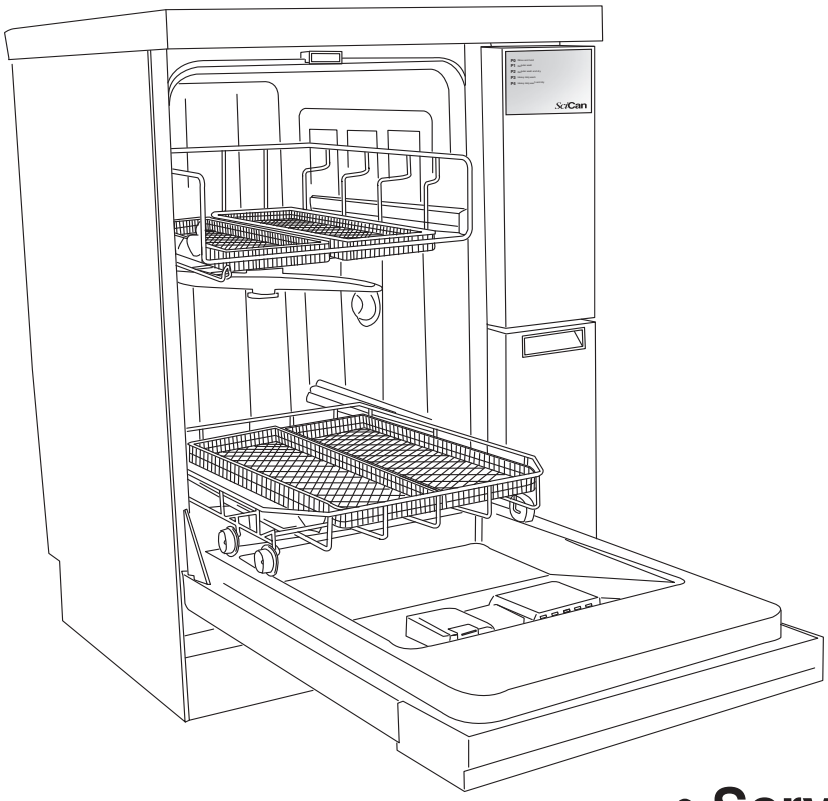
HYDR*IM*® L110wd & HYDR*IM*® L110w



- **Service Guide**
- **Manuel maintenance**
- **Wartungsanleitung**
- **Manuale di manutenzione**

SciCan

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HYDR*IM* L110wd / HYDR*IM* L110w Service Guide 96-108019 Rev 3.0

Contents

Hydrim L110wd

Distributed by:
SciCan, Division of Lux and Zwingenberger
Toronto, Ontario, Canada
Phone: (416) 445-1600
Fax : (416) 446-2727

Manufactured by / EU Representative
BHT Hygienetechnik GmbH
Messerschmittstr. 11,
D-86368 Gersthofen
GERMANY
Phone: 49-0821-278-930
Fax: 49-0821-78-40-99
CE 0123

SciCan Medtech

Alpenstrasse 16, 2300 Zug, Switzerland
Phone: (41-41) 727-70-27
Fax: (41-41) 727-70-29

Hydrim L110w

Manufactured by:
SciCan
1440 Don Mills Road,Toronto,
ON M3B 3P9 CANADA
Phone: (416) 445-1600
Fax: (416) 445-2727
Toll free: 1-800-667-7733

SciCan Inc.

500 Business Center Drive,Pittsburgh, PA 15205 USA
Phone: (412) 494-0181
Fax: (412) 494-4794
Toll free: 1-800-572-1211

Email (Service and Repair): techservice.ca@scican.com
Email: customer_servicecanada@scican.com

For all service and repair inquiries:
In Canada: 1-800-870-7777
In The United States: 1-800-572-1211

Sommaire

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Inhaltsverzeichnis

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Indice

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Alpenstrasse 16, 2300 Zug, Switzerland
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1. Introduction

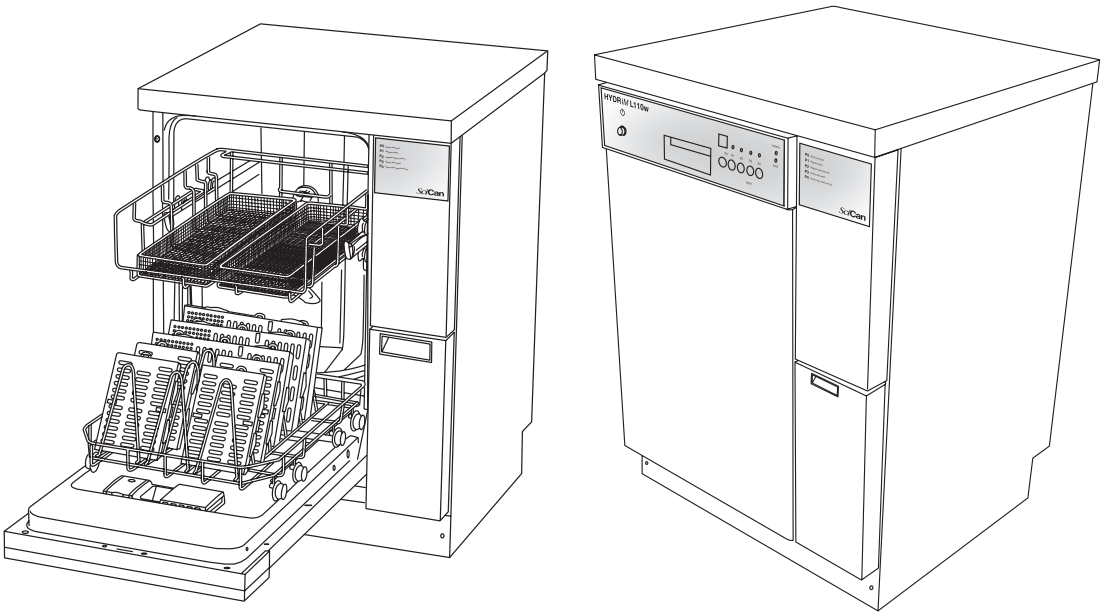


Figure 1

1.1 Overview

This guide provides instructions for the servicing and repair of the HYDRIM® L110wd washer disinfector and the HYDRIM® L110w instrument washer. Every attempt has been made to provide accurate, detailed instructions.

All servicing of the Hydrim L110wd and Hydrim L110w should be done by certified personnel only. All local, provincial, state, and national regulations regarding the servicing of the class of device and safety requirements must be observed.

Do not permit any person other than certified personnel to supply parts for, service, or maintain a Hydrim L110wd or Hydrim L110w. SciCan shall not be liable for incidental, special, or consequential damages caused by any maintenance or services performed on the Hydrim L110wd or Hydrim L110w by a third party, including lost profits, any commercial loss, economic loss, or loss arising from personal injury.

Pay close attention to the symbols that appear in the margins.
The following symbols indicate:

a potential hazard to the operator.

a situation or circumstance which may lead to a mechanical failure.

important information.

1. Introduction

The Hydrim L110wd and Hydrim L110w are designed to complement the STATIM family of autoclaves by quickly and hygienically preparing soiled instruments for sterilization.

The Hydrim L110wd and Hydrim L110w work like most domestic dishwashers. The operator loads the instruments, closes the door, and selects the wash cycle. Both the Hydrim L110wd and Hydrim L110w automatically dispense cleaning solution via a dosing mechanism. The operator is responsible for adding water softening salt, adding rinse aid (if necessary), cleaning the filters, and replacing the cleaning solution container when necessary.

Hydrim L110wd washer disinfector:

The program duration and consumption details are shown in the chart below:

Program	Wash Temperature	Rinse / Disinfection Temperature	Total Time*	Water Usage
P1 Pre-wash	30˚C / 5 min.	–	8 minutes	4 L
P2 Wash with 65˚C rinse	50˚C / 5 min.	65˚C / 3 min	38 minutes	19 L
P3 Wash with 80˚C rinse	50˚C / 5 min.	80˚C / 10 min.	64 minutes	19 L
P4 Wash with 93˚C disinfection	50˚C / 5 min.	93˚C / 10 min	69 minutes	19 L
Air Drying	–	–	10 minutes	–

* Actual cycle time will vary depending on incoming water temperature and pressure

NOTE: For ophthalmology use, an additional rinse is required which lengthens P2, P3, and P4 by 11 minutes, and increases water consumption by 8 litres. See section 2.8 for instructions how to program the additional rinse.

1. Introduction

The Hydrim L110w instrument washer:

The program duration and consumption details are shown in the chart below:

Program	Wash Temperature	Time*	Water Usage
P0 - Rinse and Hold	30˚C / 86˚F	8 minutes	4 L / 1 gallon
P1 - Regular wash	50˚C / 122˚F	20 minutes	16L / 4 gallons
P2 - Regular wash with dry	50˚C / 122˚F	30 minutes	16L / 4 gallons
P3 - Heavy duty wash	50˚C / 122˚F	30 minutes	19L / 5 gallons
P4 - Heavy duty wash with dry	50˚C / 122˚F	40 minutes	19L / 5 gallons

* Actual cycle time will vary depending on incoming water temperature and pressure

1.2 Specifications

Hydrim L110wd washer disinfector:

Dimensions:	
Height (free-standing)	850 mm
Height (built-in)	810 mm
Width	600 mm
Depth	600 mm
Depth with Door Open	1143 mm
Weight	85 kg
Running Noise	58 dB wash 78 dB dry
Cold Water Connection	¾" - 14 NPSM
Pressure	0.3 - 10 bar (gauge)
Waste Water connection	direct connection to drain according to local code requirements
Wash Temperature	50 - 60˚C
Cold Rinse	< 30˚C
Thermal Disinfection	93˚C
Electrical Consumption:	
Europe	220 - 240 V 50 Hz 10-16 A
North America	220 - 240 V 60 Hz 15A
Rated Load	2.5 kW
Other:	
Equipment Pollution Degree	2
Equipment Installation Category	II
Maximum relative humidity	20 - 80 %
Maximum altitude	1600 m
Maximum ambient temperature	30˚C
IP	XO

1.2 Specifications

Hydrim L110w instrument washer:

Dimensions:	
Height (free-standing)	850 mm / 33.5"
Height (built-in)	810 mm / 32"
Width	600 mm / 23.75"
Depth	600 mm / 23.75"
Depth with Door Open	1143 mm / 45"
Weight	85 kg / 187 lbs
Running Noise	58 dB wash 78 dB dry
Hot Water Connection	60˚C max / 158˚F
Rinse aid dispenser	120 ml / 4.3 U.S. fl. oz. capacity
Water softener	1.0 kg / 2.2 lbs salt capacity
Filling system	4.5 L / 135 U.S. fl. oz. capacity
Wash Temperature	50˚C / 122˚F
Rinse and hold	30˚C / 86˚F
Electrical Consumption:	
North America	208 - 240 V 60 Hz 15 A
Rated Load	2.5 kW
Other:	
Equipment Pollution Degree	2
Equipment Installation Category	II
Maximum relative humidity	80 % for temp. up to 31˚C / 88˚F 50 % for temp. up to 40˚C / 104˚F
Mains supply	+ / - 10 % of nominal
Operating mode	Free-standing or Built in

1.3 Safety Information

Safe operation

The following applies to both operators and service technicians:

- If you open the door prior to completion of a cycle, hot steam may be released.
- Exercise caution and seek assistance when lifting or carrying the unit.
- Cleaning solutions may irritate. Avoid contact with eyes and mouth.
- Never lean on the open door. The unit may tip forward causing injury.

