Supplemental Instructions

Models

QW2S2D QW3S2D QW4S2D QW5S2D

These models provide a unique dehumidification circuit for periods of high indoor humidity conditions. Additionally, an "energy recovery ventilator" may be provided to allow for outside ventilation air requirements by eliminating excessive sensible and latent loads as a result of the increased ventilation requirement.

Refer to Specification Sheet S3419 for the standard features of the base unit QW*S2D Q-TEC. Electrical data for the QW dehumidification Q-TEC models is identical to the electrical data for the standard QW models.

Dehumidification Circuit

The dehumidification circuit incorporates an independent heat exchanger coil in the supply air stream in addition to the standard evaporator coil. This coil reheats the supply air after it passes over the cooling coil, and is sized to nominally match the sensible cooling capacity of the evaporator coil. Extended run times in dehumidification mode can be achieved using waste heat from the refrigeration cycle to achieve the reheat process, while at the same time large amounts of moisture can be extracted from the passing air stream. See below for specific operating sequences, and see attached tables for performance on sensible and latent capacities, water removal ratings, and supply air delivery conditions.

The dehumidification refrigerant reheat circuit is controlled by a 3-way 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 3-way 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 water coil for further heat transfer. When the humidistat is satisfied, the system automatically switches back to normal A/C mode and either continues to operate or turns off based on the signal from the wall thermostat. The result is separate humidity control at minimum operating cost.

