Rainwater “a gift from heaven” **NEW** thought

Drinking
Showering
Washing
Garden
Toilet




Become your own water supplier and use rainwater as your own **home RAIN water source.**

INTEWA

Your home RAIN water source

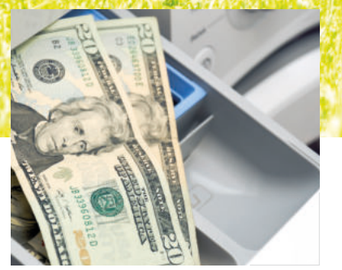
Save up to 100 % drinking water

Particularly in countries with centralized water supplies, rainwater has hardly ever been used apart from for flushing toilets and watering gardens. In many areas, however, there is sufficient rainwater of excellent quality available to cover up to 100% of the total water demand.

Showering - Drinking - Garden - Toilet - Washing

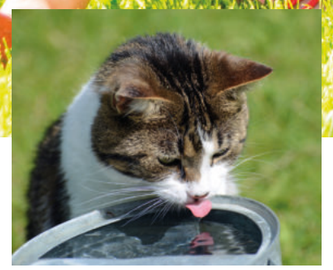
This is now possible with INTEWA technology. Use your house as your own water source by collecting the rain that falls as a gift from the sky, treating it with AQUALOOP technology and thus having an almost self-sufficient water supply.

Note: The operator is responsible for checking the water quality. Cross-connections to the public water system are not permitted. The water may only be used for the operator's own consumption without any further approvals.



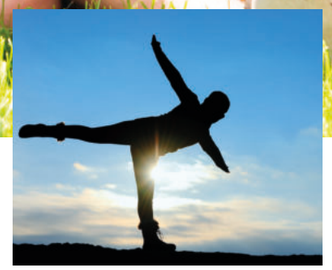
Saving costs

No medication residues



Not only tasty for people

No annoying limescale marks



More independence

Back to the "water future"

Water comes out of the tap, so modern man takes it for granted. But things won't go on like this forever, because the problems are increasing. It's worth taking a look into the past.
Whether it was surface water in the Stone Age or river/spring water in the Middle Ages, people have always drunk rainwater. With small decentralized filter systems, this is still possible today without any problems. The vision is that, at least in areas with sufficient rainfall, pure rainwater can be collected decentrally from every house and used directly on site.

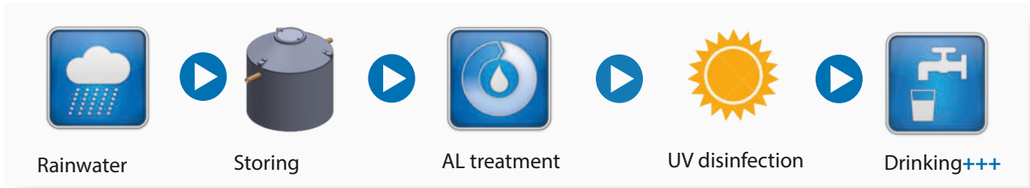
System structure rainwater treatment

The principle of AQUALOOP

Functionality

The so-called “roof run-off water” is first pre-filtered via a PURAIN pre-filter (1) before it enters the cistern. The skimmer overflow of the PURAIN filter removes the surface dirt. The integrated backflow flap prevents small animals and dirt from entering the cistern. The calming pot (2) prevents the swirling up of bottom sediments.

Different pump systems are used depending on whether the house has a basement or not. The RAINMASTER Favorit 40-SC pump system (6) draws the rainwater from the cistern via a suction pipe (4) with a floating suction filter and pushes it through the AQUALOOP direct (8) ultrafiltration unit. When used with a submersible motor pump (3), the water is pumped into the ultrafiltration unit via a pressure hose (4). Due to the small membrane pore size of 0.02 µm, particles, bacteria and even viruses are retained. Pressure surges are buffered by an expansion vessel (7). After this membrane filtration, the water passes through an additional UV unit (9) for redundant disinfection before it reaches the consumers. When a consumer such as toilets, washing machines, showers, bathtubs, washbasins and the garden system is opened, the pump unit automatically detects a drop in pressure and starts. If there is not enough rainwater available, either the RAINMASTER Favorit 40-SC or a make-up unit (6) automatically supplies the consumers with drinking water.



