



# WATER TO WATER DOMESTIC WATER HEATER SPECIFICATION DATA SHEET

FHP MANUFACTURING ENERGY WISE HVAC EQUIPMENT

# WH018

Hermetic compressor. Load side double wall heat exchanger. Expansion valve. High and low refrigerant pressure switches and lockout control circuit. Insulated heat exchangers and refrigerant lines. Pump relay. Low pressure time delay relay. Low voltage terminal strip. Gavalume Plus®.



## ELECTRICAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	ELECT. SYM.	COMPRESSOR		PUMP FLA (1)	TOTAL FLA (2)	MIN. CIRCUIT AMPACITY (3)	FUSE (T/D) HACR CIRCUIT BREAKER (2)
		RLA	LRA				
115-1-60	-0	16.2	62	5.0	21.2	20.3	35
208/230 1-60	-1	7.6	33	2.5	10.1	9.5	15
265-1-60	-2	6.9	26	1.5	7.4	8.6	15

Notes: (1) Maximum pump FLA: 5 amps at 115V, 2.5 amps at 230V, 1.5 amps at 256V  
 (2) Includes Pump FLA.  
 (3) Does not include Pump FLA.

## HEATING (All BTUH In Thousands)

Entering Source Temp °F	Water Tank Temp °F	Water Heating Capacity BTUH	Heat Of Absorption BTUH	Power Input Watts	C.O.P.
25	40	12.3	10.3	575	6.30
	60	11.1	8.8	680	4.80
	80	8.7	6.2	735	3.50
	100	7.4	4.3	910	2.40
	120	6.2	2.5	1070	1.70
45	40	14.1	12.2	550	7.50
	60	12.9	10.7	620	6.10
	80	11.7	9.0	785	4.40
	100	10.2	7.2	880	3.30
	120	9.1	5.8	950	2.80
65	40	18.5	16.1	675	8.00
	60	17.2	14.8	700	7.20
	80	15.1	12.2	850	5.20
	100	13.0	9.9	905	4.20
	120	12.1	8.7	985	3.60
85	40	22.3	20.1	645	10.10
	60	21.1	18.6	710	8.70
	80	18.0	15.3	790	6.70
	100	16.1	13.1	875	5.40
	120	15.2	12.0	930	4.80
95	40	24.3	22.0	660	10.75
	60	23.2	20.6	725	9.35
	80	20.7	17.9	813	7.45
	100	18.7	15.7	883	6.20
	120	17.8	14.6	925	5.70

Note: Performance based on 3.00 GPM flow on both source and tank sides.  
 Source fluid 15% methanol by volume.  
 At 95°F entering source temperature - maximum source flow is 1.5 GPM

## CORRECTION FACTORS FOR VARIATION IN ENTERING FLUID FLOW

GPM	CAPACITY	WATTS
1.5	.93	1.20
3.0	1.00	1.00
5.0	1.07	.80

## FLUID FLOW PRESSURE DROP

GPM	LOAD Pressure Drop (Ft. of Hd.)	SOURCE Pressure Drop (Ft. of Hd.)
1.5	3.5	7.4
3.0	6.9	11.9
5.0	11.6	24.1

## RECOVERY RATE

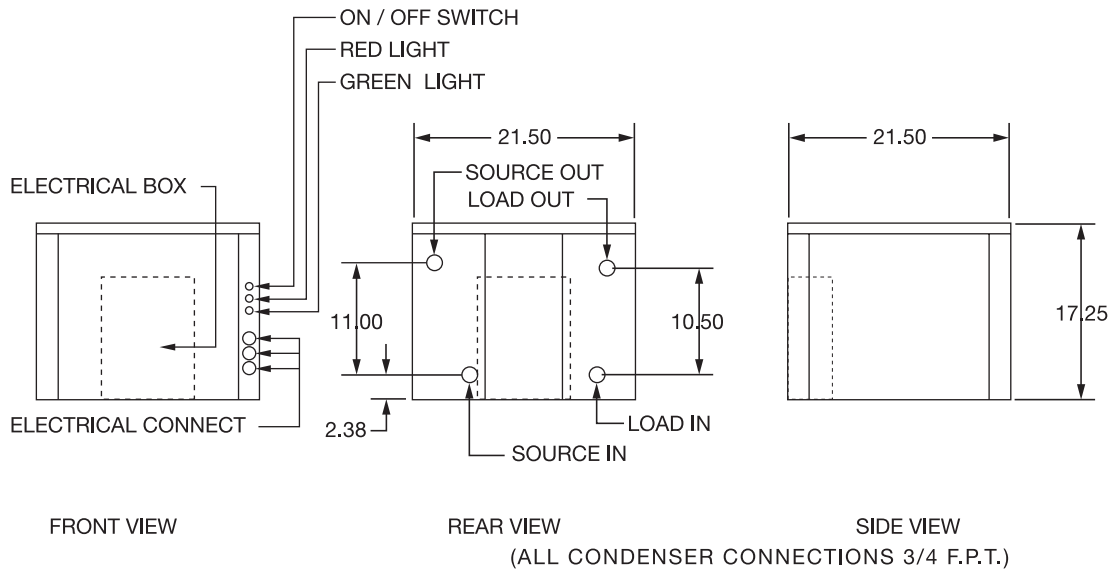
<b>Approximate Recovery Rate In Hours</b>	$= \frac{(\text{Tank Capacity})(8.33 \text{ Lbs/Gal.})(\text{Tank } \Delta T)(1 \text{ BTU/Lb } ^\circ\text{F})}{\text{Average Heat Pump Capacity BTUH}}$ $= \frac{\text{BTU}}{\text{BTUH}}$ $= \text{Hours}$
<b>Example</b>	How long will it take 50 gallons of tank water to heat from 60 °F to 120 °F with 3 GPM of 65 °F entering source temperature fluid?
<b>Approximate Recovery Rate</b>	$= \frac{(50)(8.33)(60)(1)}{17,200}$ $= \frac{24,990 \text{ BTU}}{17,200 \text{ BTUH}}$ $= 1.45 \text{ Hours}$



