

# BEULCO®

WATER



2022  MADE IN GERMANY

# Disinfection systems for drinking water supply.

## H2

**BECAUSE  
WE CARE  
ABOUT  
WATER.**

#DRINKINGWATERPASSION 

# INHALT

Disinfection systems for  
drinking water supply - H2

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# GOOD TO KNOW

## Disinfection of drinking water distribution systems and standpipes

Due to the frequent rental of standpipes for different purposes, such as construction water supply or drinking water supply at markets and festivals, the standpipe and its individual parts, such as the system separator and water meter, come into contact with different types of water at different locations. The operating conditions (construction, use and dismantling) can have an influence on the drinking water quality. Mobile water supply systems in particular pose increased health risks for the consumer, as contamination of the system and thus of the water can easily occur, for example due to the constant set-up and dismantling at public events or during construction water supply.

### Normative background

In practice, some disinfectants or disinfectant chemicals have proven their worth. However, only agents approved in accordance with the EU Biocide Regulation for product type 4 (PT4) „Disinfectants for the food and feed sector“ may be used. The **DVGW worksheet W 291** „Cleaning and disinfection of water supply systems“ describes the common disinfection chemicals for the disinfection of all equipment and installations of drinking water supply systems. Among others, substances such as hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>), chlorine dioxide (ClO<sub>2</sub>) or sodium hypochlorite (NaOCl) can be found here.

For this reason, manufacturers primarily offer hydrogen peroxide-based agents for the disinfection of standpipes. However, this chemical compound is very aggressive and can attack the material if left over in the subsequent storage period. Therefore, after disinfection, when hydrogen peroxide is used, the water containing the disinfectant must be checked for pH to ensure that all residuals have been rinsed out. Furthermore, the list of treatment substances and disinfection processes published by the Federal Environment Agency in accordance with **§11 of the Drinking Water Ordinance** contains treatment substances that may be used to disinfect the water itself. Here, substances such as calcium hypochlorite (Ca(OCl)<sub>2</sub>), chlorine (Cl) and sodium hypochlorite (NaOCl) can be found

### Why sodium hypochlorite?

Sodium hypochlorite is approved under both the EU Biocide Regulation and §11 of the Drinking Water

Ordinance. Sodium hypochlorite-based agents may therefore be used not only for the disinfection of water-bearing systems but also for the disinfection of (drinking) water.

A disinfection with an agent based on sodium hypochlorite, as it is the case with **BEULCO Clean**, is carried out within the scope of a dynamic process, since contaminations or germs are flushed out directly. In the **BEULCO disinfection system**, the agent is added to the drinking water via a dosing pump (ratio 3% = 30ml/liter). The disinfecting effect can be measured via the redox value.

In addition, the BEULCO Clean disinfectant is designed to be sustainable and 100% self-degrading. Thus, no long-term residues remain.

### The redox voltage

The redox voltage [mV] is a measure of the germicidal and oxidative effect of disinfectants in water.

The higher the redox value of the water, the lower the contamination. During the disinfection process, the faucet is rinsed until the water has a redox value of 650mV - 700mV. At this value, the water and thus also the fitting or hoses are demonstrably free of germs. If the value has not yet been reached, the disinfectant continues to work until the last germ has been killed and the voltage of 650mV - 700mV is reached. As a rule, this process takes **between six and ten** minutes depending on the environmental conditions (drinking water quality, purity of the pipes, etc.). Since very little of the disinfectant is required, approximately 20 liters can be used to disinfect 20 to 40 standpipes. When using sodium hypochlorite-based agents, germs cannot form any resistance, since the agent acts immediately and no filling or dwell time in the fitting is necessary. In contrast, germs can form resistances to the corresponding disinfectant during the dwell time of the agent in the fitting when filling with hydrogen peroxide-based agents.



# DISINFECTION DEVICE

## Fields of application and use

Mobile and temporary water tapping points in particular harbor serious and often health-threatening risks, despite seemingly professional installation, because both the mobile installation and the entire public drinking water network can be contaminated by the unfortunate coincidence of various factors. Plants or installations that are regularly used in different locations are particularly problematic in this respect.

For this reason, the **cleaning and disinfection** of standpipes and system separators has a particularly high priority. The BEULCO disinfection system enables fast and effective cleaning as well as disinfection of several standpipes.

## Flexibility and versatility - also for mobile use

The simple design allows only the disinfection unit (dosing pump with fittings and connections) to be transported to the place of use. This ensures a high degree of flexibility with little effort. Only a water connection is required on site.

