



MARKET FORGE

PS-3E AND PS-6E ELECTRIC CONVECTION STEAMERS PARTS AND SERVICE MANUAL

EFFECTIVE AUGUST 1, 2014

Superseding All Previous Parts Lists.

The Company reserves the right to make substitution in the event that items specified are not available.

ERRORS: Descriptive and/or typographic errors are subject to correction.

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SERVICE AND ADJUSTMENTS



NOTICE

Contact the factory, the factory representative or local service company to perform any maintenance and repairs.

ADJUSTMENT FOR HIGH ALTITUDE LOCATIONS

The steamer has been factory set so that when it is ON and during the READY phase, it will maintain water temperature in the steam generator tank at approximately 205° Fahrenheit (just below water boiling point). However, for high altitude locations, an authorized service agent must adjust the steamer to achieve this temperature. To adjust:

1. Remove side panel and turn control panel power switch to ON.
2. Open compartment door, and after about 15 minutes, steam will be seen, entering the cooking compartment.
3. Turn thermostat dial counter clockwise to lower temperature until steam just ceases to enter cooking compartment and READY light goes on.
4. Replace side panel.
5. Follow TESTING PROCEDURES in this manual.

WATER FLOWS INTO DRAIN DURING SHUTDOWN

When steamer is shut down and cold water is running continuously into the open drain, either or both solenoid valves did not close when steamer was turned off.

1. Disassemble solenoid valve(s) and examine for scale or foreign particles lodged in diaphragm or core tube.
2. Clean valve(s) thoroughly and reassemble, or replace valve(s).

DRAIN WATER TEMPERATURE TOO LOW OR TOO HIGH

Cooling solenoid valves are adjustable with fine adjustment screw on the bottom of the valve.

1. Run cooking compartment empty until drain temperature stabilizes.
2. Turn fine adjustment screw on cooling solenoid valve out to decrease drain temperature and in to increase drain temperature.

WATER OVERFLOWS INTO COOKING COMPARTMENT

When steamer is first turned on for the day, and the following conditions occur:

- READY light does not come on after about 15 minutes,
- Water begins to overflow into cooking compartment,
- Water fill solenoid valve is open, then any or all of these symptoms may indicate a problem with the operating probe due to either:
 1. A short between the operating probe terminal and body of the steamer. Call your authorized service agent.
 2. Excessive scale build-up on the operating probe. This acts as an “insulation” and prevents the probe from sensing the water level. It is therefore unable to close the water fill (solenoid) valve to shut off the water.

As a temporary solution, with power OFF, unscrew probes, check visually, and clean or chip off scalant. Replace probe.

This problem is an indication of severe harmful water conditions which should be corrected immediately to avoid damage to the components and ultimate malfunction of the steamer. (See WATER CONDITIONING in this manual).

HEATER ELEMENTS DO NOT COME ON

When the steamer is turned ON and heater elements do not activate, and therefore, the READY light does not come on, then the contactors may be burned out. If a considerable amount of “chattering” of contactors has been previously experienced, then the thermostat bulb may be coated with scalant and unable to sense water temperature in the boiler accurately, and therefore unable to control the contactors.

