

OWNER'S MANUAL

Heavy Duty Gas Tube Fryer

Model: DFFG-50



INSTALLATION, OPERATION, MAINTENANCE, SERVICE & PARTS LIST

FOR YOUR SAFETY:

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

CAUTION:

INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS SHALL BE POSTED IN A PROMINENT LOCATION. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING THE LOCAL GAS SUPPLIER.

WARNING:

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THESE INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

IMPORTANT:

MUST ORDER REINFORCEMENT CHANNELS IF MOUNTING TO OVEN OR RANGE.



MARKET FORGE
INDUSTRIES INC.

An Employee Owned Company

"The Premier Steam Cooking Equipment Manufacturer"

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INTRODUCTION

Installation of the equipment should be performed by qualified, certified and authorized personal who are familiar and experienced with local installation codes.

Before installation please red instructions completely and carefully.

Do not remove permanently affixed labels, warnings or plates from unit.

Important Information:

The installation must conform with local codes, or in the absence of local codes, to the national fuel gas code, ANSIZ223.1-1988 (or latest addenda), national gas installation code, CAN/CGA-B 149,1, or the propane installation code, CAN/CGA-B 149.2 as applicable.

The appliance and its individual shut off valve must be disconnected from the gas supply piping system during any pressure testing of that system in excess of 1/2 PSI.

The gas supply line must be at least the same size as the inlet of the appliance.

Shipping Damage Claim Procedure:

The equipment is crafted and inspected carefully by skilled personnel before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of this equipment. If shipment arrives damaged:

Visible loss or damage:

Note the damage or loss on freight bill or express delivery and signed by the person making the delivery.

File claim for damages immediately:

Regardless of the extent of damages.

Concealed loss or damage:

If damage is noticed after unpacking, notify the transportation company immediately and file a "Concealed Damage" claim with them. This should be done within fifteen (15) days from the date delivered. Retain container for inspection.

Service:

Installation & Service of the equipment should be performed by qualified, certified, licensed and/or authorized personnel who are familiar with and experienced in state/local installation codes.

Operation of the equipment should be performed by qualified and authorized personnel who have read this manual and are familiar with the functions of the equipment.

Air Supply and Ventilation:

For proper operation of the appliance, do not obstruct the flow of combustion and ventilation air.

The area in front of, around and above the appliance must be kept clear to avoid any obstruction of the flow of combustion and ventilation air. Adequate clearance must be maintained at all times in front and at the sides of the appliances for servicing and proper operation.

Means must be provided for any commercial, heavy-duty cooking appliance to exhaust combustion waste products to the outside of the building. Usual practice is to place the unit under an exhaust hood. Filters and drip troughs should be part of any industrial hood. Consult local codes before constructing and installing a hood.

Strong exhaust fans in this hood or in the overall air conditioning system can produce a slight vacuum in the room and/or cause air drafts, either of which can interfere with pilot or burner performance and can also be hard to diagnose. Air movement should be checked during installation; if pilot or burner outage problems persist, make-up air openings or baffles may have to be provided in the room.

Flex Coupling, Connectors and Casters:

If the unit is to be installed with casters, the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 or Connectors for Moveable Gas Appliances, CAN/CGA-6.16, and a quick-disconnect device that complies with the Standard or Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41, or Quick Disconnect Devices For Use with Gas Fuel CAN1-6.9. Locking front casters are provided to limit the movement of the appliances without depending on the connector or associated piping. A suitable strain relief must be installed with the flexible connector.

Restraining device may be attached to the back frame/panel of the unit.

All connections must be sealed with a joint compound suitable for LP gas and all connections must be tested with a soapy water solution before lighting pilots.

Disclaimer:

All MARKET FORGE INDUSTRIES, INC. appliances are adjusted and tested before leaving the factory, effectively matching them to sea level conditions. Adjustments and calibrations to assure proper operation may be necessary on installation to meet local conditions; low gas characteristics, to correct possible problems caused by rough handling or vibration during shipment, and are to be performed only by qualified service personnel. These adjustments are the responsibility of the customer and/or dealer and are not covered by our warranty.

INSTALLATION

READ BEFORE INSTALLING

Clearance:

When installing against combustible surfaces; rear, sides and floor - 6" (152mm) clearance is required. When installing ovens against non-combustible surfaces (*rear or side walls*) 0" clearance is required.

