



# Water and wastewater management





# SEWAGE TREATMENT PLANTS

## Reliable JFC service



Our products must meet a wide range of requirements. JFC Poland has the knowledge and experience in all standard production processes using plastics, thanks to which it can ensure an optimal production process for each product. The factory service of JFC Poland offers services related to maintenance and repairs of the treatment plant. It also provides technical advice and provides ongoing consultations on the correct use, servicing and selection of equipment from the JFC commercial offer.



**ISO 9001**  
LL-C (Certification)



**ISO 14001**  
LL-C (Certification)

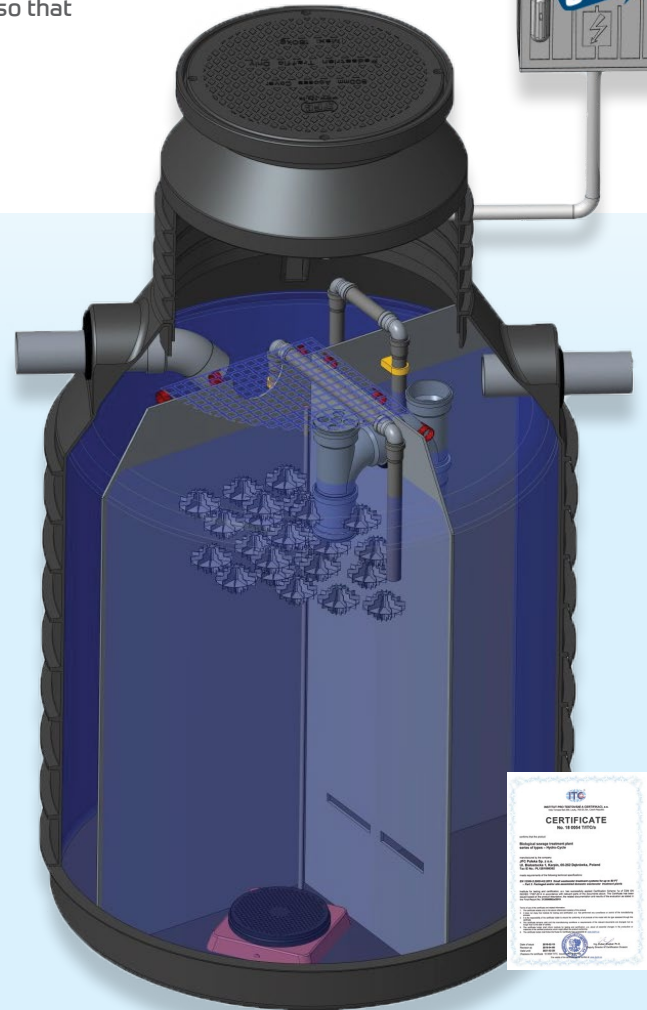
# AQUA Household Sewage Treatment Plant

AQUA household treatment systems operate in hybrid technology combining active sludge and biological bed in one treatment plant. The system allows full control of the cleaning process through a friendly and intuitive management control device including sequential sewage dosage, holiday function, alarm function, and maintenance and control function. The AQUA treatment plant will remind you to remove sludge or to have it inspected so that you can enjoy high efficiency and longer life of the drainage system.



## Advantages

- Two technologies in one device
- High degree of reduction of pollutants
- Low operating cost
- Low electricity consumption
- No need to clean the bed
- External control cabinet with a foundation - protection and safety
- Possibility to remove the diffuser without emptying the treatment plant
- High degree of maintenance-free due to process automation
- Resistance to flow irregularities
- Possibility to choose the colour of the cover
- Possibility to choose the size of the system
- Possibility of expanding with a chemical module
- Access to factory service
- Intuitive control with a service management system



## The AQUA set consists of:

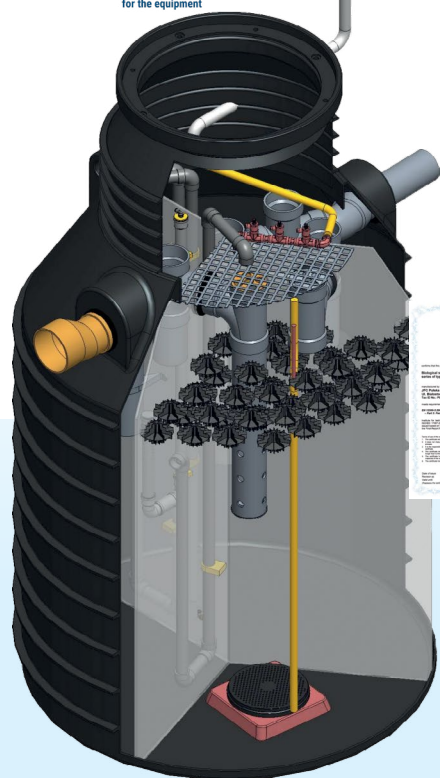
- Tank (s) with superstructure (s) and cover (s)
- Set of tank internal equipment
- Free-standing control cabinet with equipment

NUMBER OF USERS (MAX PEOPLE)	NUMBER OF TANKS	TANK CAPACITY (DM <sup>3</sup> )	SETTLING TANK CAPACITY (DM <sup>3</sup> )	DIAMETER OF SEWAGE CONNECTIONS (MM)	INSPECTION HATCH (MM)	SEWAGE DOSAGE	RECIRCULATION	PRODUCT CODE
4	1 X WWT-01	2000	1000	110/160	600	YES	YES	A 1
4	1 X WWT-02	3400	1700		600			A 2
4	2 X WWT-01	4000	2000		2X600			A 3
4-6	1 X WWT-02	3400	1700		600			A 5
4-6	2 X WWT-01	4000	2000		2X600			A 6

NOTE We also offer wastewater treatment plants in sizes exceeding the above-presented type of series - the plants may be used by 1 to 50 people. Please contact the JFC sales department in this regard.



# HYDRO-CYCLE Household Sewage Treatment Plant



The Hydro-cycle household sewage treatment plant is one of the few systems on the market that, thanks to its innovative design based on no advanced automation solutions, guarantees high efficiency of sewage treatment and minimal impact on the environment, which is confirmed by the results of tests on compliance with the 12566-3 standard. A special self-cleaning fluidized bed was used in the treatment plants, combining the features of the active sludge and biological bed technologies often used in collective treatment plants. It is a three-chamber system that does not require constant, specialized maintenance, as in the case of the systems using activated sludge only, therefore it is an ideal solution for areas without underground infrastructure. The system allows the selection of the optimum size of the treatment plant, depending on the plot area and preferences as to the frequency of sludge removal, and thus the amount of operating expenses incurred. The optional equipment of the treatment plant is a chemical module for further reduction of pollutants, in particular nitrogen and phosphorus.

## Advantages

- Very high treatment efficiency
- High resistance to variability of concentration and amount of incoming sewage
- Solid, durable structure of the tank made of polyethylene
- No need for professional knowledge to operate
- Easy access to each of the chambers
- External cabinet with a base - protection of electrical devices
- Possibility to remove the diffuser without emptying the treatment plant
- Low failure rate - simple construction without advanced automation
- Possibility to choose the size of the system
- Possibility of expanding with a chemical module
- Access to factory service
- Possibility to choose the colour of the cover

## The HYDRO-CYCLE set consists of:

- Tank (s) with superstructure (s) and cover (s)
- Set of tank internal equipment
- Cabinets with equipment



NUMBER OF USERS (MAX PEOPLE)	NUMBER OF TANKS	TANK CAPACITY (DM <sup>3</sup> )	SETTLING TANK CAPACITY (DM <sup>3</sup> )	DIAMETER OF SEWAGE CONNECTIONS (MM)	INSPECTION HATCH (MM)	SEWAGE DOSAGE	RECIRCULATION	PRODUCT CODE
do 4	1 X WWT-01	2000	600	110/160	600	YES	YES	HC 1
4-6	1 X WWT-02	3400	2000		600			HC 2
4-6	2 X WWT-01	4000	2600		2X600			HC 3
7-8	1 X WWT-02	3400	1000		600			HC 4
8-10	2 X WWT-01	4000	2000		2x600			HC 5
10-15	2 X WWT-02	6800	3400		2X600			HC 6

NOTE We also offer wastewater treatment plants in sizes exceeding the above-presented type of series - the plants may be used by 1 to 50 people. Please contact the JFC sales department in this regard.



