

user manual

Multi-Washer 3000 Series with EvoClean

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1.00 overview

1.01 Safety Precautions



WARNING! Please read precautions thoroughly before operation. Meet all applicable local codes and regulations.

THANK YOU FOR YOUR INTEREST IN OUR PRODUCTS

Please use this equipment carefully and observe all warnings and cautions.

- Both the unit and its peripheral elements must be handled by qualified technical personnel.
- Make sure the installation is carried out according to the current regulations of the state, county and city.
- Do not mount the unit on an irregular or unstable surface.
- This unit is designed to work in a vertical position.
- The unit must be installed in an area with adequate clearance, far from possible impacts, electromagnetic noise sources and pipelines of gas, steam or water.
- The top of the cabinet is not a shelf! Do not leave objects on the unit.
- Warranty is voided if the user modifies, adds or suppresses any feature of the unit.
- All components involved in maintenance tasks must be the ones registered in the spare parts list supplied by the manufacturer. Otherwise the Warranty is void.
- The installation of the dosing system must be performed according to the instructions of this manual.
- Main electrical power supply must be 110-230 VAC at 50 Hz/60 Hz.
- The units ship with the circuit breaker (in the control cabinet) in the OFF position. Switch it ON once all electrical wiring is complete.
- Always use wires in good condition.
- The water supply to the unit must conform to the specifications of this manual.
- The unit should be configured according to the programming manual.
- All chemical products must be stored in approved container, at a safe distance from the unit.
- The handling of chemical products requires the proper safety measures such as protective glasses, mask and gloves.

1.02 Overview

The Multi-Washer 3000 Series with EvoClean is designed to dose laundry chemicals to multiple washer extractors. The system combines the proven Hydro Multi-Washer controller with the low-maintenance and highly accurate EvoClean dispenser.

The number of chemical products that can be used with a single unit can be four (4), six (6), or eight (8). Regardless of the number of products, the maximum number of washers the products can be distributed to by a single unit is three (3) for a low flow EvoClean.

All the components of the system are consistent with general purpose industry standards, and the materials of construction are compatible with all normal laundry products.

Because the EvoClean does not rely on squeeze tubes to deliver product, it provides reliable, accurate and repeatable product dosage that does not degrade over time. The system excels at dosing small volumes (below 90 ml / 3 oz) and requires significantly lower maintenance than traditional pumping systems.

The Multi-Washer 3000 Series with EvoClean has three major components:

- The EvoClean dispenser with pickup tubing for four (4), six (6), or eight (8) products.
- Distribution manifolds (mounted separately) with valves going to each washer.
- A controller that takes all signals and controls the valves and pumps, to precisely dose the chemicals to each washer.

When a qualified signal is detected by the control cabinet the unit will dose the appropriate products according to the settings of the formula and washing phase being executed.

1.00 overview

1.03 Package Contents

Multi-Washer 3000 with EvoClean

Metric Models

HYDSPD0093M	4P , 3WE, 1CH, EVCL, V, MET
HYDSPD0091M	6P , 3WE, 1CH, EVCL, V, MET
HYDSPD0092M	8P , 3WE, 1CH, EVCL, V, MET

North America Models

HYDSPD0093	4P , 3WE, 1CH, EVCL, V, USA
HYDSPD0091	6P , 3WE, 1CH, EVCL, V, USA
HYDSPD0092	8P , 3WE, 1CH, EVCL, V, USA

A key feature to these systems is delivering up to 8 chemicals to up to 3 washers using the low-maintenance, highly accurate EvoClean dispenser.

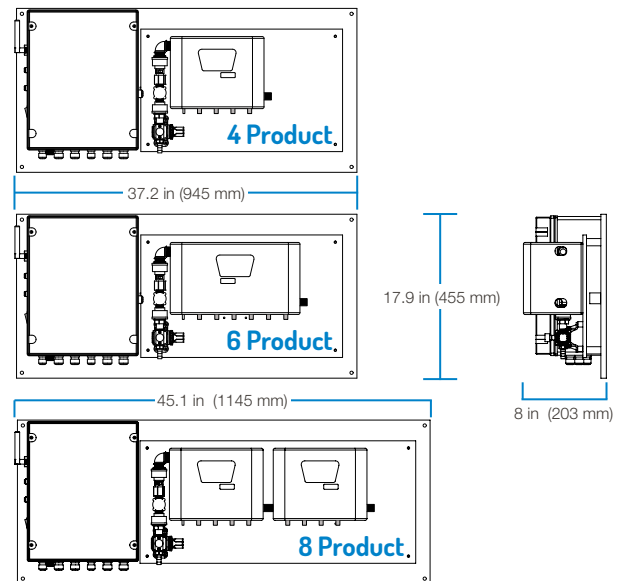
Aiding in the reliability and longevity of the system is a water flush that cleans the entire channel after every product delivery. The eductors, manifold, and all the way through the distribution manifold to the washer is flushed with clean water, to prevent the effects of long-term chemical exposure.

1.04 Panel Dimensions

Panel Height: 4 & 6 & 8 product:	17.9 in (455 mm)
Panel Width: 4 & 6 product:	37.2 in (945 mm)
8 product:	45.1 in (1145 mm)
Panel Depth: 4 & 6 & 8 product:	8 in (203 mm)



Multi-Washer 3000 with 6-Product EvoClean



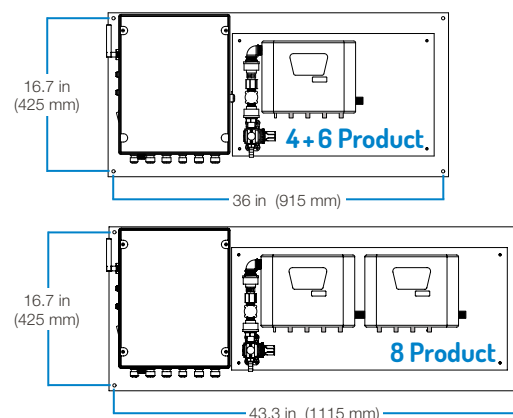
2.00 installation

2.01 Preliminary Tasks

- Choose a clear and flat wall near to the laundries machines.
- It is highly recommended to use the specific kit of materials for installation which is available under request. In case the elements for mounting are obtained from local providers, all items should be the same as the ones listed in the kit.
- In case a previous unit is already working in the site, all the existing elements must never interfere with the new installation.

2.02 Panel Mounting

- In order to make the unit work correctly, it must be placed on a clear and flat wall.
- The system must be placed at such a height that the dispenser and control box can be easily accessed.
- The panels' approximate mounting dimensions are shown to the right but may vary slightly. **Use the panel being installed as a template.**
- To use the supplied mounting hardware, drill four 5/16 in (8 mm) holes at the locations indicated, and insert the included anchors.
- Place the unit on the wall and use the provided fasteners to affix it securely.



2.00 installation (continued)

2.03 Peripheral Elements

After placing the unit, it is necessary to hang the distributor that directs dosages to the washers:

- This distributor is responsible for diverting the products to the corresponding washer extractor.
- Only one machine is attended while the others are queued.
- It is recommend to set the distributor at an equidistant position from the washer extractors.

2.04 Tubing

Once all elements are on the wall, their fittings must be connected with the tubes. We recommend using 1/2 inch or 12mm reinforced tubing for the water inlet and 3/8 inch or 10 mm for the chemical pickups.

Water Inlet: Make sure there is enough water supply for the unit; at least 40 psi or 2.8 bar in the dynamic range.

If that water pressure cannot be achieved, it is mandatory to install a booster tank to increase the incoming water pressure to the EvoClean.

Chemical Pickup: Decide the best distribution for the tanks / drums of product.

After that, connect all tubes from the EvoClean to the suction lances.

- Inlet Valve 1 = Flush vent**
- Inlet Valve 2 = Product 1**
- Inlet Valve 3 = Product 2**
- Inlet Valve 4 = Product 3**
- Inlet Valve 5 = Product 4**
- Inlet Valve 6 = Product 5**
- Inlet Valve 7 = Product 6**
- Inlet Valve 8 = Product 7**
- Inlet Valve 9 = Product 8**

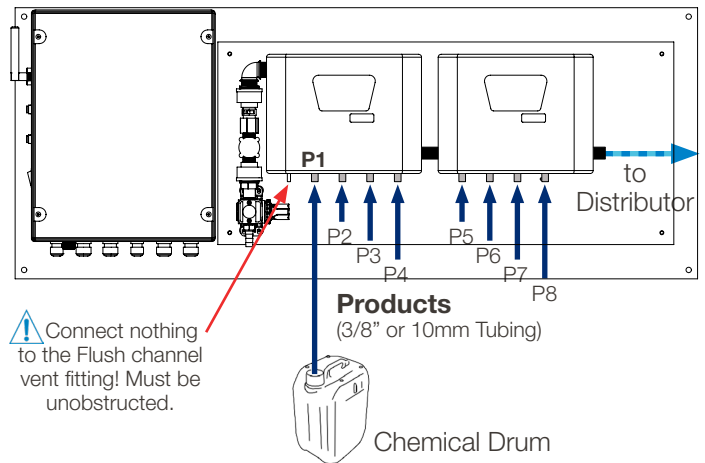
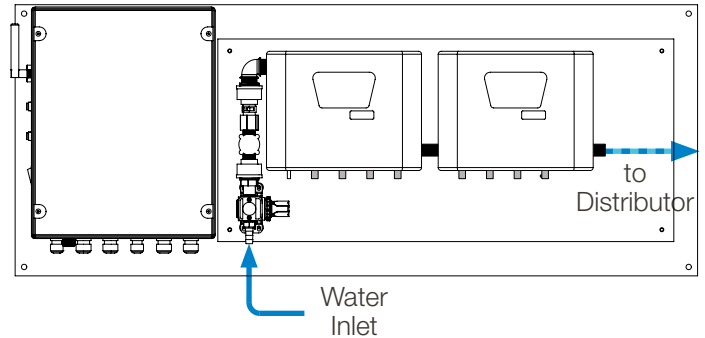


Do not connect any tubes to the Flush channel vent fitting! This must remain unobstructed.