The area around the appliance must be kept free and clear of combustibles such as solvents, cleaning liquid, broom, rags, etc. Proper clearances must be provided at the front of the appliance for servicing and proper operation. Provisions shall be incorporated in the design of the kitchen, to ensure adequate supply of fresh air and adequate clearance for air openings into the combustion chamber, for proper combustion, and ventilation.

Rating Plate:

The rating plate is located inside the front panel of the fryer. Information on this plate includes the model, and serial number, BTU / hour input of the burners, operating gas pressure in inches WC, and whether the appliance is orificed for Natural or Propane gas.

UNIT MUST BE CONNECTED ONLY TO THE TYPE OF GAS IDENTIFIED ON THE RATING PLATE!

Gas Connection:

The gas supply (*service*) line must be the same size or greater than the inlet line of appliance. Oven uses a 3/4" NPT inlet. Sealant on all pipe joints must be resistive to LP gas. Specify type of gas and altitude if over 2,000 feet when ordering.

Manual Shut-Off Valve:

This installer-supplied valve must be installed in the gas service line ahead of the appliance and regulator in the gas stream and in a position accessible in the event of an emergency.

Pressure Regulator:

Gas pressure regulator provided with the equipment must be installed when the appliance is connected to gas supply.

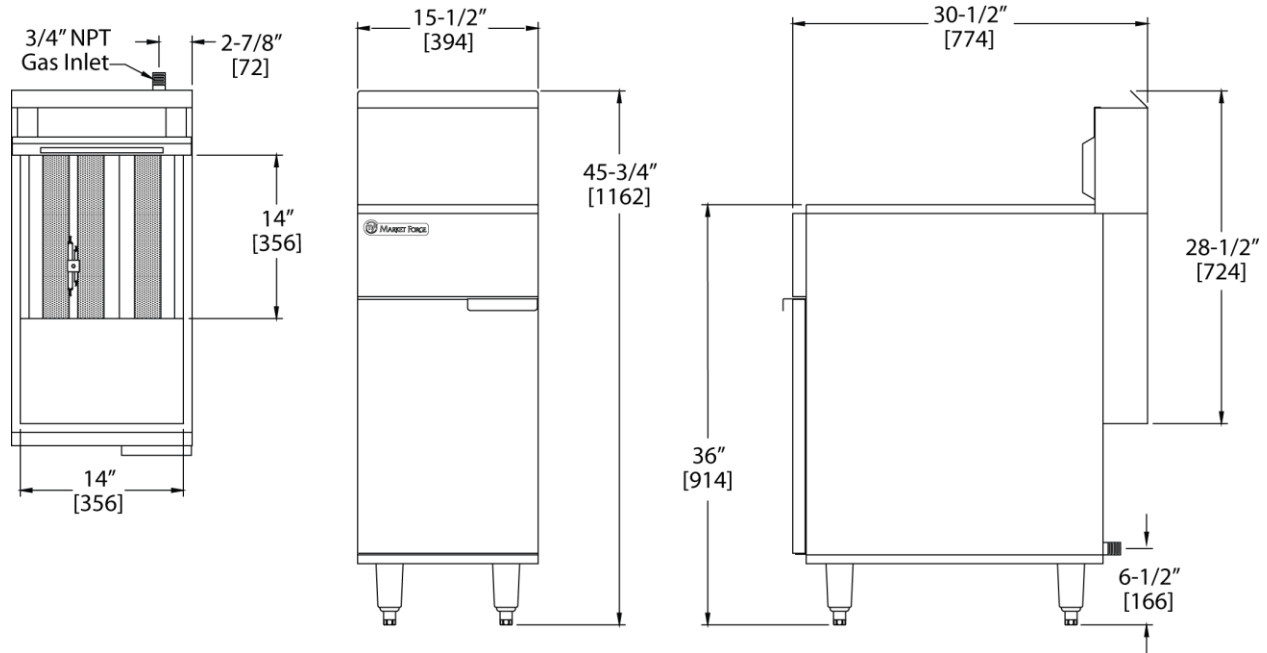
All commercial cooking equipment must have a pressure regulator on the incoming service line for safe and efficient operation, since service pressure may fluctuate with local demand. The pressure regulator comes with the oven. Failure to install the pressure regulator will void the equipment warranty!

