

TopClean D



SCBA and PPE Washer
(North American Version)



Installation, Operation and Maintenance Manual

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NOTES:

AN ELECTRICAL WIRING DIAGRAM IS LOCATED INSIDE THE LOWER-FRONT COMPARTMENT OF THIS MACHINE.

THE MEIKO MODEL TOPCLEAN D HAS BEEN DESIGNED EXCLUSIVELY FOR THE CLEANING OF MASKS, BACKPACKS, AIR BOTTLES, HELMETS, BOOTS, GLOVES AND TOOLS IN A COMMERCIAL OR INSTITUTIONAL SETTING AND MUST NOT BE USED FOR ANY OTHER PURPOSE.

ALL PPE & SCBA SHALL BE CLEANED AND DISINFECTED ACCORDING TO THE PPE & SCBA MANUFACTURER'S INSTRUCTIONS USING ONLY THOSE AGENTS INDICATED BY THE MANUFACTURER.

MEIKO ACCEPTS NO RESPONSIBILITY FOR DAMAGE TO THE APPLIANCE, SURROUNDING EQUIPMENT OR ENVIRONMENT THAT IS CAUSED BY INAPPROPRIATE INSTALLATION OR OPERATION, OR FROM ANY SERVICE THAT IS UNDERTAKEN BY NON-AUTHORIZED PERSONNEL, OR FROM THE USE OF ANY PARTS EXCEPT THOSE THAT ARE APPROVED BY THE MANUFACTURER. ANY SUCH INSTALLATION, USE OR SERVICE WILL IMMEDIATELY VOID THE MANUFACTURER'S WARRANTY.

ANY MODIFICATIONS TO THE APPLIANCE THAT ARE PERFORMED WITHOUT THE WRITTEN PERMISSION OF MEIKO WILL IMMEDIATELY VOID THE MANUFACTURER'S WARRANTY.

MEIKO reserves the right to change any specifications without notice at any time.

1 INTRODUCTION

1.1 Overview of Equipment

The MEIKO Model TopClean D is a commercial SCBA and PPE washer. It is designed for cleaning masks, backpacks, air bottles, helmets, boots, gloves and tools with a minimum of employee intervention or supervision.

A control keypad allows easy selection of three different washing cycles to accommodate different types of PPE and levels of soiling. A digital display permits easy monitoring of operation.

Other features that affect operation:

Auto Safe: An internal booster heater is regulated by the electronic control system to ensure a proper final rinse temperature, regardless of the incoming water temperature.

Soft Start: The wash water is pumped at a reduced pressure for the first few seconds of the wash cycle. This helps protect the PPE from being moved or damaged by a sudden burst of pressure.

Pumped rinse: An internal rinse pump ensures that the final rinse pressure is constant.

Pumped drain: Accommodates wall or floor drains.

Aqua Stop: Automatically shuts the machine down if a water leak is detected.

For safe and efficient operation, follow the installation and operating instructions in this manual. In particular, all safety symbols and notices on the equipment and in the supplied documentation **must be followed**.



IMPORTANT

The Model TopClean D has been designed exclusively for the washing of SCBA's and PPE in commercial or institutional setting and must not be used for any other purpose.

1.2 General Safety Information

The symbols and headings below are used throughout this manual to indicate possible hazards to persons or to the equipment. They're shown in order of importance.



WARNING!

Possible hazard, for example, electrical shock, crushing, or hot surfaces.



CAUTION!

Possible hazard to the dishwasher or other equipment.



IMPORTANT

Vital information or tips for the installer or operator.

NOTES

Information or tips for the installer/operator.

2 TRANSPORT AND SHIPPING



IMPORTANT

- Observe any notices on crating material that pertain to shipping.
- Use care when transporting equipment.
- When unpacking the equipment, check to ensure all components on the shipping invoice are present and intact.
- Check for shipping damage. If present, call MEIKO Customer Service at 1-800-55-MEIKO and provide the customer name, serial number and extent of damage present.



WARNING!

In NO EVENT should damaged equipment be installed or operated!

3 GENERAL SAFETY INSTRUCTIONS

3.1 Overview of Installation

The owner should contract with qualified personnel to move the appliance to the installation location, unpack it, and prepare it for final utility connections. In most cases, local codes prevent the final utility connections from being made by any party other than a licensed electrician and/or plumber.



IMPORTANT

FOR WARRANTY ACTIVATION

contact your MEIKO Authorized Service Agency

For an ASA listing, please refer to either the QR code on the back cover of this manual or visit our website at www.meiko.us. You may also contact MEIKO Service directly at (800) 868-3840.

You will be asked to schedule your Performance and Installation Inspection. This inspection is provided **FREE OF CHARGE** to ensure that your new dishwasher is properly installed.

YOUR WARRANTY IS NOT VALID UNTIL THIS FREE INSPECTION HAS BEEN COMPLETED BY YOUR AUTHORIZED SERVICE AGENCY

Installation of the washer involves the following steps:

- Verifying that the utility connections are present, are appropriate for the appliance, and comply with all applicable local and national codes.
- Unwrapping the appliance (leaving the shipping skid in place for easier movement) and checking for shipping damage.
- Moving the appliance to the installation location, removing the skid, and leveling the feet.
- Connecting the electrical supply.
- Installing the chemicals to the unit.
- All units are equipped with an internal chemical dispensing system. This process involves connecting the machines detergent and rinse additive tubes to appropriate chemical supply containers.

- Connecting the fresh water supply.
- Positioning the drain hose.

3.2 Requirements Before Installation

Before the installer can uncrate and move the appliance to the installation location, the following conditions **MUST** be met:

INSTALLATION AREA REQUIREMENTS

- The area **MUST** be frost-free. Freezing temperatures (32°F/0°C or lower) inhibit proper operation and can damage internal components.
- The area **MUST** have a firm floor surface. It is possible to compensate for uneven flooring by adjusting the feet.
- The area should be away from appliances, furniture or surfaces that can be damaged by steam. If this is not possible, these items should be protected from the small quantities of steam that are released during normal operation of the dishwasher.