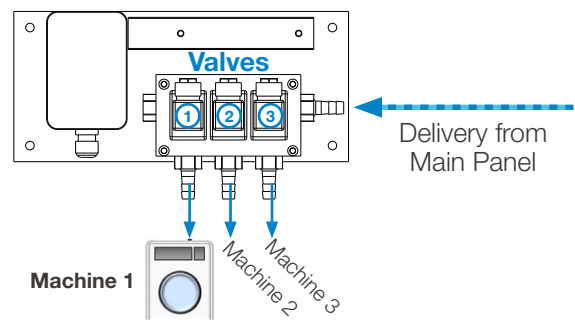
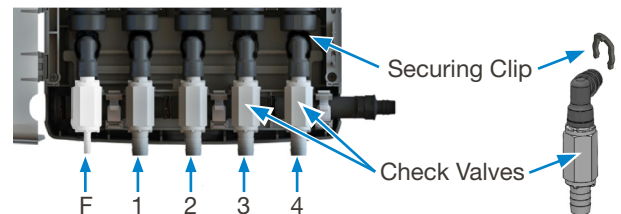
The product check valves are supplied detached in a bag with the unit. **To prevent damage to the dispenser, install hoses to the check valves before connecting the check valves to the manifold!** Push the product intake hose onto the detached check valve and secure with cable tie, then push the check valve elbow into the eductor and secure with the clip.

Distributor Tubing: Install the delivery tubing from the main panel to the distributor inlet and connect each distributor delivery tube to the appropriate washer, as shown to the right.

- Distributor Valve 1 = Machine 1**
- Distributor Valve 2 = Machine 2**
- Distributor Valve 3 = Machine 3**



EvoClean with all Check Valves installed



2.00 installation (continued)

2.05 Electrical Connections

Main Input Power: Connect a 110 to 230 VAC source to the X1 connections in the cabinet.

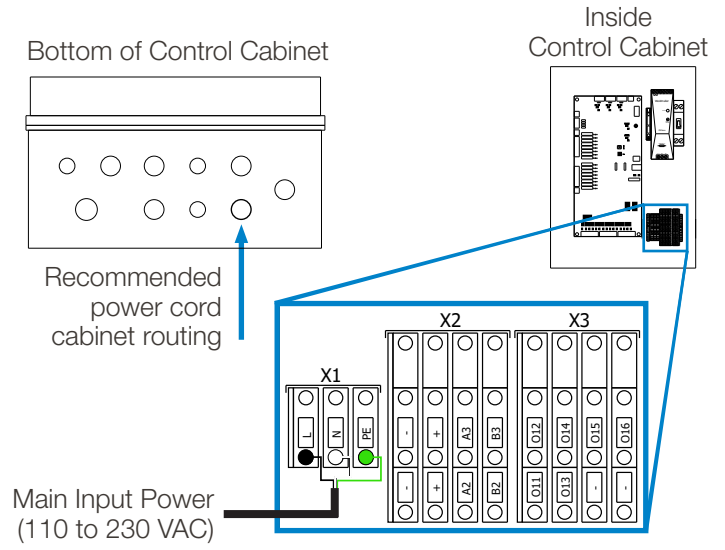
Remember never to get the power from a washer extractor.

An independent 10 amp breaker is recommended.

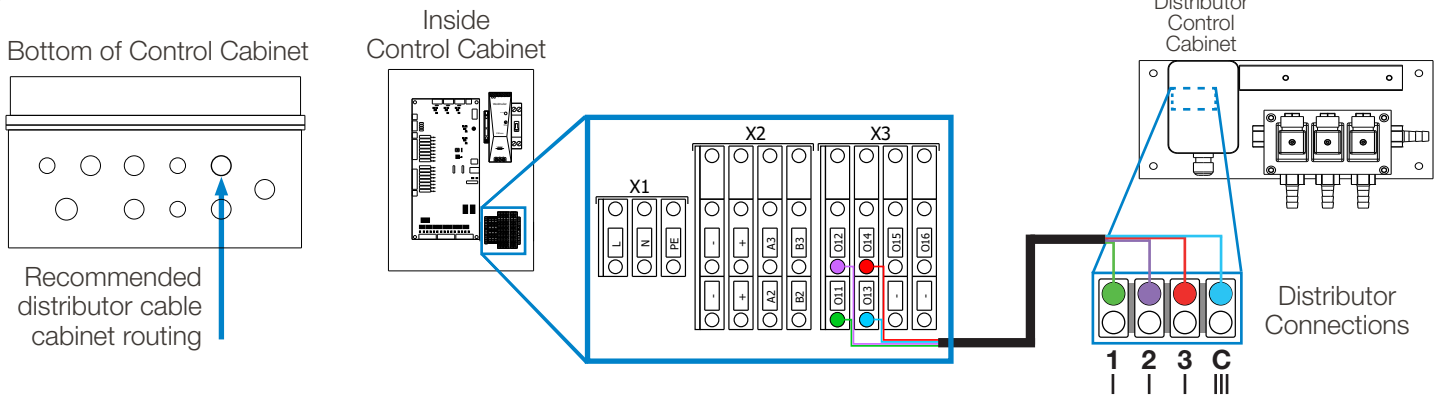
The power cable must be constructed of 3 wires with at least 1.5 mm cross-section or 16 gauge wire.

- Line/Phase (black) goes to the 'L' connector.
- Neutral (white) goes to the 'N' connector.
- Ground (green) goes to the 'Ground' connector.

Once the power is supplied to the unit, all inputs, outputs and communications may be configured.



Distributor Connections: Follow the wiring diagrams to below, when making the electrical connections between the main panel and the distributor control cabinet

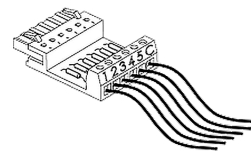


Washer Signal Wiring: (Metric Models)

! Be sure the unit is turned off, before connecting the washer signals to the control cabinet.

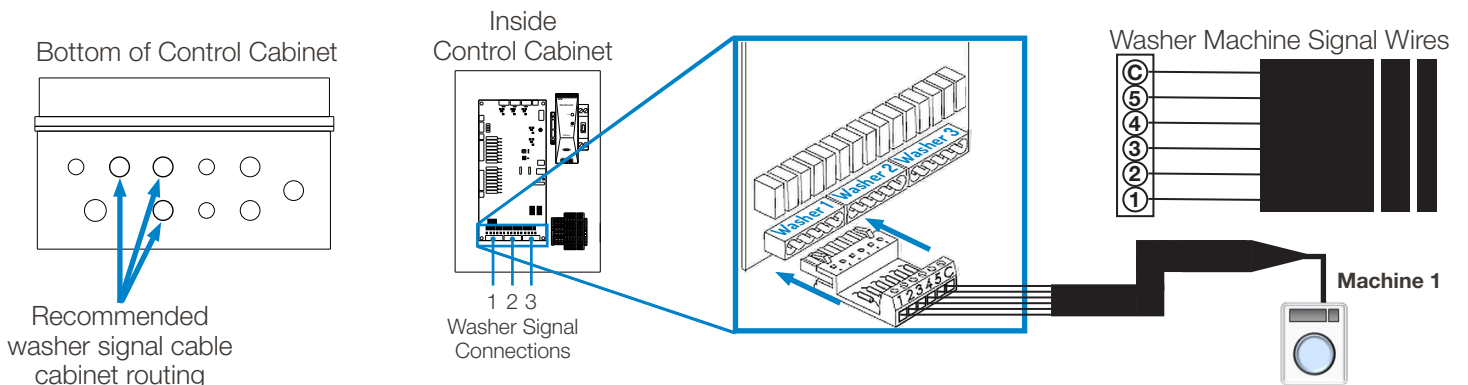
1) Attach the signal wires from the washer to the appropriate Washer Signal Voltage Adapter Board, based on the signal voltage coming from the washer.

2) Plug the Adapter Board into the appropriate Washer Signal Connection header at the bottom of the main board in the control cabinet.



Washer Signal Voltage	Washer Voltage Adapter Board
220 VAC	Option 1
110 VAC	Option 2
24 VAC or DC	Option 3

Note: Every unit ships with a total of 9 washer adapter boards, a full set of 3 for each of the 3 voltage options.

