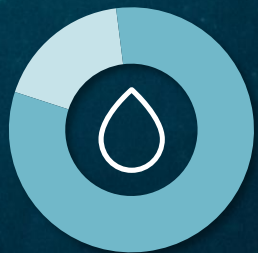


CIRCULAR SHOWERS



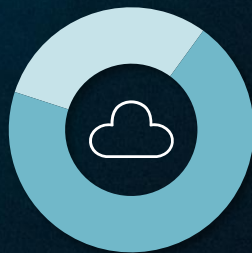
HOTELS



80% WATER



70% ENERGY

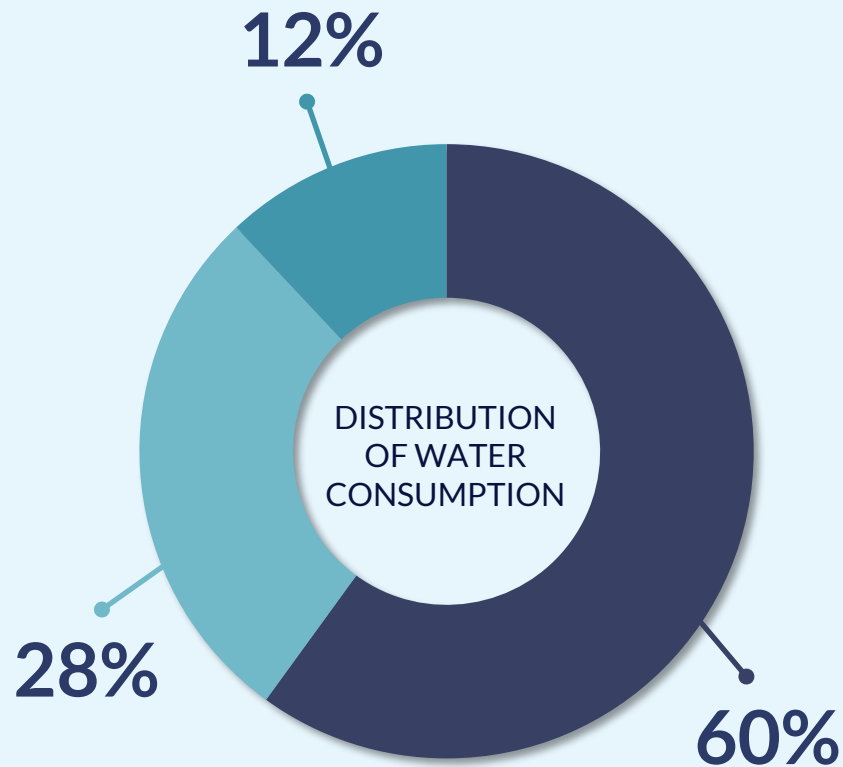


70% CO₂

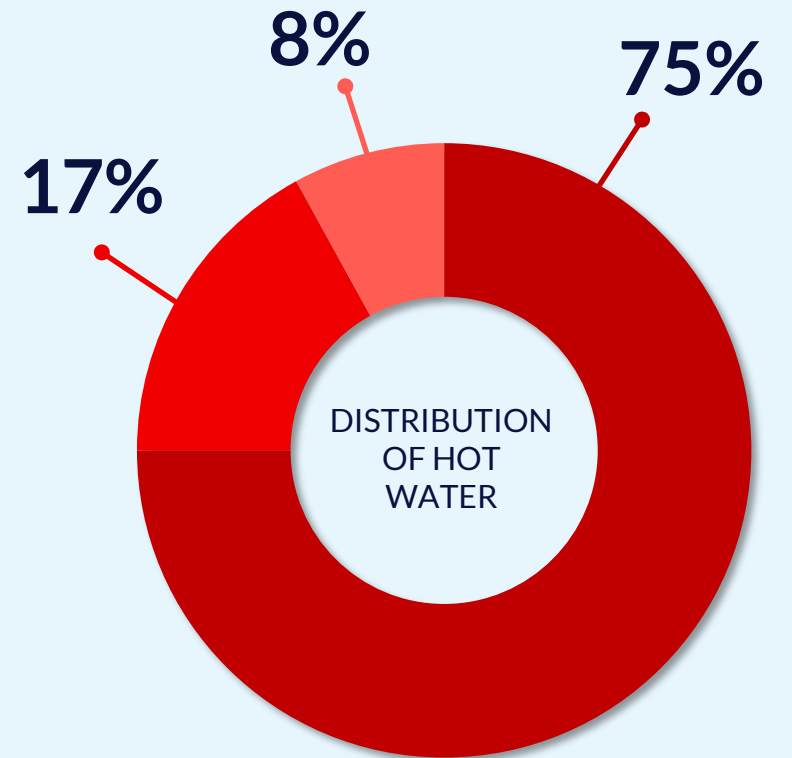


