



HYDRALOOP

USE WATER TWICE



WE ARE FACING A GLOBAL WATER CRISIS

The human population has successfully harnessed many of the world's natural waterways—building dams, water wells, vast irrigation systems, and other structures that have allowed civilizations to grow and thrive. But water systems are increasingly stressed, and some rivers, lakes, and aquifers are drying up.

Water covers 70% of our planet, and it is easy to think that it will always be plentiful. However, freshwater—the stuff we drink, bathe in, irrigate our farm fields with—is incredibly rare. Only **3%** of the world's water is freshwater, and two-thirds of that is tucked away in frozen glaciers or otherwise unavailable for our use.

At the current consumption rate, this situation will only get worse. By **2025**, two-thirds of the world's population may face water shortages. And ecosystems around the world will suffer even more.



Where we are
TODAY



WE HELP YOU BE MORE EFFICIENT & SUSTAINABLE



Water recycling is the most efficient and affordable way to use less water. And the easiest way to recycle water is to clean it right where you use it – decentralized. The Hydraloop offers homeowners and building developers a simple way of recycling up to 45% of their water - all via a grey box not much bigger than your average fridge.

Hydraloop collects, cleans and re-uses the water from showers, baths, washing machines, handbasins and air conditioning units. Hydraloop water is clean, clear, safe, and disinfected. It can be re-used for toilet flushing, washing machines, garden irrigation and topping up swimming pools.

Hydraloop offers turn-key products and made to measure solutions for projects of any size. With Hydraloop, you can give water, our 'Blue Gold', a second life. Together, we can drastically reduce the world-wide water consumption.

"Your Own Personal Water Recycling Plant"



- SAVE WATER AND ENERGY
- INNOVATIVE TECHNOLOGY
- EASY INSTALLATION
- **NO FILTERS / NO CHEMICALS**
- SELF-CLEANING
- SMARTPHONE APP
- AFFORDABLE
- LOW MAINTENANCE
- WATER IS CLEAN, SAFE, AND DISINFECTED
- NO COMPROMISE ON LIVING COMFORT

ENERGY SAVING & QUIET

- A refrigerator uses around 150watts per day, Hydraloop uses an estimated 60watts per day
- Hydraloop sounds like a quiet dishwasher (44dB)

Our Systems

H300

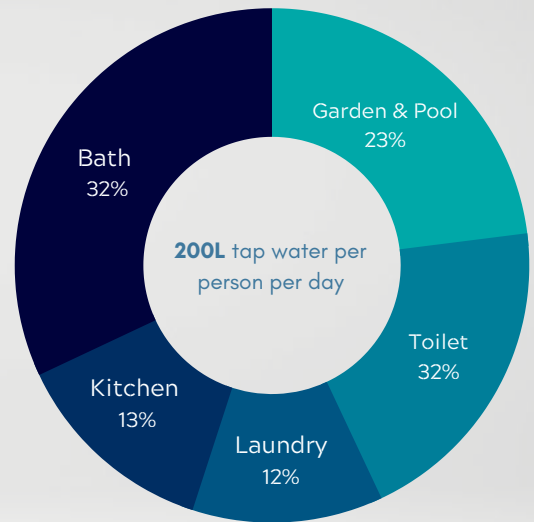
- **Volume: 300 liters | 80 gallons**
- **Cleaning capacity: 530 liters | 140 gallons per day**



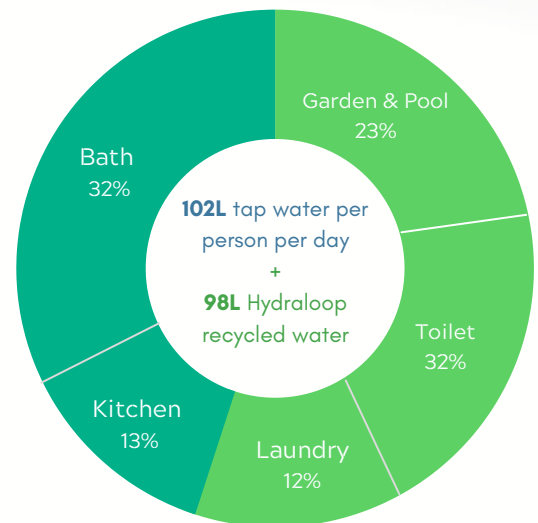
H600

- **Volume: 600 liters | 160 gallons**
- **Cleaning capacity: 1000 liters | 260 gallons per day**