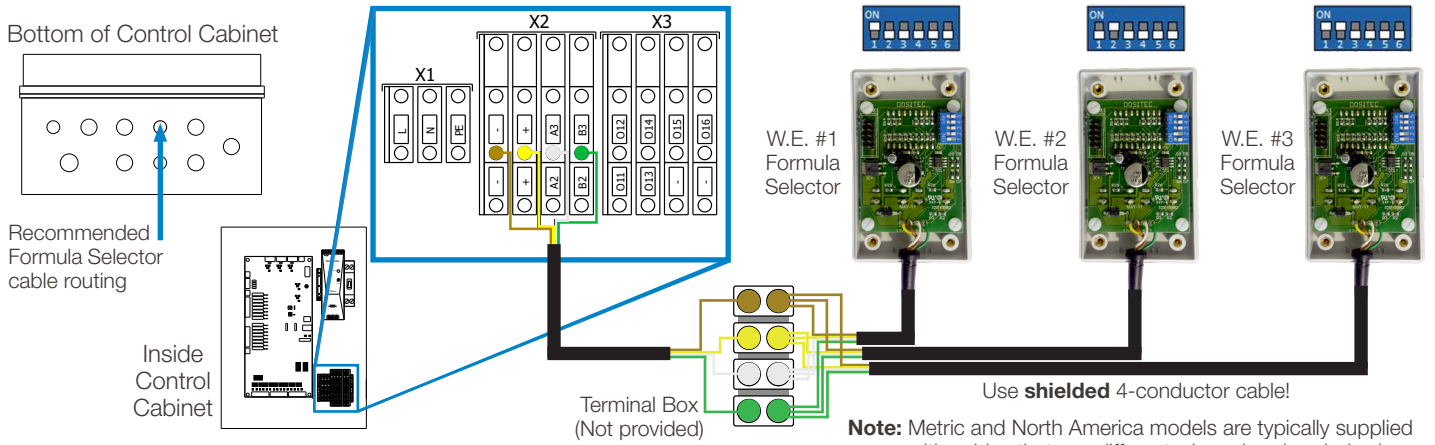


2.00 installation (continued)

2.05 Electrical Connections (continued)

Formula Selector Wiring: (Metric Models)

With the Metric Multi-Washer 3000 units, the Formula Selector(s) are connected directly to the control board, at the second level of the X2 terminal block, as shown below. **Brown to “-”, Yellow to “+”, White to A3 and Green to B3.** If multiple Formula Selectors are being connected, they must be connected in parallel, either at the control board or (recommended) using a standard terminal box, as shown.



Washer Signal Wiring: (North America Models)

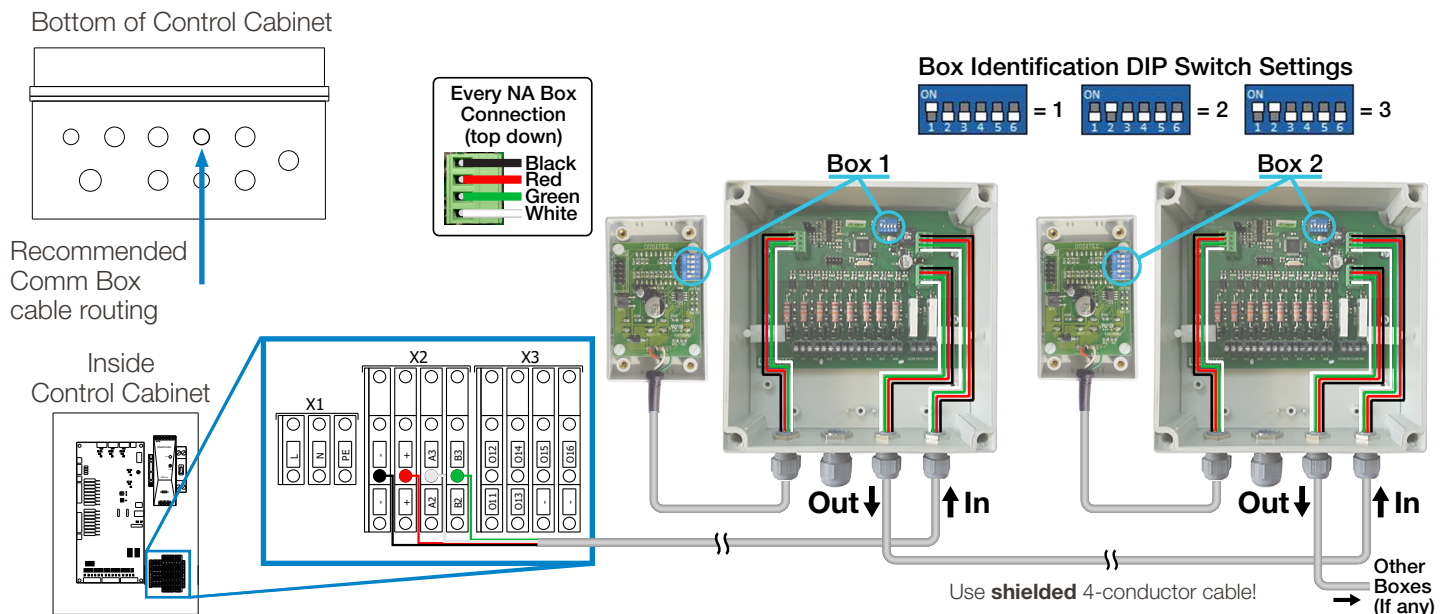


Be sure the unit is turned off, powered down, before connecting the communication boxes!

The North America Multi-Washer 3000 models use Communication Boxes as the interface between the signals coming from the washer and the formula programming to deliver certain products at certain times. The simple On/Off signals from the washer are translated into digital packets of information and transmitted back to the Multi-Washer control board over a digital network. This allows a single four-wire cable to daisy-chain from one communication box to another, simplifying installation.

The connection at the main panel is on the second bank of Terminal Block X2; **Black to “-”, Red to “+”, White to A1 and Green to B1** as shown below. The four conductor cable runs to the “In” connector of the box closest to the main panel. Any remaining boxes are connected with a cable running from the “Out” connector to the “In” connector of the next box.

The boxes are identified to the PLC by the DIP switch settings as shown below. If you are using the Remote Formula Selection accessory, their DIP switches must be set to match the Communication Box to which they are connected.

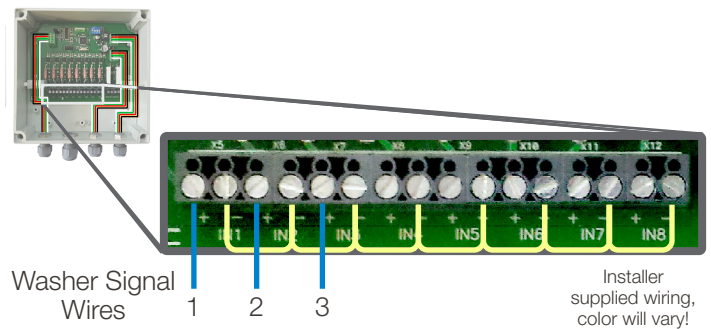


2.00 installation (continued)

2.05 Electrical Connections (continued)

Washer Signals (North America Models)

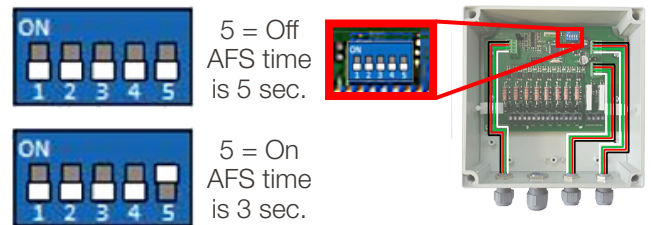
The signal wires from each washer connect to their Multi-Washer Communications Box using the row of connectors at the lower edge of the circuit board, with the grounds jumpered to have a common connection, as shown to the right.



DIP Switch 5 - AFS Time (NA Models)

On the DIP switch that identifies the Communications Box (see above), **the fifth DIP switch is used to adjust the time period** for Auto-Formula Select (AFS).

With switch 5 in the **Off position, 5 seconds** is the AFS time, so an AFS signal of 15 seconds would select Formula 3. With switch 5 in the **On position, 3 seconds** is the AFS time, so an AFS signal of 9 seconds would select Formula 3.

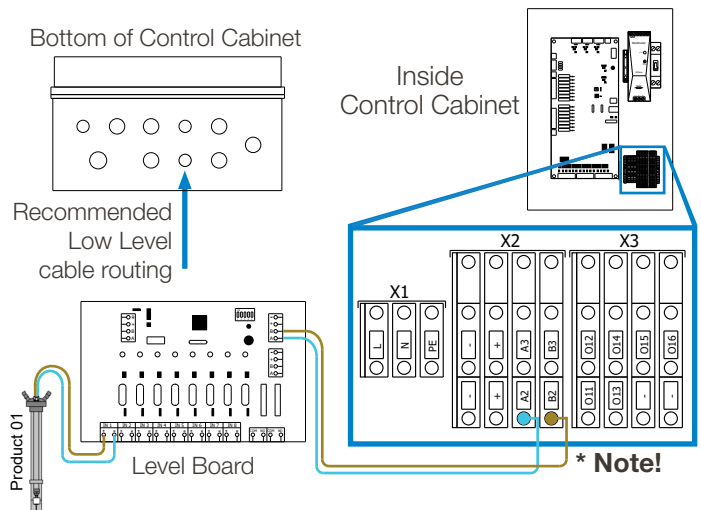


Level Probes Wiring:

An optional low level alarm (see section 5.0 Service Parts) with up to 8 depletion wands can be connected to the MW-3000 control cabinet.

