

MODERN ULTRAVIOLET TECHNOLOGIES IN FOOD PRODUCTION



ULTRAVIOLET DISINFECTION CATALOG

EQUIPMENT FOR THE FOOD INDUSTRY



General Principles of UV Disinfection of Food Products

The use of UV radiation for food decontamination complies with the requirements of:

- *The BRC Global Standard for Food Safety;*
- *EU Regulation No. 258/97 of the European Food Safety Authority (EFSA);*
- *EU Regulation No. 178/2002 “Establishing General Principles and Requirements for Food Safety”;*
- *EU Regulation No. 2073/2005 “On Microbiological Criteria for Foodstuffs”;*
- *EU Regulation No. 852/2004 “On the hygiene rules for the production of foodstuffs”.*

UV disinfection technology is approved for use in the food and pharmaceutical industries (FDA, 21 CFR 173.368).



Principles of UV Disinfection

- *The mechanism of UV disinfection is based on the destructive effect of intense UV radiation on the structure of DNA molecules.*
- *Under the influence of UV radiation, irreversible processes occur within the cells of microorganisms (including pathogenic and nonpathogenic bacteria and viruses), involving the disruption of intracellular and intercellular chemical bonds and the destruction of DNA and RNA molecules, resulting in the virtually instantaneous death of all types of microorganisms.*
- *The lethal effect of UV radiation has been observed in all known species of microorganisms. It is determined by the spectral sensitivity of a particular microorganism to UV radiation.*
- *The disinfecting effect of UV radiation is most pronounced in the wavelength range from 205 to 315 nm. UV radiation with a wavelength of 265 nm has the greatest disinfecting effect.*

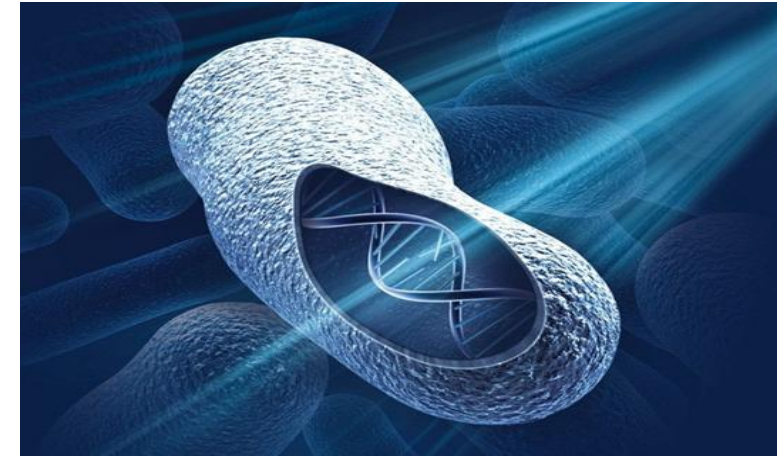




The Effect of UV Radiation on Microorganisms

To effectively destroy microorganisms, it is necessary to correctly select the power and type of UV lamps, as well as the duration of irradiation; that is, it is necessary to determine the amount of UV radiation energy (UV irradiation dose) required to destroy microorganisms. The UV irradiation dose varies depending on the specific types of microorganisms being treated.

For virtually all known viruses, bacteria, spores, fungi, and so on, these doses have been experimentally determined by microbiologists and are used to establish the parameters for UV disinfection systems.



The UV irradiation dose required to inactivate various groups of microorganisms with an efficacy of 90 ... 99.9%

No	Microorganisms subject to regulation	UV dose, mJ/cm ²
1	Staphylococcus Aureus	60
2	Total microbial count	30 ... 50
3	Yeast	40 ... 70
4	Mold	50 ... 100

