



# HYDRALOOP RECYCLE READY GUIDE

## Dear Hydraloop Customer,

We're excited to learn that you're embracing the efficiency of using water twice with Hydraloop. To ensure a seamless experience, let's confirm that your building is 'Recycle Ready.' This guide provides you with the necessary information.

Preparing a building for greywater recycling is straightforward. Essentially, you'll need to add some extra piping to and from the Hydraloop device, along with ensuring proper ventilation, power supply and Wi-Fi or ethernet access. Looking ahead, new builds worldwide will be designed and constructed with 'Recycle Ready' capabilities in mind.

Thank you for taking this eco-friendly step with Hydraloop.

## Owner Guidelines

This section of the Recycle Ready Guide is crucial for both the future building owner and the Hydraloop device user. Please carefully review the Owner Guidelines and ensure that you sign the Recycle Ready Checklist once all preparations are completed.

## Plumbing & Installation Guidelines

The second part of the Recycle Ready Guide provides essential information for the plumber or constructor responsible for preparing the building's infrastructure. Before the work starts, it is imperative that all parties involved thoroughly understand both the Plumbing & Installation Guidelines. Once preparations are complete, have your construction professional verify and co-sign the Recycle Ready Checklist. Then, send the co-signed Checklist to your Hydraloop Partner.





## Water Lines Before Installation

Upon achieving the 'Recycle Ready' status for the building, all water lines can be made operational, even if the Hydraloop device has not been installed. On the scheduled installation date, your Hydraloop installer will remove the bridge connection, place the device at the agreed-upon location, and establish connections to and from the device.

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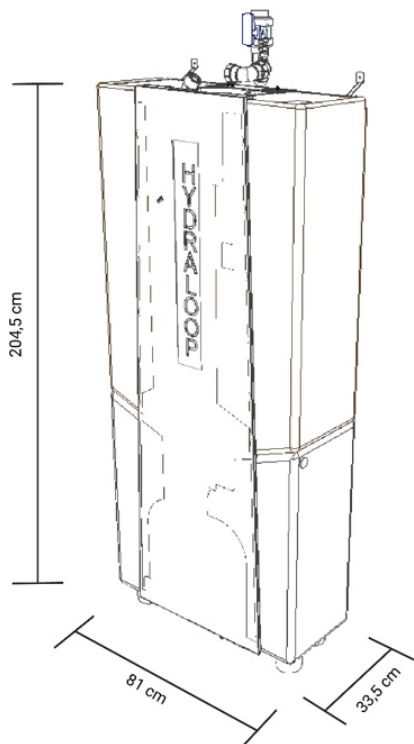
## 1. OWNER GUIDELINES

- 
**Work with professionals**  
 The preparation of your plumbing network should be completed by a verified professional.
- 
**Check your local regulations**  
 Before moving forward with your installation, please check your local guidelines for recycled greywater reuse.
- 
**Submit your Recycle Ready Checklist before installation**  
 Before the installation of your HydraLoop device, it is important to ensure the building is Recycle Ready. Together with your plumber or constructor, co-sign the Recycle Ready Checklist and forward it to your HydraLoop Partner for verification. If you do not submit the checklist in time, we cannot verify, and therefore cannot proceed with the installation.
- 
**Ask if your HydraLoop installer has a viable HDM login**  
 On the agreed installation date, your HydraLoop installer must have a prearranged login for the HydraLoop Device Manager (HDM) with a HydraLoop Sales Engineer. Without this access, activation of the device cannot be performed.