UTILITY CONNECTION REQUIREMENTS

- Connections must be present and ready for hookup to the appliance. All utility supplies must comply with the electrical information labels, with the information on the data plate, and with all applicable local and national codes.
- Electrical leads and the water supply hose (supplied by the customer) must be present.
- Appropriate chemical supply containers should be installed and ready for connection to the appliance.

GENERAL REQUIREMENTS

- Authorized personnel should be available to perform the actual utility connections.

3.3 Uncrating, Positioning and Leveling



CAUTION!

During shipping and installation, the washer may **ONLY** be positioned upright or on its left side. Some water may remain in the lines after pre-shipping testing. If the unit is positioned in any manner **EXCEPT** upright or on its left side, this water can affect the operation of the water level sensor.

1. Check for shipping damage as described in Section 2.
2. Remove all shipping and packaging material from the appliance, including supports and wrappings. Leave the shipping skid in place at this time to allow for easier movement to the installation location.
3. Move the appliance to the installation area and remove the skid. Use caution to avoid damaging the appliance or any of its components.
4. Using a level, check that the appliance is level in both directions (front-to-back **AND** side-to-side). If necessary, rotate the leg bolts to level the appliance.



CAUTION!

The dishwasher **MUST** be level for proper operation.

3.4 Accessing the Utility Connections

Water supply and drain connections are located at the lower rear of the machine. The electrical supply enters through a strain relief at the lower rear, but the terminal blocks are accessed from the front of the machine.

To remove the lower front panel:

1. Remove **AND RETAIN** the two (2) screws on the bottom edge of the lower front panel. See Figure 3-1.
2. Slide the panel down and away from the machine to remove it. As you pull the panel away, disconnect the ribbon cable for the Mike 2 controller to avoid damage.

3. The terminal blocks for the main electrical supply and chemical dispensers (if used) are located on the right side of the machine as shown in Figure 3-2. Remove the cover plate to access the main terminal block.

Figure 3-1

Removing the Front Panel Screws

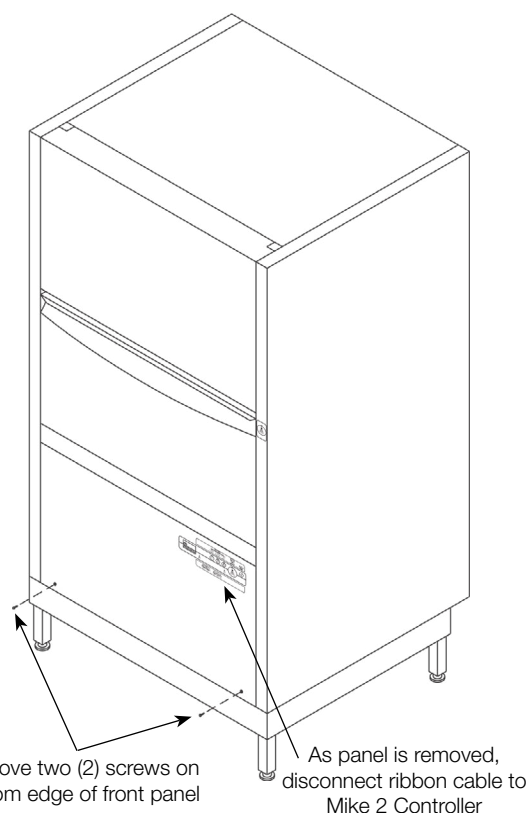
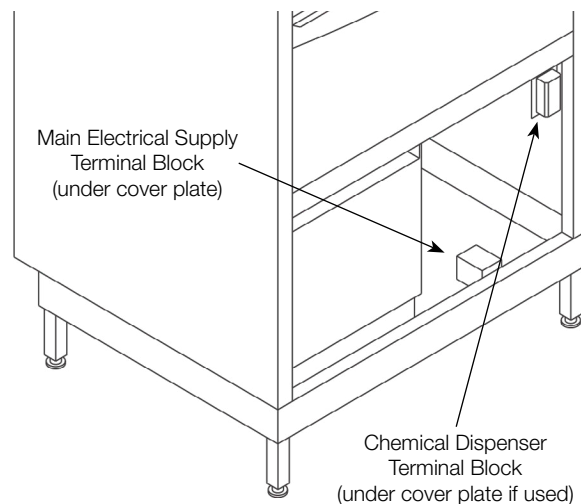


Figure 3-2

Removing Rear Panel



3.5 Main Electrical Supply Connection



WARNING!

Check that the circuit breaker/fused disconnect is in the OFF position and that the unit is switched off before making the electrical utility connections.



IMPORTANT

In some cases, local codes dictate that electrical supply connections be made only by a certified professional.

1. Check that the incoming power leads are of sufficient rating for the appliance's current draw. Amperage and minimum supply wire specifications are shown on the serial plate and on the electrical information label.
2. Check that the incoming power leads are long enough to permit the unit to be repositioned for servicing.
3. Locate the strain relief for the electrical supply wiring at the lower rear of the machine. Refer to Figure 3-3. Thread the incoming supply leads through the strain relief and to the main electrical supply terminal block in the front of the machine. Refer to Figure 3.4
4. Refer to Figure 3-5 and to the electrical wiring diagram. Connect the power supply and ground leads as indicated.
5. Adjust the strain relief to fasten the wiring in place. You should leave enough slack in the wiring to prevent stress on the terminal connections.
6. Replace the cover above the main terminal block.

NOTES

For external pump questions, contact MEIKO factory direct.

