



Rainwater „a gift from heaven“

**RE**-imagined  
**Drinking**  
**Showering**

Washing  
Garden  
WC



Become your own water provider and use  
rainwater as your House Water Source

**INTEΨA**

## Your House RAINwater source

Save up to 100 % drinking water

Particularly in countries with a centralized water supply, rainwater is hardly used except for flushing toilets and garden irrigation. In many areas however, sufficient rainwater of excellent quality is available to cover up to 100 % of the total water requirement. With INTEWA technology that is now possible.

### Showering - Drinking - Garden - Toilets - Washing

Now everything is possible. Use your house as your own water supply by collecting rainfall, as a gift from heaven, in drums. Treat it with the AQULOOP technology and thus have an almost self-sufficient water supply.

**Note:** „Compliance with and inspection of water quality as well as maintenance of the system is subject to the responsibility of the operator and is only for their own consumption.“





# Back to the „Water Future“

Water comes from the faucet, to modern people this is self-evident. But this will not continue forever because problems are increasing. It is worth taking a look into the past.



## ► Stone Age

Early peoples drank natural surface water, whose origin was rainwater.



## ► Medieval - Modern Times

As people settled down, they settled on the water. Next came diseases caused by germs, as well as bottlenecks in the supply.



## ► Today

Today's contaminants, such as trace elements from medicine and agriculture, cannot be removed from the water by modern systems. However, membrane filtration and digital monitoring systems already enable the use of small, decentralized systems. With this technology, a rethink is possible.

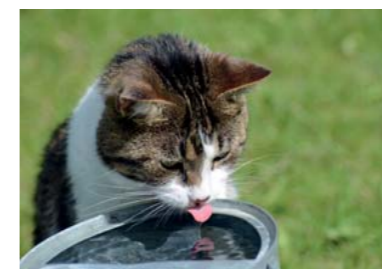
## ► Vision

The vision is, at least in areas of sufficient rainfall, decentralized, pure rainwater is collected from every house and processed directly on-the-spot to drinking water.

## Benefits of Rainwater



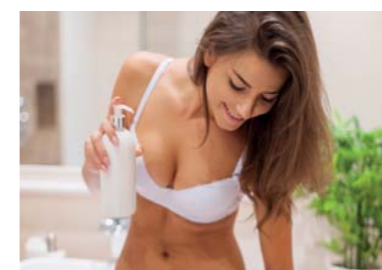
- Animals love lime-free water
- Lime-free rainwater increases the life expectancy of hot water systems
- Tea and coffee taste better with soft water
- No need to buy bottles of drinking water
- No more annoying limescale deposits on faucets, less cleaning



- Maintenance cost-savings with lime-free rainwater
- Healthy skin with soft rainwater
- Saving laundry detergent
- Soft rainwater protects clothing
- Less shower gel and beautiful hair
- No anthropogenic trace elements and drug residues

