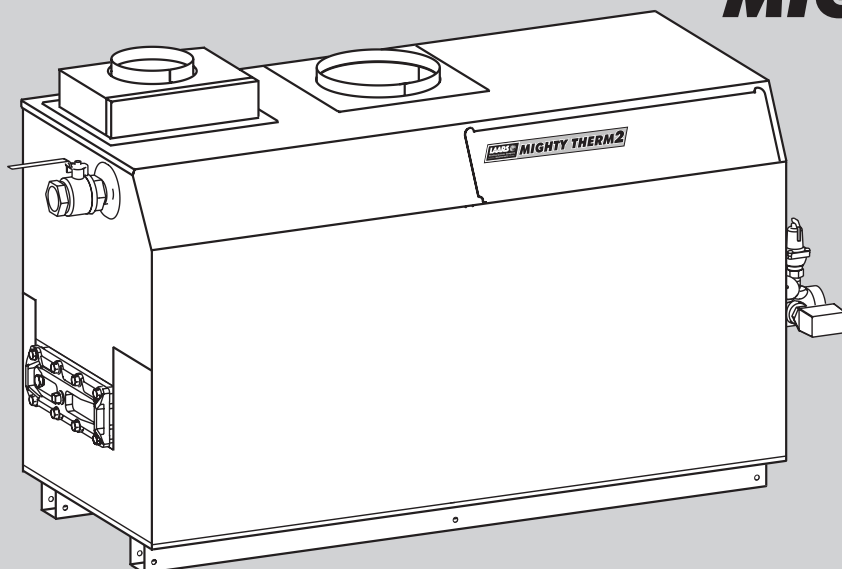


Installation and Operation Instructions for

MIGHTY THERM²

Hydronic Boiler
Model MT2H

Volume Water Heater
Model MT2V

Sizes 500–2000 MBTU/h

FOR YOUR SAFETY: This product must be installed and serviced by a professional service technician, qualified in hot water boiler installation and maintenance. Improper installation and/or operation could create carbon monoxide gas in flue gases which could cause serious injury, property damage, or death. Improper installation and/or operation will void the warranty. For indoor installations, as an additional measure of safety, Laars strongly recommends installation of suitable Carbon Monoxide detectors in the vicinity of this appliance and in any adjacent occupied spaces.

⚠ WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a nearby phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency, or gas supplier.

⚠ AVERTISSEMENT

Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort.

Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

- Ne pas tenter d'allumer d'appareils.
- Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones dans le bâtiment où vous êtes.
- Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.