Figure 3-3
Utility Connections
(Lower Rear of Machine)

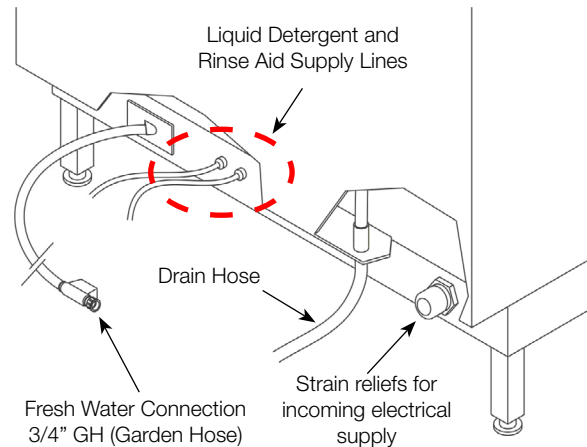


Figure 3-4
Routing the Electrical Supply
(Lower Front of Machine)

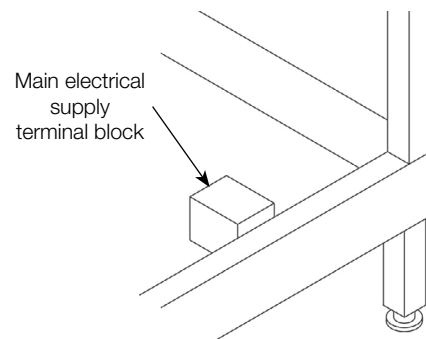
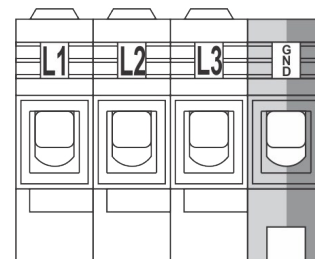


Figure 3-5
Main Electrical Supply Connections

208-230V, 60 Hz, 3 Phase
or
460V, 60 Hz, 3 Phase

L1, L2 and L3 = "hot" (line)
yel/grn = ground

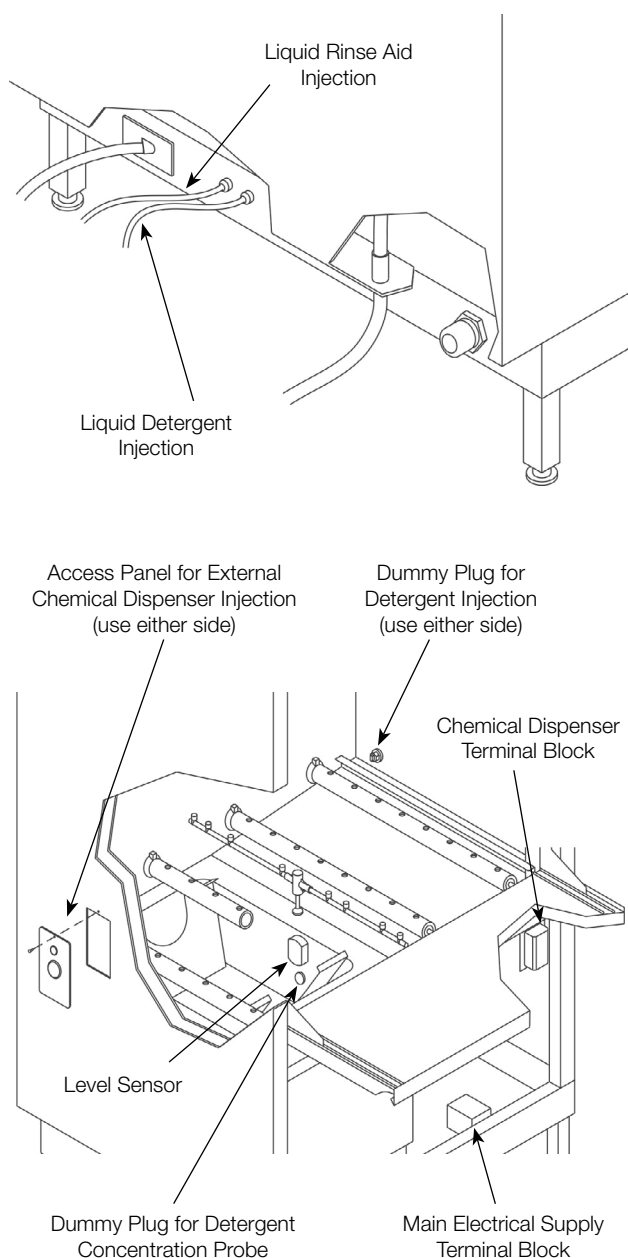


3.6 Dispensing System Overview

The TopClean D washer is designed for use with a liquid rinse aid, and either solid or liquid detergents.

The machines are equipped with liquid internal detergent and rinse aid pumps which have two tubes exiting the machine at the lower rear. These tubes can simply be attached to detergent and rinse aid containers. See Figure 3-6.

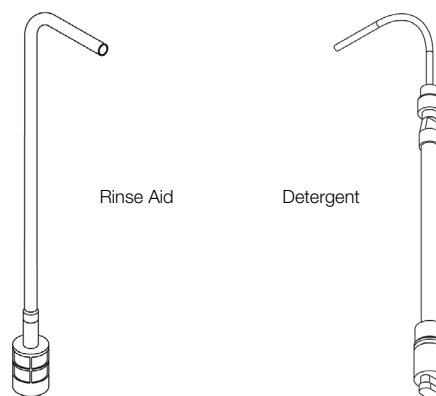
Figure 3-6
Chemical Connections



3.7 Connecting Chemical Containers or Dispensers

1. Check that the rinse aid and detergent are compatible with the unit. In particular, a commercial, low foam, mask manufacturer approved, **LIQUID** detergent **MUST** be used.
2. Check that the containers/dispensers are correctly installed according to the manufacturer's instructions.
3. The dishwasher is equipped with factory internal chemical dispensing pumps. Two (2) pick-up tube assemblies for the chemical containers are also included. See Figure 3-9.
4. Locate the **MARKED** liquid detergent supply tube at the lower rear of the unit. Connect the tubing to the detergent container.
5. Locate the **MARKED** liquid rinse aid supply tube at the lower rear of the unit. Connect the tubing to the rinse aid container.