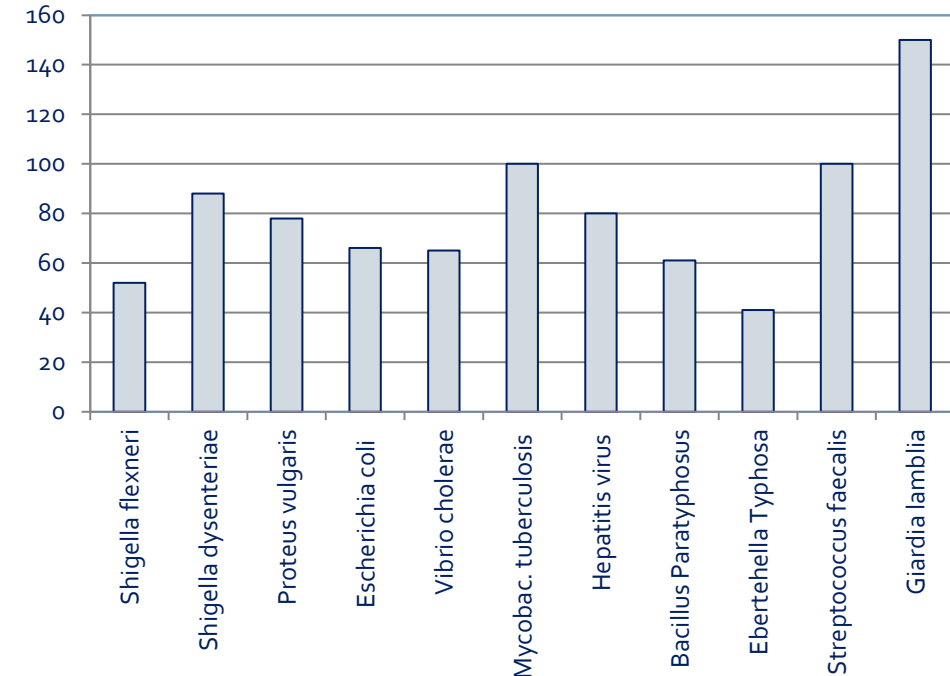


Effectiveness of UV Disinfection

In accordance with current regulatory documents (NSF/ANSI 55-2002. Ultraviolet Microbiological Water Treatment Systems):

- For the disinfection of drinking water, the minimum UV irradiation dose must be 40 mJ/cm² (400 J/m²).*
- If parasites are present in the water, the disinfection dose of UV irradiation must not be less than 45 mJ/cm² (450 J/m²).*
- For wastewater disinfection, the UV irradiation dose should be 40 mJ/cm² (400 J/m²) under normal operating conditions; if parasites are present in the water, it should be 60–65 mJ/cm² (600–650 J/m²).*

The UV irradiation dose must be specified for a specific value of the transparency coefficient of the water being disinfected, T10



*Sensitivity of certain types of microorganisms to UV irradiation, J/m².
Disinfection efficiency: 99.9%.*



Where Is UV Disinfection Used?

In the production and storage of food products, UV radiation is used for:

- *disinfecting water and air;*
- *disinfecting fresh berries, fruits, vegetables, and other raw materials and semi-finished products;*
- *disinfecting food products packaged in transparent packaging;*
- *disinfecting cold storage rooms and cheese ripening chambers;*
- *disinfecting PET and glass jars and bottles, as well as lids;*
- *disinfecting film packaging;*
- *disinfecting processing equipment and tanks;*
- *disinfecting processing equipment, as well as storage and production facilities;*
- *disinfecting processing equipment and staff protective clothing, etc.*





Basic Principles of UV Disinfection

To ensure the safety of food products and extend their shelf life, special UV disinfection systems are used, which destroy microorganisms in the shortest possible time with an efficiency of at least 99.9%.

