



RoboLabs

Incredible machines for fastfood & funfood

Popcorn machine VPM-PA72M2E

User manual



Read this manual before use and keep for future reference!

Safety requirements



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER



- **ALWAYS** put corn **FIRST. THEN** add oil. **FAILED TO DO SO CAN CAUSE OIL FIRE.**
- **NEVER USE WATER** on oil fire.
- **USE ONLY** oil suitable for making popcorn.

DANGER



- Not grounded equipment can cause electric shock. Power outlet **MUST HAVE PROPER GROUNDING** to avoid electric shock.
- Using excessive water during cleaning can cause short circuit and electric shock. **DO NOT USE** excessive water or water jet for cleaning. **DO NOT SPILL** water on electric panels or parts.
- **ALWAYS** unplug equipment before cleaning or servicing.
- No user serviceable parts inside. **DO NOT OPEN** electric panel unless you are qualified for this.

WARNING



- Hot kettle surfaces can cause burns if touched. **DO NOT TOUCH HOT KETTLE.**
- Hot steam coming out from kettle can cause scalds. **BEWARE OF HOT STEAM.**

WARNING



- Rotating agitator can crush. **DO NOT REACH** into kettle while in operation.

WARNING



- **IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY, OR DEATH.** Read and understand this manual before use.
- **ONLY INSTRUCTED PERSONNEL** is allowed to operate the equipment.

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1 General information

Popcorn machine VPM-PA72M2E (hereinafter "machine" or "equipment") is intended for making salted and sweet popcorn.

Commercial use only.

1.1 Technical specifications

Kettle volume	72 Oz
Rated voltage	400 VAC
Rated frequency	50 Hz
Rated power	8 kW
Dimensions (LxWxH)	610x830x820 mm
Weight	90 kg
Airborne acoustic noise	less than 70 dBA
Material	stainless steel

1.2 Manufacturer details

RoboLabs Ltd.
11 Industrialnaya Street, Tver, 170100 Russia
Technical support:
Email: support@robolabs.pro
Phone: +7 495 956 4000

1.3 Quality check

VPM-PA72M2E	
Model	Serial no.
The equipment is made with accordance to mandatory requirements of the state standards, actual technical documentation, and approved for use.	
QC Engineer	
STAMP HERE	
Signature	Full name
DD.MM.YYYY	

1.4 Ambient requirements

This equipment is designed to be operated at the ambient temperature from +5°C to +40°C (+41°F to +104°F) and relative humidity not more than 45% at 40°C (104°F) while using at altitudes not exceeding 1000 m over the sea level. The temperature decreasing is related to RH increasing, for example, 90% of RH at 20°C (68°F). This equipment **MUST NOT** be exposed to precipitations of any kind (rain, snow and so on).

1.5 Transportation and storage

The equipment may be transported by any kind of covered vehicle, in accordance with transportation rules for this kind of vehicle. Ambient temperature during the transportation and storage must be between minus 25°C and plus 55°C.

1.6 Warranty obligations

The manufacturer guarantees trouble-free operation of the equipment during 12 months from the date of receiving the equipment by a dealer (in accordance with transport documentation); or, in case of purchase directly through Trapeza LLC or RoboLabs Ltd., from the date of purchase, given that terms of using, transportation, and storage are met.

The warranty repair is performed upon presentation of this manual and filled warranty card with the seller's seal and the date of sale. Technical specifications of the equipment can be changed by manufacturer at any time due to improvements and/or other reasons. Technical specifications stated in this document are intended to act as a reference point, which is necessary to evaluate suitability of the equipment for the customer's needs, and are not the subject of warranty policy.

The information stated in this document has been thoroughly checked and considered as accurate one; nevertheless, the manufacturer is not responsible for any typographical errors or misprints.

Due to constant improvement of the equipment, technical specifications are subject to change without prior notice!