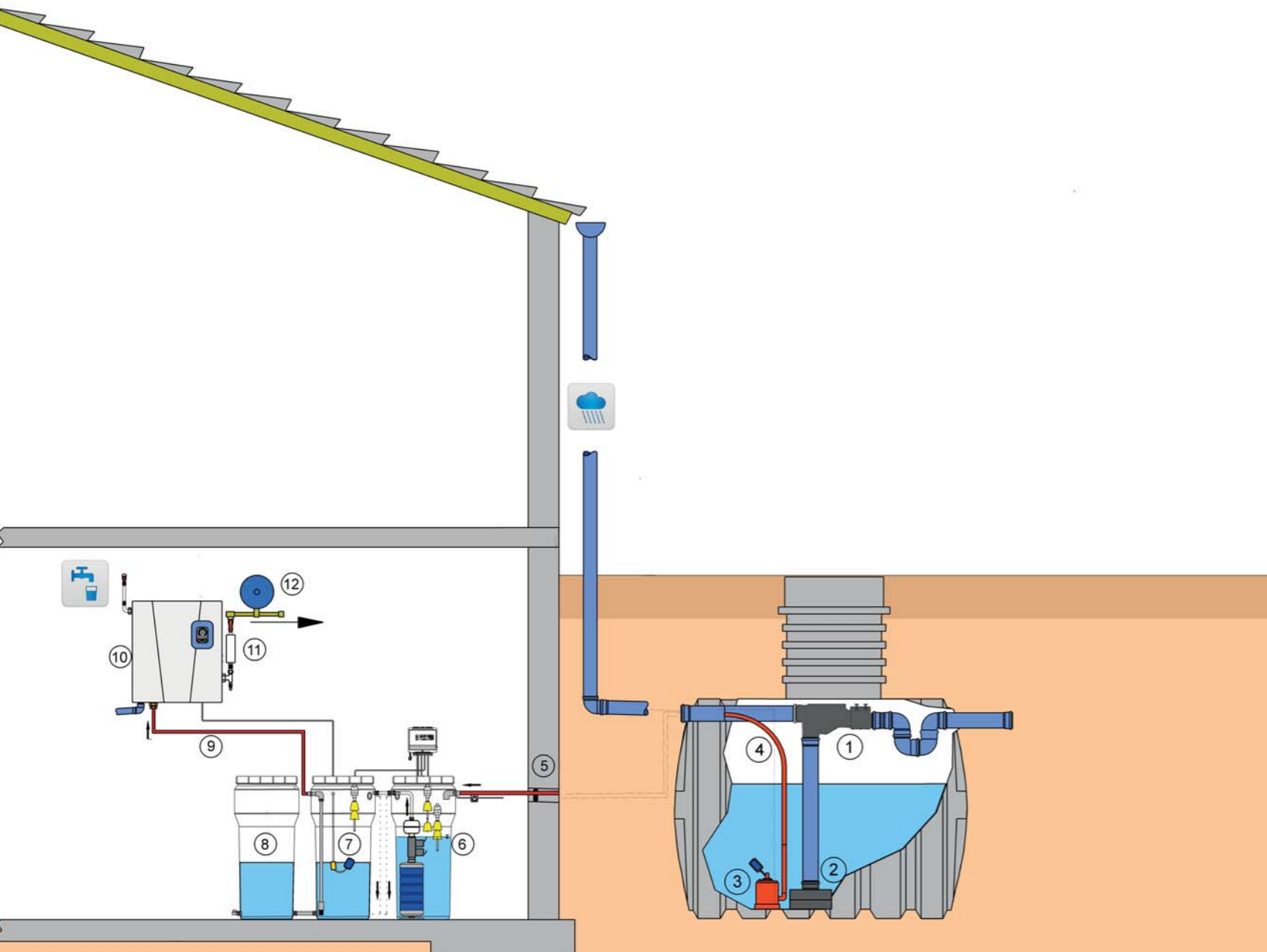
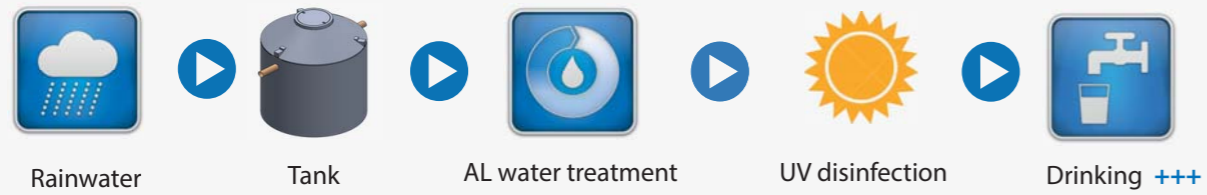


- Permanent cost-savings for drinking water and wastewater
- More independence from the drinking water provider
- Higher security thanks to decentralized water supply
- The Ministry of the Environment recommends rainwater for irrigation of your plants



## Rainwater Treatment System Construction

The AQUALOOP concept



### Functionality

The rainwater is treated in several cleaning stages. Before the water enters the tank, it is pre-cleaned with the PURAIN filter. Coarse debris, such as leaves or small branches, are retained. Particles, heavier than the water, settle on the tank bottom. Lighter substances remain on the surface of the water and are flushed away by the skimmer integrated on the PURAIN filter through the overflow. An integrated backflow preventer stops the ingress of pollution from the overflow.

The 24 V pump installed in the membrane station sucks the water through the hollow membrane fibers into the clear water tank. Bacteria and viruses are reliably filtered without chemical additives, such as harmful chlorine.

The UV system installed in the pressure line combats the potential reinfection of the standing clear water by disinfecting the water before it is delivered to the consumer via the pump system.

### Simple retrofitting

The existing pipe system of a house can be used. With such a system many existing homes can be retrofitted.

### Your individual system

The modular design of INTEWA technology allows the realization of your own system to suit your structural as well as your personal requirements. If you already have a rainwater tank, this can be used as well.