WITHOUT RECYCLING



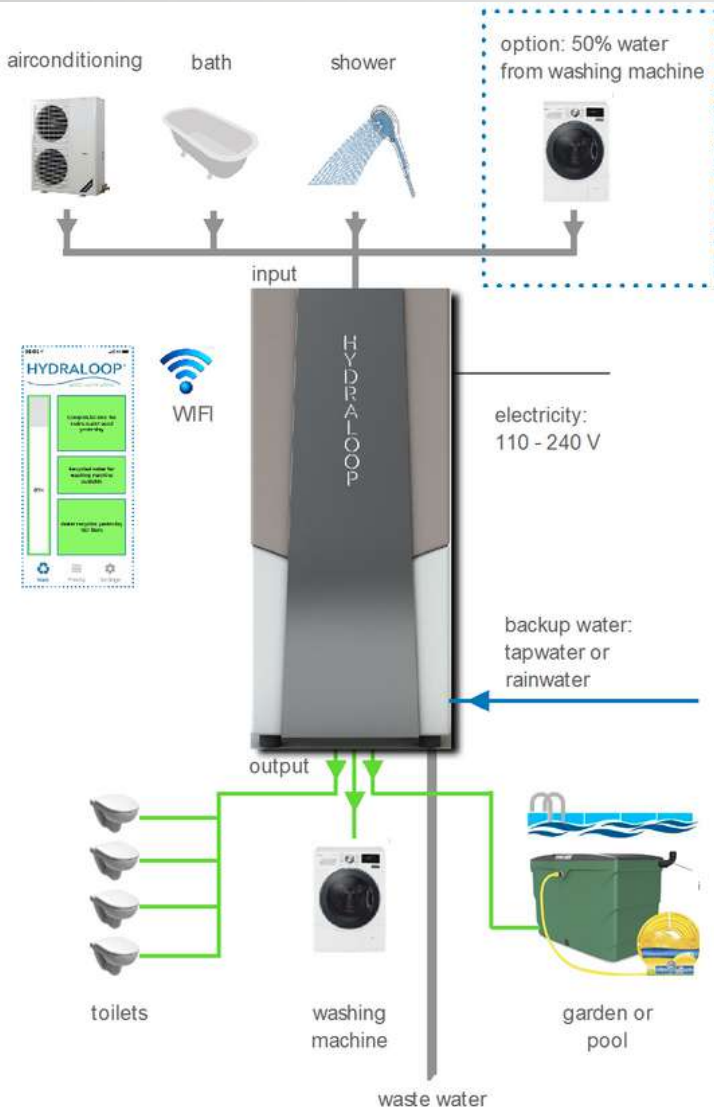
HYDRALOOP USE WATER TWICE RECYCLING



You still use **200L** but
your intake is only **102L**

* Example based on Sydney average of water usage per person per day

TECHNICAL DETAILS



Input

Water from:

- Air-conditioning condensation
- Heat pump condensation
- Bath & shower
- Washing machine

Output

Safe, clean, and disinfected recycled water for:

- Flushing toilets
- Washing machine
- Garden irrigation
- Topping up pool



Controlled by the central processor:

1. Sedimentation - sediment is collected at the bottom of the tank
2. Floatation - floating dirt (hair, soap) via central skimmer into sewer
3. Dissolved Air Floatation - tiny air bubbles will travel upwards collecting small particles
4. Foam fractionation - soap and suspended solids are skimmed off
5. MBBR - biological treatment by aerobic bioreactor
6. UV-disinfection - every 4 hour by UV-light

GENERAL H300 SPECS



Dimensions (W x D x H):

80 cm | 31.5" x 34 cm | 13.5" x 185 cm | 75" *

***Please note that with the incoming water pipes 210cm | 83" of height is required.**

Material specification:

The water tanks are made of Medium Density Polyethylene.