- Always turn the unit **OFF** before adding softener salt or solutions. Before performing routine maintenance or servicing the unit, turn the unit **OFF**, and unplug the power cord from the power source.
- The operator should never remove the cover of the unit, or insert objects through holes or openings in the cabinetry. Doing so may damage the unit and/or create a hazard for the operator.

Safe servicing

- The Hydrim L110wd and Hydrim L110w units should only be installed and serviced by a qualified contractor, as these are Installation Category II devices. SciCan will not be liable for incidental, special, or consequential damages including lost profits, any commercial loss, economic loss, or loss arising from personal injury caused by any maintenance or services performed on the Hydrim L110wd or Hydrim L110w by a third party, nor will it be liable for damage arising from the use of equipment or parts manufactured by a third party.
- All local, regional, state and national regulations regarding the servicing of this class of device and safety requirements must be observed.

Exercise caution when the cover is removed:

- Hazardous voltages are accessible. Disconnect the power cord before removing the cover.
- Sharp metal edges are exposed. Be careful, and wear long sleeves and gloves.

Power main

A dielectric strength test (hi-pot) must be performed on the unit if parts associated with the power main are serviced or replaced.

Ground

A protective bonding impedance test (ground continuity) must be performed on the unit if components of the protective earthing system are changed or if connections are broken and remade.

Reporting

It is vital for SciCan to learn of any problem in the field. This information will help SciCan solve the problem quickly and improve product reliability in new units. Section 9 of this service manual contains a service report form that should be completed and returned to SciCan's Toronto office.

Biological waste

Waste water in the unit may contain biological contaminants. Use a mechanical means to siphon the contents. Wear disposable rubber gloves. Dispose of absorbent material according to biological waste disposal regulations.

1.4 Hardware Specifications

This unit contains the following types of hardware:

- Phillips pan head self-tapping metal screws
- Phillips flat head stainless steel machine screws
- Torx pan head machine screws
- Torx pan head plastite screws

As you remove a screw or nut, be sure to remember where it goes. When you reinsert a plastite screw, tighten the screw until it is snug.

1.5 Shipping Instructions

The unit should be serviced on site. If it is necessary to send the unit back to SciCan, follow these instructions. Before shipping the unit, run the Rinse and Hold cycle to remove most of the water from the system. If there is standing water in the chamber, siphon or ladle as much water as possible and use an absorbent cloth to remove the rest.

Disconnect and remove the cleaning solution container and then drain the dosing reservoir. Screw in completely the leveling legs found underneath the unit. Specify upright, heated, and insured shipping.

1.6 Contact Information

For further information or questions about the Hydrim L110wd and Hydrim L110w, contact your authorized dealer or:

SciCan
1440 Don Mills Road
Toronto ON M3B 3P9
CANADA
Phone: (416) 445-1600
Fax: (416) 445-2727
Toll free: 1-800-667-7733

SciCan Inc.
500 Business Center Drive
Pittsburgh PA 15205
Phone: (412) 494-0181
Fax: (412) 494-4794
Toll Free: 1-800-572-1211

SciCan Medtech
Alpenstrasse 16, 6300 Zug
SWITZERLAND

EU Representative:
BHT Hygienetechnik GmbH
Messerschmittstr. 11
D-86368 Gersthofen
GERMANY

For all Service and Repair inquiries:
Canada: 1-800-870-7777
United States: 1-800-572-1211
International: (416) 446-4500
Email: techservice.ca@scican.com

www.scican.com

2. Installation

2.1 Suggested Installation Configurations

Both the Hydrim L110wd and Hydrim L110w units should only be installed and serviced by a SciCan qualified contractor as these are Installation Category II devices. The contractor should be experienced in installing equipment that requires electrical hook-up as well as plumbing.

These machines must be installed correctly for the units to function as described. All electrical work must be carried out by a qualified electrician and in compliance with all local and national electrical codes.

Before making any connections, check that the voltage shown on the serial number label corresponds to your power supply. Both models require only a single-phase power supply and are fitted with power supply cords 1.8 m / 6 ft long with a cross section of AWG 16 - 3. The cord should be connected to the main power supply according to the information below.

Electrical Connection		
	North America	**Europe**
Voltage:	208 - 240 V	220 - 240 V
Frequency:	60 Hz	50 Hz
Rated load:	2.5 kW	2.5 kW
Circuit breaker:	15 A per phase	10-16 A per phase

This appliance must be correctly grounded! The manufacturer cannot be held responsible for damage or injury caused by incorrect or missing grounding.

2.2 Water Connections

The unit must be connected to the water supply in accordance with local and national plumbing codes. SciCan recommends a hard plumbing installation within 1.5 m / 5 ft. of the unit. If additional distance is necessary, commercial grade plumbing hose, similar to washing machine installation, must be used to minimize possible leaks.

Connect the inlet hose to a water tap using the enclosed parts and in accordance with the installation instructions.

Water Connection	
Water Pressure:	• 7 - 145 psi / 0.5 - 10 bar
Water Temperature:	• Cold Water < 86˚F / 30˚C • Hot Water up to 140˚F / 60˚C

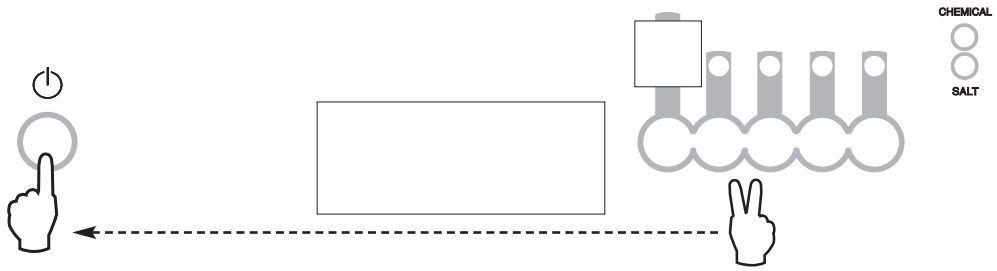
2.3 Water Softener

The Hydrim has an integrated water softening system and is shipped with the softening salt setting at 0. If you are in an area where the water hardness is higher than normal, the use of water softening salts may improve the cleaning results.

To use the water softening system, you will first need to determine the hardness of your local tap water. Please use the enclosed water test strips or contact your local water utility. Once you are aware of the hardness, you can identify the setting from the following table:

ppm	qpq	°dH	°fH	°Clarke	mmol / l	Hydrim setting
0 - 110	0 - 6.5	0 - 6	0 - 11	0 - 8	0 - 1.1	0
120 - 140	7 - 8	7 - 8	12 - 15	9 - 10	1.2 - 1.4	1
150 - 180	8.5 - 10.5	9 - 10	16 - 17	11 - 12	1.5 - 1.8	2
190 - 210	11 - 12	11 - 12	18 - 21	13 - 15	1.9 - 2.1	3
220 - 290	12.5 - 17	13 - 16	22 - 29	16 - 20	2.2 - 2.9	4
300 - 370	17.5 - 21.5	17 - 21	30 - 37	21 - 26	3.0 - 3.7	5
380 - 540	22 - 31.5	22 - 30	38 - 54	27 - 38	3.8 - 5.4	6
550 - 890	32 - 52	31 - 50	55 - 89	39 - 62	5.5 - 8.9	7

To change the water softener setting, follow these steps:

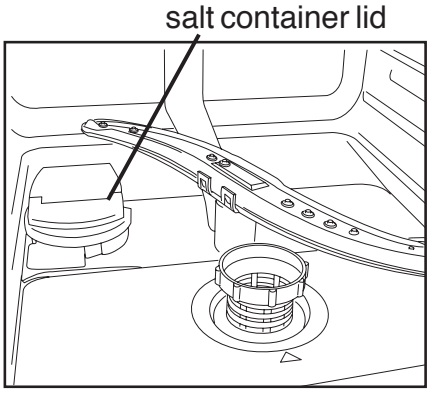


1. Press and hold the second and third buttons simultaneously.
2. Turn the power button **ON**, before releasing the second and third buttons. The display will show the actual water softener setting value.
3. Adjust by pressing the first button for down and the second button for up. Default value is 0.
4. Set the power button to **OFF**. The new setting is stored in the unit memory.

In areas with hardness greater than 890 ppm, additional water treatment may be required. Contact a local water treatment company to advise on how to install an external water softening system.

NOTE: Do not pour cleaning solution into the container for salt. This will destroy the water softener.

If you have set the water softener to any setting above 0, the SALT indicator flashes when you need to refill the salt container.



To add water softening salts, follow these steps:

1. Unscrew the salt container lid.
2. If empty pour approximately 1 litre (1 quart) of water into the salt container.
3. Fill the salt container to the top (maximum of 1kg / 2.2 lbs.)
4. Close the salt container lid.

After the salt has been added to the unit, the softening salt indicator will initially remain lit. The indicator will turn off when the salt solution has become sufficiently concentrated.

2.4 Drainage

The unit is supplied with a 1.5 m / 5 ft. flexible drain hose with an inner diameter of 2 cm / ¾". The hose should not be shortened or attached to any fittings that would cause a reduction in water flow. The drain system is equipped with a non-return valve that prevents dirty water from flowing back into the unit.

The drain hose should not be further than 1.5 m / 5 ft. from a hard plumbing drain. If this is not possible, then commercial grade plumbing hose must be used to minimize possible leaks.

The hose can be attached to an existing drain line with a 3.5 cm / 1½" or larger stand pipe / P-trap combination. Alternatively, the hose can be connected directly to the existing drain lines, provided any fittings or adapters used do not reduce the water flow. The drain hose should not exceed 3.3 m / 13 ft. in length, or be attached to the main drain at a point higher than 35 cm / 14" above the floor.

