



Rainwater harvesting solutions



RAINWATER HARVESTING TANK SYSTEMS
FILTER & ACCESSORIES



Production site in Dachstein (France)



Production site in Teningen (Germany) near Freiburg



GRAF – Setting standards in quality

For 50 years, Otto Graf GmbH has been offering high-class plastic products to its customers. In 1974, GRAF developed its first pioneering range of rainwater harvesting products. Today we are market leader in numerous countries for rainwater harvesting systems.

High Quality Manufacturing

Graf is investing continuously in the expansion of the headquarters in Teningen near Freiburg (Breisgau). The facility has now an approximate area of 155.000 m² and is one of the most modern production facilities for plastic products in the world.

Our choice of Germany for the new production site was easy. On the one hand, we feel an obligation to the site because of our history. On the other, we would like to offer our customers products of the highest quality.

Logistics Expertise

GRAF products are exported to over 60 countries around the globe. The share of products exported by our company as almost doubled over the last five years. We owe the outstanding loyalty of our customers to unique product quality, great value for money and the distinct service approach we deploy with our trade partners. Well thought-out logistics with short response and delivery times are essential to ensure a high standard of service. GRAF logistics have an impressively high delivery rate of 99 %.

Engineering Expertise

More than 200 registered property rights and countless awards document our work as an innovation leader. These innovations are the growth drivers and basis for our economic success. All GRAF products are designed by our own development department, which brings together all the expertise needed, from design and function to construction and structural analysis.

Our goal: your satisfaction

More than 100,000 satisfied customers already benefit from the advantages of GRAF rainwater harvesting systems.

High Quality Manufacturing

Our products have to satisfy a huge number of different requirements, which is why GRAF is an expert in all the common procedures for manufacturing plastic products and has access to the optimum manufacturing process for every product.

Durable products: reliable investment

Right from the product development stage, GRAF attaches great importance to durable design. GRAF offers a warranty of up to 15 years for its rainwater tanks. All products manufactured by GRAF are also 100 % recyclable.

Sustainability starts with production

Nearly all GRAF products work to protect the environment. Thanks to GRAF rainwater harvesting systems our customers can cut their mains water consumption by at least 50 % . State-of-the-art facilities in the production process ensure minimal use of resources.

Our injection moulding process requires considerably less energy than standard. The heat produced during production is used to heat the production and logistics building thanks to heat recovery.

Environmental products from recycled raw materials

Over 50 % of the raw materials processed at GRAF are recycled. Thanks to an in-house raw materials recycling facility, we ensure a constantly high quality of raw materials and take account of the sustainability concerns of our products throughout the value added chain.

Seamless quality assurance

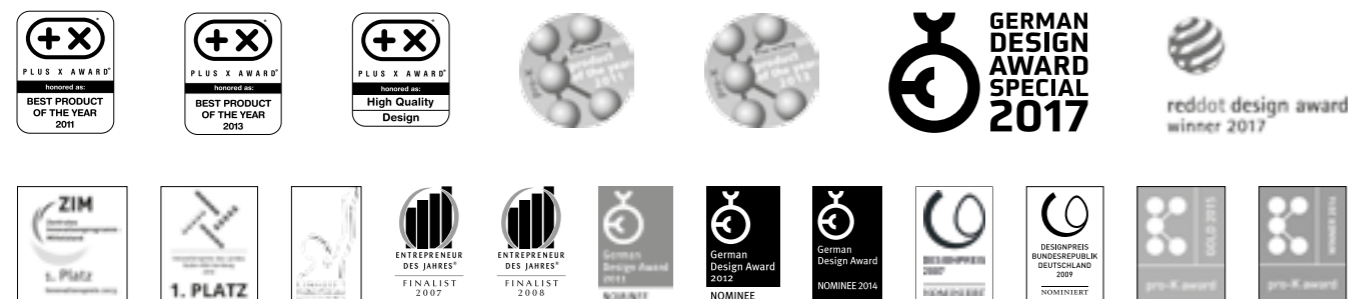
Our products portray an image of superlative production quality and reliability. Each part is then given a serial number. The production process for each and every tank is documented throughout. All production parameters, such as weight or material batch, are recorded for quality assurance.



Manufacturing certified according to ISO 9001



Manufacturing certified according to ISO 50001



World's biggest injection moulding machine



Blow moulding process



Rotational moulding



COMPOSTERS



GARDEN RANGE



WATER SPRING



DOWNPIPE FILTERS



RAINWATER HARVESTING OVERGROUND



WASTEWATER TREATMENT

HORTICULTURE & VITICULTURE



STORMWATER MANAGEMENT



RAINWATER HARVESTING UNDERGROUND

Stormwater Management

The infiltration range

- Infiltration modules
- Infiltration filters
- Retention cisterns
- Shafts and accessories



Housing development, Buenos Aires (Argentina)



City park, Barcelona (Spain)



Energy supplier, Warwick (UK)



Catalogue Stormwater Management

For more information about our Stormwater Management, ask for our catalogue.



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Functions of the app

- Calculate your annual savings
- Browse the complete product range
- Access the video channel GRAF TV



Q Webcode G1103




The webcode will lead you directly to the required information.

- Installation instructions
- Technical drawings
- Detailed product information
- Downloads




www.graf-water.com

Symbols in the catalogue

Load capacity

-  Suitable for pedestrian loading
-  Suitable for vehicle loading
-  Lorry-bearing

Application range

-  Watering the garden
-  Flushing the toilet
-  Washing machine

Carat S underground rainwater tank

Ingeniously designed down to the smallest detail

Unique manufacturing process

The GRAF Carat S underground tank is unlike any other underground tank in the world. It is the largest tank of its kind to be manufactured by injection compression moulding. This technique

provides the tank with unbeatable stability and ensures that each component is produced with the highest of accuracy.

Unlike other underground tanks, the wall thickness is equal in all areas of the tank. The production tolerances

are kept to a minimum, resulting in a product of the highest quality, which is strong, accurate, reliable and extremely user-friendly.

To manufacture the Carat S range, one of the worlds largest injection moulding systems had to be developed.

The tank that turns its head for you

The GRAF Carat S underground tank has a rotating tank dome. The tank dome can be aligned with the connections independently of the tank – this makes installation much easier! All installation pipes are connected using the five standard lip seals. The Carat S telescopic dome shaft connects the system to the ground surface. The height of the tank can be smoothly adjusted to suit the local conditions and it can be tilted by 5°. To allow the lid to be flush with the finished ground level.



Four-stage cleaning process for best water quality



Stage 1
First the rainwater is cleaned by a patented filter system. The cleaned water flows into the tank and dirt particles are rinsed into the sewer system along with a small amount of residual water.



Stage 2
To allow very fine dirt particles to settle, the filtered water is routed through a steady inflow pot on the base of the tank. This prevents the water from being stirred up and also adds oxygen to the water at the bottom of the tank. This keeps the water clear and fresh.



Stage 3
Particles that are lighter than water (such as pollen) form a floating layer on the surface. The overflow siphon installed in the tank causes the floating layer to be removed when the tank overflows. So it's important to let the tank overflow regularly to ensure consistent water quality.



Stage 4
The collected rainwater is removed by means of a floating extraction unit near the top of the tank. The best water quality is found around 10 cm (4") below the water's surface.

The tank with a smart head!



Built-in professional filter technology

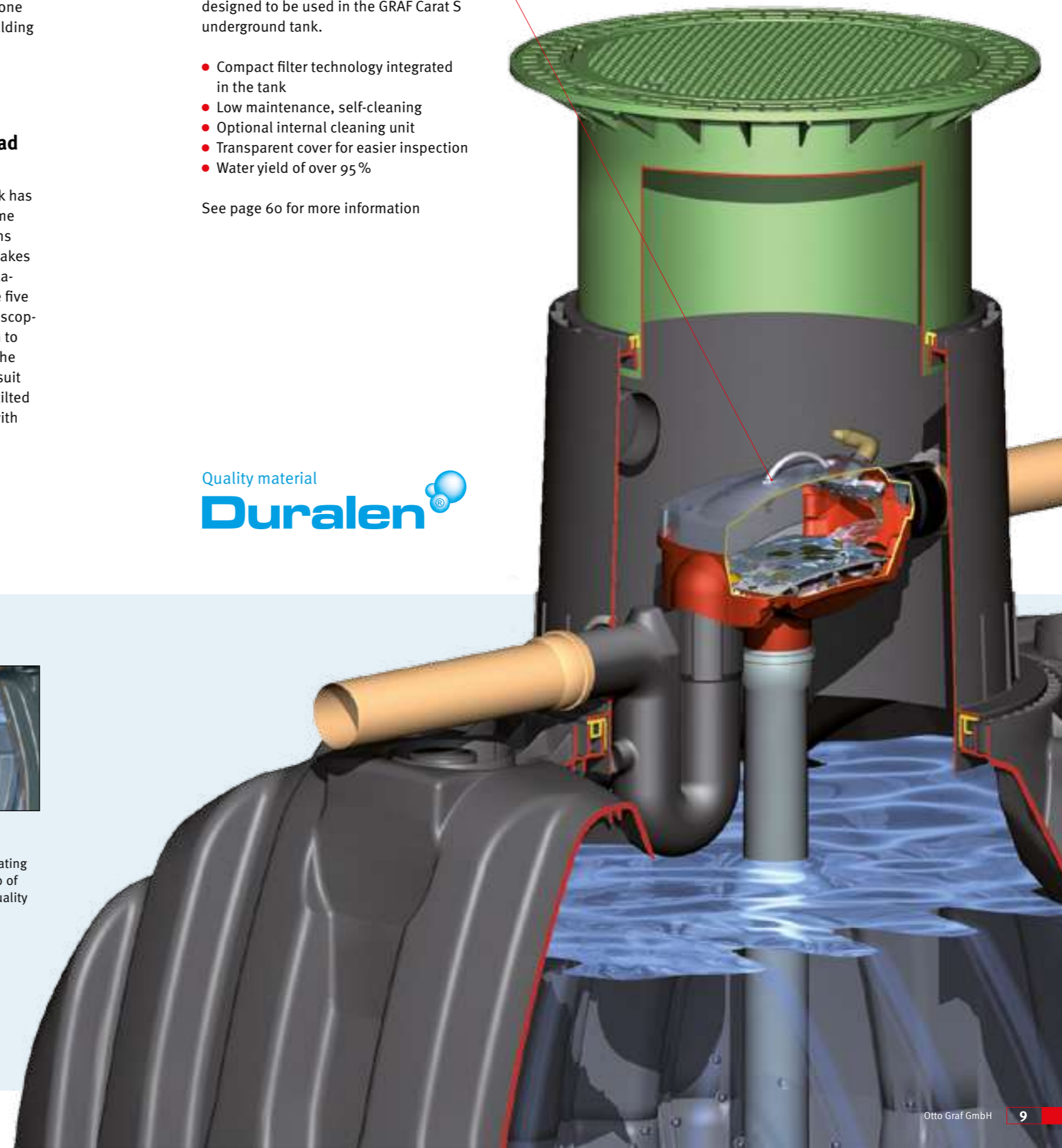
The GRAF Optimax-Pro filter is specially designed to be used in the GRAF Carat S underground tank.

- Compact filter technology integrated in the tank
- Low maintenance, self-cleaning
- Optional internal cleaning unit
- Transparent cover for easier inspection
- Water yield of over 95 %

See page 60 for more information



Quality material
Duralen



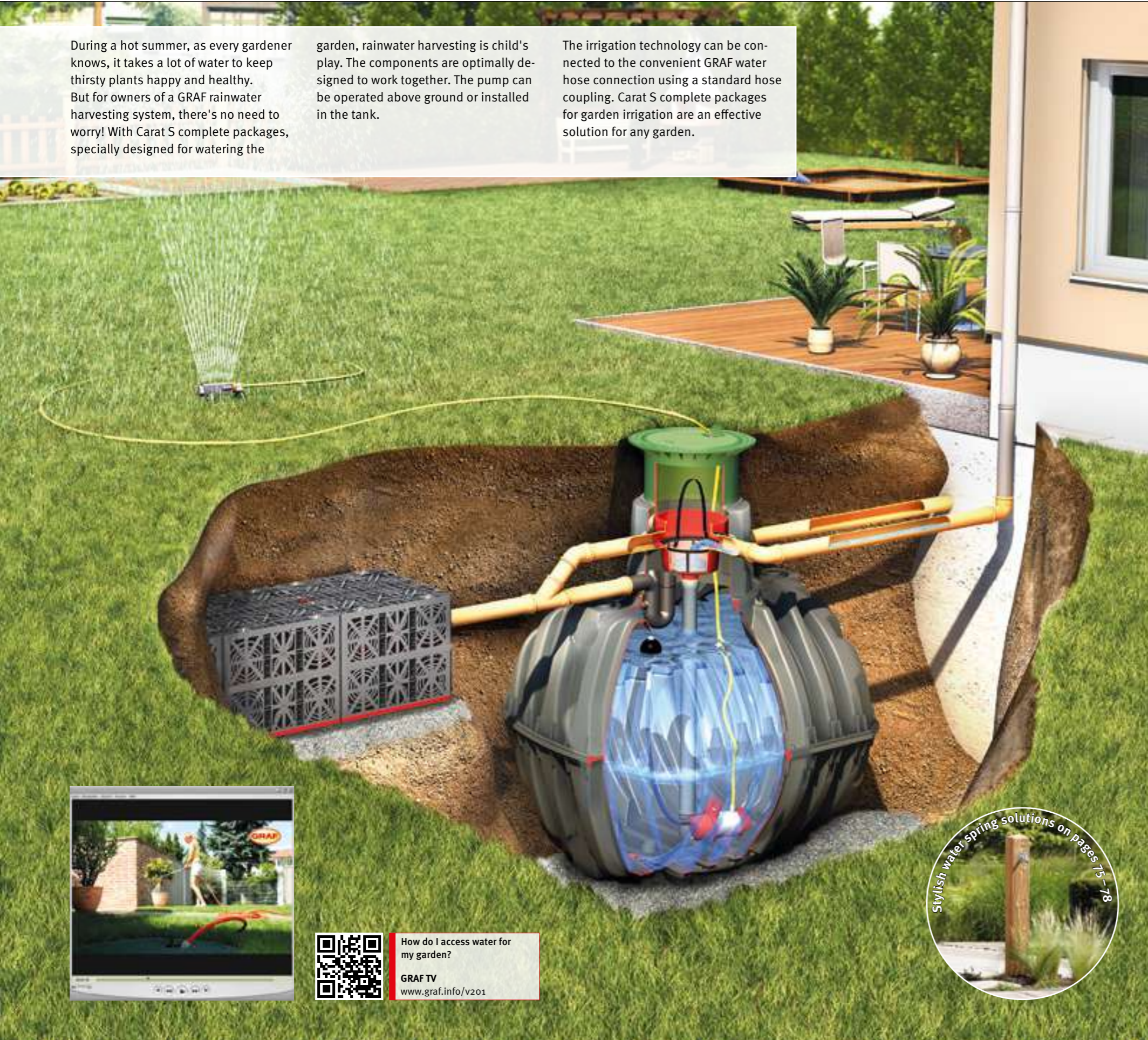
Carat S complete packages for garden irrigation



During a hot summer, as every gardener knows, it takes a lot of water to keep thirsty plants happy and healthy. But for owners of a GRAF rainwater harvesting system, there's no need to worry! With Carat S complete packages, specially designed for watering the

garden, rainwater harvesting is child's play. The components are optimally designed to work together. The pump can be operated above ground or installed in the tank.

The irrigation technology can be connected to the convenient GRAF water hose connection using a standard hose coupling. Carat S complete packages for garden irrigation are an effective solution for any garden.



How do I access water for my garden?
GRAF TV
www.graf.info/v201



Carat S complete packages for garden irrigation

100 % water yield

GRAF garden packages have a basket filter that reliably holds back contaminants. The filter construction guarantees a water yield of 100 %.

Dome shaft

The GRAF dome shaft provides easy access to the filter and tank. It features a tank cover suitable for pedestrian loading and blends seamlessly into the ground surface. Because it is flush with the ground, the tank cover won't get in the way during lawn mowing.

Automatic pump

The Carat S garden Comfort complete package includes a submersible pump that switches on and off automatically. The water can be extracted very easily: just open the tap and you have water on demand!

Easy extraction

GRAF's unique water hose connection allows you to connect up equipment for watering the garden. It can be installed at any location in the garden or in the tank cover itself. Simply connect your garden hose or lawn sprinkler to the integrated standard connection valve.



Carat S garden Jet package

The great value complete solution



Carat S garden Jet package

- The great value complete solution
- Low visual impact
- Integrated filter technology (100 % water yield)
- Easy to install using prepared components

Webcode G1201

Scope of supply

- Carat S / Carat XL underground tank
- Mini telescopic dome shaft for pedestrian loading with an adjustable PP lid 750 mm – 950 mm (29.5 – 3' 1.4")
- Filter package 2, consists of
 - Internal Universal filter 3/XL internal
 - Inflow stilling system for controlling the water inflow
 - Overflow siphon and rodent guard
 - Spannfix pipe connection sleeve
- Garden Jet technical package consists of:
 - Jet 700 garden pump (page 72)
 - Internal and external water hose connection box (compatible with standard hose coupling, page 75)
 - Pump connection set with 1 m (3' 3.4") PVC hose
 - Suction set with 12.5 m (41') suction hose 25 mm (1")

Volume [l]	Volume [US gal.]	Connections [DN]
2,700	700	100 (4") / 150 (6")
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ²⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank

²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)

Vehicle loading version available see page 18

Carat S garden Comfort package

The simple garden solution with submersible pump system



Carat S garden Comfort package

- Simple to install and use
- Use a simple hose connection socket and pressure sensitive pump for automatic water activation
- Low visual impact
- Reduces electricity consumption by using a pressure drop activation system, so that electricity is only used when required
- Integrated filter technology (100 % water yield)

Webcode G1202

Scope of supply

- Carat S / Carat XL underground tank
- Mini telescopic dome shaft for pedestrian loading with an adjustable PP lid 750 mm – 950 mm (29.5 – 3' 1.4")
- Filter package 2, consists of:
 - Internal Universal filter 3/XL internal
 - Inflow stilling system for controlling the water inflow
 - Overflow siphon and rodent guard
 - Spannfix pipe connection sleeve
- Garden Comfort technical package consists of:
 - Integra INOX automatic submersible pump (page 73)
 - Internal and external water hose connection box (compatible with standard hose coupling, page 75)
 - Floating suction fitting with fine filter and hose
 - 10 m (33') pressure hose 25 mm (1")

Volume [l]	Volume [US gal.]	Connections [DN]
2,700	700	100 (4") / 150 (6")
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ²⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank

²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)

Vehicle loading version available see page 19



You will find an enquiry form and sizing assistance on our website www.graf-water.com

Carat S complete packages for the home and garden



Day after day households use precious drinking water to flush the toilet, run the washing machine and water the garden. But these applications, which use a lot of water, don't actually require water of drinking quality. GRAF rainwater harvesting systems provide a reliable supply of rainwater for these uses,

reducing drinking water consumption by around 50%. The self-cleaning Optimax-Pro filter feeds rainwater into the underground tank through the steady inflow. The feed technology (e.g. the GRAF Aqua-Center-Silentio, page 71) is installed in the technical room inside the house. It provides a reliable supply

of rainwater to the separate supply network. When no rainwater is available, drinking water is automatically supplied instead. Carat S complete packages for the home are state of the art.



What happens when my tank is empty?
GRAF TV
www.graf.info/v202

Carat S complete packages for home and garden

Self-cleaning filter

GRAF household packages include the patented Optimax-Pro filter. This self-cleaning filter delivers a water yield of over 95 % and requires minimal maintenance. If required the filter can also be equipped with a cleaning unit, which cleans contaminants out of the filter at your preferred intervals. With a mesh width of just 0.35 mm (0.02"), the filter reliably holds back dirt.

Very high water quality

Not only the GRAF Optimax-Pro filter but also the floating extraction unit ensures very high water quality. This unit extracts the water from the cleanest zone – about 10 cm (4") below the water's surface. The GRAF Professional complete

package also comes with a reversible flow fine filter that filters the water again before it is fed into the supply network.

Reliable, ultra-quiet intake

The GRAF Aqua-Center-Silentio monitors the level of rainwater in the Carat S underground tank. When no rainwater is available, drinking water is automatically supplied instead. For ultra-quiet operation the domestic water control unit is installed in a fully encapsulated housing.



Carat S Eco-Plus package

The ideal solution for use in the home and garden



Carat S Eco-Plus package

- Economic package solution
- Patented filter technology and in-house pump system with automatic switch-over to mains water supply
- Easy to assemble due to modular components
- Float switch controlled
- Low visual impact

Webcode G1203

Scope of supply

- 1 Carat S / Carat XL underground tank
- 2 Maxi telescopic dome shaft for pedestrian loading with an adjustable PP lid 750 mm – 1,050 mm (29.5 – 3' 5")
- 3 Filter package 3 consists of:
 - Internal Optimax-Pro filter/XL internal (self-cleaning)
 - Inflow stilling system for controlling the water inflow
 - Overflow siphon with rodent guard function
 - Spannfix pipe connection sleeve
- 4 Eco-Plus technical package consists of:
 - Drinking water feed console (page 70)
 - Floating suction fitting with fine filter and hose
 - DN 100 (4") wall duct
 - Labelling set
 - PE suction pipe 25 mm (1"), length 12 m (39' 4")

Volume [l]	Volume [US gal.]	Connections [DN]
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ²⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank
²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)

Vehicle loading version available see page 19



You will find an enquiry form and sizing assistance on our website www.graf-water.com



Carat S Professional package

The convenient complete solution for use in the home and garden



Carat S Professional package

- Patented filter technology and in-house drinking water intake
- Easy to fit using modular technology
- Microprocessor control system
- Digital fill level display
- Automatic rinsing intervals for the intake reservoir and the filter
- Low visual impact

Webcode G1204

Scope of supply

- 1 Carat S / Carat XL underground tank
- 2 Maxi telescopic dome shaft for pedestrian loading with an adjustable PP lid 750 mm – 1,050 mm (29.5 – 3' 5")
- 3 Filter package 3 consists of:
 - Internal Optimax-Pro filter/XL internal (self-cleaning)
 - Inflow stilling system for controlling the water inflow
 - Overflow siphon and rodent guard
 - Spannfix pipe connection sleeve
- 4 Professional technical package consists of:
 - Aqua-Center-Silentio drinking water feed module (page 71)
 - Floating suction fitting with fine filter and hose
 - DN 150 wall duct (6")
 - Internal filter cleaning unit
 - Automatic filter cleaning system
 - Reversible flow fine filter
 - Labelling set
 - PE suction pipe 25 mm (1"), length 12 m (39' 4")

Volume [l]	Volume [US gal.]	Connections [DN]
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ²⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank
²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)

Vehicle loading version available see page 19

Carat S package Silentio Press

suitable for pedestrian loading. Ideal for installations > 15 m (49' 3") away from the house [Webcode G1210](http://www.graf-water.com)

Volume [l]	Volume [US gal.]	Connections [DN]
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ²⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank
²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)

Complete packages for vehicle loading

for use in the home and garden



Suitable for vehicle loading with cast iron cover

Do you want to install your GRAF complete package in your driveway or under your carport? The GRAF complete packages for vehicle loading with the cast iron telescopic dome shaft are extremely robust. They can bear a maximum axle load of 2.2 to. This provides a certain

reserve for larger vehicles. A minimum earth covering of 800 mm (31.4") is required for these loads. If the axle load is insufficient for your needs, please contact us. GRAF also offers solutions for special requirements!

