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# Fryer (Electric)

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**【Stand regular type 1 tank-type】**

- MEF-13E      •MEF-18E
- MEF-23E      •MEF-27E

## **USER'S MANUAL**

**(Product • Installation)**

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General commercial kitchen Appliances & Equipment

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**Maruzen Co.,Ltd.**

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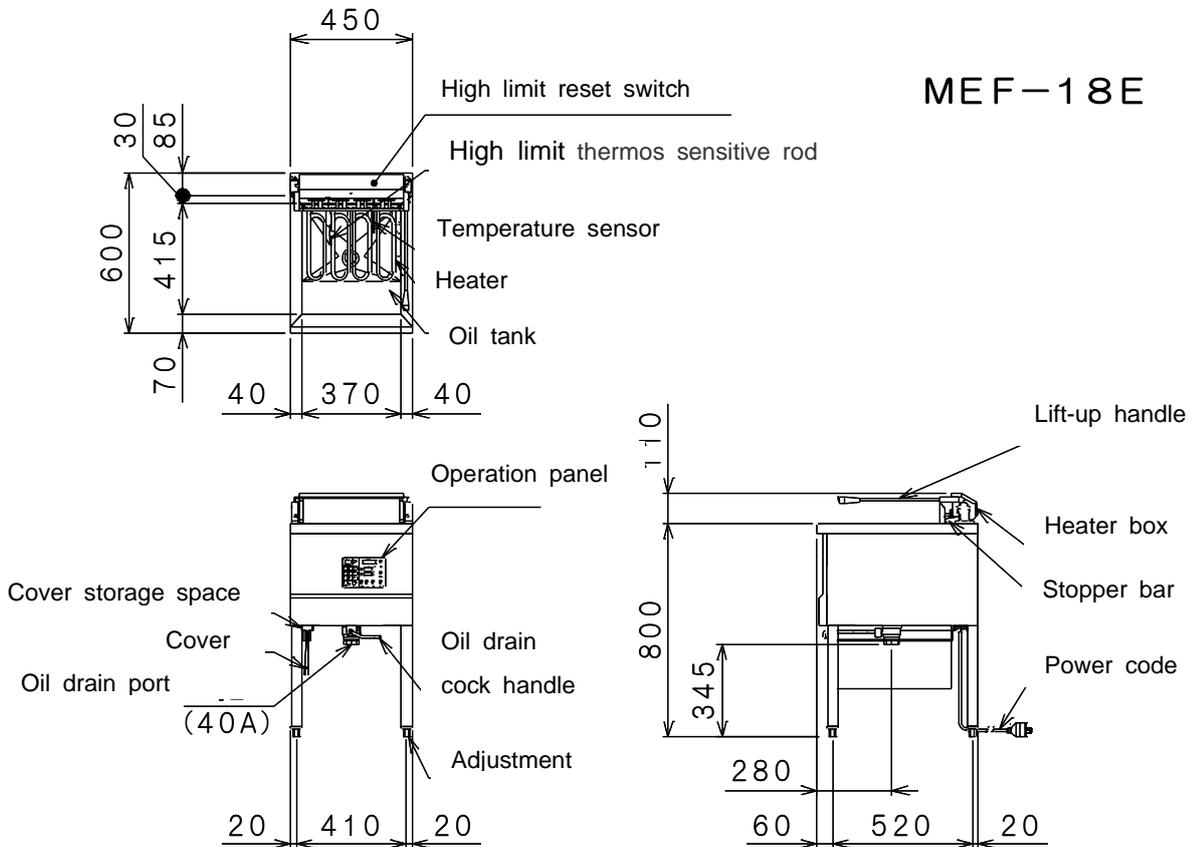
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Before use

