Supplemental Instructions

Models:

W24HYD W30HYD W36HYD W42HYD W48HYD W60HYD

This model provides a unique dehumidification circuit for periods of low outdoor ambient temperature and high indoor humidity conditions.

Refer to Specification Sheet S3643 for the standard features of the base units and this manual for electrical data.

Dehumidification Circuit

The dehumidification circuit incorporates an independent heat exchanger coil in the supply air stream. This coil reheats the supply air after it passes over the cooling coil without requiring the electric resistance heater to be used for reheat purposes. This results in very high mechanical dehumidification capability from the air conditioner on demand without using electric resistance reheat.

The dehumidification refrigerant reheat circuit is controlled by a dehumidification valve directing the refrigerant gas to the normal condenser during periods when standard air conditioning is required. During periods of time of low ambient temperature (approximately 65° to 75° outdoor) and high indoor humidity, a humidistat senses the need for mechanical dehumidification. It then energizes both the compressor circuit and the dehumidification valve, thus directing the hot refrigerant discharge gas into a separate desuperheating condenser circuit, which reheats the conditioned air before it is delivered to the room. The refrigerant gas is then routed from the desuperheating condenser to the system condenser for further heat transfer. When the humidistat is satisfied, the system automatically switches off. The result is separate humidity control at minimum operating cost.

Dehumidification Sequence of Operation

Dehumidification is controlled through the thermostat (if capable) or through a separate humidistat. On a call for dehumidification mode of operation, the compressor and dehumidification valve of the unit are energized through circuit R - D to provide dehumidification. Dehumidification will continue until the humidistat is satisfied.

A cooling call takes precedence over a dehumidification call for as long as the cooling call is present.

A heating call takes precedence over a dehumidification call unless an occupied signal is received. When occupied, a dehumidification call takes precedence over first stage heating. A second stage heating call takes precedence over a dehumidification call even when occupied.

Refer to the table on page 12 for a full list of outputs that can be expected for different input combinations.

Balanced Climate™ Mode

It is recommended to enable Balanced Climate mode and utilize a 2-stage thermostat to enhance the dehumidification performance and comfort. To activate this mode, the jumper between Y1 and Y2 on the low voltage terminal strip needs to be removed and the unconnected purple wire laying in the cable duct needs to be pulled out and placed on the terminal block so that it connects to the yellow wire from the outdoor temperature switch. Refer to the unit wiring diagram for clarity.

Bard® SINCE 1914
Climate Control Solutions

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506

www.bardhvac.com

Manual: 7960-948
Supersedes: ***NEW***
Date: 6-29-23

NOTE: *In units with dehumidification, never have both the Balanced Climate jumper in place and the outdoor temperature switch connected at the same time!*

This mode will allow the indoor blower to run at a reduced airflow on the first stage of cooling. A 2-stage thermostat connected to Y2 will then allow the airflow to return to normal rated speed if the call for dehumidification or cooling is not satisfied within the allotted time frame specified by the thermostat. See latest revision of unit installation instructions 2100-788 or 2100-790 for more information regarding the Balanced Climate operation.

Electronic Expansion Valve

Operation

This model employs an electronic expansion valve (EEV) which meters the refrigerant to the evaporator. In the heat pump application, the EEV is used bi-directionally to meter the refrigerant in both heating and cooling modes. The EEV is made of a stepper motor that is controlled with a step output from the controller. The valve is capable of 480 steps which drives a needle valve that in turn regulates the flow of refrigerant. The EEV allows for tighter control and better capacity management in varying operating conditions than a standard TXV. The EEV system consists of the electronic valve and stator, control board, relay, suction temperature sensor and suction pressure transducer. The pressure transducer and temperature sensor monitor the suction line to provide real time data to the control board so that a real time superheat can be calculated. This then determines the EEV position. The controller is sent to maintain around 13° superheat. The relay is used to activate the EEV system's controller anytime that the compressor is energized.

WARNING/AVERTISSEMENT

- Exposure to high pressure refrigerant hazard.
- This unit is equipped with an electronic expansion valve. In order to fully recover refrigerant or evacuate the system during repairs, be sure to use service tool 2151-021 to manually open the electronic expansion valve or be sure to recover and evacuate from all service ports; suction, liquid, and discharge.
- Failure to do so could result in eye injuries and/or refrigerant burns.

- Exposition à un risque de réfrigérant à haute pression.
- Cet appareil est équipé d'un détendeur électronique. Afini de récupérer complètement le réfrigérant ou d'évacuer le système pendant les réparations, assurez-vous d'utiliser l'outil de service 2151-021 pour ouvrir manuellement le détendeur électronique ou assurrez-vous de récupérer et d'évacuer de tous les ports de service: aspiration, liquide et refoulement.
- Ne pas le faire pourrait entraîner des blessures auz yeux et / ou des brûlures de réfrigérant.

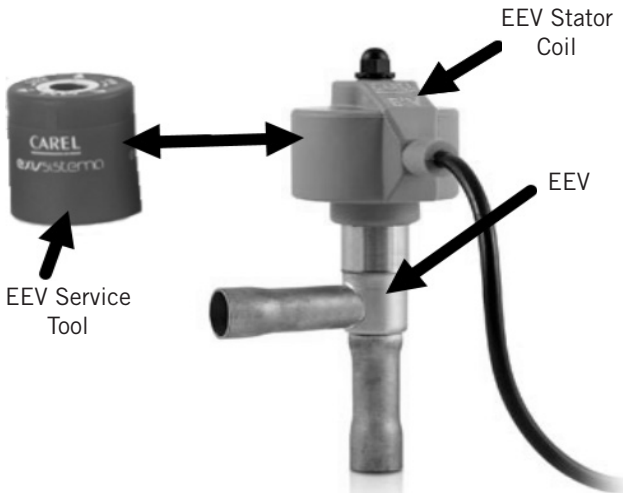
7961-953

EEV Instructions for Vacuuming, Reclaiming and Charging Unit

The electronic expansion valve moves to a closed position when there is no call to control. In order to pull a complete vacuum, fully reclaim the system or charge the unit, connections to all service ports—suction, liquid and discharge—need to be utilized or the valve needs to be manually opened first. The valve can be opened manually using the magnetic EEV service tool (Bard Part # 2151-021) shown in Figure 1. To do this, remove the EEV stator coil (red color with retaining nut on top), slide the magnetic tool over the shaft where the stator was removed and turn in a clockwise direction to open the valve to the full open position (directional arrows are provided on the tool).

Reapply the EEV stator coil and retaining nut once complete. Upon powering the unit back up, the control board will automatically drive the EEV back to the fully shut position. Once the compressor starts, the control board will again modulate the EEV position to control the system superheat.

FIGURE 1
Electronic Expansion Valve (EEV) and Service Tool



Troubleshooting the Electronic Expansion Valve

The control board has two status LEDs.

- The green LED should be lit anytime that the board has power and the control is functioning.
- The red LED is to show that an alarm is present.

See Table 1 for a guide to know where to start troubleshooting the EEV. Refer to the appropriate unit replacement parts manual for any parts that are needed.

Control Board

Check that the controller is getting 24VAC signal (GO 24VAC Hot and G 24VAC common). Reference unit wiring diagram for proper connections. If 24V is present but the green LED is not lit, replace the controller. If the green LED is now lit but the superheat is still not being maintained, troubleshoot the relay to check that the DI is connected to G; refer to **Relay in EEV Control Box** on page 3.

TABLE 1
Electronic Expansion Valve Troubleshooting

Problem	Probable Cause	Troubleshoot
The green LED is not lit.	Controller not receiving 24VAC signal.	Control Board
The green LED is lit, but superheat is not being maintained.	The relay is not closing the controller's DI connection to ground.	Relay
The red LED is flashing and EEV is not controlling superheat properly (13° superheat). One of the following is likely the fault:		
1. Low superheat is detected and the controller is taking steps to protect the system by closing the valve.	Stator is broken or connected incorrectly.	Stator
	Valve is stuck open.	EEV Valve
2. Suction temperature sensor error.	Poor connection of sensor or faulty sensor.	Thermistor
3. Suction pressure transducer error.	Pressure transducer wiring incorrect or faulty transducer.	Transducer
The red LED is on steady.	The operating parameters have been damaged.	Replace Control Board

Electronic Expansion Valve

Check to see if valve can be moved by manually moving the stepper motor using the EEV service tool shown in Figure 1 (Bard Part # 2151-021). If valve still does not control, check the transducer and thermistor sensors as described on page 4. If sensors are good, replace the valve.

Relay in EEV Control Box

Contacts NO to DI and COM to G must be closed for EEV control to start controlling superheat. Check that the relay is getting 24VAC. Reference unit wiring diagram for proper connections. If 24V is present, measure the resistance between COM and NO; it should be 0 ohms when the relay is getting 24V. If the resistance is out of range, replace the relay.

Stator Coil

Disconnect the stator from the valve and the control and measure the resistance of the windings using an electrical tester. The resistance of both windings should be around 40 ohms +/– 10%. The four wire sets that will have resistance between them are: White and red, green and red, yellow and purple, blue and purple. If the resistance falls outside these values, replace the stator.

Transducer Sensor

1. Check that there is 5VDC Nominal between the red and black wires going to the transducer.
2. Check the signal voltage between the blue and black wires (0.5-4.5VDC Actual). The following formula and Figure 2 can be used to determine if the transducer's voltage to pressure ratio is within range. Replace transducer if out of range.
3. Check to ensure wires are correctly connected as follows:

   Blue wire = pin 1 of controller plug to pin C on transducer plug

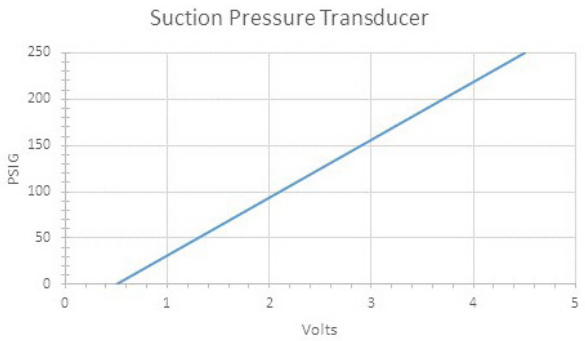
   Red wire = pin 2 of controller plug to pin B on transducer plug

   Black wire = pin 3 of controller plug to pin A on transducer plug
4. Check continuity of all three wires from transducer plug to controller plug. Replace wires if poor connection in any wire.

