Made in Georgia

Biotop

Product Catalog

Biotop

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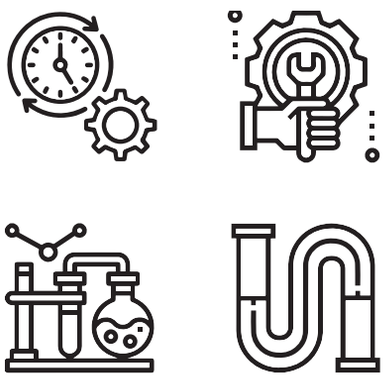
Autonomous sewage system BIOTOP

The Polymer Group company is the first enterprise of modern standard in Georgia, producing various products from polyethylene and polypropylene.



Polyethylene has a number of advantages:

Long service life,

Chemical resistance,

Repairability,

Simplicity of installation.

The Polymer Group company is the first enterprise of modern standard in Georgia, producing various products from polyethylene and polypropylene. The company's goal is to make a significant contribution to ecology and maintain a healthy environment for the country.

The company can produce both serial equipment and equipment of varying technical complexity, adapted to individual projects.

Biotop

The production area is located on 4500 m^2. The company had 30 highly qualified employees.

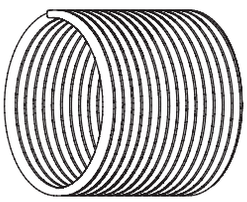
The company can produce both serial equipment and equipment of varying technical complexity, adapted to individual projects.

Spiral twisted pipes (SVT) BIOTOP

Dimensions: diameter, mm ID: 600–2400
Connections: butt welding, on pipe threads (with sealing), with using a heat-shrinkable (heat-casing) clutch
Scope of application: waste water
Ring stiffness: SN2, SN4, SN6, SN8, SN10, SN12, SN16

Spiral twisted pipes (SVT) BIOTOP are made of polyethylene, with hollow wall spiral profile, intended for household sewerage and underground drainage networks (sewerage gravity and drainage systems), as well as for the removal of other liquid and gaseous substances to which the pipeline material is chemically resistant: to permanent wastewater with maximum temperatures up to 40°C and to short-term effluents with maximum temperatures up to 80°C.

Inner Diameter		Profile, weight in meter, outer diameter according to SN					
		SN2	SN4	SN6	SN8	SN12	SN16
600	Profile (mm)	25*32*3.5	25*32*3.5	39*52*3.5	39*52*3.5	39*52*3.7	39*52*3.7
	Weight in meter kg/m	14 kg	16.5 kg	26 kg	37 kg	42 kg	46 kg
	Outside diameter	650 mm	650 mm	678 mm	678 mm	678 mm	688 mm
800	Profile (mm)	39*52*4.5	39*52*4.5	44*60*4.5	50*68*4.5	56*75*5.2	62*85*5.7
	Weight in meter kg/m	29 kg	35 kg	48 kg	53 kg	67 kg	73 kg
	Outside diameter	878 mm	878 mm	888 mm	900 mm	912 mm	924 mm
1000	Profile (mm)	44*60*5.0	50*68*5.0	56*75*5.0	62*85*5.3	70*91*6.4	70*91*7.3
	Weight in meter kg/m	55 kg	56 kg	57 kg	62 kg	78 kg	95 kg
	Outside diameter	1088 mm	1100 mm	1112 mm	1124 mm	1140 mm	1140 mm
1200	Profile (mm)	50*68*5.0	62*85*5.0	70*91*5.8	70*91*6.5	87*120*7.1	87*120*9.5
	Weight in meter kg/m	49 kg	60 kg	76 kg	86 kg	100 kg	130 kg
	Outside diameter	1300 mm	1324 mm	1340 mm	1340 mm	1374 mm	1374 mm
1400	Profile (mm)	56*75*5.3	70*91*6.4	87*120*7.5	87*120*8.4	110*110*7.8	110*110*9.5
	Weight in meter kg/m	62 kg	72 kg	87 kg	98 kg	120 kg	138 kg
	Outside diameter	1512 mm	1540 mm	1574 mm	1574 mm	1620 mm	1620 mm
1500	Profile (mm)	62*85*5.2	87*120*6.5	87*120*6.7	95*130*7.7	110*110*8.3	120*120*11.5
	Weight in meter kg/m	75 kg	91 kg	113 kg	142 kg	203 kg	252 kg
	Outside diameter	1624 mm	1674 mm	1674 mm	1690 mm	1720 mm	1720 mm
1600	Profile (mm)	70*91*5.7	87*120*6.8	87*120*9.0	95*130*10	110*110*10.6	120*120*14
	Weight in meter kg/m	100 kg	120 kg	140 kg	215 kg	266 kg	335 kg
	Outside diameter	1740 mm	1774 mm	1774 mm	1790 mm	1820 mm	1840 mm
1800	Profile (mm)	87*210*6.5	87*120*7	110*110*6.9	120*140*9.5	130*155*11	150*150*13.5
	Weight in meter kg/m	122 kg	172 kg	242 kg	306 kg	351 kg	392 kg
	Outside diameter	1974 mm	1974 mm	2020 mm	2040 mm	2060 mm	2100 mm
2000	Profile (mm)	87*120*6.6	110*110*7	120*140*10	130*155*11	150*175*12	150*150*15.5
	Weight in meter kg/m	150 kg	270 kg	308 kg	422 kg	436 kg	462 kg
	Outside diameter	2174 mm	2220 mm	2240 mm	2260 mm	2300 mm	2300 mm
2200	Profile (mm)	87*120*6.6	120*140*9.5	130*155*11	150*175*14	160*180*15.5	—
	Weight in meter kg/m	220 kg	302 kg	346 kg	435 kg	489 kg	—
	Outside diameter	2374 mm	2440 mm	2460 mm	2500 mm	2520 mm	—
2300	Profile (mm)	120*140*9.5	130*155*10.5	150*175*14	160*180*15.5	160*180*17	—
	Weight in meter kg/m	315 kg	337 kg	417 kg	477 kg	560 kg	—
	Outside diameter	2540 mm	2560 mm	2600 mm	2620 mm	2620 mm	—
2400	Profile (mm)	110*110*9	130*155*11	130*155*16	150*175*14	160*180*18	—
	Weight in meter kg/m	325 kg	376 kg	45 kg	515 kg	558 kg	—
	Outside diameter	2620 mm	2660 mm	2660 mm	2700 mm	2720 mm	—



