HYDR*IM* 112W G4⁺

Instrument Washer

Operator's Manual

SciCan | *Your Infection Control Specialist*

Page Navigation

Manufacturer's Information and Customer Service Information

For all service and repair inquiries:

In Canada	1-800-667-7733
United States:	1-800-221-3046
International:	(416) 446-4500
Email:	techservice.ca@scican.com

COLTENEGROUP

1. About this Manual

1.1 Important Information About Using your HYDRIM

Intended Use

The SciCan HYDRIM 112W G4+ is designed for use by healthcare professionals to clean general dental and medical instruments. It complements the STATIM, STATCLAVE and BRAVO autoclaves by quickly and hygienically preparing soiled instruments for sterilization. When used correctly, the HYDRIM is effective for the removal of debris on instruments that may result in the insulation of microorganisms during sterilization. Terminal sterilization MUST follow processing in the HYDRIM.

Examples of medical and dental instruments suitable for cleaning in the HYDRIM instrument washer include:

› Stainless steel scalers, spatulas, and hemostats.

› Stainless steel retractors, needle holders, skin hooks, tissue forceps, scissors, curettes, and other stainless-steel instruments free of deep cavities.

› Suction cannula or other plastic hollows.

Before Operating the Unit

To ensure years of safe, trouble-free service, carefully review this Operator's Manual before operating the unit. The HYDRIM 112W is suitable only for the applications listed in this manual. Using the HYDRIM 112W for other purposes may be dangerous. The legal manufacturer cannot be held responsible for damage caused by improper use.

Operational, maintenance and replacement instructions must be followed for the product to perform as designed. All trademarks referred to in this manual are the property of their respective owners. Contents of this manual are subject to change without notice to reflect changes and improvements to the HYDRIM product.

Qualified Installation

The HYDRIM 112W should only be installed and serviced by a qualified contractor as it is an Installation Category II device. Before connecting the unit, the installer should check that the voltage and frequency of the electrical supply correspond with the details in the installation instructions. The unit must be plugged into a grounded outlet. Please note that this unit is completely isolated from the electrical supply only when it is unplugged or the circuit breaker is turned OFF. This must be done before any repair work is carried out.

Cleaning Solution

The HYDRIM 112W uses HIP™ Cleaning Solution exclusively. The unit will not perform as described if detergents or cleaning products not approved by the legal manufacturer are used. Other detergents or cleaning products may damage the unit, the instruments, cause excessive foaming, and void the warranty. Do not use solvents in this unit.

Water Quality

Calcium carbonate is the principal cause of water hardness and leaves white spots or scales. The HYDRIM 112W is equipped with a built-in water softening system that must be adjusted according to the local water hardness. Please see Setting the Water Softening System for recommended regeneration settings.

User Qualifications

The operation and maintenance of this unit should be restricted to trained and authorized personnel.

Repair and Modifications

Do not permit any person other than certified personnel to supply parts, service or maintain your HYDRIM.

The legal manufacturer shall not be liable for incidental, special or consequential damages caused by any maintenance or services performed on the HYDRIM 112W by a non-accredited third party, or for the use of equipment or parts manufactured by a third party, including lost profits, any commercial loss, economic loss, or loss arising from personal injury.

Never insert objects through holes or openings in the cabinetry. Doing so may damage the unit and / or pose a hazard to the operator.

Never remove unit side or top covers as these panels constitute the unit's fire protection rating system. Installing a unit without these panels will compromise fire safety protection.

Incident Reporting

Any serious incidents should be reported to the manufacturer and/or the competent authority in which the user and/or patient resides.

Symbols on the Unit

Pay close attention to the following symbols that appear on the unit:		
⚠	**Caution:** Hot surface and/or hot steam.	**MD** Medical Device
⚠	**Caution:** Refer to manual for details.	⚡ **Caution:** Risk of electrical shock. Disconnect supply before servicing.

Wi-Fi Compliance

This device has been tested and found to comply with the limits for a Class B digital device pursuant to the Federal Communications Commission's Part 15 Subpart B. The total radiated energy from the main antenna connected to the wireless card conforms to the FCC limit of the SAR (Specific Absorption Rate) requirement regarding 47 CFR Part 2 Section 1093, when the unit was tested. The transmission antenna for the wireless card is located in the front fascia.

Wireless transmission considerations

To comply with U.S. Federal Communications Commission, ETSI, and Industry Canada Radiofrequency exposure compliance requirements, the antenna used for this transmitter has been installed to provide a separation distance of at least 20 cm (3/4") from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter (the transmission antenna for the wireless card is in the front fascia).

Disclaimers

› Do not permit any person other than authorized personnel to supply parts for service or maintenance for your HYDRIM 112W. The legal manufacturer is not liable for incidental, special or consequential damages caused by any maintenance or services performed on the HYDRIM 112W by unauthorized personnel, or for the use of equipment or parts manufactured by a third party, including lost profits, any commercial loss, economic loss, or loss arising from personal injury.

› Never remove any unit panels and never insert objects through holes or openings in the cabinetry. Doing so may damage the unit and/or pose a hazard to the operator.

› If the unit is used in a manner other than that specified, the protection provided by the equipment may be impaired.

› Cleaning solutions may irritate. Avoid contact with eyes and mouth.

› Never sit, stand, or lean on the open door. The unit may tip forward causing injury.

› Always turn the unit OFF before adding softener salt, adding solutions, or performing routine maintenance to the unit.

› The owner shall not allow any personnel other than the trained and authorized personnel to operate the unit.

› We recommend leaving the unit turned ON at all times, in particular over times when no staff is in the office and when no water shut-off mechanism is installed. Leaving the unit turned ON will activate the drain pump if water is leaking into the chamber because of any faulty circumstance.

› If the unit is left unused for a week or longer, follow the steps in *Vacation Mode* to ensure the unit is ready for next use.

2. Familiarizing Yourself with Your HYDRIM

2.1   Operating Principles

Designed for loads used in dental offices, HYDRIM 112W can be configured for several different instrument arrangements with rack options for up to 10 cassettes and 4 baskets. It has three cleaning cycles each with optimized drying.

The HYDRIM 112W uses hot water, high water pressure and precision-dispensed HIP Cleaning Solution to clean dental instruments to a spot-free, thoroughly dry finish. G4+ technology records and monitors cycle history for in-unit and cloud-based data storage. HYDRIM 112W completes every cycle with clean, dry instruments – a critical step that will keep your autoclave performing optimally because instrument loads that start sterilization dry, finish dry.

2.2   Key Features

Fast cycle times include active drying, with HEPA-filtered heated air filling the chamber to force out moisture, leaving your instruments sterilizer-ready from the moment the HYDRIM door opens.

The HYDRIM has a standard washer footprint but one of the industry's widest chambers. At 112 litres, the **stainless-steel chamber** holds as many as 10 cassettes and 4 baskets.

Multiple configuration options for easy loading to match any office's instrument reprocessing needs.

Glove-friendly LCD screen protected by scratch-resistant Panda Glass, a chemically hardened glass used in many smartphones.

Video tutorials and interactive screen instructions show you how to quickly maintain your HYDRIM unit.

G4+ process documentation enhances record keeping and connects to myCOLTENE digital services portal.

HEPA filter protected air-drying system traps and holds airborne pollen, dirt, dust, moisture, bacteria, viruses and liquid aerosol common in dental offices.

Enhanced documentation mode adds user information and load contents for your records to show not only when a cycle was run, but who started it, who stopped it, and what was washed.

Door monitoring makes certain the door lock is ready, engaged and locked for the duration of your cycle.

Economical detergent and water consumption. Typical cycle uses 72 mL / 2.4 fl oz of HIP cleaning solution and monitors usage to make sure you don't start a cycle without enough detergent to finish it. Water consumption is among category leaders while benefiting from increased efficiency.

Vacation mode keeps your unit in operational condition during prolonged periods of unuse so that it's ready to work when you are.

Maintenance reminders keep you on schedule so that your unit is always in optimal condition.

Spot-free drying with rinse-aid technology.

2.3   Safety Devices

Power surge protection

› Circuit breakers protect the unit's electronics from power surges and can be easily reset by a technician.

Redundant safety system for water heater

› Water heater thermal cut-off protects the unit from an overheat situation.

› Water heater safety pressure switch detects the presence of water in the unit and prevents the water heater from turning on when there is no water circulating.
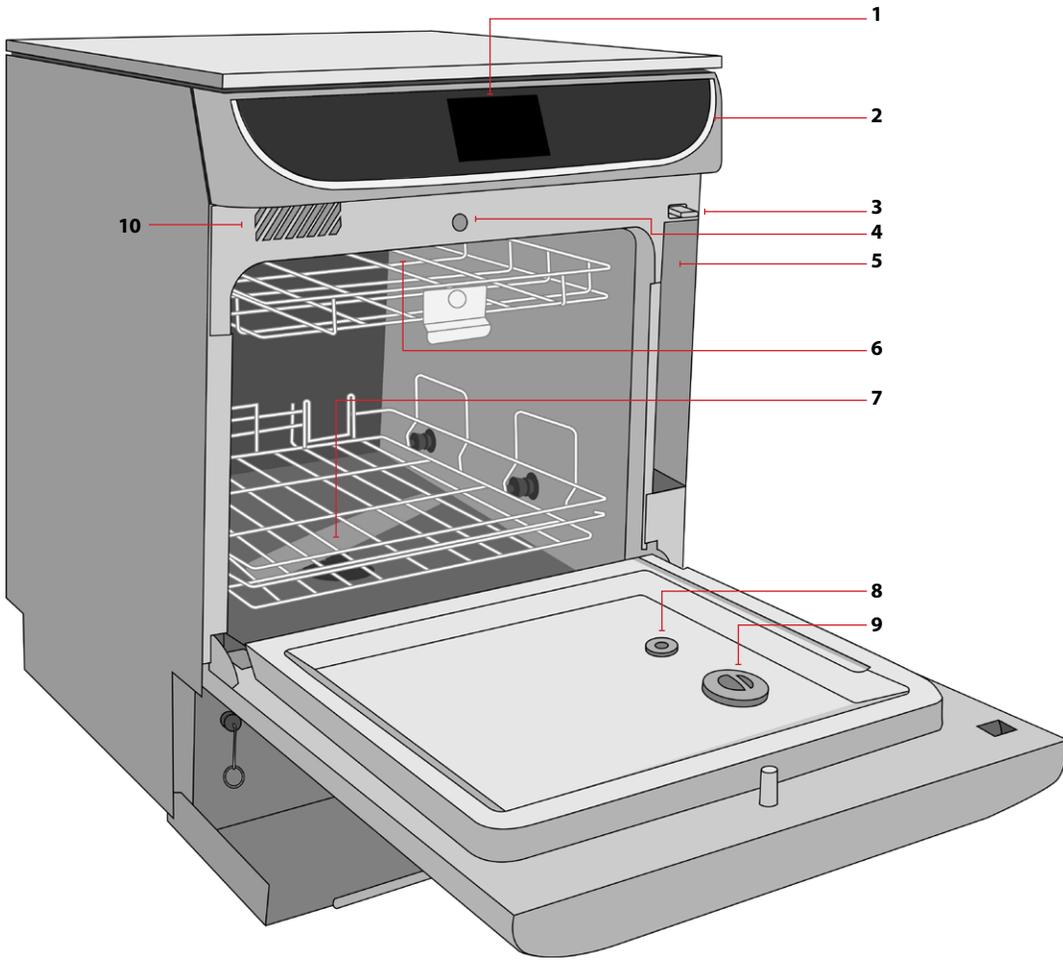
Dryer-overheat protection

› Air heater thermal switch and thermal cut-off protects the dryer system from overheat situations.