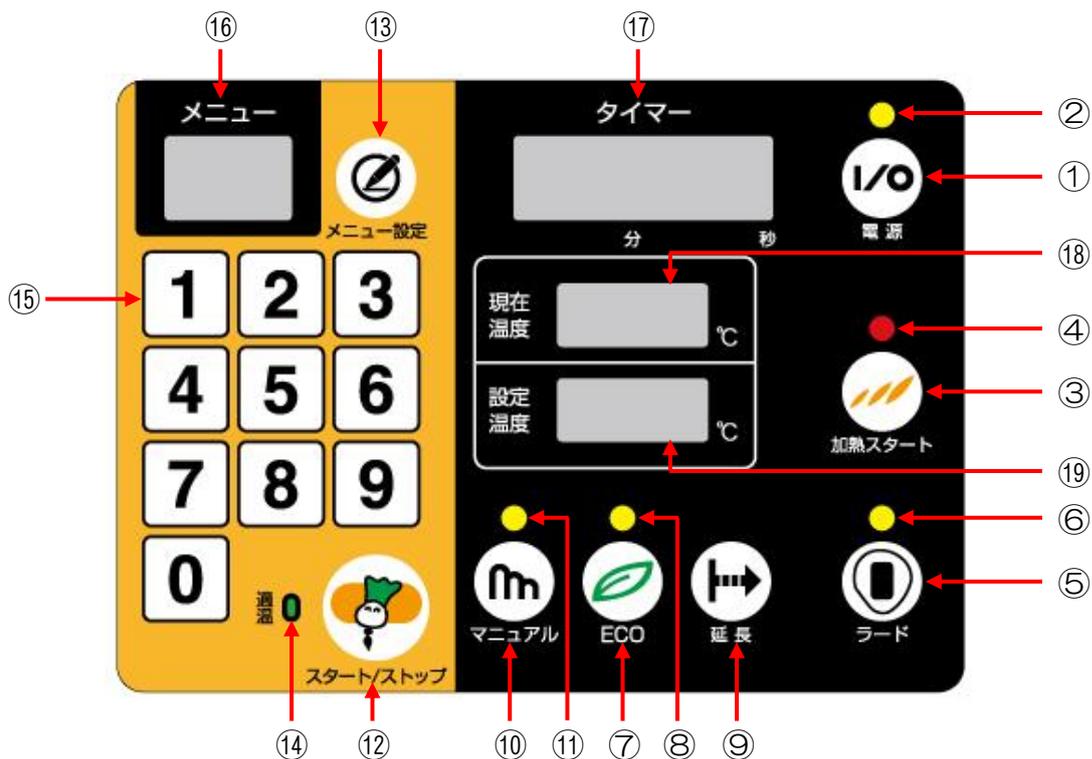
# 1-1 Name and function of each parts

## Name of each parts



## Name and function of operation panel

<Fixed type • Tabletop type (MEF-13TE) • In the case of tabletop auto lift type>



- ① Power switch ······Power is "ON" or "OFF" whenever you press the power switch.
- ② Power lamp (Yellow) ······Lit when the power is "ON".
- ③ Heating start switch ······Used to start or stop heating while the power switch is "ON"
- ④ Heating lamp (Red) ······ Lit when heating is 「ON」 .The heating lamp starts blinking over set temperature.
- ⑤ Lard switch ··········Used this switch when you cook with lard.
- ⑥ Lard lamp (Yellow) ··········Lit when the lard mode is 「ON」 .
- ⑦ ECO switch ··········Whenever you press the switch, the ECO mode is "ON" "OFF".
- ⑧ ECO lamp (Yellow) ··········Lit when the ECO mode is 「ON」 .
- ⑨ Extension switch ····Pressed this switch will do additional cooking for 10 seconds. Also, you can extend cooking time of 10 seconds by pressing it during cooking.
- ⑩ Manual switch ··········Used when you cook at any set except menu cooking.
- ⑪ Manual lamp(Yellow) ··········Lit when the manual mode is 「ON」 .
- ⑫ Start / Stop switch ··········Menu cooking starts or stops if you press the switch while heating is 「ON」.
- ⑬ Menu setting switch ··········Set the designed menu number.
- ⑭ Appropriate temperature lamp(Green) ······Lit when oil temperature has reach the set temperature.
- ⑮ Ten key switches ··········Used when you input the cooking menu, temperature and time.
- ⑯ Menu display panel ··········Displayed menu number.
- ⑰ Timer display panel ··········Displayed setting time or lapsed time during cooking (Down counting)
- ⑱ Current temperature display panel ··········Displayed current temperature.
- ⑲ Preset temperature display panel ··········Displayed preset temperature.