Carat S garden Jet package

Scope of supply

- ① Carat S / Carat XL underground tank
- ② Telescopic dome shaft cast iron, 800 mm – 1,050 mm (31.4" – 3' 5") earth covering, for vehicle loading with 2.2 to cast iron cover
- ③ + ④ Filter / pump package identical to package page 12

Q Webcode G1205

Suitable for vehicle loading

Volume [l]	Volume [US gal.]	Connections [DN]
2,700	700	100 (4") / 150 (6")
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ¹⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank

²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)



Carat S garden Comfort package

Scope of supply

- ① Carat S / Carat XL underground tank
- ② Telescopic dome shaft cast iron, 800 mm – 1,050 mm (31.5" – 3' 5") earth covering, for vehicle loading with 2.2 to cast iron cover
- ③ + ④ Filter / pump package identical to package page 13

Q Webcode G1206

Suitable for vehicle loading

Volume [l]	Volume [US gal.]	Connections [DN]
2,700	700	100 (4") / 150 (6")
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ¹⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank

²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)



Carat S Eco-Plus package

Scope of supply

- ① Carat S / Carat XL underground tank
- ② Telescopic dome shaft cast iron, 800 mm – 1,050 mm (31.5" – 3' 5") earth covering, for vehicle loading with 2.2 to cast iron cover
- ③ + ④ Filter / pump package identical to package page 16

Q Webcode G1207

Suitable for vehicle loading

Volume [l]	Volume [US gal.]	Connections [DN]
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ¹⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank

²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)



Carat S Professional package

Scope of supply

- ① Carat S / Carat XL underground tank
- ② Telescopic dome shaft cast iron, 800 mm – 1,050 mm (31.5" – 3' 5") earth covering, for vehicle loading with 2.2 to cast iron cover
- ③ + ④ Filter / pump package identical to package page 17

Q Webcode G1208

Suitable for vehicle loading

Volume [l]	Volume [US gal.]	Connections [DN]
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ¹⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank

²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)



Carat S Professional package Silentio Press

Ideal for distances ≥ 15 m (49' 3") to the house

Scope of supply

- ① Carat S / Carat XL underground tank
- ② Telescopic dome shaft cast iron, 800 mm – 1,050 mm (31.5" – 3' 5") earth covering, for vehicle loading with 2.2 to cast iron cover
- ③ + ④ Filter / pump package identical to package page 17

Q Webcode G1209

Suitable for vehicle loading

Volume [l]	Volume [US gal.]	Connections [DN]
3,750	1,000	100 (4") / 150 (6")
4,800	1,250	100 (4") / 150 (6")
6,500	1,700	100 (4") / 150 (6")
8,500 ¹⁾	2,240	150 (6")
10,000 ¹⁾	2,640	150 (6")
13,000 ²⁾	3,400	100 (4") / 150 (6")

¹⁾ Carat XL underground tank

²⁾ Set consists of two Carat S underground tanks (Connecting pipes must be provided on site)



Less digging! Less work! Less cost!

GRAF brand quality – try it for yourself!

- Minimum installation depth, which translates into short installation time and low costs
- Suitable for vehicle loading
- Groundwater stable



Four-stage cleaning process for best water quality



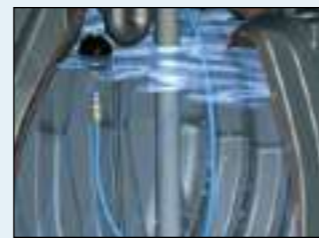
Stage 1
First the rainwater is cleaned by a patented filter system. The cleaned water flows into the tank and dirt particles are rinsed into the sewer system along with a small amount of residual water.



Stage 2
To allow very fine dirt particles to settle, the filtered water is routed through a steady inflow pot on the base of the tank. This prevents the water from being stirred up and also adds oxygen to the water at the bottom of the tank. This keeps the water clear and fresh.



Stage 3
Particles that are lighter than water (such as pollen) form a floating layer on the surface. The overflow siphon installed in the tank causes the floating layer to be removed when the tank overflows. So it's important to let the tank overflow regularly to ensure consistent water quality.



Stage 4
The collected rainwater is removed by means of a floating extraction unit near the top of the tank. The best water quality is found around 10 cm (4") below the water's surface.

How do you install a tank? I know!

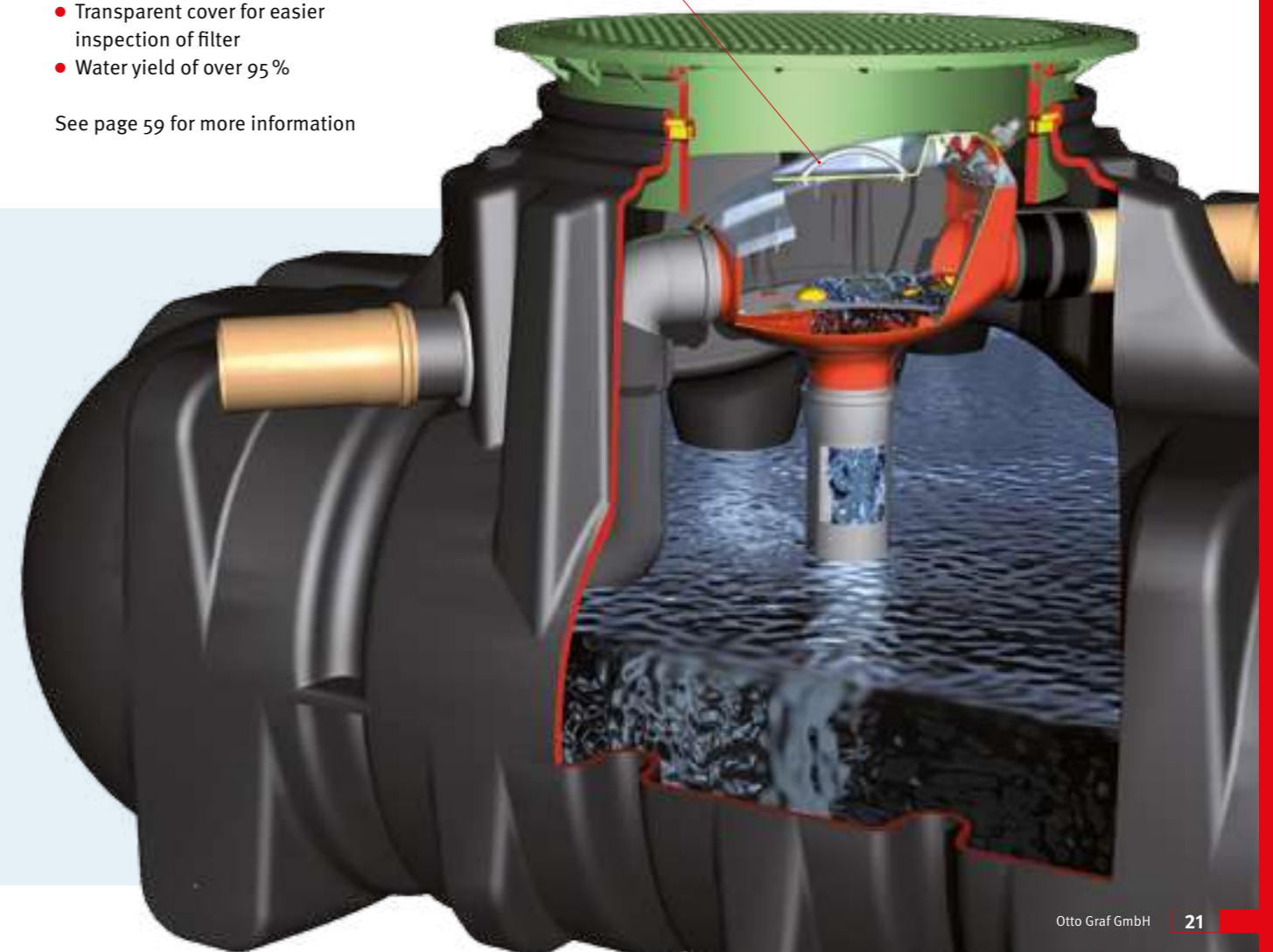


Built-in professional filter technology

The GRAF Minimax-Pro filter (patented) is specially designed to be used in the GRAF Platin flat tank.

- Compact filter technology integrated in the tank
- Low maintenance, self-cleaning
- Optional internal cleaning unit
- Transparent cover for easier inspection of filter
- Water yield of over 95 %

See page 59 for more information



Platin garden Jet package

The low-cost complete solution



Platin garden Jet package

- Low-cost complete solution
- Integrated filter technology (100% water yield)
- Easy assembly thanks to modular design
- Easy installation and convenient water extraction with water hose connection (compatible with standard hose coupling)

Webcode G1220

Scope of supply

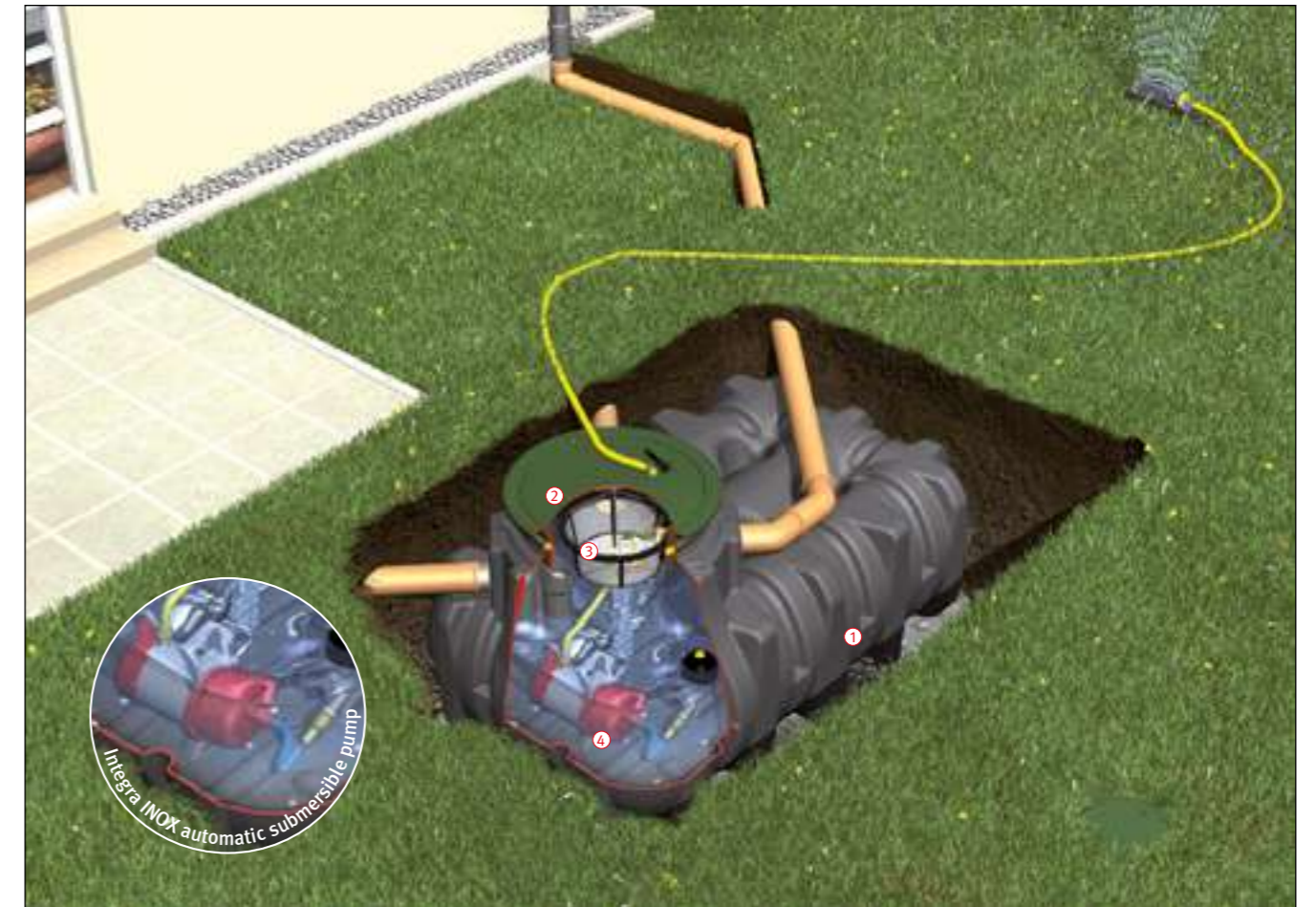
- ① Platin flat tank
- ② Mini dome shaft tank cover suitable for pedestrian loading, smooth telescopic adjustment from 455 mm – 655 mm (17.9" – 25.8") earth covering or cast iron dome shaft suitable for vehicle loading, smooth telescopic adjustment from 455 mm – 755 mm (17.9" – 29.7") earth covering
- ③ Platin filter package 2 consists of:
 - Filter basket with suspension
 - Overflow siphon, rodent guard
- ④ Garden Jet pump package consists of:
 - Jet 700 garden pump (page 72)
 - Internal and external water hose connection box (compatible with standard hose coupling, page 75)
 - Pump connection set with 1 m (3' 3.4") PVC hose
 - Suction set with 12.5 m (41') suction hose 25 mm (1")

Volume [l]	Volume [US gal.]	Connections [DN]
1,500	400	100 (4")
3,000	800	100 (4")
5,000	1,325	100 (4")
7,500	1,980	100 (4")
10,000 ¹⁾	2,650	100 (4")
15,000 ¹⁾	3,960	100 (4")

¹⁾ Set consists of two Platin flat rainwater tanks (Connecting pipes must be provided on site)

Platin garden Comfort package

The convenient solution with automatic submersible pump



Platin garden Comfort package

- Draw water from the socket like electricity
- Simple installation thanks to integrated filter technology
- Water can be extracted using either an internal or external water hose connection for standard watering systems
- Easy to assemble due to modular components
- Just one cover visible at the surface

Webcode G1221

Scope of supply

- ① Platin flat tank
- ② Mini dome shaft tank cover suitable for pedestrian loading, smooth telescopic adjustment from 455 mm – 655 mm (17.9" – 25.8") earth covering or cast iron dome shaft suitable for vehicle loading, smooth telescopic adjustment from 455 mm – 755 mm (17.9" – 29.7") earth covering
- ③ Platin filter package 2 consists of:
 - Filter basket with suspension
 - Overflow siphon, rodent guard
- ④ Garden Comfort pump package consists of:
 - Integra INOX automatic submersible pump (page 73)
 - Internal and external water hose connection box (compatible with standard hose coupling, page 75)
 - Floating suction fitting with fine filter and hose
 - 10 m (33') pressure hose 25 mm (1")

Volume [l]	Volume [US gal.]	Connections [DN]
1,500	400	100 (4")
3,000	800	100 (4")
5,000	1,325	100 (4")
7,500	1,980	100 (4")
10,000 ¹⁾	2,650	100 (4")
15,000 ¹⁾	3,960	100 (4")

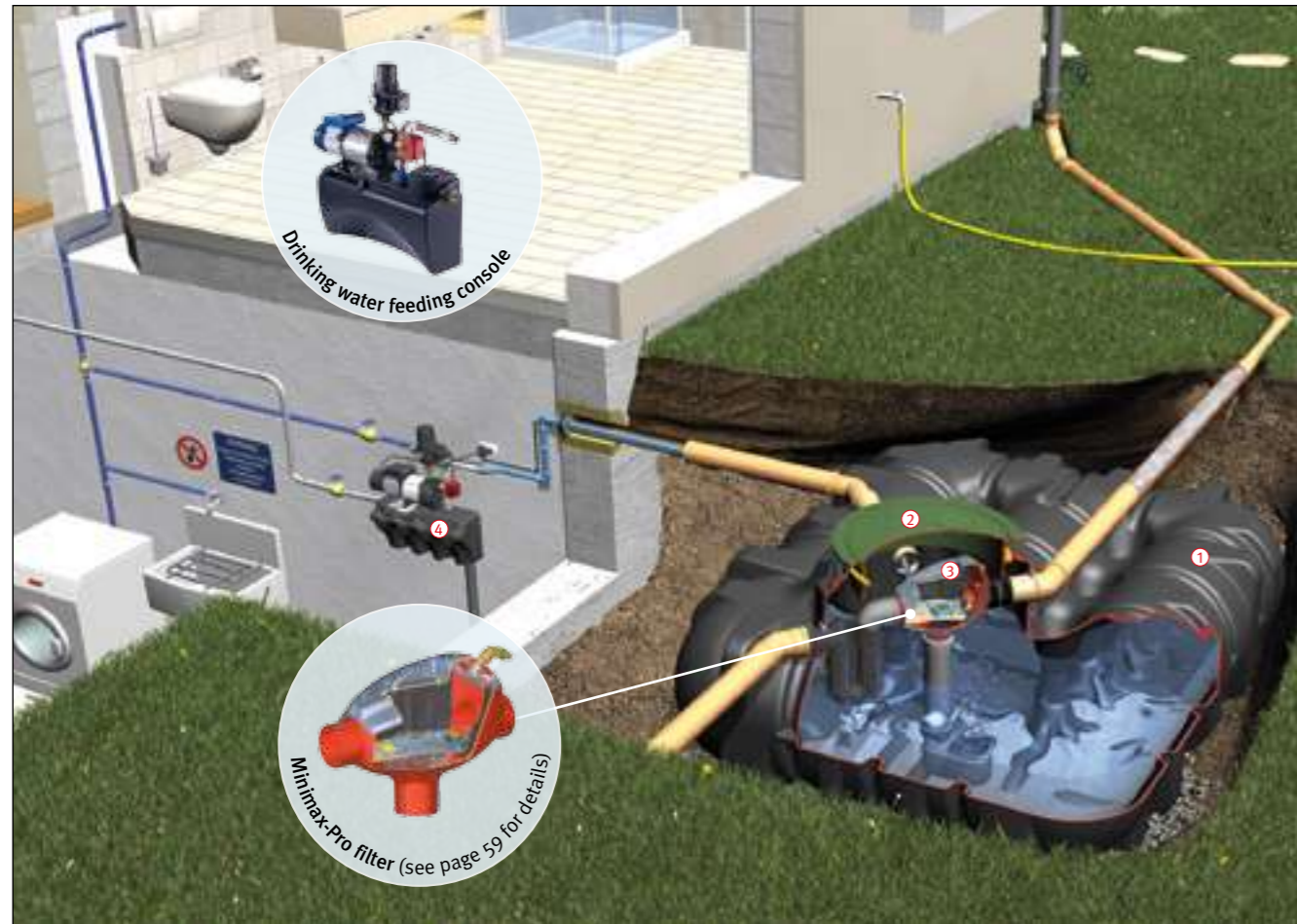
¹⁾ Set consists of two Platin flat rainwater tanks (Connecting pipes must be provided on site)



You will find an enquiry form and sizing assistance on our website www.graf-water.com

Platin complete package Eco-Plus

The low-cost complete solution for the home and garden



Platin Eco-Plus package

- Low-cost complete solution
- Patented filter technology
- Switch to drinking water supply in the home when needed
- Easy assembly thanks to modular design
- Float switch controlled
- Only one cover visible on the surface

🔍 **Webcode G1222**

Scope of supply

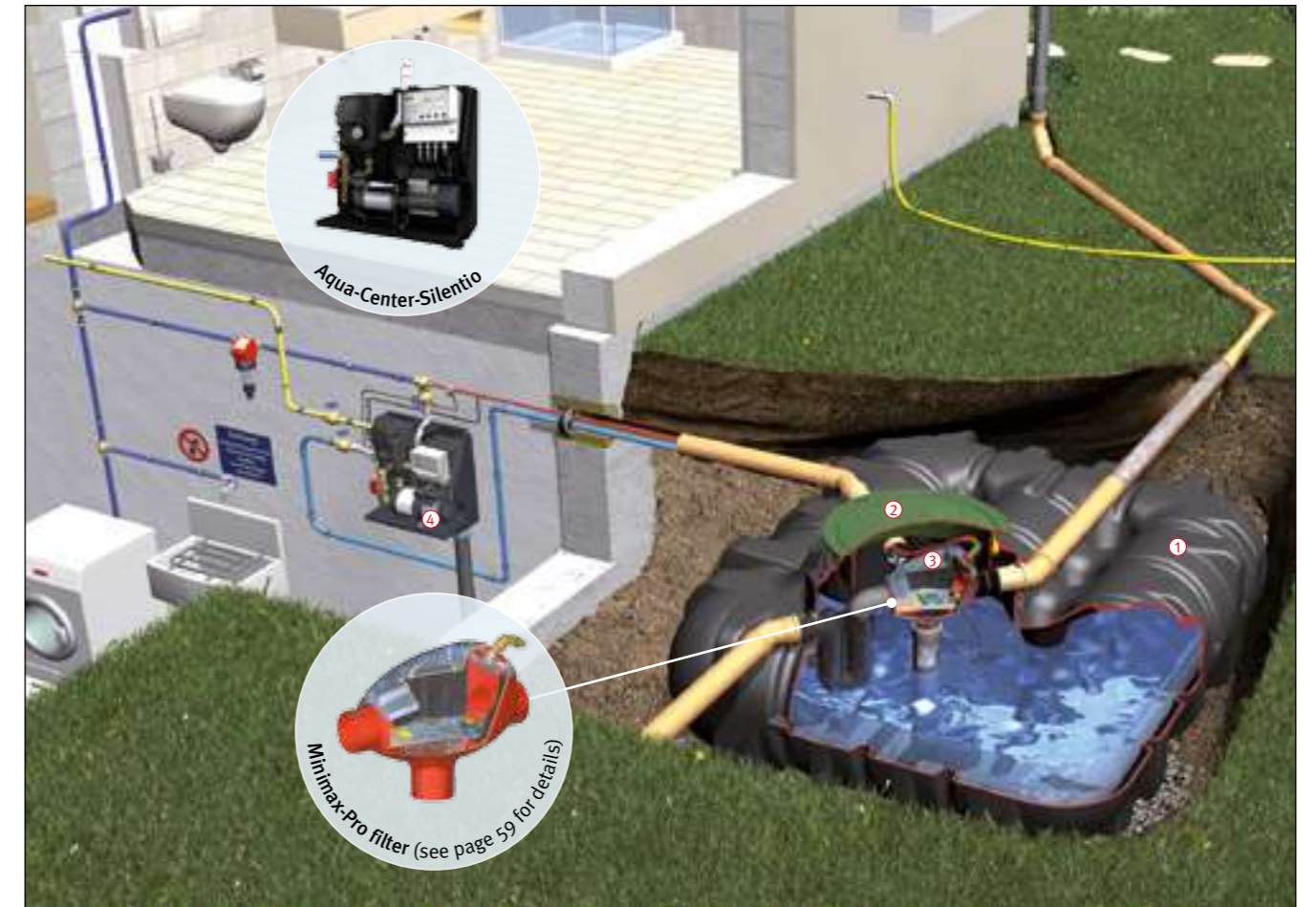
- ① Platin flat tank
- ② Maxi dome shaft tank cover suitable for pedestrian loading, smooth telescopic adjustment from 455 mm – 755 mm (17.9" – 29.7") earth covering or cast iron dome shaft suitable for vehicle loading, smooth telescopic adjustment from 455 mm – 755 mm (17.9" – 29.7") earth covering
- ③ Platin filter package 3 consists of:
 - Minimax-Pro internal filter (patented, self-cleaning)
 - Steady inflow pot, overflow siphon, Spannfix quick-assembly sleeve
- ④ Eco-Plus pump package consists of:
 - Drinking water feed console (page 70)
 - Floating suction fitting with fine filter and hose
 - DN 100 (4") wall duct
 - Labelling set
 - PE suction pipe 25 mm (1"), length 12 m (39' 4")

