

INSTRUCTIONS

ENDOSCOPE REPROCESSOR

OER-Pro

(For Aldahol III)

For details on installation and setup, refer to "Instructions - Installation Manual".

USA: CAUTION: Federal law restricts this device to sale by or on the order of a physician.

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Contents

Labels and Symbols

The meaning(s) of the symbol(s) shown on the package with the components, the back cover of this instruction manual and/or this equipment are as follows:



Refer to instructions.



Caution, hot surface



Endoscope reprocessor



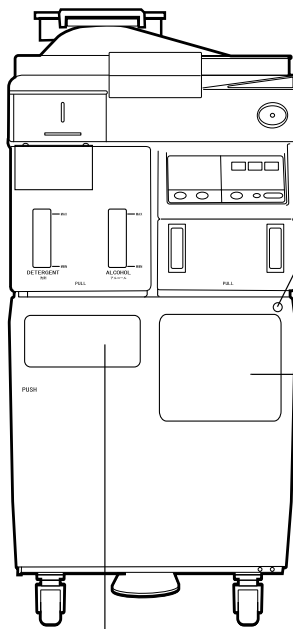
Manufacturer



Authorized representative in the European Community

Safety-related labels and symbols are attached to the equipment at the locations shown below. If labels or symbols are missing illegible, contact Olympus.

○ Front panel



RFID marking

OLYMPUS COMBINATION OF ENDOSCOPES CAN BE REPROCESSED SIMULTANEOUSLY

WARNING ENDOSCOPES LISTED IN GROUP 1 (GASTROINTESTINAL OR BRONCHIO ENDOSCOPES) SHOULD NOT BE REPROCESSED IN COMBINATION WITH ENDOSCOPES LISTED IN GROUP 2 (SURGICAL ENDOSCOPES). THESE COMBINATIONS MAY LIMIT THE EFFECTIVENESS OF CLEANING AND DISINFECTION.
 * ANY TWO ENDOSCOPES LISTED IN THE GROUP 1 CAN BE REPROCESSED SIMULTANEOUSLY.
 * ANY TWO ENDOSCOPES LISTED IN THE GROUP 2 CAN BE REPROCESSED SIMULTANEOUSLY.

<GROUP1> (GASTROINTESTINAL OF BRONCHIO ENDOSCOPES)										<GROUP2> (ENDOSCOPES OF SURGICAL FIELD)									
GROUP	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope	Endoscope		
GF	P220 XP20	1T30 N30 P30 Q30	Q40 XQ40	200Z	130 1T130 N230	140 1T140 1T240	P140 Q140 Q240	XP240 XQ140 XQ240	160 1TQ160 Q160 Q160Z XP160 XTQ160	H80 N80 Q180	LF	2 T P	DP TP GP				V		
JF						140F													
TJF						140F													
CF			40LJ		110TL7J 1110LJ 200L9S 200Z	130LVS 140LRS 1T140LJ Q140LJ Q240LJ	160LRS 1T160LJ Q160LJ Q160LJ Q240LJ	H180ALJ H180ALJ H180ALJ H180ALJ											
PCF							140LJ 240LJ	160ALJ S	H180ALJ										
OSF		3																	
BF	1T200 200 N20 P200 XP200	1T30 3C 3C30 P30 XP30 XT30	1T40 3C40 40 P40 XP40 XT40	1T60 P60 MP60 XP60	1T200 P200 200	1T240 240 3C240 P240	160 1T160 3C160 MP160F P160 XP160F XT160	1T180 P180 Q180 Q180-AC											

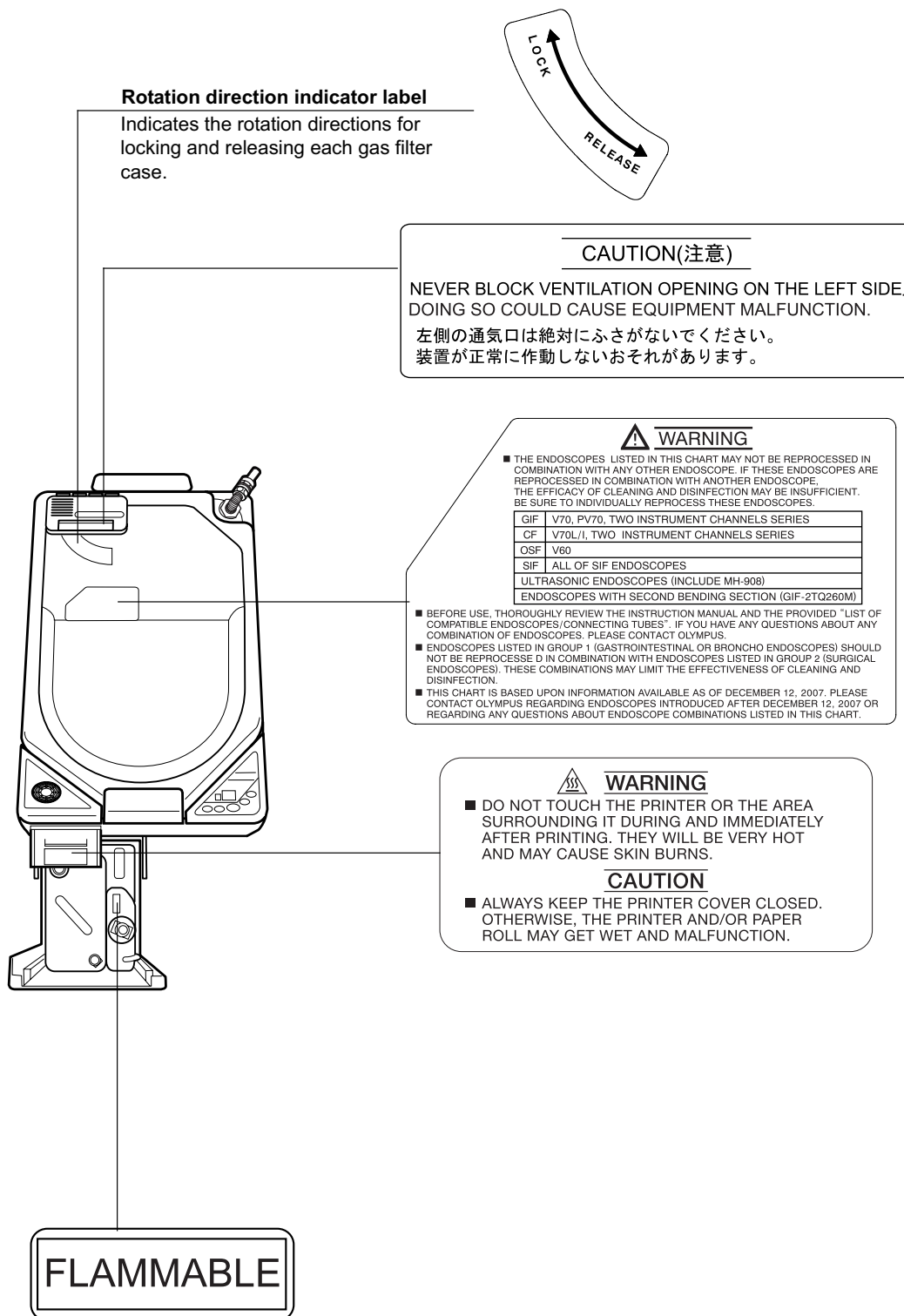
MAJ-1300

THIS CHART IS BASED UPON INFORMATION AVAILABLE AS OF **/**/** (MM/DD/YYYY). PLEASE CONTACT OLYMPUS REGARDING ENDOSCOPES INTRODUCED AFTER **/**/** (MM/DD/YYYY) OR REGARDING ANY QUESTIONS ABOUT ENDSCOPE COMBINATIONS LISTED IN THIS CHART.

WARNING

- THIS EQUIPMENT CAN BE SET UP TO USE THE RFID FUNCTION. PLEASE BE AWARE THAT THE RADIO WAVES EMITTED FROM THE EQUIPMENT MAY CAUSE MEDICAL DEVICES SUCH AS PACEMAKERS TO MALFUNCTION.
- DO NOT EXPOSE EQUIPMENT TO OPEN FLAME. USE CARE IN HANDLING OF ALCOHOL TO PREVENT IGNITION AND FIRE HAZARD.
- ALWAYS USE ENDORAPID 980 ML PACK (OLYMPUS-DESIGNATED DETERGENT). IF NO DETERGENT IS USED OR A NON-DESIGNATED DETERGENT IS USED, THE ENDOSCOPES MAY NOT BE PROPERLY REPROCESSED.
- DISCONNECT THE CONNECTING TUBES AND THE LEAK TEST AIR TUBES FROM THE CONNECTORS IN THE TUB WHENEVER THE TUBES ARE NOT USED. FAILURE TO DISCONNECT UNUSED CONNECTING TUBES MAY REDUCE THE EFFICACY OF REPROCESSING AND DAMAGE THE ENDSCOPE.
- CONFIRM FLUID FLOW TO THE CONNECTORS BY VISUALIZING FLUID EXITING FROM THE TOP OF THE CONNECTOR. ALSO, CONFIRM FLUID FLOW FROM THE WATER SUPPLY/CIRCULATION NOZZLE (WHITE), WHICH DIRECTS FLUID ONTO THE DEOM OF THE LID. IF FLUID FLOW IS NOT OBSERVED, THE ENDSCOPE WILL NOT BE EFFECTIVELY REPROCESSED. PLEASE CONTACT OLYMPUS.
- CLEAN THE MESH FILTERS OF THE CIRCULATION PORT AND THE DRAIN PORT EVERY DAY. OTHERWISE ENDOSCOPES MAY NOT BE REPROCESSED SUFFICIENTLY.
- BE SURE TO CLOSE THE WATER FAUCET AT THE END OF THE DAY TO PREVENT WATER FROM LEAKING OUT OF THE EQUIPMENT.

○ Top panel



○ Inner side

CAUTION(注意)

NEVER BLOCK VENTILATION OPENING ON THE LEFT SIDE.
DOING SO COULD CAUSE EQUIPMENT MALFUNCTION.

左側の通気口は絶対にふさがないようにください。
装置が正常に作動しないおそれがあります。

CAUTION

DRAIN AIR FROM THE WATER FILTER COMPLETELY.
IF THE WATER FILTER, IT COULD BECOME CLOGGED
SOONER OR THE SUPPLY MAY BECOME INSUFFICIENT.

注 意

水フィルターのエア抜きは確実に行ってください。
エア抜きが確実に行われていない場合、水フィルターの
目詰まりが早まったり、給水量不足の原因になります。

 **MAINTENANCE**

CAUTION

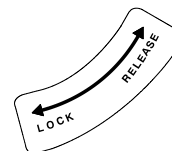
LEAVE THE RUBBER CAP ATTACHED TO THE DISINFECTANT REMOVAL PORT UNLESS THE DISINFECTANT REMOVAL TUBE OR THE DISINFECTANT SOLUTION DRAIN CONNECTOR IS CONNECTED. LEAKING DISINFECTANT SOLUTION POSES A SAFETY RISK TO THE OPERATOR AND MAY DAMAGE THE SURROUNDING EQUIPMENT.

注意

消毒液、ドレーンホースまたはドレーンコネクター接続時以外は、ドレーン口にゴムキャップを取り付けてください。消毒液漏れにより装置周辺の機器や設備などに損害を与えるおそれがあります。

Rotation direction indicator label

Indicates the rotation direction for locking and releasing each gas filter case.



Error code table

Lists error codes, possible causes, and remedial actions for details, see Section 8.1, "Troubleshooting guide" on page 218 in the "Instructions-Operation Manual".

