

Recycle Ready Guide – Hydraloop H600

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Is your building Recycle Ready?

Water conservation is becoming increasingly important, and greywater recycling is an effective way to reduce drinking water and wastewater production. Hydraloop enables you to reuse water from showers, baths, and washing machine for non-drinking purposes such as flushing toilets, laundry, watering gardens 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 washing machines) as well as blackwater (from toilets and kitchen sinks). While blackwater must always be drained, greywater can be treated and reused safely thus helping to conserve both drinking water and wastewater. It will also reduce utility costs.

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 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.

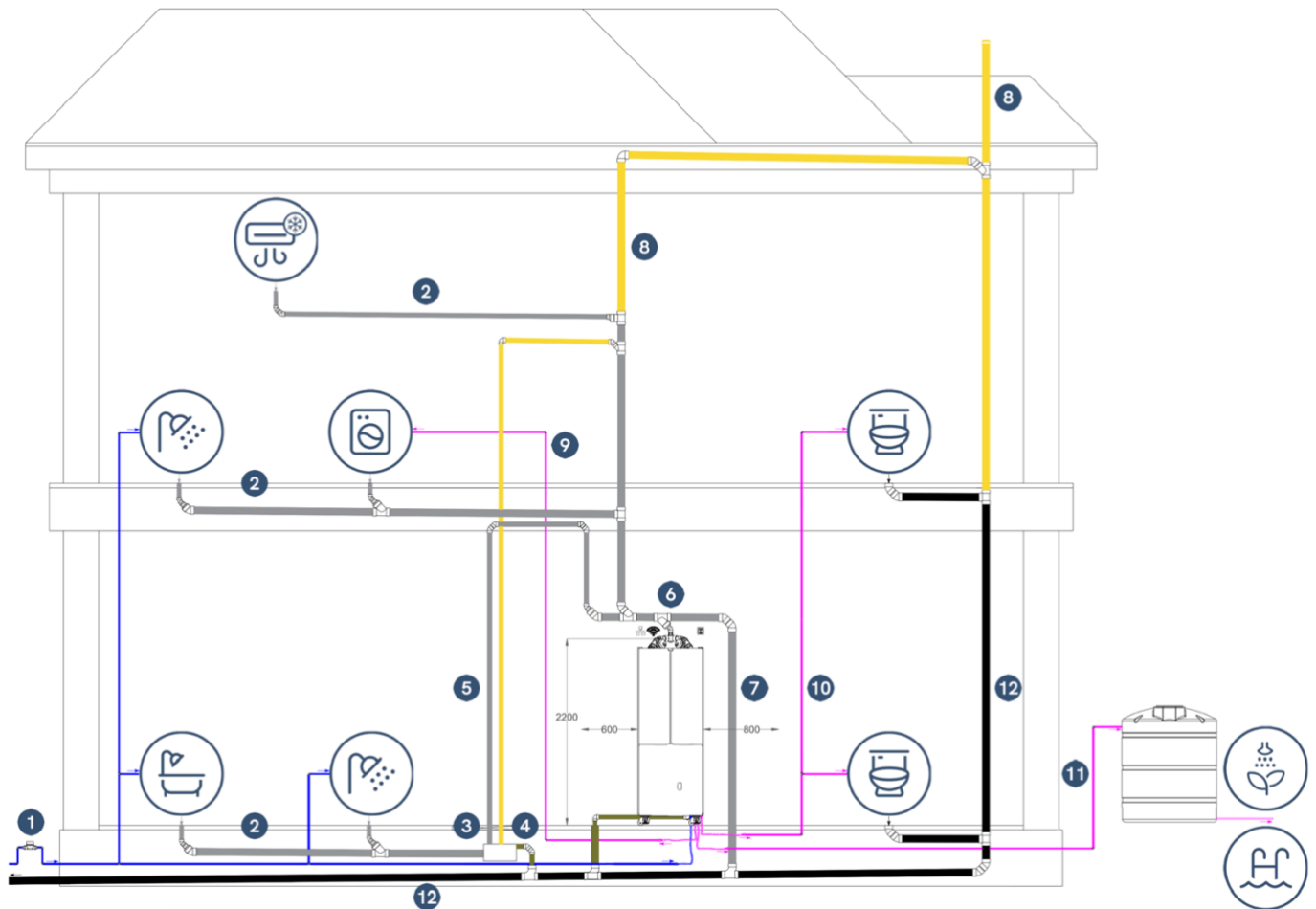
Verifying Recycle Readiness

Before ordering a Hydraloop, it's essential to confirm that your building will meet the necessary plumbing requirements. Work with a qualified installer to complete the [Recycle Ready Pre-Checklist](#) and submit it to your Hydraloop partner.

After you've installed the Hydraloop and before system verification, we ask for a [Recycle Ready Confirmation Checklist](#). After submittal of this confirmation checklist, we can make sure we can warrant proper functionality of the system. This is for your own benefit, as possible issues can be identified timely and be resolved before encountering major issues.



Recycle Ready plumbing schematic



Legend			
Tap water		Recycled water	
Grey water		Waste water	
Drain vents			
1	Tap water supply	7	Overhead bypass to sewer
2	Grey water drain	8	Open to air vent pipe
3	Lift pump installation	9	Recycled water, washing machine
4	Lift pump overflow (incl. sewer check valve to prevent backflow according to EN 12056 or local regulations)	10	Recycled water, toilets
5	Pressure drain	11	Recycled water, garden or pool (open pipe connection or float valve in tank)
6	Hydraloop greywater inlet, 2200 mm center line inlet height	12	Black water / sewer drain



Hydraloop connections

Greywater inlet

Hydraloop collects the greywater at the top of the device. The greywater enters the Hydraloop through the inlet diverter which leads it to the A- or B-side T1 to start the treatment process. All connections are neatly stored behind the removable front and back plates. The image below shows the front side.