UV disinfection systems must ensure:

- maximum microbiological safety of food products;*
- the creation and maintenance of sterile zones in various areas of food processing.*

With the correct selection of a UV disinfection system, it becomes possible to:

- the effective destruction of present microorganisms, including: E. coli, various types of enterobacteria and enterococci, lactic acid bacteria and probiotics, Salmonella, yeast, molds, viruses, and other pathogens;*
- extending the shelf life of perishable products (by 1.5–2 times);*
- eliminating the use of hazardous chemical preservatives.*





Water Disinfection Using UV Radiation

- *One of the most effective and efficient water disinfection technologies—which does not produce hazardous toxic substances in the disinfected water—is disinfection using ultraviolet (UV) radiation.*
- *UV water disinfection works by the direct action of ultraviolet rays on the cells and molecules of microorganisms present in the water, leading to their immediate destruction.*
- *UV water disinfection is carried out without adding any chemicals to the water.*
- *UV disinfection does not alter the chemical composition of the water and preserves its natural taste and properties.*
- *UV disinfection makes the water safe for further use.*
- *Current regulatory documents require mandatory disinfection of all water used in food production.*





WATERLIGHT UV Drinking Water Disinfection Systems

Our engineers have designed and manufacture the WATERLIGHT series of UV disinfection systems for the disinfection of drinking water.

- The WATERLIGHT series UV units consist of a UV disinfection chamber, a control unit, and a flushing unit.*
- The UV disinfection chamber is made of stainless steel (AISI 304 or AISI 316L).*
- Bactericidal lamps are located inside the UV disinfection chamber.*
- To protect them from direct contact with water, the UV lamps are housed in protective tubes made of clear quartz glass.*
- UV water disinfection is carried out using an elevated dose of UV irradiation, which ensures the reliable destruction of bacteria and viruses present in the water.*
- The use of modern components and highly efficient UV lamps makes the water disinfection process simple and reliable.*
- The WATERLIGHT series of UV disinfection units are successfully operating at many enterprises in the food industry and public utilities sector.*



WATERLIGHT UV Drinking Water Disinfection Systems

(<https://www.waterlight.pro/uv-water-disinfection/>)



WATERLIGHT Enclosed-Type UV System

The WATERLIGHT series of UV drinking water disinfection systems includes several models that differ in power, capacity, and type of germicidal UV lamps (<https://www.waterlight.pro/uv-water-disinfection/drinking-water/>).

<i>No</i>	<i>Model</i>	<i>Q, m³/h</i>	<i>Power, kW</i>	<i>No</i>	<i>Model</i>	<i>Q, m³/h</i>	<i>Power, kW</i>
1	WATERLIGHT W1	1,1	0,02	7	WATERLIGHT W50	54,6	0,60
2	WATERLIGHT W5	4,8	0,05	8	WATERLIGHT W75	80	0,8
3	WATERLIGHT W7	7,0	0,08	9	WATERLIGHT W100	125	1,2
4	WATERLIGHT W10	14,4	0,12	10	WATERLIGHT W150	150	2,0
5	WATERLIGHT W20	24	0,20	11	WATERLIGHT W200	200	2,3
6	WATERLIGHT W30	31,2	0,25	12	WATERLIGHT W350	375	2,5

The Q performance rating is specified for the disinfection of drinking water with a turbidity of $T_{10} = 85\%$ at a UV dose of $D = 450 \text{ J/m}^2$ (45 mJ/cm^2), which ensures the effective destruction of bacteria, viruses, and other microorganisms. According to NSF/ANSI 55-2002 and DIN 19294-1:2020-08 standards, the performance of European UV systems is specified for cleaner water with a transparency coefficient $T_{10} = 98\%$, which does not ensure effective disinfection of water that has not undergone additional treatment in reverse osmosis systems.



UV Disinfection of Return Water

UV disinfection of recirculated water helps conserve water resources used in industrial processes, such as washing meat, cheese, and fruit, or disinfecting wastewater. Such water is characterized by a significant content of suspended solids and high turbidity; it has an earthy color and an unpleasant odor caused by putrefactive bacteria.