Simple retrofitting

The existing pipe system of a house can be taken over. Such a system can therefore be retrofitted in many existing houses.

Your customized system

The modular structure of INTEWA technology allows you to implement your own system to suit your structural conditions and your personal requirements. wishes. If you already have a rainwater storage tank, this can be used. **We recommend two standard systems.**

AL-DW1000 + RAINMASTER Favorit

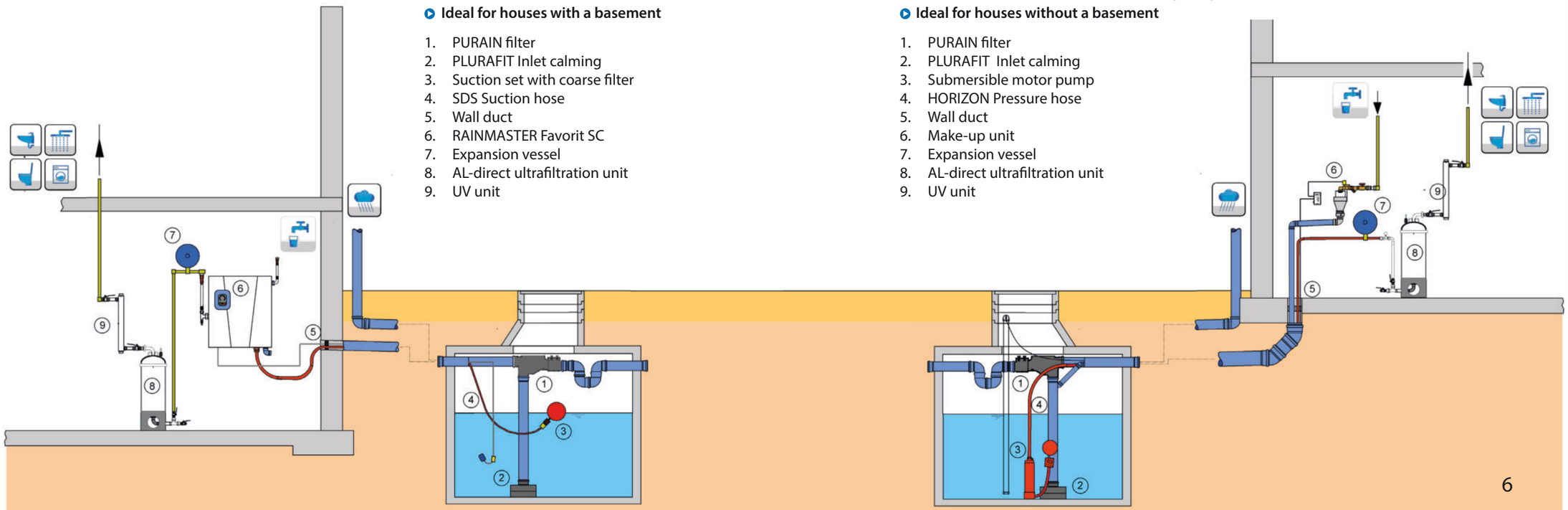
Ideal for houses with a basement

1. PURAIN filter
2. PLURAFIT Inlet calming
3. Suction set with coarse filter
4. SDS Suction hose
5. Wall duct
6. RAINMASTER Favorit SC
7. Expansion vessel
8. AL-direct ultrafiltration unit
9. UV unit

AL-DW1000 + Submersible motor pump

Ideal for houses without a basement

1. PURAIN filter
2. PLURAFIT Inlet calming
3. Submersible motor pump
4. HORIZON Pressure hose
5. Wall duct
6. Make-up unit
7. Expansion vessel
8. AL-direct ultrafiltration unit
9. UV unit



Components for rainwater treatment

AQUALOOP direct ultrafiltration unit

AL-direct is a direct filtration unit with an ultrafiltration membrane. The AQUALOOP membrane is the heart of the water treatment system. The membrane technology allows the smallest particles in the water, such as microorganisms, bacteria and viruses larger than 0.02 µm, to be retained.