## <Set range>

### ●Set temperature

- It can be set every second between 100°C to 220°C. (Initial value : 180°C)

### ●Set timer

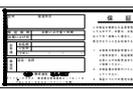
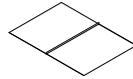
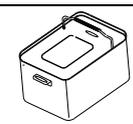
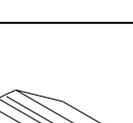
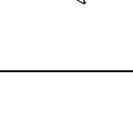
- It can be set every second between 0min 00sec to 99min 59sec (Initial value : 0 min 0 0 sec)
- Time remaining of the set time is counted down every second.

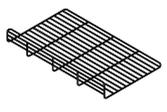
## • CAUTION

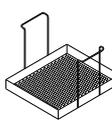
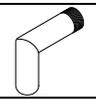
- If the high limit works, heater does not work even if you rise or drop the temperature setting.

In this case, any parts might be damaged. Do NOT press the reset switch by yourself. Contact our sales office or distributor.

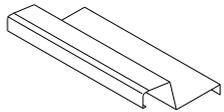
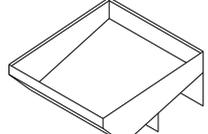
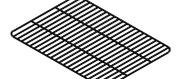
# 1-2 Accessories

Name of Accessory	Shape	Q'ty	How to use
User's manual		1	<ul style="list-style-type: none"> <li>●Accompanying all models.</li> <li>●Keep carefully in a place to make it available for reference at any time.</li> </ul>
Warranty		1	<ul style="list-style-type: none"> <li>●Accompanying all models.</li> <li>●Keep it carefully not to lose.</li> </ul>
Cover (Stationary)			<ul style="list-style-type: none"> <li>●Accompanying all models.</li> <li>(※However, Tabletop fast food type is excluded.)</li> </ul>
Cover(Tabletop)			
Partition net			<ul style="list-style-type: none"> <li>●Accompanying all models.</li> <li>(※However, Tabletop fast food type is excluded.)</li> <li>●Used by hooking on heater.</li> </ul>
Oil can			<ul style="list-style-type: none"> <li>●Accompanying Fixed type.</li> <li>●Accompanying Tabletop type.(ME F-1 3 TE)</li> <li>●Used to drain oil.</li> </ul>
Oil strainer net			<ul style="list-style-type: none"> <li>●Accompanying Fixed type.</li> <li>●Accompanying Tabletop type. (ME F-1 3 TE)</li> <li>●Used to remove oil debris in wasted oil as putting Oil strainer net on Oil can.</li> </ul>
Scoop net			<ul style="list-style-type: none"> <li>●Accompanying Fixed type and Tabletop type. (ME F-1 3 TE)</li> <li>(※However, Fixed fast food type is excluded.)</li> <li>●Used to scoop up ingredients which are fried in Oil tank.</li> </ul>
Sliding plate			<ul style="list-style-type: none"> <li>●Accompanying fixed type and Tabletop type. (ME F-1 3 TE)</li> <li>(※However, the Fixed fast food type is excluded.)</li> <li>●Used to put foods into Oil tank.</li> </ul>
Oil cut plate			<ul style="list-style-type: none"> <li>●Accompanying Fixed type and Tabletop type. (ME F-1 3 TE)</li> <li>(※However the Fixed fast food type is excluded.)</li> <li>●Used to fit in side of Oil tank. The fried food is put on Oil cut plate to cut oil.</li> </ul>

Oil cut net		<ul style="list-style-type: none"> <li>●Accompanying the Fixed type and Tabletop type. (MEF-13TE) (※However, the Fixed fast food type is excluded.)</li> <li>●Used by putting it on Oil cut plate.</li> </ul>
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Name of Accessory	Shape	Q'ty	How to use
Fry basket (Fast foods type)			<ul style="list-style-type: none"> <li>●Accompanying the Fixed fast food type.</li> <li>●Accompanying Tabletop fast food type.</li> <li>●Accompanying Tabletop auto lift type.</li> </ul>
Fry basket (Auto lift type)			
Debris removing net			<ul style="list-style-type: none"> <li>●Accompanying Tabletop type. (However, MEF-13TE is excluded.)</li> <li>●Accompanying Tabletop auto lift type.</li> <li>●Used to scoop up oil debris in Oil tank.</li> </ul>
Drain oil support			<ul style="list-style-type: none"> <li>●Accompanying Tabletop type.</li> <li>●Used to drain oil.</li> </ul>
Drain oil flexible hose			<ul style="list-style-type: none"> <li>●Accompanying Tabletop fast food type.</li> </ul>
Drain oil hose			<ul style="list-style-type: none"> <li>●Accompanying Tabletop auto lift type (MEF-8TLE).</li> </ul>
Attaching tool			<ul style="list-style-type: none"> <li>●Accompanying Tabletop fast food type.</li> <li>●Used when connecting drain oil flexible hose.</li> </ul>