- To disinfect recirculated water, our engineers have developed a special UV system, the WATERLIGHT 12WA2.5.*
- The unit is designed for UV disinfection of water characterized by high turbidity and the presence of suspended solids.*
- The unit consists of several identical UV disinfection chambers connected by piping, as well as a control cabinet.*
- Inside each UV disinfection chamber is a powerful amalgam lamp housed in a protective tube made of clear quartz glass.*
- The UV lamps are powered and the system is controlled via an automatic control system.*



WATERLIGHT 12WA2.5 UV System
(<https://www.waterlight.pro/uv-water-disinfection/waterlight-uv-recirculated-water-disinfection-system/>)



UV disinfection of recirculating water

- *Water disinfection is carried out using a UV irradiation dose increased to 150 mJ/cm², which ensures a high level of disinfection efficiency.*
- *The UV unit is manufactured from stainless steel and complies with all the requirements of standard EN 60335-2-109 'Household and similar electrical appliances. Safety. Part 2-109. Additional requirements for appliances for the treatment of water by ultraviolet radiation'.*

No	Parameter	Unit	Value
1	Capacity	m ³ /h	20
2	Disinfecting dose of UV irradiation	mJ/cm ²	150
3	Ultraviolet radiation (UV) absorption coefficient	cm ⁻¹	1,03
4	Number of UV disinfection sections	pcs.	12
5	Power	kW	6
6	Water pressure in the system	MPa	0,6 – 1,6
7	Dimensions	mm	1270x1000x2000

VIDEO: <https://www.youtube.com/shorts/vugr6jih1Rc>





UV Disinfection of Production and Process Facilities

- *The quality and safety of finished products and semi-finished goods depend on the microbiological cleanliness of production and storage facilities.*
- *Facilities are disinfected using UV irradiation.*
- *Typically, disinfection is carried out using stationary germicidal irradiators. However, due to the presence of shadowed areas, this disinfection method does not ensure the necessary microbiological cleanliness of the premises.*

To address this issue, our engineers have developed the OBERIG mobile (portable) germicidal irradiator, which reliably inactivates all types of microorganisms present in the production facility.



*Germicidal UV Lamp OBERIG M16.1554T5 IP54
(<https://www.waterlight.pro/uv-disinfection-of-air-and-rooms/oberig-high-power-bactericidal-irradiator/>)*



UV Disinfection of Production and Process Facilities

- *The OBERIG M16.1554T5 IP54 germicidal irradiator consists of a mobile platform equipped with a hydraulically driven lifting mechanism, a UV lamp power supply unit, a UV emitter, and a control unit.*
- *The UV emitter can rotate 180° around its horizontal axis. This ensures effective disinfection of ceilings, walls, floors, and process equipment.*
- *The UV emitter is equipped with a screen that has high reflectivity. The presence of this screen, combined with the ability to adjust the irradiation angle, enables the creation of a directed stream of UV radiation, which makes it possible to effectively disinfect ceilings, floors, walls, process equipment, and other objects.*
- *The UV emitter is raised to its operating height (the height that ensures maximum UV disinfection efficiency) automatically via a hydraulic drive.*





OBERIG UV Germicidal Light M16.1554T5 IP54

<i>No</i>	<i>Parameter</i>	<i>Unit</i>	<i>Value</i>
1	<i>UV radiation intensity at a distance of 10 m</i>	<i>W/m²</i>	<i>0,37</i>
2	<i>Disinfection Effectiveness</i>	<i>%</i>	<i>99,9</i>
3	<i>Maximum elevation angle of the UV emitter</i>	<i>m</i>	<i>4,5</i>
4	<i>The volume of the room that can be disinfected in 20–30 min.</i>	<i>m³</i>	<i>1700</i>
5	<i>Number of UV lamps</i>	<i>pcs.</i>	<i>16</i>
6	<i>Power</i>	<i>kW</i>	<i>3,2</i>
7	<i>Dimensions</i>	<i>m</i>	<i>2,2x1,4x5,5</i>

The structural components of the germicidal irradiator are made of stainless steel (AISI 304) in a moisture-resistant design (IP54).

VIDEO: <https://www.youtube.com/shorts/rO7aAtwYJ04>



UV disinfection of compressed air

Special OBP51 series germicidal irradiators have been developed for the UV disinfection of compressed air used in the pneumatic conveyance of PET bottles, caps and stoppers.