Formula for Tech:

(Measured Pressure x .016) + .5 =
Expected Transducer Signal Voltage (see Figure 2)

FIGURE 2
Voltage to Pressure: Suction Pressure Transducer



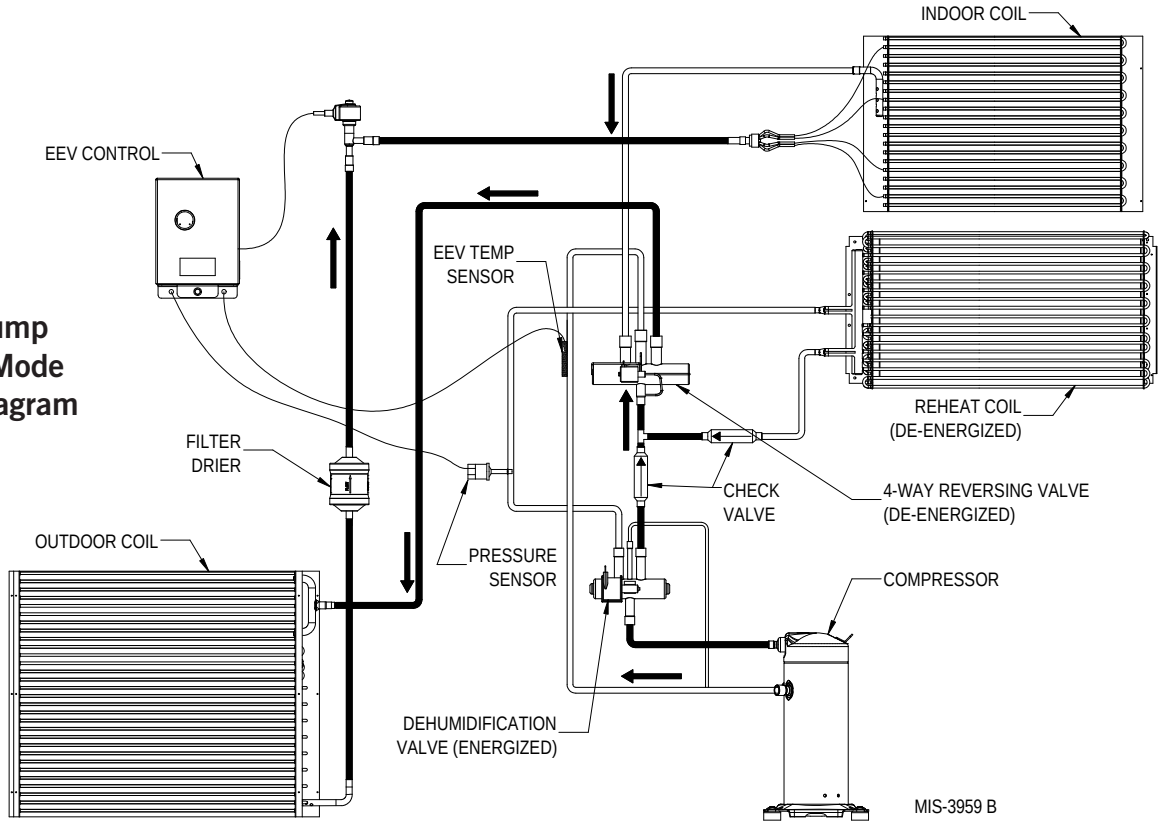
Thermistor Sensor

1. Make a visual check for broken wire insulation, broken wires or cracked epoxy material.
2. Disconnect 10k ohm NTC thermistor from the EEV control box.
3. Use an ohmmeter to measure the resistance between the two connectors. Also use ohmmeter to check for short or open.
4. Compare the resistance reading to Table 2. Use sensor ambient temperature. (Tolerance of part is ±10 %.)
5. If sensor is out of tolerance, shorted, open or reads very low ohms, it should be replaced.

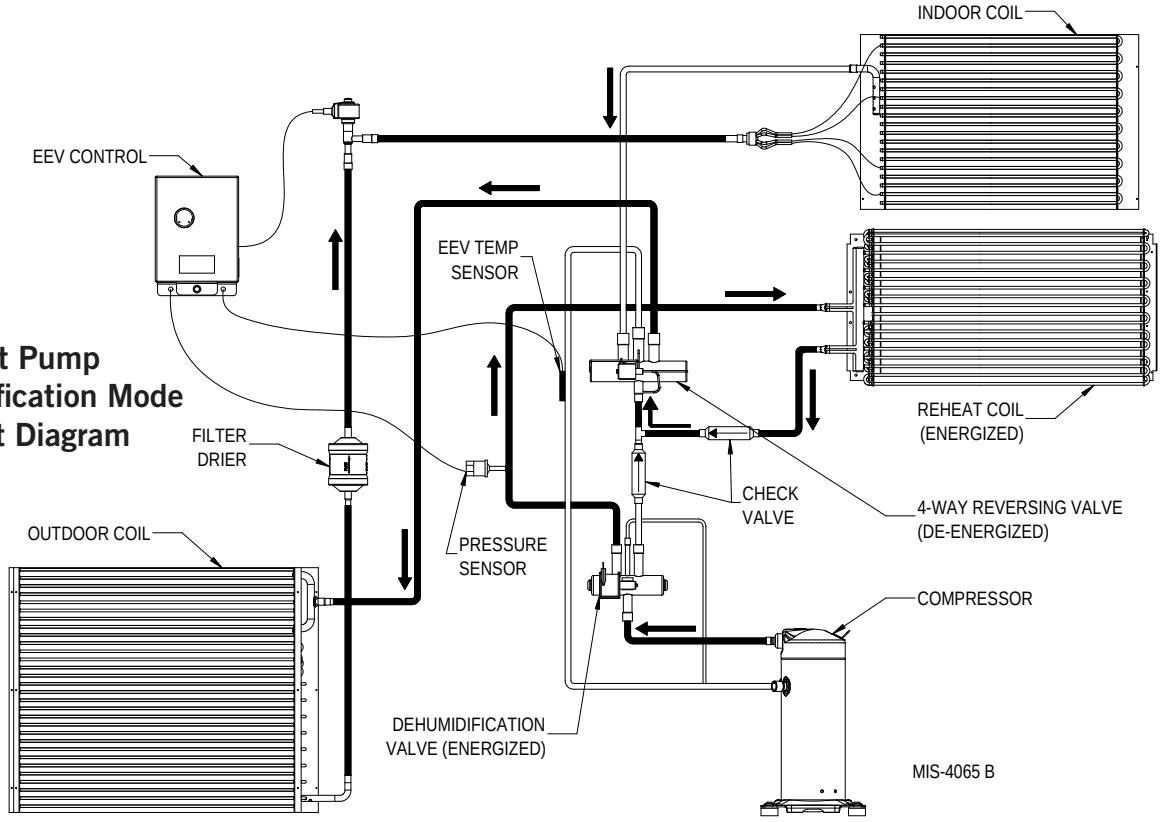
TABLE 2
10K Ohm NTC Sensor: Temperature/Resistance

Temperature		Resistance	Temperature		Resistance	Temperature		Resistance	Temperature		Resistance
F	C	Ω	F	C	Ω	F	C	Ω	F	C	Ω
-40	-40	188,500	28.4	-2	29,730	96.8	36	6,700	165.2	74	1,980
-38.2	-39	178,500	30.2	-1	28,480	98.6	37	6,470	167	75	1,920
-36.4	-38	169,000	32	0	27,280	100.4	38	6,250	168.8	76	1,870
-34.6	-37	160,200	33.8	1	26,130	102.2	39	6,030	170.6	77	1,820
-32.8	-36	151,900	35.6	2	25,030	104	40	5,830	172.4	78	1,770
-31	-35	144,100	37.4	3	23,990	105.8	41	5,630	174.2	79	1,920
-29.2	-34	136,700	39.2	4	23,000	107.6	42	5,440	176	80	1,670
-27.4	-33	129,800	41	5	22,050	109.4	43	5,260	177.8	81	1,620
-25.6	-32	123,300	42.8	6	21,150	111.2	44	5,080	179.6	82	1,580
-23.8	-31	117,100	44.6	7	20,300	113	45	4,910	181.4	83	1,530
-22	-30	111,300	46.4	8	19,480	114.8	46	4,750	183.2	84	1,490
-20.2	-29	105,700	48.2	9	18,700	116.6	47	4,590	185	85	1,450
-18.4	-28	100,500	50	10	17,960	118.4	48	4,440	186.8	86	1,441
-16.6	-27	95,520	51.8	11	17,240	120.2	49	4,300	188.6	87	1,370
-14.8	-26	90,840	53.6	12	16,560	122	50	4,160	190.4	88	1,340
-13	-25	86,430	55.4	13	15,900	123.8	51	4,030	192.2	89	1,300
-11.2	-24	82,260	57.2	14	15,280	125.6	52	3,900	194	90	1,270
-9.4	-23	78,330	59	15	14,690	127.4	53	3,770	195.8	91	1,230
-7.6	-22	74,610	60.8	16	14,120	129.2	54	3,650	197.6	92	1,200
-5.8	-21	71,100	62.6	17	13,580	131	55	3,540	199.4	93	1,170
-4	-20	67,770	64.4	18	13,060	132.8	56	3,430	201.2	94	1,140
-2.2	-19	64,570	66.2	19	12,560	134.6	57	3,320	203	95	1,110
-0.4	-18	61,540	68	20	12,090	136.4	58	3,220	204.8	96	1,080
1.4	-17	58,680	69.8	21	11,630	138.2	59	3,120	206.6	97	1,050
3.2	-16	55,970	71.6	22	11,200	140	60	3,020	208.4	98	1,020
5	-15	53,410	73.4	23	10,780	141.8	61	2,930	210.2	99	1,000
6.8	-14	50,980	75.2	24	10,380	143.6	62	2,840	212	100	970
8.6	-13	48,680	77	25	10,000	145.4	63	2,750			
10.4	-12	46,500	78.8	26	9,630	147.2	64	2,670			
12.2	-11	44,430	80.6	27	9,280	149	65	2,590			
14	-10	42,470	82.4	28	8,940	150.8	66	2,510			
15.8	-9	40,570	84.2	29	8,620	152.6	67	2,440			
17.6	-8	38,770	86	30	8,310	154.4	68	2,360			
19.4	-7	37,060	87.8	31	8,010	156.2	69	2,300			
21.2	-6	35,440	89.6	32	7,730	158	70	2,230			
23	-5	33,900	91.4	33	7,450	159.8	71	2,160			
24.8	-4	32,440	93.2	34	7,190	161.6	72	2,100			
26.6	-3	31,050	95	35	6,940	163.4	73	2,040			

Heat Pump Cooling Mode Circuit Diagram



Heat Pump Dehumidification Mode Circuit Diagram



W24HYD Cooling and Dehumidification Application Data[1]