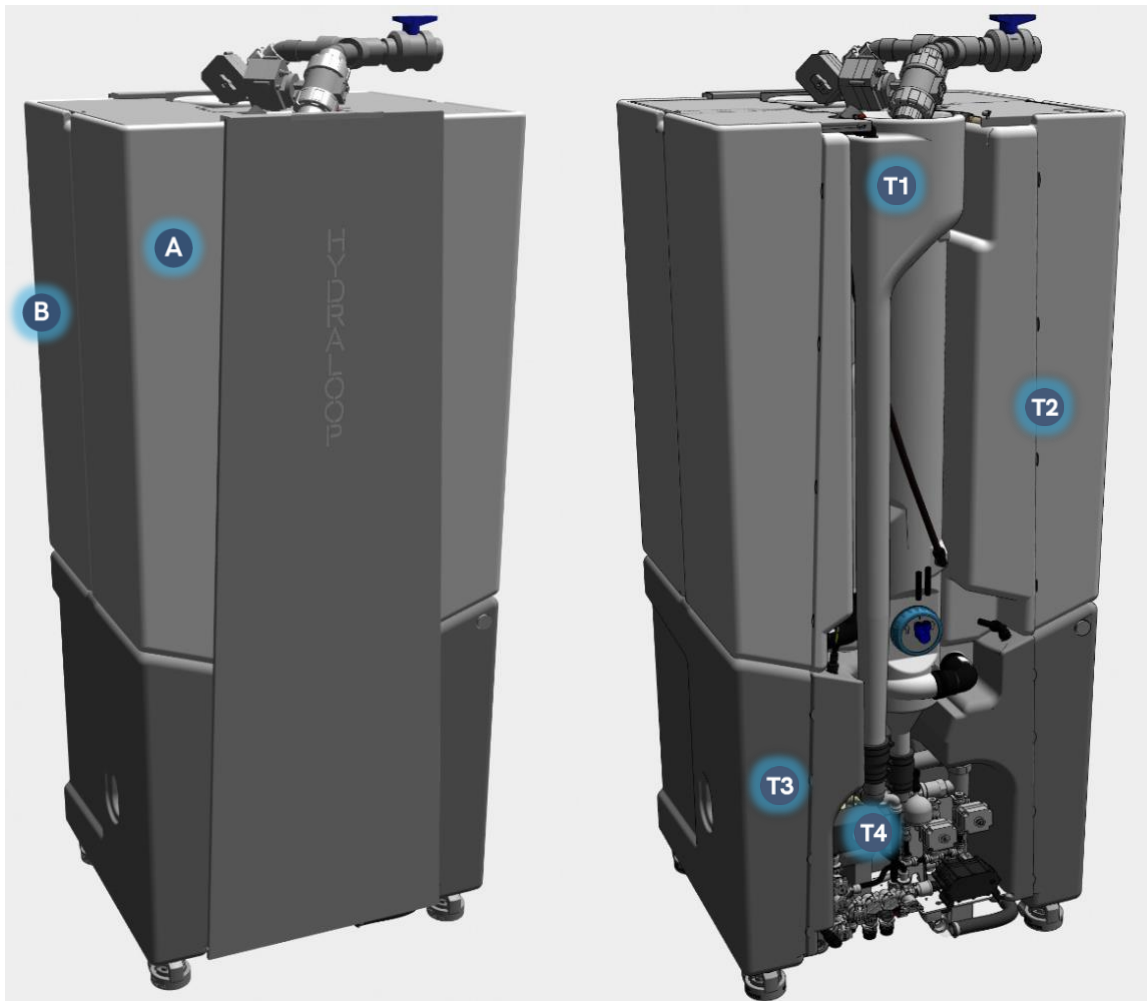


Image: Hydraloop H600. Left; with front plate. Right; without front plate.

The image above also indicates the tanks and sides of the Hydraloop:

- T1 [2x]; Greywater inlet tank
- T2 [2x]; Bioreactor tank with moving bed bioreactor (MBBR)
- T3; storage tank which holds recycled water
- T4; tank for backup water connection, complete with safe air gap