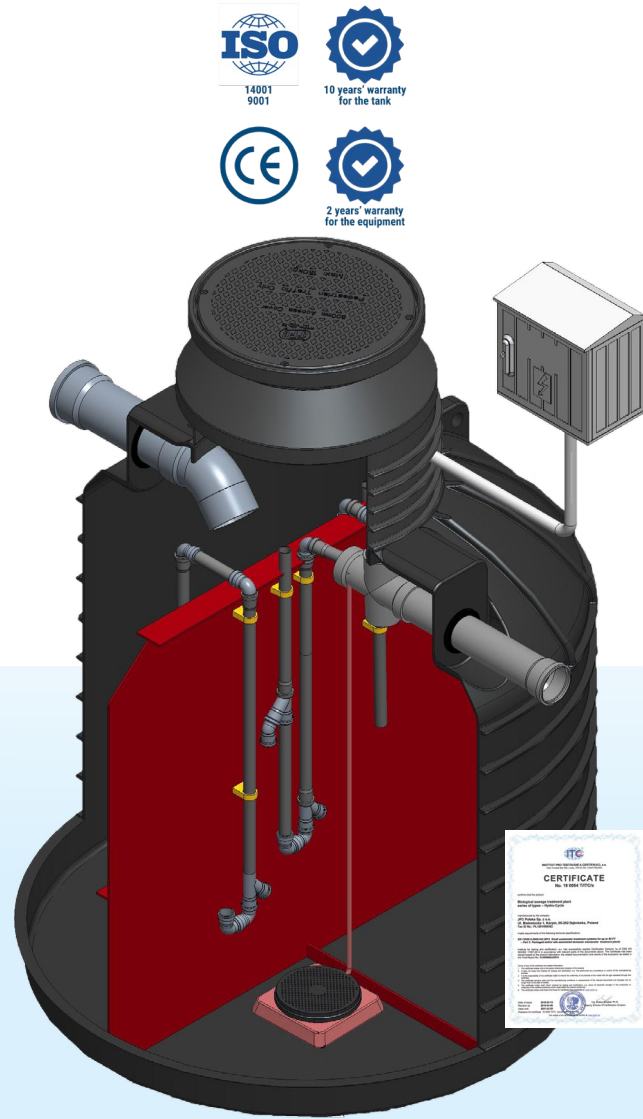
# HYDRO Household Sewage Treatment Plant

The Hydro household sewage treatment plant is a two-chamber system consisting of a primary settling tank and a biological reactor. Hydro works in the SBR technology - it ensures high treatment efficiency and low operating costs. The Hydro system is an ideal solution for detached houses, small businesses, guesthouses, small hotels. The wastewater treatment process is controlled automatically. The plant controller has and performs the following functions:

- Automatic holiday function
- Dispensing of sewage from the settling tank to the reactor
- Recirculation of sewage from the reactor to the settling tank
- Aeration of sewage in the reactor
- Pumping of treated sewage from the treatment plant
- Automatic switching of the controller to the holiday operation mode
- Automatic transition to normal operation after a holiday period
- Internal buzzer indicating alarm states, breakdown, no power supply

## SBR technology

The SBR technology relies on treating the incoming sewage in portions. The process of treating each portion of sewage takes place in several-hour cycles, divided into five phases. Aeration is performed by an air pump that produces compressed air evenly. The air pump and control systems are located in the control cabinet. This ensures quiet operation of the treatment system, easy access to individual components and it facilitates assembly. The control system is ready for connection - just insert the plug. Works in automatic mode. All parameters are already set.



## Advantages:

- The latest and most modern technology
- Low operating cost – very low electricity consumption
- Access to each of the chambers through an independent extension with a cover
- Outdoor electrical cabinet – protection and safety
- Possibility to remove the diffuser without emptying the treatment plant
- High degree of maintenance-free due to process automation
- Resistance to flow irregularities
- Possibility to choose the size of the system
- Possibility of expanding with a chemical module
- Access to factory service
- Possibility to choose the colour of the cover

NUMBER OF USERS (MAX PEOPLE)	NUMBER OF TANKS	TANK CAPACITY (DM <sup>3</sup> )	SETTLING TANK CAPACITY (DM <sup>3</sup> )	DIAMETER OF SEWAGE CONNECTIONS (MM)	INSPECTION HATCH (MM)	SEWAGE DOSAGE	RECIRCULATION	PRODUCT CODE
do 4	1 X WWT-01	2000	1000	110/160	600	YES	YES	H 1
do 4	1 X WWT-02	3400	1700		600			H 2
do 4	2 X WWT-01	4000	2000		2X600			H 3
5-6	1 X WWT-02	3400	1700		600			H 5
5-6	2 X WWT-01	4000	2000		2x600			H 6
7-8	2 X WWT-02	6800	3400		2X600			H 8

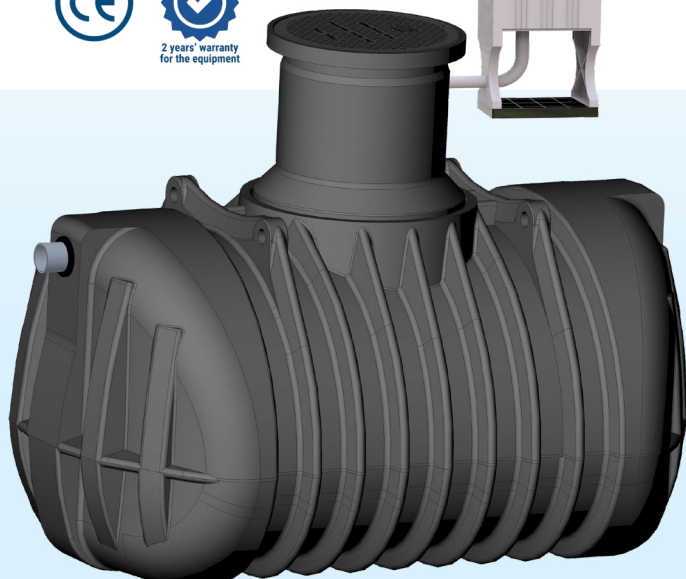
NOTE We also offer wastewater treatment plants in sizes exceeding the above-presented type of series - the plants may be used by 1 to 50 people. Please contact the JFC sales department in this regard.



# AQUACLEAN Household Sewage Treatment Plant



We created the Aquaclean household sewage treatment plant to meet our customers' needs. It is simple to assemble, environmentally and budget friendly. The Aquaclean household sewage treatment plant is a two-chamber SBR system that is an ideal solution for owners of small plots.