Electronics protection

› Controller board fuses protect the unit's electronics.

› In-line 4A fuse protects the unit's 24V circuit components.

2.4   Unit Overview

Front - door open

1. Touchscreen LCD

Press 🔒 to open door.

2. LED status light
3. USB port
4. Door latch
5. Detergent compartment
6. Upper wash arm (not shown)
7. Lower wash arm
8. Rinse aid dispenser outlet
9. Rinse aid fill cap
10. Dryer exhaust
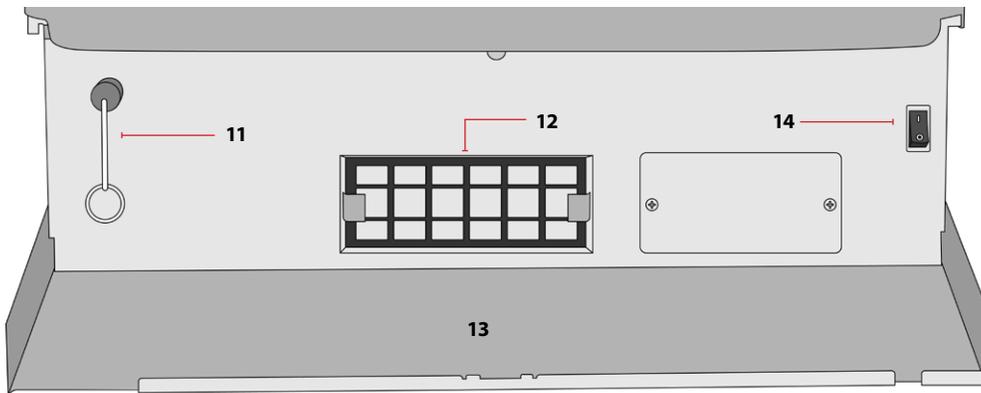
Front - kickplate open

11. Emergency door release
12. HEPA filter
13. Kickplate
14. Power switch
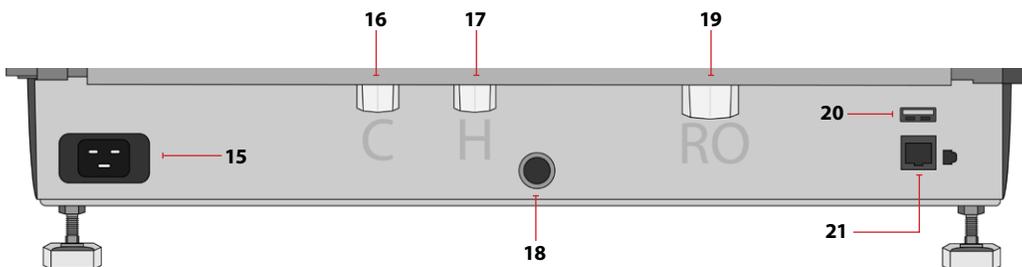
Back

15. Power cord input
16. Cold water inlet
17. Hot water inlet
18. Drain outlet
19. RO water inlet
20. USB port
21. Ethernet port

LED Colours

WHITE Ready for use

BLUE Cycle is running

GREEN Cycle complete

YELLOW Cycle stopped by user or warning
Flashing condition detected during cycle

RED Cycle fault or alarm condition

ORANGE Software update

PINK Unit being accessed by
remote technician

GREY Factory or service mode

2.5   Touchscreen Overview

Dashboard

Cycle count   **Network name**   **USB key status**

**P1: Rinse and
Hold Cycle**
Use to prevent soil
from drying on
instruments when
they will not be
washed immediately
after loading.

P2: Regular Cycle
Moderately soiled
loose instruments.

P3: Heavy Duty Cycle
Heavily soiled
instruments and
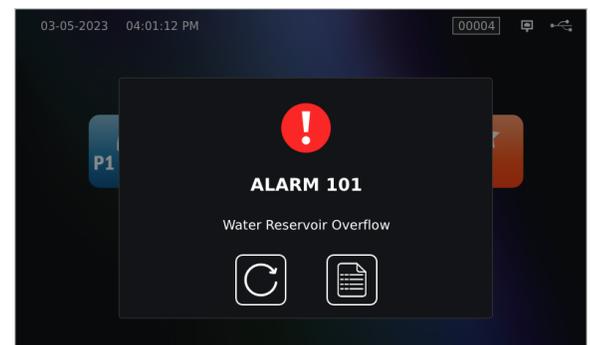cassettes.

Door lock status   **Cycle records**   **Connectivity**   **Settings**   **Notifications**

Press 🔒 to open door.

Alarm Pop-Up Guide

Press **REFRESH** ↻ to clear alarm. If pop-up stays open,
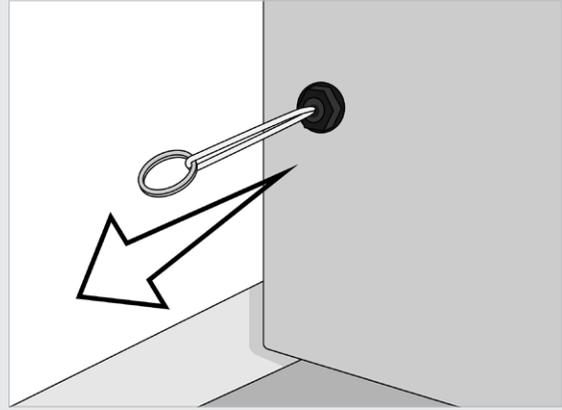more steps are required to fix the issue.

Press **EVENT LOG** 📄 for more information.

3. Set Up

IMPORTANT INFORMATION

Opening the door – no power
Open the kickplate and pull the door release ring located on the bottom left.

› Ensure that HIP Cleaning Solution is available.

› Included with your unit: hygiene basket, hinged basket, 10-cassette rack, water softening salt, water hardness test strips, and HEPA filter.

› The HYDRIM weighs 65 kg. Use of a dolly is recommended for transport to installation location.

› The HYDRIM must be properly grounded.

› The HYDRIM is equipped with an air gap / anti-suction device to prevent backflow of dirty water into the water supply. No other air gap device is necessary.

3.1 Installing Your HYDRIM

Installation should only be undertaken by an approved technician. The use of an unapproved installer may invalidate the warranty. A separate pre-installation checklist should have been supplied by your dealer. Please review this prior to installation.

If the HYDRIM is installed in a sterilization center, the manufacturer of the sterilization center should allow enough space at the top, back and both sides of the unit to facilitate installation, leveling, and service access to the unit.

Do not move the HYDRIM into place by maneuvering the open wash chamber door. This may cause the door to become misaligned and can cause leakage.

During installation, all consumables should have been added to the machine as appropriate. It is important to check that this has been undertaken before starting the machine.

Adjustable leveler feet:

The unit's feet can be adjusted by as much as 30 mm so that the unit can accommodate undercounter installations of 820 to 850mm. The unit is shipped with a kickplate that fits the most common 850mm installations. If the feet are shortened to 820mm to accommodate shorter countertop heights, a shorter kickplate can be ordered to provide a more aesthetically complete installation.
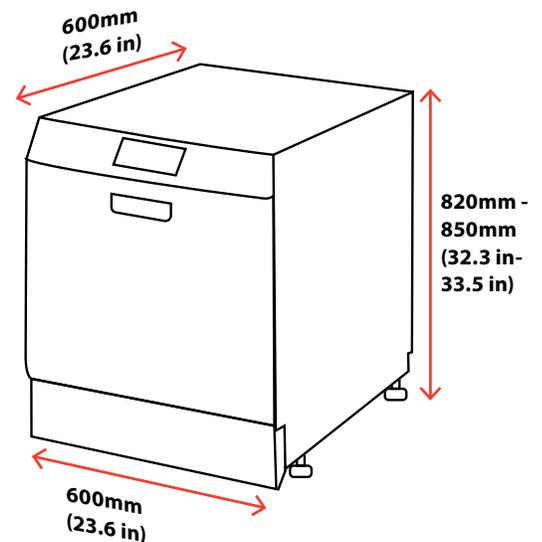
4. Selecting Wash Programs

Cycle	P1 **Rinse and Hold Cycle***	P2 **Regular Cycle**	P3 **Heavy Duty Cycle**
	Use to prevent soil from drying on instruments when they will not be washed within one hour.	Use for moderately soiled loose instruments.	Use for heavily soiled instruments and cassettes.
Prewash (Cold)	6 minutes	5 minutes	5 minutes
Wash	–	10 minutes	14 minutes
Rinse	10 minutes	10 minutes	10 minutes
Dry	–	15 minutes (default)	15 minutes (default)
Total Time**	16 minutes	40 minutes	44 minutes
Water Consumption	12 L 3.17 Gal	24L 6.34 Gal	24L 6.34 Gal

* This is not a wash cycle. Always run a wash cycle following the rinse & hold cycle.

** Cycle times depend on the temperature and pressure of incoming water as well as incoming voltage (208-240V).

5. Loading Trolleys, Racks and Baskets

The HYDRIM can be configured to wash several different combinations of instruments. This section provides examples of a few loading scenarios, including the most common basket loadings, the recommended loading of general instruments, and the maximum loading for the unit. Handle all instruments with care to prevent personal injuries from punctures and follow local health and safety regulations to prevent accidents and injuries.

IMPORTANT! The HYDRIM will wash instruments at a high temperature using a calibrated dose of HIP Cleaning Solution. Observe the instrument manufacturer's recommendations for cleaning and care.

IMPORTANT! Do not overload the HYDRIM. All instruments must be placed in the instrument washer in such a way as to allow good rinsing of all surfaces. Any surface that is shielded from water and detergent cannot be cleaned. Be sure to observe the instrument manufacturer's recommendations for cleaning and care.

Your HYDRIM comes equipped with the following accessories.

Trolleys

The upper and lower trolleys are the basis of the HYDRIM loading system. Do not run a cycle without these trolleys in place. Racks, baskets, or cassettes are designed to be placed in the trolleys.

Upper Trolley

(Maximum load weight: 5 kg/11lbs)

Lower Trolley

(Maximum load weight: 20 kg/44 lbs)

Baskets and Rack

You HYDRIM comes equipped with a 10-cassette rack for the lower trolley and a hygiene basket and hinged basket for the upper trolley.

