

CONSOLE WATER SOURCE HEAT PUMP (HPW) CERTIFIED DRAWING

DWG. NO.

REV. -

PROJECT	DATE	BY	REVISIONS			
PURCHASER	P.O. #	QTY	DATE	BY	DESCRIPTION	
ARCHITECT	SHIPPING DATES					
ENGINEER						
HVAC CONTR.						
GEN. CONTR.						

DESIGNATION	MODEL NUMBER	QTY
TOTAL		

UNIT SPECIFICATIONS+

PERFORMANCE DATA

MODEL	5HPW09	5HPWI3	8HPWI3	8HPWI6	8HPWI8
COOLING CAPACITY*	9,800	13,500	13,500	16,500	19,900
COOLING EER	13.0	13.5	13.5	14.0	14.0
HEATING CAPACITY**	12,200	17,600	17,600	18,500	23,000
HEATING COP	4.4	4.5	4.5	4.5	4.7
TYPICAL CFM	300	350	350	400	500

GENERAL NOTES

TABLE 1

* BTUH @ 80.6°F DB, 66.2°F WB EAT; 86°F EWT
 ** BTUH @ 68°F DB, 59°F WB EAT; 68°F EWT

PHYSICAL DATA

MODEL	5HPW09	5HPWI3	8HPWI3	8HPWI6	8HPWI8
COMPRESSOR TYPE (I EA)	ROTARY				
REFRIGERANT	R410A				
REFRIGERANT FACTORY CHARGE (oz)	17.6	24.7	24.7	24.7	30
FAN MOTOR (HP)	1/20	1/12	1/12	1/8	1/6
BLOWER WHEEL SIZE (DIAMETERXWIDTH) (IN)	5.25" X 6.25"				
WATER CONNECTION (IN)	1/2" NPT				
AIR COIL DIMENSION (IN)	19.5X10.0	19.5X10.0	19.5X10.0	27.5X10.0	27.5X10.0
STANDARD FILTER-1/2" (IN)	22.75X10.0	22.75X10.0	22.75X10.0	30.75X10.0	30.75X10.0
WEIGHT (LB)	175	180	180	190	210

CUSTOM NOTES

I:

TABLE 2

FOR OVERALL UNIT DIMENSIONS PLEASE REFER TO DRAWING SUB-8270

TYPICAL WATER SIDE DATA

MODEL	5HPW09	5HPWI3	8HPWI3	8HPWI6	8HPWI8
FLOW RATE (GPM)	2.2	3.0	3.0	3.7	4.5
WATER CONNECTION SIZE (IN)	1/2 NPT				
CONDENSATE HOSE CONNECTION SIZE (IN)	1/2				

TABLE 3

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HVAC CONTR.						
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UNIT SPECIFICATIONS+

ELECTRICAL DATA

TABLE 4

MODEL	VOLTAGE/HZ-PHASE	TOTAL UNIT FLA	MIN CIRCUIT AMPS	MAX FUSE/HACR
5HPW09	115/60-1	7.4	10.5	20
5HPWI3	115/60-1	9.5	14.5	20
8HPWI3	208-230/60-1	5.2	7.8	15
8HPWI6	208-230/60-1	5.5	9.5	15
8HPWI8	208-230/60-1	6.9	11.4	15

AIR FLOW CORRECTION TABLE

TABLE 5

	% OF RATED AIR FLOW	70%	75%	80%	85%	90%	95%	100%	105%
COOLING FACTORS	TOTAL CAPACITY	0.92	0.93	0.95	0.96	0.97	0.99	1.00	1.02
	SENSIBLE CAPACITY	0.80	0.83	0.87	0.90	0.93	0.97	1.00	1.04
	POWER	0.97	0.97	0.98	0.99	0.99	1.00	1.00	1.01
	HEAT REJECTION	0.94	0.95	0.96	0.97	0.98	0.99	1.00	1.01
HEATING FACTORS	HEATING CAPACITY	0.94	0.95	0.96	0.97	0.98	0.99	1.00	1.01
	POWER	1.08	1.06	1.05	1.04	1.02	1.01	1.00	0.99
	HEAT EXTRACTION	0.93	0.95	0.96	0.97	0.98	0.99	1.00	1.01