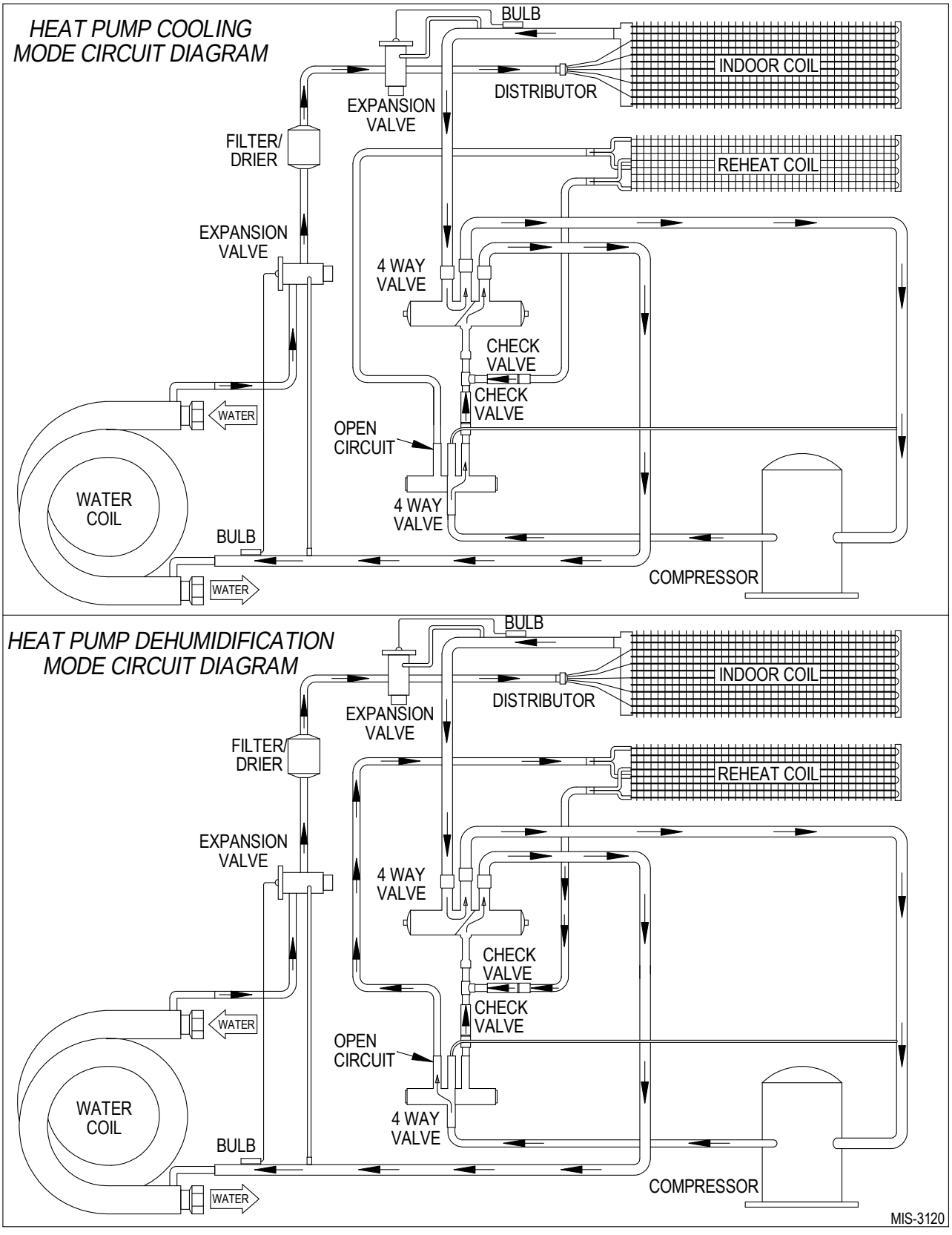
Dehumidification Sequence of Operation

Dehumidification is controlled through a humidistat and is independent of the thermostat. On a call for dehumidification mode of operation, the compressor will operate at full load (capacity) and 3-way valve that feeds the reheat coil is energized through "D" terminal. Dehumidification will continue until the humidistat is satisfied.

Anytime there is a R-Y call for cooling or heat pump, dehumidification is canceled and the unit will operate in part load cooling or heating dependent upon the control signal. If there is still a dehumidification demand when the cooling or heating call is terminated, the compressor will stay in operation, the three-way valve will once again energize and the compressor will be ramped up to full load capacity.

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

Manual: 7960-658A
Supersedes: 7960-658
Date: 3-12-15


HEAT PUMP COOLING
MODE CIRCUIT DIAGRAM
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EXPANSION
VALVE
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BULB
COMPRESSOR
WATER
MIS-3120

QW2S2DA

Full Load Capacities Based Upon Rated Flow of 7 GPM of 15% Methanol/Mass at 950 CFM Airflow.

Cooling Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Sensible to Total Ratio	Approximate Supply Air	
							DB	WB
50°	65° DB 63° WB	27.87	11.56	16.31	15.39	41.48%	54.4	53.9
60°		27.28	11.30	15.98	15.08	41.43%	54.6	54.1
70°		26.69	11.05	15.65	14.76	41.38%	54.9	54.3
75°		24.93	10.28	14.65	13.82	41.20%	55.6	55.0
80°		24.31	9.86	14.45	13.63	40.60%	56.0	55.4
90°		23.69	9.44	14.25	13.44	39.90%	56.4	55.8
100°		21.83	8.19	13.64	12.87	37.50%	57.5	56.9
50°	75° DB 63° WB	27.52	20.35	7.17	6.77	73.94%	56.4	53.1
60°		26.93	19.98	6.95	6.60	74.20%	56.7	53.3
70°		26.34	19.62	6.72	6.30	74.48%	57.0	53.6
75°		24.57	18.52	6.05	5.70	75.38%	58.0	54.3
80°		23.93	18.18	5.75	5.40	76.00%	58.3	54.5
90°		23.29	17.84	5.45	5.10	76.60%	58.6	54.8
100°		21.37	16.82	4.55	4.29	78.70%	59.6	55.5
50°	75° DB 66° WB	29.17	17.91	11.26	10.63	61.39%	58.6	56.3
60°		28.46	17.58	10.88	10.30	61.76%	58.9	56.5
70°		27.75	17.25	10.51	9.90	62.14%	59.2	56.7
75°		25.62	16.25	9.37	8.80	63.42%	60.0	57.4
80°		24.99	15.95	9.04	8.50	63.80%	60.3	57.6
90°		24.36	15.66	8.71	8.20	64.30%	60.6	57.8
100°		22.47	14.76	7.71	7.27	65.70%	61.4	58.5
50°	75° DB 68° WB	30.11	15.73	14.37	13.56	52.26%	60.6	58.9
60°		29.50	15.47	14.04	13.20	52.42%	60.8	59.1
70°		28.90	15.20	13.70	12.90	52.58%	61.1	59.3
75°		27.10	14.39	12.70	12.00	53.11%	61.8	59.9
80°		26.44	14.11	12.33	11.60	53.40%	62.1	60.1
90°		25.78	13.82	11.96	11.30	53.60%	62.3	60.3
100°		23.80	12.96	10.84	10.23	54.40%	63.1	61.0
50°	80° DB 67° WB	29.82	20.70	9.12	8.60	69.42%	61.1	57.6
60°		29.13	20.33	8.80	8.30	69.80%	61.4	57.9
70°		28.44	19.97	8.47	8.00	70.21%	61.7	58.1
75°		26.37	18.87	7.51	7.10	71.54%	62.7	58.9
80°		25.74	18.56	7.18	6.80	72.10%	63.0	59.1
90°		25.10	18.25	6.85	6.50	72.70%	63.3	59.4
100°		23.19	17.33	5.87	5.53	74.70%	64.3	60.1

