

# OWNER'S MANUAL

## Self-Contained Electric Steam Jacketed Kettles

**MODELS: FCT-4CE  
FCT-6CE  
FCT-10CE  
FCT-12CE**



**MARKET FORGE**  
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# INSTALLATION

## INSTALLATION ON COUNTER SURFACE:

1. Position kettle on counter allowing sufficient rear clearance from wall to tilt freely and completely without obstruction.
2. Mark (4) corner locations of kettle base, as shown in Figure 1.
3. Remove kettle from counter and locate position of 4 holes as per above drawing. Drill four 7/6" diameter holes.
4. Apply a continuous bead of Silastic or other equivalent sealant along the complete perimeter edge of the kettle base.
5. Use 5/16 - 18 x 1 1/2" Hex Cap Screws with suitable flat washers to bolt down.
6. Wipe off excess sealant.
7. A Control Box with power supply equivalent to Electrical Rating of kettle should be located conveniently nearby.
8. A waterproof electrical connection for power supply to console housing must be provided.
9. Ground kettle to terminal provided inside console housing.
10. Turn power ON and check for proper operation.

**MODELS:**     FCT- 4CE     FCT- 6CE  
                   FCT-10CE     FCT-12CE

**DESCRIPTION:** Will be a Market Forged self-generating, countertop tilting kettle, with hand crank.

<input type="radio"/> FCT-4CE	4 Gallon	16 Liter Capacity
<input type="radio"/> FCT-6CE	6 Gallon	23 Liter Capacity
<input type="radio"/> FCT-10CE	10 Gallon	38 Liter Capacity
<input type="radio"/> FCT-12CE	12 Gallon	45 Liter Capacity

Kettle will be constructed of welded satin finish, type 316, stainless steel. The kettle will be jacketed by an outer kettle, which encloses heating element, water and anti-freeze required to generate steam. Heating element can be easily removed for service and will automatically shut off when kettle is tilted to prevent element damage. Kettle will be equipped with crank handle with positive stop.

Water Tight Controls will be integrally mounted to the kettle and control console and includes an on-off switch, solid state temperature controller with pilot light, low water shut off light, pressure/vacuum gauge, pressure safety valve, and air bleed vent. Kettle will operate in a temperature range of approximately 100° to 298°F (38°-148°C) at a pressure not to exceed 50 PSI (3.5 kg/cm<sup>2</sup>). Mounting base will include kettle mounting lugs concealed inside a rectangular enclosure.

**OPERATION SHALL BE BY:** \*Optional at extra cost.

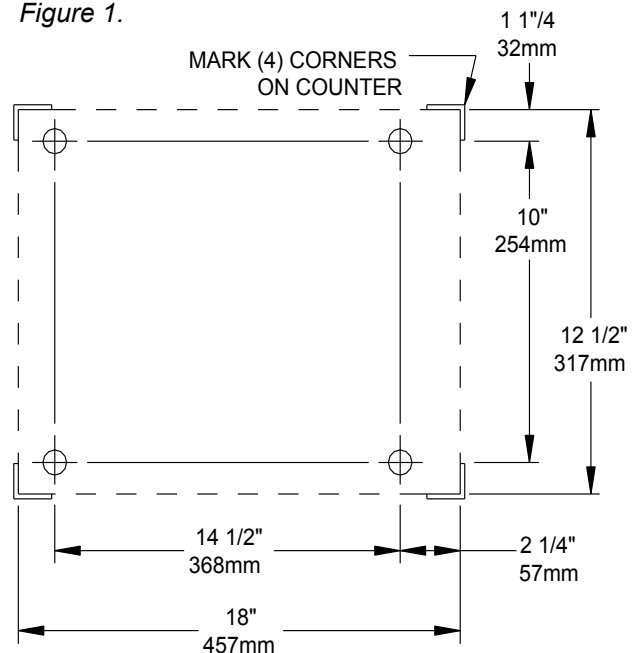
Electrically, self-generating closed steam system equipped for operation on:

- 208 VAC,  1 Phase or  3 Phase, 50/60 Hz.
- 240 VAC,  1 Phase or  3 Phase, 50/60 Hz.
- \*480 VAC, 3 Phase, 50/60 Hz.
- 220/380 VAC, 3 Phase 4 wire 50Hz.
- 240/415 VAC, 3 Phase 4 wire 50Hz.