AIR TEMPERATURE CORRECTION TABLE

TABLE 6

HEATING								
EAT DB (*F)	45	50	55	60	65	70	75	80
HEATING CAPACITY FACTOR	1.11	1.09	1.06	1.04	1.02	1.00	0.98	0.95
POWER FACTOR	0.77	0.81	0.86	0.91	0.95	1.00	1.05	1.10
HEAT EXTRACTION FACTOR	1.18	1.14	1.11	1.07	1.04	1.00	0.96	0.92

TABLE 7

COOLING					
EAT WB (*F)	60	65	67	70	75
TOTAL CAPACITY FACTOR	0.85	0.96	1.00	1.06	1.17
SENSIBLE CAPACITY FACTOR EAT DB	70	0.85	0.62	0.52	-
	75	1.09	0.86	0.76	0.62
	80	1.33	1.09	1.00	0.86
	85	*	1.33	1.23	1.09
	90	*	*	1.48	1.34
95	*	*	*	1.56	
POWER FACTOR	1.00	1.00	1.00	1.00	1.01
HEAT REJECTION FACTOR	0.90	0.97	1.00	1.05	1.12

DB - DRY BULB AIR TEMPERATURE
 WB - WET BULB AIR TEMPERATURE
 EAT - ENTERING AIR TEMPERATURE
 ALL TEMPERATURES ARE IN *F
 * = SENSIBLE CAPACITY EQUALS TOTAL CAPACITY