Figure 3-9
Pick-up Tubes for Chemicals



3.8 Fresh Water Supply Connection



CAUTION!

Before connecting the water supply hose, the line **MUST** be flushed clean of all debris, including (but not limited to) pipe sealant, metal particles, solder, etc. This debris can damage the appliance.



IMPORTANT

In some cases, local codes dictate that water supply connections be made only by a certified professional.

3.8 Fresh Water Supply Connection (Continued)

1. Check that iron or other metal particles cannot contaminate the fresh water supplied to the dishwasher.
2. Check that the incoming water pressure is within the acceptable range for the appliance (8.7-72.5 psi, 0.6-5.0 bars). It may be necessary to increase the pressure (with a booster pump) or to reduce the pressure (with a reducing valve).
3. Check the incoming water temperature. MEIKO recommends a water temperature of 120°F/49°C for optimum operation, although if necessary the appliance will sanitize correctly using water at a reduced temperature. Colder water will result in a longer preheat time (during initial startup) and will extend the cycle time to allow the final rinse water to heat to 120°F/49°C.
4. Check the incoming water hardness. MEIKO recommends a hardness of 1-3 grains per U.S. gallon. Softer water will result in less water streaking on mask surface.

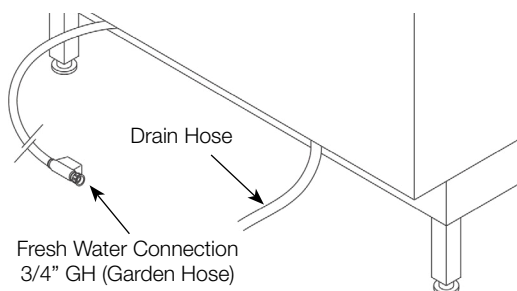


IMPORTANT

Water harder than recommended will void machine warranty.

5. An additional trap is unnecessary because the water inlet incorporates a Y-Strainer, unless required by local, national or international codes.
6. The appliance includes a water supply line. See Figure 3-10.
7. Check that the water line is long enough to permit the unit to be repositioned for servicing.

Figure 3-10
Fresh Water Supply and Drain Connections



3.9 Drain Hose Positioning

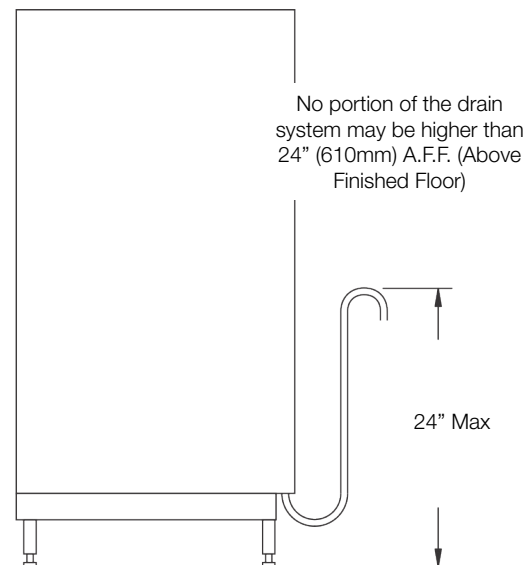
1. Check that the end of the drain hose will empty into a drain with a minimum diameter of 1-1/2"/38mm.
2. Check the type of drain that will be used. The TopClean D is equipped with a pumped drain. A floor or wall drain is acceptable.



CAUTION!

No portion of a wall drain system may be higher than 24" (610mm) to ensure the drain pump is operating within rated specifications. See Figure 3-11.

Figure 3-11
Drain Line Vertical Rise Limitations



3. Route the drain hose to the drain. In some cases, a grease trap (supplied by others) must be fitted into the waste water line. If this trap is required for your installation, check that it is present.

3.10 Final Assembly

1. Check and tighten all electrical terminal screws.
2. Replace all panels on the appliance
3. Switch the circuit breaker/fused disconnect to the **ON** position. Be sure to prime the detergent and rinse aid pumps. Refer to section 3.11 for the priming procedure.

3.11 Priming the Liquid Detergent and Rinse Aid Lines

1. Press and hold the STOP/OFF (0) key until (CodE 1-----) appears in the display (about 4-5 seconds).



2. Press the START CYCLE/DRAIN key 5 times until (1-1-----) appears in the display.



3. Press the SELECT CYCLE (1) key and (1-2-----) will appear in the display.



4. Press the START CYCLE /DRAIN key to start priming the liquid rinse additive lines. A timer will count down the time remaining. By default, the system will prime for 180 seconds which will be shown on the display as (1-3--180).



5. When the display returns to (1-2-----), press the SELECT CYCLE (1) key so that (1-3-----) appears in the display.



6. Press the START CYCLE/DRAIN key to start priming the liquid detergent lines. A timer will count down the time remaining. By default, the system will prime for 30 seconds which will be shown on the display as (1-3---30).



7. When the display returns to (1-3-----) press the STOP/OFF (0) key to shut off the dishwasher.



3.12 Checking for Correct Chemical Concentration

Default Machine Settings:

- Detergent - 0.256 oz. per gallon of wash water (2.0 ml per liter).
- Rinse Additive - 0.0256 oz. per gallon of rinse water (0.2 ml per liter).

To check if the normal settings are correct for your chemicals, **RUN THREE (3) EMPTY LOADS** to completely cycle the water supply and obtain accurate test results. This will only take a few minutes. Then, run a sample load with soiled PPE and examine the results.