The OBP51 series germicidal irradiators consist of a disinfection chamber and a control unit.

The air to be disinfected enters the disinfection chamber via the inlet pipe, where it is subjected to intense UV irradiation. The disinfected air exits the disinfection chamber via the outlet pipe.

The disinfection chamber housing is made of stainless steel.

No	Parameter	Unit	OBP51.0140	OBP51.0180
1	Capacity	l/min	450	650
2	UVC dose	J/m ³	385	385
3	Disinfection Effectiveness	%	99,9	99,9
4	Air pressure	bar	10	10
5	Power	W	50	90



OBP51.0140 germicidal lamp

(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/uv-disinfection-of-compressed-air/>)

The OBP51 germicidal lamps are highly efficient and compact, which makes it possible to use them on existing production lines.



UV Disinfection of Cold Storage and Defrosting Chambers

- The OBP 02 (PROMIN X) series of highly efficient germicidal lamp is designed for disinfecting cold storage and defrosting chambers.
- They are designed to operate in harsh conditions with high humidity (up to 100%) and across a wide temperature range (from -25 °C to +60 °C).
- The OBP 02 series germicidal lamp are made of stainless steel and feature a high degree of protection against dust and moisture ingress—IP65.
- They ensure the effective inactivation of all types of microorganisms that cause food spoilage.



No	Parameter	Unit	OBP02. 0116	OBP02.0316
1	Camera capacity	m ³	27	72
2	Disinfection Effectiveness	%	99,9	99,9
3	Number of UV lamps	pcs.	1	3
4	Power	W	20	60
5	Dimensions	mm	430x100x105	430x110x160

OBP02.0116 and OBP02.0316 Germicidal lamp
(<https://www.waterlight.pro/uv-disinfection-of-air-and-rooms/obp02ip67-sunfrost-germicidal-irradiators/>)



UV Air Disinfection in Ventilation Systems

- OBP 61 (PROMIN A) germicidal lamps are designed for UV air disinfection in ventilation ducts. They can be used for UV air disinfection during meat defrosting, in cooling systems, or in general supply ventilation systems.*
- The germicidal lamps are made of stainless steel and feature a high degree of protection against dust and moisture (IP65); they are designed to operate in harsh conditions with high humidity (up to 100%) and across a wide temperature range (from -25 °C to +65 °C).*

No	Parameter	Unit	OBP61.1500	OBP61.5000
1	Capacity	m ³ /h	1500	5000
2	Disinfection Effectiveness	%	99,9	99,9
3	UVC dose	J/m ³	385	385
4	Power	W	0,7	2,4
5	Dimensions	m	0,6x0,6x0,6	0,6x0,6x1,8



*OBP 61 (PROMIN-A) Germicidal lamp
(<https://www.waterlight.pro/uv-disinfection-of-air-and-rooms/uv-air-disinfection-in-a-ventilation-duct/>)*



UV Disinfection of Bottles and Cans

- *The OBP21M (OBP21K) disinfection system is designed to disinfect empty bottles and jars using germicidal UV radiation.*
- *Two types of disinfection systems have been developed—the OBP21M and OBP21K—which differ in design and throughput:*
- *The OBP21M.0336 disinfection system is designed to disinfect bottles and jars at a throughput of up to 500 units per hour (features manual feeding of bottles and jars).*
- *The OBP21K disinfection system disinfects bottles and jars at a capacity of up to 10,000 units per hour and features an automatic conveyor-type feeding system.*

Advantages:

- *The OBP21M (OBP21K) UV disinfection systems provide effective disinfection of empty bottles and jars without the use of chemicals, high temperatures, or steam.*
- *Disinfection efficiency: 99%.*



OBP21M (OBP21K) UV Disinfection Systems
(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/uv-disinfection-of-bottles-and-cans/>)



PROMIN-T UV Disinfection Systems

- The PROMIN-T tunnel-type UV disinfection system is designed for UV disinfection of meat, sausages, frankfurters, berries, fruits, vegetables, salads, and other food products—whether packaged in plastic film or unpackaged—to extend their shelf life.
- The UV system consists of a belt conveyor and a UV irradiation system.
- The UV system is constructed of stainless steel.