60% OF THE WATER CONSUMPTION IS ATTRIBUTED TO SHOWERING AND PERSONAL HYGIENE

IT MAKES UP **75%** OF THE HOT WATER USE



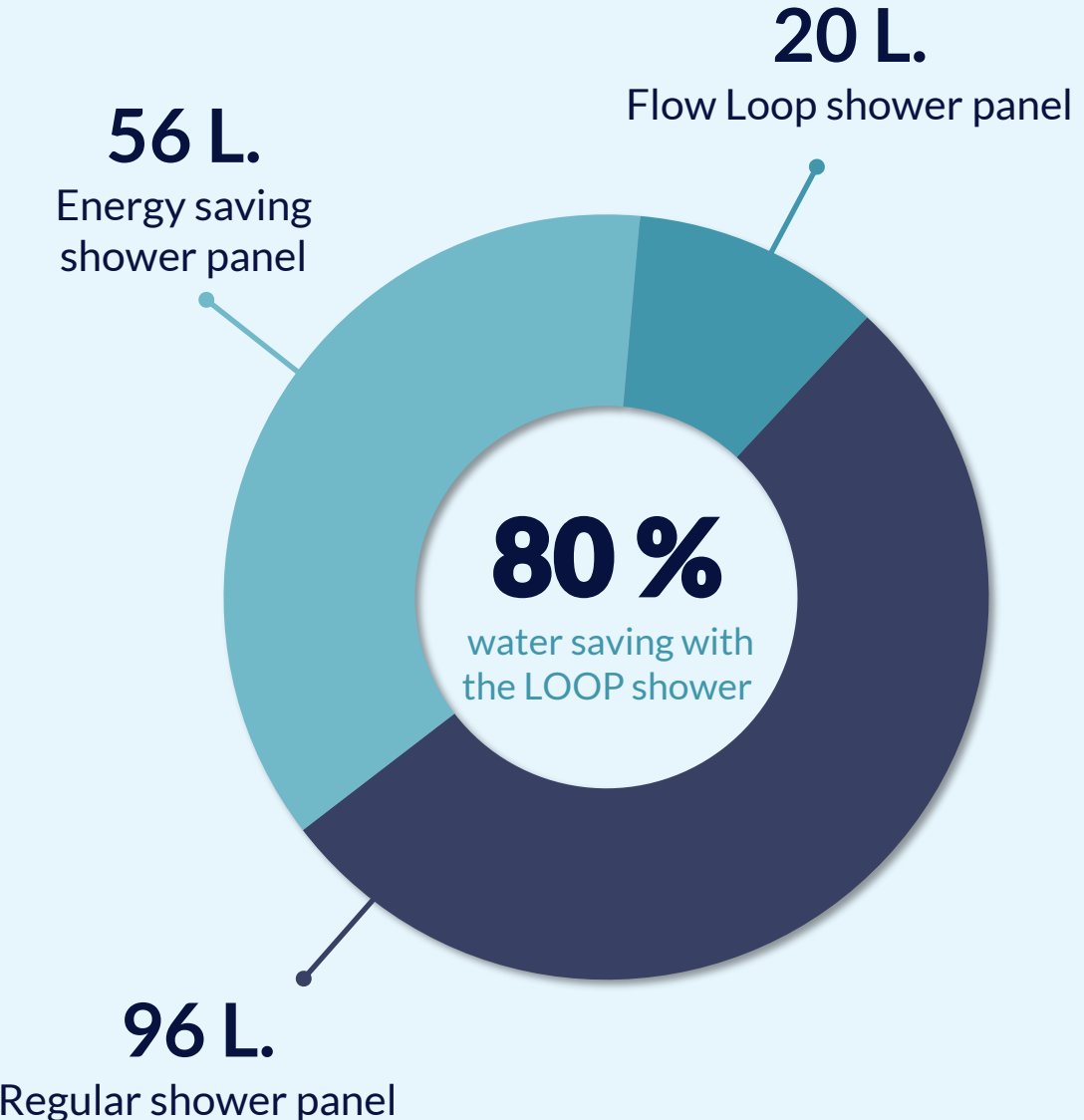
- Showering and Personal Hygiene
- Toilet Flushing
- Miscellaneous