Hygiene Basket

Open mesh basket with integrated wire cradle holds instruments in evenly spaced positions for optimal washing.
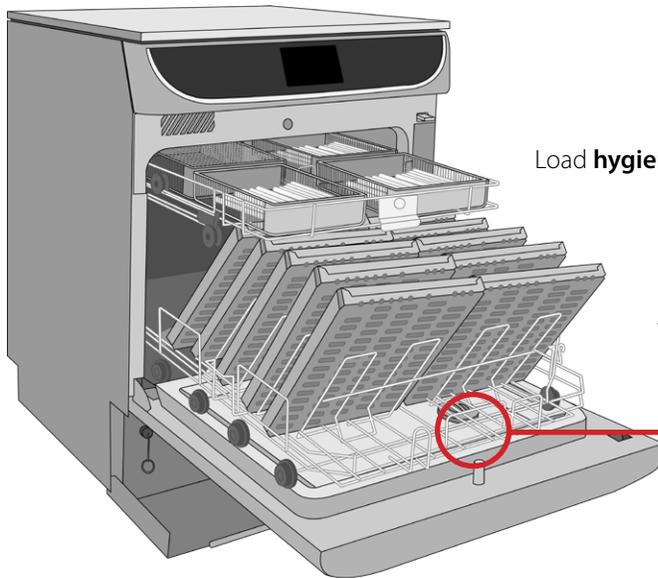
Hinged Basket

Mesh basket with hinged lid holds small or light objects.

10-Cassette Rack

Holds up to 10 standard cassettes at an angle that allows optimal water drainage and encourages faster drying.

Loading your HYDRIM

Load **hygiene basket** and **hinged basket** in top trolley.

Load **cassette rack** to hold cassettes angled towards the front of the unit in lower trolley.

Place **wash test indicator** here (as required by your local guidelines).

5.1 Instrument Baskets and Rack

IMPORTANT! Some items may not be suited for processing in the HYDRIM

› Burs, microkeratomes, phaco tubing, fiberoptics and electrical equipment should not be processed in the HYDRIM.

› Nickel-plated instruments, or instruments containing aluminum or colour anodized aluminum as well as single use instruments are not suited for processing in the HYDRIM.

› It is not recommended to process carbon steel and chrome plated instruments in the HYDRIM.

DO use only accessories, such as baskets, trolleys, and racks to hold instruments that are designed for your HYDRIM.

DO use accessories for their intended purpose only.

Solid straight instruments

› DO arrange loose instruments so that they are not touching one another.

› DO place instruments with concave surfaces or cavities in a way that allows water to drain freely.

› DO place trays and other concave shaped items at an angle to ensure water can run off surfaces easily.

› DO remove all cement, composite material and amalgam from instruments at chair-side prior to processing in the HYDRIM.

› DO disassemble instruments if possible.

› DON'T overlap instruments. Each instrument must be kept separate.

Hinged instruments

› DO place hinged instruments in a wide-open position in baskets. Closed hinged instruments cannot be cleaned.

› DON'T place hinged instruments in cassettes.

› DO use the hinged instrument rack accessories.

Tubes and hollow instruments

› DO place suction tubes in the rack for vertical instruments and ensure that water can flow unrestricted in and out of the tubes.

› DON'T place suction tubes horizontally in a basket or in a cassette.

› For instruments containing lumens, such as dental handpieces, only the external surfaces are cleaned.

5.2   Sample Load Configurations

The HYDRIM can process many different instrument combinations as determined by the following:

› Size of practice

› Types of procedures undertaken at any one time

› Specialization of practice

› Instrument management protocols

When loading the unit, arrange loose instruments so that they do not touch one another. Instruments with concave surfaces or cavities should be placed so that water can drain freely.

Upper trolley configurations

The upper trolley is best used for loose instruments.

Up to 4 hygiene (open) or hinged (closed) baskets.

2 long baskets

Lower trolley configurations

Use of standard cassettes is recommended to improve your office's instrument reprocessing workflow.

Wash up to 10 large standard cassettes using the ten-cassette rack.

Wash 5 large standard cassettes with four hinged baskets by using the half center support and five-cassette rack
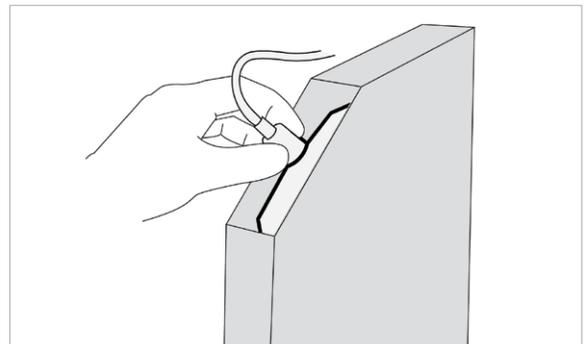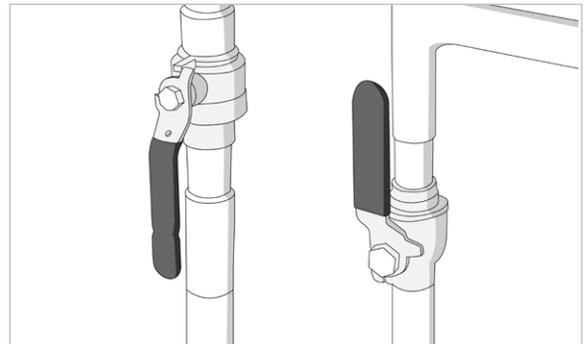

Wash loads using 1 large basket

Wash hinged or hollow instruments.

6. Initial Use

Before using your HYDRIM for the first time, check the following:

1. Power ON the unit.

2. Check that the water supply is ON.

3. Check that the HIP chemical solution is connected.
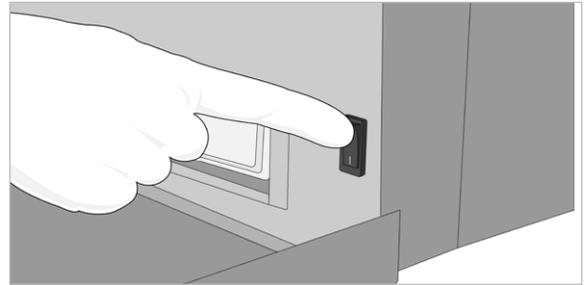
4. From the dashboard select **SETTINGS** ⚙ and press **SYSTEM**.

5. Press **INTRO SETUP**.

6. Select **Initiate Intro Setup Wizard** and press ✅.
   Following this process will allow you to connect your unit to a network, register your unit and link it to your myColtene account.

7. Press **Start Setup** and follow the screen prompts.
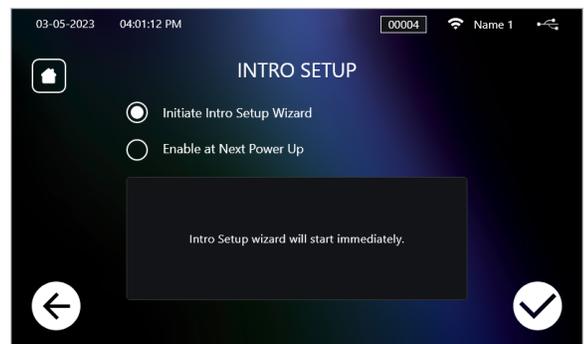
8. Once the unit is connected and registered you may be prompted to download the latest software upgrade.
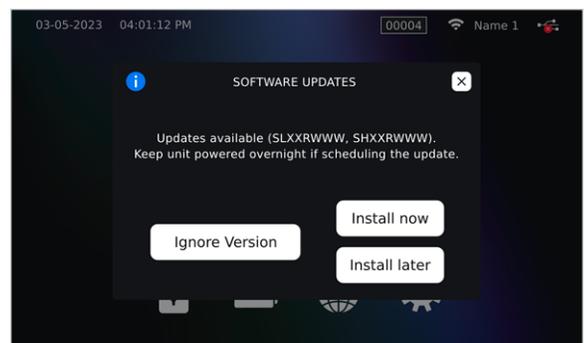
7.   Connecting Your HYDRIM to a Network

You can use the Intro Setup sequence (*6. Initial Use*) to guide you through connecting your HYDRIM to a network, registering your unit and linking it to your myCOLTENE account, or you can follow these steps to connect your HYDRIM to a network.

7.1   Connecting to a Wireless Network

1. From the dashboard, select **SETTINGS** ⚙.

2. Press **NETWORK SETUP**.

3. Press **CONNECT**.

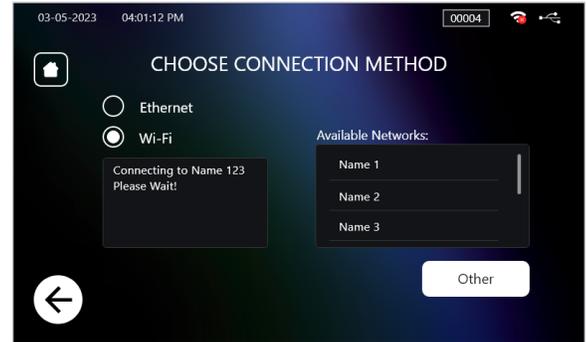4. Select **WiFi** and choose the network from the available list.

5. Enter the password.

6. Press ✅ to return to the main menu.

7.2   Connecting to a Wired Network

The HYDRIM's Ethernet port is located at the back of the unit. If you want to connect an Ethernet cable to your unit after it has been installed, you will have to pull the unit forward to access the port.

See installation instructions to learn how to pull the unit forward.

Once you have connected the cable, follow these steps:

1. From the dashboard, select **CONNECTIVITY** 🌐.

2. Confirm that the unit is connected to both the Network and Internet and press [⬛] to return to the dashboard.
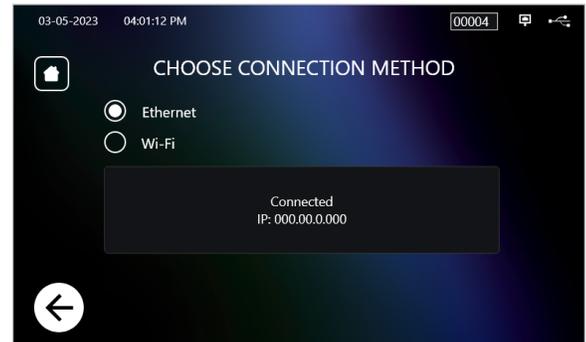
8. HIP Cleaning Solution

The HIP Cleaning Solution is used in diluted form as a detergent for the cleaning of surgical instruments in the HYDRIM range of washers. It is a colourless and almost odourless liquid that is completely soluble in water.

The pH range of the concentrated solution is between 9.3 – 9.8 and the solution is therefore mildly alkaline. Certain precautionary measures should be observed when loading the solution into the unit, and when removing and disposing of the empty pouch and box.

Recommended precautionary measures for the safe handling of HIP Cleaning Solution.

› Always wear undamaged gloves made of natural or butyl rubber, nitrile, or neoprene (surgical gloves are ideal).

› Always wear eye protection.

› Protect exposed skin on arms.

› If solution is spilled on clothing, remove the item of clothing and wash affected skin with plenty of water, in accordance with the Safety Data Sheet requirements.