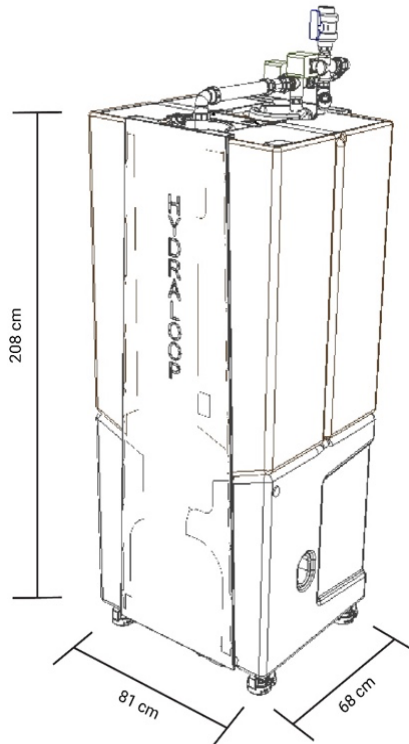
## 2. PLUMBING & INSTALLATION GUIDELINES

### 2.1 Size and Location

H300



H600





### **Location**

Hydraloop recommends installing the device in a mechanical or technical room, basement, garage, or a laundry room.

### **Sound**

A Hydraloop device is in action 24/7, collecting, treating, and redistributing water. The movement of water will produce some sound. Therefore, we do not recommend installing it in a living space.

### **Temperature**

The room temperature should be between 14-35 °C | 57-95 °F.

### **Sunlight**

Avoid direct sunlight on the Hydraloop device. It is not IP rated or UV resistant.

### **Greywater Inlet**

The greywater inlet and inlet diverter should be positioned at least 2.2m | 87" above the ground.

### **Service space**

Allow at least 80 cm | 31" of space in front of the Hydraloop device face plate for maintenance access. The H300 device will typically be placed against a wall. The H600 device has two sides (left and right) that should be accessible for maintenance.

## **2.2 Plumbing Options**

### **Hydraloop device on a lower floor – input by gravity**

Greywater from the shower/bath or other sources is gravity fed into the Hydraloop device.

### **Hydraloop device on the same floor – input via lift pump**

Greywater from the shower/bath or other sources enters the device through lift pump.

### **Optional: Inlet diverter for washing machine**

50% of washing machine greywater is treated by the Hydraloop device through the Inlet Diverter.

## 2.3 Plumbing Guidelines



### Input Connections

**For H300:** Only collect lightly contaminated greywater from shower/bath and washing machine (with optional inlet diverter). Do not connect the Hydraloop device to dishwashers, floor drains, or a kitchen sink.

**For H600:** Only collect lightly contaminated greywater from shower/bath and washing machine (with optional inlet diverter) and condensation water from air conditioning, heat pump, and tumble dryer. Do not connect the Hydraloop device to dishwashers, floor drains, or a kitchen sink.



### Output connections

Reusable water can be used for toilet flushing, washing machine and/or distributed via an auxiliary outlet (for garden irrigation or pool top-up). Do not supply bidets and/or hand showers with reusable water.



### Non-potable Water Identification

All outputs from the Hydraloop system must be identified with a non-potable water sign.

## 2.4 Power/Network Requirements

Ensure there is an outlet within 1.2 meters | 47 inches of the Hydraloop device, as it operates on a 100-120V (60Hz) or 200-240V power supply.

A stable WiFi internet connection is required for the Hydraloop device, supporting either 2.4GHz or 5GHz bandwidths. Additionally, the device is equipped with Ethernet and Bluetooth (v 2.0) capabilities. This internet connection is essential for monitoring the water treatment process and ensuring the quality of the reused water.

## 2.5 Extraordinary Situations

### Operation during power outage

Hydraloop devices operate seamlessly using a standard wall outlet. During a power outage, the device automatically switches to its backup batteries to safely drain the tanks, preventing any potential overflow. However, it's important to note that during a power loss, the device won't be able to supply water to toilets and/or the washing machine. To ensure continuous water availability, we recommend considering the following backup options:

- **UPS (Uninterruptible Power Supply):** Invest in a UPS to provide temporary power and maintain the Hydraloop's functionality during short-term outages.
- **Generator:** Install a generator to supply continuous power, ensuring uninterrupted operation of the Hydraloop in the event of prolonged power cuts.
- **Selective Water Usage:** If multiple toilets are in use, designate one toilet to be supplied by tap water during a power outage.
- **Backup Bypass to Tap Water:** Implement a backup bypass system connecting the device to tap water as an alternative water source during power outages.

