# Recycle Ready Guide – Hydraloop

## Is your building Recycle Ready?

Water conservation is becoming increasingly important, and greywater recycling is an effective way to reduce drinking water use and waste water production. Hydraloop enables you to reuse water from showers, baths and ablution for non-hygienic purposes as flushing toilets, laundry, garden irrigation and topping up pools.

However, before installing a Hydraloop, your plumbing must be *Recycle Ready*. This guide will help you determine whether your building meets the necessary requirements or what modifications may be needed.

## What does “Recycle Ready” mean?

In most conventional plumbing systems, all wastewater is sent directly to the sewer. This includes greywater (from showers, baths and ablution) as well as blackwater (from toilets, kitchen sinks, etc.). While blackwater must always be drained, greywater can be treated and reused safely thus helping to conserve drinking water and reduce wastewater.

Being Recycle Ready means your plumbing system is correctly set up to work with a Hydraloop, ensuring efficient greywater collection, recycling and reuse.

## How does Hydraloop work?

Hydraloop treats greywater using a natural process using an aerated bioreactor, similar to those used in large-scale wastewater treatment facilities. The system collects greywater, removes contaminants and receives regular UV disinfection to make it certified microbiologically safe and suitable for reuse in non-potable applications.

For the system to function properly, it requires:

- A dedicated greywater drain;
- An overflow connection and an open-to-air vent to maintain proper drainage;
- An internet connection to connect to the Hydraloop Device Manager (HDM)

The HDM allows you to monitor the greywater recycling process and provides remote access for maintenance and troubleshooting when needed.

# Verifying Recycle Readiness

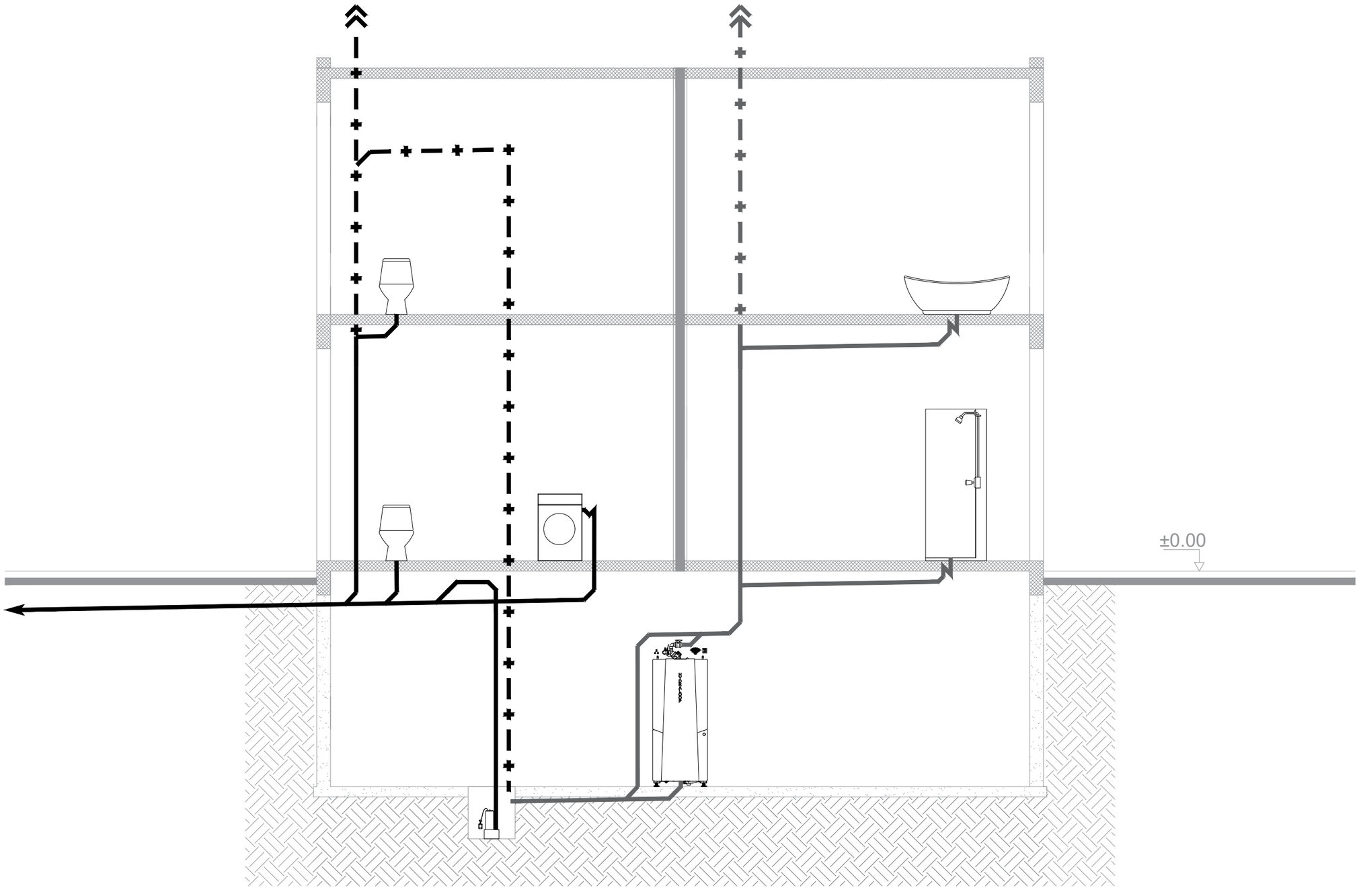
Before purchasing a Hydraloop system, it is important to ensure the building is suitable for in property water recycling. Review the requirements with you Hydraloop partner to prevent unexpected issues later in the process.

If any plumbing activity is planned, make sure the Recycle Ready Pre-Checklist is completed in advance. This should be done in cooperation with a qualified installer and submitted before plumbing begins. It helps confirm that all installation requirements are met and avoids unnecessary delays or modifications.

Before installation and verification of the Hydraloop unit, submit the Recycle Ready Confirmation Checklist. This confirmation secures that all plumbing conditions prior to Hydraloop installation and verification have been met. The Hydraloop verification will then confirm whether the system is ready for commissioning and proper operation.

# Plumbing diagrams

The following pages contains several plumbing diagrams which illustrate the proper drainage and water supply connections in various configurations.