Rating plate

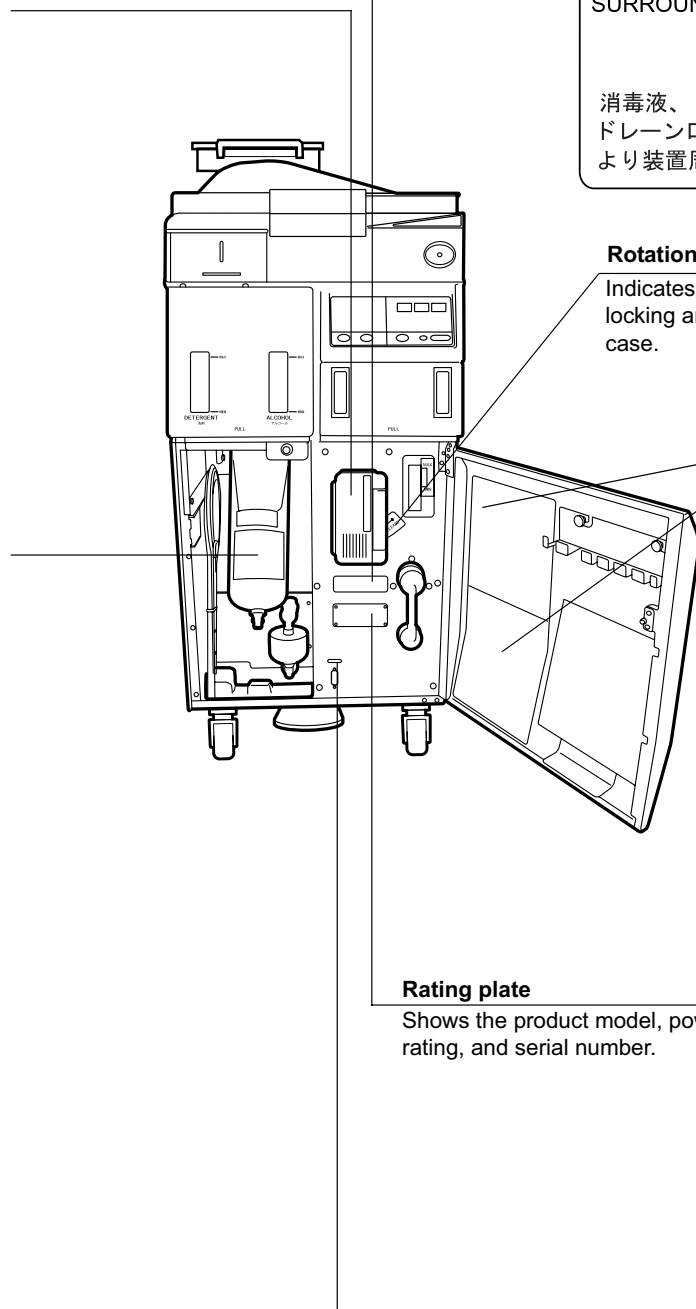
Shows the product model, power rating, and serial number.

ENDOSCOPE REPROCESSOR

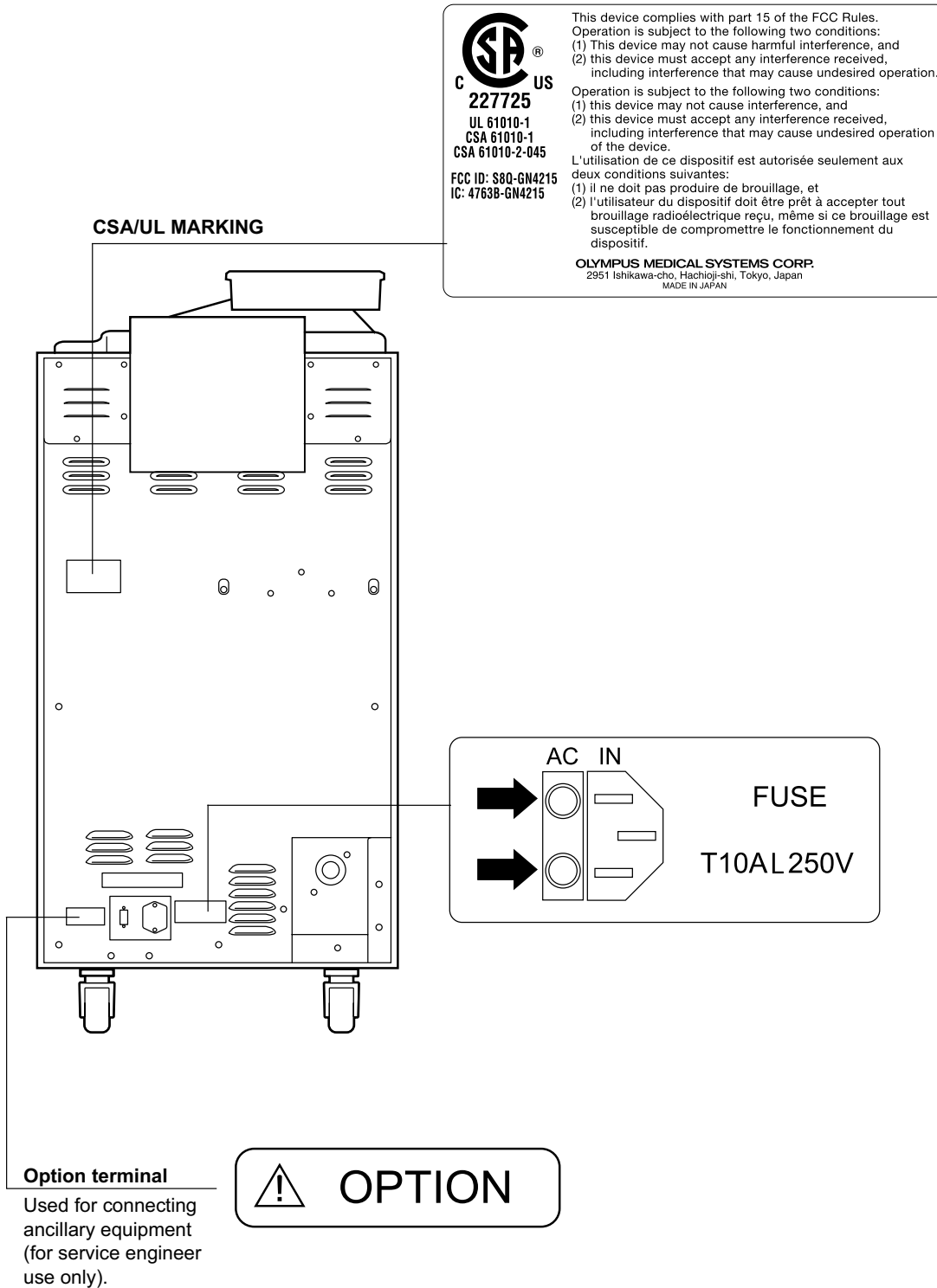
MODEL	OER-Pro
INPUT	120V~5.5A 60Hz

SN _____

OLYMPUS MEDICAL SYSTEMS CORP.



○ Rear panel



Important Information — Please Read Before Use

Intended use

This subject device has been designed to wash and disinfect flexible endoscopes and their accessories utilizing an alkali detergent and an FDA-approved liquid chemical germicide for semi critical medical devices. Both the detergent and the LCG are exclusively used for this subject.

Instruction manuals

The instructions for this equipment are divided into two volumes: “Instructions-Installation Manual” and “Instructions-Operation Manual”. Each manual contains essential information for using this equipment safely and effectively (“Instructions-Installation Manual” describes how to install the equipment and “Instructions-Operation Manual” describes how to inspect and use the equipment. These manuals will be referred to as “the instruction manuals”). Before using this reprocessor, be sure to review these manuals thoroughly, as well as the manuals of any other equipment that will be used during reprocessing. Always, use this equipment as instructed. It might cause unexpected danger if you don't follow the installation and operation manual. The descriptions in these manuals assume that all endoscopes are reprocessed using the Olympus-designated detergent (EndoRapid 980 ml pack) and disinfectant solution (Aldahol III).

Keep these and all related instruction manuals and documents in a safe, accessible location.

If you have any questions or comments about any information in these manuals, please contact Olympus.

User qualifications

The operator of this equipment must be sufficiently trained in reprocessing of endoscopes. Medical literature reports cases of infections due to inappropriate cleaning, disinfection, and /or sterilization. Thoroughly review and understand the following items before use:

- Cleaning, disinfection, and sterilization procedures described in the instruction manuals for the endoscope and ancillary equipment.
- Professional health and safety standards.
- Applicable guidelines on cleaning, disinfection, and sterilization of endoscopy equipment.
- Structure and handling of endoscopic equipment.
- Personal protective equipment requirements to minimize exposure to chemicals and infectious materials.

These manuals do not explain or discuss the detailed cleaning, disinfection, and sterilization procedures. For more details, please consult your facility's procedures, professional guidelines, and regulatory requirements for reprocessing endoscopes.

Ensuring the safety of reprocessing personnel

- Before handling the high-level disinfectant solution (Aldahol III), carefully read the instructions for use and the material safety data sheet.
- During reprocessing, wear appropriate personal protective equipment to prevent contact with or inhalation of infectious substances or disinfectant. Personal protective equipment includes eye wear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.

- When using the disinfectant solution and alcohol, Olympus recommends the use of gas filters and running this equipment in well-ventilated areas.
 - Wear a facemask, gloves, and protective clothes to minimize aspiration and skin contact.
 - Wear goggles for eye protection.

Refer to the following association's guidelines related to ventilation:

SGNA	(Society of Gastroenterology Nurses and Associates)
ASGE	(American Society of Gastroenterological Endoscopy)
APIC	(Association for Professionals of Infection Control and Epidemiology)
AORN	(Association of Preoperative Registered Nurses)
ASTM	(American Society for Testing and Materials)
OSHA	(Occupational Safety and Health Administration)
ACGIH	(American Conference of Governmental Industrial Hygienists)
NIOSH	(National Institute for Occupational Safety and Health)
AIA	(American Institute of Architects)

Do not handle the equipment if the operator shows any allergic symptoms even while wearing protective gear.

- Before handling the detergent or disinfectant, read the material safety data sheets and learn what measures to take in the event of exposure.
- Operators who exhibit symptoms of an allergic reaction or sensitivity to the reprocessing chemicals should not operate this equipment.
- This equipment can be set up to use the RFID function. Please be aware that the radio waves emitted from the equipment may cause medical devices such as pacemakers to malfunction.

Equipment compatibility

Use this equipment in combination with ancillary equipment listed in “System chart” in Appendix. Using incompatible equipment may result in patient or operator injury and equipment damage and/or malfunction.

Care and storage

After use, reprocess and store this equipment referring to the instructions in Chapter 5, “End-of-Day Checks” in this manual. Inappropriate care and storage could present an infection control risk and/or cause equipment damage or malfunction.

Maintenance and administration

- Endoscopes or ancillary devices that have been used many times or for a long time are more likely to fail. In addition to checks before use, the person in charge of maintenance and administration of the medical equipment at the hospital should periodically check all of the items described in this manual. If any irregularity is observed, do not use the equipment and inspect it as described in 8.1, “Troubleshooting guide” on page 218. If the irregularity is still present, the equipment must be repaired prior to next use.
- If the lamp of the PERIODICAL MAINTENANCE indicator described in Section 2.5, “Control panels” on page 24 blinks, contact Olympus.

Repair and modification

Do not disassemble, modify or attempt to repair this equipment and its accessories. Doing so could result in operator or patient injury and/or equipment damage or malfunction. Some problems that appear to be malfunctions may be corrected by referring to Chapter 8, “Troubleshooting and Repair”. If the problem cannot be resolved using the information in Chapter 8, “Troubleshooting and Repair”, contact Olympus.

Disposal of waste fluids

The waste fluids of this equipment should be treated as directed in the Aldahol III instruction manuals and follow all applicable national and local guidelines.

Disposal of this equipment

When disposing of this equipment and accessories, follow all applicable national, state, and local regulations and guidelines.

Signal words

The following signal words are used throughout these manuals:

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices or potential equipment damage.

NOTE

Indicates additional helpful information.

Dangers, warnings, and cautions

Follow the dangers, warnings, and cautions given below when handling this equipment. This information is supplemented by the dangers and warnings given in each chapter.

