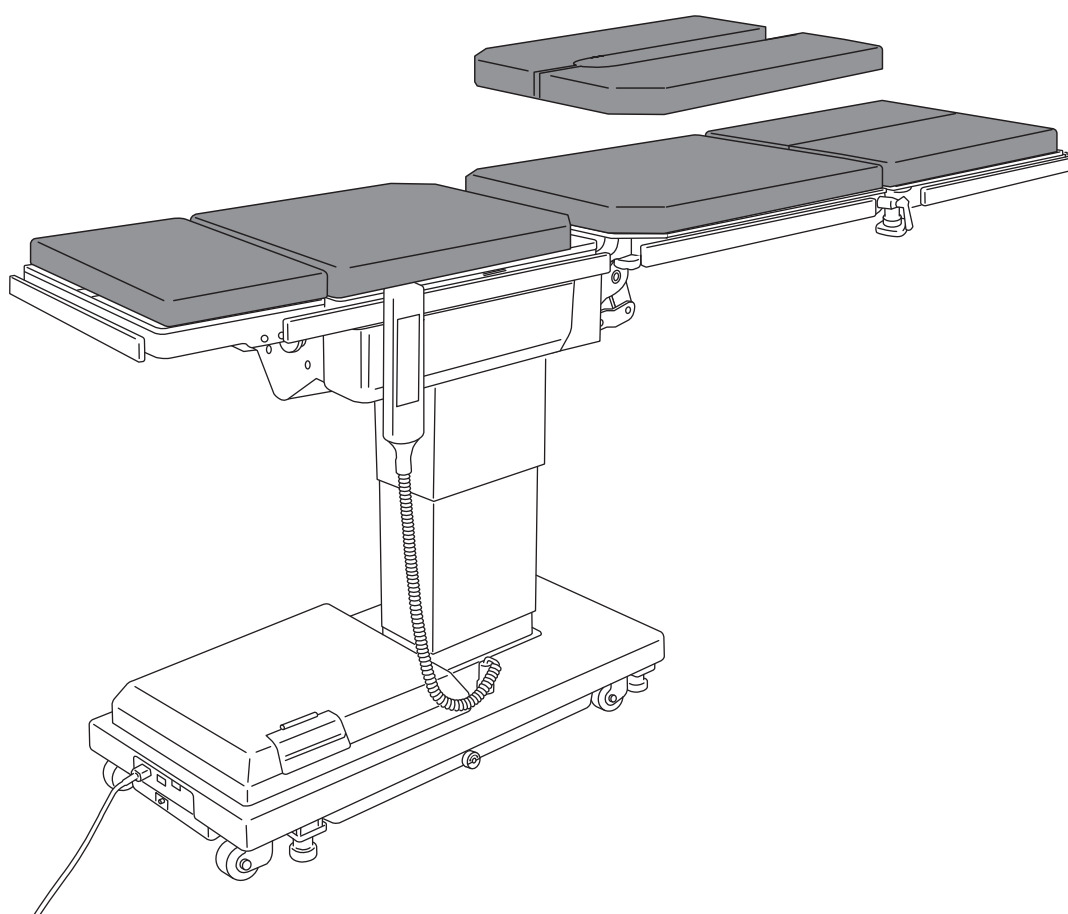




## Operating Table MOS-1302B

### Operator's Manual



This operating table is designed for medical operations. Using this operating table for any other purpose other than this intended use may cause serious injury.

The operator and the person in charge of the maintenance of this operating table must read this operator's manual thoroughly and understand the contents before operating, inspecting, adjusting and maintaining it.

Keep this manual for reference in a place where is readily accessible.

# Table of contents

<b>1.</b>	<b>Introduction .....</b>	<b>1</b>
1.1	This manual .....	1
1.2	Intended use and this product .....	1
1.3	Accessories .....	2
<b>2.</b>	<b>Safety precaution .....</b>	<b>3</b>
2.1	Read thoroughly before using .....	3
2.2	Labeling .....	8
<b>3.</b>	<b>Section Introduction .....</b>	<b>11</b>
3.1	Main unit .....	11
3.2	Hand controller .....	12
3.3	Foot switch (optional) .....	13
<b>4.</b>	<b>Operation .....</b>	<b>14</b>
4.1	Installation and battery charging.....	14
4.2	Turning on/off the power.....	19
4.3	Operating the emergency stop switch .....	22
4.4	Fixing and unfixing the operating table.....	23
4.5	Tilting the tabletop laterally .....	24
4.6	Trendelenburg .....	25
4.7	Back section up/down.....	26
4.8	Changing the tabletop height.....	27
4.9	Seat section up/down .....	28
4.10	Return to level .....	29
4.11	Adjusting the head section .....	30
4.12	Attaching/Detaching the seat section .....	32
4.13	Adjusting the leg section.....	33
4.14	Attaching/Detaching the arm (optional) .....	39
<b>5.</b>	<b>Maintenance and inspection .....</b>	<b>42</b>
5.1	Inspection before and after use .....	42
5.2	Cleaning and disinfection .....	44
5.3	Maintenance by providers .....	44
5.4	Periodic replacement parts.....	45
5.5	Version information of the software .....	45

<b>6.</b>	<b>Specification .....</b>	<b>46</b>
6.1	Specification table .....	46
6.2	External view .....	48
<b>7.</b>	<b>Troubleshooting .....</b>	<b>49</b>
7.1	When the hand controller cannot be used.....	49
7.2	When the brake cannot be released.....	50
<b>8.</b>	<b>Before contacting for repairs .....</b>	<b>51</b>
<b>App.-1</b>	<b>Electromagnetic Compatibility .....</b>	<b>53</b>
<b>App.-2</b>	<b>Glossary.....</b>	<b>56</b>





# 1. Introduction

## 1.1 This manual

This manual contains information for safely and effectively using this product.

Before operating this product, read this manual thoroughly to understand how to operate and inspect the product.

Failure to follow these instructions could lead to serious injury.

The safety information is categorized as per the following so that the contents of warnings and cautions, and the details of warnings and cautions which are labeled on the product may be comprehended.



If this indication is ignored and the product is incorrectly used, serious injury or death may result.



If this indication is ignored and the product is incorrectly used, injury and/or damage to property may result.

### NOTE

This notice notes additional information on the product's functions.

The warning and caution notices on this manual relating to operating and inspecting, apply to the intended use (surgical operations) of this product.

If the product is used for purposes other than surgery, the user is responsible in regard to safety for performing operations and inspections which are not contained in this manual.

## 1.2 Intended use and this product

This product is the operating table on which a patient is placed for surgical operations.

The product is intended to support a patient during surgical operations.

In conforming with the objectives of surgery, the product is equipped with features for adjusting its height, and for freely changing and setting the patient's body position.

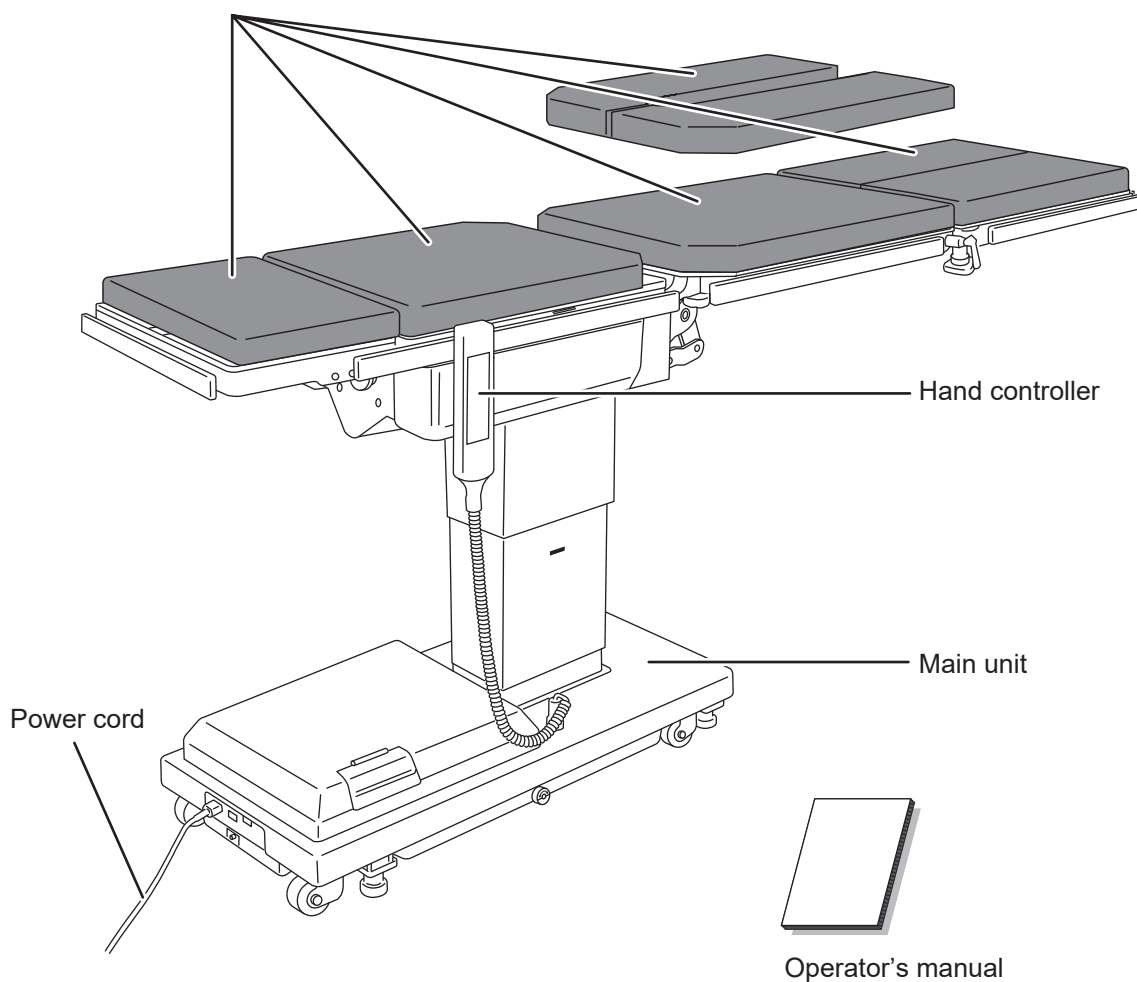
The product uses both medical grade outlets and batteries as power sources.

This product is to be used by health care professionals, including but not limited to surgeons, nurses and biomedical technicians.

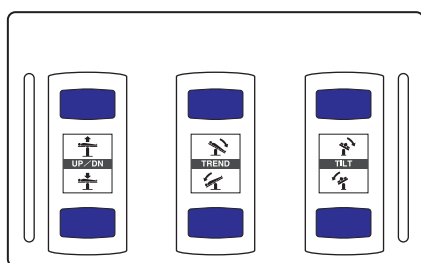
## 1.3 Accessories

### ■ Standard components and accessories

Flame-Retardant and Waterproof Pads (SUSANO Pad)  
(for Head Section Type A, Back Section Type C, Seat Section Type D,  
Seat Section Type E, and Double Leg Section Type C)

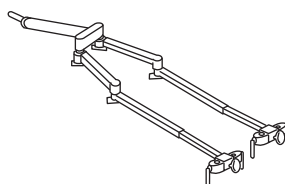


### ■ Optional parts

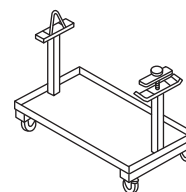


Foot switch

### ■ Separately sold accessories



Traction Device Arm  
Extension Arm, Right/Left



Cart

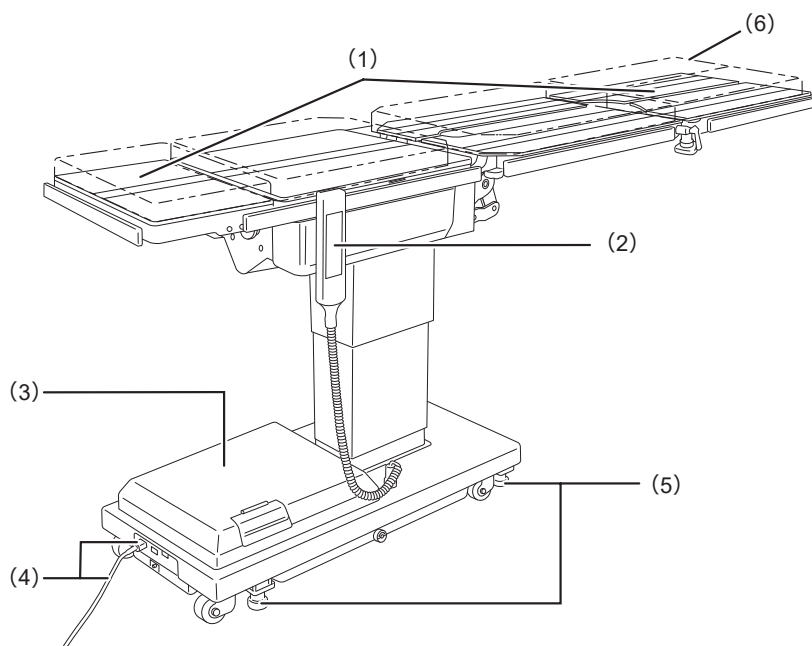
## 2. Safety precaution

2

Safety precaution

### 2.1 Read thoroughly before using

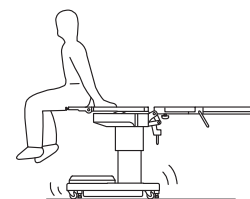
In using this product, carefully read the following warnings and cautions, and make sure to observe them. Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority in which the user and/or patient is established.



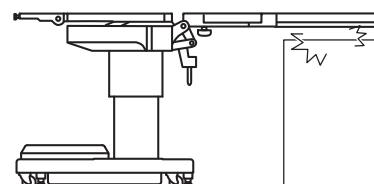
#### (1) Head section and leg section



Do not step or sit on the head section or the leg section(s).  
The operating table may tip over resulting in injury.

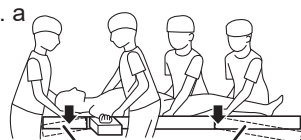


Before lowering the table or placing it in a reverse Trendelenburg position, check if there are any devices under the leg section. If the leg section comes in contact with devices and it is subjected to excessive force, the operating table may be damaged.



When transferring a patient from the operating table (Fig. a) or changing a patient's body position (Fig. b), do not apply excessive force on the head section or leg section.  
The operating table may get deformed or damaged.

Fig. a



Head section

Leg section

Fig. b



Head section

Leg section

## (2) Hand controller



**CAUTION**

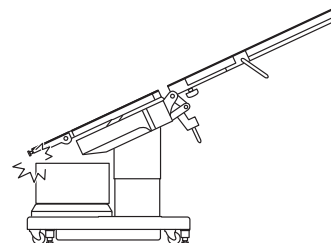
- Do not forcibly pull the hand controller cord.
- Do not subject the hand controller to strong shocks. The hand controller may get damaged.

## (3) Base



**CAUTION**

Do not place any objects on the base. An object may get caught and the operating table may get damaged.

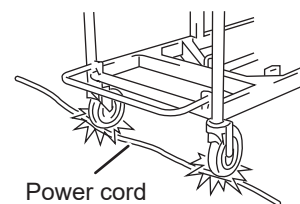


## (4) Power cord and power connector



**WARNING**

- Do not place any heavy objects on the power cord.
- Do not roll over the power cord with a casted device.
- Do not forcibly pull the power cord.
- Do not place any objects in the place where the power cord is to be unplugged from the medical grade outlet, which would obstruct it from being unplugged.
- Take waterproofing measures such as covering the power connector with a plastic sheet, etc. so that liquids do not infiltrate inside of the power connector. If liquids infiltrate inside of the power connector, it may cause fire or damage.



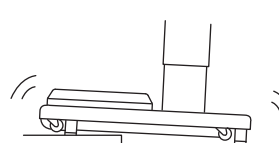
Power cord

## (5) Installation of the operating table

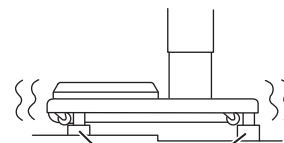


**WARNING**

- Do not install the operating table on an uneven floor.
- Do not place a pad under the base for raising the operating table. The operating table may tip over resulting in injury.



Uneven floor



Pad

## (6) Table pad

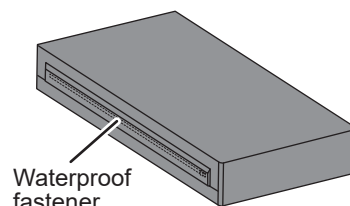


**WARNING**

Make sure to securely attach the table pads to the operating table so that they do not come off. The table pads may come off, and the patient may get injured.



- Attach the table pads straight along the Velcro fastenings from the edges. Especially, attach long table pads while holding them with your hands so that the surfaces do not get wrinkled. If the table pads rise up or buckle, they may get deformed or damaged.
- Do not apply tape, etc. directly on the table pads. Otherwise, they may get damaged.
- Place and store the table pads in flat places. Leaning or bending may get deformed or damaged.
- Do not store operating table accessories or other medical devices, etc. on the table pads. Otherwise, they may get deformed or damaged.
- The table pads maintain waterproofness when they are properly attached in their usage. If the table pads are attached other than the proper placement method in their usage, and liquids infiltrate inside, it may cause degradation.
- If liquids get on the table pads waterproof fastener, wipe them off quickly. If the waterproof fastener gets wet and the liquids infiltrate inside, it may cause degradation.
- Do not open the table pads waterproof fastener. If liquids infiltrate inside, it may cause degradation.



