MODELS:

QW242D, QW302D, QW361D

QW421D, QW481D, QW601D

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506

MODEL FEATURES

This model provides 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 S3343 for the standard features of the base unit. Electrical data for the dehumidification models is identical to the electrical data for the standard QW models.

SPECIAL FEATURES

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 system condenser for further heat transfer. A small orifice assembly inserted between the reheat coil return line and suction line will prevent liquid from accumulating in the reheat coil when it is inactive. This drain does not affect the normal operation of the system. A check valve is located in the reheat coil return line. It has a soft spring to hold the ball on the seat. Refer to Page 2 for the location of the check valve and drain back capillary. 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.

SEQUENCE OF DEHUMIDIFICATION OPERATION

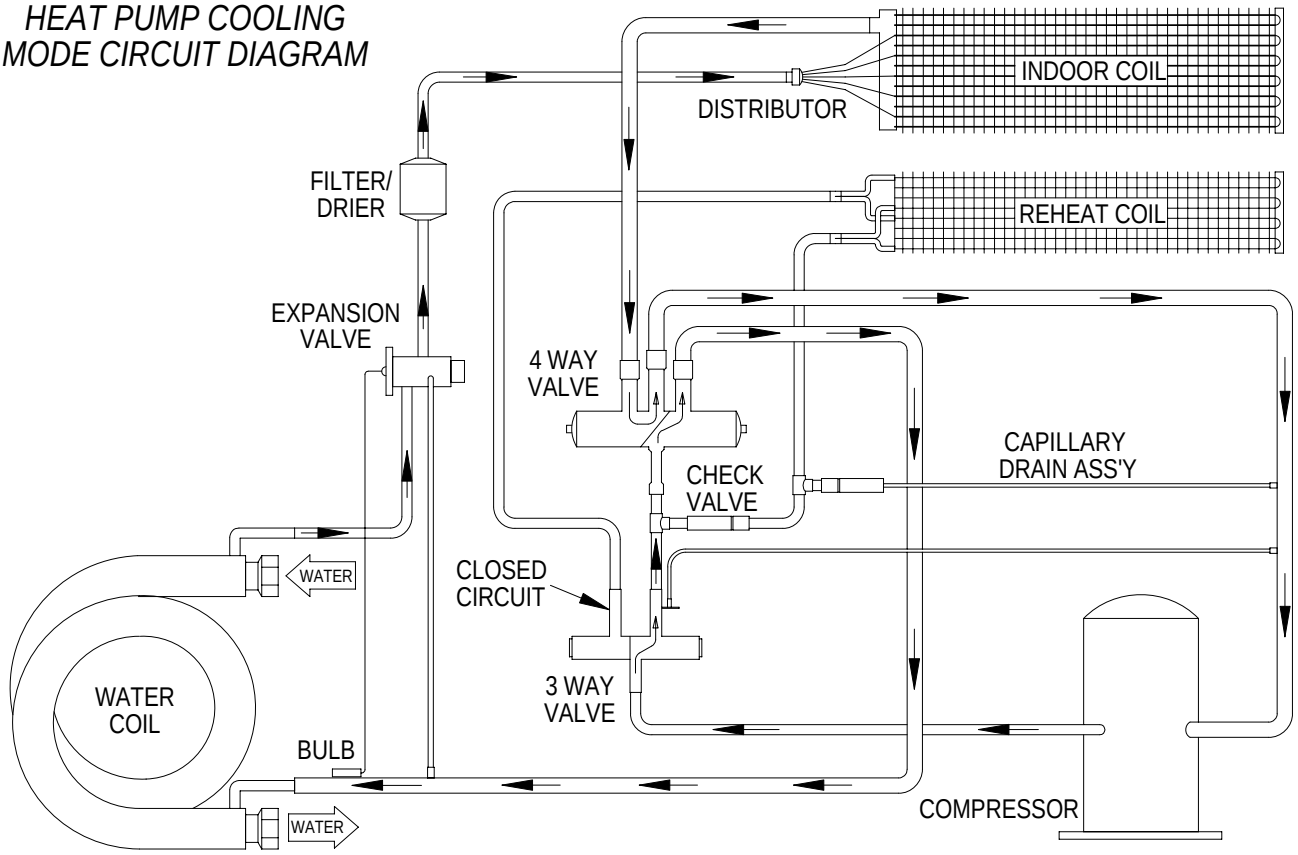
Dehumidification is controlled through a humidistat and is independent of the thermostat. On a call for dehumidification mode of operation the compressor and 3-way valve of the unit are energized through circuit R - W3 to provide dehumidification. Dehumidification will continue until the humidistat is satisfied.