Volume [l]	Volume [US gal.]	Connections [DN]
3,000	800	100 (4")
5,000	1,325	100 (4")
7,500	1,980	100 (4")
10,000 ¹⁾	2,650	100 (4")
15,000 ¹⁾	3,960	100 (4")

¹⁾ Set consists of two Platin flat rainwater tanks (Connecting pipes must be provided on site)

Platin Professional package

The ideal complete solution for the home and garden



Platin Professional package

- Professional solution with patented filter technology
- Ultra-quiet operation thanks to encapsulated system control unit
- Switch to drinking water supply in the home when needed
- Easy assembly thanks to modular design
- Microprocessor control
- Digital level gauge
- Automatic rinse intervals of feed tank and filter
- Only one cover visible on the surface

🔍 **Webcode G1223**



You will find an enquiry form and sizing assistance on our website www.graf-water.com

Scope of supply

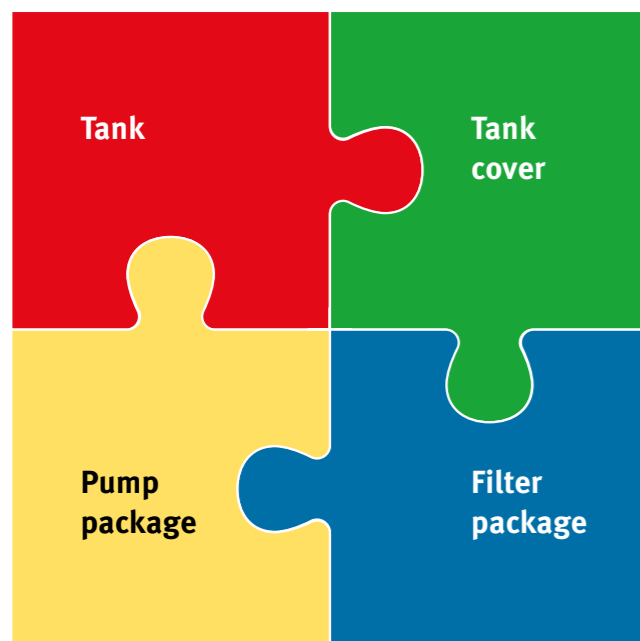
- ① Platin flat tank
- ② Maxi dome shaft tank cover suitable for pedestrian loading, smooth telescopic adjustment from 455 mm – 755 mm (17.9" – 29.7") earth covering or cast iron dome shaft suitable for vehicle loading, smooth telescopic adjustment from 455 mm – 755 mm (17.9" – 29.7") earth covering
- ③ Platin filter package 3 consists of:
 - Minimax-Pro internal filter (patented, self-cleaning)
 - Steady inflow pot, overflow siphon, Spannfix quick-fit sleeve
- ④ Professional pump package consists of:
 - Aqua-Center-Silentio drinking water feed module (page 71)
 - Floating suction fitting with fine filter and hose
 - DN 150 wall duct (6")
 - Internal filter cleaning unit
 - Automatic filter cleaning system
 - Reversible flow fine filter
 - Labelling set
 - PE suction pipe 25 mm (1"), length 12 m (39' 4")

Volume [l]	Volume [US gal.]	Connections [DN]
3,000	800	100 (4")
5,000	1,325	100 (4")
7,500	1,980	100 (4")
10,000 ¹⁾	2,650	100 (4")
15,000 ¹⁾	3,960	100 (4")

¹⁾ Set consists of two Platin flat rainwater tanks (Connecting pipes must be provided on site)

The GRAF modular system – simply unique

Choose your system from four different modulars



Tank

Carat S 2.700 – 6.500 litres

<p>Carat S 2,700 l (700 US gal.) Order no. 372024</p>	<p>Carat S 3,750 l (1,000 US gal.) Order no. 372025</p>
<p>Carat S 4,800 l (1,250 US gal.) Order no. 372026</p>	<p>Carat S 6,500 l (1,700 US gal.) Order no. 372027</p>
<p>Carat Set 13,000 l (3,400 US gal.) Set consists of two Carat rainwater tank 6,500 l (1,700 US gal.) Order no. 370009</p>	

Carat XL 8.500 – 10.000 litres

<p>Carat XL 8,500 l (2,240 US gal.) Order no. 370005</p>	<p>Carat XL 10,000 l (2,640 US gal.) Order no. 370006</p>
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Platin 1.500 – 7.500 litres

<p>Platin 1,500 l (400 US gal.) Order no. 390000</p>	<p>Platin 3,000 l (800 US gal.) Order no. 390001</p>
<p>Platin 5,000 l (1,325 US gal.) Order no. 390002</p>	<p>Platin 7,500 l (1,980 US gal.) Order no. 390005</p>
<p>Platin Set 10,000 l (2,650 US gal.) Set consists of two Platin flat rainwater tank 5,000 l (1,325 US gal.) Order no. 390010</p>	<p>Platin Set 15,000 l (3,960 US gal.) Set consists of two Platin flat rainwater tank 7,500 l (1,980 US gal.) Order no. 390011</p>

Tank cover

Mini telescopic dome shaft
Order no. 371010

Maxi telescopic dome shaft
Order no. 371011

Telescopic dome shaft cast iron
Order no. 371020

Telescopic dome shaft lorry-bearing
For standard cast concrete covers
Order no. 371021

Extension
Order no. 371003

Tank dome Maxi for Carat S
DN100 Order no. 371040
DN150 Order no. 371019

Tank dome Mini for Carat S
Order no. 371041

Tank dome Micro for Carat S
Order no. 371009

Filter package – connection DN 100

Carat S filter package 1
Basic filter package
Order no. 342001

Carat S filter package 2
Recommended for garden use
Order no. 342002

Carat S filter package 3
Recommended for household use
Order no. 342005

Filter package – connection DN 150

Carat XL filter package 1
Basic filter package
Order no. 342040

Carat XL filter package 2
Recommended for garden use
Order no. 342041

Carat XL filter package 3
Recommended for household use
Order no. 342042

Platin – connection DN 100

Platin filter package 1
Basic filter package
Order no. 342001

Platin filter package 2
Recommended for garden use
Order no. 342026

Platin filter package 3
Recommended for household use
Order no. 342038

Pump package

Pump package garden Jet
Order no. 342010

Pump package garden Comfort
Order no. 342011

Pump package house Eco-Plus
Order no. 342014

Pump package house Professional
Order no. 342016

Pump package house Silentio Press
Order no. 342015

Tank (page 28 – 33)

The underground tank Carat S, Carat XL or Platin is the basis for the modular system.

Tank cover (page 34 – 35)

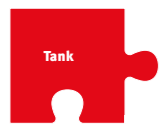
Would you like to install your tank in the garden or in a driveway? GRAF offers you wide range of telescopic tank covers from plastic to cast iron.

Filter package (page 36 – 38)

Are you looking for the best value solution or high-quality, self-cleaning filter technology? The GRAF filter package contains all components needed in the tank.

Pump package (page 39)

From the simple garden pump to the fully automatic drinking water intake technology. The pump package also includes the accessories needed for installation.



Carat S underground tank – logistical advantages



Benefits

- Easy to transport
- Tank consists of two half-shells
- 5 – 9 tanks per pallet
- This allows up to 8 times more tank volume to be shipped thanks to the unique product design
- Up to 36 complete wastewater or 45 rainwater systems per lorry



Carat S: Reduce freight costs by up to 80 %
GRAF TV
www.graf.info/v2o8



Carat S underground tank

2,700 to 6,500 litres (700 to 1,700 US gal.)



Carat S underground tank Suitable for vehicle / lorry-bearing

- Suitable for lorry-bearing up to 12 to (26456 lbs)
- Can be mounted in groundwater
- Lower weight than concrete and steel
- Various connection surfaces DN 100 (4"), DN 150 (6"), DN 200 (8")
- Investment security thanks to a 15-year warranty

Q Webcode G1102



Tank dome Maxi
 DN 100
 Order no. 371040
 DN 150
 Order no. 371019



Tank dome Mini
 Order no. 371041



Tank dome Micro
 Order no. 371009

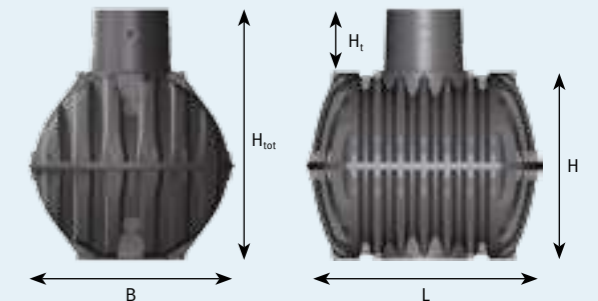
Illustration shows 4,800 l (1,250 US gal.) tank with telescopic dome shaft with cast iron lid, suitable for vehicle loading

Dimensions

Volume	Width B	Length L	Height H	Height H _{tot}	Height of tank dome H _t	Inner Ø of tank dome	Weight	Order no.
2,700 l (700 US gal.)	1565 mm (5' 2")	2080 mm (6' 10")	1400 mm (4' 7")	2010 mm (6' 7")	610 mm (24")	650 – 800 mm (25.6 – 31.5")	120 kg (265 lbs)	372024
3,750 l (1,000 US gal.)	1755 mm (5' 9")	2280 mm (7' 6")	1590 mm (5' 3")	2200 mm (7' 3")	610 mm (24")	650 – 800 mm (25.6 – 31.5")	150 kg (331 lbs)	372025
4,800 l (1,250 US gal.)	1985 mm (6' 6")	2280 mm (7' 6")	1820 mm (6')	2430 mm (8')	610 mm (24")	650 – 800 mm (25.6 – 31.5")	185 kg (408 lbs)	372026
6,500 l (1,700 US gal.)	2190 mm (7' 2")	2390 mm (7' 10")	2100 mm (6' 11")	2710 mm (8' 11")	610 mm (24")	650 – 800 mm (25.6 – 31.5")	220 kg (485 lbs)	372027

Technical data

Max. earth covering (without groundwater, vehicle loading):	1800 mm (5' 11")
Max. axle load:	8 to (17637 lbs)
Max. total weight:	12 to (26456 lbs)
Earth covering required for vehicle loading:	800 – 1800 mm (31.5" – 5' 11")
Groundwater stability :	up to middle of tank
Earth covering required for groundwater stability:	800 – 1800 mm (31.5" – 5' 11")
Connection:	DN 100 (4") / DN 150 (6") / DN 200 (8") on top





Carat S tank extension



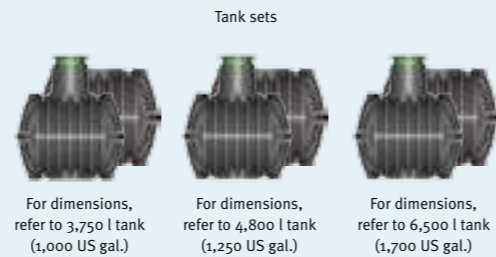
Technical data

Max. earth covering (without groundwater, vehicle loading):	1800 mm (5' 11")
Max. axle load:	8 to (17637 lbs)
Max. total weight:	12 to (26456 lbs)
Earth covering required for vehicle loading:	800–1800 mm (31.5"–5' 11")
Groundwater stability :	up to middle of tank
Earth covering required for groundwater stability:	800–1800 mm (31.5"–5' 11")
Connection:	DN 100 (4") / DN 150 (6") / DN 200 (8") on top

Accessories

Extension filter	Order no. 371005
Drill DN 100 (4")	Order no. 202003
Special seal 100	Order no. 332033
Special seal 150	Order no. 332035

Filter can be placed in the first tank to clean the water between the tanks.



Carat XL underground tank

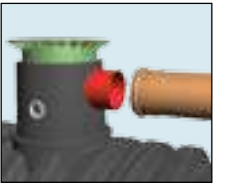
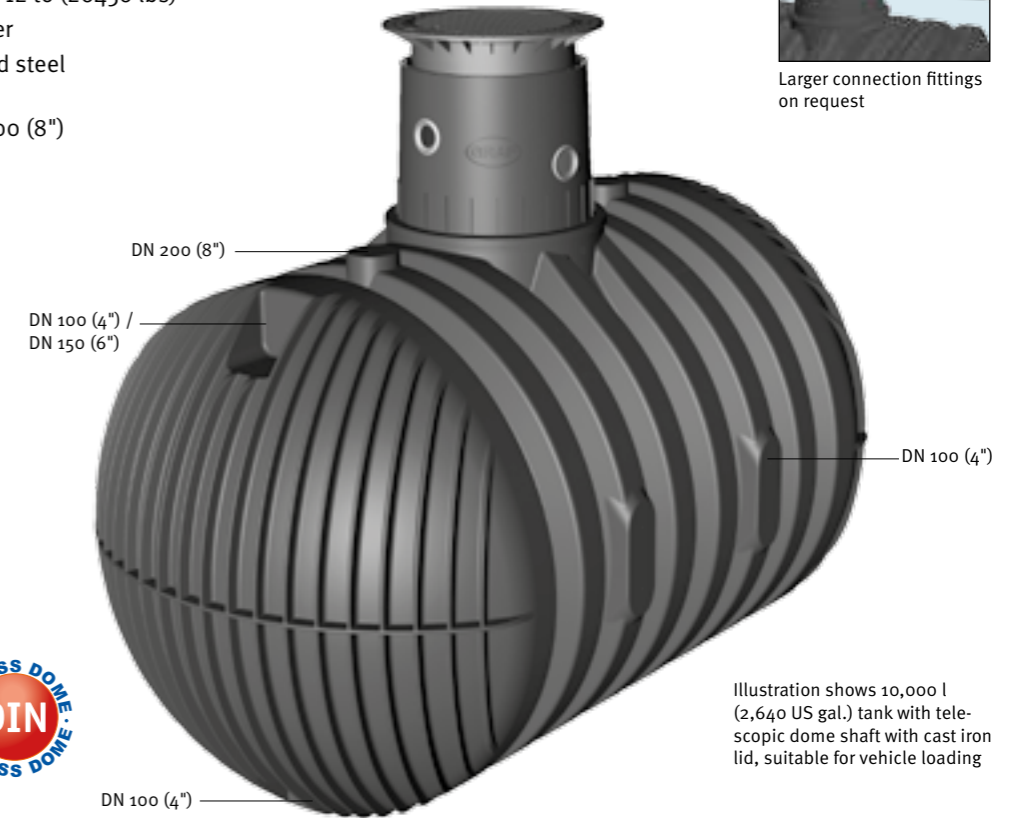
8,500 and 10,000 litres (2,240 and 2,640 US gal.)



Carat XL underground tank Suitable for vehicle / lorry-bearing

- Suitable for lorry-bearing up to 12 to (26456 lbs)
- Can be mounted in groundwater
- Lower weight than concrete and steel
- Various connection surfaces
DN 100 (4"), DN 150 (6"), DN 200 (8")
- Investment security thanks to a 15-year warranty

Q Webcode G1103



Larger connection fittings on request

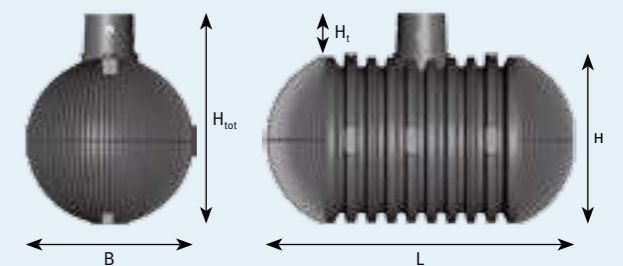
Illustration shows 10,000 l (2,640 US gal.) tank with telescopic dome shaft with cast iron lid, suitable for vehicle loading

Dimensions

Volume	Width B	Length L	Height H	Height H _{tot}	Height of dome shaft H _t	Internal Ø of dome shaft	Weight	Order no.
8,500 l (2,240 US gal.)	2040 mm (6' 3")	3500 mm (11' 6")	2085 mm (6' 10")	2695 mm (8' 10")	610 mm (24")	650 mm (25.6")	380 kg (838 lbs)	370005
10,000 l (2,640 US gal.)	2240 mm (7' 4")	3520 mm (11' 7")	2285 mm (7' 6")	2895 mm (9' 6")	610 mm (24")	650 mm (25.6")	455 kg (1003 lbs)	370006

Technical data

Max. earth covering (without groundwater, vehicle loading):	2000 mm (6' 7")
Max. axle load:	8 to (17637 lbs)
Max. total weight:	12 to (26456 lbs)
Earth covering required for vehicle loading:	800–2000 mm (31.5"–6' 7")
Groundwater stability :	up to middle of tank
Earth covering required for groundwater stability:	800–1800 mm (31.5"–5' 11")
Connection:	DN 100 (4") / DN 150 (6") / DN 200 (8") on top





Platin flat rainwater tank

Choose your required size



Platin flat rainwater tank
Suitable for vehicle loading¹⁾

Webcode G1101

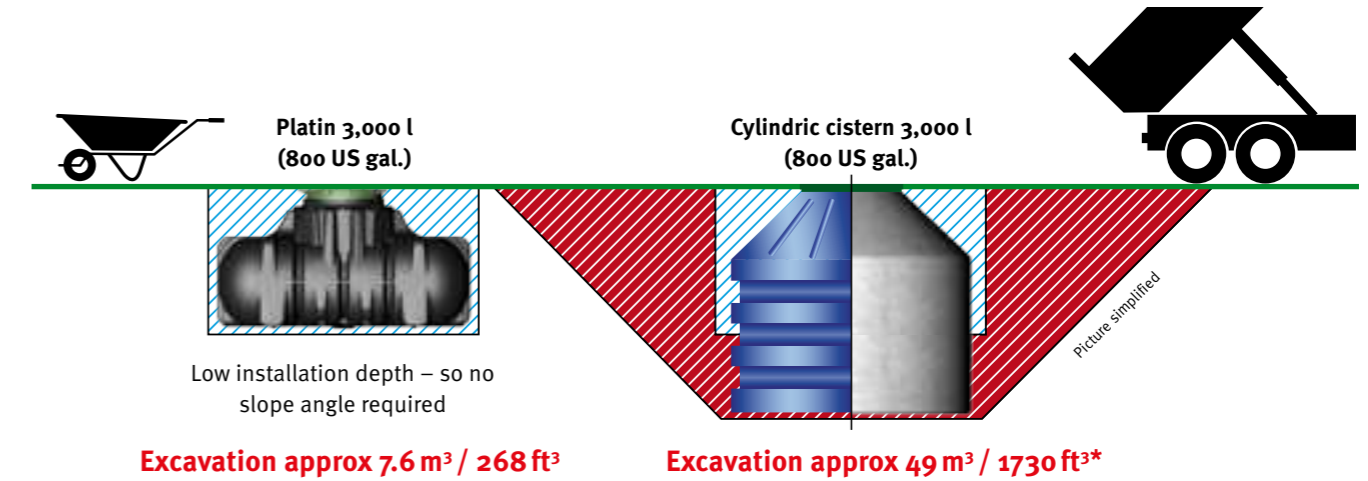
Illustration shows 1,500 l (400 US gal.) tank with Mini dome shaft suitable for pedestrian loading (for accessories, see page 35)



You will find an enquiry form and sizing assistance on our website www.graf-water.com

80%* less digging compared with a cylindric cistern*.

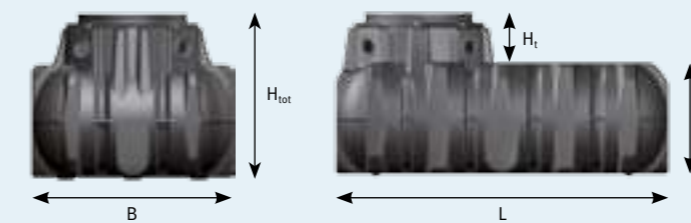
Save more than 150* wheelbarrow loads of soil*!



* Based on a vertical, cylindric cistern with a useable volume of 3,000 l (800 US gal.), a height of 1.90 m (6' 3") and a diameter of 2.20 m (7' 3") Calculation of excavation is under consideration of a ditch bottom of 10 cm (4"), a sidwise distance of 50 cm (19.7") and a slope with 45° gradient according to DIN 4124.