### Water Hardness

Before installation, please check the water hardness level of the water supplied by your water utility. If the water in your region exceeds 7 grains per gallon, we recommend installing a water softener and/or to ensure regular maintenance for scale removal. Descaling is part of the scheduled maintenance program. Your Hydraloop installer will insert citric acid in the shower drain, which enters the Hydraloop device. Then, the device runs an internal cleaning cycle, descaling all essential components.

### Water Hardness Scale

Grains per gallon (GPG)	mg/L & ppm (parts per million)	Classification
Less than 1	Less than 17.1	Soft
1 - 3.5	17.1 - 60	Slightly Hard
3.5 - 7	60 - 120	Moderately Hard
7 - 10	120 - 180	Hard

### 2.6 Lift Pump Requirements

A lift pump is recommended when gravity alone cannot supply grey water to or remove wastewater from a Hydraloop device due to the device's placement in a home or building.

#### Install a lift pump in these 2 situations:

1. To lift water from showers, baths, or washing machines that are placed below the 2,2 meter top inlet of the Hydraloop device. For example, the Hydraloop device is placed on the first floor and the shower and washing machine are on the ground floor. The lift pump will pump the greywater up to the device.

2. If the Hydraloop device is placed in a basement without a gravity-fed sewer, you can install a lift pump to pump wastewater up to the sewer line.

Hydraloop 1.5 devices can control the lift pump via the "Greywater Bypass", if connected to the 2.5 amp power outlet on the back of the device. For this option, you require an applicable electrical connector. This connector is not supplied by Hydraloop.

Hydraloop 2.0 devices are not connected to the lift pump in any way.

Please install a lift pump that is locally available and meets the following criteria:

- Max. flow of 100 LPM/27 USGPM
- Hydraloop device is equipped with a power outlet at the back of the device for controlling the lift pump
- Ventilation: ensure a proper two-way ventilation by installing ventilation stack that leads outside or by creating a relief line/overflow to sewage.

**Advised Models:**

- DAB NovaBox 30/300 (230V)
- Saniflo Sanivite (110V)
- Liberty 405 Pump (110V, CSA certified)

### 3. WATER LINES BEFORE INSTALLATION

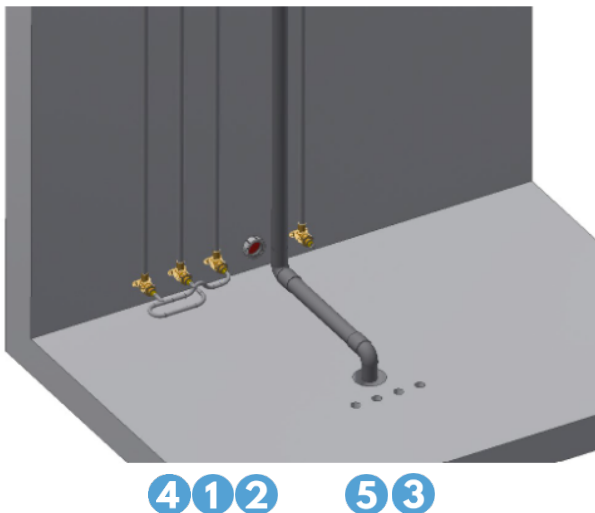
Once the plumbing configuration is Recycle Ready, the 3-way greywater selector can be set to bypass mode. This will allow the backup water to be supplied to the toilets and/or washing machine until the Hydraloop device has been delivered and installed.