Performance Data

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

All capacities are in 1000 BTUH

All temperatures are in F

5HPW09																						
EWT	60			70			80			85			90			100			110			
GPM	1.1	1.6	2.2	1.1	1.6	2.2	1.1	1.6	2.2	1.1	1.6	2.2	1.1	1.6	2.2	1.1	1.6	2.2	1.1	1.6	2.2	
Water dP (Ft)	2.9	5.6	9.7	2.6	5.2	9.2	2.6	5.0	8.4	2.5	5.0	8.2	2.4	5.0	7.9	2.4	4.8	7.6	2.4	4.8	7.6	
Cooling	Total	10.7	10.8	10.8	10.3	10.6	10.7	9.7	10.0	10.3	9.2	9.7	10.0	8.9	9.3	9.7	7.9	8.4	8.8	6.6	7.3	7.6
	Sensible	8.1	8.0	8.0	8.1	8.1	8.1	8.0	8.1	8.1	7.9	8.0	8.0	7.6	7.9	8.0	7.2	7.5	7.6	6.4	6.8	7.1
	Power (KW)	0.7	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.7	0.9	0.8	0.8	0.9	0.8	0.8	1.0	0.9	0.9	1.1	1.1	1.0
	Heat Rejection	12.9	12.9	12.8	12.8	12.9	12.9	12.4	12.7	12.8	12.1	12.4	12.5	11.9	12.2	12.4	11.2	11.6	11.9	10.4	10.8	11.1
	EER	16.4	17.5	18.2	14.2	15.7	16.4	12.0	13.2	14.2	10.8	12.2	13.0	9.9	11.1	12.0	7.8	8.9	9.6	5.9	6.9	7.5
Heating	Total	10.7	11.1	11.4	11.8	12.2	12.5	12.7	13.2	13.5	13.2	13.6	13.9	13.6	14.0	14.2	Operation Not Recommended					
	Power (KW)	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9						
	Heat Extraction	8.0	8.5	8.7	9.0	9.4	9.7	9.8	10.3	10.6	10.3	10.7	10.9	10.7	11.0	11.2						
	COP	3.8	3.9	4.0	4.1	4.1	4.3	4.3	4.4	4.4	4.4	4.4	4.5	4.4	4.5	4.5						
5HPW13																						
EWT	60			70			80			85			90			100			110			
GPM	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	
Water dP (Ft)	4.6	10.1	14.3	4.2	9.6	13.4	3.8	8.8	13.2	3.7	8.6	12.7	3.6	8.2	12.4	3.6	8.0	11.8	3.3	8.0	11.5	
Cooling	Total	14.4	14.8	14.9	13.8	14.3	14.4	13.1	13.6	13.8	12.7	13.2	13.4	12.4	12.9	13.1	11.5	12.0	12.3	10.7	11.2	11.4
	Sensible	10.7	10.5	10.4	10.9	10.8	10.7	10.9	10.9	10.9	10.8	10.9	10.9	10.8	10.9	10.9	10.4	10.7	10.7	9.8	10.1	10.4
	Power (KW)	0.9	0.8	0.8	0.9	0.9	0.9	1.0	1.0	0.9	1.1	1.0	1.0	1.1	1.0	1.0	1.3	1.2	1.2	1.4	1.3	1.3
	Heat Rejection	17.4	17.5	17.6	17.1	17.3	17.4	16.8	17.0	17.1	16.5	16.8	16.9	16.3	16.5	16.8	15.9	16.2	16.3	15.6	15.8	15.9
	EER	16.8	18.2	18.9	14.7	16.0	16.8	12.5	13.9	14.5	11.7	12.8	13.5	10.8	11.9	12.5	9.1	10.1	10.6	7.6	8.4	8.9
Heating	Total	14.4	15.2	15.6	16.0	16.9	17.2	17.5	18.3	18.6	18.2	18.9	19.2	18.8	19.5	19.7	Operation Not Recommended					
	Power (KW)	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2						
	Heat Extraction	11.0	11.7	12.0	12.5	13.2	13.7	13.9	14.6	15.0	14.5	15.2	15.5	15.1	15.7	16.0						
	COP	3.8	4.0	4.0	4.2	4.3	4.4	4.4	4.6	4.7	4.6	4.7	4.8	4.7	4.8	4.9						
8HPW13																						
EWT	60			70			80			85			90			100			110			
GPM	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	1.5	2.3	3.0	
Water dP (Ft)	4.6	10.1	14.3	4.2	9.6	13.4	3.8	8.8	13.2	3.7	8.6	12.7	3.6	8.2	12.4	3.6	8.0	11.8	3.3	8.0	11.5	
Cooling	Total	14.4	14.8	14.9	13.8	14.3	14.4	13.1	13.6	13.8	12.7	13.2	13.4	12.4	12.9	13.1	11.5	12.0	12.3	10.7	11.2	11.4
	Sensible	10.7	10.5	10.4	10.9	10.8	10.7	10.9	10.9	10.9	10.8	10.9	10.9	10.8	10.9	10.9	10.4	10.7	10.7	9.8	10.1	10.4
	Power (KW)	0.9	0.8	0.8	0.9	0.9	0.9	1.0	1.0	0.9	1.1	1.0	1.0	1.1	1.0	1.0	1.3	1.2	1.2	1.4	1.3	1.3