2.5 Printer

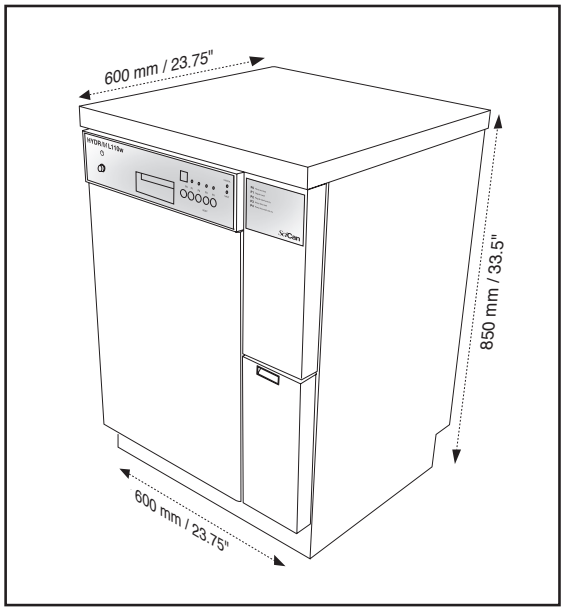
Printer model number STAR SP200-2 is optional. Note that the printer should be powered on prior to powering on the Hydrim. Please refer to the printer manual for instructions for use.

2.6 Setup and Installation Tips

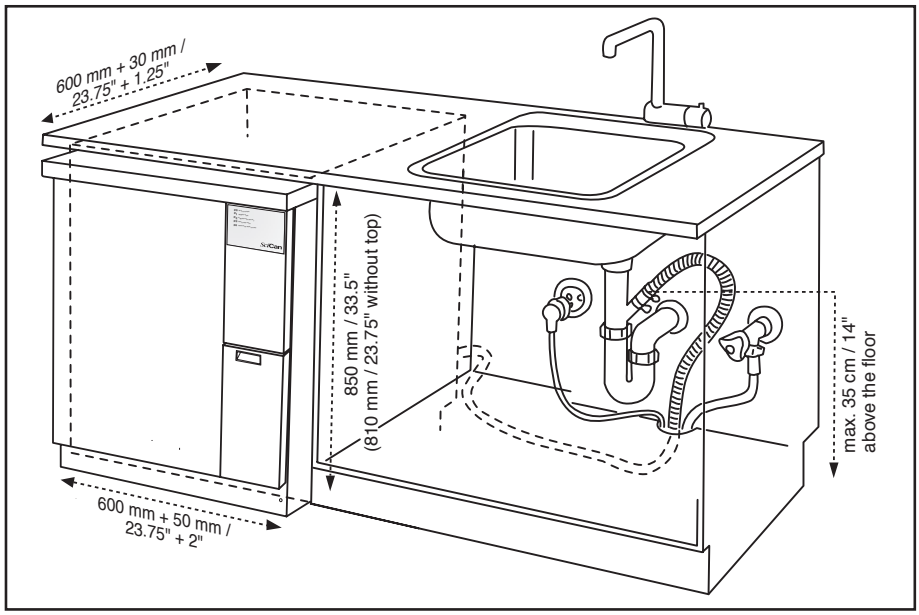
1	The Hydrim L110wd instrument washer-disinfector functions properly to a maximum altitude of 1600 m (5249 ft) above sea level. The Hydrim L110w does not have altitude restrictions.
2	Obtain the hardness of water from the local water utility or by checking it with the enclosed water test strips. You need this information to adjust the water softener dial in the unit according to the operator's manual, maintenance section.
3	The installation site needs to be inspected and prepared in advance. An electrician and / or a plumber may be required for this. a) A level, water resistant floor or undercounter location, preferably close to the sink for easy access to the hot and cold water and the drain, is recommended for installation site. b) Holes may need to be drilled into the cabinetry to route the hot and cold water hoses, drain tube and power cord to the supplies. c) The water hoses provided with the unit are 2 m / 6.5 ft long with ¾" NPT female fittings (Hydrim L110WD) or ¾" garden hose female fittings (Hydrim L110W). The hot and cold water lines must have taps with corresponding male fittings. A water pressure of 7 - 145 psi / 0.5 - 10 bar (gauge) is required. Make sure that the hot and cold water hoses are connected to their respective inlet connectors (not reversed) at the back of the unit. Note: The Hydrim L110wd has only a cold water inlet. d) The drain tube provided with the unit is 1.5 m / 5 ft long with an inner diameter of 2 cm / ¾". It should be connected to a drain point no more than 35 cm / 14" above the floor. e) If the unit cannot be installed close to the sink, the water hoses and the drain may need to be extended. Any additional tube, connector and fitting should be procured prior to installation. Please note that the drain tube should not exceed 3.3 m / 13 ft. Make sure that the extension hoses for cold and hot water can withstand the water line pressure. f) The Hydrim is constructed with air gap / anti-siphoning device on cold and hot water inlet hoses as well as the drain hose. No additional air gap/anti-siphoning device is necessary. g) A power outlet of 208 - 240 V, 60 Hz, 15 A single phase for North America and 220 - 240 V, 50 Hz, 10-16 A single phase for Europe with proper grounding is required for the unit. A power cord of the unit is 1.8 m / 6 ft long.
4	The Hydrim is very heavy. Seek assistance if moving it.
5	When connecting the water hoses, the connector with the elbow connects to the back of the unit. The washer with the screen goes into the connector in the other end of the hose.
6	Make sure that the voltage and frequency of the power outlet are the same as indicated on the label of the unit.
7	Make sure that Hydrim cleaning solution is used with Hydrim L110w in North America. The Hydrim L110wd uses Neodisher cleaner and neutraliser. For both models, see operator's manual for more information on water softening and rinse aid.
8	Once installed, turn the water taps to the open position, ensure the unit is plugged in to the power supply, and run a program. Check the water and drain connections at both ends for leaks.

2.7 Optional Installation Configurations

Option 1. Free Standing



Option 2. Under Counter



2.8 Controller Software Functions

NOTE: When making modifications to the factory settings there can be variations in wash and disinfection results. The default settings are included in the information listed below wherever applicable.

If in doubt about any of the settings, please contact the SciCan Technical Service department.

By pressing various combinations of buttons, it is possible to enter special cycles. To use these cycles, hold the two buttons indicated and power the machine **ON**.

1. Buttons 1 and 2 - "verify mode". This mode is used in conjunction with the verification fixture to test the controller.
2. Buttons 2 and 3 - "regeneration level set". The display shows "L" on the first digit and the actual value of the regeneration level ("regeneration level"). Adjustment from 0 to 7 can be made with button 1 (down) and button 2 (up).
3. Buttons 1 and 3 - "reset drying cycle counter". The display shows "c" on the first digit and the actual drying cycles counter. Pressing button 4 will reset the counter to "0". Reset after 600 cycle filter check.
4. Buttons 3 and 4 - "device test cycle". The unit starts filling the chamber then dosing pumps (M4 for 20sec. and after that M5 for 20sec.) and rinse aid valve. During this time whenever button 4 is pressed regeneration valve and salt indicator LED will be 'ON' for 10 seconds. See Electrical schematic (4.2) for M4 and M5.
5. Buttons 1 and 4 - "unit set". The display shows "tI", by pressing button 4 the user can select between setting the wash time or setting the wash temperature:
   a) "set wash time". The display shows "tI" followed by the actual value of the wash time. Adjustment from 5 to 99 minutes can be made with button 1 (down) and button 2 (up).
      *Factory preset time to 5 minutes.
   b) "set wash temperature". The display shows "tE" followed by the actual value of the wash temperature. Adjustment from 15 to 99˚C can be made with button 1 (down) and button 2 (up).
      *Factory preset temperature to 50˚C
   c) "set drying time." The display shows "dt" followed by the actual value of the drying time. Adjustment from 10-20 minutes can be made with PO (down) and P1 (up).

   Exit this mode by powering off the unit after making all necessary changes.
6. Buttons 1 and 5 – "set number of rinses". The display shows "nr" followed by the actual number of rinses. Adjustment from 1 to 99 can be made with button 1 (down) and button 2 (up).
   *Factory preset to 0 for Hydrim L110wd-D02 and L110w-M01 and to 2 for L110wd-M02

7. Buttons 2 and 4 – "set dosing time". The display shows "ch", by pressing button 4 the user can select between setting the detergent(chemical) dosing time or setting neutralizer dosing time:

   a) "set chemical dosing time". The display shows "ch" followed by the actual value of the dosing time. Adjustment from 1 to 99 seconds can be made with button 1 (down) and button 2 (up).
   *Factory preset time is 21 seconds for L110w and 5 seconds for L110wd

   b) "set neutralizer dosing time" (Hydrim L110wd only). The display shows "nE" followed by the actual value of the neutralizer dosing time. Adjustment from 1 to 99 seconds can be made with button 1 (down) and button 2 (up).
   * Factory preset time is 3 seconds.

Exit this mode by powering off the unit after making all necessary changes.

8. Buttons 2 and 5 – "printer set-up". The display shows "Ln", by pressing button 4 the user can select between the following printer settings:

   a) "set language". The display shows "Ln" followed by the actual value of the language. Adjustment from 0 to 2 can be made with button 1 (down) and button 2 (up). 0 stands for English, 1 for German, 2 for French.

   b) "set baud rate". The display shows "br" followed by the actual value of the baud rate. Adjustment can be made with button 1 (down) and button 2 (up) as follows:

   12 – 1200 bps 48 – 4800 bps

   24 – 2400 bps 96 – 9600 bps

   c) "set unit number". The display shows "un" followed by the actual value of the unit number. Adjustment from 1 to 99 can be made with button 1 (down) and button 2 (up). This number will identify the unit in a set up with more than one Hydrim L110 unit.

Exit this mode by powering off the unit after making all necessary changes.

9. Buttons 4 and 5 - "software revision". The display shows "r" in the first digit followed by the first digit of the revision number and then the last two digits. (For example, if the revision is 1.02 then will display r1 followed by 02).

10. Pressing a combination of button 3 and button 5 together is used if an error occurs during a cycle as an error reset. The first digit of the display shows "E" while the second digit shows the error number. The user will have to reset the unit in order to run another cycle.