No	Parameter	Unit	Value
1	UVC dose	kJ/m^2	1 ... 7
2	Conveyor belt width	mm	400
3	Conveyor belt speed	m/min	1,6 ... 5
4	Power	kW	4,0
5	Dimensions	mm	4000x1000x1600





UV Disinfection of Food Products and Semi-Finished Goods

- *UV disinfection of meat products packaged in transparent film helps extend their shelf life. This makes it possible to reduce costs associated with storing fresh meat products and minimize losses from their premature spoilage on supermarket shelves.*
- *The PROMIN-T UV system ensures the rapid and effective destruction of pathogenic and non-pathogenic microorganisms present on the surface of the packaged product.*
- *The use of special UV lamps promotes the formation of ozone inside the packaging, which enhances the effectiveness of product disinfection.*
- *UV irradiation technology is a viable alternative to the use of preservatives and is highly effective and cost-efficient.*
- *UV irradiation does not alter the physical or chemical composition of the product; it acts quickly, reliably, and is environmentally safe.*



PROMIN-T UV Disinfection Systems.
(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/preservation-of-meat-products-using-uv-technology/>)



Storage of Ripe Fruit Using Modern UV Technologies

The main causes of rot in berries, vegetables, and fruits are microscopic fungi (molds and yeasts) and bacteria. They reach the fruit from the soil, air, or water, or are carried by fruit flies and other pests.

UV units of the PROMIN-T series effectively destroy rot-causing microorganisms on the surface of fruits and berries, which positively extends the shelf life of fresh produce.

UV irradiation extends shelf life by 1.5 to 2 times without the use of hazardous preservatives.

UV irradiation of fresh berries, fruits, and vegetables ensures compliance with FAO and HACCP requirements for food quality and safety.

UV irradiation is most effective when used to treat fruits, vegetables, and berries that have just been harvested from fields or orchards.

PROMIN-T UV units are indispensable for the disinfection of baby food, dietary products, and military rations.



<https://www.waterlight.pro/agriculture/storing-ripe-fruit-using-modern-uv-technologies/>



UV Disinfection of Returnable Containers

The PROMIN-T UV disinfection system is also used to disinfect returnable containers using UV irradiation.

It ensures the effective destruction of microorganisms found on the inner and outer surfaces of the containers.

The tunnel-style design of the disinfection chamber ensures high disinfection efficiency for returnable containers while minimizing electricity consumption.

No	Parameter	Unit	Value
1	Container size	mm	600x400x240
2	Capacity	pcs./h	250
3	Disinfection Effectiveness	%	90
4	Power	kW	1,2
5	Dimensions	mm	4000x1000x1600



*PROMIN-T UV Disinfection System
(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/uv-disinfection-of-returnable-containers/>).*