DB/WB[2]	OD Temp.	65°F[3]		70°F		75°F		80°F		85°F		90°F		95°F		100°F		105°F	
	Mode	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum
75/62.5 (50% RH)	Total Cooling Btuh	27,800	16,400	27,000	14,800	26,000	13,200	25,100	11,500	24,100	9,700	23,100	7,700	22,000	5,700	20,800	3,600	19,600	1,500
	Sensible Btuh	20,700	8,200	20,400	7,000	20,200	5,800	19,700	4,600	19,300	3,300	18,900	2,000	18,400	700	17,900	(700)	17,300	(2,100)
	S/T	0.745	0.500	0.756	0.473	0.777	0.439	0.785	0.400	0.801	0.340	0.818	0.260	0.836	0	0.861	0	0.883	0
	Latent Btuh	7,100	8,200	6,600	7,800	5,800	7,400	5,400	6,900	4,800	6,400	4,200	5,700	3,600	5,000	2,900	4,300	2,300	3,600
	Lbs. H20/hr.	6.7	7.7	6.2	7.4	5.5	7.0	5.1	6.5	4.5	6.0	4.0	5.4	3.4	4.7	2.7	4.1	2.2	3.4
	Supply Air DB	51.0	61.2	51.5	63.3	52.0	65.3	52.5	67.5	53.1	69.6	53.6	71.8	54.2	74.0	54.7	76.2	55.3	78.4
	Supply Air WB	50.1	52.2	50.6	53.3	51.0	54.4	51.6	55.6	52.1	56.8	52.6	58.0	53.1	59.2	53.7	60.4	54.2	61.7
	Suction PSIG[4]	123	116	124	119	126	121	128	124	130	127	132	130	135	133	137	136	140	139
	Discharge PSIG[4]	264	246	284	261	305	277	327	294	349	311	373	329	398	347	424	365	451	385
75/64.1 (55% RH)	Total Cooling Btuh	28,700	16,800	27,800	15,300	26,900	13,600	26,000	11,900	25,000	10,100	23,900	8,200	22,800	6,200	21,700	4,100	20,500	1,900
	Sensible Btuh	19,500	7,400	19,200	6,200	18,900	5,000	18,600	3,700	18,200	2,500	17,700	1,200	17,200	(200)	16,700	(1,500)	16,100	(2,900)
	S/T	0.679	0.44	0.691	0.41	0.703	0.37	0.715	0.31	0.728	0.25	0.741	0.15	0.754	0	0.770	0	0.785	0
	Latent Btuh	9,200	9,400	8,600	9,100	8,000	8,600	7,400	8,200	6,800	7,600	6,200	7,000	5,600	6,400	5,000	5,600	4,400	4,800
	Lbs. H20/hr.	8.7	8.9	8.1	8.6	7.5	8.1	7.0	7.7	6.4	7.2	5.8	6.6	5.3	6.0	4.7	5.3	4.2	4.5
	Supply Air DB	52.3	62.6	52.8	64.7	53.3	66.7	53.8	68.9	54.3	71.0	54.8	73.2	55.4	75.4	55.9	77.6	56.5	79.8
	Supply Air WB	51.5	53.6	51.9	54.8	52.4	55.9	52.9	57.1	53.4	58.3	53.9	59.4	54.4	60.7	55.0	61.9	55.5	63.1
	Suction PSIG[4]	126	118	128	120	129	123	131	126	133	128	135	131	138	134	140	137	143	140
	Discharge PSIG[4]	265	247	285	263	306	279	328	295	351	312	375	330	400	348	426	367	452	386
75/65.5 (60% RH)	Total Cooling Btuh	29,600	17,300	28,700	15,700	27,700	14,100	26,900	12,400	25,800	10,500	24,800	8,600	23,700	6,600	22,600	4,500	21,400	2,400
	Sensible Btuh	18,300	6,500	18,100	5,400	17,900	4,200	17,400	2,900	17,000	1,600	16,600	300	16,100	(1,000)	15,500	(2,300)	15,000	(3,700)
	S/T	0.618	0.376	0.631	0.344	0.646	0.298	0.647	0.234	0.659	0.152	0.669	0.035	0.679	0	0.686	0	0.701	0
	Latent Btuh	11,300	10,800	10,600	10,300	9,800	9,900	9,500	9,500	8,800	8,900	8,200	8,300	7,600	7,600	7,100	6,800	6,400	6,100
	Lbs. H20/hr.	10.7	10.2	10.0	9.7	9.2	9.3	9.0	9.0	8.3	8.4	7.7	7.8	7.2	7.2	6.7	6.4	6.0	5.8
	Supply Air DB	53.5	64.0	54.0	66.1	54.5	68.1	55.0	70.2	55.5	72.4	56.1	74.6	56.6	76.7	57.2	79.0	57.8	81.2
	Supply Air WB	52.8	55.1	53.2	56.2	53.7	57.3	54.2	58.5	54.7	59.7	55.2	60.9	55.8	62.1	56.3	63.3	56.8	64.6
	Suction PSIG4	130	119	131	122	133	124	135	127	137	130	139	133	141	136	144	139	146	142
	Discharge PSIG4	267	249	287	264	308	280	330	297	352	314	376	331	401	349	427	368	454	387
75/66.7 (65% RH)	Total Cooling Btuh	30,500	17,700	29,600	16,200	28,600	14,600	27,700	12,800	26,700	11,000	25,700	9,100	24,600	7,100	23,400	5,000	22,200	2,800
	Sensible Btuh	17,200	5,700	16,900	4,500	16,700	3,400	16,200	2,100	15,800	800	15,400	(500)	14,900	(1,800)	14,400	(3,200)	13,800	(4,600)
	S/T	0.564	0.32	0.571	0.28	0.584	0.23	0.585	0.16	0.592	0.07	0.599	0	0.606	0	0.615	0	0.622	0
	Latent Btuh	13,300	12,000	12,700	11,700	11,900	11,200	11,500	10,700	10,900	10,200	10,300	9,600	9,700	8,900	9,000	8,200	8,400	7,400
	Lbs. H20/hr.	12.5	11.3	12.0	11.0	11.2	10.6	10.8	10.1	10.3	9.6	9.7	9.1	9.2	8.4	8.5	7.7	7.9	7.0
	Supply Air DB	54.8	65.4	55.3	67.4	55.7	69.5	56.3	71.6	56.8	73.8	57.3	75.9	57.9	78.1	58.4	80.4	59.0	82.6
	Supply Air WB	54.1	56.5	54.6	57.7	55.0	58.7	55.5	60.0	56.0	61.2	56.6	62.4	57.1	63.6	57.6	64.8	58.2	66.0
	Suction PSIG[4]	133	121	134	124	136	126	138	129	140	132	142	135	145	138	147	141	150	144
	Discharge PSIG[4]	268	250	288	265	309	281	331	298	354	315	378	332	403	351	429	369	455	389
75/68 (70% RH)	Total Cooling Btuh	31,300	18,200	30,500	16,600	29,500	15,000	28,600	13,200	27,600	11,400	26,500	9,500	25,400	7,500	24,300	5,400	23,100	3,200
	Sensible Btuh	16,000	4,900	15,700	3,700	15,500	2,500	15,000	1,300	14,600	-	14,200	(1,300)	13,700	(2,600)	13,200	(4,000)	12,600	(5,400)
	S/T	0.511	0.269	0.515	0.223	0.525	0.167	0.524	0.098	0.529	0.000	0.536	0	0.539	0	0.543	0	0.545	0
	Latent Btuh	15,300	13,300	14,800	12,900	14,000	12,500	13,600	11,900	13,000	11,400	12,300	10,800	11,700	10,100	11,100	9,400	10,500	8,600
	Lbs. H20/hr.	14.4	12.5	14.0	12.2	13.2	11.8	12.8	11.2	12.3	10.8	11.6	10.2	11.0	9.5	10.5	8.9	9.9	8.1
	Supply Air DB	56.0	66.8	56.5	68.8	57.0	70.9	57.5	73.0	58.0	75.2	58.6	77.3	59.1	79.5	59.7	81.8	60.2	84.0
	Supply Air WB	55.4	58.0	55.9	59.1	56.3	60.2	56.9	61.4	57.4	62.6	57.9	63.8	58.4	65.0	58.9	66.2	59.5	67.5
	Suction PSIG[4]	136	123	138	125	140	128	141	131	143	133	146	136	148	139	150	142	153	145
	Discharge PSIG[4]	270	251	290	267	311	283	333	299	356	316	379	334	404	352	430	371	457	390
80/68.3 (55% RH)	Total Cooling Btuh	31,400	19,500	30,600	18,000	29,600	16,400	28,700	14,600	27,700	12,800	26,700	10,900	25,600	8,900	24,400	6,800	23,200	4,600
	Sensible Btuh	20,000	8,300	19,700	7,200	19,500	6,000	19,100	4,700	18,700	3,400	18,200	2,100	17,700	800	17,200	(600)	16,600	(1,900)
	S/T	0.637	0.43	0.644	0.40	0.659	0.37	0.666	0.32	0.675	0.27	0.682	0.19	0.691	0.09	0.705	0	0.716	0
	Latent Btuh	11,400	11,200	10,900	10,800	10,100	10,400	9,600	9,900	9,000	9,400	8,500	8,800	7,900	8,100	7,200	7,400	6,600	6,500
	Lbs. H20/hr.	10.8	10.6	10.3	10.2	9.5	9.8	9.1	9.3	8.5	8.9	8.0	8.3	7.5	7.6	6.8	7.0	6.2	6.1
	Supply Air DB	56.4	66.1	56.9	68.2	57.3	70.2	57.9	72.4	58.4	74.5	58.9	76.7	59.5	78.9	60.0	81.1	60.6	83.3
	Supply Air WB	55.5	57.1	56.0	58.2	56.4	59.3	57.0	60.5	57.5	61.7	58.0	62.9	58.5	64.1	59.0	65.3	59.6	66.6
	Suction PSIG[4]	137	127	138	130	140	132	142	135	144	138	146	141	149	144	151	147	154	150
	Discharge PSIG[4]	270	255	289	271	310	287	332	303	355	320	379	338	404	356	430	375	457	394

[1] Values listed are with ventilation package disabled
[2] Return air temperature °F @ Default airflow (800 CFM) for AC tests and Balanced Climate airflow (560 CFM) for dehumidification tests
[3] Below 50°F, unit requires a factory or field installed low ambient control.
[4] Suction pressure +/- 4 psi, Discharge pressure +/- 10 psi

W30HYD Cooling and Dehumidification Application Data[1]