## ■ Patient's position during surgical operation



Position the patient's body 10 mm (0.39 in) or more away from the metal side rail. The side rail may produce high temperatures due to the usage of electric scalpels, etc., which may result in a burn injury.

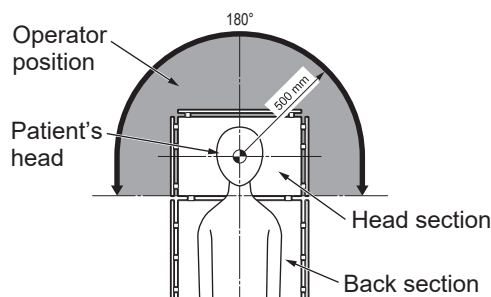
## ● Positioning the patient

Follow the steps below to position the patient.

- 1. Attach the accessory table pads onto the tabletop with their Velcro fastenings aligned with each other.**
- 2. Put the patient on the table pads. (Do not reverse the patients' head and leg orientations.)**
- 3. Position the patient according to the purpose of the surgical operation.**



Have the person who operates the operating table to operate it in a position where the emergency stop switch can be immediately pressed, and the patient's condition can constantly observed.





### ● Prohibited

- Do not disassemble and/or modify the operating table. Otherwise, malfunction may occur.

### ● Patient position

- When using the tabletop or accessories to secure a patient's body position, always observe the patient's condition. Being in the same position for long periods of time causes neuroparalysis or bedsores.

### ● Other medical electrical equipment to be used together with the operating table

- When using a high-frequency surgical equipment and/or a cardiac defibrillator etc. with the operating table, refer to their operator's manual provided by the manufacturers and observe the precautions and usage. Improper precautions and usage may cause the operator or the patient to get burned and/or devices to malfunction.
- When using medical electrical equipment etc. with the operating table, check that the operating table does not malfunction before using it. Electromagnetic interference may result in malfunctioning of the operating table.

### ● Weight capacity

- Do not apply loads which exceed the weight capacity (total of the patient and accessories)\*. The operating table may not function, which may result in failures.  
\* Elevation: 135 kg (300 lbs) / Operations other than elevation: 135 kg (300 lbs)

### ● Preventive maintenance and inspections

- Make sure to inspect and maintain the operating table before and after use. The operating table may require replacement of the parts due to significant wear, deterioration, and/or breakage depending on the usage period and frequency of use.
- For preventive maintenance and inspections, contact your distributor or MIZUHO directly.

### ● Antistatic measure

- Do not use the operating table on floors and/or with accessories that do not possess static electricity countermeasures. This may impede surgical operations.



### ● **Devices and accessories used together with this product**

- Before using other devices or accessories, thoroughly read the instruction manual of the devices and make sure that the operating table is not affected adversely. Before fitting on accessories from third party companies, contact your distributor or MIZUHO. Some accessories cannot be fitted on.
- While operating the operating table, check the position of other devices or the accessories used with them. They may come in contact with each other during the operation, the operating table, devices and/or accessories may get damaged.
- For hygiene, be sure to use sterilized drapes on the areas on this product where the patient comes into contact with it.

### ● **Moving and transporting**

- Do not move the operating table with a patient on it.
- Follow the procedures below to move the operating table.
  - \* Before moving the operating table, disinfect the entire operating table in order to prevent infection.
    1. Turn off the power and disconnect the power cord from the medical grade outlet.
    2. Check if the handles and levers are in fixed positions, and each section is fixed firmly.
    3. Unlock the brakes, and move the operating table.
  - \* Do not move the operating table by pulling on the head section or the leg section.
- The operating table should be transported with the following conditions met.
  1. Disinfect the entire operating table before transporting it.
  2. Take measures to prevent it from tipping over, such as lowering the tabletop to the bottom position.
  3. Actuate the brake.
  4. Suitably position cushioning on the product to prevent it from getting damaged during transport.
  5. Store the product in a container so that it does not get exposed to dust, and the weather.

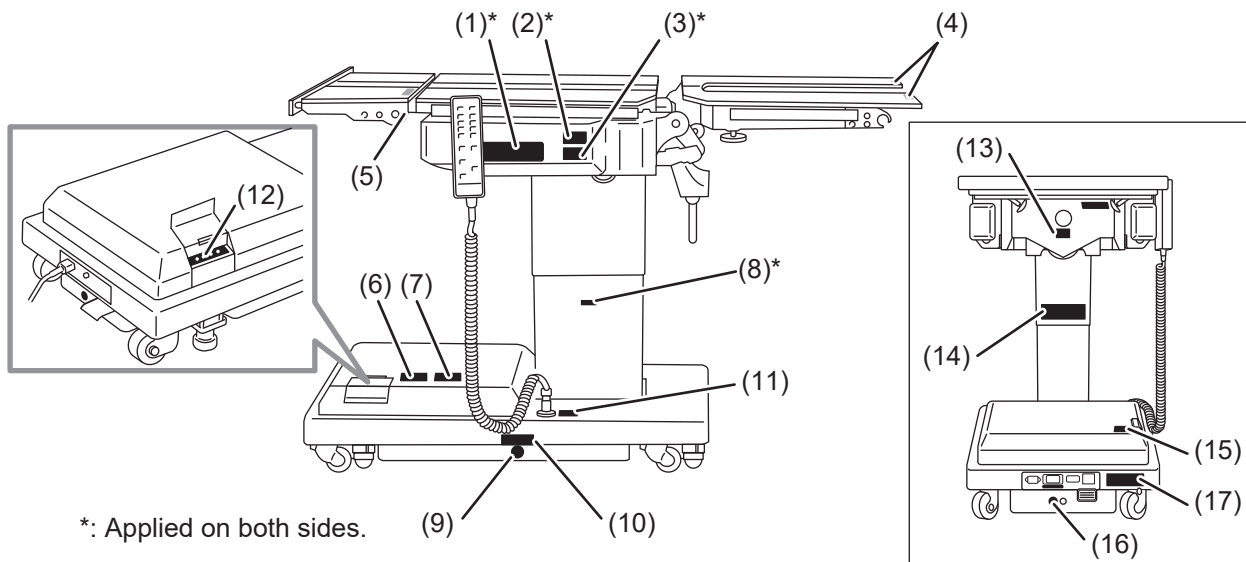
### ● **Disposal**

- In accordance with the European Union Waste Electrical and Electronic Equipment (WEEE) Directive, all electrical components and batteries must be disposed of in accordance with local regulations. Please contact your local distributor for proper disposal.
- Pay special attention to the following disposals:
  - a) Hydraulic Fluid
  - b) Lead Acid Batteries

## 2.2 Labeling

The operating table is labeled at the locations shown as below. Before use, make sure to understand the contents of the labels.

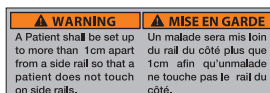
### Labels (1/2)



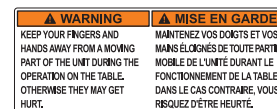
(1) C651304□



(2) C653624□



(3) C655732□



(4) C651310□ (ASIA)



(5) C651321□ (ASIA)



or C651314□ (EU)



or C651313□ (EU)



or C651318□ (US)



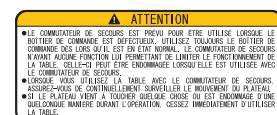
or C651317□ (US)



(6) C655803□



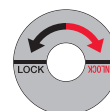
(7) C657333□



(8) C600020□



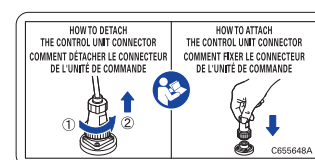
(9) C653516□



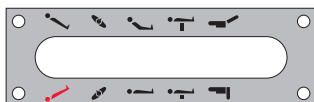
(10) C653515□



(11) C655648□



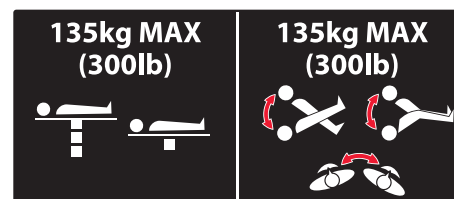
(12) C600162□



(13) C653614□



(14) C651305 □



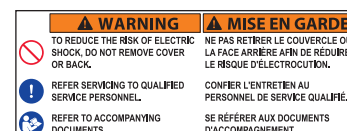
(15) C642002□



(16) C653513□

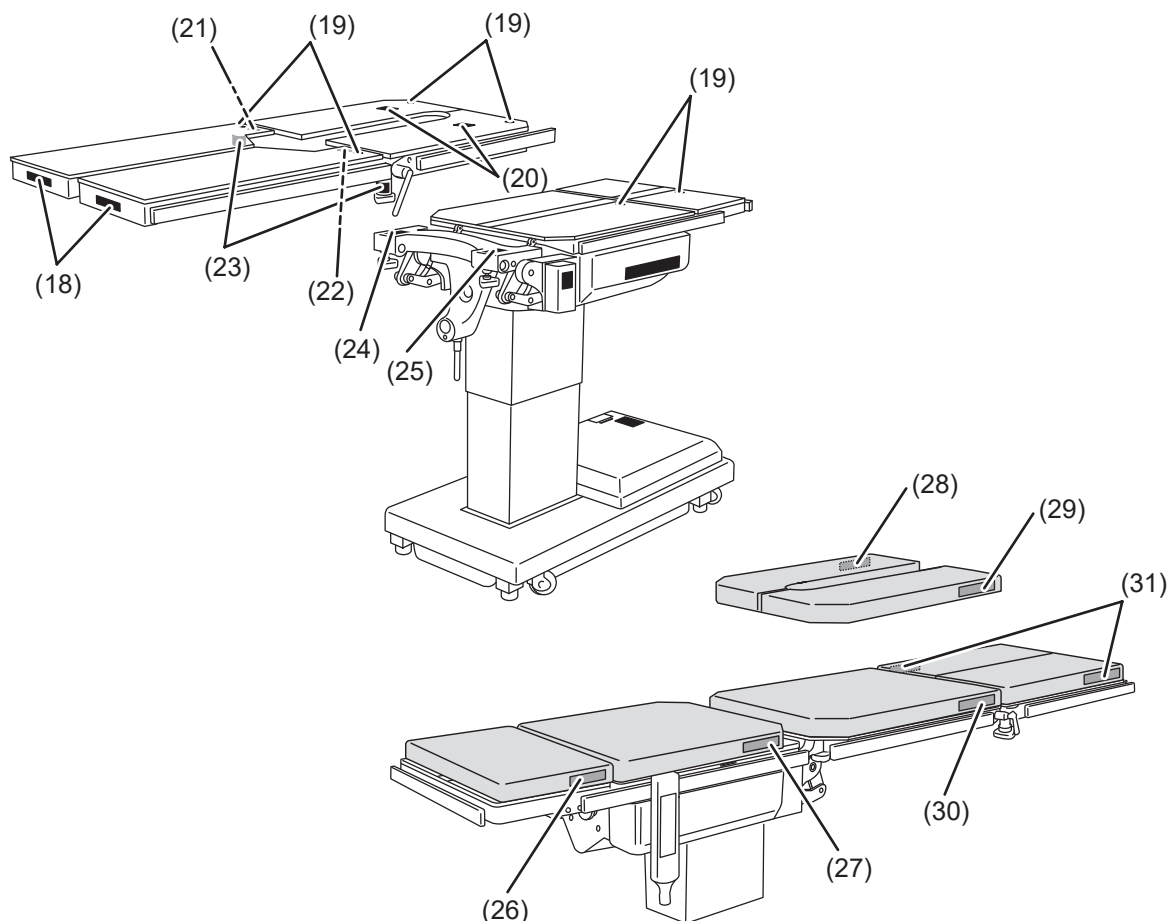


(17) C656740□





## Labels (2/2)



(18) C643029□



(19) C653620□



(21) C651312□ (ASIA)



(22) C651311□ (ASIA)



(20) C600187□



(24) C651306□



(25) C651309□



or C651316□ (EU)



or C651315□ (EU)



(23) C600516□



or C651320□ (US)



or C651319□ (US)



(26) PIN 558K5M1



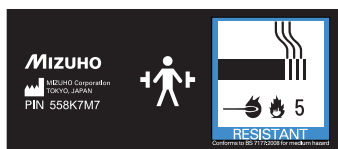
(27) PIN 558K6M6



(28) PIN 558K7M6



(29) PIN 558K7M7



(30) PIN 558K7M5



(31) PIN 558K8M7



## ■ Symbol mark for labeling

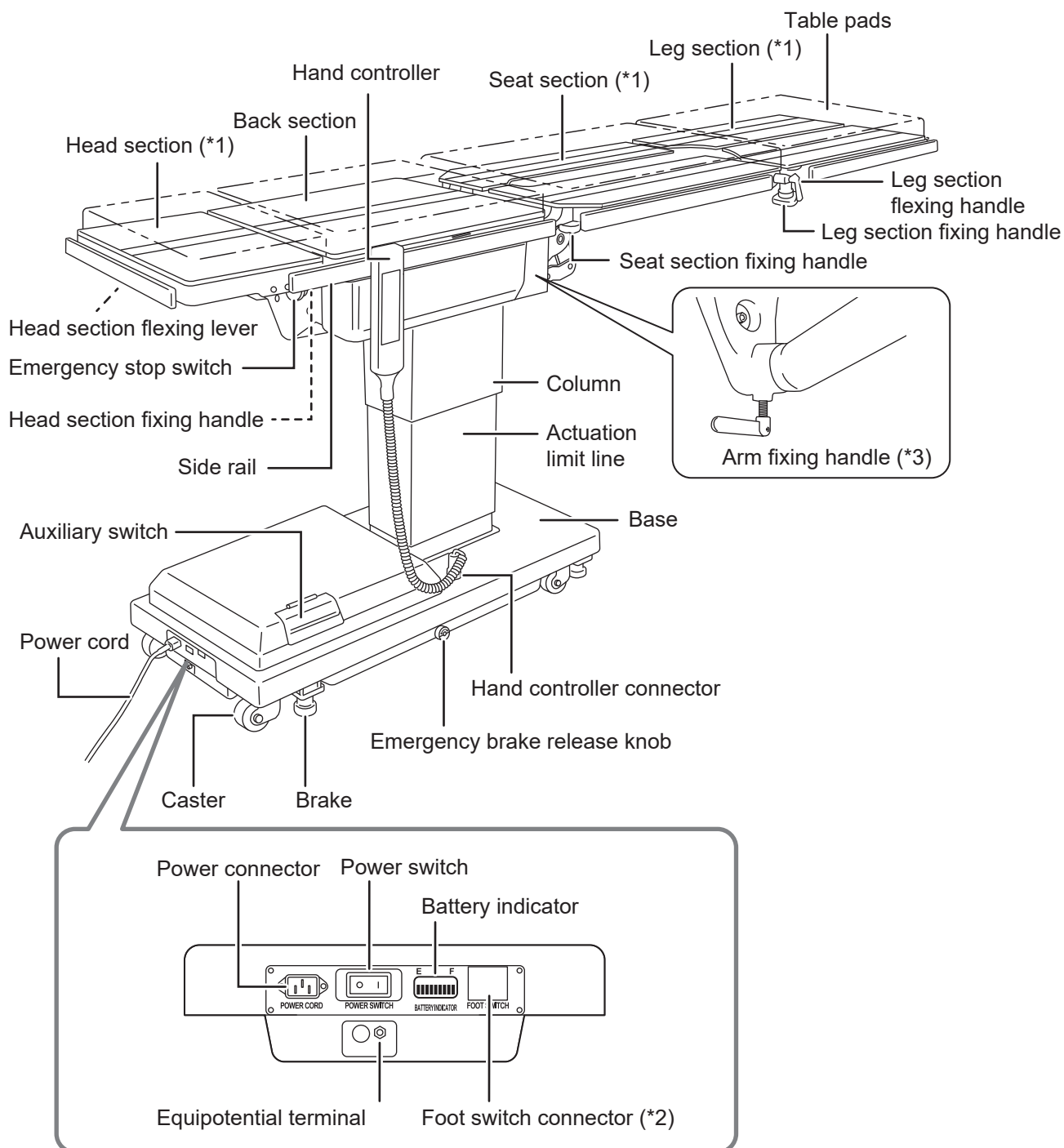
Symbol	Description	Label no.
	Indicates a possibility of injury or even death if operates the table without following the warning	(2) (3) (6) (7) (17) (18)
	General prohibition sign	(17) (18)
	No sitting	(18)
	No stepping on surface	(18)
	General mandatory action sign	(17)
	Emergency stop	(13)
	Refer to the operator's manual	(11) (13) (15) (17)
	Indicates AC power supply	(15)
IPX4	Enclosure Class (Splash-proof)	(15)
	Serial Number	(15)
	Catalogue Number	(15)
	Indicates waste disposal information	(15)
	European authorized representative	(15)
	Medical Device	(15)
	Equalization terminal	(16)
	Indicates protection against electric shock and defibrillator (Class B)	(19)
	Defibrillation - proof Type B applied part	(26) (27) (28) (29) (30) (31)
	Date of manufacture	(15)
	Manufacturer	(15) (26) (27) (28) (29) (30) (31)
	Conforms to BS 7177:2008 for medium hazard	(26) (27) (28) (29) (30) (31)