- Showering and Personal Hygiene
- Dishwashing, Cleaning
- Miscellaneous

Source: NIRAS analysis report, 09.08.23

FLOW LOOP'S RECIRCULATING
SHOWER USES LESS THAN 20
LITERS OF WATER IN AN
8-MINUTE SHOWER



*Water consumption in liters for an 8-minute shower

FLOW LOOP – INSTALLATION IN NEW CONSTRUCTION, RENOVATION, HOTELS AND ON A NATIONAL LEVEL

We base the figures on four different analysis reports from a NIRAS report on the Flow Loop system if installed in new construction, renovations, hotels, and a national level.

Results and conclusions, prepared in 2023, focus on the potential water savings of implementing the Flow Loop system. The basis is based on standard values, Danish average figures, and realistic assumptions for each scenario. However, results may vary depending on the actual recirculation time of the Flow Loop system, as well as any adaptations in the piping system and hot water tank.

Main results:

- Downscaling of piping systems and hot water tanks can be implemented in certain areas and must be adapted to the context.
- Recirculating showers in projects with communal water installations reduces hot water flow, reducing the need for a large hot water tank capacity and allowing for smaller pipe sizes.
- The risk of biofilm is reduced by maintaining the water velocity in the pipes.
- Smaller hot water tanks may be needed, and alternatives, such as decentralized hot water production, should be considered.
- The choice of domestic water system depends on the context, building location, and design.

Overall, the savings are significant. See percentage savings on the right. This can undoubtedly contribute to an overall more efficient and tailored water management in the industry.



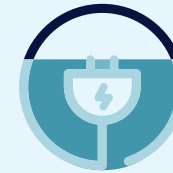
Flow Loop in liters per shower has a water saving of 82%



Total water consumption in m³/year has a saving of 31%



Energy in kWh/m² per year has a saving of 23%



Flow Loop in kWh per shower has an energy saving of 69%



CO₂ in kg/CO₂ per year has a saving of 22%



The price for water and electricity in DKK has a saving of 37%



Parts of the piping system and hot water tank dimension have a possible downscaling of -1 DIM



The energy label in classes has an improvement of +1 class

HOTEL CASE FROM COMWELL HOTEL – HOLTE, DENMARK



The hotel building was built in 1968 and was selected due to the collaboration between Comwell Hotel, Holte, and Flow Loop.

The following information has been provided:

1. The hotel has 112 hotel rooms
2. Heated floor area: The rooms make up: 2,297 m² (Total for the hotel: 8,803 m²)
3. Assumption: A hotel room is on average 22 m² and is occupied by 1-2 people
4. Heat supply: Natural gas, with contribution from electricity
5. Data on the hotel's annual consumption for 2019 (electricity, water, and natural gas)
6. Price: Water 35.0 DKK/m³, natural gas 11.0 DKK/m³ and electricity 1.50 DKK/kWh

The total water consumption for the hotel is stated at 7,450 m³, which corresponds to 67 m³ per hotel room based on the annual water consumption. Before the installation of the Flow Loop shower, the energy framework for the building was estimated at 191 kWh/m² per year based on the hotel's annual consumption of electricity and natural gas, which resulted in energy label E.

After the installation of Flow Loop's recirculating shower, the energy frame is reduced by 22% to 149 kWh/m² per year. This results in an improvement of the building's energy framework. When the energy framework is changed, the energy label can be recalculated and possibly improved to a new energy labeling.



