

# OPERATOR'S MANUAL

## STERILIZING CONTAINER FOR WASTES

# ST-ZERO

The use of ST-ZERO should be limited to those who have had specialized biosafety education and training.

Before starting operation, read this manual thoroughly for a complete understanding of the ST-ZERO and its proper operation.

Be sure to keep this Operator's manual handy with the Autoclave Operator's manual for future reference.

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**TOMY**

# 1. FOR SAFE OPERATION

Sterilizing container for wastes is a product for autoclaving with contaminated substances exposed pathogenic substances.

Operator should have specialized biosafety education and training before use. Should the ST-ZERO be operated incorrectly, there is danger of death or serious injury to the operator and personnel in the vicinity. Before commencing operation, read this operator's manual thoroughly for a complete understanding.

<symbols>

	Denotes general ban or prohibition. The specific instruction is described as an illustration or in a statement near the symbol.
	Denotes general mandatory action. The specific instruction is described as an illustration or in a statement near the symbol.

## WARNING



Do not use when corrosion, deformation is found in the main unit, lid or stand.

- Contravention is dangerous with likelihood of biohazard because of injuring hands or damaging gloves.



Do not use when sharp part is found in the main unit, lid or stand.

- Contravention is dangerous with likelihood of biohazard because of injuring hands or damaging gloves.



Do not use when liquid leaks from anywhere other than the opening part to take out contaminants.

- Contravention is dangerous with likelihood of biohazard because of leaking contaminated liquid.



When performing autoclave, set appropriate sterilization conditions according to waste or packaging.

- Contravention is dangerous with likelihood of biohazard because of the pathogenic substance.



Handle contaminants with extra attention to the article's shape.

- Contravention is dangerous with likelihood of biohazard because of injuring hands or damaging gloves.

## 2. EXPLANATION OF THE ST-ZERO

The ST-ZERO is a sterilizing container for wastes to sterilize long shape of contaminants such as disposable pipet with liquid adhering to a vertical type autoclave. It is designed and manufactured so that liquid does not flow out by flat placement and vertical mounting. However, it will not be sealed even if the lid is closed.

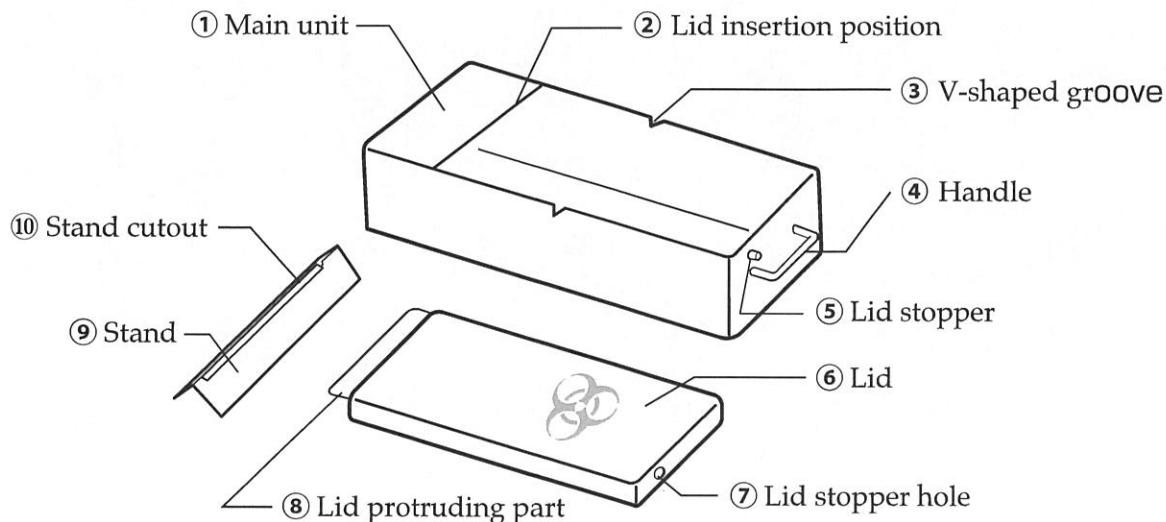
ST-ZERO only can be used to place in the biosafety cabinet, to carry between the biosafety level 1 ~ 3 laboratories, or to operate autoclaving in the biosafety level 1 ~ 3 laboratories. Do not use for other use (e.g.: to maintain sterilization of stored items, or to carry contaminants between different laboratories.)

### 2-1. Constitution

The items listed in the below are consisted with ST-ZERO.