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Any design and construction company can contact our design department for selection of technical characteristics, calculation slabs, selection of pumping equipment, development of structural drawings and many other technical issues.

Septic tanks - biological treatment stations Biotop

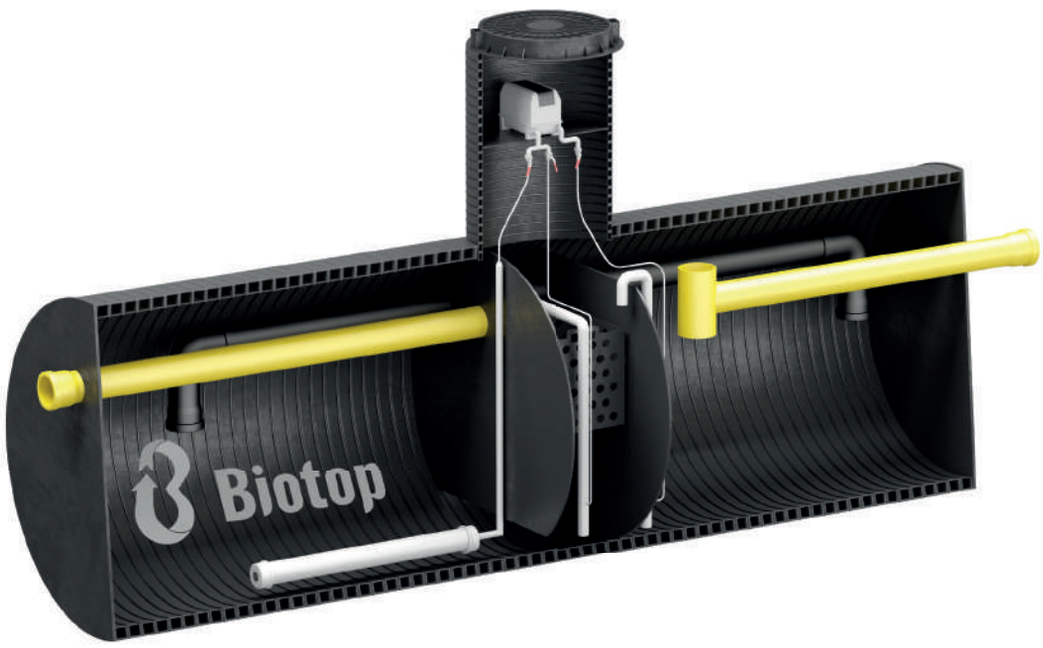
Biotop biological treatment station is used to collect and treatment of domestic wastewater from individual residential buildings, cottages, low-rise buildings in the absence of a centralized sewerage systems. Wastewater treated at the station can be drain into the ground, into drainage ditches, drainage systems.