Dehumidification Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Approximate Supply Air	
						DB	WB
50°	65° DB 63° WB	17.49	3.81	13.67	12.90	61.5	57.5
60°		15.43	2.55	12.88	12.15	62.6	58.2
70°		13.37	1.29	12.08	11.40	63.8	58.9
75°		7.20	-2.50	9.70	9.15	67.2	60.9
80°		4.49	-3.75	8.24	7.78	68.4	61.6
90°		1.78	-5.00	6.79	6.40	69.6	62.3
100°		-6.34	-8.76	2.42	2.28	73.1	64.5
50°	75° DB 63° WB	17.70	11.31	6.39	6.03	64.6	56.7
60°		15.86	9.76	6.11	5.76	66.0	57.3
70°		14.03	8.21	5.82	5.49	67.4	57.9
75°		8.52	3.55	4.97	4.69	71.7	59.8
80°		6.41	2.12	4.29	4.05	73.0	60.5
90°		4.30	0.68	3.62	3.41	74.3	61.1
100°		-2.03	-3.62	1.59	1.50	78.3	63.1
50°	75° DB 66° WB	18.95	9.32	9.63	9.08	66.4	59.6
60°		17.12	7.89	9.23	8.70	67.7	60.2
70°		15.29	6.46	8.83	8.33	69.0	60.8
75°		9.80	2.17	7.62	7.19	73.0	62.7
80°		7.44	0.83	6.61	6.24	74.2	63.4
90°		5.08	-0.52	5.60	5.28	75.5	64.1
100°		-1.99	-4.55	2.56	2.41	79.2	66.1
50°	75° DB 68° WB	19.87	7.39	12.48	11.77	67.9	62.0
60°		18.10	6.12	11.98	11.30	69.1	62.6
70°		16.34	4.85	11.49	10.84	70.3	63.2
75°		11.03	1.03	10.00	9.44	74.0	64.9
80°		8.49	-0.25	8.74	8.24	75.2	65.6
90°		5.94	-1.54	7.48	7.05	76.4	66.3
100°		-1.71	-5.40	3.69	3.48	80.0	68.4
50°	80° DB 67° WB	20.10	11.92	8.19	7.72	69.1	61.1
60°		18.20	10.42	7.78	7.34	70.5	61.7
70°		16.30	8.92	7.38	6.96	71.8	62.2
75°		10.59	4.43	6.16	5.81	75.9	63.9
80°		8.75	3.09	5.66	5.34	77.1	64.4
90°		6.90	1.74	5.16	4.86	78.4	65.0
100°		1.36	-2.29	3.65	3.44	82.1	66.6

QW3S2DA

Full Load Capacities Based Upon Rated Flow of 8 GPM of 15% Methanol/Mass at 1150 CFM Airflow.