- If the detergent setting is too low, the PPE may not be adequately cleaned. In some cases, this can be corrected by simply selecting a longer cycle time by using the (Extended) or (Heavy) cycle buttons. The detergent concentration may also need to be adjusted depending on local water conditions.
- If the rinse additive setting is too low, PPE may come out too wet. If rinse additive setting is too high, may cause spotting or streaking on the PPE.



IMPORTANT

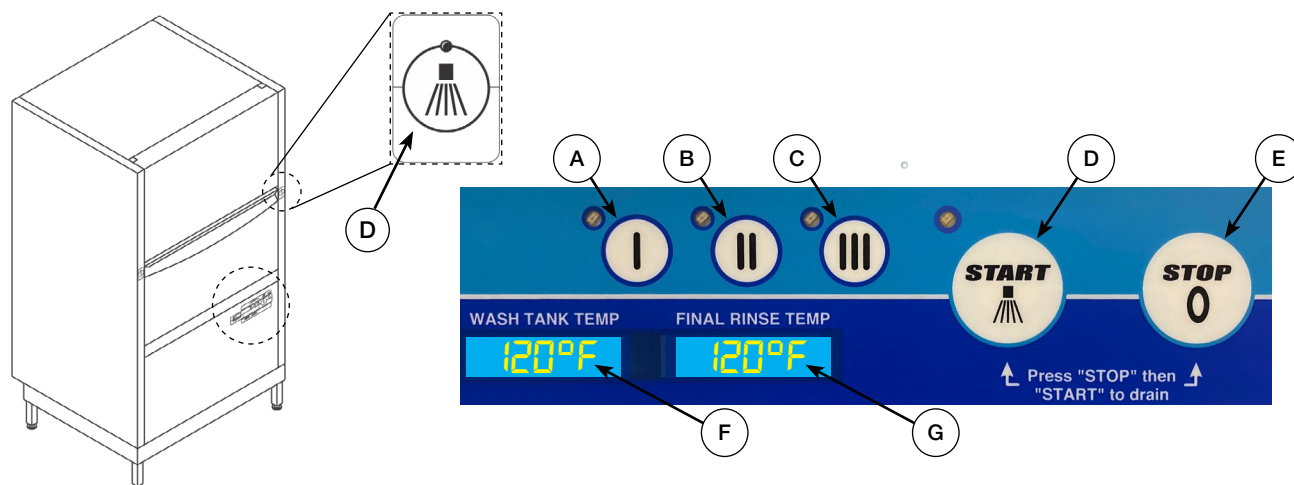
Any adjustments to the chemical dosing system settings are **ONLY** to be performed by qualified persons. Failure to adjust the chemicals properly may cause damage to the machine and void the warranty.

4 OPERATION

4.1 Location and Description of Controls

The appliance controls are on the keypad directly above the door. See Figure 8-1.

Figure 4-1
Appliance Controls



A-C. POWER ON/CYCLE SELECT KEYS

Pressing any one of these keys turns the device on. Each key selects a different cycle length to accommodate differing levels of soiling:



Normal Cycle: 3 min. short cycle for SCBA's and PPE's



Extended Cycle: 8 min. standard cycle for items with greater soiling



Extra Cycle: 8 min. wash cycle + wash tank dump and fill (times may vary depending on water temperature)

The keys may also be pressed between cycles to choose a different cycle length.

D. START CYCLE/DRAIN KEY



If pressed when the unit is ready to operate, this key starts the operating cycle. If the machine has been switched off (for instance, at the end of the shift), pressing this key begins the drain cycle.

E. STOP/OFF KEY



If pressed when the wash cycle is running, this key will **STOP** the cycle. If unit is idle or not washing, pressing this button will turn the unit **OFF**.

F. WASH TANK TEMP DISPLAY



Shows the current temperature of the water in the wash tank.

G. FINAL RINSE TEMP DISPLAY



Shows the current temperature of the final rinse water. The device cannot begin a final rinse cycle until the rinse water has heated to the proper temperature. The wash cycle will automatically extend (if necessary) until the proper rinse temperature is reached.

4.2 Startup

Check the level of the external detergent and rinse additive containers. If necessary, replace the containers.

Press any of the three **POWER ON/CYCLE SELECT** keys to turn on the dishwasher.



Normal Cycle for SCBA's and PPE's



Extended Cycle for items with greater soiling



Heavy Cycle for very heavily soiled items (if you are not able to see the bottom of the wash tank, change the water out)

(flashing)



The light above the selected **POWER ON /CYCLE SELECT** key will begin to flash during the initial filling phase.

The time required for filling and preheating will vary based on the temperature of the incoming water supply. For incoming water at 120°F/49°C, the machine may need up to 15 minutes to fill and heat to the correct initial wash temperature of

(constant)



When the tank is full and the water has been heated to the correct temperature, the light above the selected **POWER ON/CYCLE SELECT** key will be continuously illuminated.

4.3 Loading

The loading guidelines shown here will lead to faster, more efficient cleaning of your PPE.

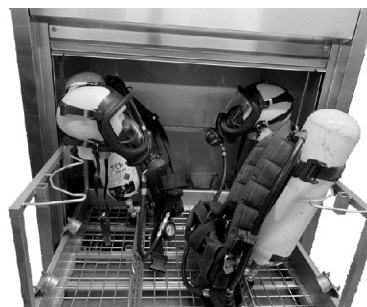
- Pre-rinse all the PPE in the rack before inserting it in machine.



4 backpacks with bottles LDV capped



Secure face piece to the head and tighten all the straps to seal.



2 complete SCBA's



LVD cap adapter



Load bottle with flip down bottle bracket



Close up of bottle in locating notch

4.4 Operation



Press either of the **START CYCLE/ DRAIN** key to start the selected wash cycle.

The key will not work unless the light above the selected **POWER/CYCLE SELECT** key has stopped flashing.

The machine will begin a wash and rinse cycle. The Soft Start feature pumps the water through the arms slowly for the first few seconds of the cycle to protect fragile PPE. After a few seconds, full pressure will engage.