**LEGEND**

- GREYWATER
- VENT
- BLACKWATER
- VENT

***Plumbing works fall outside the scope of Hydraloop products.***

**SUBJECT:**

Plumbing Schematic Drawing
(Hydraloop in Basement)

*Use Water Twice*
HYDRALOOP

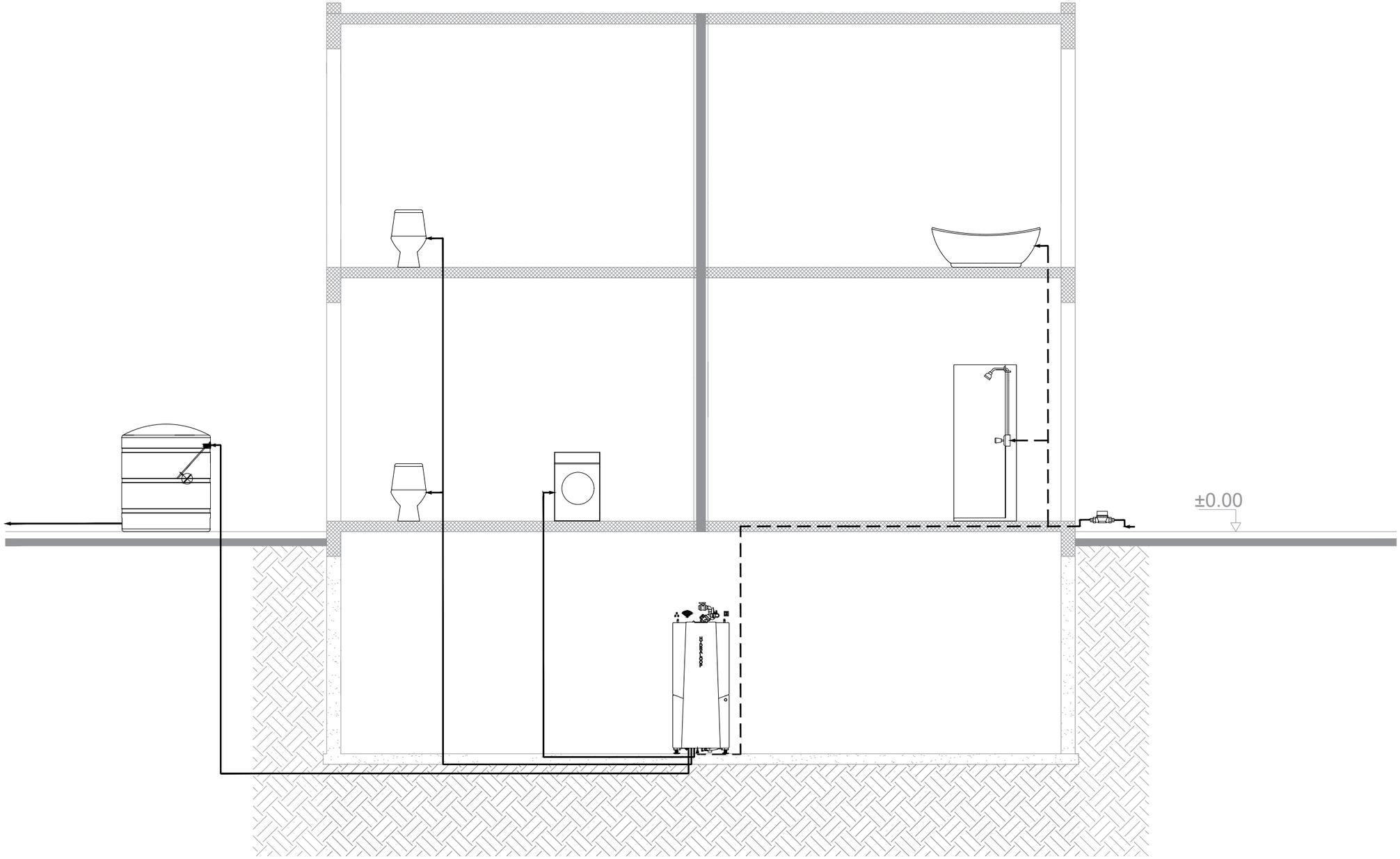
**DRAWING TITLE:**

H300 / H600
Greywater & Blackwater Building
Drainage System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
| mm | DR-SYS-H300H600-001 | 04 |

*All pipework should be installed according to the local plumbing regulations.*




**LEGEND**

TAP WATER

REUSE WATER

***Plumbing works fall outside the scope of Hydraloop products.***

**SUBJECT:**

Plumbing Schematic Drawing
(Hydraloop in Basement)