Any time there is a call for cooling mode or operation through circuit R - Y the dehumidification mode will cancel and the system will return to cooling operation.

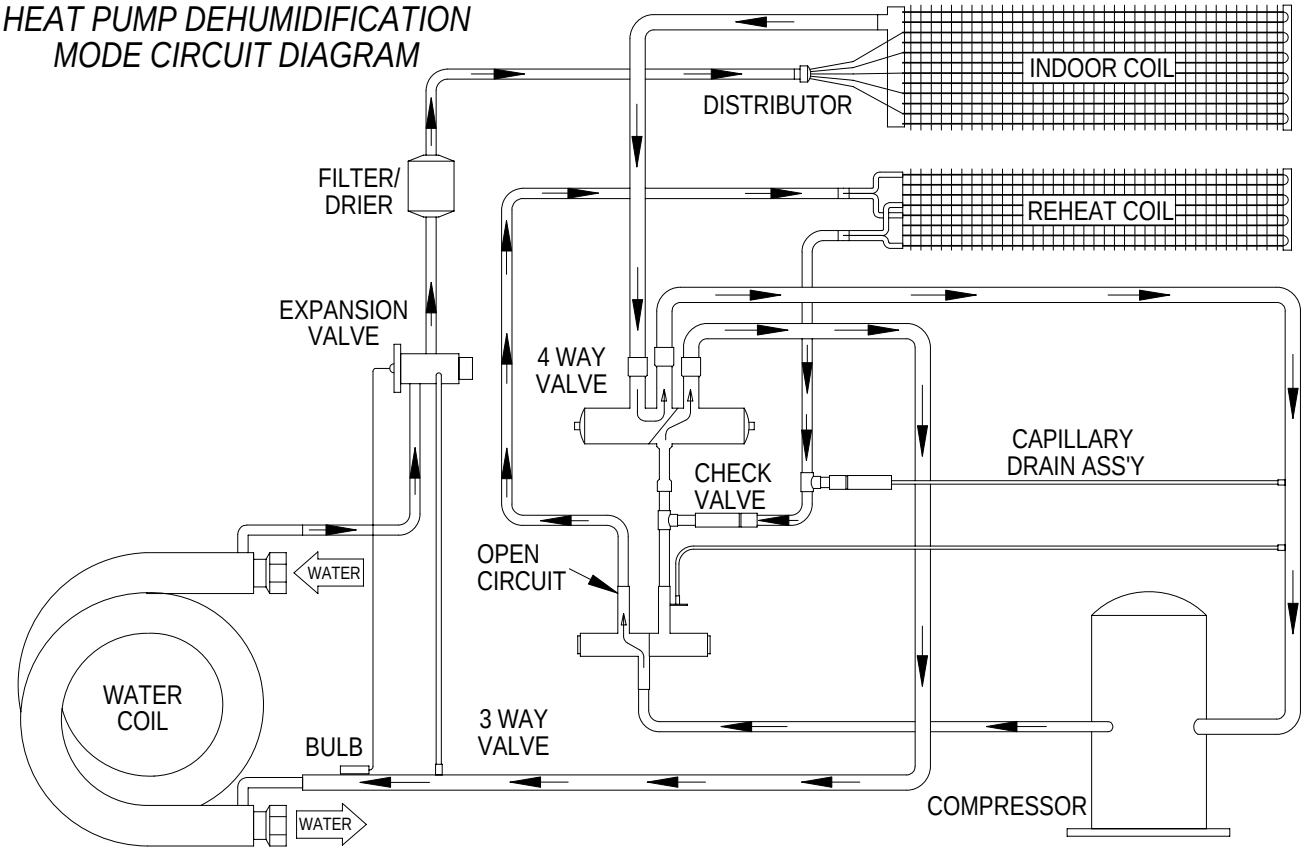
Any time there is a call for heating mode of operation through circuit R - W2 the dehumidification mode will cancel and the system will return to heating operation.