Backup water (potable or rainwater) connections:

Flow minimal 20 lit. | 4.5 gal. per minute, pressure minimal 2 bar | 29 Psi.

Power supply:

100/240V, 20W (24V internal)

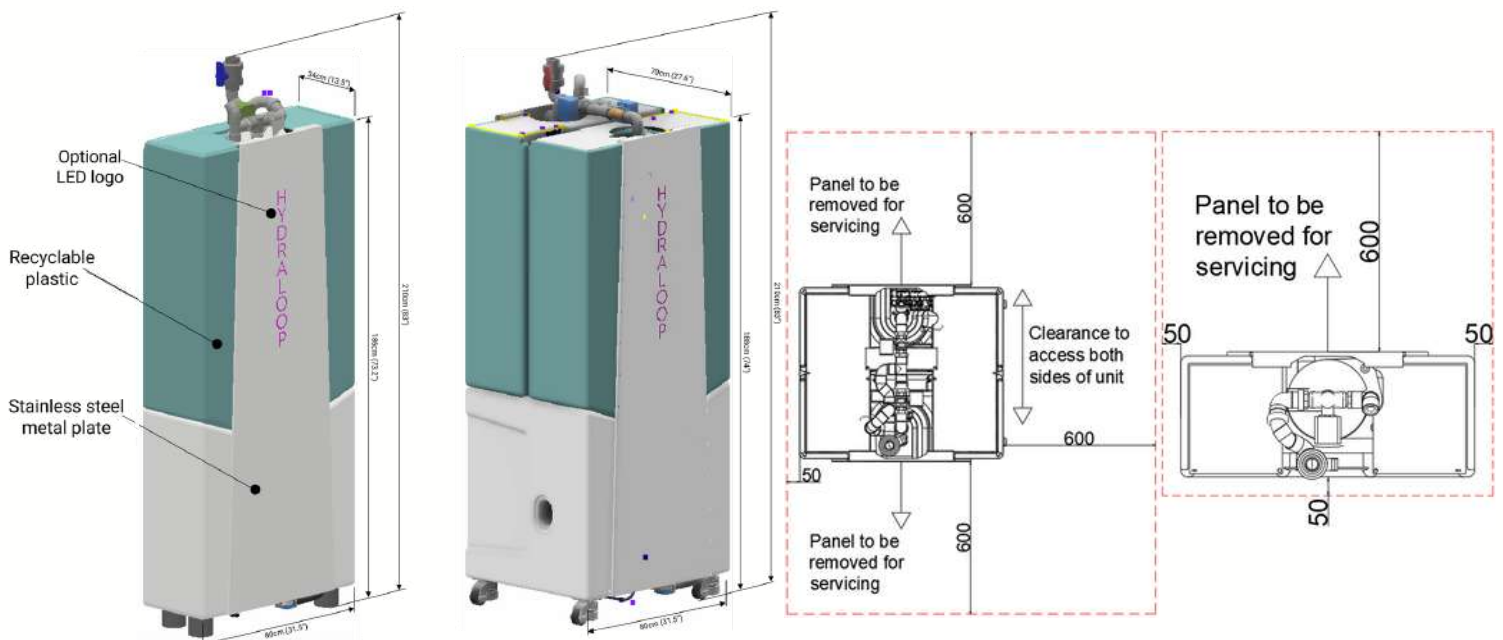
Expected power consumption: ±200 kWh/year Average recycled water quality

Hydraloop Residential water recycling products are certified to NSF/ANSI standard 350

- CBDO5 (mg/L) < 10
- TSS (mg/L) < 10
- Turbidity (NTU) < 5
- E. coli (MPN/100mL) < 14
- PH (SU) 6.0 - 9.0
- Noise level: + 44 dB



Certified to
NSF/ANSI
Standard 350



OTHERS USERS ROI

Estimated product lifetime: 20 years

Input

- City Water Tarif:
- Average per capita use
- Average members in household (H300)
- Estimated large household (H600)

H300

5 Person home average

- Water used per household/month
- Water cost saving per month (50% of full bill)

H600

8 Person home average

- Water used per household/month
- Water cost saving per month (50% of full bill)

Value

- 0.052 AED/IG
- 120 IG
- 5 Persons
- 8 Persons

Notes

Slab R + 0,006 AED fuel surcharge
550 L converted to IG
Year 2020. Includes all nationalities.