All H600 devices are equipped with double T1 and T2 tanks. This doubles the cleaning capacity. This results in a front [A] and back [B] side. The front is where the distribution unit is located.



Overhead bypass to sewer (#7 Plumbing diagram)

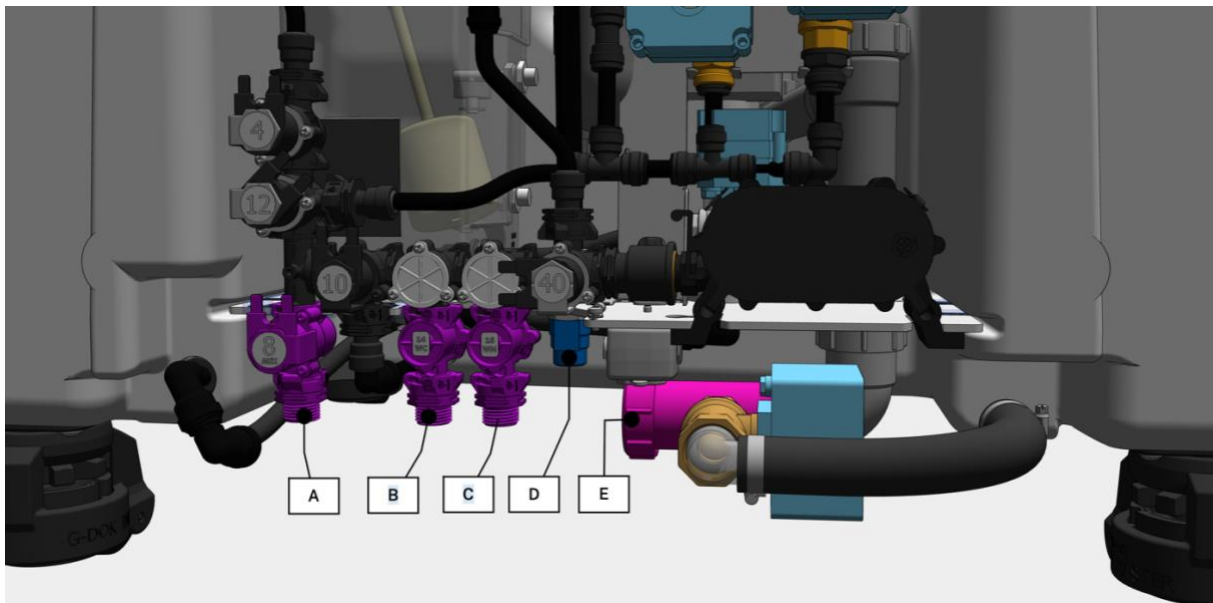
When installing the grey water drain it is important not to restrict the internal diameter. Restricting the diameter downstream will negatively affect the functioning of the plumbing installation, and the Hydraloop.