## OPTIONAL AT EXTRA COST:

- One piece lift off stainless steel cover.
- Stainless steel wire basket.
- Low, Open, Stainless Steel Stand.  
(30" Wide x 20" High)
- Vegetable Strainer.
- 30" Lowboy Stainless Steel Stand with Sink Drain. (4, 6, 10 and 12 Gallon Only)

Figure 1.



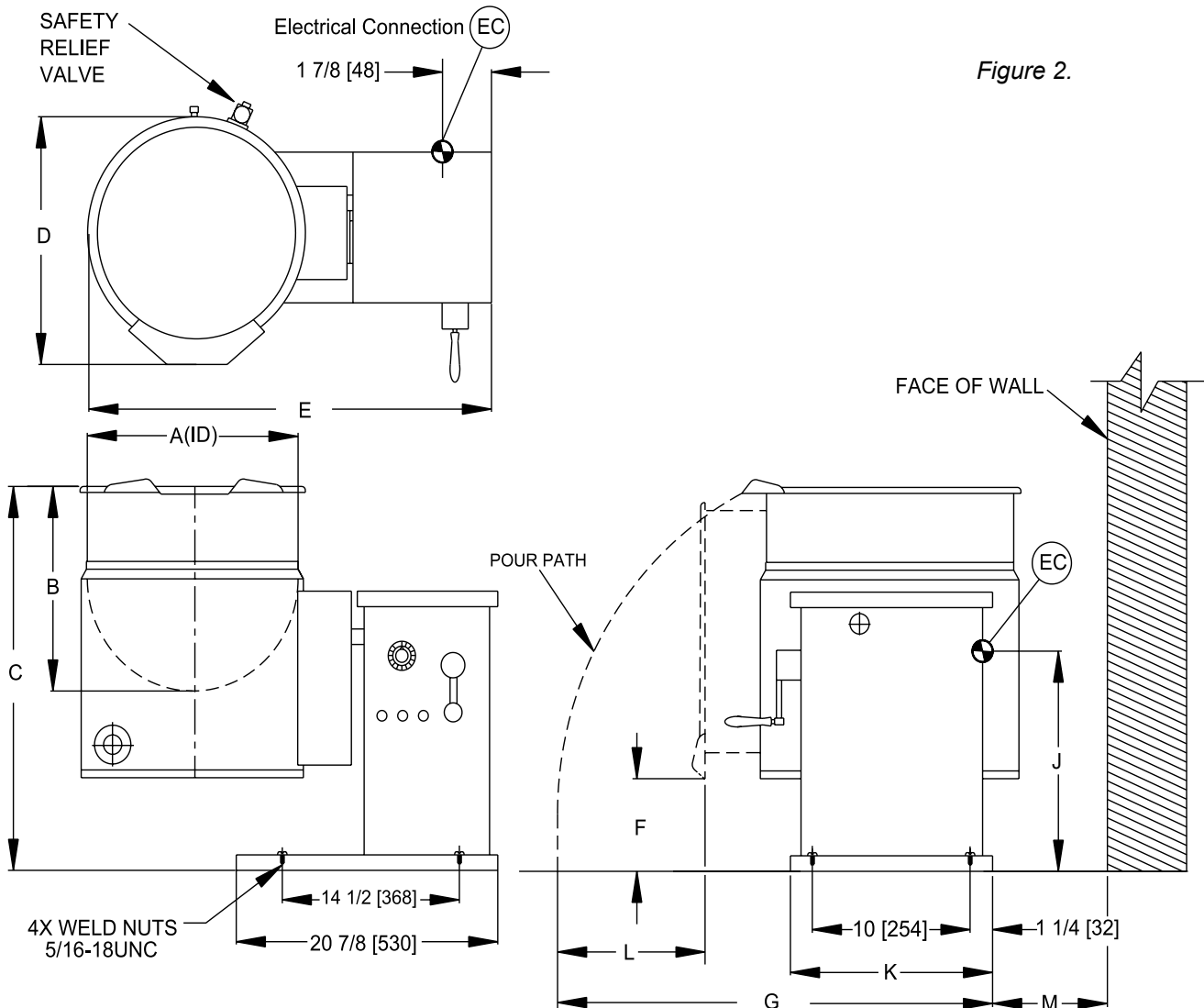
# INSTALLATION

## ELECTRICAL CHARACTERISTICS

MODEL	pH	208V		230V		240V		380V		415V		480V	
		kW	Amp	kW	Amp	kW	Amp	kW	Amp	kW	Amp	kW	Amp
FCT-4CE	1	7.5	36	7.5	32.6	7.5	31.3						
	3	7.5	20.8	7.5	18.8	7.5	18.1	7.5	11.4	7.5	10.4	7.5	9
FCT-6CE	1	7.5	36	7.5	32.6	7.5	31.3						
	3	7.5	20.8	7.5	18.8	7.5	18.1	7.5	11.4	7.5	10.4	7.5	9
FCT-10CE	1	12	57.6	12	52.2	12	50						
	3	12	33.3	12	30.2	12	28.9	12	18.3	12	16.7	12	14.5
FCT-12CE	1	12	57.6	12	52.2	12	50						
	3	12	33.3	12	30.2	12	28.9	12	18.3	12	16.7	12	14.5

## CAPACITY

MODEL	CAPACITY		A	B	C	D	E	F	G	H	J	K	L	M
FCT-4CE	4 Gal.	in	12	--	--	15	25	4	28	6 1/8	13	12 3/4	10	6 1/8
	16 Liters	mm	305			387	638	102	711	156	330	324	254	156
FCT-6CE	6 Gal.	in	12	14	25	15	25	4	28	6 1/8	13	12 3/4	10	6 1/8
	23 Liters	mm	305	356	638	387	638	102	711	156	330	324	254	156
FCT-10CE	10 Gal.	in	16	15	25.5	19	28 7/8	4	28	6 1/8	13	12 3/4	12 3/4	6 1/8
	38 Liters	mm	406	381	648	486	734	102	711	156	330	324	324	156
FCT-12CE	12 Gal.	in	16	17	27.5	19	28 7/8	4	30	6 1/8	13	12 3/4	12 3/4	6 1/8
	45 Liters	mm	406	432	699	486	734	102	762	156	330	324	324	156