2 Installation

2.1 Delivery set

- 1x Popcorn machine VPM-PA72M2E
- 1x Oil hose
- 1x Oil supply tube with bracket
- 1x Electric panel key
- 1x Fasteners set
- 1x 48 Oz measuring cup
- 1x 72 Oz measuring cup
- 1x Documentation set

2.2 Installation

1. Unpack the machine carefully. Check the delivery set. Make sure the power cord doesn't have any damages.
2. Remove protective film from all surfaces.
3. Wipe all surfaces with a clean soft cloth dampen with mild soap. Then remove soap residues with a clean cloth dampen with water. Let it dry.
4. Put the machine on **VPM-PTCPA72 base cooling table**, and secure in place with four screws using **fastening holes**, see Fig. 1.
5. ATTENTION! If the machine was in ambient temperature below 0° C, keep it at normal room conditions (+18...+24° C) not less than 3 hours before the first start.

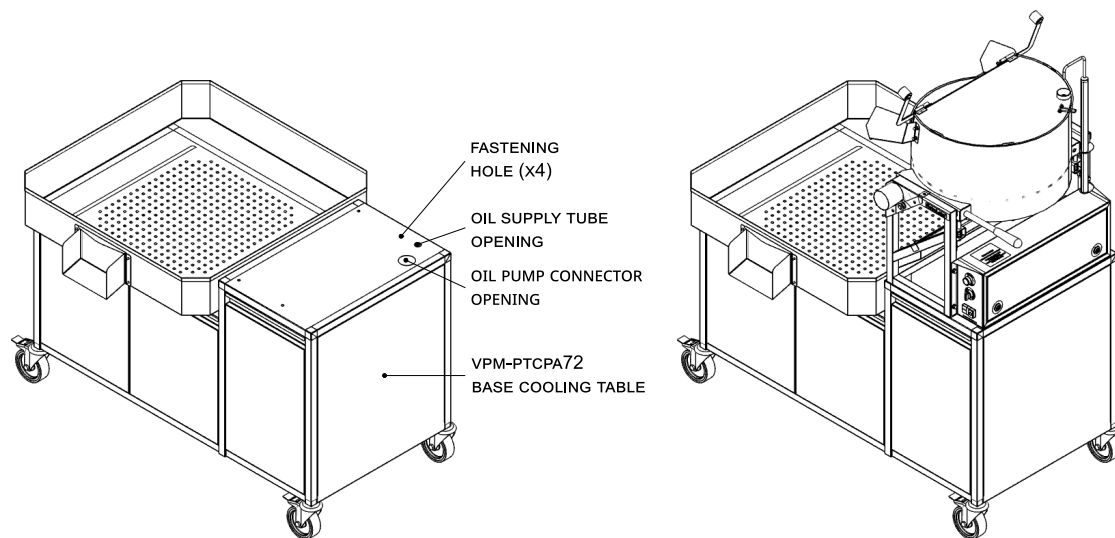


Figure 1: Mounting to VPM-PTCPA72 base table

Oil supply system installation

If the machine is going to be used with VPM-BOPM oil pump, install the oil supply tube.

1. Open electric panel.
2. Insert the **oil supply tube** as shown on the Fig. 2, so the nozzle goes through the bottom side of the electric panel and the tabletop of VPM-PTCPA72 cooling base, see Fig. 1.
3. Secure the oil supply tube in place with **bolts, lock washers, and flat washers** provided.
4. Insert the **heating cable connector** to its couple inside electric panel.
5. Close electric panel.
6. Oil hose has two **quick-release connectors**. Connect one of them to the **nozzle** of oil supply tube, and the other one to the nozzle on VPM-BOPM.
7. Connect VPM-BOPM oil pump to the **VPM-BOPM connector**, which is available through the oil pump connector opening located in the tabletop of base table (see Fig. 1).