*Use Water Twice*
HYDRALOOP

**DRAWING TITLE:**

H300 / H600
Drinking Water
& Recycled Water (Non-Potable Water)
Supply System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
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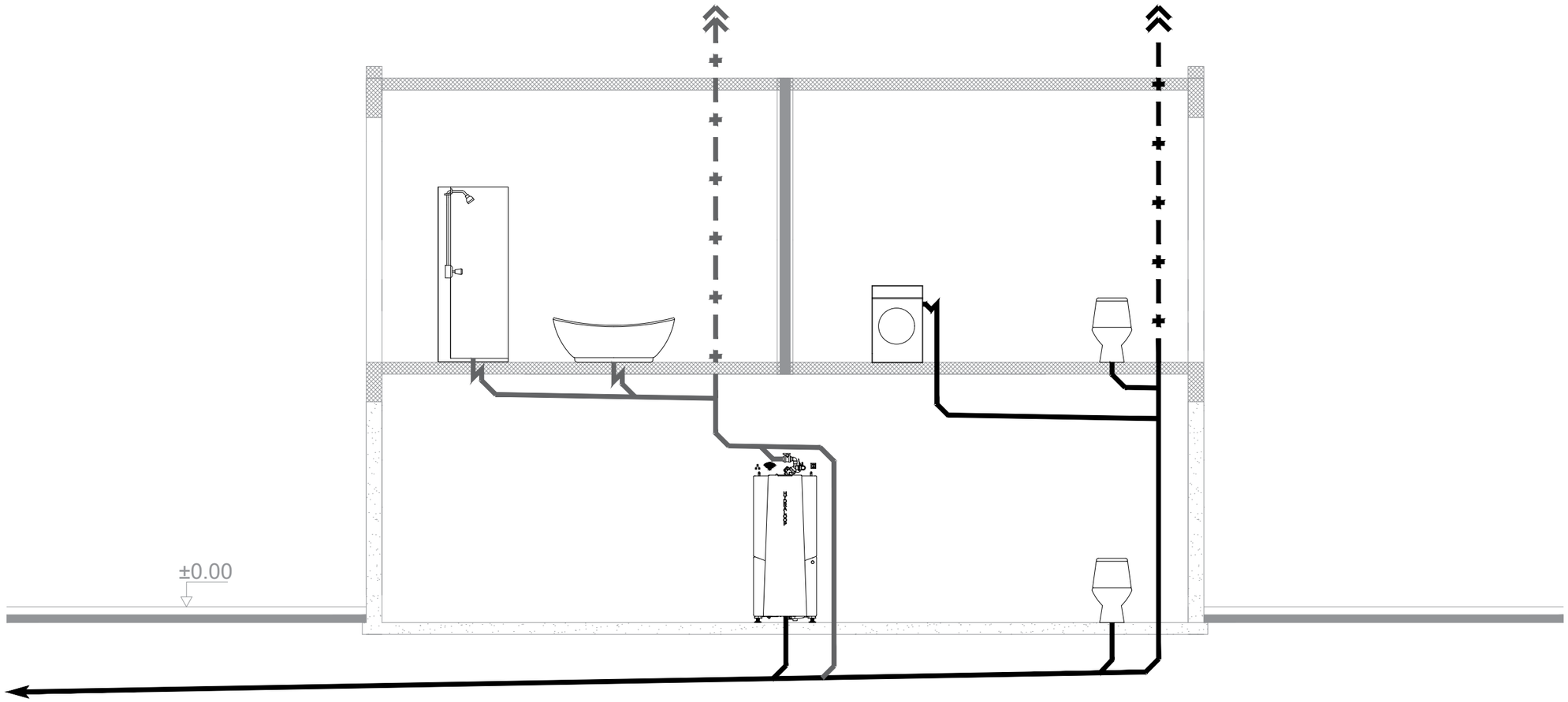



**LEGEND**

- GREYWATER
- VENT
- BLACKWATER
- VENT

***Plumbing works fall outside the scope of Hydraloop products.***

**SUBJECT:**

Plumbing Schematic Drawing
2-Storey Building
(Hydraloop on Lower Level)

*Use Water Twice*
HYDRALOOP

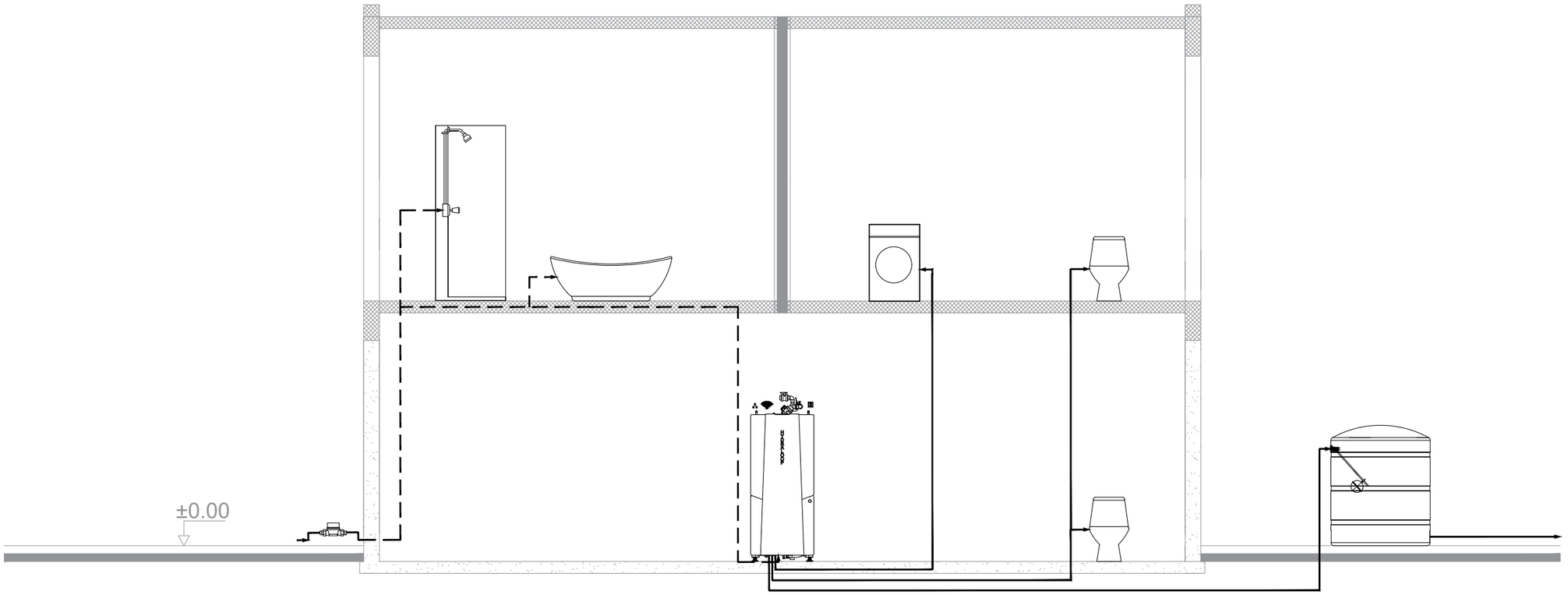
**DRAWING TITLE:**

H300 / H600
Greywater & Blackwater Building
Drainage System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
| mm | DR-SYS-H300H600-002 | 04 |

*All pipework should be installed according to the local plumbing regulations.*




**LEGEND**

TAP WATER

REUSE WATER

***Plumbing works fall outside the scope of Hydraloop products.***

**SUBJECT:**

Plumbing Schematic Drawing
2-Storey Building
(Hydraloop on Lower Level)

*Use Water Twice*
HYDRALOOP

**DRAWING TITLE:**

H300 / H600
Drinking Water
& Recycled Water (Non-Potable Water)
Supply System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
| mm | WS-SYS-H300H600-002 | 04 |