# 3. Section Introduction

## 3.1 Main unit

3

Section Introduction

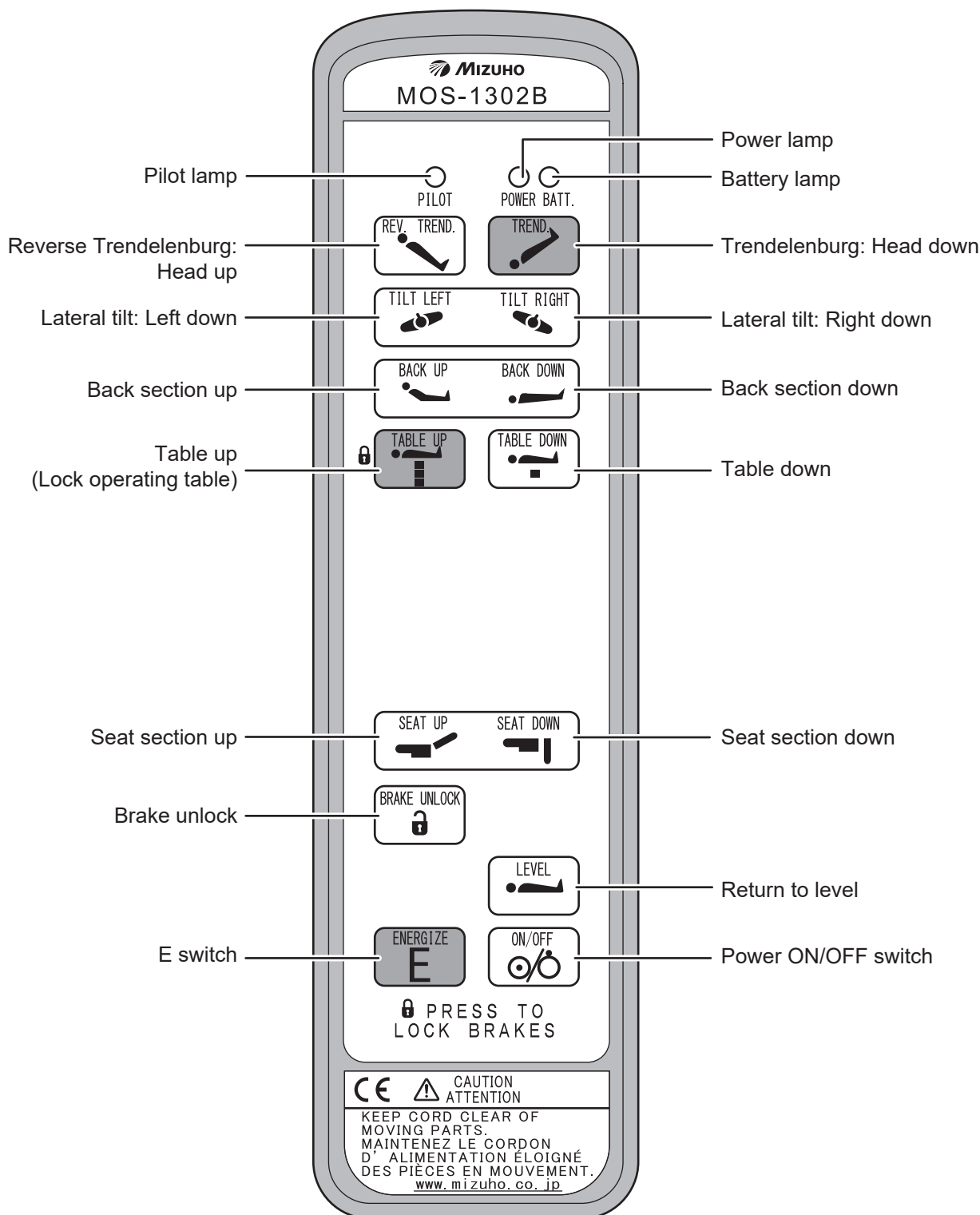


\* 1: The head section, the seat section, and the leg section can be detached.

\* 2: The foot switch is optional.

\* 3: The arm fixing handle is used when the Leg Traction Device is being attached. For details, refer to the Leg Traction Device operator's manual.

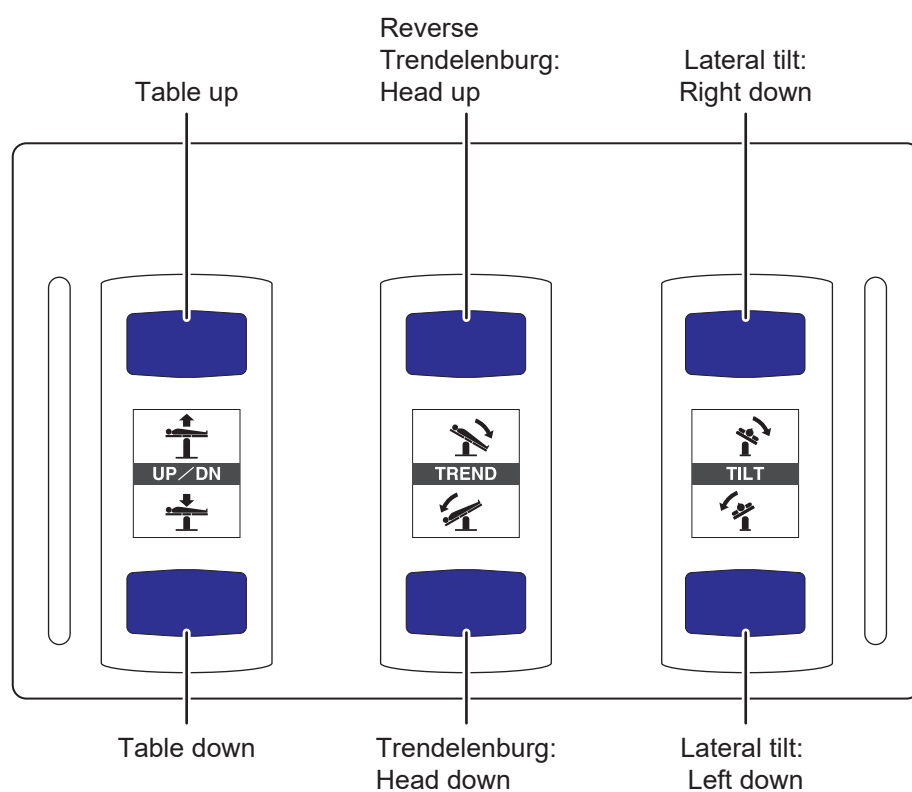
## 3.2 Hand controller



### NOTE

- If **E** is pressed, the pilot lamp lights up. Pressing any function switch while the pilot lamp is lighting up, that function will operate while the switch is pressed.
- About 7 minutes of halting will be needed when operating the table continuously for about 3 minutes. If the motor gets overheated you will not be able to operate the table. When overheat occurs, about 60 minutes of rest will be needed to operate the table as usual.

## 3.3 Foot switch (optional)

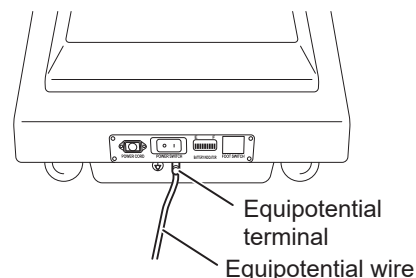


# 4. Operation

## 4.1 Installation and battery charging



- Use the equipotential wire to ground the equipotential terminal to the medical grounding terminals. Prepare the equipotential wire yourself.
- When moving this product, carry it out with two or more persons.

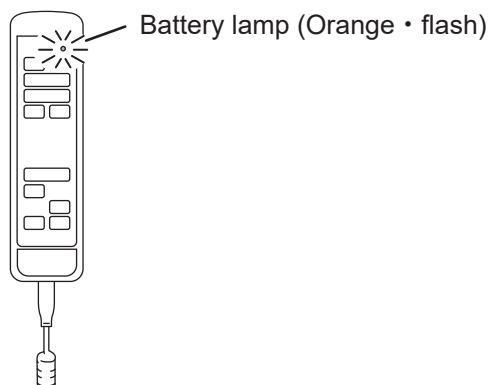


### ■ Installing the operating table

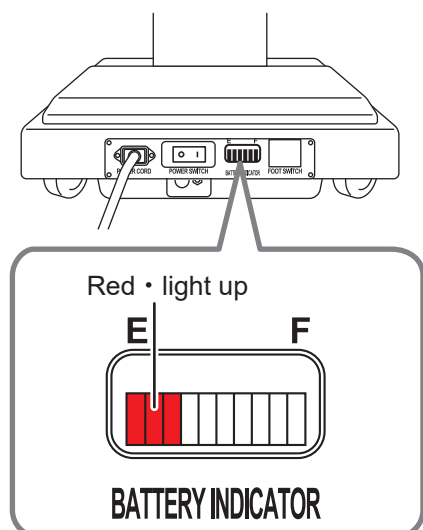
**1. Move the operating table to a flat area.**

**2. Check the battery lamp.**

If the battery lamp (orange) on the hand controller flashes, battery charging is required.

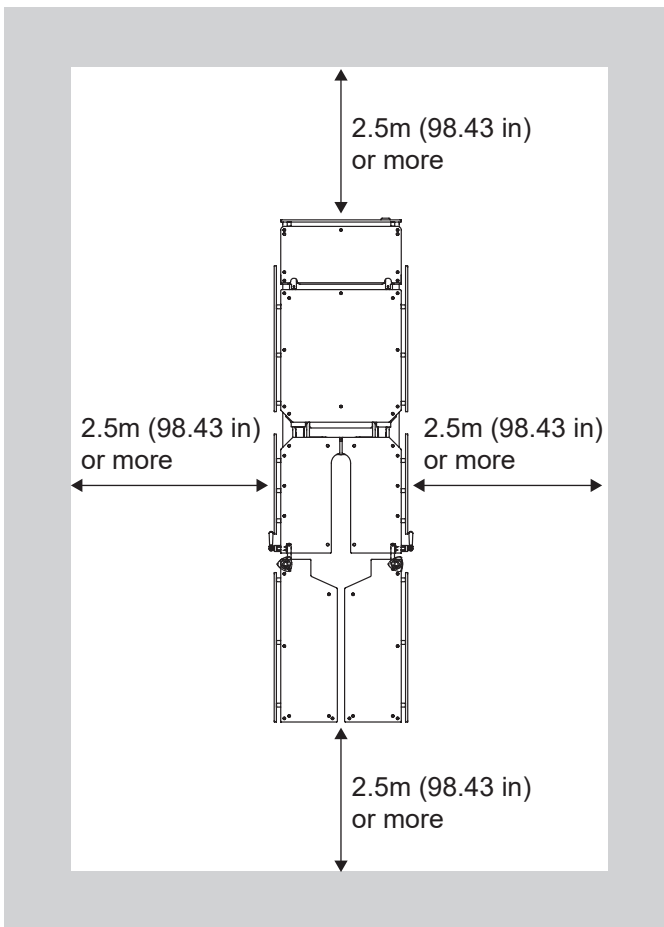


**3. If the battery indicator shows empty (red), battery charging is required.**



## ■ Installation space

This product requires the installation space shown as below.



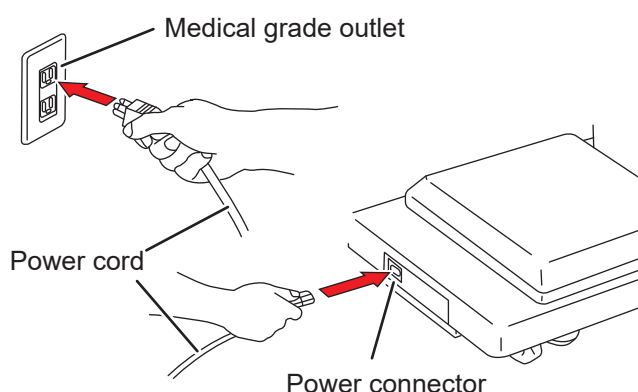
## ■ Charging the battery



**CAUTION**

- Connect the product to the power source provided with the protective grounding to prevent the risk of an electrical shock.
- Make sure to use the dedicated power cord with the “MIZUHO” logo.
- Before inserting the power cord into the power connector, check that the power connector does not have any fluid in it nor is dusty.
- If the battery deteriorates, it will not be available for the operating table when AC power is not supplied due to power outage etc.

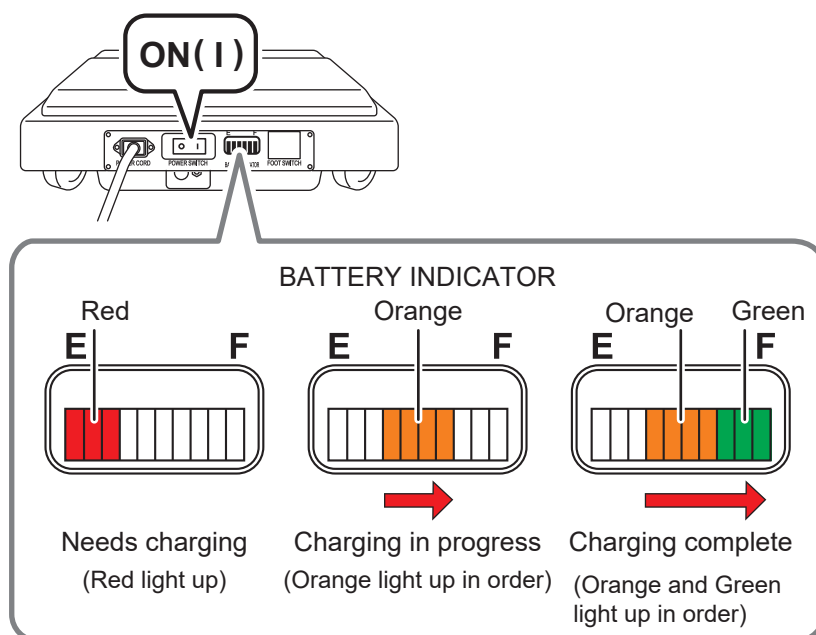
### 1. Connect the power connector of the product and the medical grade outlet with the power cord.




### 2. When turning on the power switch, battery charging starts.

While charging, the battery indicator sequentially lights up orange.

### 3. When the battery indicator sequentially lights up orange and green, charging is completed.



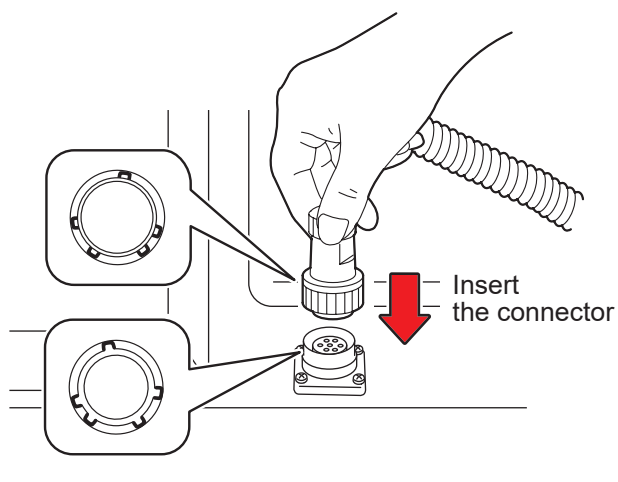
### NOTE

- Make sure to charge the battery when initially using the purchased product, or when it has not been used for a long time. The battery naturally discharges itself when it is not being used and is being stored.
- If the battery lamp on the hand controller flashes or the battery indicator on the lower part of the operating table lights up only red while using the operating table with the battery power, charge the battery immediately. When the battery is discharged, only the AC power is available and will not be able to use the battery power.
- The operating table battery replacement time is about 2 years. Once it reaches its replacement time, request your distributor or MIZUHO for a battery replacement.
- The lifespan for the battery varies greatly depending on operating conditions. The battery could degrade quicker if charging and discharging the battery are repeated frequently after using the operating table for short operations.
- It is recommended that you charge the battery once a week on weekends, since it takes about 24 hours to fully charge the battery.
- If the battery is discharged soon even after charging, the battery may be degraded. Request repairs from your distributor or MIZUHO.
- While the battery is being charged, you can operate the operating table by using  on the hand controller.



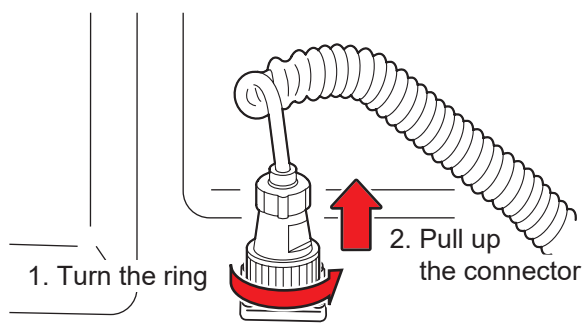
## ■ Attaching the hand controller

1. Align the connector with the guide and insert it into the receptacle properly.





## ■ Detaching the hand controller

1. Turn the connector ring counterclockwise (to the left) until it stops.
2. Once it stops, pull up the connector.

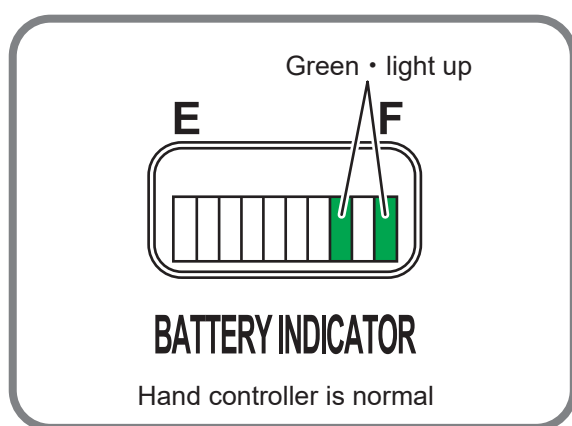


## ■ Using the self-diagnostic function

This product is equipped with an embedded self-diagnostic function capable of checking the communication status between the main unit and the hand controller.