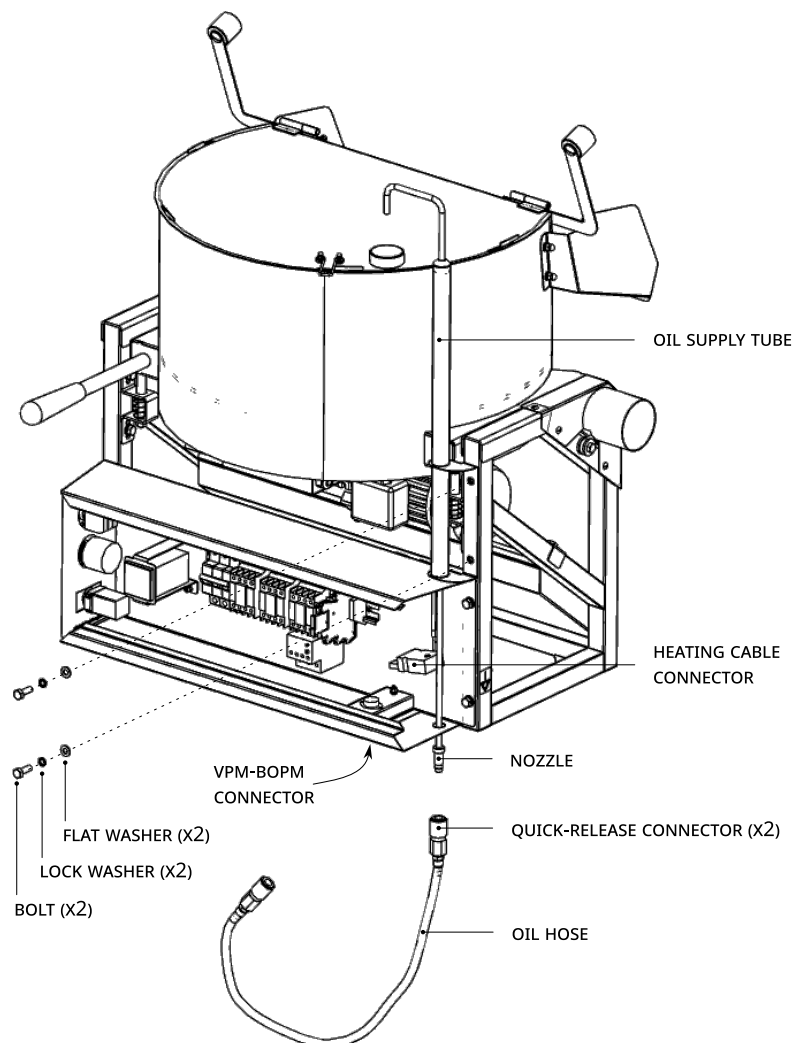


Figure 2: Oil supply system installation

2.3 Electric requirements

DANGER



- Power outlet **MUST HAVE PROPER GROUNDING** to avoid electric shock.
- If supply or interconnection cords damaged, it must be replaced by manufacturer, service agent, or skilled person in order to avoid hazard.
- Connections must be done **BY SKILLED ELECTRICIAN ONLY**.

Equipotential bonding wire (up to 10 sq.mm) shall be connected to screw terminal on the base frame marked with IEC 60417-5021 sign:



The machine is supplied without power plug. Use 3P+N+PE 16 A 400 V connector in accordance to IEC 60309 standard. Short-circuit current rating for the machine is 6 kA at 400 VAC.

Agitator rotation

After connection, press ON push button on the machine, to make sure that the agitator inside kettle rotates counterclockwise, see Fig. 3. If not, press OFF push button to turn the machine off, disconnect, and swap any two phase wires in the plug.

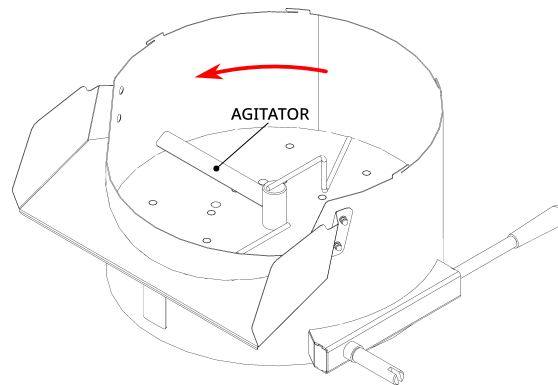


Figure 3: Agitator rotation

3 Design and principle of operation

3.1 Structural parts

Main structural part of the machine represented on Fig. 4.

Machine consists of **kettle** mounted on **base frame**.

Kettle is heated up with **heating elements** mounted inside the bottom plate of the kettle.

Agitator, driven by **electric motor**, located under the kettle, rotates continuously inside.

Kettle is closed with the **lid** equipped with a free moved **hinged flap**. **Counterweights** on the flap allows it to be opened with very light mechanical force applied. Also counterweights used as handles to help operator open the kettle before ingredients loading.