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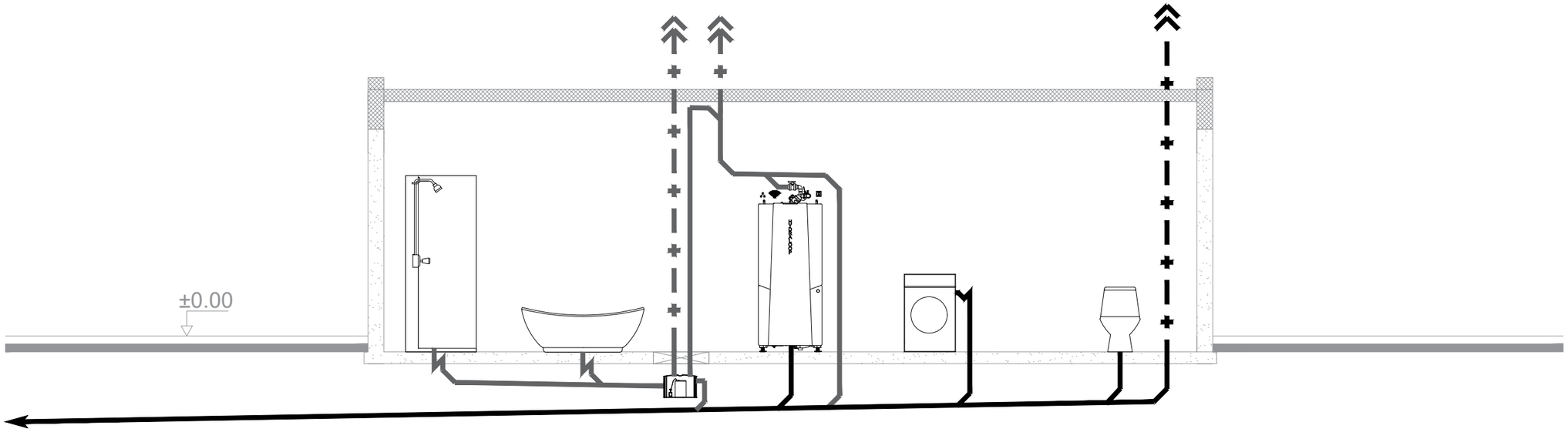



**LEGEND**

- GREYWATER
- VENT
- BLACKWATER
- VENT

***Plumbing works fall outside the scope of Hydraloop products.***

**SUBJECT:**

Plumbing Schematic Drawing
Bungalow Style Building
(Hydraloop on Same Level)

*Use Water Twice*
HYDRALOOP

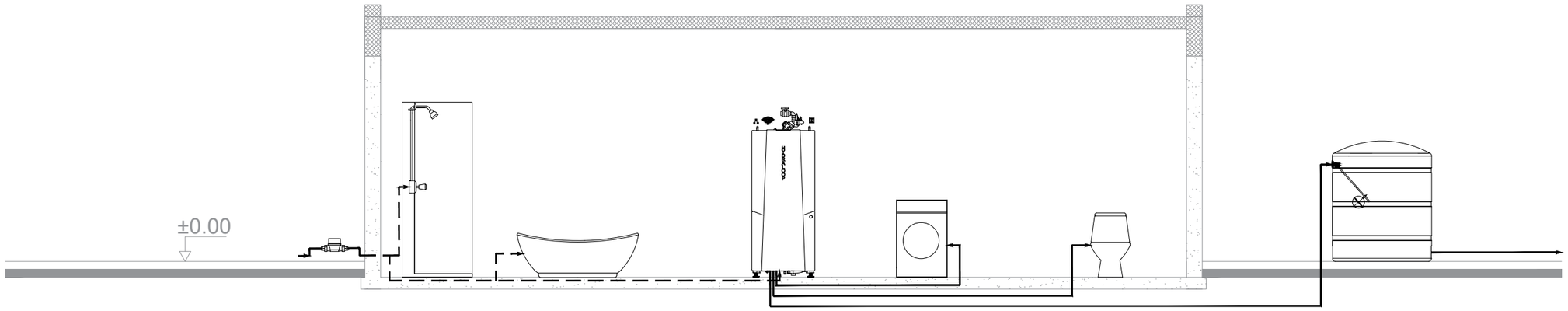
**DRAWING TITLE:**

H300 / H600
Greywater & Blackwater Building
Drainage System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
| mm | DR-SYS-H300H600-003 | 04 |

*All pipework should be installed according to the local plumbing regulations.*




**LEGEND**

- TAP WATER
- REUSE WATER

***Plumbing works fall outside the scope of Hydraloop products.***

**PROJECT:**

Plumbing Schematic Drawing
Bungalow Style Building
(Hydraloop on Same Level)

