

# **BUWAtank**

Water tank metal

# **BUWAliner**

Water tank liners

# **BUWAcover**

Water tank covers



**BUWAtank BUWAliner BUWAcover BUWAdome BUWAtop**



**WATER TECHNOLOGY**

# Segments

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**BUWATEC is the specialist for water storage systems based on corrugated steel tanks. The BUWAtank is designed for storage of various liquids and applications. The core activity is development, production, sales and distribution of complete systems for irrigation, drainage and recirculation tanks. BUWATEC supplies water tanks in the various segments:**

## Horticulture

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Water tanks for the horticulture segment are used by clients in water technics, irrigation and for storage of drain water as well as purification purposes. Essential for professional greenhouses are the systems with drip irrigation, aquaponics-technics or sprinkling systems. The BUWAtank is used for storage of various water qualities.



## Aquaculture

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Fish farms use tanks for breeding fish in different stadia. Tilapia, trout, eel, salmon and carps are the most popular for fish production. Installation of fish tanks demands local limited installation knowledge, material and equipment. Steel tanks for fish production are in general supplied in height 1,59 meter. Specific solutions for cleaning and emptying these tanks is a part of our concept.

## Industry

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For industrial companies BUWATEC supplies water tanks for treatment of wastewater. The tanks are a significant part of the process of collecting contaminated water as well as storage of treated water for reuse in the production process. The largest users of water treatment applications are refineries, companies in the chemical sector, metal industry, paper-and graphic industry and the food industry.



## Drink water

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BUWATEC is involved in the worldwide challenges to offer clean drink water, sanitation services and hygiene. In cooperation with specialists in water purification, national governments and non-governmental organisations. BUWATEC develops solutions for potable and clean drink water. The BUWAtank is an important part of water storage and water treatment installations.

## Agriculture

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BUWATEC water tanks are mainly used in the agriculture segment for irrigation. Because of the climate change worldwide, it's getting more important to store rainwater. Growers will use the stored water in summer and dry growing seasons to protect their crops. Water tanks for agriculture are mainly used in combination with good cover solutions for having the best quality water for the irrigation systems.



# BUWAtank Water tanks

**BUWAtank is the brand name for steel tanks suitable for storage of water and similar liquids.**

BUWAtank are produced from steel quality strength S280 and S350, depends on diameter and height of the tanks. All dimensions are produced in three different steel qualities WSW, WSWA and WSWB.

The water tanks are provided with a zinc layer ZM200 and are available with optional prefabricated Plastisol coating, thickness 200 µm both inside and outside. This combination gives the tank a maximal protection against corrosion.

All tanks have CE-certification, registered by the Declaration of Performance number DOP14BCTWS03 and are in line with the guidelines for EN 1090-1:2009+A1:2011. Water tanks are transported as a compact installation package and can be installed with man power only.

## WSW

This tank is constructed with a minimum panel thickness of 0,8 mm and is designed for inside storage applications whereas special heights and wind load has no influence.

## WSWA

This tank is fabricated with a minimum panel thickness of 1,0 mm and is especially developed for outside usage and storage of a diversity of liquids. The 1,0 mm panel thickness tank can handle outside climate conditions. This application can also be supplied, complete or partly, with an additional Plastisol protection layer. WSWA tank is needed for additional roof constructions.

## WSWB

WSWB tanks are especially designed for industrial and heavy duty applications. Activities as fire protection pumping and aeration inside the tank demand a highest quality material specifications. This tank has a minimum panel thickness of 1,2 mm. Most usual version is the fully Plastisol coated WSWBVC tank for maximal security and longest life time. This tank can be partly installed under ground level.

## Plastisol coating

Plastisol coated panels are standard supplied with inside and outside unique 'Super Vinyl Thermoplast' coating. This coating contains environment friendly elements. The layer thickness of 200 µm per side guarantees a high protection against corrosion and UV radiation. Plastisol coating is resistant against acids, alcohol and mineral oils. The normal life time expectation of Plastisol coating is 25 years.

### BUWAtank: special characteristics

#### Long lifetime

Using the latest technics guarantees a durable and long lifetime of the product.

#### Quick delivery

Galvanised as well as Plastisol coated water tanks are delivered in 1-2 weeks.

#### High tensile strength

Use of high quality steels S280, S320 and S350 according ENV-norms.

#### Wide capacity range

Available in many diameters, heights and panel thicknesses. See page 8 (back site).

#### Fast installation

Large bolt dimensions M12, less bolts per panel, bolt sets galvanised, tuned for fast and easy installation. All bolts, nuts and washers are treated with a special high quality zinc nickel for better fitting.

