



Owners Manual & Instructions

OSF-02 Microprocessor 2.0 Automatic Donut Making Machine

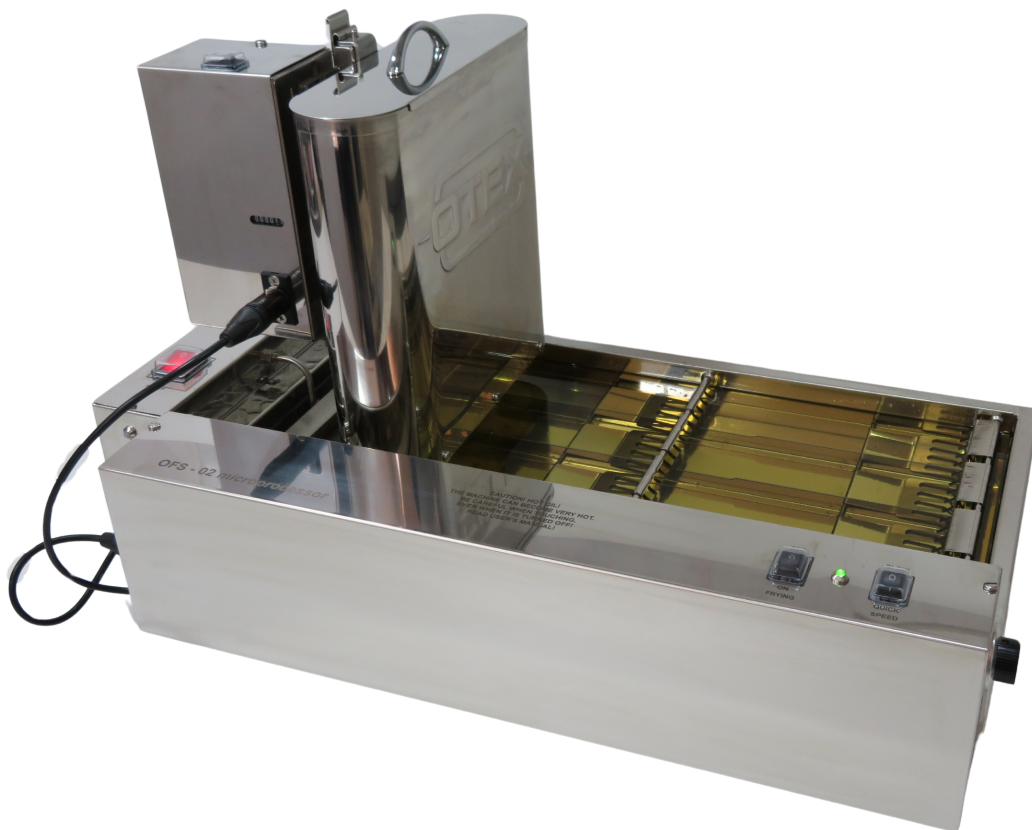


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PREPARING THE MACHINE

1. General Information about the OFS-01 Automatic Donut-Making Machine

We would like to thank you for choosing our product!

Although the machine incorporates some advanced technical solutions, its operating principles are quite simple. Read this manual carefully and follow all instructions.