The regulators supplied with MARKET FORGE INDUSTRIES, INC. Ovens, have 3/4" inlet /outlet openings and are adjusted at the factory for 5" WC (Natural gas) or 10" WC (Propane gas) depending on customer's ordering instructions.

Prior to connecting the regulator, check the incoming line pressure, as these regulators can only withstand a maximum pressure of ½ PSI (14"WC). If the line pressure is beyond this limit, a step-down regulator will be required. The arrow shown on the bottom of the regulator body shows gas flow direction; it should point downstream to the appliance. The red air vent cap on the top regulator is part of the regulator and should not be removed.

Any adjustments to regulators must be made only by qualified service personnel with the proper equipment.

Dimensions:



Connections:

Please check installer-supplied intake pipes visually and /or blow them out with compressed air to clear any dirt particles, threading chips, or other foreign matter before installing a service line. When gas pressure is applied these particles can clog orifices. All connections must be sealed with a joint compound suitable for LP gas, and all connections must be tested with a soapy water solution before lighting any pilots!

Specifications:

50 lb. Tube Fryer

MODEL	COOKING AREA	NO. OF BURNERS	TOTAL BTU	SHIP WEIGHT
DFFG-50	14" x 14" (356mm)	3 ¹	114,000	210 lbs.

¹ Infra-red burner rated at 38,000 BTU/hr each.

Crated Dimensions are 32-1/2" (826mm) Deep x 44" (1118mm) Tall x 18" (457mm) Wide

OPERATION

WARNING:

- ▶ Hot oil and hot surfaces can cause severe burns. Use caution when operating the fryer.
- ▶ Do not attempt to move the fryer filled with hot oil or shortening.
- ▶ Do not go near the area directly above the flue when fryer is in operation. Severe burns may be caused.
- ▶ Drain hot oil in metal contains, do not use plastic buckets or glass containers.

Before lighting, check all joints in the gas supply line for leaks.

DO NOT USE AN OPEN FLAME TO CHECK FOR LEAKS!

Putting an open flame beside a new gas connection is extremely dangerous.

DO NOT USE APPLIANCE DURING PROLONGED POWER FAILURE AS THE VENT HOOD MAY NOT BE IN OPERATION RESULTING IN INADEQUATE VENTING!

CAUTION: When lighting pilots and checking for leaks, do not stand with your face close to the combustion chamber.

Check all gas connections for leaks with a soapy water solution before lighting any pilots.

Preparation Before use:

New units have a coating of oil on the interior of the vessel. Remove this coating with hot soapy water, washing soda, or any other grease dissolving liquid. Rinse thoroughly and drain until all residues are removed. Wipe dry. Clean the baskets, crumb screen.

Before Turning the Burners On:

Fill the vessel with liquid shortening or oil up to the "oil level" marking. Cut solid shortening into small pieces and pack tightly. Turn the burner "ON" for 10 seconds and turn off for about a minute. Repeat this "ON-OFF". Cycle until all the shortening is melted. If scorching occurs, lower the "ON" time. Do not overfill the vessel.

LIGHTING INSTRUCTIONS:

1. Set the thermostat and the gas cock dial on the combination gas valve to the "OFF" position.
2. Wait for five minutes.
3. Turn gas cock dial on the combination gas valve to "Pilot" position.
4. Depress the gas cock dial and apply a lighted match or taper to the pilot.
5. Hold the gas cock dial depressed for about 30 seconds or until pilot stays lit before releasing.
6. If the pilot does not stay lit, repeat step 4 and 5.

Burners/Thermostat Operation:

1. After the pilot is lit, turn the gas cock, dial "ON" position.
2. Turn the thermostat dial to any temperature setting and observe the burners ignition. It should ignite within four seconds.

CAUTION:

**Main burners shall not be "ON" when the vessel is empty.
During testing, fill the vessel with liquid (*oil or water*)**

Pilot Operation:

Check and make sure the pilot is lit. If not, refer back to lighting instructions above.

Main Burner Operation:

After the vessel is filled with liquid shortening or oil, set the gas cock dial on the combination gas valve to the "ON" position.

DAILY SHUT DOWN:

At the end of the day, turn the gas cock dial on the combination gas valve and the thermostat to "OFF" position. Where applicable turn the power switch to "OFF" position Filter the oil in all fryers.

MAINTENANCE

If the appliance is on casters and is connected to the supply piping by means of a connector for movable appliances, there is a restraining device at the rear of the unit. If disconnection of the restraint is necessary, reconnect the restraint after the appliance has been returned to its originally installed position.