Per hotel room	Before	After	Profit		
Water consumption	67	46	20	31%	m ³ /year
Energy	3,915	3,050	865	22%	kWh/year
Emitted CO ₂	540	421	119	22%	kg CO ₂ /year
Total price for water and energy	6,879	4,360	2,519	37%	DKK/year
Total for the building	Before	After	Profit		
Water consumption	7,450	5,168	2,282	31%	m ³ /year
Energy	438,475	341,625	96,850	22%	kWh/year
Emitted CO ₂	60,510	47,144	13,365	22%	kg CO ₂ /year
Total price for water and energy	770,447	488,331	282,116	37%	DKK/year
Assumption of energy	Before	After	Profit		
Energy frame	191	149	42	22%	kWh/m ² /year
Energy label	E	D	+1		class

Source: NIRAS report, 09.08.23

POTENTIAL PROPERTY VALUE UPLIFT

– COMWELL HOTEL



COMWELL HOTEL CASE

- 112 rooms
- Savings per shower per hotel room: 2,519 DKK/year (1-2 guests/room)
- Total annual savings for the building: 282,116 DKK
- Heated floor area: 2,997 m²
- Total shower panel investment: 2,5 m. DKK (excl. VAT)
- **Incl. saving on infrastructure: 260.000 DKK (excl. VAT)**

RESOURCE BENEFITS - TOTAL BUILDING: (vs normalized new build baseline):

- 31% water saving (2,282 m³/year)
- 22% energy saving (96,850 kWh/year)
- 22% CO₂ saving (13,365 kg CO₂ per year)

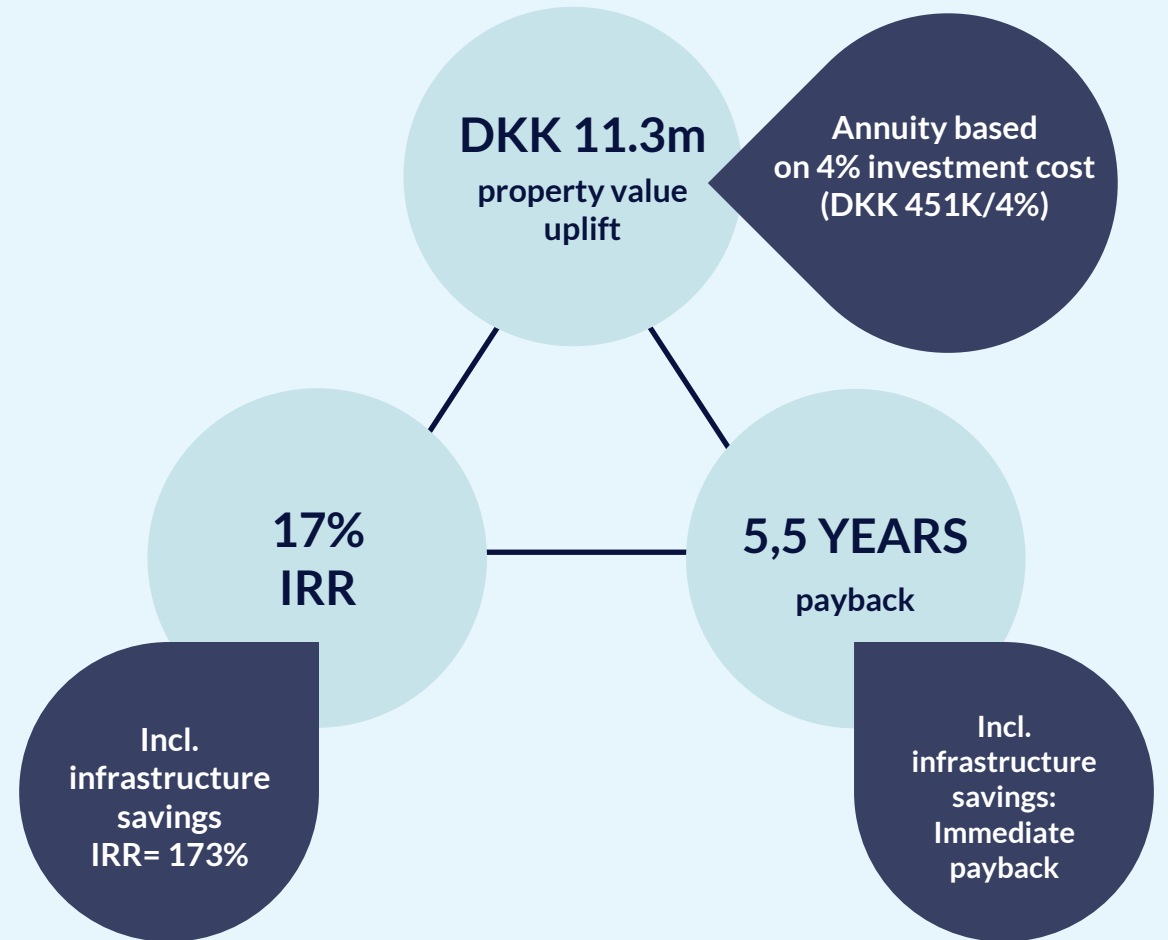
PROPERTY ENERGY LABELLING ALTERNATIVES:

According to NIRAS, the above savings will increase property energy labeling with +1 class.