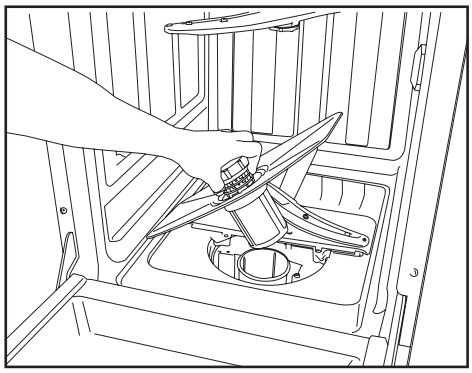
11. For Hydrim L110wd a combination of buttons 3 and button 5 pressed together is also used after a power down occurrence, as a reset. The unit will indicate error 7 "E7" and the previous selected program LED will be flashing after powering the unit up, as an indication of cycle interrupted. The user will have to reset the unit in order to run another cycle.

3. Routine Maintenance

These steps should be performed prior to inspecting the unit.

3.1 Filters

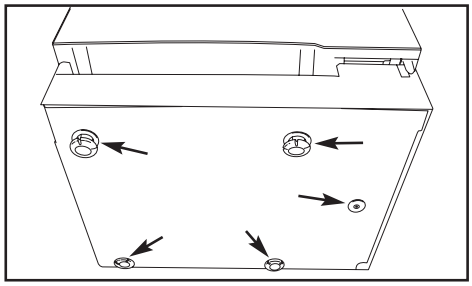
Inspect the coarse and fine filters as follows:



1. Open the unit's door and remove the wash trolleys.
2. Grasp the handle in the center of the coarse filter and turn it 90˚ counter-clockwise. (To reinsert the coarse filter, turn the handle clockwise.)
3. Remove the coarse filter.
4. Remove the fine filter.
5. Clean both filters by rinsing them with water.
6. Return both filters to the unit.

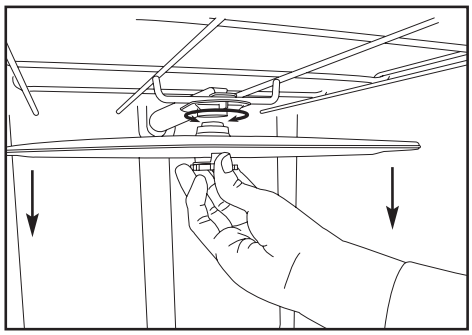
3.2 Leveling Unit

To keep the unit from moving while in use, it will need to be correctly leveled. To level the unit, adjust the legs underneath the unit.

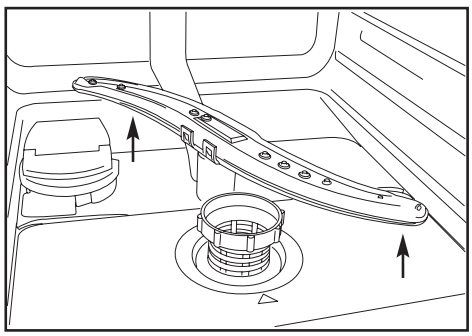


3.3 Wash Arms

Inspect the upper and lower wash arms as follows:



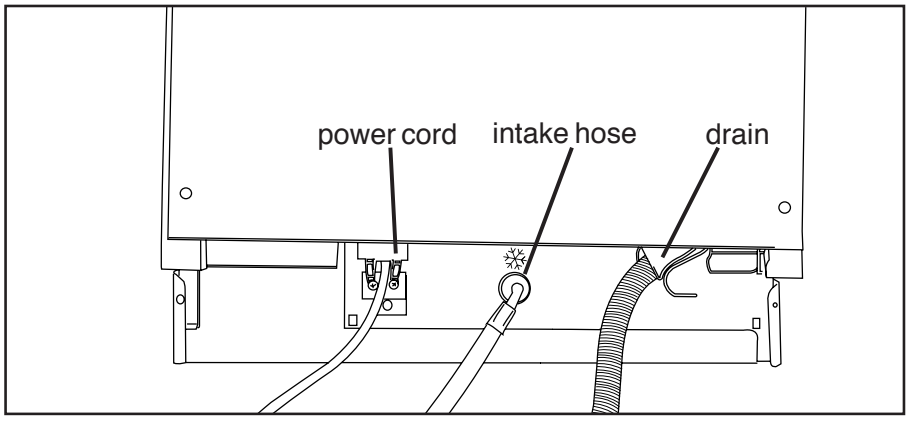
1. Open the door.
2. Turn the upper washer arm collar 90˚ and pull down.
3. Remove the upper wash arm.
4. Using two hands, grasp both ends of the lower wash arm on the underside.
5. Pull the lower wash arm upwards.
6. Inspect both sides of the wash arms for debris in the nozzles. Remove any debris, if discovered.
7. Rinse both wash arms with water.
8. Reassemble the wash arms.



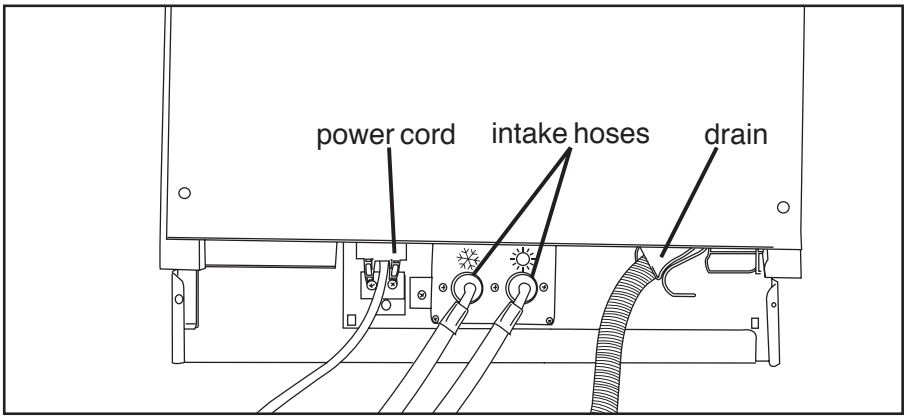
3.4 Hoses

1. Disconnect the cold water inlet hose, hot water inlet hose, and drain hose from the back of the unit.
2. Make sure that the hoses are clean, free of debris, and not kinked.
3. Make sure that the inlet valves are free of debris.
4. Return the hoses to the unit or replace them if there is a problem.