	Heat Rejection	17.4	17.5	17.6	17.1	17.3	17.4	16.8	17.0	17.1	16.5	16.8	16.9	16.3	16.5	16.8	15.9	16.2	16.3	15.6	15.8	15.9
	EER	16.8	18.2	18.9	14.7	16.0	16.8	12.5	13.9	14.5	11.7	12.8	13.5	10.8	11.9	12.5	9.1	10.1	10.6	7.6	8.4	8.9
Heating	Total	14.4	15.2	15.6	16.0	16.9	17.2	17.5	18.3	18.6	18.2	18.9	19.2	18.8	19.5	19.7	Operation Not Recommended					
	Power (KW)	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2						
	Heat Extraction	11.0	11.7	12.0	12.5	13.2	13.7	13.9	14.6	15.0	14.5	15.2	15.5	15.1	15.7	16.0						
	COP	3.8	4.0	4.0	4.2	4.3	4.4	4.4	4.6	4.7	4.6	4.7	4.8	4.7	4.8	4.9						
8HPW16																						
EWT	60			70			80			85			90			100			110			
GPM	1.9	2.8	3.7	1.9	2.8	3.7	1.9	2.8	3.7	1.9	2.8	3.7	1.9	2.8	3.7	1.9	2.8	3.7	1.9	2.8	3.7	
Water dP (Ft)	2.5	5.7	9.5	2.5	5.4	8.9	2.5	4.9	8.4	2.3	4.7	8.1	2.1	4.6	7.8	2.1	4.3	7.6	2.1	4.3	7.3	
Cooling	Total	18.6	19.2	19.4	17.6	18.3	18.6	16.4	17.1	17.6	15.7	16.5	16.8	15.1	15.8	16.3	13.7	14.5	14.9	12.4	13.1	13.5
	Sensible	13.2	13.3	13.5	12.8	13.1	13.2	12.3	12.6	12.8	12.1	12.3	12.5	11.7	12.1	12.3	11.2	11.5	11.7	10.8	11.0	11.1
	Power (KW)	1.0	0.9	0.9	1.1	1.0	1.0	1.2	1.2	1.1	1.3	1.2	1.2	1.4	1.3	1.3	1.5	1.4	1.4	1.7	1.6	1.5
	Heat Rejection	22.1	22.5	22.6	21.5	22.0	22.1	20.8	21.3	21.5	20.4	20.8	21.1	19.9	20.5	20.7	19.1	19.5	19.9	18.4	18.7	19.0
	EER	18.5	20.7	21.8	15.7	17.6	18.5	13.2	14.7	15.6	12.0	13.4	14.2	11.0	12.2	13.0	9.0	10.1	10.7	7.4	8.3	8.7
Heating	Total	15.5	16.3	16.7	17.2	18.2	18.6	18.9	19.8	20.2	19.6	20.5	20.9	20.4	21.2	21.6	Operation Not Recommended					
	Power (KW)	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3						
	Heat Extraction	11.9	12.6	13.1	13.6	14.4	14.8	15.1	15.9	16.4	15.8	16.6	17.0	16.5	17.3	17.6						
	COP	3.8	3.9	4.0	4.1	4.3	4.4	4.4	4.6	4.7	4.5	4.7	4.8	4.7	4.8	4.9						
8HPW18																						
EWT	60			70			80			85			90			100			110			
GPM	2.3	3.4	4.5	2.3	3.4	4.5	2.3	3.4	4.5	2.3	3.4	4.5	2.3	3.4	4.5	2.3	3.4	4.5	2.3	3.4	4.5	
Water dP (Ft)	4.5	10.1	15.7	4.3	9.6	14.6	3.9	9.0	14.2	3.8	8.7	13.8	3.7	8.4	13.5	3.7	8.2	12.9	3.4	7.9	12.7	
Cooling	Total	22.4	23.1	23.3	21.0	21.8	22.2	19.4	20.4	20.7	18.7	19.5	20.0	17.8	18.7	19.2	16.5	17.2	17.6	15.6	16.0	16.2
	Sensible	16.2	16.3	16.5	15.6	16.0	16.2	14.8	15.4	15.5	14.3	14.9	15.1	13.8	14.4	14.6	12.8	13.3	13.5	12.0	12.3	12.6
	Power (KW)	1.1	1.1	1.0	1.3	1.2	1.2	1.4	1.3	1.3	1.5	1.4	1.4	1.6	1.5	1.4	1.7	1.7	1.6	1.9	1.8	1.8
	Heat Rejection	26.6	27.0	27.1	25.7	26.2	26.5	24.6	25.3	25.6	24.2	24.8	25.1	23.7	24.2	24.5	22.9	23.3	23.4	22.6	22.7	22.8
	EER	19.6	21.7	22.6	16.4	18.2	19.2	13.7	15.2	16.1	12.5	13.8	14.6	11.3	12.5	13.2	9.5	10.4	10.9	8.3	8.8	9.2
Heating	Total	20.7	21.1	21.2	22.0	22.5	22.8	23.9	24.9	25.4	25.3	26.6	27.4	26.8	28.4	29.3	Operation Not Recommended					
	Power (KW)	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.6	1.6						
	Heat Extraction	15.7	16.0	16.2	16.9	17.3	17.7	18.7	19.5	20.1	20.1	21.2	21.9	21.3	22.8	23.7						
	COP	4.3	4.3	4.3	4.5	4.5	4.6	4.8	4.9	4.9	4.9	5.1	5.2	5.1	5.3	5.4						