FT SERIES

DIRECT CONNECTED STEAM KETTLE

INSTALLATION - OPERATION - MAINTENANCE

MODELS

- ❑ FT-6
- ❑ FT-10
- ❑ FT-12
- ❑ FT-20

MARKET FORGE

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PN 14-0337 Rev C (3/17)

Your Service Agency's Address:

Model

Serial number

Oven installed by

Installation checked by

IMPORTANT

WARNING: Improper installation, adjustment, alternation, service or maintenance can cause property damage, injury or death. Read the installation, operation and maintenance instructions thoroughly before installing or servicing this equipment.

FOR YOUR SAFETY

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

The information contained in this manual is important for the proper installation, use, and maintenance of this oven. Adherence to these procedures and instructions will result in satisfactory baking results and long, trouble free service. Please read this manual carefully and retain it for future reference.

ERRORS: Descriptive, typographic or pictorial errors are subject to correction. Specifications are subject to change without notice.

TABLE OF CONTENTS

Introduction

GENERAL:

All direct connected steam jacketed kettles pertaining to this manual are direct steam operated pressure vessels of a double-wall stainless steel construction forming a steam chamber (jacket) enveloping the lower two thirds of the kettle bowl surface. All kettles are tilting and countertop mounted in fixed positions on legs.

Available models include:

- **FT-6**, 6-Gallon (23 liters)
- **FT-10**, 10-Gallon (38 liters)
- **FT-12**, 12-Gallon (46 liters)
- **FT-20**, 20-Gallon (76 liters)

DESCRIPTION:

Kettle will be constructed of welded satin finish, stainless steel type 304. A double wall kettle interior will form a steam jacket around the lower 2/3 of the kettle. Kettle bottom will be of elliptical design for improved heat circulation.

Type 316 stainless steel liner for high acid content products. Tubular stainless steel mounting frame will have steam supply and condensate return pipes completely concealed within frame members.

Sealed stainless steel tilt mechanism bearings will permit the kettle to tilt forward 90o for complete emptying. A removable operating handle with heat-proof knob can be mounted on the left or right side of each kettle. Kettle will be built to A.S.M,E. code and will be N.S.F. approved.

OPERATION WILL BE BY:

Direct steam at a minimum of 5 PSI (0.4 kg/cm2) and a maximum of 50 PSI (3.4 kg/cm2).

FUNCTIONING MODE:

Direct connected steam jacketed kettles consist of a stainless steel bowl and a stainless steel jacket which envelopes two thirds of the lower surface of the bowl thus forming a sealed pressure vessel (chamber) into which steam is introduced by means of a manual control valve located in the right leg.

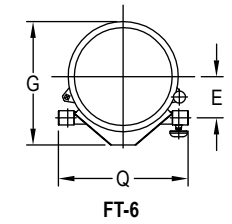
The kettle bowl is the container for the food product which ideally should be of a liquid or semiliquid consistency to achieve complete contact with the bowl surface and thus fully absorb the heat transmitted through that surface.

The temperatures required for the cooking process to function adequately must be greater than the boiling point of the liquid food product, viz. water. Further, the greater the steam pressure used, the higher the temperature and consequently the quicker the cooking process. For example, steam pressurized at 30 psi attains a temperature of 274°F (135°C).

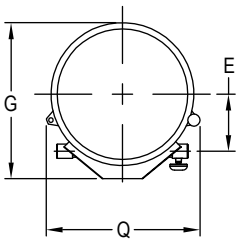
In the initial stages of the cooking process when the steam comes in contact with the cold kettle bowl surface it condenses and forms considerable amounts of water. A thermostatic steam trap should be plumbed to the exit end of the kettle jacket. This trap is a mechanical device that closes on high temperatures and opens when the temperature drops thus allowing the water formed from condensate to exhaust but retain steam under pressure.

DIMENSIONS

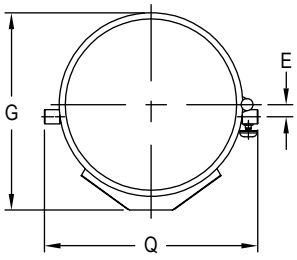
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q
FT-6	12 [305]	14.5 [368]	19.5 [495]	349 [349]	5 [127]	7.5 [191]	15.12 [384]	8.5 [216]	12.25 [311]	10.38 [264]	30.25 [768]	4 [102]	4.38 [111]	34.12 [867]	0 [0]	16 [406]
FT-10	16 [406]	15 [381]	18.5 [470]	13.75 [349]	7 [178]	7.75 [197]	19.12 [486]	9 [229]	13.25 [413]	8.88 [225]	32.25 [819]	2.38 [60]	4.88 [124]	33.12 [841]	0 [0]	19.25 [489]
FT-12	16 [406]	17 [432]	20.5 [521]	13.75 [349]	7 [178]	7.75 [197]	19.12 [486]	9 [229]	16.25 [413]	10.88 [276]	39.5 [1003]	2.38 [60]	4.88 [124]	35.12 [892]	0 [0]	19.25 [489]
FT-20	21 [533]	18 [457]	26.5 [673]	23.5 [597]	1.5 [38]	6.25 [159]	24.12 [613]	15.25 [387]	15.75 [400]	10.5 [267]	40.5 [1029]	7.5 [191]	11.12 [283]	42.38 [1076]	1.5 [38]	26 [660]