1.1 Safety Instructions

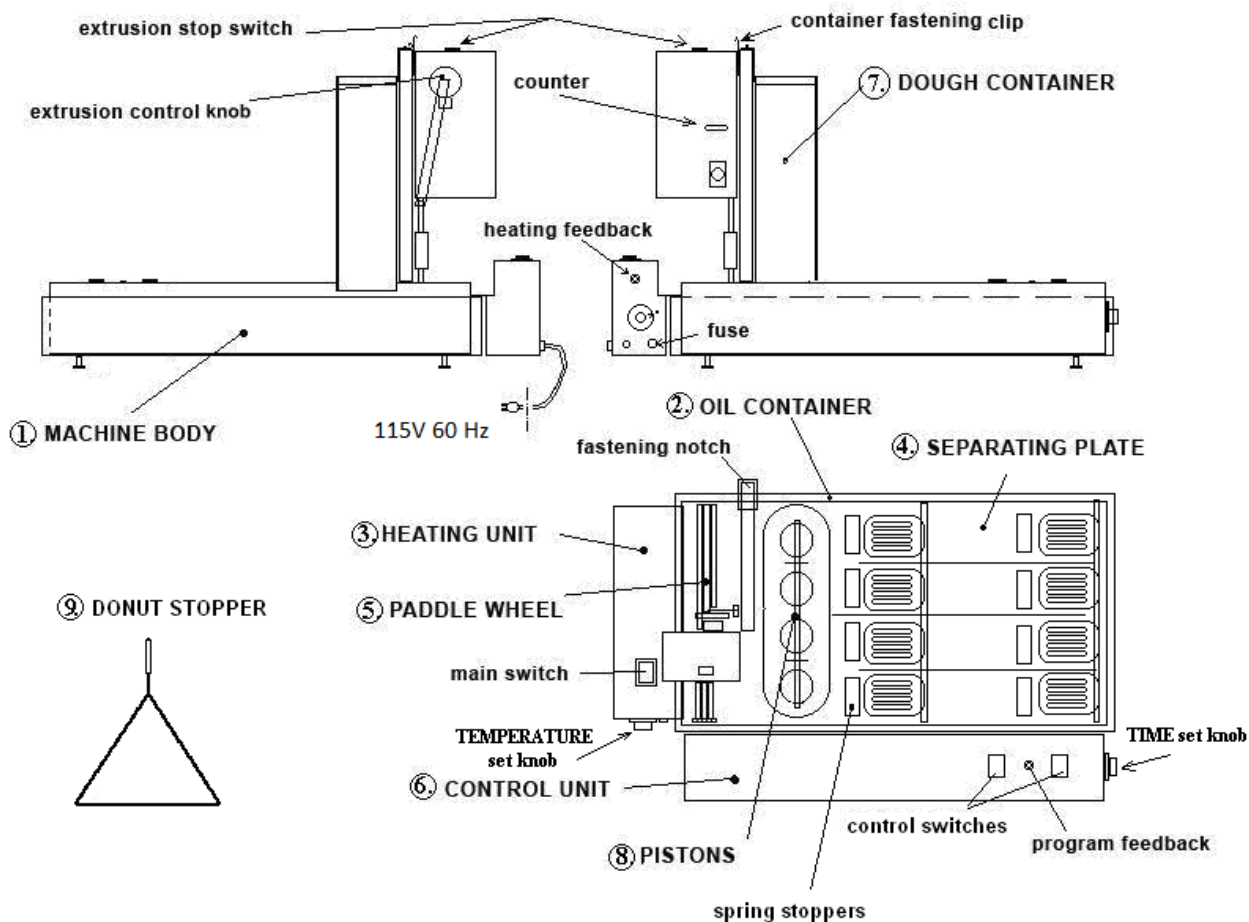
- Do not expose the machine to extreme temperatures (below 41 °F or above 95 °F) or humidity levels below 10% or above 95%.
- Ensure that no liquids come into contact with the electronic components of the machine. Do not allow the machine to come into contact with water while it is in operation or hot.
- If you notice any damage due to improper operation or shipping, do not plug in the machine. Contact the manufacturer immediately.
- Do not attempt to repair the machine yourself. Only the manufacturer's authorized service department is qualified to perform repairs.
- Tampering with the electronic components or making any mechanical modifications is strictly prohibited and will void the warranty on your machine.
- Do not operate the machine without oil. The heating element will burn out quickly and damage the machine.
- The machine must not be operated without supervision. It may only be used by persons aged 18 or older.

