

Chromalox®

Installation Operation

and

RENEWAL PARTS IDENTIFICATION

SERVICE REFERENCE

DIVISION 4

SECTION ADH

SALES REFERENCE (Supersedes PF438-3)

PF438-4

161-057949-001

DATE SEPTEMBER, 2004

Type ADH and ADHT Air Duct Heaters

Specifications — Table A

Model	Approx. Net. Wt. (Lbs.)	Model	Approx. Net. Wt. (Lbs.)	Volts	Phase	kW	No. Elements	No. Mtg. Holes 9/32" Dia.	No. Circuits	Dimensions (In.)								
										A	B	C	D	E	H	K	L	M
ADH-005	8	ADHT-005	10	480	3	5	3	10	1	5-5/8	20-3/8	28-1/8	4	1/4	2-1/2	3-1/2	11-1/8	9-1/2
ADH-010	15	ADHT-010	20	480	3	10	6	10	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
ADH-015	25	ADHT-015	30	480	3	15	9	12	1	9-5/8	20-3/8	28-1/8	8	1/4	3	3-1/2	11-1/8	9-1/2
ADH-020	35	ADHT-020	40	480	3	20	12	14	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
ADH-025	40	ADHT-025	50	480	3	25	15	14	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
ADH-030	55	ADHT-030	65	480	3	30	18	14	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
ADH-035	65	ADHT-035	80	480	3	35	21	14	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
ADH-040	70	ADHT-040	90	480	3	40	24	14	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
ADH-045	80	ADHT-045	100	480	3	45	27	14	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
ADH-050	90	ADHT-050	110	480	3	50	30	14	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
ADH-060	105	ADHT-060	130	480	3	60	36	18	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
ADH-080	140	ADHT-080	175	480	3	80	48	22	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
ADH-090	160	ADHT-090	200	480	3	90	54	22	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
ADH-100	175	ADHT-100	220	480	3	100	60	22	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-120	205	480	3	120	36	18	4	27-5/8	35	42-7/8	26	3/8	4-1/2	3-1/2	11-1/8	9-1/2
ADH-144	165	—	—	480	3	144	48	22	4	35-5/8	35	42-7/8	34	3/8	4-3/8	3-1/2	11-1/8	9-1/2
—	—	ADHT-160	270	480	3	160	48	22	8	35-5/8	35	42-7/8	34	3/8	4-3/8	3-1/2	11-1/8	9-1/2
ADH-162	185	—	—	480	3	162	54	22	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	305	480	3	180	54	22	6	39-5/8	35	42-7/8	38	3/8	4-7/8	3-1/2	11-1/8	9-1/2
ADH-216F	240	—	—	480	3	216	72	22	6	27-5/8	35	42-7/8	26	3/8	4-1/2	3-7/8	20	18-3/8
—	—	ADHT-240F	400	480	3	240	72	22	8	27-5/8	35	42-7/8	26	3/8	4-1/2	3-7/8	20	18-3/8
ADH-270F	300	—	—	480	3	270	90	22	8	33-5/8	35	42-7/8	32	3/8	5-1/2	3-7/8	20	18-3/8
—	—	ADHT-300F	500	480	3	300	90	22	10	33-5/8	35	42-7/8	32	3/8	5-1/2	3-7/8	20	18-3/8

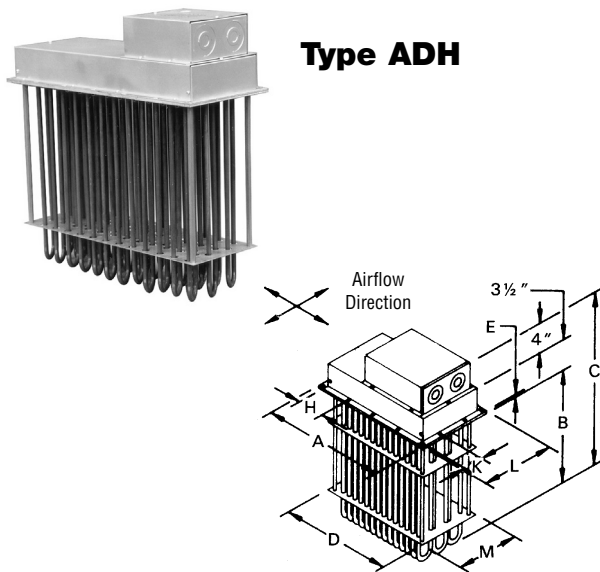


Figure 1 — Dimensions

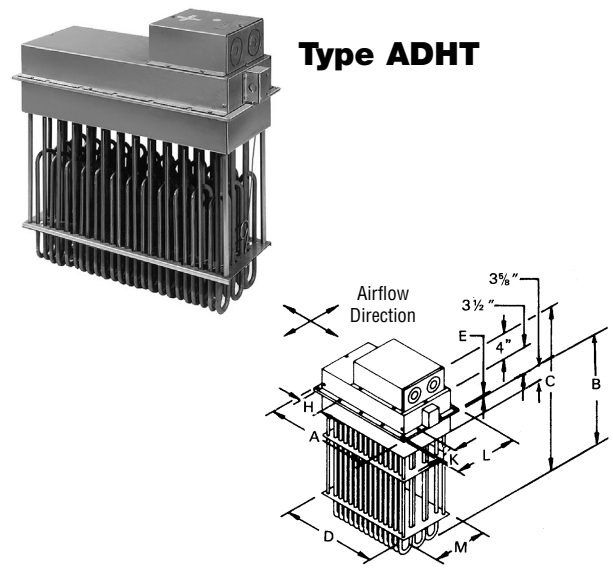


Figure 2 — Dimensions

GENERAL

⚠ WARNING

FIRE/EXPLOSION HAZARD. This heater is not intended for use in hazardous atmospheres where flammable vapors, gases, liquids or other combustible atmospheres are present as defined in the National Electrical Code. Failure to comply can result in personal injury or property damage.