The ready-to-connect system can be connected to your domestic water system in just a few simple steps. The rainwater is pumped directly from its storage tank through the system to the consumer as required.

PURAIN filter

Self-cleaning rainwater filter with skimmer and backflow flap for installation in the rainwater cistern.

PLURAFIT inlet calming

The calming pot prevents soil sediment from being stirred up in the cistern.

Suction set with coarse filter

The high-quality EPDM hose is the connection between the submersible pump and the ultrafiltration unit.

Submersible motor pump

The submersible pump pumps the collected and pre-filtered rainwater from the underground tank into the house. underground tank into the house.

Wall duct

The MD 100 seals the inside of the pipe connection between the cistern and the house with the suction pipe, cable and other pipes against draughts and backwater from the cistern.

Suction hose / pressure hose

Depending on the type of pump, the hose is used to sucking or pushing the water between the rainwater storage tank and the house.

RAINMASTER Favorit 40-SC

The RAINMASTER Favorit 40 with speed control draws the disinfected water from the clear water tank to your consumers.

Make-up unit

The INTEWA make-up unit with a so-called “free outlet” in accordance with DIN EN1717 refills drinking water as required.

Expansion vessel

The expansion vessel ensures smooth regulation of the pump.

UV unit

The downstream UV lamp disinfects any water that may have been contaminated with germs once again before you use it.

Rainwater storage options

Plastic underground tank

Two-part plastic underground tank

GRP underground tank

Concrete underground storage tank

Tiny House, Netherlands

Project data

Application:	Potable water from rainwater
Usable volume:	5,000 liters
Collecting surface:	40 m²

This particularly innovative building consists of new, attractive timber-frame residential containers that have been converted into attractive homes. The special feature is that the container houses are water self-sufficient. This means that only the rainwater from the 40 m² roof is available for supply. In addition, there is naturally very little space available for the technology. The difficulties were solved with a special INTEWA rainwater utilization system. The water samples confirm excellent quality.

Single family house, Germany

Project data

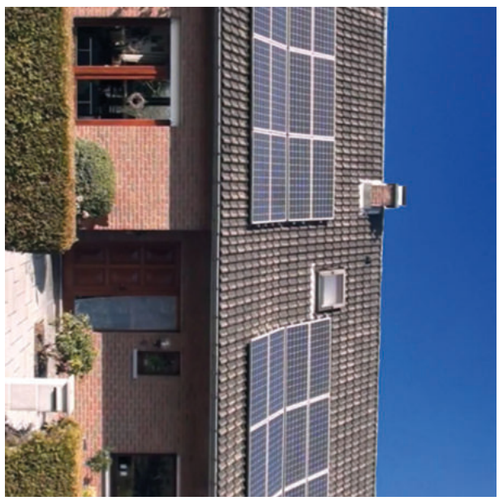
Application:	Bathroom, wellness area
Usable volume:	14,000 liters
Collecting surface:	350 m²

Due to the experience of the last few years with longer periods of drought, the client decided to have the approx. 14,000 liter oil tank converted into a rainwater tank. In this way, he gives the increasingly valuable commodity of water the storage space it needs for the months with little rainfall. This rain is collected for the tank on a roof area of approx. 350 m².