1.2 Safety Warnings

- Risk of electric shock. Do not disassemble any components of the machine. There are no user-serviceable parts inside. For repairs, contact the manufacturer's authorized service partner.
- Ensure that the power supply voltage matches the machine's requirements.
- The machine contains several moving and rotating parts that become hot during operation. Use caution when touching any part of the machine, even when it is turned off.
- Never obstruct or interfere with the movement of any moving or rotating parts.
- The finished donuts may cause burns. Use caution when handling the hot product. Always observe temperature and hygiene requirements.
- To reduce the risk of electric shock, do not expose the machine to water, do not rinse any electrical components under running water, and avoid using excessive water or liquid usage for cleaning.
- Do not cover the ventilation openings or insert any objects into them.

- The machine must be operated on a flat, level surface where it can operate securely and does not move. Ensure there is sufficient space around the machine for airflow of all components.
- Keep any flammable materials away from the machine.
- The machine is suitable for both indoor and outdoor use; however, operating the machine in an uncovered area can cause damage to the machine.

1.3 The parts of the machine



- (1) MACHINE BODY WITH STAND AND EXTRUDING UNIT
- (2) OIL CONTAINER
- (3) HEATING UNIT
- (4) SEPARATING PLATE WITH SCOOPS
- (5) PADDLE WHEEL
- (6) CONTROL UNIT
- (7) DOUGH CONTAINER
- (8) PISTONS
- (9) DONUT STOPPER

(1) MACHINE BODY WITH STAND AND EXTRUSION UNIT

- The machine body, like the other parts of the machine, is made of stainless steel, which is corrosion-resistant and easy to clean. This unit forms the base of the machine's construction and also houses the shaft drive of the dough extruder.

(2) OIL CONTAINER

- A sturdy steel container that is removable for easy cleaning.

(3) HEATING UNIT

- This unit controls the machine's power supply and is responsible for heating and maintaining the oil at the correct temperature. The machine's main power switch is located on top of the heating unit and glows red when in the ON position.

(4) SEPARATING PLATE WITH SCOOPS

- This unit separates the oil vertically and horizontally and is responsible for turning the donuts over. The paddle wheel (see section 5) is located here.

(5) PADDLE WHEEL

- A unit equipped with gears, responsible for circulating the oil.

(6) CONTROL UNIT

- This unit contains the machine's control buttons, which manage the frying process. The control LED indicates the machine's current status.

(7) DOUGH CONTAINER (HOPPER)

- This container holds approximately 5.5lbs of pre-mixed dough. The rings around the openings at the bottom are coated with Teflon to prevent the dough from sticking.

(8) PISTONS

- The pistons should be placed inside the dough container; their movement shapes and extrudes the dough. The movement, and thus the size of the donuts, can be adjusted using the extrusion adjustment knob.

(9) DONUT STOPPER

- A triangular shaped tool used to hold the first row of donuts back during quick mode.

1.4 Assembling the Machine

1.4.1 After washing all components, begin assembling the machine by first selecting the appropriate location for the MACHINE BODY (1). Choose a sturdy, level surface and position the machine body so that the heating element is on your left and donuts flow from left to right.

1.4.2 Open the stand's FASTENING NOTCH by flipping it back about 45° to the left, along with the small unit attached to it. Take the OIL CONTAINER (2) and slide it into the machine body from the right, holding it so that the two notches face you. When the left side of the container passes under the moving fork, straighten the stand and lift the container into place simultaneously. Turn the fastening notch to lock the container in place.

1.4.3 Place the HEATING UNIT (3) on the left side of the OIL CONTAINER (2), ensuring that the heating unit is inside the container. The heating unit should rest on the container with a firm press down.

1.4.4 Place the SEPARATING PLATE (4) into its final position so that the scoops are on your right. The two notches ensure proper placement; slide the holes onto these notches.

1.4.5 After successfully installing the SEPARATING PLATE (4), place the PADDLE WHEEL into the specially designed slots so that the gears face you. Check that it rotates freely by turning by hand.