1. Connect the power connector of the product and the medical grade outlet with the power cord.
2. Press  on the hand controller.
3. Press  and one of the function switches on the hand controller at the same time.

If two lines of green on the battery indicator light up, the hand controller is functioning properly.



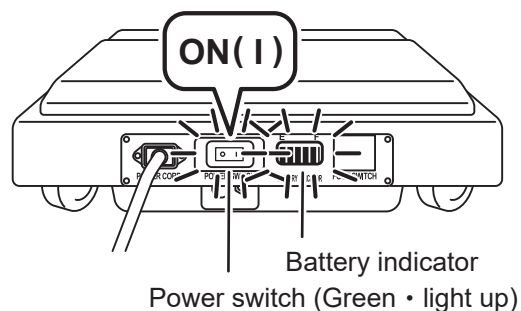
## 4.2 Turning on/off the power

### ■ When the medical grade outlet is used


#### ● Turning on the power

##### 1. Turn on the power switch on the base.

The power switch (green) and the battery indicator will be lighted on.

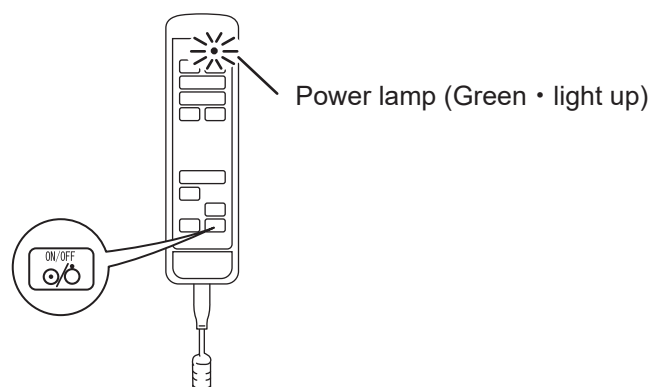


#### NOTE

- In an emergency or when turning off the power completely, disconnect the power cord from the medical grade outlet.
- If you press  on the hand controller before turning on the power switch on the base, the battery power will be turned on.

##### 2. Press on the hand controller.

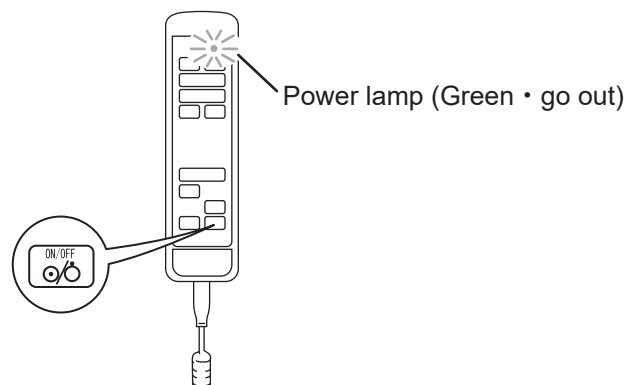
The power lamp (green) on the hand controller lights up and the power is turned on.




## ● Turning off the power

1. When the power is turned on, press  on the hand controller.

The power lamp (green) on the hand controller goes out.

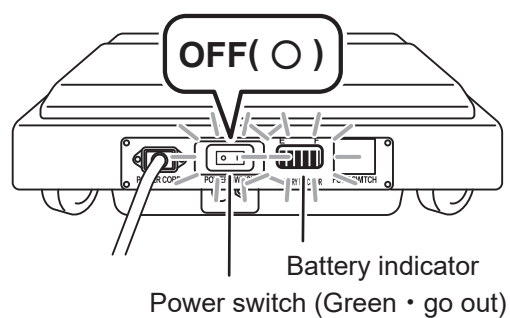


### NOTE

If you turn off the power switch on the base before pressing  on the hand controller, the battery power will be turned on.


2. Turn off the power switch on the base.

The power switch (green) and battery indicator go out, and the power is turned off.

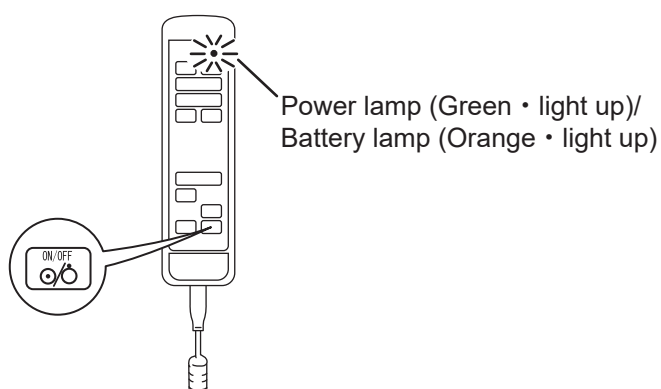
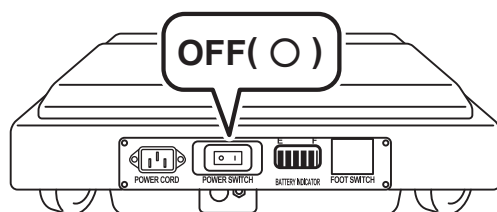


## ■ When the battery is used

### ● Turning on the power

1. When the power cord is not connected to the power connector or the power switch on the base is turned off, press  on the hand controller.


The power lamp (green), battery lamp (orange) and battery indicator light up, and the power is turned on.



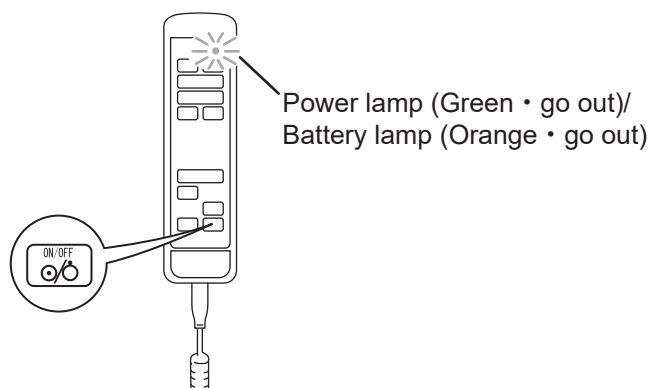
#### NOTE

When using the battery, the power is turned off automatically 2 hours after the last operation. If the power is turned off, turn on the power.

### ● Turning off the power

1. When the power switch on the base is turned off, press  on the hand controller.

The power lamp (green), battery lamp (orange) and battery indicator go out, and the power is turned off.



## 4.3 Operating the emergency stop switch

In an emergency, you can stop the operating table from moving by pressing the emergency stop switch.



The emergency stop switch must be used only in an emergency.

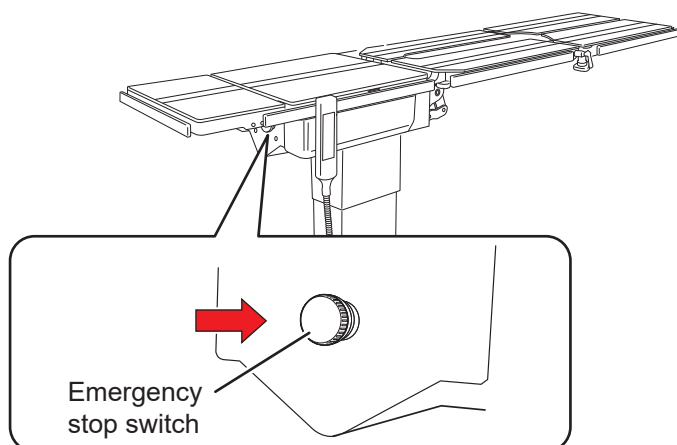
### ■ Operating in an emergency

#### 1. Press the emergency stop switch.

The buzzer sounds and the operating table stops.

#### NOTE

The emergency stop switch is located on the upper side of the column.



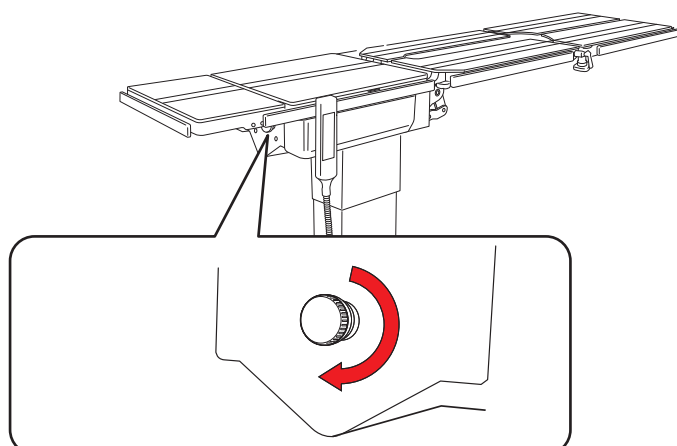
### ■ Canceling operations



To reset the operating table to the original position in an emergency where, for example, an operator's hand is caught in a gap of the operating table, press the switch on the hand controller to move the table in the opposite direction.

#### 1. After the operating table stops, turn the emergency stop switch clockwise (to the right) to cancel the emergency stop switch.

The buzzer stops sounding.



## 4.4 Fixing and unfixing the operating table

### ■ Fixing the operating table

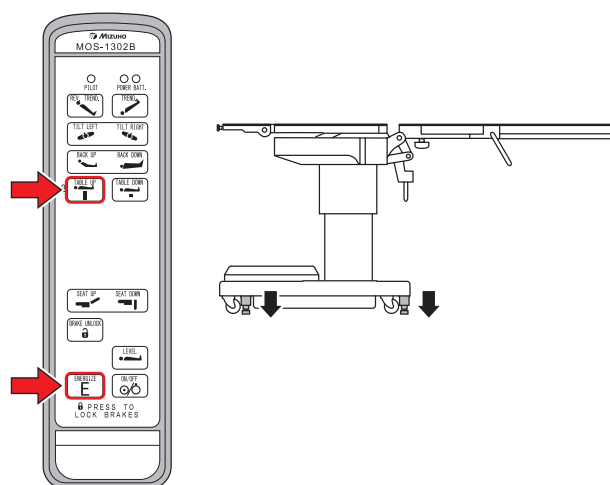


**WARNING**




- After activating the brake, check that the operating table is fixed securely.
- If the operation needs to be halted, press the emergency stop switch.

#### 1. Press first and then .

The brake is activated to fix the operating table. Operations such as raising the tabletop will not operate until the fixing of the operating table is completed.



#### NOTE

- The operating table can be fixed or unfixed once  and  or  are pressed.
- It takes about 12 seconds until the operating table is fixed or unfixed.
- If the brake cannot be activated and the operating table is not fixed, refer to “Troubleshooting.” (→Page 50)

4

Operation

### ■ Unfixing the operating table

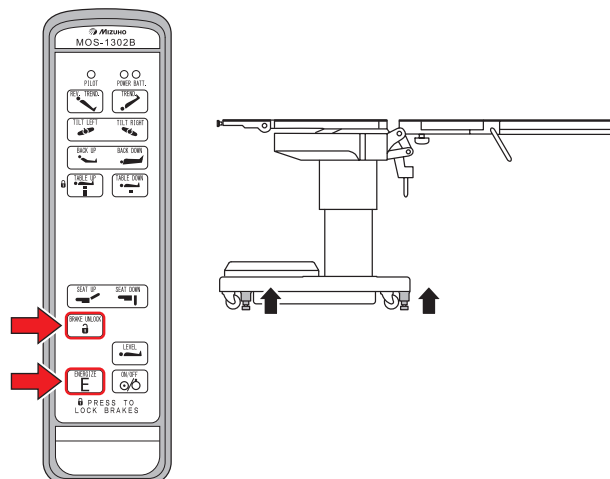


**WARNING**

Do not unfix the operating table with a patient on it.  
The patient may fall from the operating table.

#### 1. Press first and then for 1 second or more.

The brake is released for unfixing the operating table. The operating table can be moved.



## 4.5 Tilting the tabletop laterally



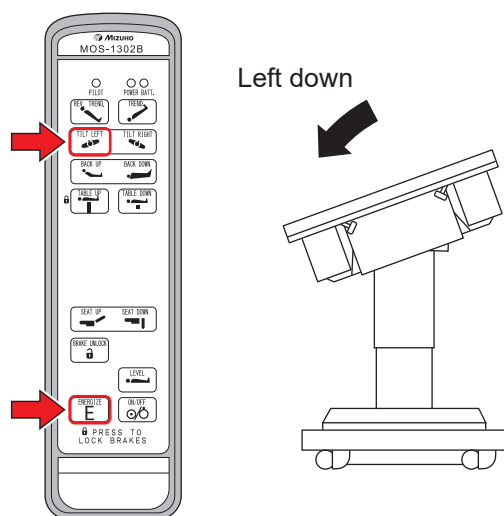
**WARNING**

When you tilt the tabletop laterally with a patient on the operating table, make sure to use the fixing accessory for the MIZUHO operating table.  
The patient may fall from the operating table.

### ■ Tilting to the left

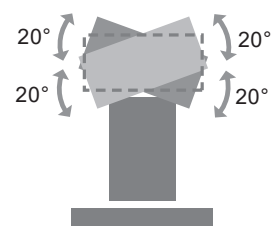
1. Press **ENERGIZE** first and then **TILT LEFT** .

The tabletop tilts to the left in the view from the head side.



### NOTE

- The maximum angle achieved in the left down and right down position is 20° from the level position.

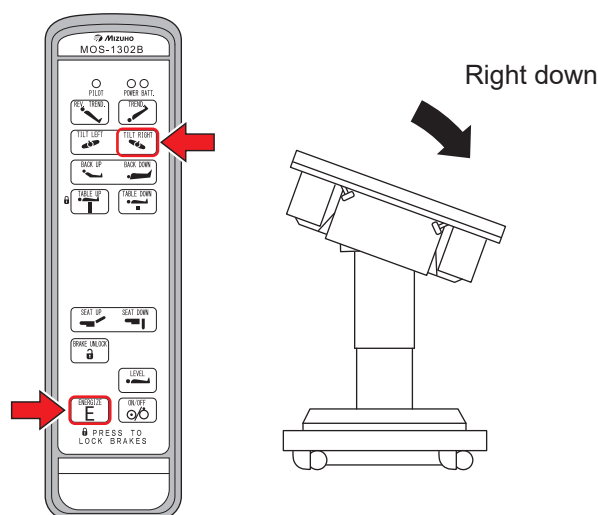


- When lateral tilt is operated in the opposite direction from the current lateral tilt position, it will stop in the level position. Once it stops, release the switch and press it once again; it will be laterally tilted to the maximum angle.

### ■ Tilting to the right

1. Press **ENERGIZE** first and then **TILT RIGHT** .

The tabletop tilts to the right in the view from the head side.



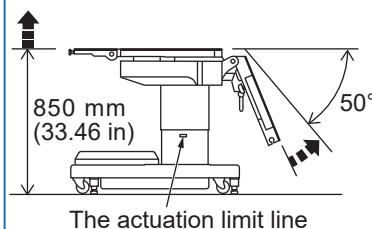
### NOTE RESTRICTION

The tabletop cannot be operated into a Reverse Trendelenburg position or a lateral tilt position in any one of the following conditions.

- The seat section is flexed more than 50° downward.
- The tabletop position is lower than 850 mm (33.46 in) from the floor.

To cancel the restriction, perform the following operations.

- Operate the seat section so that their downward flex angle will be 50° or less.
- Raise the tabletop until the actuation limit line on the column base cover is fully visible (850 mm (33.46 in) or higher above the floor).





## 4.6 Trendelenburg



When you operate the Trendelenburg operation with a patient on the operating table, make sure to use the fixing accessory for the MIZUHO operating table. The patient may fall from the operating table.

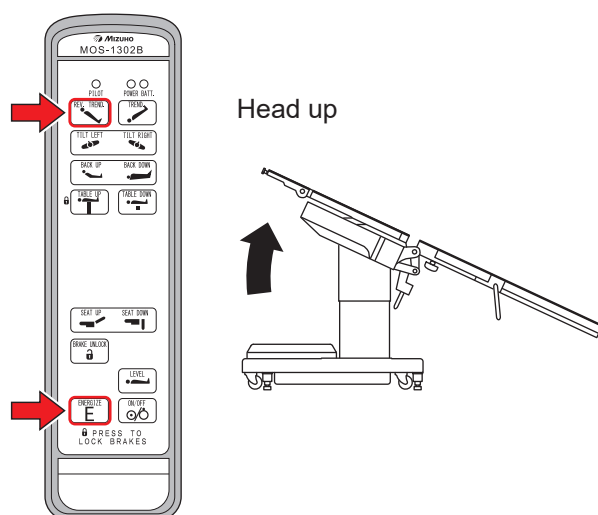


Do not operate reverse Trendelenburg position with the leg section bent down. The tip of the leg section may come in contact with the floor and get damaged.

### ■ Reverse Trendelenburg (Head up)

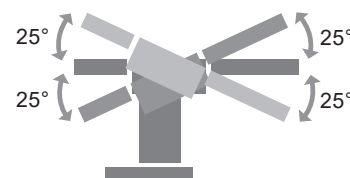
1. Press **E** first and then **REV. TREND.** .

The tabletop moves to the head up position.



#### NOTE

- The maximum angle achieved in the head up and head down position is 25° from the level position.