*Use Water Twice*
HYDRALOOP

**DRAWING TITLE:**

H300 / H600
Drinking Water
& Recycled Water (Non-Potable Water)
Supply System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
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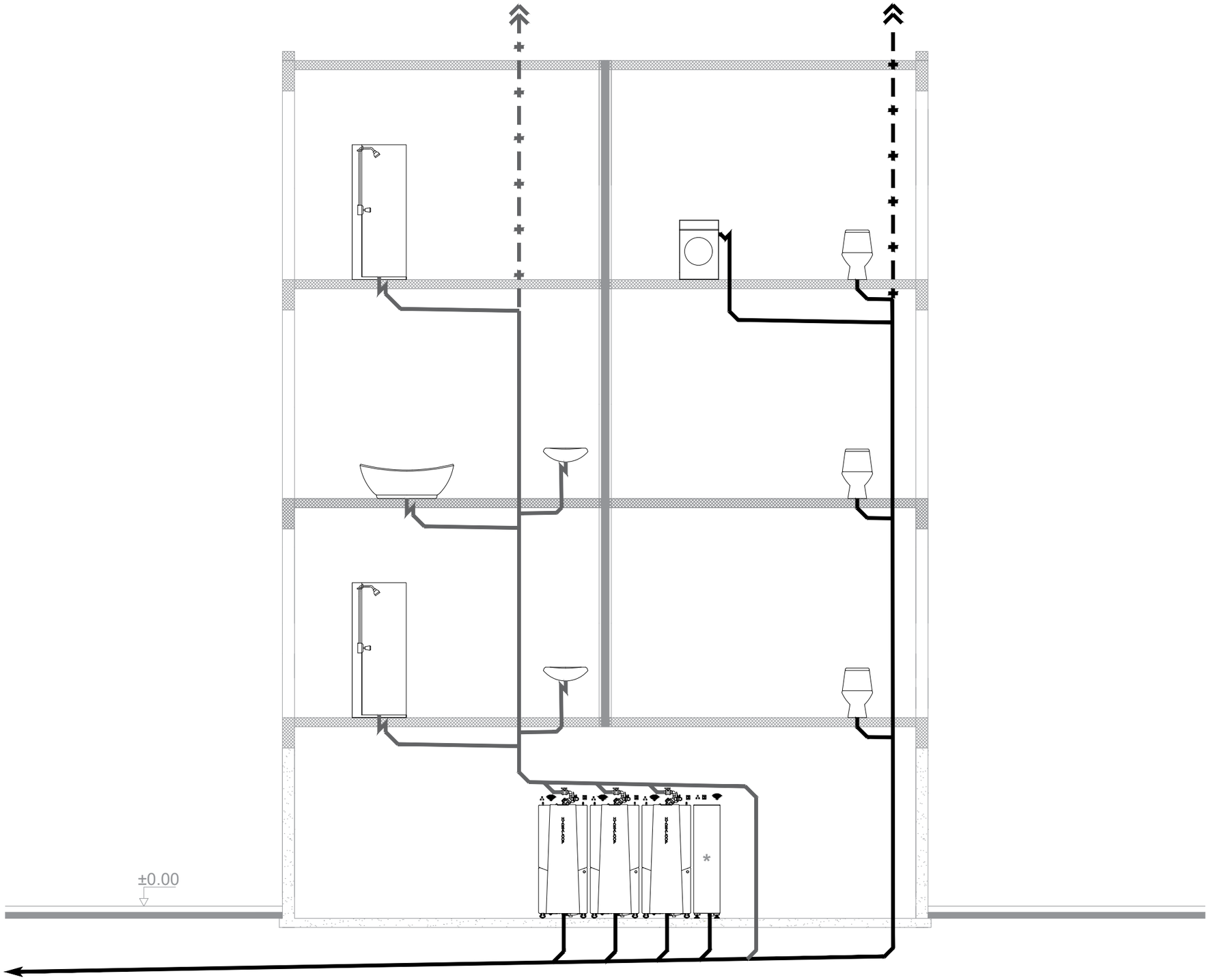



**LEGEND**

- GREYWATER
- VENT
- BLACKWATER
- VENT

*POST TREATMENT UNIT (PTU)

***Plumbing works fall outside the scope of Hydraloop products.***

**SUBJECT:**

Plumbing Schematic Drawing
Multi-Storey Building
(Hydraloop on Lower Level)

*Use Water Twice*
HYDRALOOP

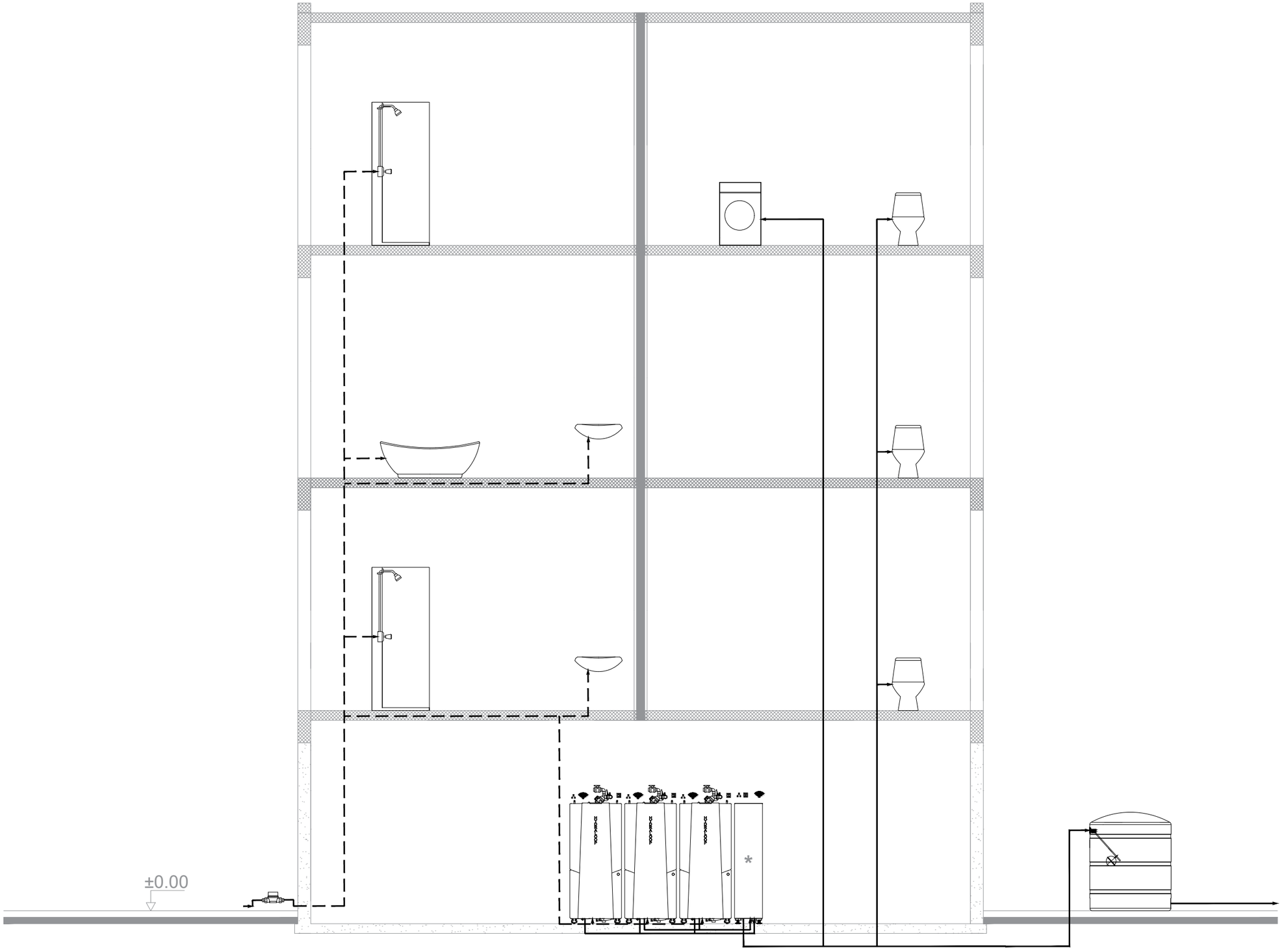
**DRAWING TITLE:**

H600 Cascade + Post Treatment Unit (PTU) (*)
Greywater & Blackwater Building
Drainage System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
| mm | DR-SYS-CASCADE-004 | 04 |

