



Flexible Tanks

PERFECT STORAGE SOLUTIONS FOR
MOBILE USE AND TEMPORARY APPLICATIONS



FLEXIBLE RESERVOIRS FOR THE STORAGE OF LIQUIDS
INDUSTRIAL BUILDING / STRUCTURAL AND CIVIL ENGINEERING
AGRICULTURE
DRINKING WATER STORAGE
RAINWATER HARVESTING



Dachstein factory near Strasbourg (France)



Teningen factory near Freiburg

GRAF - quality plastic products

For 50 years, the GRAF brand has been synonymous with high-quality plastic products. GRAF has a highly varied product range, covering everything from rainwater harvesting and rain percolation products to local disposal of wastewater. Right from the start, the GRAF range has included plastic containers and barrels for agricultural and industrial use.

Commitment to Germany

Between 2006 and 2008, GRAF invested more than €20 million in expanding its headquarters at Teningen near Freiburg (Baden, Germany). The 155 000 m² site - the same size as 31 football pitches - is home to one of the most state-of-the-art production facilities for plastic products in the world. We feel great attachment to Germany as a location for industry. Firstly, we are committed to the country because of our roots. Secondly Germany provides us with the qualified and motivated staff we need to maintain our high quality standards.

Tied to our past

GRAF's origins lie in the production of plastic containers and barrels for fruit and wine growers. We can now build on 50 years of experience in the manufacture of high-quality plastic products. Today the product range of Otto Graf GmbH is highly varied. As the European market leader in rainwater harvesting, GRAF is synonymous with progressive environmental products and a sustainable approach to the precious resource of water. But we have always remained true to the origins of our range.

Quality is our main priority

GRAF uses state-of-the-art production facilities. This is the only way to guarantee superlative quality at attractive prices. Seamless quality assurance and a high level of automation in production ensure very high levels of production reliability. All the production parameters and also every employee involved in the production process are documented for every single product.



When are flexible tanks a practical solution?

Flexible, self supporting tanks from GRAF present an excellent alternative to conventional tanks and offer a great many advantages:

- Low empty weight
- Ease of transport
- Simple setup
- Large holding capacity up to 600 m³
- Easy to empty and clean
- Opaque
- UV resistant
- No evaporation
- No penetration of contaminants or microorganisms
- Long lifetime
- 100% recyclable

These flexible tanks are designed for the most diverse applications, and additional accessories can be installed or modified as the need arises.

Suitable for:

- Industrial waste water
- Process water
- Agricultural waste water
- Rainwater
- Drinking water
- Liquid fertilisers
- Stock water
- Many other solutions



The flexible tank: Fast and simple setup

Preparing the platform

The setup of a flexible tank requires an absolutely flat and horizontal surface (verified with a spirit level) and a clean, stable subsurface free of pointed and sharp objects. The platform must bear the weight of the tank without sagging

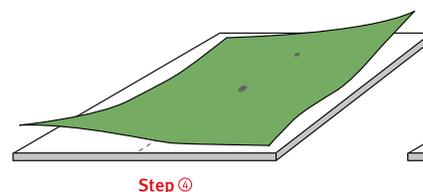
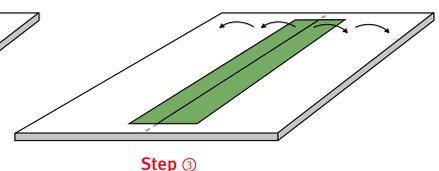
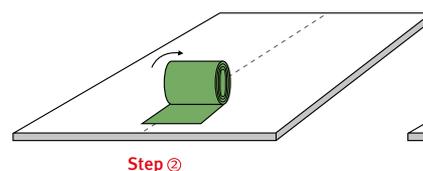
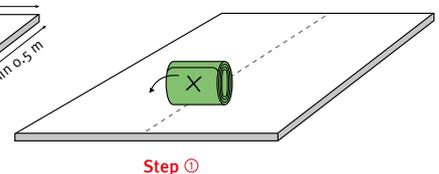
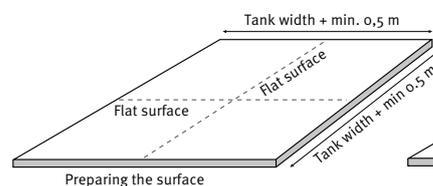
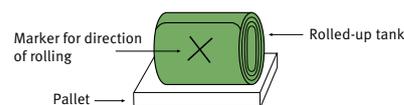
or washing out. A protective mat can be laid as a barrier between the tank and the ground. A recommended stable platform for large holding capacities is a compressed bed 15–20 cm deep. This must then be covered with a 5–10 cm thick layer of compressed fine sand that

acts as a barrier against penetration. Broken stones should not be used as the covering layer.