If the room temperature falls below 65° the dehumidification mode will discontinue until the room temperature rises above 72°.

HEAT PUMP COOLING MODE CIRCUIT DIAGRAM



HEAT PUMP DEHUMIDIFICATION MODE CIRCUIT DIAGRAM



MIS-1788

Supersedes Form No. F1773-803

QW242D Application Data w/59°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	59	24,800	10,700	14,100	0.43	13.33	800	54.1 / 52.8	A/C
65/63	90	59		[3,600]	11,800	-0-	11.15	600	70.6 / 58.2	Dehum
75/62.5	50	59	22,100	16,500	5,600	0.75	5.30	800	55.5 / 52.3	A/C
75/62.5	50	59	8,300	2,400	5,900	0.29	5.60	600	71.9 / 57.6	Dehum
75/65.5	60	59	27,300	18,000	9,300	0.66	8.80	800	58.0 / 53.3	A/C
75/65.5	60	59	9,200	-0-	9,200	-0-	8.70	600	74.6 / 60.6	Dehum
75/68	70	59	27,800	14,800	13,000	0.53	12.32	800	60.3 / 55.8	A/C
75/68	70	59		[1,500]	11,700	-0-	11.05	600	77.1 / 63.1	Dehum
80.6/66.2	50	59	28,000	20,500	7,100	0.74	6.70	800	58.0 / 55.2	A/C
80.6/66.2	50	59	17,300	10,300	7,000	0.59	6.60	600	76.1 / 61.0	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW242D Application Data w/77°F Brine

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Brine	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	77	25,400	11,400	14,000	0.45	13.23	800	54.3 / 52.0	A/C
65/63	90	77		[7,100]	12,600	-0-	11.88	600	75.9 / 60.9	Dehum
75/62.5	50	77	25,400	18,650	6,750	0.73	6.38	800	54.7 / 52.8	A/C
75/62.5	50	77		[1,150]	5,925	-0-	5.59	600	77.1 / 59.9	Dehum
75/65.5	60	77	29,500	19,500	10,000	0.66	9.46	800	54.7 / 52.8	A/C
75/65.5	60	77		[2,900]	9,450	-0-	8.93	600	79.0 / 61.8	Dehum
75/68	70	77	27,250	14,400	12,850	0.52	12.12	800	59.1 / 57.6	A/C
75/68	70	77		[3,150]	11,400	-0-	10.76	600	80.6 / 64.2	Dehum
80.6/66.2	50	77	25,000	18,500	6,150	0.74	5.80	800	58.4 / 55.2	A/C
80.6/66.2	50	77	6,300	-0-	6,300	-0-	5.94	600	79.7 / 62.3	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW242D Application Data w/86°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	86	24,050	10,450	13,600	0.43	12.85	800	53.0 / 52.8	A/C
65/63	90	86		[9,275]	10,500	-0-	9.90	600	79.2 / 82.7	Dehum
75/62.5	50	86	24,100	18,425	5,675	0.76	5.35	800	54.9 / 52.5	A/C
75/62.5	50	86		[3,400]	4,825	-0-	4.55	600	80.3 / 61.7	Dehum
75/65.5	60	86	26,325	18,425	7,900	0.69	8.58	800	54.9 / 52.5	A/C
75/65.5	60	86		[4,725]	7,900	-0-	7.45	600	82.3 / 64.0	Dehum
75/68	70	86	26,025	13,900	12,125	0.53	11.45	800	59.7 / 58.2	A/C
75/68	70	86		[5,950]	10,300	-0-	9.72	600	84.0 / 65.9	Dehum
80.6/66.2	50	86	25,500	19,975	5,525	0.78	5.22	800	58.7 / 56.0	A/C
80.6/66.2	50	86		[2,075]	4,650	-0-	4.40	600	83.8 / 64.5	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW302D Application Data w/59°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	59	29,550	12,750	16,800	0.43	15.85	1000	53.9 / 53.3	A/C
65/63	90	59		[4,175]	14,000	-0-	13.25	700	70.3 / 58.7	Dehum
75/62.5	50	59	29,550	22,850	6,700	0.77	6.32	1000	55.3 / 52.8	A/C
75/62.5	50	59	9,900	2,850	7,050	0.28	6.67	700	71.6 / 58.2	Dehum
75/65.5	60	59	30,650	19,850	10,800	0.64	10.15	1000	57.6 / 55.6	A/C
75/65.5	60	59	11,500	850	10,650	0.07	10.05	700	74.0 / 60.9	Dehum
75/68	70	59	32,225	17,150	15,075	0.53	14.22	1000	59.9 / 58.3	A/C
75/68	70	59		[1,125]	13,500	-0-	12.75	700	76.5 / 63.5	Dehum
80.6/66.2	50	59	30,500	23,275	7,225	0.77	6.82	1000	59.5 / 56.6	A/C
80.6/66.2	50	59	11,925	4,175	7,750	0.35	7.32	700	75.6 / 61.4	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW302D Application Data w/77°F Brine