Cooling Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Sensible to Total Ratio	Approximate Supply Air	
							DB	WB
50°	65° DB 63° WB	39.96	16.81	23.15	21.83	42.07%	50.5	49.7
60°		39.42	16.52	22.90	21.61	41.91%	50.8	49.9
70°		38.89	16.23	22.66	21.38	41.74%	51.0	50.1
80°		37.17	15.08	21.69	20.46	40.60%	52.0	51.0
90°		37.03	14.79	21.44	20.23	39.90%	52.3	51.3
100°		36.64	13.93	20.71	19.54	38.00%	53.0	52.0
50°	75° DB 63° WB	39.65	26.86	12.79	12.07	67.74%	52.0	49.4
60°		39.67	26.05	13.61	12.80	65.68%	52.7	50.2
70°		39.68	25.25	14.43	13.60	63.63%	53.4	51.0
80°		38.90	22.50	16.40	15.50	57.80%	55.7	53.6
90°		38.07	22.17	15.89	15.00	58.30%	56.0	53.8
100°		35.57	21.19	14.38	13.57	59.60%	56.8	54.6
50°	75° DB 66° WB	40.46	23.28	17.18	16.20	57.55%	55.0	53.0
60°		40.31	23.19	17.12	16.20	57.53%	55.1	53.1
70°		40.16	23.10	17.07	16.10	57.51%	55.2	53.1
80°		38.89	22.50	16.40	15.50	57.80%	55.7	53.6
90°		38.06	22.17	15.89	15.00	58.20%	56.0	53.8
100°		35.57	21.19	14.38	13.57	59.60%	56.8	54.6
50°	75° DB 68° WB	40.95	20.25	20.70	19.52	49.46%	57.6	56.1
60°		40.82	20.20	20.62	19.50	49.48%	57.7	56.1
70°		40.70	20.14	20.55	19.40	49.50%	57.8	56.2
80°		39.65	19.66	19.99	18.90	49.60%	58.2	56.5
90°		38.97	19.33	19.64	18.50	49.60%	58.5	56.7
100°		36.95	18.36	18.59	17.54	49.70%	59.2	57.4
50°	80° DB 67° WB	40.67	26.00	14.67	13.84	63.92%	57.7	54.9
60°		40.76	26.01	14.75	13.90	63.80%	57.7	54.9
70°		40.85	26.02	14.83	14.00	63.69%	57.7	54.9
80°		40.23	25.71	14.52	13.70	63.90%	58.0	55.2
90°		39.33	25.37	13.96	13.20	64.50%	58.4	55.5
100°		36.64	24.36	12.28	11.58	66.50%	59.4	56.5