Because the inlet into the Hydraloop is 40 mm, it is important that an overhead bypass is created, 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 maximise the amount of water running into the Hydraloop.

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. 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		

* Auxiliary outlet is always present, but to activate must be ordered as add-on



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 H600, measurements in mm:

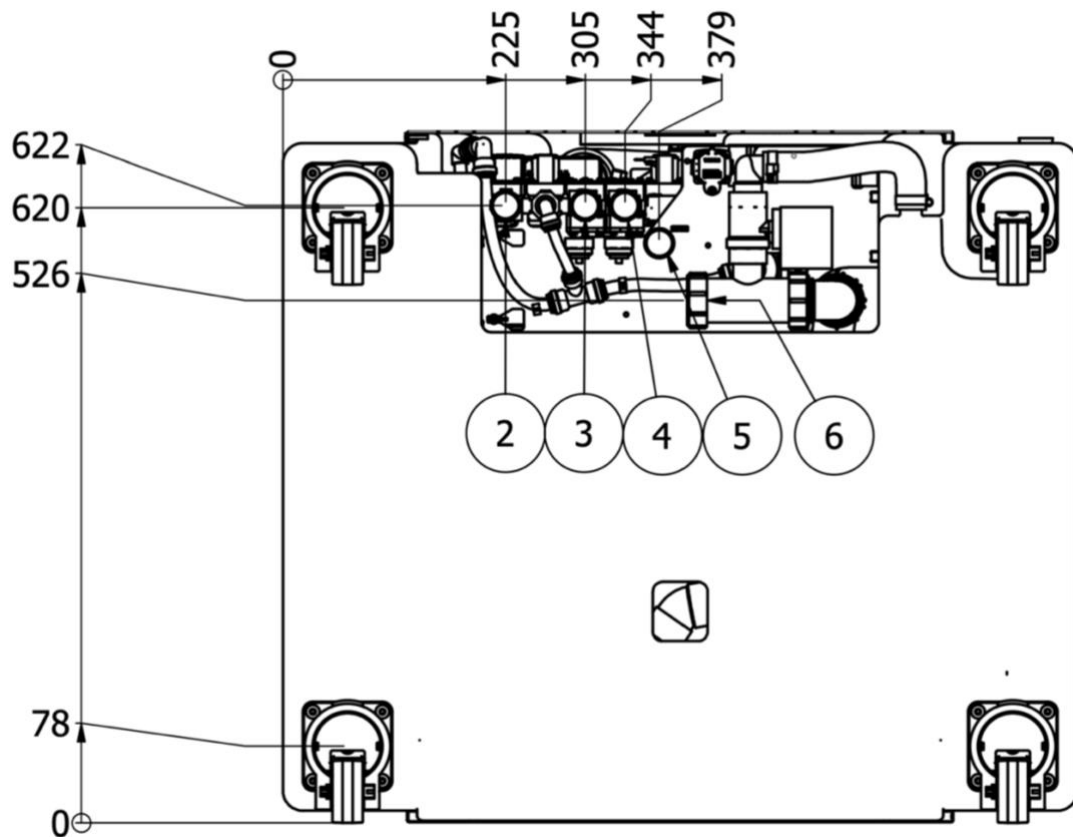
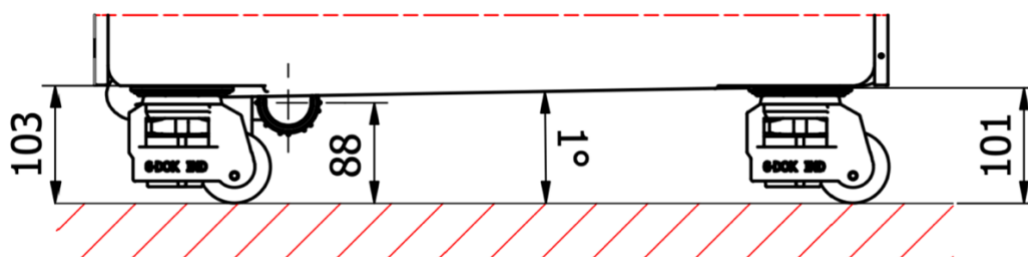