Dimensions

Volume	Width B	Length L	Height H	Height H _{tot}	Height dome shaft H _i	Innen Ø dome shaft	Weight	Order no.
1,500 l (400 US gal.)	1250 mm (4' 1")	2100 mm (6' 11")	700 mm (27.6")	1015 mm (3' 4")	315 mm (12.4")	650 mm (25.6")	82 kg (181 lbs)	390000
3,000 l (800 US gal.)	2100 mm (6' 11")	2450 mm (8' 1")	735 mm (28.9")	1050 mm (3' 5")	315 mm (12.4")	650 mm (25.6")	180 kg (397 lbs)	390001
5,000 l (1,325 US gal.)	2300 mm (7' 7")	2890 mm (9' 6")	1000 mm (3' 3")	1315 mm (4' 4")	315 mm (12.4")	650 mm (25.6")	250 kg (551 lbs)	390002
7,500 l (1,980 US gal.)	2250 mm (7' 5")	3600 mm (11' 10")	1250 mm (4' 1")	1565 mm (5' 2")	315 mm (12.4")	650 mm (25.6")	380 kg (837 lbs)	390005
10,000 l ²⁾ (2,650 US gal.)	Set consists of two Platin flat tanks. For dimensions and weights, see 5,000 l (1,325 US gal.) Tank							390010
15,000 l ²⁾ (3,960 US gal.)	Set consists of two Platin flat tanks. For dimensions and weights, see 7,500 l (1,980 US gal.) Tank							390011



Technical data

Max. earth covering (without groundwater, vehicle loading):	1200 mm (3' 11")
Max. axle load:	2,2 to (4850 lbs)
Max. vehicle weight	3,5 to (7716 lbs)
Earth covering required for vehicle loading:	700 – 1000 mm (27.6" – 3' 3")
Groundwater stability:	up to tank shoulder
Earth covering required for groundwater stability:	700 – 1200 mm (27.6" – 3' 11")
Connection:	4 x DN 100 (4") Optionally up to DN 150 (6")

¹⁾ In conjunction with cover suitable for vehicle loading ²⁾ Please note: two tank covers required



Tank domes and covers

Select your desired tank cover



Tank dome Mini

- Suitable for Carat S
- Weight: 11 kg (24 lbs)
- For especially flat installation
- Incl. 3 edge seals

DN 100 Order no. 371041



Tank dome Maxi

- Suitable for Carat S
- Weight: 15 kg (33 lbs)
- For large earth coverings (loading capacity)
- Incl. 5 edge seals

DN 100 Order no. 371040

DN 150 Order no. 371019



Tank dome Micro

- Suitable for Carat S
- Weight: 7 kg (15 lbs)
- Including green lid
- For shallow excavation
- Earth cover only 90 mm (3.5")

Order no. 371009



Extension for shafts and domes

- Weight: 6 kg (13 lbs)
- The earth covering can be raised 300 mm (11.8") using the spacer

Order no. 371003



Infiltration connecting piece 1000 DN 600 (24")

With DN 200 (8") contact surface, incl. profile seal, length 1000 mm (3' 3"), 750 mm (21.5"), 500 mm (19.7")

Order no. 371015



Infiltration connecting piece 1000 DN 600 (24")

With DN 200 (8") pipe connections, incl. profile seal, length 1000 mm (3' 3"), 750 mm (29.5"), 500 mm (19.7")

Order no. 371016



Telescopic dome shaft Mini

- With PP cover
- Suitable for pedestrian loading
- Weight: 9 kg (20 lbs)
- Adjustable earth covering across upper tank surface

plus 140 mm – 340 mm (5.5 – 13.4") earth covering

Order no. 371010



Telescopic dome shaft cast iron

- Suitable for vehicle loading – with childproof cast iron cover up to 3.5 to (7716 lbs)
- Weight: 55 kg (121 lbs)
- Adjustable earth covering across upper tank surface

plus 140 mm – 440 mm (5.5 – 17.3") earth covering

Order no. 371020



Telescopic dome shaft Maxi

- With PP cover
- Suitable for pedestrian loading
- Weight: 15 kg (33 lbs)
- Adjustable earth covering across upper tank surface

plus 140 mm – 440 mm (5.5 – 17.3") earth covering

Order no. 371011



Telescopic dome shaft lorry-bearing

- Suitable for vehicle/lorry-bearing
- Weight: 11 kg (24 lbs)
- Cover to be provided on site
- Adjustable earth covering across upper tank surface
- For commercially available concrete rings/covers (to be provided on site)

plus 140 mm – 440 mm (5.5 – 17.3") earth covering

Order no. 371021



Tank dome Mini



Tank dome Maxi



Telescopic dome shaft suitable for pedestrian loading



Telescopic dome shaft suitable for vehicle/lorry-bearing



Filter packages

Select your required filtration

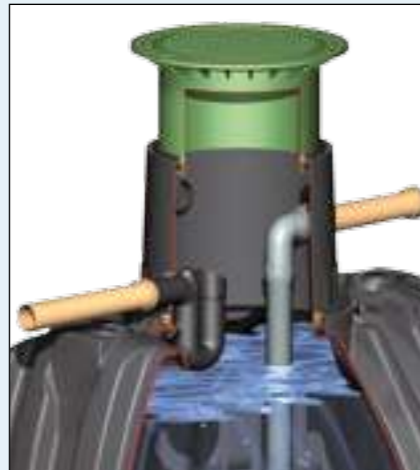


Filter package – connection DN 100 (4")

Filter package 1

Garden use – for improving the water quality

With filter package 1, the basic Carat S tank (with external filter) can also be used for household applications (WC and washing machine).



Scope of supply:

- Inflow stilling system for controlling the water inflow
- Overflow siphon
- Rodent guard

DN 100 (4")

Order no. 342001

Filter package 2

For use in the home and garden – 100 % water yield

Universal filter 3 integrated in the basic Carat S tank with 100 % water yield. Filter package 2 is ideal if you need a water yield of 100 %, or if the tank's overflow is connected to an infiltration plant rather than the sewer network.



Scope of supply:

- Internal Universal filter 3
- Inflow stilling system for controlling the water inflow
- Overflow siphon and rodent guard
- Spannfix pipe connection sleeve

DN 100 (4")

Order no. 342002

» Maximum flow rate of 5,5 l/s

Filter package 3

For use in the home and garden – the self-cleaning design

The self-cleaning Optimax-Pro filter can be integrated into the basic Carat S tank. The convenient, low maintenance solution with self-cleaning filter and > 95 % water yield. Can also be fitted with Opticlean® cleaning unit. Tank and filter overflow are connected to the sewer network with this filter package.



Scope of supply:

- Internal Optimax-Pro (self cleaning) filter
- Inflow stilling system for controlling the water inflow
- Overflow siphon with rodent guard function
- Spannfix pipe connection sleeve

DN 100 (4")

Order no. 342005

Cleaning unit

Connection 19 mm (3/4"), delivery without hose

Order no. 340040

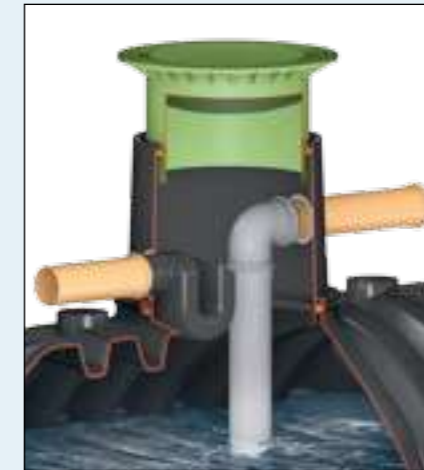
» Maximum flow rate of 5,5 l/s

XL filter package – connection DN 150 (6")

XL filter package 1

Garden use – for improving the water quality

With filter package 1, the basic Carat XL tank (with external filter) can also be used for household applications (WC and washing machine).



Scope of supply:

- Inflow stilling system for controlling the water inflow
- Overflow siphon
- Rodent guard

DN 150 (6")

Order no. 342040

XL filter package 2

For use in the home and garden – 100 % water yield

Universal filter 3 XL integrated in the basic Carat XL tank with 100 % water yield. Filter package 2 is ideal if you need a water yield of 100 %, or if the tank's overflow is connected to an infiltration plant rather than the sewer network.



Scope of supply:

- Internal Universal filter 3 XL
- Inflow stilling system for controlling the water inflow
- Overflow siphon and rodent guard
- Spannfix pipe connection sleeve

DN 150 (6")

Order no. 342041

» Maximum flow rate of 16 l/s

XL filter package 3

For use in the home and garden – the self-cleaning design

The self-cleaning Optimax-Pro XL filter can be integrated into the basic Carat XL tank. The convenient, low maintenance solution with self-cleaning filter and > 95 % water yield. Can also be fitted with Opticlean® cleaning unit. Tank and filter overflow are connected to the sewer network with this filter package.



Scope of supply:

- Internal Optimax-Pro XL (self cleaning) filter
- Inflow stilling system for controlling the water inflow
- Overflow siphon with rodent guard function
- Spannfix pipe connection sleeve

DN 150 (6")

Order no. 342042

Cleaning unit

Connection 19 mm (3/4"), delivery without hose

Order no. 340117

» Maximum flow rate of 16 l/s



Filter packages

Select your required filtration

Platin – connection DN 100 (4")

Platin filter package 1

To be combined with external filter

With filter package 1, the Platin basic tank (with external filter) is also suitable for household use (WC and washing machine).



Scope of supply:

- Inflow stilling system for controlling the water inflow
- Overflow siphon
- Rodent guard

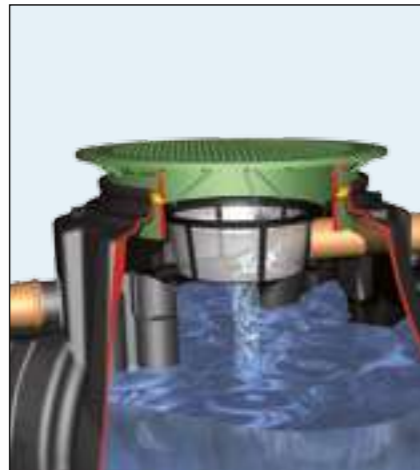
DN 100 (4")

Order no. 342001

Platin filter package 2

Garden and home use – 100 % water yield

Filter basket for Platin basic tank with 100 % water yield. Filter package 2 is ideal if you want to achieve a water yield of 100 % or connect the tank's overflow to an infiltration system rather than the sewer.



Scope of supply:

- Filter basket
- Crossbar and chain suspension
- Overflow siphon
- Rodent guard

DN 100 (4")

Order no. 342026

» Maximum flow rate of 5,5 l/s

Platin filter package 3

Garden and home use – the self-cleaning model

Minimax-Pro filter (self-cleaning) for Platin basic tank. The convenient solution that requires minimum maintenance thanks to a self-cleaning filter with over 95 % water yield. Can also be fitted with the internal cleaning unit. With this filter package, the tank and filter overflows are connected to the sewer system.



Scope of supply:

- Minimax-Pro internal filter (patented)
- Inflow stilling system for controlling the water inflow
- Overflow siphon with rodent guard function
- Spannfix pipe connection sleeve

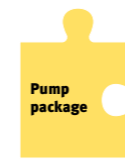
DN 100 (4")

Order no. 342038

Cleaning unit

Connection 19 mm (3/4"), delivery without hose

Order no. 340040



Pump package

Select your required pump and accessories



Pump package garden Jet

The good value complete solution.



- Garden Jet pump 700 (page 72)
- Suction set with 12.5 m (41') suction hose
- Water hose connection internal and external

Order no. 342010

Pump package garden Comfort

Improved operating convenience through automatic pump control.



- Integra INOX Submersible and suction pump (page 73)
- Floating water extraction unit
- PE pressure max. 10 m (32' 10")
- Water hose connection internal and external

Order no. 342011

Pump package house Eco-Plus

The good value complete solution.



- Drinking water feeding console including domestic waterworks KSB-Superinox 15/4 (page 72)
- Floating water extraction unit
- Wall duct DN 100 (4")
- Labelling set
- PE suction pipe 12 m (39' 4") (not shown)

Order no. 342014

Pump package house Professional

In-house drinking water feeding using the latest modular technology with microprocessor control and digital fill level display.



- Drinking water feeding module Aqua Center Silentio including domestic waterworks KSB-Superinox 15/4 (page 72)
- Floating water extraction unit
- Internal cleaning unit
- Automatic filter cleaning unit (not shown)
- Reversible flow filter
- Wall duct DN 150 (6")
- Labelling set
- PE suction pipe 12 m (39' 4") (not shown)

Order no. 342016

Pump package house Silentio Press

In-house drinking water intake with submersible pump. Ideal when there are larger distances (15 m (49' 3")) between the tank and the domestic waterworks.



- Drinking water feeding module Aqua-Center-Silentio Press including domestic waterworks and submersible pump 300 A (page 73)
- Internal cleaning unit
- Automatic filter cleaning unit (not shown)
- Reversible flow filter
- Wall duct DN 150 (6")
- Labelling set
- 25 m (82') special suction and pressure hose 25 mm (1")

Order no. 342015

Carat XXL underground Tank

The new dimension



2 x 76,000 l (20,077 US gal.)



4 x 26,000 l (6,869 US gal.), Münchenstein (Switzerland)



2 x 76,000 l (20,077 US gal.), Gernsheim (Germany)



4 x 56,000 l (14,794 US gal.), Semmering (Austria)



26,000 l (6,869 US gal.), Baden-Baden (Germany)



56,000 l (14,794 US gal.), Bad Sauerbrunn (Austria)

Carat XXL underground tank

The perfect combination of flexibility and stability



Available with a second tank dome as an option

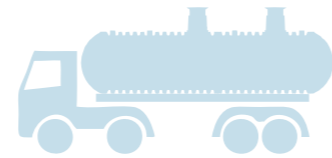
On request the Carat XXL can be fitted with an additional dome. This increases the tank volume by 6,000 l (1,550 US gal.)

Lighter than concrete or steel

In spite of its large capacity, the Carat XXL has all the advantages of a plastic tank: its comparatively low weight reduces both logistics and installation costs.

Up to 76,000 l (20,050 US gal.) without abnormal load vehicle

Because the tank makes maximum use of the 2.5 m (8' 3") wide loading space, a 76,000 l (20,050 US gal.) tank can be transported without the need for an abnormal load vehicle. Lifting straps are included in the delivery.



Suitable for lorry-bearing up to 40 to

The GRAF Carat XXL underground tank can be driven over by vehicles of up to 40 to with an earth covering of 1000 mm (3' 3").

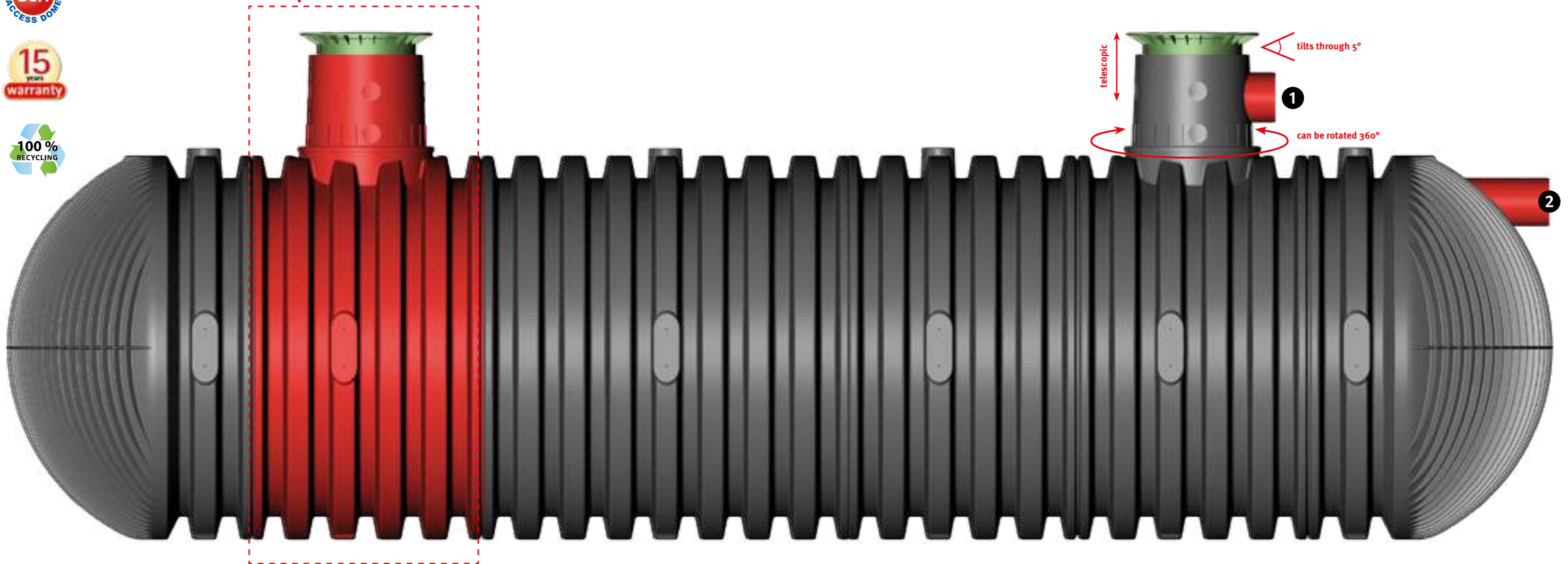


Flexible connection up to DN 300 (12")

The rotating tank dome is easy to align with the connecting pipe. The telescopic tilting dome shaft makes it easy to align the tank with the level of the ground. Connecting faces up to DN 200 (8") are already fitted as standard. If necessary the Carat XXL can be fitted with connectors up to DN 300 (12"), either on the tank dome **1** or on the tank end **2**.

Flexible in use

- Rainwater tank
 - Retention cistern
 - Firefighting water tank
 - Drinking water reservoir
 - Wastewater tank
- see GRAF wastewater catalogue >>



Delivery time by arrangement. Shipping costs on request

Carat XXL underground rainwater tank

Up to 122,000 l (32,230 US gal.)



Carat XXL underground rainwater tank Suitable for vehicle/lorry-bearing ¹⁾

Lorry-bearing up to
40 to

- Suitable for lorry-bearing up to 40 to
- Can be installed in groundwater
- Lower weight than concrete and steel
- Various connection surfaces
DN 100 (4"), DN 150 (6"), DN 200 (8")
- Larger connectors up to DN 300 (12") also available
- Volumes up to 76,000 l (20,077 US gal.) can be transported without abnormal load vehicle

Webcode G1104



Illustration shows 26,000 l (6,850 US gal.) tank with telescopic dome shaft suitable for lorry-bearing loading (see pages 35)

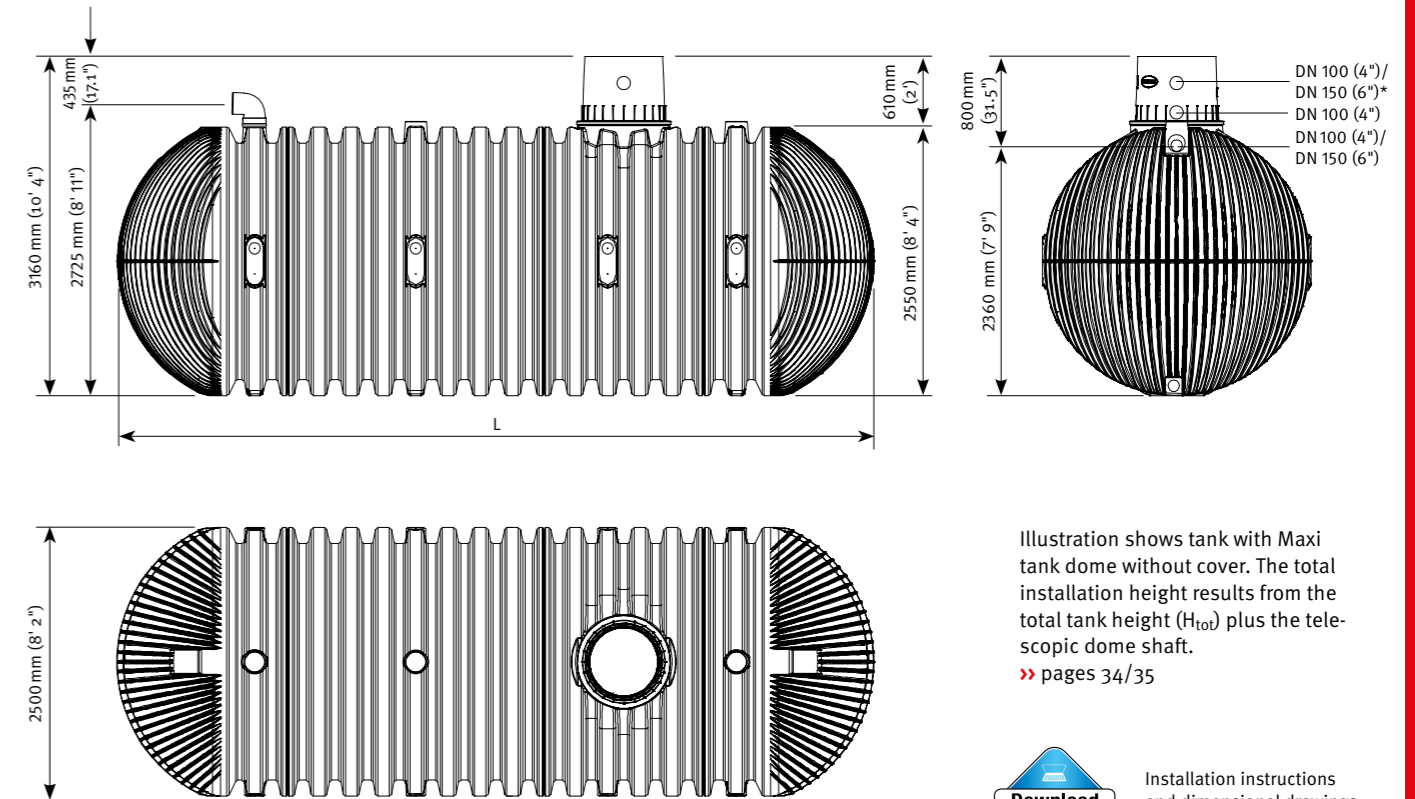


Illustration shows tank with Maxi tank dome without cover. The total installation height results from the total tank height (H_{100}) plus the telescopic dome shaft.
» pages 34/35

Download
Installation instructions and dimensional drawings available at www.graf-water.com