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Brine	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	77	28,400	12,325	16,075	0.43	15.15	1000	54.0 / 53.7	A/C
65/63	90	77		[7,900]	11,050	-0-	10.42	700	74.4 / 61.4	Dehum
75/62.5	50	77	27,925	21,925	6,000	0.78	5.64	1000	56.0 / 53.4	A/C
75/62.5	50	77		[1,400]	4,900	-0-	4.61	700	76.8 / 60.9	Dehum
75/65.5	60	77	29,600	19,125	10,475	0.64	9.88	1000	58.4 / 56.4	A/C
75/65.5	60	77		[2,800]	8,600	-0-	8.12	700	78.4 / 62.8	Dehum
75/68	70	77	30,850	16,775	14,075	0.54	13.29	1000	60.5 / 58.9	A/C
75/68	70	77		[4,175]	12,200	-0-	11.52	700	80.2 / 65.1	Dehum
80.6/66.2	50	77	29,000	22,925	6,075	0.79	5.74	1000	60.0 / 57.0	A/C
80.6/66.2	50	77	6,325	-0-	6,325	-0-	5.97	700	80.0 / 63.4	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW302D Application Data w/86°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	86	26,925	11,300	15,625	0.41	14.57	1000	55.3 / 54.5	A/C
65/63	90	86		[10,325]	9,175	-0-	8.65	700	77.6 / 63.8	Dehum
75/62.5	50	86	26,625	21,625	5,000	0.81	4.72	1000	56.1 / 53.0	A/C
75/62.5	50	86		[4,025]	3,975	-0-	3.75	700	79.9 / 62.7	Dehum
75/65.5	60	86	28,100	18,825	9,275	0.67	8.95	1000	58.6 / 56.0	A/C
75/65.5	60	86		[5,375]	7,175	-0-	6.77	700	81.6 / 65.0	Dehum
75/68	70	86	29,500	16,200	13,300	0.54	12.54	1000	61.0 / 59.4	A/C
75/68	70	86		[7,900]	11,025	-0-	10.40	700	83.5 / 66.8	Dehum
80.6/66.2	50	86	29,100	23,400	5,700	0.80	5.37	1000	60.4 / 57.4	A/C
80.6/66.2	50	86		[2,750]	4,650	-0-	4.40	700	84.0 / 65.6	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW361D Application Data w/59°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	59	30,050	14,300	18,750	0.47	17.70	1000	51.8 / 51.1	A/C
65/63	90	59		[5,275]	16,400	-0-	15.47	850	70.6 / 58.6	Dehum
75/62.5	50	59	32,125	23,200	8,925	0.72	8.42	1000	53.5 / 50.9	A/C
75/62.5	50	59	10,820	2,550	8,270	0.23	7.80	850	72.4 / 59.4	Dehum
75/65.5	60	59	33,975	20,500	13,475	0.60	12.71	1000	56.0/ 53.9	A/C
75/65.5	60	59	12,500	-0-	12,500	-0-	11.80	850	74.6 / 61.9	Dehum
75/68	70	59	36,100	18,500	17,600	0.51	16.60	1000	57.9 / 56.4	A/C
75/68	70	59		[1,365]	16,000	-0-	15.10	850	76.6 / 63.3	Dehum
80.6/66.2	50	59	34,850	24,950	9,900	0.71	9.32	1000	57.4 / 54.0	A/C
80.6/66.2	50	59	37,000	28,000	9,000	0.75	8.50	1200	59.8 / 56.4	A/C
80.6/66.2	50	59	13,900	4,500	9,400	0.33	8.88	850	75.9 / 61.3	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW361D Application Data w/77°F Brine