L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
Sheet Metal Components – See Figure 23								
1	Panel, Jacket, Front	5F3320	7F3320	10F3320	12F3320	15F3320	17F3320	20F3320
2A	Panel, Jacket, Side, Lower Left	5F3420	5F3420	5F3420	5F3420	5F3420	5F3420	5F3420
2B	Panel, Jacket, Side, Lower Right	5F3421	5F3421	5F3421	5F3421	5F3421	5F3421	5F3421
3A	Panel, Jacket, Side, Lower Left	5F3520	5F3520	5F3520	5F3520	5F3520	5F3520	5F3520
3B	Panel, Jacket, Side, Lower Right	5F3521	5F3521	5F3521	5F3521	5F3521	5F3521	5F3521
4	Panel, Side, Top Left, Jacket	5F3400	5F3400	5F3400	5F3400	5F3400	5F3400	5F3400
5	Panel, Side, Top Right, Jacket	5F3501	5F3501	5F3501	5F3501	5F3501	5F3501	5F3501
6	Panel, Rear, Jacket	5F3220	7F3220	10F3220	12F3220	15F3220	17F3220	20F3220
7	Panel, Top, Jacket	5F3021	7F3021	10F3021	12F3021	15F3021	17F3021	20F3021
8	Weldment, Vent Plate	5F3100	7F3100	7F3100	12F3100	12F3100	12F3100	20F3100
9	Weldment, Housing, Air Inlet/Filter	5F3800	5F3800	10F3800	12F3800	12F3800	12F3800	20F3800
10	Panel, Access, Filter	5F3701	5F3701	5F3701	12F3701	12F3701	12F3701	12F3701
11	Filter, Combustion Air	A2088700 (1)	A2088700 (1)	A2088700 (1)	A2088700 (2)	A2088700 (2)	A2088700 (2)	A2088700 (2)
12A	Pump Housing Right Side	5C3018	5C3018	5C3018	5C3018	5C3018	5C3018	5C3018
12B	Pump Housing Left Side	5C3019	5C3019	5C3019	5C3019	5C3019	5C3019	5C3019
12C	Pump Housing Cover	5C3020	5C3020	5C3020	5C3020	5C3020	5C3020	5C3020
14	Cover, Pipe, Gas Manifold	5F3304 (2)	5F3304 (2)	10F3304 (2)	20F3304 (2)	20F3304 (2)	20F3304 (2)	20F3304 (2)
Internal Components – See Figure 24								
16	Assembly, Base	5F1020	7F1020	10F1020	12F1020	15F1020	17F1020	20F1020
17	Panel, Front, Combustion Chamber	5F2003	7F2003	10F2003	12F2003	15F2003	17F2003	20F2003
18	Panel, Rear, Combustion Chamber	5F2006	7F2006	10F2006	12F2006	15F2006	17F2006	20F2006
19	Panel, Top, Combustion Chamber	5F2001	7F2001	10F2001	12F2001	15F2001	17F2001	20F2001
20	Weldment, Chamber, Left Side, Bottom	5C2602	5C2602	5C2602	5C2602	5C2602	5C2602	5C2602
21	Weldment, Chamber, Right Side, Bottom	5C2202	5C2202	5C2202	5C2202	5C2202	5C2202	5C2202
22	Panel, Chamber, Left/Right Side, Top	5C2002 (2)	5C2002 (2)	5C2002 (2)	5C2002 (2)	5C2002 (2)	5C2002 (2)	5C2002 (2)
23	Assembly, Sight Glass	10956000	10956000	10956000	10956000	10956000	10956000	10956000
24	Panel, Left Side, Air Box	5F2015	5F2015	5F2015	5F2015	5F2015	5F2015	5F2015
25	Panel, Right Side, Air Box	5F2016	5F2016	5F2016	5F2016	5F2016	5F2016	5F2016
26	Panel, Access, Air Box	5F2004	7F2004	10F2004	12F2004	15F2004	17F2004	20F2004
27	Cover, Access Panel, Air Box	5F2005 (1)	5F2005 (1)	5F2005 (1)	5F2005 (2)	5F2005 (2)	5F2005 (2)	5F2005 (2)
28	Divider, Chamber, Upper, Air Box				15F2005	15F2005		
29	Divider, Chamber, Lower, Air Box				15F2002	15F2002		
30	Divider, Front Chamber, Combustion Chamber						20F2002	20F2002
31	Assembly, Exhaust Stack	5F2027	7F2027	7F2027	12F2027	12F2027	12F2027	12F2027