DANGER

- Do not insert an EndoTherapy accessory or other object through an opening including the air vent of the equipment. Also, do not allow any liquid (including water or disinfectant solution) to flow into an opening. Contact with an electrical part inside the equipment could cause an electric shock or equipment failure.
- Always remove the tank from the detergent/alcohol drawer before putting detergent or alcohol in the tank. If detergent or alcohol is spilled on the detergent/alcohol drawer, it could get inside the equipment and contact an electrical part inside, causing an electric shock or fire hazard.
- Do not install this equipment in any place where any of the following are present.
 - High oxygen concentration
 - Oxidizing substance such as Nitrous Oxide (N₂O)
 - Flammable anesthetic gas

This equipment is not explosion-proof and may explode or cause fire under these conditions.

WARNING

Always use the power cord provided with this equipment. Otherwise, equipment failure or power cord burnout may result. Also, remember that the provided power cord is for use only with this equipment and should not be used with any other equipment.

CAUTION

- Do not press any of the switches on the main or subcontrol panel of this equipment with a pointed or hard object. Otherwise, the switch may be damaged.
- Be sure to turn off the faucet and the power switch of the equipment at the end of the day. Otherwise, water supply hose might slip off the connection when not in use (e.g., nighttime or holidays) because of the unexpected change in water pressure.

- To avoid malfunctions, do not use this equipment in a dusty environment.
- To avoid electromagnetic interference from other equipment, do not install any other electrical devices in close proximity to this equipment (aside from ancillary devices used with this equipment).
- This equipment provides a radio communication function by RFID and emits RF (Radio Frequency) energy to perform the said intended functions. Therefore, it may cause electromagnetic interference in nearby electronic equipment, and is labeled with the following symbol. If electromagnetic interference occurs, mitigation measures may be necessary, such as moving the electronic equipment away, reorienting or relocating this instrument, or shielding the location. An electromagnetic interference with other devices may shorten the communications distance of the designated ID tag and cause signals to become unreadable. Try to take mitigation measures such as keeping the affecting device away from this equipment.



Terms used in these manuals

Cleaning fluid

Refers to the water treated by the water filter for use by this equipment in reprocessing. When cleaning fluid is used in the detergent cleaning process, detergent is added to it.

Detergent

Olympus-designated alkaline detergent (EndoRapid).

Disinfectant solution

Olympus-designated disinfectant solution (Aldahol III).

Alcohol

70% ethyl alcohol or isopropyl alcohol.

Process

Generic term for any operation, including cleaning and disinfection, that is performed automatically by this equipment.

Cleaning process

A series of operations programmed into the equipment that enable it to perform ultrasonic cleaning and detergent cleaning of an endoscope.

Disinfection process

A series of operations programmed into the equipment that enable it to perform disinfection of an endoscope.

Leak test

A test to confirm that an endoscope is waterproof.

Air purge

In this operation, air is fed into an endoscope channel to blow out any internal moisture. This operation is usually performed automatically during a process, but it can also be activated independently. Air purge is also used to drain cleaning fluid or disinfectant solution from inside the equipment when the operation has stopped due to an error code, etc.

Reprocessing programs

A series of operations for ultrasonic cleaning, detergent cleaning, disinfection, and rinsing of the outer surface and channels of endoscopes that run in a specified sequence and for a specified time. Reprocessing programs [1] to [3] can be selected by the user. Program [1] consists of a preset series of processes confirmed as effective at our factory. Programs [2] and [3] can be set up by the user.

Alcohol flushing

To dry the channel after reprocessing, alcohol is passed through the endoscope channel and then air is fed through. This operation can be performed as the last step after completion of the reprocessing program or as an independent operation.

Disinfectant solution heating

A process for heating disinfectant solution until it reaches the appropriate temperature. When this process is included in a reprocessing program, it is performed automatically during the program. It can also be performed as an independent operation.

Test strip

Device used to test if the concentration of disinfectant solution is effective for disinfection. Meets the minimum recommended concentration (MRC) specified by the disinfectant manufacturer.

Error code

A code consisting of [E] and a two-digit number. This code is displayed on the main control panel if there is a problem with the equipment. When an error code is displayed, check the error code list to find out what corrective measures to take.

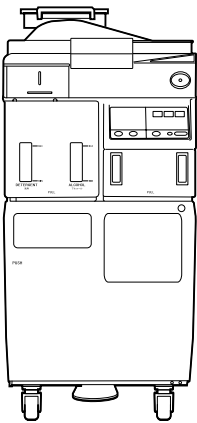
Automatic Processing

When the equipment is stopped by the operator or due to an error, it identifies its status and executes the optimum operation automatically. For example, if the device stops in the middle of disinfection process, it terminates the disinfection process and removes the disinfectant solution.

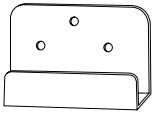
Chapter 1 Checking the Package Contents

Check that the package contains all the items listed below. Inspect each item for damage. If the device is damaged, a component is missing, or there is any question regarding items, do not use the device and contact Olympus immediately.

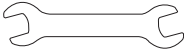
Accessories for use in installation



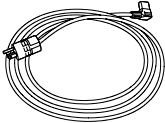
ENDOSCOPE REPROCESSOR OER-Pro



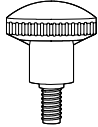
Buckling guard (GT143100)



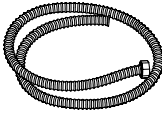
Wrench (GC748400)



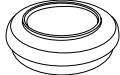
Power cord (DW662000)




Buckling guard retaining screws (× 3) (GC783700)



Drain hose (GJ853400)




Grommet (× 4) (GC784100)

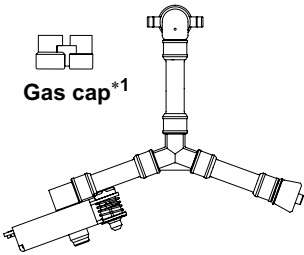


Water supply adapter (GN513000)

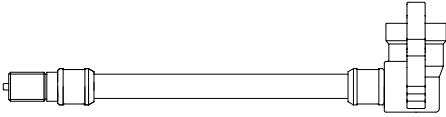
Accessories for use in reprocessing



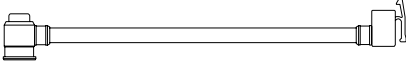
Gas cap*1



Connecting tubes (× 2) (MAJ-1500)



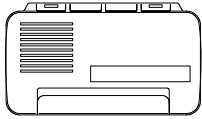
Connecting tubes (× 2) (MAJ-1501)



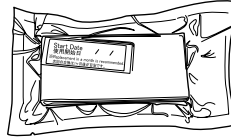
Leak test air tubes (× 2) (MAJ-821)

*1 Not used with OER-Pro.

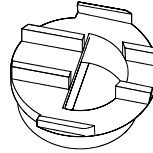
Accessories to be attached to the equipment



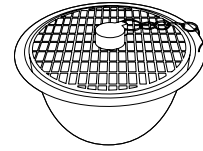
Gas filter cases (x 2)
(GJ460700)



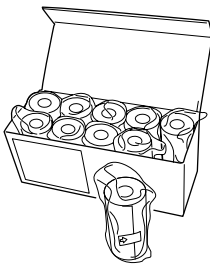
Gas filters (x 2)
(MAJ-822)



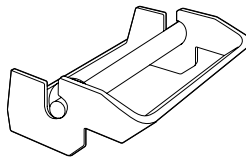
Adapter
(GC949900)



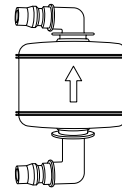
Washing case
(MAJ-827)



printer paper roll
(MAJ-1497)



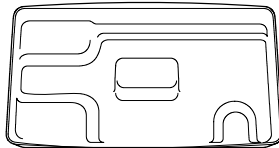
Paper roll axle
(MAJ-1498)



Air filter
(MAJ-823)

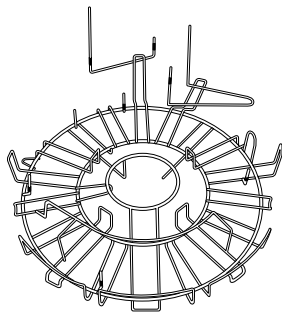


Water filter
(MAJ-824)

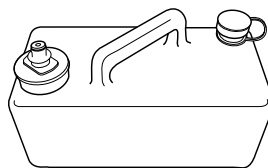


Water tray
(GC601400)

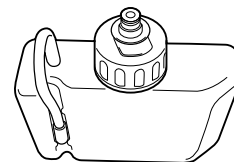
Accessories pre-attached to the equipment



Retaining rack
(GL830600)



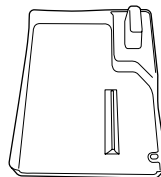
Detergent tank
(GJ457500)



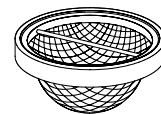
Alcohol tank
(GN042300)



Circulation port mesh filters
(GC574000, GC693900)



Detergent/alcohol inner tray
(GT115400)

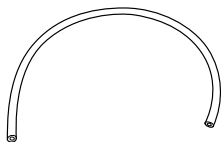


Drain port mesh filter
(GC220100)

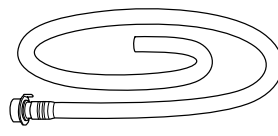
Accessories for use in maintenance



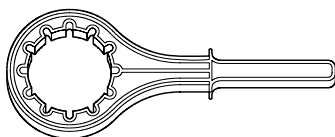
**Syringe
(GT173600)**



**Tube
(GC651300)**



**Disinfectant collection hose
(GJ668000)**



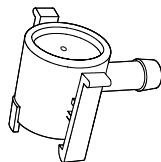
**Water filter wrench
(GC601300)**



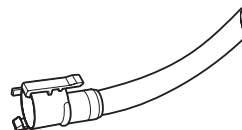
**Filter tubes (× 2)
(GJ460500)**



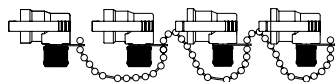
**Sampling tube
(GN513100)**



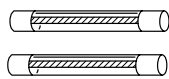
**Drain connector
(GL366300)**



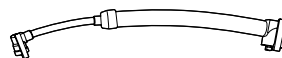
**Disinfectant
removal tube
(GJ460200)**