# OPERATION

## COOKING:

1. Ensure that the external electrical shut-off to kettle is on.
2. Check pressure gauge for correct cold kettle reading. Reading should be 25-30 In.Hg of vacuum. If reading is not low enough, follow VENTING procedure prior to using kettle.
3. Place power switch in ON position.
4. Preheat kettle by placing thermostat knob at '10' and wait until TEMPERATURE light goes off.  
**NOTE:** Preheating should not be used when cooking milk and egg food products which adhere to hot cooking surfaces. These foods should be placed into kettle before heating is begun.
5. Add food to be cooked into kettle.
6. Place thermostat knob at required temperature setting from '1' to '10' coinciding with a temperature range from roughly 90°F to 300°F (32°C to 149°C) in the reservoir. Approximate cooking temperatures with water at various thermostat settings are as follows:

THERMOSTAT SETTING	APPROXIMATE	TEMPERATURE
	°F	(WATER) °C
4	90°	32°
5	125°	52°
6	160°	71°
7	195°	91°
8	231°	110°
9	273°	134°
10	300°	149°

7. When cooking is finished, set thermostat knob and power switch to OFF position.
8. Pour finished product from kettle using tilt handle. Be careful to avoid splashing.
9. Add water to kettle for cleaning purposes.
10. Wash kettle thoroughly. See CLEANING procedure.

1.	Hand Crank
2.	Power Switch
3.	Low Water Indicator Light
4.	Temperature (Heat Indicator) Light
5.	Temperature Control Thermostat
6.	Vacuum/Pressure Gauge