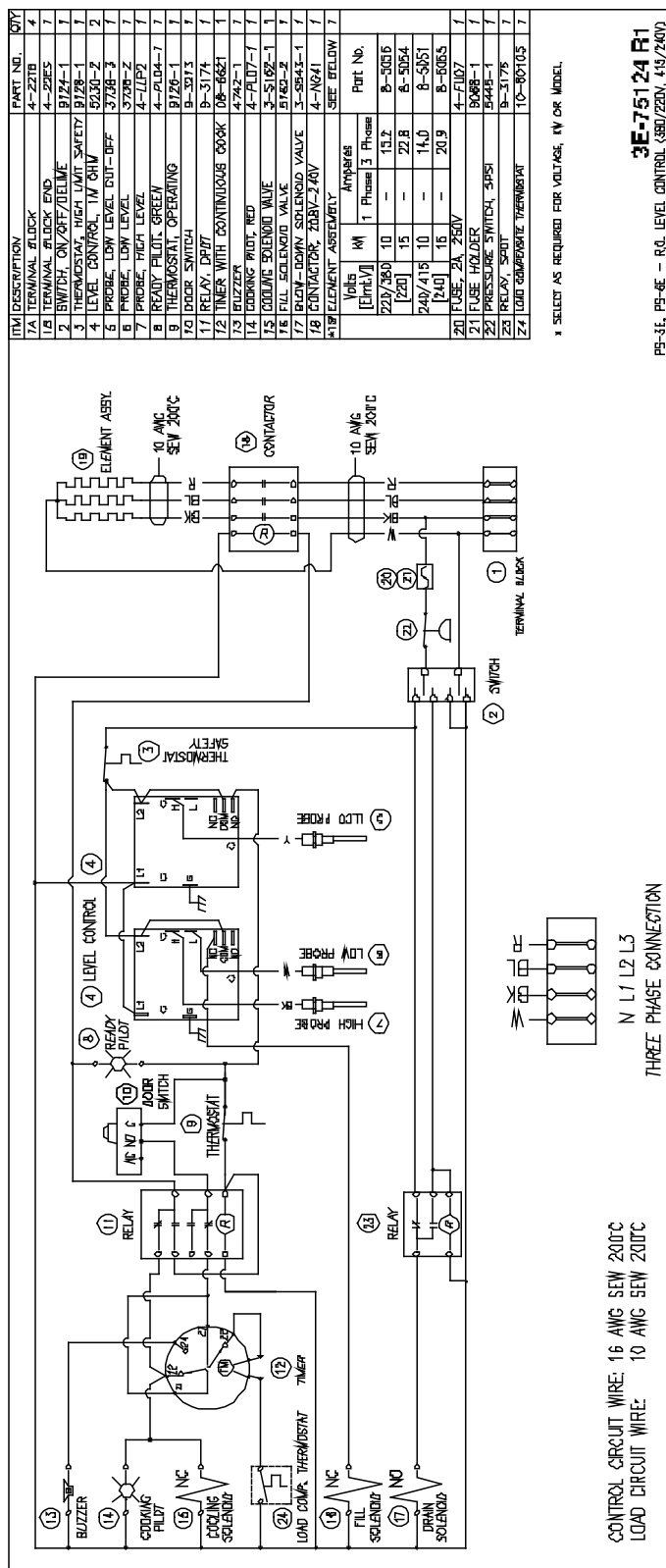
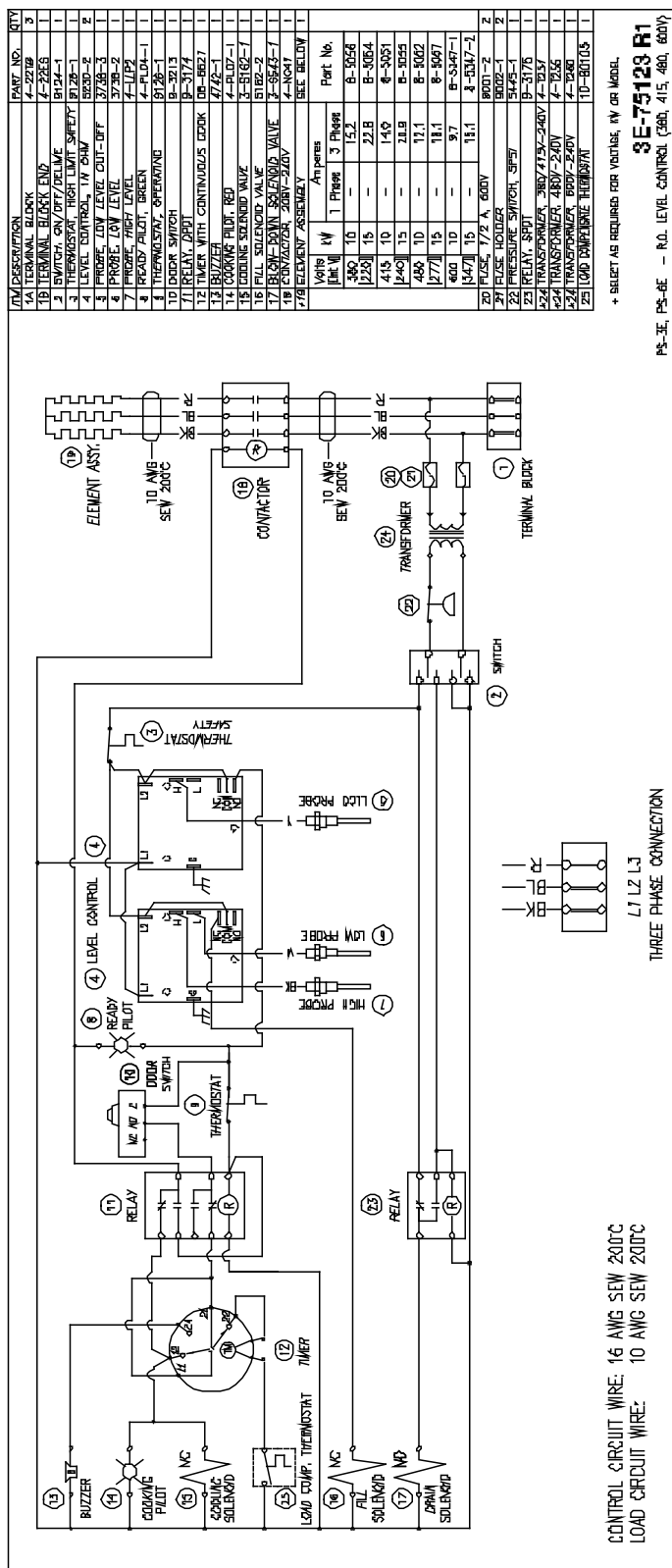
1. Replace contactors.
2. Unscrew operating thermostat bulb, clean off scalants and screw thermostat bulb back in.