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
32	Assembly, Copper Tube, Heat Exchanger	5C4000	7C4000	10C4000	12C4000	15C4000	17C4000	20C4000
	Assembly, Cupro-Nickel, Heat Exchanger	5C4020	7C4020	10C4020	12C4020	15C4020	17C4020	20C4020
33	Tile, Side (Left and Right)	T2015600 (2)	T2015600 (2)	T2015600 (2)	T2015600 (2)	T2015600 (2)	T2015600 (2)	T2015600 (2)
34	Tile, Front	T2017300						
35	Tile, Front, Left Side	T2016200	T2016800	T2016800	T2016800	T2016800	T2016800	T2016800
36	Tile, Front, Right Side	T2016300	T2017100	T2017100	T2017900	T2017100	T2017900	T2017100
37	Tile, Front, Center		T2016900	T2016900	T2016900	T2016900	T2016900	T2016900
38	Tile, Rear	T2015700						
39	Tile, Rear, Left Side		T2017500	T2016600	T2016600	T2016600	T2016600	T2016600
40	Tile, Rear, Right Side		T2016600	T2016600	T2018100	T2016600	T2018100	T2016600
41	Tile, Rear, Center			T2017200	T2017200	T2017200	T2017200	T2017200
42	Tile, Bottom	T2015500						
43	Tile, Bottom, Left Side		T2017400	T2017400	T2017400	T2017400	T2017400	T2017400
44	Tile, Bottom, Right Side		T2016500	T2017400	T2018000	T2017400	T2018000	T2017400
45	Tile, Bottom, Center			T2015900	T2015900	T2015900	T2015900	T2015900
46	Gas Train Components – See Figure 24							
	Blower	A2111900 (1)	A2111900 (1)	A2111900 (1)	A2111900 (2)	A2111900 (2)	A2111900 (2)	A2111900 (2)
47	Weldment, Blower Mount	5C5300 (1)	5C5300 (1)	5C5300 (1)	5C5300 (2)	5C5300 (2)	5C5300 (2)	5C5300 (2)
47A	Assembly, Blower Damper				15C5400 (2)	15C5400 (2)	15C5400 (2)	15C5400 (2)
48	Manifold, Gas Supply	5C6100	7C6100	10C6100	12C6100	15C6100	17C6100	20C6100
49	Valve, Ball, Manual Shutoff	V2003100	V2003100	V2003200	V2003300	V2003300	V2003300	V2003300
50	Valve, Gas, Combination	V2017600 (2)	V2017600 (3)	V2017600 (3)	V2017600 (5)	V2017600 (5)	V2017600 (6)	V2017600 (6)
50A	O-Ring	V2017500 (4)	V2017500 (6)	V2017500 (6)	V2017500 (10)	V2017500 (10)	V2017500 (12)	V2017500 (12)
51A	Weldment, Pipe, Gas Valve/Ball Valve	P2073600 (2)	P2073600 (3)	P2073600 (3)	P2073600 (3)	P2073600 (5)	P2073600 (6)	P2073600 (6)
51B	4" Nipple, black	P0014700 (2)	P0014700 (3)	P0014700 (3)	P0014700 (3)	P0014700 (5)	P0014700 (6)	P0014700 (6)
51C	Union	P0030400 (2)	P0030400 (3)	P0030400 (3)	P0030400 (3)	P0030400 (5)	P0030400 (6)	P0030400 (6)
52	Valve, Ball, Manual Shutoff, Secondary	V2000200 (2)	V2000200 (3)	V2000200 (3)	V2000200 (5)	V2000200 (5)	V2000200 (6)	V2000200 (6)
53	Manifold, 3 Burner/Orifice, Left	L2012800 (1)	L2012800 (2)	L2012800 (3)	L2012800 (3)	L2012800 (1)	L2012800 (2)	L2012800 (2)

