YORK®	**ELECTRIC HEATER DATA CHANGES**		
ENGINEERING SUPPLEMENT	Supersedes: See Below*	803	Form 130.12-EG1 (Supl. 1)

500-YH
SINGLE DUCT
AIR TERMINAL UNITS

*The information on the reverse side of this publication supersedes the information on page 17 of Form 130.12-EG1 (1101).

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Form 130.12-EG1 Supl. 1 (803)
New Release
Subject to change without notice. Printed in USA
Code: VAV

Electric Heater Assembly Capacities

Notes for Minimum Static Pressure Requirements on pages 13-16.

1. D Ps is the static pressure difference across the YH assembly, with the damper in the fully open position.
2. To obtain total pressure (Pt), add the velocity pressure (Pv) for a given CFM to the static pressure (Ps) of the desired configuration.
3. Damper leakage at shut-off is less than 1% at the maximum capacity of the air terminal at 3 inches of static pressure, for units 6 through 16.
4. It is recommended that air terminals be selected in the upper middle range of their listed capacity for maximum efficiency.
5. The lowest CFM flows shown above only imply a range; all terminals are capable of shut-off. The minimum pressure independent controlled flow is dependent on the controller specified.
6. Low flows: High gain sensors are available for flow control down to 10 CFM if desired. Warning: Most flow controllers are limited to a 5/1 flow control range.
7. Air terminals are not recommended for operation in ambient temperatures over 95°F. For protection of controls, do not store in ambient temperatures over 115° F.
8. A minimum of 0.03 inches of water is required to set the flow switch in the electric heater. Warning: Flow rates with static pressures below 0.03 inches of water will not activate the electric heater.
9. †Consult Factory

500-YH SINGLE DUCT AIR TERMINAL UNITS

Single Phase

Case Size	Heater Voltage	Minimum kW per step	Maximum kW	Maximum Steps
6	120	0.5	4	2
	208	0.5	4	2
	240	0.5	4	2
	277	0.5	4	2
	480	1	4	2
8	120	0.5	5	3
	208	0.5	8	3
	240	0.5	8	3
	277	0.5	8	3
	480	1	5	3
10	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	9.5	3
	277	0.5	9.5	3
	480	1	13	3
12	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	9.5	3
	277	0.5	9.5	3
	480	0.5	13	3
14	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	9.5	3
	277	0.5	9.5	3
	480	0.5	13	3
16	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	9.5	3
	277	0.5	9.5	3
	480	0.5	13	3
20	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	9.5	3
	277	0.5	9.5	3
	480	0.5	13	3
24	120	0.5	5	3
	208	0.5	9.5	3
	240	0.5	9.5	3
	277	0.5	9.5	3
	480	0.5	13	3

Three Phase

Case Size	Heater Voltage	Minimum kW per step	Maximum kW	Maximum Steps
6	208	0.5	5	2
	240	0.5	5	2
	480	1.6	3	2
8	208	1.5	8	3
	240	1.5	8	3
	480	1.5	8	3
10	208	1.5	12	3
	240	1.5	12	3
	480	1.5	12	3
12	208	1.5	16	3
	240	1.5	16	3
	480	1.5	16	3
14	208	1.5	16	3
	240	1.5	16	3
	480	1.5	16	3
16	208	1.5	16	3
	240	1.5	16	3
	480	1.5	24	3
20	208	1.5	16	3
	240	1.5	16	3
	480	1.5	30	3
24	208	1.5	16	3
	240	1.5	16	3
	480	1.5	39	3

Electric heat selection:

A. Specify electric duct heaters using voltage, kW, and number of steps.
B. Use above chart to select voltage. Calculate required kW using following equations:

$$kW = \frac{BTU/hr}{3413} \quad kW = \frac{CFM \times dT \times 1.085^*}{3413} \quad dT = \frac{kW \times 3413}{CFM \times 1.085^*}$$

$$CFM = \frac{kW \times 3413}{dT \times 1.085^*} \quad CFM = \frac{kW \times 3413}{dT \times 1.085^*}$$

* air density at sea level - reduce by 0.036 for each 1000 feet of altitude above sea level

Where:

BTU / Hr = Required heating capacity
CFM = volume of air during heating. Typically 30% to 100% of maximum cooling air volume.
dT = desired air temperature rise across the electric heater.
Inlet air temperature = primary air temperature, usually 55°F.

Notes for Electric Heater:

1. Heaters equal to or less than 5 kW are specifiable to the nearest 0.2 kw, heaters greater than 5 kW and equal to or less than 10 kW are specifiable to the nearest 0.5 kW and heaters greater than 10 kW are specifiable to the nearest 1.0 kW.
2. Minimum flow rate for electric heat is 70 CFM/kW. Lower CFM's can cause nuisance tripping, excessive discharge temperatures, rapid cycling, and rapid element failure. **Orders with Electric Heat units running below 70 CFM/kW will not be accepted and will void warranties!**
3. For optimal thermal comfort, the suggested discharge temperature should not exceed 20 deg F above room setpoint.
4. To protect heater components, discharge temperatures in excess of 105 deg F are not recommended.
5. Maximum number of steps at minimum kW is one step.
6. Where the kW value exceeds the maximum kW without power side fusing, a minimum of 2 steps are required.
7. If more than one 1 heater is wired into a building's circuit breaker (multi-outlet branch outlet), each heater will require the addition of power side fusing.
8. For higher kW's than listed, contact factory for availability.