The treatment system with AQUALOOP fulfills the task of supplying 3 bathrooms and a wellness area. Care was taken to ensure that the system can be disconnected from the municipal water supply, that the water volume can be expanded in terms of the number of consumers and that sufficient pressure capacity is available in the house. A good filter volume was a prerequisite.

INTEWA company building, Germany

Application: Potable water from rainwater
Usable volume: 30,000 liters
Collecting surface: 380 m²



Single family house, Belgium

Application: Showers, garden irrigation, washing
Usable volume: 10,000 liters
Roof surface: 120 m²

Single family house, Belgium

Application: Potable water from rainwater
Usable volume: 12,000 liters
Roof surface: 120 m²

Weekend house, Germany

Application: Potable water from rainwater
Usable volume: 6,000 liters
Collecting surface: 90 m²

Water test reports for reference projects

Parameters	Messergebnisse mit AQUALOOP				Limit values according to Drinking Water Ordinance	Unit
	Single family house, Belgium	INTEWA company building	Weekend house, Germany	Tiny House, Netherlands		
Escherichia Coli	0	0	0	0	0/100	kve/100 ml
Enterokokken	0	0	0	0	0/100	kve/ 100 ml
Trübung	0,11	0,5		< 0,1	1	NFTE/ NTU
pH- Wert	8,58			7,7	7 - 9,5	
Nitrat	3,4	5,2		7,8	≤ 50	mg/ l
Nickel		0,002		0,0014	≤ 0,02	mg/ l
Zink				76	≤ 3000	µg/ l
Coliforme Bakterien	0	0	0		0/100	MPN/ 1 ml
Freies Clor bei pH			< 0,02		0,3	mg/ l
Koloniezahl 22°C		0	0		1000	kve/ 1 ml
Koloniezahl 36°C		0	23		100	kve/ 1 ml

References

Using greywater as another source of water in the house

If there is not enough rainwater available, you can also use a greywater system.
In greywater recycling, the slightly contaminated water from the shower, bathtub, hand basin and washing machine (if applicable) is collected and treated so that it can be reused for flushing toilets, watering the garden and cleaning purposes.

The big advantage of shower water recycling:
Since drinking water and wastewater prices are saved, you save twice by using greywater. Greywater recycling systems with free-standing storage tanks can be used in most single-family homes due to their small space requirements. A single-family home requires a storage volume of around 2 x 300 liters.

Our service

We support you from the idea to implementation.

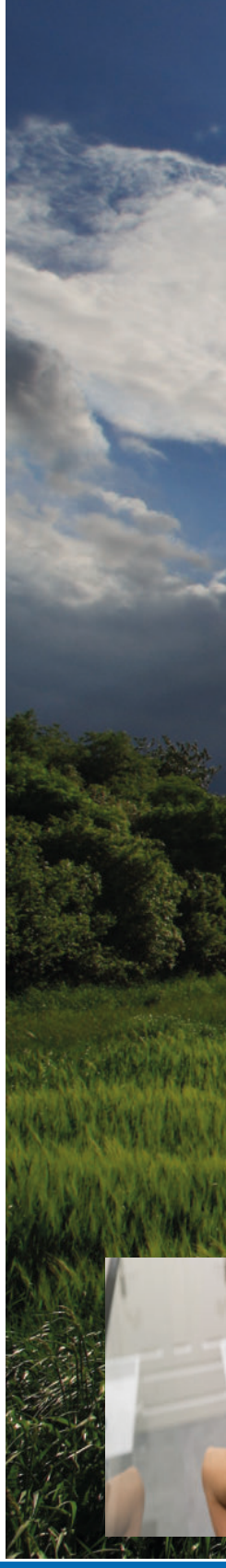
- Concept development and price calculation for preliminary planning
- Support for the executing companies
- Technical documentation
- Advice on commissioning

Certifications

DVGW CERT Anschlusssicher W 540

NSF Certified to NSF/ANSI 350

PIA Prüfinstitut für Abwassertechnik GmbH



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