

DEEP FRYER

TYPE **KOSMAT 60**

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1. Introduction

ATD for the machine intended for frying doughnuts and confectionery. For assurance of the right function of the machine is necessary to keep the directions in this ATD. In the case of breaching them, the producer does not carry any responsibility for malfunctions and quality of frying. This ATD is binding both for the producer (supplier) and for user (customer) and becomes binding when the machine is delivered up to the user, it means by signature of protocol of engagement.

2. Technical description

- 2.1 Usage: The machine for frying doughnuts type KOSMAT serves for frying doughnuts and other confectioneries in confectioner trades and in bakeries. Its capacity is cca 50 pieces of products fried in one period by automaton or manually with extraction of product from the bath automatically.
- 2.2 Technical description: machine for frying doughnuts and other confectioneries type KOSMAT 60 is mainly made of stainless steel and includes following components, from which it is set up according to the requirements of customer.
 - a) frying container with extensible baskets (quantity 50 pieces of doughnuts)
 - b) frame
 - c) heaving plant
 - d) barrow including 9 disparage devices
 - e) automatics
 - f) semiautomatics
 - g) rolling out table
- 2.3 Function of particular parts:
 - a) Frying container with driving motion for extension of baskets from the bath. From disparage devices to the toggling baskets are tipped out 50 pieces of doughnuts or other products heaved in heaving plant and according to the technological plan (which is made out in relation to used dough and oil) either manually or automatically are the doughnuts fried. After frying the baskets automatically

- protrude from oil bath upwards and the machine signals completion of frying.
- b) Frame – serves for placing of the frying container, heaving plant and barrow with disparage devices
 - c) Heaving plant: a frame made of stainless steel, ahead equipped with gate, abeam dissembled, at the bottom there is a evaporating container with water and a heating helix. Abeam of the heaving plant there is a ventilator assuring air circulation and hereat also regular heaving of doughnuts and other products placed in heaving plant. It has a thermostat for keeping demanding temperature.
 - d) Barrow for setting in: it is a machine made of stainless steel, disparage devices with half-finished products are put here. The whole barrow is imposed into the heaving plant.
 - e) Disparage devices: made of stainless steel in combination with aluminium, only surface, where the products are, is covered with teflon.
 - f) Automatics – a frame made of stainless steel, equipped with programme for automatical frying.
 - g) Table for rolling out: it is a special sludging device made of stainless steel profiles, which serves for rolling out of fried products on the barrow from a frying-pan and for oil sludging on the table and its returning back into the frying-pan.

3. Operating data

Installed capacity KOSMAT 60	10.5 kW
Full dimensions of the machine KOSMAT 60	w=980 l=2570 h=1070
Connecting voltage	220 V / 110 V 60 Hz
Heating tempereture (preparation)	131°F
Standby temperature (frying)	328 – 374°F
Protection	428°F wrecking
Capacity of tank 60	60 kg of fat
Weight	290 kg

- 3.1 Material execution: Frying machine is executed and designed so, as it can satisfy in long term particular sanitary rules. It is made of materials sort 17, DIN 1.4301, covering from material ČSN 424005.

4. Service instructions

Preparing of the machine to operation: Operating staff puts necessary quantity of fat (oil) to inner part of frying machine up to guideline, which shows height of oil level. **Automatic:** Operating staff launches the machine by means of main switch and activates programme according to enclosed instructions. Heating starts. **Semiautomatic:** Operating staff launches the machine by means of main switch. Switch over to the **impuls heating** and after reaching temperature 131°F the operator switches over to the **constant heating** and starts heating in proofbox. Operating staff rolls dough for doughnuts, puts it on dispartage devices and let the dough heave with the barrow to the heaving plant. As the fat is heated, doughnuts are heaving in the heaving plant. After heating the fat (oil) to the standby temperature of 131°F, it comes to closure of the operating temperature and till complete heaving (45 – 55 min.) the fat (oil) is heated up to the operating temperature (328 - 374°F) and frying can start.