### System components

1. PURAIN filter
2. PLURAFIT calming inlet
3. Submersible pump
4. HORIZON pressure hose
5. Wall bushing
6. AL Tap comfort
7. AL clear water tank
8. AL expansion tank
9. SDS suction hose
10. RAINMASTER Favorit SC
11. UV system
12. Expansion vessel

**Note:** On request we are also happy to offer plastic or concrete tanks in different sizes.

## Components for Rainwater treatment

The patented AQUALOOP membrane is the heart of the water treatment.



### ► AL control unit

Each membrane station is equipped with a control unit. This automatically controls the AQUALOOP water treatment system. The operating conditions can be easily read off a lighted LCD display.

### ► AL pump assembly

The pump assembly includes a suction pump and backwash pump. The built-in suction pump sucks the water through the membrane and transports it through the permeate hose into the clear water tank. The backwash pump cleans the membrane fibers.

### ► AL membrane

The special hollow membrane fibers reliably filter out bacteria and viruses. The particular construction and arrangement allows a very long service life, up to 10 years, with very little maintenance. AQUALOOP water treatment can dispense with chemical additives, such as harmful chlorine. This is equally positive for the environment and wallet.



### PURAIN filter

Self-cleaning rainwater filter with skimmer and backflow preventer for installation in the rainwater tank.

### PLURAFIT calming inlet

The calming pot prevents the disturbance of floor sediments in the tank.



### Submersible pump

The submersible pump supplies the collected and pre-filtered rainwater from the rainwater tank into the membrane tank in the house.

### HORIZON hose

The high-quality EPDM hose is the connection between the submersible pump and the membrane tank.

### Wall bushing

The MD 100 seals the interior of the pipe connection with suction hose, cables and other pipes between the tank and house against drafts and backwater from the tank.

### AL Tap comfort

The rainwater is filtered and sterilized from the AL Tap com through the built-in membrane station into the two coupled clear water tanks.



### AL- clear water tank

The clearwater tank functions as a water reservoir. The storage volume can be increased with one or more extension tanks.

### SDS suction hose

The high-quality EPDM suction hose serves as a connection between the clear water tank and the RAINMASTER Favorit 20 SC pump unit.



### RAINMASTER Favorit 20 SC

The RAINMASTER Favorit 20 with speed control sucks the sterilized water from the clear water tank to your fixtures ie. toilet, shower, outdoor tap, washing machine, etc ..

Additionally, the RMF-SC is particularly durable, quiet and economical with power consumption

### UV system

Thanks to the downstream UV lamp, it is possible to disinfect water once again before use.



### Expansion vessel

The expansion vessel ensures gentle regulation of the pump.

Wood-frame Tiny House, Netherlands

Project data

Application: Drinking, Showering, Laundry, Toilet, Garden  
Useful volume: 3.000 Liter  
Roof area: 40 m²  
Construction date: 2016

With this particularly innovative construction, new, attractive wood-frame containers are transformed into attractive living quarters. What is special is that the container houses are operated as water independent. The supply is provided only with the rain-

water available from the 40 m² roof area. Of course, there was also very little space for the technology. The difficulties were solved with a special INTEWA rainwater harvesting system. The water samples confirm an excellent quality.

Parameter	Measured results with AQUALOOP	Limits according to drinking water regulation	Units
Escherichia coli	0	0/100	cfu/100 ml
Enterococci	0	0/100	cfu/100 ml
Turbidity	< 0,1	1	NFTE
pH	7,7	7 - 9,5	
Nitrate	7,8	≤ 50	mg/l
Nickel	0,0014	≤ 0,02	mg/l
Zinc	76	≤ 3000	µg/l



Weekend House in the Black Forest

Project data

Application: Drinking, Showering, Laundry, Toilet, Garden  
Useful volume: 6.000 Liter  
Roof area: 90 m²  
Construction date: September 2016

from the builder

„We were faced with the problem that a water connection and no source for house water supply was available for a weekend house in the middle of the Black Forest. The house is located in a forest at an altitude of approx. 650 m asl. A cistern for rainwater with a capacity of 6,000 litres was installed next to the house and we were looking for a way to use the rainwater for the water supply. This can only be realised with help from water treatment.

Through research on the Internet we came across the company INTEWA, with whom we contacted. From the data provided by us

an offer was presented for an „AQUALOOP system for water treatment“. After several telephone conversations about the functioning of the system and the space requirements in a basement, we agreed and ordered the offered system. As the basement was erected, the delivered system was installed and the necessary supply lines laid.