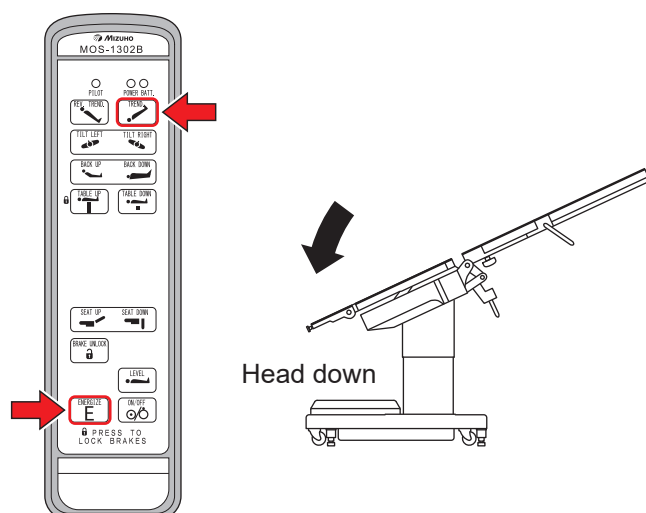


- When Trendelenburg is operated in the opposite direction from the current Trendelenburg position, it will stop in the level position. Once it stops, release the switch and press it once again; it will be tilted to the maximum angle.

### ■ Trendelenburg (Head down)

1. Press **E** first and then **TREND.** .

The tabletop moves to the head down position.

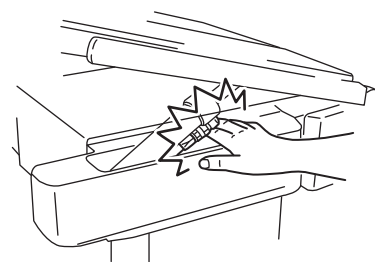


## 4.7 Back section up/down



**WARNING**

- Keep your hands away from the underneath of the back section during the operation of the table. Otherwise you may get injured.
- Keep your hands away from the operating area during the operation of the table. Otherwise you may get injured.



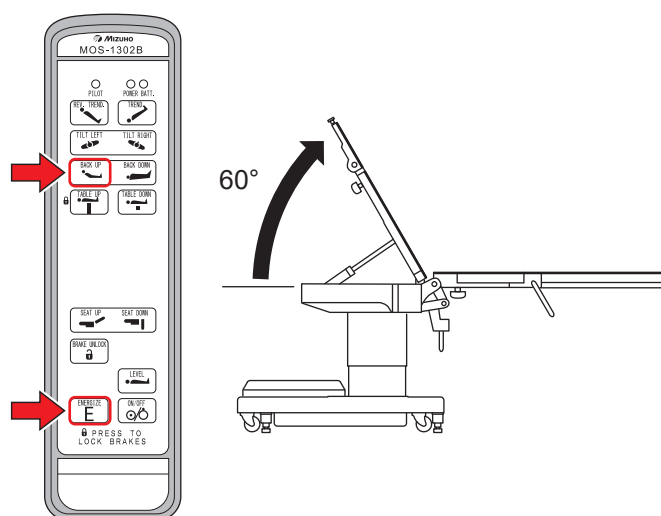
4

Operation

### ■ Moving up the back section

1. Press **ENERGIZE** first and then **BACK UP**.

The back section moves up.



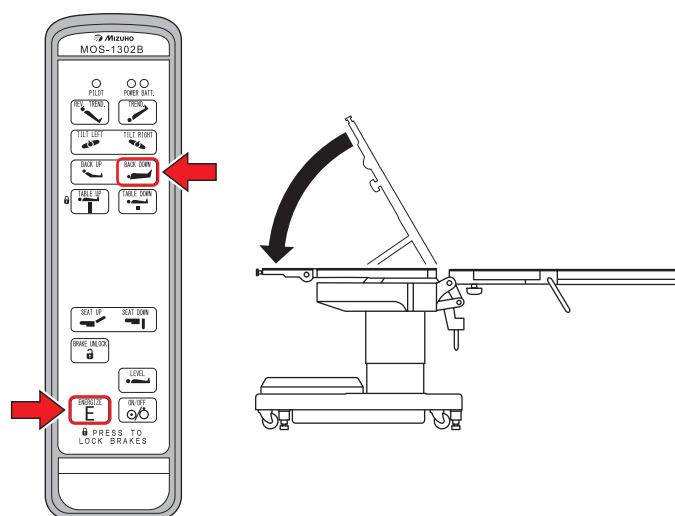
#### **NOTE**

The maximum angle achieved in the back section up position is 60° from the level position.

### ■ Moving down the back section

1. Press **ENERGIZE** first and then **BACK DOWN**.

The back section moves down to the level position.



#### **NOTE**

The maximum angle achieved in the back section down position is level position.

## 4.8 Changing the tabletop height

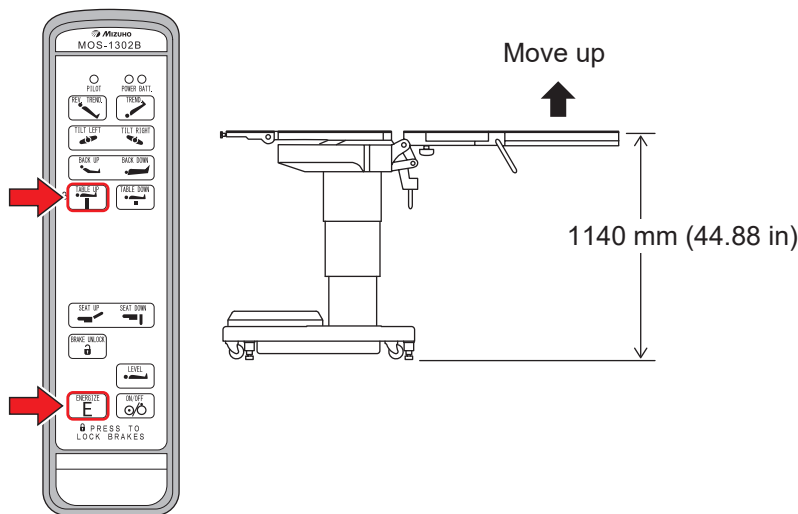


- Do not move down the tabletop with the leg section bent down at 90°. The tip of the leg section may come in contact with the floor or the base (when the seat section is bent) and get damaged.
- Do not operate until the tip of the leg section contacts the floor when moving down the tabletop with the leg section bent down. It may get damaged.

### ■ Moving up the tabletop

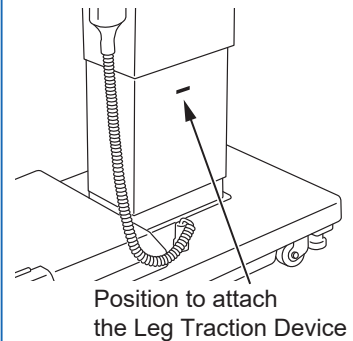
1. Press **E** first and then **TABLE UP**.

The tabletop moves up.



### NOTE

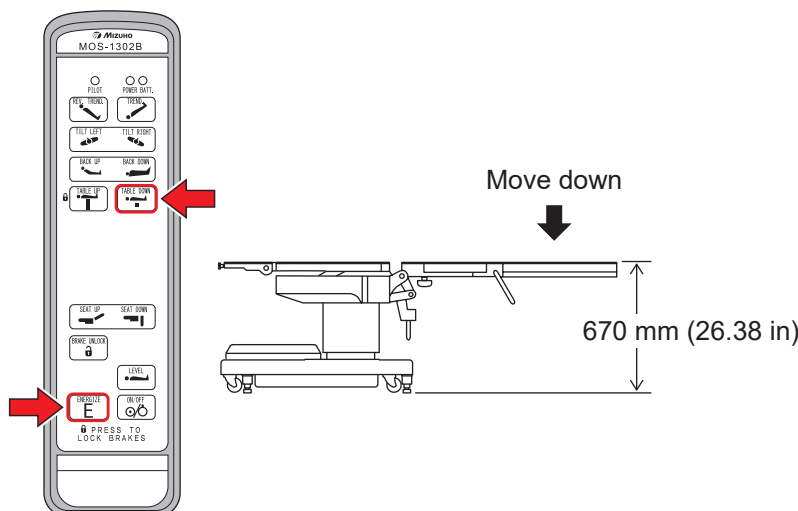
- The maximum height from the floor to the tabletop upper surface is 1140 mm (44.88 in).
- The minimum height from the floor to the tabletop upper surface is 670 mm (26.38 in).
- The line on the column shows the position for attaching the Leg Traction Device. For the procedure to attach the Leg Traction Device, refer to the Leg Traction Device operator's manual.



### ■ Moving down the tabletop

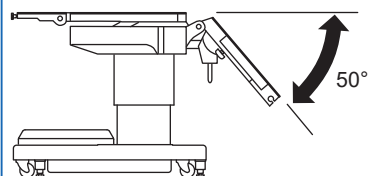
1. Press **E** first and then **TABLE DOWN**.

The tabletop moves down.



### NOTE RESTRICTION

The tabletop cannot be lowered to the lowest position when the seat section is flexed more than 50° downward. Operate the seat section so that its downward flex angle will be 50° or less.



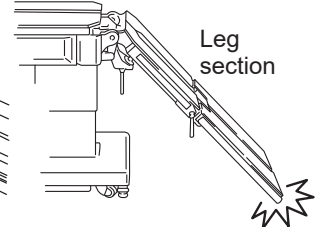
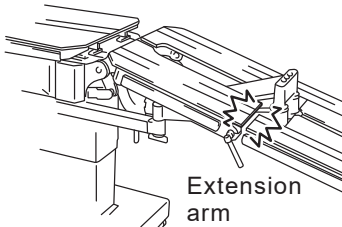
## 4.9 Seat section up/down



Keep your hands away from the joint sections during the operation of the table. Otherwise you may get injured.



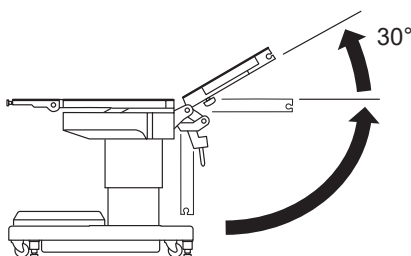
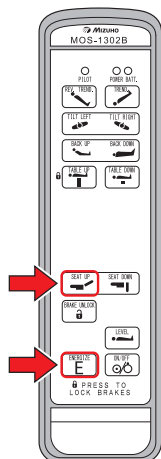
- Do not operate it with the extension arm and the leg section attached. It may get damaged.
- Do not operate reverse Trendelenburg position with the seat section bent down. The tip of the seat section may come in contact with the base and get damaged.
- Do not operate until the tip of the leg section contacts the floor when moving down the tabletop with the leg section bent down. It may get damaged.



### ■ Moving up the seat section

1. Press **ENERGIZE** first and then **SEAT UP** .

The seat section moves up.



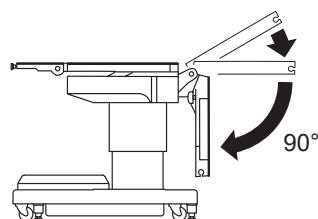
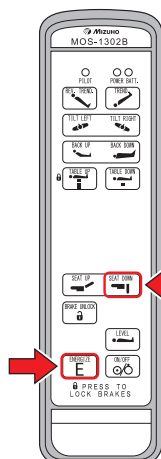
#### NOTE

- The maximum angle achieved in the seat section up position is 30° from the level position.
- The maximum angle achieved in the seat section down position is 90° from the level position.

### ■ Moving down the seat section

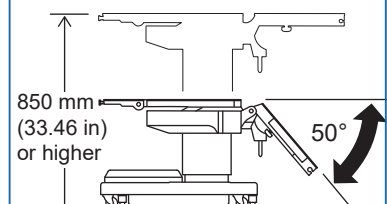
1. Press **ENERGIZE** first and then **SEAT DOWN** .

The seat section moves down.



#### NOTE RESTRICTION

The downward flex angle of the seat section will not exceed 50° when the tabletop is in the lowest position. Raise the tabletop until the actuation limit line on the column base cover is fully visible (at least 850 mm (33.46 in) above the floor).

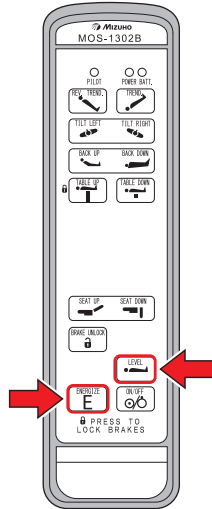


## 4.10 Return to level

### ■ Return the tabletop to the level position

1. Press **ENERGIZE** **E** first and then **LEVEL** .

The tabletop from the Trendelenburg, lateral tilting and seat section up/down (seat section up → level position) positions will return to the level position.



#### NOTE

The elevation, back section up/down, seat section up/down (seat section down → level position) and braking do not function.

## 4.11 Adjusting the head section

The head section can be bent in 15° increments, to 4 different positions upward (maximum 60°) and to 6 different positions downward (maximum 90°). The head section can also be detached.



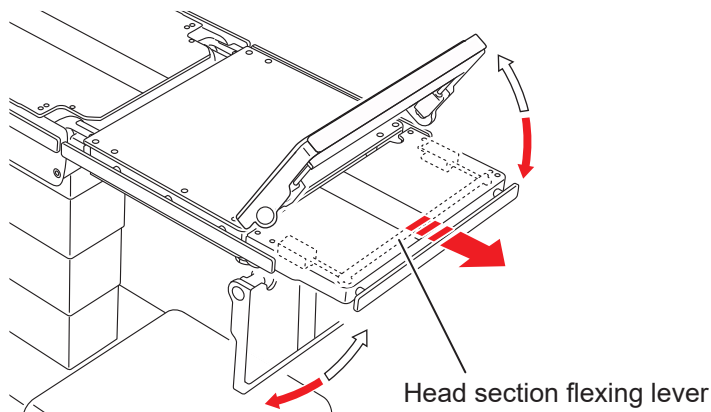
The head section weighs 7 kg (15.4 lbs). Pay special attention when handling it. It may drop and cause damage or injury.

### ■ Head section up/down

1. Pull the head section flexing lever toward the head direction. The head section can be bent upward and downward. When releasing the lever, the head section is fixed in that position.

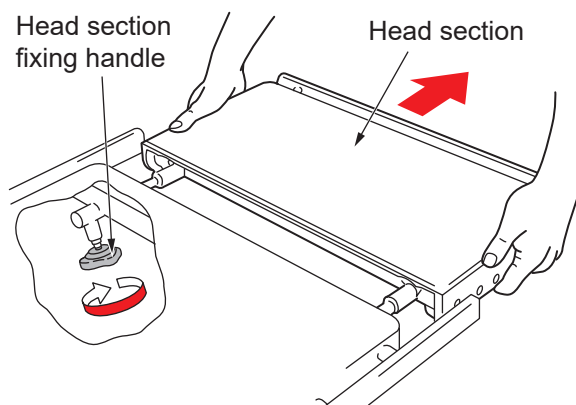
#### NOTE

When bending upward, the head section can be lifted and bent without pulling the head section flexing lever.



### ■ Detaching the head section

1. Loosen the two head section fixing handles located on the lower side of the back section.
2. Hold both sides of the head section firmly and pull straight.



## ■ Attaching the head section

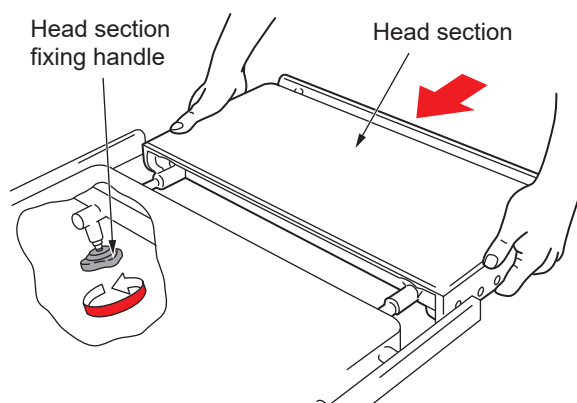


Make sure to tighten the head section fixing handles securely. If the head section moves with the handles in a loosened state, the patient may get injured.



- Make sure to insert the head section into the back section completely. If the operating table is used with the head section inserted incompletely, it may get damaged.
- Do not move the operating table by pulling on the head section. It may drop and cause damage or injury.

- 1. Hold both sides of the head section firmly and align the head section insertion shafts with the back section reception holes, and insert.**
- 2. After checking that the head section is completely inserted, tighten the two head section fixing handles located on the lower side of the back section to fix it.**



## 4.12 Attaching/Detaching the seat section

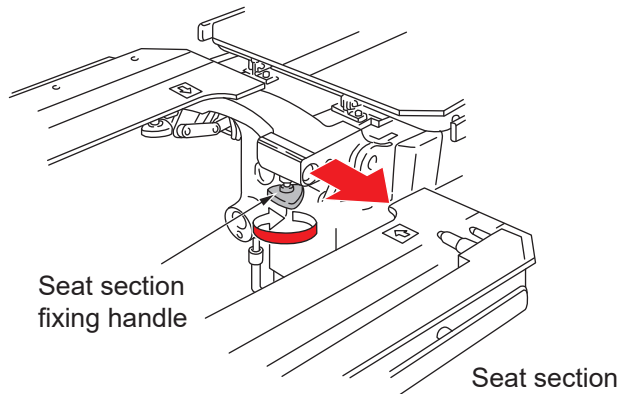
The seat section can be detached separately on the right and left.



The seat section weighs 5 kg (11 lbs) (each). Pay special attention when handling it. It may drop and cause damage or injury.