Carat XXL underground rainwater tank

Volume	Length L	Inner Ø of tank dome	Weight	Order no.
16,000 l (4,230 US gal.)	4660 mm (15' 4")	650 mm (2' 2")	805 kg (1775 lbs)	380001
22,000 l (5,820 US gal.)*	6145 mm (20' 2")	650 mm (2' 2")	1015 kg (2238 lbs)	380000
26,000 l (6,870 US gal.)	7045 mm (23' 1")	650 mm (2' 2")	1150 kg (2535 lbs)	380002
32,000 l (8,460 US gal.)*	8530 mm (27' 12")	650 mm (2' 2")	1360 kg (2998 lbs)	380003
36,000 l (9,520 US gal.)	9430 mm (30' 11")	650 mm (2' 2")	1495 kg (3296 lbs)	380004
42,000 l (11,100 US gal.)*	10915 mm (35' 10")	650 mm (2' 2")	1705 kg (3759 lbs)	380005
46,000 l (12,160 US gal.)	11815 mm (38' 9")	650 mm (2' 2")	1840 kg (4057 lbs)	380006
52,000 l (13,740 US gal.)*	13300 mm (43' 8")	650 mm (2' 2")	2050 kg (4520 lbs)	380007
56,000 l (14,800 US gal.)	14200 mm (46' 7")	650 mm (2' 2")	2185 kg (4817 lbs)	380008
62,000 l (16,380 US gal.)*	15685 mm (51' 6")	650 mm (2' 2")	2395 kg (5280 lbs)	380009
66,000 l (17,440 US gal.)	16585 mm (54' 5")	650 mm (2' 2")	2530 kg (5578 lbs)	380010
72,000 l (19,020 US gal.)*	18070 mm (59' 3")	650 mm (2' 2")	2740 kg (6041 lbs)	380011
76,000 l (20,080 US gal.)	18970 mm (62' 3")	650 mm (2' 2")	2875 kg (6338 lbs)	380012
82,000 l (21,670 US gal.)*	20455 mm (67' 1")	650 mm (2' 2")	3085 kg (6801 lbs)	380013
86,000 l (22,720 US gal.)	21355 mm (70' 1")	650 mm (2' 2")	3220 kg (7099 lbs)	380014
92,000 l (24,310 US gal.)*	22840 mm (74' 11")	650 mm (2' 2")	3430 kg (7562 lbs)	380015
96,000 l (25,360 US gal.)	23740 mm (77' 11")	650 mm (2' 2")	3565 kg (7860 lbs)	380016
102,000 l (26,950 US gal.)*	25225 mm (82' 9")	650 mm (2' 2")	3775 kg (8322 lbs)	380017
106,000 l (28,010 US gal.)	26125 mm (85' 9")	650 mm (2' 2")	3910 kg (8620 lbs)	380018
112,000 l (29,590 US gal.)*	27610 mm (90' 7")	650 mm (2' 2")	4120 kg (9083 lbs)	380019
116,000 l (30,650 US gal.)	28510 mm (93' 6")	650 mm (2' 2")	4255 kg (9380 lbs)	380025
122,000 l (32,230 US gal.)*	29995 mm (98' 5")	650 mm (2' 2")	4465 kg (9843 lbs)	380026

Scope of supply: Carat XXL underground rainwater tank with Maxi dome
Delivery time by arrangement. Dispatched from the factory – shipping costs on request

*with a second tank dome
¹⁾In conjunction with vehicle- or lorry-bearing cover

Technical data

Max. earth covering:	1500 mm (4' 11")
Max. axle load:	8 to (17637 lbs)
Max. vehicle weight:	3.5 to (7716 lbs) with 2.2 to cast iron cover, 40 to (88183 lbs) with telescopic dome shaft lorry
Earth covering required for vehicle loading	800 – 1500 mm (31.5" – 4' 11") vehicle loading 1000 – 1500 mm (3' 3.4" – 4' 11") lorry-bearing
Groundwater stability:	up to the middle of the tank
Earth covering required for groundwater stability:	800 – 1500 mm (31.5" – 4' 11")
Connection:	5 x DN 150 (6") (or 10 x 5 x DN 150 (6")) + DN 200 (8") on top Optionally up to DN 300 (12")

*with a second tank dome

Tank covers
» page 35



Also available as a fire fighting water tank
» page 49

Optimax XXL filter

- Water yield of over 95 %
- Self-cleaning filter principle
- Stainless steel filter insert with 0.35 mm (0.01") mesh
- Maximum flow rate of 100 l/s (27 US gal.) with connection DN 300 (12") and 200 l/s (54 US gal.) with DN 400 (16")
- Patented filter technology
- Larger connections on request
- Includes cleaning unit
- Height loss of just 45 mm (1.75") between inlet and dirty water outlet

Webcode G2207

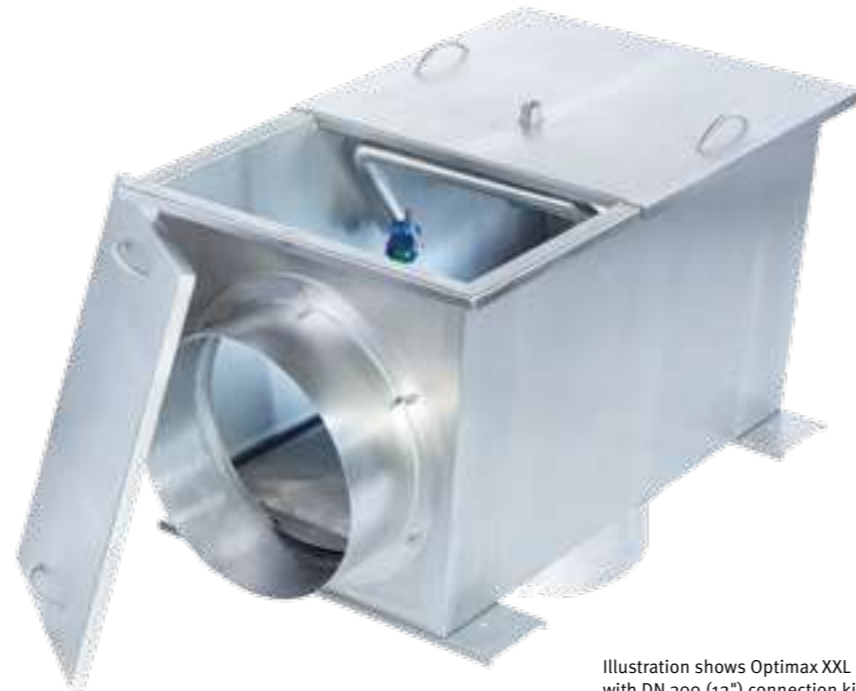
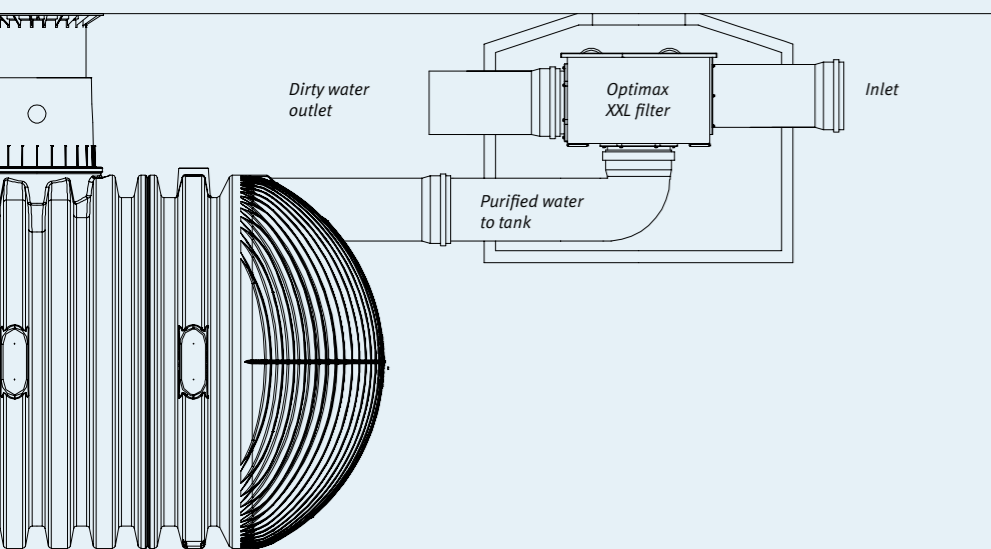


Illustration shows Optimax XXL with DN 300 (12") connection kit

Optimax XXL external filter

Width	Length	Height	Weight	Order no.
675 mm (26.6")	1225 mm (4')	770 mm (30.3")	75 kg (165 lbs)	340096

Example installation*



*Simplified representation

Including filter cleaning unit

Consists of four adjustable flat jet nozzles with a very powerful water jet to clean the filter screen. This means fewer maintenance intervals. Automatic control possible with Aqua-Center-Silentio.



How the filter cleaning unit works

Accessories

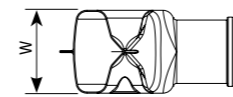
Description	Order no.
Connection kit DN 300	340097
Connection kit DN 400	340099
Connection kit US 300 (12")	340098
Connection kit US 400 (16")	340100

Add-on components

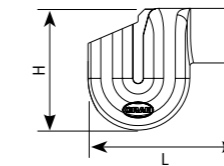


Overflow siphon

Connections DN	Width W	Length L	Height H	Weight	Order no.
150 (6")	275 mm (10.8")	430 mm (16.9")	355 mm (14")	2 kg (4 lbs)	330450
200 (8")	275 mm (10.8")	560 mm (22")	435 mm (17.1")	3 kg (7 lbs)	330451
300 (12")	400 mm (15.7")	885 mm (34.8")	680 mm (26.8")	12 kg (27 lbs)	330452

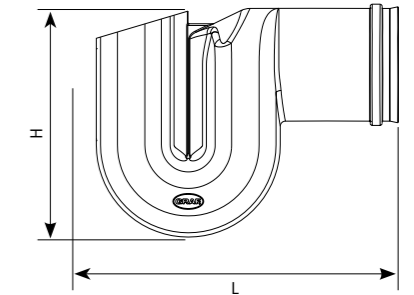


DN 150 (6")¹⁾



¹⁾with fitting

DN 200 (8")/DN 300 (12")²⁾

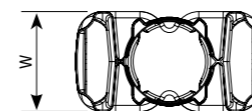


²⁾with sleeve

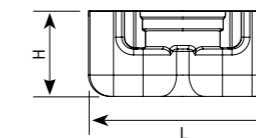


Steady inflow pot

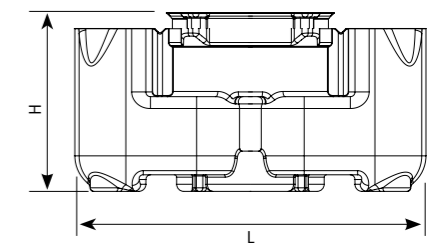
Connections DN	Width W	Length L	Height H	Weight	Order no.
150 (6")	200 mm (7.9")	400 mm (15.7")	180 mm (7.1")	1.5 kg (3 lbs)	330453
200 (8") 300 (12")	400 mm (15.7")	750 mm (29.5")	377 mm (14.8")	9 kg (20 lbs)	330454



DN 150 (6")



DN 200 (8")/DN 300 (12")



Aqua-Center-Silentio Connect



Aqua-Center-Silentio Connect

Rain manager with dual pump system and feeder pump for use in large-scale rainwater systems.

- Powerful dual pump system with adjustable switching points
- Feeder pump with float switch for feeding rainwater
- Demand-driven drinking water intake in accordance with DIN EN 1717 with automatic closing function should faults occur (network failure)
- Stagnation protection for mains water pipe and optional auto-drain function for preventing stagnation in the feed tank
- Intelligent connect control with touch-screen to control and monitor the system functions
- Operating status can be accessed remotely using an app on a smartphone, tablet or PC
- Water detector for monitoring humidity in the technical room provided as standard

Optional accessories:

Auto-drain function

As stagnation protection for feed tank

Order no. 355040

Fill level display in rainwater tank

Comprising 50 m (164') submersible pressure sensor including software updates

Order no. 355006

Rainwater stop – backflow inhibitor

In deeper installations, rain manager acts as water level

Order no. 353011

50 l (13 US gal.) diaphragm expansion tank

Including set of connections, diameter 410 mm (16.1"), length 500 mm (19.7")

Order no. 355036

100 l (26 US gal.) diaphragm expansion tank

Including set of connections, diameter 500 mm (19.7"), length 670 mm (26.4")

Order no. 355009

Q Webcode G3104

Properties	Aqua-Center-Silentio Connect			Feeder pump
Pump	6/40	8/40	14/40	1100 A
Order no.	353002	353007	353009	included
Rated power	2 x 700 W	2 x 880 W	2 x 1200 W	1100 W
Protection class	IP 44	IP 44	IP 44	IP 68
Operating pressure	4.6 bar	4.2 bar	4.7 bar	1.4 bar
Delivery height	46 m (150' 11")	42 m (137' 10")	47 m (154' 3")	14 m (45' 11")
Max. flow rate	6 m³/h	9 m³/h	14 m³/h	16.5 m³/h
Max. suction lift / suction length	see 1100 A feeder pump			
Operating pressure gauge	•	•	•	
Feeder pump included	•	•	•	
Drinking water feed				
Volume	100 l (27 US gal.)	100 l (27 US gal.)	100 l (27 US gal.)	
Demand-driven drinking water intake with automatic closing function on power failure	•	•	•	
Manual switchover to drinking water possible	•	•	•	
Stagnation protection for drinking water pipe	•	•	•	
Overflow according to DIN EN 1717	•	•	•	
Control				
Intelligent connect control with APP link	•	•	•	
Optional electronic level measurement	•	•	•	
Fault indicator	•	•	•	
Dimensions				
Width	600 mm (23.6")		160 mm (6.3")	
Height	1540 mm – 1560 mm (5' 1" – 5' 2") (adjustable)			474 mm (18.7")
Depth	630 mm (24.8")		–	
Weight	100 kg (220 lbs)	100 kg (220 lbs)	100 kg (220 lbs)	11 kg (24 lbs)

Carat XXL firefighting water tank



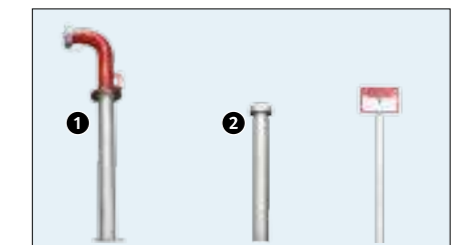
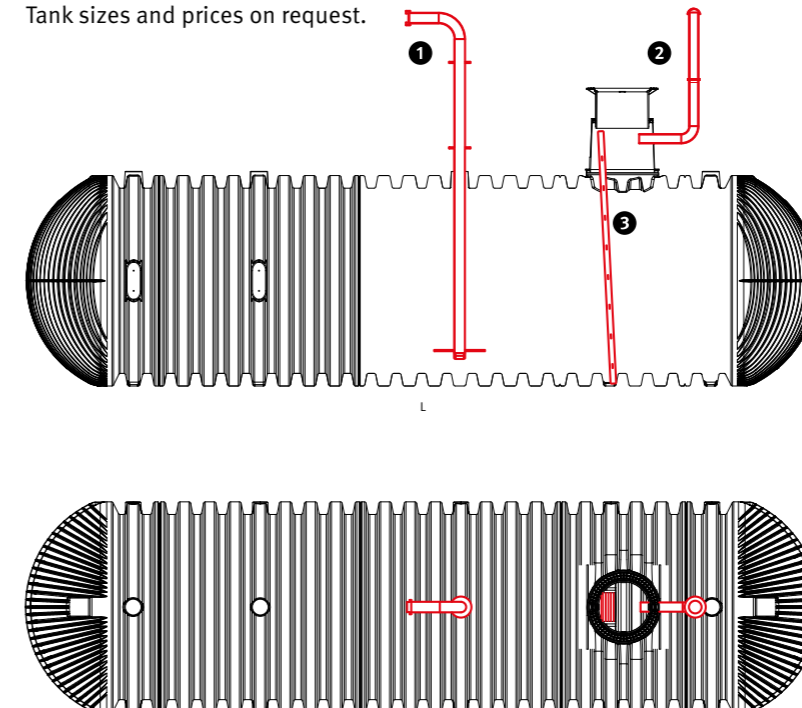
- Delivery includes all firefighting water accessory parts to DIN 14230
- Complete system fully factory-assembled if required – no on-site assembly
- Dome shaft allows easy access / rescue from tank
- Individual tanks can be enlarged / connected to create large volumes
- Fill with drinking water or rainwater
- Individual adjustment to ground level (earth covering / angle of slope)

- Low procurement costs
- Incl. telescopic dome shaft lorry-bearing
- Cover to be provided on site according to national regulations

Q Webcode G1312



Tank sizes and prices on request.



GRAF tank systems

For special requirements



Rainwater harvesting in style
For more information about Rainwater harvesting in style, ask for our catalogue.



Herkules-Tank

For overground and underground installation



- Three ways to use it
- Can be installed in groundwater up to top edge of tank
- Very good value for money

Technical data

Capacity	1,600 l (423 US gal.)
Max. Ø	1350 mm (4' 4")
Height	1600 mm (5' 3")
Material	fibre-glass reinforced PP (UV stable and 100% recyclable)
Weight	approx. 60 kg (132 lbs)
Connections:	each 2 x DN 70 (2.8"), DN 100 (4") and DN 200 (8")

Herkules-Tank 1,600 l (423 US gal.) (extendable)

Order no. 320001

[Webcode G1301](#)

Herkules-Tank-Set

DN 100 (4") extension set(s) included

3,200 l (846 US gal.) Order no. 211001

4,800 l (1,269 US gal.) Order no. 211002

[Webcode G1302](#)

Herkules Infiltration tank

Geotextile required (Accessories) Incl. support pipe

Order no. 200201

[Webcode G1309](#)

GRAF-Tex geotextile

For one Herkules Infiltration Tank

Order no. 369015

Practical advantages of Herkules

Ease of transport

Each half of the Herkules-Tank only weighs 30 kg (66 lbs). This allows ease of transport and manual installation. The tank halves fit through any doorway (80 cm (31.5") width and above).



Easy to install



Several tanks can be combined



Herkules complete packages

For the garden or home



Herkules complete garden package

- Very convenient to use
- Draw off water like you do power from a socket. Pump switches on and off automatically
- Convenient water extraction with water hose connection (compatible with standard hose coupling)
- Pot filter reliably holds back contaminants

Scope of supply

- 1 Herkules tank(s)
- 2 Pot filter
- 3 Extension set (2 or more tanks)
- 4 Submersible pressure pump 1000 E
- 5 Support pipe(s) for below ground installation
- 6 DN 200 (8") dome
- 7 External water hose connection
- 8 10 m (33') pressure hose 25 mm (1")

Q Webcode G1234



Herkules complete home package

- Low-cost complete solution
- High-quality filter technology for excellent water quality
- Drinking water automatically supplied to tank when necessary

Scope of supply

- 1 Herkules tanks
- 2 Universal filter 3 external
- 3 Extension set(s)
- 4 Drinking water feed with level gauge
- 5 Domestic water control unit, centrifugal 4/1000 with pump wall bracket
- 6 Suction fitting without suction hose
- 7 DN 200 (8") domes
- 8 Labelling set
- 9 Support pipes for installation

Q Webcode G1235

Herkules-Tank

Three installation options



1 Above ground

You can simply set up the Herkules tank in the garden. The tried-and-tested GRAF downpipe filters provide a reliable connection.



2 Underground

By using accessory parts, the Herkules tank can also be installed underground. The tank can be installed in groundwater up to the top edge.



3 As a cellar tank

You can also install the Herkules tank in the cellar. Its tank halves will fit through any standard door of 80 cm (31.5") and above.

Accessories

Interconnect Pipe Set*

(without cut-out tool)

DN 70 (2.8") Order no. 202029

DN 100 (4") Order no. 202028

* Consists of special seals

Cut-out tool (with pilot drill)

DN 70 (2.8") Order no. 202002

DN 100 (4") Order no. 202003

Tank dome

(with telescopic end 1 m (3' 3") to be cut on demand)

DN 200 (8") Order no. 322026

Floating suction fitting with fine filter

Includes: Backflow preventer with 25 mm (1") hose connector, fine filter basket with 1.2 mm (0.05") mesh width, float ball with eye and ring, without hose
Order no. 330054

Support pipe

(for underground installation)

DN 150 (6") Order no. 322014

Tap with tank screw

Connection for Herkules, top and garden tank, size 19 mm (3/4"), incl. teflon sealing tape
Order no. 330044

Aqua-Quick plastic tap

with brass finish, suited to all above-ground tanks and water butts, socket size 19 mm (3/4")
Order no. 504040

Water butt connection kit

Kit for complete water spring and water level display for above-ground rainwater storage tanks. Consists of 2.15 m (7') flexible hose, extraction tap and various connection options. Suited to all storage tanks.
Order no. 220015



Saphir universal shaft

- Numerous connection faces for easy installation
- Telescopic / tilting dome shaft for easy alignment with ground surface
- Easy to transport thanks to low weight
- With lifting eyes for easy handling and setting down in the trench
- With profile seal for easy assembly of telescopic dome shaft
- Sealed up to ground level
- Groundwater stable up to a certain height from the bottom of the tank
- Unique stability and precision fit of components

Webcode G9304

Applications

- Lift station shaft
- Separating tank
- Inspection shaft
- Regulator drain shaft

Tank domes and covers

>> page 34/35



Extension for shafts and domes

- Weight: 6 kg (13 lbs)
- The earth covering can be raised 300 mm (11.8") using the spacer

Order no. 371003



Dimensions

Volume	Ø	Height H	Height H _{tot}	Height of dome shaft	Inner Ø of dome shaft	Groundwater stable from the bottom of the tank	Weight	Order no.
600 l (160 US gal.)	1125 mm (3' 8")	985 mm (3' 3")	1045 mm (3' 5")	60 mm (2.4")	645 mm (25.4")	430 mm (17")	27 kg (59.5 lbs)	330455
900 l (240 US gal.)	1155 mm (3' 10")	1265 mm (4' 2")	1345 mm (4' 5")	80 mm (3.2")	645 mm (25.4")	430 mm (17")	47 kg (103.6 lbs)	330456
1,200 l (320 US gal.)	1155 mm (3' 10")	1590 mm (5' 3")	1670 mm (5' 6")	80 mm (3.2")	645 mm (25.4")	550 mm (21.6")	58 kg (127.9 lbs)	330457

Technical data

Max. earth covering (without groundwater, vehicle loading): 1200 mm (3.11")

Max. axle load: 2,2 to (4850 lbs)

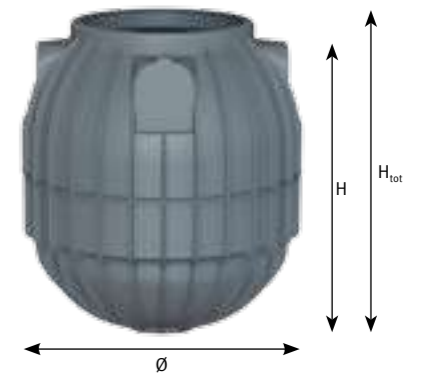
Max. vehicle weight: 3,5 to (7716 lbs)

Earth covering required for vehicle loading: 400 – 1000 mm (15.7" – 3' 3")

Groundwater stability:
600 l (159 US gal.) and 900 l (238 US gal.): up to a height of 43 cm (17") from bottom of the tank
1,200 l (317 US gal.): up to a height of 55 cm (21.6") from bottom of the tank

Earth covering required for groundwater stability: 300 – 600 mm (11.8 – 23.6")

Connection: DN 100 (4") / DN 150 (6")



1,000 l (270 US gal.) underground tank

Underground tank suitable for pedestrian loading, 1,000 l (264 US gal.) produced in one without seams, incl. PE cover.