› Use good industrial hygiene practices in handling this material. When handling, do not eat or drink.

› After handling the product, remove and dispose of gloves and wash hands prior to removing eye protection.

› Do not use the personal protective equipment you use for clinical activities to handle HIP products.

› Always ensure that personal protective equipment, if contaminated with HIP Cleaning Solution, is cleaned, or disposed of as appropriate.

For comprehensive data on HIP Cleaning Solution, please visit the HYDRIM Cleaning Solutions page at **www.scican.com** to view or download a PDF of the Safety Data Sheet.

8.1   Replacing the HIP Cleaning Solution

Spare part#: CS-HIPT (4 x 1.75 L), HIP Cleaning Solution.

When a red X appears on the water softener/detergent icon, press on the icon to determine if the problem is with the water softener or cleaning solution level. If the cleaning solution must be replaced, a red X will appear next to it.

To install the HIP Cleaning Solution, follow these steps:

1. Tear the perforated corner off the chemical box.

2. Remove the cap.

3. Open the door and place the new detergent box into the space to the right of the chamber.

4. Screw the cap to the new detergent box.
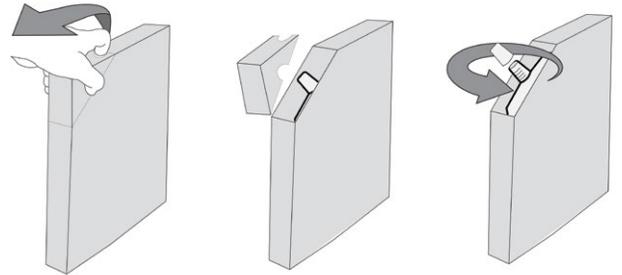
9. Water Softening System

The quality of the water being used in the HYDRIM to clean the instruments is critical to achieving satisfactory cleaning results and to protecting the instruments and the internal parts of the unit from deterioration.

Drinking water typically contains many dissolved solids. The number of dissolved solids greatly depends on the local natural geological conditions, and they can cause stains, spots and corrosion on instruments and on the internal parts of the HYDRIM. Among others, Iron, Manganese, Chloride, and Calcium Carbonate ($CaCO_3$) are the dominant dissolved solids that affect the cleaning results when using a washer.

Calcium Carbonate is the principal cause of water hardness and leaves white spots or scales. The HYDRIM is equipped with a built-in water softening system that must be adjusted according to the local water hardness. Please see section 9.2 of this manual for recommended regeneration settings.

Iron and Manganese can cause orange and brown or black stains on the instruments and on the internal parts of the HYDRIM. Chloride is usually responsible for causing stains, spotting, pitting, and scaling. If the instruments or the inner parts of the HYDRIM, such as the chamber, show any of these spots or stains, a water test may be required to determine the cause. The installation of a water treatment system may be required to reduce the number of dissolved solids in the water and to improve the cleaning performance of the HYDRIM.

Before using the HYDRIM, we recommend testing the water and recording the results for water hardness, pH value, and water conductivity for future reference in your installation instructions.

NOTE: If the water hardness level in your area is consistently lower than 18 PPM, you don't need to fill the salt container but you will still have to set the water regeneration level to 0.

IMPORTANT: The HYDRIM's water softening system reduces the water hardness by taking out Calcium Carbonate. If your water testing results show that your water hardness is outside the unit's range of adjustment, or if other dissolved solids in the water cause stains or deposits on the instruments or chamber, an external water treatment system may be required.

9.1   Refilling the Water Softening Salt Reservoir

When the salt in the water softener system is depleted, the unit will tell you to add more salt. You can still run cycles when the salt level is low. If you run the unit without adequate salt for your local water hardness conditions, you may see stains on instruments or inside the HYDRIM chamber.
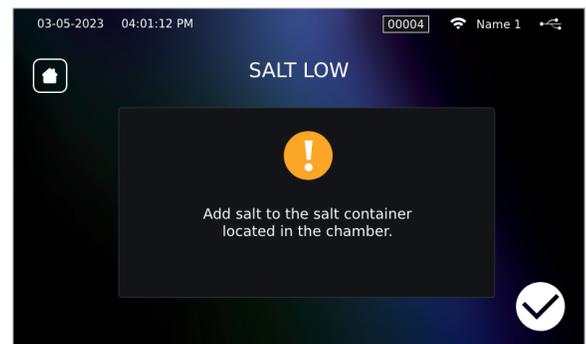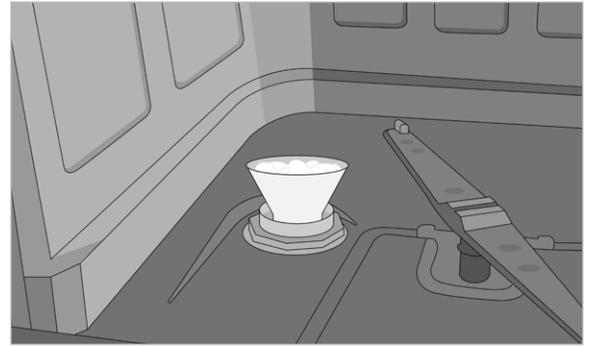

To refill the water softening salt reservoir, follow these steps:
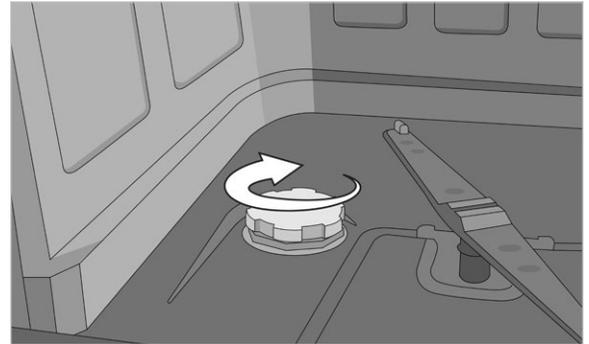
1. Open the salt container lid.
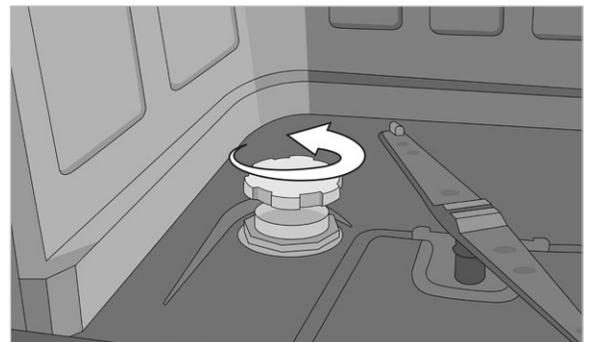
2. Fill the salt container to the top, using the funnel supplied, and then fill the reservoir with water.

3. Close the salt container lid, ensuring a tight seal. An improper seal can lead to corrosion.

4. Run an empty cycle (no instruments) immediately to avoid corrosion.

9.2   Adjusting the Water Softening System

The HYDRIM is equipped with a built-in water softening system that must be adjusted according to the local water hardness. The default regeneration level is 1. Setting it to 0 will turn regeneration OFF. Any number higher than 0 indicates how often, after a given number of cycles, the water softener resin beads are regenerated. The higher the setting, the more frequently the resin beads are regenerated.

To read local water hardness, proceed as follows:

1. The water test kit included with your HYDRIM contains three water hardness test strips. Take a water sample from the location where the machine will be installed.

2. Open one of the test strips and dip it into the water for one second.
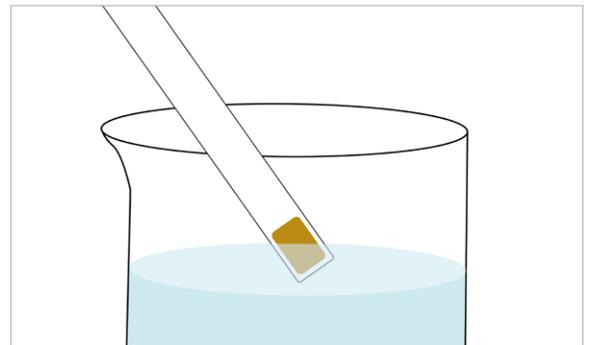
3. Wait 30 seconds for the test strip colour to stabilize, then compare the color of the strip with the chart on the back of the bag. Determine the water hardness according to the chart on the water test kit envelope.
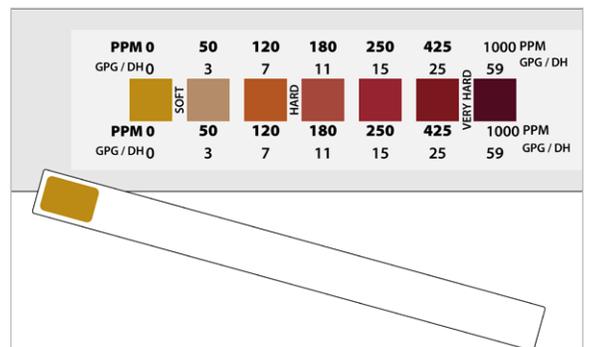
4. Match your PPM or DH number to the numbers on this table to find your HYDRIM's regeneration level. The regeneration level is the number you will use to adjust your HYDRIM's settings.

5. From the dashboard, select **SETTINGS** ⚙, then **SYSTEM**, then **WATER SOFTENER**.

Water Hardness Conversion and 112W Regeneration Levels

	°dH	US GPG	PPM (mg CaCO3 / Litro)	Regen
Normalmente No se requiere tratamiento (valores desde 18-143)	1	1,0	18	1
	2	2,1	36	
	3	3,1	54	
	4	4,2	71	
	5	5,2	89	
	5,6	5,8	100	
	6	6,3	107	2
	6,2	6,4	110	
	7	7,3	125	
	8	8,3	143	
Puede requerir tratamiento externo (valores desde 150-535)	8,4	8,8	150	3
	9	9,4	161	
	10	10,4	178	
	10,1	10,5	180	
	11	11,5	196	
	11,2	11,7	200	4
	11,8	12,3	210	
	12	12,5	214	
	13	13,6	232	
	14	14,6	250*	
	15	15,6	268	5
	16	16,7	286	
	16,8	17,5	300	6
	17	17,7	303	
	18	18,8	321	
	19	19,8	339	
	19,6	20,5	350	7
	20	20,9	357	
	20,2	21,0	360	
	21	21,9	375	
	22	22,9	393	
	22,4	23,4	400	
	23	24,0	411	
	24	25,0	428	
	25	26,1	446	
	25,2	26,3	450	8
	26	27,1	464	
	27	28,2	482	
	28	29,2	500	
	28,6	29,8	510	
	29	30,2	518	
	30	31, 3	535	
Tratamiento externo requerido (valores >535)	≥30,3	≥31,6	≥540	Tratamiento de agua adicional requerido

6. Set the Regeneration Level. If your water hardness falls between two settings, select the higher setting.

*Please note: The water test strip is only accurate up to 250 ppm. If the reading on the test strip exceeds 250 ppm and/or if the location in which the HYDRIM is installed has known water quality problems, the use of an external water softening or purification system may be required.