Dehumidification Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Approximate Supply Air	
						DB	WB
50°	65° DB 63° WB	29.40	8.55	20.80	19.62	57.6	52.9
60°		25.13	6.44	18.69	17.63	59.4	54.4
70°		20.91	4.33	16.58	15.64	61.2	55.9
80°		8.25	-3.35	11.60	10.95	67.9	60.4
90°		8.25	-4.71	12.96	12.22	69.0	60.5
100°		8.23	-8.79	17.02	16.06	72.5	60.6
50°	75° DB 63° WB	29.98	14.31	15.67	14.78	62.6	56.6
60°		28.72	13.09	15.63	14.74	63.7	57.0
70°		27.46	11.87	15.59	14.70	64.7	57.4
80°		21.07	6.36	14.71	13.88	69.5	59.5
90°		18.45	4.49	13.95	13.16	71.1	60.3
100°		10.60	-1.10	11.68	11.02	75.9	62.6
50°	75° DB 66° WB	29.40	17.95	11.41	10.76	59.5	53.0
60°		28.22	16.00	12.22	11.53	61.2	54.1
70°		27.09	14.06	13.03	12.29	62.9	55.3
80°		21.07	6.36	14.71	13.88	69.5	59.5
90°		18.45	4.49	13.95	13.16	71.1	60.3
100°		10.60	-1.10	11.68	11.01	75.9	62.6
50°	75° DB 68° WB	30.90	11.84	19.08	18.00	64.9	59.4
60°		29.65	10.66	18.99	17.91	65.9	59.8
70°		28.39	9.49	18.90	17.83	66.9	60.2
80°		22.14	4.20	17.94	16.93	71.4	62.1
90°		19.68	2.43	17.24	16.27	72.9	62.8
100°		12.28	-2.87	15.15	14.29	77.4	64.8
50°	80° DB 67° WB	31.70	17.59	17.07	16.10	65.0	58.0
60°		30.39	16.47	16.32	15.39	65.9	58.4
70°		29.12	15.36	15.56	14.68	66.9	58.7
80°		26.71	14.11	12.60	11.89	71.3	60.6
90°		28.10	16.20	11.90	11.23	73.0	61.4
100°		12.3	22.48	9.79	9.24	77.9	63.7

QW4S2DA

Full Load Capacities Based Upon Rated Flow of 9 GPM of 15% Methanol/Mass at 1450 CFM Airflow.

Cooling Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Sensible to Total Ratio	Approximate Supply Air	
							DB	WB
50°	65° DB 63° WB	49.78	20.50	29.28	27.62	41.19%	52.1	51.2
60°		49.77	20.45	29.32	27.66	41.09%	52.1	51.2
70°		49.76	20.40	29.37	27.70	40.99%	52.1	51.3
80°		48.38	19.66	28.93	27.29	40.60%	52.6	51.7
90°		47.02	19.07	28.35	26.74	40.60%	53.0	52.1
100°		42.92	17.32	26.61	25.10	40.30%	54.1	53.1
50°	75° DB 63° WB	50.79	34.29	16.50	15.57	67.51%	53.5	50.5
60°		50.32	34.19	16.13	15.20	67.94%	53.6	50.6
70°		49.86	34.09	15.76	14.90	68.38%	53.6	50.8
80°		47.28	33.09	14.20	13.40	70.00%	54.2	51.5
90°		46.10	32.37	13.73	13.00	70.20%	54.7	51.8
100°		42.57	30.23	12.34	11.64	71.00%	56.0	52.6
50°	75° DB 66° WB	51.42	29.36	22.07	20.82	57.09%	56.7	54.3
60°		51.19	29.39	21.80	20.60	57.42%	56.6	54.3
70°		50.96	29.43	21.53	20.30	57.75%	56.6	54.3
80°		49.28	29.06	20.22	19.10	59.00%	58.2	55.1
90°		48.29	28.59	19.71	18.60	59.20%	60.0	55.8
100°		45.34	27.17	18.18	17.15	59.90%	65.4	57.9
50°	75° DB 68° WB	51.39	25.29	26.10	24.62	49.21%	59.2	57.3
60°		51.71	25.49	26.22	24.70	49.30%	59.0	57.2
70°		52.04	25.70	26.34	24.80	49.38%	58.9	57.1
80°		52.00	25.86	26.14	24.70	49.70%	58.7	57.0
90°		50.99	25.40	25.59	24.10	49.80%	59.0	57.3
100°		47.94	24.02	23.92	22.57	50.10%	59.9	58.1
50°	80° DB 67° WB	51.88	33.38	18.50	17.45	64.35%	59.1	55.8
60°		51.91	33.48	18.44	17.40	64.49%	59.0	55.8
70°		51.95	33.57	18.38	17.30	64.63%	58.9	55.8
80°		50.92	33.40	17.53	16.50	65.60%	59.0	56.0
90°		49.78	32.93	16.86	15.90	66.10%	59.3	56.3
100°		46.36	31.52	14.85	14.00	68.00%	60.1	57.0