CAUTION: Never use Ammonia in an Oven that is warmer than room temperature and always have direct ventilation.

Cleaning:

For continued performance efficiency and longevity of your Fryer it is essential to carry out a good maintenance program.

Daily Cleaning:

1. Remove and wash thoroughly all "LOOSE" parts (Basket hangers, baskets, crumb screen, etc.).
2. Wipe clean all exterior and interior accessible surfaces and parts.
3. Filter the liquid oil/shortening at the end of the day, replace if necessary. If fryer is under heavy use, filter more often during the day.

Weekly Cleaning:

1. Shut down the fryer by turning off the gas cock dial and power supply, where applicable.
2. Drain the fryer in a filter pan or steel container. Flush out sediments at the bottom of the vessel with liquid oil.
3. Close the drain valve and fill the vessel with a mixture of boil-out solution and water.
4. Relight the pilot and turn on the burner.
5. When the solution starts to boil, turn off the thermostat and let the vessel soak to soften the deposit and/or carbon spots. (Approximately 1 hour).
6. Drain off solution, scrub the insides with a brush and rinse thoroughly.
7. Repeat the cleaning procedure, if necessary.
8. Wipe dry with soft towels and refills with clean oil/shortening.

WARNING:
ALL WATER MUST BE REMOVED BEFORE ADDING OIL OR SHORTENING. NOT DOING SO CAN RESULT IN SPLATTERING OF HOT OIL.

Cleaning Stainless Steel:

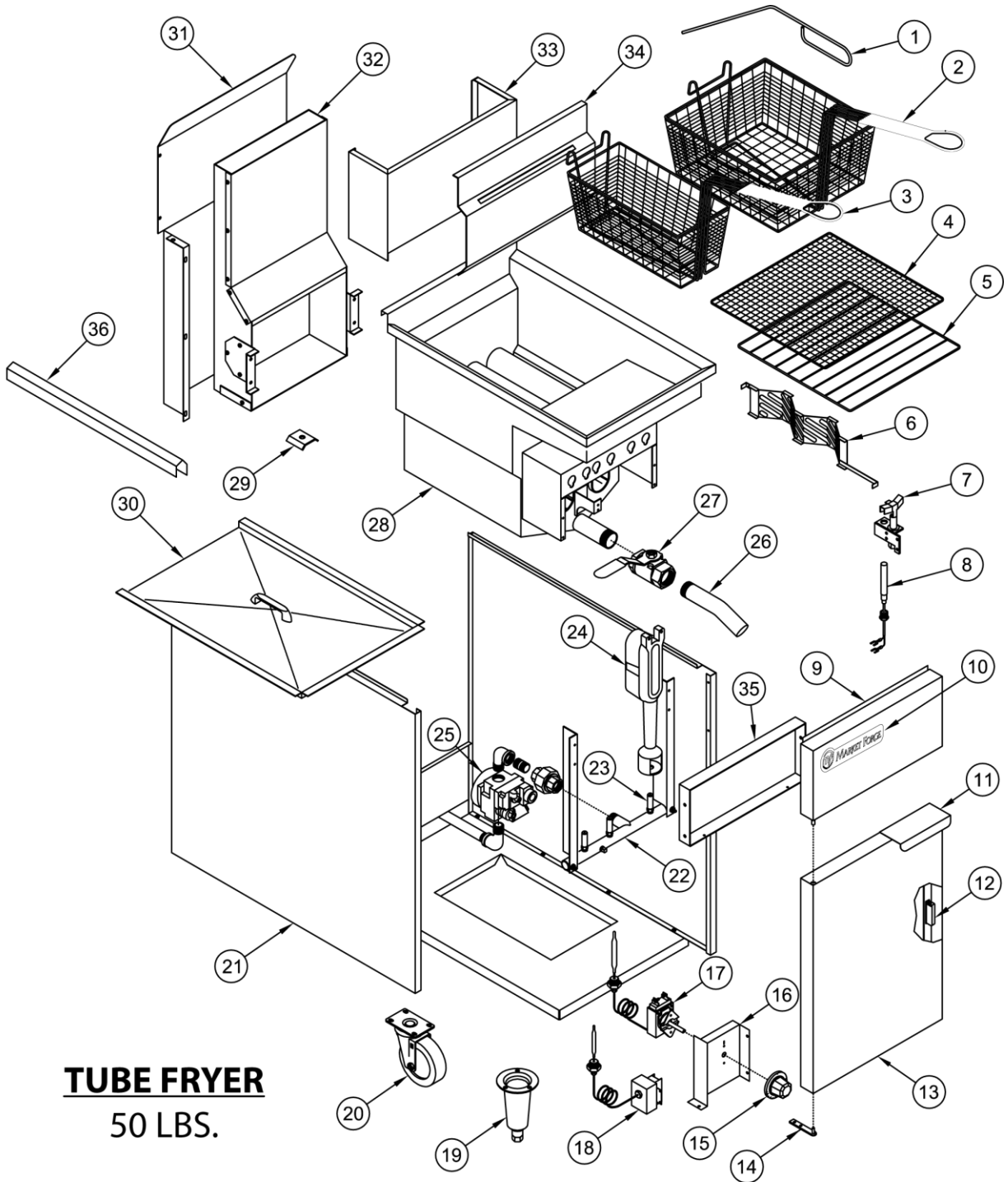
All stainless steel body parts should be wiped regularly with hot soapy water during the day and with a liquid cleaner designed for this material at the end of each day.