## Advantages

- The system guarantees extremely high reduction of contaminants,
- One two-chamber tank with the possibility of non-welded partition, superstructure, cover and control box,
- Intelligent control of the treatment plant,
- Low operating cost,
- Simple installation – low tank

## The set consists of:

- Tank (s) with superstructure (s) and cover (s)
- Set of tank internal equipment
- Cabinet with equipment

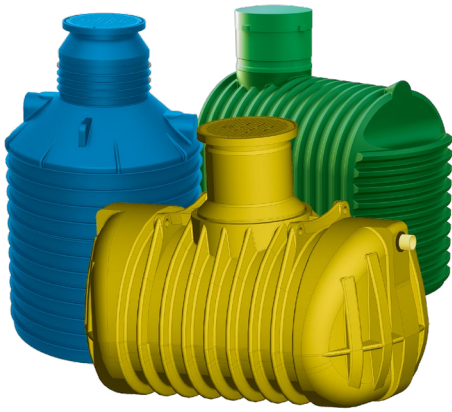


NUMBER OF USERS (MAX PEOPLE)	NUMBER OF TANKS	TANK CAPACITY (DM <sup>3</sup> )	SETTLING TANK CAPACITY (DM <sup>3</sup> )	DIAMETER OF SEWAGE CONNECTIONS (MM)	INSPECTION HATCH (MM)	SEWAGE DOSAGE	RECIRCULATION	PRODUCT CODE
4-6	1 X WWTH3000	1500	1500	110/160	600	YES	YES	AC 6
6-7	1 X WWTH5000	2200	2200		600			AC 10

NOTE We also offer wastewater treatment plants in sizes exceeding the above-presented type of series - the plants may be used by 1 to 50 people. Please contact the JFC sales department in this regard.



# Septic tanks



Septic tanks are used to treat raw domestic wastewater to a level that is suitable for aerobic treatment in the ground. The sludge separation and fermentation process with the help of anaerobic bacteria takes place in the septic tank. The pollutants separate into solid parts that fall to the bottom of the tank, a light substance that floats on the surface of the wastewater in the form of a blanket, and substances that dissolve in water. In addition, a special filter is involved in the treatment process, which is designed to filter the liquid that flows from the septic tank into the distribution well. The sizes of the septic tanks are listed in the table

## Advantages

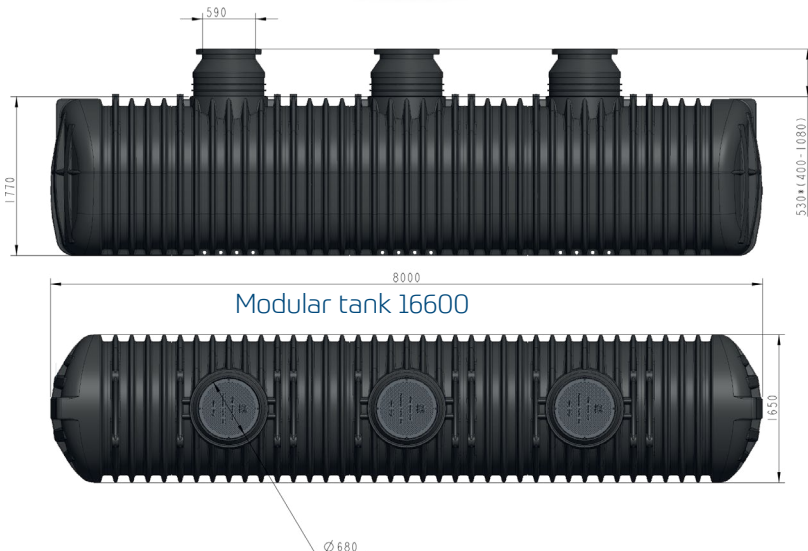
- Certificate of compliance with the EN 12566-1 standard
- Easy assembly - compact housing
- Solid, durable construction made of polyethylene
- No need for professional knowledge to operate
- Easy access - cover 600mm
- Inlet and outlet DN110 / 160
- Easy removal of the filter without interfering with other elements of the settling tank equipment
- Possibility to choose the colour of the cover

TANK CAPACITY (DM <sup>3</sup> )	PARTITION	FILTRATION BASKET	FILTER FILLING	PRODUCT CODE
4850	YES, PARTIAL	YES	YES	WWTH5000
3400	YES, PARTIAL			SEPT3400
3100	YES, PARTIAL			OSG3000
3000	YES, PARTIAL			WWTH3000
2000	YES, PARTIAL			SEPT2000
3000	YES, PERFORATED			WWTH3000-2
4850	YES, PERFORATED			WWTH5000-2

## System of modular underground tanks



The modular system allows you to adjust the capacity even up to 12600l. On the basis of modular tanks, rainwater tanks, sewage treatment plants, septic tanks, separators, and septic tanks can be produced.

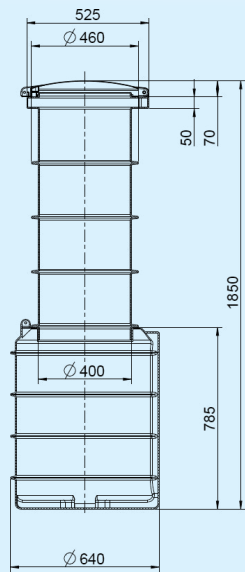


TANK CAPACITY (DM <sup>3</sup> )	LENGTH (MM)	WIDTH (MM)	HEIGHT (MM)
6500	3260	1650	1770
8000	3980	1650	1770
9000	4510	1650	1770
10700	5250	1650	1770
12400	6000	1650	1770
13200	6500	1650	1770
15000	7300	1650	1770
16600	8000	1650	1770



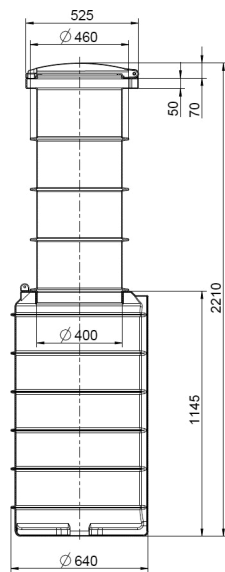
# Small tanks

Capacity range: 150l- 600l. JFC offers a wide range of tanks for various purposes. They are ideal for use as water storage units, pumping station sumps, water meter wells. JFC tanks are manufactured by rotational moulding of polyethylene.



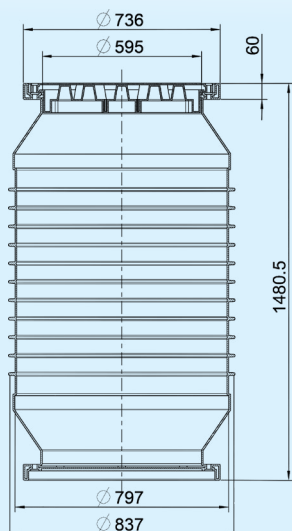
**PS150 TANK**

Chamber capacity [l]	150
Total capacity [l]	280
Diameter [mm]	640
Chamber height [mm]	785
Standard height [mm]	1850
Maximum height [mm]*	2900
Manhole [mm]	400



**PS300 TANK**

Chamber capacity [l]	300
Total capacity [l]	430
Diameter [mm]	640
Chamber height [mm]	1150
Standard height [mm]	2110
Maximum height [mm]*	3150
Manhole [mm]	400



**PS500 TANK**

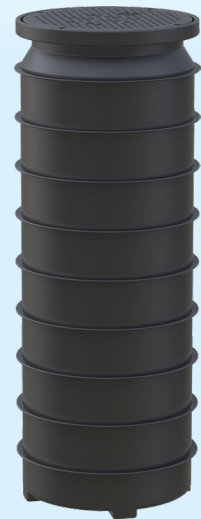
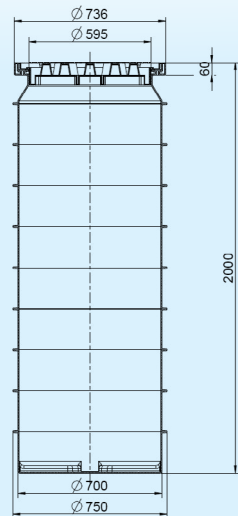
Capacity [l]	600
Diameter [mm]	837
Height [mm]	1480
Manhole [mm]	590
Cover [mm]	DN600