1.4.6 Hook the CONTROL UNIT (6) onto the notches located on the side of the CONTAINER (2) (the same notches used for positioning the SEPARATING PLATE (4)). First, hold the unit horizontally and hook it onto the right notch. Then, lift the scoop motor slightly by hand and place it on the drive motor notch. Simultaneously, hook the CONTROL UNIT (6) onto the left notch. Ensure the PADDLE WHEEL (5) gears are correctly engaged; if necessary, adjust them by hand.

1.4.7 Begin assembling the DOUGH CONTAINER (7) by placing the PISTONS (8) inside. Make sure the "FRONT" label and the arrows point toward the front of the machine. Insert the longer shafts, responsible for movement, into the smaller holes first. Pressing the pistons straight down will guide the four Teflon pistons into place. Fit the two long notches simultaneously, pushing them in straight almost all the way. Avoid pushing the pistons sideways, as they may become stuck. **IMPORTANT! Before performing this operation, immerse the lower part of the piston row in oil to prevent assembling it dry.**

1.4.8 Placing the DOUGH CONTAINER(7) on the stand. The easiest way to place the dough container onto the machine is to push the piston row through the bottom of the container so that the white Teflon pistons protrude from the white O rings. Hold the container from underneath with your hand at approximately a 60-degree angle and align the two holes at the bottom of the piston row with the moving fork. Once both ends of the fork are inserted, slowly tilt the container upright by pushing it continuously to the left. This motion will bring the back of the container flush against the stand. Then, simply press the container downward. At this point, the hook on the back of the container will latch onto the specially designed part of the stand, and the hole at the top of the container's bracket will slide over the corresponding pin. If everything is done correctly, the spring-loaded container locking clip will automatically snap into place, securing the dough container.

1.4.9 After completing the above steps, connect the HEATING UNIT'S (3) plug (with four holes) to the CONTROL UNIT'S (6) socket. Then, connect the CONTROL UNIT'S (6) plug (with three holes) to the socket located on the extrusion motor box on the MACHINE BODY (1).

USING THE MACHINE

2.1. Operating controls

Startup

2.1.1. The Main Switch

The main switch is located on top of the HEATING UNIT (3) and controls the machine's power supply. The heating feedback LED is situated on the front side; when lit, it indicates that the heating unit is turned on. Below the LED, you will find the digital thermostat, as well as the main fuse. **Important:** If the fuse needs to be replaced repeatedly, please contact a qualified professional. Fuse malfunctions are almost always caused by an underlying issue. Please contact the manufacturer for assistance.

2.1.2. Program Selection Switches

These switches are located on top of the CONTROL UNIT(6) and are used to choose between the two frying programs. Pushing the “frying” switch results in the continuous production of donuts, and production will continue until the program is switched off. The SPEED switch can be used to choose between SLOW and QUICK mode. These functions as well as other states of the machine are indicated by the control LED's located between the two program switches. These states can be the following:

- STAND BY – continuous green light
- SLOW MODE – flashing red light
- QUICK MODE – continuous red light

It is important to know that when turning off the “FRYING” switch, the red light will not change to green instantly, as the donuts still in production must complete their frying cycle first.

2.1.3. The Counter

The counter is built into the dough dispenser drive box, which is located on top of the MACHINE BODY (1). It advances by one position with each dough extrusion, helping to keep track of the number of donuts produced. Since 4 donuts are made at a time, multiply the number on the counter by 4 to determine the total lifetime number of donuts produced.

2.1.4. The “Extrusion Stop” Button

This button is also located on top of the same unit and allows you to stop the dough extrusion at any time. This makes it possible to adjust the donut thickness or clean the extrusion openings during operation simply by tilting the container backward.

2.1.5. The digital temperature control is simple to use. To change the factory-set optimal temperature (367°F), simply press the up ▲ or down ▼ arrow on the controller once. The flashing number indicates the current temperature limit. Use the up ▲ or down ▼ buttons to increase or decrease this limit. After 8 seconds, the new value will be saved automatically. Important: Do not set the temperature above 374°F. Doing so will cause the safety thermostat to shut off the heating process. You can reset it using the small white button located on top of the heating unit.