Hydrim L110wd

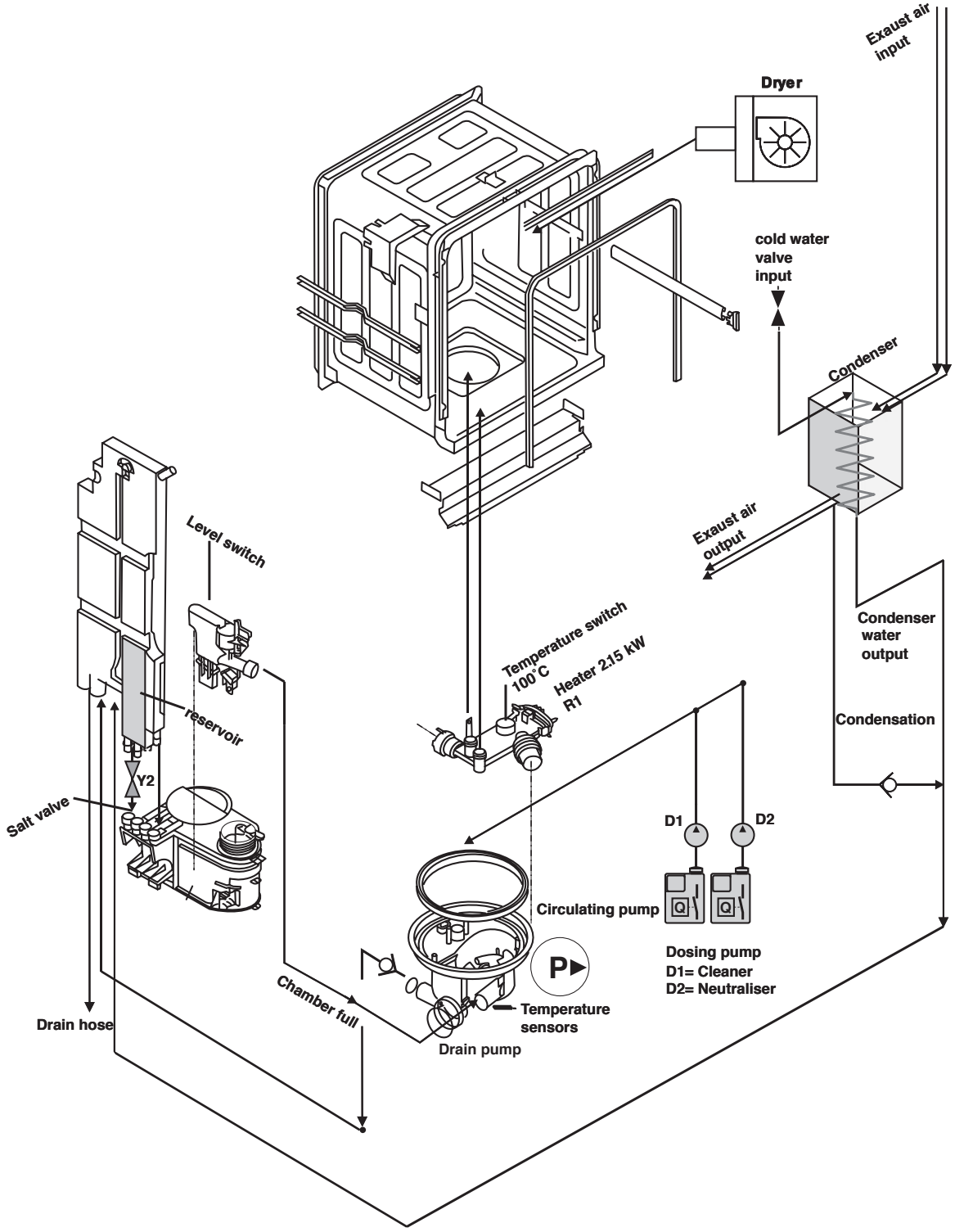


Hydrim L110w



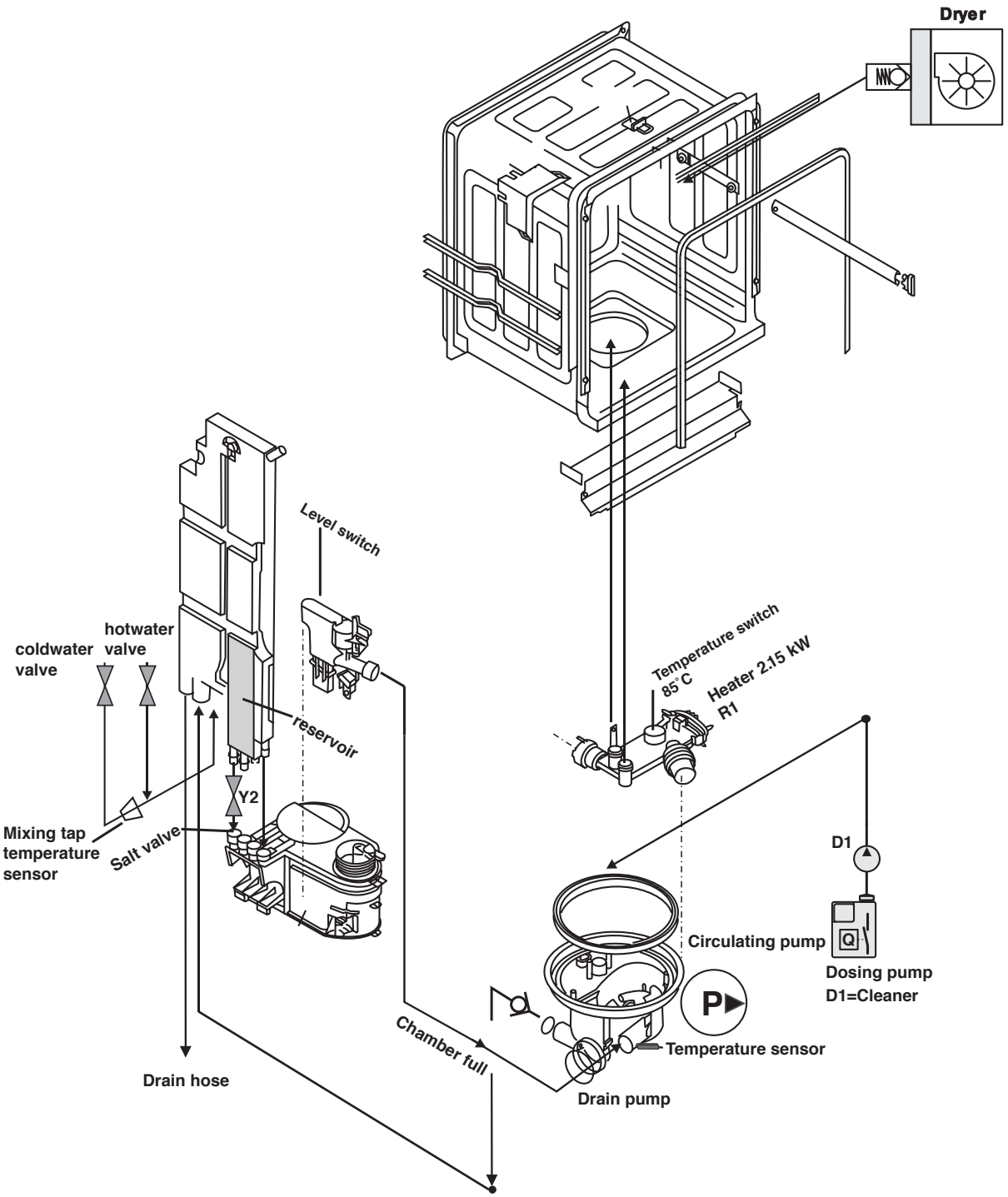
4. Schematics

4.1 Hydraulic Schematic – Hydrim L110wd



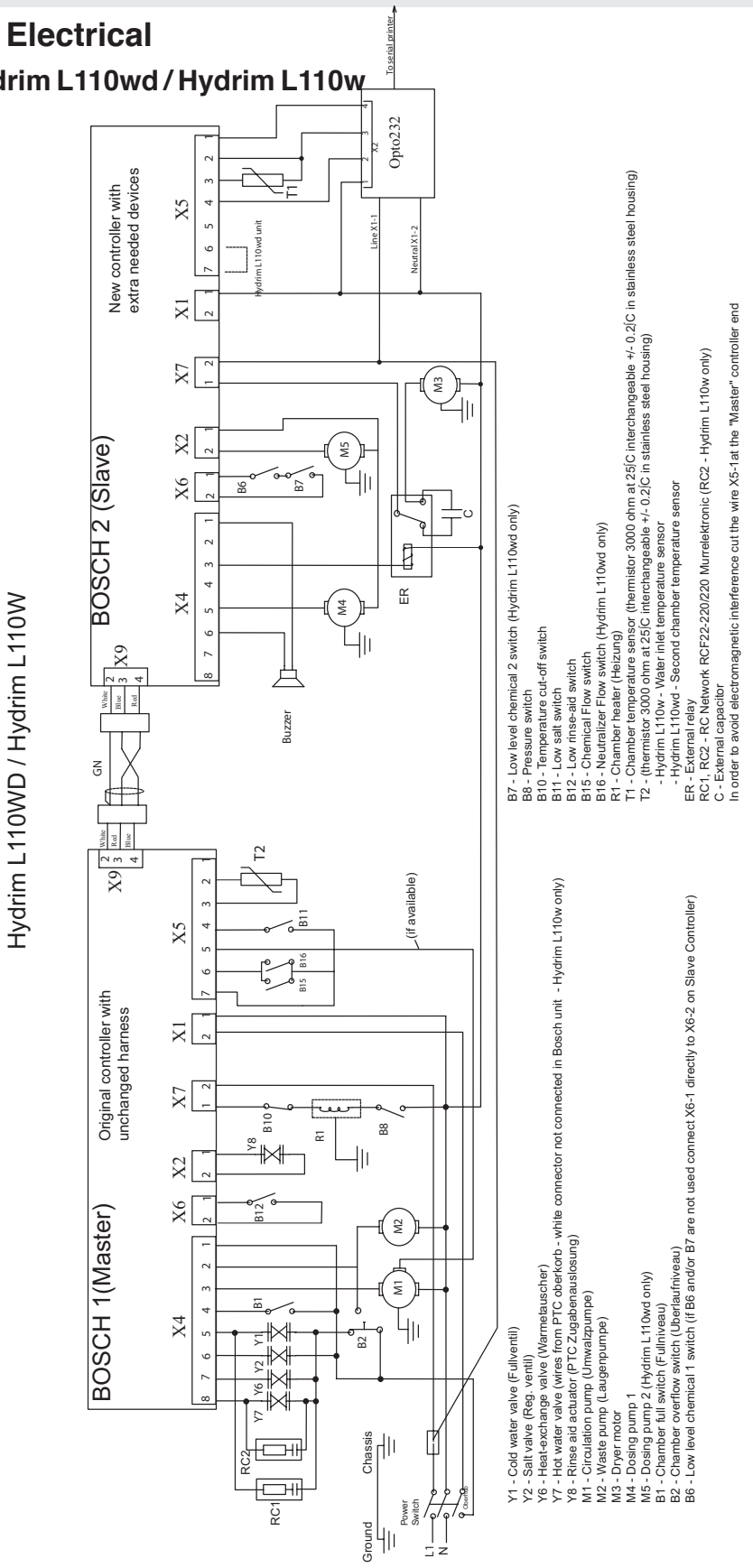
4. Schematics

4.1 Hydraulic Schematic – Hydrim L110w



4.2 Electrical

Hydrim L110wd / Hydrim L110w



5. Troubleshooting

5.1 Primary Assessment

1. Check the water connections both on the back of the unit and from the water source.
2. Check the power connection from both the unit and from the source.
3. Check the drainage.
4. Check if there are any leaks coming from the unit or if the water pressure has dropped significantly.

5.2 Power on Problems

1. Check the circuit breaker.
2. Check the plug.
3. Check the fuse values.
4. Check if there are sufficient fuses in the fuse box.

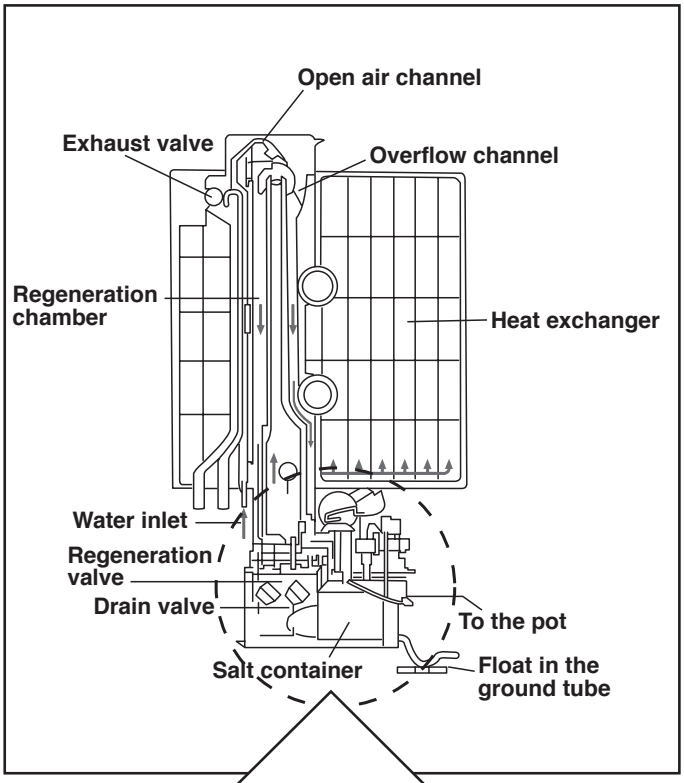
5.3 Controller Problems

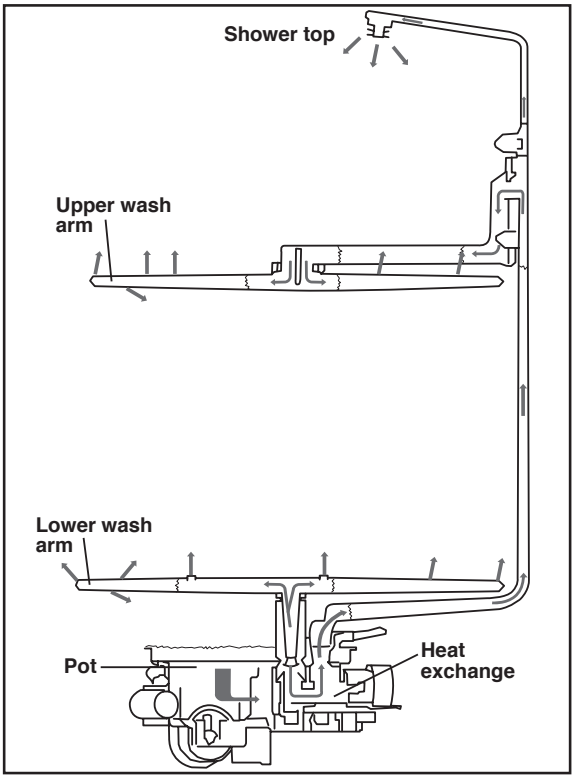
1. Check if the unit is turned **ON** and the door is properly closed.
2. Check the primary wiring.