This problem is an indication of inadequate water quality and is not covered under warranty. Have water quality analysed and corrected immediately to avoid complete malfunction of the steamer.

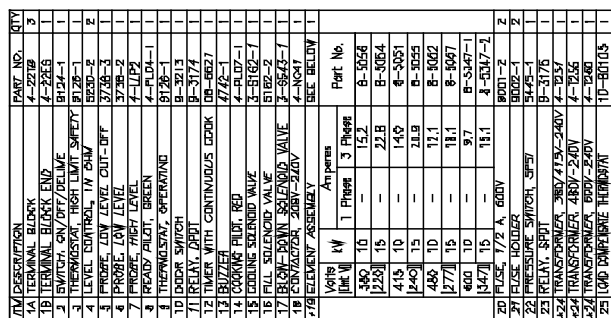
UNIT SHUTS DOWN WHILE IN OPERATION

Pressure switch has been activated due to 5 PSI (35 kg/cm²) pressure in the generator tank. Pressure in the generator tank is caused due to plugged steam jet tubes or steam diverters due to scale or poor water conditions. Steam jet tubes/steam diverter will have to be cleaned or replaced.

WIRING DIAGRAMS



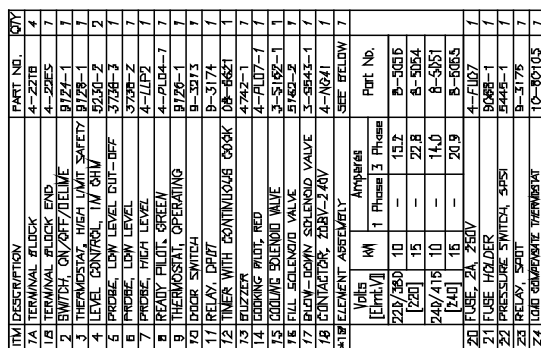
WIRING DIAGRAMS



+ SELECT AS REQUIRED FOR VOLTAGE, KW OR MODEL.