Item	Description	Size 500	Size 750	Size 1000	Size 1250	Size 1500	Size 1750	Size 2000
69	Baffle, Water Deflector, Inlet	10338300	10338300	10338300	10338300	10338300	10338300	10338300
70	Well, Immersion, Temperature Control	E2058300	E2058300	E2058300	E2058300	E2058300	E2058300	E2058300
71	Cover, Return, Glass-Lined Cast Iron	10364300	10364300	10364300	10364300	10364300	10364300	10364300
	Cover, Return, Bronze	10364301	10364301	10364301	10364301	10364301	10364301	10364301
72	Pump Housing, Glass-Lined Cast Iron	S2056900	S2056900	S2056900	S2056900	S2056900	S2056900	S2056900
73	Baffle, Diffuser, Pump Housing Inlet	10338400	10338400	10338400	10338400	10338400	10338400	10338400
Electrical Components – See Figure 26								
74	Control, Gas Ignition, Three-Try (standard)	E2313900	E2313900	E2313900	E2313900	E2313900	E2313900	E2313900
	Control, Gas Ignition, Single-Try (CSD-1 option)	(1) E2107300	(1) E2107300	(2) E2317300	(2) E2317300	(2) E2317300	(2) E2317300	(2) E2317300
	SPDT, Toggle Switch	E0109200	E0109200	E0109200	E0109200	E0109200	E0109200	E0109200
75A	DPDT Switch	E2056300	E2056300	E2056300	E2056300	E2056300	E2056300	E2056300
76	Terminal Block, 16-Position, Dual Row	E2327500	E2327500	E2327500	E2327500	E2327500	E2327500	E2327500
77	Switch, Hi-Limit Manual Reset (boiler)	E0015900	E0015900	E0015900	E0015900	E0015900	E0015900	E0015900
	Controller, Temperature, 100° to 200°F, Manual Reset	E2217800	E2217800	E2217800	E2217800	E2217800	E2217800	E2217800
78	Thermostat, 2-Stage, 130° to 230°F	E0093200	E0093200	E0093200	E0093200	E0093200	E0093200	E0093200
79	Panel, Mounting, Limits/Ignition Control	5F7001	5F7001	5F7001	5F7001	5F7001	5F7001	5F7001
80	Panel, Cover, High Limit/Ignition Control	5F7003	5F7003	5F7003	5F7003	5F7003	5F7003	5F7003
81	Panel, Access, Terminal	5F7006	5F7006	5F7006	5F7006	5F7006	5F7006	5F7006
82	Switch, Rocker, 30A, 125 VAC	E2343300	E2343300	E2343300	E2343300	E2343300	E2343300	E2343300
83	Terminal Block, 6-Position, Dual Row	E2327700	E2327700	E2327700	E2327700	E2327700	E2327700	E2327700
84	Terminal Block, 12-Position, Dual Row	E2342500	E2342500	E2342500	E2342500	E2342500	E2342500	E2342500
85	Switch, Pressure, Diaphragm, SPDT	E0240900	E0240900	E0240900	E0240900	E0240900	E0240900	E0240900
	Bracket, Pressure Switch	(2) 5F7007	(2) 5F7007	(2) 5F7007	(3) 5F7007	(3) 5F7007	(3) 5F7007	(3) 5F7007
87	Transformer, 150 VA, 120/24V	E2310400	E2310400	E2310400	E2310400	E2310400	E2310400	E2310400
88	Relay, Time Delay (24 VAC)	E2077700	E2077700	E2077700	E2077700	E2077700	E2077700	E2077700
	Delay on Break, Adj.							
89	Relay, 24VAC, DPDT	E2327800	E2327800	E2327800	E2327800	E2327800	E2327800	E2327800
	Panel, Mounting, LWCO Switch (optional)	5F7005	5F7005	5F7005	(2) 5F7005	(2) 5F7005	(2) 5F7005	(2) 5F7005
90	Wire Harness #1, Fenwal	E2328800	E2328800	E2328400	E2328400	E2328400	E2328400	E2328400
91	Wire Harness #2, Control Panel	E2328900	E2328900	E2328500	E2330100	E2330100	E2330100	E2330100
92	Wire Harness #3, Main	E2329000	E2329000	E2329100	E2328600	E2328600	E2328600	E2328600
93	Wire Harness #4, Local Remote SW	E2328700	E2328700	E2328700	E2328700	E2328700	E2328700	E2328700
94								

NOTE: Quantity is one (1) unless otherwise indicated.