**IN THE WALL (H300 only - recommended)**



<b>1</b>	<b>Toilet feed</b> Reusable water
<b>2</b>	<b>Washing machine feed</b> Reusable water
<b>3</b>	<b>Auxiliary outlet</b> Reusable water
<b>4</b>	<b>Backup water</b> Tap water or rainwater
<b>5</b>	<b>Wastewater</b> to sewer

**IN THE FLOOR (H300 and H600)**

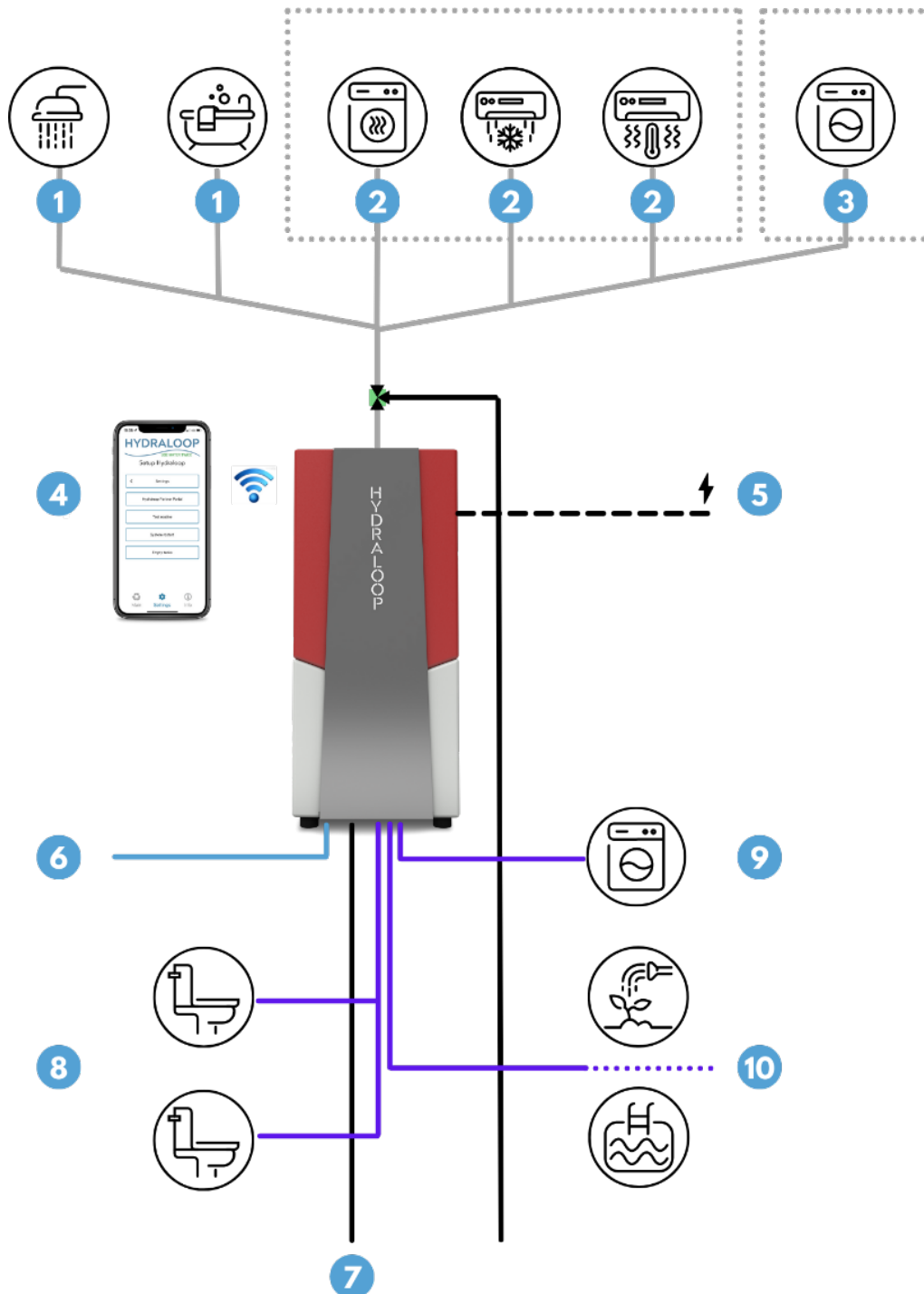


## 4. CONNECTION OVERVIEW

### Input connections

Main greywater inlet into the top of the HydraLoop device: 40 mm | 1 1/2" OD

- Bring all greywater sources into one dedicated line.
- Please ensure that all greywater lines are separated from black water.
- If the greywater input is on a higher floor than the HydraLoop device, gravity will direct the flow.
- In other circumstances, install a lift pump.