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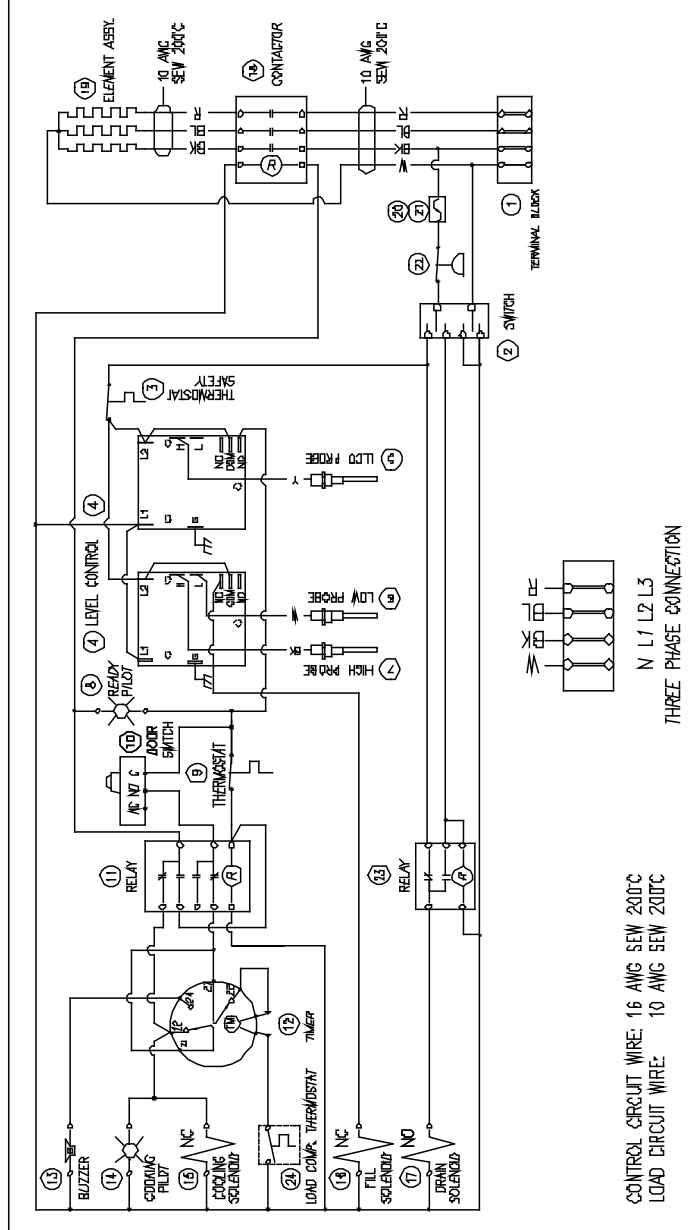
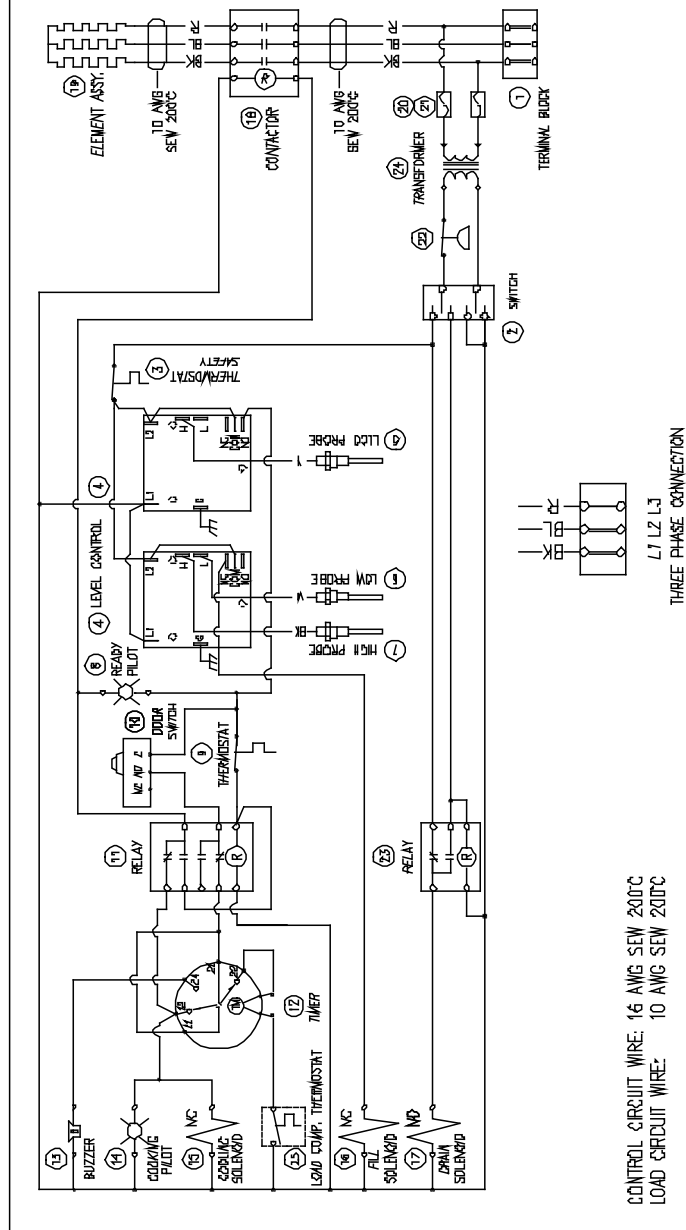
PS-3E, PS-6E - R.O. LEVEL CONTROL (3AB, 415, 480, 600V)