10. Rinse Aid System

HYDRIM is equipped with a rinse aid dispenser. **SciCan STAT-DRI** is the recommended rinse aid for HYDRIM. As with STATIM cassettes, STAT-DRI helps to prevent the formation of water droplets and promotes dryness.

To fill the rinse aid dispenser:

1. Turn the rinse aid cap counterclockwise.
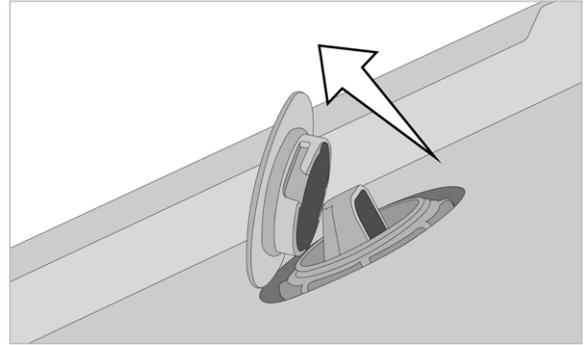
2. Fill to the max line.

11. Basic Operation

11.1   Instrument Reprocessing Recommendations

The HYDRIM 112W is designed to clean general dental and medical instruments.
Terminal sterilization must be performed after processing in the HYDRIM.

Examples of medical and dental instruments suitable for cleaning in the HYDRIM include:

› Stainless steel scalers, spatulas, and hemostats.

› Stainless steel retractors, needle holders, skin hooks, tissue forceps, scissors, curettes, and other stainless-steel instruments free of deep cavities.

For best results, instruments processed in the HYDRIM should have the following properties:

› Heat resistance to a temperature of up to 60°C.

› Corrosion resistance in the presence of heat.

› Microkeratomes, phaco tubing, fiberoptics and electrical equipment should not be processed in the HYDRIM.

› Nickel-plated instruments, or instruments containing aluminum or colour anodized aluminum as well as single use instruments are not suited for processing in the HYDRIM.

HIP Cleaning Solution has been carefully formulated to provide outstanding material compatibility with a wide range of metals and coatings. However, some manufacturers' instruments may not be compatible.

Some instrument manufacturers make their instruments with special coatings, which may not be suitable for use in an automatic instrument washer. Please consult the instrument manufacturer for their recommended cleaning procedures of these instruments.

In general, it is not recommended to process carbon steel and chrome-plated instruments in the HYDRIM.

When processing small or light objects in the HYDRIM, use the basket with lid.

Tips for best cleaning results

Ensure that the washer spray arms are free of any blockage and can rotate freely.

Ensure that the mesh filters in the chamber drain are free from debris.

To achieve best cleaning results, instruments should be processed in the HYDRIM as soon as possible. If immediate cleaning is not possible, it is recommended to process the instruments using the P1 Rinse and Hold program immediately after use on the patient.

Visually inspect instruments for cleanliness and integrity (corrosion, material changes) after cleaning and repair or replace instruments if necessary.

11.2   Low Salt Message

When the salt in the water softener system is depleted, the unit will tell you to add more salt. You can still run cycles when the salt level is low. If you run the unit without adequate salt for your local water hardness conditions, you may see stains on instruments or inside the HYDRIM chamber.

See Section 9 for instructions on Refilling the water softener.
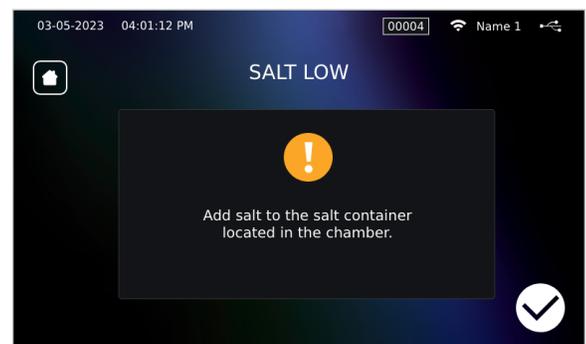
11.3 Pre-cycle Screen

The HYDRIM has basic conditions that must be met before a cycle can be started.
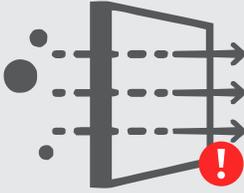
If unit displays…	Do this…
Low detergent detected.	Add more detergent and press ⟳. Press ⓘ to learn how to add more detergent.
HEPA Air Filter missing.	Open the kickplate and check that the HEPA filter is in place. Press ⟳ to resolve. Press ⓘ to learn how to check or change the HEPA filter.
Door open.	Push door closed until you hear it click. Press ⟳ to resolve. Press ⓘ for tips on closing the door.

11.4 Running a Cycle

Before using your HYDRIM:
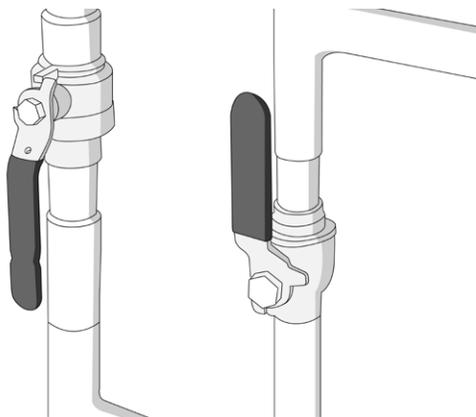
Check that the water supply is ON.

Check that the HIP Cleaning Solution pouch is correctly installed and attached.

Then follow these steps:

1. Power ON the unit.

2. Unlock the door.

3. Load the instruments.

4. Select a **Cycle**.

5. Press **START**.

   a. Drying time is based on a maximum load. Use the dropdown menu to increase or decrease drying time to suit your clinic's needs.

   b. If Process Enforced or Documentation mode is ON, you will be prompted to select a user and enter a password.

6. The cycle will begin.

7. Press **OK** when Cycle Complete screen appears.

   a. If process enforced is activated, you will be prompted to select a user and enter a password or use the GUEST option.

   b. In process enforced mode, you must select an option stating whether instruments are visually clean after a complete cycle is finished.

   c. And accept or reject the printout.
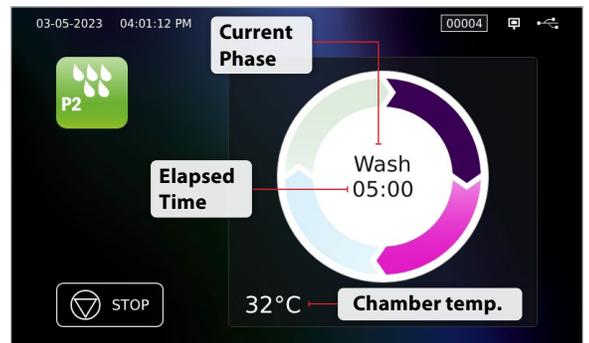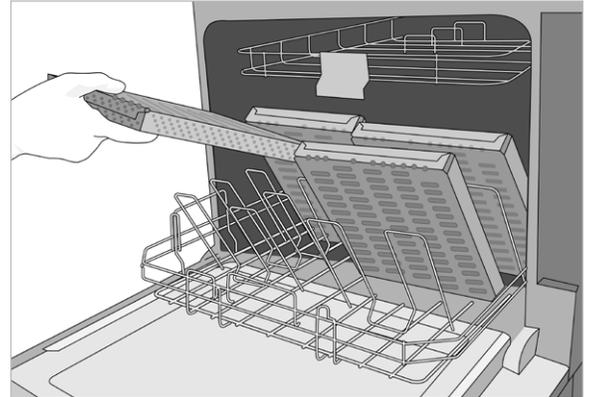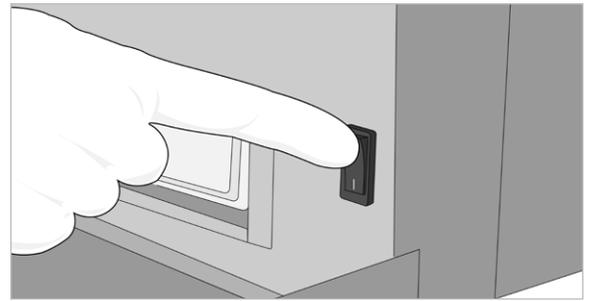
11.5 Setting Drying Time

1. From the dashboard, select a **Cycle**.

2. Scroll to the drying time you want and press ✓ to save and exit.
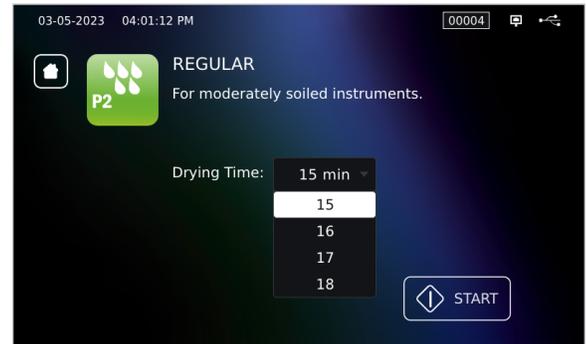
11.6 Interrupting or Aborting Mid Cycle

The door of the HYDRIM is locked during the cycle. If the **STOP** button is pressed, the cycle is aborted and cannot be re-started. Whether it is stopped due to a cycle fault or because a user pressed **STOP**, loads interrupted mid cycle must be reprocessed.

1. The message **Draining. Please wait.** will appear.

2. The unit will drain.

3. Then the message **Stop button pressed. Instruments not processed.** will appear. Press ✓.

4. Open the door by pressing 🔒 .

5. Use gloves when handling the instruments.

CAUTION! Instruments, trolleys, baskets, and cassettes may be hot. The cycle must be repeated to ensure that instruments are properly processed.

11.7 Interrupting or Aborting During Drying

If the drying phase of the cycle is interrupted, the critical parts of the cycle are complete and the message displaying the program name and **Cycle Complete. Drying interrupted** will appear.

You will be reminded to check for dryness.

11.8 Opening the Door Without Power

If there is a power failure, open the kickplate and pull the ring located at the bottom left.
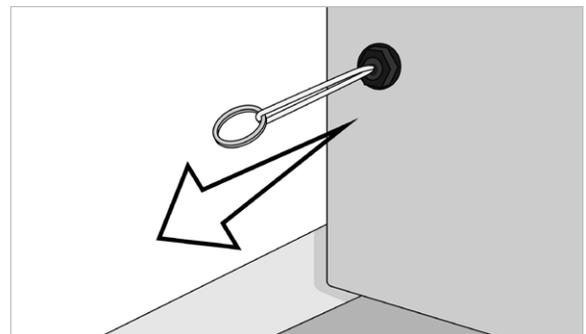
CAUTION! There may be fluid remaining in the unit and the instruments may be hot. If the cycle was interrupted, instruments should not be used and should be reprocessed.

12. Overview of Basic Settings

The HYDRIM 112W features several settings that can be adjusted. The chart below provides an overview of where these settings can be found within the menu structure and tells you what you can do with each button. Functions such as setting up load traceability, usernames, and passwords, setting drying times and standby mode are explained in more detail later in this chapter.