The system complies with all environmental safety standards and does not releases harmful emissions into the atmosphere and soil.

- The Biotop station operates in fully automatic mode with pre-denitrification technology.
- Wastewater enters the receiving chamber, which acts as denitrifier and equipped with a removable basket for collecting large household waste.
  Next, the water enters the aerobic aeration unit - the active biomass nitrifier, in which organic matter is oxidized substances and the process of nitrification occurs.

The aerobic unit is equipped with a tubular aerator to maintain the required level of dissolved oxygen in water.
All fluid circulation at the station is carried out using air ducts Air recirculation (eng. airlift) - a type jet pump.

Consists of:
- From a vertical pipe, into the lower part, immersed in liquid is pumped under pressure (using a compressor) gas (oxygen).
- The emulsion formed in the tube (a mixture of liquid and bubbles), rises due to the difference in specific gravity emulsions and liquids.



The use of air ducts allows pumping small volume of liquid into the air distribution device by volume control using a valve.
At the third stage, the water enters the secondary settling tank, where biomass settles as sediment under the influence of gravity, and biologically purified water flows out of the system.
Two airlift systems provide recirculation of sediment and nitrate mixtures in the system.

The station operates in automatic mode and is equipped with only one compact well, which allows for complete service.

After cleaning in a secondary settling tank, depending on requirements, additional cleaning and disinfection of wastewater can be carried out water
Additional cleaning can be done using ultraviolet lamp (not included in delivery).

Table of technical data

Name Biotop	Biotop-4	Biotop-6	Biotop-8	Biotop-10	Biotop-12	Biotop-15
Number of people	2-4	4-6	6-8	8-10	10-12	12-15
Capacity m^3/day	0,84	1,2	1,5	1,9	2,3	2,9
Maximum flow rate, m^3/h	0,56	0,68	0,78	0,86	0,94	1
Diameter, mm	1000	1000	1000	1000	1000	1000
Length/Height, mm	2000	2500	3000	3500	4000	4500
Input/Output Diameter, mm	110	110	110	110	110	110
Compressor capacity, l/min	60	80	80	80	100	100
Compressor power, W	38	55	55	55	65	65

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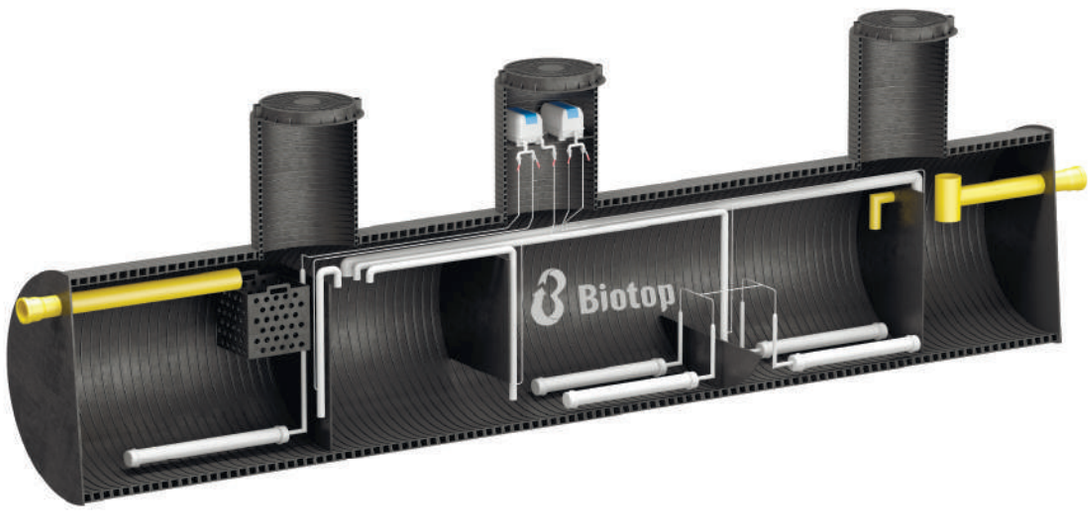
Local wastewater clearing stations Biotop-Standard



Biotop-Standard - designed for the treatment of domestic wastewater.
Capacity from 3 to 15 m3/day, for such objects as:

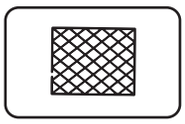
boarding houses and hotels, warehouses
and industrial complexes, camps
and recreation areas, office buildings
and hypermarkets with an average
volume of incoming wastewater,but with a significant interruption of water supply.