The time of the total cycle will be at least as long as the times shown in Section 4.1.

NOTE: quickly loading several loads in succession when using a cold water supply may extend the cycle time.



WARNING!

If the door is opened suddenly, hot water can spray out of the washer. To prevent this from happening:

- Always press the **STOP/OFF** (0) key to stop the wash/rinse cycle before opening the door.

When the cycle has completed, the washer will stop operating and three (3) short tones will follow. After the tone has sounded, you may open the door and unload the PPE.

NOTE: that hot water vapor will escape when the door is opened; this is normal.



WARNING!

Use caution when handling HOT PPE!

4.5 Between Cycles

During idle periods, leave the doors of the washer closed. If the doors are left open, the wash tank water will cool. This will activate the tank heaters, consuming extra energy, and may

4.5 Between Cycles (Continued)

lengthen the recovery time when another cycle is started.

If necessary, you can choose a different cycle length between cycles by pressing any of the **POWER/CYCLE SELECT** keys.

When you are ready to start a new cycle, refer to Section 4.3, “**LOADING**”.

4.6 Shutdown



At the end of the shift, press the **STOP/OFF** key to turn the unit OFF.



Press the **START CYCLE/DRAIN** key to drain the machine.

During the **DRAIN CYCLE**, the interior will be sprayed with hot, fresh water as the booster tank empties. When this is completed, the drain will “pulse” several times to empty the water and the dishwasher will automatically shut off.



WARNING!

DO NOT open the door of the washer during the drain rinse process! The process will be interrupted and hot water may spray out of the machine.

After the machine has finished its drain rinse process, open the door. Remove any scraps or debris from the scrap screen. Please see the continued cleaning process in section 5.1 and 5.2 on p.12 and 13.



IMPORTANT

It is **STRONGLY RECOMMENDED** that the interior of the machine be cleaned daily following the instructions in Section 5.1, “**DAILY CLEANING.**”

5 CLEANING



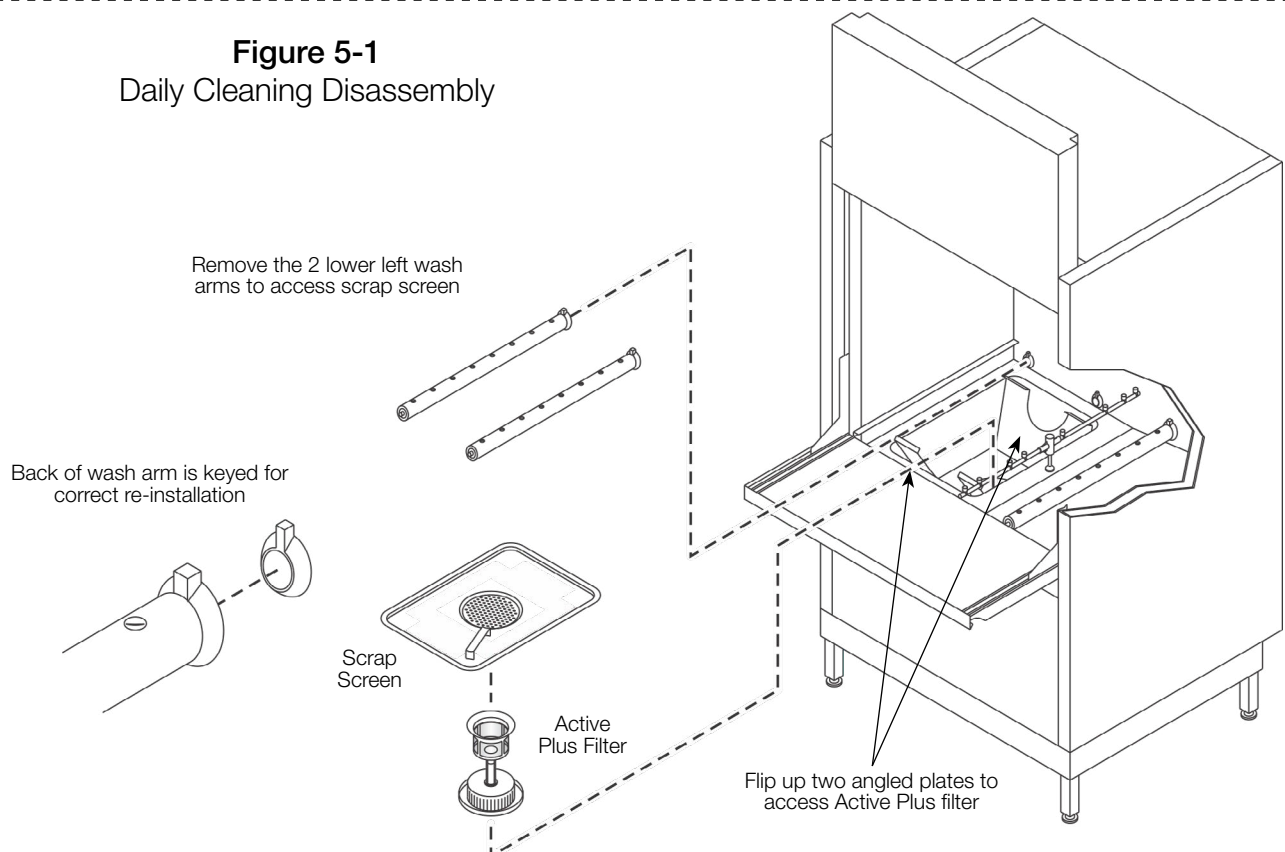
IMPORTANT

The headings “Daily Cleaning” and “Weekly Cleaning” in this section are general recommendations based on typical soiling.