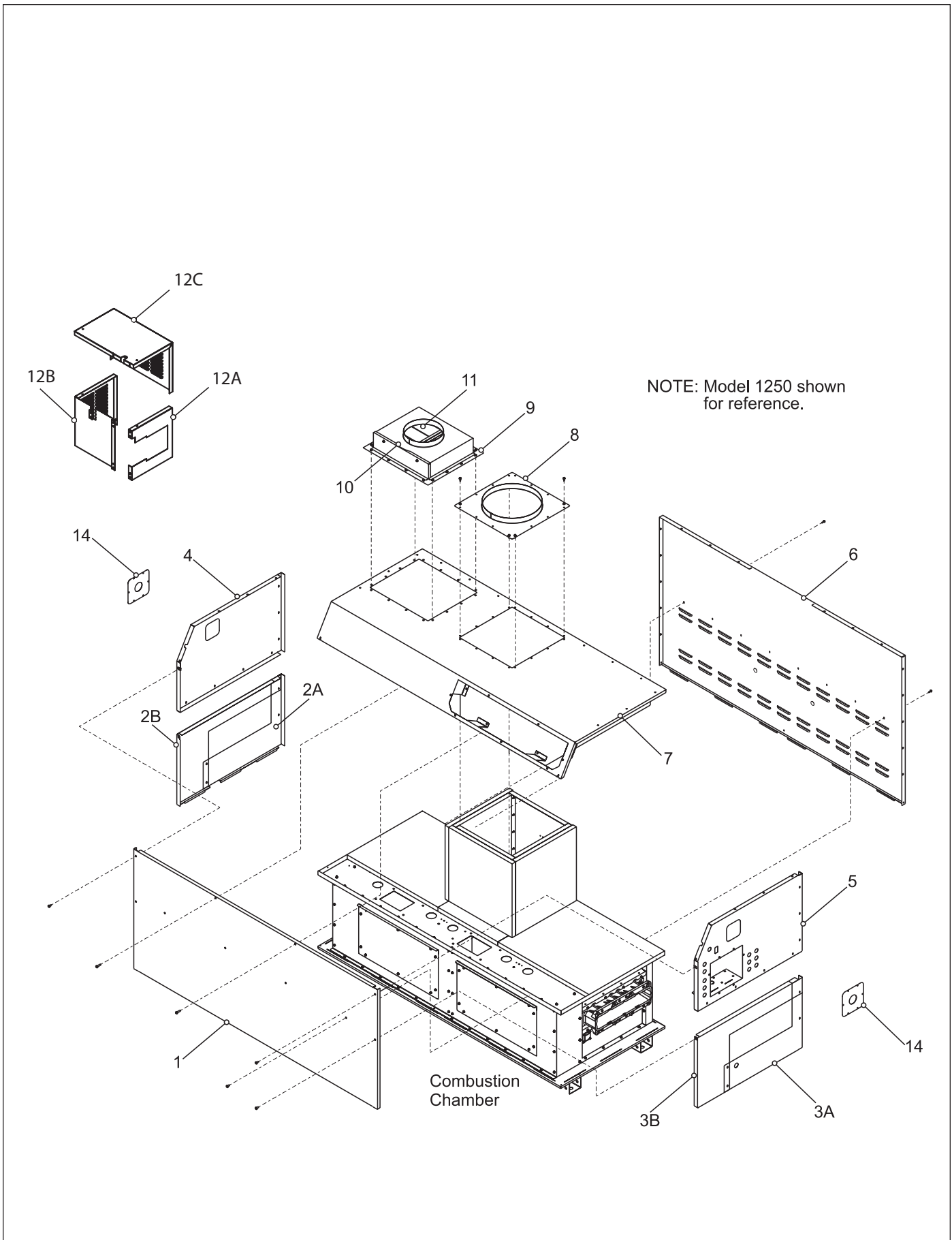


Figure 23. Sheet Metal Components.