#### Packaging

Panels are sealed to prevent water getting between the panels during long distance transport.

#### Technical information

All instructions are available in pictorials.

#### Strength calculation program

Program is based on European Norm described in NVN-ENV 1993-4-1- Eurocode 3.

#### CE certificate

All tanks are CE-approved since 2015.

#### Plastisol: special characteristics

- Good UV resistance.
- High corrosion resistance.
- High scratch resistance.
- Resistant against acids, alcohol and mineral oils.



# BUWAliner Water tank liners

A complete water storage system needs a liner to keep the water inside the steel tank. These liners are able to perform in various climate conditions all over the world for the storage of different liquids. The BUWATEC liners are deliverable in different qualities and materials to meet the necessary requirements as UV-resistance, chemical resistance and resistance for chlorine.

## BUWAliner PVC 1,0 mm

The PVC liner is black with thickness 1,0 mm and is in potable water quality. PVC is suitable for the storage of rain, clean and drinking water. Wall blanket (polyester 250 gr/m<sup>2</sup>) as protection between the metal tank and the liner is an essential part of a tank. Low Chlorine resistance. Standard: the upper side of the PVC lining has a hem with stretching bands and ratchet buckles.



## BUWAliner PVC Extreme 0,75 mm



PVC Extreme liner is white, thickness 0,75 mm, in clean water quality has a high UV-radiation protection. Most suitable liner for the use of Chlorine mixture in the water of maximum 3 ppm Chlorine resistance possible for potable and drinking water.

**Standard:** the upper side of the lining has a green protection part, metal rings and rope for installing.

## BUWAliner EX 0,6 mm

EX liner is black, thickness 0,6 mm, is a high quality foil, with a life expectancy, exceeding the lifetime of PVC liners. EX liner is especially suitable for applications in high tanks. Maximal water temperature -40°C to +80°C, high UV-radiation resistance and chemical resistance (fertilizer). No Chlorine resistance.

EX liner has more elasticity and is suitable for tanks with heights of maximal 5,37 meter. In addition EX material has 35% less weight compared to PVC liners.

**Standard:** the upper side of the EX liner has a hem with stretching bands and ratchet buckles.



## BUWAliner EPDM 1,0 mm



EPDM liner for industrial use is black, thickness 1,0 mm. A very high quality liner, with the longest life expectancy. EPDM is especially suitable for high UV radiation areas as well as for tanks with water temperatures up to +120°C. EPDM is extremely flexible with a 300% high tensile strength. No Chlorine resistance.

**Standard:** the upper side of the liner has stainless steel rings. The liner will be fixed with nylon rope through these stainless steel rings and liner hooks as well as a hem with stretching bands and ratchet buckles.

## BUWAIner Wall and Bottom blanket

The protection blanket is necessary to protect the liner for sharp parts of the steel tank wall or sharp stones on the bottom of the tank. For the assembly of the blankets, special strips and tie-reps are supplied for installation. The white coloured protection blanket is delivered in strips of 2 meter width and both wall and bottom blankets are in 250 gr/m<sup>2</sup> quality.



### BUWAIner: special characteristics

#### Multiple application

The tank liners are available in various materials as PVC, PVC Extreme, EX and EPDM.

#### Quick delivery

Tank liners with a diameter up to 10 meter available within 10 working days.  
Tank liners with a diameter up to 18 meter available within 12 working days.  
Tank liners with a diameter more than 18 meter available within 15 working days.

#### High tensile strength

With a high tensile strength EX and EPDM liners can be supplied for tanks with height 5,37 meter.

#### Production quality

With ultramodern welding techniques a watertight connection is guaranteed. A special 'clean floor' prevents damage to the liner during the production. Before delivery all liners are inspected by a test, using light technology.

#### Guarantee

Production control and material check is a continuous process within the ISO certified organization.



#### Certification CE

The processed materials are all of certified quality. The total tank system is supplied with CE-marking.

#### Patented conical outlets standard

Special conical design of the outlets gives a great flexibility for installing. Diameters 32 mm - 500 mm in only 4 models.

#### Prefabricated outlets

Conical outlets are installed in liners under ideal production circumstances and temperature.

#### Package

Liners, blankets and anti-algae covers are packed separately in boxes. A prefab outlet will be supplied on drawing location, unfolding information is shown on the outside of the carton.

#### Information

Technical documentation and assembly instructions are available in pictorials.



# BUWAcover Water tank covers

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Greenhouse owners are forced to use water tanks for storage of rain water and recycled water. During storage the water is often polluted by algae, which can damage the irrigation systems. BUWAtank has different tank covering systems, which offers an adequate solution. This material is has an open structure and is used for indoor as well as outdoor applications.