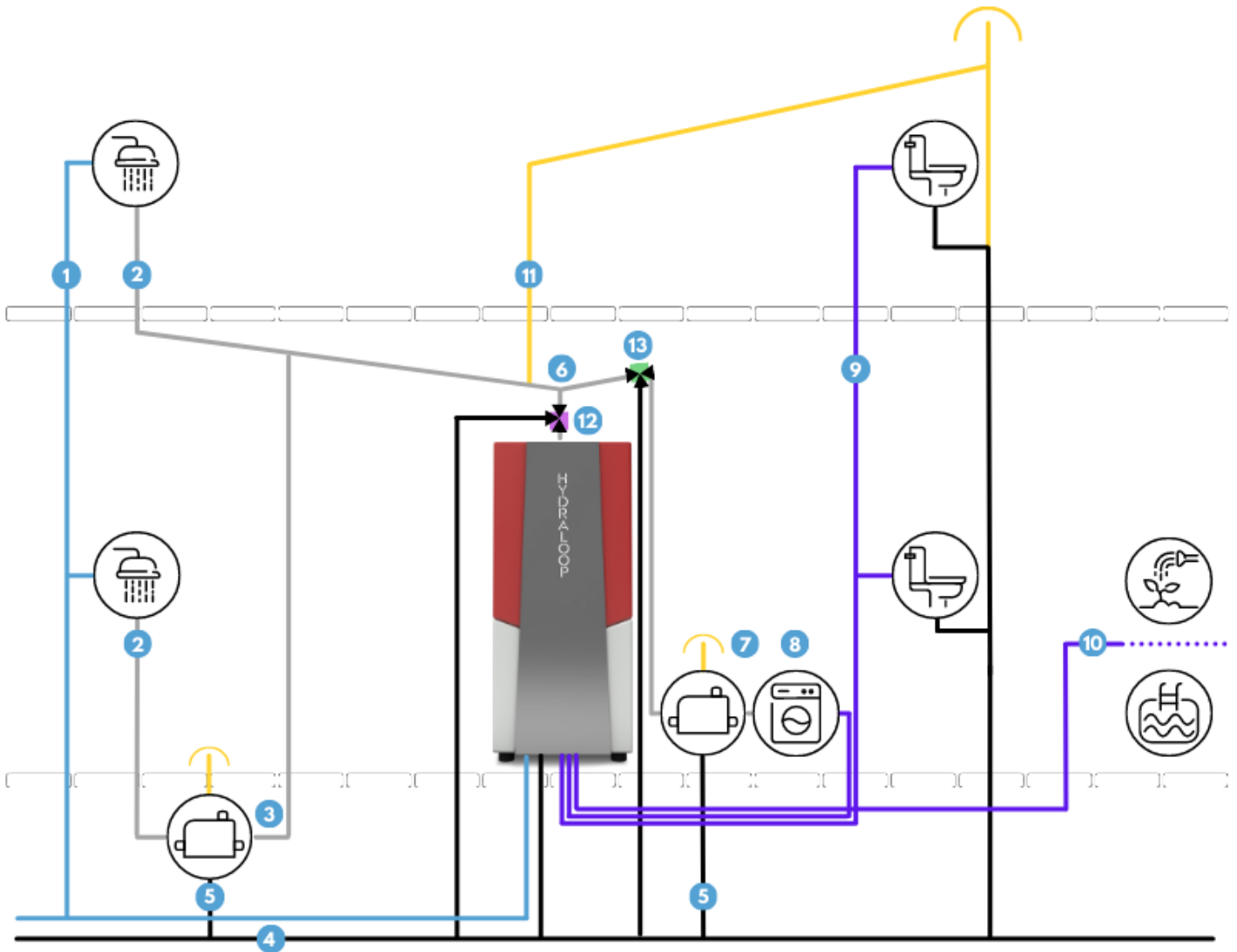


Greywater inlet to the Hydraloop device from		
<b>1</b>	H300 and H600	Shower and Bath
<b>2</b>	H600	Tumble dryer, Air conditioning and Heat pump
<b>3</b>	H300 and H600	Optional: Washing machine (only with inlet diverter) You can connect only one (1) washing machine per Hydraloop device

Power/Network connections	
<b>4</b>	<b>Permanent WiFi internet connection:</b> Bandwidth of 2.4GHz or 5 GHz Ethernet & Bluetooth (v 2.0)
<b>5</b>	<b>Power supply:</b> 100-120V (60Hz) or 200-240V Outlet to be within 1.2 m of device
<b>6</b>	<b>Backup water inlet</b> Tap water or other: 15 mm   ½" MNPT - flow of 12 LPM   3.2 USGPM If the flow rate is higher than 12LPM   3.2 USGPM, floater cap and flow regulator. If you use a rainwater pump, install an expansion vessel and 50-micron mesh pre-filter.

