

ENTHALPY CHART AND VERIFICATION PROCESS

Enthalpy Chart

Wet Bulb Temp.	Enthalpy	Wet Bulb Temp.	Enthalpy
40	15.23	60	26.46
41	15.70	61	27.15
42	16.17	62	27.85
43	16.66	63	28.57
44	17.15	64	29.31
45	17.65	65	30.06
46	18.16	66	30.83
47	18.68	67	31.62
48	19.21	68	32.42
49	19.75	69	33.25
50	20.30	70	34.09
51	20.86	71	34.95
52	21.44	72	35.83
53	22.02	73	36.74
54	22.62	74	37.66
55	23.22	75	38.61
56	23.84	76	39.57
57	24.48	77	40.57
58	25.12	78	41.58
59	25.78	79	42.62

Miscellaneous Footnotes for System Verification Process:

- An average of multiple temperature readings taken over a cross-section of the duct will provide the most accurate temperature.
- When determining CFM with ECM motors, identify the CFM that the motor is programmed for.

Section 4A) Static pressure

- One method of determining the external static pressure is to take 1) one reading before the fan, and 2) the other reading should be taken either before or after the indoor coil / strip heat. If the pressure is taken after the indoor coil / strip heat, static pressure values will have to be added to the total to compensate for these components. The values for these two components should be in the equipment specifications.
- Once the total external static pressure is determined, the equipment specifications for that furnace will indicate what the equivalent CFM is.

Section 4B) Airflow check

- Operate thermostat in emergency heat mode.
- Heat pump should not be operating to determine CFM.
- Make sure fan speed is at 100% (or the speed at which the fan operates if the heat pump would be on).
- When getting temperature readings make sure the temperature probe and the resistance heaters are not in direct sight of each other.

Section 5A) When checking the heat pump capacity in the heating mode, make sure the auxiliary heat is switched off.

Section 5B) When checking capacity in the cooling mode, make sure the system runs at least 10 minutes to get a wet indoor coil.

Section 6) Manufacturer's rating HP capacity – this Btuh value is obtained from the equipment specifications integrated performance curve (indicates Btuh output for various outdoor air temperatures).