Parts	Main unit	Material: stainless steel (SUS 304)	1 pc
	Lid	Material: stainless steel (SUS 304)	1 pc
	Stand	Material: stainless steel (SUS 304)	2 pcs
Documents	Operator's Manual		1 set

## 2-2. Name and function



### ① Main unit

For storing contaminants. Operate in a flat state in which the opening portion faces upward, or hand-carry state with the handle facing up.

### ② Lid insertion position

For fixing the lid. It is a pair with the lid protruding part.

### ③ V-shaped groove

A mark for placing the lid on the main unit. The lid stopper hole side is matched with V-shaped groove.

### ④ Handle

For carrying.

### ⑤ Lid stopper

For fastening the lid. It is a pair with the lid stopper hole.

### ⑥ Lid

For closing the opening portion of the main unit. It will not be sealed even if the lid is closed.

### ⑦ Lid stopper hole

For fastening the lid. It is a pair with the lid stopper.

### ⑧ Lid protruding part

For fixing the lid when closed. It is a pair with the lid insertion position.

### ⑨ Stand

For placing the main unit. For securing airflow in a biosafety cabinet.

### ⑩ Stand cutout

For placing the main unit. Place the stand cutout faces upward.

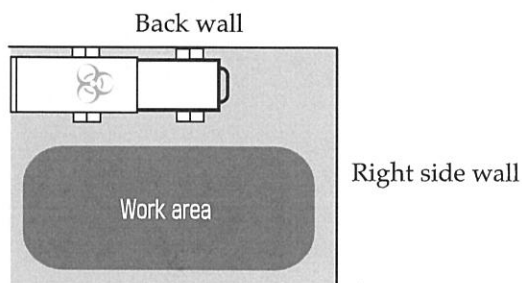
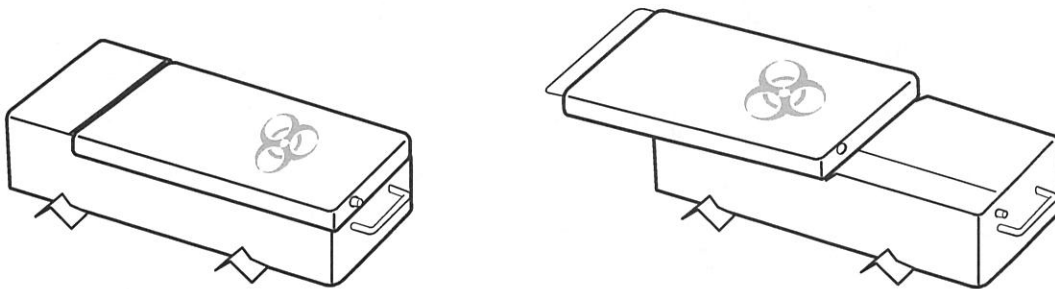
# 3. FLOW OF OPERATION

## 3-1. Place ST-ZERO in a biosafety cabinet

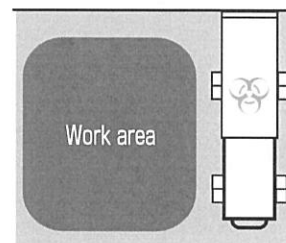
An unexpected airflow may be occurred depending on the usage environment or its way when placing ST-ZERO in a biosafety cabinet. It is recommended to check airflow by using smoke tester before operation.

### <Place on sideways>

1. Bring ST-ZERO into a biosafety cabinet.
2. Place the stand 1pc or 2 pcs, to stand cutout facing upward.
3. Place the main unit on the stand.
4. Place the lid on the main unit with V-shaped groove as a guide.
5. Place the main unit near the wall on the far side.
  - ※ The aerosol near the main unit flows to the back of the cabinet when placing correctly.
  - ※ The area in front of ST-ZERO is a work area less affected by aerosol.
  - ※ If stand is not used or ST-ZERO is placed near side, the aerosol near the main unit flows in front of the cabinet.



<Place on sideways>



<Place on vertical>

### <Place on vertical>

1. Bring ST-ZERO into a biosafety cabinet.
2. Place the stand 1pc or 2 pcs, to stand cutout facing upward.
3. Place the main unit on the stand.
4. Place the lid on the main unit with V-shaped groove as a guide.
5. Adjust ST-ZERO as parallel to the left and right side wall.
  - ※ The aerosol near the main unit flows to the back of the cabinet when placing correctly.
  - ※ The area in front of ST-ZERO is a work area less affected by aerosol.
  - ※ There is no effect on airflow With or without using the stand.