- 4.1 **The semiautomatic frying:** The operator takes out the dispartage device with doughnuts from the proofbox, gets it on the fryer, turns this device. Doughnuts fall to the oil. Do away with dispartage device. Push button **down basket, cover**. After frying one side press button **up cover, basket** and turn doughnuts. That you can do again to be well done. When doughnut are ready push **up cover, basket**. Drive with the basketrolley up the oil pan and throw doughnuts into. Drive out with the basketrolley and press **down basket, cover** to the fat. Do again the whole cycle.

The automatic frying: The frying runs automatically according to the engaged programme, which the operating staff selects according to directions.

- 4.2 Completion of frying: Switch off the main switch, close the caps, clean all parts of frying machine.
- 4.3 The machine is determined for 1 attendant, working place is from front of the machine.

- 4.4 Equivalent noise level measured in place for operating staff does not exceed 70 Db.
- 4.5 The user has obligation to refresh safety marking and marking of handlers if they are not readable.
- 4.6 The operating staff is compulsory to read up the whole directions for use before launching working on the machine.

5. Maintenance and cleaning:

- 5.1 Before the first use wash out with common device for dishes and wash down with drinkable water.
- 5.2 During the use after letting out of oil clean with common device for dishes and wash down with drinkable water.
- 5.3 Reparation of electric devices can be done only by a person with electrical qualification from significant regulations and rules.
- 5.4 The day after completion of frying close the machine cap and clean all parts, check the filler condition (to guideline). The machine is ready for the next frying.
- 5.5 The surface of the teflon dispartage devices is cleaned from flour mechanically by banging out or doing out. After operation finish is the machine washed off with hot water with detergent and washed down with water, except of frying-pan.
- 5.6 Change of fat filler (oil) :
The quality of fat and oil should be regularly checked with emissions, colour and dull. If the sensorial attributes change, the fat must be changed. It depends on operation intensity and quality of used fat (oil). It is necessary to keep the directions of the producer of the fat or oil. During changing of fat is possible to put out heating spiral. The spiral and the inner part of the frying-pan is washed off with hot water with detergent and successively washed down with water.

6. Safety

6.1 Introduction

The following safety symbols have this meaning:

!! – symbol means, that breaching setting down rules or carelessness can cause hurt

! – symbol means, that disobedience or carelessness can cause damage to the machine

// - symbol warn of some speciality

6.2 Safety provision

- during construction of the machine were used cultured materials (mainly sort 17 DIN 1.4301), which correspond to the food processing industry
- maximum simplification of the machine attendance
- the machine correspond to the sanitary rules **sv. 36 direction 40/76 Ministry of health ČR**
- the machine corresponds to ČSN EN 60 204-1 and bearing rules

- in the case of fire cut off the machine from grid and quench snow or foam fire extinguisher
- if the cap is closed, it is not possible to activate basket elevating
- if the oil is stiff the basket elevating is blocked
- safety voltage PELV according to ČSN 332000-4-41

6.3 Safety of operation

!! – The operating staff must be older than 18, mentally and physically fit and envincibly must be properly familiarize with operation and function of the machine. There must not be any untrained persons near the machine.

!! – In the case of revision, cleaning, maintenance is necessary to cut off the machine from grid (lock up distributor – key has only responsible person).

!! – The machine must not be in run with removed covering.

!! – In the case of machine breakdown is necessary to shut-down the machine by **main switch**.

!! – If the machine is on, it is forbidden to handle in the machine workspace.

!! – Oil in the machine reached up to the temperature of 374°F – attention – during lifting off the cap it is possible to scald

- Machine cap is necessary to grip only by means of isolated hand grip
- It is forbidden to touch the frying container and extensible basket, further on doughnuts e.g. during checking-up of frying, danger of burning up, use instruments
- It is forbidden to get water somehow to the hot oil, there is a danger of oil spritting and hitting the operating staff

! – The operating staff could not activate the machine without fatty (oil) filler. The oil level must be on control mark. It is necessary to control it during operation.