5.1 Daily Cleaning (or as required)

1. The machine automatically enters a self-cleaning cycle when it is turned off. The interior will be sprayed with hot, fresh water as the booster tank empties.
 2. **AFTER** the drain rinse process ends and the machine shuts down, open the doors, and remove the basket from the machine. Any soil or debris can be wiped off with a clean, damp cloth.
 3. Remove the two lower left wash arms to access the scrap screen and wash tank. To remove the arm, first pull its front side up and out of the black retainer bar. Then, pull the back side free of the manifold.
 4. Lift out the scrap screen and clean it thoroughly using a brush and warm water.
5. Flip up the two angled plates that surround the Active Plus filter.
 6. Lift out the Active Plus filter. Clean it thoroughly using a brush and warm water. Be sure to use care to avoid damaging the screen on the Active Plus filter.
 7. Wipe any residue out of the tank using a clean, damp cloth.
 8. MEIKO recommends that the door of the machine be left open overnight to allow it to air thoroughly.
 9. Reassemble all components into the machine before operation. Note the following:
 - The Active-Plus filter **MUST** be reinstalled with the slotted end facing **DOWN**. See Figure 5-1.
 - Be sure to flip down the two angled plates that surround the Active Plus filter before replacing the scrap screen!
 - To replace the wash arms, first insert the back end into the manifold. The back end of the arm is keyed to ensure correct replacement. Then, snap the front end down into the black retainer bar. All lower wash arms are identical.

Figure 5-1
Daily Cleaning Disassembly

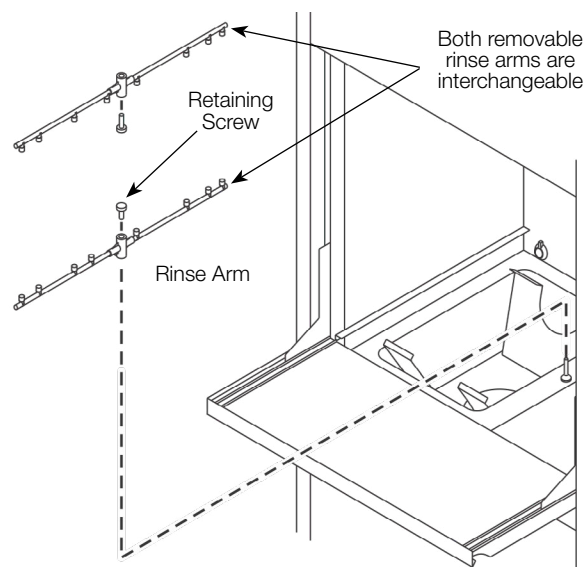


5.2 Weekly Cleaning (or as required)

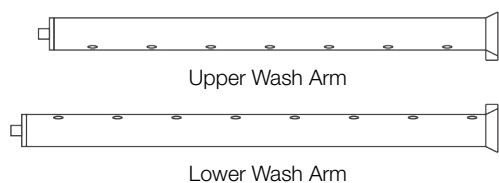
Once per week, at a minimum, perform the following steps:

1. Open the doors. Follow the procedures in Section 5.1, “**DAILY CLEANING.**”
2. Remove and disassemble the wash and rinse arms. The machine is equipped with:
 - Four upper wash arms (identical)
 - Four lower wash arms (identical)
 - One removable upper rinse arm
 - One removable lower rinse arms
 - Two additional fixed lower rinse arms (leave these in place)
3. Clean the wash and rinse arms with a brush and warm running water. In particular, check that any soil or debris inside the wash arms is removed.
4. Reassemble all components into the machine.

Figure 5-2
Wash and Rinse Arm Disassembly



NOTE: Upper wash arms are shorter than lower wash arms to ensure correct re-installation.



Both removable rinse arms are identical. The upper wash arms are slightly shorter than the lower arms to prevent their re- installation in the wrong location.

All of the lower wash arms are removed in the same manner as described in Section 5.1, “Daily Cleaning.” To remove the upper wash arms, first pull the front side of the arm down and out of the black retainer bar, and then pull the back side free of the manifold.

To remove the rinse arms, remove the retaining screw and pull the arm off the shaft.

5.3 Exterior Cleaning (as required)



CAUTION!

When cleaning the exterior of the dishwasher, be sure to follow these guidelines:

- MEIKO strongly recommends using mild soap and water when cleaning the exterior of the unit, instead of commercial stainless steel cleaners. These cleaners can damage the surface of the control panel.
- Never use abrasive cleaners or pads when cleaning the exterior of the washer. These can scratch the surface of the unit.



WARNING!

Ensure that detergents and stainless steel cleaners are kept out of the interior of the washer. If the interior of the unit requires cleaning, refer to the deliming procedures in Section 5.4.

5.4 Deliming as required)

Lime scale deposits will occur over time on the interior of the washer if it is operated using a hard water supply. MEIKO recommends a hardness of 1-3 grains per U.S. gallon.

A deliming or de-scaling process can be used to remove hard water deposits, as well as any food residue.

5.4 Deliming (Continued)



CAUTION!

When deliming the interior, be sure to follow these guidelines:

- Use deliming agents designed for use with commercial washers.
- Follow the instructions for the deliming agent that is used.

After the deliming process:

1. Run the machine through 2-3 regular cycles without a load to rinse and sanitize the interior thoroughly.
2. Inspect the interior for any remaining deliming agent residue. If residue is present, remove it using a soft cloth and hot water; then, run the machine through one final empty cycle.
3. Press the **POWER OFF** button; then, press the **START CYCLE/DRAIN** button. This will empty the tank, ensuring that any deliming agent still in the tank will be flushed out of the machine.



