

AFRI-WATER

C O L D O R H O T W A T E R
2 4 H O U R S
A V A I L A B L E O N D A Y

New

Now available with
UV-Light-Filter



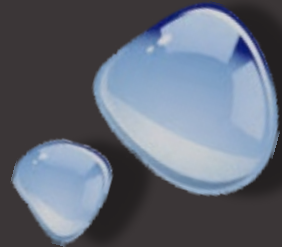
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AFRI-WATER Function

During the day, the solar-generator produce enough electric power from the sun to operate the system.

The customer can use the cold water during the day or use at night.
(optional also hot-water)





Solar-Generator

Water-Tank (cold)



Option:
Water-Tank (hot)



Controller



Imersion-Pump

AFRI-WATER Spezifikation

- 24 hours water available
- Very simple operation
- Robust and durable technology
- Very easy installation and maintenance
- Works exclusively with solar energy
- Can be used for single houses or small villages

Optional:

CASH-SMS (for rental)





AFRI-WATER Tank

1000l tank on steel or PE pallet (with / without steel-hood for protection and, if necessary, with thermal insulation).

It is food safe and therefore suitable for filling with Drinking-Water.

The water-tank stands on a Steel- or Plastic-Palett and has an inlet opening with a cap (225mm) at the top and an outlet tap with a 2 inch Coarse thread the bottom.

The tank has a plastic bladder inside and a level - indicator (line marking) on the front.

The tank can be stacked (also filled) and it can be buried.

Dimensions including the pallet :

width approx. 100 cm, depth approx. 120 cm and height approx. 120 cm, Weight: 55 kg

AFRI-WATER Batteryless

The system works without batteries, as this is not economical. For example, a battery-operation for 3 days, needs around 30 kWh of electrical energy, which have to be generated and stored. This leads to extremely high system costs and maintenance.

The Afri-Water has enough power to fill up several tanks on sunny days in order to have enough water available even during bad weather.

Simply increase the number of tanks and connect them with pipes for a practically unlimited supply of water.





AFRI-WATER Option „Cash-SMS“

Due to the cascadable size of the storage volume, the system can use for individual houses or even for small Villages.

Sell the fresh drinking water to your customers with the CASH-SMS. (World-wide use possible)



The CASH-SMS is the global remote control for rented devices !

AFRI-WATER Option „Cash-SMS“

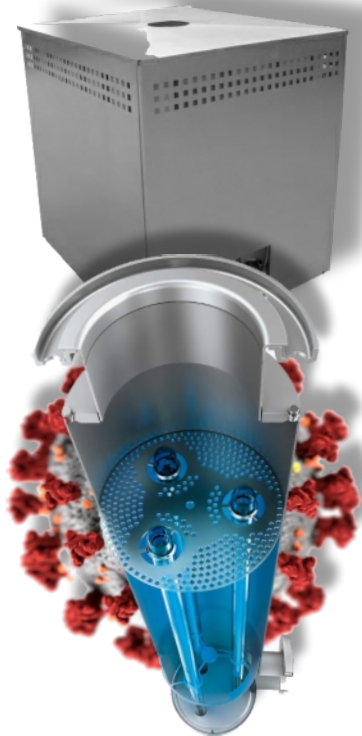
With the CASH-SMS you can switch the AFRI-WATER on / off remotely for a certain duration.

(up to 9,999 different AFRI-WATER can be managed)

The activation / deactivation is sent individually from the owner's mobile phone directly to the rented system via the global cellular network.

The owner does not have to activate the rented system on site and thus saves time and money on the otherwise laborious journey to the tenant.

The invoice for the customer is also created by the APP and can be sent as an SMS or printed out.



AFRI-WATER „Anti-Microbes“

Countless germs and microbes are part of nature and are everywhere. However, these organisms have no place in drinking water. The integrated filter system with ultraviolet light and a wavelength of 254 (nm) automatically kills the majority of microbes and viruses. A system for disinfecting germs and microbes is integrated in the AFRI-WATER.

The germicidal effect of artificially generated UV radiation was discovered at the beginning of the 20th century. The disinfection of water with the help of UV light is now a very widespread and reliable method.



Requirement for Water-Abstraction

- What is needed is available groundwater at a lower depth in the near of the pump.
- The water tanks must be installed on the roof or in a higher position about 3-5m above the ground, so that the water can be flow independently.
- The site of the tanks must be very stable, because the water tanks have a high filling weight. (about 1 to per tank).
- No frost protection available.
The ambient temperatures must be always be above the freezing point.

Requirements for the Well-Pipes

1. Well-pipes with certificate for drinking water
2. Well-Pipes with certificate for environmental protection
2. Wall thickness of the Well-Pipes min 5mm
3. Well-Pipe diameter min 115mm (inside)
4. End cap firmly attached to the tube sheet



Requirements for the Pipe-Filter

1. Filter-Slot width max. 0.3mm
2. Minimum 3m filter height (3x1m)

Requirements for the Borehole

1. The bottom of the borehole must be filled with gravel
2. The space between the borehole and the well pipe must be filled with gravel
3. The minimum depth **$D(bh)$** of the borehole is:

$$D(bh) = D(gw) + L(f) + L(s) + L(p)$$

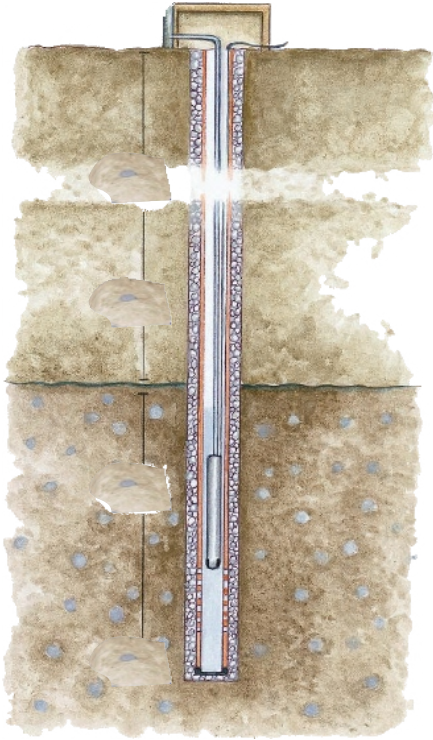
$D(bh)$: Total depth of the borehole

$D(gw)$: Groundwater level height

$L(f)$: Length of the filter (3m)

$L(s)$: Length of the sump (1m)

$L(p)$: Length of the pompe-area (4m)

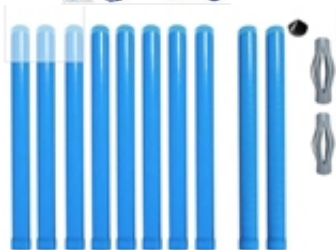
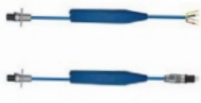




Requirements for the Groundwater

1. The water may have a max sand content $<120 \text{ g / m}^3$
2. The groundwater must not have any toxic content
3. The groundwater must not have any microorganisms
4. The groundwater must not have any viruses / bacteria
5. The groundwater must have no discolouration
6. The groundwater must have no taste
7. The groundwater must have no smell

AFRI-WATER Set



- Solar-Controller
- Water-Tank 1000L
- Solar-Modul-Brackets
- Solar-Moduls
- String-Cable
- Pump-Cable
- Pump-Drain-Rope
- Motor-Starter
- Fitting for water-pipe
- Water-Pipe
- Sand-Filter
- Well-Pipes
- Deep-Well-Pump

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