Dehumidification Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Approximate Supply Air	
						DB	WB
50°	65° DB 63° WB	27.70	2.48	25.23	23.80	63.4	56.9
60°		25.76	0.58	25.18	23.76	64.6	57.3
70°		23.82	-1.32	25.14	23.72	65.8	57.7
80°		14.32	-9.27	23.59	22.26	70.8	59.8
90°		10.64	-11.53	22.17	20.92	72.3	60.6
100°		—	-18.30	17.92	16.90	76.6	63.1
50°	75° DB 63° WB	26.60	14.71	14.94	14.09	53.5	50.5
60°		24.78	12.80	14.38	13.57	57.1	52.1
70°		22.92	10.90	13.82	13.04	60.8	53.8
80°		13.49	2.41	11.08	10.45	73.5	59.6
90°		9.65	-0.36	10.01	9.44	75.2	60.4
100°		—	-8.66	6.80	6.41	80.5	63.0
50°	75° DB 66° WB	30.50	11.60	18.86	17.79	67.6	59.1
60°		28.29	9.68	18.61	17.56	68.8	59.6
70°		26.12	7.76	18.36	17.32	70.0	60.1
80°		16.15	-0.31	16.46	15.53	75.2	62.2
90°		12.68	-2.63	15.31	14.45	76.7	62.9
100°		—	-9.60	11.87	11.20	81.1	65.1
50°	75° DB 68° WB	31.20	8.91	22.31	21.04	69.3	61.8
60°		29.52	7.12	22.40	21.13	70.5	62.1
70°		27.83	5.34	22.49	21.21	71.6	62.5
80°		19.55	-2.22	21.77	20.54	76.5	64.1
90°		16.33	-4.44	20.78	19.60	77.9	64.8
100°		6.69	-11.11	17.80	16.79	82.0	66.7
50°	80° DB 67° WB	30.80	15.43	15.35	14.48	70.3	60.6
60°		29.52	13.76	15.76	14.87	71.3	60.9
70°		28.26	12.09	16.17	15.26	72.4	61.2
80°		20.77	4.65	16.12	15.21	77.0	62.8
90°		17.05	2.21	14.84	14.00	78.6	63.6
100°		5.90	-5.10	11.00	10.37	83.2	65.8

QW5S2DA

Full Load Capacities Based Upon Rated Flow of 11 GPM of 15% Methanol/Mass at 1650 CFM Airflow.

Cooling Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Sensible to Total Ratio	Approximate Supply Air	
							DB	WB
50°	65° DB 63° WB	63.20	26.60	36.60	34.53	42.09%	49.7	49.1
60°		62.19	26.18	36.01	33.97	42.10%	50.0	49.3
70°		61.18	25.76	35.42	33.42	42.11%	50.2	49.5
80°		56.44	24.19	32.25	30.42	42.90%	51.2	50.3
90°		54.72	23.88	30.84	29.10	43.60%	51.3	50.4
100°		49.56	22.93	26.63	25.12	46.30%	51.8	50.8
50°	75° DB 63° WB	61.70	41.98	19.73	18.61	68.03%	50.9	48.6
60°		60.56	41.43	19.13	18.00	68.42%	51.2	48.9
70°		59.41	40.89	18.53	17.50	68.82%	51.5	49.1
80°		54.71	38.59	16.12	15.20	70.50%	52.9	50.2
90°		53.45	37.93	15.52	14.60	71.00%	53.3	50.6
100°		49.67	35.95	13.72	12.94	72.40%	54.4	51.6
50°	75° DB 66° WB	65.43	27.75	37.68	35.54	42.41%	53.3	51.5
60°		64.29	29.21	35.08	33.10	45.44%	53.6	51.8
70°		63.16	30.67	32.49	30.60	48.57%	53.9	52.1
80°		58.47	34.45	24.02	22.70	58.90%	55.2	53.2
90°		57.17	33.83	23.34	22.00	59.20%	55.6	53.5
100°		53.29	31.99	21.30	20.09	60.00%	56.7	54.5
50°	75° DB 68° WB	68.59	34.02	35.57	33.55	49.60%	55.5	54.0
60°		67.53	33.51	34.82	32.90	49.62%	55.8	54.3
70°		66.47	32.99	34.08	32.20	49.63%	56.1	54.6
80°		61.95	30.87	31.09	29.30	49.80%	57.3	55.8
90°		60.61	30.29	30.32	28.60	50.00%	57.6	56.1
100°		56.57	28.55	28.03	26.44	50.50%	58.6	56.9
50°	80° DB 67° WB	65.62	41.53	24.09	22.73	63.29%	56.1	53.5
60°		64.51	41.06	23.46	22.10	63.64%	56.3	53.7
70°		63.41	40.59	22.82	21.50	64.01%	56.6	53.9
80°		58.68	38.63	20.06	18.90	65.80%	57.6	54.9
90°		57.26	38.07	19.19	18.10	66.50%	58.0	55.2
100°		53.00	36.41	16.60	15.66	68.70%	59.0	56.2