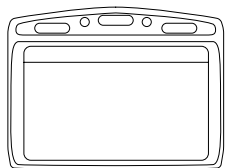
**Connector jig
(GN312400)**



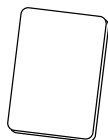
**Spare fuses (× 2)
(DB181500)**



**Water supply piping
disinfection hose
(GL860800)**



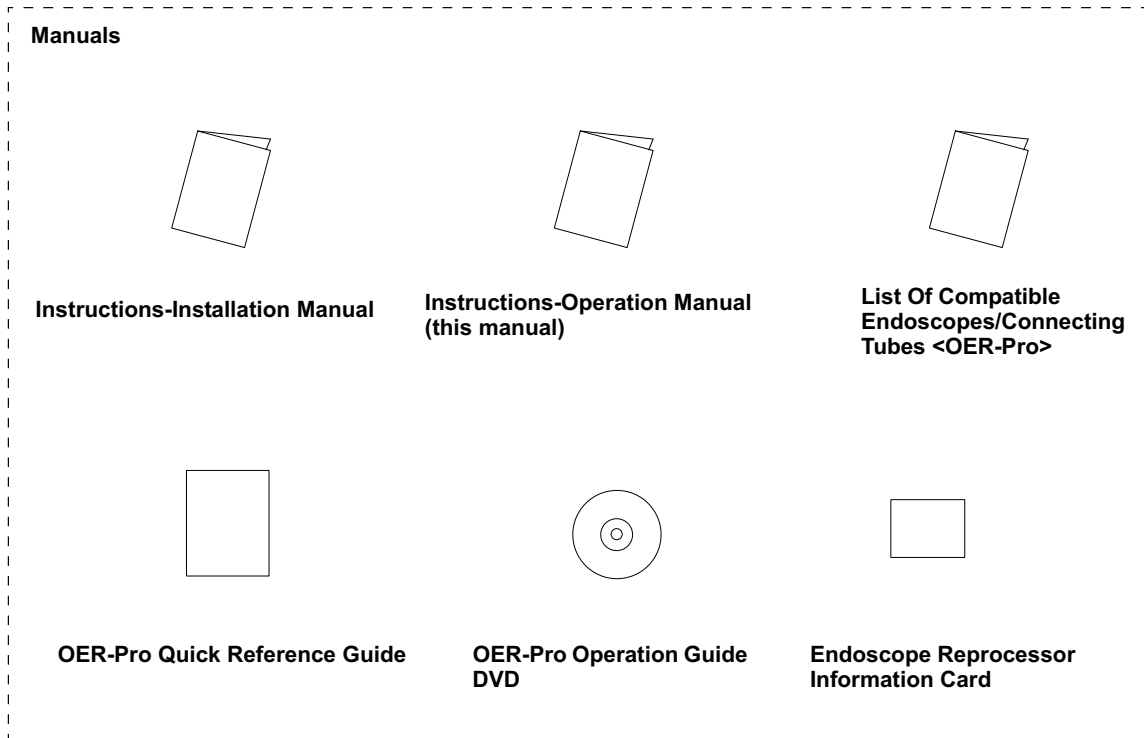
**Card holders (× 2)
(GT271000)**



**Scope ID master card
(GT210400)**

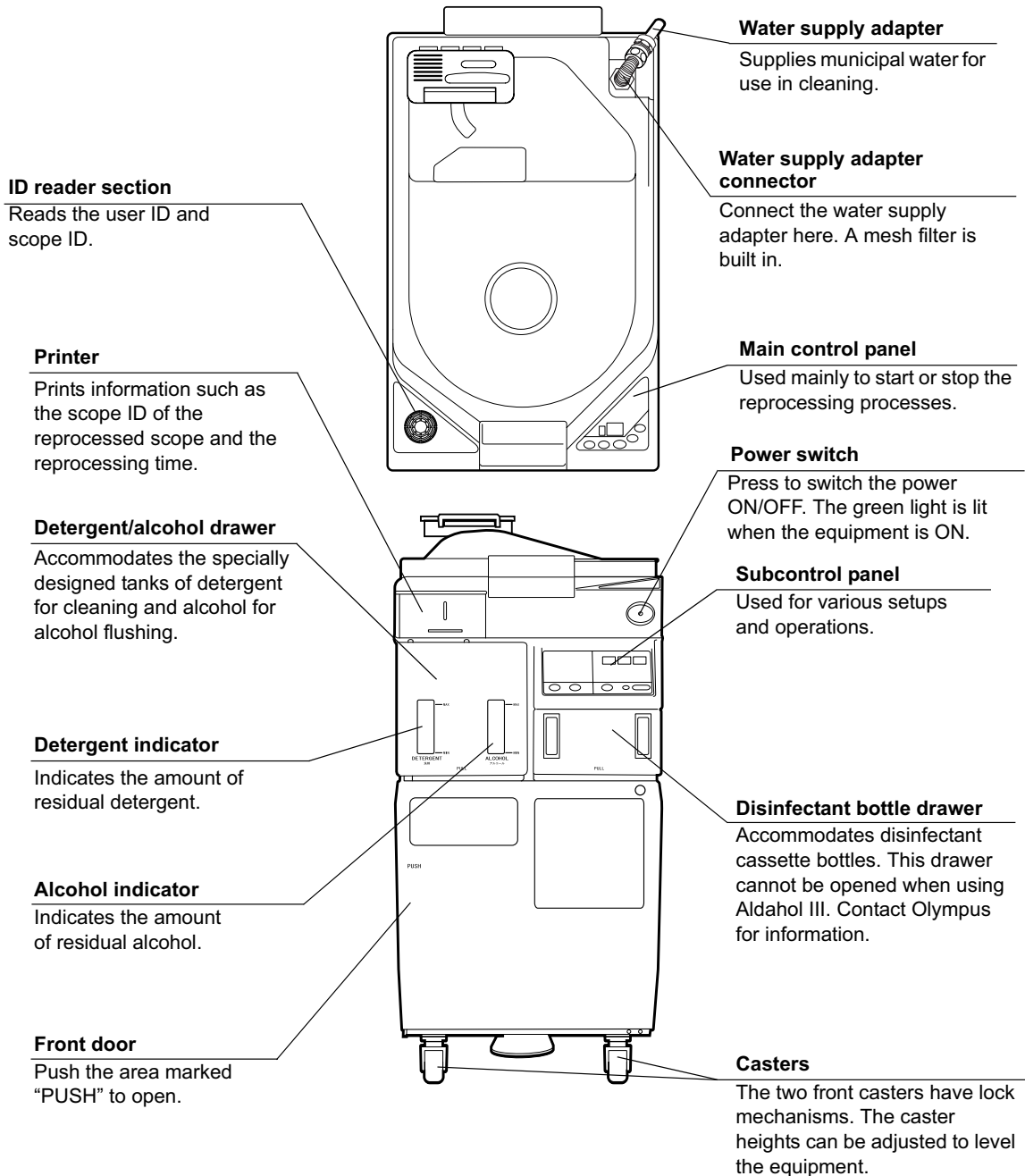


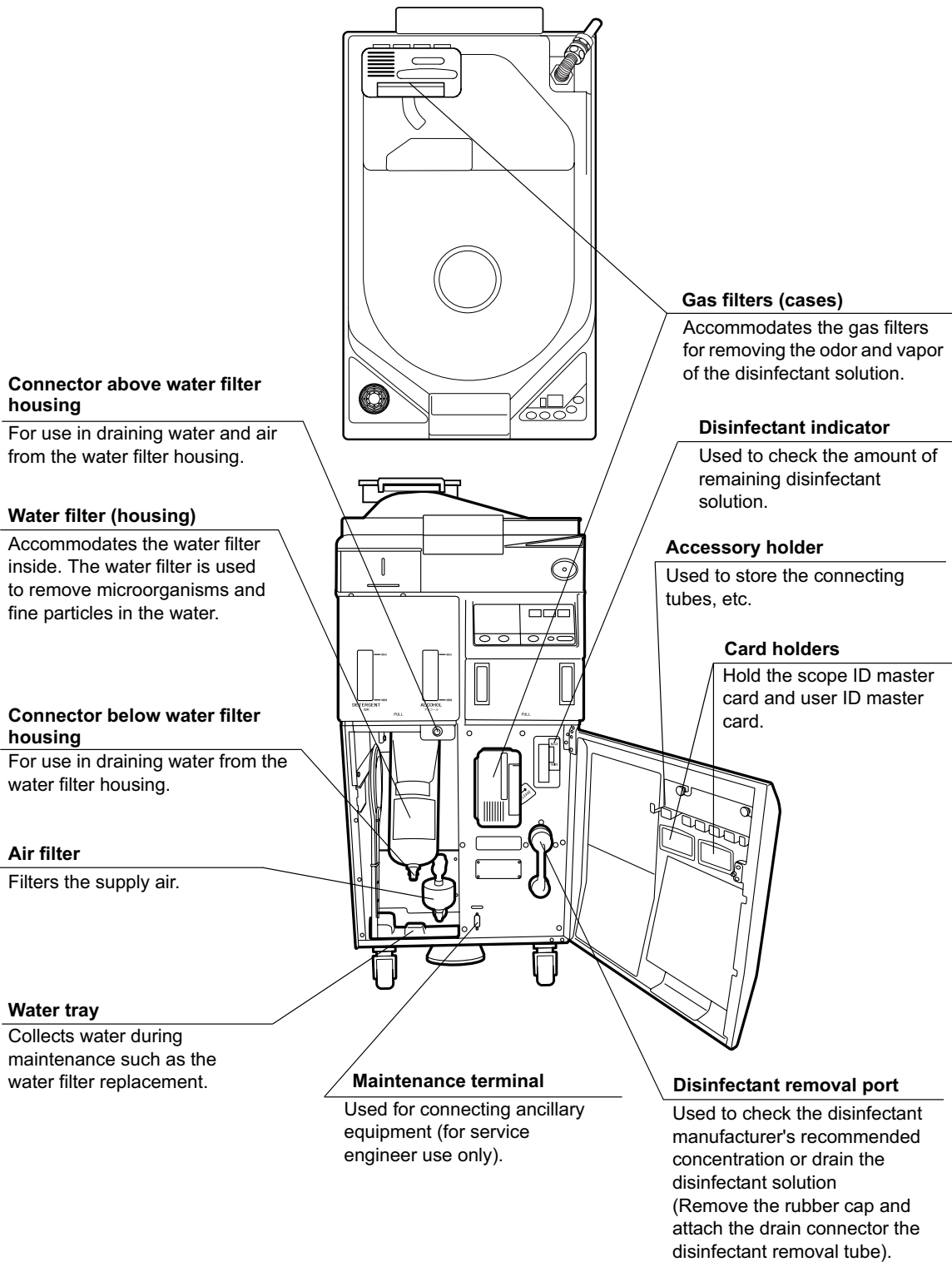
**User ID master card
(GT210300)**



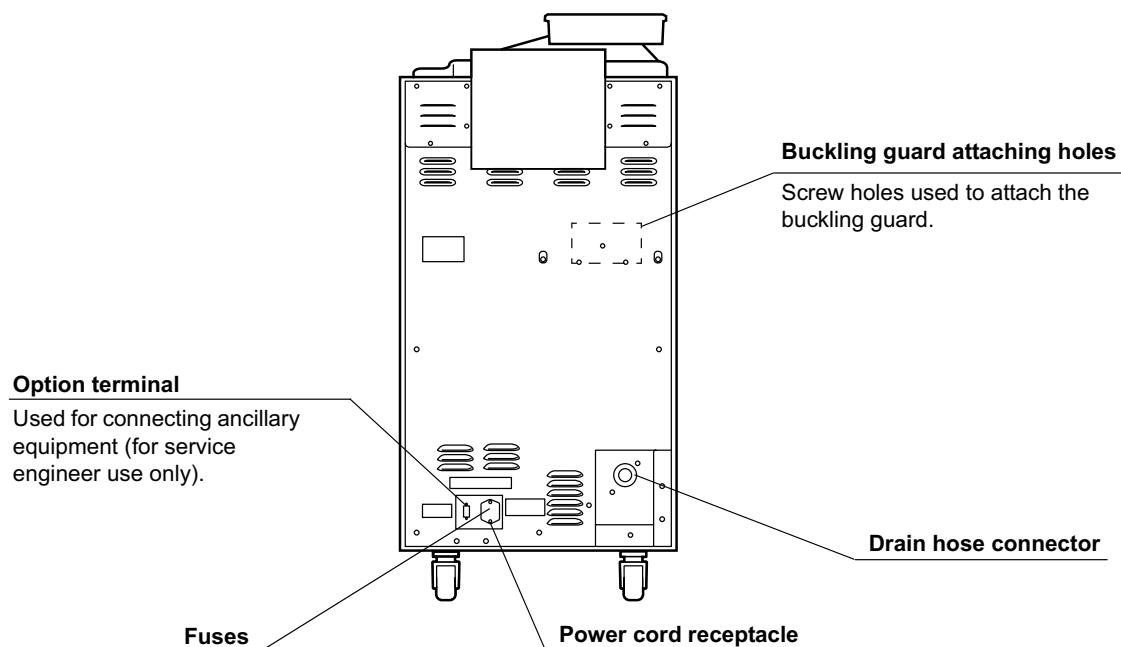
Chapter 2 Nomenclature and Functions

2.1 Front and top panel

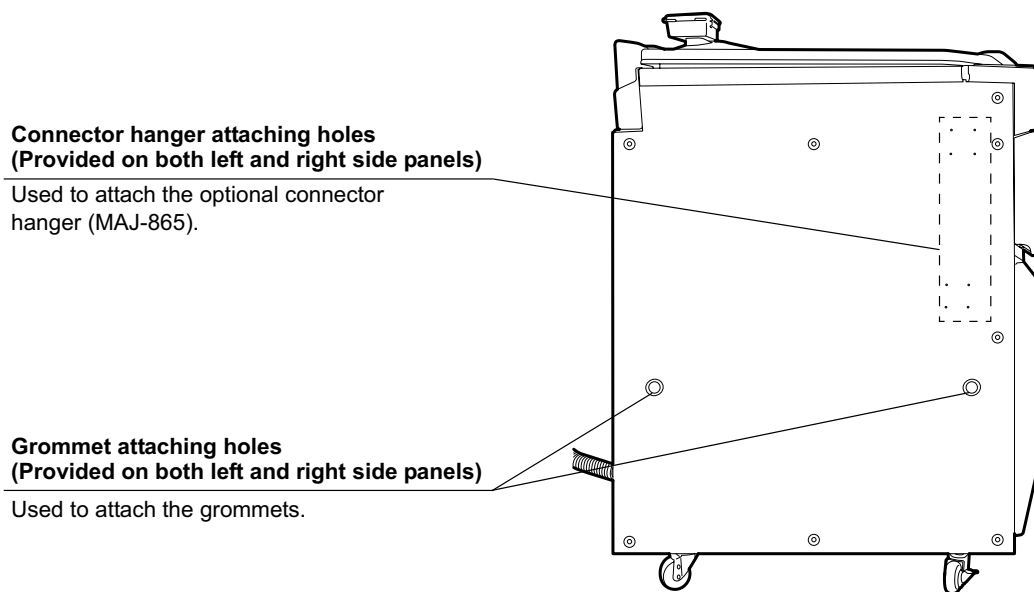




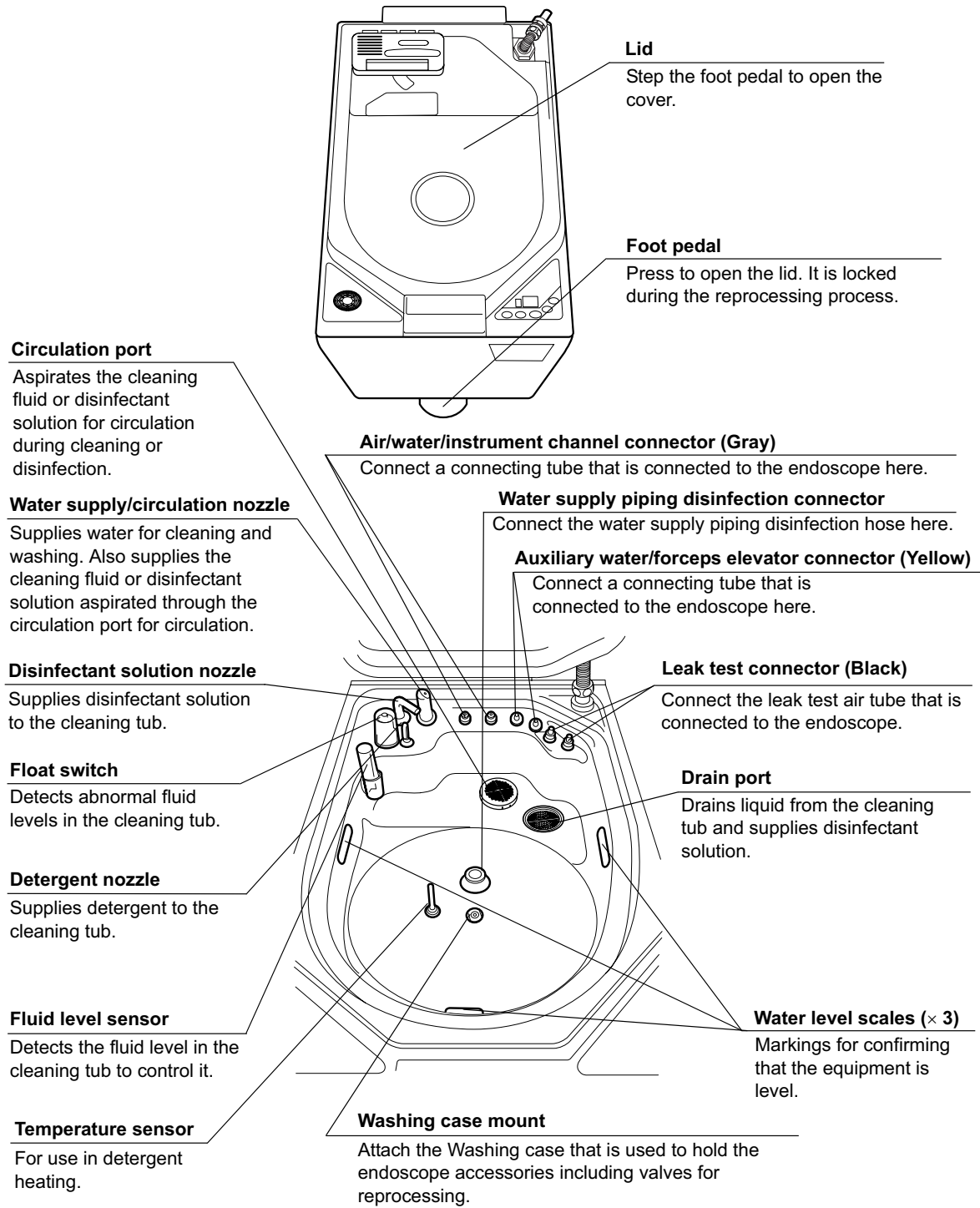
2.2 Rear panel



2.3 Side panel

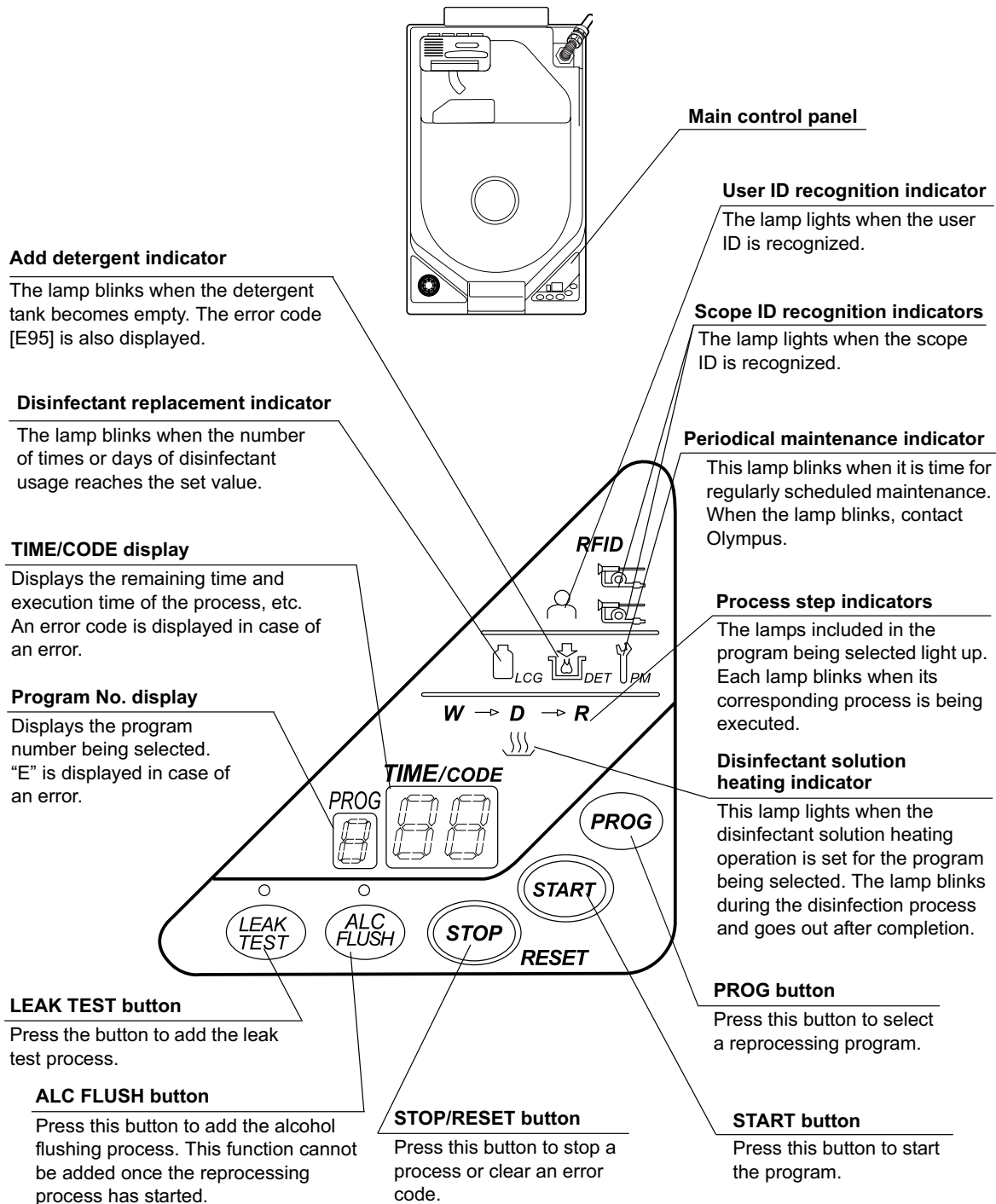


2.4 Cleaning tub

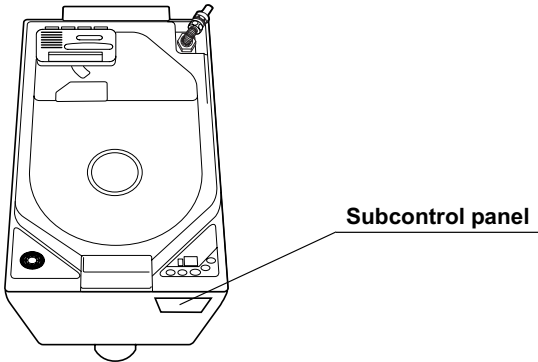


2.5 Control panels

Main control panel

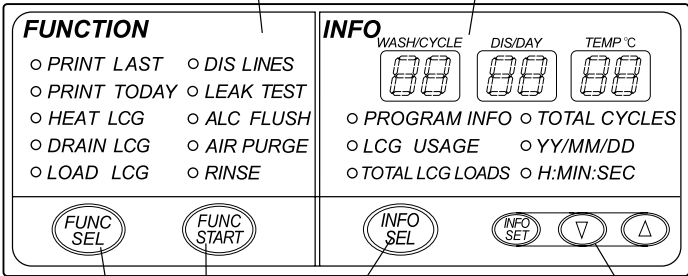


Subcontrol panel



FUNCTION
The lamp corresponding to the selected function lights. For details, see "FUNCTION" on page 26.

INFO
The lamp corresponding to the selected information lights and the details are displayed. For details, see "INFO" on page 27.



FUNC SEL button
Press this button to select a function.

FUNC START button
Press this button to start the selected function.

INFO SEL button
Press this button to select the information to be displayed.

Set "▼"/"▲" buttons
Press these buttons to set the program details, date, and time.

○ FUNCTION

PRINT LAST

Prints information about the previous reprocessing operation, such as the scope ID and cleaning time. For details, see Section 4.12, "Printing of the reprocessing results" on page 95.

PRINT TODAY