- 18,000 IG/ household
- 468 AED/month

- 28,800 IG/ household
- 749 AED/month

H300

QYT	Est Price \$	ROI in Years
• 1	6,175	4
• 30	5,995	4
• 60	5,881	4
• 250	5,771	4
• 500	5,613	3
• 1000+	4,940	3

H600

QYT	Est Price \$	ROI in Years
• 1	9,262	4
• 30	8,992	4
• 60	8,821	4
• 250	8,656	4
• 500	8,420	3
• 1000+	7,410	3

In this example we calculate with the European average usage of 130 liters per person per day.

In many regions of the world, the actual usage per person per day is higher.

H300

• Example of annual Hydraloop water recycling for 4 person family in Gallons

Capita 4	gallons	Person	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Showing (morning)	12,0	4	48	48	48	48	48	48	48
Showering (Evening)	16,0	1	16	16	16	16	16	16	16
Collected greywater			64	64	64	64	64	64	64
Available Hydraloop water									
		90%	58	58	58	58	58	58	58
		Gallons							
Toilet Flush (5 flushes/day/person)		1,6	32	32	32	32	32	32	64
Washing machine (1/day)		12,2	12	12	12	12	12	12	12
Gardan, Pool or carwash			14	14	14	14	14	14	14
Recycled water usage per day			58	58	58	58	58	58	58

Tap water saved per year **20.045 gallons**

In this example we calculate with an average water usage of 200 liters | 53 gallons per person per day.
This is common in many regions around the world, like Australia, the US, and parts of the Middle East.

H600

• Example of annual Hydraloop water recycling for 6 person family in Gallons

Capita 6	gallons	Person	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Showing (morning)	15,9	6	95	95	95	95	95	95	95
Showering (Evening)	17,2	3	52	52	52	52	52	52	52
Accondensation water	15,9		15,9	15,9	15,9	15,9	15,9	15,9	21,1
Collected greywater			162	162	162	162	162	162	168
Available Hydraloop water		90%	146	146	146	146	146	146	151
		Gallons							
Toilet Flush (5 flushes/day/person)		2,8	83	83	83	83	83	83	83
Washing machine (1/day)		18,5	18	18	18	18	18	18	18
Gardan, Pool or carwash			44	44	44	44	44	44	44
Recycled water usage per day			146	146	146	146	146	146	151

Tap water saved per year 47.503 gallons

ENERGY SAVING



- **Hydraloop uses approx 200kWh**
- **Hydraloop saves 400 - 600kWh**
- **In-house low radiation heating**
 - to be heated for washing machine
 - with flushing of the toilet



REDUCTION IN CO2 EMISSIONS

- **Reduction of CO2 emission by Hydraloop: 476 kg/year**
- **On average 6.3% less in-house production of total CO2**

CASE STUDY- MIDDLE EAST

جامعة الملك عبد الله
للعلوم والتقنية
King Abdullah University of
Science and Technology



- September 2021 Hydraloop pilot installation of cascade system for LEED PLATINUM certification at KAUST.

