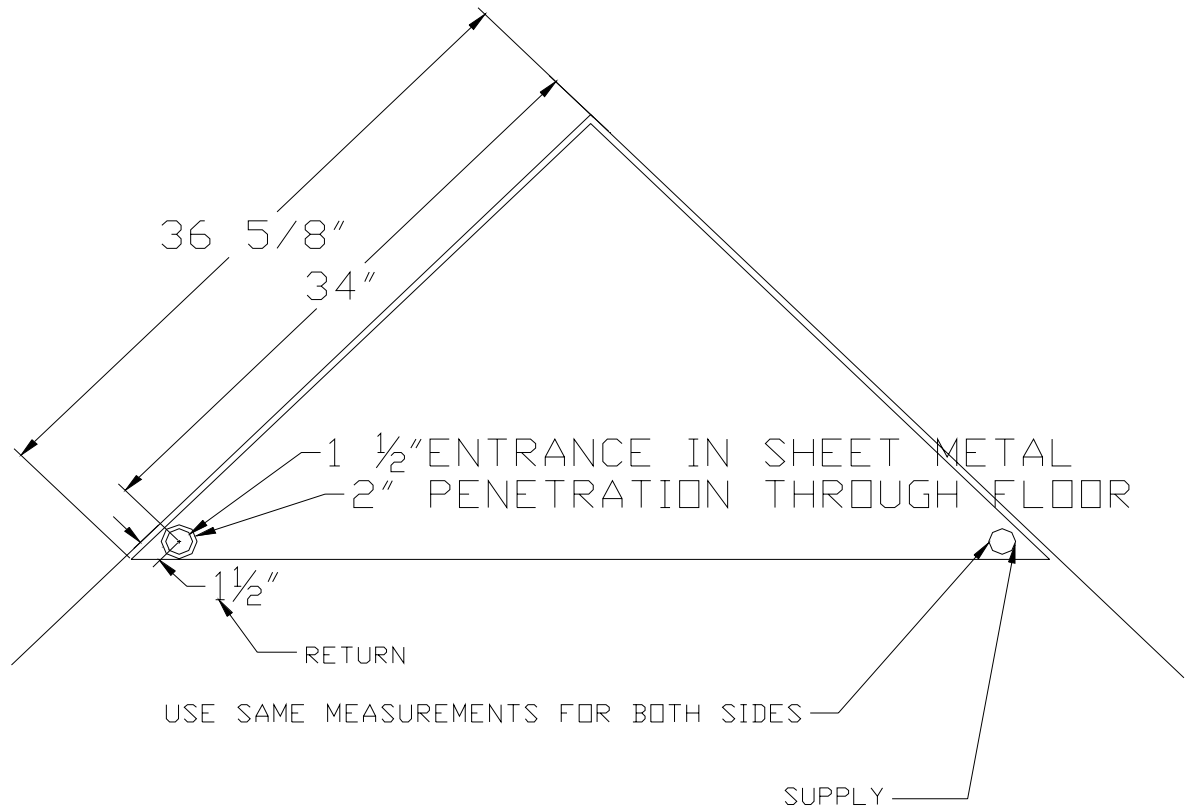
COOLING, Tons	1.39	HEATING, Btu/h	22,583
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NOTE: FILTERS ACCESSABLE ONLY WHEN CASSETTE IS REMOVED FOR SERVICE.



NOTES: WALL OPENING 24" X 24"
WALL THICKNESS 8" TO 14.5"

DETAIL: HEAT RECOVERY VENTILATOR FOR CORNER CONSOLE



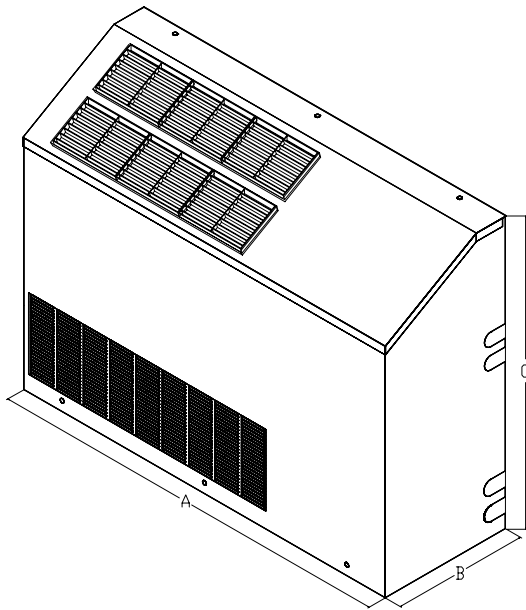
DETAIL: PLUMBING PENETRATIONS
(WHEN WATER IS FED FROM BELOW FLOOR)