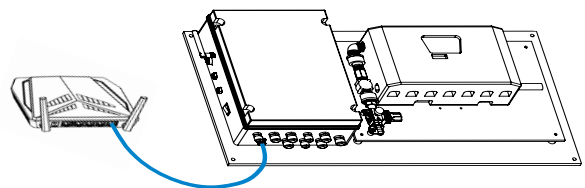
The low level alarm is powered by an external power source using a plug at 110-230 VAC. To wire the system, connect the two wires from each depletion wand to the appropriate contacts on the Level Board (see images at right) and route the two-conductor cable from the Level Board (A & B) through the opening in the bottom of the cabinet and wire to the X2 terminal block at contact A2 and B2 as shown.

(* **Note!** Although some of the X2 block connections are labeled differently for the Metric and North America models, the referenced **two bottom-row contacts of the X2 block are labeled A2 and B2** for both models.)



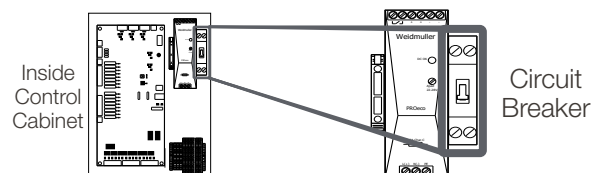
Internet Connection: The controller cabinet has an external Ethernet jack available for communication across networks and over the Internet. It can be used as follows:

- **Cell Modem Connection:** If a strong enough signal is available near the laundry room, you can connect the controller to a cellular modem, to create a connection to the Internet. A monthly data subscription is required.



Control Cabinet Circuit Breaker

When all electrical work is done, switch ON the circuit breaker located inside the control cabinet, to the upper right, to power up the system.

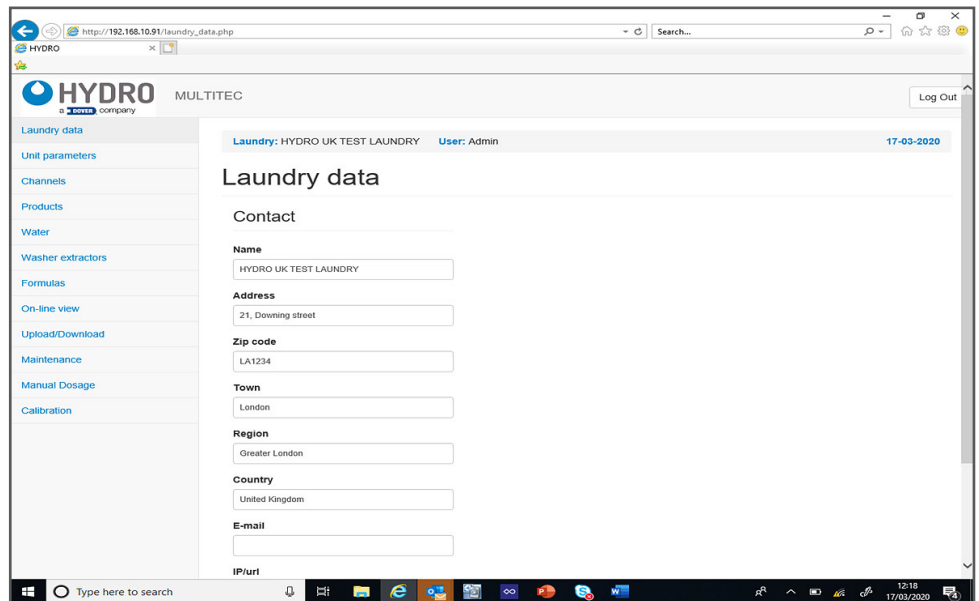


3.00 programming

Programming the Multi-Washer 3000 controller consists of **“Creating a Program Settings File”**. Follow the steps detailed below to create a program settings file that contains the settings you desire.

3.01 General

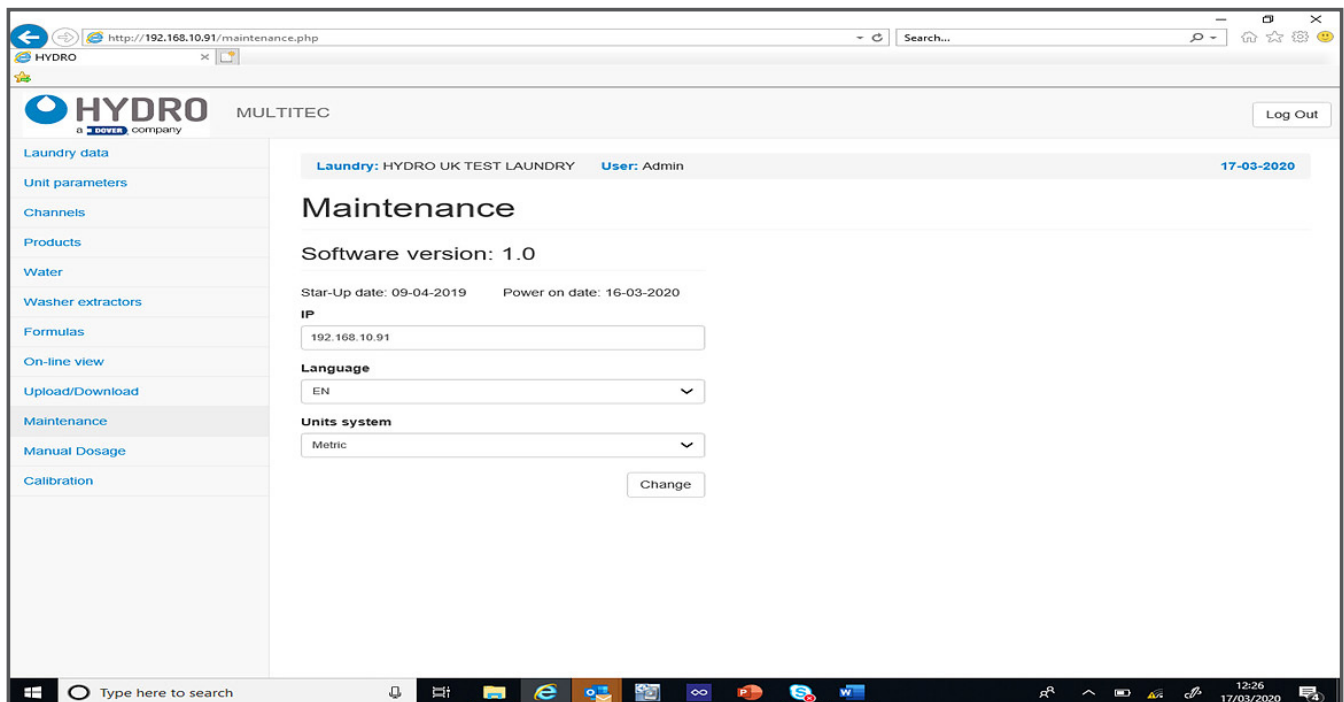
- 1) From a laptop computer or smartphone connect to the unit's Wi-Fi by connecting to network: multitec_3_ xxxx.
 - Enter Password: psgdover
- 2) Open up a web browser and insert IP 192.168.10.91 in the search bar and this will be diverted to the main page.
 - Insert email: admin@multitec.com
 - Password: 1111
- 3) Enter the laundry details, it is essential to add a contact name and email address.
- 4) When all details have been entered, scroll down and click Save at the bottom of the page.



General Laundry Settings

3.02 Maintenance

- 1) Click on Maintenance in the left-hand column, the below page will open.



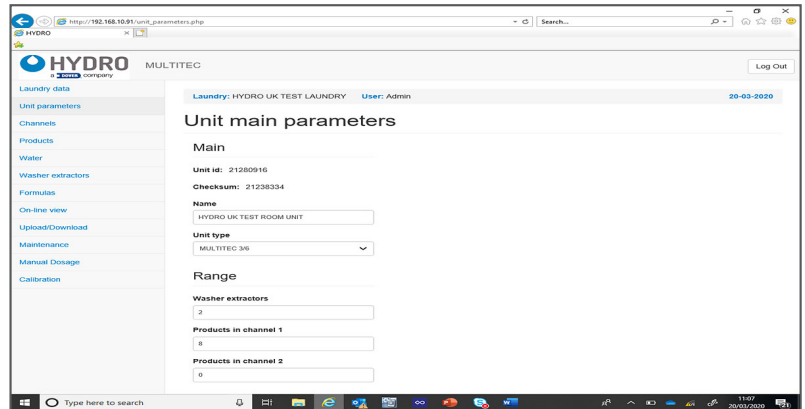
Maintenance Settings

- 2) IP – This will simply display the IP address of the Multi-Washer 3000 unit, and will not normally change.
- 3) Language – the language you require the unit to display.
- 4) Units system – choose between Metric (EMEA) or US (Americas)
- 5) Click on Save at the bottom of the page.