\* it is possible to order a special, extended superstructure

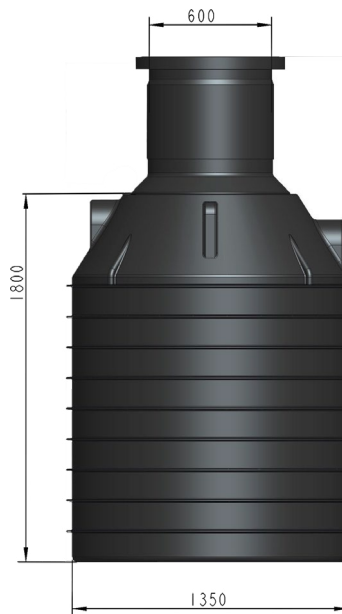
# Medium and large tanks

Capacity range: 700l - 4800l. The unique design of the JFC tanks makes it possible to get a large tank capacity. The design makes them stronger than fibreglass tanks. The handles make the installation of large JFC tanks faster, easier and safer.

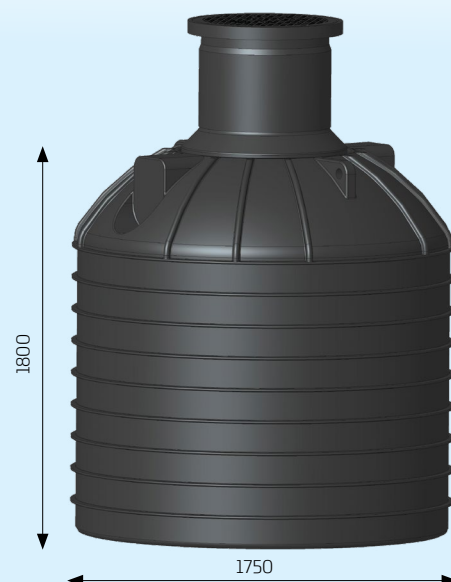
PS700 TANK	
Capacity [l]	700
Diameter [mm]	750
Height [mm]	2000
Manhole [mm]	590
Cover [mm]	DN600



WWT-01 TANK	
Chamber capacity [l]	2275
Capacity up to the outlet [l]	2060
Diameter [mm]	1350
Chamber height [mm]	1800
Standard height [mm]	2475 <sup>1)</sup> 2330 <sup>2)</sup>
Maximum height [mm]*	2875 <sup>1)</sup> 2600 <sup>2)</sup>
Manhole [mm]	590
Cover [mm]	DN600



WWT-02 TANK	
Chamber capacity [l]	3780
Capacity up to the outlet [l]	3470
Diameter [mm]	1750
Chamber height [mm]	1800
Standard height [mm]	2475 <sup>1)</sup> 2330 <sup>2)</sup>
Maximum height [mm]*	2875 <sup>1)</sup> 2600 <sup>2)</sup>
Manhole [mm]	590
Cover [mm]	DN600

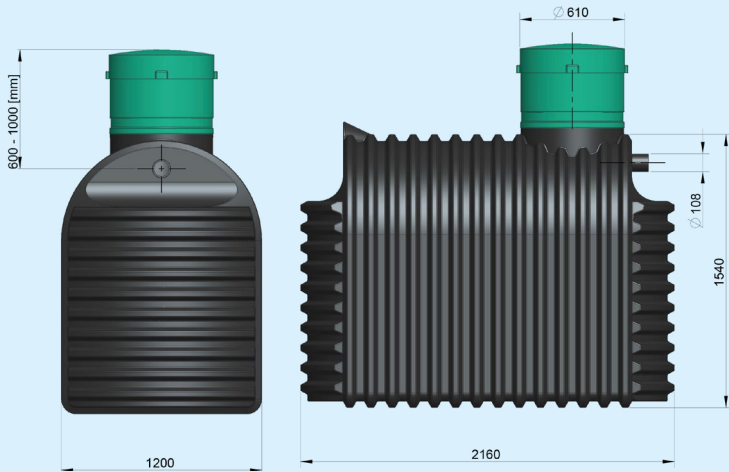


<sup>1)</sup>with a ribbed superstructure <sup>2)</sup>with telescopic superstructure (optional)



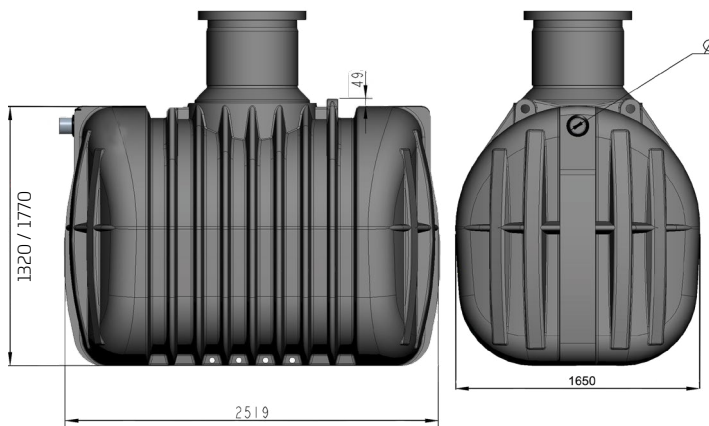
# Medium and large tanks

Based on the type of series of these tanks, JFC Poland produces septic tanks, biological treatment plants, and rainwater tanks. They are also ideal for collecting wastewater, i.e. for use as non-flow and flow-through tanks, the installation of which is easier due to their low weight - no heavy and expensive machinery is required.



## OS3000 TANK

Chamber capacity [l]	3370
Capacity to the outlet [l]	3100
Width [mm]	1200
Length [mm]	2160
Minimum height [mm]	2100
Maximum height [mm] *	2400
Manhole [mm]	610



\*it is possible to order a special, extended superstructure

WWTH TANK	3000	5000
Chamber capacity [l]	3300	4800
Capacity to the outlet [l]	3000	4500
Width [mm]	1650	2519
Length [mm]	1320	1770
Minimum height [mm]	1995 <sup>1)</sup> 1850 <sup>2)</sup>	2445 <sup>1)</sup> 2300 <sup>2)</sup>
Maximum height [mm] *	2395 <sup>1)</sup> 2120 <sup>2)</sup>	2845 <sup>1)</sup> 2570 <sup>2)</sup>
Manhole [mm]	DN400/600	DN400/600

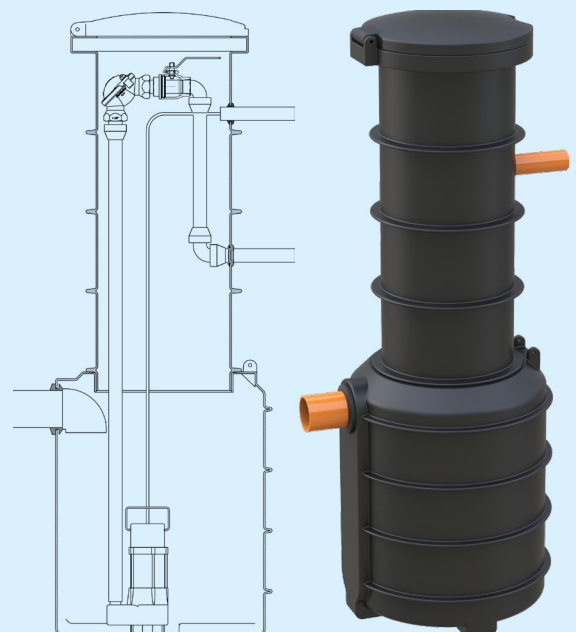
# Pumping stations

Pumping stations are used wherever it is not possible to provide gravity flow. JFC Poland manufactures pumping stations for raw and treated wastewater.