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Brine	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	77	31,375	13,175	18,200	0.42	17.14	1000	52.7 / 52.1	A/C
65/63	90	77		[10,000]	14,750	-0-	13.92	850	74.7 / 61.1	Dehum
75/62.5	50	77	30,150	22,250	7,900	0.74	7.44	1000	54.3 / 51.7	A/C
75/62.5	50	77	7,200	-0-	7,200	-0-	6.81	850	76.6 / 60.3	Dehum
75/65.5	60	77	32,100	19,700	12,400	0.40	11.72	1000	56.6 / 54.6	A/C
75/65.5	60	77		[3,540]	11,550	-0-	10.89	850	78.8 / 62.9	Dehum
75/68	70	77	34,650	17,700	16,950	0.51	16.00	1000	58.7 / 57.1	A/C
75/68	70	77	14,500	-0-	14,500	-0-	13.72	850	80.7 / 65.0	Dehum
80.6/66.2	50	77	31,675	23,575	8,100	0.77	7.64	1000	58.9 / 55.8	A/C
80.6/66.2	50	77	33,400	25,400	8,000	0.77	7.60	1200	59.8 / 56.6	
80.6/66.2	50	77	7,775	-0-	7,775	-0-	7.33	850	80.5 / 63.4	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW361D Application Data w/86°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	86	29,800	12,400	17,400	0.41	16.45	1000	53.0 / 52.7	A/C
65/63	90	86		[11,700]	14,300	-0-	13.50	850	77.7 / 61.9	Dehum
75/62.5	50	86	29,150	21,200	7,950	0.72	7.50	1000	55.4 / 52.5	A/C
75/62.5	50	86		[4,400]	6,250	-0-	5.90	850	79.6 / 61.8	Dehum
75/65.5	60	86	30,550	18,750	11,800	0.61	11.10	1000	57.4 / 55.2	A/C
75/65.5	60	86		[6,200]	10,300	-0-	9.70	850	81.7 / 64.4	Dehum
75/68	70	86	33,000	17,000	16,000	0.51	15.10	1000	59.0 / 57.7	A/C
75/68	70	86	21,350	8,000	13,350	0.37	12.60	850	83.6 / 66.5	Dehum
80.6/66.2	50	86	31,650	23,500	8,150	0.74	7.70	1000	58.9 / 55.7	A/C
80.6/66.2	50	86	33,500	26,725	6,780	0.79	6.40	1200	60.7 / 57.3	A/C
80.6/66.2	50	86		[2,850]	7,100	-0-	6.70	850	83.7 / 65.0	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW421D Application Data w/59°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	59	38,200	16,800	21,400	0.43	20.20	1000	49.6 / 49.1	A/C
65/63	90	59		[6,650]	19,000	-0-	17.96	800	72.0 / 58.3	Dehum
75/62.5	50	59	38,000	26,250	11,750	0.69	11.08	1000	50.9 / 48.5	A/C
75/62.5	50	59	11,750	1,250	10,500	0.10	9.90	800	73.7 / 57.9	Dehum
75/65.5	60	59	41,300	23,600	17,700	0.57	16.70	1000	53.4 / 51.7	A/C
75/65.5	60	59		[4,300]	14,750	-0-	13.92	800	76.0 / 60.4	Dehum
75/68	70	59	42,400	21,500	20,900	0.50	19.72	1000	55.5 / 54.2	A/C
75/68	70	59		[3,050]	26,700	-0-	25.20	800	78.3 / 62.8	Dehum
80.6/66.2	50	59	41,500	28,600	12,900	0.69	12.20	1000	54.6 / 52.0	A/C
80.6/66.2	50	59	42,000	32,300	9,700	0.76	9.12	1200	58.7 / 55.5	A/C
80.6/66.2	50	59	26,450	14,650	11,800	0.55	11.12	800	77.8 / 61.0	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW421D Application Data w/77°F Brine