The following items are available as option. Also you can make an additional purchase of the same accessories. Please contact us about more details at our sales office or distributor which you bought Fryers.

Option name	Shape	How to use
Sliding plate for Tempura		<ul style="list-style-type: none"> <li>●Used to form Tempura batter when you fry Tempura.</li> </ul>
Top oil cut plate		<ul style="list-style-type: none"> <li>●Used to put in the upper parts of Heater box. Used to cut oil according to put on fried foods here.</li> </ul>
Flat screen net		<ul style="list-style-type: none"> <li>●Used to put on top of Top oil cut plate. Used to cut oil.</li> </ul>

## 2-1 Preparation before use

### • WARNING

- Do not place or use spray cans, or combustible, volatile or inflammable substance near the appliance.
- Turn on ventilation facilities such as exhaust fan while in use.

### • CAUTION

- Do not place any material weak to heat near the appliance.
- Do not touch electrical components such as power plug or operate electric switches with wet hands.
- In case of any part broken, do not continue to use and replace such part with a new one.
- Do not use when the appliance is dirty.
- Do not use any tools or accessories other than the designated ones.
- Do not dry-heat.
- Do not use for any purpose other than cooking.

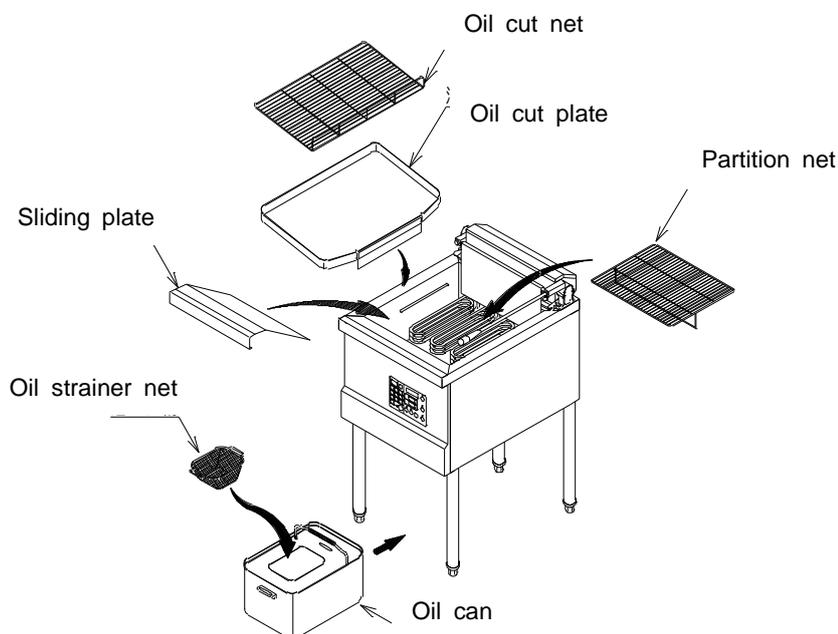
### 1) Preparation before use

#### <The Fixed regular type>

① Make sure that Heater is down in Oil tank.

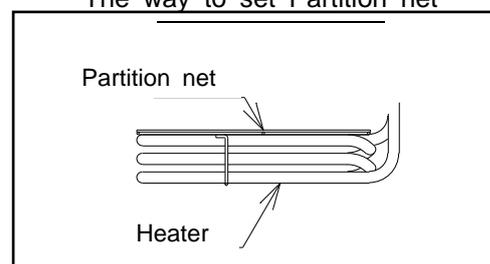
② Confirm whether the using parts are installed.