In the complex, primary mechanical cleaning is carried out in waste basket, preliminary averaging before aeration, biological treatment of activated sludge using biocenosis, complete nitrification and denitrification, secondary settling tank.
All technological processing is carried out using air ducts operating in fully automatic mode.
The installation is designed in such a way that the maximum flow is leveled in the homogenizer, and then a uniform flow of water fed to the cleaning section.
Using a homogenizer allows you to reduce the biological zone cleaning and the secondary settling tank area, and during low pressure hours, for example at night, the air ducts continue to operate and the cleaning cycle does not stop, which has a beneficial effect on nitrification processes and denitrification.

Biotop-Standart allows you to purify wastewater from suspended substances, organic pollutants, nitrogen and phosphorus compounds, with minimal energy and maintenance costs.
In the event of a power outage, the station will continue to operate anaerobic gravity mode, and after launch using Biotop-Active bioactivators will reach the required working conditions parameters as soon as possible.

Wastewater treated at the station can be sent to drainage systems, filtration fields, combined sewer collectors, and also sent for additional cleaning and disinfection in case of discharge onto open surfaces.

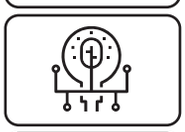
Advantages of the Biotop-Standart station:



- The station is equipped with air ducts for conditional processing solid particles up to 40 mm in size, which completely eliminates possibility of getting stuck.

- Fully autonomous operation system allows the station work even in the absence of electricity in anaerobic gravity mode, and the addition of active bacteria BiotopActive allows you to start biological processes in the shortest possible time deadlines.

- Minimum power consumption at the station is ensured for due to the use of two economical compressors and the absence expensive units.



- The station uses a technological cleaning scheme with preliminary complete oxidation of organic substances, which preceded by denitrification, which today is advanced technology.

- Ease of maintenance and operation is achieved by access to all serviced units, and removing the waste basket carried out using an easily removable system.

Name Biotop-Standart	Standart-3	Standart-5	Standart-7	Standart-10	Standart-15	Standart-20	Standart-25
Number of people	15-25	25-35	35-45	45-45	55-75	75-95	95-125
Capacity m^3/day	3	5	7	10	15	20	25
Maximum flow rate, m3/h	1.4	1.4	1.6	1.6	2	2	2.4
Diameter, mm	1200	1200	1200	1400	1600	1800	1800
Length/Height, mm	4000	6500	9000	9500	11000	11500	13200
Input/Output Diameter, mm	160	160	160	160	160	160	160
Compressor capacity, l/min	2x65 2x80	2x80 2x100	2x80 1x100 1x150	2x80 1x100 2x200	2x80 1x100 1x200	3x100 2x200	3x100 2x200
Compressor power, W	186	240	295	535	355	555	555

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Clearing installations of blackwater Biotop-PRO

Biotop-PRO is designed for the treatment of domestic wastewater from 20 m^3 /day for objects such as villages,
boarding houses and hotels,
warehouse and industrial complexes, recreation centers,
medical institutions.

The complex contains technological solutions for cleaning domestic wastewater in accordance with standards for further discharge into water bodies or drainage systems,using technologies for complete removal of nitrogen and phosphorus. The complex includes:
mechanical cleaning with mesh, homogenizer, biological cleaning using activated biocenosis, complete nitrification and denitrification, two-stage secondary settling tank, further processing on sorption filters, disinfection with ultraviolet radiation (optional).

Name Biotop-Pro	20BF-S	20P-S-UV	30 BF-S	30P-S-UV	40 BF-S	40 P-S-UV	50 BF-S	50 P-S-UV
Capacity m^3/day	20	20	30	30	40	40	50	50
Maximum flow rate, m^3/h	2.5	2.5	3.75	3.75	4.65	4.65	5.65	5.65
Diameter, mm	1800	1800	2000	2000	2300	2300	2400	2400
length, mm	10400	11700	12400	13700	12400	13700	13700	14700
Well with mire mesh, mm	1200	1200	1200	1200	1200	1200	1200	1200
Sorption block, mm	1000	1200	1000	1200	1000	1200	1000	1200
Input/Output Diameter, mm	160	160	160	160	160	160	160	160
Compressor power, W	3.2	4	3.2	4	3.5	4	3.5	4