Oil supply tube and **oil inlet** in the lid are used for automated oil supply option¹. Oil supply tube is wrapped with heating cable, which prevents oil solidification inside the tube.

Electric panel with controls contains most of electric components of the machine, and also the control panel, which is used to control the machine.

Deflector on the kettle used to avoid popcorn falling over the cooling table.

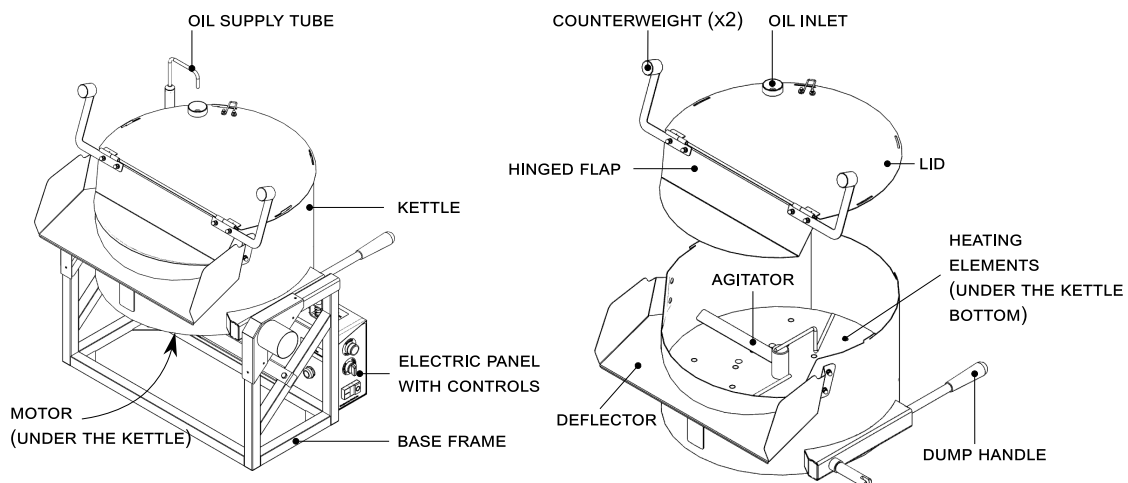


Figure 4: Structural parts

3.2 Principle of operation

Corn kernels and oil are heated up inside the kettle. Agitator rotates continuously during operation, allowing constant mixing of corn and oil, thus providing even heat distribution. After short time, corn kernels start to pop. The volume of popcorn is being rapidly increased, which creates enough pressure to open the hinged flap. After flap is opened, popcorn is evacuated from the kettle.

¹When used along with VPM-BOPM oil pump.

3.3 Kettle lid

During the operation the lid must be closed all the time. Before turning machine on, make sure that the lid is properly locked on the kettle, see Fig. 5. All four **pins** must be inserted in the **slots**, and **spring clip** must lock one pin, so the lid cannot be twisted and removed.

When machine is not in operation, the lid might need to be removed, during cleaning, for example. To remove the lid, open the flap, pull up the spring clip, twist the lid counterclockwise until the pins are not fixing the lid anymore, and then remove the lid.

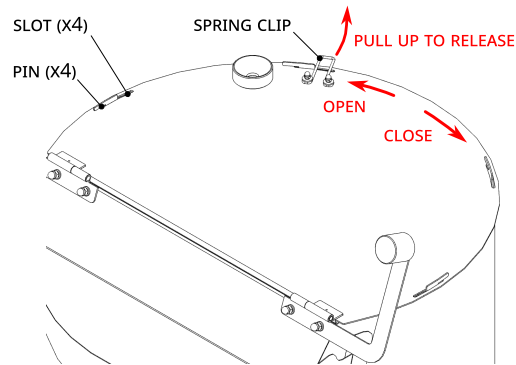


Figure 5: Lid locking system

3.4 Control panel

Control panel has following items, see Fig. 6:

- **OIL push button.** Starts an operational cycle (supplying one batch of oil) of VPM-BOPM oil pump.
- **HOT KETTLE lamp.** When it is on, the kettle is ready for operation. When it is off, the kettle is heating up and not ready for operation.
- **SWEET-SALTED switch.** Defines the temperature set value for different modes of operation (sweet popcorn or salted popcorn).
- **ON-OFF push buttons.** Turns the machine on and off, respectively.