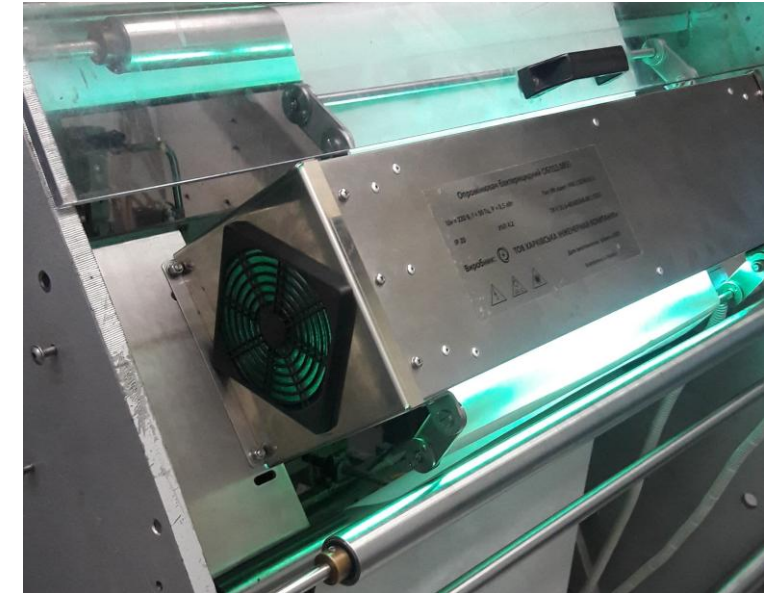
UV Disinfection of Packaging Tape

The OBP13.0824/OBP13.0855 UV disinfection system was developed to disinfect packaging tape.

Thanks to the two-sided UV irradiation of the packaging tape, optimal storage conditions are ensured for food products, including yogurt, sour cream, ice cream, fresh meat, cooked sausages, fish, berries, vegetables, fruits, and other food items.

UV irradiation of the packaging tape prevents microbes and bacteria from entering the packaged product and helps extend its shelf life.

No	Parameter	Unit	OBP13.0824	OBP13.0855
1	Tape width	mm	250	500
2	Conveyor Line Speed	m/h	40	60
3	Power	W	210	465
4	Dimensions	mm	510x190x154	730x190x154



**OBP13.0824/OBP13.0855
UV Disinfection System**

(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/ultraviolet-disinfection-of-packaging-tape/>)



UV pasteurization

The UVLIGHT UVP series UV pasteurizers are designed for cold UV disinfection of wines, fruit juices, juice-based beverages, liqueurs, and other clear liquid products.

These UV pasteurizers are flow-through systems in which the product is disinfected as it passes through the UV disinfection chamber.

- *A distinctive feature of the UVLIGHT UVP UV pasteurizer is its ability to perform cold (non-heating) UV disinfection of juices, wines, and other beverages.*
- *The UVLIGHT UVP UV pasteurizer ensures maximum preservation of the vitamin and amino acid composition of the disinfected product and preserves its flavor and nutritional properties.*
- *The UVLIGHT UVP UV pasteurizer features low specific energy consumption ($5 \dots 10 \text{ W}\cdot\text{h}/\text{dm}^3$), which is tens of times lower than that of thermal pasteurization.*

The UVLIGHT UVP UV pasteurizer consists of several sterilization sections, a control unit, a rinsing unit, pumps, and other equipment necessary for operation.





UVLIGHT UVP UV Pasteurizer

Thanks to the UVLIGHT UVP ultraviolet pasteurizer, pasteurization becomes a simple process that does not require the use of thermal treatment methods.

No	Parameter	Unit	UVP 250	UVP 500
1	Capacity	l/h	250	500
2	Disinfection Effectiveness		3lg ... 5lg (10^3 ... 10^5)	
3	Number of sections	pcs.		
4	Power	kW	1,0	2,0

When you purchase UV disinfection systems for bottles and packaging, you receive a complete processing system that ensures high microbiological quality in fruit juices and juice-based beverages, as well as stabilizes grape wines.



UVLIGHT UVP UV Pasteurizer
(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/uv-pasteurizers-uvlight-uvp/>)



UV Disinfection of Spices, Nuts, and Dried Fruit

BOZON rotary-type UV disinfection systems have been developed for the cold disinfection of spices and snacks.

These systems ensure easy and effective sterilization of products such as nuts, coffee, cocoa beans, sesame seeds, dry infant formula mixes, paprika, cilantro, cinnamon, dried fruit, snacks, and others.

Disinfection mechanism: Under the influence of UV rays, various bacteria on the product's surface are destroyed.

Ozone penetrates the product, neutralizes yeast and mold, and destroys toxins and mycotoxins that form in the products.

The combined use of ozone and UV radiation ensures that the disinfecting agents reinforce each other's effects, making it possible to effectively treat food products without altering their composition or physical state.