- Heater construction characteristics —
 - Alloy sheathed tubular elements, .475" diameter
 - Steel flange
 - Stainless steel support construction
 - High temperature alloy terminals and connections
 - Replaceable individual heating elements
 - Wiring terminals located outside the heated zone
- Maximum Temperatures** — Types ADH and ADHT process air heaters can generally be used at the following maximum temperatures shown, provided the minimum air velocity is maintained uniformly through the heater.

Air Velocity (Ft./Sec.)	Max. Outlet Air Temp. (°F)	
	ADH	ADHT
4	800	1050
9	800	1100
16	800	1150
25	800	1200
36	800	1200

CAUTION: Do not energize heater in air with a velocity less than 1 Ft. Per Second.

- The heater may be bolted to the duct with the terminal housing and flange at the top, at either side or at the bottom.
- Several heaters may be mounted in tandem so long as proper controls are used to limit the maximum temperature attained.
- Installation with duct transitions in some air distribution systems, the duct heater may be considerably larger than the duct-work and the duct area must be increased by a sheet metal transition.

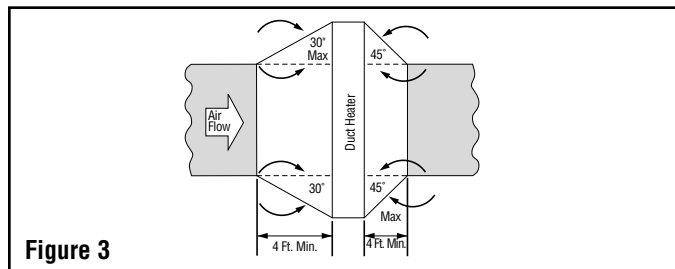


Figure 3

- The slope of the transformation piece on the upstream side of the equipment is limited to 30° as indicated in Figure 3. On the leaving side, the slope should not be more than 45°.
- Use moisture proof terminal cover in atmospheres bearing corrosive fumes or excessive moisture.
- Use explosion resistant heaters in explosive atmospheres and reduce current rating to elements.
- Gas tight design — Achieved by the use of threaded fittings with fiber washers to attach heating elements to flange — prevents leakage of ducted air into terminal housing.
- Overtemperature protection — Thermocouple fastened to the element sheath surface and wired to a terminal block can be provided for accurate overheat protection (standard on ADHT models).
- Flange mounting gasket — Packed separately with each duct heater to minimize air leakage between the flange and air duct. Refer to Table B and Figure 4.

Specifications — Table B

Flange Gasket Part No.	Flange Size	Used On ADH and ADHT
168-055429-001	11-1/8 x 5-5/8	5 kW
168-055429-002	11-1/8 x 7-5/8	10 kW
168-055429-003	11-1/8 x 9-5/8	15 kW
168-055429-004	11-1/8 x 11-5/8	20 kW
168-055429-005	11-1/8 x 13-5/8	25 kW
168-055429-006	11-1/8 x 15-5/8	30 kW
168-055429-007	11-1/8 x 17-5/8	35 kW
168-055429-008	11-1/8 x 19-5/8	40 kW
168-055429-009	11-1/8 x 21-5/8	45 kW
168-055429-010	11-1/8 x 23-5/8	50 kW
168-055429-011	11-1/8 x 27-5/8	60, 120 kW
168-055429-013	11-1/8 x 35-5/8	80, 144, 160 kW
168-055429-014	11-1/8 x 39-5/8	90, 162, 180 kW
168-055429-015	11-1/8 x 43-5/8	100 kW
168-055429-017	20 x 27-5/8	216, 240 kW
168-055429-018	20 x 33-5/8	270, 300 kW

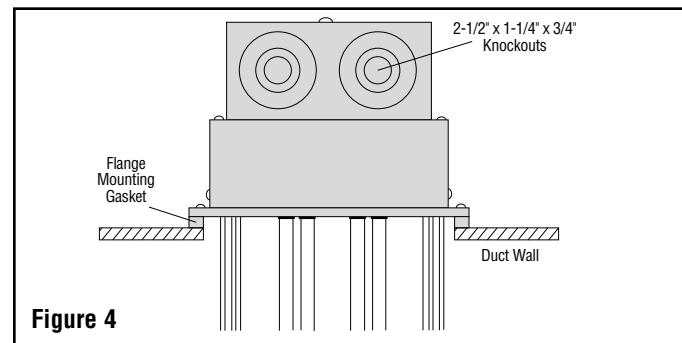


Figure 4

INSTALLATION

⚠ WARNING

ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heater. Failure to do so could result in personal injury or property damage. Heater must be installed by a qualified person in accordance with the National Electrical Code, NFPA 70.

⚠ WARNING

The system designer is responsible for the safety of this equipment and should install adequate back-up controls and safety devices with their electric heating equipment. Where the consequences of failure could result in personal injury or property damage, back-up controls are essential.

- Locate and position heater in duct in accordance with both process requirements and recommendations given.
- Refer to Figures 1 and 2, layout "D" and "M" dimensions on duct mounting face established in step 1.
- With tools suitable for sheet metal work, cut layout opening in duct.

- In general, heaters less than 35 pounds in weight may be mounted directly in opening without additional duct reinforcement if duct installation and condition permits. To fasten heater to duct wall use #14 pan or round head self-tapping screws. The flange mounting gasket supplied with the heater is recommended for insertion between heater flange and duct to minimize air leakage.
- For heater weights greater than 35 pounds (see Specifications Table A, page 1) due consideration should be given to; (a) mechanically strengthening duct work with, for example, angle irons or chains (see Figure 5), and (b) heat insulating duct line in immediate area of heater location to prevent excessive heat loss. Consult your local sheet metal contractor.