Typical property cost to increase property energy classes +1,000 DKK/m² from alternatives such as insulation, new windows, changing light sources to LED, etc.

LOOP-cost at 1,060 DKK/m².

This is a new technology to uplift property energy labeling after exploring known alternatives. Cheap marginal alternative to uplift property energy labeling with an attractive business case.



VALUE POTENTIAL FOR PROPERTY OWNER (PRE-TAX)

- By investing 2.5 m. DKK the value of the property will increase by 11.3 m. with a net value gain of +8.8 m. DKK.
- Over time, property energy classes will likely be important in terms of ensuring that the property can be sold and even provide access to cheaper bank loans.

DERIVED EFFECTS ON A NATIONAL LEVEL IN DENMARK

The Flow Loop system can affect the whole of Denmark if all Danes use a Flow Loop shower and activate the recirculation when they take a shower.

Here are some important details:

- Number of people in the ages 18-75: 4,187,600
- Average time spent in the shower per week: 37 minutes
- Water saving: **81.8%**
- Saving on energy consumption (kWh): **68.9%**

Flow Loop's recirculating shower, LOOP, can make a significant contribution to Denmark's Climate Act and the objective of 70% reduction of greenhouse gases by 2030 compared to the level of 1990.

With a complete implementation in Denmark, we will save more than 200,000 tCO₂ annually.



If the population group from ages 18-75 showers with recirculating showers, we will annually save:

Water m ³ per year	72,890,345
Energy kWh per year	1,931,055,731
tCO ₂ 2023	202,761

FLOW LOOP SUPPORTS EU'S AND UN'S GLOBAL SUSTAINABILITY STANDARDS

Flow Loop supports sustainability standards and contributes to fulfilling the upcoming requirements for EU sustainability reporting, which will come into force from the 1st of January 2024 for the biggest Danish companies and the following two years for all listed companies.

The EU's Sustainability Reporting Directive focuses on ESG (environmental, social, and governance factors). The reporting that supplements the annual financial report, must in the future cover all three sustainability aspects (climate, social conditions, and economy).

The enhanced requirements include data collection and documentation for sustainability reporting at the level of the annual financial report.

- The UN's Sustainable Development Goals
- CSRD
- ESRS
- ESG
- EU taxonomy

Flow Loop can help meet the requirements of the EU taxonomy regarding:

- Energy framework
- Water flow
- Improving the energy label

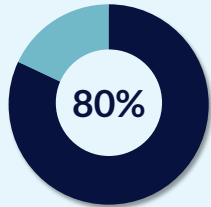
This makes Flow Loop a potential and important player in meeting these future standards and requirements in sustainability reporting.



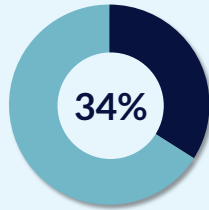
European Commission



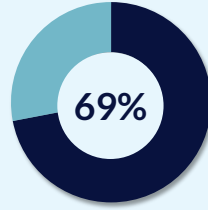
A LOT OF 30°C WATER GOES TO WASTE...



Water saving per shower



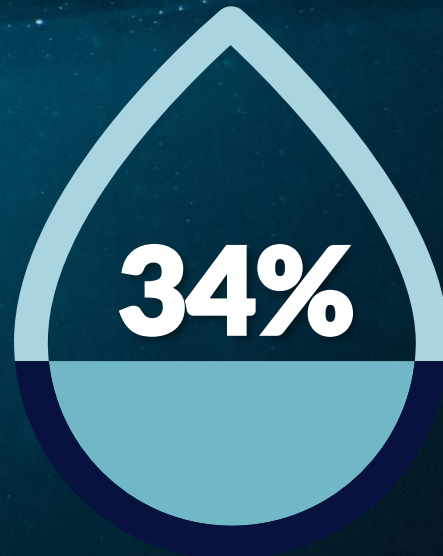
Annual savings on water consumption



Annual savings on hot water consumption

WATER IS A VALUABLE RESOURCE

– which must not be taken for granted. Therefore, it is crucial that we do not let water go to waste, but instead reuse wherever possible. With a LOOP shower, 34% less water will be used annually.