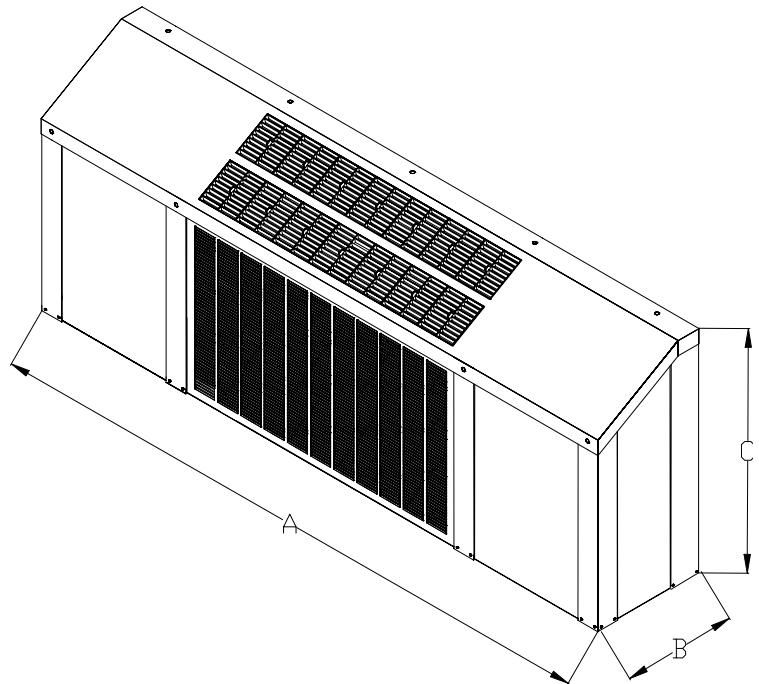
HYDRO-TEMP[®]

Earth Coupled Heat Pumps

CONSOLE UNITS



The Narrow Console



The Long Console

These consoles fit a variety of spaces. Ideal for small spaces or those hard to fit areas in school entry ways, hallways or under windows, or other architectural features, these consoles make efficient use of available space. The different cabinet configurations make it possible to fit one of these consoles in almost any space.

Available in sizes ranging up through 3 tons, these units are not suitable for creating hot water and internal electric heat is also not available on these units.

Water line entrances, condensate drain, and electrical entrance can be selected in the field. These consoles are designed for easy access for the service technician. The cabinets are constructed of heavy gauge metal and insulated with 1-inch thick insulation for noise suppression.

NARROW CONSOLE

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan - Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers - Brazed Plate, with brazed fittings.

Air Coil - Heaatcraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates.

Fan - Forward curved centrifugal wheel with epoxy coated housing.

Fan Motor - GE electronically commutated motor

Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

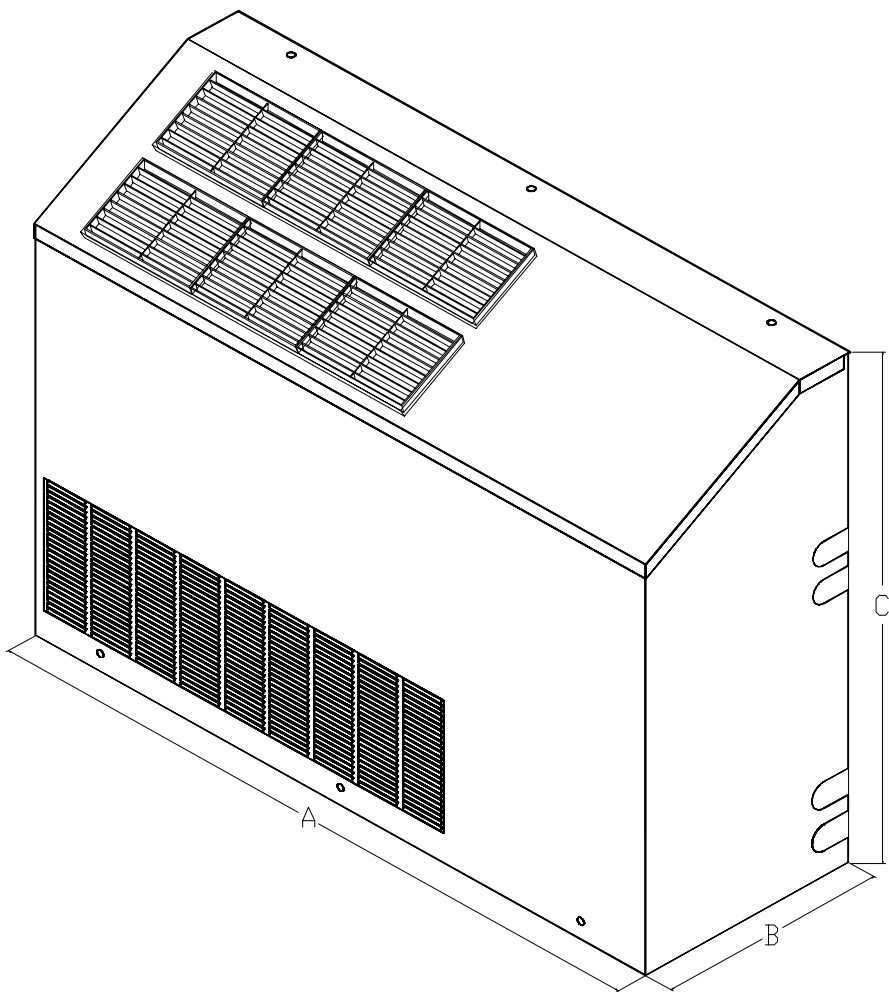
Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.