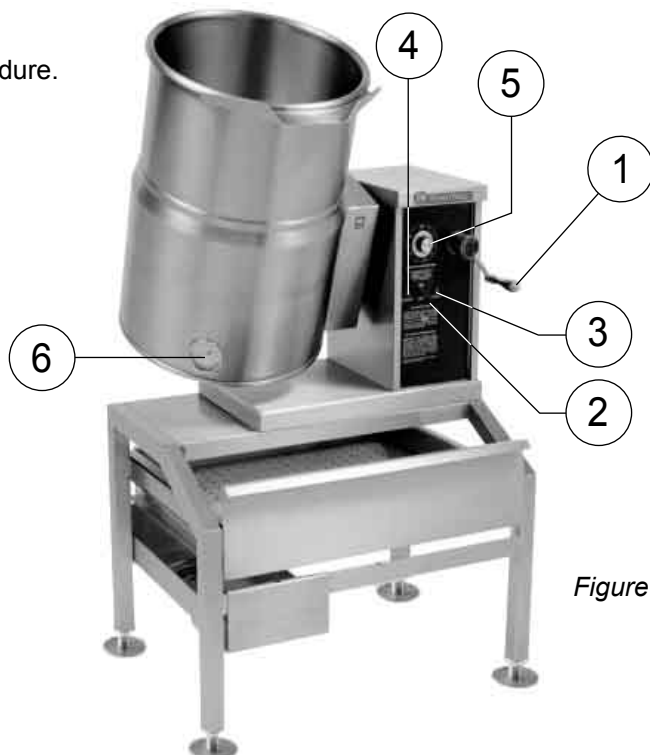


Figure 3.

# MAINTENANCE

## CLEANING:

The kettle interior and exterior should be thoroughly washed after each use in preparation of a different food.

1. Add water and mild detergent to the kettle immediately after use.
2. Scrub kettle interior with a nylon brush.  
**NOTE:** *Never scrape the inside of kettle with metal tools, steel scouring pads, or abrasive cleaners. Scratches will result which will spoil the kettle's general appearance and make it harder to clean and maintain in a sanitary condition.*
3. Loosen food which is stuck to kettle by allowing it to soak at a low temperature setting.
4. Rinse with clear water and dry.  
**WARNING:** Do not hose down unit under any condition. Failure to comply will void warranty.
5. Wipe down exterior, rinse and dry.

## VENTING:

Check vacuum/pressure gauge when kettle is cold. Gauge should be in the vacuum zone between 25-30 In. Hg. If not, air is present which must be vented (removed) for proper heating. Use the following procedures to vent air.

1. Place power switch in ON position; kettle empty.
2. Set temperature control thermostat to '10'. Heat kettle until heat indicator light goes off.
3. Using a 7/16" wrench, open bleed vent one full turn for 10 seconds and close.
4. Cool kettle. Check for proper vacuum of 25-30 In. Hg. If reading is not low enough, repeat entire procedure, steps 1-3.

## FILLING-JACKET RESERVOIR:

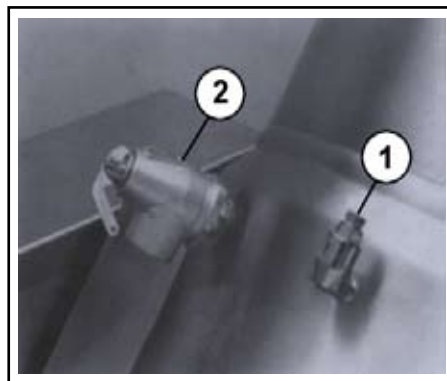
The reservoir water level must be maintained at or above the minimum needed to submerge the heating elements. If the low water light turns on during use, the water level is not adequate and the low water protection control has automatically shut off the heating elements. **CAUTION:** Before adding water to the reservoir, water supply should be analyzed to ensure that hardness is no greater than 2.0- grains per gallon and pH level is within the range of 7.0-8.5. Water which fails to meet these standards should be treated, or ionized distilled water with sodium used. EQUIPMENT FAILURE CAUSED BY INADEQUATE WATER QUALITY IS NOT COVERED UNDER WARRANTY.

Use the following procedure to fill reservoir. Check vacuum/pressure gauge to ensure that there is no pressure in kettle when adding water.

1. Turn thermostat and power switch to OFF position.
2. Remove 7/16" vent fitting from bleed vent on back of kettle. Insert a funnel into vent opening and add prescribed volume of water. For 6 gallon models, add 50 ounces (1.5 liters). For 10 and 12 gallon models, add 100 ounces (3 liters).
3. Replace and tighten vent fitting.
4. With kettle in upright position, the low water light should be off at this time. If so, follow venting procedure to vent air from reservoir Venting. If low water light is not off, repeat Filling Jacket Reservoir.