LOOP – CONSUMES LESS AND GIVES MORE

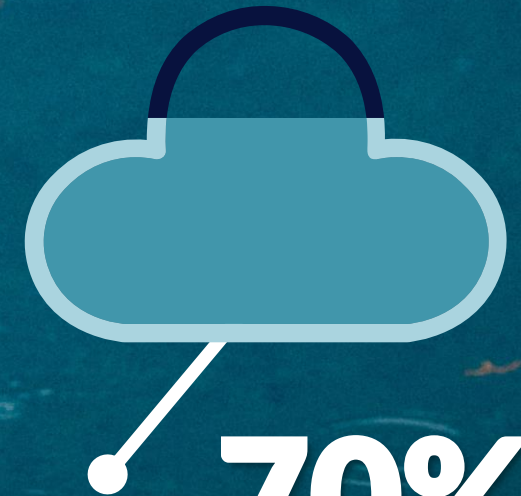
Until now, the only way to achieve water savings while showering has been by compromising on the shower experience, but the LOOP shower does not require a compromise.

Hotel guests have always been able to enjoy great showers, and this pleasure must remain an integral part of the hotel experience. With a LOOP shower, we can maintain the wonderful shower experience without pointing out the need to save water.

Enjoy great showers
– without wearing out the environment!



80%
saving on water



70%
saving on CO₂



70%
saving on energy

OUR MISSION IS ...



TO REDUCE WATER AND ENERGY CONSUMPTION AND CREATE THE NEEDED INFRASTRUCTURE



TO REDUCE COSTS AND CO₂ EMISSIONS



TO CREATE, DEVELOP, AND IMPLEMENT USER-FRIENDLY SOLUTIONS THAT CAN BE INSTALLED QUICKLY AND EFFICIENTLY IN 2 HOURS



TO ENHANCE THE SHOWER EXPERIENCE FOR OUR USERS WITHOUT HARMING THE ENVIRONMENT

COMWELL HOTEL – HOLTE

In the spring of 2023, Comwell Hotel, Holte, chose to install two LOOP showers to test the possibility of water savings. Already just after one month, the results were understandable.

The case at Comwell Hotel, Holte, clearly demonstrates the effectiveness of the Flow Loop showers and their ability to deliver significant savings in a short period of time in the hotel industry, as well as guest comfort using the system. This confirms that investing in solutions such as Flow Loop is not only good for the environment, but also has positive economic consequences.



”It is of crucial importance that we have not received any feedback from our guests regarding the showers.

Our guests pay a lot of money to stay at our hotel, so if something is wrong, we expect to be notified.”