Output connections	
<b>7</b>	<b>Wastewater outlet</b> Connection to sewer: 40 mm   1½" OD (min. of 50 mm   2") with rubber sleeve Wastewater from the Hydraloop device to sewer (gravity) operates on a timer for wastewater release every 7 days
<b>8</b>	Toilet flushing (pressurized): 15 mm   ½" MNPT
<b>9</b>	Washing machine (pressurized): 15 mm   ½" MNPT
<b>10</b>	Auxiliary outlet (non-pressurized): 15 mm   ½" MNPT

## 5. RECYCLE READY PLUMBING DIAGRAM

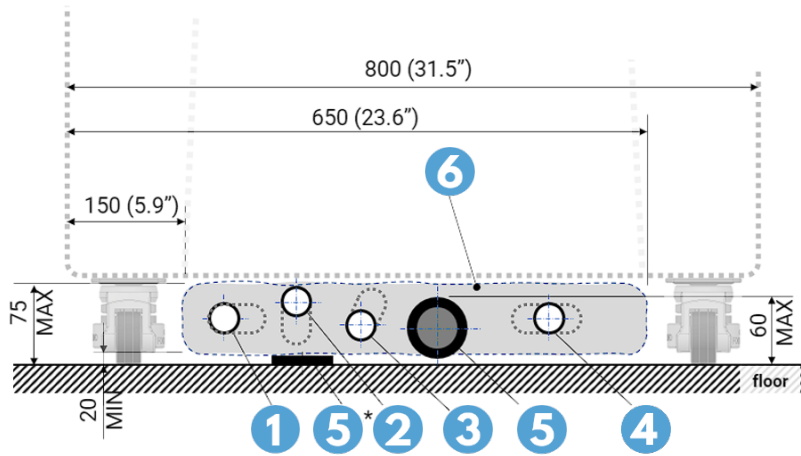


<b>1</b>	Backup water
<b>2</b>	Greywater and condensation water
<b>3</b>	Lift pump
<b>4</b>	Sewage line
<b>5</b>	Lift pump overflow + maintenance waste
<b>6</b>	Greywater and condensation water inlet
<b>7</b>	Washing machine greywater lift pump