3.00 programming (continued)

3.03 Unit Parameters

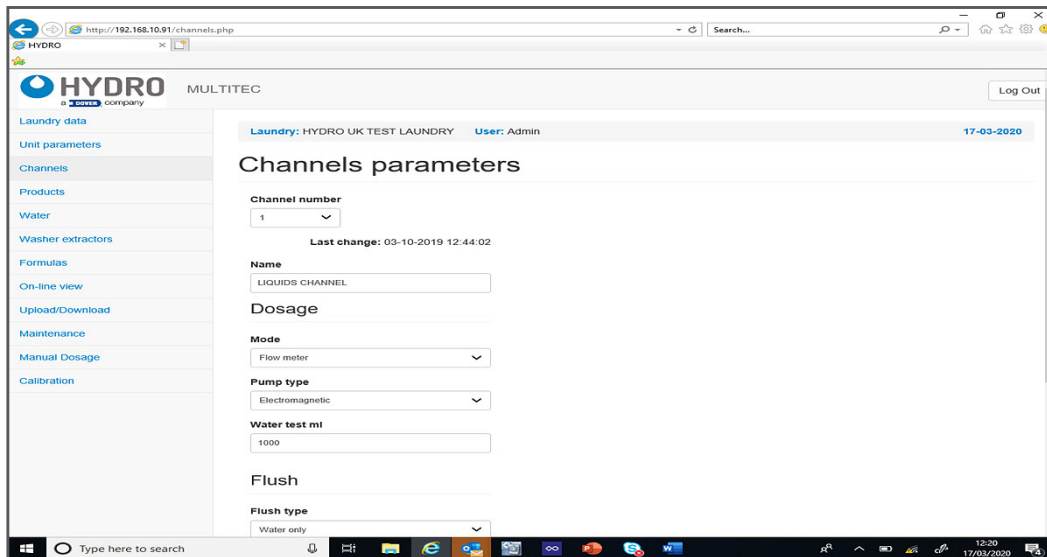
- 1) Click on Unit parameters in the left-hand column, the page shown to the right will open.
- 2) Name – enter the name you wish to give the unit.
- 3) Enter machine type – Multitec 3.
- 4) Range
 - Washer extractors – the amount of washer extractors you are connecting the unit to.
 - Products in channel 1 – the number of chemical products you are connecting to the channel.
- 5) When all values have been entered click on Save at the bottom of the page.



Unit Parameters

3.04 Channels Parameters

- 1) Click on Channels in the left-hand column, the below page will open.



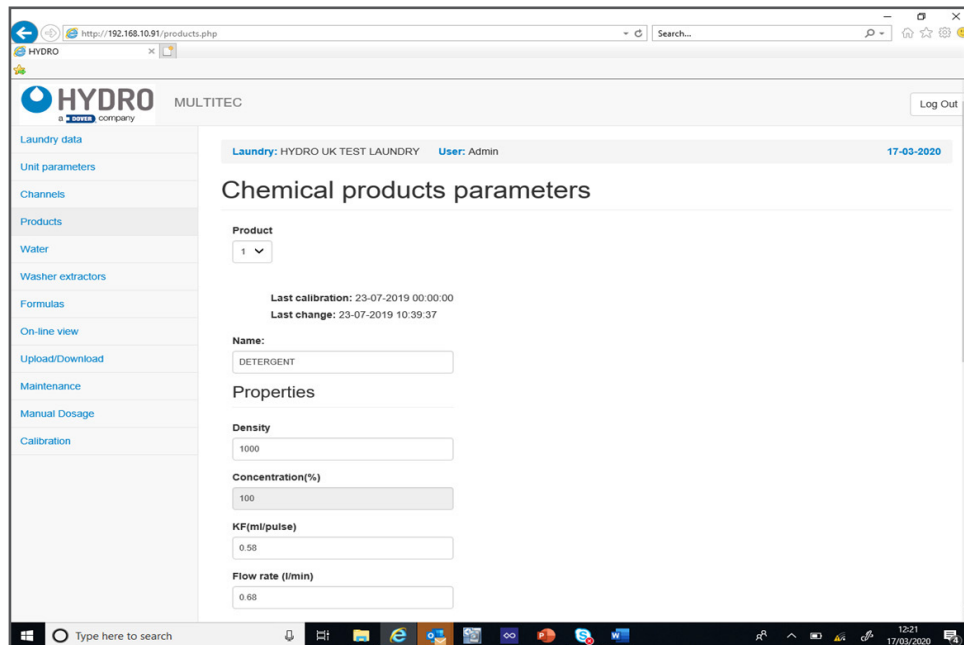
Channel Parameters

- 2) Channel number – choose the channel you wish to program. For a Multi-Washer 3000 this will always be 1.
- 3) Name – name the channel.
- 4) Mode – choose from the following; time, flow sensor or flow meter. Flow sensor is the recommended mode for the Multi-Washer 3000 with EvoClean.
- 5) Pump type – This must be set to EvoClean for the Multi-Washer 3000, and it should always be preselected as the default pump type.
- 6) Water test – amount of water required to create the test within the channel in ml.
- 7) Flush
 - Flush type – For the Multi-Washer 3000 units, this setting will always be the water flush setting “**Water Only**”.
- 8) Alarms
 - Skipped alarms – the amount of alarms that the unit will accept before the alarm buzzer Initiates on the unit and stops dosages. Start at 1 and then change to 3 after initial commissioning.
- 9) Click on Save at the bottom of the page.

3.00 programming (continued)

3.05 Product Parameters

1) Click on Products in the left-hand column, the below page will open.



Product Parameters

2) Product – choose the valve number you want to program i.e. 1. Remember the product order starts with the valve next to the water one.

3) Name – enter the name of the product.

4) Properties:

- Specific Gravity – enter the specific gravity of the product. This can be obtained from your chemist.
- Concentration – enter the concentration of the product. (Always 100% unless the product is a stock solution or the dosages are referred to the raw material only).
- K/F (mls/pulse or oz/pulse) – performing calibration will set this.
- Flow rate (L or oz per minute) – performing calibration will set this.

5) Dosage:

- Priority - this must be set for each chemical, if “0” the chemical will not dispense.
- Priority must be set higher for the products in the shortest stage of the wash program e.g.
- Softener should be set at 1-2.
- Priority determines the next machine in the queue to receive the dosage depending on the product it is asking for.
- Mode - time or flow meter. Time is the recommended mode for the Multi-Washer 3000 with EvoClean.
- Estate - Liquid or stock solution. For the Multi-Washer 3000 this will always be liquid.

6) Alarms:

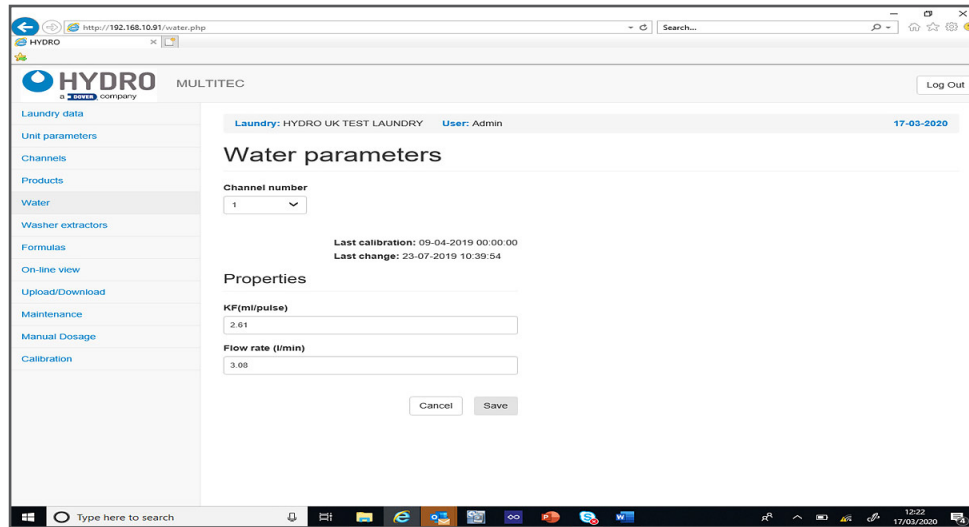
- Skipped alarms – start up at 1 and then change to 3 once start-up has been completed, this is the amount of times the unit can receive an error before it alarms. If an error is received and then the next dosage is correct the skipped alarm will default back to 0.
- Level contact - This suction lance setting can be set to normally open or normally closed, but **all Hydro Systems’ lances use normally open.**

7) Click on Save at the bottom of the page.

3.00 programming (continued)

3.06 Water Parameters

1) Click on Water in the left-hand column, the below page will open.



Water Parameters

2) Channel number – dependent on how many channels the unit has, if more than 1 select other numbers to check and save parameters.

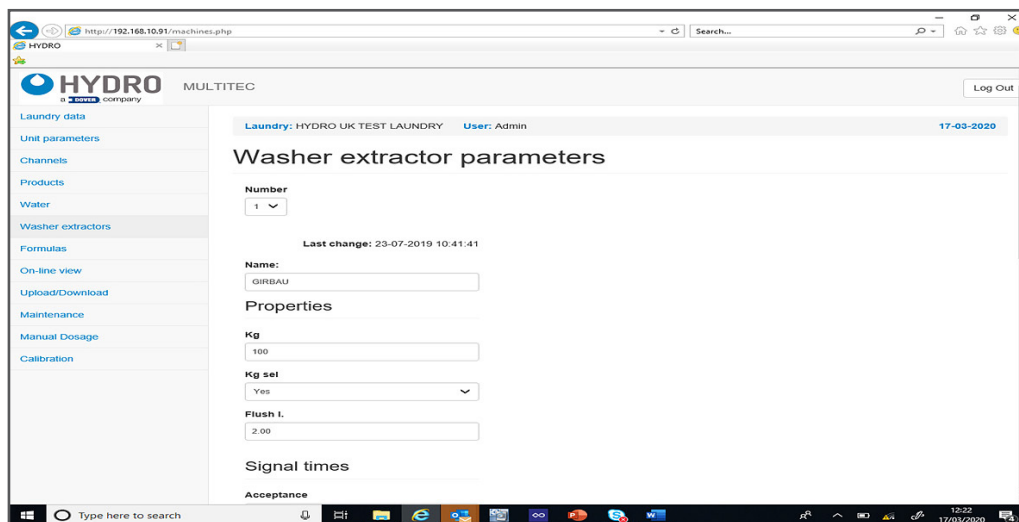
3) Properties:

- KF (ml/pulse or oz/pulse) millilitres or ounces of water per pulse recorded by the flow meter when calibrated.
- Flow rate – (l/min or oz/min) litres or ounces per min of water passing through the flow meter, recorded when water is calibrated.