Retention membranes available on request in a range of sizes.

Setting up the tank

- ① Place the tank, rolled up along its length, ready to hand about a metre from the edge of the platform (the cross on the tank's packaging marks the direction the tank must be unfolded in).
- ② Unfold the tank along its length.
- ③ Unfold the tank along its width.
- ④ Make any corrections to the tank's position relative to the platform.



CAUTION

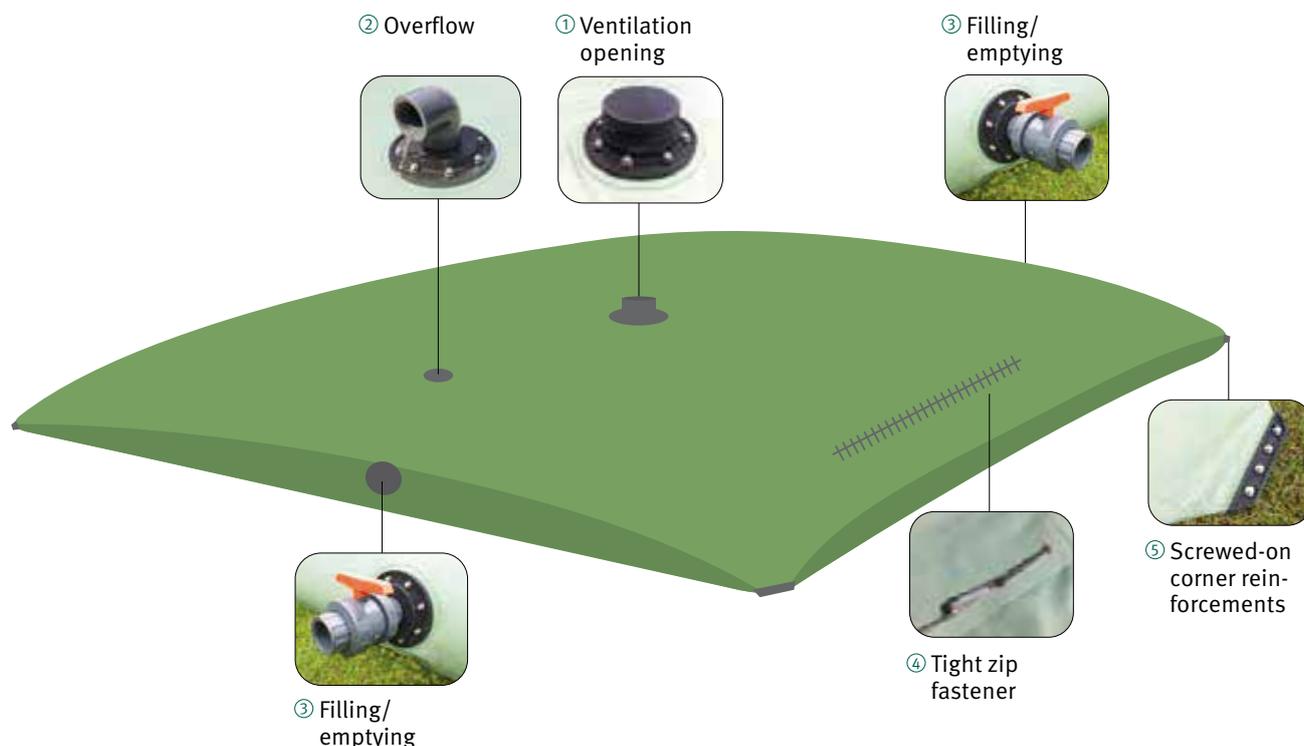
Do not drag the tank over the ground. To reposition the tank on the platform, generate an air cushion under the tank by lifting the two opposite corners.

Industry / Structural and Civil Engineering / Irrigation

Flexible tanks for storing process liquids and rainwater

Flexible tanks offer versatile solutions for both the short and long term storage of a great many liquids and present many advantages in the form of easy installation, low acquisition costs, and high holding capacities.

The special, highly robust fabric used for the flexible tanks is suitable for the storage of sludges, seepage water, process liquids, and many other types of industrial waste water and for rainwater harvesting.