Order no. 319039

Webcode G1303

Shaft extension

For 1,000 l (264 US gal.) tank, Ø 620 mm (24.4"), 700 mm (27.6") high, can be shorted

Order no. 202057



Technical data

Length	1915 mm (6' 3")
Width	930 mm (3' 1")
Height	1100 mm (3' 7")
Weight	60 kg (132 lbs)



The ideal filter for every requirement



Internal filter

For use in the tank



Properties	Universal filter 3	Universal filter 3 XL	Minimax-Pro filter	Optimax-Pro filter	Optimax-Pro XL filter
Installed in	Tank dome Carat	Tank dome Carat	Tank dome Carat/Platin	Tank dome Carat	Tank dome Carat
Suitable for infiltration	•	•			
Low maintenance, self-cleaning			•	•	•
Cleaning unit as an option			•	•	•
Max. flow rate l/s	5.5 l/s	16 l/s	5.5 l/s	5.5 l/s	16 l/s
Material of filter insert	Plastic	Plastic	Stainless steel	Stainless steel	Stainless steel
Mesh width	0.35 mm (0.01")	0.35 mm (0.01")	0.35 mm (0.01")	0.35 mm (0.01")	0.35 mm (0.01")
Water yield with normal rain	100 %	100 %	99 %	99 %	99 %
with heavy rain	100 %	100 %	over 95 %	over 95 %	over 95 %
Filter basket volume	17 l (4.5 US gal.)	17 l (4.5 US gal.)			
Measurements					
Offset height between inlet & outlet	275 mm (10.8")	275 mm (10.8")	10 mm (0.4")	165 mm (6.5")	165 mm (6.5")
Length	570 mm (22.4")	535 mm (21.1")	500 mm (19.7")	480 mm (18.9")	515 mm (8.3")
Width	570 mm (22.4")	535 mm (21.1")	270 mm (10.6")	260 mm (10.2")	475 mm (18.7")
Height	485 mm (19.1")	485 mm (19.1")	365 mm (14.4")	320 mm (12.6")	430 mm (16.9")
Connections	DN 100 (4")	DN 150 (6")	DN 100 (4")	DN 100 (4")	DN 150 (6")
Weight	4.3 kg (9.5 lbs)	4.6 kg (10 lbs)	3.6 kg (8 lbs)	3.7 kg (8 lbs)	4.8 kg (10.6 lbs)
Page	Page 58	Page 58	Page 59	Page 60	Page 61

External filter

in plastic shaft



Properties	Universal filter 3 external	Universal-Industrial filter 3 external	Optimax-Industrial filter external	Optimax filter external	Minimax filter external
Installed in	Ground	Ground	Ground	Ground	Ground
Suitable for infiltration	•	•			
Loading capacity pedestrian loading	•	•	•	•	•
vehicle loading	•	•	•	•	•
Low maintenance, self-cleaning			•	•	•
Cleaning unit as an option			•	•	•
Max flow rate l/s	16 l/s	29.5 l/s	29.5 l/s	16 l/s	5.5 l/s
Material of filter insert	Plastic	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Mesh width	0.35 mm (0.01")	0.75 mm (0.03")	0.35 mm (0.01")	0.35 mm (0.01")	0.5 mm (0.02")
Water yield with normal rain	100 %	100 %	99 %	99 %	99 %
with heavy rain	100 %	100 %	over 95 %	over 95 %	over 95 %
Filter basket volume	15 l (4.0 US gal.)	25 l (6.6 US gal.)			
Measurements					
Offset height between inlet & outlet	270 mm (10.6")	230 mm (9")	225 mm (8.8")	200 mm (7.9")	100 mm (3.9")
Length over Connections	760 mm (29.9")	1140 mm (3' 7")	1180 mm (3' 9")	860 mm (33.9")	510 mm (20")
Diameter	550 mm (21.7")	850 mm (33.5")	850 mm (33.5")	550 mm (21.7")	550 mm (21.7")
Height	600 – 1050 mm (23.6" – 3' 5")	740 – 1270 mm (29.1" – 4' 2")	730 – 1320 mm (28.7" – 4' 4")	580 – 1050 mm (22.8" – 3' 5")	485 – 955 mm (19.1" – 3' 1")
Connections	DN 100 (4") DN 150 (6")	DN 150 (6") DN 200 (8")	DN 150 (6") DN 200 (8")	DN 100 (4") DN 150 (6")	DN 100 (4")
Weight pedestrian loading version	11 kg (24 lbs)	37 kg (82 lbs)	37 kg (82 lbs)	14 kg (31 lbs)	11 kg (24 lbs)
vehicle loading version	37 kg (82 lbs)	77 kg (170 lbs)	77 kg (170 lbs)	40 kg (88 lbs)	37 kg (82 lbs)
lorry-bearing version		36 kg (79 lbs)	35 kg (77 lbs)		
Page	Page 62	Page 62	Page 63	Page 64	Page 64



Properties	Drainstar filter external	Settling filter shaft	Pot filter	Infiltration filter shaft
Installed in	Ground	Ground	Ground	Ground
Suitable for infiltration	•	•	•	•
Loading capacity pedestrian loading	•	•		•
vehicle loading	•	•		•
Low maintenance, self-cleaning				
Cleaning unit as an option				
Max flow rate l/s	16 l/s	16 l/s	5.5 l/s	16 l/s
Material of filter insert	Plastic	Plastic	Filter mat	Stainless steel / Plastic
Mesh width	0.35 mm (0.01")	0.35 mm (0.01")	0.10 mm (0.004")	0.35 mm (0.01")
Water yield with normal rain	100 %	100 %	100 %	100 %
with heavy rain	100 %	100 %	100 %	100 %
Filter basket volume	15 l (4.0 US gal.)	17 l (4.5 US gal.)		20 l (5.3 US gal.)
Measurements				
Offset height between inlet & outlet		250 mm (9.5")	290 mm (11.4")	
Length over Connections	910 mm (35.8")	710 mm (28")	595 mm (23.4")	760 mm (29.9")
Diameter	550 mm (21.7")	850 mm (33.5")	560 mm (22")	550 mm (21.7")
Height	600 – 1050 mm (23.6" – 3' 5")	1000 – 1500 mm (39.4" – 59.1")	340 mm (13.4")	600 – 1050 mm (23.6" – 3' 5")
Connections	DN 100 (4") DN 150 (6")	DN 150 (6")	DN 100 (4")	DN 100 (4") DN 150 (6")
Weight pedestrian loading version	11 kg (24 lbs)	35 kg (77 lbs)	8.5 kg (19 lbs)	46 kg (101 lbs)
vehicle loading version	35 kg (77 lbs)	90 kg (199 lbs)		46 kg (101 lbs)
Page	Page 65	Page 66	Page 66	Page 67

Universal filter 3 Internal / XL Internal

100 % water yield



Advantages

- Allows up to 100 % water yield
- Space-saving filter technology inside the tank
- The filter housing can be easily removed without tools
- Ideally suited when connecting the tank to a soakaway
- 275 mm (10.8") offset height between inlet and outlet
- Maximum flow rate of 5.5 l/s with connections DN 100 (4") and 16 l/sec. with DN 150 (6")
- Emergency overflow available
- Sieve set mesh width 0.35 mm (0.01")

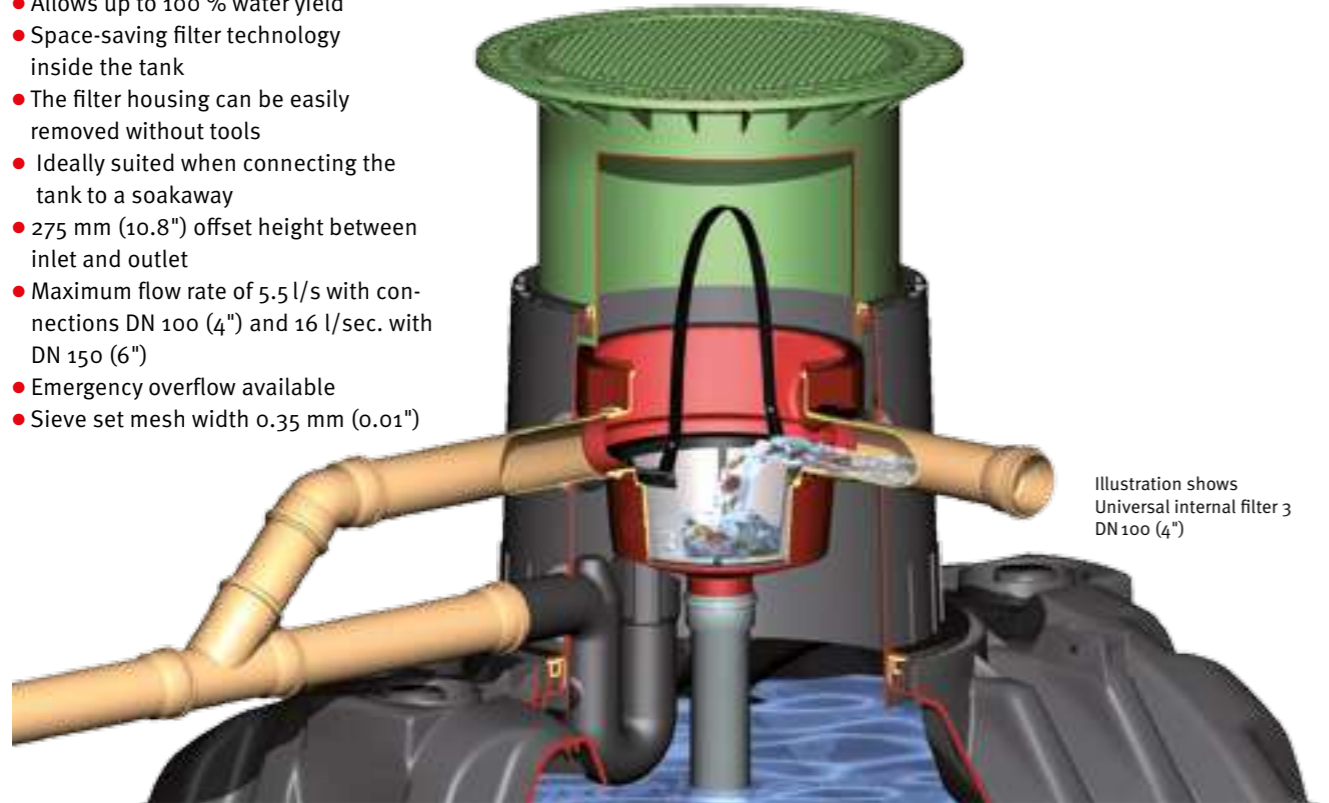


Illustration shows Universal internal filter 3 DN 100 (4")

Universal filter 3 Internal

DN 100 (4")

Order no. 340022

Universal filter 3 XL Internal

DN 150 (6")

Order no. 340107

[Q Webcode G2101](#)



Accessories

Quick assembly sleeve Spanifix

Patented (Page 80)

DN 100 (4")

Order no. 295909

DN 150 (6")

Order no. 340546



Replacement filter basket

Filter basket with practical lift-out device

Order no. 340056

Connecting dimensions for telescopic dome shaft

For Universal filter 3 Internal for Carat S

telescopic dome shaft		Inlet	Tank overflow	Emergency overflow
Mini	DN 100 (4")	385 – 585 mm (15.2" – 23")	660 – 860 mm (26" – 33.9")	385 – 585 mm (15.2" – 23")
	DN 150 (6")	360 – 560 mm (14.2" – 22")	635 – 835 mm (25" – 32.9")	360 – 560 mm (14.2" – 22")
Maxi	DN 100 (4")	385 – 685 mm (15.2" – 27")	660 – 960 mm (26" – 3' 2")	385 – 685 mm (15.2" – 27")
	DN 150 (6")	360 – 660 mm (14.2" – 26")	635 – 935 mm (25" – 36.8")	360 – 660 mm (14.2" – 26")

All dimensions are calculated middle of connection until earth top edge

Minimax-Pro filter, self-cleaning

Minimum height loss, maximum water yield!



Advantages

- Water yield of over 95 %
- Self-cleaning stainless steel filter insert with mesh width of 0.35 mm (0.01")
- Compact filter technology integrated in the tank
- Filter housing can be removed for tank inspection without tools
- Transparent cover for easier inspection of filter
- DN 100 (4") connections
- Optional internal cleaning unit
- Just 10 mm (0.4") height offset between inlet and outlet (with optional curved outlet – 80 mm (3.2") height offset)
- Maximum flow rate of 5.5 l/s

90° plastic pipe bend for connection to an internal siphon is included in delivery.

Minimax-Pro internal filter (patented)

Just 10 mm (0.4") height offset between inlet and outlet

Order no. 340093

[Q Webcode G2105](#)

Accessories

Internal cleaning unit

Very powerful jet of water to clean the filter sieve, resulting in fewer maintenance intervals. Automatic control possible with the Aqua-Center-Silentio (page 71); 19 mm (3/4") connection, supplied without hose

Order no. 340040

Quick assembly sleeve Spanifix

Patented (Page 80), DN 100 (4")

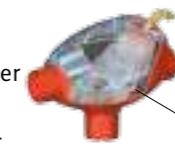
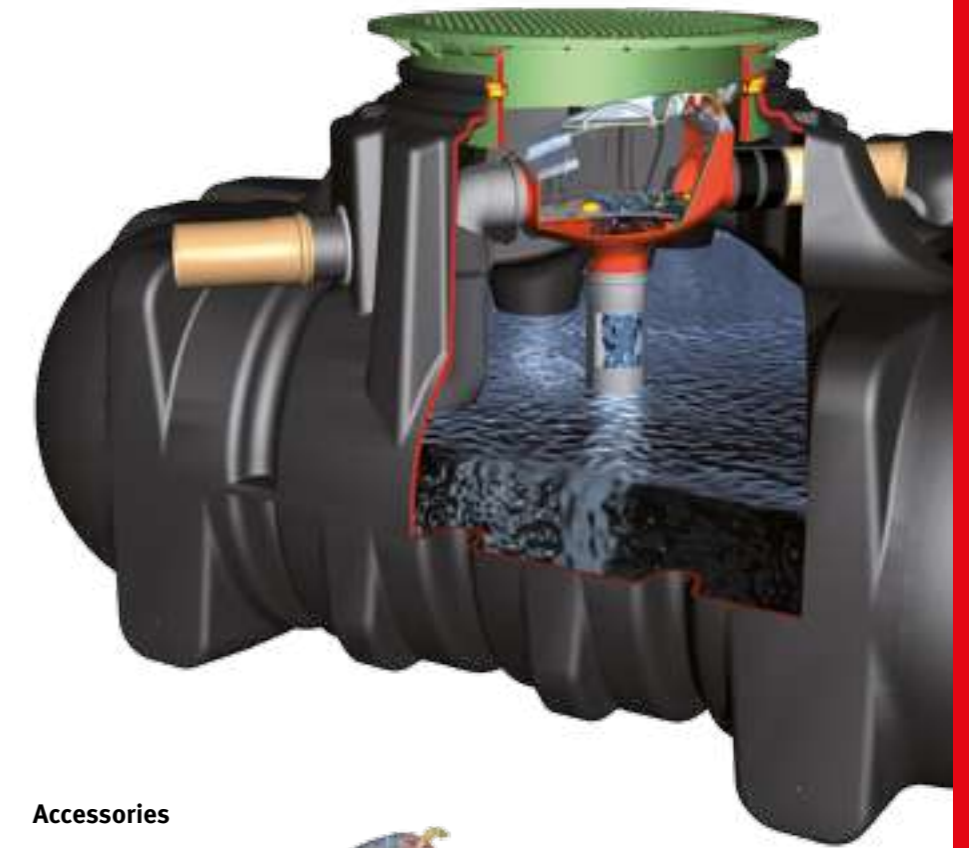
Order no. 340502

Connecting dimensions for telescopic dome shaft

For Minimax-Pro filter Internal (patented) for Platin flat tank

telescopic dome shaft		Inlet	Tank overflow
Mini	DN 100 (4")	325 – 525 mm (12.8 – 20.7")	405 – 605 mm (15.9 – 23.8")
		325 – 625 mm (12.8 – 24.6")	405 – 705 mm (15.9 – 27.8")

All dimensions from middle of connection to ground level



XL lift out device

for a convenient withdrawal of filter cover and filter insert, length 505 mm (19.9")

Order no. 330220

Optimax-Pro, self-cleaning filter

Efficient cleaning system with high water yield!



Advantages

- Provides over 95 % water yield
- Low maintenance (self-cleaning)
- Space-saving filter technology inside the tank
- Filter housing can be easily removed without tools
- Transparent lid for filter visibility
- DN 100 (4") connections
- Optional internal cleaning unit
- Low offset height of 165 mm (6.5") between inlet and outlet
- Maximum flow rate of 5.5 l/s



Rainwater harvesting system maintenance
GRAF TV
www.graf.info/v203

Illustration shows Optimax-Pro internal filter 3 DN 100 (4")



Optimax-Pro XL, self-cleaning filter

Efficient cleaning system with high water yield!



Advantages

- No external prefilter needed, so no additional cover visible
- High efficiency even in heavy rainfall
- Combination of more than one roof area possible
- Provides over 95 % water yield
- Low maintenance (self-cleaning)
- Space-saving filter technology inside the tank
- Filter housing can be easily removed without tools
- Transparent lid for filter visibility
- Maximum flow rate of 16 l/s
- DN 150 (6") connections
- Internal cleaning unit XL
- Low offset height of 165 mm (6.5") between inlet and outlet



Optimax-Pro filter Internal (patented)

DN 100 (4")

Order no. 340037

Webcode G2102

Accessories

Internal cleaning unit

Very powerful jet of water to clean the filter sieve, resulting in fewer maintenance intervals. Automatic control possible with the Aqua-Center-Silentio (page 71); 19 mm (3/4") connection, supplied without hose

Order no. 340040



Filter cartridge

Very smooth surface and, therefore, max. self cleaning, mesh width 0.35 mm (0.01")



Quick assembly sleeve Spannfix

Patented (Page 80), DN 100 (4")

Order no. 340502

Connecting dimensions for telescopic dome shaft

For Optimax-Pro filter Internal (patented) for Carat S

telescopic dome shaft		Inlet	Tank overflow
Mini	DN 100 (4")	495 – 695 mm (19.5" – 27.4")	660 – 860 mm (26" – 33.9")
Maxi	DN 100 (4")	495 – 795 mm (19.5" – 31.3")	660 – 960 mm (25.9" – 3' 2")

All dimensions are calculated middle of connection until earth top edge

Lift out device Plus

For a convenient withdrawal of filter cover and filter insert, length 505 mm (19.9")

Order no. 330220



Optimax-Pro XL filter Internal (patented)

DN 150 (6")

Order no. 340108

Webcode G2103

Accessories

Internal cleaning unit XL

Very powerful jet of water to clean the filter sieve, resulting in fewer maintenance intervals. Automatic control possible with the Aqua-Center-Silentio (page 71); 19 mm (3/4") connection, supplied without hose

Order no. 340117



Filter cartridge

Very smooth surface and, therefore, max. self cleaning, mesh width 0.35 mm (0.01")



Quick assembly sleeve Spannfix

Patented (Page 80), DN 150 (6")

Order no. 340546

Connecting dimensions for telescopic dome shaft

For Optimax-Pro XL filter Internal (patented) for Carat S

telescopic dome shaft		Inlet	Tank overflow
Mini	DN 150 (6")	470 – 670 mm (19.5" – 27.4")	635 – 835 mm (19.5" – 27.4")
Maxi	DN 150 (6")	470 – 770 mm (19.5" – 27.4")	635 – 935 mm (19.5" – 27.4")

All dimensions are calculated middle of connection until earth top edge

Lift out device Plus

For a convenient withdrawal of filter cover and filter insert, length 505 mm (19.9")

Order no. 330220



Universal filter 3 and Universal-Industrial filter 3

External filter technology, 100 % water yield



Universal filter 3 external

- 100 % water yield therefore ideal for smaller roof areas
- Filter insert mesh width 0.35 mm (0.01")
- Continuously variable installation depth of 600 mm – 1050 mm (23.6" – 3' 5") using the telescopic dome shaft
- Lockable, childproof cover
- Flush with ground level
- Minimal height offset (270 mm (10.6")) between the inlet and outlet
- Also suitable for infiltration and pond systems
- Maximum flow rate of 16 l/s

Universal filter 3 external
suitable for pedestrian loading
Order no. 340020

Universal filter 3 external
suitable for vehicle loading
Order no. 340021

Q Webcode G2205

Connecting dimensions

① Inlet	275 – 725 mm (10.8" – 28.5")
② Outlet	545 – 995 mm (21.5" – 3' 2")
③ Emergency overflow	275 – 725 mm (10.8" – 28.5")

All dimensions are calculated from the middle of connection to the earth top edge

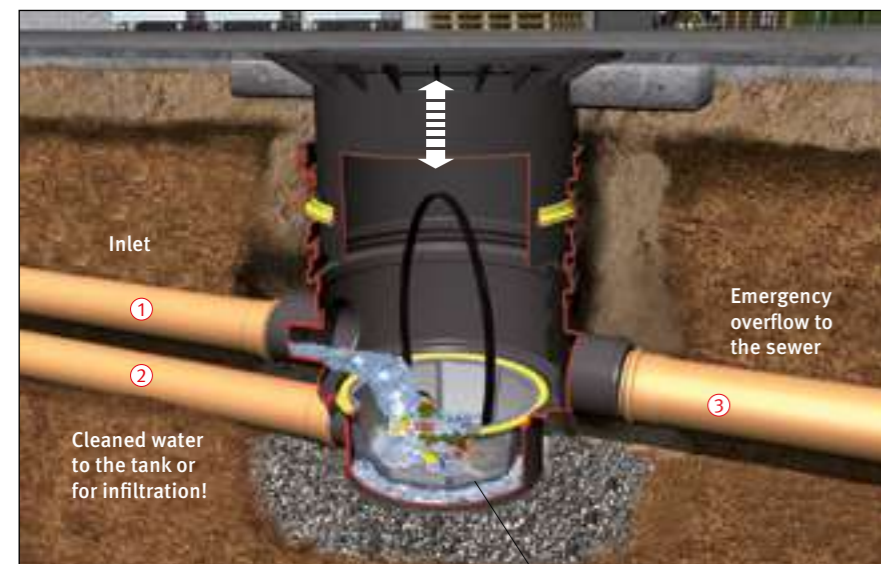
VS connecting piece DN 400 (16")
For large installation depths, useful length: 500 mm (19.7"), can be shortened to 250 mm (9.8")