*All pipework should be installed according to the local plumbing regulations.*




**LEGEND**

TAP WATER

REUSE WATER

*DISTRIBUTION TANK (TBC)

***Plumbing works fall outside the scope of Hydraloop products.***

**SUBJECT:**

Plumbing Schematic Drawing
Multi-Storey Building
(Hydraloop on Lower Level)

*Use Water Twice*
HYDRALOOP

**DRAWING TITLE:**

Cascade + Post Treatment Unit (PTU) (*)
Drinking Water
& Recycled Water (Non-Potable Water)
Supply System

| SCALE | | DRAWN | DATE |
|---|---|---|---|
| NTS | A3 | VP | 07/05/26 |

| UNITS | DRAWING NO. | REV. NO. |
|---|---|---|
| mm | WS-SYS-CASCADE-004 | 04 |

*All pipework should be installed according to the local plumbing regulations.*

# Hydraloop connections

## Greywater inlet

Hydraloop collects the greywater at the top of the device. The greywater enters the Hydraloop in the middle of the first tank (T1). All connections are neatly stored behind the removable front plate, as visible in the image below.

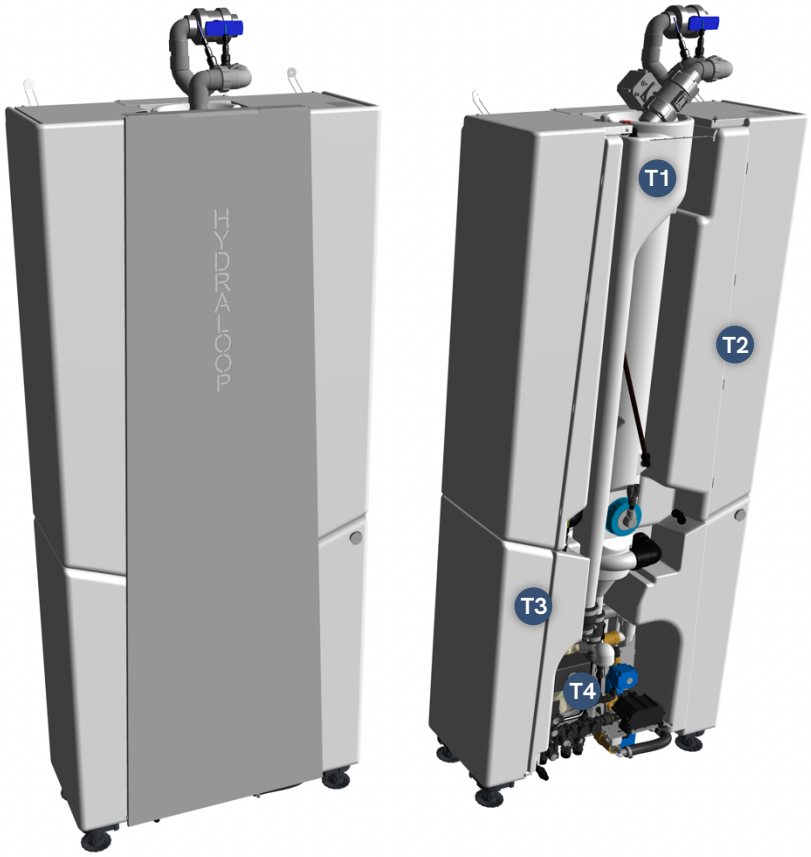



***Image: Hydraloop H300. Left; with front plate. Right; without front plate.***

The image above indicates the 4 tanks of which the Hydraloop consists of:

- **T1;** Greywater inlet tank
- **T2;** Bioreactor tank with moving bed bioreactor (MBBR)
- **T3;** Storage tank which holds recycled water
- **T4;** Tank for backup water connection (EN 1717 certified safe air gap)

## Overhead bypass to sewer

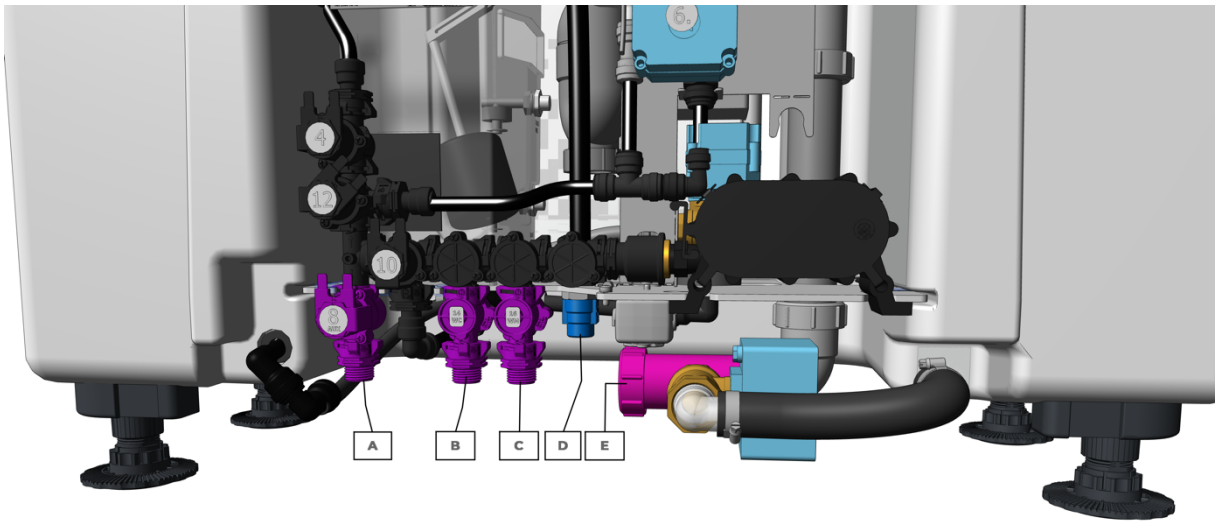
When installing grey water drainage it is important never to restrict the internal diameter. Restricting the diameter downstream will negatively affect the functioning of the plumbing installation and the Hydraloop.