## Advantages

- Certificate of compliance with EN 12050-1 and 12050-2
- Solid durable structure of the tank made of polyethylene
- Cover accessible in black or green

TANK PRODUCT CODE	SYSTEM CAPACITY [dm <sup>3</sup> ]
PS150	150
PS300	300
PS500	600
PS700	700
WWT-01	2000
WWT-02	3400



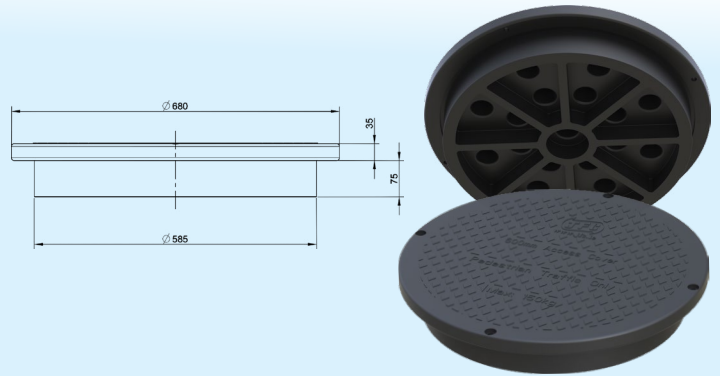
<sup>1)</sup>with a ribbed superstructure <sup>2)</sup>with telescopic superstructure (optional)

# Accessories

The accessories offered by JFC Poland include: distribution chambers, drainage chambers, covers, tank superstructures and absorption wells.

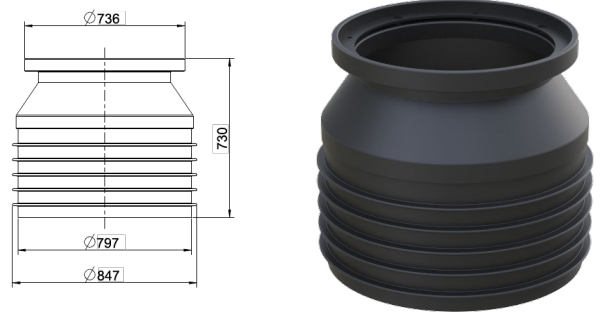
## WWT-L COVER

Diameter [mm]	680
Height [mm]	110
Manhole [mm]	590
Load capacity [kg]	150



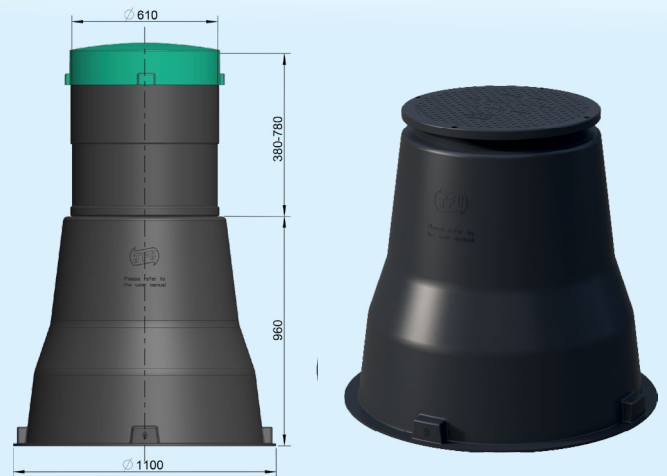
## WWT-R/WWT-DR

Diameter [mm]	847
Height [mm]	730/1480
Manhole [mm]	590



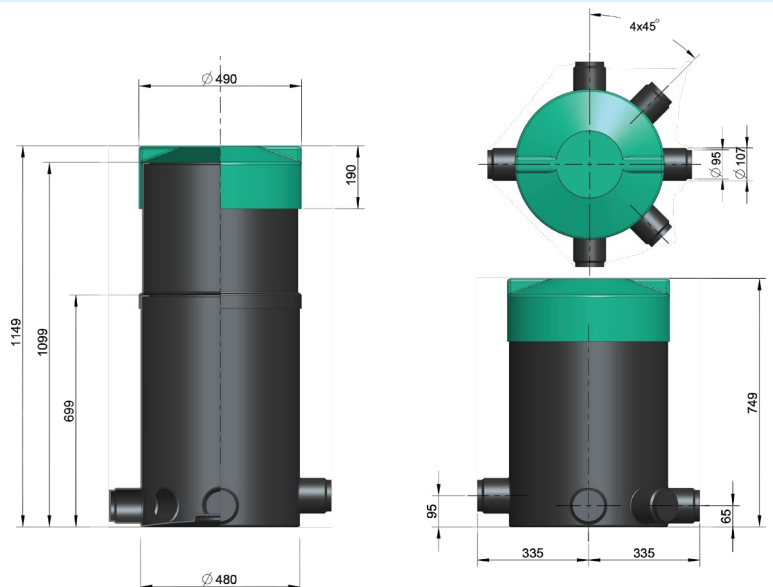
## DW600 ABSORPTION WELL

Diameter [mm]	1100
Height [mm]	1010
Manhole [mm]	600
Cover	DN610



## DISTRIBUTION CHAMBER

	MODEL SR 750	MODEL SR 1150
Number of outputs	5	5
Diameter [mm]	480	480
Height [mm]	749	1149
Opening (mm)	425	425
Cover	DN490	DN490





# Traditional treatment plants

Traditional treatment plants offered by JFC consist of a septic tank with a drainage system. The septic tanks are designed to remove suspensions from household wastewater from residential buildings, using the processes of sedimentation, flotation and filtration as well as fermentation of sludge formed from retained suspensions. Then, the wastewater, after preliminary treatment in the septic tank, is directed to the system of drains, i.e. perforated pipes laid in the ground, and drained into the ground. As they flow through its layers, biological processes take place in them causing further purification under aerobic conditions.

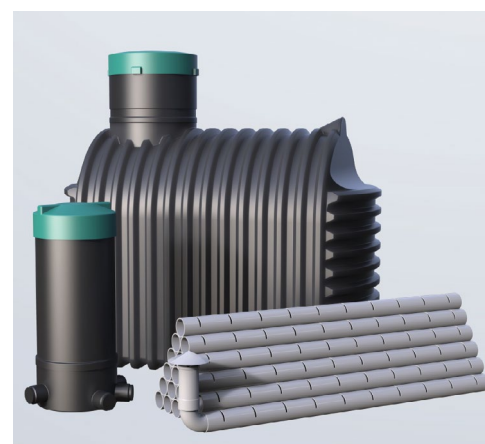
EXAMPLES OF SETS OF EQUIPMENT			
NAME OF SET:	OSG-DR4	OSG-DR6	OSG-DR8
Septic tank	Septank 2000	Septank 3000	Septank 3000
Connection of the settling tank with the distribution well	PVC pipe 100x2.2x2000mm (1 pc.)	PVC pipe 100x2.2x2000mm (1 pc.) 110 double socket coupling (1 pc.)	PVC pipe 100x2.2x2000mm (1 pc.) 110 double socket coupling (1 pc.)
Distribution chamber	1 pc.	1 pc.	1 pc.
Distribution cables	PVC pipe 110x2.2x2000mm (2 pcs.), Elbow PP 110/90 (2 pcs)	PVC pipe 110x2.2x2000mm (2 pcs.), Elbow PP 110/90 (2 pcs)	PVC pipe 110x2.2x2000mm (2 pcs.), PVC pipe 110x2.2x1000mm (2 pcs.), Knee PP 110/90 (2 pcs.), Elbow PP 110/45 (2 pcs)
Infiltration cables	PVC pipe 110x2.2x2000mm (20 pcs.)	PVC pipe 110x2.2x2000mm (30 pcs.)	PVC pipe 110x2.2x2000mm (40 pcs.)
Connection of infiltration pipes with ventilation fireplaces	PP 110/90 elbow (3 pcs.), PVC pipe 110x2,2x2000mm (3 pcs)	PP 110/90 elbow (3 pcs.), PVC pipe 110x2,2x2000mm (3 pcs)	PP 110/90 elbow (3 pcs.), PVC pipe 110x2,2x2000mm (3 pcs)
Ventilation chimney 110/315 mm	3 pcs.	3 pcs.	4 pcs.
Geotextiles	40 lm	60 lm	80 lm