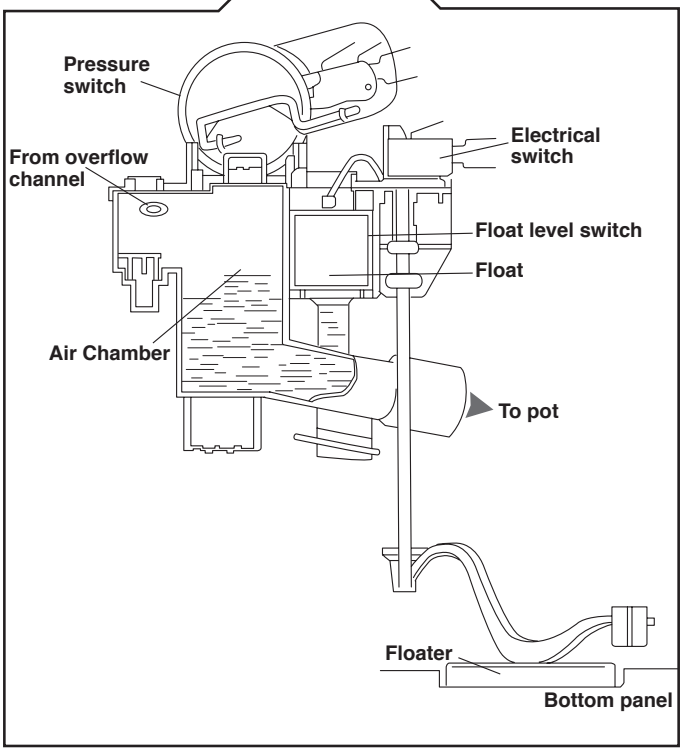
5.4 Fault Codes

Fault #	Fault	Result	Detected by	Subassembly
E1	Water heating failure	Improper wash, cycle aborted	Water temperature < set point after timeout during "Circulation and heating" phase	Washing chamber
E2	Filling failure	Improper wash, cycle aborted	Timeout on filling up the heat exchanger	Water inlet
E3	Chamber temperature reading failure	Improper wash, cycle aborted	Chamber temperature reading outside range	Washing chamber
E4	Water evacuation failure	Cycle interrupted	Timeout on water evacuation from the chamber	Exhaust
E5	Disinfection failure (Hydrim L110wd) or Disinfection timer error (Hydrim L110wd)	Disinfection failure Disinfection failure	Water temperature less then disinfection temperature during disinfection cycle The timer maintained by the master controller is different with more than 5 % than the timer maintained by the slave controller.	Washing chamber Washing chamber
E6	Serial transmission failure	Unit functionality failure, cycle aborted.	Timeout on receiving data on serial port	Serial interface
E7	Cycle aborted (Hydrim L110wd)	Improper wash	Power down occurrence during a cycle	User interface
E8	Water inlet temperature reading failure (Hydrim L110w)	Improper wash, cycle aborted.	Water inlet temperature reading outside range	Water inlet
E9	Program timeout.	Improper wash, cycle aborted	Timeout on finalising the cycle.	Heater
E0	Heat exchanger filling failure – full chamber sensor blocked into **ON** position	Improper wash, cycle aborted	Timeout on filling the heat exchanger	Water inlet
Ed	Dosing system failure	Improper wash, cycle aborted	Timeout on dosing	Dosing system (Replace / refill cleaning solution)
Ef	Flow error	Cycle won't start	Detergent or neutraliser flow metre defective	Flow metre (detergent or neutraliser)
En	Neutralising system failure	Improper wash cycle aborted.	Time out on neutralising	
Et	Temperature out of range.	Improper wash cycle aborted.	Second temperature sensor reading is ±5˚C from target temperature during wash cycle and –2/+4˚C from target temperature during disinfection.	

5.5 Hydraulic Overview







6. Taking Apart and Reassembling the Unit

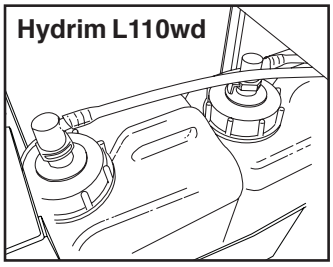
When the various covers are removed from the unit:

- Hazardous voltages are accessible. Disconnect the power cord before removing the covers.
- Sharp metal edges are exposed. Be careful, and wear long sleeves.

6.1 Removing the Cleaning Solution

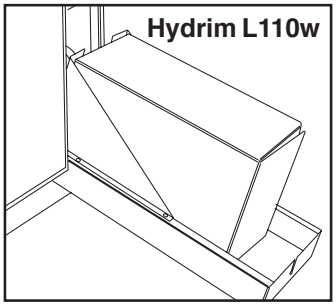
For Hydrim L110wd

1. Open the cleaning solution drawer by pulling it from the bottom.
2. Unscrew the cap and remove the level sensor assembly.
3. Remove the empty bottles and replace with full ones.



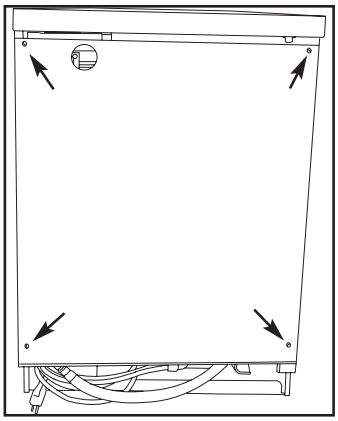
For Hydrim L110w

1. Open the cleaning solution drawer.
2. Unscrew the cap.
3. Remove the solution box and replace with a new one.



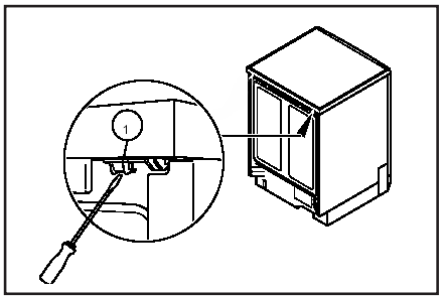
6.2 Removing the Back Cover

1. Remove the screws in each corner of the panel.
2. Remove the panel.

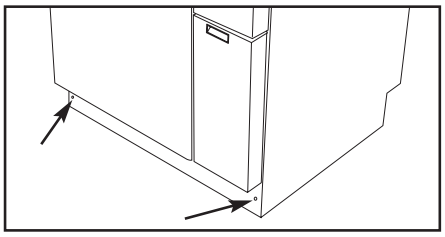


6.3 Removing the Top Cover

1. Using a flat screwdriver, release the latch located at the back right of the unit.
2. Pull the cover back about 1 cm / ½".
3. Lift the cover off.

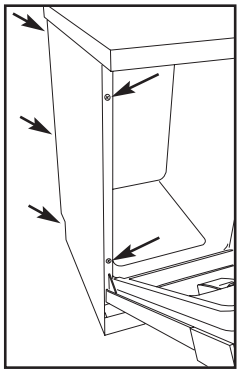


6.4 Removing the Kick Plate



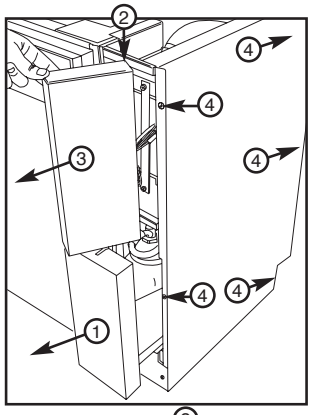
1. Remove the screws on both ends of the kick plate.
2. Remove the kick plate.

6.5 Removing the Left Side Panel



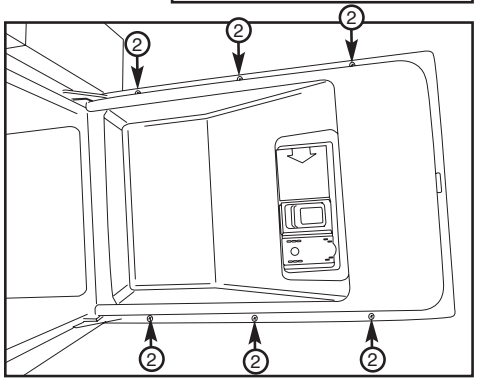
1. Open the door of the unit.
2. Remove the two screws from behind the door frame.
3. Remove the screws from the back panel.
4. Remove panel.

6.6 Removing the Right Side Panel



1. Open the cleaning solution drawer. (EU version shown)
2. Remove the screw holding the panel in place.
3. Pry off the front panel (above the cleaning solution drawer).
4. Remove the screws holding the panel in place.
5. Remove the panel.

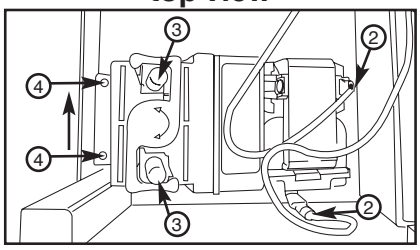
6.7 Removing Door Panel



1. Open the door of the unit.
2. Remove the three screws on each side of the door on the inside.
3. Close the door.
4. Remove the panel.

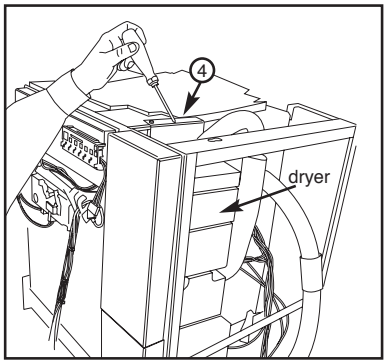
6.8 Removing the Dosing Pump

top view



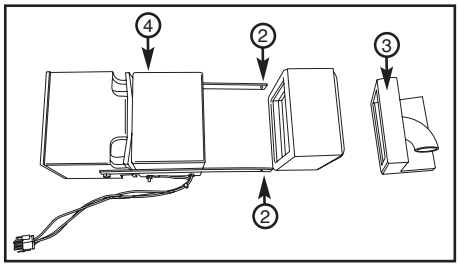
1. Remove the side panel.
2. Detach electrical wires.
3. Detach detergent tubes.
4. Unscrew two screw on the bracket holding the pump to the vertical wall and remove the pump.
5. Repeat the same for the second pump.

6.9 Removing the Dryer



1. Remove top cover. (see section 6.3)
2. Remove the side panel. (see section 6.6)
3. Disconnect the hose.
4. Remove the two screws holding the bracket at the top of the unit.
5. Disconnect the wire connector.
6. Remove the dryer from the unit.