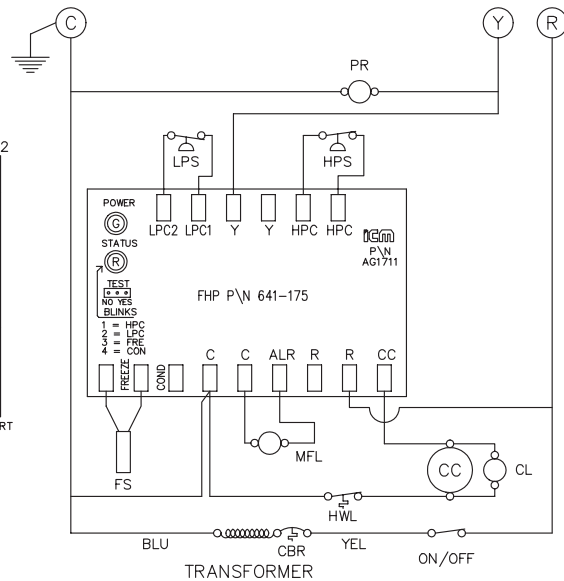
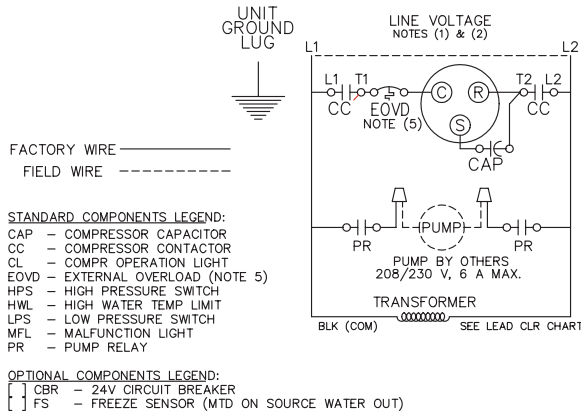
ISO 9001:2000 Certified

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## PHYSICAL CHARACTERISTICS



TRANSFORMER PRIMARY LEAD CLR:	
120	- WHT
208	- RED
240	- ORG
277	- BRN
380	- PUR OR YEL
460	- BLK/RED
575	- GRV



- NOTES:
- SEE UNIT NAME PLATE FOR ELECTRICAL RATING
  - ALL FIELD WIRING MUST BE IN ACCORDANCE WITH N.E.C.-N.F.P.A. #70, COPPER CONDUCTORS ONLY
  - 208/230V UNITS ARE FACTORY WIRED FOR 230V OPERATION. FOR 208V OPERATION, REMOVE ORG LEAD AND REPLACE WITH RED LEAD. CAP ALL UNUSED LEADS
  - EXTERNAL OVERLOAD STANDARD ON ALL UNITS EQUIPPED WITH ROTARY COMPRESSORS.
  - CCM-I INCLUDES BUILT IN: 30-60 SECOND RANDOM START  
5 MINUTE DELAY ON BREAK  
90 SECOND LOW PRESSURE BYPASS
  - SETTING THE TEST MODE JUMPER TO YES REDUCES ALL TIME DELAYS TO 5 SECONDS.
  - "FREEZE" PINS ON CCM MUST BE JUMPED TOGETHER IF FREEZE SENSOR IS NOT INSTALLED.
  - BLINK CODES FOR HARD LOCK OUT: 1 - HIGH PRESSURE FAULT  
2 - LOW PRESSURE FAULT  
3 - FREEZE FAULT

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As a result of continuing research and development, all ratings and specifications are subject to change without notice