Image B: side view H600 showing drain height. Drain position is on A-side.





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:

1. 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
2. Calculate your greywater production (litres per day):
 - **Shower:** People × Showerhead flow rate (L/min) × Shower duration × Showers per day

Note: Only 92% of the greywater is reusable, as Hydraloop uses 8% for cleaning.

Decision rule: If your recycled water demand is lower than your greywater production, recycling washing machine water is unnecessary.

For a quick assessment, try our [Hydraloop Calculator](#)

Plumbing options

Hydraloop on lower level – input by gravity

Greywater from the shower/bath or other sources 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 the shower/bath or other sources 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.



Requirements

Below are the system requirements. More information can be found in our [FAQ](#):

1. Location/placement:	<p>Inside the building thermal envelope. Hydraloop is not IP rated or UV resistant. Avoid direct sunlight and rain. Maximum RH-value: 70%</p> <p>Recommended positions are:</p> <ul style="list-style-type: none">• mechanical or technical room• garage• laundry room <p>Due to possible 24-hour sound production, it is not recommended in or adjacent to living space or quiet rooms. For systems sound pressure, see Specifications.</p> <p>Do not sit/stand on the Hydraloop. Do not use it for storage, leave top free for access.</p>
2. Temperature	Average operational ambient temperature 14-35 °C.
3. Service space:	80 cm in front [A-side], 60 cm at the back [B-side].
4. Greywater inlet:	<p>40 mm O.D. PVC. height min. 2200 mm CL.</p> <p>Only shower/bath water, bathroom wash hand basin, washing machine, condensate drain.</p> <p>No kitchen sinks, dishwashers, floor drains or human waste.</p>
5. Drainage connect:	110 mm. Hydraloop has 40 mm I.D. union clamp conn.
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:	<p>2 options:</p> <ol style="list-style-type: none">a. Ethernet cableb. 2.4 GHz Wi-Fi with WPA or WPA2, no captive portal. If internet access is restricted by a firewall, ensure TCP port 443 is open. <p>Distance Wi-Fi router to Hydraloop > 1 m.</p>
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 (WC)	permanently pressurized	1/2" BSP
Washing machine (WM)	permanently pressurized	1/2" BSP
Auxiliary (AUX) *	only pressurized before transfer to T3 when T3 is full	1/2" BSP

* Auxiliary outlet will be activated after order as add-on.

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: 2.1 bar / 210 kPa
- Nominal flow: 12 l/min

Input specifications

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 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.