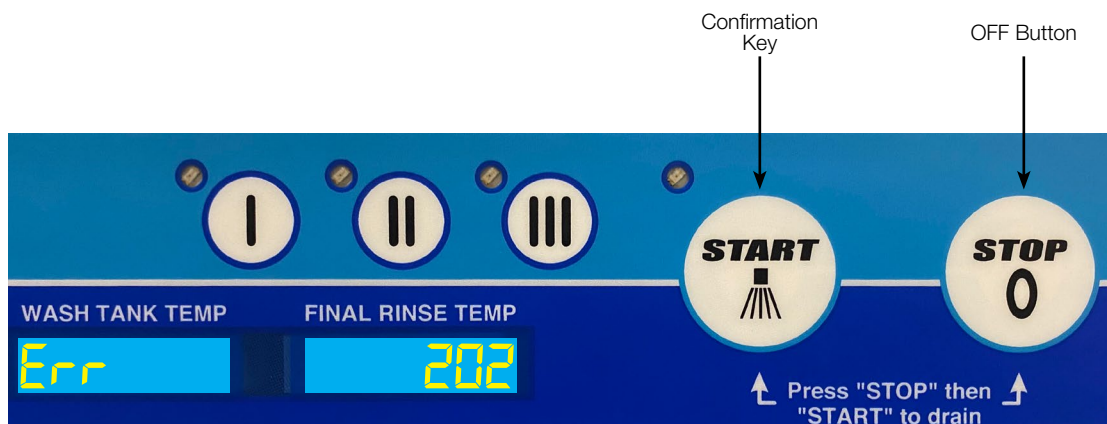
IMPORTANT

Should deliming be required, detailed deliming instructions are available. Please contact MEIKO directly via our service hotline:
800-868-3840

6 TROUBLESHOOTING

6.1 Location and Description of Controls

Figure 6-1
Information Codes



Information displays can be deleted using the confirmation button.

Provided that the appliance function is restored, the next program sequence will begin. By pressing the off button, the information display is also deleted.

INFO #	Description	Possible Cause
120	Emergency Program Active Restricted Washing Possible	No boiler/tank heating No fresh water supply Check system
121	Door not Closed	Check S1 connection Change micro-switch Check micro-switch adjustment Replacing a defective I/O circuit board
126	Maintenance Required	The set operating hours (P122) or batch number (P123) has been reached. Inform the service department and perform maintenance. Reset the maintenance counter (P124)
420	Lack of Rinse Aid	If the appliance is ready for operation, a lack of rinse agent will be signaled (only if there is a built-in warning system)
520	Lack of Detergent	If the appliance is ready for operation, a lack of detergent will be signaled (only if there is a built-in warning system)

6.2 Error Messages and Troubleshooting

Figure 6-2
Error Codes



Error messages will disappear automatically after the fault has been rectified.
Error messages (extract)

ERR #	Description	Possible Cause
001	EEPROM Plug-in Fault	EEPROM not available/incorrectly plugged in/defective Empty or incorrect EEPROM Replace EEPROM with correct parameter set
111	Bottom Pan Leakage	Leak inside the appliance (sump pump/motor/etc.) Defective leakage detector Repair error, remove water
117	Door not Locked	The pin of the lifting magnet is not correctly in the locking device. The magnetic coil of the lifting magnet is damaged. Door locking query is not correct.
201	Level not Reached During 1st Filling	Fresh water inlet insufficient (water tap closed) Aquastop hose kinked Inlet filter soiled Aquastop defective Boiler switch defective
202	Level not Reached Early Enough During Filling	See Err 201
203	No Change Detected by the Level Switch During Emptying	Booster pump defective Booster pump plug connector loose Start capacitor defective Plug connector loose Plug connector defective No DSP signal on - from I/O circuit board No signal boiler full - from I/O circuit board Check boost pump/S2 using manual control
204	Still no Change Detected by the Level Switch at the End of the Rinse Time	See Err 203

6.2 Error Messages and Troubleshooting (Continued)

ERR #	Description	Possible Cause
205	Temperature Increase not Reached	Boiler heating defective/heating element thermal fuse Temperature sensor defective, incorrect installation position Boiler protection defective, performance switch loose No signal from I/O circuit board
206	Wash Time Increase	Boiler not ready for rinsing in time (Boiler level/boiler temperature) Boiler heating defective/heating element thermal fuse Temperature sensor defective Boiler protection defective, performance switch loose No signal from I/O circuit board
210	Temperature Sensor Short-Circuit	Check sensor cable (plug contacts) Replace sensor Install sensor correctly
211	Temperature Sensor Interruption	See Err 210
212	Actual Boiler Temperature too High	Contactor sticking Incorrect sensor/defective sensor Check sensor/cable (plug-in contact MIKE II XA5)
301	Number of Circulatory Pumping Cycles Exceeded. Tank Level Analysis Disrupted	Booster pump output too low Rinse jets dirty Air trap dirty Booster pump rotor defective Condensate in level pipe Hose kinked/loose/leaky
302	It Does Not Fall Below Level 1 when Draining During the Wash Program	Drain pump output too low Drain pump dirty/defective Impeller loose Drain pump plug connector loosened Start capacitor defective Tank level analysis disrupted Aquastop system not closing completely No signal from I/O circuit board
303	Level Does not Drop Below Level 3 After Time (Drain Pump ON)	See Err 302
304	Temperature Increase not Reached	Tank heating defective/thermal fuse radiator Temperature sensor defective, incorrect installation position Tank protection defective, performance switch loose
305	Number of Boiler Contents Insufficient for Rinsing Level 2 not Reached	See Err 301 Level switch defective Plug connector loose

6.2 Error Messages and Troubleshooting (Continued)

ERR #	Description	Possible Cause
306	Max. Level Value Exceeded Tank Level Sensor Malfunction	Ventilation valve dirty Check tank level Level sensor air catch/check hose
307	Tank Level Sensor Defective	Connection plug loosened Sensor defective Replace I/O circuit board
310	See Err 210	See Err 210
311	See Err 211	See Err 211
312	See Err 212	See Err 212
502	Lack of Detergent	If the appliance is ready for operation, a lack of detergent will be signaled. (only if there is a built-in warning system)

If information or fault numbers occur that are not shown in the tables, or if the suggested measure does not lead to the elimination of the fault, please notify a customer service technician.

[illegible]

[illegible]



TopClean D
SCBA and PPE Washer



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