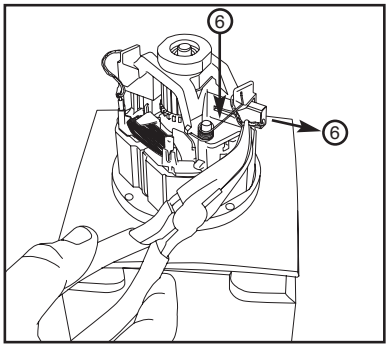
6.9.1 Removing Air Filter



1. Remove the dryer from the unit. (see section 6.9)
2. Unscrew the top screws on both sides of the dryer.
3. Remove the outlet connector assembly.
4. Remove the filter.

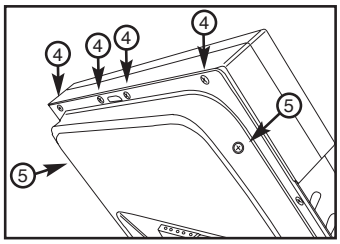
Note: Remember to replace the filter based on the proper air flow direction as marked on the filter.

6.9.2 Removing Dryer Blower Brushes

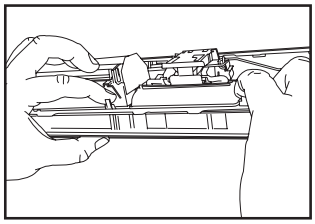


1. Remove the Dryer. (see section 6.9)
2. Remove the Air Filter. (see section 6.9.1)
3. Unscrew the bottom screws on both sides of the dryer.
4. Disconnect the two power wires.
5. Remove the motor from the assembly.
6. Pull back the springs holding the brushes in place and remove the brushes.

6.10 Removing the Control Panel Fascia

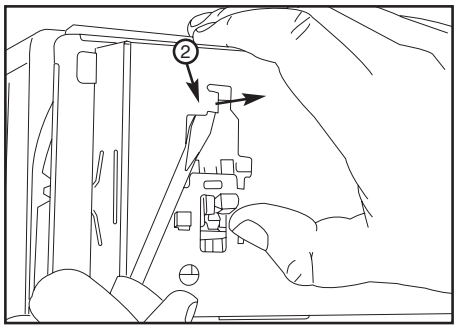


1. Remove the door panel. (see section 6.7)
2. Disconnect the controller and main switch wires.
3. Open the door of the unit.
4. Unscrew the four screws along the top inside edge of the door.
5. Unscrew the two screws on both sides of the door that are holding the controller panel in place.
6. To take the fascia out of the frame gently part the clips.



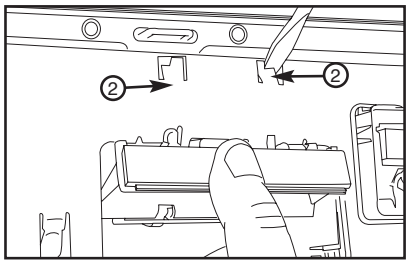
6.10.1 Removing the On / Off Switch

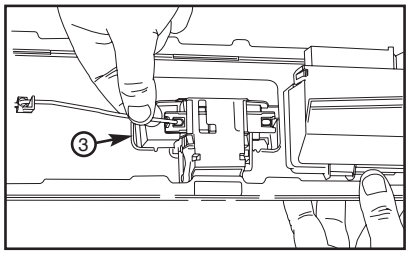
1. Remove the control panel fascia. (see section 6.10)
2. Flatten the metal tab holding the switch in place.
3. When bending tabs back slide the switch up and out of place.



6.10.2 Removing the Door Lock

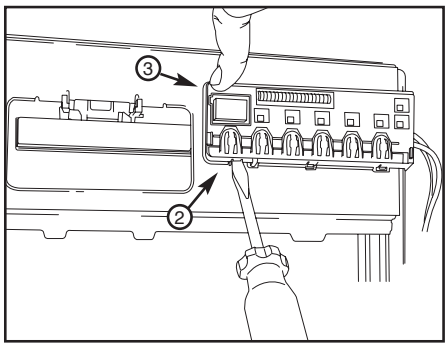
1. Remove the control panel fascia. (see section 6.10)
2. Flatten the two metal tabs holding the lock in place.
3. Flip the panel and then disconnect the auto shut-off rod.
4. Remove the door lock.





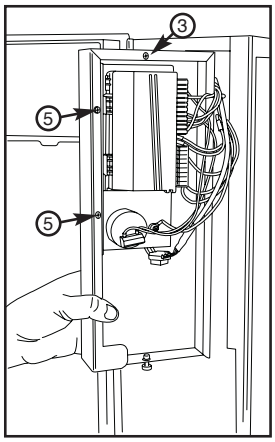
6.10.3 Removing the Master Controller

1. Remove the control panel fascia. (see section 6.10)
2. Release the latch on the front of the panel holding the controller in place.
3. Push the controller out of the door frame.



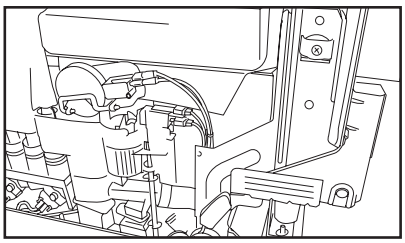
6.11 Removing the Slave Controller

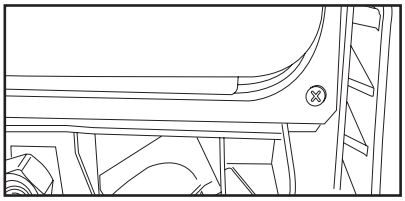
1. Remove the top cover. (see section 6.3)
2. Slide out the chemical door.
3. Remove the top screw.
4. Pop out the front panel.
5. Remove the two screws.
6. Release the two latches that hold the controller in the bracket and remove the controller from the bracket.



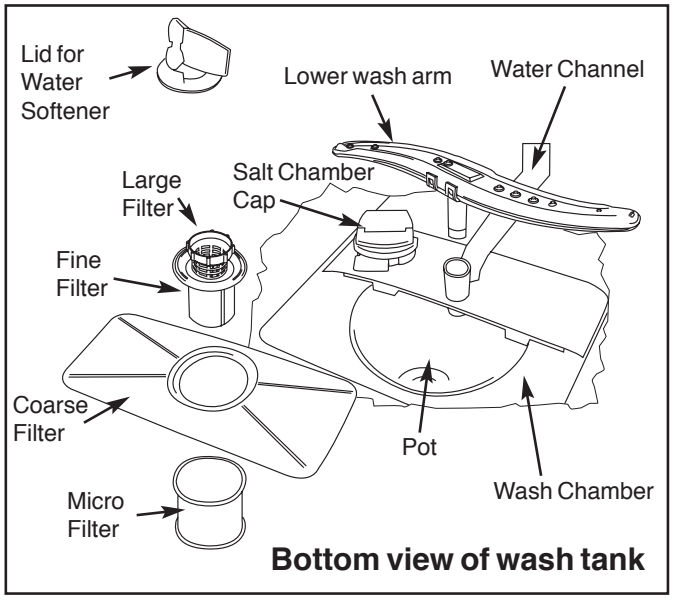
6.12 Removing Wash Tank

1. Follow the directions for removing the following parts from the unit:
   - Back cover (see section 6.2)
   - Top cover (see section 6.3)
   - Kick plate (see section 6.4)
   - Left and right side panels (see section 6.5)



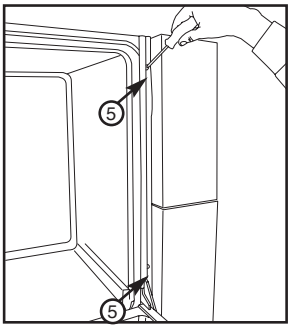


2. Unscrew the two screws in the metal plate under the door, and remove the plate.
3. Open the door.
4. Remove the following from inside the wash tank:
   - Baskets
   - Wash arms
   - Filters
   - Salt chamber cap, and second cap beneath
   - Four screws from around base of tank
   - Water conduit (release two latches)

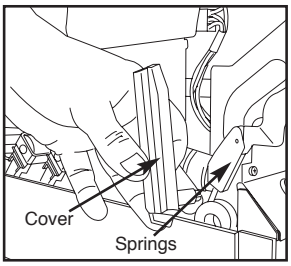


Bottom view of wash tank

5. Unscrew the two screws holding the rubber seal on the right side of the door and remove it.
6. Close the door.

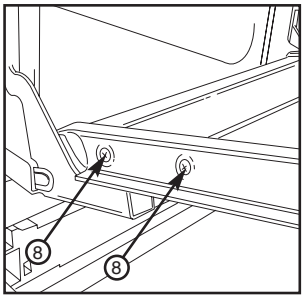


7. Release the door springs located beneath the white cover. There is one on each side of the door near its hinges.

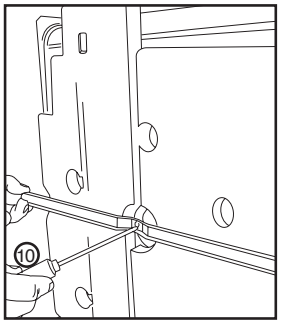


6. Taking Apart and Reassembling the Unit

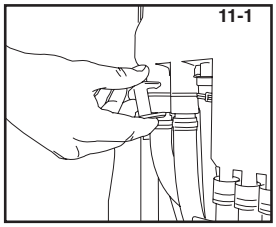
8. Remove the four screws holding the door hinges together, and remove the door.

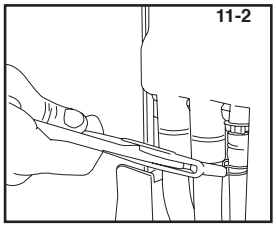


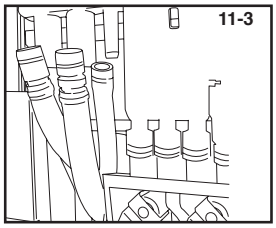
9. Remove the three plastic corner pieces around the top of the wash tank. Release the latch or unscrew as necessary and lift off.
10. Remove the two brackets holding the condenser bottle. Remove the screws, and slide out of place.

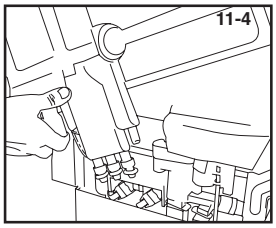


11. Remove clip. Disconnect the tubing from the condenser bottle. Pull the condenser bottle out of the unit.

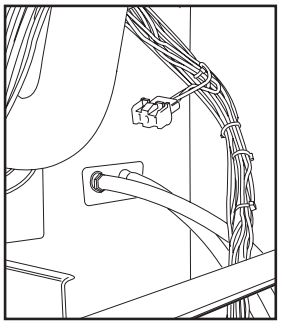








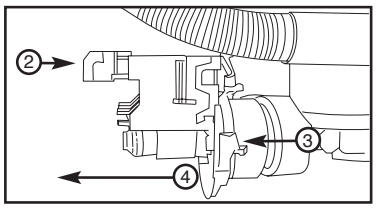
12. Remove the two screws at the front of the unit, below the door and remove the plate.
13. Disconnect the dosing pump tubing from the right side of the wash tank.