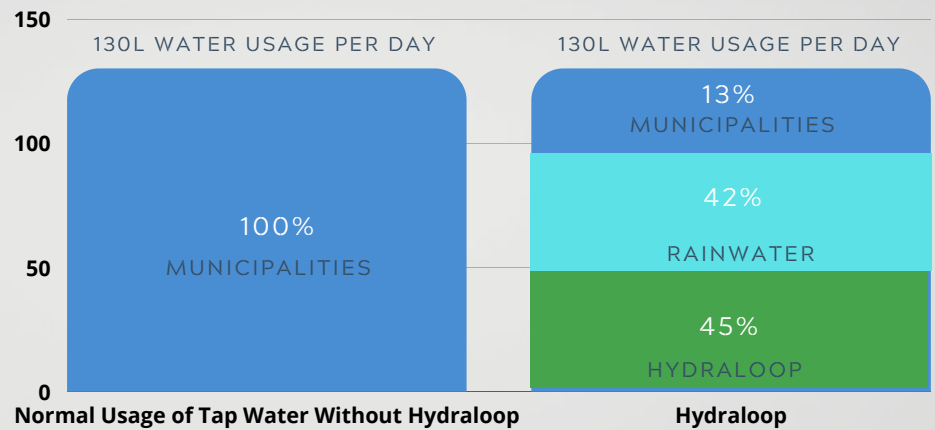
BBH



- BBH is a lifestyle brand that supports wellness and sustainable living. Hydraloop has been working with BBH and has installed its systems in the BBH villa in Palm Jumeirah In September 2021.



CASE STUDY-1



- David Mertens and his 2 children moved into their new built home in Grimbergen, Belgium in 2019. Combining recycled water and rainwater, they use only 13 liters of water per person per day. As Belgium water usage per capita is 130 liters per day.

“

I work for Durabrik, a project developer, and through a colleague I came into contact with Hydraloop. When I was developing a new housing project, I decided to live there myself. For heating and electricity, I opted for PV panels and an air-water heat pump. In Flanders it is mandatory for new homes to recover rainwater, but we wanted to go even further and also added water recycling. We connected all drains - where possible - to rainwater or recycled Hydraloop water. **On average we use only 13 liters of tap water per person per day** for the dishwasher, hand basins and for drinking water. My experiences are positive. Hydraloop staff always think along and are customer oriented. In my case, this was even more important as we connected the Hydraloop to rainwater, which made the overall installation a bit more complex. Water is still fairly cheap today. But what you save financially per year is great anyway. I



”

CASE STUDY-2



- &Beyond's Sossusvlei Private Desert Lodges, Namibia, Africa. All luxury suites installed with Hydraloop units, serving each lodge with recycled water for the toilet flushing, topping up its private swimming pool and washing the dust off the solar panels.

The Namibian desert is a landscape of endless space and one of the most spectacular yet arid areas on earth. All exquisite suites of the Private Desert Reserve extend over an ocean of dunes and gravel planes. One of the most innovative features of the accommodation design is the way in which the extremes of the natural environment are harnessed to create energy and recycle wastewater. Each super comfortable and luxury suite has its own Tesla solar power plant and Hydraloop water treatment and recycling system.

The Hydraloop facility manager's dashboard gives &Beyond's Lodge Managers relevant information on water usage and savings.



ARTICLES ON HYDRALOOP



“

A water recycler recycles up to 95% of the water from your shower, bath, washing machines and air-conditioning and reuses it for toilets, garden irrigation and swimming pools. Not only does it provide enormous environmental benefits, but this smart device is also a profitable investment and will surely pay off the upfront cost in time. A water recycler can save you up to 45% on tap water and 45% on wastewater and contribute to keeping water supplies stable. You can buy a water recycler at water recycling systems specialized companies like Hydraloop for \$4000+.

”