Scope of supply

Standard industrial set:

- ① PP ventilation opening DN 100 with screwed flange
- ② Overflow DN 50 with screwed flange
- ③ Filling/emptying: PP connection fitting on the side with screwed flange
PVC valve DN 50 – 2" thread with DN 50 / DN 24 adapter
- ④ Tight zip fastener for cleaning purposes
- ⑤ Screwed-on polypropylene corner reinforcements

Service set:

- 1 x PVC (identical to tank material)
- 1 x tube of special PVC adhesive
- 1 x servicing instructions

Volume [m ³]	Order no.
30	327071
40	327072
50	327073
100	327074
200	327075
300	327076
400	327077
500	327078

* Other sizes and capacities from 1 m³ to 600 m³ on request (see table on page 7)



on tank



on fittings

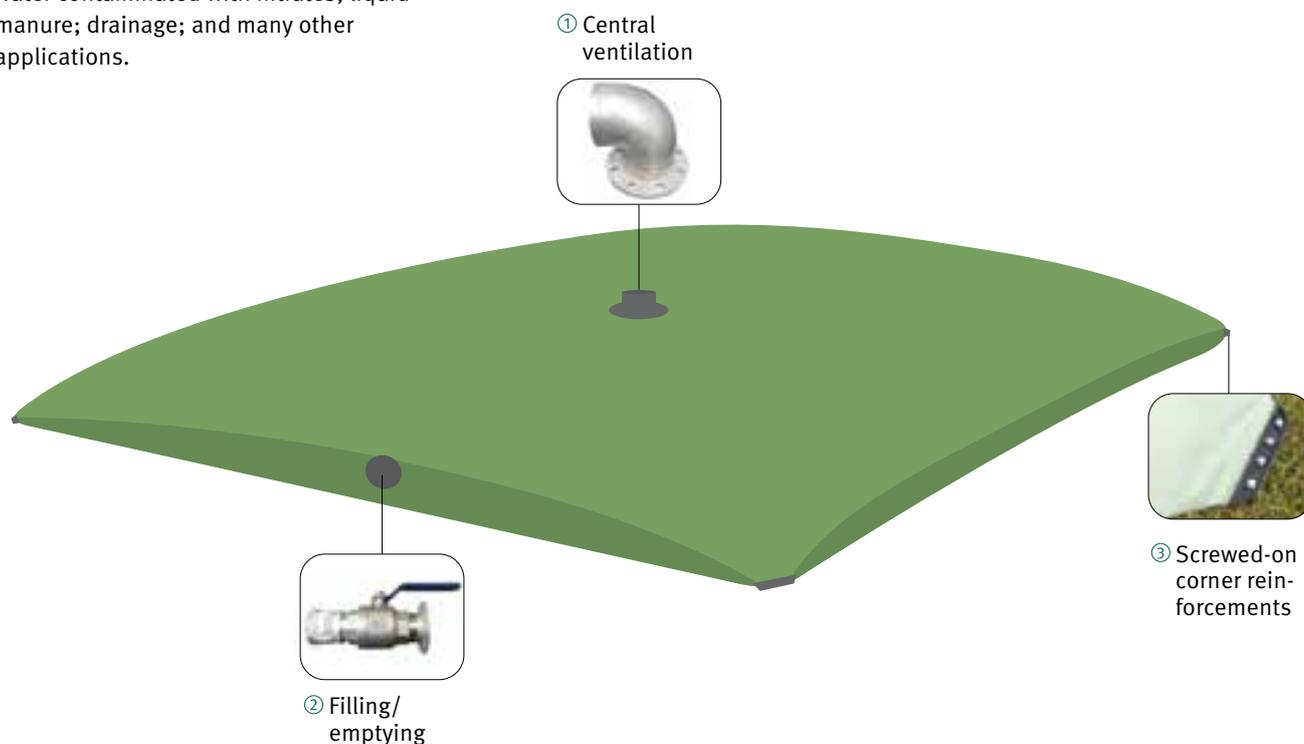


Agriculture

Flexible tanks for storing agricultural waste water and liquid fertilisers

The waste water quantities generated by agricultural processes pose a great challenge. Here, the flexible tanks from GRAF present an ideal alternative to conventional tanks for dairy, wine making, and stock breeding waste water; waste water contaminated with nitrates; liquid manure; drainage; and many other applications.

Made of plastomer lined fabric, these flexible tanks are ideal for the storage of liquid fertilisers containing nitrogen and sulphur.