## BUWAspan cover PP

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Anti-algae cover PP is a woven polypropylene cover. This cover is oversized and has a reinforced hem with rings for fastening. The cover must be installed over and across the tank wall and secured with a drag cord and hooks. The BUWAspan cover will be used for water tanks with a maximum diameter of 8,5 meter.



## BUWAfloating cover PP

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This cover is floating on the water surface. This floating cover has a reinforced hem with rings for fastening. For floating capacity, a rack of PVC pipes should be constructed ( $\varnothing$  63 mm), which has to be obtained from a local supplier. The cover must be stretched around this rack. The system protect the water against algae growth, but reduce also evaporation and waves inside the tank. This cover fits for water tanks with a minimum diameter of 8,5 meter.

## BUWAsilofloat cover

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Silofloat is made of EX material with a high floating capacity. Supplied with PE pipes and other materials needed for installation. This cover fits for water tanks with a minimum diameter of 8,5 meter

The cover is installed including the supplied PE circular tube and the cover needs to be rolled out and will be fixed by rubber elastic rope and carbine hooks.



## BUWAtop

The BUWAtop is a complete closed steel roof system for water tanks. It is suitable for covering silos with a diameter of 4 to 9 meters. The system is used for drinking water installations, industrial applications and irrigation water in greenhouses. It is suitable for water tanks in minimum WSWA qualities.

The roof is supported by a PVC pipe (200 mm) and is made up of several panels, which are connected watertight. The panels are lightweight and therefore quick and easy to install.



## BUWAdome



The BUWAdome is a completely covering lightweight frame roof system available for water tanks till a diameter of 15 meter. The system consists of an aluminium tube frame that dispenses its own weight onto the water tank. The cover material is a reinforced PVC quality and is installed on the frame afterwards. The cover is produced with a manhole so you can get in the water tank.

The BUWAdome systems completely covers the water tank, avoiding pollution. This secures a better water quality regulation for outside water tanks and saves on cleaning costs.

Every BUWAdome is specified to weather circumstances and tank sizes. This makes the roof suitable for every weather situation, including snow and sun exposure. An extra UV-resistant PVC cover is available for countries with a high UV index.

## BUWAcover overview

Diameter in meter	Span cover	Floating cover	Silofloat	BUWAtop	BUWAdome
Indoor	Till approx. 15 meter diameter	-	-	-	-
Outdoor	✓ ✗*	✓	✓	Till approx. 9 meter diameter	Till approx. 15 meter diameter
Heavy rainfall	✓ ✗	✓	✓	✓	✓
Wind	✓	✓	✓	Max 10 Beaufort	Max 10 Beaufort
Snow	✗	✓	✓	Max 75 kg/m <sup>2</sup>	Max 30 kg/m <sup>2</sup>

\* Ask our specialists for advice.

# BUWAtank WSW - WSWA - WSWB

BUWATEC ∞ BUWAtank - BUWAliner - BUWAcover

Diameter in meter	Height in meter	Capacity in m <sup>3</sup>
1,34	1,59	2
1,34	2,36	3
1,34	3,12	4
1,34	3,88	5
1,34	4,64	7
1,34	5,37*	8
2,01	1,59	5
2,01	2,36	7
2,01	3,12	10
2,01	3,88	12
2,01	4,64	15
2,01	5,37*	17
2,69	1,59	9
2,69	2,36	13
2,69	3,12	18
2,69	3,88	22
2,69	4,64	26
2,69	5,37*	30
3,36	1,59	14
3,36	2,36	21
3,36	3,12	28
3,36	3,88	34
3,36	4,64	41
3,36	5,37*	48
4,03	1,59	20
4,03	2,36	30
4,03	3,12	40
4,03	3,88	49
4,03	4,64	59
4,03	5,37*	68
4,70	1,59	28
4,70	2,36	41
4,70	3,12	54
4,70	3,88	67
4,70	4,64	80
4,70	5,37*	93
5,37	1,59	36
5,37	2,36	53
5,37	3,12	71
5,37	3,88	88
5,37	4,64	105
5,37	5,37*	122
6,04	1,59	46
6,04	2,36	68
6,04	3,12	89
6,04	3,88	111
6,04	4,64	133
6,04	5,37*	154
6,72	1,59	56
6,72	2,36	84
6,72	3,12	111
6,72	3,88	138
6,72	4,64	164
6,72	5,37*	190
7,39	1,59	68
7,39	2,36	101
7,39	3,12	134
7,39	3,88	166
7,39	4,64	199
7,39	5,37*	230
8,06	1,59	81
8,06	2,36	120
8,06	3,12	159
8,06	3,88	198
8,06	4,64	237
8,06	5,37*	274
8,73	1,59	95
8,73	2,36	141
8,73	3,12	187
8,73	3,88	232
8,73	4,64	278
8,73	5,37*	322