FT-6



FT-10 & FT-12

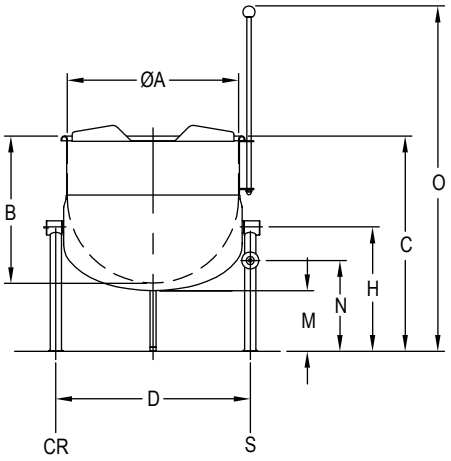


FT-20

SERVICE CONNECTIONS

S	**Steam Supply** - 1/2" (13mm) IPS, 15-50 PSI (1.0-3.5 kg/cm2). Pressure reducing valve is required if incoming pressure exceeds 50 PSI (3.5 kg/cm2)
CR	**Condensate Return** - 1/2" (13mm) IPS.

Installation Clearance: When installing kettles against combustible/non-combustible surfaces (rear walls) 1" (25mm) minimum clearance is required and (side walls) 3" (76mm) minimum clearance is required.



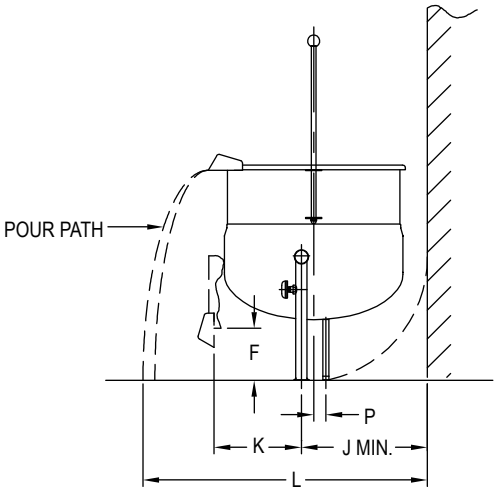


Figure 1

Installation Instructions

1. These kettles must be installed on a suitable table or counter top.
2. On counter top make the following holes. Provide sufficient space from rear wall to allow for tilting of kettle.
   a. 7/8” holes at 13 - 3/4” center for kettle legs on models FT-6, FT-10, and FT-12
   b. 23-1/2” center on model FT-20.
3. From bottom of leg remove mounting lockouts and washers. Apply Silastic to flared edge of leg. Insert threaded portion of legs through holes. Replace washers and locknuts and tighten. Wipe off excess sealant.
4. Install a safety relief valve in the steam line set at the maximum operating pressure of the kettle. Note that one valve will handle a series of kettles.
5. Connect steam supply line (1/2” pipe size) to steam inlet fitting on right leg.
6. Install a steam shutoff valve in steam supply line, preferably near the kettle for convenience.
7. A pressure reducing valve will be required if the steam supply pressure is greater than the maximum kettle working pressure.
8. If large amounts of water are in the steam line it will be necessary to install one or more ball float traps in the line to eliminate the water.
9. A steam line pressure gauge is also recommended to determine the actual amount of steam coming to the kettle.
10. Install a suitable steam trap in condensate line (left leg) near the kettle and run condensate return line to drain. If the condensate return line will be directed to the boiler, then it must have a check valve and gate shutoff valve near the kettle.

WARNING

The kettle and its parts are hot. Use care when operating, cleaning and servicing the appliance.

OPERATION

1. Fill kettle with product to desired level.
2. Slowly turn the steam control valve ON to full open position.
3. The water or food should boil 3 - 4 minutes per gallon. If it does not, then incoming pressure should be checked to determine that it is adequate to operate the kettle efficiently.
4. Regulate steam control valve depending on type of food being prepared.
5. When food is cooked, turn off steam, remove food and clean kettle immediately to prevent residue from drying on kettle bowl surface.

CLEANING

1. Your kettle should be cleaned immediately after each use.
2. Ensure that steam supply is OFF.
3. Pre-rinse inside of kettle thoroughly and tilt to remove any food particles.
4. Using a nylon brush, clean kettle with a mild detergent and warm water rinse. Never use steel wool or scouring powder as it will scratch stainless steel.
5. Tilt kettle and rinse thoroughly draining out detergent solution.

WARNING

Do not use cleaning agents that are corrosive.

Use of cleaning agents that contain chloride, acids or salts are corrosive and may cause pitting and corrosion when used over a period of time; this will reduce the life of the appliances. Should pitting or corrosion occur this is not covered by warranty.

Follow the recommended cleaning instructions. Use a mild detergent, warm water and rinse thoroughly.

PREVENTATIVE MAINTENANCE

No preventive maintenance is required other than adhering to the Cleaning Procedure instructions.

Safety Valve Maintenance and Testing

CAUTION

Under normal operating conditions a "try lever test" should be performed every two months. Under severe service conditions, or if corrosion and/or deposits are noticed within the valve body, testing must be performed more often. A "try lever test" should also be performed at the end of any non-service period.

CAUTION

Hot, high pressure fluid may be discharged from body drain and vent during "try lever" test. Care must be taken to avoid any bodily contact.

CAUTION

High sound levels may be experienced during "try lever" test. Wear proper safety equipment and exercise extreme care! Test at, or near, half of the operating pressure by holding the test lever fully open for at least two seconds to flush the valve seat free of sediment and debris. Then release lever and permit the valve to snap shut.

If lift lever does not activate, or there is no evidence of discharge, turn off equipment immediately and contact a licensed contractor or qualified service personnel.