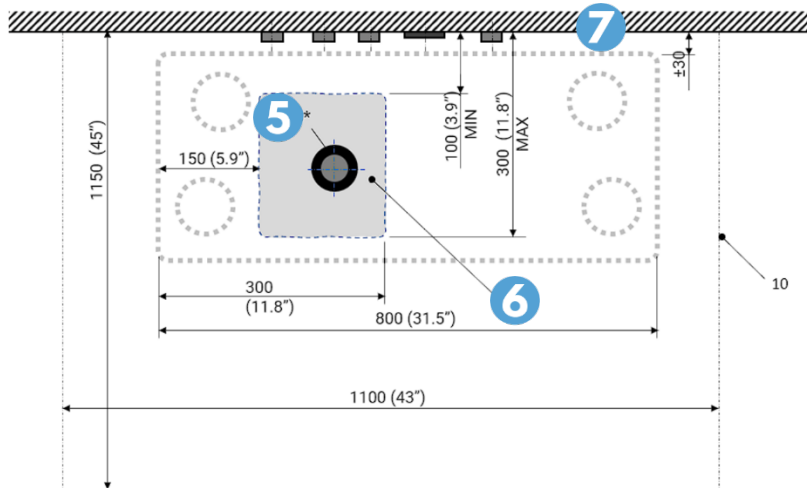
<b>8</b>	Washing machine reusable water feed
<b>9</b>	Toilet reusable water feed
<b>10</b>	Auxiliary reusable water feed (garden or pool)
<b>11</b>	Ventilation
<b>12</b>	Manual three-way bypass valve (not included with device)
<b>13</b>	Electrical inlet diverter (for washing machine greywater input)

## 6. TECHNICAL DRAWINGS

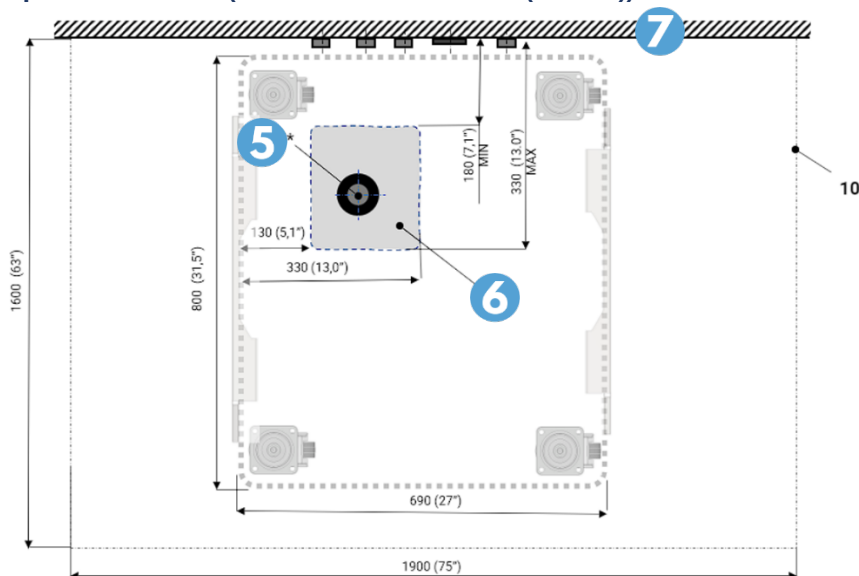
### Front view of H300 and H600



### Top view of H300 (All dimensions in mm (inches))



### Top view of H600 (All dimensions in mm (inches))



<b>1</b>	<b>Auxiliary outlet</b> Reusable water: connect with flexible hose provided
<b>2</b>	<b>Toilet feed</b> Reusable water: connect with flexible hose provided
<b>3</b>	<b>Washing machine feed</b> Reusable water: connect with flexible hose provided
<b>4</b>	<b>Backup water</b> Tap water and rainwater
<b>5</b>	<b>Wastewater to sewer in the <u>wall</u></b> 50-75mm   2 - 3" sewer connection with rubber manchet
<b>5*</b>	<b>* Wastewater to sewer in the <u>floor</u>:</b> 50-75mm   2 - 3" sewer connection with rubber manchet
<b>6</b>	Allowed area
<b>7</b>	Wall