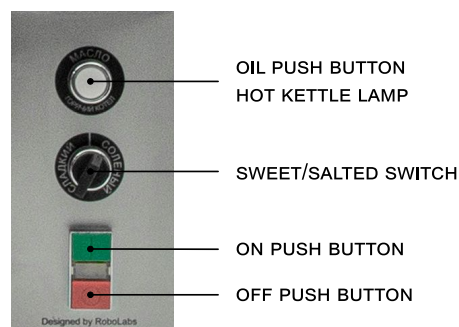


Figure 6: Controls

4 Intended use

DANGER



- **DO NOT USE MACHINE** if power cord, or plug, or wall outlet are damaged.

DANGER



- **ALWAYS** put corn **FIRST. THEN** add oil. **FAILED TO DO SO CAN CAUSE OIL FIRE.**
- **NEVER USE WATER** on oil fire.
- **USE ONLY** oil suitable for making popcorn.

WARNING



- Hot kettle surfaces can cause burns, if touched.
DO NOT TOUCH HOT KETTLE.
- Hot steam coming out from kettle can cause scalds.
BEWARE OF HOT STEAM.

WARNING



- Rotating agitator can crush. **DO NOT REACH** into kettle while in operation.

4.1 Operating order

1. Prepare and measure all ingredients, use cups from the delivery set.
2. Make sure the lid is properly locked on the kettle.
3. Press ON push button. The agitator starts to rotate, and the kettle to be heated.
4. Set the SWEET/SALTED switch in either position, depending on what popcorn you are going to make.
5. Wait until HOT KETTLE lamp is on.
6. Pull down one of the countweights to open the flap (see Fig. 4).
7. Put corn and dry ingredients inside the kettle.
8. **If you use VPM-BOPM oil pump**, close the flap and press OIL push button.
9. **If you add oil manually**, pour oil in the kettle through open flap, and then close the flap.
10. Wait for popcorn starts to come out from the kettle.
11. Wait when there is only few popping sounds, turn the kettle down using the dump handle to discharge residual popcorn from kettle to cooling table.
12. Bring the kettle back in straight position.
13. To run one more cycle wait until HOT KETTLE lamp is on.
14. To turn the machine off, press OFF push button.

5 Cleaning

DANGER



- **DO NOT USE EXCESSIVE WATER OR WATERJET** for cleaning the machine.
- **DO NOT SPILL WATER** on electric panel.
- **ALWAYS KEEP** power cord plug **OFF THE FLOOR AND WATER.**

WARNING



- **MAKE SURE** the machine is cooled down before cleaning.

CAUTION



- **DO NOT USE HIGH ALCALINE** cleaners.
- **DO NOT USE SHARP ITEMS** or **ABRASIVES** for cleaning.

CAUTION



- **ALWAYS WEAR** protective gloves while cleaning.

The purpose of cleaning is to keep machine in good condition during all the lifetime, and to meet safety requirements.

Perform cleaning daily. Use dry cleaning procedure if the machine is used for making salted popcorn only. Otherwise, use wet cleaning procedure.

5.1 Wet cleaning

1. Make sure the lid is properly locked on the kettle.
2. Open hinged flap, pour hot water in the kettle, close the flap.
3. Turn the machine on. Let water boil for 3-4 minutes. Then turn the machine off and let it cool down.
4. If case of severe carbon buildups on the bottom of the kettle, use special solution for cleaning the kettle. Follow the instruction for the solution.

5.2 Dry cleaning

1. Let the machine cool down and then remove the lid.
2. Turn the machine down with dump handle and remove residual popcorn, husk and so on from the kettle.
3. Wipe kettle inside with a clean dry paper towel to remove oil residuals.
4. Wipe outer surfaces of the machine with a clean cloth dampened with mild soap, and then with clean cloth dampened with water to remove soap residues. Let it dry.

5.3 Conservation

If equipment is not used for long time, perform all cleaning procedures and pack using original packaging.