

## ADHT

### High Temperature Air Duct Heater

- 5 - 300 kW
- 480 Volt, Three Phase (Up to 600V Available)
- INCOLOY® Sheath Elements
- 1200°F Max. Outlet Air Temp.
- Insulated Standoff Collar

#### Construction

**Rugged Construction Elements** — Sturdy 0.475" diameter INCOLOY® sheath tubular elements are mounted to a heavy 1/4 or 3/8" thick steel flange. Element fasteners to allow for easy replacement.

**Corrosion-Resistant Terminal Enclosure** — The element terminal enclosure is made of 16 gauge high-temperature, corrosion-resistant steel and includes 1" thick high-temperature insulation to minimize temperatures in the wiring area.

**Wiring Box** — The 16 gauge wiring box encloses individual terminal blocks for each circuit. Threaded stud type terminals are provided to permit quick positive attachment of circuit wiring conductors.

**Insulation Housing** — Includes 3" of high temperature thermal insulation to reduce duct heat conducted into terminal enclosure.

#### Specifications and Ordering Information

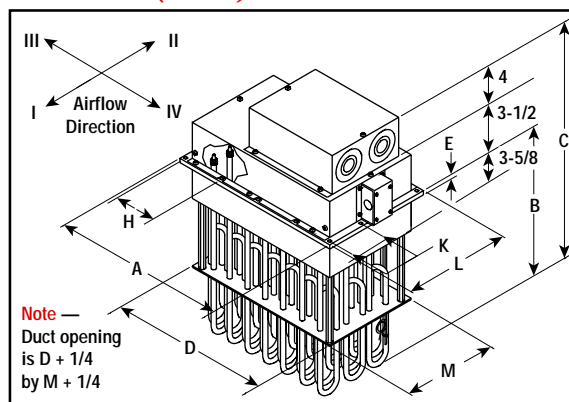
kW	W/In <sup>2</sup>	No. Elem.	No. Circ.	Dimensions (In.)									Model	Stock	PCN	Wt. (Lbs.)
				A	B	C	D	E	H	K	L	M				
5	20	3	1	5-5/8	20-1/8	28-1/8	4	1/4	2-1/2	3-1/2	11-1/8	9-1/2	ADHT-005	S	210198	10
10	20	6	1	7-5/8	20-3/8	28-1/8	6	1/4	3-1/2	3-1/2	11-1/8	9-1/2	ADHT-010	NS	210200	20
15	20	9	1	9-5/8	20-3/8	28-1/8	8	1/4	3	3-1/2	11-1/8	9-1/2	ADHT-015	NS	210219	30
20	20	12	1	11-5/8	20-3/8	28-1/8	10	1/4	2-3/4	3-1/2	11-1/8	9-1/2	ADHT-020	S	210227	40
25	20	15	1	13-5/8	20-3/8	28-1/8	12	1/4	3-1/4	3-1/2	11-1/8	9-1/2	ADHT-025	NS	210235	50
30	20	18	1	15-5/8	20-3/8	28-1/4	14	3/8	3-3/4	3-1/2	11-1/8	9-1/2	ADHT-030	NS	210243	65
35	20	21	1	17-5/8	20-3/8	28-1/4	16	3/8	4-1/4	3-1/2	11-1/8	9-1/2	ADHT-035	NS	210251	80
40	20	24	2	19-5/8	20-3/8	28-1/4	18	3/8	4-3/4	3-1/2	11-1/8	9-1/2	ADHT-040	S	210260	90
45	20	27	2	21-5/8	20-3/8	28-1/4	20	3/8	5-1/4	3-1/2	11-1/8	9-1/2	ADHT-045	NS	210278	100
50	20	30	2	23-5/8	20-3/8	28-1/4	22	3/8	5-3/4	3-1/2	11-1/8	9-1/2	ADHT-050	NS	210286	110
60	20	36	2	27-5/8	20-3/8	28-1/4	26	3/8	4-1/2	3-1/2	11-1/8	9-1/2	ADHT-060	S	210294	130
80	20	48	4	35-5/8	20-3/8	28-1/4	34	3/8	4-3/8	3-1/2	11-1/8	9-1/2	ADHT-080	NS	210307	175
90	20	54	5	39-5/8	20-3/8	28-1/4	38	3/8	4-7/8	3-1/2	11-1/8	9-1/2	ADHT-090	NS	210315	200
100	20	60	5	43-5/8	20-3/8	28-1/4	42	3/8	5-3/8	3-1/2	11-1/8	9-1/2	ADHT-100	NS	210323	220
120	20	36	4	27-5/8	35	42-7/8	26	3/8	4-1/2	3-1/2	11-1/8	9-1/2	ADHT-120	NS	210331	205
160	20	48	8	35-5/8	35	42-7/8	34	3/8	4-3/8	3-1/2	11-1/8	9-1/2	ADHT-160	NS	210340	270
180	20	54	6	39-5/8	35	42-7/8	38	3/8	4-7/8	3-1/2	11-1/8	9-1/2	ADHT-180	NS	210358	305
240	20	72	8	27-5/8	35	42-7/8	26	3/8	4-1/2	3-7/8	20	18-3/8	ADHT-240F <sup>1</sup>	NS	210366	400
300	20	90	10	33-5/8	35	42-7/8	32	3/8	5-1/2	3-7/8	20	18-3/8	ADHT-300F <sup>1</sup>	NS	210374	500

**Stock Status:** S = stock AS = assembly stock NS = non-stock  
**To Order**—Specify model, PCN, kW and quantity.

1. Elements contain threaded gas tight fittings as standard.



#### Dimensions (Inches)



**Element Support Plate** — A Stainless Steel element support plate is held in place with Stainless Steel support rods to provide structural stability.

**Flange Mounting Gasket** — Packed separately with each duct heater to minimize air leakage between the flange and air duct.

**Overtemperature Protection** — A type K thermocouple is welded to the element sheath surface to sense element temperature, and is wired to a terminal block located on the outer surface of the terminal housing.

#### Mounting

Generally mounted to a field fabricated stand off collar from the ductwork to position the heater such that the 3" insulation housing is in the same plane as the duct insulation.

**All Heaters** can be mounted in any position; top, side or bottom entry. In high ambient temperature operations, least corrosive action and least oxidation to the terminals will occur if heaters are mounted with terminals in the coolest possible ambient, usually on bottom or side of duct. Minimum duct size is A or L dimension plus 3/8" and B dimension plus 1-5/8", and 3" for insulation housing.

#### Application & Selection Guidelines

**Maximum Work Temperatures** — Type ADHT heaters can generally be used at the following maximum temperatures, provided the minimum air velocity is maintained uniformly through the heater. Maximum temperatures are based on 20 W/In<sup>2</sup>.

Air Velocity (Ft./Sec.)	Max. Outlet Air Temp. (°F)
4	1050
9	1100
16	1150
25	1200
36	1200

**Note** — See Allowable Watt Density & Heater Selection Graphs in Technical section.

**Note** — An Air Flow Switch is recommended for air duct heater applications.

#### Options

- Gas Tight Design
- Thermocouple Sensor for control
- Moisture-Resistant Terminal Enclosure
- Explosion-Resistant Terminal Enclosure
- Special Ratings, Sizes or Construction