Order no. 330341

Replacement filter basket

Filter insert with practical lift-out device

Order no. 340524



Universal-Industrial filter 3 external

- Maximum flow rate of 29.5 l/s
- Continuously variable installation depth of 740 – 1270 mm (29.1" – 4' 2") using the telescopic dome shaft
- Only 230 mm (9") height offset between the inlet and the outlet

Universal-Industrial filter 3 external
suitable for pedestrian loading
Order no. 340050

Universal-Industrial filter 3 external
suitable for vehicle loading
Order no. 340051

Universal-Industrial filter 3 external*
suitable for lorry-bearing
Order no. 340095

*Cover and compensating ring to be provided on site

Infiltration connecting piece 1000 DN 600 (24")

With DN 200 (8") contact surface, incl. profile seal, length 1000 mm (3' 3"), 750 mm (21.5"), 500 mm (19.7")

Order no. 371015

Connecting dimensions

① Inlet	DN 150 (6") / DN 200 (8")	430 – 960 mm (16.9" – 3' 2")
② Outlet	DN 150 (6")	660 – 1190 mm (26" – 3' 11")
③ Emergency overflow	DN 150 (6") / DN 200 (8")	430 – 960 mm (16.9" – 3' 2")

All dimensions are calculated from the middle of connection to the earth top edge

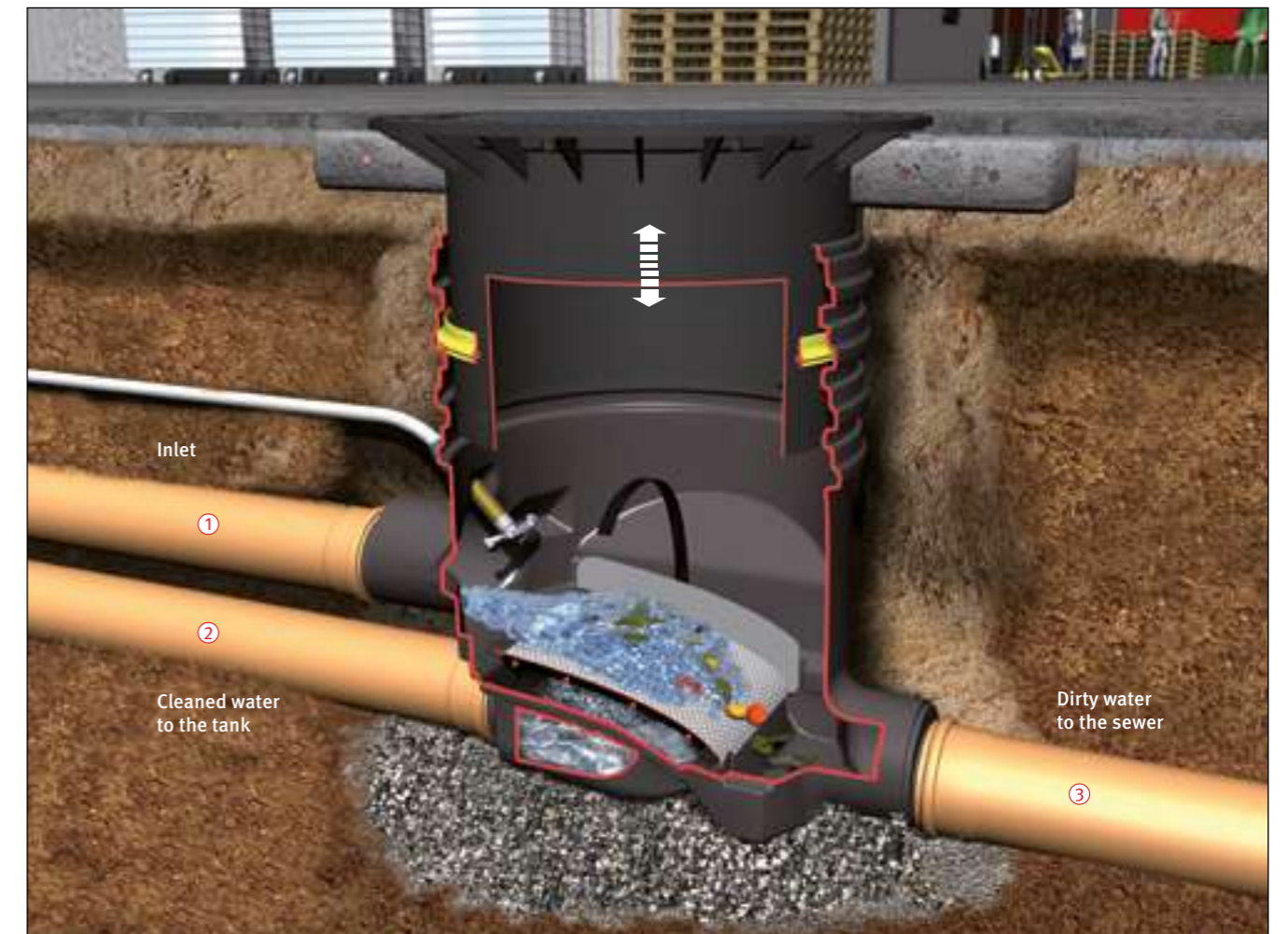


Q Webcode G2202



Optimax-Industrial filter external

External filter technology, self-cleaning



Optimax-Industrial filter external

- Maximum flow rate of 29.5 l/s
- Patented filter technology
- Smooth installation depths from 735 – 1320 mm (28.9" – 4' 4") using the telescopic dome shaft
- Only 224 mm (8.8") height offset between the inlet and outlet



Q Webcode G2201

Accessories

External cleaning unit
without hose
Order no. 340041

Optimax-Industrial filter external
suitable for pedestrian loading
Order no. 340035

Optimax-Industrial filter external
suitable for vehicle loading
Order no. 340036

Optimax-Industrial filter external*
suitable for lorry-bearing
Order no. 340116

*Cover and compensating ring to be provided on site

Connecting dimensions

① Inlet	DN 150 (6") / DN 200 (8")	430 – 1015 mm (16.9" – 3' 4")
② Outlet	DN 150 (6")	655 – 1240 mm (25.8" – 4' 1")
③ To the sewer	DN 150 (6") / DN 200 (8")	655 – 1240 mm (25.8" – 4' 1")

All dimensions are calculated middle of connection until earth top edge

Infiltration connecting piece 1000 DN 600 (24")

With DN 200 (8") contact surface, incl. profile seal, length 1000 mm (3' 3"), 750 mm (21.5"), 500 mm (19.7")

Order no. 371015

Optimax- and Minimax filter external

External filter technology, self-cleaning



Optimax filter external

- Provides over 95 % water yield
- Low maintenance as it is self cleaning
- Continuously variable installation depth of 580 – 1050 mm (22.8 – 3' 5") using the telescopic dome shaft
- Minimal height offset (200 mm (8")) between the inlet and outlet
- Optional with cleaning unit Opticlean
- Maximum flow rate of 16 l/s

Optimax filter external

suitable for pedestrian loading

Order no. 340030

Optimax filter external

suitable for vehicle loading

Order no. 340031

VS connecting piece DN 400 (16")

For large installation depths, useful length: 500 mm (19.7"), can be shortened to 250 mm (9.8")

Order no. 330341

Connecting dimensions

① Inlet	330 – 800 mm (13" – 31.5")
② Outlet	530 – 1000 mm (20.9" – 3' 3")
③ To the sewer	530 – 1000 mm (20.9" – 3' 3")



Webcode G2203

Accessories

External cleaning unit

Without hose

Order no. 340041

All dimensions are calculated from the middle of connection to the earth top edge



Minimax filter external

- Only 10 mm (0.4") height offset between the inlet and outlet
- Filter insert mesh width 0.35 mm (0.01")
- Continuously variable installation depth of 485 mm – 955 mm (19.1 – 3' 2") using the telescopic dome shaft
- Standard 100 mm (4") connections
- Optional with cleaning unit Miniclean
- Maximum flow rate of 5.5 l/s

Minimax filter external

suitable for pedestrian loading

Order no. 340061

Minimax filter external

suitable for vehicle loading

Order no. 340062

Connecting dimensions

① Inlet	330 – 800 mm (13" – 31.5")
② Outlet	430 – 900 mm (16.9" – 3")
③ To the sewer	340 – 810 mm (13.4" – 31.9")



Webcode G2204

Accessories

External cleaning unit

Order no. 340041

All dimensions are calculated from the middle of connection to the earth top edge

Drainstar filter external

External filter technology, 100 % water yield



Drainstar filter external

- No height loss between inlet and outlet
- Filter insert mesh width 0.35 mm (0.01")
- Continuously variable installation depth of 600 – 1050 mm (23.6 – 3' 5") provided by telescopic dome shaft
- Sealed up to ground level
- Ideally suited to infiltration and pond systems
- Maximum flow rate of 5.5 l/s with DN 100 (4") connection and 16 l/s with DN 150 (6") connection
- DN 100 (4") and DN 150 (6") connections

Connecting dimensions

① Inlet	DN 100 (4") / DN 150 (6")	275 – 725 mm (10.8" – 2' 4.5")
② Outlet	DN 150 (6")	250 – 700 mm (9.8" – 2' 3.6")

All dimensions are calculated middle of connection until earth top edge



External Drainstar filter suitable for pedestrian loading

With plastic cover, childproof

Order no. 340143

External Drainstar filter suitable for vehicle loading

With cast cover, class B

Order no. 340144

Webcode G4405

Replacement filter basket

Filter insert with practical lift-out device

Order no. 340524



Settling filter shaft and pot filter

External filter technology



Settling filter shaft

- 3-stage cleaning process
 - ① Fine filter basket (0.35 mm (0.01") mesh width)
 - ② Sedimentation zone
 - ③ Immersion pipe as separator
- Continuously variable installation depth of 1000 – 1500 mm (3' 3.4" – 4' 11") using the telescopic dome shaft diameter 600 mm (24")
- Suitable for pedestrian loading with plastic cover, or suitable for vehicle loading with cast cover, class B
- Lockable childproof cover
- Sealed up to ground level
- Maximum flow rate of 16 l/s
- DN 150 connection (6")

[Webcode G4402](#)

Connecting dimensions

④ Inlet	DN 150 (6")	480 – 980 mm (18.9" – 38.6")
⑤ Outlet	DN 150 (6")	730 – 1230 mm (28.7" – 4' 1")

All dimensions are calculated from the middle of connection to the earth top edge

Infiltration connecting piece 1000

DN 600 (24")

With DN 200 (8") contact surface, incl. profile seal, length 1000 mm (3' 3"), 750 mm (21.5"), 500 mm (19.7")

Order no. 371015

Settling filter shaft

suitable for pedestrian loading

Order no. 340026

Settling filter shaft

suitable for vehicle loading

Order no. 340027



Pot filter

For installation at ground level (underground tank inflow) before the cistern. Good value alternative – suitable when only used for garden irrigation, ponds or infiltration. Connection: DN 100 (4"). Dimensions: 500 mm (19.7") Ø, 340 mm (13.4") high

Pot filter

Order no. 340003

Accessories

Replacement filter mats (2 units)

Order no. 347010

Connecting dimensions

① Outlet	288 mm (11.3")
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All dimensions are calculated from the middle of connection to the earth top edge

[Webcode G2206](#)

Infiltration filter shaft

External filter technology



Infiltration filter shaft

- 3-stage cleaning process
 - ① Coarse filter insert
 - ② Fine filter basket (0.35 mm (0.01") mesh width)
 - ③ Sedimentation zone
- Retains contaminants which may affect infiltration performance
- Ideal as a courtyard inlet structure or a trough-trench overflow element
- Suitable for vehicle loading with cast cover, class B
- Continuously variable installation depth of 600 – 1050 mm (24" – 3' 5.4") using the telescopic dome shaft diameter 400 mm (16")
- Maximum flow rate of 16 l/s
- DN 100 (4") and DN 150 (6") connections



Infiltration filter shaft

suitable for vehicle loading

Order no. 340025

[Webcode G4401](#)

Telescopic filter shaft 400, class B

With slotted cast cover, suitable for vehicle loading, class B; incl coarse filter insert and fine filter basket (mesh width 0.35 mm (0.01")); colour: black

Order no. 340126

VS connecting piece DN 400 (16")

For large installation depths, useful length: 500 mm (19.7"), can be shortened to 250 mm (9.8")

Order no. 330341

Connecting dimensions

④ Outlet	DN 100 (4") / DN 150 (6")	275 – 725 mm (10.8" – 2' 4.5")
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All dimensions are calculated middle of connection until earth top edge

Domestic waterworks and pumps

The central system control for your rainwater harvesting system



Feeding console

Properties	Mains-on-tap	Drinking water feeding console		Aqua-Center-Silentio	
Pump		15/4	25/4	15/4	25/4
Nominal power		660 W	800 W	660 W	800 W
Operating noise		55 dB(A)	55 dB(A)	49 dB(A)	49 dB(A)
Pretection class	IP 44	IP 44	IP 44	IP 44	IP 44
Operating pressure		3.5 bar (51 psi)	4.3 bar (62 psi)	3.5 bar (51 psi)	4.3 bar (62 psi)
Feed height		35 m (114' 9")	43 m (141' 1")	35 m (114' 9")	43 m (141' 1")
Max. delivery rate	up to 720 l/h (190 US gal./h)	3,600 l/h (951 US gal./h)	4,200 l/h (1,110 US gal./h)	3,600 l/h (951 US gal./h)	4,200 l/h (1,110 US gal./h)
Max. suction height		6 m (19' 8")	6 m (19' 8")	6 m (19' 8")	6 m (19' 8")
Max. suction length		15 m (49' 3")	15 m (49' 3")	15 m (49' 3")	15 m (49' 3")
Display operating pressure		•	•	•	•
Optionally available as Silentio Press package for distances of >15 m (49' 3") to the house				•	•

Drinking water feeding module

Volume		10 l (2.6 US gal.)	6.5 l (1.7 US gal.)
Manual switching to drinking water is possible		•	•
Automatic water exchange basin			•
Overflow corresponds to EN 1717		•	•

System control

Via float switch / level sensor		•	•
Via electronic measurement			•
Optional filter cleaning unit			•
Display Operating error			LED/Full text

Measurements

Width	218 mm (8.6")	680 mm (26.8")	580 mm (22.8")
Height	277 mm (10.9")	760 mm (29.9")	530 mm (20.9")
Depth	95 mm (3.7")	210 mm (8.3")	295 mm (11.6")
Weight	0.6 kg (1.3 lbs)	30 kg (66.2 lbs)	34 kg (75 lbs)

Page in catalogue

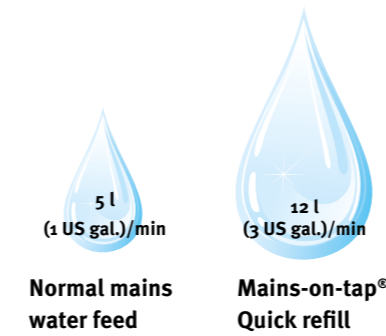
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Mains-on-tap®

Excellent value for money



1. Permanent monitoring of your rainwater tank level
2. Upon reaching a critical fill level, the rainwater tank is topped up with a small quantity of mains water.

Advantages

- Excellent value for money
- Low mains water consumption
- Quick refill (up to 12 l (3 US gal./min))
- Extremely small housing – only 218 x 277 x 95 mm (8.6 x 10.9 x 3.7") (w x h x d)
- Virtually silent operation
- Incorporates AB Air Gap
- Solar capable using 12-volt technology
- Mains-on-tap® – the Plug & Play feed console. No calibration required. Tool-free plug connections

Innovative designed EPP housing

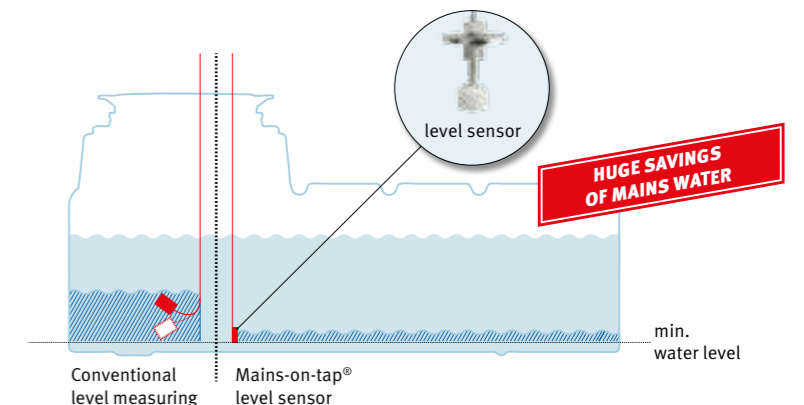


Mains-on-tap®

Scope of delivery: Mains-on-tap® incl. 12 volt wall power supply and level sensor

Order no. 350020

Webcode G3106



Drinking water feeding console

The cost-effective solution

The drinking water feeding console controls and regulates the entire water requirement and guarantees outstanding operational safety due to its reliable operation. The drinking water feeding console is safety-tested in accordance with DIN 1988 and EN1717. The floating switch-controlled monitoring of the fill level in the rainwater tank ensures

that, in the event that the water level in the tank drops below the predefined minimum, drinking water is automatically provided from the in-house reservoir as needed. As soon as the cistern refills with rainwater, the drinking water feeding console switches back to rainwater operation.

Advantages

- Cost-effective in-house internal drinking water intake
- Floating switch- controlled



Drinking water feeding console
Incl. floating switch with 20 m (65' 6") connection cable

Pump	Order no.
15/4	350021
25/4	350022

Q Webcode G3101

Aqua-Center-Silentio

The convenient control system

The GRAF Aqua-Center-Silentio is the central system control for your rainwater harvesting system. The microelectronics control and regulate the entire system. The pump and processor units are compactly installed with the intake container. The switching valve is sensor-controlled and opens the drinking water intake to the service water network when the water level is low in the cistern. The Aqua-Center-Silentio switches back to rainwater operation after even a brief rain shower. The Aqua-Center-Silentio is safety-tested in accordance

with DIN 1988 and EN 1717 and can be installed above the backpressure level without problems. By connecting a lifting device in accordance with DIN 1988 and EN 1717 to the overflow, installation is also possible below the backpressure level. Please follow the installation instructions. A quiet, multi-stage, self-priming centrifugal pump with professional output works below the attractive soundproof hood. The Aqua-Center-Silentio comes ready to connect – this facilitates a simple and quick start-up.

Advantages

- With automatic filter cleaning unit as option
- Regular rinsing of the drinking water reservoir prevents microbial contamination
- Digital display of the operating status and the level in the cistern



Aqua-Center-Silentio
Incl. switching valve sensor controlled and 20 m (65' 6") data line

Pump	Order no.
15/4	350209
25/4	350210

Q Webcode G3102

Aqua-Center-Silentio Press
For greater distances between the tank and the house waterworks (15 m (49' 3")) including submersible pump 300 A as a pressure pump (Page 73)

Pump	Order no.
15/4	350211
25/4	350212

Q Webcode G3103

Accessories

Automatic filter cleaning unit
Order no. 352038

Data line 50 m (164')
2 wire with Cinch plug
Order no. 330699



KSB-Superinox 15/4 and 25/4

- Proven domestic water control unit of brand quality
- Stainless steel housing
- Extremely low running noise
- Multi-stage, self-priming centrifugal pump with energy-saving motor
- Pump switches on and off automatically via pressure and flow monitor
- Integrated dry running protection and backflow inhibitor
- Motor with lifetime lubrication and integrated circuit breaker
- IP 44

15/4 Order no. 353032

25/4 Order no. 353046

[Webcode G3201](#)

[Webcode G3202](#)



Kreisel 4/1000

Integrated prefilter

- Domestic water control unit of brand quality
- Water cooled motor (low noise)
- Energy saving motor
- Pump switches on and off automatically via pressure and flow monitor
- Integrated dry running protection and backflow inhibitor
- Incl. 25 mm (1") hose connection fitting
- LED display (incl. faults)

Order no. 354021

[Webcode G3203](#)



Jet 700

Integrated prefilter

- Self-priming jet pump
- Tried and tested pump technology of brand quality
- Water cooled motor (low noise)
- Made of high quality, corrosion free materials
- Incl. 25 mm (1") hose connection fitting
- Integrated backflow inhibitor

Order no. 202011

[Webcode G3204](#)



Integra INOX

- Automatic submersible pump with integrated pressure and flow monitor
- Pump switches on and off automatically
- Tried and tested pump technology of brand quality
- Very low running noise
- Made of high quality, corrosion free materials
- Incl. 10 m (32' 9.7") cable and floating water extraction unit
- Also suitable as suction pump
- Integrated dry running protection

Order no. 354018

[Webcode G3205](#)



Submerged pump 300 A

- Submersible pump with dry running protection
- Tried and tested pump technology of brand quality
- Very low running noise
- Made of high quality, corrosion free materials
- Incl. 10 m (32' 9.7") cable
- Incl. 32 mm (1 1/4") hose connection fitting

Order no. 354031

[Webcode G3206](#)



Submersible pressure pump 1000 A

- Submersible pressure pump with dry running protection and 3 impellers
- Tried and tested pump technology of brand quality
- Very low running noise
- Made of high quality, corrosion free materials
- Incl. 15 m (49' 2.5") cable
- Incl. 19 mm (3/4") / 25 mm (1") hose connection fitting

Order no. 354030

[Webcode G3207](#)



Submersible pressure pump 1000 E

- Submersible pressure pump with integrated pressure and flow monitor
- Pump switches on and off automatically
- Tried and tested pump technology of brand quality
- Very low running noise
- Made of high quality, corrosion free materials
- Incl. 15 m (49' 2.5") cable
- Integrated dry running protection
- Incl. 19 mm (3/4") / 25 mm (1") hose connection fitting

Order no. 354036

[Webcode G3208](#)

Performance Data	Superinox 15/4	25/4	Kreisel 4/1000	Jet 700
Motor performance	0.66 kW	0.8 kW	0.85 kW	0.85 kW
Max. feed height	35 m (114' 9")	43 m (141' 1")	43 m (141' 1")	43 m (141' 1")
Max. operating pressure	3.5 bar	4.2 bar	4.3 bar	4.3 bar
Max. delivery rate	3,600 l/h (951 US gal.)	4,200 l/h (1,110 US gal.)	3,180 l/h (840 US gal.)	3,180 l/h (840 US gal.)
Max. suction height	8 m (26' 2")		8 m (26' 2")	8 m (26' 2")
Max. suction length	18 m (59' 1")		15 m (49' 2")	15 m (49' 2")
Max. submersion depth	-		-	-

Attention: the suction performance values represented in the chart are not valid in combination with drinking water feeding consoles!