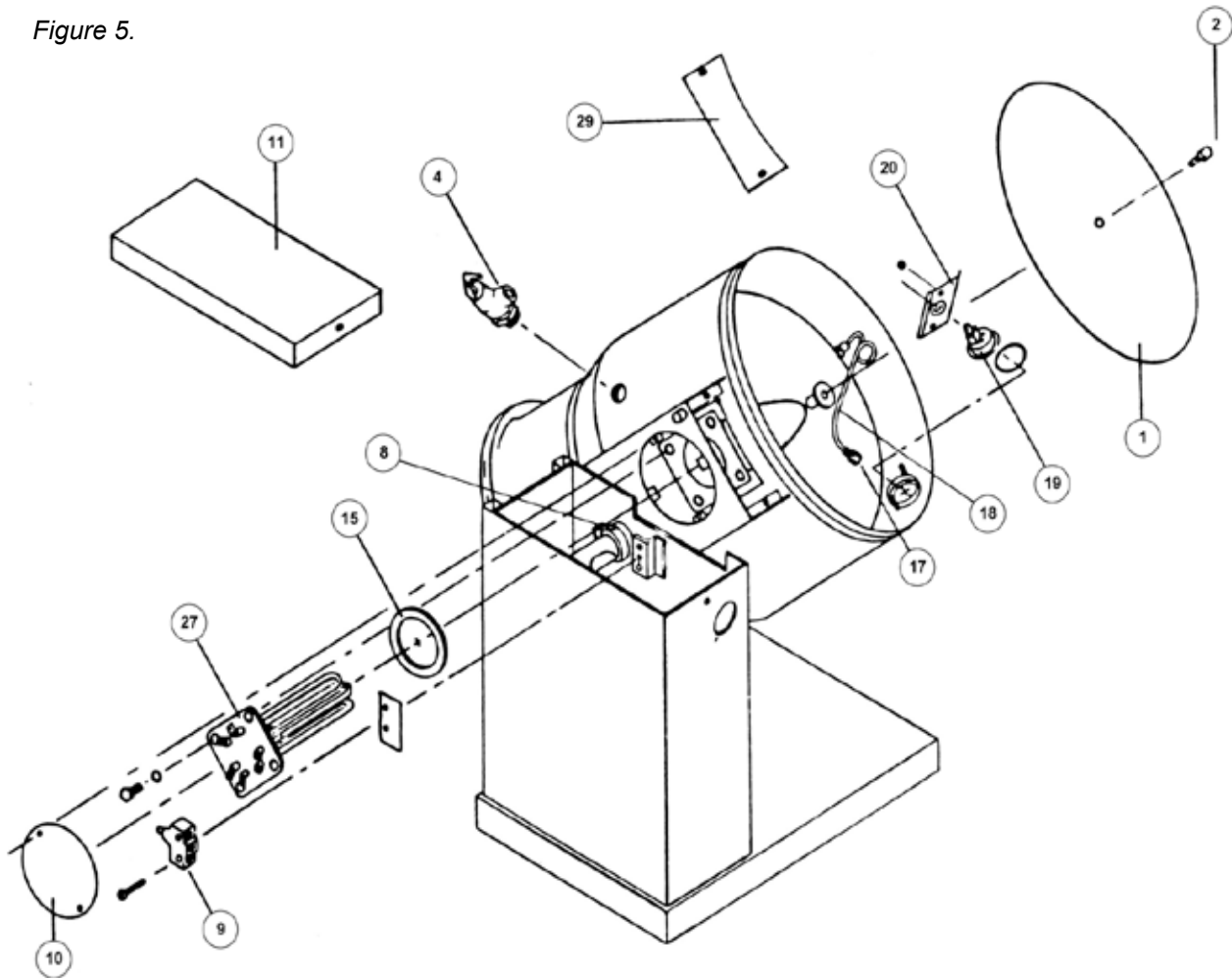
1.	Bleed Vent
2.	Pressure Relief Valve

Figure 4.



# ILLUSTRATED PARTS

Figure 5.