※The Fixed regular type : Partition net, Oil can, Oil strainer net, Sliding plate, Oil cut plate, Oil cut net.

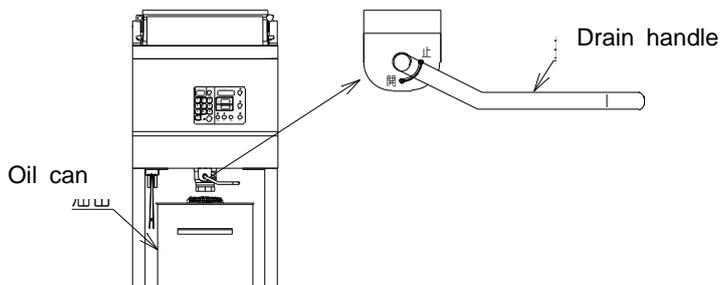


【The Fixed regular type】

The way to set Partition net



③ Confirm whether oil drain handle is at the stop position.



【The Fixed regular type】

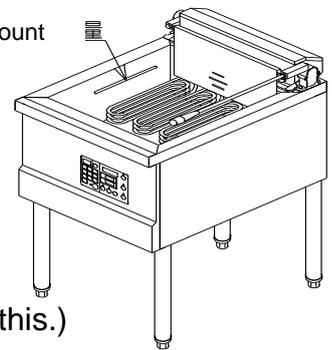
④ Pour oil into Oil tank.

- Pour oil at the specified amount of oil.

※ There is a mark of the oil amount inside of Oil tank. The center of the mark is the specified oil amount.

When oil is heated, the volume expands to the top of the mark.

Appropriate oil amount



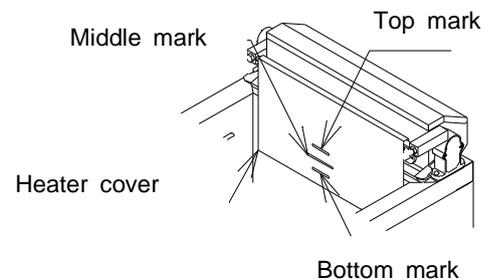
- Heater cover mark is as following below.

Top mark: The upper limited of oil (Do not pour oil more than this.)

Middle mark: Appropriate amount of oil.

Bottom mark: The lower limited of oil.

(Be sure to add oil when it is less than this.)



#### • CAUTION

● Confirm whether there is no water left before putting oil in Oil tank.

It is very dangerous that you may have a risk of burn injury because the oil may spit on you when remaining water is boiled while in use.

● Always use cold oil to pour into the oil tank.

Pouring hot oil into Oil tank is very dangerous because it may cause burn injury.

● Use lard heating (Melt function) in case of using a solid oil such as lard.  
(refer to 2-4 other usage)

⑤ Ventilate with ventilation system.

⑥ Turn on the main power (Hand switch).

## 2-2 Basic usage

### • WARNING

- Do not place or use spray cans, or combustible, volatile or inflammable substances near the machine.
- In case of abnormality, or earthquake or fire, stop the use and turn the main power (Hand switch • Consent) off.
- Turn on ventilating facilities such as exhaust fan while in use.
- Do not leave the machine unattended while in use.
- Do not let children operate the machine.
- Turn the main power (Hand switch, plug) completely off after operation.

### • CAUTION

- Do not take out cooked food with bare hands.
- Take out cooked food immediately after cooking. ● Set appropriate temperature and time.
- Do not touch any parts except operation parts while in use and just after use.
- Do not touch electrical components or operate electric switches with wet hands.
- Do not dry-firing ● Do not cool rapidly.
- Please use only for the purpose of fried and fry cooking.
- Do not operate / stop equipment by connecting or disconnecting the power plug.
- Do not use chlorine type detergent of solid or powder, and bleach.
- Do not use a metal scrubbing brush, cleanser and polishing power.

### 1) How to operate

<Fixed Standard Type>

<Fixed Fast Foods Type>

<Tabletop Type (MEF-13TE)>

#### ◆ [Menu mode]

※Please refer “2-3 How to use Menu Mode Operation” for menu registration method.

#### ① Press the power switch.

- Power lamp (Yellow) lights.
- Setting information will be displayed as follows:  
“Preset Time” on the timer display.  
“Current Temperature” on the current temperature display.  
“Preset Temperature” on the preset temperature display, and  
“Menu Number” on the menu display.