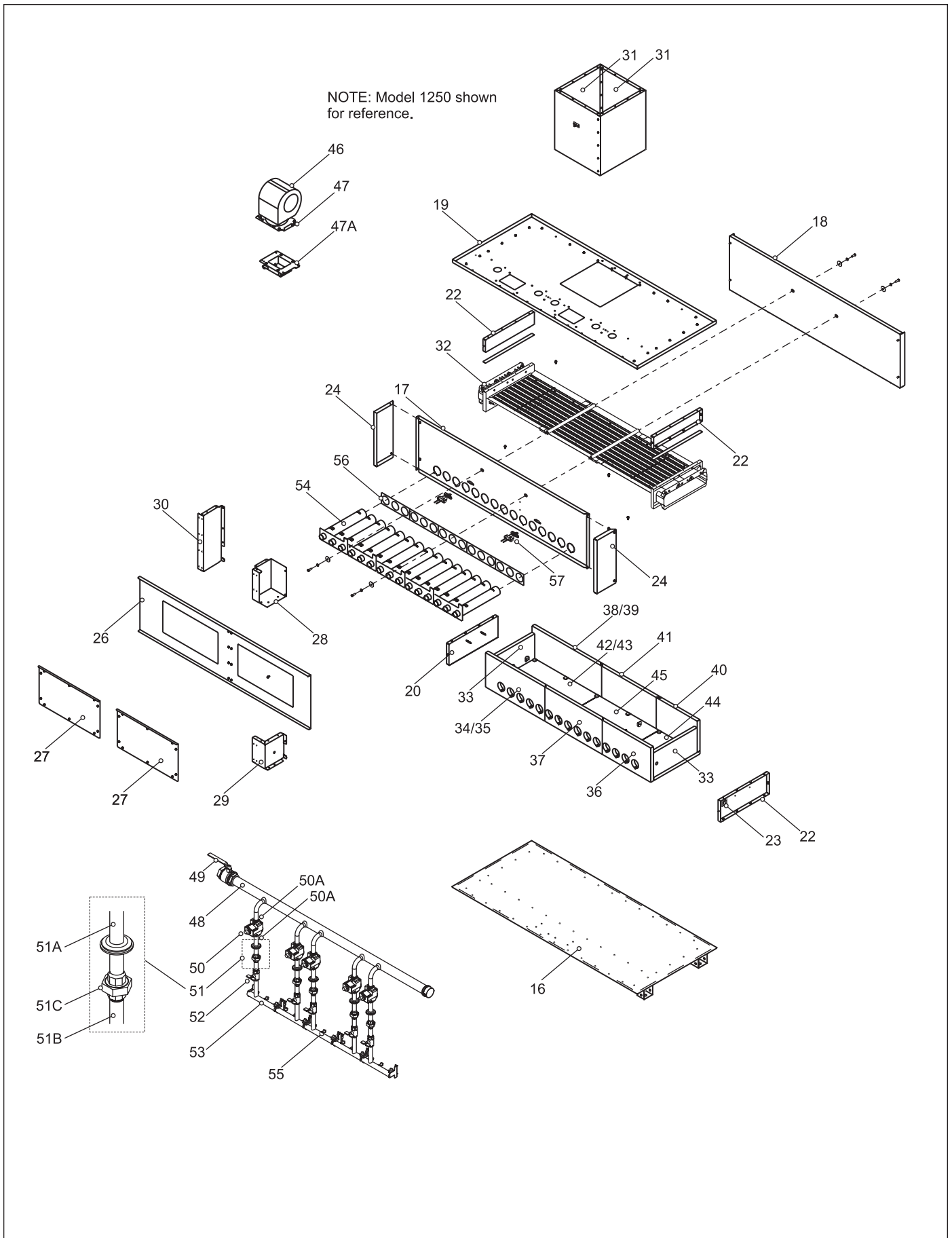


Figure 24. Internal Components