SYSTEM



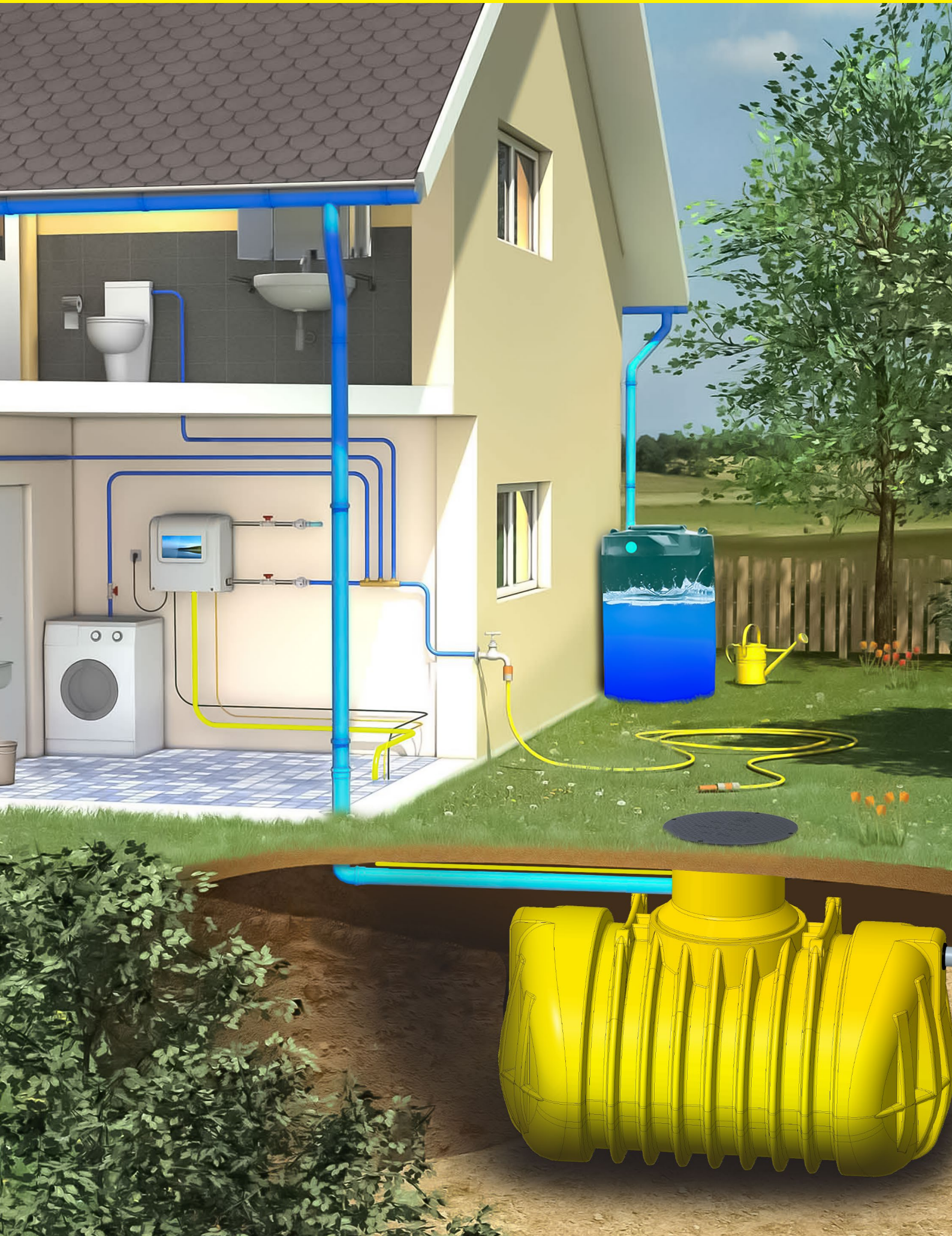
OSG-DR4



OSG-DR6/DR8



# WATER HARVESTING







JFC Poland rainwater tanks will serve you for many years. High-quality materials used for their production guarantee resistance to time, UV and harsh weather conditions. The slim line tanks are stable, practical, and adjustable due to their shapes.

- We select the capacity of the tank taking into account:
  - the size of the precipitation collection area;
  - the purposes for which the water will be used;
- Account should also be taken of:
  - the precipitation value for the region concerned;
  - the type of material from which the catchment area is made (the area that collects precipitation);

Ask our representative for details or use our rainwater calculator on our website: [www.jfcpolska.pl](http://www.jfcpolska.pl)



## Advantages



Resistance to low temperatures;



Material with increased resistance to UV radiation;

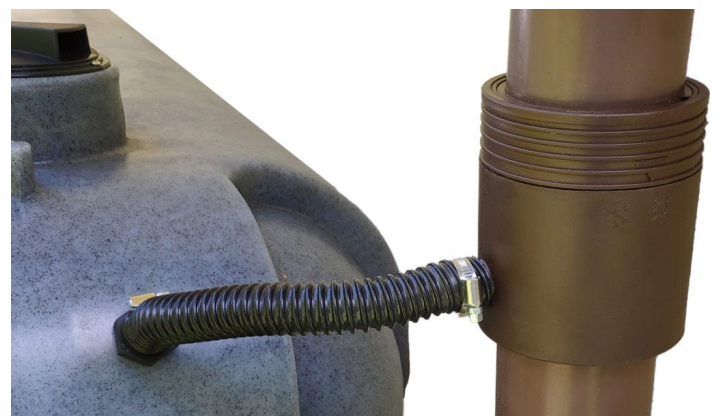


A monolithic polyethylene tank in combination with a gutter collector, filter and tap form a closed system. Rainwater is harvested from the roof through a gutter system to a water collector, and then fed through a drain pipe to the tank. The excess water flows down the gutter. Water distribution is carried out using a tap mounted at the bottom of the tank. It is possible to install a submersible pump.