Diameter in meter	Height in meter	Capacity in m <sup>3</sup>
9,40	1,59	110
9,40	2,36	164
9,40	3,12	216
9,40	3,88	269
9,40	4,64	322
9,40	5,37*	373
10,07	1,59	127
10,07	2,36	188
10,07	3,12	248
10,07	3,88	309
10,07	4,64	369
10,07	5,37*	428
10,75	1,59	144
10,75	2,36	214
10,75	3,12	283
10,75	3,88	352
10,75	4,64	421
10,75	5,37*	487
11,42	1,59	163
11,42	2,36	242
11,42	3,12	319
11,42	3,88	397
11,42	4,64	475
11,42	5,37*	550
12,09	1,59	182
12,09	2,36	271
12,09	3,12	358
12,09	3,88	445
12,09	4,64	532
12,09	5,37*	616
12,76	1,59	203
12,76	2,36	302
12,76	3,12	399
12,76	3,88	496
12,76	4,64	593
12,76	5,37*	687
13,43	1,59	225
13,43	2,36	334
13,43	3,12	442
13,43	3,88	549
13,43	4,64	657
13,43	5,37*	761
14,10	1,59	248
14,10	2,36	368
14,10	3,12	487
14,10	3,88	606
14,10	4,64	724
14,10	5,37*	839
14,78	1,59	273
14,78	2,36	405
14,78	3,12	535
14,78	3,88	665
14,78	4,64	796
15,45	1,59	298
15,45	2,36	442
15,45	3,12	585
15,45	3,88	727
15,45	4,64	870
16,12	1,59	324
16,12	2,36	481
16,12	3,12	636
16,12	3,88	791
16,12	4,64	947
16,79	1,59	352
16,79	2,36	522
16,79	3,12	690
16,79	3,88	859
17,46	1,59	381
17,46	2,36	565
17,46	3,12	747
17,46	3,88	929
18,13	1,59	410
18,13	2,36	609

Diameter in meter	Height in meter	Capacity in m <sup>3</sup>
18,13	3,12	805
18,13	3,88	1.002
18,81	1,59	442
18,81	2,36	655
18,81	3,12	867
18,81	3,88	1.078
19,48	1,59	474
19,48	2,36	703
19,48	3,12	929
19,48	3,88	1.156
20,15	1,59	507
20,15	2,36	752
20,15	3,12	994
20,82	1,59	541
20,82	2,36	803
20,82	3,12	1.062
21,49	1,59	576
21,49	2,36	856
21,49	3,12	1.131
22,16	1,59	613
22,16	2,36	910
22,16	3,12	1.203
22,84	1,59	651
22,84	2,36	966
22,84	3,12	1.278
23,51	1,59	690
23,51	2,36	1.024
23,51	3,12	1.353
24,18	1,59	730
24,18	2,36	1.083
24,18	3,12	1.433
24,85	1,59	771
24,85	2,36	1.144
24,85	3,12	1.513
25,52	1,59	813
25,52	2,36	1.207
26,19	1,59	856
26,19	2,36	1.271
26,87	1,59	901
26,87	2,36	1.338
27,54	1,59	947
27,54	2,36	1.405
28,21	1,59	993
28,21	2,36	1.474
28,88	1,59	1.041
28,88	2,36	1.545
29,55	1,59	1.090
29,55	2,36	1.618
30,22	1,59	1.140
30,22	2,36	1.693
30,90	1,59	1.192
30,90	2,36	1.769

\*Tank Height 5,37 meter needs installation 0,80 meter deep into the ground!

### Standard versions BUWAtank

WSW = minimal panel thickness 0,8 mm for inside use  
 WSWA = minimal panel thickness 1,0 mm for outside use  
 WSWB = minimal panel thickness 1,2 mm for industrial use

### Special versions BUWAtank

WSW1C = bottom ring Plastisol coated  
 WSWVC = fully Plastisol coated  
 WSWA1C = bottom ring Plastisol coated  
 WSWAVC = fully Plastisol coated  
 WSWBVC = fully Plastisol coated

### Advantages of WSW tanks:

- Less number of bolt sets
- Saving steel material
- More durable composition of zinc layer
- Better packaging

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