

PERFORMANCE DATA

Design Parameters

Design Parameters	Cooling	Heating
SAT	55 – 65°F	60 – 90°F
Airflow Rate	3 – 25 cfm/ft. (2-Way Discharge) 3 – 15 cfm/ft. (1-Way Discharge)	
EWT	Dew point + 2°F	120 – 180°F
Water ΔT	2 – 6°F	10 – 20°F
Water Flow Rate	min: 0.5 gpm max: 3 gpm (Optimal ≥ 1 gpm)	
Water ΔP	0 – 10 ft.	
Air ΔP	0.2 – 0.8 in.	

Acoustic Performance Data

6 ft Long Cabinet: One-Way Discharge, Nozzle Size 50 (405)

8E Inlet		Airside Pressure Drop [in H ₂ O]	Number of Units Ducted In Series		
Primary Airflow Rate [CFM]	Total Airflow Rate [CFM]		1	2	3
			Sound Pressure Level [NC]		
60	211	0.28	<10	15	22
70	246	0.38	<10	15	22
80	281	0.50	11	16	23
90	315	0.63	15	20	27
100	349	0.78	19	24	31

6 ft Long Cabinet: One-Way Discharge, Nozzle Size 70 (504)

8E Inlet		Airside Pressure Drop [in H ₂ O]	Number of Units Ducted In Series		
Primary Airflow Rate [CFM]	Total Airflow Rate [CFM]		1	2	3
			Sound Pressure Level [NC]		
80	236	0.20	<10	15	22
100	296	0.32	11	16	23
120	355	0.46	17	22	29
140	413	0.63	22	27	34
160	471	0.82	27	32	39

6 ft Long Cabinet: Two-Way Discharge

8E Inlet		Airside Pressure Drop [in H ₂ O]	Number of Units Ducted In Series		
Primary Airflow Rate [CFM]	Total Airflow Rate [CFM]		1	2	3
			Sound Pressure Level [NC]		
110	417	0.25	11	16	20
130	474	0.35	16	21	25
150	528	0.47	21	26	30
170	580	0.60	24	29	33
190	630	0.76	28	33	37

Performance Notes:

1. Single unit data is tested to ASHRAE Standard 200
2. Tested in a chamber accredited to ANSI S12.51 (NVLAP Lab Code: 200874-0)
3. Airside pressure drop measured at the first unit
4. Tested with perforated face
5. NC values are based on a room absorption of 10dB, re 10⁻¹² Watts

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Quick-Sizing Thermal Performance Data

6 ft Long Cabinet: One-Way Discharge, Nozzle Size 50 (405)

Primary Airflow Rate [CFM]	Total Airflow Rate [CFM]	Airside Pressure Drop [in H ₂ O]	Water Flow Rate [GPM]	Cooling		
				Total Sensible Capacity [BTUH]	Water Pressure Drop [ft H ₂ O]	Discharge Air T [°F]
60	211	0.28	0.5	2,903	0.9	62.6
			0.75	3,035	1.6	62.0
			1	3,136	2.4	61.6
			1.5	3,288	4.6	60.9
70	246	0.38	0.5	3,270	0.9	63.0
			0.75	3,415	1.6	62.5
			1	3,525	2.4	62.1
			1.5	3,691	4.6	61.5
80	281	0.50	0.5	3,618	0.9	63.4
			0.75	3,773	1.6	62.9
			1	3,891	2.4	62.5
			1.5	4,070	4.6	61.9
90	315	0.63	0.5	3,951	0.9	63.7
			0.75	4,115	1.6	63.2
			1	4,241	2.4	62.9
			1.5	4,430	4.6	62.3
100	349	0.78	0.5	4,272	0.9	64.0
			0.75	4,445	1.6	63.5
			1	4,577	2.4	63.2
			1.5	4,776	4.6	62.7

6 ft Long Cabinet: One-Way Discharge, Nozzle Size 70 (504)

Primary Airflow Rate [CFM]	Total Airflow Rate [CFM]	Airside Pressure Drop [in H ₂ O]	Water Flow Rate [GPM]	Cooling		
				Total Sensible Capacity [BTUH]	Water Pressure Drop [ft H ₂ O]	Discharge Air T [°F]
80	236	0.20	0.5	3,337	0.9	62.3
			0.75	3,469	1.6	61.8
			1	3,569	2.4	61.4
			1.5	3,720	4.6	60.8
100	296	0.32	0.5	3,987	0.9	62.9
			0.75	4,136	1.6	62.4
			1	4,250	2.4	62.1
			1.5	4,421	4.6	61.6
120	355	0.46	0.5	4,600	0.9	63.3
			0.75	4,763	1.6	62.9
			1	4,887	2.4	62.6
			1.5	5,075	4.6	62.1
140	413	0.63	0.5	5,186	0.9	63.7
			0.75	5,362	1.6	63.3
			1	5,495	2.4	63.0
			1.5	5,696	4.6	62.6
160	471	0.82	0.5	5,754	0.9	64.0
			0.75	5,940	1.6	63.6
			1	6,081	2.4	63.4
			1.5	6,294	4.6	63.0