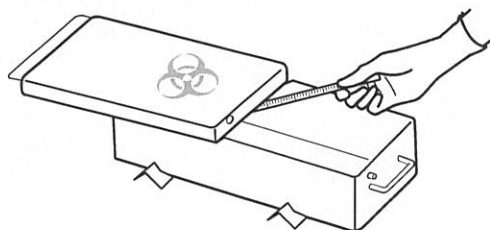
## 3-2. Place contaminants

### 1. Place contaminants.

※ It may be difficult to remove the articles depending on the type and amount of the articles.

For the reference, 25ml pipet x 25pcs as maximum amount.

※ Be careful for the amount of liquid when only liquid is in ST-ZERO, The maximum capacity is approx. 650ml in hanging position.



## 3-3. Close the lid

### 1. Put water approx. 100ml.

※ For effective autoclave sterilizing.

### 2. Close the lid with placing the lid protruding part is in the lid insert position.

### 3. Confirm that the lid fastener hangs over the lid stopper hole.

### 4. Affix the process indicator (sterile tape, sterile label etc) and securely fix the lid.

※ It is recommended to use process indicator(sterile tape, sterile label etc) in order to confirm autoclave processing.

## 3-4. Take out ST-ZERO

### 1. Disinfect the surface of ST-ZERO with chemicals.

### 2. Take out ST-ZERO from biosafety cabinet.

### 3. Hold the handle and stand it slowly.

※ ST-ZERO is not sealed even if the lid is closed. Do not use it as sealed container.

※ Move carefully in order not to occur aerosol inside of ST-ZERO.

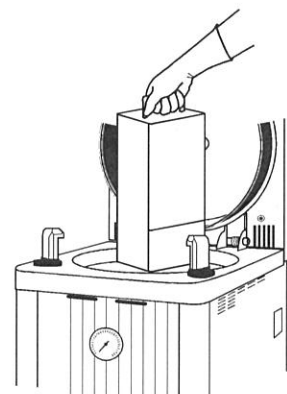
## 3-5. Autoclave

### 1. Put into a vertical type autoclave.

### 2. Set sterilize conditions and start operation. Set appropriate conditions according to the below table.

Table : Guidelines for setting ※ 1

Setting temperature	Liquid	Setting time
121°C	Water 100 ml	60 min
	—	80 min
135°C	Water 100 ml	10 min
	—	40 min



※ 1 The values in the table are guidelines for setting when 1 pcs ST-ZERO storing 30 pcs pipet is autoclaved by TOMY BSX-500. It does not guarantee complete sterilization.

## 3-6. Cleaning ST-ZERO

1. Take out autoclaved contaminants from ST-ZERO.  
※ Contaminants may be deformed into unexpected shape by autoclave. Be careful not to injure your hand or damaging globes.
2. Wash ST-ZERO with water.
3. Wipe moisture with a soft cloth and dry.  
※ Wipe with ethanol when it is hard to peel process indicators off.

## 4. PREVENTIVE MAINTENANCE

### 4-1. Maintenance of ST-ZERO

#### <How to maintenance>

1. Confirm the edge of the main unit, the lid, and the stand are not sharp.
2. Confirm there is no corrosion or deformation in the main unit, the lid and the stand.
3. Put water into the main unit and confirm there is no water leak.  
※ Do not operate when found sharp part, corrosion, deformation, or water leak.

### 4-2. Sterilization and disinfection of ST-ZERO

#### <How to sterilize>

Autoclave with appropriate temperature.

- ※ Corrosion may occur when autoclaving with putting disinfectant.

#### <How to disinfect>

Disinfect with appropriate disinfectant.

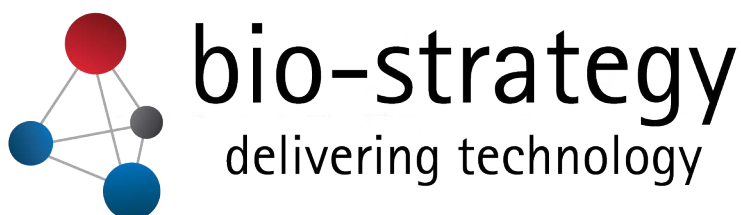
## 5. SPECIFICATIONS

Model name	Sterilizing container for wastes ST-ZERO
Use	Storage in a biosafety cabinet Movement of contaminants in the laboratory biosafety level 1~3 Autoclave in the laboratory biosafety level 1~3
Material	Stainless steel (SUS 304)
Dimensions(mm)	106W, 350D, 80H (Protrusion 380D)
Weight	1.2kg
Attachment	Stand 2 pcs, operator's manual 1 set

(ST-ZERO)

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