NOTE:

Available through 3 tons
Single stage only.
NO Domestic Hot Water capability.
Water and Electric enter from rear or either side of unit



Dimensions in Inches

A	B	C									Water Lines	Cond. Line
48	16	36									1 in	3/4 in

LONG CONSOLE

General Specifications

Cabinet - All cabinets are design built to aid in installation and serviceability.

Insulation - 1" thick multi-density sound absorbing.

Drain pan – Sloped, one piece welded aluminum, 0.036" thick with corrosion resistant coating.

Refrigerant Circuit - Sealed and contains reversing valve, distributor, thermal expansion valve, and high/low side access valves.

Compressor - Hermetically sealed with overload protection and mounted on rubber insulators.

Heat Exchangers – Brazed Plate, with brazed fittings.

Air Coil – Heaatcraft ARI certified, Seamless copper filled tube with aluminum lanced fins and aluminum end plates.

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Fan Motor – GE electronically commutated motor

Electrical - High pressure, and low pressure safety switches, compressor relay, 24 volt 100 VA transformer, 24 VAC control system. Electrical panel hinges and lifts out for service.

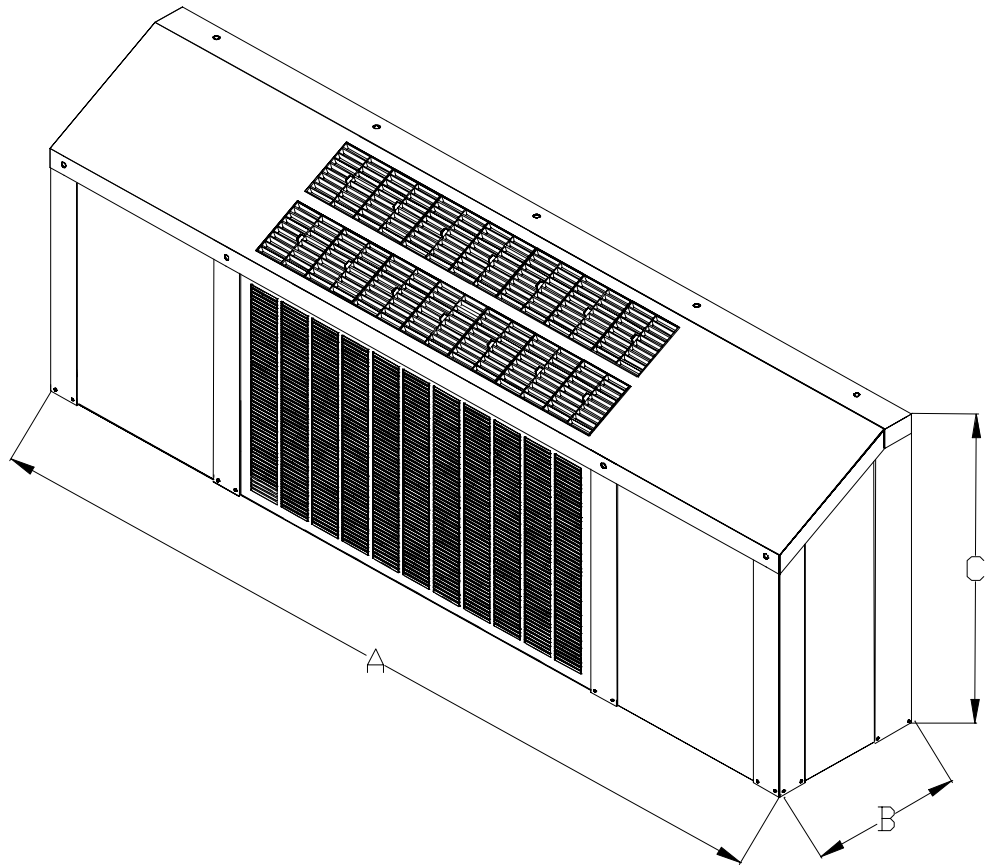
Control - Field mounted 24 volt digital wall thermostat.

Options and Accessories:

- Extended Corrosion Resistant heat exchanger .
- Cleanable electrostatic filter.
- UVC Antibacterial Light
- CO2 sensor controlled fresh air intake.
- Enhanced Dehumidification option.

NOTE:

Available through 3 tons
Single stage only.
NO Domestic Hot Water capability.
Water and Electric enter from rear of unit



Dimensions in Inches

A	B	C									Water Lines	Cond. Line
84	15.25	32.25									1 in	3/4 in