Dimensions and weights

HYDRALOOP MODEL	WIDTH (MM)	DEPTH (MM)	HEIGHT (MM)	DRY WEIGHT (KG)	WET WEIGHT (KG)
H600	800	695	2080	128	740
H600 PACKAGED	705	820	2190	138	–



Specifications

Hydraloop H600	
Volume	600 liters
Nominal cleaning capacity	850 liters (depending on user behavior)
Voltage	120 / 240V, 24V internal
Average power consumption	460 kWh/year, 53W during treatment
Internet	The Hydraloop device needs to be connected with internet through an ethernet cable or an internal Wi-Fi-network. Note: Wi-Fi router must be > 1m from Hydraloop
Greywater input sources (possible)	Shower, Bath, Washing machine *, and Condensate from air-conditioning, heat pump or tumble dryer


Sound Pressure (L_{pa}) level at various treatment stages		Interval / duration
Air pump	26 dB(A)	Daily / long
Distribution pump	29 dB(A)	Daily / with use
Greywater flow into Hydraloop	49 dB(A)	Daily / with use
Backup water filling	48 dB(A)	Weekly / depending on user behavior
Inlet diverter open/close	50 dB(A)	Depending on user behavior / when recycling greywater from washing machine
Self-cleaning cycle	50 dB(A)	Weekly / short

* When collecting greywater from washing machine, you must supply recycled water to the washing machine from the 'WM' outlet.


For the technical detailed drawing, see the next page.