## Speed

Under good conditions, the disinfectant reaches its maximum effect in standpipes within 10 minutes. This means that the standpipes are disinfected and ready for use again within a very short time. Standpipes can now also be disinfected shortly before use/issue instead of before storage. The system also enables rapid disinfection in drinking water installations without

## Safety

The ORP meter allows a controllable result of the disinfection. The increase of the redox voltage is achieved by adding the disinfectant to the water during the rinsing process. When a redox voltage of 650mV - 750mV is reached, the process is complete and the standpipes are perfectly disinfected. The disinfectant used is not a hazardous material and can be used without protective equipment.

## Variants

The unit is available for connection of one or two standpipes as well as a single disinfection unit (e.g. for mobile use).

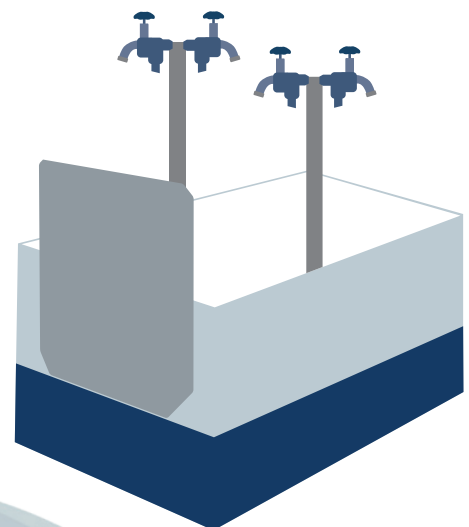
### Versatile use

Cleaning and disinfection of:

- Standpipes
- Water meters
- Drinking water sub-distributors
- Drinking water hoses
- Stalls at folk festivals and markets
- Household installations

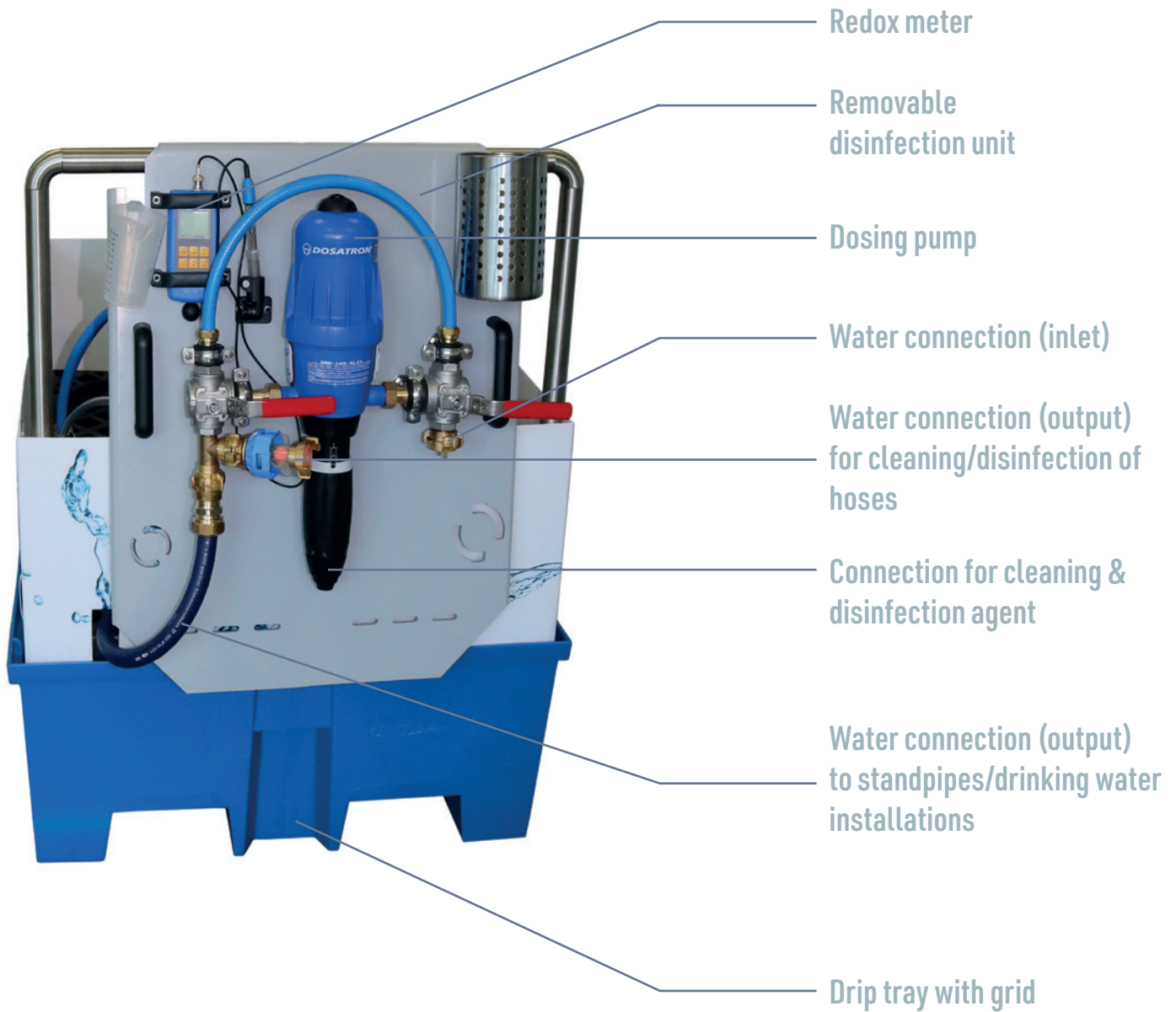
Testing of:

- Standpipes for functionality
- BA system separator - annually prescribed test (with optional differential pressure measuring case)



# STRUCTURE

Disinfection device









# DISINFECTION BOX

## Fields of application and use

When handing over public buildings, it is mandatory to carry out a hazard analysis (according to DVGW worksheet W 551, DVGW note W1001 and VDI guideline 6023). Prior to this analysis, it is mandatory to disinfect the installation. Therefore, pressure testing, rinsing and disinfection are mandatory before handing over.

The mobile BEULCO disinfection box has been developed in accordance with the valid national standards and guidelines and is primarily designed for the hygienic and safe disinfection of drinking water pipes in public buildings.

The components of the disinfection box, especially the dosing pump (set to 3-5% for shock disinfection) are adapted to the use of our disinfectant BEULCO Clean.

## Simple application

For the use of the BEULCO disinfection box, no great prior knowledge or training of specialized personnel is necessary in handling and operation. No electrical connection is required.

Illustrative videos can be viewed on our website [www.beulco.de](http://www.beulco.de).

## Device protection

The installed fittings of the BEULCO disinfection box are protected by the robust case against mechanical damage as well as external influences.

## Tamper-proof

The disinfection box is lockable, so that no changes of the settings can be made by unauthorized persons.

## Mobility and handling

The two large wheels and the extendable handle make the box easy to transport. The low weight allows it to be carried without great effort.

## Technical data

Max. external dimensions	Height 850 mm (with handle extended)
	Width 600 mm
	Depth 630 mm
Total weight	20 kg (with empty canister)
Working pressure	3-6 bar

## Professional disinfection of drinking water installations

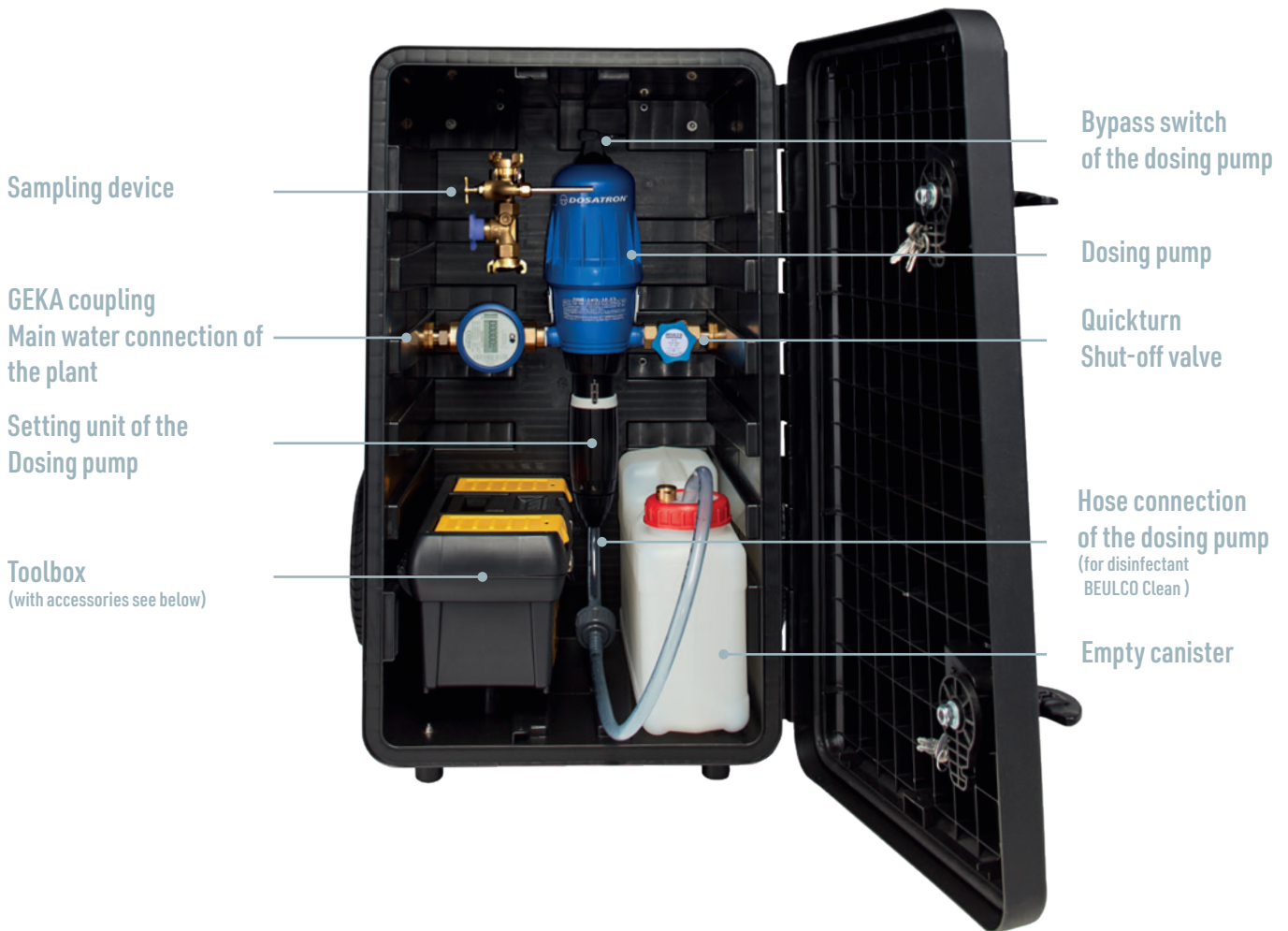
- at markets
- at public festivals
- other events
- in public buildings