Integra INOX	Submerged pump 300 A	Submersible pressure pump 1000 A	Submersible pressure pump 1000 E
1.1 kW	0.22 kW	0.9 kW	0.9 kW
40 m (131' 3")	5.5 m (18' 1")	36 m (118' 1")	36 m (118' 1")
4.0 bar	0.55 bar	3.6 bar	3.6 bar
3,000 l/h (793 US gal.)	5,700 l/h (1,505 US gal.)	5,700 l/h (1,505 US gal.)	5,700 l/h (1,505 US gal.)
8 m (26' 2")	-	-	-
12 m (39' 4")	-	-	-
5 m (16' 4")	7 m (22' 11")	12 m (39' 4")	12 m (39' 4")

Accessories

Pump wall console

suitable for pumps KSB-Superinox and Kreisel 4/1000, rubber mounting brackets reduce noise

Order no. 355020



Flexible armoured hose

Latex core, stainless steel jacket, length 500 mm (19.7"), wear-free, rust-free, brass connections R 1"

Order no. 330058



Controlmatic

Pump switching gear with dry running prediction and pressure gauge, completely wired, 1"

Order no. 355022



Brio

Pump switching gear with dry running prediction, completely wired, 1", IP 65

Order no. 355021



Reversible flow filter

For fine filtering of rainwater after the pump. This is sensible if the water is going to be used for the washing machine. The mesh width of the 0.1 mm (0.004") fine filter retains the smallest dirt

particles. Connections R 1" AG. DVGW-tested fine filter in accordance with DIN. The sieve insert cleans easily in a few seconds, the sieve does not need to be replaced. Note: the rainwater must be

fed through a prefilter (page 58 – 67) before it is fed into the tank.

Order no. 331021



Water hose connection / Water spring



External water hose connection

For the convenient extraction of rainwater in your garden. For jet pump and submersible pump, includes 2-way valve for standard hose coupling, 25 mm (1") hose connection.

- Made of extra-tough, weather-resistant plastic
- Makes an ideal extra extraction point for your underground tank

Order no. 202060

[Q Webcode G9102](#)



Internal water hose connection

For the convenient extraction of rainwater in your garden. Extract water directly from the tank. Easy to retrofit with Mini or Maxi telescopic dome shaft, includes

valve for standard hose coupling, 25 mm (1") hose connection.

Order no. 375119

[Q Webcode G9103](#)



Stainless steel water spring

The elegant water spring point for the garden. Made of stainless steel, with chrome-plated drain cock. 19 mm (3/4") connection with external thread in base.

Ø Column 10 cm (4"), Base 20 cm (8"), Height 90 cm (3'), Weight 6.2 kg (13.6 lbs)

Order no. 356020

[Q Webcode G9104](#)



Pump set

Complete set with heavy cast pillar 32 mm (1 1/4") connection, colour: green
Order no. 356010

Spare seal set

Piston sleeve, flange and valve seals, leather piston seal
Order no. 356502

Pump body

Top part only, 32 mm (1 1/4") connection, colour: green
Order no. 356503

Reducing adapter

32 mm (1 1/4") internal thread to 25 mm (1") external thread for connecting the manual pump to a GRAF underground tank with a suction fitting
Order no. 330025

[Q Webcode G9105](#)

Granite water spring

Practical and stylish



! TIP
• Ideal as an additional extraction point for rain-water harvesting systems

Granite water spring

- Elegant water spring in natural granite look
- Can be fitted with 19 mm (3/4") hose connection at bottom
- Includes 19 mm (3/4") chrome drain cock for convenient water extraction
- Easy assembly – pre-drilled holes in base
- Very UV-stable
- Made of high-quality, weather-resistant plastic

Granite water spring

Height 100 cm (3' 3"), Column 13 x 13 cm (5.1 x 5.1"), Base 25 x 25 cm (9.8 x 9.8"), Weight 5 kg (11 lbs)

darkgranite	Order no. 356025
lightgranite	Order no. 356026

[Q Webcode G9107](#)



Wood water spring

Natural wood look



! TIP
• Ideal as an additional extraction point for rain-water harvesting systems

Wood water spring

- Elegant water spring in the shape of a natural wood peg
- Can be fitted with 19 mm (3/4") hose connection at bottom
- Includes 19 mm (3/4") chrome drain cock for convenient water extraction
- Easy assembly – pre-drilled holes in base
- Very UV-stable
- Made of high-quality, weather-resistant plastic

Wood water spring

Height 100 cm (3' 3"), Column 13 x 13 cm (5.1 x 5.1"), Base 25 x 25 cm (9.8 x 9.8"), Weight 5 kg (11 lbs)

darkwood	Order no. 356030
lightwood	Order no. 356031

[Q Webcode G9108](#)



Rondo water spring unit

- Made of extra-tough, weather-resistant plastic
- The convenient water spring point for the garden
- Can be fitted with 19 mm (3/4") hose connection at bottom
- Includes 19 mm (3/4") chrome drain cock for convenient water extraction
- Easy assembly – pre-drilled holes in base

Rondo water spring

Ø Column 12 cm (4.7"), Base 19 cm (7.5"), Height 90 cm (3'), Weight 3 kg (7 lbs)

stonegrey	Order no. 356021
-----------	------------------

[Q Webcode G9101](#)



Stone fountain Venezia & Roma

Natural stone look



Stone fountain

- Includes 19 mm (¾") traditional-look drain cock for convenient water extraction
- Can be fitted with 19 mm (¾") hose connection at bottom
- Pre-assembled and ready to connect
- Made of high-quality, weather-resistant plastic

Venezia

Height 90 cm (3'), Width 44 cm (17.3"), Depth 52 cm (20.5"), Height basin 15 cm (5.9"), Weight 8 kg (18 lbs)

lightgranite	Order no. 356100
redstone	Order no. 356102

[Q Webcode G9109](#)

Roma

Height 100 cm (3' 3"), Width 54 cm, Depth 54 cm (21' 3"), Height basin 25 cm (9.8"), Weight 10 kg (22 lbs)

lightgranite	Order no. 356101
redstone	Order no. 356103

[Q Webcode G9110](#)



Accessories

For rainwater harvesting

Order no.

Cut-out tool

for pipe DN 50 (2")	with pilot drill Ø 58 mm (2.3")	332004
for pipe DN 70 (2.8")	with pilot drill Ø 83 mm (3.3")	202002
for pipe DN 100 (4")	with pilot drill Ø 124 mm (4.9")	202003
for pipe DN 150 (6")	with pilot drill Ø 175 mm (6.9")	332002
for pipe DN 200 (8")	with pilot drill Ø 210 mm (8.3")	332005

Special seal

For connecting the tanks and further connections

For pipe	Ø Borehole	Tank wall thickness	Colour	Order no.
DN 32 (1.3")	46 mm (1.8")	4–8 mm (0.15–0.3")	black	332036
DN 19 (0.8")	45 mm (1.8")	1–15 mm (0.04–0.6")	black	330383
DN 32 (1.3")				
DN 32 (1.3")	58 mm (2.3")	1–15 mm (0.04–0.6")	black	330347
DN 50 (2")				
DN 50 (2")	58 mm (2.3")	4–8 mm (0.15–0.3")	black	332038
DN 50 (2")				
DN 70 (2.8")	83 mm (3.3")	3–5 mm (0.1–0.2")	grey	332041
DN 70 (2.8")		4–6 mm (0.15–0.25")	green	332039
DN 70 (2.8")		9–16 mm (0.4–0.6")	black	332040
DN 100 (4")	124 mm (4.9")	4–6 mm (0.15–0.25")	green	332031
DN 100 (4")		9–13 mm (0.4–0.5")	black	332033
DN 100 (4")	124 mm (4.9")	14–17 mm (0.55–0.66")	red	332032
DN 100 (4")		17–21 mm (0.66–0.8")	blue	332030
DN 100 (4")	124 mm (4.9")	9–13 mm (0.4–0.5")	grey	332053
DN 100 (4")		14–17 mm (0.55–0.66")	red	332054
DN 150 (6")	175 mm (6.9")	6–11 mm (0.25–0.4")	black	332035
DN 150 (6")		11–21 mm (0.4–0.8")	grey	332046
DN 200 (8")	210 mm (8.3")	9–13 mm (0.4–0.5")	black	332051
DN 200 (8")		11–21 mm (0.4–0.8")	grey	332049

Aqua-Control+

351021

The Aqua-Control+ informs on the exact water level in the tank and switches automatically to drinking water intake as needed. This ensures smooth operation of the entire plant. The pump is also protected against dry running. Digital display and adjustable intake amount in 1 % steps. Regular rinsing of the magnetic valve. 2-year warranty. Price incl. brass magnetic valve and 20 m (65' 7") of data cable.

Digital fill level display

351013

Childproof 12-volt technology with 20 m (65' 7") of data line. Digital display in 1 % steps, any tank size up to 3 m (9' 8") high, simple assembly, also for retrofitting existing systems, 2-year warranty.

Wall duct DN 100 (4")

1 x 25 mm (1") + 2 x cable bushing

331002

Wall duct DN 150 (6")

1 x 25 mm (1") + 1 x 32 mm (1 ¼") + 2 x cable bushing

331003

Prevents thermal and moisture bridges to the wall ducts using a compression seal. Bushing possibilities for intake pipe (only with DN 150 (6")), suction hose, sensor cable and pump or floating switch cable.



Standard interface to building BUS systems / intelligent home technology integrated



Accessories

For rainwater harvesting



Steady inflow pot
So that small dirt particles can settle on the base of the tank, the filtered water is fed to the base of the tank through a steady inflow pot. Larger steady inflow pots.

Order no.
DN 100 (4") 330140
DN 150 (6") 330453
DN 200 (8")/300 (12") 330454

DN 100 (4") DN 150 (6") DN 200 (8")/300 (12")

DN 200 (8")
DN 300 (12")

Overflow siphon
Used as an odour trap and for disposing of the floating layer. Larger overflow siphons.

DN 100 (4") 330108
DN 150 (6") 330450
DN 200 (8") 330451
DN 300 (12") 330452

As above but with rodent guard

DN 100 (4") 331004
DN 150 (6") 331025

DN 100 (4") DN 150 (6") with fitting DN 200 (8") with sleeve

DN 300 (12")

Protection against small animals
made of stainless steel for inserting into common plastic pipes. Prevents small animals getting into the system.

DN 100 (4") 331008
DN 150 (6") 331013

Quick assembly sleeve Spannfix
patented, for connecting 2 DN 100 (4") pipes without sleeve (butt connection), no assembly tools required!

Double Spannfix
DN 100 (4") 340502
Triple Spannfix
DN 100 (4") 295909
DN 150 (6") 340546

German Patent 10213814

FOR PIPE CONNECTIONS



PVC pressure hose
Yellow with fabric lining, size 25 mm (1")

Order no.	
5 m (16' 4")	330075
10 m (32' 8")	330076
15 m (49' 2")	330077
25 m (82')	330078

PVC suction hose
Grey with reinforcing ribs, size 25 mm (1")

5 m (16' 4")	330188
10 m (32' 8")	330189
15 m (49' 2")	330190
25 m (82')	330191

PVC suction hose
Grey with reinforcing ribs, size 32 mm (1 1/4")

5 m (16' 4")	330060
10 m (32' 8")	330062
15 m (49' 2")	330063
25 m (82')	330065

Special suction and pressure hose 330624
PVC hose, with spring steel coil, high bending strength, max. pressure 10 bar, max. vacuum 0.9 bar, size 25 mm (1"), colour: black, price per metre

Suction set 333002
Scope of supply: suction basket, backpressure valve made of brass, suction hose with 1" curved hose nozzle, length: 250 cm (8' 2") can be shortened, for Carat S and Platin tanks

Suction set

Suction hose with filter basket and backpressure valve, connection 25 mm (1") outside thread	4 m (13' 1")	355012
	7 m (23')	355013

PE suction pipe, 330082
12 m (39' 4") long, for connecting between the tank connection and pump. With screw connection, 1" outside thread and MS $\langle \rangle 90^\circ R 1''$ outside thread

Accessories

For rainwater harvesting

Order no.

Floating water extraction unit

Scope of supply: floating balloon, non-return valve with stainless steel fine suction basket, suction hose with brass connecting thread R 1" inside thread, length 300 cm (9'9")

Fine filter nominal width 1.2 mm (0.05")	333014
Micro filter nominal width 0.23 mm (0.01")	333015



Floating suction fitting with fine filter

Includes: Non-return valve with 25 mm (1") hose connector, fine filter basket with mesh width of 1.2 mm (0.05"), float ball with eye and ring, without hose

330054



Floating suction fitting with fine filter

with 32 mm (1 1/4") hose connection, fine filter basket with mesh width of 1,2mm (0,05"), float ball with eye and ring, without hose and Non-return valve

333008

Floating suction fitting with fine filter

with 50 mm (2") hose connection, fine filter basket with mesh width of 1,2mm (0,05"), float ball with eye and ring, without hose and Non-return valve

333009

Floating suction fitting with micro-fine filter

Includes: Backflow preventer with 25 mm (1") hose connector, micro-fine filter basket with mesh width of 0.2 mm (0.01"), float ball with eye and ring, without hose

330055



Labelling set

for rainwater harvesting systems, consists of: engraved sign, adhesive foil, 10 m (33') film strip, adhesive label, pipe label

330122



Drinking water reservoir

For underground installation



Illus. with telescopic dome shaft (see below for accessories)



Carat drinking water reservoir (without tank cover – see below)

Volume [l]	Volume [US gal.]
2,700	700
3,750	1,000
4,800	1,250
6,500	1,700
10,000 ¹⁾	2,640

Q Webcode G1313

¹⁾ Carat XL underground tank Q Webcode G1311

Platin drinking water reservoir (without tank cover – see below)

Volume [l]	Volume [US gal.]	Order no.
1,500	400	390600
3,000	800	390601
5,000	1,325	390602

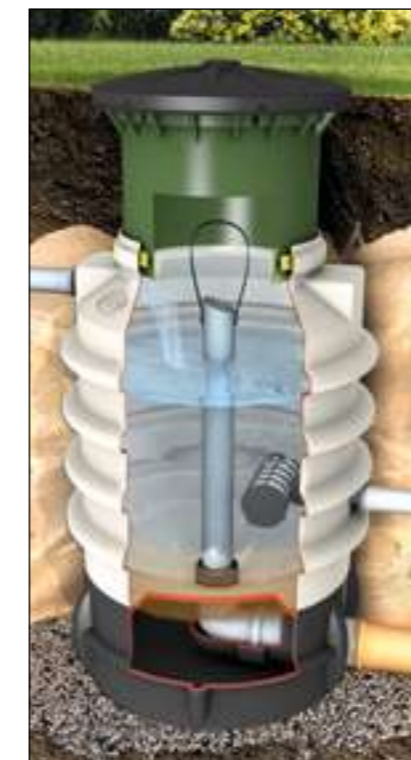
Q Webcode G1310

Accessories

Container screw connection 51 mm (2")

Order no. 330035

Other connection options on request



Spring water shaft

- Variable installation depth thanks to telescopic dome shaft
- To aerate and remove sand from spring water
- Food-safe model with test certificate
- Sealed up to ground level
- Lockable cover with special key
- Includes dome ventilation

Dimensions: Ø 730 mm (28.7")
Height: 1200 – 1500 mm (3' 9" – 4' 9") (telescopic)
Inlet/outlet: 51 mm (2") External thread
Overflow: DN 100 (4")

Spring water shaft 200 l (52 US gal.)

Incl. cover for pedestrian loading, colour grass-green

Order no. 381541

Q Webcode G9106

Maxi drinking water telescopic dome shaft with regular cover and drinking water cover

- Smoothly adjustable for earth covering of 750 – 1050 mm (2.9" – 3' 5") (Carat) or 455 – 755 mm (17.9 – 29.7") (Platin)
- With additional protective cover for drinking water
- Sealed up to ground level
- Lockable cover with special key
- Includes dome ventilation



Maxi telescopic dome shaft with regular cover and drinking water cover

Maxi drinking water telescopic dome shaft with cover

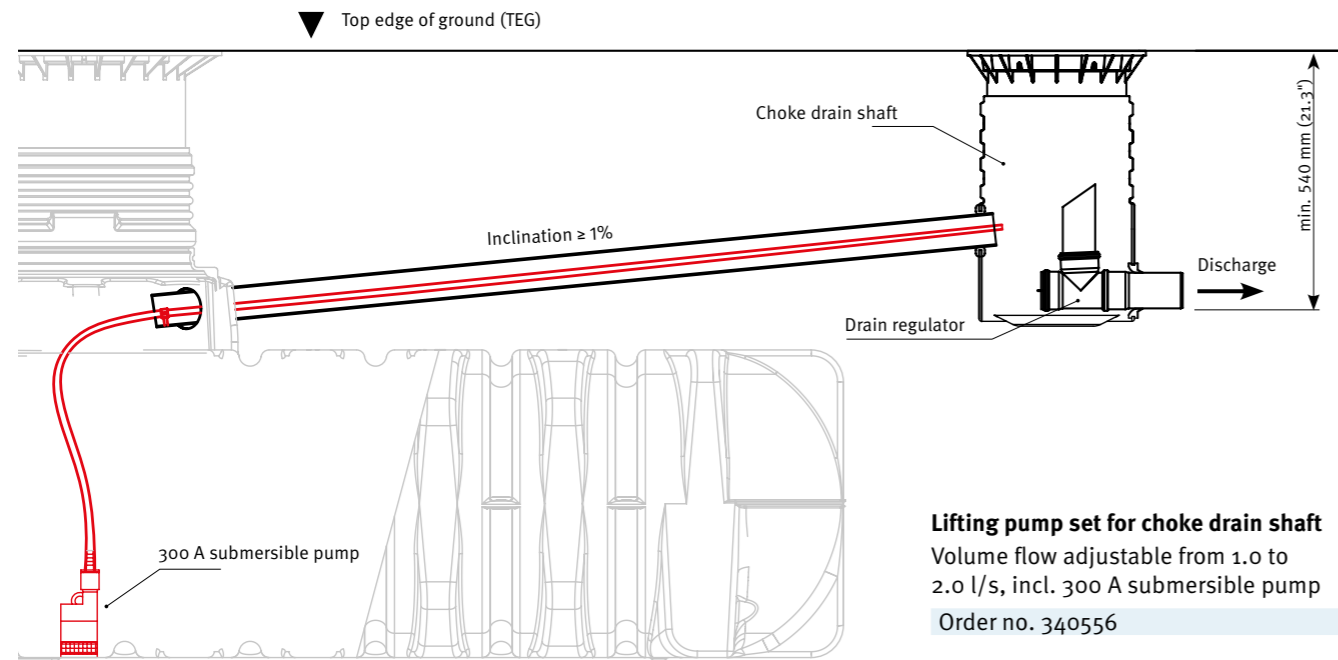
Order no. 381545

Lifting choke shaft

With Platin flat tank

- Choke drain shaft with external access
- Platin tank 1,500 (400 US gal.) to 7,500 l (1,980 US gal.)
- Alternatively, also possible with other retention tanks
- Volume flow adjustable from 1.0 to 2.0 l/s
- Higher volume flows possible on request
- Factory-set volume flow if required

IDEAL FOR HIGH RETENTION DRAINAGE



Lifting pump set for choke drain shaft
Volume flow adjustable from 1.0 to 2.0 l/s, incl. 300 A submersible pump
Order no. 340556



Choke drain shaft suitable for pedestrian loading
Incl. drain regulator DN 100 (4"), emergency overflow, connector seal DN 100 (4") and telescopic dome shaft
Order no. 340028

Choke drain shaft suitable for vehicle loading
Incl. drain regulator DN 100 (4"), emergency overflow, connector seal DN 100 (4") and telescopic dome shaft
Order no. 340029

Webcode G4330

Platin flat tank M 153 sedimentation tank



Figure shows Platin flat tank M 153 sedimentation tank with scope of supply and mini telescopic dome shaft (accessories)

Scope of supply

- ① Platin flat tank
- ② Calmed inlet digester
- ③ Drain baffle

Not included in the scope of supply:

- ④ Matching cover (must be ordered separately; see page 34/35)
- ⑤ External filter (optional) from page 62

Platin flat tank M 153 sedimentation tank

Including sedimentation accessory

Volume [l]	Volume [US gal.]	Order no. [Connection DN 100 (4")]	Order no. [Connection DN 150 (6")]
1,500	400	390350	390354
3,000	800	390351	390355
5,000	1,325	390352	390356
7,500	1,980	390353	390357

Further sizes upon request!

Webcode G4501

LARGER CONNECTING AREAS ON REQUEST

Due to national standards like german standard DWA-M 153 $r_{(15,1)} = 150 \text{ l/(s x ha)}$

Type D25: Inflow for $18 \text{ m}^3/(\text{m}^2 \times \text{h})$ and passage $D = 0.35$

Type D21: Inflow for $9 \text{ m}^3/(\text{m}^2 \times \text{h})$ and passage $D = 0.2$

Type	Reduced connecting area $A_{red, D25}$ DN 100 (4")/ DN 150 (6") [m ²]	Reduced connecting area $A_{red, D21}$ DN 100 (4")/ DN 150 (6") [m ²]
Platin 1,500 l (400 US gal.)	280/670	280/335
Platin 3,000 l (800 US gal.)	280/850	280/675
Platin 5,000 l (1,325 US gal.)	280/850	280/845
Platin 7,500 l (1,980 US gal.)	280/850	280/850

Internationally proven: GRAF rainwater technology



Detached house, (Australia)



Industrial building, Neu-Isenburg (Germany)



Industrial building, Navata (Spain)



Residential building, British Columbia (Canada)



Shopping centre, Geelong (Australia)



Detached house, Eichstetten (Germany)



Farm, Cross Plains TX, USA



Library, Lincoln South (Australia)



Industrial building, Nova Scotia (Canada)



Baseball Academy, Mexico City (Mexico)



Detached house, Barcelona (Spain)



Sport-Base (Bulgaria)



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RAINWATER HARVESTING



INFILTRATION



WASTEWATER TREATMENT SOLUTIONS



SEPARATORS



GARDEN PRODUCTS & MULTI-PURPOSE CONTAINERS



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.

Over and above the statutory regulation, GRAF is lengthening the warranty period for a number of underground tanks. This relates to proper handling, assembly and installation in accordance with the installation manual, as well as leakproofness, usability and static safety. The prerequisites of this are competent assembly and operation in accordance with the requirements, namely the currently valid installation and operating instructions and the prevailing standards.

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

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

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

For all our offers and conclusions of contract are only valid our General Terms and Conditions of Business dated 01/10/2012 which we will send to you on request.

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