Biotop-Pro station configuration:

- Well with grate
- Integrated biological treatment section
- Sorption block
- Cleaning and disinfection module

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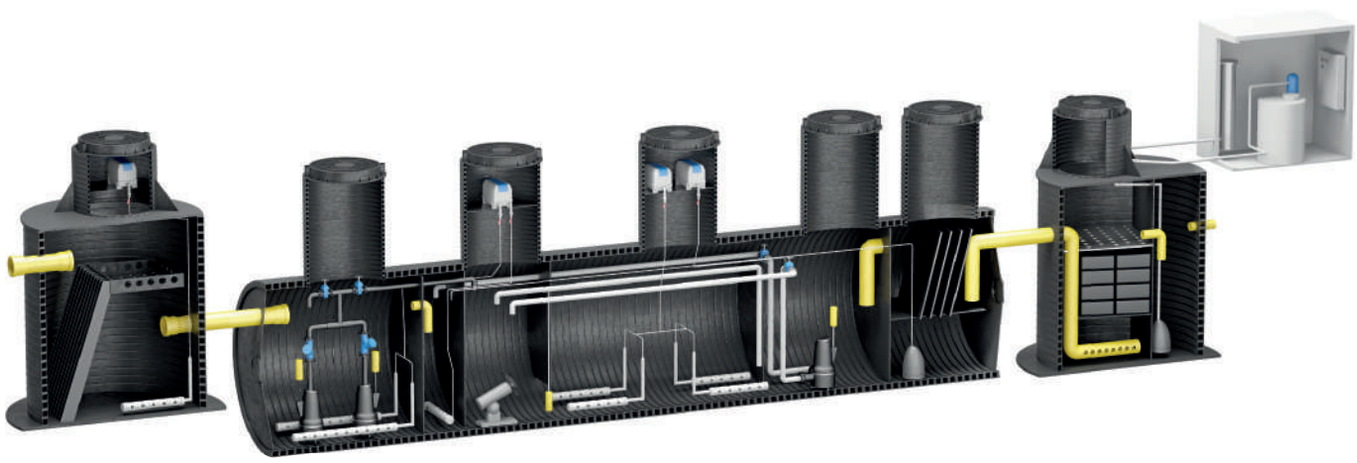

*Biotop-Pro installations with productivity from 50 to 500 m^3/days are calculated individually upon request

Biological treatment station BIOTOP V

Sewage treatment station in a vertical building with the number of occupants from 2 to 15 people.

In commercial facilities, calculation of working volume according to wastewater is produced in a different way.

Name Biotop V	Biotop V-6	Biotop V-10	Biotop V-14	Biotop V-18
Number of people	2-6	6-10	10-14	14-18
Capacity m^3/day	1.2	2	3	3.7
Maximum flow rate, m3/h	0.68	0.86	1	1.2
Diameter, mm	1400	1400	1600	1800
Length/Height, mm	1400	1800	1800	1800
Input/Output Diameter, mm	110	110	110	110
Compressor capacity, l/min	65.80	65.80	65.100	65.100
Compressor power, W	93	93	103	103

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Spiral sewage pumping station pipes (SVT) BIOTOP-PS

Characteristics:
Ring stiffness: SN2 to SN16
Productivity: from 1 l/s
Diameter, mm DN: 800–2400
(possibility of double housings)

- The BIOTOP-PS sewage pumping station is designed for pumping domestic, rain and industrial wastewater from free-standing buildings, enterprises, towns and cities.
- The station can be used as a separate structure or and as part of a complex of treatment facilities.

- The station can be manufactured to suit any customer requirements and regulatory organizations, be equipped with automated gratings, crushers, shut-off valves with electric drives, and also the required number of pumping units.

Spiral Tube (SVT) Grease Traps BIOTOP GS

The BIOTOP GS grease trap is designed to trap grease sediments (plant and animal origin) from sewage water, in order to prevent clogging of pipelines and ensure uninterrupted operation of the sewerage system.