4) Click on Save at the bottom of the page.

3.07 Washer Extractor Parameters

1) Click on Washer Extractors in the left-hand column, the below page will open.



2) Number - the number assigned to the washer extractor.

3) Name – name of the washer extractor i.e. Girbau

(continued)

3.00 programming (continued)

3.07 Washer Extractor Parameters (continued)

4) Properties:

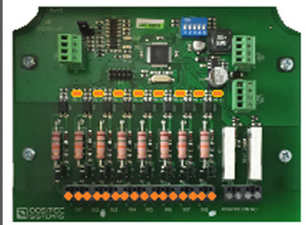
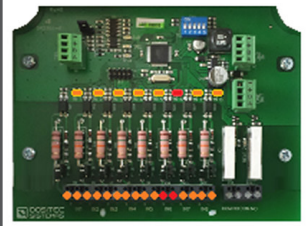
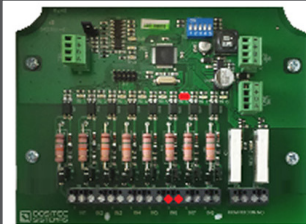
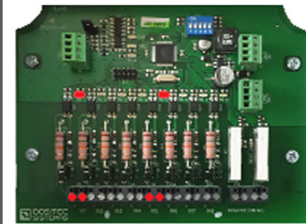
- Kg/Lb – Enter the wash capacity of the machine in kilograms or pounds.
- Kg/Lb sel – yes or no, this is dependent on whether you have installed a selector to manually change the % wash weight on the unit.
- Flush L/oz – the amount of water in litres or ounces required to deliver the chemicals to the washer extractor inlet by means of water flush.

5) Signal times:

- Acceptance – Length of time in seconds required for the machine to accept a signals.
- Non repetition – time in seconds that the unit will not accept a further signal after the prior signal within that particular wash stage.
- Lock after end – only on formula selector mode. Time duration after whole dosing process that the unit will accept no further signals.

6) Washing process:

- Formula ID – mode in which the identification of a new washing process is determined, how the machine triggers the unit to auto select a formula, see below:


	<p>Pairs of signals</p> <p>Whenever a couple of signals is detected simultaneously, a new process begins. The formula number is determined by the combination of the signals:</p> <table border="0"> <tr> <td>Fr.1 = S1 + S2</td> <td>Fr.6 = S2 + S3</td> <td>Fr.11 = S3 + S5</td> </tr> <tr> <td>Fr.2 = S1 + S3</td> <td>Fr.7 = S2 + S4</td> <td>Fr.12 = S3 + S6</td> </tr> <tr> <td>Fr.3 = S1 + S4</td> <td>Fr.8 = S2 + S5</td> <td>Fr.13 = S4 + S5</td> </tr> <tr> <td>Fr.4 = S1 + S5</td> <td>Fr.9 = S2 + S6</td> <td>Fr.14 = S4 + S6</td> </tr> <tr> <td>Fr.5 = S1 + S6</td> <td>Fr.10 = S3 + S4</td> <td>Fr.15 = S5 + S6</td> </tr> </table> <p><i>See manual for more combinations</i></p>	Fr.1 = S1 + S2	Fr.6 = S2 + S3	Fr.11 = S3 + S5	Fr.2 = S1 + S3	Fr.7 = S2 + S4	Fr.12 = S3 + S6	Fr.3 = S1 + S4	Fr.8 = S2 + S5	Fr.13 = S4 + S5	Fr.4 = S1 + S5	Fr.9 = S2 + S6	Fr.14 = S4 + S6	Fr.5 = S1 + S6	Fr.10 = S3 + S4	Fr.15 = S5 + S6						
Fr.1 = S1 + S2	Fr.6 = S2 + S3	Fr.11 = S3 + S5																				
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	<p>Signal = Formula</p> <p>Whenever signal 6 is detected a new process begins. The following signal to be received will determine the formula number (as long as it is different from 6). When one of these signals arrives for the second time, the unit will proceed with the corresponding dosage. In case all the signals are available in the machine, the maximum number of formulas is 7.</p>																					
	<p>Time signal 6</p> <p>Every time signal 6 is detected, a new cycle will begin. The formula number corresponds to the time that signal 6 remains enabled in multiples of 5:</p> <table border="0"> <tr> <td>Form. 1 = 5 s</td> <td>Form. 6 = 30 s</td> <td>Form. 11 = 55 s</td> </tr> <tr> <td>Form. 2 = 10 s</td> <td>Form. 7 = 35 s</td> <td>Form. 12 = 60 s</td> </tr> <tr> <td>Form. 3 = 15 s</td> <td>Form. 8 = 40 s</td> <td>Form. 13 = 65 s</td> </tr> <tr> <td>Form. 4 = 20 s</td> <td>Form. 9 = 45 s</td> <td>Form. 14 = 70 s</td> </tr> <tr> <td>Form. 5 = 25 s</td> <td>Form. 10 = 50 s</td> <td>Etc...</td> </tr> </table>	Form. 1 = 5 s	Form. 6 = 30 s	Form. 11 = 55 s	Form. 2 = 10 s	Form. 7 = 35 s	Form. 12 = 60 s	Form. 3 = 15 s	Form. 8 = 40 s	Form. 13 = 65 s	Form. 4 = 20 s	Form. 9 = 45 s	Form. 14 = 70 s	Form. 5 = 25 s	Form. 10 = 50 s	Etc...						
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	<p>Time signals 1+5</p> <p>Every time signals 1 and 5 are detected simultaneously, a new cycle will begin. The formula number is obtained according to the time that signals 1 and 5 remain ON:</p> <table border="0"> <thead> <tr> <th>Formulas 1 to 9</th> <th>Formulas 11 to 19</th> <th>Formulas 21 to 29</th> </tr> </thead> <tbody> <tr> <td>Fr.1 = 10s + 5s</td> <td>Fr.11 = 15s + 5s</td> <td>Fr. 21 = 20s + 5s</td> </tr> <tr> <td>Fr.2 = 10s + 10s</td> <td>Fr.12 = 15s + 10s</td> <td>Fr. 22 = 20s + 10s</td> </tr> <tr> <td>Fr.3 = 10s + 15s</td> <td>Fr.13 = 15s + 15s</td> <td>Fr. 23 = 20s + 15s</td> </tr> <tr> <td>Fr.4 = 10s + 20s</td> <td>Fr.14 = 15s + 20s</td> <td>Fr. 24 = 20s + 20s</td> </tr> <tr> <td>...</td> <td>...</td> <td>...</td> </tr> <tr> <td>Fr.9 = 10s + 45s</td> <td>Fr.19 = 15s + 45s</td> <td>Etc...</td> </tr> </tbody> </table> <p><i>Formulas 10,20,30... are forbidden</i></p>	Formulas 1 to 9	Formulas 11 to 19	Formulas 21 to 29	Fr.1 = 10s + 5s	Fr.11 = 15s + 5s	Fr. 21 = 20s + 5s	Fr.2 = 10s + 10s	Fr.12 = 15s + 10s	Fr. 22 = 20s + 10s	Fr.3 = 10s + 15s	Fr.13 = 15s + 15s	Fr. 23 = 20s + 15s	Fr.4 = 10s + 20s	Fr.14 = 15s + 20s	Fr. 24 = 20s + 20s	Fr.9 = 10s + 45s	Fr.19 = 15s + 45s	Etc...
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(continued)

3.00 programming (continued)

3.07 Washer Extractor Parameters (continued)

6) Washing process: (continued)



Binary


Every time signal 6 is detected along with any combination of the others, the unit will begin a new cycle. The Formula number is determined by the binary value of the combination of signals:

Fr.1 = S6 + S1	Fr.6 = S6 + S3 + S2
Fr.2 = S6 + S2	Fr.7 = S6 + S3 + S2 + S1
Fr.3 = S6 + S2 + S1	Fr.8 = S6 + S4
Fr.4 = S6 + S3	Fr.9 = S6 + S4 + S1
Fr.5 = S6 + S3 + S1	Fr.10 = S6 + S4 + S2

See manual for more combinations

Formula selector

The selection of the formula is done manually by using a selector. Use this option when the machine does not allow to control its signals. Remember to identify the selector with the same machine number as the board where it is connected



7) Trigger mode – Sequential, Signal + 1st Phase, sequential + 1st phase or signal + repetition.

8) Finish mode – signal or pump. Choose whether you want the unit to end the program via a pump or signal (signal number, i.e. final rinse, door lock etc).

9) Default formula after finish – choose a formula number for the unit to reset to after finish (0 will create the unit to not select a formula).