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Brine	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	77	35,500	15,700	19,800	0.44	18.68	1000	50.7 / 50.0	A/C
65/63	90	77		[10,575]	16,900	-0-	15.94	850	76.3 / 60.7	Dehum
75/62.5	50	77	35,450	25,100	10,350	0.70	9.78	1000	52.1 / 49.4	A/C
75/62.5	50	77		[2,900]	9,200	-0-	8.68	850	78.2 / 59.7	Dehum
75/65.5	60	77	39,050	22,700	16,350	0.58	15.42	1000	54.3 / 52.2	A/C
75/65.5	60	77		[5,000]	13,600	-0-	12.84	850	80.5 / 62.3	Dehum
75/68	70	77	39,750	20,200	19,550	0.51	18.44	1000	56.7 / 55.1	A/C
75/68	70	77		[6,550]	16,700	-0-	15.76	850	82.5 / 64.3	Dehum
80.6/66.2	50	77	39,100	27,100	12,000	0.69	11.37	1000	55.8 / 53.0	A/C
80.6/66.2	50	77	40,000	29,000	11,000	0.72	10.40	1200	28.5 / 55.3	
80.6/66.2	50	77		[1,425]	10,475	-0-	9.88	850	82.2 / 63.0	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW421D Application Data w/86°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	86	33,800	14,400	19,400	0.42	18.32	1000	51.9 / 51.4	A/C
65/63	90	86		[13,100]	15,750	-0-	14.84	850	79.2 / 62.3	Dehum
75/62.5	50	86	34,050	24,250	9,800	0.71	9.24	1000	52.9 / 50.3	A/C
75/62.5	50	86		[5,750]	8,450	-0-	7.96	850	81.0 / 61.8	Dehum
75/65.5	60	86	36,150	21,350	14,800	0.59	13.96	1000	55.6 / 53.2	A/C
75/65.5	60	86		[7,700]	12,300	-0-	11.60	850	83.2 / 64.2	Dehum
75/68	70	86	37,600	18,850	18,750	0.50	17.68	1000	57.7 / 56.2	A/C
75/68	70	86		[9,250]	15,350	-0-	14.48	850	84.8 / 66.0	Dehum
80.6/66.2	50	86	37,150	26,350	10,800	0.70	10.20	1000	56.5 / 53.6	A/C
80.6/66.2	50	86	37,500	27,830	9,670	0.74	9.12	1200	58.7 / 55.5	A/C
80.6/66.2	50	86		[4,200]	9,100	-0-	8.60	850	85.2 / 64.8	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW481D Application Data w/59°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	59	42,700	18,100	24,600	0.42	23.20	1100	50.2 / 49.9	A/C
65/63	90	59		[7,500]	20,200	-0-	19.04	850	73.3 / 58.7	Dehum
75/62.5	50	59	42,350	28,900	13,450	0.68	12.68	1100	51.7 / 49.4	A/C
75/62.5	50	59	12,000	-0-	12,000	-0-	11.32	850	75.2 / 58.4	Dehum
75/65.5	60	59	45,050	25,900	19,150	0.57	18.08	1100	54.1 / 52.4	A/C
75/65.5	60	59		[2,250]	16,500	-0-	15.56	850	77.6 / 60.8	Dehum
75/68	70	59	46,750	23,150	23,600	0.49	22.28	1100	56.3 / 54.9	A/C
75/68	70	59		[4,250]	20,350	-0-	19.20	850	79.7 / 63.1	Dehum
80.6/66.2	50	59	45,450	31,000	14,450	0.68	13.64	1100	55.4/ 53.8	A/C
80.6/66.2	50	59	48,500	35,100	13,400	0.72	12.64	1450	58.4 / 55.6	A/C
80.6/66.2	50	59	14,400	1,000	13,400	0.07	12.64	850	79.5 / 60.9	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW481D Application Data w/77°F Brine