PVC ball valve - Position options

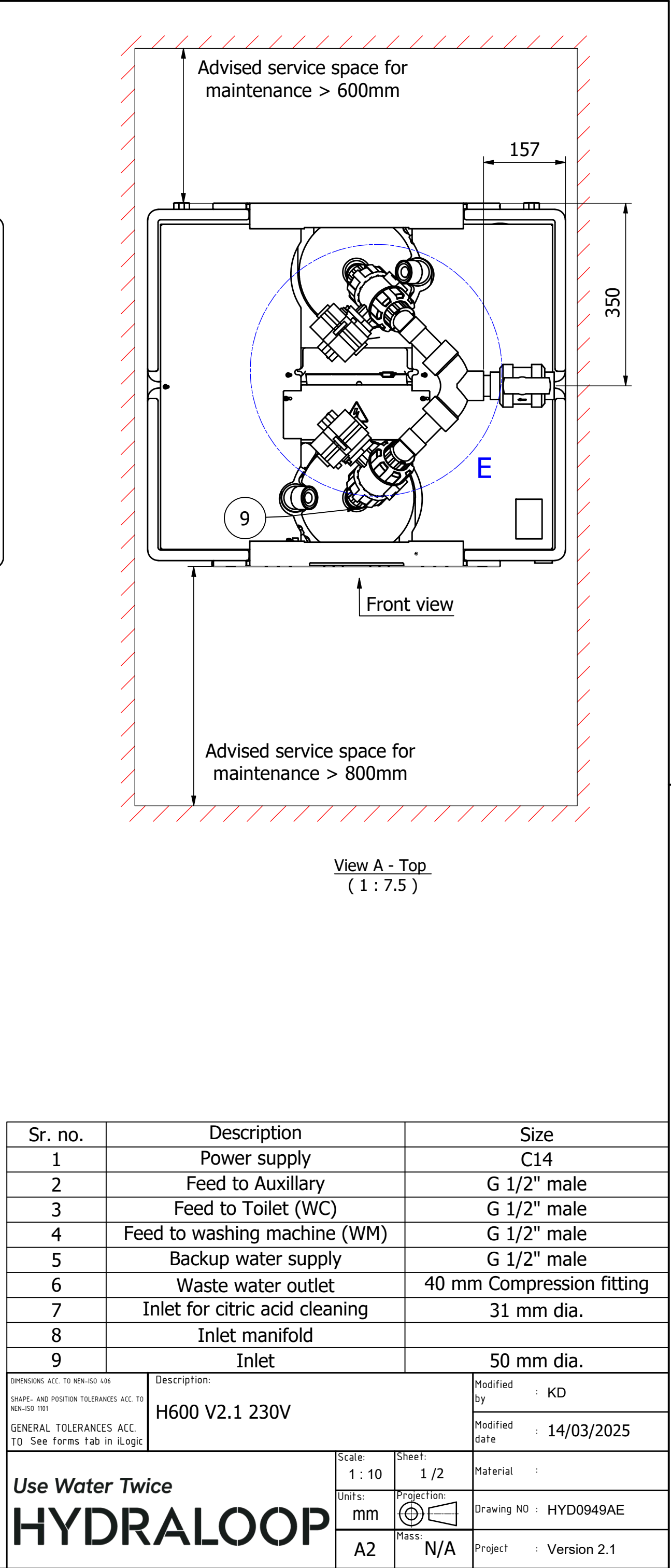
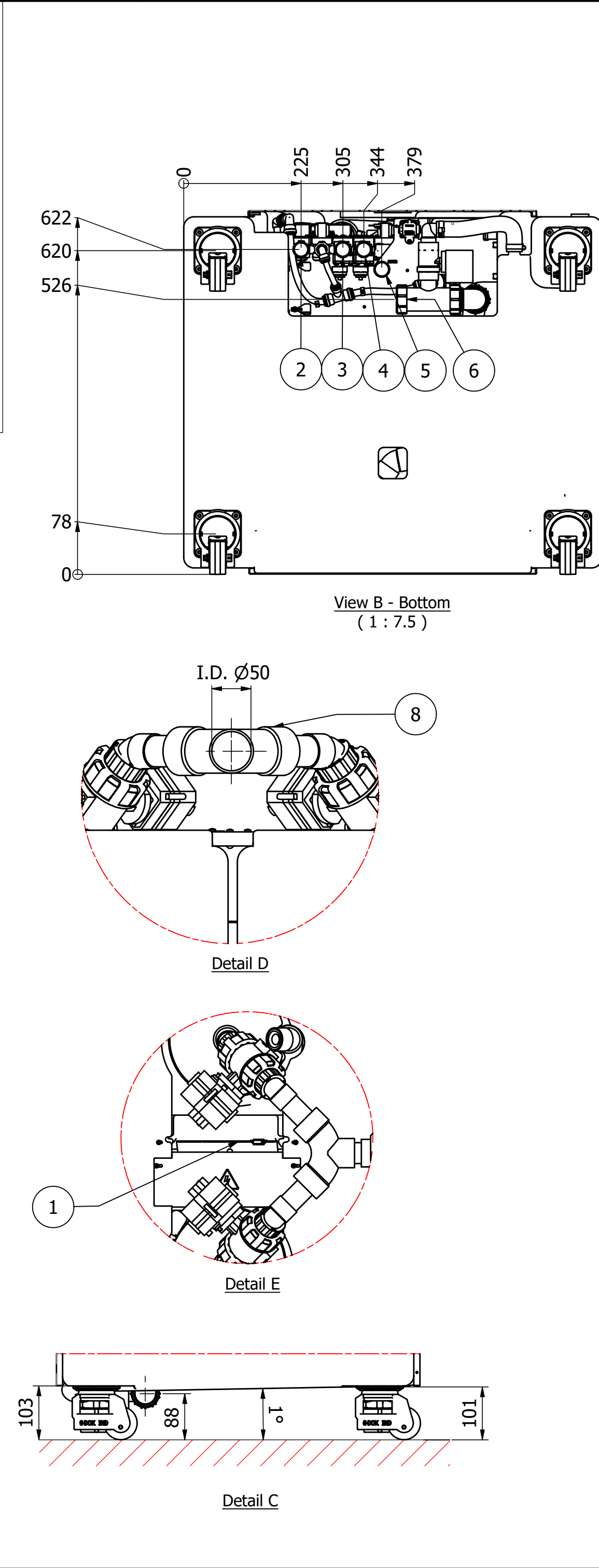
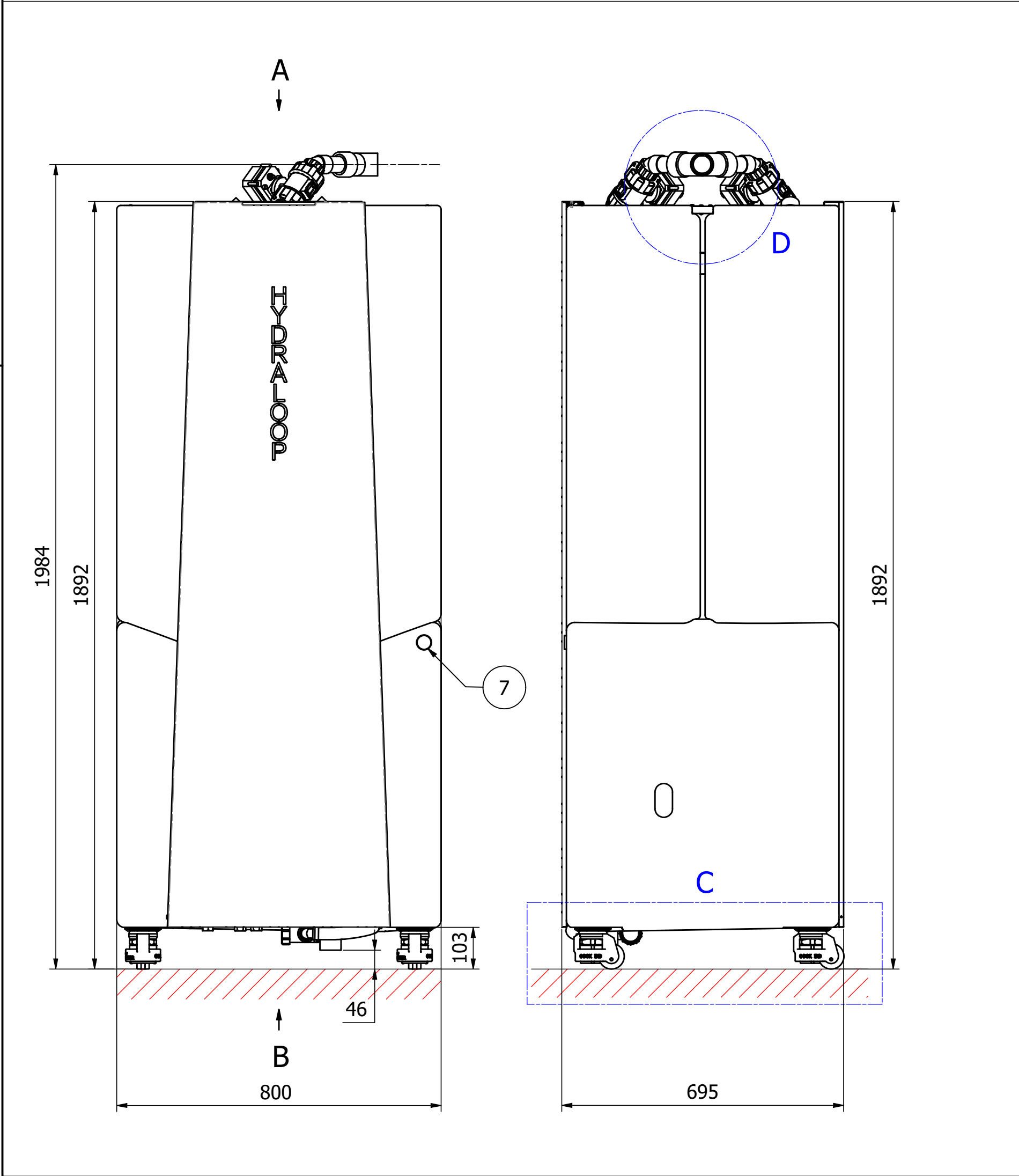
a. Horizontal option



b. Vertical option



Two Inlet options have been provided : 50mm standard or 40mm with the supplied ball valve.





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.

Recycle Ready Guide

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

Recycle Ready Pre-Checklist

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

Recycle Ready Confirmation Checklist

A required checklist, signed by the responsible party, confirming all prerequisites are met for proper functioning of Hydraloop and before verification can begin.

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.