Settings Button	SubMenu Button	What To Do With It
Time and Date		Enter values.
Language and Units		Select from language list Select Celsius or Fahrenheit Select country Select time zone
System	Display	Set screensaver delay Set theme (light or dark) Set LCD contrast
	Sound	Set button beep on/off Set button beep volume
	Device Nickname	Name device for easier record keeping
	Intro Setup	Initiate the Intro Setup Wizard
	Vacation Mode	Drain detergent system for prolonged shutdowns
	Water Softener	Set the water softener regeneration level according to the water hardness table in section 9
	Rinse Aid	Set rinse aid use ON/OFF
	Maintenance	Counts cycles remaining before required maintenance
Network Setup		Set Internet connectivity
Process		Enable enhanced cycle recordkeeping functions
Cleaning		Start chamber cleaning cycle
Printer		Set printer type
General	Instructions	View video instructions
	Privacy Policy	Agree or disagree
	Cycle count	Total number of cycles and of each cycle run
	Event Log	Review maintenance records, unit errors and software updates
	Troubleshooting Tips	Fix common issues
	Consumables	Order detergent, rinse aid and salt
Information		Unit information including model, serial number, and software versions
Technician		Enter password to access service menu
Remote Access		Generate remote access token

13. Setting up Load Traceability

The Process Enforced function documents who has started and who has stopped your HYDRIM 112W. It does this by prompting users to enter a username and password at the start of a cycle and when they stop or cancel a cycle. Using Process Enforced does not restrict any functions, it is simply a means of tracking which of the registered users was operating the unit. To use the Process Enforced feature, you must first assign usernames and passwords.

13.1 Activating Load Traceability

To turn Process Enforced usage ON, OFF or to activate DOCUMENTATION mode, select ⚙ and follow these steps:

1. Select **PROCESS**.

2. Use the side menu to select one of the following:

   › **Standard**: Process enforced is OFF.

   › **Enforced**: Process enforced is ON and username and password are required to start and stop a cycle.

   › **Documentation**: Process enforced is ON, username and password are required to start and stop a cycle, and additional load contents and cycle verification prompts are enabled.

   TIP: Any user can stop a cycle and remove the load even with the Enforced or Documentation mode ON. However, the cycle data will record that a GUEST user has stopped the cycle and opened the door.

13.2 Deactivating the GUEST Option

Some clinics may choose to deactivate the GUEST option so that only registered users can START and STOP a cycle. If the GUEST mode has been set to OFF, only a registered user can start or stop a cycle when the Enforced or Documentation mode is set to ON.

To turn GUEST mode ON or OFF, select **SETTINGS** ⚙ then **PROCESS**.

13.3 Setting Usernames and Passwords

1. To set up a username and password, go to **SETTINGS** ⚙ and select **PROCESS**.

2. Select **ENFORCED** and press ⊞.

3. Enter the new username.

4. Enter the new password.

5. The new user will appear as a selection on the **PROCESS** screen.
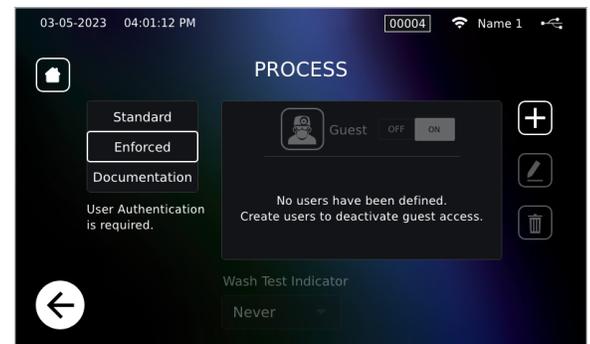
13.4 Using Documentation Mode

This mode activates the Process Enforced usage function and keeps a record of a user confirming wash validation. This record is then added to the cycle record.

After pressing START:

1. Enter username and password.

2. Use the Contents screen to create a record of what instruments are being washed.

3. Confirm the entry and press ✅ to start the cycle.
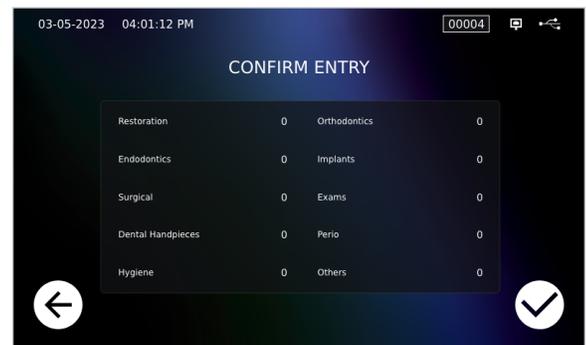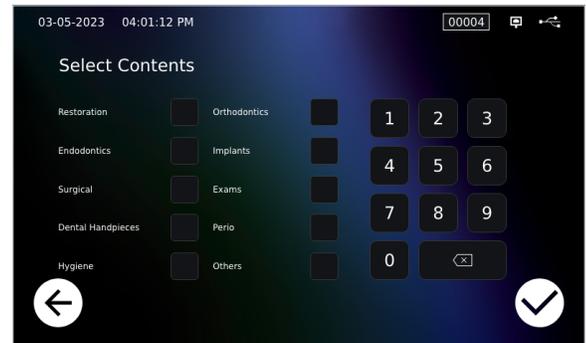
At the end of the cycle:

1. Enter username and password.

2. Complete wash verification information.

3. Confirm the cycle record is accurate.

14. Storing, Retrieving and Printing Cycle Records

The HYDRIM's internal memory can store data on every cycle, whether successful or incomplete, for the lifetime of the unit. You can access this information through the unit's LCD touchscreen, by exporting to a USB storage device or to an email address, or by connecting a printer. HYDRIMs connected to a Network can also store cycle records at my.Coltene.com, a web portal that is exclusive to Coltene customers. It will automatically upload your unit's cycle data to an online storage service for safe off-site record keeping. See Section 15. Connecting your unit to myCOLTENE.

14.1 Retrieving Cycle Information Using the Touchscreen

1. From the home screen, press **CYCLE RECORDS** 📁

2. Select a cycle number from the list to see its details.

14.2 Exporting Cycle Information to USB or Email

You can use your unit's USB storage device or an email address to send cycle information stored in the unit to a computer. Best practice suggests this should be done once a week.

1. From the home screen, press **CYCLE RECORDS** 📁

2. Press ⬇️

3. From the EXPORT drop down menu, select **USB** or **EMAIL** and press ✅

4. Select the number of record days to export.

5. If you selected **USB**, insert the USB storage device into the unit's USB port. Then press ✅
   If you selected **EMAIL**, press ✅. You will be prompted to enter and email address before starting the export.

14.3 Connecting to a Printer

Some users may prefer to have a printed record generated after every cycle. To use an external printer, you must connect it to one of the unit's two USB ports at the back. Once the printer is connected, enabled and its settings correctly adjusted (see below), it will automatically print a record of each cycle.

To connect the printer, power on the printer and from the HYDRIM's dashboard, select SETTINGS, then PRINTER, and follow these steps:

1. Select the printer type.

   a. If using a Network Printer, select **Network Printer** and follow the prompts to connect it to an IP address.

   b. If using a **Local Printer**, connect the printer to a USB port at back of unit.

2. Select the printer type from the drop-down menu. Use the test page function to make sure it is connected and functioning correctly.

3. Print a test page.

4. Configure settings, as needed.

14.4 Reading a Cycle Printout
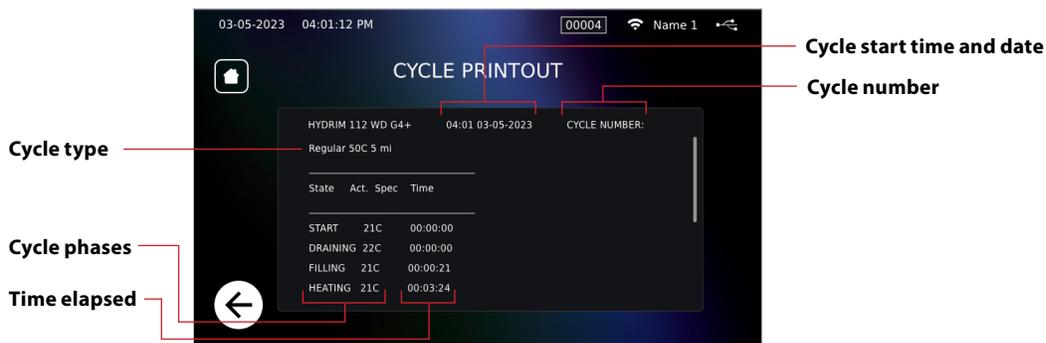
15. Connecting your Unit to my.COLTENE

my.COLTENE.com is a web portal that is exclusive to SciCan customers. It connects your unit to a personalized cloud-based storage account for your cycle records and access to a host of support services including, instructional videos, troubleshooting tips, operator manuals, and quick reference guides – all the relevant information for the products you own.

Log into your existing my.COLTENE account or create one using your email and product serial number. Once connected, your HYDRIM will continue to store cycle records on the unit and will maintain a cloud-based backup from the moment you link it to your my.COLTENE account for the lifetime of the unit.

The easiest way to connect your unit to my.COLTENE is to use the Setup Wizard, which starts automatically when a unit is powered on for the first time.

You can also prompt your unit to run the Setup Wizard by selecting ✴ and following these steps:

1. Select **SYSTEM** 🔲

2. Select **INTRO SETUP** ☰

3. Follow the prompts through the Setup Wizard.

4. When you arrive at the Online Account screen, select **YES** to enter your account information.

   If **NO**, enter your email and initiate the account set-up process.
   Check your inbox for a registration email (if you did not receive a confirmation email, check your spam folder.)
   Click on the link and follow the prompts to create your my.COLTENE account or add your HYDRIM to your existing account.

Data Security and WiFi

Ensuring your WiFi® connections are secure is an important element of safeguarding your organization's data. A WiFi network using WPA2™ provides both security (you can control who connects to it) and privacy (the transmissions cannot be read by others) for communications as they travel across your network. For maximum security, your network should include only devices with the latest in security technology – WiFi Protected Access® 2 (WPA2).

Tips for securing your network

› Change the network name (SSID) from the default name.

› Change the administrative credentials (username and password) that control the configuration settings of your Access Point/Router/Gateway.

› Enable WPA2-Personal (aka WPA2-PSK) with AES encryption.

HYDRIM Cybersecurity Statement

A network disruption or cybersecurity incident will not prevent this device from performing its primary function of completing a cycle. Additionally, a cybersecurity incident affecting the device cannot result in direct patient harm since the device does not come into contact with a patient. While the unit records, stores and sends (if connected to a network) information about a cycle, no patient data is stored on the unit.

The unit's functionality and design observe a number of additional cybersecurity risk mitigation measures:

› Prevents unauthorized access to safety-critical settings.