2.1.6 The “Added Cooking Time” Knob

If you want the donuts to cook longer, you can add up to 20 seconds of cooking time per side using the TIME knob. Each number represents +2 seconds. (The standard time is 25 seconds). Note: Increasing the cooking time will slow down production, resulting in fewer donuts made per hour.

2.2. Filling with Oil

Approximately 1.3 gallons of oil are required to fill the fryer. Use high-quality oil, as it better withstands high temperatures and has a neutral odor. If the oil has solidified due to low temperature, warm it until it is liquid before pouring into the machine.

Add oil until it reaches the minimum level marking on the SEPARATING PLATE (4). This marking indicates the correct oil level when the oil is cold; keep in mind that the oil level will rise slightly as it heats up due to thermal expansion. Maintaining the correct oil level at all times is essential — both too little and too much oil can lead to malfunction. When refilling, it is recommended to use a small metal ladle or container with pour spout.

2.3 Switching on the Machine

Once the machine has been filled with oil, ensure that both the MAIN SWITCH and the CONTINUOUS PROGRAM switch are in the “O” (off) position. Then, connect the machine to the power supply. Switch on the MAIN SWITCH. At this point, the program LED will light up green, indicating standby mode, while the heating LED will turn red, signaling that the heating process has started.

Complete heating takes approximately 20 minutes, although this may vary depending on ambient temperature. Once the target temperature is reached, the red heating LED turns off. The digital temperature display shows the actual oil temperature and the machine automatically maintains the correct temperature.

2.4 Dough Preparation and Loading

Once the dough has the correct consistency, the machine can form and fry donut rings from almost any type of dough.

The manufacturer’s instructions must always be followed precisely. This includes the recommended resting period after mixing, if required. Skipping this step may result in rapid thickening of the dough, which can cause the machine to malfunction. The dough should only be loaded into the container after the resting period is complete. It is also recommended to briefly stir the dough by hand before loading.

Frying

Once all previous steps have been completed, the machine is ready to begin donut production.

3.1 Slow Mode

Switch the SPEED switch to SLOW position on the CONTROL UNIT(6) and turn the FRYING switch on. The green color of the control LED will switch to flashing red and the frying process will begin, resulting in 560 donuts/hour. After being turned off, the machine will finish any donuts still in process before returning to standby mode.

3.2 Quick Mode

Switch the SPEED to QUICK mode on the CONTROL UNIT(6) and turn the FRYING on. The continuously glowing green light will turn red, and the frying process will begin. In QUICK mode, the machine will fry 16 donuts at one time, and will have two rows of four donuts frying in each of the two sections. The machine can make double rows in the first section (in front of the turning scoops) automatically, but the second section (behind the turning scoops) requires the operator to stop the first row which has flipped over to create the necessary second double row. To achieve this, use the triangle shaped DONUT STOPPER(9) to hold back the first row of donuts to prevent donuts from floating onto the turning scoops too quickly. For this operation, we have to hold the DONUT STOPPER(9) in front of the second row of scoops for one cycle. Leave enough space for the next row that have just been turned over. After the donuts flip, allow the donuts to float onto the scoops. Now, we have 16 donuts in four rows and in this mode we can make 1130 donuts/hour. The machine will continue production until FRYING is turned off. Once turned off, the machine will finish any donuts still in process before returning to standby mode. The SLOW and QUICK programs can be changed at anytime during donut production. The machine controls the program automatically and a short beeping signal reminds the operator of a program change. When choosing QUICK mode, the operator must always hold back the donuts in front of the second row of scoops with the triangular shaped DONUT STOPPER(9).

IMPORTANT!

If it is necessary to immediately and completely stop the machine, use the MAIN SWITCH. In this case, it functions as an emergency stop. Exercise extreme caution when turning the machine on, as any components not in their standby position (such as scoops or pistons) will automatically return to that position.