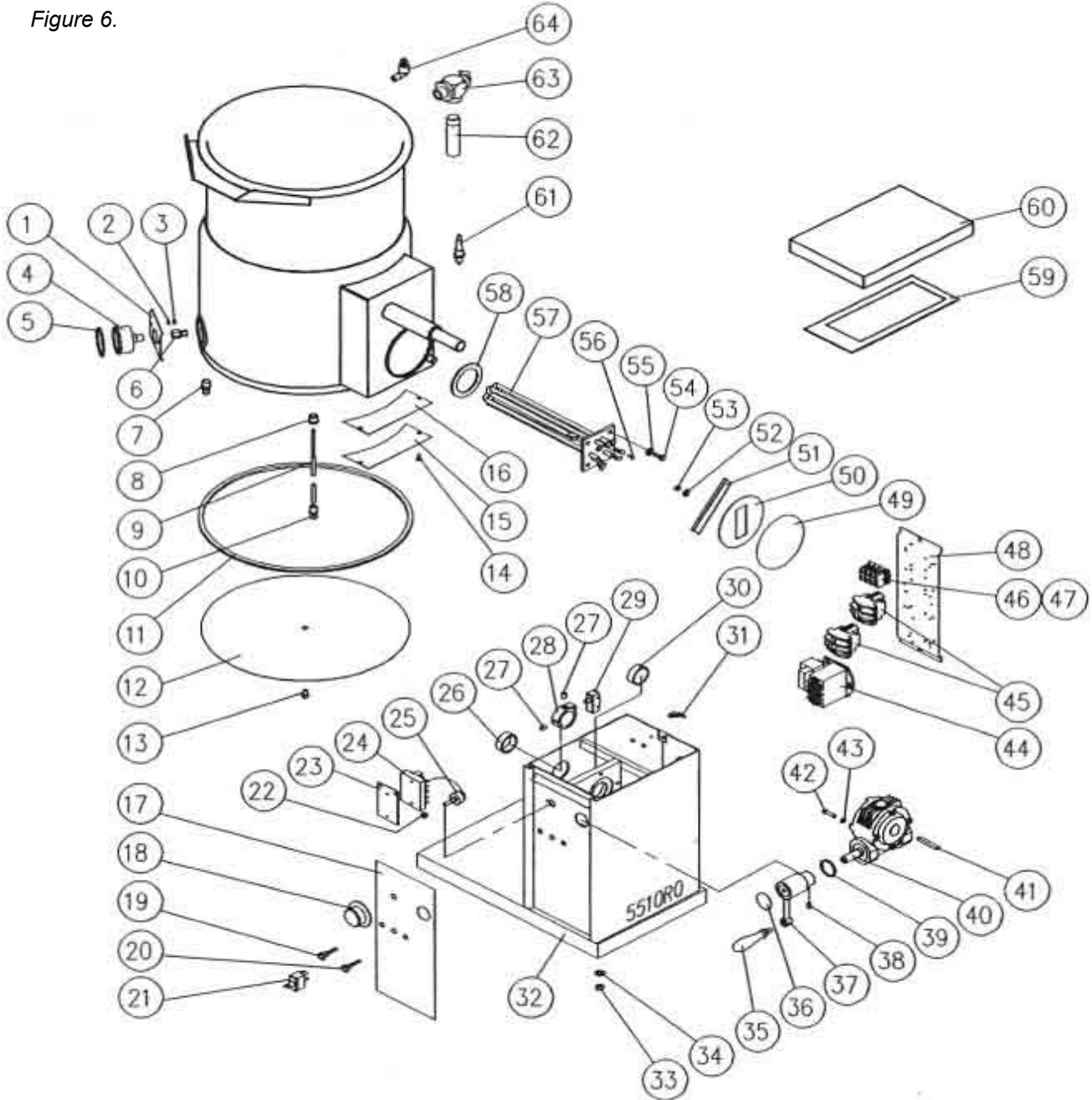
ITEM	PART NO.	DESCRIPTION
1	97-5004	Cover, Kettle Enclosure FCT-6CE
	97-5006	Cover, Kettle, Enclosure FCT-10CE & -12CE
2	97-5005	Bolt, Enclosure Cover
3	97-5010	Air Vent 7/16", Assy.
4	97-5009	Valve, Relief, Safely (50 PSI)
5	97.5007	Handle, Tilt, FCT-6CE, -10CE & -12CE
6	97-5008	Knob, Handle, Tilt
7	97-5011	Switch, Power
8	97-5026	Collar, Retaining
9	08-6362	Switch, Interlock
10	97-5144	Cover, Access, Element
11	97-5003	Cover, Box, Control
12	10-7934	Liquid Level Control
13	20-0043	Contactora
14	10-5069	Section, Terminal Block