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Brine	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	77	40,600	17,500	23,100	0.43	21.08	1100	51.0 / 50.6	A/C
65/63	90	77		[11,600]	18,150	-0-	17.12	850	77.6 / 60.5	Dehum
75/62.5	50	77	39,625	28,125	11,500	0.70	10.88	1100	52.1 / 49.8	A/C
75/62.5	50	77		[3,500]	10,550	-0-	9.96	850	78.8 / 59.7	Dehum
75/65.5	60	77	42,250	25,500	16,750	0.60	15.82	1100	54.4 / 52.7	A/C
75/65.5	60	77		[5,800]	15,400	-0-	14.56	850	81.3 / 62.4	Dehum
75/68	70	77	44,790	22,740	22,050	0.50	20.80	1100	56.5 / 55.1	A/C
75/68	70	77		[7,700]	18,900	-0-	17.84	850	83.5 / 64.6	Dehum
80.6/66.2	50	77	43,375	30,100	13,275	0.69	12.52	1100	56.1 / 53.4	A/C
80.6/66.2	50	77	45,000	33,075	11,925	0.74	11.25	1450	58.8 / 55.7	
80.6/66.2	50	77		[1,725]	11,875	-0-	11.20	850	82.6 / 62.5	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW481D Application Data w/86°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	86	36,950	16,000	20,950	0.43	19.76	1100	51.8 / 51.1	A/C
65/63	90	86		[14,860]	15,800	-0-	14.96	850	81.2 / 62.6	Dehum
75/62.5	50	86	37,700	26,700	11,000	0.70	10.40	1100	53.3 / 50.8	A/C
75/62.5	50	86		[7,000]	12,400	-0-	11.68	850	82.9 / 61.5	Dehum
75/65.5	60	86	42,150	23,150	19,000	0.54	17.96	1100	55.9 / 53.8	A/C
75/65.5	60	86		[9,000]	16,300	-0-	15.36	850	85.2 / 64.1	Dehum
75/68	70	86	41,300	21,300	20,000	0.51	18.92	1100	57.0 / 56.3	A/C
75/68	70	86		[10,800]	16,250	-0-	15.32	850	86.7 / 66.5	Dehum
80.6/66.2	50	86	40,100	28,600	11,500	0.71	10.80	1100	57.2 / 54.3	A/C
80.6/66.2	50	86	44,000	34,400	9,600	0.78	9.04	1450	60.0 / 56.6	A/C
80.6/66.2	50	86		[5,400]	10,900	-0-	10.36	850	86.8 / 64.1	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW601D Application Data w/59°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	59	60,200	30,900	29,300	0.51	27.60	1250	47.1 / 46.8	A/C
65/63	90	59		[5,900]	29,000	0.20	27.30	1250	69.6 / 56.6	Dehum
75/62.5	50	59	53,500	35,500	18,000	0.66	16.97	1250	47.8 / 46.1	A/C
75/62.5	50	59	23,300	6,100	17,200	0.26	16.25	1250	70.4 / 55.9	Dehum
75/65.5	60	59	54,400	31,700	22,700	0.58	21.40	1250	50.7 / 49.3	A/C
75/65.5	60	59	25,200	2,250	22,700	0.10	21.40	1250	73.1 / 58.6	Dehum
75/68	70	59	58,400	29,700	28,700	0.50	27.10	1250	52.3 / 51.3	A/C
75/68	70	59	28,400	-0-	28,400	-0-	26.80	1250	75.0 / 60.7	Dehum
80.6/66.2	50	59	57,700	37,200	19,500	0.64	18.40	1250	52.1 / 49.9	A/C
80.6/66.2	50	59	58,500	40,000	18,500	0.68	17.50	1550	55.1 / 52.4	A/C
80.6/66.2	50	59	27,500	8,000	19,500	0.29	18.40	1250	74.6 / 59.2	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW601D Application Data w/77°F Brine