#### ② Press the ten key switches to select the registered menu number.

- If the number is 1 digit, it will be confirmed after 3 seconds.  
Or it will be confirmed with menu setting switch.
- If the number is 2 digits, it will be confirmed after inputting the numbers  
e.g.) The menu number is 10.



Press “1” then “0” on the ten key switches.

※Settings can be checked by pressing the menu setting switch.

③ Press the heating start switch.

- Heating lamp (Red) lights and heating starts.
- ※Once the temperature reached at appropriate temperature, appropriate temperature lamp (Green) is turned on.



④ Once the appropriate temperature lamp (Green) lights, you can start cooking.

Put cooked food in to the oil tank.

- Appropriate temperature range is  $\pm 1.0^{\circ}\text{C}$  from the preset temperature.
- ※Once the temperature exceeded the preset temperature, heating lamp (Red) will blink.



⑤ Press the Start/Stop switch.

(The switch can be used as a kitchen timer.)

- The timer display starts down counting.
- ※If you want to abort cooking, press the Start/Stop switch again. Down counting is terminated.



⑥ Once it is the preset time the buzzer is sounded to notify the completion.

Take cooked food from the oil tank with a scoop net etc.

- The buzzer is sounded 5 seconds before of the preset time.
- Once "End" is displayed on the timer display, press the Start/Stop switch to finish cooking.



◆ [Manual mode]

- ※Under the manual mode, you can cook even though the temperature has not reached at appropriate temperature.
- ※The preset temperature is the one for the selected menu number.

① Press the manual switch.

- Manual lamp (Yellow) blinks



② Press the ten key switches to set desired cooking time.

- "Preset time" is displayed on the timer display.
- The timer setting can be done between 0 minute 00 second and 99 minutes 59 seconds. e.g.) The preset time is 3 minutes 40 seconds. Press "3", "4", then "0" on the ten key switches.



③ Press the Start/Stop switch.

(The switch can be used as a kitchen timer.)

- Manual lamp (Yellow) lights.
- The timer display starts down counting.
- ※If you want to abort cooking, press the Start/Stop switch again. Down counting is terminated.



④ Once it is the preset time, the buzzer is sounded to notify the completion.

**Please take cooked food from the oil tank with a scoop net etc.**

- The buzzer is sounded 5 seconds before of the preset time.
- Once “End” is displayed on the timer display, press the Start/Stop switch to finish cooking.



## 2) How to stop \_\_\_\_\_

① Press the power switch to “OFF” the power.

- All displays are turned off.

② Turn off the main power (local switch).



## 2-3 How to use Menu Mode Operation

### 1) How to register menu

① When the power is "ON", press the ten key switches to register desired menu number.

- "Menu Number" is displayed on the menu display.
- You can register up to 99 menus.

e.g.) The menu number is 10.

Press "1" then "0" on the ten key switches.



② Press the menu setting switch more than 2 seconds.

- The buzzer is sounded and the mode enters a menu program mode.
- "Menu Number" blinks on the menu display.



③ Please configure desired settings.

#### ■ Setting temperature [O n d o]

- "Ondo" is displayed on the timer display.
- "Preset Temperature" is displayed on the preset temperature display. (Default setting: 180°C)
- Press the ten keys to set desired "Ondo (Temperature)".

※Temperature setting range: from 100 to 220°C

e.g.) The preset temperature is 180°C.

Press "1", "8", then "0" on the ten key switches.



- Once the menu setting switch is pressed, you will be prompted to time settings.

### Notification

- To modify details of registered menu, register again reference to "How to register menu" from the step ①.
- If more than 1 minute passed without any operation, the display is returned to the initial display.

## 2-4 Other usage

### ■ ECO mode

- When the ECO switch is pressed, the mode enters an ECO mode.
- “ECO” is displayed on the timer display panel.
- Under the ECO mode, ECO lamp (Yellow) lights and the oil temperature is maintained at  $-20^{\circ}\text{C}$  from the preset temperature. It is economical to use in an idle time.



※To cancel, press the ECO switch again.

ECO mode is released.