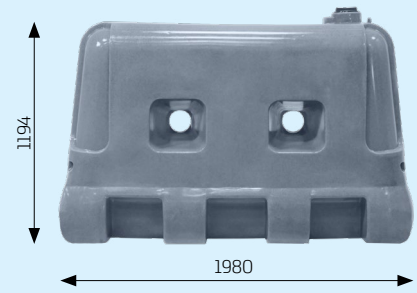
Available colours



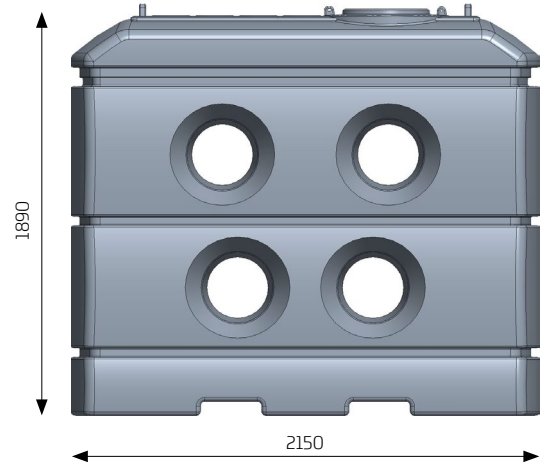
Rainwater harvesting system



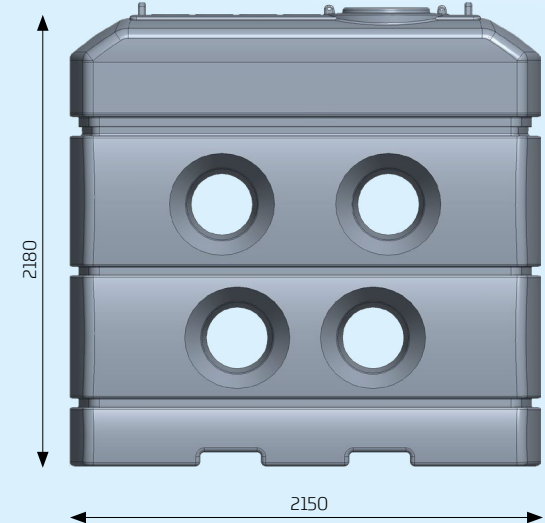
WR-1100 SLIM TANK	
Capacity [L]*	1100
Length / diameter [mm]	1980
Width [mm]	700
Height [mm]	1194



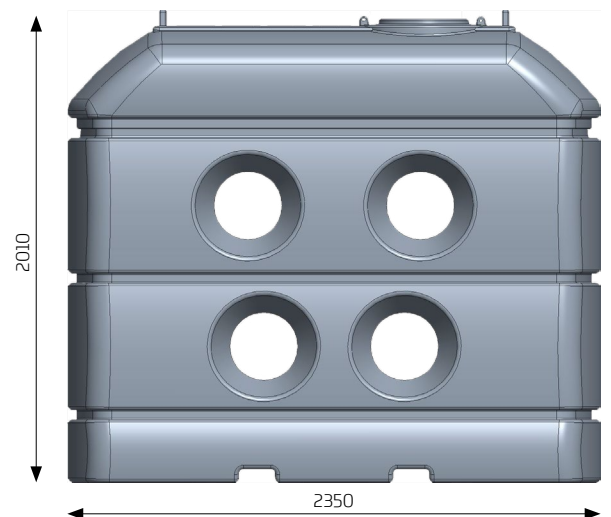
WR-2500 SLIM TANK	
Capacity [L]*	2500
Length / diameter [mm]	2150
Width [mm]	820
Height [mm]	1890



WR-2800 SLIM TANK	
Capacity [L]*	2800
Length / diameter [mm]	2150
Width [mm]	820
Height [mm]	2180



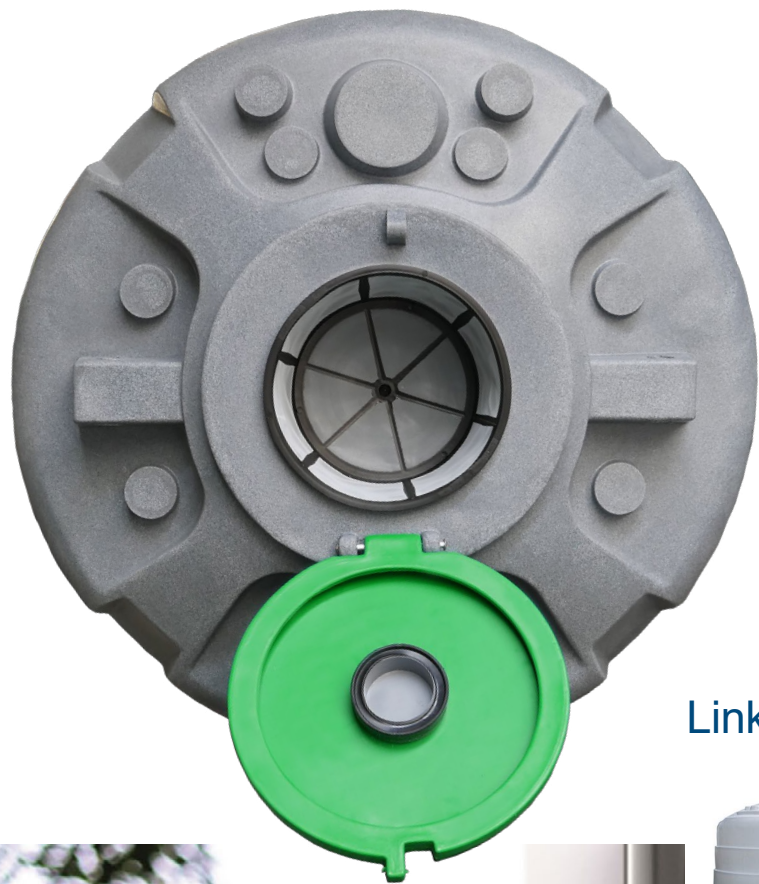
WR-3600 SLIM TANK	
Capacity [L]*	3500
Length / diameter [mm]	2350
Width [mm]	995
Height [mm]	2010



SLIM LINE

\*The tank symbol is not the same as its capacity. The capacity of the tank depends on the location of the overflow hole





JFC Poland rainwater tanks from the Classic line have round bases which enable large capacities (1300 - up to 5000 L). It is possible to install a submersible pump (option). To install a filter screen (option) if the feed is at the top you need to have an additional overflow. A Classic series tank is equipped with:

- a connection set with a diameter of 50 mm, 2m long;
- a trough picker, sizes 90, 100, or 110 to choose from;
- a discharge nut, and a drain plug 1";

Available Colours



Linking multiple tanks in a series possible

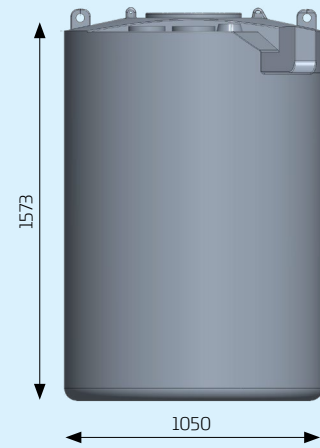


Surface  
Garden  
Irrigation

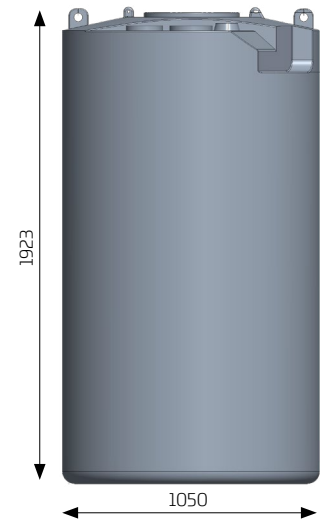
WR- 2500 tanks



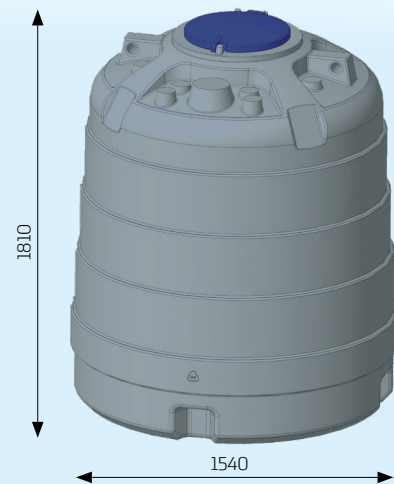
WR-1300 TANK	
Capacity [L]*	1300
Length / diameter [mm]	1050
Width [mm]	1050
Height [mm]	1573