Because the inlet into the Hydraloop is 40 mm, and the inlet is closed during treatment, it is important that an overhead bypass is created so greywater can drain away, see plumbing diagram. Make sure the Y-junction that drops towards the Hydraloop is full bore, pointed down and in line with the flow to maximize the amount of water running into the Hydraloop. Place a reducer after the full diameter branch, to ensure a maximum yield of grey water.

After passing the Hydraloop inlet, connect the overhead bypass to the sewer connection. Make sure backflow of sewer water, or black water is made impossible. If necessary, include a non-return valve. Backflow of sewer water will harm the functioning of the Hydraloop.

## Distribution module

Recycled water is collected in the holding tank (T3) at the bottom of the Hydraloop. This is where the distribution unit is located. When the front plate is removed, all connections are visible. The image below indicates the locations of the recycled water outlets, backup water inlet and drain outlet.



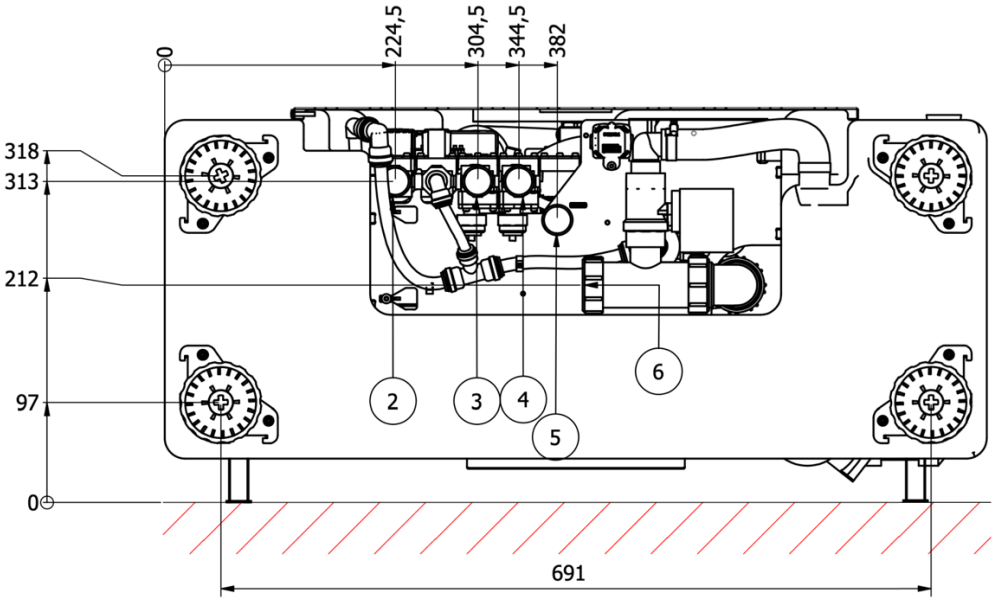

| | | | |
|---|---|---|---|
| A | ‘AUX’ Auxiliary outlet | D | Backup water inlet |
| B | ‘WC’ Toilet(s) outlet | E | Drain to sewer outlet |
| C | ‘WM’ Washing machine outlet | | |

## Pipework placement

To ensure proper pipe placement for recycled water, backup water and drain to sewer connection, see image A (bottom view) and image B (side view). The feet are height adjustable for levelling purposes. Clarification of the numbers as shown in image A:

| | |
|---|---|
| **2** | ½" Auxiliary outlet: connect with flexible hose provided |
| **3** | ½" Toilet feed: connect with flexible hose provided |
| **4** | ½" Washing machine feed: connect with flexible hose provided |
| **5** | ½" Backup water: mains tap water, rainwater or well water: connect with flexible hose provided |
| **6** | Wastewater to sewer. 40 mm sewer connection with rubber gasket |

***Image A: bottom view H300, measurements in mm:***



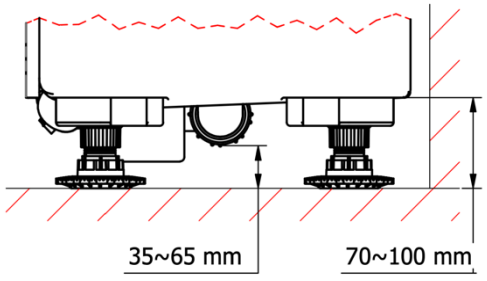




***Image B: side view H300 showing drain in middle, measurement variation due to height adjustable feet.***

The water and waste connections can be made in the free space underneath the Hydraloop, or next to the Hydraloop, depending on the configuration. Please contact your qualified installer or Hydraloop for expert advice.

When the building and installation is in use before the Hydraloop is placed, connect the water lines to the tap water so all fixtures can be used. Install a backflow prevention device when local plumbing regulations require this.

# Water demand calculation

To keep the installation simple, first determine if recycling your washing machine's greywater is necessary. Follow these two steps:

- Calculate your recycled water demand (litres per day):
  - **Toilet:** Flushes per day × Flush volume × Number of people
  - **Washing machine:** Litres per cycle × Cycles per day
- Calculate your greywater production (litres per day):
  - **Shower:** People × Showerhead flow rate (L/min) × Shower duration × Showers per day

Note: 90% of incoming greywater is reusable, as Hydraloop uses 10% of incoming greywater in its dirt removal process.

**Decision rule:** If your recycled water demand is lower than your greywater production, a single device will be sufficient to meet full demand.

For a quick assessment, try our Hydraloop Calculator

# Inlet plumbing options

## Hydraloop on lower level – input by gravity

Greywater from the showers, baths or ablution is drained via a conventional gravity-fed sloped drain to the top of the Hydraloop. Ensure the greywater drain to the Hydraloop is connected to an open-to-air ventilation line and according to local plumbing regulations.