### ■ Detaching the seat section

1. Loosen the seat section fixing handle.
2. Pull the seat section toward you.

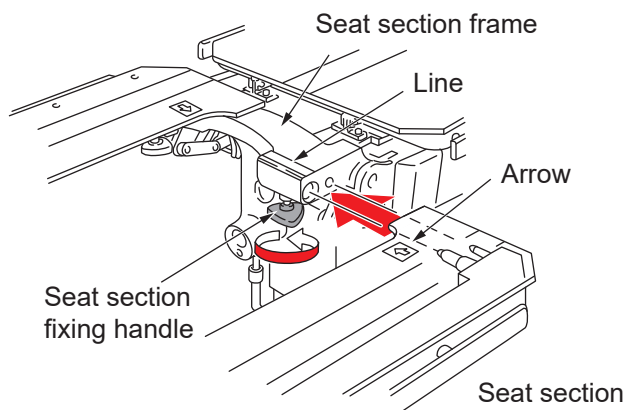


### ■ Attaching the seat section



Make sure to tighten the seat section fixing handles securely. If the seat sections move with the handles in a loosened state, the patient may get injured.

1. Align the arrow on the seat section with the line on the seat section frame and insert the seat section into the seat section frame.
2. Tighten the seat section fixing handle securely.





## 4.13 Adjusting the leg section

The leg sections can be bent, stretched outward, and detached.



The leg section weighs 6.3 kg (13.9 lbs) (each). Pay special attention when handling it. It may drop and cause damage or injury.

### ■ Leg section up/down

The left and right leg sections can be operated separately, and be flexed in 15° increments to 6 different positions downward (maximum 90°) and to 2 different positions upward (maximum 30°).

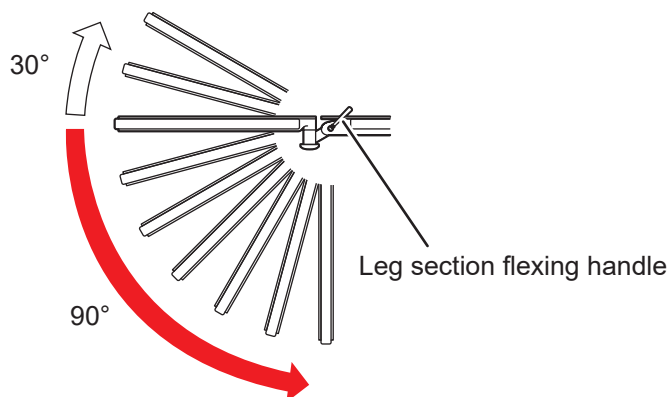


- Make sure to hold the tip of the leg section and turn the leg section flexing handle when bending. Otherwise the leg section may bend down by its own and cause injury.
- Make sure to tighten the leg section flexing handles securely. If the leg sections move with the handles in a loosened state, the patient may get injured.



Do not operate until the tip of the leg section contacts the floor when moving down the tabletop with the leg section bent down. It may get damaged.

1. Hold the tip of the leg section on the leg side and turn the leg section flexing handle 1 revolution to loosen it.
2. Hold the tip of the leg section and flex the leg section downward or upward.
3. At the setting position, tighten the leg section flexing handle to fix the leg section.



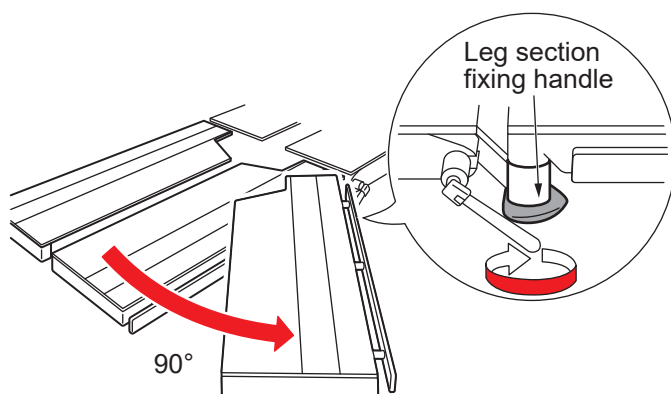
## ■ Outstretching the leg section

The leg sections can be stretched outward up to 90°.



Make sure to tighten the leg section fixing handles securely. If the leg sections move with the handles in a loosened state, the patient may get injured.

1. Hold the tip of the leg section on the leg side and turn the leg section fixing handle 1 revolution and a half to loosen it.
2. Pull the leg section outward.
3. At the setting position, tighten the leg section fixing handle to fix the leg section.

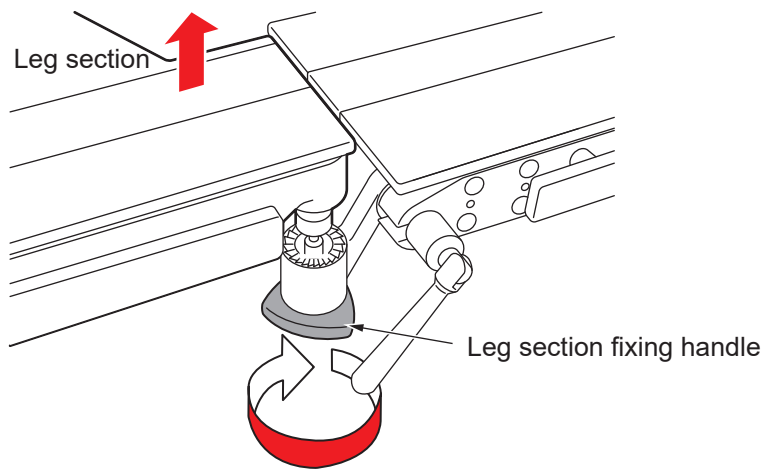


## ■ Detaching the leg section (Leg section fixing handle)



- Make sure to hold the leg section and turn the leg section fixing handle when detaching the leg section. Otherwise it may drop and cause damage or injury.
- Attach and detach the leg section with it horizontally positioned. Otherwise it may drop and cause damage or injury.

- 1. Hold the tip of the leg section on the leg side and turn the leg section fixing handle to loosen it.**
- 2. Hold both sides of the leg section firmly and pull it straight up.**

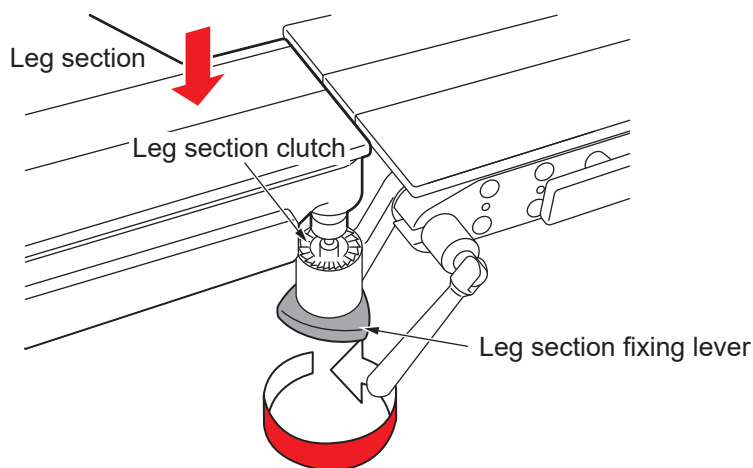


## ■ Attaching the leg section (Leg section fixing handle)



- Make sure to tighten the leg section fixing handles securely. If the leg sections move with the handles in a loosened state, the patient may get injured.
- After attaching the leg section, check that the leg section is inserted completely by shaking the leg section back and forth. If the operating table is used without the leg section being completely inserted into it, the patient may get injured by the leg section being moved.
- Attach and detach the leg section with it horizontally positioned. Otherwise it may drop and cause damage or injury.

- 1. Hold both sides of the leg section firmly and align the leg section insertion shaft with the leg section clutch, and insert.**
- 2. Hold the tip of the leg section on the leg side and turn the leg section fixing handle until it engages with the leg section clutch to fix.**

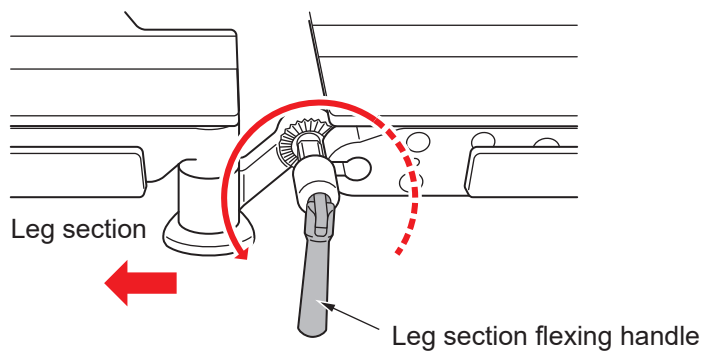


## ■ Detaching the leg section (Leg section flexing handle)



- Make sure to hold the leg section and turn the leg section flexing handle when detaching the leg section. Otherwise it may drop and cause damage or injury.
- Attach and detach the leg section with it horizontally positioned. Otherwise it may drop and cause damage or injury.

- 1. Hold the tip of the leg section on the leg side and turn the leg section flexing handle 2 revolutions to loosen it.**
- 2. Hold both sides of the leg section firmly and pull it straight out.**



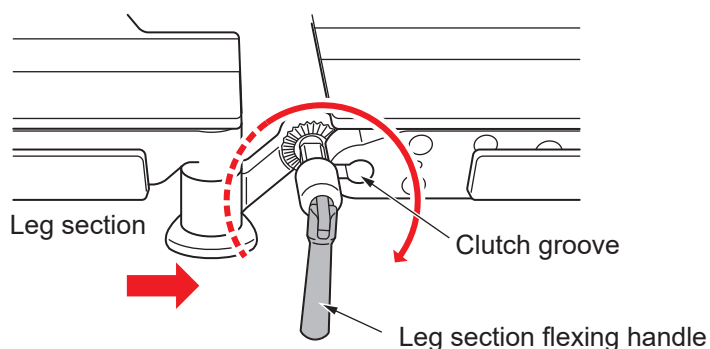
## ■ Attaching the leg section (Leg section flexing handle)



### WARNING

- Make sure to tighten the leg section flexing handles securely. If the leg sections move with the handles in a loosened state, the patient may get injured.
- After attaching the leg section, check that the leg section is inserted completely by shaking the leg section back and forth. If the operating table is used without the leg section being completely inserted into it, the patient may get injured by the leg section being moved.
- Attach and detach the leg section with it horizontally positioned. Otherwise it may drop and cause damage or injury.

- 1. Align the seat section's clutch groove with the leg section flexing handle's shaft, and insert the leg section straight into it.**
- 2. Hold the tip of the leg section on the leg side and turn the leg section flexing handle until it engages with the leg section clutch to fix.**



## 4.14 Attaching/Detaching the arm (optional)

The Leg Traction Device can be attached on this operating table. For details, refer to the Leg Traction Device operator's manual.

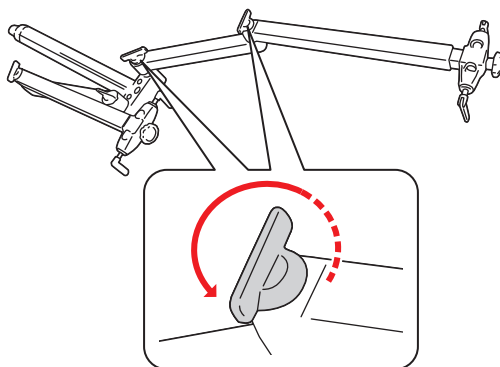
### ■ Attaching the arm



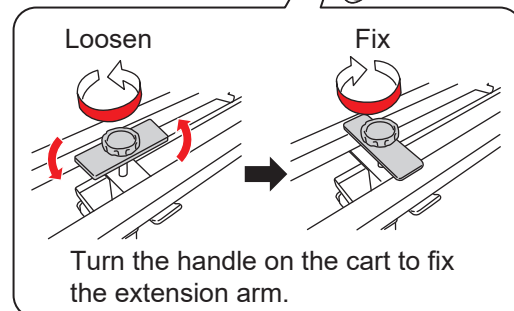
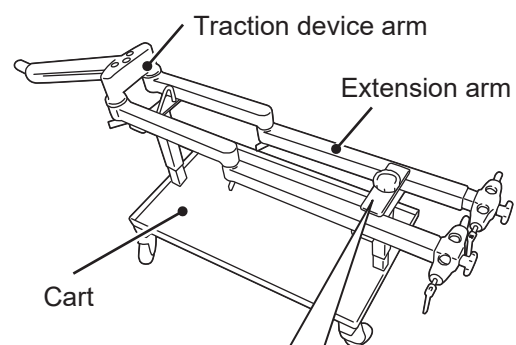
After attaching the arm, make sure to tighten the fixing handle and the arm fixing handle securely. If the arm is used in a loosened state, it may drop down and cause injury.

#### 1. Place the arm (traction device arm/extension arm) on the cart.

Turn the extension arm upside down.  
Loosen the fixing handles to extend it.



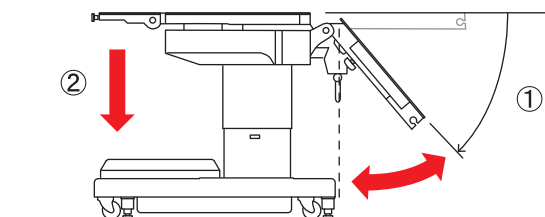
Turn it upside down and place it on the cart.



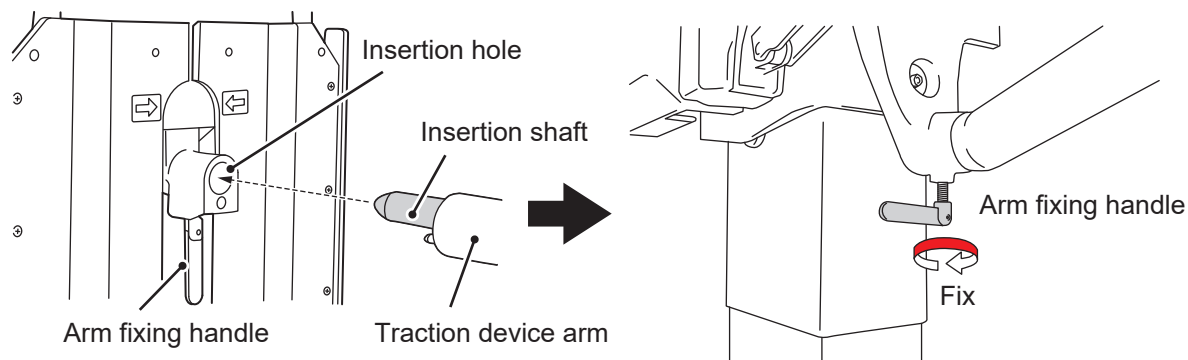
#### 2. Press **ENERGIZE** first and then **LEVEL** to move the tabletop to the level position.

#### 3. Press **ENERGIZE** first and then **SEAT DOWN** to bend the seat section until it clicks (①, 50° or more).

Press **ENERGIZE** first and then **TABLE DOWN** to lower the tabletop until it stops (②).

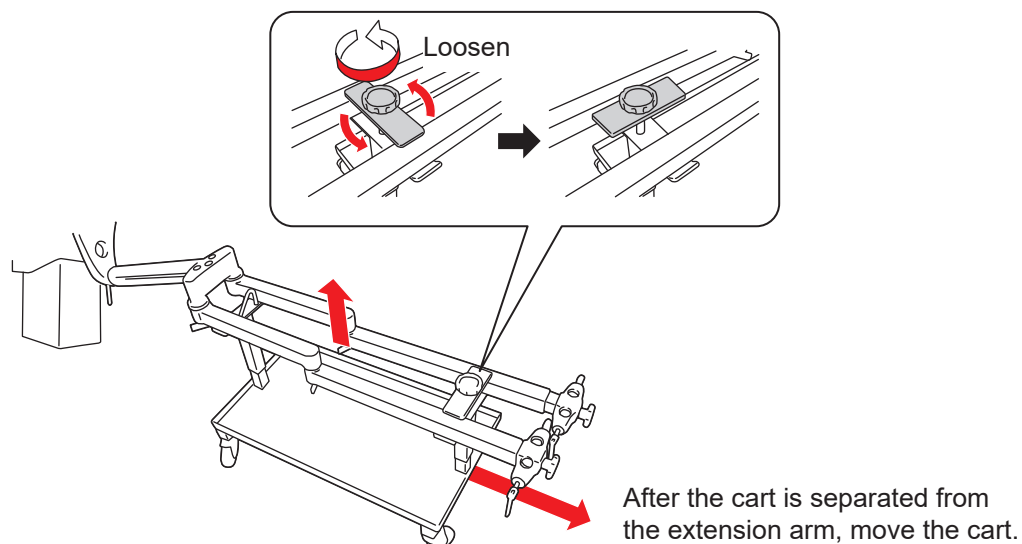


4. Insert the traction device arm insertion shaft into the insertion hole on the operating table and turn the arm fixing handle to fix it.



5. Loosen the handle on the cart.

Press **E** first and then **T** to raise the operating table.



6. Set the seat section in the level position, or detach the seat section from the operating table.

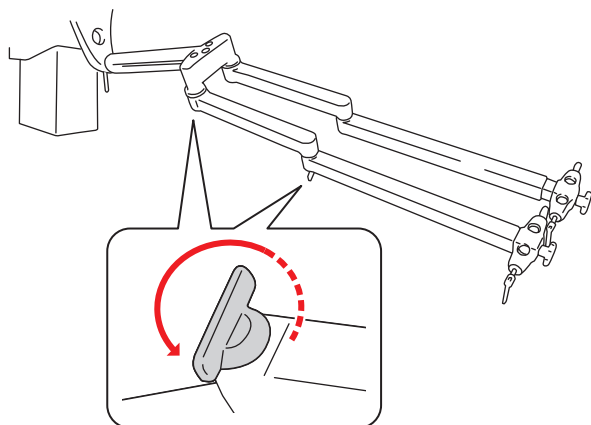
#### NOTE

The handling of the seat section will change depending on the surgical positions.