※You can set automatic migration to an ECO mode with no operation more than 20 minutes. (Contact our nearest sales branch or distributor of our company for configuration changes.)

### <No auto lifting>

- ① With “J”, the first cooking is conducted. The notification buzzer is sounded 5 seconds before of the preset time, and the sound continues after the preset time.
- ② Take cooked food out from the oil tank.
- ③ If you press the Start/Stop switch, the mode is migrated to “t-J”.
- ④ With “t-J”, the system is in a standby condition. The notification buzzer is sounded 5 seconds before of the preset time, and the sound continues after the preset time.
- ⑤ Put cooked food into the oil tank.
- ⑥ If you press the Start/Stop switch, the mode is migrated to “2-J”.
- ⑦ With “2-J”, the second cooking is conducted. The notification buzzer is sounded 5 seconds before of the preset time, and “End” is displayed on the timer display.
- ⑧ Press the Start/Stop switch to finish cooking.

### ■ Lard heating (Melting function)

- It is the function to melt gradually solid oil such as lard.

(When oil temperature is below  $60^{\circ}\text{C}$ , heating process is conducted for 8 minutes with the cycle of ON for 5 seconds, OFF for 10 seconds, then ON 5 seconds....)

- ① Press the lard switch when the power is “ON”.
  - Lard lamp (Yellow) lights during the heating process of lard.
  - ※ No heating operation can be accepted while heating.



- ② Press the heating start switch.
  - Heating lamp (Red) lights and heating process of lard starts.
  - The timer display is down counting. (For 8 minutes)



- ③ Once the heating process of lard (for 8 minutes) is completed, the process is migrated to general heating.  
Or when the oil temperature is over  $60^{\circ}\text{C}$ , the process is migrated to general heating.



- Lard lamp (Yellow) is turned off.

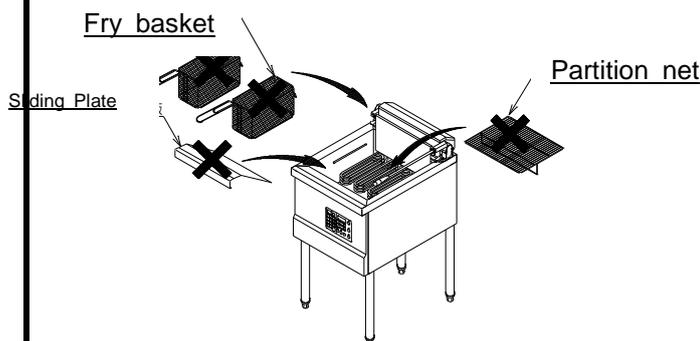
※To cancel, press the heating start switch.

Lard lamp (Yellow) is turned off and heating process of lard is released.

※Lard heating can be used when oil temperature is below  $60^{\circ}\text{C}$ .

## 【How to put solid oil into the oil tank】

※If you put the solid oil in the solidified state, remove the partition net from the heater and never attach the sliding plate and fry basket.



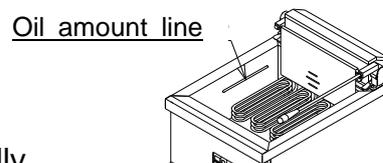
【The Fixed type】

【Tabletop type (MEF-13TE)】

- Put solid oil so as to it touches the heater entirely.
- Put solid oil up to the oil amount line.

If it is not enough after melting, pour them additionally.

※Agitate inside the tank from time to time because it takes longer to melt for the part below the heater.



## 【Cautions to use solid oil】

- When you use solid oil such as lard, use lard heating (the melting function).
  - Once lards are melted into the liquid state, flip up the heater and attach the partition net after cooling down the heater completely before cooking.
- ※Make sure the heater is cooled down before attaching the partition net.  
It is extremely dangerous to attach it when the heater is still hot.

## ■Extension of cooking

- For the extension of cooking, the cooking time is extended for 10 seconds when you press the extension switch.(Whenever you press the extension switch, 10 seconds are added to the cooking time.)



- A 10-seconds cooking can be done even though no cooking process is going on if the extension switch.
- ※During the extension, cooking can be down even if the temperature has not reached at appropriate temperature.