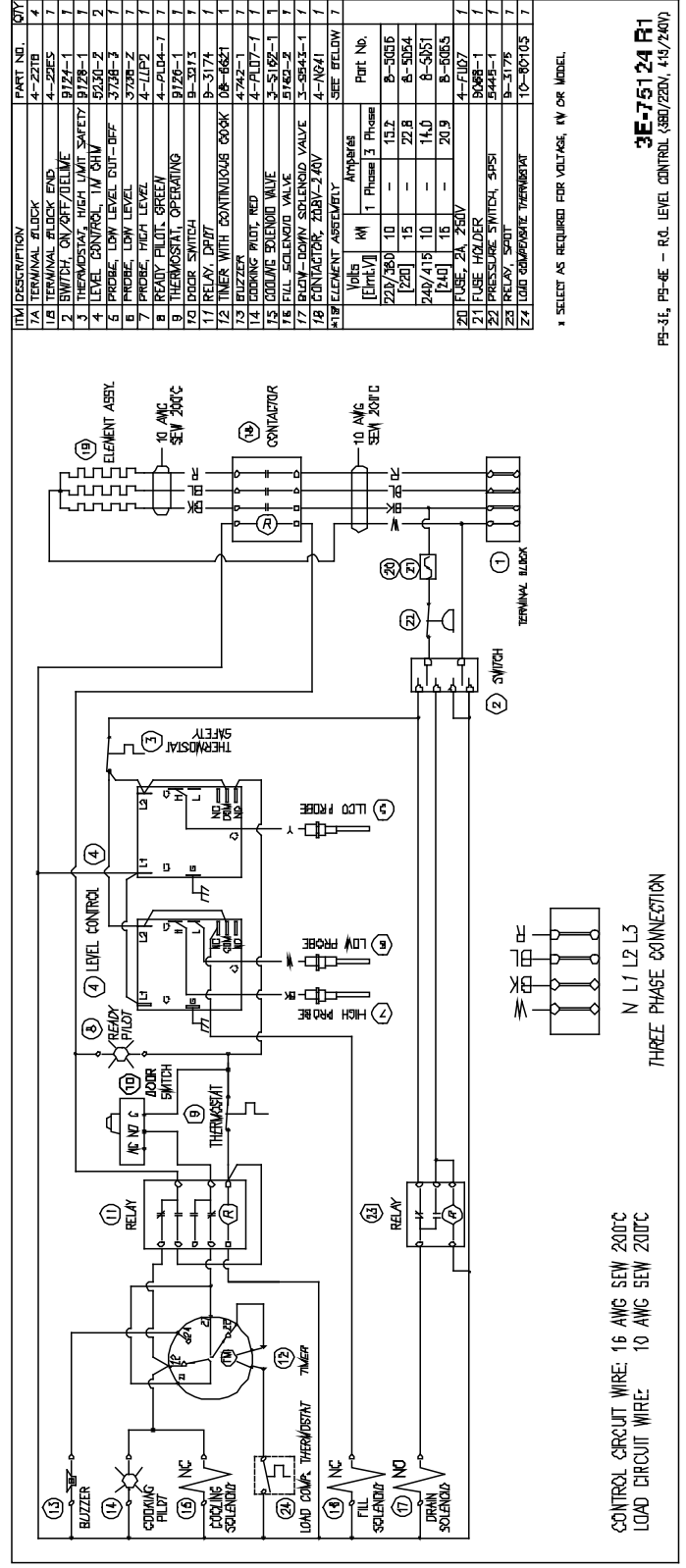
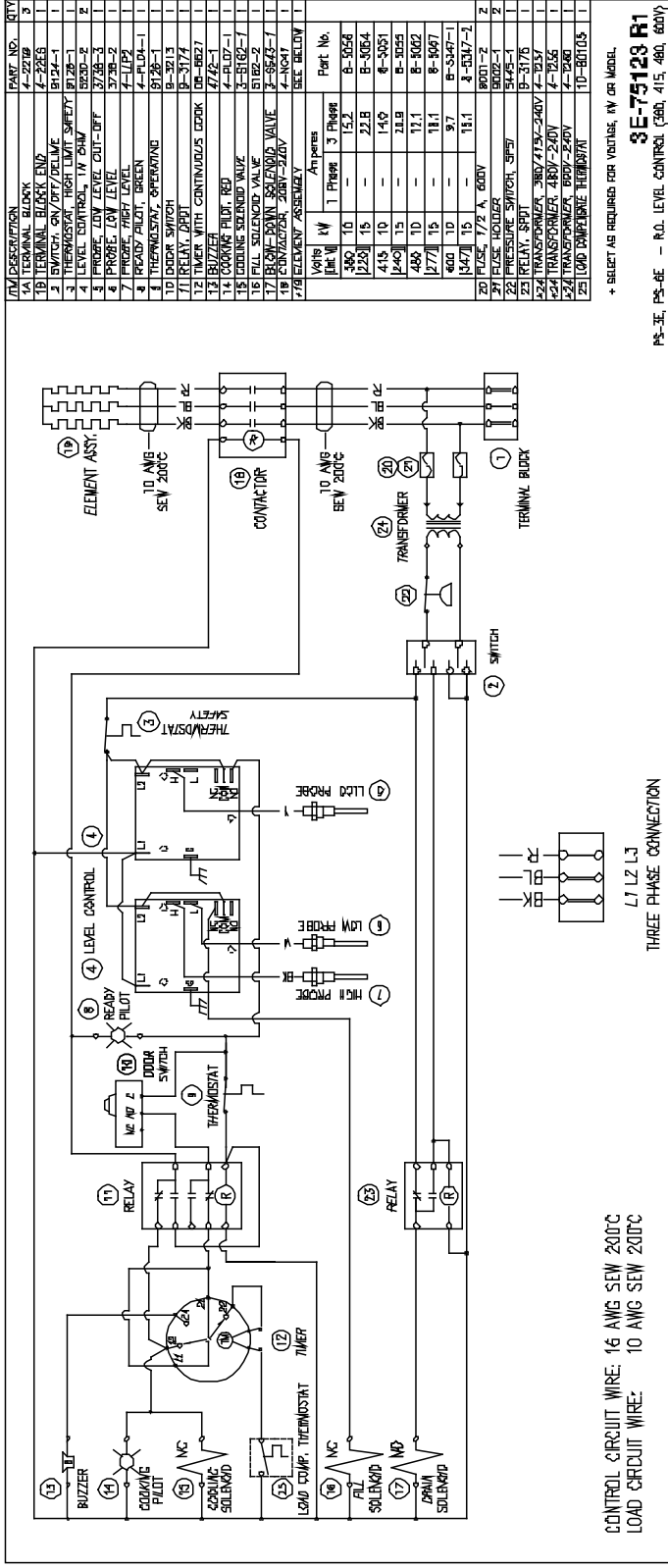
X SELECT AS REQUIRED FOR VOLTAGE, KW OR MODEL,