Prints details on all reprocessing operations carried out during the day, including scope IDs and cleaning time. For details, see Section 4.12, "Printing of the reprocessing results" on page 95.

PRINT ALL

Prints details on up to the last 60 reprocessing operations, including scope IDs and cleaning time. For details, see Section 4.12, "Printing of the reprocessing results" on page 95.

HEAT LCG

Heats the disinfectant solution before starting the disinfection process. For details, see Section 6.2, "Heating the disinfectant solution" on page 120.

DRAIN LCG

Drains the disinfectant solution from the disinfectant solution tank. For details, see Section 7.12, "Replacing the disinfectant solution" on page 176.

LOAD LCG

Supplies the disinfectant solution from the cleaning tub. For details, see Section 7.12, "Replacing the disinfectant solution" on page 176.

DIS LINES

Disinfects the water supply piping as well as the inside of the equipment. For details, see Section 7.3, "Disinfecting the water supply piping" on page 152.

LEAK TEST

Performs a leak test on the endoscope. For details, see Section 4.7, "Leak test" on page 72.

ALC FLUSH

Performs alcohol flushing of the endoscope channel. For details, see Section 4.10, “Alcohol flushing” on page 87.

AIR PURGE

Feeds air into the equipment and endoscope channels to drain residual water. For details, see Section 6.7, “Air purge” on page 132.

RINSE

Rinses the inside of the equipment and endoscope. For details, see Section 6.8, “Rinsing” on page 133.

○ INFO

WASH/CYCLE display

Pressing the information select button changes the information displayed on the subcontrol panel as shown in Table 2.1.