# ILLUSTRATED PARTS

	<a href="#">10-5070</a>	End, Terminal Block
15	<a href="#">97-5024</a>	Gasket FCT-6CE, Element
	<a href="#">97-5025</a>	Gasket FCT-10CE & -12CE, Element
16	<a href="#">10-7935</a>	Probe
17	<a href="#">10-3425</a>	Connector 1/4 x 1/4
18	<a href="#">97-5145</a>	Tube, Copper, FCT-6CE
19	<a href="#">97-5146</a>	Tube, Copper, FCT-10CE & -12CE
20	<a href="#">97-5002</a>	Gauge, Pressure
21	<a href="#">97-5147</a>	Plate, Mounting
22	<a href="#">10-6307</a>	Knob Thermostat
23	<a href="#">09-6493</a>	Controller, Temperature (thermostat)
24	<a href="#">97-0572</a>	Potentiometer, Remote
25	<a href="#">09-6474</a>	Sensor, temperature
26	<a href="#">20-0007</a>	Light. Low Water
27	<a href="#">20-0007</a>	Light, Temperature
	—	Elements Heating FCT-6CE
	<a href="#">97-5015</a>	208V,7.5KW
	<a href="#">97-5016</a>	220V or 380V 7.5KW
	<a href="#">97-5017</a>	240V or 415V 7.5KW
	<a href="#">97-5018</a>	480V 7.5KW
	—	Elements Heating FCT-10CE & -12CE
	<a href="#">97-5019</a>	208V 12KW
	<a href="#">97-5021</a>	240V, or 415V 12KW
	<a href="#">97-5020</a>	220V/380V 12KW
	<a href="#">97-5022</a>	480V 12KW
28	<a href="#">97-5150</a>	Panel, Control
29	<a href="#">97-5149</a>	Cover, Box, Trunnion FCT-10CE & -12CE
	<a href="#">97-5148</a>	Cover, Box, Trunnion FCT -6CE
30	<a href="#">10-5562</a>	Logo, Casting. M.F

# ILLUSTRATED PARTS

Figure 6.



# ILLUSTRATED PARTS

FCT-4, -6CE

FCT-10, -12CE

ITEM	PART NO.	REF NO.	DESCRIPTION	QTY.	QTY.
1	97-6499	3407-1	Pressure Gauge Plate	1	1
2	—	FOIX-10	Washer #10	2	2
3	—	9029-32	Hex Nut 10-32	2	2
4	<a href="#">97-5002</a>	3-PG00	Pressure Gauge	1	1
5	<a href="#">97-5620</a>	2-230R	“O” Ring	1	1
6	<a href="#">97-5046</a>	3-664B	Connetor - female	1	1
7	<a href="#">97-5000</a>	3-684C	Connector - male	1	1
8	<a href="#">97-6500</a>	3-110CB	Reducer Bushing 3/8 x 1/4	1	1
9	<a href="#">97-5618</a>	4-TP12	Temperature Probe	1	1
10	97-6501	3-6863B	Connector - male	1	1
11	<a href="#">97-6502</a>	4618-1	Bottom Cover Gasket	1	
	<a href="#">97-6503</a>	4618-2	Bottom Cover Gasket		1
12	<a href="#">97-6504</a>	3403-1	Bottom Cover	1	
	<a href="#">97-6505</a>	3440-1	Bottom Cover		1
13	—	M50S51618-12	Hex Screw 5/16-18 x 1/2	1	1
14	—	M33S1032-12	Machine Screw 10-32 x 1/2	2	2
15	97-6506	3400-1	Trunnion Box Cover	1	
	97-6507	3438-1	Trunnion Box Cover		1
16	97-6508	4922-1	Trunnion Box Cover	1	
	97-6509	4922-2	Trunnion Box Cover		1
17	97-6510	1364-1	Console Decal	1	
	97-6511	1354-1	Console Decal		1
18	<a href="#">97-5013</a>	4-TD02	Dial	1	1
19	<a href="#">98-6162</a>	4661-4	Temperature Pilot - Red	1	1
20	<a href="#">97-6512</a>	4661-5	Temperature Pilot - Amber	1	1
21	<a href="#">97-6513</a>	9110-1	Power Switch	1	1
22	<a href="#">98-6047</a>	9109-1	Rotary Shaft Seal	1	1
23	97-6515	4620-1	Mounting Plate	1	1
24	<a href="#">97-5047</a>	4-TH19	Temperature Control	1	1
25	<a href="#">97-5617</a>	5517-1	Potentiometer complete with wires & hardware	1	1
26	97-6516	5333-1	Bearing L.H.	1	1
27	97-6517	9061-5	Set Screw 3/8-16 x 1/2	2	2
28	<a href="#">97-6518</a>	3546-1	Actuator	1	1
29	<a href="#">97-5414</a>	4-M605	Interlock Siwtch	1	1
30	97-6519	5333-3	Bearing R.H.	1	1
31	<a href="#">97-5052</a>	4-70EU	Ground Lug	1	1
	97-6320	9-3104	Earth ID Tag	1	1
32	97-6520	1356-1	Base	1	1
33	—	9029-3	Hex Nut 3/8-16 NC	6	6
34	—	FOIX-38	Washer 3/8”	6	6