Capacity l/h	1.5	3	5	7	10
Diameter, mm	1200	1200	1400	1600	1600
Length/Height, mm	2000	2400	2400	2400	3400
Input/Output Diameter, mm	160	160	160	160	160

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BIOTOP Polyethylene Sheet

Model	Capacity, m^3/h	Dimensions
Biotop 0.3-15	0.3 m^3/h	430x300x300
Biotop 0.3-20	0.3 m^3/h	450x350x300
Biotop 0.5-40	0.5 m^3/h	570x380x395
Biotop 1-60	1 m^3/h	580x470x420
Biotop 1-80	1 m^3/h	780x470x420

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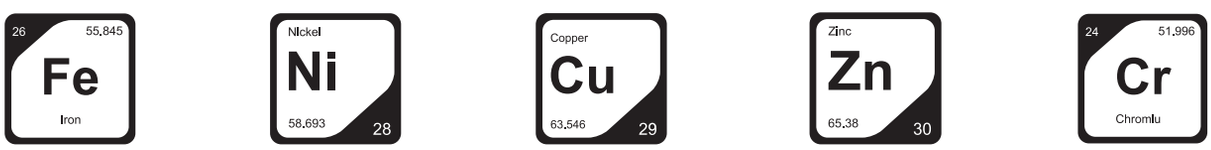
Storm water runoff treatment installations made of spiral pipes (SVT) BIOTOP-R

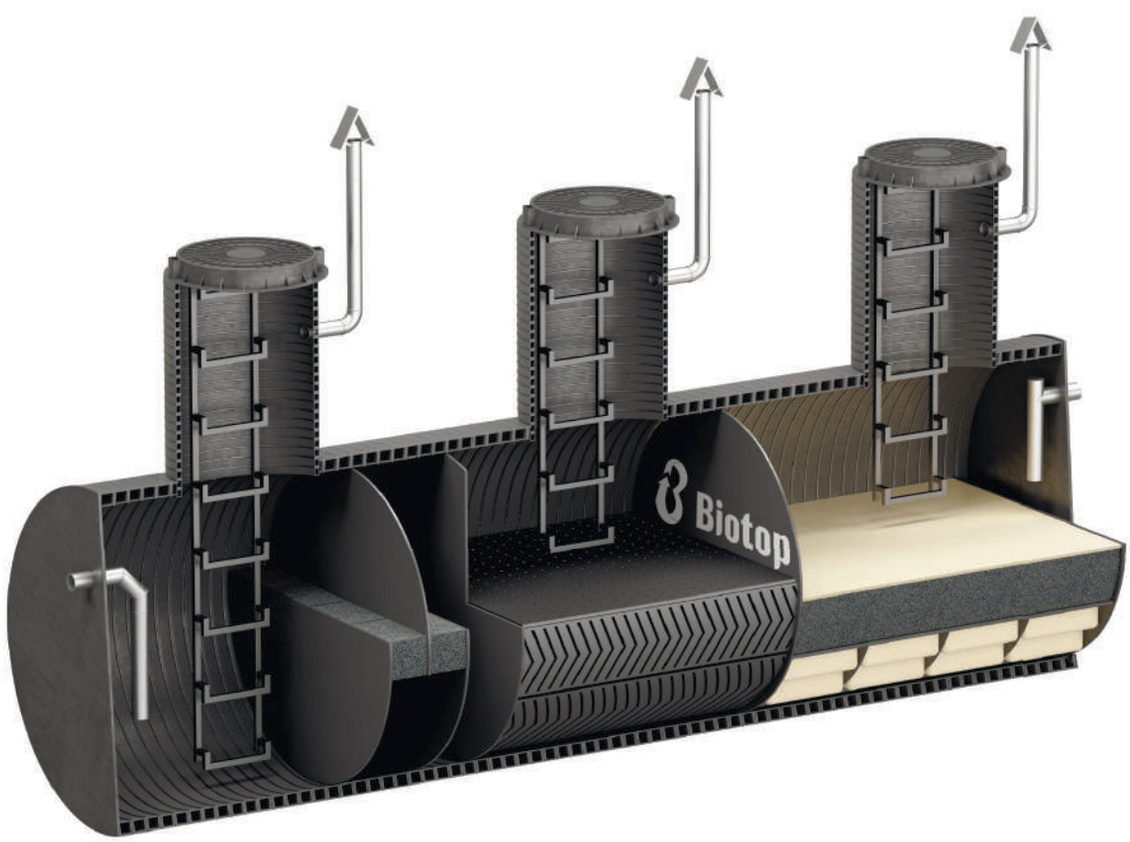
Characteristics:
Diameter, mm DN: 1000–2400
Ring stiffness: SN2 to SN16
Capacity: from 1 l/s to 190 l/s

BIOTOP-R is a comprehensive system designed for cleaning surface rain and melt wastewater from petroleum products and suspended substances.