Dehumidification Full Load

Entering Fluid Temp (°F)	Entering Air Temp (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Latent Capacity (MBtuH)	Pounds of Water per Hour Removal	Approximate Supply Air	
						DB	WB
50°	65° DB 63° WB	37.98	3.57	34.41	32.46	63.2	55.2
60°		34.73	1.22	33.51	31.61	64.6	55.9
70°		31.47	-1.13	32.61	30.76	65.9	56.6
80°		18.52	-10.43	28.95	27.31	71.3	59.3
90°		15.34	-12.67	28.00	26.42	72.7	59.9
100°		5.78	-19.38	25.16	23.74	76.7	61.7
50°	75° DB 63° WB	34.84	17.12	17.72	16.72	65.1	54.9
60°		32.60	15.15	17.45	16.46	66.3	55.4
70°		30.36	13.18	17.18	16.21	67.4	56.0
80°		20.32	4.66	15.66	14.78	72.4	58.3
90°		16.99	2.05	14.95	14.10	74.0	59.0
100°		7.01	-5.80	12.81	12.08	78.6	61.1
50°	75° DB 66° WB	37.34	12.93	24.41	23.03	67.5	57.9
60°		35.39	11.09	24.30	22.93	68.6	58.3
70°		33.44	9.25	24.19	22.82	69.7	58.8
80°		24.28	1.16	23.12	21.81	74.4	60.8
90°		20.98	-1.40	22.38	21.11	75.9	61.5
100°		11.07	-9.08	20.15	19.01	80.5	63.6
50°	75° DB 68° WB	68.59	34.02	34.57	32.61	55.5	54.0
60°		61.00	27.37	33.63	31.73	59.4	55.7
70°		53.41	20.71	32.69	30.84	63.2	57.4
80°		27.38	-1.76	29.14	27.49	76.3	63.1
90°		24.13	-4.28	28.40	26.80	77.8	63.8
100°		14.37	-11.82	26.18	24.70	82.3	65.8
50°	80° DB 67° WB	37.33	16.29	21.04	19.85	70.6	59.7
60°		35.58	14.72	20.87	19.69	71.5	60.1
70°		33.84	13.14	20.69	19.52	72.4	60.4
80°		25.32	5.84	19.48	18.38	76.7	62.2
90°		22.04	3.26	18.78	17.72	78.3	62.8
100°		12.20	-4.50	16.70	15.75	82.9	64.8