## ■Melodies to notify the completion

- You can change the sound to notify the completion of cooking into the following melodies:

完了メロディ
大きな古時計
第九 (ベートーベン)
シャボン玉
キラキラ星
エリーゼのために
月光 (ベートーベン)
ロンドン橋

How to use

## 2-5 Precautions for use

### ● Do not drain oil when the power is on.

- It is very dangerous because there is a risk for damage for the product or accident caused by the product.  
Never do that.

### ● If you neglect cleaning of the oil tank and continue to cook, the product is in trouble.

- If cooking is continued, fixed materials such as debris might be generated on the bottom of the oil tank.
- If the fixed materials are heated, the tank is deformed or electrical component at the bottom part of the main body is damaged

※If there is a dirt at the bottom of the oil tank, clean the tank with neutral detergent with great care.

How to use

## 2-6 Draining of oil

### • WARNING

- Drain oil after the oil temperature is cooled down (below 50°C).

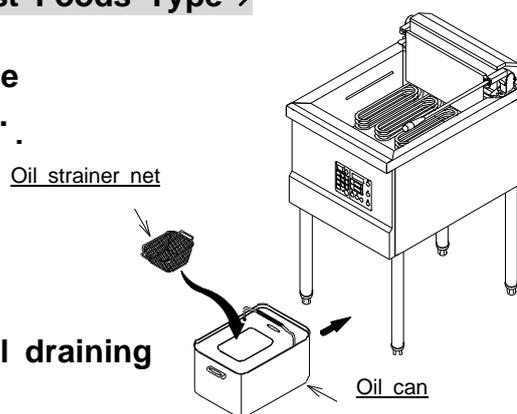
### • CAUTION

- When draining oil, drain little by little.
- When draining oil from the oil tank, drain into the oil can (accessory) or 18-liter can, etc. after the oil has been cooled down enough.

#### <The Fixed Standard Type>

#### <The Fixed Fast Foods Type >

- ① Put oil strainer net over oil can, and place them under oil drain port of the appliance. Put it so as to the drawer handle is toward you.



- ② Make sure oil is cooled down, and turn oil draining handle slowly to the direction of "Open".

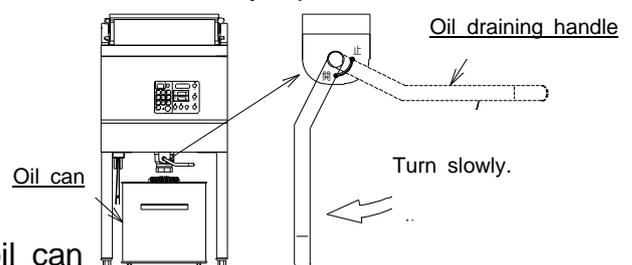
If turning the handle quickly, it's dangerous because oil may splash.

- ③ If oil can is full of oil, turn oil draining handle to the direction of "Stop".

Full amount is about 70% of oil can.

If draining more than this, it is dangerous because oil may splash when pulling out oil can

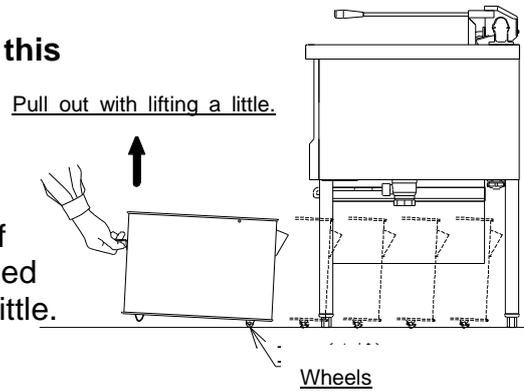
Keep checking oil amount while draining, not to let oil overflow.



④ Pull oil can slowly and lifting up a little to this end with holding the drawer handle of oil can to remove.

If pulling out quickly, it's dangerous because oil may splash.

There are wheels at the back of the bottom of the oil can. Therefore, the oil can may be pulled with ease with lifting up the drawer handle a little.



### CAUTION

- After installation of the appliance, open/close oil draining valve for several times. Valve may be hard because it is not fit in yet.
- It's very dangerous to drain hot oil.
- When draining solid oil such as lard, drain after oil is cooled down to the degree not to solidify.

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General commercial kitchen Appliances & Equipment

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