3.3 Setting Dough Thickness

Changes in dough consistency while in the container, as well as the decreasing amount of dough, may require adjusting the dough extruder. This is done using the EXTRUSION CONTROL KNOB, which is numbered from 1 to 5 — where 1 produces the thinnest dough and 5 produces the thickest. To change the setting, first stop the extrusion by pressing the EXTRUSION STOP switch. Then, hold the knob and pull it against the spring tension. This allows you to turn the knob to a different setting. After turning the knob, ensure that the setting has successfully changed. If the knob pops back to its original position, the change has been successful. The current setting is indicated by the number on top of the knob. Always start at position 1 with a full container, and adjust the setting only if necessary as the dough level or consistency changes.

3.4 Completing the Frying Process

To ensure the container is emptied as thoroughly as possible, set the dough thickness to 5. Once the container is completely empty, turn off the machine. Remove the dough container (7) from the rack by simultaneously pulling back on the container securing clip and lifting the container. It may be easier to tilt the container backward slightly before removing it. Avoid overheating the container, as the precision Teflon pistons may become stuck if exposed to excessive heat. After emptying, do not leave the container on the machine while it is still hot. This helps prevent the dough from drying inside the container and makes cleaning the pistons easier.

(4) Cleaning the machine

IMPORTANT! For safety reasons, turn the machine off before starting any cleaning process.

4.1 Cleaning During Operation

Sometimes it may be necessary to clean the Teflon rings on the bottom of the DOUGH CONTAINER (7), as dough can become stuck to them. The machine's vertical stand is equipped with a folding SECURING LATCH that allows you to clean these rings during operation. Using the latch, the entire top portion of the stand and the extrusion unit can be tilted backward.

It is very important to ensure that the machine is turned off and in standby mode (indicated by the green control light). For added safety, switch the EXTRUSION STOP button to its "O" (off) position as well. Now you can easily remove any remaining dough using a small paper towel or a small brush.

4.2 Daily Cleaning

The dough can only be used for a limited time; generally, it is not recommended to use it after 1–2 hours. After each production cycle, wipe the machine with dry paper towels. Carefully wash the DOUGH CONTAINER (7) and the PISTONS (8). For disinfection, use only disinfectants authorized by the food safety authorities. Do not use abrasive cleaning powders or sharp and pointed objects for cleaning. Soaking can be used to soften dried dough residues. **DO NOT WASH ANY COMPONENTS IN A RESIDENTIAL OR COMMERCIAL DISHWASHER.** Excessively high heat above 140°F can damage machine components.

4.3 Ongoing Cleaning

The machine should be cleaned at every 1000-count interval on the counter. This cleaning includes complete disassembly of all components, replacing the oil, and carefully cleaning and disinfecting all parts that are immersed in oil. The most important task is the thorough cleaning of the moving elements connecting the turning and ejector scoops, with regular use of cold degreaser to prevent debris buildup.

WARNING!

Immediately after finishing frying, remove the DOUGH CONTAINER (7)

To drain the oil, it is advisable to allow the oil inside the machine to cool. If your machine has a drain tap, simply open the lever located at the bottom of the machine and guide the hose into a food-safe container. If your machine includes a drain pump, remove the CONTROL UNIT (6) from the machine. Pull out the pump, then insert the flattened end of the pump's suction tube into the space behind the ejector scoops. Press the handle down fully, then pull it up halfway. Press it down again to start the suction.

WARNING!

The safety button located on the machine's electrical connectors must be pressed before unplugging the connectors. Do not use excessive force when removing the electrical connectors as damage to the machine may occur.

Used frying oil should not be poured into a sink or drain. Contact your local waste management authority and ensure proper storage and disposal.

4.4 Maintenance

With proper use, the machine requires minimal maintenance. As long as the machine is cleaned regularly and thoroughly, the only task is to lubricate the sliding sheath located on the stand using food-safe lubricant. Depending on usage, it may also be necessary to tighten the screw at the joint on the stand, which can be done with a 13mm wrench. During extended use, moving parts may need to be replaced due to normal wear and tear.