DB/WB[2]	OD Temp.	65°F[3]		70°F		75°F		80°F		85°F		90°F		95°F		100°F		105°F	
	Mode	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum
75/62.5 (50% RH)	Total Cooling Btuh	32,400	15,600	31,500	13,600	30,200	11,200	29,700	9,400	28,800	7,100	27,900	4,800	27,000	2,300	26,100		25,200	
	Sensible Btuh	24,300	6,100	23,900	4,200	23,500	2,400	23,100	600	22,700	(1,200)	22,300	(2,900)	22,000	(4,600)	21,600	(6,200)	21,400	(7,900)
	S/T	0.750	0.391	0.759	0.309	0.778	0.214	0.778	0.064	0.788	0	0.799	0	0.815	0	0.828	0	0.849	0
	Latent Btuh	8,100	9,500	7,600	9,400	6,700	8,800	6,600	8,800	6,100	8,300	5,600	7,700	5,000	6,900	4,500	6,000	3,800	5,000
	Lbs. H20/hr.	7.6	9.0	7.2	8.9	6.3	8.3	6.2	8.3	5.8	7.8	5.3	7.3	4.7	6.5	4.2	5.7	3.6	4.7
	Supply Air DB	53.0	67.2	53.5	69.6	53.6	72.0	54.3	74.2	54.6	76.5	55.0	78.7	55.3	80.9	55.5	83.0	55.7	85.2
	Supply Air WB	51.4	55.5	51.8	56.5	52.2	57.6	52.5	58.4	52.9	59.5	53.2	60.5	53.5	61.6	53.8	62.7	54.1	63.9
	Suction PSIG[4]	127	120	128	121	128	122	130	123	132	125	133	127	135	129	138	131	140	134
	Discharge PSIG[4]	278	238	298	251	319	265	342	280	365	295	390	311	415	328	442	345	470	363
75/64.1 (55% RH)	Total Cooling Btuh	33,500	16,500	32,600	14,600	31,700	12,500	30,800	10,400	29,900	8,100	29,000	5,800	28,100	3,300	27,200	700	26,300	
	Sensible Btuh	23,100	5,500	22,600	3,600	22,200	1,800	21,800	-	21,400	(1,800)	21,100	(3,500)	20,700	(5,200)	20,400	(6,900)	20,100	(8,500)
	S/T	0.690	0.33	0.693	0.25	0.700	0.14	0.708	0.00	0.716	0	0.728	0	0.737	0	0.750	0	0.764	0
	Latent Btuh	10,400	11,000	10,000	11,000	9,500	10,700	9,000	10,400	8,500	9,900	7,900	9,300	7,400	8,500	6,800	7,600	6,200	6,600
	Lbs. H20/hr.	9.8	10.4	9.4	10.4	9.0	10.1	8.5	9.8	8.0	9.3	7.5	8.8	7.0	8.0	6.4	7.2	5.8	6.2
	Supply Air DB	54.1	68.0	54.5	70.4	55.0	72.7	55.4	75.0	55.7	77.3	56.0	79.5	56.3	81.7	56.6	83.9	56.8	86.0
	Supply Air WB	52.7	56.7	53.1	57.6	53.5	58.5	53.8	59.5	54.2	60.6	54.5	61.6	54.8	62.7	55.1	63.8	55.4	65.0
	Suction PSIG[4]	131	124	132	124	133	125	134	126	136	128	137	130	139	132	142	134	144	137
	Discharge PSIG[4]	280	241	300	254	321	268	344	283	367	298	392	314	418	331	444	348	472	365
75/65.5 (60% RH)	Total Cooling Btuh	34,600	17,500	33,700	15,600	32,400	13,100	31,900	11,400	31,000	9,100	30,100	6,700	29,200	4,300	28,300	1,700	27,300	
	Sensible Btuh	21,800	4,800	21,400	3,000	21,000	1,100	20,600	(700)	20,200	(2,400)	19,800	(4,100)	19,500	(5,800)	19,200	(7,500)	18,900	(9,100)
	S/T	0.630	0.274	0.635	0.192	0.648	0.084	0.646	0	0.652	0	0.658	0	0.668	0	0.678	0	0.692	0
	Latent Btuh	12,800	12,700	12,300	12,600	11,400	12,000	11,300	12,100	10,800	11,500	10,300	10,800	9,700	10,100	9,100	9,200	8,400	8,200
	Lbs. H20/hr.	12.1	12.0	11.6	11.9	10.8	11.3	10.7	11.4	10.2	10.8	9.7	10.2	9.2	9.5	8.6	8.7	7.9	7.7
	Supply Air DB	55.1	68.9	55.6	71.2	55.7	73.6	56.4	75.9	56.8	78.1	57.1	80.3	57.4	82.5	57.6	84.7	57.9	86.8
	Supply Air WB	54.1	57.8	54.4	58.7	54.8	59.8	55.2	60.7	55.5	61.7	55.8	62.7	56.1	63.8	56.4	65.0	56.7	66.1
	Suction PSIG4	135	127	136	128	136	129	138	130	139	131	141	133	143	135	146	138	148	140
	Discharge PSIG4	282	243	302	257	323	271	346	286	369	301	394	317	420	334	446	351	474	368
75/66.7 (65% RH)	Total Cooling Btuh	35,700	18,500	34,800	16,500	33,400	14,100	33,000	12,300	32,100	10,100	31,200	7,700	30,300	5,300	29,300	2,700	28,400	-
	Sensible Btuh	20,600	4,200	20,200	2,300	19,800	500	19,300	(1,300)	18,900	(3,000)	18,600	(4,800)	18,200	(6,500)	17,900	(8,100)	17,600	(9,700)
	S/T	0.577	0.23	0.580	0.14	0.593	0.04	0.585	0	0.589	0	0.596	0	0.601	0	0.611	0	0.620	#DIV/0!
	Latent Btuh	15,100	14,300	14,600	14,200	13,600	13,600	13,700	13,600	13,200	13,100	12,600	12,500	12,100	11,800	11,400	10,800	10,800	9,700
	Lbs. H20/hr.	14.2	13.5	13.8	13.4	12.8	12.8	12.9	12.8	12.5	12.4	11.9	11.8	11.4	11.1	10.8	10.2	10.2	9.2
	Supply Air DB	56.2	69.7	56.7	72.1	56.8	74.4	57.5	76.7	57.9	78.9	58.2	81.2	58.5	83.4	58.7	85.5	58.9	87.6
	Supply Air WB	55.4	58.9	55.8	59.8	56.1	60.9	56.5	61.8	56.8	62.8	57.1	63.8	57.5	64.9	57.8	66.1	58.1	67.2
	Suction PSIG[4]	139	130	140	131	140	132	142	133	143	134	145	136	147	138	149	141	152	144
	Discharge PSIG[4]	284	246	304	260	325	274	348	289	371	304	396	320	422	336	448	353	476	371
75/68 (70% RH)	Total Cooling Btuh	36,700	19,500	35,900	17,500	34,500	15,100	34,100	13,300	33,200	11,100	32,300	8,700	31,300	6,200	30,400	3,700	29,500	1,000
	Sensible Btuh	19,400	3,600	18,900	1,700	18,500	(100)	18,100	(1,900)	17,700	(3,700)	17,300	(5,400)	17,000	(7,100)	16,700	(8,800)	16,400	(10,400)
	S/T	0.529	0.185	0.526	0.097	0.536	0	0.531	0	0.533	0	0.536	0	0.543	0	0.549	0	0.556	0
	Latent Btuh	17,300	15,900	17,000	15,800	16,000	15,200	16,000	15,200	15,500	14,800	15,000	14,100	14,300	13,300	13,700	12,500	13,100	11,400
	Lbs. H20/hr.	16.3	15.0	16.0	14.9	15.1	14.3	15.1	14.3	14.6	14.0	14.2	13.3	13.5	12.5	12.9	11.8	12.4	10.8
	Supply Air DB	57.3	70.5	57.7	72.9	57.9	75.3	58.6	77.5	58.9	79.8	59.3	82.0	59.5	84.2	59.8	86.3	60.0	88.5
	Supply Air WB	56.7	60.0	57.1	60.9	57.4	62.0	57.8	62.9	58.1	63.9	58.5	64.9	58.8	66.0	59.1	67.2	59.4	68.3
	Suction PSIG[4]	143	134	144	134	144	135	146	136	147	138	149	140	151	142	153	144	156	147
	Discharge PSIG[4]	286	249	306	263	327	277	350	292	373	307	398	323	424	339	450	356	478	374
80/68.3 (55% RH)	Total Cooling Btuh	37,400	19,700	36,500	17,800	35,200	15,300	34,700	13,600	33,800	11,300	32,900	8,900	32,000	6,500	31,100	3,900	30,200	1,300
	Sensible Btuh	24,300	7,000	23,900	5,100	23,500	3,300	23,000	1,500	22,700	(300)	22,300	(2,000)	22,000	(3,700)	21,600	(5,300)	21,300	(7,000)
	S/T	0.650	0.36	0.655	0.29	0.668	0.22	0.663	0.11	0.672	0	0.678	0	0.688	0	0.695	0	0.705	0
	Latent Btuh	13,100	12,700	12,600	12,700	11,700	12,000	11,700	12,100	11,100	11,600	10,600	10,900	10,000	10,200	9,500	9,200	8,900	8,300
	Lbs. H20/hr.	12.4	12.0	11.9	12.0	11.0	11.3	11.0	11.4	10.5	10.9	10.0	10.3	9.4	9.6	9.0	8.7	8.4	7.8
	Supply Air DB	58.2	71.0	58.6	73.4	58.8	75.7	59.5	78.0	59.8	80.2	60.1	82.5	60.4	84.7	60.7	86.8	60.9	88.9
	Supply Air WB	56.7	60.1	57.1	61.0	57.5	62.1	57.8	63.0	58.2	64.0	58.5	65.1	58.8	66.2	59.1	67.3	59.4	68.4
	Suction PSIG[4]	145	134	146	134	146	135	148	136	150	138	152	140	154	142	156	144	158	147
	Discharge PSIG[4]	286	249	306	263	327	277	350	292	373	307	398	323	423	339	450	357	478	374

1 Values listed are with ventilation package disabled
2 Return air temperature °F @ Default airflow (1000 CFM) for AC tests and Balanced Climate airflow (700 CFM) for dehumidification tests
3 Below 50°F, unit requires a factory or field installed low ambient control.
4 Suction pressure +/- 4 psi, Discharge pressure +/- 10 psi

W36HYD Cooling and Dehumidification Application Data[1]