# STRUCTURE

Mobile disinfection box



# TOOLBOX

Components



Inside the disinfection box is a toolbox with necessary accessories. Included are:

- ORP meter with ORP test solution and KCL electrolyte
- Measuring cup
- Syringe 5ml
- Syringe 150ml
- Base body for cleaning adapter
- Bevi Tabs cleaning adapter
- 10 cleaning tabs Bevi Tabs
- PH indicator paper
- Drain tap for 20L canister

# DISINFECTION SYSTEMS FOR THE DRINKING WATER SUPPLY



# OVERVIEW

## Disinfection systems

Application ● DW = Drinking Water  
● W = Water

Illustration	Description	Page
	<b>Disinfection device</b> for standpipes  Model 4700BA  ● ●	12
	<b>Rising and disinfection unit</b> for mobile insert  ● ●	12
	<b>BEULCO Clean</b> Testing set	13
	<b>Disinfection box</b> for drinking water installations, distribu- tions, hoses and sales stands  ● ●	13
	<b>BEULCO Clean</b> Disinfectant  Model 4700.1  ● ●	13



# DISINFECTION DEVICE FOR STANDPIPES

Model 4700BA

consisting of: Disinfection unit (removable, e.g. for mobile use) with 2 stand-pipe claws and collecting tray with grid, extensive accessories\* Delivery with instruction on site.



Version	Dimension tub(mm)	DW	W	pkg. unit	EAN no. 4027848-
2 Standpipe claws NW 70/80	1245 x 865 x375	●	●	1	376155

# DISINFECTION DEVICE FOR STANDPIPES

Model 4700BA

consisting of: Disinfection unit (removable, e.g. for mobile use) with 1 stand-pipe claws and collecting tray with grid, extensive accessories\* Delivery with instruction on site.



Version	Dimension tub(mm)	DW	W	pkg. unit	EAN no. 4027848-
1 Standpipe claws NW 70/80	910 x 760 x 525	●	●	1	380398

# RISING AND DISINFECTION UNIT

for mobile use, with extensive accessories\*. Delivery with instruction on site



				pkg. unit	EAN no. 4027848-
				1	376162

Application ● DW = Drinking Water  
● W = Water





# #DRINKINGWATERPASSION

Not only a Commitment, a passion.

The passion for drinking water accompanies us through all areas of the company. With our ideas and innovations, we want to protect it and bring it safely to its destination.

**Clean drinking water** is of paramount importance for a healthy future. It is the only way to ensure the necessary hygiene and to support and maintain health.

For this reason, drinking water should not be a rarity, but accessible to everyone - worldwide.

We want to make clean access to running drinking water easy and safe with our products, so that a supply is possible at any time and in any place.

In the development and manufacture of our products, we responsible and sustainable use of all materials and especially of our most precious resource - drinking water. For this reason, we are constantly working on improving our materials and production processes with regard to this task close to our heart.

## Drink

Without the supply of liquid, the human being is not viable. Already after 24 hours a lack of liquid shows a dehydration of the body. If it lasts longer than three days, the body can no longer survive.

## Water

Water is the basis of all life for plants, animals and for us humans - making it the most precious resource we have on earth. Water bodies such as lakes and rivers are habitats for many animals and plants. Therefore, the protection of drinking water has top priority.

## Passion

The love for drinking water and drinking water protection has always made us - therefore we develop products and solutions to protect our most valuable food in the long term.

## #DRINKINGWATERPASSION

One word says it all.









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