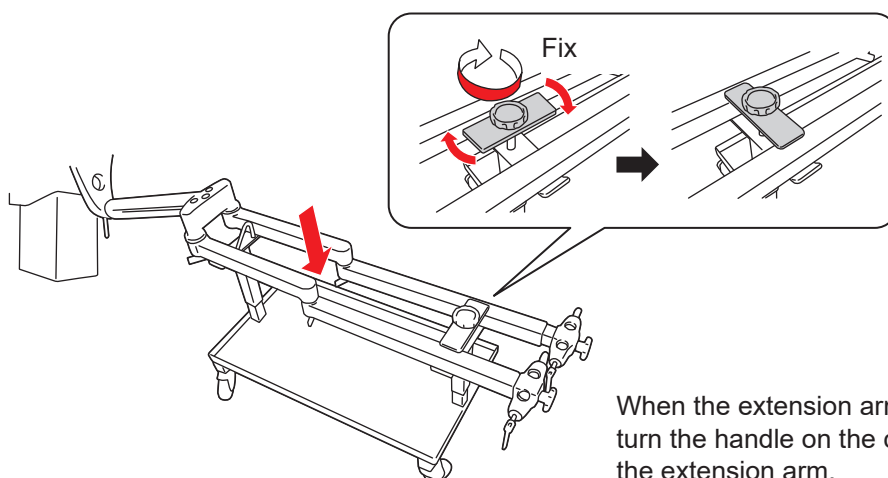


## ■ Detaching the arm

1. Loosen the extension arm fixing handle and extend the arms.

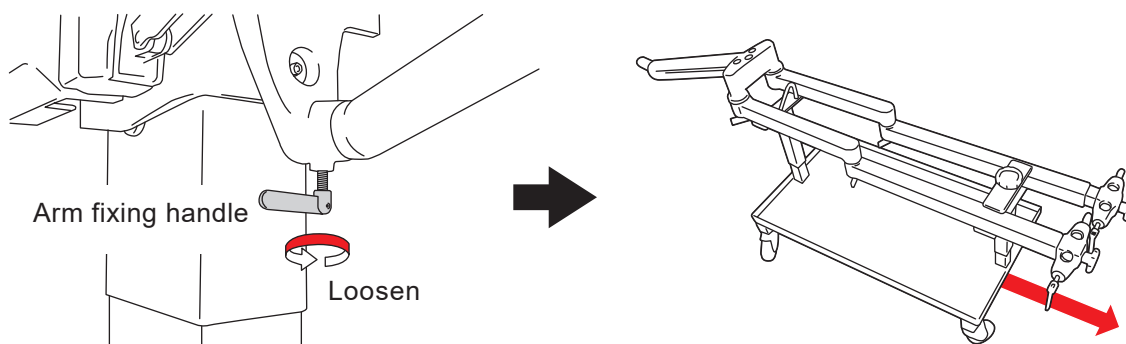


2. Press **ENERGIZE E** first and then **TABLE UP T** to raise the tabletop up to a position (850 mm (33.46 in) or higher) where the column's actuation limit line can be seen.
3. When the seat section is in the level position, press **ENERGIZE E** first and then **SEAT DOWN S** to bend the seat section until it clicks.
4. Move the cart so that it is underneath the extension arm.
5. Press **ENERGIZE E** first and then **TABLE DOWN D** to move down the operating table.



When the extension arm contacts the cart, turn the handle on the cart to fix the extension arm.

6. Turn the arm fixing handle to loosen it. Move the cart and pull the arm out of the operating table.



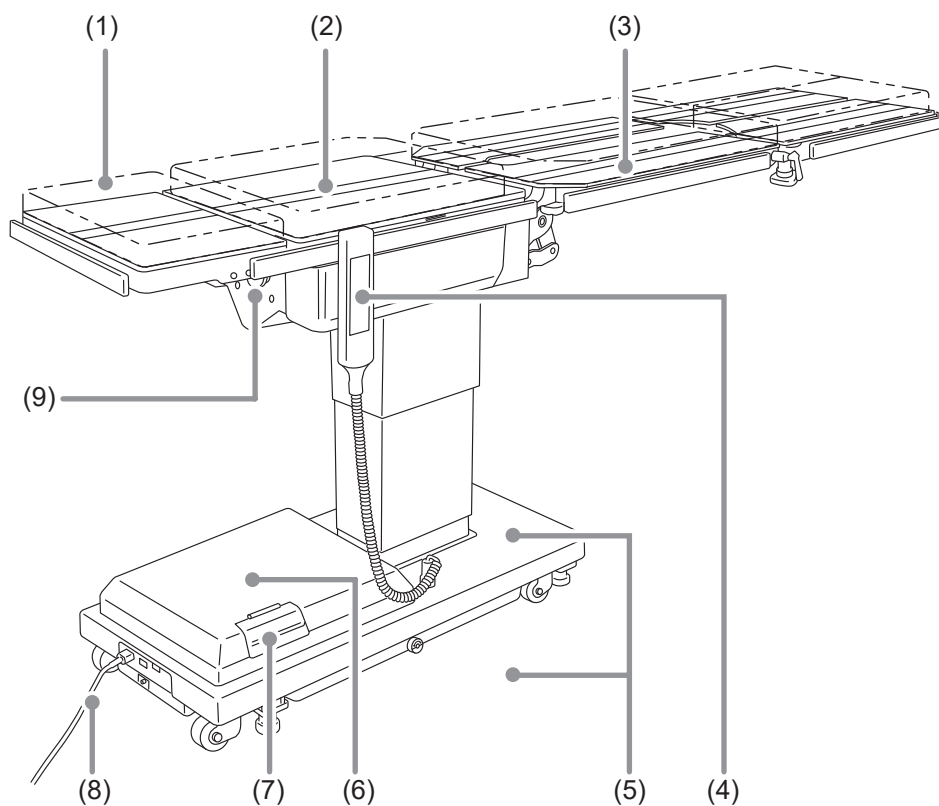
# 5. Maintenance and inspection

## 5.1 Inspection before and after use



Make sure to inspect the items below before and after use. If there are any abnormalities, request your distributor or MIZUHO for repairs. Otherwise it may cause problems during surgery.

Inspect the items below. If there is any problem, request your distributor or MIZUHO for repair.



### (1) Table pads

#### ● Before use

- Check all the table pads for any damage.

#### ● After use

- Check all the table pads for any damage or dirt.

### (2) Backlash of the tabletop

#### ● Before use

- Check all the tabletops for any backlash when jiggling both sides of the back section.

### **(3) Tabletops**

#### **● Before use**

- Check all the tabletops for any damage.

#### **● After use**

- Check all the tabletops for any damage or dirt.

### **(4) Hand controller**

#### **● Before use**

- Press the power ON/OFF switch on the hand controller to see if the power lamps on the hand controller light up.
- Press the switches on the hand controller to see if all functions are working properly.

### **(5) Oil leakage**

#### **● Before and after use**

- Check the floor or the base surface for any hydraulic oil.

### **(6) Battery**

#### **● Before use**

- Check if the battery has been charged.

### **(7) Auxiliary switch**

#### **● Before use**

- Press the auxiliary switch to see if all functions are working properly.

### **(8) Power cord and plug**

#### **● Before use**

- Check the power cord for any exposed wire and the plug for any damage.

### **(9) Emergency stop switch**

#### **● Before use**

- Check if the emergency stop switch is working properly.

## 5.2 Cleaning and disinfection



- In order to prevent infections, make sure to clean and disinfect the operating table after using it.
- Make sure to unplug the power cord and turn off the main power when cleaning and disinfecting the operating table. The operating table may actuate and cause injury.



- Make sure to use MIZUHO authorized disinfectants. Failure to do so may cause the operating table to become discolored or deformed.
- When cleaning the table pads, take care not to get liquids on the fasteners. If liquids get on the waterproof fasteners, wipe them off quickly. If the waterproof fastener gets wet and the liquids infiltrate inside, it may cause degradation.

### ■ Cleaning and disinfection procedures

1. Turn off the power and disconnect the power cord from the medical grade outlet.
2. Detach all the table pads from the operating table.
3. Use a lint-free cloth soaked with proper volume of disinfectant to wipe off the upper, sides, and back side of the table pads.
4. As with step 3, disinfect the surfaces of the tables and side rails.
5. Wipe off the operating table with a clean dry cloth within 15 minutes after disinfecting it.

### ■ Disinfectants

Authorized disinfectants are as shown below.

	Disinfectant name	Concentration
a	Sodium hypochlorite	0.1%
b	Hypo Alcohol	10%
c	Chlorhexidine gluconate	0.5%
d	Benzalkonium chloride	10%
e	Ethanol	80%
f	Isopropyl alcohol	99.5%

#### NOTE

Use the disinfectant according to the operator's manual and instructions for disinfectant use.

## 5.3 Maintenance by providers

For safety use of this product, make sure to perform the periodical inspection by MIZUHO or the certified provider once a year.

Inspections and maintenances by other than MIZUHO or the certified provider could cause any adverse event such as deterioration of the performance and functions.

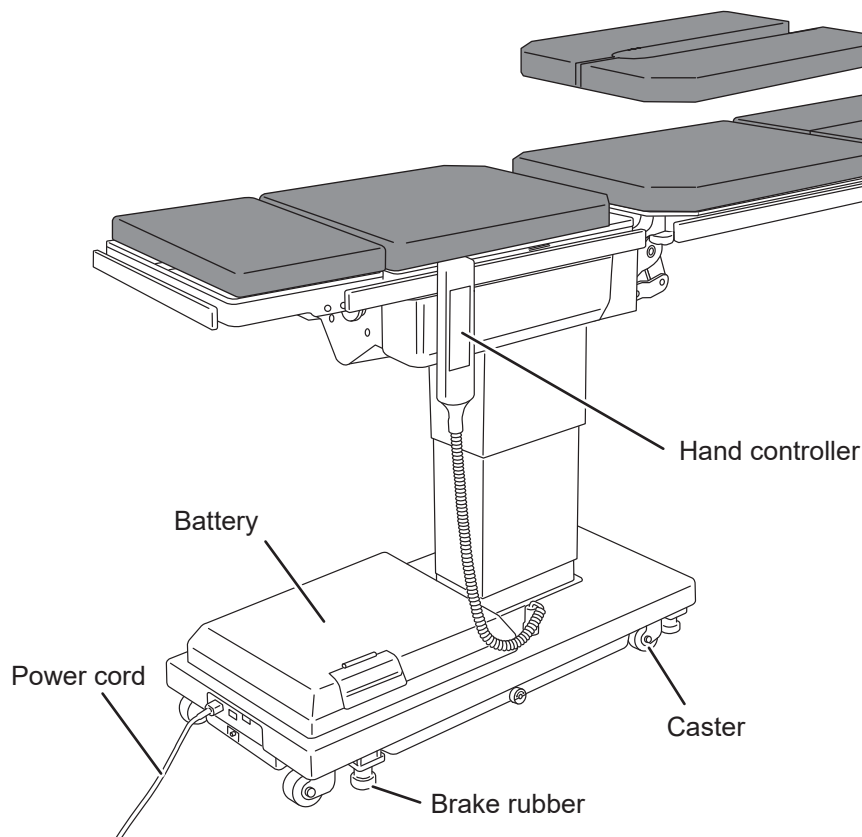
For request for the periodical inspection, contact your distributor or MIZUHO.

## 5.4 Periodic replacement parts

MIZUHO specifies that the following parts need to be periodically replaced for safety use.

The replacement time is a rough standard. Earlier replacement may be required depending on the usage condition and/or usage frequency.

Request your distributor or MIZUHO for replacements.



Parts	Replacement time (years)
Battery	2
Hand controller	4 to 6
Caster	5 to 7
Brake rubber	3 to 5
Power cord	5 to 7

### NOTE

The aforementioned are estimated times. The replacement time may depend on usage condition and/or usage frequencies.

## 5.5 Version information of the software

The version information for the control software which is installed in the operating table can be verified via the label that is directly applied on the on-board microcomputer.



The version information of the software is mainly for the service and maintenance personnel as needed. For confirmation, open the base cover to access the control board.

# 6. Specification

## 6.1 Specification table

Product description			MOS-1302B
Electromotive functions	Elevation range	Highest	1140 mm (44.88 in)
		Lowest	670 mm (26.38 in)
	Trendelenburg angle	Head up	25°
		Head down	25°
	Lateral tilt angle	Left down	20°
		Right down	20°
	Back section up/down angle	Up	60°
	Seat section up/down angle	Up	30°
		Down	90°
	Return to level		Trendelenburg, Lateral tilt, Seat section up/down (seat section up → level position)
	Brake		Lock / Unlock
	Control devices	Hand controller	Elevation, Trendelenburg, Lateral tilt, Back section up/down, Seat section up/down, Return to level, Brake, E switch, Power ON/OFF
		Auxiliary switch	Elevation, Trendelenburg, Lateral tilt, Back section up/down, Seat section up/down
		Foot switch: Note 9	Elevation, Trendelenburg, Lateral tilt
		Emergency stop switch	Stop
Manual functions	Head section up/down angle	Up	60°
		Down	90°
	Leg section up/down angle	Up	30°
		Down	90°
	Leg section outstretching angle	Each for left and right	90°
	Detachment		Head section, Seat section (left/right), Leg section (left/right)
Rating	Others		Emergency brake release knob
	Classification as per 60601-1		Class I Equipment / Type B Applied Parts / IPX4 Rated (internal power source device: Note 1)
	Supply voltage		AC 100 - 240 V
	Rated supply frequency		50/60 Hz
	Battery power		DC 24V
	Battery charging time		Up to 24 hours (cumulative operation time when fully charged: up to 60 min.: Note:12)
	Power consumption		400VA
	Operating voltage		DC 5V , 24V
	Duty cycle (per 1 cycle)		3 min on, 7 min off: Note 3
	Others		Recovery from defibrillator is within 5 seconds. Conformity to EMC Standard IEC 60601-1-2: 2020

Dimension	Tabletop	2055 mm (80.91 in) (L) x 500 mm (19.69 in) (W) : Note 3
	Base	973 mm (38.31 in) (L) x 483 mm (19.02 in) (W) : Note 4
Weight		330 kg (727 lbs)
Weight capacity: Note 6		Elevation: 135 kg (300 lbs) Operations other than elevation: 135 kg (300 lbs)
Transitable height and width		Height: 10 mm (0.39 in) / Width: 80 mm (3.15 in)
Table pad	Anti-defibrillation device	
	Flame resistance: BS 7177 Fire Test on Mattresses, Sofas and Bases Classification: Conforms to BS 7177:2008 for medium hazard (Medium Hazard [5])	
	Manufacturing method via waterproofing: Welder processing: Note 10 Waterproof fasteners: Note 11	
Operating environment	Temperature	10 to 40°C (50 to 104°F): Note 7
	Humidity	30 to 75%: Note 7
	Atmospheric pressure	700 to 1060 hPa: Note 7
	Others	Allowable altitude for use is 3000 m or lower.: Note 7
Transportation and storage	Temperature	-10 to 50°C (14 to 122°F): Note 5
	Humidity	10 to 85% (without moisture condensation): Note 5
	Atmospheric pressure	700 to 1060 hPa: Note 5
Service life		Under the specified maintenance and proper storage, 10 years: Note 6

Note 1: When the battery power is used

Note 2: Operating tables operating possible time and halting time per 1 cycle

Note 3: Excluding the side rail

Note 4: Rough dimension

Note 5: Company standard (in case that appropriate maintenance and inspection is done)

Note 6: Based on MIZUHO's own validation data

Note 7: IEC 60601-1: 2020 Medical electrical equipment - Part1: General requirements for basic safety and essential performance