DB/WB[2]	OD Temp.	65°F[3]		70°F		75°F		80°F		85°F		90°F		95°F		100°F		105°F	
	Mode	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum
75/62.5 (50% RH)	Total Cooling Btuh	40,200	18,100	39,200	15,400	35,400	12,400	36,500	10,000	36,000	7,200	34,800	4,500	33,600	1,600	32,400		31,200	
	Sensible Btuh	29,800	7,400	29,400	5,400	28,900	3,500	27,700	1,400	27,900	(500)	27,400	(2,500)	26,800	(4,400)	26,300	(6,300)	25,700	(8,200)
	S/T	0.741	0.409	0.750	0.351	0.816	0.282	0.759	0.140	0.775	0	0.787	0	0.798	0	0.812	0	0.824	0
	Latent Btuh	10,400	10,700	9,800	10,000	6,500	8,900	8,800	8,600	8,100	7,700	7,400	7,000	6,800	6,000	6,100	5,100	5,500	4,100
	Lbs. H20/hr.	9.8	10.1	9.2	9.4	6.1	8.4	8.3	8.1	7.6	7.3	7.0	6.6	6.4	5.7	5.8	4.8	5.2	3.9
	Supply Air DB	51.2	67.0	51.6	69.2	53.1	71.4	52.7	73.7	52.8	75.9	53.2	78.1	53.6	80.2	54.0	82.4	54.4	84.5
	Supply Air WB	50.1	55.2	50.5	56.4	51.4	57.5	51.2	58.7	51.6	59.8	52.0	61.0	52.4	62.1	52.8	63.2	53.2	64.2
	Suction PSIG[4]	126	117	127	119	128	120	129	122	130	124	132	126	133	129	135	131	137	134
	Discharge PSIG[4]	276	245	296	259	317	272	339	288	361	303	385	318	409	334	434	351	459	367
75/64.1 (55% RH)	Total Cooling Btuh	40,500	19,300	39,500	16,600	38,500	13,900	37,400	11,200	36,300	8,400	35,100	5,600	33,900	2,800	32,700		31,400	
	Sensible Btuh	27,900	6,700	27,400	4,600	26,900	2,600	26,400	600	25,900	(1,300)	25,400	(3,300)	24,900	(5,200)	24,300	(7,100)	23,700	(9,000)
	S/T	0.689	0.35	0.694	0.28	0.699	0.19	0.706	0.05	0.713	0	0.724	0	0.735	0	0.743	0	0.755	0
	Latent Btuh	12,600	12,600	12,100	12,000	11,600	11,300	11,000	10,600	10,400	9,700	9,700	8,900	9,000	8,000	8,400	7,100	7,700	6,100
	Lbs. H20/hr.	11.9	11.9	11.4	11.3	10.9	10.7	10.4	10.0	9.8	9.2	9.2	8.4	8.5	7.5	7.9	6.7	7.3	5.8
	Supply Air DB	52.8	67.9	53.2	70.2	53.6	72.4	53.9	74.6	54.3	76.8	54.8	79.0	55.2	81.2	55.6	83.3	56.0	85.5
	Supply Air WB	51.7	56.2	52.1	57.4	52.4	58.6	52.8	59.8	53.2	60.9	53.6	62.0	54.0	63.1	54.3	64.2	54.7	65.3
	Suction PSIG[4]	130	121	131	122	132	124	133	126	134	128	135	130	137	132	138	135	140	137
	Discharge PSIG[4]	277	248	297	262	318	276	340	291	362	306	386	321	410	337	435	354	460	371
75/65.5 (60% RH)	Total Cooling Btuh	40,800	20,500	39,800	17,800	36,000	14,800	37,100	12,400	36,600	9,600	35,400	6,800	34,200	4,000	33,000	1,100	31,700	
	Sensible Btuh	25,900	5,900	25,400	3,800	25,000	2,000	23,800	(100)	24,000	(2,100)	23,500	(4,100)	22,900	(6,000)	22,300	(7,900)	21,800	(9,800)
	S/T	0.635	0.288	0.638	0.213	0.694	0.135	0.642	0	0.656	0	0.664	0	0.670	0	0.676	0	0.688	0
	Latent Btuh	14,900	14,600	14,400	14,000	11,000	12,800	13,300	12,500	12,600	11,700	11,900	10,900	11,300	10,000	10,700	9,000	9,900	8,100
	Lbs. H20/hr.	14.1	13.8	13.6	13.2	10.4	12.1	12.5	11.8	11.9	11.0	11.2	10.3	10.7	9.4	10.1	8.5	9.3	7.6
	Supply Air DB	54.4	68.9	54.7	71.1	56.3	73.3	55.9	75.6	55.9	77.8	56.3	80.0	56.7	82.1	57.2	84.3	57.6	86.4
	Supply Air WB	53.3	57.3	53.6	58.5	54.5	59.6	54.4	60.8	54.8	62.0	55.1	63.1	55.5	64.2	55.9	65.3	56.3	66.3
	Suction PSIG4	133	124	134	126	135	127	136	129	137	131	139	133	140	136	142	138	144	141
	Discharge PSIG4	278	251	298	265	319	278	341	294	364	309	387	324	411	340	436	357	461	374
75/66.7 (65% RH)	Total Cooling Btuh	41,100	21,600	40,100	19,000	36,300	15,900	37,300	13,500	36,900	10,800	35,700	8,000	34,500	5,200	33,300	2,300	32,000	
	Sensible Btuh	23,900	5,100	23,500	3,100	23,000	1,200	21,800	(900)	22,000	(2,900)	21,500	(4,800)	20,900	(6,800)	20,400	(8,700)	19,800	(10,600)
	S/T	0.582	0.24	0.586	0.16	0.634	0.08	0.584	0	0.596	0	0.602	0	0.606	0	0.613	0	0.619	0
	Latent Btuh	17,200	16,500	16,600	15,900	13,300	14,700	15,500	14,400	14,900	13,700	14,200	12,800	13,600	12,000	12,900	11,000	12,200	10,000
	Lbs. H20/hr.	16.2	15.6	15.7	15.0	12.5	13.9	14.6	13.6	14.1	12.9	13.4	12.1	12.8	11.3	12.2	10.4	11.5	9.4
	Supply Air DB	55.9	69.8	56.3	72.1	57.9	74.2	57.5	76.5	57.5	78.7	57.9	80.9	58.3	83.1	58.7	85.2	59.2	87.4
	Supply Air WB	54.8	58.4	55.2	59.5	56.1	60.6	56.0	61.9	56.3	63.0	56.7	64.1	57.1	65.2	57.5	66.3	57.9	67.4
	Suction PSIG[4]	137	128	138	129	139	131	140	133	141	135	142	137	144	139	145	142	147	144
	Discharge PSIG[4]	279	254	299	268	320	282	342	297	365	312	388	328	412	343	437	360	462	377
75/68 (70% RH)	Total Cooling Btuh	41,400	22,800	40,400	20,100	36,600	17,100	37,600	14,700	37,100	11,900	36,000	9,200	34,800	6,300	33,600	3,500	32,300	600
	Sensible Btuh	22,000	4,300	21,500	2,300	21,100	400	19,900	(1,700)	20,100	(3,700)	19,500	(5,600)	19,000	(7,500)	18,400	(9,400)	17,800	(11,300)
	S/T	0.531	0.189	0.532	0.114	0.577	0.023	0.529	0	0.542	0	0.542	0	0.546	0	0.548	0	0.551	0
	Latent Btuh	19,400	18,500	18,900	17,800	15,500	16,700	17,700	16,400	17,000	15,600	16,500	14,800	15,800	13,800	15,200	12,900	14,500	11,900
	Lbs. H20/hr.	18.3	17.5	17.8	16.8	14.6	15.8	16.7	15.5	16.0	14.7	15.6	14.0	14.9	13.0	14.3	12.2	13.7	11.2
	Supply Air DB	57.5	70.8	57.9	73.0	59.4	75.2	59.0	77.5	59.1	79.7	59.5	81.9	59.9	84.1	60.3	86.2	60.7	88.3
	Supply Air WB	56.4	59.4	56.8	60.6	57.6	61.7	57.5	62.9	57.9	64.1	58.3	65.2	58.7	66.3	59.1	67.4	59.4	68.5
	Suction PSIG[4]	141	132	141	133	142	134	143	136	144	138	146	141	147	143	149	145	151	148
	Discharge PSIG[4]	280	257	300	271	321	285	343	300	366	315	389	331	413	347	438	363	464	380
80/68.3 (55% RH)	Total Cooling Btuh	46,200	23,600	45,200	20,900	41,300	17,900	42,400	15,500	41,900	12,700	40,800	9,900	39,600	7,100	38,400	4,300	37,100	1,400
	Sensible Btuh	28,500	8,200	28,000	6,100	27,500	4,300	26,400	2,200	26,600	200	26,000	(1,800)	25,500	(3,700)	24,900	(5,600)	24,300	(7,500)
	S/T	0.617	0.35	0.619	0.29	0.666	0.24	0.623	0.14	0.635	0.02	0.637	0	0.644	0	0.648	0	0.655	0
	Latent Btuh	17,700	15,400	17,200	14,800	13,800	13,600	16,000	13,300	15,300	12,500	14,800	11,700	14,100	10,800	13,500	9,900	12,800	8,900
	Lbs. H20/hr.	16.7	14.5	16.2	14.0	13.0	12.8	15.1	12.5	14.4	11.8	14.0	11.0	13.3	10.2	12.7	9.3	12.1	8.4
	Supply Air DB	55.9	71.3	56.3	73.5	57.8	75.7	57.4	78.0	57.4	80.2	57.9	82.4	58.3	84.5	58.7	86.7	59.1	88.8
	Supply Air WB	55.4	59.4	55.8	60.6	56.6	61.7	56.5	62.9	56.9	64.1	57.3	65.2	57.7	66.3	58.1	67.4	58.5	68.5
	Suction PSIG[4]	141	132	142	133	143	135	144	137	145	139	146	141	148	143	149	146	151	149
	Discharge PSIG[4]	279	256	300	270	321	284	343	299	365	314	389	330	413	346	437	362	463	379

1 Values listed are with ventilation package disabled
2 Return air temperature °F @ Default airflow (1100 CFM) for AC tests and Balanced Climate airflow (800 CFM) for dehumidification tests
3 Below 50°F, unit requires a factory or field installed low ambient control.
4 Suction pressure +/- 4 psi, Discharge pressure +/- 10 psi

W42HYD Cooling and Dehumidification Application Data[1]