3E-75124 R1

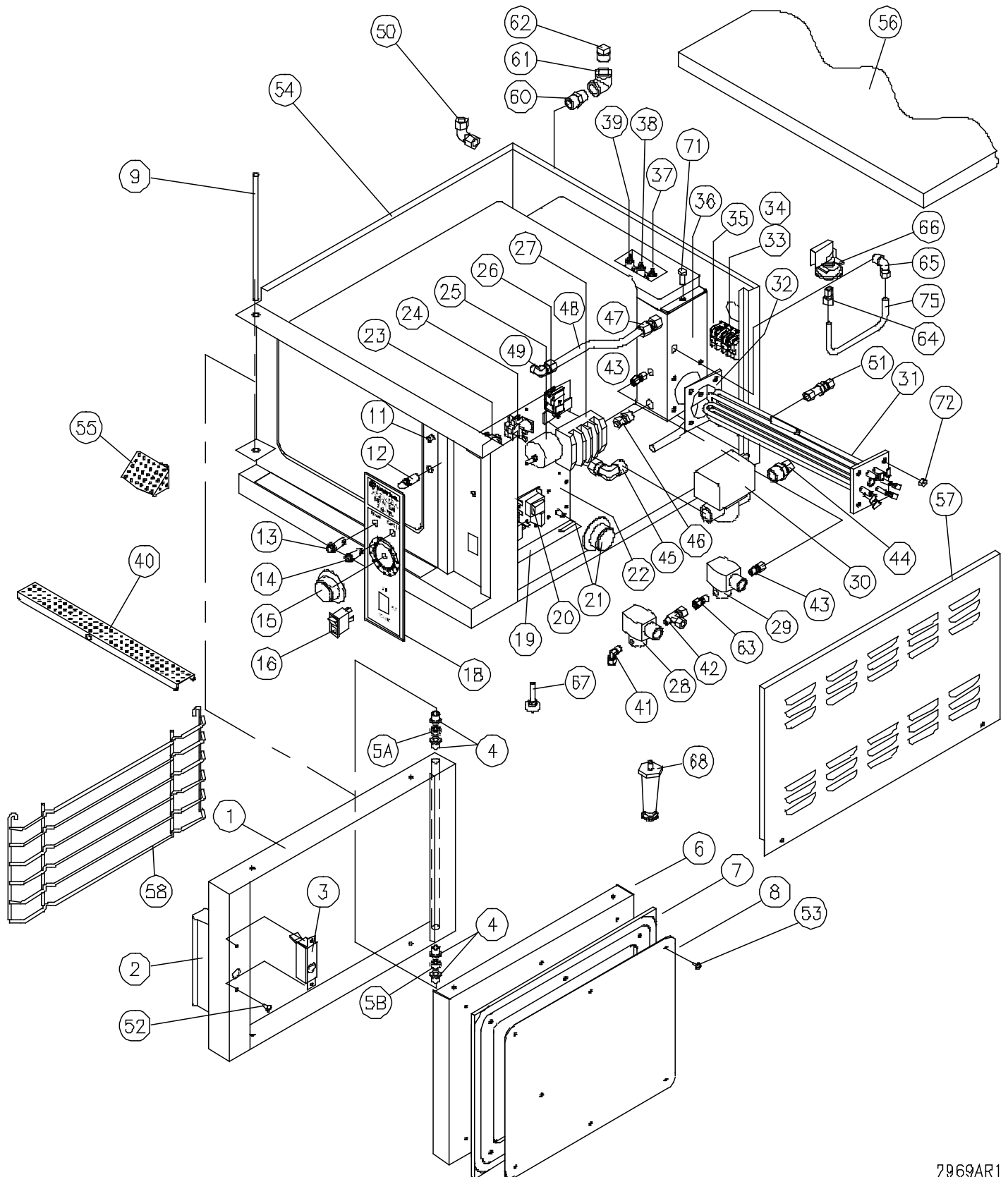
PPS-3E, PPS-4E - R.O. LEVEL CONTROL (380/220V, 415/240V)