Performance Notes:

1. Tested to ASHRAE Standard 200 in an accredited test chamber (A2LA Certificate Number 4357.01)
2. Room temperature is 75°F for cooling
3. The entering water temperature is 57°F for cooling
4. Primary air temperature is 55°F for cooling
5. See "Fin Tube Heating Performance Data" for One-Way Discharge unit heating capacity
6. Tested with perforated face

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Fin Tube Heating: One-Way Discharge Only

Rear Fin Tube Heating Capacity [BTUH/ft] at 4 GPM						
Entering Water T [°F]	Entering Air Temperature [°F]					
	55	60	65	70	75	80
100	199	164	132	103	77	54
110	274	235	199	164	132	103
120	359	316	274	235	199	164
130	452	404	359	316	274	235
140	553	501	452	404	359	316
150	661	606	553	501	452	404
160	777	718	661	606	553	501
170	900	837	777	718	661	606
180	1029	963	900	837	777	718

Multiplier for Water Flow Rates Less than 4.0 GPM							
Flow Rate [GPM]	0.5	1.0	1.5	2.0	2.5	3.0	3.5
Factor	0.927	0.951	0.965	0.975	0.983	0.990	0.995

Performance Notes:

1. Tested in an accredited test chamber (A2LA Certificate Number 4357.01)
2. Capacity of fin tube installed in cabinet (one-way discharge)

6 ft Long Cabinet: Two-Way Discharge

Primary Airflow Rate [CFM]	Total Airflow Rate [CFM]	Airside Pressure Drop [in H ₂ O]	Water Flow Rate [GPM]	Cooling			Heating		
				Total Sensible Capacity [BTUH]	Water Pressure Drop [ft H ₂ O]	Discharge Air T [°F]	Total Sensible Capacity [BTUH]	Water Pressure Drop [ft H ₂ O]	Discharge Air T [°F]
110	417	0.25	0.5	3,433	0.6	68.0	2,137	0.4	83.6
			0.75	3,516	1.1	67.7	2,369	0.8	84.9
			1	3,580	1.7	67.5	2,546	1.2	86.0
			1.5	3,676	3.2	67.1	2,812	2.3	87.5
130	474	0.35	0.5	3,978	0.6	67.7	2,306	0.4	82.5
			0.75	4,070	1.1	67.5	2,562	0.8	83.8
			1	4,140	1.7	67.2	2,756	1.2	84.7
			1.5	4,245	3.2	66.9	3,050	2.3	86.1
150	528	0.47	0.5	4,508	0.6	67.5	2,435	0.4	81.6
			0.75	4,608	1.1	67.3	2,711	0.8	82.7
			1	4,683	1.7	67.0	2,920	1.2	83.6
			1.5	4,797	3.2	66.7	3,237	2.3	84.9
170	580	0.60	0.5	5,028	0.6	67.4	2,533	0.4	80.8
			0.75	5,134	1.1	67.1	2,827	0.8	81.8
			1	5,214	1.7	66.9	3,050	1.2	82.7
			1.5	5,336	3.2	66.5	3,388	2.3	83.9
190	630	0.76	0.5	5,539	0.6	67.2	2,608	0.4	80.1
			0.75	5,651	1.1	66.9	2,918	0.8	81.1
			1	5,735	1.7	66.7	3,153	1.2	81.9
			1.5	5,863	3.2	66.4	3,509	2.3	83.0

Performance Notes:

1. Tested to ASHRAE Standard 200 in an accredited test chamber (A2LA Certificate Number 4357.01)
2. Room temperature is 75°F for cooling and 70°F for heating.
3. The entering water temperature is 57°F for cooling and 120°F for heating
4. Primary air temperature is 55°F for cooling and 65°F for heating
5. Tested with perforated face

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Adjacent Zone Data

5 ft Long Cabinet	Primary Airflow Rate [CFM]	Total Airflow Rate [CFM]	Airside Pressure Drop [in H ₂ O]	Adjacent Zone [ft]	
				60 FPM	40 FPM
One-Way Discharge, Nozzle Size 50	70	229	0.57	7	13
Two-Way Discharge	120	350	0.47	5	9

Thermal Comfort Performance Notes:

1. Tested to ASHRAE Standard 70
2. Temperature differential of 5°F between discharge air and room temperature
3. Air velocity measured 4" above the floor
4. Tested with perforated face