DB/WB[2]	OD Temp.	65°F[3]		70°F		75°F		80°F		85°F		90°F		95°F		100°F		105°F	
	Mode	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum
75/62.5 (50% RH)	Total Cooling Btuh	47,200	21,800	45,800	18,400	44,200	15,500	42,900	12,000	41,500	8,900	40,000	5,900	38,500	3,000	37,000	100	35,400	
	Sensible Btuh	34,700	8,600	34,000	6,400	33,400	4,200	32,700	1,900	32,100	(300)	31,500	(2,500)	30,900	(4,800)	30,300	(7,000)	29,700	(9,300)
	S/T	0.735	0.394	0.742	0.348	0.756	0.271	0.762	0.158	0.773	0	0.788	0	0.803	0	0.819	0	0.839	0
	Latent Btuh	12,500	13,200	11,800	12,000	10,800	11,300	10,200	10,100	9,400	9,200	8,500	8,400	7,600	7,800	6,700	7,100	5,700	6,600
	Lbs. H20/hr.	11.8	12.5	11.1	11.3	10.2	10.7	9.6	9.5	8.9	8.7	8.0	7.9	7.2	7.4	6.3	6.7	5.4	6.2
	Supply Air DB	51.7	66.7	52.1	68.9	52.5	71.0	53.0	73.3	53.4	75.4	53.9	77.6	54.3	79.7	54.7	81.8	55.2	83.9
	Supply Air WB	50.4	55.0	50.8	56.2	51.1	57.2	51.6	58.5	52.0	59.6	52.4	60.6	52.8	61.6	53.2	62.6	53.7	63.5
	Suction PSIG[4]	123	113	124	115	124	117	126	119	128	121	130	123	131	126	133	128	135	131
	Discharge PSIG[4]	276	248	296	262	315	277	339	292	362	308	387	325	412	341	439	359	466	377
75/64.1 (55% RH)	Total Cooling Btuh	48,500	23,400	47,100	20,100	45,700	16,800	44,200	13,700	42,800	10,600	41,300	7,600	39,800	4,600	38,300	1,700	36,700	
	Sensible Btuh	32,900	7,600	32,200	5,400	31,500	3,200	30,800	1,000	30,200	(1,200)	29,600	(3,500)	29,000	(5,700)	28,400	(8,000)	27,800	(10,200)
	S/T	0.678	0.32	0.684	0.27	0.689	0.19	0.697	0.07	0.706	0	0.717	0	0.729	0	0.742	0	0.757	0
	Latent Btuh	15,600	15,800	14,900	14,700	14,200	13,600	13,400	12,700	12,600	11,800	11,700	11,100	10,800	10,300	9,900	9,700	8,900	9,100
	Lbs. H20/hr.	14.7	14.9	14.1	13.9	13.4	12.8	12.6	12.0	11.9	11.1	11.0	10.5	10.2	9.7	9.3	9.2	8.4	8.6
	Supply Air DB	52.9	67.6	53.3	69.8	53.8	72.0	54.2	74.2	54.6	76.4	55.1	78.5	55.5	80.6	56.0	82.8	56.4	84.9
	Supply Air WB	51.8	56.0	52.2	57.2	52.6	58.4	53.0	59.5	53.4	60.6	53.8	61.7	54.2	62.7	54.6	63.6	55.0	64.6
	Suction PSIG[4]	126	116	127	118	128	120	130	122	131	124	133	126	135	129	136	131	138	134
	Discharge PSIG[4]	278	251	297	265	318	280	341	295	364	311	388	327	414	344	440	362	468	379
75/65.5 (60% RH)	Total Cooling Btuh	49,800	25,000	48,400	21,700	46,800	18,700	45,500	15,300	44,100	12,200	42,600	9,200	41,100	6,200	39,600	3,400	38,000	600
	Sensible Btuh	31,000	6,700	30,300	4,500	29,600	2,300	29,000	-	28,300	(2,200)	27,700	(4,400)	27,100	(6,700)	26,500	(8,900)	26,000	(11,200)
	S/T	0.622	0.268	0.626	0.207	0.632	0.123	0.637	0.000	0.642	0	0.650	0	0.659	0	0.669	0	0.684	0
	Latent Btuh	18,800	18,300	18,100	17,200	17,200	16,400	16,500	15,300	15,800	14,400	14,900	13,600	14,000	12,900	13,100	12,300	12,000	11,800
	Lbs. H20/hr.	17.7	17.3	17.1	16.2	16.2	15.5	15.6	14.4	14.9	13.6	14.1	12.8	13.2	12.2	12.4	11.6	11.3	11.1
	Supply Air DB	54.1	68.5	54.6	70.7	54.9	72.9	55.4	75.1	55.9	77.3	56.3	79.4	56.7	81.6	57.2	83.7	57.6	85.8
	Supply Air WB	53.2	57.1	53.6	58.3	53.9	59.2	54.3	60.5	54.7	61.6	55.1	62.7	55.6	63.7	56.0	64.6	56.4	65.6
	Suction PSIG4	129	119	130	121	131	122	133	125	135	127	136	129	138	132	140	134	142	137
	Discharge PSIG4	279	253	299	268	318	282	342	298	366	314	390	330	415	347	442	364	470	382
75/66.7 (65% RH)	Total Cooling Btuh	51,100	26,700	49,700	23,400	48,100	20,400	46,800	16,900	45,400	13,800	43,900	10,800	42,400	7,900	40,900	5,000	39,300	2,200
	Sensible Btuh	29,100	5,700	28,400	3,500	27,800	1,300	27,100	(900)	26,500	(3,200)	25,800	(5,400)	25,200	(7,600)	24,700	(9,900)	24,100	(12,100)
	S/T	0.569	0.21	0.571	0.15	0.578	0.06	0.579	0	0.584	0	0.588	0	0.594	0	0.604	0	0.613	0
	Latent Btuh	22,000	21,000	21,300	19,900	20,300	19,100	19,700	17,800	18,900	17,000	18,100	16,200	17,200	15,500	16,200	14,900	15,200	14,300
	Lbs. H20/hr.	20.8	19.8	20.1	18.8	19.2	18.0	18.6	16.8	17.8	16.0	17.1	15.3	16.2	14.6	15.3	14.1	14.3	13.5
	Supply Air DB	55.4	69.5	55.8	71.7	56.1	73.8	56.6	76.0	57.1	78.2	57.5	80.3	58.0	82.5	58.4	84.6	58.8	86.7
	Supply Air WB	54.6	58.1	54.9	59.3	55.3	60.2	55.7	61.6	56.1	62.6	56.5	63.7	56.9	64.7	57.4	65.7	57.8	66.6
	Suction PSIG[4]	133	122	134	124	134	125	136	128	138	130	140	132	141	135	143	137	145	139
	Discharge PSIG[4]	281	256	301	271	320	285	344	301	367	317	392	333	417	350	444	367	472	385
75/68 (70% RH)	Total Cooling Btuh	52,400	28,300	51,000	25,000	49,400	22,000	48,100	18,600	46,700	15,500	45,200	12,500	43,700	9,500	42,200	6,600	40,600	3,900
	Sensible Btuh	27,200	4,800	26,600	2,600	25,900	400	25,200	(1,900)	24,600	(4,100)	24,000	(6,400)	23,400	(8,600)	22,800	(10,800)	22,200	(13,100)
	S/T	0.519	0.170	0.522	0.104	0.524	0.018	0.524	0	0.527	0	0.531	0	0.535	0	0.540	0	0.547	0
	Latent Btuh	25,200	23,500	24,400	22,400	23,500	21,600	22,900	20,500	22,100	19,600	21,200	18,900	20,300	18,100	19,400	17,400	18,400	17,000
	Lbs. H20/hr.	23.8	22.2	23.0	21.1	22.2	20.4	21.6	19.3	20.8	18.5	20.0	17.8	19.2	17.1	18.3	16.4	17.4	16.0
	Supply Air DB	56.6	70.4	57.0	72.6	57.3	74.7	57.9	77.0	58.3	79.1	58.7	81.3	59.2	83.4	59.6	85.5	60.1	87.6
	Supply Air WB	55.9	59.1	56.3	60.3	56.6	61.2	57.1	62.6	57.5	63.7	57.9	64.7	58.3	65.7	58.7	66.7	59.2	67.6
	Suction PSIG[4]	136	125	137	127	138	128	140	131	141	133	143	135	145	137	146	140	148	142
	Discharge PSIG[4]	283	259	303	273	321	288	346	304	369	319	393	336	419	353	445	370	473	388
80/68.3 (55% RH)	Total Cooling Btuh	52,800	28,400	51,500	25,100	49,900	22,200	48,600	18,700	47,200	15,600	45,700	12,600	44,200	9,700	42,700	6,800	41,100	4,000
	Sensible Btuh	33,800	9,500	33,200	7,300	32,500	5,100	31,800	2,800	31,200	600	30,600	(1,600)	30,000	(3,900)	29,400	(6,100)	28,800	(8,400)
	S/T	0.640	0.33	0.645	0.29	0.651	0.23	0.654	0.15	0.661	0.04	0.670	0	0.679	0	0.689	0	0.701	0
	Latent Btuh	19,000	18,900	18,300	17,800	17,400	17,100	16,800	15,900	16,000	15,000	15,100	14,200	14,200	13,600	13,300	12,900	12,300	12,400
	Lbs. H20/hr.	17.9	17.8	17.3	16.8	16.4	16.1	15.8	15.0	15.1	14.2	14.2	13.4	13.4	12.8	12.5	12.2	11.6	11.7
	Supply Air DB	57.1	70.8	57.5	73.0	57.9	75.1	58.4	77.3	58.8	79.5	59.3	81.6	59.7	83.8	60.2	85.9	60.6	88.0
	Supply Air WB	56.0	59.3	56.3	60.5	56.7	61.4	57.1	62.8	57.5	63.9	57.9	64.9	58.3	65.9	58.8	66.9	59.2	67.8
	Suction PSIG[4]	138	125	139	127	140	129	142	131	143	133	145	136	146	138	148	141	150	143
	Discharge PSIG[4]	284	258	304	273	322	287	347	303	370	319	394	335	420	352	447	369	474	387

[1] Values listed are with ventilation package disabled
[2] Return air temperature °F @ Default airflow (1350 CFM) for AC tests and Balanced Climate airflow (900 CFM) for dehumidification tests
[3] Below 50°F, unit requires a factory or field installed low ambient control.
[4] Suction pressure +/- 4 psi, Discharge pressure +/- 10 psi

W48HCD Cooling and Dehumidification Application Data[1]