Note 8: Total of the patient and accessories

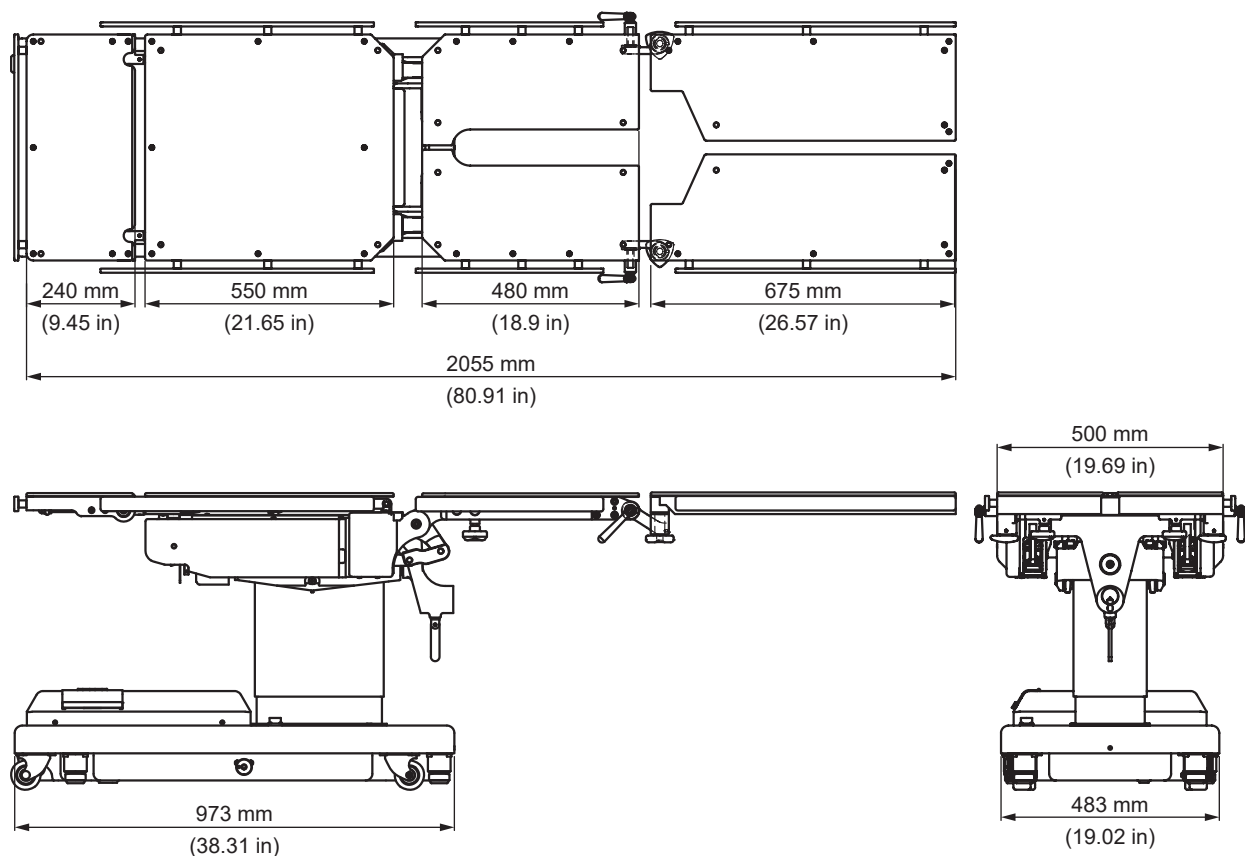
Note 9: Optional

Note 10: Process that seamlessly welds via heat

Note 11: Fastener with high waterproofness

Note 12: Depending on the usage conditions

## 6.2 External view





# 7. Troubleshooting

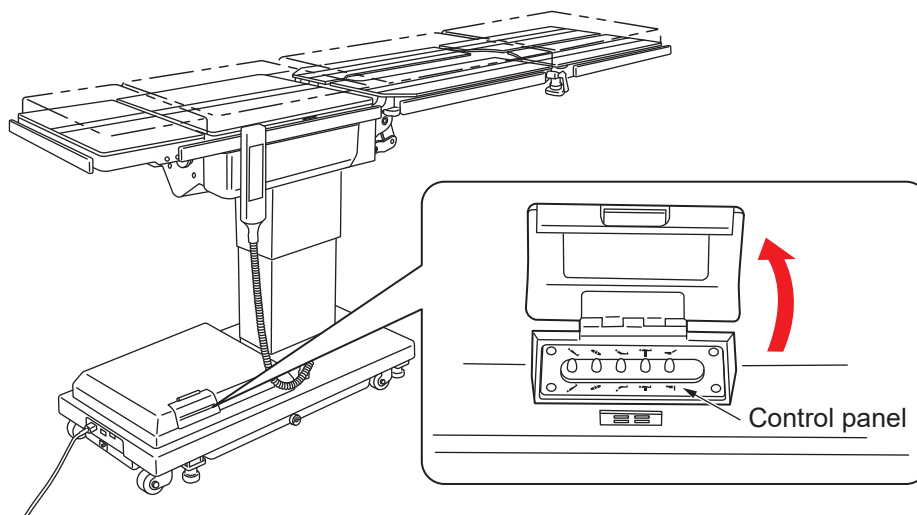
## 7.1 When the hand controller cannot be used

### ■ Use the auxiliary switch to operate the operating table

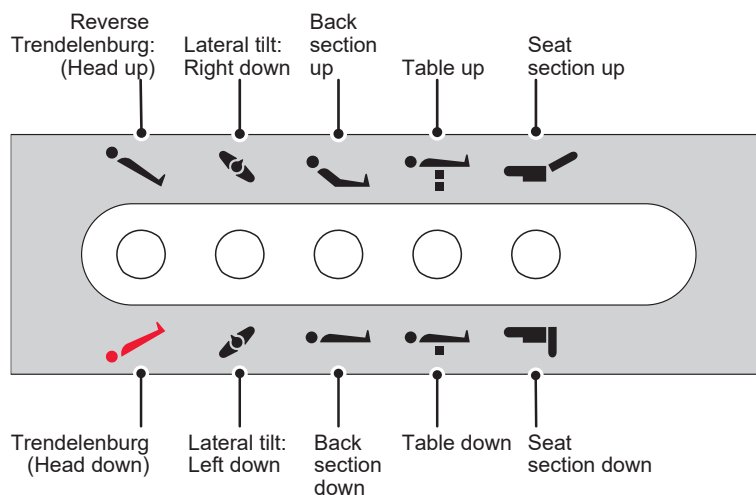


- The auxiliary switch should be used only in an emergency.
- Always watch movement of the operating table when you operate the auxiliary switch. The auxiliary switch has no operational restrictions and may come in contact with other parts.
- If any parts come in contact with each other, immediately stop the operation. Otherwise, the operating table may get damaged.

#### 1. Open the lid of the auxiliary switch.



#### 2. Press the function switch on the control panel according to the desired direction.



#### NOTE

- The operating table moves while the auxiliary switch is being pressed.
- The operating table stops once the maximum angle is achieved at each operation.

## 7.2 When the brake cannot be released



### WARNING

- Do not operate the emergency brake release knob with a patient on the operating table. The operating table may tip over resulting in injury.
- Do not operate the operating table while the emergency brake release knob is in the UNLOCK state. The operating table may tip over resulting in injury.
- After returning the emergency brake release knob to LOCK, operate the brake release with the hand controller. If the operating table is operated without the brake release being operated, the system misidentifies the operating table is locked properly and the operating table operates with the brakes released, which may tip over resulting in injury.

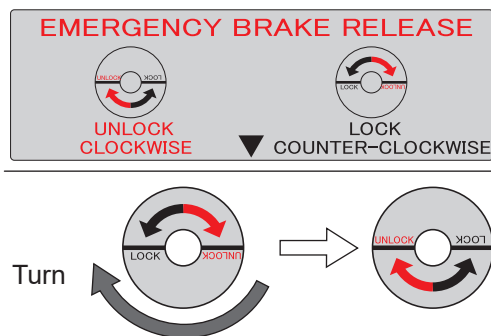
### ■ Brake release with the emergency brake release knob

In case of electrical trouble, the operating table can be moved by using the emergency brake release knob.

Follow the procedure below to release the brake.

#### 1. Turn the emergency brake release knob clockwise (to the right).

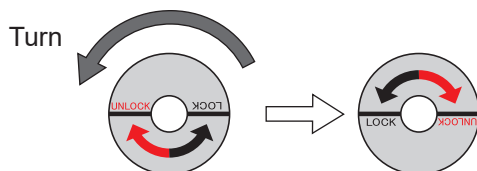
The brake on the operating table body will be released.



### ■ Brake release and fixing the operating table

When you want to use it again after the electrical trouble been fixed, follow the procedure below to release the brake and fix the operating table.

#### 1. Turn the emergency brake release knob counterclockwise (to the left).



#### 2. Press first and then on the hand controller for 1 second or more.

The operating table system recognizes the brake release status.

#### 3. Press first and then on the hand controller.

The operating table will be fixed.

# 8. Before contacting for repairs

## ■ Checking causes and countermeasures

The following problems can occur even if the operating table is not malfunctioning. Check the following points before requesting repairs.

Status	Possible cause	Measures
The table cannot be turned on.	The connector of the hand controller is not connected properly.	Insert the connector completely. (→Page 17)
	The battery may be low.	Charge the battery. (→Page 16)
A function switch on the hand controller does not function.	The connector of the hand controller is not connected properly.	Insert the connector completely. (→Page 17)
	You did not press the E switch before the function switch.	Press E switch first and then the function switch. (→Page 23 to 29)
	Motor may be overheated.	Wait for about 60 minutes to operate. (→Page 12)
The operating table cannot be fixed.	The emergency brake release knob is in "UNLOCK" position.	Turn the emergency brake release knob toward "LOCK." (→Page 50)
	After releasing the brake by the emergency brake release knob, the brake has not been unlocked by the hand controller.	Unlock the brake by the hand controller. (→Page 50)
Reverse Trendelenburg positioning and lateral tilt positioning do not operate.	The seat section is flexed more than 50° downward.	Operate the seat section so that their downward flex angle will be 50° or less. (→Page 28)
	The tabletop is 850 mm (33.46 in) or less above the floor.	Raise the tabletop until the actuation limit line on the column base cover is fully visible (at least 850 mm (33.46 in) above the floor). (→Page 27)
The tabletop cannot be lowered to the lowest position.	The seat section is flexed more than 50° downward.	Operate the seat section so that their downward flex angle will be 50° or less. (→Page 28)
The seat section flexing function does not operate.	The tabletop is 850 mm (33.46 in) or less above the floor.	Raise the tabletop until the actuation limit line on the column base cover is fully visible (at least 850 mm (33.46 in) above the floor). (→Page 27)
The battery indicator is flashing red.	The battery is fully charged.	1. Unplug the power cord, then after operating the elevation function with battery power, turn the power switch back on. (→ Page 21, 27)
		2. Turn off the power switch, then after operating the elevation function with battery power, turn the power switch back on. (→ Page 21, 27)
	If the situation does not improve even if countermeasures 1. and 2. are implemented.	
	The battery's fuse is blown.	Request repairs from your distributor or MIZUHO.

If the situation does not improve even if the above countermeasures are implemented, request repairs from your distributor or MIZUHO.

## ■ In case of malfunction

---



- The operating table should only be serviced or maintained by MIZUHO or the certified providers. Make sure to contact your distributor or MIZUHO for maintenance or repairs.
  - Do not disassemble the operating table. Unauthorized disassembling may cause a fire, electrical shock or malfunction.
  - In order to prevent infections, make sure to clean and disinfect the operating table when requesting to have it repaired.
- 

Implement the follow measures when the operating table malfunctions.

- 1. Turn off the power and disconnect the power cord from the medical grade outlet.**
- 2. Place an “Out of Order” or “Do Not Use” sign on the operating table.**

## ■ Warranty

MIZUHO Corporation will repair defective parts of this product without charge for one year from the date of delivery/installment except for cases of damage caused by a third party's repair, act of nature, improper use or intentional damage. All other warranty terms and conditions are subject to regulations of MIZUHO Corporation.

# App.-1 Electromagnetic Compatibility

Install and operate according to the EMC information provided in this manual.



- Do not use any accessories other than those specified by MIZUHO.  
This can result in increased emissions and reduced immunity.
- Do not use it adjacent to or stacked with other equipment.  
Normal operation may not be possible due to electromagnetic interference.
- Before using other medical electronic devices (especially life support devices) to be used together, make sure that they will not malfunction due to electromagnetic interference.  
Normal operation may not be possible due to electromagnetic interference.

## Guidelines and manufacturer declaration – electromagnetic emissions


The MOT-1302B is intended for use in the electromagnetic environment specified below. The customer or user of the MOT-1302B must ensure that it is operated in suchlike environments.

Electromagnetic interference measurements	Compliance	Electromagnetic environment – guideline
Harmonic emissions IEC 61000-3-2	Class A	The MOT-1302B is suitable for use in all establishments, other than domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	
RF emissions CISPR 11	Class A	
RF emissions CISPR 11	Group 1	The MOT-1302B uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.

A

Electromagnetic Compatibility

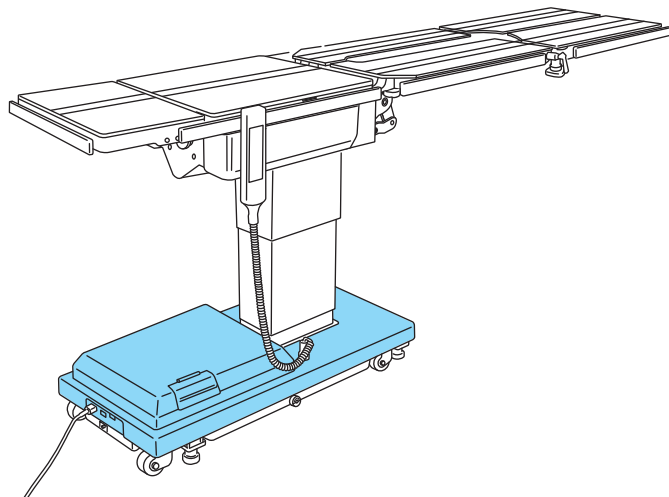
<b>Guidelines and manufacturer declaration – electromagnetic interference immunity</b>			
The MOT-1302B is intended for use in the electromagnetic environment specified below. The customer or user of the MOT-1302B must ensure that it is operated in suchlike environments.			
<b>Interference immunity tests</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment – guidelines</b>
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact discharge  ± 2; 4; 8; 15 kV air discharge	± 8 kV contact discharge  ± 2; 4; 8; 15 kV air discharge	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines  ± 1 kV for input and output lines	± 2 kV for power supply lines  ± 1 kV for input and output lines	Power supply voltage quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 0.5; 1 kV differential mode voltage  ± 0.5; 1; 2 kV common mode voltage	± 0.5; 1 kV differential mode voltage  ± 0.5; 1; 2 kV common mode voltage	Power supply voltage quality should be that of a typical commercial or hospital environment.
Voltage drops, short interruptions and fluctuations in power supply voltage IEC 61000-4-11	0% $U_T$ for 0.5 cycles  0% $U_T$ for 1 cycles  70% $U_T$ for 25/30 cycles  0% $U_T$ for 250/300 cycles	0% $U_T$ for 0.5 cycles  0% $U_T$ for 1 cycles  70% $U_T$ for 25/30 cycles  0% $U_T$ for 250/300 cycles	Power supply voltage quality should be that of a typical commercial or hospital environment. If the user of the MOT-1302B need to continue operation during a main power interruption, it is recommended that the MOT-1302B be powered by an uninterruptible power supply or battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Info: $U_T$ is the AC voltage before application of the test level.			

Guidelines and manufacturer declaration – electromagnetic interference immunity (continuation)				
Conducted disturbances induced by radiated RF IEC 61000-4-6	150 kHz to 80 MHz 3 V		150 kHz to 80 MHz 3 V	Portable and mobile RF communications equipment (radio devices, incl. antennas or cables) should be used no closer to any part of the MOT-1302B than the recommended safety distance of 300 mm (12 in).
	ISM frequencies 6 V		ISM frequencies 6 V	
Interference due to radiated RF IEC 61000-4-3	80 MHz to 2.7 GHz 3 V/m		80 MHz to 2.7 GHz 3 V/m	The field strengths from fixed RF transmitters, as determined by field surveys of electromagnetic fields, should be less than a compliance level of 3 V/m in each frequency range.  Interference may occur in the vicinity of equipment marked with the following symbol:  
	Wireless communication frequency band V/m   MHz		Wireless communication frequency band V/m   MHz	
	27	385	27	385
	28	450	28	450
	9	710	9	710
	9	745	9	745
	9	780	9	780
	28	810	28	810
	28	870	28	870
	28	930	28	930
	28	1720	28	1720
	28	1845	28	1845
	28	1970	28	1970
	28	2450	28	2450
	9	5240	9	5240
	9	5500	9	5500
	9	5785	9	5785
Info: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and people.				
The field strengths from fixed transmitters, such as wireless (cellular/cordless) telephones and mobile terrestrial radio base stations, amateur radio, AM/FM radio broadcasts and TV broadcasts cannot be accurately and theoretically predicted. In order to confirm the electromagnetic environment caused by the fixed RF transmitter, it is desirable to consider an electromagnetic field survey. If the measured field strength exceeds the compliance level as specified above at the location where the MOT-1302B is used, the MOT-1302B should be observed to verify correct functionality. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the MOT-1302B.				

## App.-2 Glossary

### Base

The light-blue portion of the figure below.

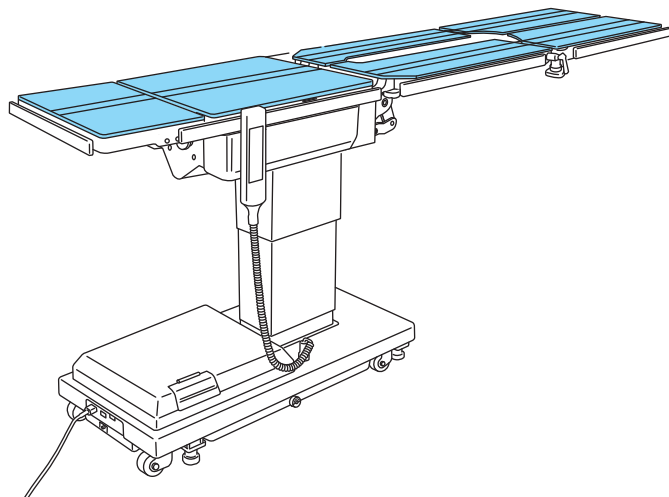


### Lateral tilt

Tabletop of the operating table moves to the left-down or the right-down position.

### Tabletop

The light-blue portion of the figure below.



### Trendelenburg

Tabletop of the operating table moves to the head-up or the head-down position.



# Revision Record

2017-09-07	Ver.1	New release
2020-02-03	Ver.2	Revision
2021-01-27	Ver.3	Revision
2021-06-18	Ver.4	Revision
2023-07-14	Ver.5	Revision
2024-10-29	Ver.6	Revision
2025-05-01	Ver.7	Revision
2025-06-24	Ver.8	Revision



---

Sales Agent



**EMERGO EUROPE**  
Westervoortsedijk 60  
6827 AT Arnhem, The Netherlands



**MIZUHO Corporation**  
3-30-13 Hongo, Bunkyo-ku  
Tokyo 113-0033, Japan  
<https://www.mizuho.co.jp>