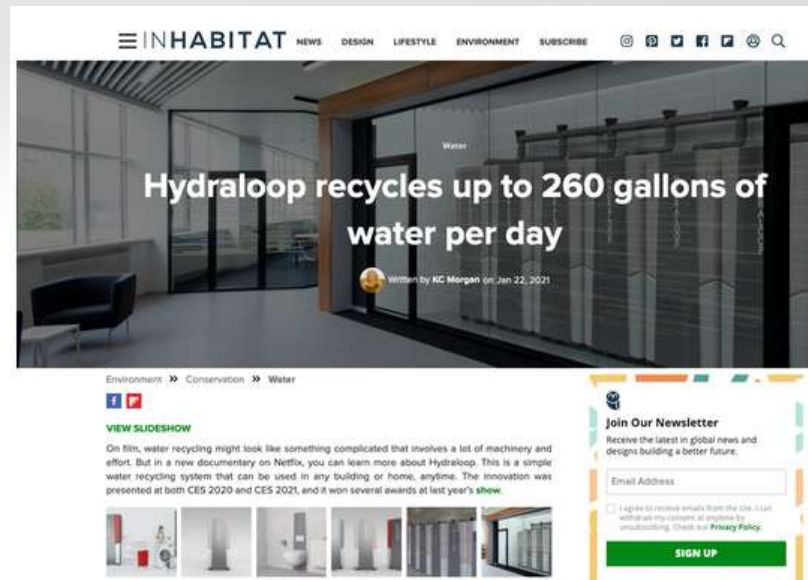


ARTICLES ON HYDRALOOP

INHABITAT

“On film, water recycling might look like something complicated that involves a lot of machinery and effort. But in a new documentary on Netflix, you can learn more about Hydraloop. This is a simple water recycling system that can be used in any building or home, anytime. The innovation was presented at both CES 2020 and CES 2021, and it won several awards at last year's **show**. Hydraloop is featured in "Brave Blue World," a documentary that takes an unfiltered look at water and **climate change**. The documentary was filmed across five continents and shows how water is managed in places all over the world.

”



ARTICLES ON HYDRALOOP



“

During CES 2021, HydraLoop Systems launched two new products designed to "use water twice:" HydraLoop H600 and the HydraLoop Cascade. These products build upon the company's award-winning HydraLoop H300 - which won four CES 2020 awards including Engadget's "Best of the Best" - and allow businesses, such as hotels and restaurants, to take advantage of this sustainability technology. HydraLoop collects the water from showers, baths and washing machines, and in a cascade set-up also the water from hand basins and air conditioning units. After treatment, the cleaned and disinfected water can be reused for toilet flushing, washing machine, garden, swimming pool and cleaning purposes.

”

The screenshot shows a website header for Hospitality Technology with a navigation menu: CUSTOMER EXPERIENCE, POINT OF SALE, OPERATIONS, and EVENTS. Below the header is a banner for 'iInvent' with the text 'Watch Wyndham, Star Alliance, and Just Eat Takeaway Reveal their Tech Advantage.' The main article title is 'CES 2021 NEWS: HydraLoop Debuts Two New Water Recycling Systems' with a date of '01/14/2021'. A 'Subscribe' button is visible. Below the title is a photo of a modern bathroom interior featuring a toilet, a sink, and a shower area. The article text begins with: 'During CES 2021, HydraLoop Systems launched two new products designed to "use water twice:" HydraLoop H600 and the HydraLoop Cascade. These products build upon the company's award-winning HydraLoop H300 - which won four CES 2020 awards including Engadget's "Best of the Best" - and allow businesses, such as hotels and restaurants, to take advantage of this sustainability technology. HydraLoop collects the water from showers, baths and washing machines, and in a cascade set-up also the water from hand basins and air conditioning units. After treatment, the cleaned and disinfected water can be reused for toilet flushing, washing machine, garden, swimming pool and cleaning purposes.'

ARTICLES ON HYDRALOOP

“

Hydraloop Systems – winner of four CES2020-awards including Engadget’s “Best of the Best” – has scaled up its American operations to meet the rapidly growing demand from the US. With its US entity Hydraloop Inc., the game-changer in decentralized water recycling now supports American consumers and businesses to battle the water crisis in our own back yards. Hydraloop is NSF-350 certified and lowers water usage and wastewater emission by 45%, by reusing water from showers, baths, washing machines, hand basins and air conditioning units.