DIS/DAY display

Pressing the information select button changes the information displayed on the subcontrol panel as shown in Table 2.1.

TEMP °C display

Pressing the information select button changes the information displayed on the subcontrol panel as shown in Table 2.1.

	WASH/CYCLE display	DIS/DAY display	TEMP °C display
PROGRAM INFO	Cleaning time	Disinfection time	Temperature* ¹
LCG USAGE	Cycles	Days	--
TOTAL LCG LOADS		6-digit display	
TOTAL CYCLES		6-digit display	
YY/MM/DD	Year	Month	Day
H:MIN:SEC	Hour	Minute	Second

*1 Any temperature equal to or higher than 20°C (68°F) is displayed as “20°C” (68°F). “[-]” is displayed there is not enough disinfectant solution in the disinfectant tank to measure the temperature.

Table 2.1

PROGRAM INFO

Displays the actual measured values for cleaning time, disinfection time, and temperature.

LCG USAGE

Displays the number of times or days the disinfectant solution has been used.

TOTAL LCG LOADS

Displays the total number of times that disinfectant solution has been loaded (6 digits).

TOTAL CYCLES

Displays the total number of times that the equipment was used (6 digits).

YY/MM/DD

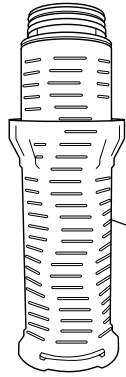
Displays the year, month, and day.

H:MIN:SEC

Displays the hour (24 hour system), minute, and second.

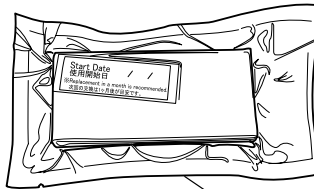
2.6 Consumable accessories (Optional)

○ Water filter (MAJ-824)



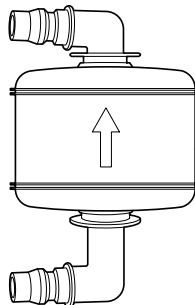
Filters microorganisms and fine particles in the water.

○ Gas filters (MAJ-822)



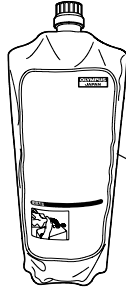
Incorporated in the gas filter cases to remove the odor of disinfectant solution.

○ Air filter (MAJ-823)



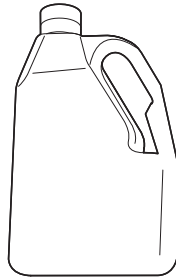
Filters microorganisms and fine particles in the air fed into the equipment.

○ **EndoRapid 980 ml pack (Olympus-designated detergent)**



The OER-Pro exclusive alkaline detergent.
Available as a 980 mL pack.

○ **Aldahol III (Olympus-designated disinfectant solution)**

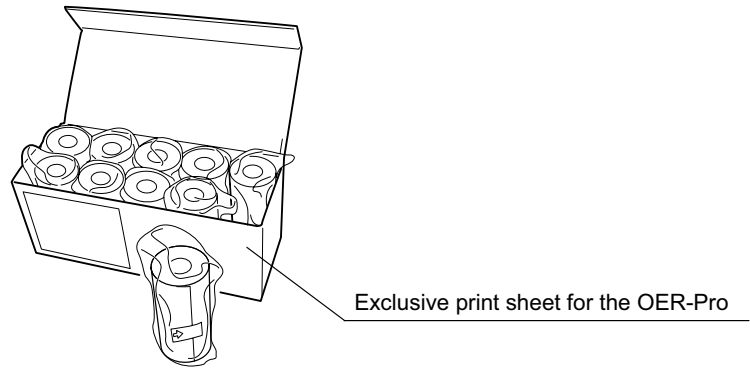


○ **Test strip**



Test paper for use in checking the effective
concentration of the Aldahol III High-level
Disinfectant.

○ **Printer paper roll (MAJ-1497)**



Chapter 3 Inspection Before Use

To ensure that this equipment operates safely and reliably, inspect and clean all parts before use. Also, check all consumables and replace or replenish as necessary.

Check	Inspection items before the first use of the day
	3.1 Inspecting for water leakage from the water supply piping and within the equipment
	3.2 Inspecting the equipment's connectors
	3.3 Inspecting the connecting tubes and leak test air tube
	3.4 Inspecting the remaining quantity of detergent, and replenishment
	3.5 Inspecting the remaining quantity of alcohol, and replenishment
	3.6 Inspecting the mesh filters
	3.7 Inspecting for disinfectant solution odor

Table 3.1

Check	Inspection items before each reprocessing
	3.8 Inspecting the disinfectant solution's concentration level
	3.9 Inspecting the printer paper roll

Table 3.2

WARNING

- When using the disinfectant solution and alcohol, Olympus recommends the use of gas filters and running this equipment in well-ventilated areas.
 - Wear a facemask, gloves, and protective clothes to minimize aspiration and skin contact.
 - Wear goggles for eye protection.

Refer to the following association's guidelines related to ventilation:

SGNA	(Society of Gastroenterology Nurses and Associates)
ASGE	(American Society of Gastroenterological Endoscopy)
APIC	(Association for Professionals of Infection Control and Epidemiology)
AORN	(Association of Preoperative Registered Nurses)
ASTM	(American Society for Testing and Materials)
OSHA	(Occupational Safety and Health Administration)
ACGIH	(American Conference of Governmental Industrial Hygienists)
NIOSH	(National Institute for Occupational Safety and Health)
AIA	(American Institute of Architects)

Do not handle the equipment if the operator shows any allergic symptoms even while wearing protective gear.

- Be sure to perform all inspections and replenish consumables as described in this chapter. Otherwise, the equipment may not work properly.
- If any irregularity is observed during the inspections, do not use the equipment and contact Olympus. Using the equipment when an irregularity has been detected may impair operation of the equipment and could cause leakage, electric shock, burns, and/or fire.
- During inspection, always wear appropriate personal protective equipment, such as eye wear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.

3.1 **Inspecting for water leakage from the water supply piping and within the equipment**

Confirm that water or fluid does not leak from the water supply piping, inside the equipment, Drain hose connector, etc.

DANGER

Do not continue using the equipment if it is leaking water. Doing so may result in an electric shock or malfunction.

WARNING

If water or fluid leaks from inside the equipment, close the faucet, set the power switch to OFF, unplug the power cord, and contact Olympus.

1. Slowly open the water supply faucet.
2. Confirm that water is not leaking from the connections on the water supply devices to the equipment: the faucet, the water supply hose, and the water supply adapter.
3. Confirm that water or fluid is not leaking from inside the equipment.

○ If water leaks from the connections on the water supply devices to the equipment: the faucet, the water supply hose, and the water supply adapter

1. Close the faucet.
2. Check the installation of the water supply devices by referring to Section 4.2, "Connection of the water supply adapter" in "Instructions-Installation Manual".

○ If water leaks from the water filter housing

1. Close the faucet.
2. Check the installation of the water filter housing by referring to Section 3.9, "Installation of water filter (MAJ-824)" in "Instructions-Installation Manual".

○ If water or fluid leaks from inside the equipment

1. Close the faucet.
2. Set the power switch of the equipment to OFF.
3. Unplug the power cord from the power outlet.

○ If water leaks from the Drain hose connector

1. Close the faucet.
2. Check the drain hose installation by referring to Section 4.3, “Connection of drain hose” in “Instructions-Installation Manual”.

3.2 Inspecting the equipment’s connectors

Check the following for each connector.

- The connector should be connected firmly.
- The O-rings should be free of abnormalities such as cracks, tears, or dents.

If any irregularity is found, do not use the equipment and contact Olympus.

Check	Connectors in the cleaning tub
	Air/water/instrument channel connectors
	Auxiliary water/forceps elevator connectors
	Leak test connector
	Water supply piping disinfecting connector

Table 3.3

Check	Other connectors
	Connector above water filter housing
	Connector below water filter housing
	Disinfectant removal port
	Tube connector on detergent tank
	Tube connector on alcohol tank

Table 3.4

WARNING

Do not use the equipment if any connector seems to be damaged or defective. Using the equipment when an irregularity has been detected may interfere with reprocessing. Furthermore, fluid leakage may damage peripheral devices or facilities near the equipment.

CAUTION

Connect each connector firmly by pushing until the connector clicks into place. After connection, pull the connector gently to confirm that it cannot be disconnected easily.

3.3 Inspecting the connecting tubes and leak test air tube

Before using the equipment, always check that there is no abnormality regarding the following points on the cleaning tubes and leak test air tube.

- All tubes should be free of cracks, breaks, fissures, scratches, or stains.
- There should be no cracks in the lock levers of connecting tube connectors.
- The tube should not be easy to disconnect once connected.

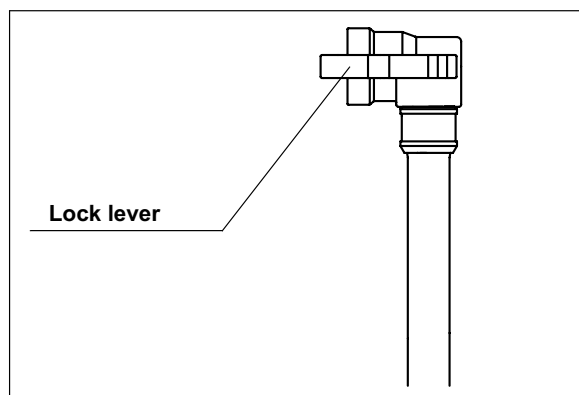


Figure 3.1

If a tube has any irregularities, do not use it and replace with a new one.

WARNING

Do not use the connecting tubes or leak test air tubes if they have any irregularities. Doing so could prevent effective reprocessing or damage the endoscope.

3.4 Inspecting the remaining quantity of detergent, and replenishment

Check	Required items
	EndoRapid 980 ml pack (Olympus-designated detergent)

Table 3.5

NOTE

Contact Olympus to obtain EndoRapid 980 ml packs (Olympus-designated detergent).

Inspection of the amount of detergent

Check the DETERGENT indicator on the detergent/alcohol drawer of the device to confirm that detergent is present. Add detergent as described in “Addition of detergent” before the level reaches “MIN.” or if the Add Detergent indicator lights up.

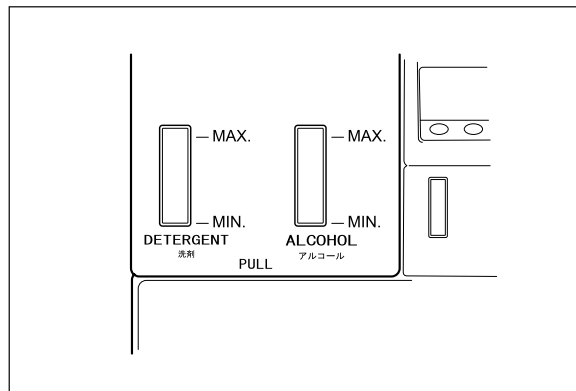


Figure 3.2

NOTE

- The detergent tank can hold about 2 L of detergent (which can be used for about 30 reprocessing operations).
- If the reprocessing process is initiated without detergent, the error code [E95] is displayed and the reprocessing is stopped. The Add Detergent indicator on the main panel blinks.

Addition of detergent

WARNING

- Before handling the detergent, read the precautions and instructions for use carefully, get fully accustomed to the content, and use the detergent as instructed. Make sure that you fully understand what measures need to be taken if you get any detergent on your skin.
- Always use the EndoRapid 980 ml pack (Olympus-designated detergent). If a nondesignated detergent is used, the endoscope may not be properly cleaned or the predetermined sterilization effect may not be achieved.

CAUTION

- When handling the detergent, always wear appropriate personal protective equipment, such as eye wear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.
- To prevent the detergent from leaking, do not tilt the detergent tank when there is detergent inside.

NOTE

- If the reprocessing process is initiated without detergent, the error code [E95] is displayed and the reprocessing is stopped. The Add Detergent indicator on the main panel blinks.
- Contact Olympus to obtain EndoRapid 980 ml packs (Olympus-designated detergent).
- The detergent tank can hold about 2 L (67 ounces) of detergent (which can be used for about 30 reprocessing operations).