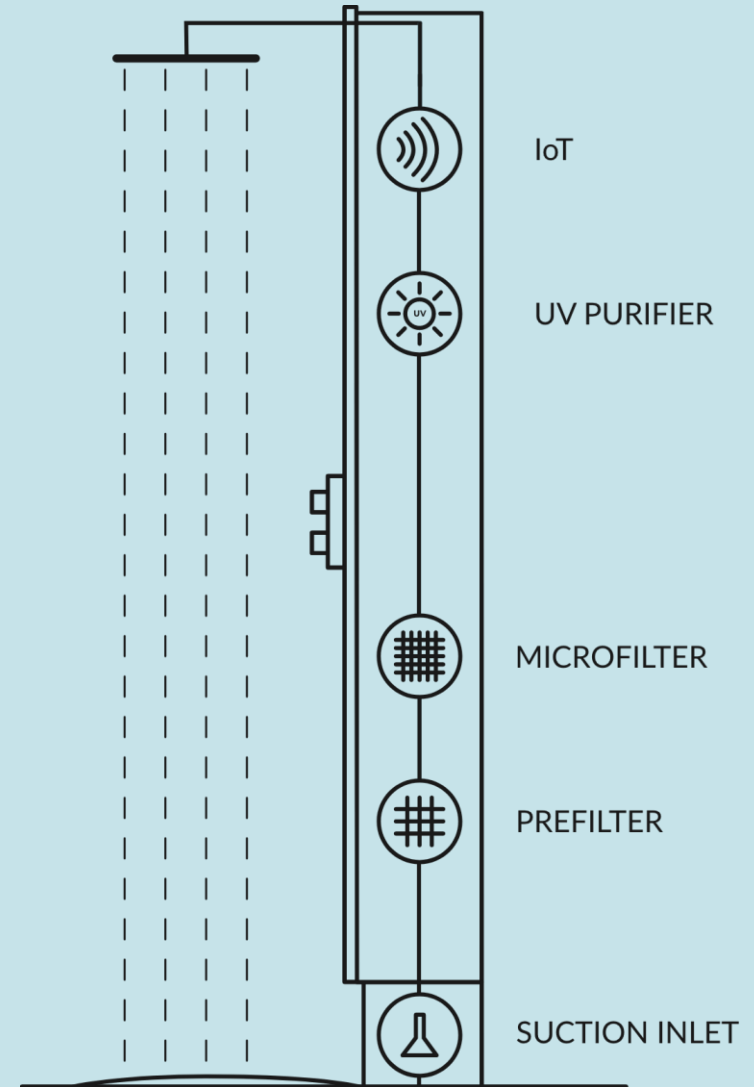
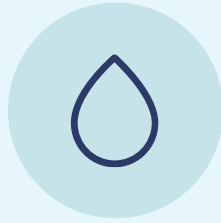
– Peter Gerløv Feddersen, Hotel Director – Comwell, Holte

EXCELLENT WATER QUALITY

Flow Loop's innovative technology ensures that no water is shared between users, and the recirculating water undergoes a microfiltration and UV treatment process. This eliminates 99.999% of all pathogenic bacteria and viruses, guaranteeing clean water and high water quality.

Our technology has been under development and extensive testing since 2017 in close cooperation with the Technical University of Denmark.

The results are verified by Eurofins.

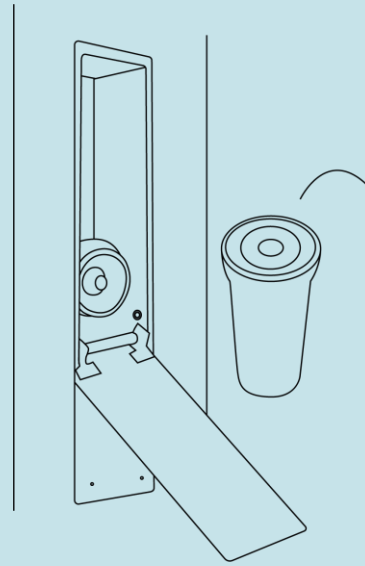


QUICK AND EASY MAINTENANCE

The LOOP shower is designed to require minimal maintenance, so it can provide clean, high-quality water for many years with only occasional filter changes and system rinses.

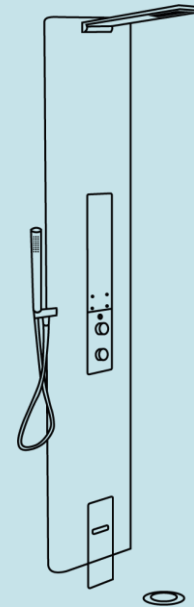
”Both the filter change and system rinse process are simple to administer. I can easily open the hatch and replace the filter or start the system rinse. The system rinse process happens automatically, so I can focus on other tasks while it takes care of itself. It saves me time and effort and ensures that our system is well maintained without demanding too much.”

– Housekeeping Manager, Maria Male, De 5 Stjerner



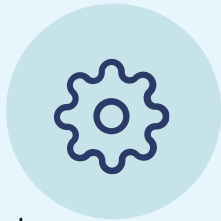
FILTER CHANGE

The filter must be replaced after 200 showers, but at least once a month. It takes one minute to perform a filter change.



SYSTEM RINSE PROCESS

A system rinse process must be carried out after 200 showers, but at least once every 14 days. The process takes 10 minutes, and the system does most of the work itself – it just needs to be started.