10) Hold machine

- Activation – choose from Not used if no machine hold is present, while queued (whilst waiting for dosage) or while queued/ during dosage.
- Delay – the Time the unit waits before activating the hold order. Commonly used to let the washer extractor gain some level of water.
- Timeout – maximum amount of time before the hold times out.

11) Click on Save at the bottom of the page.

3.08 Formulas

1) Click on Formulas in the left-hand column, the page shown at the top of the next page will open.

2) Formulas

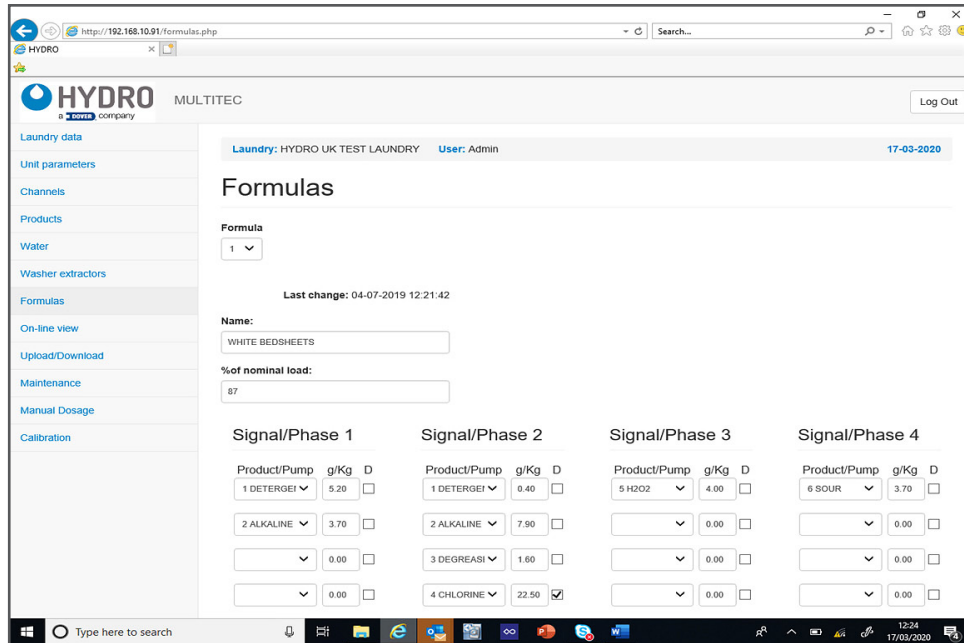
- Formula – the number of the formula you want to program.
- Last change – this shows the date the formula was last edited.
- Name – the name of formula i.e. white bedsheets.
- % of nominal load - % of load the unit will dispense chemical for.

3) Signal/phase

- Product/pump - enter the product i.e. detergent.
- oz/cwt or g/kg - enter the amount to dispense in ounces per hundredweight (oz/cwt) or grams per kilogram (g/kg).
- D – tick this box to add a delay.
- Delay 1 – the time in which the whole phase is on hold before dosing any products (commonly used to allow the machine to achieve a water level in the drum when the signal is activated from a fill valve).
- Delay 2 – takes place after delay 1 has expired and will only be applied to products that have been activated with a tick. The full sequence of leak test, water test, etc, will be applied before any dosing is achieved, even if a 1 second delay is set.

3.00 programming (continued)

3.08 Formulas (continued)

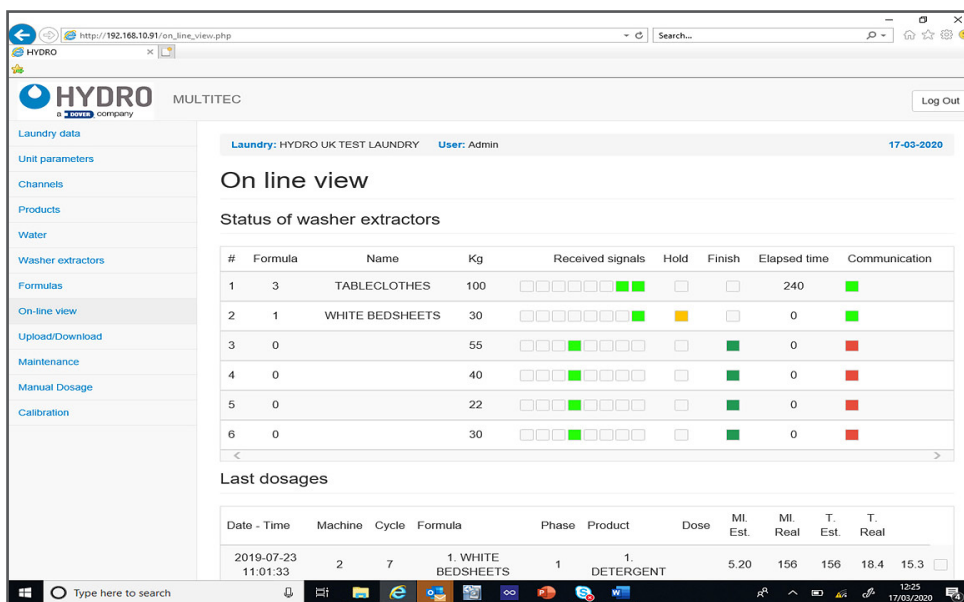


Formula Settings

- 4) Repeat the above steps for each signal/phase that chemical is to be added.
- 5) Click on Save at the bottom of the page.

3.09 On-line View

- 1) Click on On-line View in the left-hand column, the page shown below will open.



On-line View

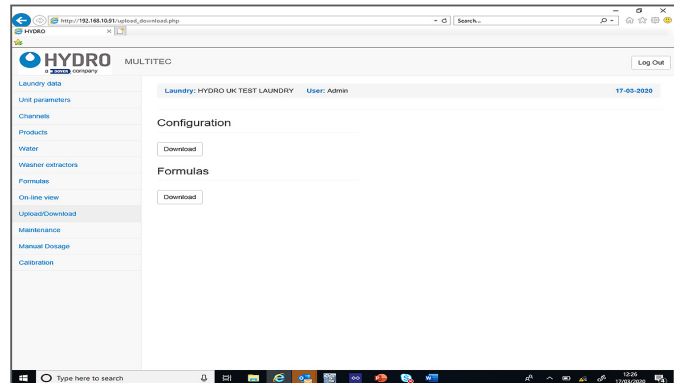
- 2) From the windows displayed in the on-line view you will be able to see the status of the machines, which programs are running and what signals have been received.

You will also be able to see if the machines are on hold, the amount of chemical dosed, downtime and if alarms have been received.

3.00 programming (continued)

3.10 Upload/Download

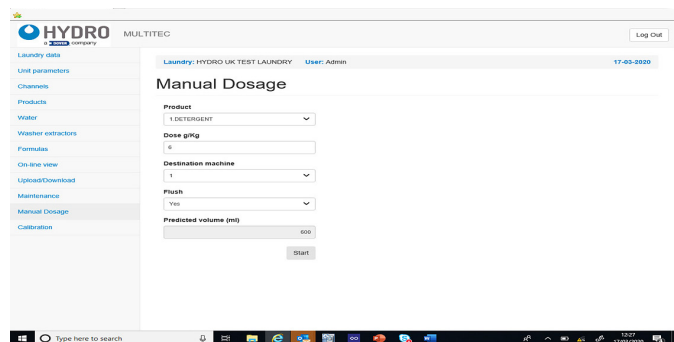
- 1) Click on Upload/Download in the left-hand column, the page shown will open.
- 2) From this screen you can upload the settings you have entered within the programmer on your computer/tablet etc or download from the unit.
- 3) Click on Save at the bottom of the page.



Upload/Download

3.11 Manual Dosage

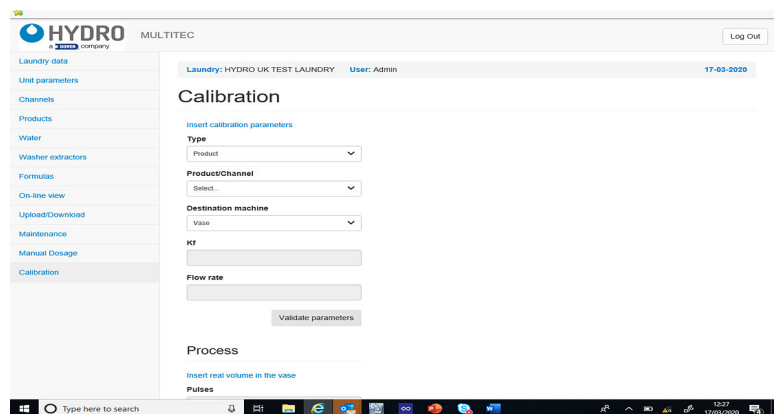
- 1) Click on Manual Dosage in the left-hand column, the page shown will open.
- 2) From this page you can enter the desired product, dosage, machine and whether you want flush to create a manual dosage.
- 3) Clicking on Start will begin the dosage.