NOTE: There are two tubes for the Hydrim L110wd, and one for the Hydrim L110w.

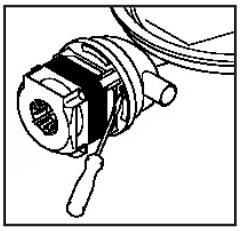
14. Unscrew the dryer and frame from the back of the unit.
15. Disconnect the screw located on the top rim of the tank.
16. Turn and press the door spring assembly downward and then lift the wash tank.
17. Lift the wash tank up and away from the unit.

6.13 Removing Drain Pump



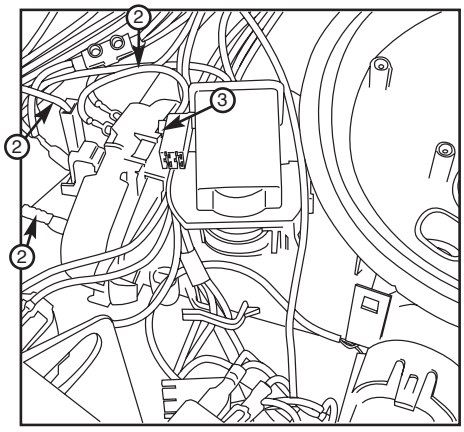
1. Remove the wash tank. (see section 6.12)
2. Disconnect the wires attached to the pump.
3. Release the latch holding the pump in place.
4. Turn clockwise and remove the pump.

6.14 Removing Circulation Pump



1. Remove the wash tank. (see section 6.12)
2. Remove the cleaning solution frame if necessary.
3. Disconnect the wires attached to the pump.
4. Loosen the clamp connecting the pump to the heater assembly.
5. Release the latch.
6. Remove the two rubber latches holding the pump in place and remove the pump.

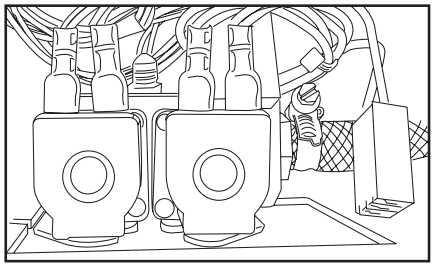
6.15 Removing the Heater



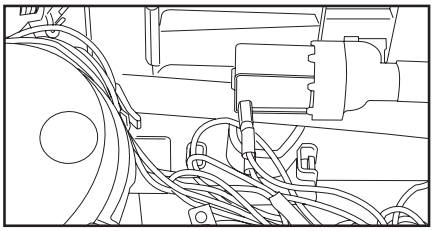
1. Remove the wash tank. (see section 6.12)
2. Disconnect the wires from the heater, pressure switch, and thermostat.
3. Loosen the clamp connecting the heater to the circulation pump.
4. Release the latch from the wash tank base.
5. Remove the heater.

6.16 Removing the Hot and Cold Inlet Valves

1. Remove wires connected to the valve units.
2. Disconnect the tubing.
3. Unscrew the four screws holding the valve units in place (two screws for the hot valve and two screws for the cold valve).
4. Detach the connector and lift the valve unit out of place.



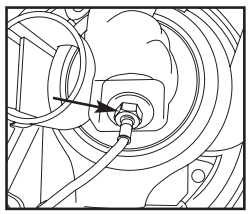
Mixing tap - Hydrim L110w



Single valve - Hydrim L110wd

6.17 Removing the Temperature Sensor

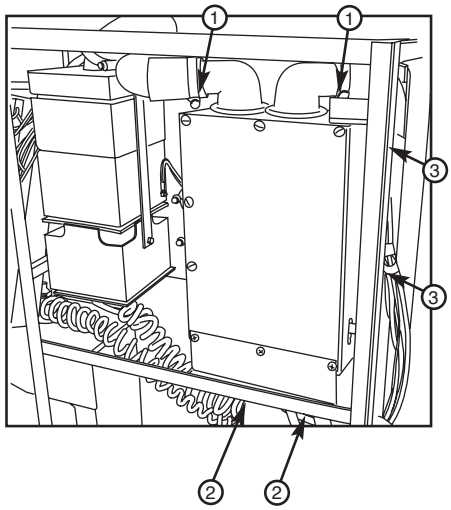
1. Remove the wash tank.
2. Unscrew the bolt.
3. Detach the wire and pull the sensor out of the hole.



outside view

6.18 Removing the Condenser (Hydrim L110wd)

1. Disconnect two air inlet tubes from the top of the condenser.
2. Disconnect two air outlet tubes from the bottom of the condenser.
3. Disconnect water input and output hose from the right side of the condenser.
4. Detach condenser from the machine frame and remove from the unit.



7. Parts (subject to change: refer to my.scican.com/ for updates.)

	Description	Part Number	Note
1.	Switch	13488.00	flow heater
2.	O-ring	16939.00	temperature switch
3.	Box power-in	13454.00	
4.	Power switch	13459.00	
5.	Handle	16945.00	door lock
6.	Micro switch	16944.00	Chamber level / control unit
7.	O-ring	16938.00	flow heater outlet
8.	Bushing	13613.00	bushing - hinge
9.	Tension f. spring	13460.00	with traction rope
10.	Float	13495.00	
11.	Wheel	13422.01	top
12.	Wheel	13422.00	bottom
13.	Foot	13599.00	front
14.	Seal	13599.01	O-ring seal, drain hose
15.	Actuator	16671.00	drain clean. sol. / rinse aid
16.	Seal	13610.00	feed device, complete
17.	Valve-drain	13614.00	
18.	Valve-regn.	13615.00	
19.	Contact	13616.00	reed contact for low salt level indicator
20.	O-ring	13530.00	for softener inlet / outlet
21.	Cover	13461.00	stainless steel for handle flap
22.	Double clamp	13457.00	drain hose at heat exchanger
23.	Screw	13631.00	Torx-Nitro 4x16 pump lid / pump pot
24.	Cap	13617.00	rubber guide for pump pot / bottom pan
25.	Sieve	13465.00	sieve set, double sieve stage
26.	Seal	13450.00	soft bearing, circ. pump pressure hose
27.	Hose band	13632.00	clamping range 28-39, width 5
28.	Seal	16937.00	for nut at salt container
29.	Support	13619.00	for drain hose
30.	Pole	13620.00	for control sys. / selector
31.	Cover	13621.00	for hardness range adjusting dev.
32.	Spring	13464.00	for door hinge
33.	Button	13471.01	**ON / OFF**, silver
34.	Button	13471.02	program, silver
35.	Lid	13638.00	for salt container
36.	Cover	13639.00	circ. pump aspiration hole
37.	Capacitor	13640.00	
38.	PTC Circulation pump	13641.00	
39.	Door-inner	13611.00	stainless steel
40.	Inlet with heat exchanger	13462.00	
41.	Seal	13456.00	peripheral door seal
42.	Seal	13521.00	pump pot / vessel

	Description	Part Number	Note
43.	Left Door hinge lever	13623.00	door lever, left
44.	Right door hinge lever	13623.01	door lever, right
45.	Pipe	13624.00	bottom pan safety switch
46.	Actuating Lever	13625.00	for float, bottom pan
47.	Rinse aid compartment	13604.00	cleaner - rinse aid
48.	Cover	13626.00	for heat exchanger
49.	Guide	13627.00	top basket guide, compl.
50.	Drain tube	13455.00	rinsing machine to syphon
51.	Hinge	13628.00	bottom pan support, left
52.	Hinge	13628.01	bottom pan support, right
53.	Seal	16942.00	inner door, bottom
54.	Rotating arm	13492.00	top, complete
55.	Pipe	13629.00	water feed rotating arm
56.	Guide	13630.00	attachment for heat exchanger
57.	Rotating arm	13481.00	bottom
58.	Sieve	13622.00	fine, for pump pot
59.	Housing	13642.00	for circulator pump
60.	Emitter housing	13447.01	for water level regulator
61.	Salt container	13643.00	
62.	Motor	13644.00	for circulator pump
63.	Drain pump	13645.00	
64.	Heat exchanger	13646.00	Heater 2150 W
65.	Tube	13647.00	pump pot / level emitter
66.	Ring	13648.00	retaining ring with soft bearing
67.	Safety switch heater	13489.00	Heater, Hydrim L110w
68.	Safety switch heater	13423.02	Heater, Hydrim L110wd
69.	Dosing pump	13010.04	
70.	Master	13475.01	controller
71.	Slave	13475.02	controller
72.	Circulator pump	13549.00	
73.	Fascia L110wd	13790.04	
74.	Fascia L110w	13790.06	
75.	Temperature sensor	13794.00	pump sump
76.	Sound insulation	16437.00	air turbine
77.	Seal	16442.00	
78.	Front plate	16648.01	cladding
79.	Bag panel	16656.00	cladding
80.	Chemical drawer	16662.06	cladding
81.	Slave drawer	16663.06	cladding
82.	Membrane	16689.01	for inlet
83.	Right face	16695.00	cladding
84.	Left face	16696.00	cladding
85.	Mix tab	17007.01	Hydrim L110w
86.	High-capacity air turbine	18466.00	
87.	Tube for exhaust air	21027.00	
88.	Neoprene Seal washer	21172.00	

	Description	Part Number	Note
89.	Plate ring seal	21406.00	seal
90.	O-ring	21527.01	manifold
91.	Spare hose	21970.00	dosing pump
92.	Union	22050.00	dosing pump
93.	Hose band	22051.00	dosing pump
94.	Single solenoid valve	22089.01	230 V
95.	Alarm emitter	23063.15	
96.	Dosing pump, front	26511.00	
97.	Carbon for blower motor	26668.01	
98.	Top face	50750.10	cladding
99.	Inlet hose	51005.03A	
100.	Air micro filter	13319.00	for Hydrim L110wd only
101.	Air filter	13319.10	for Hydrim L110w only
102.	Flow switch	17137.00	for Hydrim L110wd only
103.	Flow Switch	17137.01	for Hydrim L110w only
104.	Capacitor	22930.10	
105.	Relay	23126.01	
106.	Plexiglass door	13611.05	