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Brine	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	77	51,200	22,200	29,000	0.53	27.40	1250	48.3 / 47.7	A/C
65/63	90	77		[11,350]	26,400	-0-	24.90	1250	73.7 / 58.6	Dehum
75/62.5	50	77	50,900	32,600	18,300	0.64	17.30	1250	52.1 / 49.7	A/C
75/62.5	50	77		[4,000]	16,800	-0-	15.90	1250	78.6 / 59.6	Dehum
75/65.5	60	77	54,900	32,000	22,900	0.58	21.60	1250	51.4 / 49.8	A/C
75/65.5	60	77		[3,000]	21,600	-0-	20.40	1250	77.5 / 60.7	Dehum
75/68	70	77	53,000	24,200	28,800	0.45	27.70	1250	53.4 / 57.6	A/C
75/68	70	77		[5,700]	25,200	-0-	23.75	1250	79.6 / 63.1	Dehum
80.6/66.2	50	77	52,700	35,500	17,200	0.67	16.25	1250	52.8 / 50.6	A/C
80.6/66.2	50	77	53,500	37,450	16,000	0.59	15.10	1550	57.0 / 54.1	
80.6/66.2	50	77	16,700	-0-	16,700	-0-	15.75	1250	80.1 / 61.3	Dehum

Values shown in [ ] are BTUH of heat available at these conditions

QW601D Application Data w/86°F Water

Indoor Conditions		Fluid / Temp.	System Capacity				Pounds of Water/Hour	Evaporator Air Flow	Approximate Supply Air	Mode
DB/WB	% RH	Water	Total	Sensible	Latent	S/T	Lbs.	CFM	DB/WB	A/C vs Dehum
65/63	90	86	47,200	20,700	26,500	0.43	25.00	1250	49.0 / 48.6	A/C
65/63	90	86		[14,700]	23,800	-0-	22.40	1250	76.5 / 60.0	Dehum
75/62.5	50	86	48,550	33,350	15,200	0.69	14.40	1250	49.7 / 47.6	A/C
75/62.5	50	86		[2,700]	14,500	-0-	13.70	1250	77.4 / 59.1	Dehum
75/65.5	60	86	51,300	29,700	21,600	0.57	20.40	1250	52.4 / 50.7	A/C
75/65.5	60	86		[5,750]	20,000	-0-	18.90	1250	80.5 / 62.2	Dehum
75/68	70	86	52,300	26,600	25,700	0.50	24.20	1250	54.8 / 53.5	A/C
75/68	70	86		[9,000]	19,600	-0-	18.50	1250	82.3 / 61.2	Dehum
80.6/66.2	50	86	52,900	35,700	17,200	0.67	16.20	1250	53.6 / 51.2	A/C
80.6/66.2	50	86	51,500	36,200	15,300	0.70	14.40	1550	56.6 / 53.9	A/C
80.6/66.2	50	86		[1,150]	15,200	-0-	14.40	1250	81.7 / 62.5	Dehum

Values shown in [ ] are BTUH of heat available at these conditions