Manual Dosage Settings

3.12 Calibration

- 1) Click on Calibration in the left-hand column, the page shown will open.
- 2) Type – choose whether you want to calibrate a product or water.
- 3) Product/channel – select the product you want to calibrate or the channel for water.
- 4) Destination machine – choose which machine you want to calibrate to at the point of inlet. Although currently you must choose a washer extractor, a 3-way valve can be installed to make the physical calibration easier.
- 5) Click on validate parameters to obtain KF value and Flow rate. (**CAUTION!** ALWAYS press “Validate Parameters” before pressing the calibration button, even if you want to re-calibrate after having cleaned the channel, without entering a real volume.)
- 6) Place chemical drum on measuring scales and Tare to obtain zero. Initiate by holding the calibration button, use the amount grams obtained on the measuring scales calculating exact dosage by using the specific gravity (SG) of the product.
(**Note:** Chlorine’s SG is higher than most standard products.)
- 7) Insert real obtained value and save.
- 8) Repeat for all products



Calibration Settings

4.00 operation

4.01 Start-Up

After having installed the unit, carry out the start-up by following the steps below.

Previous requirement and unit configuration

Make sure that the laundry is created in Hydro Connect and the equipment is registered in it. In this way the obtaining of statistical data will be enabled. Start the equipment through the side switch. The service pilot will light.

4.02 Prime Product Delivery Tubes

First, all the outlet pipes must be filled with water. To do this access the calibration screen and use the 'Water' selection in the calibration mode. After filling all the tubing, check that there are no leaks, then continue with the start-up.

Prime the suction tubes of each product

We have to fill each tube that goes from the suction rod to the pumps using the calibration screen as in the previous step. In this case, we will select 'Product' as the calibration mode. After priming each tube, the channel must be cleaned. It is important to take into account the chemical incompatibilities choosing the order of the products to be primed.

4.03 Calibrate the products

You must keep 'Product' on the calibration screen. As described in section 3.12, we will select each product and press the calibration button sending the dosage to a washing machine. After determining the amount of chemical dosed, enter that volume into the calibration screen.

4.04 Calibrate the water.

The water must be calibrated to the furthest washing machine.

4.05 Check the dosage

To be sure that the meter works correctly, we can perform manual dosages and take a sample. The amount obtained must be the same as the estimated amount that appears on the screen.

The manual dosages have to be done without the flush, which involves doing a channel cleaning.

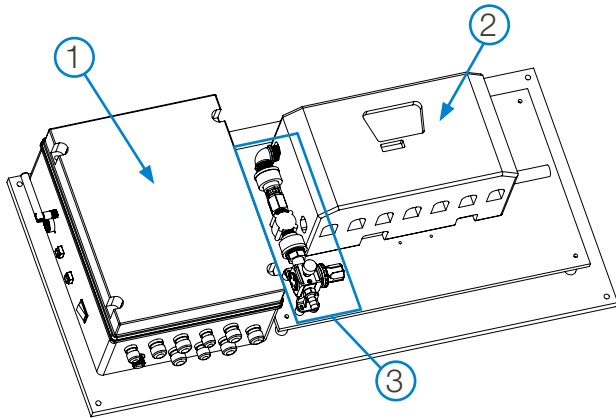
4.06 Adjust the flush of each washing machine

The user has to execute manual dosages to each washing machine. It is advisable to choose a product with a visible color. Looking at the entrance of the washing machine, we can know if the configured flush is enough to send the product inside. If we want to modify the water flush, we can go to the washing extractor parameters screen to do it.

4.07 Start each washing machine and check signals

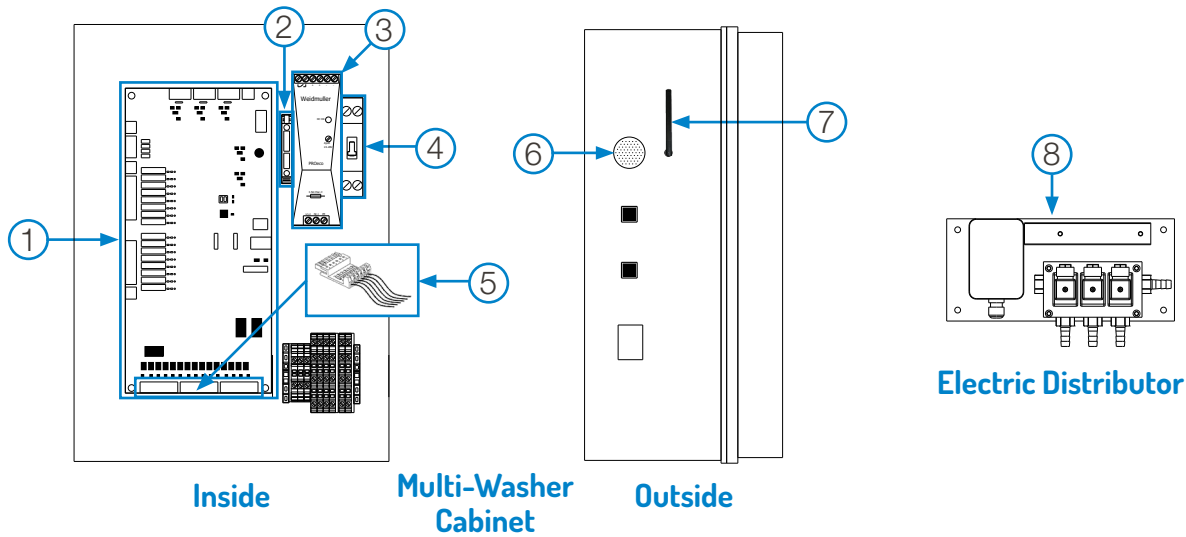
If the signals of the washing machines are connected correctly, we will activate them one by one to verify the signal reception. The formula number and the corresponding phases must be seen on the 'View washing machines' screen.

5.00 service parts



General Orientation

Key	Description
1	MW-3000 Control Cabinet
2	EvoClean Dispenser (4, 6 and 8-product models available)
3	Water Inlet Assembly

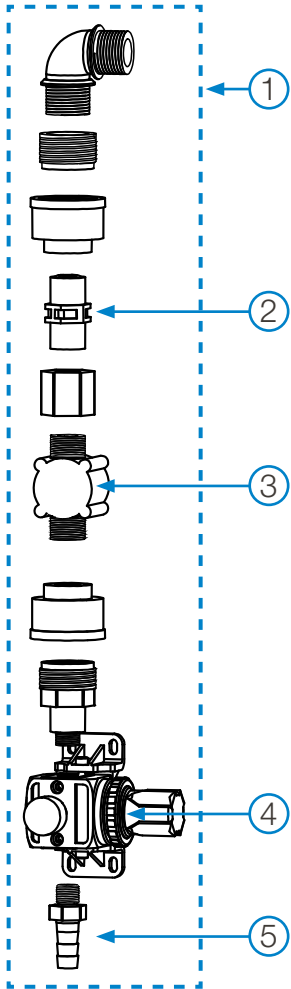


Key	Part No.	Description
1	HYD1161M3P1CV	Multi-Washer 3000 Control Board
2	HYD5753NSYTRV42SF5	Fuse Connector Kit, with 3 Amp Fuse
3	HYD57351000005	Power Supply, 24VDC, up to 5 Amps, 120 Watt
4	HYD6153IDPN21643	PN-C Circuit Breaker, 6 Amp
5	HYD11MA992013	Washer Signal Voltage Adapter Kit (Qty. 3, 220VAC Adapter Boards)
	HYD11MA992013L	Washer Signal Voltage Adapter Kit (Qty. 3, 110VAC Adapter Boards)
	HYD11MA992013M	Washer Signal Voltage Adapter Kit (Qty. 3, 24V Adapter Boards)
6	HYD1121101	Alarm Buzzer
7	HYD2721ANT001	Wi-Fi external antenna 2.4 GHz with cable, SMA RP Female B/H
8	HYD1161DISE3LPU	3-Washer Electric Distributor
	HYD1161NIVDOSP	Optional MW-3000 Low Level Alarm Board (not shown)

EvoClean Dispenser

Detailed maintenance instructions with photographs; and a complete service parts listing for the EvoClean Dispensers is available online at the EvoClean product page of the Hydro Systems website.

5.00 service parts (continued)



Water Inlet Assembly

Key	Part No.	Description
1	HYD11MA11650001	Complete Water Inlet Assembly
2	HYD041721090224	1/2" Check valve with internal spring for injection
3	HYD11172001	Flow meter for MW-3000 Series
4	331610836104	Water pressure regulator + accessories
5	HYD54808400239	PP Barb 1/4" x 12mm Tube, with O-Ring

6.00 warranty

6.01 Limited Warranty

Seller warrants solely to **Buyer** the Products will be free from defects in material and workmanship under normal use and service for a period of one year from the date of completion of manufacture. This limited warranty does not apply to (a) hoses; (b) and products that have a normal life shorter than one year; or (c) failure in performance or damage caused by chemicals, abrasive materials, corrosion, lightning, improper voltage supply, physical abuse, mishandling or misapplication. In the event the Products are altered or repaired by **Buyer** without **Seller's** prior written approval, all warranties will be void.

No other warranty, oral, express or implied, including any warranty of merchantability or fitness for any particular purpose, is made for these products, and all other warranties are hereby expressly excluded.

Seller's sole obligation under this warranty will be, at **Seller's** option, to repair or replace F.O.B. **Seller's** facility in Cincinnati, Ohio any Products found to be other than as warranted.

6.02 Limitation of Liability

Seller's warranty obligations and **Buyer's** remedies are solely and exclusively as stated herein. **Seller** shall have no other liability, direct or indirect, of any kind, including liability for special, incidental, or consequential damages or for any other claims for damage or loss resulting from any cause whatsoever, whether based on negligence, strict liability, breach of contract or breach of warranty.



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