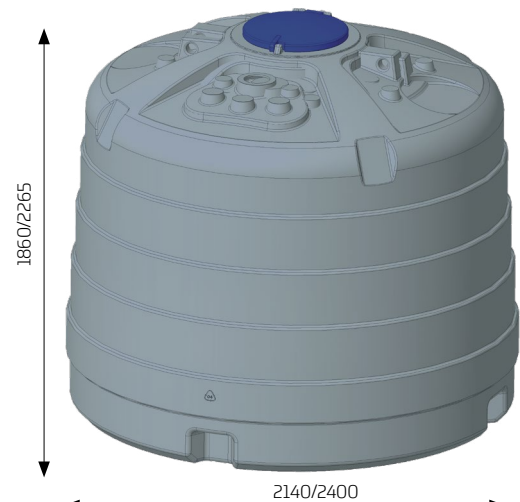
WR-1600 TANK	
Capacity [L]*	1580
Length / diameter [mm]	1050
Width [mm]	1050
Height [mm]	1923



WR-2500 TANK	
Capacity [L]*	2500
Length / diameter [mm]	1540
Width [mm]	1540
Height [mm]	1810



WR 5000/9000 TANK	5000	9000
Capacity [L]*	5000	9000
Length / diameter [mm]	2140	2400
Width [mm]	2140	2400
Height [mm]	1860	2265



CLASSIC LINE

\*The tank symbol is not the same as its capacity. The capacity of the tank depends on the location of the overflow hole



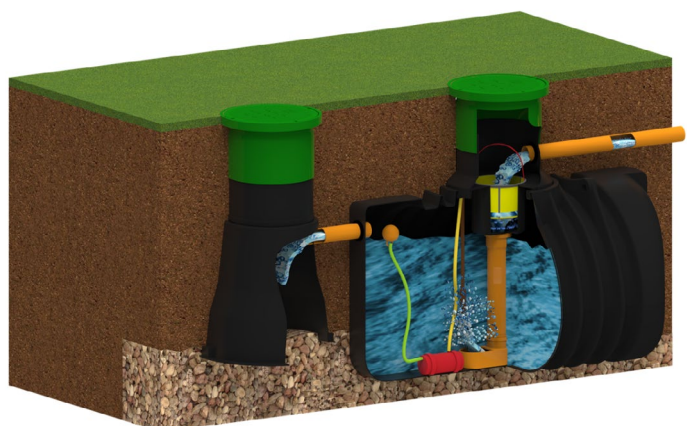
# SUB-SURFACE GARDEN IRRIGATION SYSTEM



Rainwater is harvested from the roof through a gutter system to a water collector, and then fed through a drain pipe to the tank. The water is cleaned on a basket filter and then flows by gravity to the tank through an anti-agitation siphon. Thanks to a pump, the water distribution system allows you to water the garden using a garden hose. A switch inside the pump starts or stops the pump automatically when a tap is opened or closed. The system can feed the sprinkler system – it will start when the valve of a given section is opened. The JFC Poland rainwater tank used in the Sub-surface Garden Irrigation Systems meets the requirements of the “My Water” programme and has the National Technical Assessment of the Building Research Institute, necessary to obtain funding.

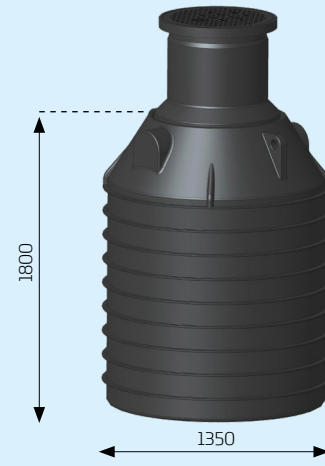
## ADVANTAGES

- Designed for approx. 500/700 m<sup>2</sup> of garden area with a minimum of 70/100 m<sup>2</sup> of roof area;
- With the right accessories, you can connect the tank to the water supply system;
- Excess water can be drained using an absorbing well – OPTION

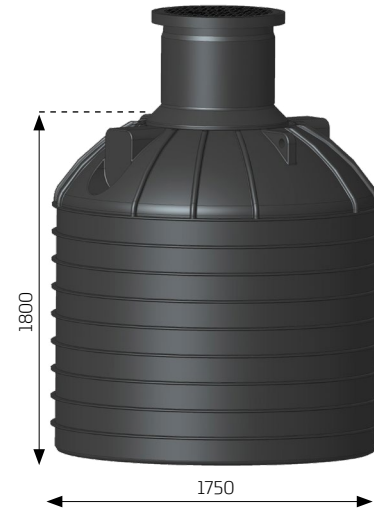




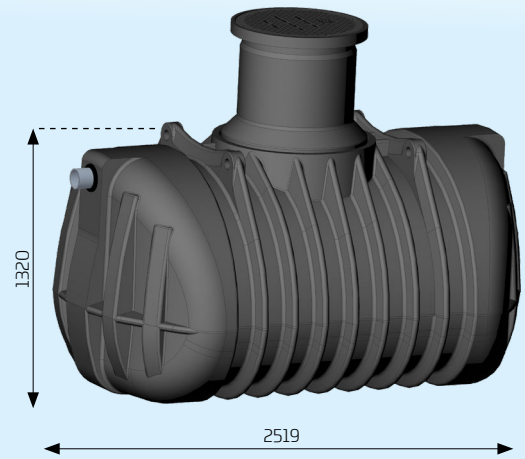
WR-01 TANK	
Capacity [L]*	2275
Length / diameter [mm]	1350
Width [mm]	1350
Height [mm]	1800



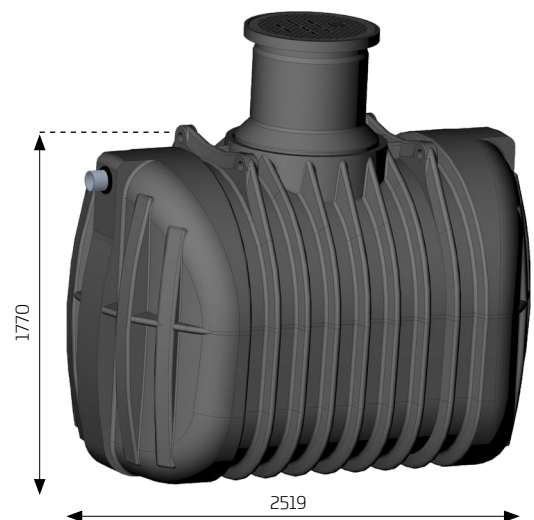
WR-3400 TANK	
Capacity [L]*	3780
Length / diameter [mm]	1750
Width [mm]	1750
Height [mm]	1800



WR-3000 TANK	
Capacity [L]*	3370
Length / diameter [mm]	2519
Width [mm]	1650
Height [mm]	1320



WRH-5000 TANK	
Capacity [L]*	4800
Length / diameter [mm]	2519
Width [mm]	1650
Height [mm]	1770



\*The tank symbol is not the same as its capacity. The capacity of the tank depends on the location of the overflow hole



**POLSKA**



**ISO 9001**

LL-C (Certification)



**ISO 14001**

LL-C (Certification)

[www.jfcpolska.pl](http://www.jfcpolska.pl)

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