DO NOT USE steel wool, abrasive cloths, cleaners or powders to clean stainless surfaces! If it is necessary to scrape stainless steel to remove encrusted materials, soak in hot water to loosen the material; then use a wood or nylon scraper.

DO NOT USE a metal knife, spatula, or any other metal tool to scrape stainless steel. Scratches are almost impossible to remove.

ILLUSTRATED PARTS

Fryer Exploded View



TUBE FRYER
50 LBS.

PILOT	THERMOPILE	THERMOSTAT	HI LIMIT	ORIFICE HOOD
(7)	(8)	(17)	(18)	(23)

Fryer Parts List

ITEM NO.	PART NO.	DESCRIPTION
1	93-5300	Clean out rod (goofer rod)
2	93-5301	Mid-size Frying basket
	93-5302	Large Frying basket
3	93-5303	Small Frying basket
4	93-5304	Crumb screen -fine mesh (50 lbs. small)
5	93-5305	Crumb screen – regular (50 lbs. small)
6	93-5306	Diffuser assy. (50 & 60 lbs. small)
7	93-5307	Pilot burner w/bell orifice (natural gas)
	93-5308	Pilot burner w/bell orifice (propane gas)
	93-5309	Pilot bell orifice only (natural gas)
	93-5310	Pilot bell orifice only (propane gas)
8	93-5311	Thermopile
9	93-5312	Front panel 50 lbs
10	93-0194	Market Forge Name Plate
11	93-5313	Offset Pull Handle (chrome handle)
12	93-5314	Door magnet
13	93-5315	Door panel assembly 50 lbs
14	93-5316	Door hinge assy.
15	93-5317	Knob thermostat
16	93-5318	Bracket – thermostat/hi-limit
17	93-5319	Thermostat
18	93-5320	Hi-limit switch
19	93-5321	Chrome cone leg
20	93-5322	Caster 5" w/brake
	93-5323	Caster 5" without brake
21	93-5324	Side outer panel – Right side 50, 60 lbs
	93-5325	Side outer panel – Left side 50, 60 lbs
22	93-5326	Manifold pipe 50 lbs. (3 tube)
23	93-5327	Orifice hood #32 (brass) natural gas, 38,000BTU
	93-5328	Orifice hood #50 (brass) propane gas, 38,000BTU
24	93-5329	Burner (cast iron)
25	93-5330	Gas valve 3/4" natural gas
	93-5331	Gas valve 3/4" propane gas
26	93-5332	Drain extension pipe 1-1/4 NPT.
27	93-5333	Drain valve 1-1/4" NPT.
28	93-5334	Vessel assembly 50 lbs. (small)
29	93-5335	Probe holder
30	93-5336	Vessel tank cover 50 lbs. (small)
31	93-5337	Back panel cover 50 lbs. (3 tube)
32	93-5338	Flue box assy. 50 lbs. (3 tube)
33	93-5339	Vessel back panel 50 lbs. (3 tube)

ITEM NO.	PART NO.	DESCRIPTION
34	93-5340	Basket hanger 50 lbs. (3 tube)
35	93-5341	Front baffle 50 lbs. (3 tube)
36	93-5342	Joiner strip for 50