VIDEO : <https://www.youtube.com/watch?v=A221xBya1EU>



BOZON M2500

Rotary-Type UV Disinfection System

(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/de-contamination-of-dry-breakfast-foods-nuts-and-spices/>)



BOZON M2500 Rotary-Type UV Disinfection System

- The specific electricity consumption required for product decontamination does not exceed 5 kWh per metric ton of decontaminated product, which is tens of times less than that required for traditional heat treatment.*
- The decontamination process is characterized by a high level of environmental safety, as ozone is rapidly converted into ordinary oxygen and water under the influence of UV radiation.*
- Product decontamination takes place at room temperature and atmospheric pressure, which completely eliminates the impact of harmful factors on the health of operating personnel.*

<i>Parameter for the model</i>	<i>Unit</i>	<i>BOZON M100</i>	<i>BOZON M250</i>	<i>BOZON M750</i>	<i>BOZON M1250</i>	<i>BOZON M1750</i>	<i>BOZON M2500</i>
<i>Load capacity</i>	<i>dm³</i>	<i>25</i>	<i>50</i>	<i>150</i>	<i>250</i>	<i>350</i>	<i>500</i>
<i>Capacity</i>	<i>kg/h</i>	<i>10 ... 15</i>	<i>20 ... 35</i>	<i>50 ... 100</i>	<i>100 ... 185</i>	<i>185 ... 375</i>	<i>375 ... 600</i>
<i>Power</i>	<i>kW</i>	<i>0,25</i>	<i>0,35</i>	<i>0,75</i>	<i>1,35</i>	<i>1,5</i>	<i>2,0</i>
<i>The length of the decontamination process</i>	<i>h</i>	<i>0,45 ... 1,5</i>	<i>0,45 ... 1,5</i>	<i>0,45 ... 1,5</i>	<i>0,45 ... 1,5</i>	<i>0,45 ... 1,5</i>	<i>0,45 ... 1,5</i>
<i>Dimensions</i>	<i>m</i>	<i>1,6x1,0x1,7</i>	<i>2,0x1,3x2,1</i>	<i>2,5x1,5x2,1</i>	<i>3,4x1,5x2,3</i>	<i>3,4x1,8x2,5</i>	<i>3,4x2,1x2,6</i>

Thanks to the BOZON rotary system, sanitizing dry bulk products becomes a simple task.



SL Screw Loader

The SL screw conveyor is designed to lift dry bulk products to heights (depending on the model) of 1.65 m, 2.15 m, and 2.5 m. The conveyor's rated capacity is 5 metric tons per hour. The screw diameter is 120 mm.

It is used to load spices, grains, cereals, dried fruits, and other products into the UV disinfection chamber of BOZON rotary-type UV units. It can also be used to load other process equipment.

The screw loader is made of stainless steel and has an electric drive. The loader is controlled via a control unit with which it is equipped.

No	Parameter	Unit	SL120.165	SL120.215	SL120.250
1	Lifting Height	m	1,65	2,15	2,5
2	Power	kW	0,75	1,1	2,2
3	Base Dimensions	m	1,5x0,7	1,5x0,7	2,0x0,7
4	Weight	kg	140	165	245



SL-120.165ss Screw Loader
(<https://www.waterlight.pro/cold-disinfection-in-the-food-industry/stainless-steel-screw-conveyor/>)



Economic efficiency

The disinfection systems developed by our company are based on the use of environmentally friendly and safe disinfection methods—UV irradiation and ozonation.

This makes it possible to:

- *achieve significant savings in the energy resources used for disinfecting (pasteurizing) products, ensuring a return on investment within 1–2 years;*
- *reduce the amount of preservatives and improve the quality of food products;*
- *extend the shelf life of products with short shelf lives.*

We are confident that the sterilization technologies presented here will help provide you and your children with high-quality products, reduce the use of chemical preservatives, and increase your company's profitability.



WHAT WE DO TODAY SHAPES OUR FUTURE



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