”



ARTICLES ON HYDRALOOP

residential tech
today

“

Hydraloop Systems head office is in Leeuwarden and manufactures in Emmen, both located in The Netherlands. The company focuses on designing and producing “game-changing decentralized water recycling products.” According to the company, the use of Hydraloop contributes toward four United Nations Sustainable Development (UNSDG), LEED, and Building Research Establishment Environmental Assessment Method (BREEAM) sustainability certifications “Our vision of the future? Use water twice”, said CEO and Founder Arthur Valkieser. “We empower people and organizations – bottom up – with smart and affordable water recycling systems. And seriously contribute to one of the greatest challenges of mankind: drastically reducing the use of water.”

”



AWARDS & CERTIFICATIONS



Best of Innovation Award: Sustainability, Eco-design & Smart Energy
 Best Sustainable Product
 Best Startup
 BEST OF THE BEST
 TIME Magazine top 25 best products of CES 2020
 NEWSWEEK top 12 best products of CES 2020



Certified to
 NSF/ANSI
 Standard 350

HYDRALOOP® NSF

The NSF/ANSI 350 standard verifies that all design and performance requirements of the standard have been met, and confirms through testing that effluent reuse water meets the stringent quality criteria. The NSF/ANSI 350 standard also sets water safety requirements for the reduction of chemical and microbiological contaminants for non-potable water use.

During the 26-week NSF/ANSI 350 testing period, the Hydraloop product was tested daily with a greywater mix that contained raw wastewater, secondary effluent, body wash, shampoo, conditioner, soap, toothpaste, deodorant, bath cleaner, acids, acids, liquid hand soap, laundry detergent & surface disinfectant, hand sanitizer and test dust. The incoming greywater and the treated recycled water was 90 tested for 26 weeks, typically 3 days a week.

Influent values of the incoming greywater used for the 26 week test

Parameters	Required range
TSS (mg/L)	50 - 140 mg/L
BOD ₅	120 - 210 mg/L
Temperature	20 - 30 °C/68 - 86 °F
pH (50)	6.0 - 8.5
Turbidity	20 - 100 NTU
Total phosphorus ^a	1.0 - 3.0 mg/L
Total (ammonia-N)	2.0 - 5.0 mg/L
COD	250 - 450 mg/L
Total coliform	10 ³ - 10 ⁷ cfu/100 mL
E. coli	10 ² - 10 ⁶ cfu/100 mL

Effluent values NSF-350 requirements and Hydraloop treated water test results

NSF/ANSI 350 requirements	Hydraloop average results
COD (mg/L)	< 10
TSS (mg/L)	< 10
Turbidity NTU	< 5
E. coli (MPN/100 mL)	< 14
pH (50)	6.0 - 9.0



WINNER
 GLOBAL WATER
 CHALLENGES PRIZE 2019



Winner Innovation Award!

INTERNATIONAL
 WATER SUMMIT
 PART OF ABU DHABI SUSTAINABILITY WEEK

Winner Rabobank Circularity
 Innovation Award 2019



OUR STORY

2017

Arthur Valkieser & Sabine Stuiver, Launched Hydraloop based in The Netherlands

2020

Hydraloop expanded and established another HQ in USA

2020

Winning Best of the Best at CES 2020, gaining worldwide exposure and sales.

2021

Hydraloop expanded and established the third HQ in the Middle East (UAE)



Arthur Valkieser



Sabine Stuiver



NEWS COVERAGE



SUPPORTING LINKS



About | Hydraloop | EN | Greywater Recycling | Use Water Twice

At Hydraloop, we empower people and organizations to save water and energy...

[H](#) [hydraloop US/UK](#)



News | Hydraloop | EN | Greywater Recycling | Use Water Twice

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Product Residential | Hydraloop | EN | Greywater Recycling | Use...

Save up to 45% on tap water and 45% on wastewater with clean, clear, safe, and...

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Technical | Hydraloop | EN | Greywater Recycling | Use Water...

The water from the shower, bath and washing machine, as well as condensatio...

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IT ALWAYS MAKES SENSE TO USE WATER TWICE



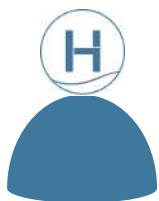
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USE WATER TWICE
Middle East Team



Hydraloop.com



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