DB/WB[2]	OD Temp.	65°F[3]		70°F		75°F		80°F		85°F		90°F		95°F		100°F		105°F	
	Mode	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum
75/62.5 (50% RH)	Total Cooling Btuh	53,500	26,200	51,500	23,200	49,700	19,700	47,700	16,800	45,800	13,300	44,000	9,600	42,200	5,800	40,400	1,800	38,700	
	Sensible Btuh	40,000	11,600	39,200	9,400	38,600	8,200	37,700	4,800	36,900	2,300	36,100	(200)	35,200	(2,800)	34,400	(5,600)	33,500	(8,400)
	S/T	0.748	0.443	0.761	0.405	0.777	0.416	0.790	0.286	0.806	0.173	0.820	0	0.834	0	0.851	0	0.866	0
	Latent Btuh	13,500	14,600	12,300	13,800	11,100	11,500	10,000	12,000	8,900	11,000	7,900	9,800	7,000	8,600	6,000	7,400	5,200	6,000
	Lbs. H20/hr.	12.7	13.8	11.6	13.0	10.5	10.8	9.4	11.3	8.4	10.4	7.5	9.2	6.6	8.1	5.7	7.0	4.9	5.7
	Supply Air DB	51.8	65.4	52.2	67.2	52.5	68.2	53.0	71.1	53.5	73.1	53.9	75.2	54.5	77.3	55.0	79.5	55.6	81.8
	Supply Air WB	50.8	54.6	51.2	55.6	51.5	55.6	51.9	57.7	52.4	58.7	52.8	59.8	53.3	60.9	53.8	62.0	54.4	63.2
	Suction PSIG[4]	128	118	129	119	131	118	132	122	133	123	134	125	136	127	137	129	139	131
	Discharge PSIG[4]	285	257	305	270	326	282	349	300	372	315	397	332	422	349	449	367	476	386
75/64.1 (55% RH)	Total Cooling Btuh	54,900	27,900	52,900	24,900	50,900	21,800	49,000	18,500	47,200	15,000	45,300	11,300	43,500	7,500	41,800	3,500	40,100	
	Sensible Btuh	37,700	10,300	37,000	8,100	36,200	5,800	35,400	3,500	34,600	1,000	33,800	(1,600)	33,000	(4,200)	32,100	(6,900)	31,200	(9,700)
	S/T	0.687	0.37	0.699	0.33	0.711	0.27	0.722	0.19	0.733	0.07	0.746	0	0.759	0	0.768	0	0.778	0
	Latent Btuh	17,200	17,600	15,900	16,800	14,700	16,000	13,600	15,000	12,600	14,000	11,500	12,900	10,500	11,700	9,700	10,400	8,900	9,000
	Lbs. H20/hr.	16.2	16.6	15.0	15.8	13.9	15.1	12.8	14.2	11.9	13.2	10.8	12.2	9.9	11.0	9.2	9.8	8.4	8.5
	Supply Air DB	53.1	66.5	53.4	68.3	53.8	70.2	54.2	72.2	54.7	74.2	55.2	76.3	55.7	78.4	56.3	80.6	56.9	82.9
	Supply Air WB	52.2	55.7	52.5	56.7	52.9	57.7	53.3	58.7	53.7	59.8	54.2	60.9	54.7	62.0	55.2	63.1	55.7	64.3
	Suction PSIG[4]	132	121	133	122	134	123	135	125	136	127	138	128	139	130	141	132	142	134
	Discharge PSIG[4]	287	261	307	274	329	288	351	303	375	319	399	335	424	352	451	370	478	389
75/65.5 (60% RH)	Total Cooling Btuh	56,300	29,500	54,300	26,600	52,400	23,100	50,400	20,100	48,500	16,700	46,700	13,000	44,900	9,200	43,100	5,200	41,400	1,000
	Sensible Btuh	35,500	8,900	34,700	6,700	34,100	5,500	33,200	2,100	32,400	(400)	31,600	(2,900)	30,700	(5,500)	29,900	(8,300)	29,000	(11,100)
	S/T	0.631	0.302	0.639	0.252	0.651	0.238	0.659	0.104	0.668	0	0.677	0	0.684	0	0.694	0	0.700	0
	Latent Btuh	20,800	20,600	19,600	19,900	18,300	17,600	17,200	18,000	16,100	17,100	15,100	15,900	14,200	14,700	13,200	13,500	12,400	12,100
	Lbs. H20/hr.	19.6	19.4	18.5	18.8	17.3	16.6	16.2	17.0	15.2	16.1	14.2	15.0	13.4	13.9	12.5	12.7	11.7	11.4
	Supply Air DB	54.3	67.6	54.7	69.4	55.0	70.4	55.5	73.3	55.9	75.3	56.4	77.4	57.0	79.5	57.5	81.7	58.1	84.0
	Supply Air WB	53.5	56.8	53.9	57.8	54.2	57.8	54.6	59.8	55.1	60.9	55.5	62.0	56.0	63.1	56.5	64.2	57.1	65.4
	Suction PSIG4	135	124	136	125	137	124	138	128	139	130	141	131	142	133	144	135	145	138
	Discharge PSIG4	289	264	309	277	331	289	353	307	377	322	401	339	427	356	453	374	480	393
75/66.7 (65% RH)	Total Cooling Btuh	57,600	31,200	55,600	28,300	53,800	24,800	51,800	21,800	49,900	18,300	48,100	14,700	46,300	10,900	44,500	6,900	42,800	2,700
	Sensible Btuh	33,200	7,600	32,500	5,400	31,900	4,200	30,900	700	30,100	(1,700)	29,300	(4,300)	28,500	(6,900)	27,600	(9,600)	26,700	(12,400)
	S/T	0.576	0.24	0.585	0.19	0.593	0.17	0.597	0.03	0.603	0	0.609	0	0.616	0	0.620	0	0.624	0
	Latent Btuh	24,400	23,600	23,100	22,900	21,900	20,600	20,900	21,100	19,800	20,000	18,800	19,000	17,800	17,800	16,900	16,500	16,100	15,100
	Lbs. H20/hr.	23.0	22.3	21.8	21.6	20.7	19.4	19.7	19.9	18.7	18.9	17.7	17.9	16.8	16.8	15.9	15.6	15.2	14.2
	Supply Air DB	55.5	68.7	55.9	70.5	56.3	71.5	56.7	74.4	57.2	76.4	57.7	78.5	58.2	80.6	58.8	82.8	59.3	85.1
	Supply Air WB	54.9	57.9	55.2	58.9	55.5	58.9	56.0	60.9	56.4	62.0	56.9	63.0	57.4	64.2	57.9	65.3	58.4	66.4
	Suction PSIG[4]	138	127	139	129	140	127	141	131	142	133	144	135	145	137	147	139	148	141
	Discharge PSIG[4]	291	268	311	281	333	293	355	310	379	326	403	342	429	359	455	377	483	396
75/68 (70% RH)	Total Cooling Btuh	59,000	32,900	57,000	30,000	55,100	26,500	53,200	23,500	51,300	20,000	49,400	16,400	47,600	12,500	45,900	8,500	44,200	4,400
	Sensible Btuh	31,000	6,200	30,200	4,000	29,600	2,800	28,700	(600)	27,900	(3,100)	27,100	(5,600)	26,200	(8,200)	25,400	(11,000)	24,500	(13,800)
	S/T	0.525	0.188	0.530	0.133	0.537	0.106	0.539	0	0.544	0	0.549	0	0.550	0	0.553	0	0.554	0
	Latent Btuh	28,000	26,700	26,800	26,000	25,500	23,700	24,500	24,100	23,400	23,100	22,300	22,000	21,400	20,700	20,500	19,500	19,700	18,200
	Lbs. H20/hr.	26.4	25.2	25.3	24.5	24.1	22.4	23.1	22.7	22.1	21.8	21.0	20.8	20.2	19.5	19.3	18.4	18.6	17.2
	Supply Air DB	56.8	69.8	57.1	71.6	57.5	72.6	58.0	75.5	58.4	77.5	58.9	79.6	59.4	81.7	60.0	83.9	60.6	86.2
	Supply Air WB	56.2	59.0	56.6	60.0	56.9	60.0	57.4	62.0	57.8	63.0	58.2	64.1	58.7	65.2	59.2	66.4	59.8	67.5
	Suction PSIG[4]	141	131	142	132	143	131	144	134	146	136	147	138	148	140	150	142	152	144
	Discharge PSIG[4]	293	271	314	284	335	296	358	314	381	329	405	346	431	363	457	381	485	400
80/68.3 (55% RH)	Total Cooling Btuh	59,600	34,700	57,600	31,800	55,700	28,300	53,700	25,300	51,800	21,800	50,000	18,200	48,200	14,400	46,400	10,400	44,700	6,200
	Sensible Btuh	39,500	12,300	38,700	10,100	38,100	8,900	37,200	5,500	36,400	3,000	35,500	500	34,700	(2,100)	33,800	(4,900)	33,000	(7,700)
	S/T	0.663	0.35	0.672	0.32	0.684	0.31	0.693	0.22	0.703	0.14	0.710	0.03	0.720	0	0.728	0	0.738	0
	Latent Btuh	20,100	22,400	18,900	21,700	17,600	19,400	16,500	19,800	15,400	18,800	14,500	17,700	13,500	16,500	12,600	15,300	11,700	13,900
	Lbs. H20/hr.	19.0	21.1	17.8	20.5	16.6	18.3	15.6	18.7	14.5	17.7	13.7	16.7	12.7	15.6	11.9	14.4	11.0	13.1
	Supply Air DB	57.5	70.8	57.9	72.6	58.2	73.6	58.7	76.5	59.1	78.5	59.6	80.6	60.2	82.8	60.7	85.0	61.3	87.2
	Supply Air WB	56.5	59.0	56.9	60.0	57.2	60.0	57.7	62.0	58.1	63.1	58.6	64.1	59.0	65.2	59.6	66.4	60.1	67.5
	Suction PSIG[4]	142	133	143	134	144	133	145	137	147	139	148	140	150	142	151	144	153	146
	Discharge PSIG[4]	292	271	313	285	334	297	357	314	380	330	405	346	430	363	456	381	484	400

[1] Values listed are with ventilation package disabled
[2] Return air temperature °F @ Default airflow (1550 CFM) for AC tests and Balanced Climate airflow (1060 CFM) for dehumidification tests
[3] Below 50°F, unit requires a factory or field installed low ambient control.
[4] Suction pressure +/- 4 psi, Discharge pressure +/- 10 psi

W60HCD Cooling and Dehumidification Application Data[1]

DB/WB[2]	OD Temp.	65°F[3]		70°F		75°F		80°F		85°F		90°F		95°F		100°F		105°F	
	Mode	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum	A/C	Dehum
75/62.5 (50% RH)	Total Cooling Btuh	63,100	31,800	61,600	28,300	59,700	26,000	58,200	21,200	56,300	17,500	54,300	13,700	52,200	9,900	50,000	6,000	47,700	2,000
	Sensible Btuh	46,500	14,100	45,900	11,600	45,300	9,200	44,400	6,700	43,600	4,100	42,700	1,600	41,700	(1,000)	40,700	(3,700)	39,600	(6,300)
	S/T	0.737	0.443	0.745	0.410	0.759	0.354	0.763	0.316	0.774	0.234	0.786	0.117	0.799	0	0.814	0	0.830	0
	Latent Btuh	16,600	17,700	15,700	16,700	14,400	16,800	13,800	14,500	12,700	13,400	11,600	12,100	10,500	10,900	9,300	9,700	8,100	8,300
	Lbs. H20/hr.	15.7	16.7	14.8	15.8	13.6	15.8	13.0	13.7	12.0	12.6	10.9	11.4	9.9	10.3	8.8	9.2	7.6	7.8
	Supply Air DB	50.9	64.8	51.3	66.5	51.7	67.6	52.1	70.2	52.5	72.0	52.9	73.9	53.4	75.8	53.8	77.7	54.3	79.7
	Supply Air WB	49.9	54.4	50.3	55.3	50.7	55.7	51.0	57.2	51.4	58.2	51.8	59.1	52.2	60.1	52.7	61.1	53.1	62.1
	Suction PSIG[4]	124	114	125	116	127	118	127	120	129	123	130	125	131	127	132	129	134	132
	Discharge PSIG[4]	284	267	305	282	328	296	348	312	371	328	396	344	421	361	447	379	474	398
75/64.1 (55% RH)	Total Cooling Btuh	64,600	33,700	63,100	30,300	61,400	26,700	59,700	23,100	57,800	19,500	55,800	15,700	53,700	11,900	51,500	8,000	49,100	4,000
	Sensible Btuh	43,900	12,600	43,200	10,200	42,500	7,700	41,800	5,200	41,000	2,700	40,100	100	39,100	(2,500)	38,000	(5,100)	36,900	(7,800)
	S/T	0.680	0.37	0.685	0.34	0.692	0.29	0.700	0.23	0.709	0.14	0.719	0.01	0.728	0	0.738	0	0.752	0
	Latent Btuh	20,700	21,100	19,900	20,100	18,900	19,000	17,900	17,900	16,800	16,800	15,700	15,600	14,600	14,400	13,500	13,100	12,200	11,800
	Lbs. H20/hr.	19.5	19.9	18.8	19.0	17.8	17.9	16.9	16.9	15.8	15.8	14.8	14.7	13.8	13.6	12.7	12.4	11.5	11.1
	Supply Air DB	52.3	65.8	52.6	67.6	53.0	69.4	53.4	71.2	53.8	73.1	54.3	74.9	54.7	76.8	55.2	78.8	55.7	80.7
	Supply Air WB	51.4	55.4	51.7	56.4	52.1	57.3	52.5	58.3	52.9	59.2	53.3	60.2	53.7	61.2	54.1	62.2	54.6	63.1
	Suction PSIG[4]	127	118	129	120	130	122	131	124	132	126	133	128	135	130	136	133	137	135
	Discharge PSIG[4]	287	271	307	285	329	300	351	315	374	331	398	348	423	365	449	383	477	401
75/65.5 (60% RH)	Total Cooling Btuh	66,100	35,700	64,600	32,200	62,700	29,900	61,100	25,100	59,200	21,400	57,300	17,700	55,200	13,800	52,900	9,900	50,600	6,000
	Sensible Btuh	41,200	11,200	40,600	8,700	40,000	6,300	39,100	3,800	38,300	1,200	37,400	(1,300)	36,400	(3,900)	35,400	(6,600)	34,300	(9,200)
	S/T	0.623	0.314	0.628	0.270	0.638	0.211	0.640	0.151	0.647	0.056	0.653	0	0.659	0	0.669	0	0.678	0
	Latent Btuh	24,900	24,500	24,000	23,500	22,700	23,600	22,000	21,300	20,900	20,200	19,900	19,000	18,800	17,700	17,500	16,500	16,300	15,200
	Lbs. H20/hr.	23.5	23.1	22.6	22.2	21.4	22.3	20.8	20.1	19.7	19.1	18.8	17.9	17.7	16.7	16.5	15.6	15.4	14.3
	Supply Air DB	53.6	66.9	54.0	68.6	54.4	69.7	54.8	72.3	55.2	74.1	55.6	76.0	56.1	77.9	56.5	79.8	57.0	81.8
	Supply Air WB	52.9	56.5	53.2	57.5	53.6	57.9	53.9	59.4	54.3	60.3	54.7	61.3	55.1	62.3	55.6	63.2	56.0	64.2
	Suction PSIG4	131	121	132	123	134	125	134	127	136	129	137	132	138	134	139	136	140	138
	Discharge PSIG4	290	274	310	289	333	303	353	319	376	335	401	351	426	368	452	386	479	405
75/66.7 (65% RH)	Total Cooling Btuh	67,600	37,700	66,000	34,200	64,100	31,900	62,600	27,000	60,700	23,400	58,700	19,600	56,600	15,800	54,400	11,900	52,100	7,900
	Sensible Btuh	38,600	9,700	37,900	7,300	37,400	4,800	36,500	2,300	35,700	(200)	34,800	(2,800)	33,800	(5,400)	32,800	(8,000)	31,600	(10,700)
	S/T	0.571	0.26	0.574	0.21	0.583	0.15	0.583	0.09	0.588	0	0.593	0	0.597	0	0.603	0	0.607	0
	Latent Btuh	29,000	28,000	28,100	26,900	26,700	27,100	26,100	24,700	25,000	23,600	23,900	22,400	22,800	21,200	21,600	19,900	20,500	18,600
	Lbs. H20/hr.	27.4	26.4	26.5	25.4	25.2	25.6	24.6	23.3	23.6	22.3	22.5	21.1	21.5	20.0	20.4	18.8	19.3	17.5
	Supply Air DB	55.0	67.9	55.3	69.7	55.7	70.8	56.1	73.3	56.5	75.2	57.0	77.0	57.4	78.9	57.9	80.9	58.4	82.8
	Supply Air WB	54.3	57.6	54.7	58.5	55.0	58.9	55.4	60.4	55.8	61.4	56.2	62.4	56.6	63.3	57.0	64.3	57.5	65.3
	Suction PSIG[4]	134	124	135	126	138	128	138	131	139	133	140	135	141	137	143	139	144	142
	Discharge PSIG[4]	292	278	312	292	335	306	356	322	379	338	403	355	428	372	455	390	482	408
75/68 (70% RH)	Total Cooling Btuh	69,000	39,600	67,500	36,100	65,600	33,800	64,100	29,000	62,200	25,300	60,200	21,600	58,100	17,700	55,900	13,800	53,600	9,900
	Sensible Btuh	35,900	8,300	35,300	5,800	34,700	3,400	33,800	900	33,000	(1,700)	32,100	(4,200)	31,100	(6,800)	30,100	(9,400)	29,000	(12,100)
	S/T	0.520	0.210	0.523	0.161	0.529	0.101	0.527	0.031	0.531	0	0.533	0	0.535	0	0.538	0	0.541	0
	Latent Btuh	33,100	31,300	32,200	30,300	30,900	30,400	30,300	28,100	29,200	27,000	28,100	25,800	27,000	24,500	25,800	23,200	24,600	22,000
	Lbs. H20/hr.	31.2	29.5	30.4	28.6	29.2	28.7	28.6	26.5	27.5	25.5	26.5	24.3	25.5	23.1	24.3	21.9	23.2	20.8
	Supply Air DB	56.3	69.0	56.7	70.7	57.1	71.8	57.5	74.4	57.9	76.2	58.3	78.1	58.8	80.0	59.3	81.9	59.7	83.9
	Supply Air WB	55.8	58.7	56.1	59.6	56.5	60.0	56.8	61.5	57.2	62.5	57.6	63.4	58.1	64.4	58.5	65.4	58.9	66.4
	Suction PSIG[4]	138	128	139	130	141	131	141	134	142	136	144	138	145	140	146	143	147	145
	Discharge PSIG[4]	295	281	315	296	338	310	358	326	382	342	406	358	431	375	457	393	484	412
80/68.3 (55% RH)	Total Cooling Btuh	69,600	41,700	68,100	38,200	66,200	35,900	64,700	31,100	62,800	27,400	60,800	23,700	58,700	19,800	56,500	15,900	54,200	12,000
	Sensible Btuh	45,900	14,800	45,300	12,400	44,700	9,900	43,800	7,400	43,000	4,900	42,100	2,300	41,100	(300)	40,100	(2,900)	39,000	(5,600)
	S/T	0.659	0.35	0.665	0.32	0.675	0.28	0.677	0.24	0.685	0.18	0.692	0.10	0.700	0	0.710	0	0.720	0
	Latent Btuh	23,700	26,900	22,800	25,800	21,500	26,000	20,900	23,700	19,800	22,500	18,700	21,400	17,600	20,100	16,400	18,800	15,200	17,600
	Lbs. H20/hr.	22.4	25.4	21.5	24.3	20.3	24.5	19.7	22.4	18.7	21.2	17.6	20.2	16.6	19.0	15.5	17.7	14.3	16.6
	Supply Air DB	57.1	69.9	57.5	71.7	57.9	72.8	58.3	75.3	58.7	77.2	59.1	79.1	59.6	81.0	60.0	82.9	60.5	84.8
	Supply Air WB	56.1	58.7	56.5	59.6	56.8	60.0	57.2	61.5	57.6	62.5	58.0	63.4	58.4	64.4	58.8	65.4	59.3	66.4
	Suction PSIG[4]	139	130	140	132	142	134	142	136	144	139	145	141	146	143	147	145	148	148
	Discharge PSIG[4]	294	282	314	296	337	310	357	326	381	342	405	359	430	376	456	394	483	412