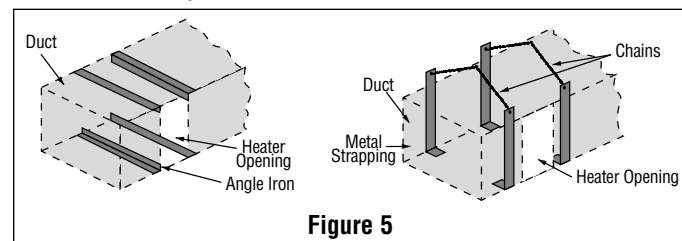


Figure 5

INSTALLATION (cont'd.)

6. In high ambient temperature operations, least corrosive action and least oxidation to the terminals will occur if the heaters are mounted with the terminals in the coolest possible ambient, usually on the bottom or side of the duct.
- A. Minimum duct size is "A" or "L" dimension +3/8" and "B" dimension +1-5/8".

⚠ WARNING

HAZARD OF FIRE. Since these heaters are capable of developing high temperatures, extreme care should be taken to:

- A. Avoid installing heaters in an atmosphere containing combustible gases and vapors.
- B. Avoid contact between heater and combustible material.
- C. Keep combustible materials far enough away to be free of the effects of high temperatures.

ADH Low temperature duct heaters — can be fastened directly to the sheet metal duct work with bolts or sheet metal screws.

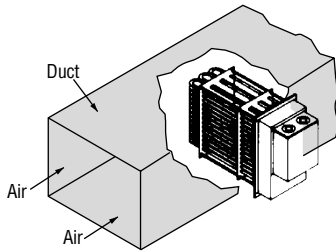


Figure 6

ADHT High temperature duct heaters — are generally mounted on field fabricated stand off supports from the ductwork to position the heater such that the 3" insulation housing is in the same plane as the duct insulation.

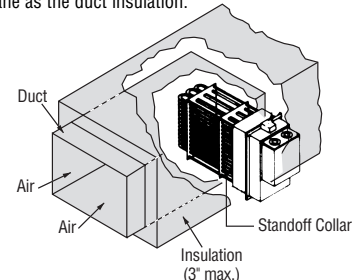


Figure 7

Temperature Control Instructions

1. A Chromalox thermal cutout or thermostat is recommended for overheat protection and control of heater and process. Consult local Chromalox representative.
2. In general, place thermostat sensing element close to the heating elements, near top of duct, at right angles to the direction of air flow, and on the downstream side of the heater. Thermostat, provided with a manual reset button, is separately mounted.

3. For heater protection, the indicated maximum temperature of the control unit should be 50°F less than the actual maximum air temperature that will be permitted, to allow for overshoot.
4. Single circuit heater elements may be wired into two circuits to allow for partial heating and control. *It is important* to have thermal control wired into all electric power circuits, so that all elements may be protected from overheat.

WIRING

⚠ WARNING

ELECTRIC SHOCK HAZARD. Any installation involving electric heaters must be performed by a qualified person and must be effectively grounded in accordance with the National Electrical Code to eliminate shock hazard.

1. All wiring should be done in accordance with National Electrical Code and with local codes by a qualified person.
2. Connect air heaters to same line voltage, phase, and frequency as on heater nameplate.
3. Teflon insulated nickel plated copper wire or bus bar is recommended for power connections to heater terminals and for wiring runs in heated zones. When ambient temperature in heated zone exceeds that for which insulated wire is recommended use bare nickel-plated copper with porcelain beads, tubing or bus bar. Consult local Chromalox representative.
4. Users should install adequate back-up controls and safety

devices with their electric heating equipment. Selection of controls, thermostat, SCR units, contactors and etc. depends on the degree of accuracy required, reliability, electrical rating of heater and economic considerations.

5. Below is an example of a standard ADH-015, 480V 3 Ø 15 kW, wired with recommended back-up controls. (Figure 8)
6. Individual terminal blocks with 1/4-20 threaded stud type terminals are provided for each circuit to permit quick positive attachment of circuit wiring conductors (one terminal block per circuit). (Figure 9)

**Terminal block
(303-027852-001)**
X Circuit label indicated here.

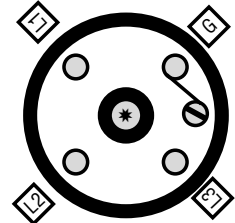


Figure 9

ADH-015, 15 kW 480V 3Ø, 1 Circuit
(9) - 480V, 1667 Watt Elements

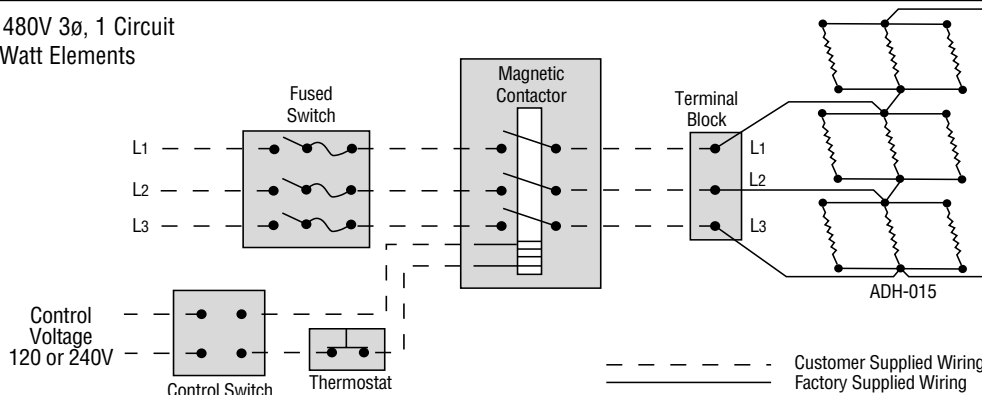


Figure 8

- - - - - Customer Supplied Wiring
————— Factory Supplied Wiring

OPERATION

Do not operate heater at voltages in excess of that stamped on the heater since excess voltage will shorten heater life.