# ILLUSTRATED PARTS

FCT-4, -6CE

FCT-10, -12CE

35	<a href="#">97-5577</a>	8-2054-1	Tilt Handle	1	1
36	<a href="#">97-6521</a>	5341-1	Direction Label	1	1
37	<a href="#">97-6522</a>	6745-1	Tilt Arm	1	1
38	—	9061-8	Set Screw 1/4-28 x 1/4	1	1
39	<a href="#">97-6523</a>	5335-1	“O” Ring	1	1
40	<a href="#">97-6524</a>	6743-1	Gear Box	1	1
41	97-6525	5337-1	Key	1	1
42	97-6526	5338-1	Socket Hd. Screw M6 x 2.5mm	4	4
43	—	9122-1	Washer M6	4	4
44	<a href="#">97-6527</a>	4-LLC1	Liquid Level Control	1	1
45	<a href="#">97-5609</a>	4-NG41	Contactora 208/240V	2	2
	<a href="#">97-5609</a>	4-NG41	Contactora 380, 415, 480V	1	1
46	<a href="#">10-6963</a>	4-22TB	Terminal Block	3	3
47	98-6186	4-22ES	End Section	1	1
48	97-5657	9-3237	Component Mounting Plate	1	1
49	97-6528	6570-1	Element Access Cover	1	1
50	<a href="#">97-6529</a>	4605-1	Element Access Cover Gasket	1	1
51	97-6530	4983-1	Element Access Brace	1	1
52	—	IOXI-14	Internal Tooth Washer 1/4”	1	1
53	—	9029-1	Hex Nut 1/4-20	1	1
54	—	M50S51618-34	Hex Screw 5-16-18 x 3/4	4	4
55	—	SOIS-516	Lock Washer 5/16	4	4
56	—	M93BRC1032-38	Screw 10-32 x 3/8 Brass NI Plated	6	6
57	<a href="#">97-5015</a>	7-5015	Element Assy., 208V, 7.5 kW	1	
	<a href="#">97-5017</a>	7-5017	Element Assy., 240/416V, 7.5 kW	1	
	<a href="#">97-5016</a>	7-5016	Element Assy., 220/380V, 7.5 kW	1	
	<a href="#">97-5018</a>	7-5018	Element Assy., 480V, 7.5 kW	1	
	<a href="#">97-5019</a>	7-5019	Element Assy., 208V, 12 kW		1
	<a href="#">97-5020</a>	7-5020	Element Assy., 220/380V, 12 kW		1
	<a href="#">97-5021</a>	7-5021	Element Assy., 240/416V, 12 kW		1
	<a href="#">97-5022</a>	7-5022	Element Assy., 480V, 12 kW		1