[1] Values listed are with ventilation package disabled
[2] Return air temperature °F @ Default airflow (1750 CFM) for AC tests and Balanced Climate airflow (1250 CFM) for dehumidification tests
[3] Below 50°F, unit requires a factory or field installed low ambient control.
[4] Suction pressure +/- 4 psi, Discharge pressure +/- 10 psi

TABLE 3
Dehumidification Relay Logic Board

Energize on Unit Terminal Strip	Mode	Occupied/ Unoccupied	Inputs to the Board					Outputs from the Board		
			Y	B	W2	A1	D	RV	TWV	YO
Y1, G	1st Stage Cooling	Unoccupied	X							X
Y1, G, A	1st Stage Cooling	Occupied	X			X				X
Y1, G, A, D	1st Stage Cooling w/Dehum ①	Occupied	X			X	X			X
Y1, G, D	1st Stage Cooling w/Dehum ①	Unoccupied	X				X			X
Y1, G, B/W1	1st Stage Heat Pump	Unoccupied	X	X				X		X
Y1, G, B/W1, A	1st Stage Heat Pump	Occupied	X	X		X		X		X
Y1, G, B/W1, A, D	1st Stage Heat Pump w/Dehum ②	Occupied	X	X		X	X		X	X
Y1, G, B/W1, D	1st Stage Heat Pump w/Dehum	Unoccupied	X	X			X	X		X
Y1, G, B/W1, W2	2nd Stage Heat Pump w/Strips	Unoccupied	X	X	X			X		X
Y1, G, B/W1, W2, A	2nd Stage Heat Pump w/Strips	Occupied	X	X	X	X		X		X
Y1, G, B/W1, W2, A, D	2nd Stage Heat Pump w/Strips and Dehum ③	Occupied	X	X	X	X	X	X		X
Y1, G, B/W1, W2, D	2nd Stage Heat Pump w/Strips and Dehum ③	Unoccupied	X	X	X		X	X		X
D	Dehum	Unoccupied					X		X ④	X ④
D, A	Dehum	Occupied				X	X		X	X

① Cooling takes precedence over dehumidification. A cooling call cancels dehumidification.

② When occupied (for either jumper position), dehumidification takes precedence over first stage heating.

③ A second stage heating call always takes precedence over dehumidification.

④ The relay logic board has a jumper (J1) on it to choose between “any-time dehumidification” and “occupied dehumidification”. The factory default is P1-P2. With the jumper in the P1-P2 position, dehumidification is available any time there is a “D” input to the relay logic board. With the jumper in the P2-P3 position, dehumidification is available when there is an occupancy signal to the “A1” terminal, “D” would also need to be energized to dehumidify.

Refer to sequence of operation. In most cases cooling and heating modes take priority over dehumidification.

TABLE 4A
Electrical Specifications – Dehumidification Models

Model	Rated Volts & Phase	No. Field Power Circuits	Single Circuit		Dual Circuit			
			① Minimum Circuit Ampacity	② Maximum External Fuse or Circuit Breaker	① Minimum Circuit Ampacity		② Maximum External Fuse or Circuit Breaker	
					Circuit A	Circuit B	Circuit A	Circuit B
W24HYDA00, A0Z	230/208-1	1	22	25				
A04		1	43	45				
A08		1 or 2	63	70	22	42	25	45
W24HYDB00, B0Z	230/208-3	1	15	20				
B05		1	30	30				
W24HYDC00, C0Z	460-3	1	8	15				
C05		1	15	15				
W30HYDA00, A0Z	230/208-1	1	24	30				
A05		1	50	50				
A10		1 or 2	76	80	24	52	30	60
W30HYDB00, B0Z	230/208-3	1	17	20				
B05		1	32	35				
B09		1	45	45				
W30HYDC00, C0Z	460-3	1	9	15				
C05		1	16	20				
C09		1	22	25				
W36HYDA00, A0Z	230/208-1	1	28	35				
A05		1	54	60				
A10		1 or 2	80	80	28	52	35	60
W36HYDB00, B0Z	230/208-3	1	20	25				
B05		1	35	35				
B09		1	47	50				
W36HYDC00, C0Z	460-3	1	11	15				
C05		1	19	20				
C09		1	25	25				

① These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing. ***CAUTION:*** *When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three (3) current carrying conductors are in a raceway.*

② *Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.*

NOTE: *The Maximum Overcurrent Protection (MOCP) value listed is the maximum value as per UL 1995 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory-installed overcurrent protective device (circuit breaker) in this model may be lower than the maximum UL 1995 allowable MOCP value, but still above the UL 1995 minimum calculated value or Minimum Circuit Ampacity (MCA) listed.*

IMPORTANT: *While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all local codes.*

TABLE 4B
Electrical Specifications – Dehumidification Models

Model	Rated Volts & Phase	No. Field Power Circuits	Single Circuit		Dual Circuit			
			① Minimum Circuit Ampacity	② Maximum External Fuse or Circuit Breaker	① Minimum Circuit Ampacity		② Maximum External Fuse or Circuit Breaker	
					Circuit A	Circuit B	Circuit A	Circuit B
W42HYDA00, A0Z	230/208-1	1	32	40				
A05		1	58	60				
A10		1 or 2	84	90	32	52	40	60
④ A15		1 or 2	85	90	33	52	40	60
W42HYDB00, B0Z	230/208-3	1	24	30				
B05		1	39	40				
B09		1	52	60				
③ B15		1	52	60				
W42HYDC00, C0Z	460-3	1	12	15				
C05		1	19	20				
C09		1	25	25				
③ C15		1	26	30				
W48HYDA00, A0Z	230/208-1	1	35	45				
A05		1 or 2	61	70	35	26	45	30
A10		1 or 2	87	90	35	52	45	60
W48HYDB00, B0Z	230/208-3	1	25	30				
B05		1	40	45				
W48HYDC00, C0Z	460-3	1	12	15				
W60HYDA00, A0Z	230/208-1	1	39	45				
A05		1 or 2	65	70	39	26	45	30
A10		1 or 2	91	100	39	52	45	60
④ A15		1 or 2	91	100	39	52	45	60
W60HYDB00, B0Z	230/208-3	1	28	35				
B09		1	56	60				
③ B15		1	56	60				
W60HYDC00, C0Z	460-3	1	14	20				
C09		1	27	30				
③ C15		1	27	30				

① These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing. **CAUTION**: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three (3) current carrying conductors are in a raceway.

② Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.

③ Maximum KW that can operate with the heat pump on is 9KW. Full heat available during emergency heat mode.

④ Maximum KW that can operate with the heat pump on is 10KW. Full heat available during emergency heat mode.

NOTE: *The Maximum Overcurrent Protection (MOCP) value listed is the maximum value as per UL 1995 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory-installed overcurrent protective device (circuit breaker) in this model may be lower than the maximum UL 1995 allowable MOCP value, but still above the UL 1995 minimum calculated value or Minimum Circuit Ampacity (MCA) listed.*

IMPORTANT: *While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all local codes.*