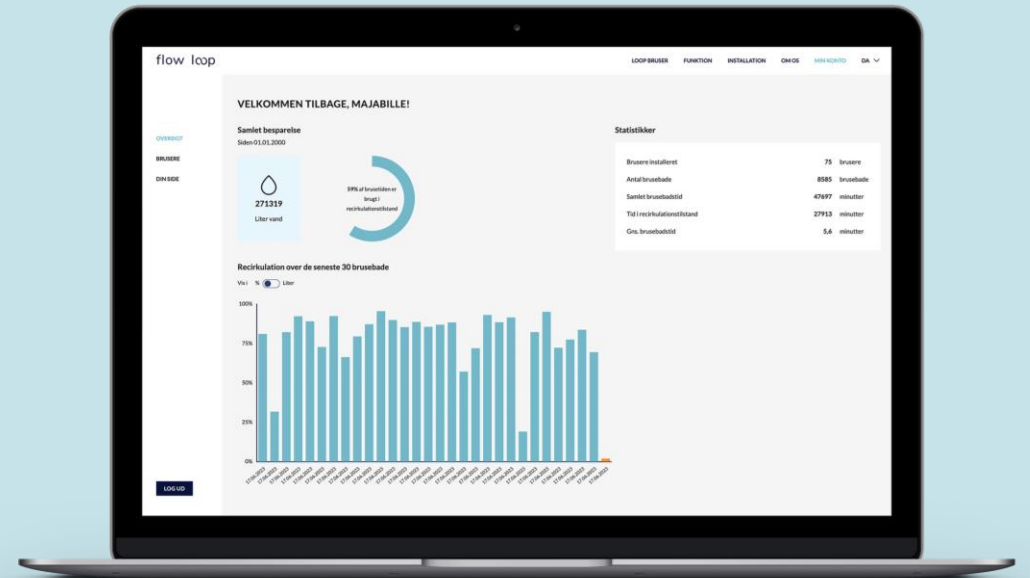
ONLINE SAVINGS MODULE

The LOOP shower comes with an IoT solution that collects data about every single shower. This makes it possible to follow water savings using a log-in to our online savings module.

The solution shows the total water savings for all installed showers, as well as data for the individual shower.

In the online savings module, you will find data on:

- Total water saving for all installed showers
- Water saving per shower
- Total shower time
- Average shower time
- Total recirculation time



GET A CIRCULAR SHOWER IN 2 HOURS



Flow Loop's circular LOOP-shower is designed to be installed in most existing bathrooms in **2 hours** – without the need for reconstruction.

In addition, we also offer retrofit solutions for most bathrooms – regardless of whether you have a circular, square, triangular or linear drain.

INSTALLATION REQUIREMENTS

1. Floor drop or edge that enables the build-up of 2-6 mm of water in the shower cabin
2. Access to a 230V socket or an electrician's visit
3. 225 cm from floor to ceiling
4. The shower must have its own drain



CUSTOMIZE YOUR LOOP SHOWER



Customize your Flow Loop shower with LOOP color. Choose your own front colors using the NCS system's color codes. You have the freedom to choose either the hotel's color codes or adapt to your specific preferences.

Only your imagination sets the limits.

RAINSHOWER WITH A CLEAN CONSCIENCE

Until now, the only way to save water in the shower was to sacrifice the shower experience. With the LOOP shower, there is no need to rush under the rain shower to save water.

This promotes comfort, and well-being and gives users a pleasant experience – without harming the environment!



INSTALLATION IN 2 HOURS



1



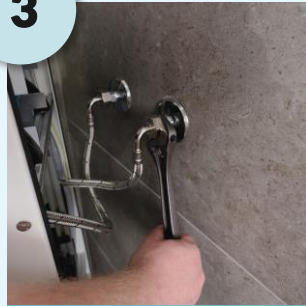
REMOVE
the old fixture

2



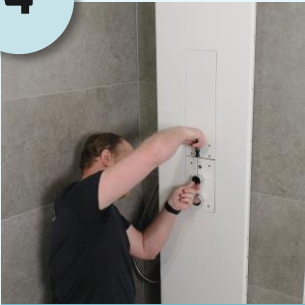
INSTALL
wall bracket

3



CONNECT
flexi hoses

4



CONNECT
the shower panel
to the wall bracket

5



INSERT
the LOOP drain
cover

6



CONNECT
to electricity
outside of the
shower cabin

BEFORE



2 hours



AFTER

flow loop
circular showers

flow loop

circular showers



HydroSustain

Cosmo Grimwood
cosmo@hydrosustain.com
www.hydrosustain.com | www.hydrosustain.es