1. Hold the section marked "PULL" of the detergent/alcohol drawer and pull it out.

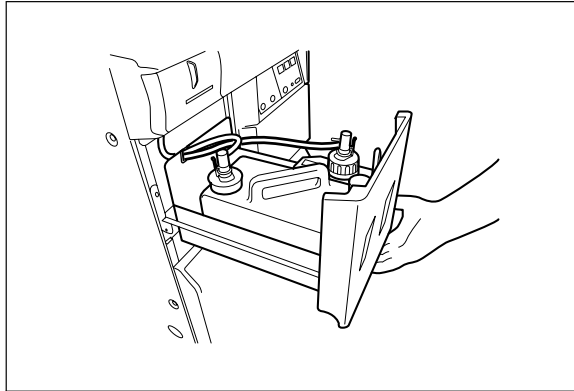


Figure 3.3

2. Push the lock lever on the connector of the tube connected to the detergent tank to detach the tube.

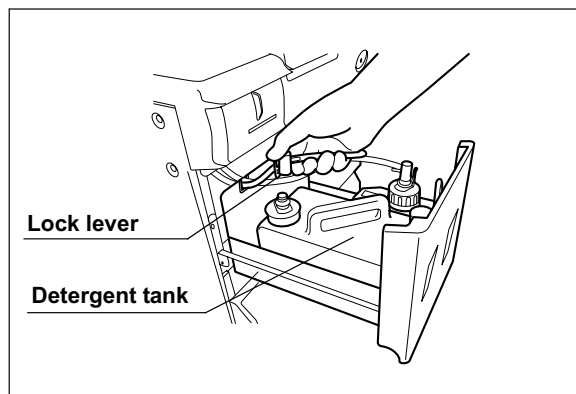


Figure 3.4

NOTE

If a few drops of detergent drip from the connector, wipe it with a piece of clean gauze or similar cloth.

3. Remove the detergent tank and place it in a sink or other tub.

4. Remove the rubber cap from the detergent inlet of the detergent tank.

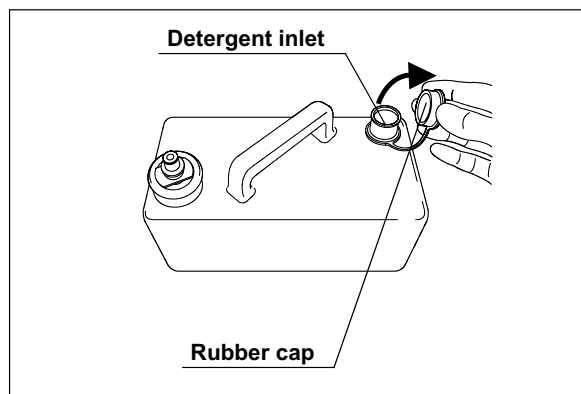


Figure 3.5

5. Remove the cap from the EndoRapid 980 ml pack (Olympus-designated detergent) and attach the provided nozzle to it by turning the nozzle all the way in the direction shown in Figure 3.6.

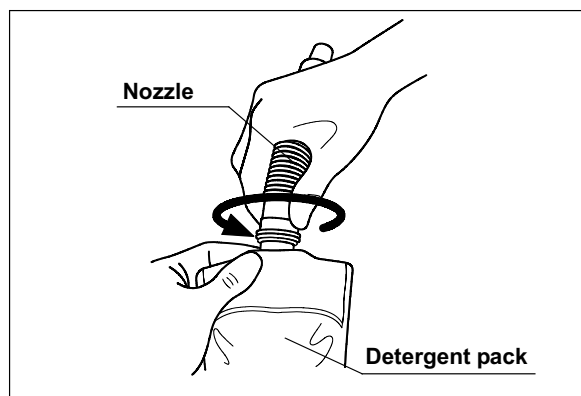


Figure 3.6

CAUTION

- Do not add detergent when the tank is on the detergent/alcohol drawer. If detergent is spilled on the tray, this equipment may be damaged.
- Do not push the center of the detergent pack with too much force while adding detergent. Otherwise, the detergent may spill out of the tank.
- Do not tilt the detergent tank while there is still detergent inside. Otherwise, the detergent may spill.
- Make sure that the nozzle provided with the detergent pack is connected firmly to the pack. Otherwise, the nozzle may get disconnected from the pack and detergent may leak as a result.

6. Insert the end of the nozzle into the detergent inlet and add detergent. If any detergent spills out of the detergent tank, wash the outside of the tank, while taking care not to allow water to get in the tank. Wipe the tank dry with a clean cloth.

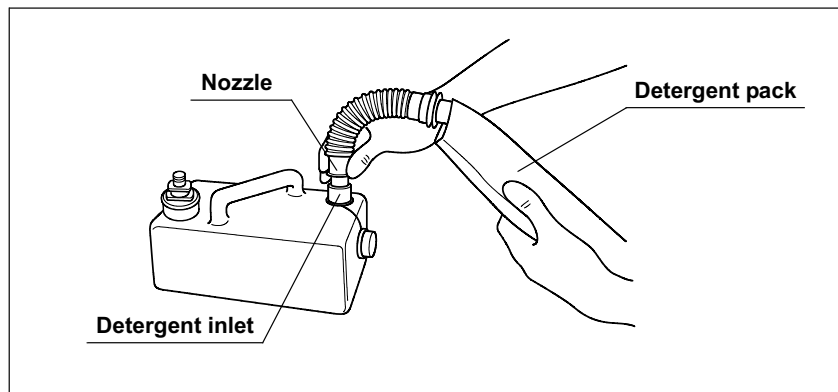


Figure 3.7

7. Attach the rubber cap to the detergent inlet of the detergent tank and ensure that detergent is not leaking from the detergent tank.
8. Place the detergent tank on the equipment's detergent/alcohol drawer and connect the connector.

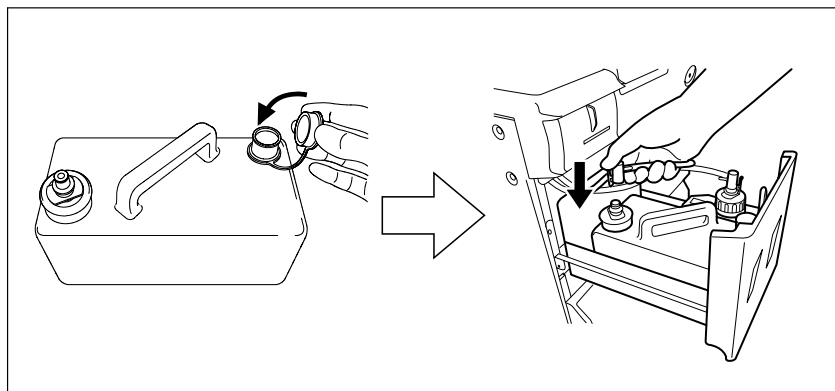


Figure 3.8

9. Turn the connector to correct the tube orientation as shown below. Confirm that the tube is not bent.

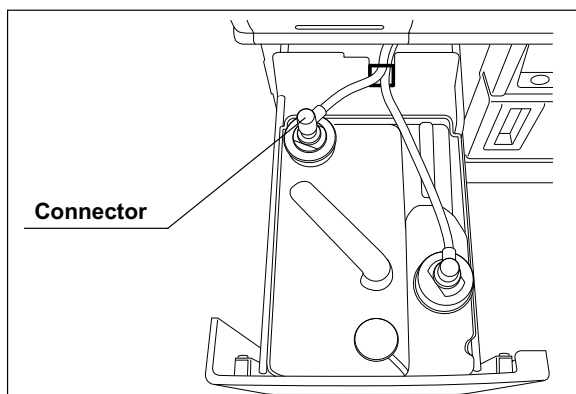


Figure 3.9

10. Close the detergent/alcohol drawer.

3.5 Inspecting the remaining quantity of alcohol, and replenishment

Check how much alcohol is in the alcohol tank and add more as required.

Check	Required items
	70% ethyl alcohol or isopropyl alcohol

Table 3.6

WARNING

- The alcohol used with the equipment should be 70% ethyl alcohol or isopropyl alcohol. Using any other kind of alcohol may result in malfunction of the equipment or the endoscope, difficulty drying the endoscope, or a hazard due to toxic vapor emitted from the alcohol.
- Alcohol is flammable and should be handled with extra care. At the end of work, be sure to drain the alcohol from the tank or to remove the tank from the equipment and store it at a safe distance from the equipment. For more information on draining the alcohol or removing the alcohol tank, refer to Section 5.3, "Removal or storage of alcohol" on page 113. Leaving alcohol in the tank could pose a fire hazard.
- Remove the alcohol in the alcohol tank and replace it with new alcohol at least once a week. Otherwise, the alcohol in the alcohol tank may degrade.
- Before handling the alcohol, carefully read the precautions for use carefully, get fully accustomed to the content, and use the alcohol as instructed.

Inspection of the amount of alcohol

Check the ALCOHOL indicator on the detergent/alcohol drawer of the equipment to confirm that alcohol is present. If the amount of alcohol has decreased, add alcohol as described in “Addition of alcohol” before the level reaches “MIN.”.

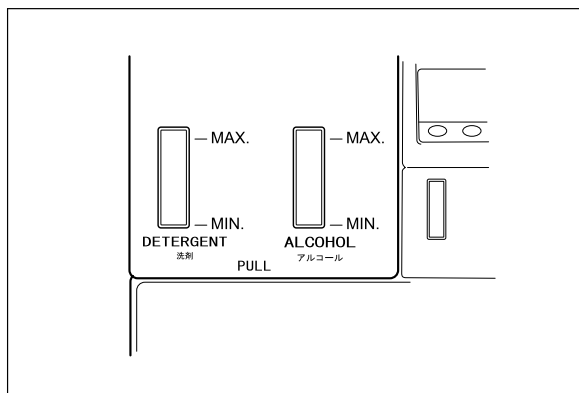


Figure 3.10

NOTE

If alcohol flushing is executed when no alcohol is present, the equipment will stop and display an error code [E93].

Addition of alcohol

1. Hold the section on the detergent/alcohol drawer marked "PULL" and pull it out.

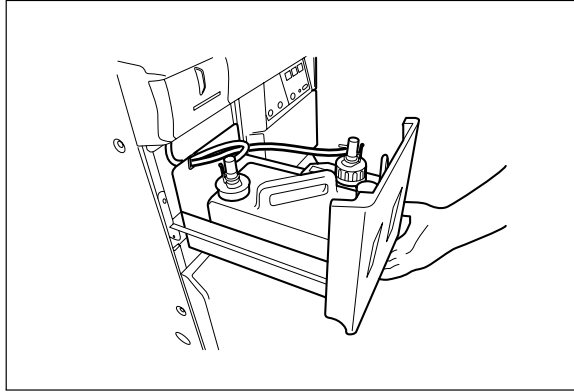


Figure 3.11

NOTE

If the alcohol runs out, the equipment will stop and display an error code [E93].