Scope of supply

Standard agriculture set:

- ① Central ventilation DN 50 – 100% stainless steel
- ② Filling/emptying: Stainless steel connection fitting on the side with screwed flange
Stainless steel valve DN 50 – 2“ thread
- ③ Screwed-on polypropylene corner reinforcements

Service set:

- 1 x PVC (identical to tank material)
- 1 x tube of special PVC adhesive
- 1 x servicing instructions

Volume [m³]	Order no.
25	327086
50	327087
110	327088
150	327089

* Other sizes and capacities from 1 m³ to 600 m³ on request (see table on page 7)



on tank



on fittings



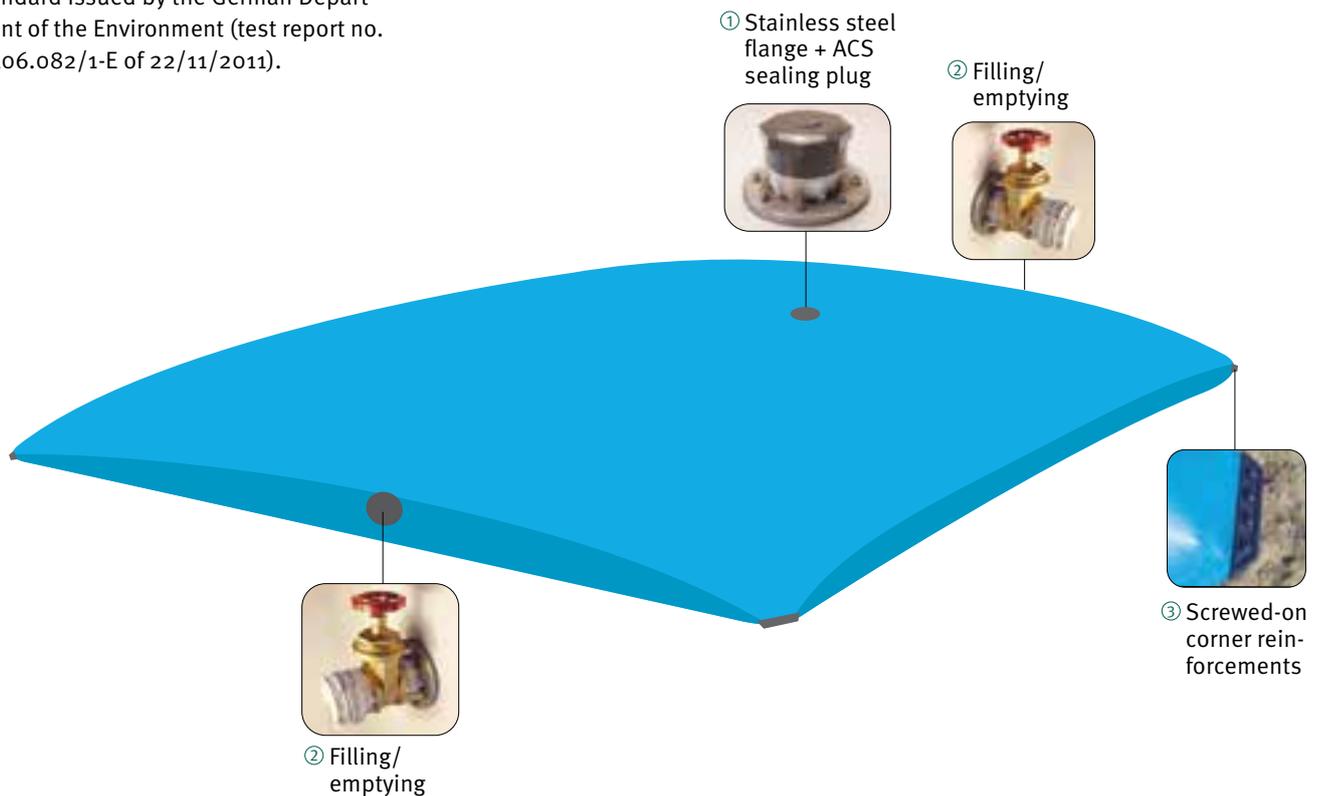
Drinking water

Perfect solution for modern and temporary applications

The responsible supply of drinking water today poses a greater challenge than ever before. In the form of its flexible, self supporting tanks, GRAF provides an excellent solution for environmentally conscious drinking water management. The tanks comply with the CE 2002/72-97/48-85/572 directives and the KTW standard issued by the German Department of the Environment (test report no. K-406.082/1-E of 22/11/2011).