MAINTENANCE

⚠ WARNING

ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heater. Failure to do so could result in personal injury or property damage. Heater must be installed by a qualified person in accordance with the National Electrical Code, NFPA 70.

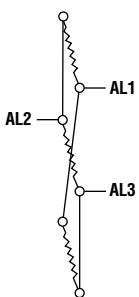
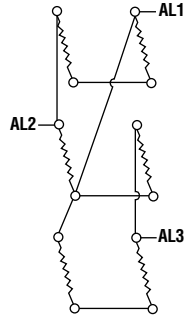
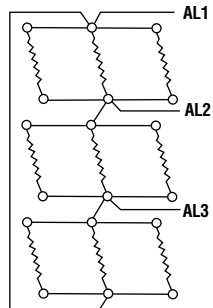
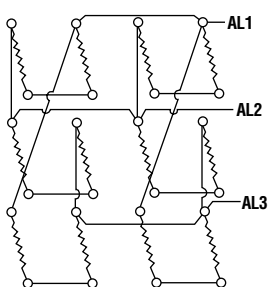
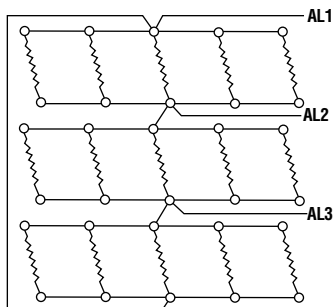
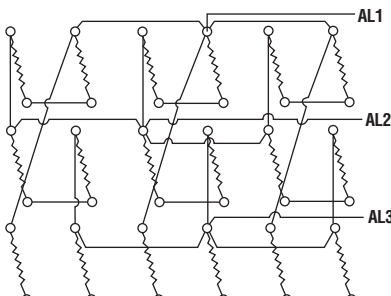
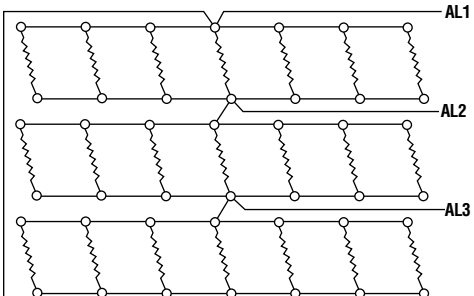
1. Periodically clean terminals and terminal covers of dust and corrosion to maintain good electrical connections and to permit rapid heat dissipation. Use airblast, and be careful to avoid damage to mica insulation.
2. Check for loose terminal connections. Tighten as necessary.

WIRING DIAGRAMS

ADH-005, ADHT-005, ADH-010, ADHT-010,
 ADH-015, ADHT-015, ADH-020, ADHT-020,
 ADH-025, ADHT-025, ADH-030, ADHT-030,
 ADH-035, ADHT-0354

ADH-040, ADHT-040, ADH-045, ADHT-045,
 ADH-050, ADHT-050, ADH-060, ADHT-060,
 ADH-080, ADHT-080, ADH-090, ADHT-090,
 ADH-100, ADHT-1005

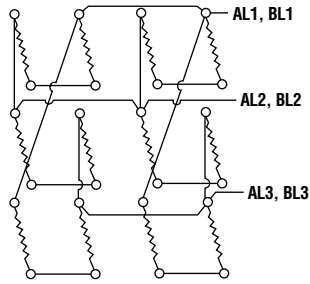
ADHT-120, ADH-144, ADHT-160, ADH-162,
 ADHT-180, ADH-216F, ADHT-240F, ADH-270F,
 ADH-300F6

<p style="text-align: center;">ADH-005, ADHT-005</p> <p style="text-align: center;">1 Circuit, 3 Elements per Heater</p>  <p style="text-align: center;">Circuit A</p>	<p style="text-align: center;">ADH-010, ADHT-010</p> <p style="text-align: center;">1 Circuit, 6 Elements per Heater</p>  <p style="text-align: center;">Circuit A</p>	<p style="text-align: center;">ADH-015, ADHT-015</p> <p style="text-align: center;">1 Circuit, 9 Elements per Heater</p>  <p style="text-align: center;">Circuit A</p>
<p style="text-align: center;">ADH-020, ADHT-020</p> <p style="text-align: center;">1 Circuit, 12 Elements per Heater</p>  <p style="text-align: center;">Circuit A</p>	<p style="text-align: center;">ADH-025, ADHT-025</p> <p style="text-align: center;">1 Circuit, 15 Elements per Heater</p>  <p style="text-align: center;">Circuit A</p>	
<p style="text-align: center;">ADH-030, ADHT-030</p> <p style="text-align: center;">1 Circuit, 18 Elements per Heater</p>  <p style="text-align: center;">Circuit A</p>	<p style="text-align: center;">ADH-035, ADHT-035</p> <p style="text-align: center;">1 Circuit, 21 Elements per Heater</p>  <p style="text-align: center;">Circuit A</p>	