2. Push the lock lever on the connector of the tube connected to the cap on the alcohol tank to detach the tube.

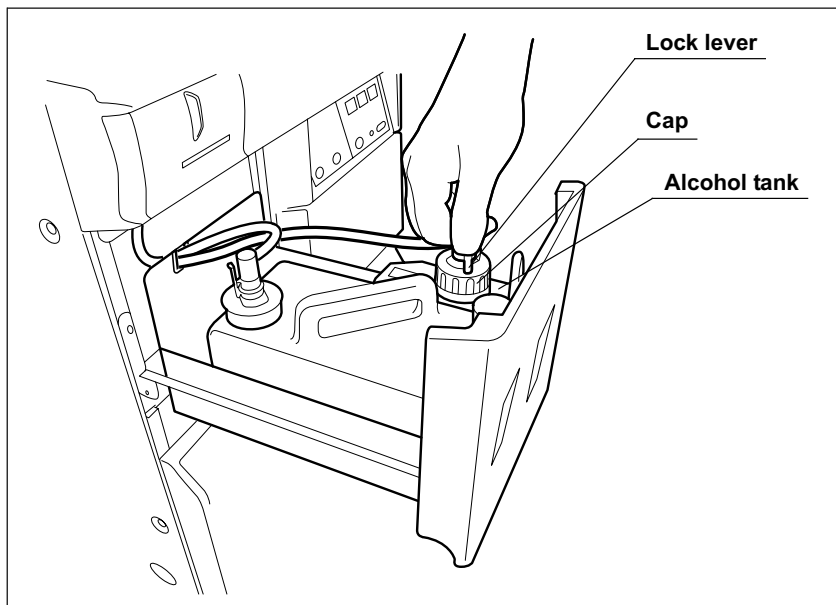


Figure 3.12

3. Remove the alcohol tank and put it in a sink or other tub.

4. Turn the cap on the alcohol inlet in the direction shown to remove the cap.

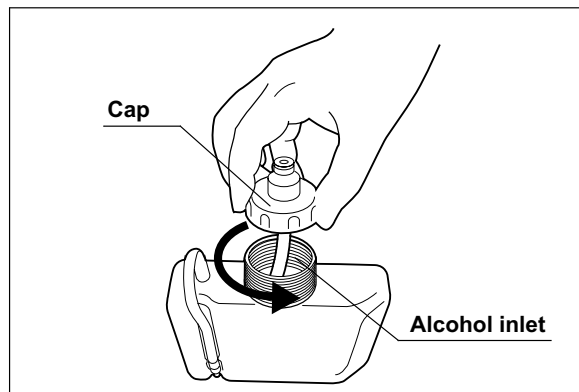


Figure 3.13

CAUTION

- Do not add alcohol while the tank is on the detergent/alcohol drawer. If alcohol is spilled on the tray, it could damage the equipment.
- Do not tilt the alcohol tank while there is still alcohol inside. Otherwise, the alcohol may spill.

5. Pour alcohol until it is level with the line inside the alcohol tank. Be careful not to spill any. If any alcohol spills from the tank, wipe it off with a clean cloth. After adding the alcohol, replace the cap on the alcohol tank.

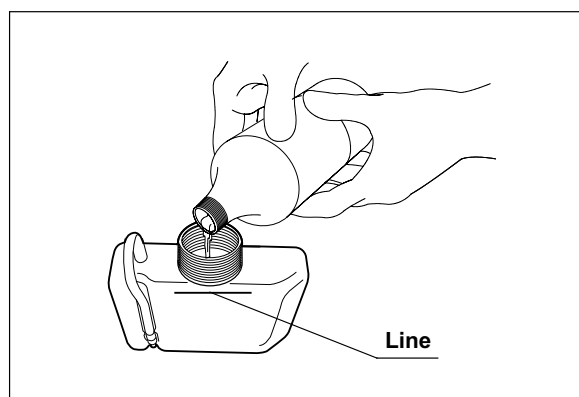


Figure 3.14

NOTE

The amount of alcohol required to fill the tank up to the level of the line is about 500 mL (approximately 16 ounces, enough for about 10 alcohol flushes).

6. Place the alcohol tank in the detergent/alcohol drawer so that the ventilation tube of the alcohol tank sits on the front of the tray.

CAUTION

Placing the alcohol tank so that the ventilation tube sits on the deeper side of the tray could damage the alcohol tank.

7. Connect the tube that was originally connected to the cap.

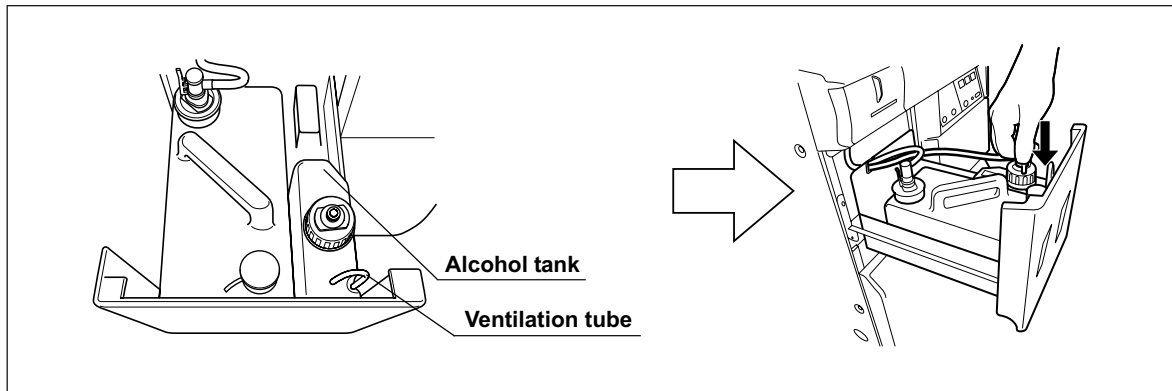


Figure 3.15

8. Turn the connector to correct the tube orientation as shown below. Confirm that the tube is not bent.

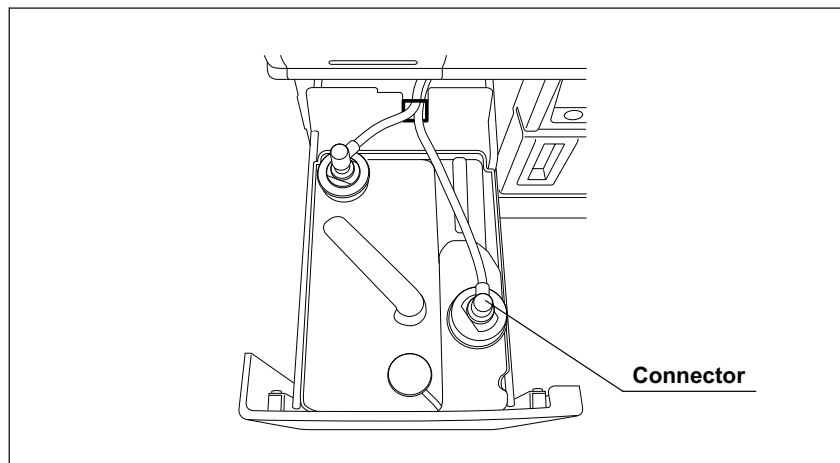


Figure 3.16

9. Close the detergent/alcohol drawer.

3.6 Inspecting the mesh filters

Make sure that the circulation port mesh filters (two types) and the drain port mesh filter are not clogged.

WARNING

A clogged mesh filter not only prevents the equipment from functioning properly, but may also cause the endoscopes to malfunction or prevent effective reprocessing.

CAUTION

- If the mesh filters have been removed, be sure to put them back in their original positions before using the equipment. If you forget to attach the mesh filters, the pump may malfunction and/or foreign objects may enter the endoscope channels including the nozzle and clog them.
- When cleaning the mesh filters, take care not to leave brush hair or cotton swab fiber in the meshes. Otherwise, their filtering effectiveness may be reduced.
- If a mesh filter is dropped or subjected to an impact, make sure that the mesh shape is not deformed. Otherwise, the filtering effect may degrade.
- Two-type mesh filters are installed on the outer and inner sides of the circulation port. Be sure to remove, inspect, and clean both of them.

1. Step the foot pedal to open the lid.
2. Remove the mesh filters from the cleaning tub.

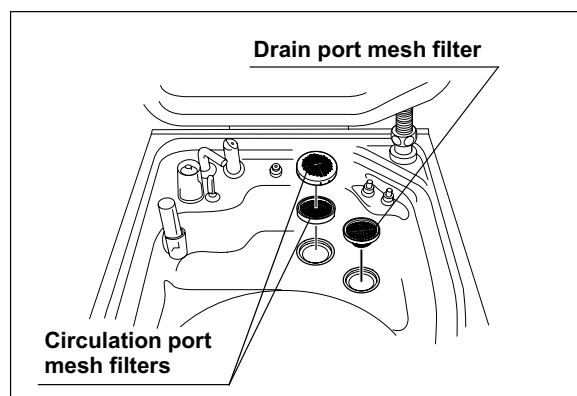


Figure 3.17

3. Check that the mesh filters are not clogged by a foreign object.

4. If any foreign object is found to be clogging the filter, clean the mesh filter in running water using a brush or cotton swab.

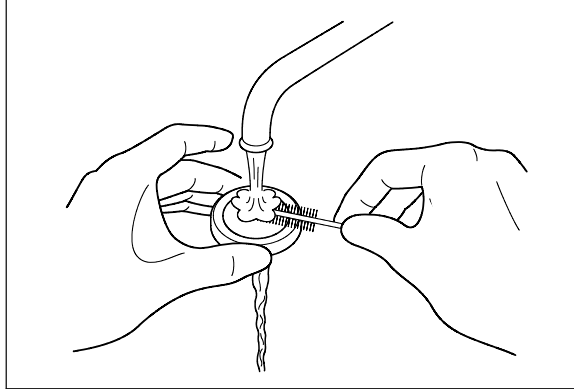


Figure 3.18

5. Attach the mesh filters in their original positions.

3.7 Inspecting for disinfectant solution odor

Check that the disinfectant solution is not producing an abnormal odor.

WARNING

Before handling the disinfectant solution, carefully read the precautions attached to the Aldahol III bottle and use as instructed.

1. Activate the room's ventilation system.
2. Check that there is no abnormal disinfectant solution odor coming from the equipment or its surroundings.

CAUTION

If the odor increases after replacement of the gas filters, contact Olympus.

3.8 Inspecting the disinfectant solution's concentration level

Check the concentration of the disinfectant solution before reprocessing an endoscope, always check that the concentration of disinfectant solution is effective using the test strip. Be sure to replace the disinfectant solution before the disinfecting effect is lost.

Check	Required items
	Test strip (For Aldahol III)
	Drain connector (should be dry)
	Cup-shape container with a capacity of about 200 ml, such as a beaker (should be dry)
	Clean cloth

Table 3.7

WARNING

- The expiration of the disinfectant solution varies depending on many factors including the drain condition, the temperature of the environment where the equipment is installed. Routinely check the concentration of the disinfectant solution with the test strip before performing endoscope disinfection. If this check is not applied, disinfection may be insufficient. Also, be sure to replace the disinfectant solution before it becomes ineffective.
- The container used in the following check, such as a beaker, and the drain connector should be completely dry. Residual moisture will affect the results.
- Before handling the disinfectant solution, read the attached document for the disinfectant solution carefully, get fully accustomed to the content, and use the solution as instructed. Be sure to fully understand what to do if the disinfectant solution comes in contact with your skin.

- When handling the disinfectant solution, wear appropriate personal protective equipment. To avoid adverse physical effects, be careful not to touch the disinfectant solution directly or to inhale too much vapor. If any disinfectant solution gets in your eyes, immediately rinse with a large amount of fresh water and then consult a medical specialist. Personal protective equipment includes eye wear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.
- Do not block the disinfectant removal port with a finger or other objects when the rubber cap is not attached. Otherwise, the disinfectant solution may flow out.
- To prevent peripheral devices and facilities near the equipment from being damaged by leaked disinfectant solution, do not remove the rubber cap from the disinfectant removal port except when connecting the drain connector to the disinfectant removal port.
- If disinfectant solution leaks out of the disinfectant removal port when the rubber cap has been removed, immediately reattach the rubber cap and follow the procedure in Section 8.1, “Troubleshooting guide” on page 218. If leaking does not stop, contact Olympus.

NOTE

To obtain test strip, contact Olympus.

1. Push [PUSH] on the front door to open the front door and remove the rubber cap from the disinfectant removal port.

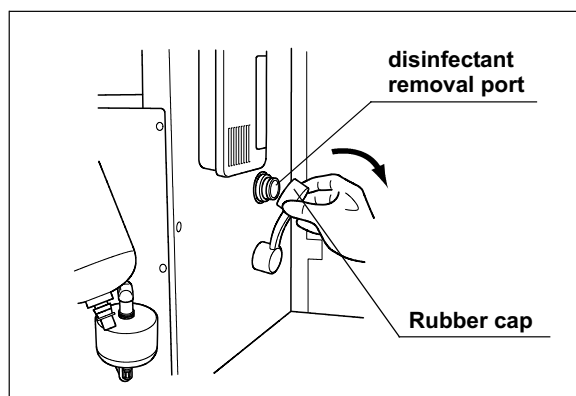


Figure 3.19