› Ensures trusted content by maintaining code, data and execution integrity.

› Recovers capabilities or services that were impaired due to the cybersecurity incident.

› Authentication methods and controls are used for each part of the communicating assets such as web sites, servers, interoperable systems and cloud storage.

16. Cleaning and Maintenance

The HYDRIM is designed to be maintenance free; however, it is recommended that an approved service technician perform a check annually. There are also several routine checks and procedures you should be capable of completing as part of the regular use of the HYDRIM.

These procedures are described below or can be viewed in the instructional videos stored on your unit.

16.1 Accessing Video Instructions

The HYDRIM has several maintenance and set-up videos to help users learn to care for the unit. These instructions can be found in the SETTINGS menu.

1. From the **SETTINGS** � menu, press **GENERAL**

2. Press **INSTRUCTIONS**

3. Select the video instructions you would like to view.
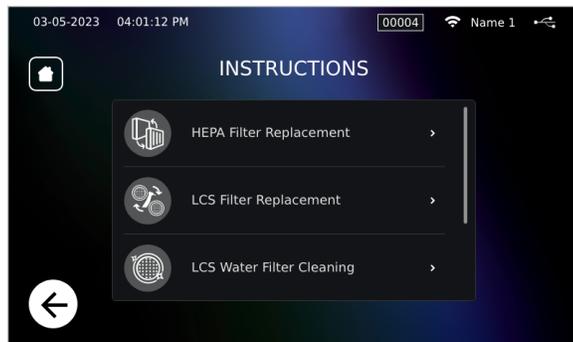
16.2 Changing the Air Filter

When the message ***Replace air filter*** appears, the HEPA filter must be changed. The filter must be replaced every 750 drying cycles. The unit will continue to run if the filter is not replaced, but you will notice less than optimal drying performance.
Spare part#: 01-113277S Filter-Air.

1. Open the kickplate below the front door of the unit.

2. Push the retaining tabs out of the way.

3. Remove the old filter by pulling it from the centre.

4. Install the new air filter – placing the arrow in the correct orientation – and push the retaining tabs back into position.

5. After replacing the filter, go to the **SETTINGS** ☼ menu, press **SYSTEM** and **MAINTENANCE**. Press to reset drying counter.

6. Reset the drying counter to 750.
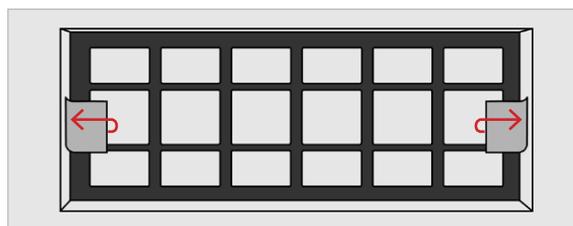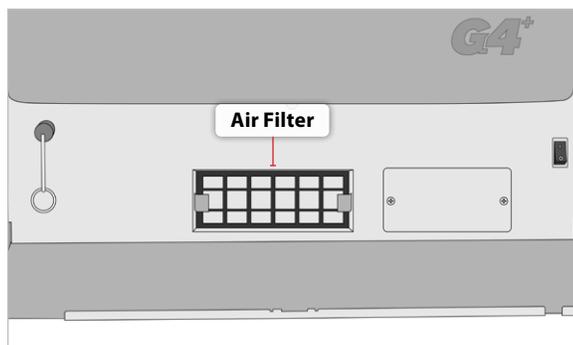
16.3 Chamber Filter Maintenance

Inspect the coarse and fine filters in the bottom of the chamber daily for debris and clean if necessary. To clean, remove the filter (turn the metal nut at the centre front of the filter to release it), rinse under a tap and reassemble. Ensure that the filter is firmly locked into position when replaced.
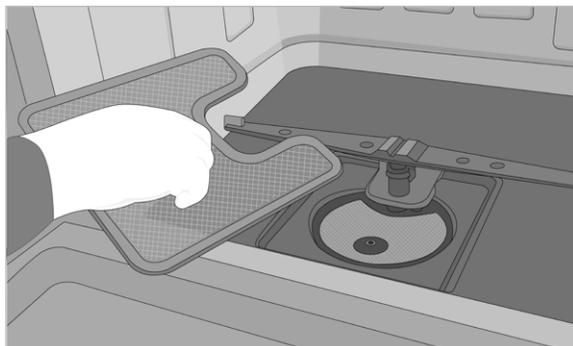
16.4　Wash Arm Maintenance

Wash arms can be removed for cleaning and inspection, as needed.

To remove the upper arm, unscrew the collar.

To remove the lower arm, pull up.

Rinse under a tap, clear obstructions from outlet holes and reassemble.
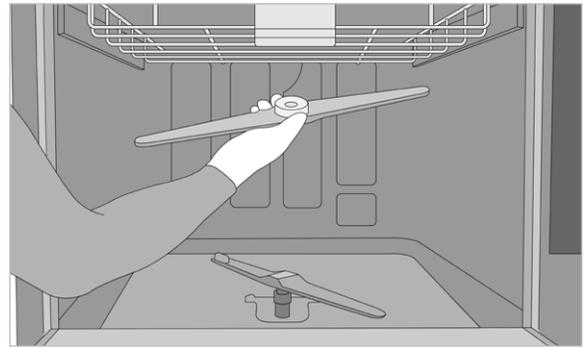
16.5　Cleaning the Unit

The HYDRIM will remind you to run a cleaning cycle every 25 cycles. The reminder frequency can be adjusted by the technician. This cycle is used to periodically remove hardwater deposits from the chamber walls and racks. Failure to clean the chamber can promote corrosion.

1. Pour 750 millilitres of vinegar or citric acid into an empty chamber (with racks) before starting the cycle.

2. From the home screen, press **SETTINGS** ⚙, then **CLEANING**.

3. Press **START**. A cleaning cycle, like a normal wash cycle, will run.
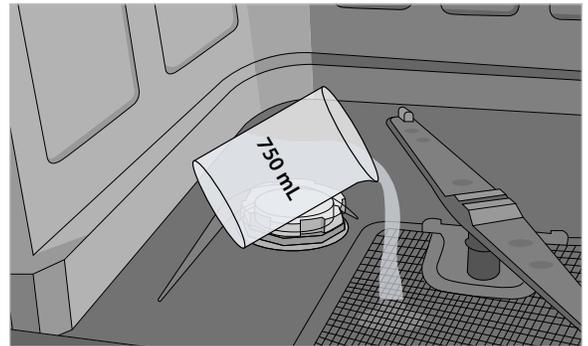
16.6　Preventative Maintenance Message

If the message ***Preventative Maintenance Required. Call for Service*** appears, the annual maintenance is required. The annual maintenance should be done after 365 days have elapsed since the initial installation or since the last service call was performed.

When a maintenance message appears, you have 2 options:

OPTION 1: OK

Press **OK** to clear the message. Call for service. You can continue to use your HYDRIM but the annual service should be done shortly. When you press **OK**, the maintenance notification counter will restart, regardless of whether you have performed the maintenance. When a service technician completes the service, they will reset the maintenance notification counter to zero.

OPTION 2: REMIND LATER

If you press **REMIND LATER**, the message will repeat 24 hours later.
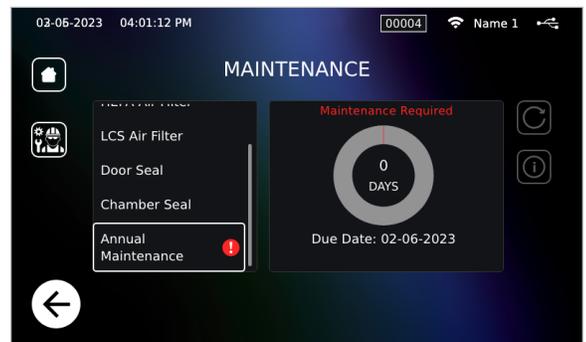
17. Unit Testing and Validation

The following outlines the recommended regular maintenance to be performed by the user and technicians for the HYDRIM washer.

IMPORTANT NOTES:

› This document outlines the minimum requirements to ensure that the equipment performs to specification. In some regions, local/national guidance documents may require additional testing. Please contact your dealer or local medical authorities for details.

› Installation, commissioning, annual servicing MUST be undertaken by approved technicians. Failure to maintain this equipment may invalidate the results of the following testing regime.

The recommended periodic testing protocols are listed in the table below:

When	Who	What Tests
Upon Installation	Approved technician	Commissioning/Installation testing as outlined in the installation document included with the unit. First validation if required by local regulations.
Daily tests and checks	User	Wash arm rotation check. Door seal check. Load carrier check. Check and clean chamber filters. Visual examination (inspection under magnification) of each load for residual soil.
Monthly	User	Door lock check.
Annually	Approved technician	Re-validation if required by local regulations. Annual maintenance as outlined in the service manual.

17.1 Tests to be Performed by the User

Door lock check

This test is to ensure that the door cannot be opened while a cycle is running, or a cycle will not start with the door open. To check that these features are working correctly, attempt to open the door using the handle immediately after a cycle has started. **Caution – DO NOT** attempt this when the wash arms are rotating and/or the water is above ambient temperature. The door should not open. When you attempt to start a cycle with the door open, the cycle should not start. If the unit fails this test, stop using it immediately and call your dealer for technical service.

Door seal check

Visually check the door seal for debris or wear. If the seal is worn or damaged, call your dealer for technical service.

Load carrier check

Visually check load carriers (trolleys) for wear and tear, damage and that the runners move freely over their full range.

Chamber filter check

Remove, visually check and clean as described in section 6.4.

Load check

Visually inspect each load for residual soil. Washers are designed to ensure that the surfaces of instruments are free from debris that may compromise the sterilization process. A visual check of the instruments processed in each load should be undertaken prior to sterilization to ensure that no residual debris is present on the instrument.

If debris is still apparent, the instrument should not be considered clean and should be reprocessed through the HYDRIM again prior to sterilization.

NOTE: Some set-able materials such as cements and composites, if set on the instrument will not be removed in a HYDRIM. If these materials are noticed on the instrument, then abrasive removal may be required.

17.2   Wash Test Indicators

Wash Test Indicators (WTI) are used for routine monitoring of the cleaning process in instrument washers. They provide a consistent, reproducible method to routinely check the performance of your automated washer process. WTI's are specifically designed for HYDRIM units with HIP solution.

Follow local regulatory guidelines for the required frequency for performing wash test verification.