## 7. SYSTEM SPECIFICATIONS

<b>Hydraloop H300</b>	
Volume	300 liters   80 gallons
Cleaning capacity	360 liters   95 gallons per day depending on user behavior
Voltage	100 / 240V, 24V internal
Average power consumption	220 kWh/year, 25W during treatment
WiFi	The Hydraloop device needs to be connected with an internal WiFi-network
Noise Level	± 44 dB.
Greywater input sources	- shower - bath - washing machine (with inlet diverter)

<b>Hydraloop H600</b>	
Volume	600 liters   160 gallons
Cleaning capacity	850 liters   225 gallons per day depending on user behavior
Voltage	100 / 240V, 24V internal
Average power consumption	460 kWh/year, 53W during treatment
WiFi	The Hydraloop device needs to be connected with an internal WiFi-network
Noise Level	± 46 dB.
Greywater input sources	- shower - bath - tumble dryer - air conditioning - heat pump - washing machine (inlet diverter)

## 8. GLOSSARY OF TERMS

### **Auxiliary Outlet**

This valve allows for the distribution of reusable water to be used for the garden, irrigation, or pool top-up (depending on your region). This outlet is non-pressurized.

### **Backup water**

Water that is used as a main source of water in the building. This could be tap water, municipal water, well water, rain water etc. Another term for backup water is 'mains water'.

### **Blackwater**

Contaminated wastewater containing pathogens from human waste and other organic materials. This waste stream can come from toilets, bidets, hand showers, floor drains, dishwashers, and kitchen sinks.

### **Greywater**

Lightly contaminated domestic water coming from the drains of baths, showers and washing machines.

### **Hydraloop APP**

This is an APP that device owners can download on their smartphone. The APP monitors how a Hydraloop device is functioning, offers tips on how to save more water and gives encouragement when water savings in the building are at a high level. The APP will notify the owner when the 21-day Activation date (and a minimum of 20 showers/baths) has been reached and when the device is ready to distribute reusable water.

### **Hydraloop Device Manager (HDM)**

Online monitoring system for the Hydraloop device. During installation, this platform is used for testing, verification, and activation of the Hydraloop device. After installation, the HDM is used for monitoring, maintenance, troubleshooting and ticket generation. Before installation of a Hydraloop device, the HDM requires login credentials, provided by Hydraloop. Please ask your Hydraloop installer if your device has a viable login-code before installation.

### **Inlet diverter**

This optional valve allows for the intake of greywater from sources other than the shower/bath i.e. the washing machine. By adding this valve to the inlet of the Hydraloop device, greywater from the washing machine can be treated for reuse.

### **Recycle Ready Guide**

This is a guide provided by Hydraloop, aimed at device owners, plumbers, and contractors. The Recycle Ready Guide explains how to prepare and configure the plumbing network in a building, so it is ready to receive and recycle greywater.

### **Recycle Ready Checklist**

Once preparations are complete, the Hydraloop owner and construction professional verify and co-sign the 'Recycle Ready Checklist'. Then, the Hydraloop owner sends the co-signed Checklist to their Hydraloop Partner. Without a signed and verified Recycle Ready Checklist, an installation date cannot be planned.

### **Reusable water**

Greywater that has undergone various steps of treatment to be reused for toilet flushing, water for the washing machine and/or outdoor uses (irrigation, pool top-up).

### **Start-up Time**

The Hydraloop device requires a minimum of 21 days (3 weeks) or 20 showers to develop the biological treatment process in the T2 tanks and become fully operational. If the device has not sensed 20 showers by 21 days of operation, the start-up time will last longer.

### **Ventilation**

This is placed along the greywater line to prevent anti-siphoning of water out of airlock. Ensure that the greywater input and sewage output both have proper two-way ventilation. Ventilation for greywater input should be above all greywater lines and end outside the building.