WIRING DIAGRAMS

ADH-040, ADHT-040

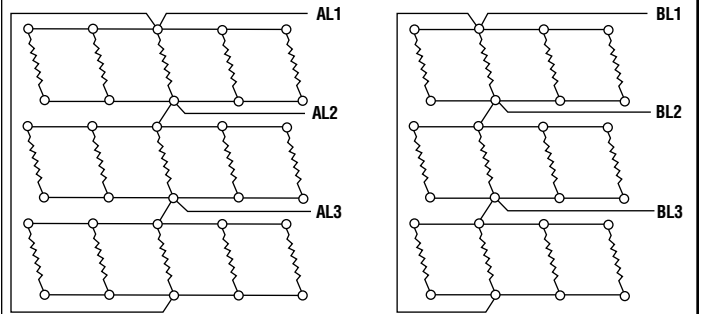
2 Circuits per Heater, Circuit A, B, 12 Elements per Circuit,
24 Elements per Heater



Typical Circuit

ADH-045, ADHT-045

2 Circuits per Heater, Circuit A, 15 Elements,
Circuit B, 12 Elements, 27 Elements per Heater

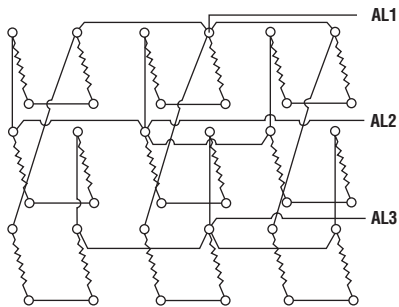


Circuit A

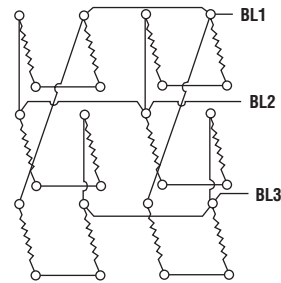
Circuit B

ADH-050, ADHT-050

2 Circuits per Heater, Circuit A 18 Elements, Circuit B 12 Elements, 30 Elements per Heater



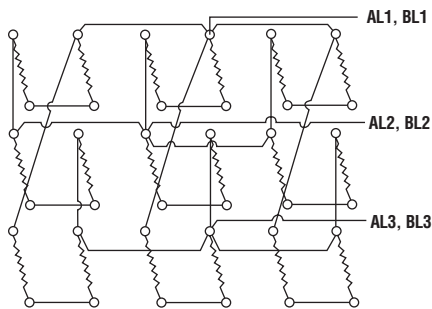
Circuit A



Circuit B

ADH-060, ADHT-060

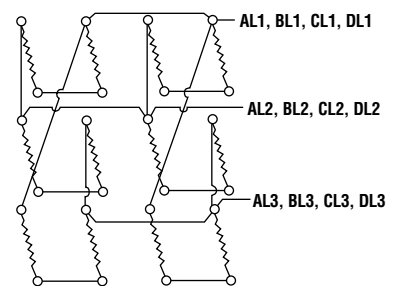
2 Circuits per Heater, Circuit A, B,
18 Elements per Circuit, 36 Elements per Heater



Typical Circuit

ADH-080, ADHT-080

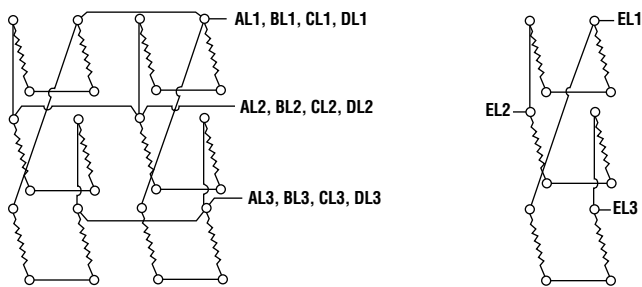
4 Circuits per Heater, Circuit A, B, C, D,
12 Elements per Circuit, 48 Elements per Heater