Areas of application:

- Reservoir for the basic supply of drinking water
- Remote settlements
- Humanitarian missions
- Private users
- Armed forces, civil defence, camping



Scope of supply

Standard drinking water set:

- ① Stainless steel flange DN 50 with screwed flange + ACS sealing plug
- ② Filling/emptying: Brass stopcock DN 50 – 2" thread (optional blind cap)
- ③ Screwed-on polypropylene corner reinforcements

Service set:

- 1 x PVC (identical to tank material)
- 1 x tube of special PVC adhesive
- 1 x servicing instructions

Volume [m ³]	Order no.
30	327079
50	327080
80	327081
100	327082

* Other sizes and capacities from 1 m³ to 600 m³ on request (see table on page 7)



on tank



on fittings



Volume [m³]	Standard measurements		Measurements, variant 1		Measurements, variant 2		Area [m²]	Height [m]	Weight [kg]	Packaged size [cm]
	Length [m]	Width [m]	Length [m]	Width [m]	Length [m]	Width [m]				
1	1.35	2.96	1.85	2.22	-	-	4	0.40	12	60x80xH80
3	2.85	2.96	3.80	2.22	-	-	8.44	0.60	38	60x80xH80
5	3.90	2.96	5.20	2.22	-	-	11.54	0.70	48	60x80xH80
10	6.20	2.96	8.25	2.22	4.15	4.44	18.35	0.90	61	60x80xH80
15	7.95	2.96	5.30	4.44	4.00	5.92	23.53	1.00	78	60x80xH80
20	9.75	2.96	6.50	4.44	4.90	5.92	28.86	1.10	88	60x80xH80
25	7.60	4.44	11.40	2.96	5.70	5.92	33.74	1.20	105	60x80xH80
30	6.70	5.92	8.95	4.44	5.35	7.40	39.66	1.25	124	60x80xH80
40	7.70	5.92	10.25	4.44	6.20	7.40	45.58	1.40	143	60x80xH80
50	9.40	5.92	12.55	4.44	7.50	7.40	55.65	1.40	174	60x80xH80
70	11.30	5.92	7.60	8.88	6.50	10.36	66.90	1.50	209	80x120xH100
80	12.85	5.92	8.60	8.88	7.40	10.36	76.07	1.50	230	80x120xH100
100	10.50	8.88	7.90	11.84	9.00	10.36	93.24	1.50	291	80x120xH100
110	11.50	8.88	8.70	11.84	9.90	10.36	102.12	1.50	319	100x120xH130
150	14.90	8.88	10.50	11.84	12.00	10.36	124.32	1.50	388	100x120xH130
200	14.45	11.84	12.85	13.32	16.50	10.36	171.09	1.50	534	100x120xH130
300	16.60	14.80	18.45	13.32	20.75	11.84	245.68	1.50	767	120x160xH130
400	18.45	17.76	22.15	14.80	-	-	327.67	1.45	1022	160x180xH130
500	22.30	19.24	24.15	17.76	-	-	429.05	1.45	1280	160x180xH130
600	25.20	19.24	-	-	-	-	484.85	1.45	1513	180x200xH130

* Other sizes and variants available on request.

Valves



Filling /emptying PVC

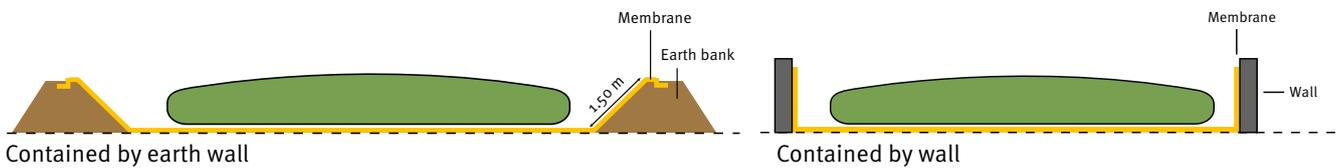


Filling /emptying stainless steel



Filling /emptying brass

Retention membrane



Packaging

- Protection during storage and transport
- Suitable for lifting and carrying
- Fast transport and setup on site
- Easy to read capacity marker





Your local distributor:

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For Landscape & Geosynthetic Engineering

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Wastewater treatment solutions

For more information about our wastewater treatment solutions, ask for our catalogue.

Prices:

A price list with our export conditions is available on request.

Warranty clause:

The warranty mentioned in this brochure only refers to the tank in question and not to the accessories. Within the warranty period we grant free replacement of the material. Further benefits are excluded. Pre-condition for warranty benefits are proper handling, assembly and installation according to the mounting guidelines.

N.B. Protect tanks from frost when installed above ground! In case of groundwater installation, please contact us for further information prior to purchase!

For all indications of measurements in this brochure we reserve a tolerance of +/- 3%. The usage volume of the tanks may be up to 10% lower than the tank Volume, depending on the connecting option.

Technical modifications and further development of the various products are subject to change. Errors excepted.

For all our offers and conclusions of contract, only our General Terms and Conditions of Business dated 01/03/2010 shall apply, which we will send to you on request.

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