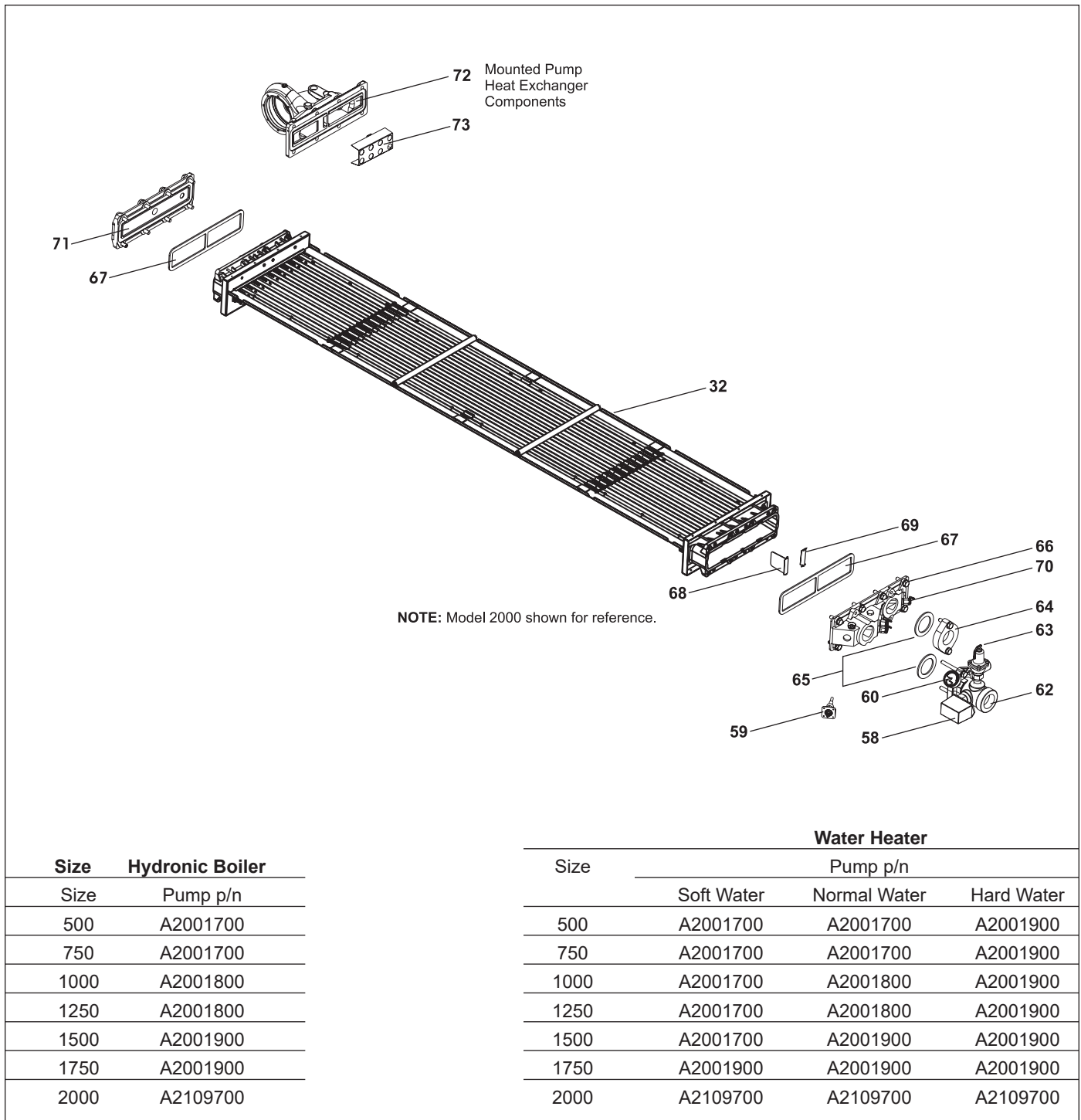


Figure 25. Heat Exchanger Components.