Typical Circuit

ADH-090, ADHT-090

5 Circuits per Heater, Circuit A, B, C, D, 12 Elements per Circuit,
Circuit E, 6 Elements, 54 Elements per Heater

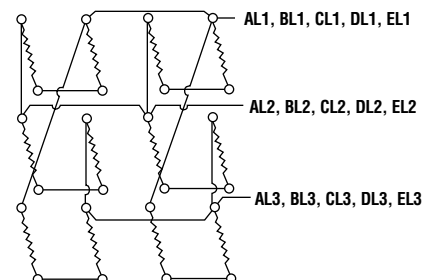


Circuit A, B, C, D

Circuit E

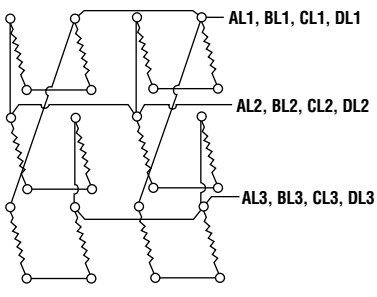
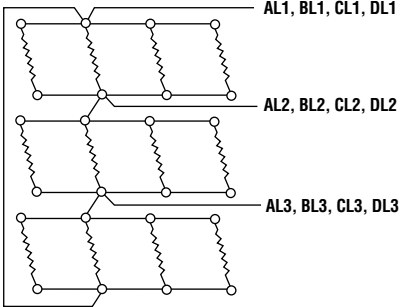
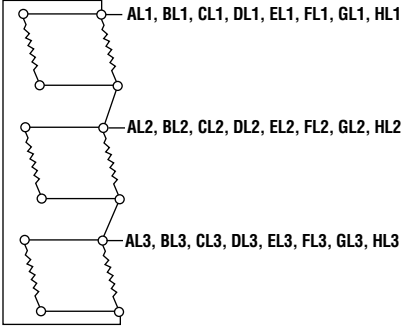
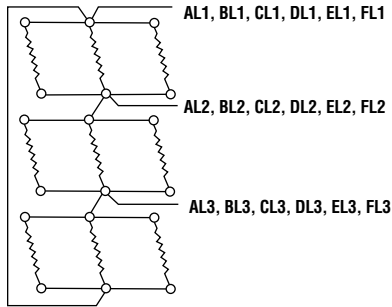
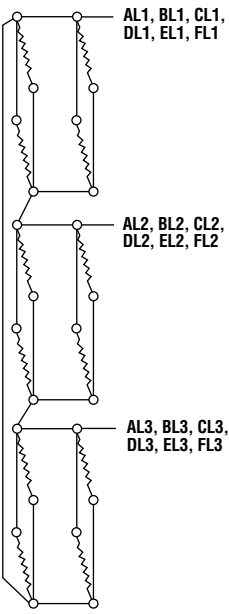
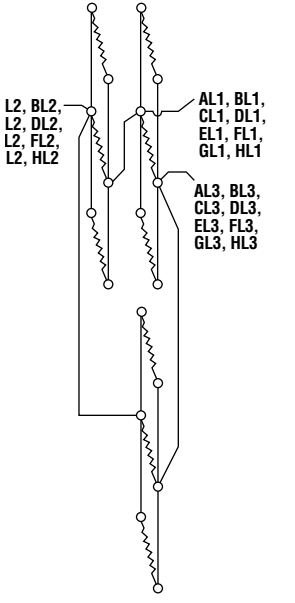
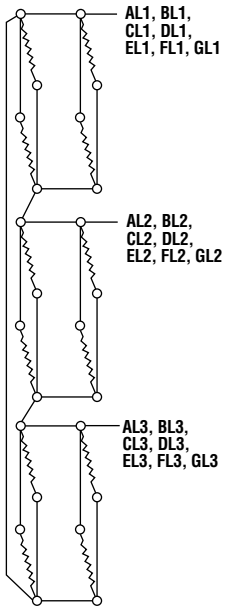
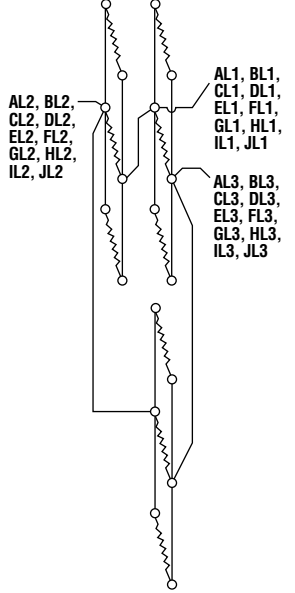
ADH-100, ADHT-100

5 Circuits per Heater, Circuit A, B, C, D, E,
12 Elements per Circuit, 60 Elements per Heater



Typical Circuit

WIRING DIAGRAMS

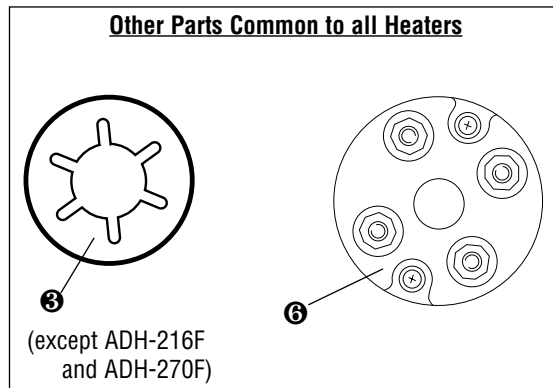
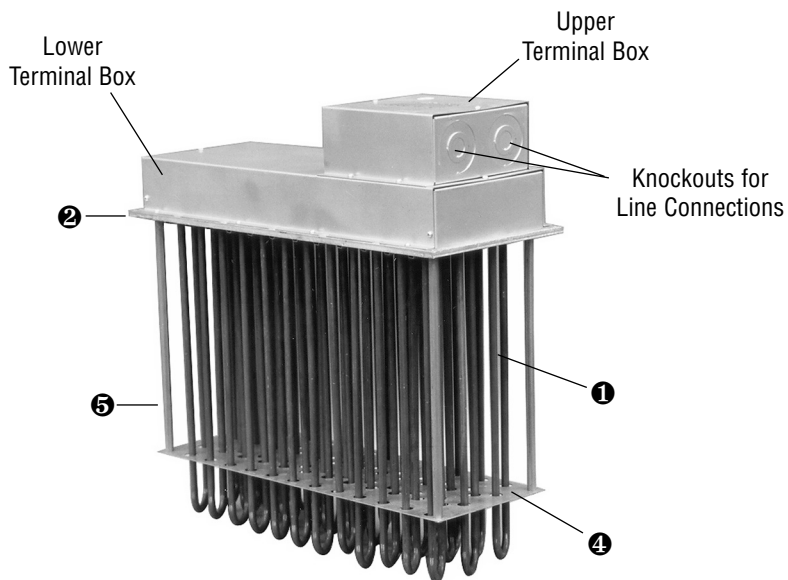
ADHT-120		ADH-144	
<p style="text-align: center;">4 Circuits per Heater, Circuit A, B, C, D, 9 Elements per Circuit, 36 Elements per Heater</p>  <p style="text-align: center;">Typical Circuit</p>	<p style="text-align: center;">4 Circuits per Heater, Circuit A, B, C, D, 12 Elements per Circuit, 48 Elements per Heater</p>  <p style="text-align: center;">Typical Circuit</p>		
ADH-160		ADH-162, ADHT-180	
<p style="text-align: center;">8 Circuits, Circuit A, B, C, D, E, F, G, H, 6 Elements per Circuit, 48 Elements per Heater</p>  <p style="text-align: center;">Typical Circuit</p>	<p style="text-align: center;">6 Circuits, Circuit A, B, C, D, E, F, 9 Elements per Circuit, 54 Elements per Heater</p>  <p style="text-align: center;">Typical Circuit</p>		
ADH-216F	ADHT-240F	ADH-270F	ADH-300F
<p style="text-align: center;">6 Circuits, Circuit A, B, C, D, E, F, 12 Elements per Circuit, 72 Elements per Heater</p>  <p style="text-align: center;">Typical Circuit</p>	<p style="text-align: center;">8 Circuits, Circuit A, B, C, D, E, F, G, H, 9 Elements per Circuit, 72 Elements per Heater</p>  <p style="text-align: center;">Typical Circuit</p>	<p style="text-align: center;">8 Circuits, Circuits A, B, C, D, E, F, G, 12 Elements per Circuit, Circuit H, 6 Elements, 90 Elements per Heater</p>  <p style="text-align: center;">Circuit A - G</p>	<p style="text-align: center;">10 Circuits, Circuit A, B, C, D, E, F, G, H, I, J, 9 Elements per Circuit, 90 Elements per Heater</p>  <p style="text-align: center;">Typical Circuit</p>