! – Cleaning demands enhanced attention in the sphere of heater.

//- It is necessary to use protective aids during hand turning.



Danger of burning up



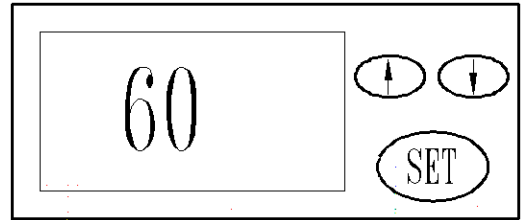
Read up service instructions

7. Electric wiring - description

The machine is put in by means of moveable supply. Through the main switch goes the supply to operating cabinet, which is situated on the back of the machine. There are switching elements of the machine a protection in the operating cabinet. The heating plant is plug in to this cabinet and through connector also side superstructure with programme unit.

7.1. Description of functions of electric devices – actuating

1. Switch on the main switch. Programme unit board will turn on. Hereafter we follow the description of actuating of programme unit.
 2. Temperature of frying machine bath is controlled from the programme unit. Limitation of the maximum temperature of 428°F is assured by safety thermostat without operating element, which is placed in connecting cabinet of the heater.
 3. Temperature of the heaving plant is controlled by digital thermostat in the upper part of the heaving plant.
- 3.1 If you want to change temperature do it this way:
1. Press button SET and keep it (see picture 1)
 2. Set up required temperature by means of buttons up, down.
 3. Leave hold of SET



8. Electric wiring - schema

drawing number :

9. Assembly

9.1 Assembly directions:

The machine for frying doughnuts is supplied according to design in single parts.

- Frame, frying container with baskets and automatics
- Heaving plant
- Barrow including dispartage devices
- Rolling out table

The machine with frying container connects with rolling out table and establish to level. User places motor outlet 32 A somewhere near the machine, in which the machine will be connect.

9.2 Single parts of the machine is possible to transport manually.

9.3 Putting machine into operation

It will provide the producer, who will train operating staff, servicing

staff and will also provide testing operation. In the case, that user will do it personally, he will lose the demand on guarantee and all repairments will be covered by him. The producer provides bakery technologist at call.

10.Spare parts

10.1 Directions for ordering spare parts:

In order for spare parts is necessary to state:

- a) number of pieces
- b) name of the component
- c) description, type and serial number of the machine.

10.2 spare parts produced by producer

- hinge for opening the cap
- hinge for fractioning of the cap
- pull bar for fractioning of the cap
- case for rolling up of the cap

Against concrete order is possible to produce and supply any part of the machine.

10.3 Subdelivered spare parts, which the producer provides against order

- gear motor of basket elevating
- gear motor of basket turning (only for alternative with programme)
- electromagnet of the cap
- inductive sensors
- travelling wheels (frying machine, barrow)
- digital thermometer (heaving plant)
- heating body of the frying-pan
- heating body of the heaving plant
- gas spring for cap lifting

Within service departement covering of disparage devices with teflon.

10.4 Ordering – address of the producer

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11. Servicing

Guarantee servicing provides manufacturing base on announcement of the malfunction. After – guarantee servicing is based on contractual agreement.

The producer provides 1 year warranty for the machine on the assumption that the machine is used with observing all instructions described in this technical documentation.

12. Handling, transport and storage

The machine consists of 4 main parts, the largest one – frying machine does not exceed the format of 980 x 1370 x 1070 mm and the biggest design is under 290 kg. Single parts are possible to make up and entrain manually. Storage of the machine does not demand any special requirements, because 95% of the machine is made of stainless steel. The machine you can use by the temperature from 32°F to 122°F.

13. Illustration of the enclosure

figure 1 – the whole design

Enclosures :

- Certificate of the quality and completion of the product
- Starting report about revision of the machine according to ČSN 331500
- Declaration of conformity according to act Nr. 22.
- User's guide (automatic)