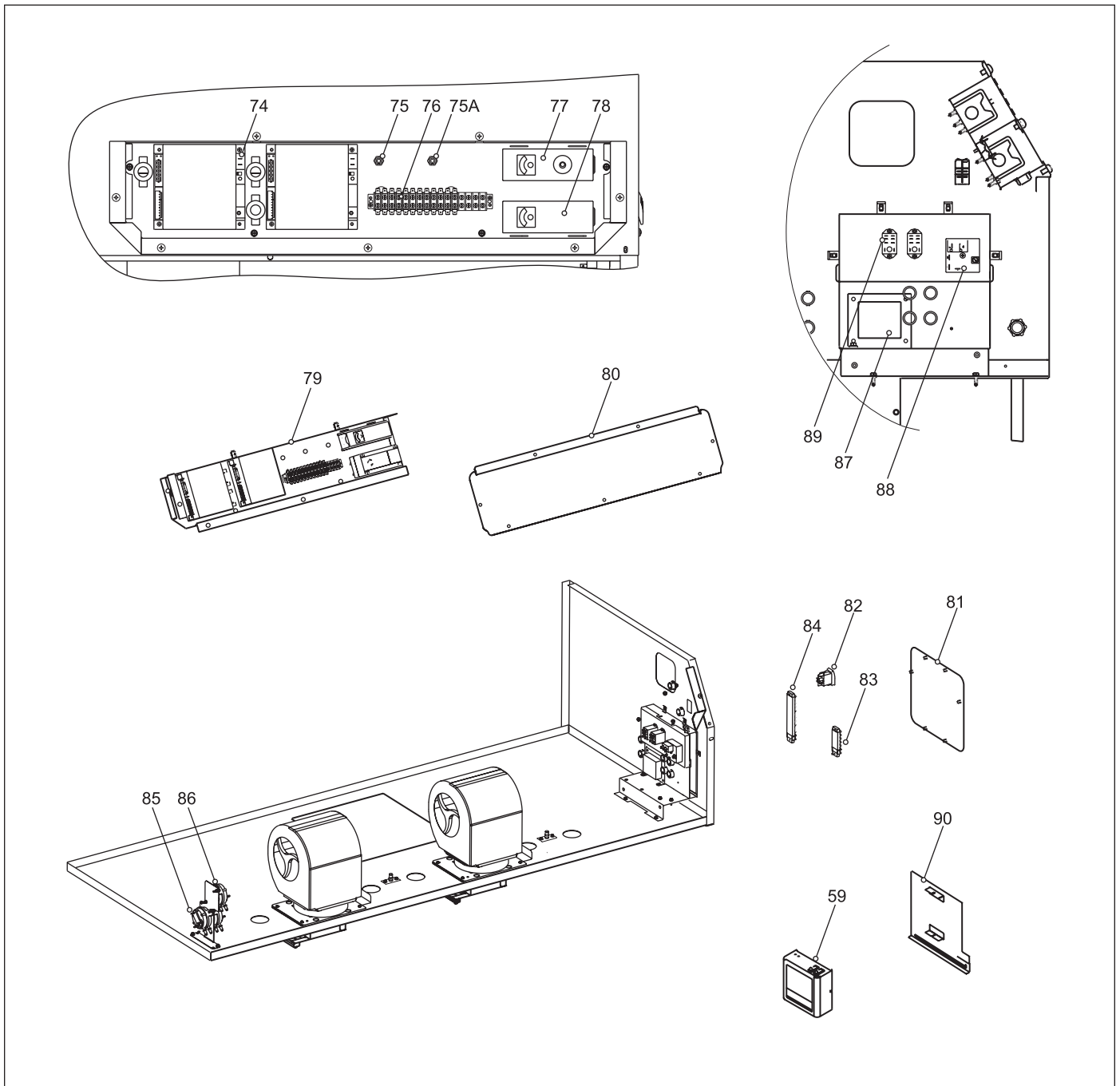


Figure 26. Electrical Components.