The sorbent used in the system allows additional ensure removal of contaminants such as iron, nickel, copper, zinc and chromium, entering the system with infiltration water through oldleaky sewer wells.



Moreover, in combination with multi-stage sedimentation and sorption filtration system, the integrated system allows you to reduce parameters such as BOD.



Dimensions of the BIOTOP-R station

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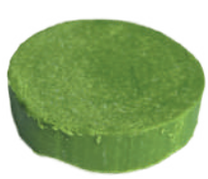
Biotop – R Capacity, l/h	Diameter/mm	Length/Height, mm	Input/Output Diameter, mm
1.5	1200	4000	110
3	1200	4500	110
6	1600	5500	160
10	1600	6500	160
15	1800	8000	200
20	2000	8400	200
25	2400	8400	200
30	2400	9400	250
40	2400	10900	250
50	2400	12400	250

Biological additives Biotop-Active

Biological additives Biotop-Active allow you to launch domestic wastewater treatment plants, increase efficiency of purification from nitrogen and phosphorus, as well as speed up processes nitrification and denitrification. In addition, Biotop-Active can be use in grease traps to improve cleaning quality and fat dissolution. The use of dietary supplements can reduce accumulation of fat and septic tank maintenance, as well as eliminate unpleasant odors due to disruption of biological processes.

Liquid

Cube



Tablet

Rainwater wells made of spiral pipe (SVT) BIOTOP

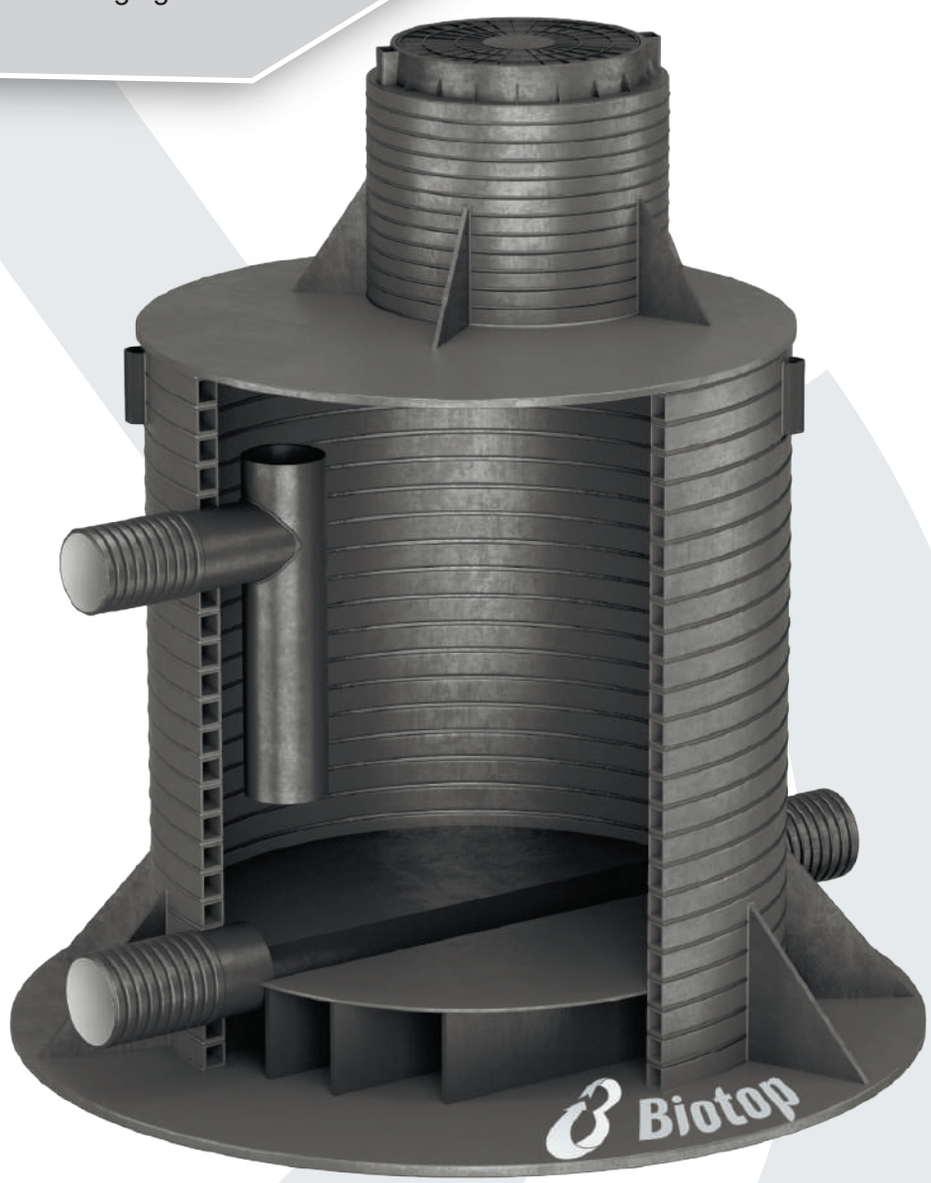
Characteristics:
Diameter, mm DN: 600–2400
Height, mm H:1000–13000
Tightness: Absolute
Application area: Rain drains