When using a WTI in the HYDRIM 112W, place the indicator in the bottom rack position.
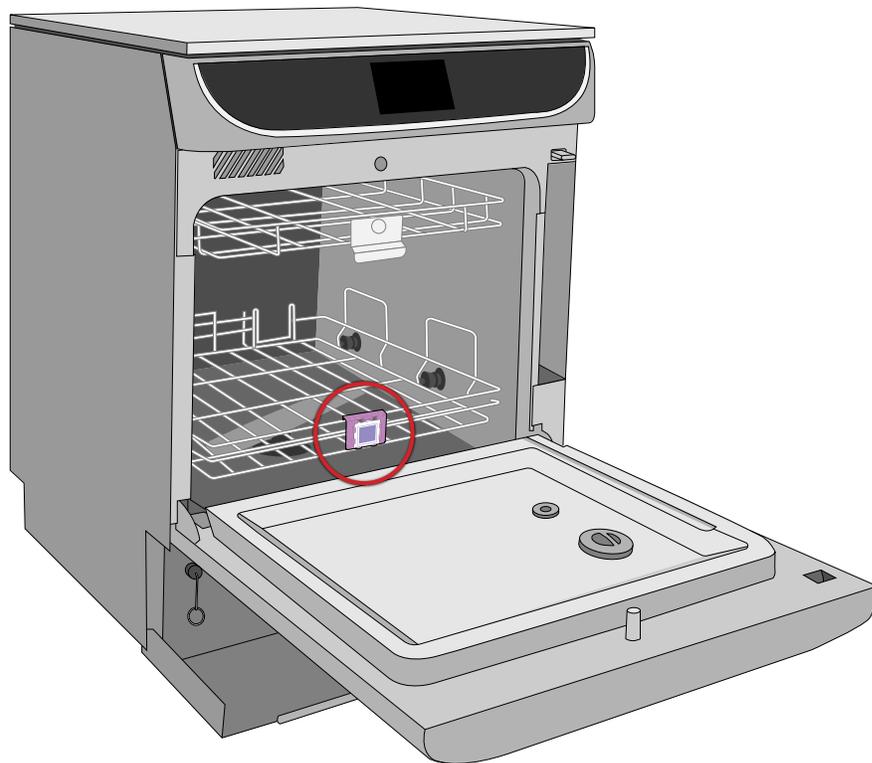
18. Troubleshooting

When the HYDRIM detects a condition that is outside the normal operating range, its sensor will trigger a cycle fault. Press on the Cycle Fault message to read the suggested corrective action before you call for service.

Problem	Possible Cause	What you can check before calling for service
No Power	Power cord or main power issue	Check that the unit is plugged into a properly grounded outlet and that the power cord is firmly seated at the rear of the machine.
		Try another outlet. Power the unit OFF for 10 seconds and then power it ON again.
		Check the condition of the main line circuit breaker or fuse.
Time and date are incorrect	Unit was shipped to a new time zone.	The time and date are set on the date of manufacture but have not been adjusted for a new time zone. See Section 12. Overview of Basic Settings.
Touchscreen is blank/ dark	Power connection failure.	Check power source.
Red Xs next to Network and Internet on the Connectivity screen.	Unit is not connected to Internet.	If it is supposed to be connected to a network and the X is visible, it is because the unit is unable to acquire an IP address.
		To resolve the issue, try some of the following:
		› Check that the router is functioning properly.
		› Check the LAN cable (try a new cable if possible).
		› Make sure your router assigns IP addresses automatically.
		Renew the IP address by following these steps:
		› Press the network icon. Press IP setup. Press RENEW IP.
No cycles are stored in the unit's memory.	Logic board configuration issue.	Check unit serial number to see if it was accurately updated after a logic board service. If the serial number consists of zeros, call your dealer.
		Remove the unit's USB and check it on your computer to see if the cycle records have been stored.
Instruments are not clean	Improper cycle selection, chamber debris	Do not overload cassettes or instrument baskets.
		Do not load too many cassettes into the HYDRIM.
		Use the Heavy Duty cycle for cassettes and hinged instruments.
		Check filters and wash arms for debris.
Door cannot be opened	The cycle is not complete.	Press door lock icon.
	The cycle was aborted and the unit did not finish draining.	Power OFF the unit then power it back ON to reset.
		Use Emergency door unlock – see section 11.8
Cycles are taking too long	Incoming hot water is not hot enough.	Check that the incoming hot water temperature is in the recommended range.
		Check that the hot and cold hoses are not reversed.
[no detergent] message but there is still a lot of chemical in the pouch	Detergent tubing	Check for a kink in chemical tubing.
		Check cap for seal.
		Reinstall chemical solution, see section 8.1

Problem	Possible Cause	What you can check before calling for service
"Preventative Maintenance Required. Call for Service"	It has been 365 days or 1000 cycles since last annual service	Call for an annual service. Press REMIND LATER to have the message repeat in 24 hours. PRESS OK to restart the counter for another 365 days or 500 cycles. See section 16.6.
"Replace Air Filter"	It has been 750 drying cycles since the HEPA filter was changed	If HEPA filter was replaced and message continues to appear, reset drying counter. See section 16.2.
"Air Filter Missing. Install Filter."	Sensor not detecting HEPA filter	Check HEPA filter to ensure it is installed correctly (with arrow in correct position). See section 16.6.
Lost USB key with all cycle data.		Unit stores all cycles for the lifetime of the unit. The USB key serves as a back up. 1. Insert the new USB device. 2. Select the USB icon. 3. Select cycle information. 4. From the cycle information screen, select the USB icon at top right. 5. Select copy and all the unit's cycle history will be copied to the new device.

19. Extended Shutdown, Disconnection and Disposal

19.1 Extended shutdown - Using Vacation Mode

If you must prepare the unit for an extended period where it is not in use for a week or longer, the detergent system should be drained then flushed with water. This will keep any residual detergent in the tubing from drying up and blocking the tubing.

Activating Vacation Mode

To activate Vacation Mode, press **SETTINGS** ⚙, then press **SYSTEM** 🖥, then press **VACATION MODE** 🗂.

The unit's interactive instruction screens will guide you through the process of disconnecting the detergent and filling the detergent reservoir with water.

Deactivating Vacation Mode

When the unit is in Vacation Mode and you press the screen, you will be asked if you are ready to deactivate vacation mode.

If **YES**, then attach the detergent cap to a detergent bag and press YES to deactivate.

If **NO**, press NO and you can access the LCD while the unit remains in Vacation Mode.

19.2 Disconnecting the HYDRIM

When a service technician disconnects the unit, they will generally follow these steps:

1. Use Vacation Mode to drain the sump and add water to the detergent system.

2. Disconnect the unit from the power supply.

3. Close the water shut-off valves.

4. Disconnect the drain connection at the drain side.

5. Disconnect the water supply connections at the supply side.

6. Pull the unit out carefully, along with the water supply and drain hoses behind it.

19.3 Disposing of Packaging and Decommissioning Units

A decommissioned washer should not be disposed of in the regular domestic waste. Doing so is potentially harmful to people and the environment. It has been used in a healthcare setting and represents a minor infection control risk. It also contains several recyclable materials that can be extracted and reused in the manufacture of other products. Contact your municipality to learn about its policies and programs governing the disposal of electronic devices.

20. Spare Parts & Accessories

01-117498S	Top trolley
01-117499S	Bottom trolley
01-117489S	Ten-cassette rack
01-109966S	Basket with lid
01-109967S	Basket hygiene
01-117500	Bottom rack
01-107240	Kit 2000 basket
01-107241	Kit 5000 basket
01-117492	Five-cassette rack
01-117490	Large basket
01-117491	Bottom rack
01-117494	Center support rack
01-117495	Long basket
01-117493	Half center support rack
01-110409S	Hinged instrument rack
01-117496	Vertical instrument rack
01-117497	Basket for small items
01-113547	Basket with hinged lid
01-113546	Hygiene basket
CS-HIPT	HIP cleaning solution (4 x 1.75L)
01-112594S	Water softener salt
01-108305S	Water test kits
WTI-SK	Wash Test Indicator - starter kit
WTI-RK	Wash Test Indicator - refill kit
8OZPLUS	STAT-DRI PLUS 8oz. bottle with cap
32OZPLUS	STAT-DRI PLUS 32oz. refill bottle
01-113277S	HEPA filter

21. Limited Warranty

For a period of two years, the legal manufacturer guarantees that the HYDRIM, when manufactured in new and unused condition, will not fail during normal service due to defects in material and workmanship that are not due to apparent abuse, misuse, or accident. In the event of failure due to such defects during this period of time, the exclusive remedies shall be repair or replacement, at our option and without charge, of any defective part(s), provided we are notified in writing within thirty(30) days of the date of such a failure and further provided that the defective part(s) are returned to us prepaid.

This warranty shall be considered to be validated, if the product is accompanied by the original purchase invoice from the authorized dealer, and such invoice identifies the item by serial number and clearly states the date of purchase. No other validation is acceptable. After one year, all our warranties and other duties with respect to the quality of the product shall be conclusively presumed to have been satisfied, all liability therefore shall terminate, and no action or breach for any such warranty or duty may thereafter be commenced against us.

Any express warranty not provided hereon and any implied warranty or representation as to performance, and any remedy for breach of contract which, but for this provision, might arise by implication, operation of law, custom of trade or course of dealing, including any implied warranty of merchantability or of fitness for particular purpose with respect to all and any products manufactured by us is excluded and disclaimed by us.

To register your product warranty with **SciCan**, go to **www.scican.com**, click on the appropriate country, and then click on the Register Your Warranty tab.

22. Specifications

Machine dimensions and weight	
Height	82 cm – 85 cm / 32.3 in – 33.5 in
Width	60 cm / 23.6 in
Depth	60 cm / 23.6 in
Depth with door open	120 cm / 47.2 in
Required clearance top, side and rear	>1 cm / >0.4 in
Unit Weight (empty)	65 kg / 143 lbs
Unit Weight fully loaded in operation	90 kg/ 198 lbs
Loading	
Maximum load weight upper trolley	5 kg / 11 lbs
Maximum load weight lower trolley	20 kg / 44 lbs
Water	
Hot and cold water connections	G 3/4"
Maximum water use per cycle	(P3) 24 L / 6.3 gal (6L / 1.6 gal per cycle phase)
Inlet water pressure	1-10 bar / 14.5 – 145 psi
Maximum incoming hot water temperature	60°C / 140°F
Maximum water hardness	30.3dH, 31.6 US GPG, 540 PPM
Maximum water conductivity	844 µS/cm PH range >6.8 and < 8.5
Water softener salt capacity	0.5 kg / 1.1 lb
Draining	
Drain	3/4"
Maximum water flow to drain	47L / 12.4 gal per min
Maximum water discharge temperature to drain	95°C / 203°F
Drying	
Drying system	Heater – 1 kW
Electrical (for 60 Hz models) (See serial number plate for requirements specific to output)	
Voltage	208V-240V ~ ±10%, single-phase
Frequency	60 Hz
Current	12A
Circuit breaker	15 A
Rated load	2.5 kW–2.9 kW
Operating Environment and Detergent	
Protection class	Class I
Equipment pollution degree	Pollution degree 2
Equipment installation category	Installation category II
Maximum relative humidity	80% for temp up to 31°C/88°F 50% for temp up to 40°C/104°F
Operating temperature range	5°C - 40°C 41°-104°F
Max. altitude	2000 m 6,562 feet
Mains supply	+ / -10% of nominal
Detergent requirements	Single solution – HIP chemical only
Detergent consumption per cycle	72 ml (wash 1.2% @ 50°C)
Running noise	65 dB