WIRING DIAGRAMS



ILLUSTRATED PARTS LIST



Z969AR1

ITEM	PART NOL	DESCRIPTION	PS-3E	PS-6E
1A	97-6254	Door Assembly	1	
	97-6373	Door Assembly		1
1	97-6295	Door Frame	1	
	97-6227	Door Frame		1
2	97-6231	Door Handle Assembly	1	1
*	97-6235	Decal	1	1
*	97-6258	Door Handle	1	1
*	97-6259	Door Handle Plate	1	1
*	98-9165	Socket Set Screw, 1/4 - 20 x 1-3/4	2	2
*	97-5349	Socket Set Screw, 1/4 - 20 x 3/4	1	1
*	97-6260	Spacer	2	2
*	97-6297	Lock Washer, 1/4	2	2
*	97-6298	Hex Nut, 1/4 - 20	2	2
3	97-6232	Latch Assembly	1	1
4	97-6261	Door Bushing	4	4
5A	97-6734	Spacer - Upper	1	1
5B	97-6735	Spacer - Lower	1	1
6	97-6262	Door Panel	1	
	97-6230	Door Panel		1
7	97-6264	Door Gasket	1	
	97-6228	Door Gasket		1
8	97-6266	Gasket Plate, 3-pan	1	
	97-6229	Gasket Plate, 6-pan		1
9	97-6299	Hinge Rod	1	
	97-6364	Hinge Rod		1
*10	97-6300	Steam Diverter	2	2
11	97-6301	Actuator Complete With Retaining Rings	1	1
*	97-6191	Door Switch	1	1
12	97-6178	Striker	1	1
*	97-6302	Stainless Steel Washer	1	1
*	97-6650	Lock Washer	1	1
*	97-6651	Nut	1	1
13	97-6270	Pilot Light, Green	1	1
14	97-6271	Pilot Light, Red	1	1
**15	98-6046	Timer Dial	1	1
16	97-6272	Power Switch	1	1

* NOT SHOWN ** SELECT AS REQUIRED

ITEM	PART NOL	DESCRIPTION	PS-3E	PS-6E
*17	97-6303	Label, De-Lime (Rear of Unit)	1	1
**18	97-6304	Control Decal	1	
	97-6305	Control Decal		1
19	97-6275	Component Mounting Board	1	1
**20	97-6276	Level Control Board, 10K OHM	1	1
	97-6277	Level Control Board, 1M OHM	2	2
21	97-5048	Thermostat - Operating	1	1
	97-6736	Dial	1	1
22	97-6278	High Limit Thermostat	1	1
23	97-6279	Relay - Single Pole, 240V	1	1
24	97-6280	Relay - Double Pole, 240V	1	1
25	08-6464	Timer, 230 VAC and 240	1	1
26	97-6307	Buzzer, 240V	1	1
**27	98-6189	Contactor - 4 Pole (208, 220, 240V)	1	1
	97-5609	Contactor - 380, 415, 480, 600 Volt	1	1
28	97-6285	Cooling Solenoid, 240V, Metering	1	1
29	97-6308	Fill Solenoid, 240V	1	1
30	97-6283	Blow-down Solenoid, 240V	1	1
**31	97-6309	Element Assembly, 10 kW, 208V	1	
	97-6310	Element Assembly, 10 kW, 220/380V	1	
	97-6311	Element Assembly, 10 kW, 240/415V	1	
	97-6312	Element Assembly, 10 kW, 480V (287)	1	
	97-6313	Element Assembly, 10 kW, 600V (347)	1	
	97-6314	Element Assembly, 15 kW, 208V		1
	97-6315	Element Assembly, 15 kW, 220/380V		1
	97-6316	Element Assembly, 15 kW, 240/415V		1
	97-6317	Element Assembly, 15 kW, 480V (287)		1
	97-6318	Element Assembly, 15 kW, 600V (347)		1
32	97-6319	Element Gasket	1	1
**33	10-6963	Terminal Block, 208-240V, 10 kW, Black	4	
	98-6185	Terminal Block, 208-240V, 15 kW, White		4
*	97-6737	Terminal Rail, 208-240V, 15 kW		1
	10-6963	Terminal Block, 380/220V 415/240V, Black	4	4
	10-6963	Terminal Block, 380-600V, Black	3	3
**34	10-6962	End Section, Black	1	1
	98-6186	End Section, 208-240V, 15 kW, White	1	1