Wells for cable networks made of spiral pipe (SVT) BIOTOP

Characteristics: Diameter, mm DN: 600–2400
Height, mm H:1000–13000
Tightness: Absolute
Scope of application: Water supply, sewer networks
Application area: for changing the direction of cable lines

Drop Wells made of spiral pipe (SVT) BIOTOP

Characteristics:
Diameter, mm DN: 800–2400
Height, mm H:1000–13000
Tightness: Absolute
Scope of application: sewer networks
Application area: for changing the direction of cable lines

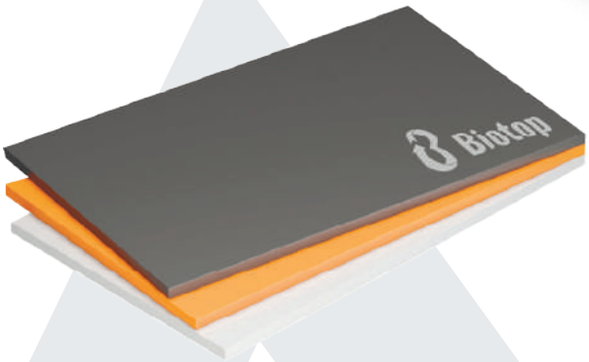


Firefight Wells made of spiral wound pipe (SVT) BIOTOP

Characteristics:
Diameter, mm DN: 800–2400
Height, mm H:1000–13000
Tightness: Absolute
Scope of application: Plumbing/ Sewerage
Application area: for changing the direction of cable lines

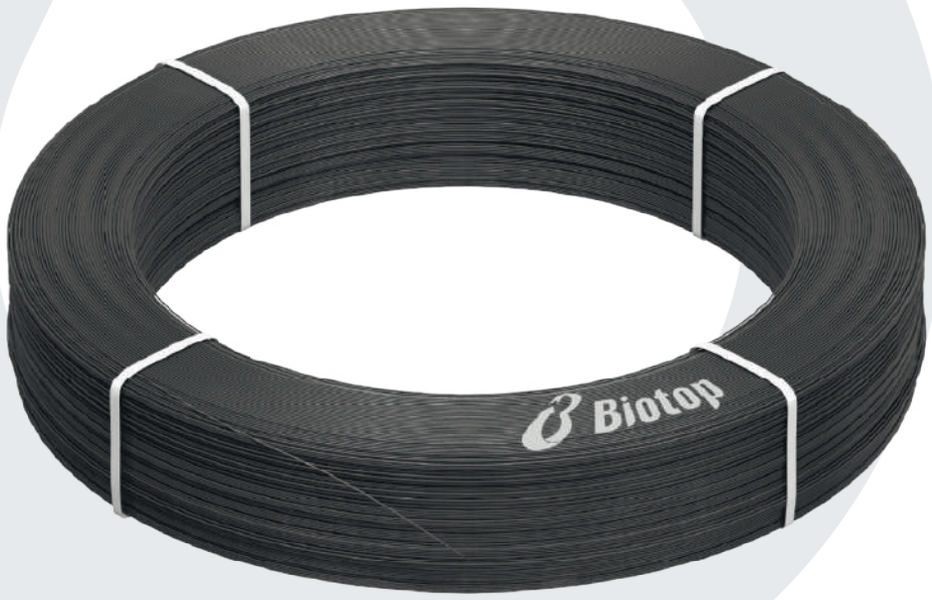
BIOTOP Polyethylene Sheet

Characteristics:
Size: 5mm, 4mm
Shape: rectangle
Color: black, any RAL color
Material: polyethylene



Round welding rod BIOTOP
Triangular welding rod BIOTOP

Characteristics:
Size: 5x3mm, 7x5mm
Shape: triangle
Color: black, any RAL color
Material: polyethylene



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