5. Storage & Transport

During storage and shipment, use the original packing materials whenever possible; however, any sturdy box is suitable if you store or transport the machine fully assembled. This is the best way to prevent damage to the machine or loss of any parts. Do not expose the machine to extreme temperatures during storage or transport. If the machine's temperature falls below 41°F, allow machine to warm up to room temperature for two to three hours before turning it on. Follow the steps in section 4.3 and thoroughly clean the machine before use after any period of storage or transport.

6.1 Problems

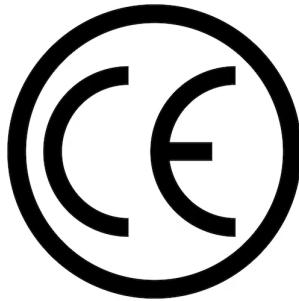
Troubleshooting

The main switch does not light up in the ON position.	Ensure the main plug is connected to the power supply and that there is electricity. Turn the switch OFF and ON again, to ensure it is fully turned on.
The machine can be turned on, but the heating indicator LED is not lit.	Ensure the heating unit's 4-prong plug is properly connected to the correct socket on the CONTROL UNIT(6). If the green standby light is on, confirm the oil has already reached the set cooking temperature.
The donuts are too thick.	Check the position of the EXTRUSION CONTROL DIAL, if necessary, set it to a lower setting. If it is already at position 1, the dough may be too thin. Temporarily remove half of the current dough.
The donuts are too thin.	Check the position of the EXTRUSION CONTROL DIAL, and if possible, set it to a higher setting. If it is already at position 5, the dough may be too thick, or the machine may be running low on dough.
The dough extrusion does not work.	Ensure the CONTROL UNIT (6) is connected to the three-prong socket on the dispenser. Also, check whether the EXTRUSION STOP button on the top is turned on and in the "T" position.
The oil is smoking.	This is a sign that the oil needs to be replaced. If the new oil also begins to smoke, contact your authorized service provider.
The donuts are not frying properly.	Ensure the outside temperature is above 50°F. Try increasing the oil temperature with the digital thermostat. Check the socket of the HEATING UNIT(3) to ensure it is not contaminated with oil or water. If it is, clean thoroughly and reconnect it. If the donuts are still not frying properly, contact your authorized service provider.
The donuts are not floating onto the scoops.	Ensure that the paddle wheel is installed correctly and that the gears are properly engaged. Check the oil level and adjust if necessary.
Some donuts aren't flipping over.	Confirm the machine is level. If necessary, adjust the counter surface to a level position.
The donuts are not dispensing consistently or are irregularly shaped.	This issue may also be caused by irregularly shaped donuts, so continuous monitoring is recommended. Clean the bottom of the container, including both the ring and piston.
The dough container cannot be removed from the machine.	Do not use force as this may damage the machine. Turn the machine off and wait for it to cool down. The container will cool faster if you tilt it back. Placing a moist (but not dripping) cloth can help speed up the cooling process.
The oil siphon is not pulling oil through.	IMPORTANT: Always pull the pump handle up before using it. Fit nozzle into the gap between the machine body and the scoops. Push down the handle, then slowly pull it up halfway, and push it down again. If the oil flow inside the pump is obstructed, compress the pump as much as possible, then rinse it thoroughly with the hot water. Move the handle fully up and down several times to empty the water from the pump and it should work properly again.
In QUICK mode, the donuts float under the scoops.	The donuts must be larger than the scoops (at least 1.57"). Ensure oil level is not too high or too low.

(7) Technical data:

Rated power: 2250 W
Rated voltage: 120V, 50-60 Hz / 240V, 50-60 Hz
Weight: 40 lbs
Oil requirement: 1.4 Gallons
Rated production capacity: 560/1130 donuts/hour

Manufacturer:
OTEX Kereskedelmi Betéti Társaság
H-4002 Debrecen, Almavirág utca 6.
Phone: +36-30-2199050
Email: info@otex.us



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