The system was put into operation in July 2016 and has been functioning like clockwork since then, converting rainwater into impeccable drinking water. Meanwhile, the hot water tank was put into operation, the shower, a sink and a toilet were finished and supplied with this water.

Parameter	Measured results with AQUALOOP	Limits according to *drinking water regulation ** Colilert 18/Quanti Tray ***DIN EN ISO	Units
Escherichia Coli	0	0/100**	cfu/100 ml
Enterokokken	0	0/100**	cfu/100 ml
Free chlorine with pH	< 0,02	0,3***	mg/L
Bacterial colonies, 22°C	0	1000*	cfu/1 ml
Bacterial colonies, 36°C	23	100*	cfu/1 ml
Coliforme bacteria	0	0**	MPN/1 ml



# Combined Rainwater and Greywater Use

Independent house water source in Belgium



## Project data

Application: Drinking, Showering, Laundry, Toilet, Garden  
Useful volume: 10.000 Liter  
Roof area: 120 m<sup>2</sup>  
Construction date: 2015

The self-cleaning PURAIN rainwater filter cleans the water with the help of a 0.8 mm gap sieve. With the AQUALOOP membrane station in the tank, the rainwater is microfiltered through the membrane fibers with a pore size of 0.2 µm (disinfection) and transported into a 350 litre clearwater storage tank. In order to exclude the potential hazard of reinfection in this indoor tank, the water is additionally disinfected by UV treatment before distribution in the house. The purified water is pumped by

the speed-controlled RAINMASTER Favorit SC pump unit into the existing pipe system to the fixtures in the house. The separated mains water supply system only feeds as backup to the DVGW-certified RAINMASTER. The water quality of the AQUALOOP system is checked at regular intervals.

Since the existing pipe system could be adapted, this concept now also allows easy retrofitting of rainwater systems.

## Water quality rainwater

The quality of the rainwater and the treatment performance of the system were examined with samples at various points in the overall system. The results of the analysis show that the bacterial load in the raw water from the rainwater tank is already very low. Neither the bacterium E.coli, an important indicator of contamination with feces, nor the pathogens Pseudomonas aeruginosa could be found in the samples.



Parameter	Measured results with AQUALOOP	Limits according to drinking water regulation	Units
Escherichia coli	0	0/100	cfu/100ml
Enterococci	0	0/100	cfu/100ml
Coliform bacteria	0	0/100	cfu/100ml
Turbidity	0,11	1	NTU
pH	8,58	7 - 9,5	
Nitrate	3,4	≤ 50	mg/l

## Greywater as Another WATER SOURCE in Your House

If there is insufficient rainwater available, you can also install a greywater system.



With greywater recycling, the slightly polluted water from the shower, bathtub, hand-wash basins and, if necessary, the washing machine is collected and recycled to use for toilet flushing, garden irrigation and cleaning purposes.

The great advantage of shower water recycling: Since drinking water and waste-water

prices are saved, you save twice with grey-water use. The technology for medium-sized systems amortizes already within less than 10 years without subsidies. Greywater recycling systems with free-standing tanks can, due to the low space-requirements, be installed in most single-family homes. For a single-family house, about 2 x 300 litres of storage volume is required.

We don't make wine from water though ...

### Beer from Rainwater

Brain is an exclusive light beer, brewed with soft, clean and pure rainwater filtered with AQUALOOP.

The soft rainwater lends Brain a distinctive character. Above all, the malt-like aromas are prominent and give a particularly supple taste to the palate. Brain should be served at 12 to 14 degrees Celsius in glasses with stalks and wide rims.

The INTEWA AQUALOOP technology ensures hygienic, impeccable water.

In contrast to many other water sources used in the beverage industry, rainwater contains no micro-impurities, such as residues from drugs or hormones and, of course, no agriculture products such as glyphosate.

There can be no better source of water for beer production. This special craft beer is also brewed in the manner of a Trappist beer with second fermentation in the bottle.



## Our Service

So your project will be a succes

- Concept creation and preliminary pricing
- Support for exporting companies
- Compilation of tenders
- Commissioning service support
- Maintenance
- Support with licensing questions
- INTEWA Wiki, the online knowledge portal

## Certifications



## We will be happy to hear from you

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*Ihr persönlicher Händler:*