Specifications – 2 and 3 Ton

MODELS	QW2S2DA	QW2S2DB	QW2S2DC	QW3S2DA	QW3S2DB	QW3S2DC
ELECTRICAL RATING – 60 HZ	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3
Operating Voltage Range	197-253		414-506	197-253		414-506
COMPRESSOR – CIRCUIT A						
Voltage	230/208		460	230/208		460
Rated Load Amps	9.1/10.6	5.1/5.9	3.2	13.2/15.8	10.1/12.0	6.0
Branch Circuit Selection Current	11.7	6.5	3.5	15.8	12.0	6.0
Lock Rotor Amps	58.3	55.4	28	83	73	38
MOTOR & EVAPORATOR						
Blower Motor HP/SPD	1/3 / Variable			1/2 / Variable		
Blower Motor--Amps	2.4			3.1		
Filter Sizes (inches) STD.	1 - 16x20x2 & 1 - 16x16x2			1 - 16x20x2 & 1 - 16x16x2		
SHIPPING WEIGHT – LBS.	475 lb.			475 lb.		

Specifications – 4 and 5 Ton

MODELS	QW4S2DA	QW4S2DB	QW4S2DC	QW5S2DA	QW5S2DB	QW5S2DC
ELECTRICAL RATING – 60 HZ	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3
Operating Voltage Range	197-253		414-506	197-253		414-506
COMPRESSOR – CIRCUIT A						
Voltage	230/208		460	230/208		460
Rated Load Amps	18.7/22.1	12.4/14.7	6.7	21.1/23.3	12.9/14.2	6.3
Branch Circuit Selection Current	22.1	14.7	6.7	27.2	16.6	7.3
Lock Rotor Amps	104	83.1	41	152.9	110	52
MOTOR & EVAPORATOR						
Blower Motor HP/SPD	3/4 / Variable			3/4 / Variable		
Blower Motor--Amps	3.6			4.0		
Filter Sizes (inches) STD.	1 - 16x20 & 1 - 16x16			1 - 16x20 & 1 - 16x16		
SHIPPING WEIGHT – LBS.	505 lb.			505 lb.		

ELECTRICAL SPECIFICATIONS

MODEL	RATED VOLTS & PHASE	NO. FIELD POWER CIRCUITS	③ MINIMUM CIRCUIT AMPACITY	① MAXIMUM EXTERNAL FUSE OR CIRCUIT BREAKER	② FIELD POWER WIRE SIZE	② GROUND WIRE SIZE
QW2S2DA0Z	230/208-1	1	19	30	10	10
QW2S2DB0Z	230/208-3	1	12	20	12	12
QW2S2DC0Z	460-3	1	7.5	15	14	14
QW3S2DA0Z	230/208-1	1	25	40	8	10
QW3S2DB0Z	230/208-3	1	20	30	10	10
QW3S2DC0Z	460-3	1	11	15	14	14
QW4S2DA0Z	230/208-1	1	33	50	8	10
QW4S2DB0Z	230/208-3	1	24	35	8	10
QW4S2DC0Z	460-3	1	13	20	12	12
QW5S2DA0Z	230/208-1	1	41	60	8	10
QW5S2DB0Z	230/208-3	1	28	40	8	10
QW5S2DC0Z	460-3	1	13	20	10	10

① Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.
② Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.
③ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical Code (latest revision) article 310 for power conductor sizing.

DEHUMIDIFICATION RELAY LOGIC BOARD

		Inputs to Board									Outputs from Board							
		G	Y	B	W2	E1	A1	D	RAT	L	G1	YO	RV	W	E	A2	TWV	L
Cooling Mode	Unoccupied	X	X								X	X						
Cooling Mode	Occupied	X	X				X				X	X				X		
Cooling Mode	w/Dehum	X	X					X			X	X						
1st Stage Heating	Unoccupied	X	X	X							X	X	X					
1st Stage Heating	Occupied	X	X	X			X				X	X	X			X		
2nd Stage Heating	Unoccupied	X	X	X	X						X	X	X	X				
2nd Stage Heating	Occupied	X	X	X	X		X				X	X	X	X		X		
Dehumidification	Unoccupied							X			X	X					X	
Dehumidification	Occupied						X	X			X	X				X	X	
Dehumidification	w/RAT						X											

NOTE: Cooling takes precedence over dehumidification. A cooling call cancels dehumidification.