* NOT SHOWN ** SELECT AS REQUIRED

ITEM	PART NOL	DESCRIPTION	PS-3E	PS-6E
*35	97-5052	Ground Lug	1	1
	97-6738	Earth I.D. Tag	1	1
36	97-6321	Steam Generator Tank	1	1
*	97-6322	Tank Cover	1	1
	97-6323	Tank Gasket	1	1
37	97-6324	Probe - 5" Low Level Cut Off	1	1
38	97-6325	Probe - 4.25" Low Level	1	1
39	97-6326	Probe - 3.688" High Level	1	1
40	97-6177	Perforated Trough	1	1
41	98-6089	Elbow, 1/4 c x 1/8 MPT	1	1
42	97-6327	Tee, 3/8 c x 1/8 MPT	1	1
43	98-6123	Connector, 1/4 c x 1/8 MPT	1	1
44	97-6328	Connector, 1/2 c x 3/4 MPT	1	1
45	97-6208	Elbow, 1/2 c x 3/4 MPT	1	1
46	97-5619	Thermostat Fitting, 3/8 c x 3/8 MPT	1	1
47	97-6206	Union Coupling, 1/2 c	1	1
48	97-6329	Right Hand Steam Jet Tube	1	1
*	97-6330	Left Hand Steam Jet Tube	1	1
49	97-6331	Elbow, 1/2 c x 1/4 MPT	2	2
50	97-6207	Elbow, 1/2 c	1	1
51	97-6226	Water Connection, 3/8 c	1	1
52	97-6739	Screw, 10-32 x 1/2 SS	6	6
53	97-6233	Screw, (Special), 10-32 x 1/2	6	8
54	97-6332	Left Hand Side and Back	1	
54	97-6333	Left Hand Side and Back		1
55	97-6334	Compartment Strainer	1	1
56	97-6335	Top	1	1
**57	97-6336	Side Panel	1	
	97-6337	Side Panel		1
**58	97-6338	Rack Slides	2	
	97-6339	Rack Slides		2
*59	97-6340	Rack Pin Assembly	4	4
60	97-6341	Brass Nipple, 1/2 -14	1	1
61	97-6342	Brass Elbow, 1/2 -14	1	1
62	97-6740	Brass Plug, 1/2 - 14, Hex Head	1	1
63	97-6344	Connector, 3/8 c x 1/8 MPT	1	1

* NOT SHOWN ** SELECT AS REQUIRED

ITEM	PART NOL	DESCRIPTION	PS-3E	PS-6E
64	97-6591	Connector, 3/8 c x 1/8 FPT	1	1
65	97-6346	Elbow 90°, 3/8 c x 3/8 MPT	1	1
66	97-6347	Pressure Switch	1	1
67	97-6348	Leveler	4	4
68	97-6211	Adjustable Leg, Optional	4	4
* **69	97-6186	Fuse, 2 Amp., 250V (208, 240V)	2	2
	97-6186	Fuse, 2 Amp., 250V (220, 220/380, 240/415)	1	1
* **	98-6188	Fuse, 1/2 Amp, 600V (380, 415, 480, 600V)	2	2
	97-5864	Fuse Holder (208, 240V)	2	2
	97-5864	Fuse Holder (220, 220/380, 240/415V)	1	1
	98-6187	Fuse Holder (380, 415, 480, 600V)	2	2
* **70	97-5616	Transformer, 380-220V, 50/60 Hz, 100VA	1	1
	97-5616	Transformer, 415-240V, 50/60 Hz, 100VA	1	1
	97-5613	Transformer, 480-240V, 60 Hz, 100VA	1	1
	98-6191	Transformer, 600-240V, 60 Hz, 100VA	1	1
71	97-6663	Hex Blot, 5/16-18 x 1 SS	2	2
72	97-6298	Hex Nut, 1/4 - 20 SS	4	4
*73	97-6349	"Y" Strainer, Optional	1	1
*74	97-6741	Wire Harness	1	1
75	97-6351	Copper Tube, 3/8	1	1

* NOT SHOWN ** SELECT AS REQUIRED