RENEWAL PARTS IDENTIFICATION — TYPE ADH

Model	① Individual Replacement Element	② Flange	③ * Element Retaining Clip	④ Element Spacer Plate	⑤ Support Rod Spacers	⑥ Terminal Block Assembly
ADH-005	393-055440-007 (3)	121-055367-001	272-511327-001 (6)	271-055370-001	242-055376-001 (4)	303-027852-001
ADH-010	393-055440-006 (6)	121-055367-002	272-511327-001 (12)	271-055370-002	242-055376-001 (4)	303-027852-001
ADH-015	393-055440-007 (9)	121-055367-003	272-511327-001 (18)	271-055370-003	242-055376-001 (4)	303-027852-001
ADH-020	393-055440-006 (12)	121-055367-004	272-511327-001 (24)	271-055370-004	242-055376-001 (4)	303-027852-001
ADH-025	393-055440-007 (15)	121-055367-005	272-511327-001 (30)	271-055370-005	242-055376-001 (4)	303-027852-001
ADH-030	393-055440-006 (18)	121-055367-006	272-511327-001 (36)	271-055370-006	242-055376-001 (4)	303-027852-001
ADH-035	393-055440-007 (21)	121-055367-007	272-511327-001 (42)	271-055370-007	242-055376-001 (4)	303-027852-001
ADH-040	393-055440-006 (24)	121-055367-008	272-511327-001 (48)	271-055370-008	242-055376-001 (4)	303-027852-001 (2)
ADH-045	393-055440-007 (27)	121-055367-009	272-511327-001 (54)	271-055370-009	242-055376-001 (4)	303-027852-001 (2)
ADH-050	393-055440-006 (30)	121-055367-010	272-511327-001 (60)	271-055370-010	242-055376-001 (4)	303-027852-001 (2)
ADH-060	393-055440-006 (36)	121-055367-011	272-511327-001 (72)	271-055370-011	242-055376-001 (4)	303-027852-001 (2)
ADH-080	393-055440-006 (48)	121-055367-013	272-511327-001 (96)	271-055370-013	242-055376-001 (5)	303-027852-001 (4)
ADH-090	393-055440-006 (54)	121-055367-014	272-511327-001 (108)	271-055370-014	242-055376-001 (6)	303-027852-001 (5)
ADH-100	393-055440-006 (60)	121-055367-015	272-511327-001 (120)	271-055370-015	242-055376-001 (6)	303-027852-001 (5)
ADH-144	393-055440-009 (48)	121-055367-013	272-511327-001 (96)	271-055370-013 (2)	242-055376-001 (10)	303-027852-001 (4)
ADH-162	393-055440-009 (54)	121-055367-014	272-511327-001 (108)	271-055370-014 (2)	242-055376-001 (12)	303-027852-001 (6)
ADH-216F	393-055440-171 (72)	121-055367-032		271-055370-866 (2)	242-055376-001 (12)	303-027852-001 (6)
ADH-270F	393-055440-171 (90)	121-055367-033		271-055370-867 (2)	242-055376-001 (12)	303-027852-001 (8)

NOTE: Number in parentheses () indicates the quantity of that part required.
 * Older heaters may have retaining channels instead of clips. Contact Factory for part number and quantity.

ADH Replacement Element Rating		
Part No.	Volts	Watts
393-055440-171 (w/ftgs)	480	3000
393-055440-006	240	1667
393-055440-007	480	1667
393-055440-009	480	3000

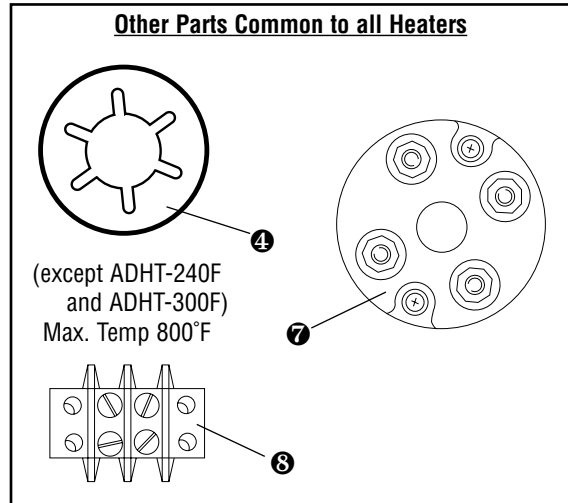
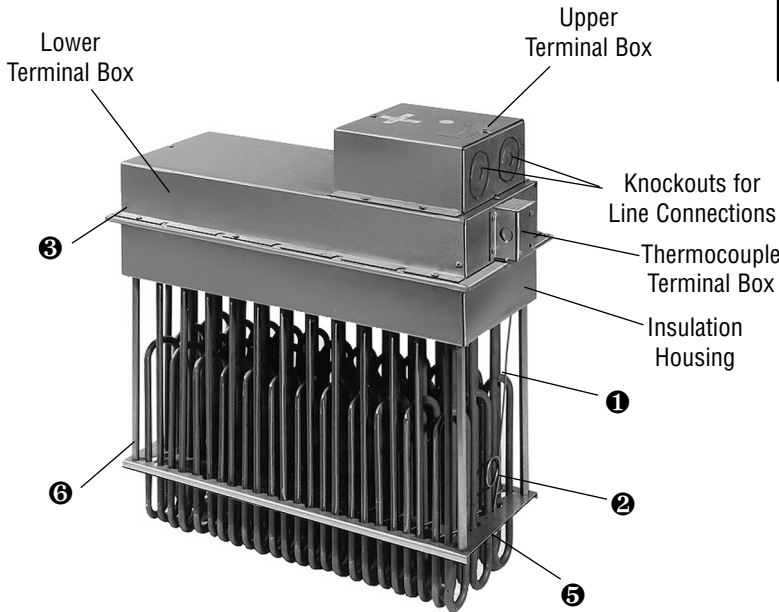