## Hydraloop on the same level – input via lift pump installation

Greywater from showers, baths or ablution enters the device through a lift pump installation. Ensure sufficient open-to-air ventilation from and to the lift pump and drainage fixtures. Always follow the lift pump manufacturers' installation requirements.

Other lift pump considerations:

- **Volume:** Ensure the maximum volume of the lift pump holding tank is 50 litres. Larger volume tanks are known to negatively affect the grey water quality.
- **Drain ventilation:** Ensure open-to-air ventilation for the lift pump by installing a vent stack. Make sure the ventilation complies with local plumbing codes. If only a lift pump supplies the Hydraloop, the incoming gravity fed grey water drain into the Hydraloop also needs to be properly vented.
- **Maximum flow:** Choose a lift pump that has a maximum flow of 45 l/min or throttle the inlet flow.
- **No pressured input:** Make sure the grey water enters the Hydraloop under gravity, and not under pressure.

# Sewage pump after Hydraloop

If the Hydraloop is installed in a basement or any location lower than the main sewer line, a macerator sewage pump is needed to move the wastewater from the Hydraloop up to the sewer. During the weekly cleaning cycle of the Hydraloop T1 and T2, or when unused recycled water in T3 is automatically drained, a large amount of water is flushed out at once.

To prevent flooding during these flushes, the macerator sewage pump must be able to handle a flow rate of at least **2 l/s.** We also recommend installing a non-return valve to stop wastewater from flowing back towards the Hydraloop.

# Requirements

Below are the system requirements. More information can be found in our FAQ:

| | |
|---|---|
| **1. Location/placement:** | Inside the building thermal envelope. Hydraloop is not IP rated or UV resistant. Avoid direct sunlight and rain.<br>Maximum RH value: 70%<br>Recommended positions are:<br>• mechanical or technical room<br>• garage<br>• laundry room<br>Due to possible 24-hour sound production, it is not recommended in or adjacent to living space or quiet rooms. For systems sounds, see Specifications.<br>**Do not sit/stand on the Hydraloop. Do not use it for storage, leave top free for access.** |
| **2. Temperature** | Average operational ambient temperature 14-35 °C. |
| **3. Service space:** | 80 cm in front (H600 – also 60cm behind) |
| **4. Greywater inlet:** | 40 mm O.D. PVC. height min. 2200 mm CL.<br>Only shower, bath and ablution water.<br>**No kitchen sinks, dishwashers, floor drains or human waste.** |
| **5. Drainage connection:** | 110 mm. Hydraloop has 40 mm I.D. union clamp connection.<br>Max. discharge volume is 2 l/s at cleaning cycle |
| **6. Electrical power:** | 230 V, 50 Hz, 15-16 Amp (120 V, 60 Hz, 15-16 Amp US/CAN) earthed wall outlet within 1.2 m from top center of Hydraloop |
| **7. Internet connection:** | Ethernet cable or;<br>2.4 GHz Wi-Fi with WPA or WPA2, no captive portal. If internet access is restricted by a firewall, ensure TCP post 443 is open.<br>**Distance Wi-Fi router to Hydraloop > 1 m.** |
| **8. Water hardness:** | max. 7° dH / 7 GPG / 120-180 ppm |
| **9. Req. ceiling height:** | 2400 mm |

# Output specifications

The recycled water from Hydraloop is suitable for toilet flushing, washing machine, garden irrigation, topping up swimming pool and cleaning purposes.

| Output Outlet | Water Delivery | Pipe size |
|---|---|---|
| Toilet | permanently pressurized | 1/2″ BSP |
| Washing machine | permanently pressurized | 1/2″ BSP |
| Auxiliary | only pressurized before transfer to T3 when T3 is full | 1/2″ BSP |

All tap points that receive recycled water from the Hydraloop must be identified with a non-potable water sign (3 stickers come with device).

## Distribution pump performance:

- Nominal pump pressure: 2.4 bar / 240 kPa
- Nominal flow: 8 l/min

# Backup water requirement

Hydraloop requires a backup water connection.

The backup water connection is in the distribution unit (“D” in schedule).

Backup water can be mains (tap) water, treated rainwater or treated well water.

| Input Outlet | Water Delivery | Pipe size |
|---|---|---|
| Backup water | permanently pressurized<br>min. 12 l/min required | 1/2″ BSP |

The backup water enters the Hydraloop via a safe air gap (T4), ensuring no possible connection between (recycled) grey water and backup water.

# Glossary of terms

**Auxiliary Outlet**
A non-pressurized valve that distributes reusable water for garden irrigation or pool top-up, depending on the region. Water is only available when present in the holding tank (T3) or as controlled by the HDM.

**Backup Water**
The primary water source for a building, such as mains tap water, municipal water, treated well water, or treated rainwater.

**Wastewater**
Highly contaminated sewer water containing pathogens, originating from toilets, bidets, hand showers, floor drains, dishwashers, and kitchen sinks.

**Greywater**
Lightly contaminated domestic water from baths, showers, and washing machines.

**Hydraloop App**
A smart app for monitoring Hydraloop device performance, offering water-saving tips, and sending notifications. It alerts users when the device is ready to distribute reusable water (after 21 days and 20 showers/baths).

**Hydraloop Device Manager (HDM)**
An online platform for installing, testing, verifying, and managing Hydraloop devices. It enables monitoring, maintenance, troubleshooting, and ticket generation. Login credentials, provided by Hydraloop, are required before installation.

**Inlet Diverter**
An optional valve that allows greywater intake from sources other than showers/baths, required when adding washing machine water.

**Recycle Ready Guide**
A guide for owners, plumbers, and contractors on preparing a building's plumbing system for greywater recycling.

**Recycle Ready Checklist**
A required checklist, signed by the responsible party to prepare the buildings' plumbing, ensuring the system is ready before installation can be scheduled.

**Reusable Water**
Recycled greywater used for toilet flushing, washing machine, or outdoor applications.

**Start-up Time**
The Hydraloop device needs at least 21 days and 20 showers to establish its biological treatment process. If fewer than 20 showers occur within 21 days, the start-up period extends.

**Open to Air Ventilation**
A ventilation system preventing siphoning in the greywater line. Ensure proper two-way ventilation for both greywater input and sewage output, with the greywater vent terminating outside the building.