RENEWAL PARTS IDENTIFICATION — TYPE ADHT

Model	① Individual Replacement Element	② Thermocouples	③ Flange	④ * Element Retaining Clip	⑤ Element Spacer Plate	⑥ Support Rod Spacers	⑦ Terminal Block Assembly	⑧ Thermocouple Terminal Block
ADHT-005	393-055441-007 (3)	309-122380-003	121-055367-001	272-511327-001 (6)	271-055370-016	242-055376-002 (4)	303-027852-001	303-122014-002
ADHT-010	393-055441-006 (6)	309-122380-003	121-055367-002	272-511327-001 (12)	271-055370-017	242-055376-002 (4)	303-027852-001	303-122014-002
ADHT-015	393-055441-007 (9)	309-122380-003	121-055367-003	272-511327-001 (18)	271-055370-018	242-055376-002 (4)	303-027852-001	303-122014-002
ADHT-020	393-055441-006 (12)	309-122380-003	121-055367-004	272-511327-001 (24)	271-055370-019	242-055376-002 (4)	303-027852-001	303-122014-002
ADHT-025	393-055441-007 (15)	309-122380-003	121-055367-005	272-511327-001 (30)	271-055370-020	242-055376-002 (4)	303-027852-001	303-122014-002
ADHT-030	393-055441-006 (18)	309-122380-003	121-055367-006	272-511327-001 (36)	271-055370-021	242-055376-002 (4)	303-027852-001	303-122014-002
ADHT-035	393-055441-007 (21)	309-122380-003	121-055367-007	272-511327-001 (42)	271-055370-022	242-055376-002 (4)	303-027852-001	303-122014-002
ADHT-040	393-055441-006 (24)	309-122380-003	121-055367-008	272-511327-001 (48)	271-055370-023	242-055376-002 (4)	303-027852-001 (2)	303-122014-002
ADHT-045	393-055441-007 (27)	309-122380-003	121-055367-009	272-511327-001 (54)	271-055370-024	242-055376-002 (4)	303-027852-001 (2)	303-122014-002
ADHT-050	393-055441-006 (30)	309-122380-003	121-055367-010	272-511327-001 (60)	271-055370-025	242-055376-002 (4)	303-027852-001 (2)	303-122014-002
ADHT-060	393-055441-006 (36)	309-122380-003	121-055367-011	272-511327-001 (72)	271-055370-026	242-055376-002 (4)	303-027852-001 (2)	303-122014-002
ADHT-080	393-055441-006 (48)	309-122380-003	121-055367-013	272-511327-001 (96)	271-055370-028	242-055376-002 (5)	303-027852-001 (4)	303-122014-002
ADHT-090	393-055441-006 (54)	309-122380-003	121-055367-014	272-511327-001 (108)	271-055370-029	242-055376-002 (6)	303-027852-001 (5)	303-122014-002
ADHT-100	393-055441-006 (60)	309-122380-003	121-055367-015	272-511327-001 (120)	271-055370-030	242-055376-002 (6)	303-027852-001 (5)	303-122014-002
ADHT-120	393-055441-009 (36)	309-122380-003	121-055367-011	272-511327-001 (72)	271-055370-026 (2)	242-055376-002 (8)	303-027852-001 (4)	303-122014-002
ADHT-160	393-055441-009 (48)	309-122380-003	121-055367-013	272-511327-001 (96)	271-055370-028 (2)	242-055376-002 (10)	303-027852-001 (8)	303-122014-002
ADHT-180	393-055441-009 (54)	309-122380-003	121-055367-014	272-511327-001 (108)	271-055370-029 (2)	242-055376-002 (12)	303-027852-001 (6)	303-122014-002
ADHT-240F	393-055441-159 (72)	309-122380-003	121-055367-032		271-055370-833 (2)	242-055376-002 (12)	303-027852-001 (8)	303-122014-002
ADHT-300F	393-055441-159 (90)	309-122380-003	121-055367-033		271-055370-834 (2)	242-055376-002 (12)	303-027852-001 (10)	303-122014-002

NOTE: Number in Parentheses () indicates the quantity of that part required.
 * Older heaters may have retaining channels instead of clips. Contact Factory for part number and quantity.

ADHT Replacement Element Rating		
Part No.	Volts	Watts
393-055441-159 (w/ftgs)	480	3333
393-055441-006	240	1667
393-055441-007	480	1667
393-055441-009	480	3333



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and expenses therefor, including but not limited to attorney's fees, and indemnifies Chromalox against any liability to Chromalox's vendors arising out of such litigation.

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