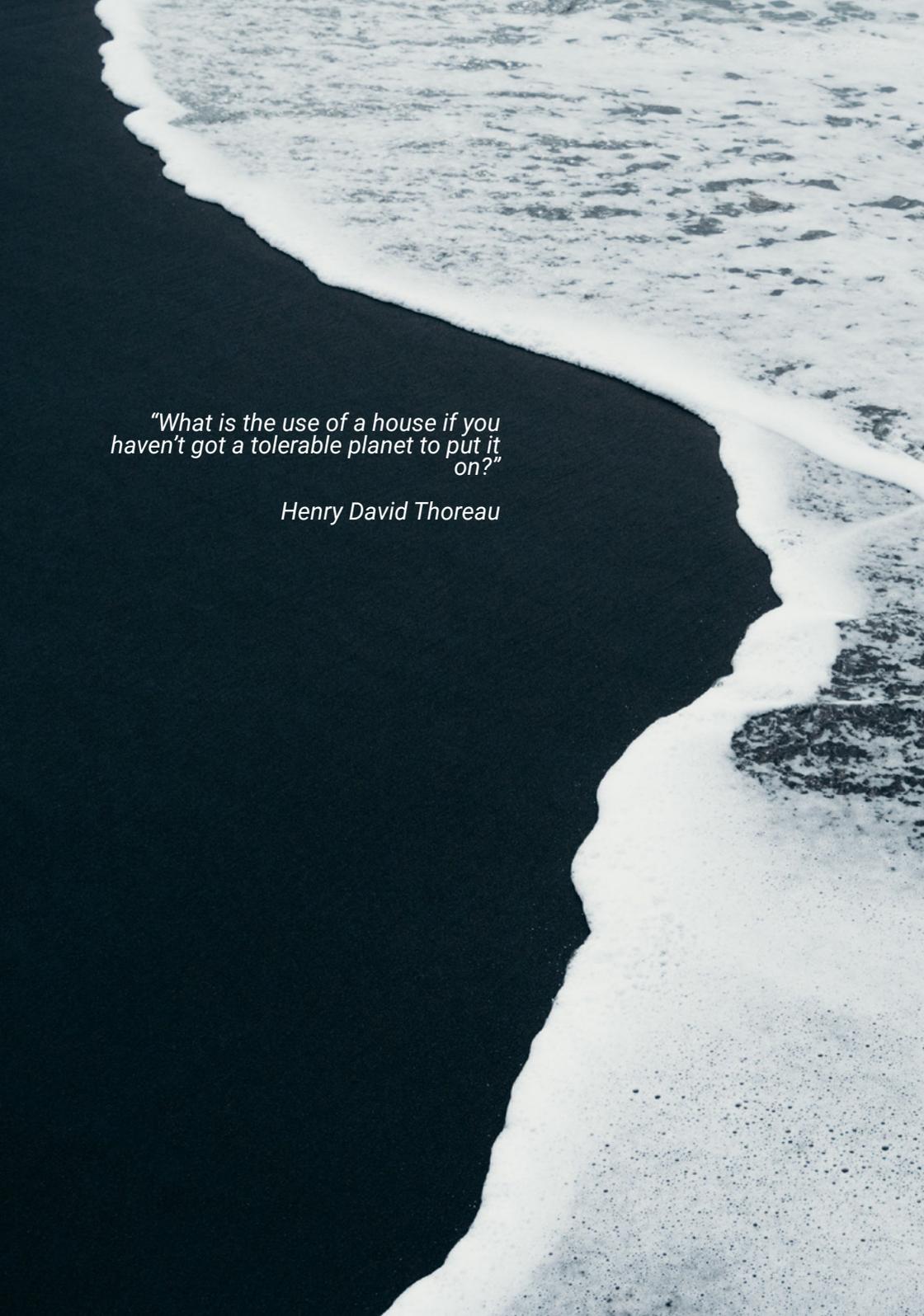




TOPAS
UKRAINE
чистий кругообіг води



*"What is the use of a house if you
haven't got a tolerable planet to put it
on?"*

Henry David Thoreau



Про компанію

Topas Ukraine LLC is part of the «**KMK Group**» group of companies and it is an integral part of the environmental areas that we strongly support.

The company's slogan «**the world becomes cleaner with us**» is not just words for us, but a credo! We have been working for the benefit of ecology and cleanliness of the environment since 2005. This year we became the official representatives and importers in Ukraine of deep biological wastewater treatment plants Topas (Czech Republic). We started our own production in 2006 and until today we continue to develop our plants by integrating new cleaning methods based on global trends and innovations. We work with the best - and we meet this high criterion.

Our most important work principles are:

-Comfort

Our stations and production are constantly improving. New technologies are introduced, processes are improved and the best components are selected. In the end, we do our best to make you forget about the combination of the words «sewer» and «odor».

-Safety

The use of environmentally friendly raw materials and reliable automation allows us to produce products that meet the highest safety standards.

-Cleanness

Our products guarantee 98% wastewater treatment, which allows us to keep the environment clean and you healthy!



In addition to our own production of water treatment plants, there are other areas of activity belonging to KMK Group:



 **QuickDeck** - a manufacturer of wood-based panels for all types of finishing and construction work. Since 2014 we became an official representative of **QuickDeck**. Panels manufactured using modern technologies, as well as using the latest equipment from Maier-dieffenbacher. Feature of «**QuickDeck**» in the balanced combination of operational parameters of material and its ecological purity.



 **Alchimica** is a European manufacturer of polyurethane waterproofing materials. The company's products are used in waterproofing of various types of surfaces that require maximum accuracy, reliability and durability. In 2009, **KMK Group**

became the official representative and importer of **Alchimica** in Ukraine. During this time, **Hyperdesmo** waterproofing from «**Alchimica**» covered more than 300 thousand m2 of roofs.



 **Paneltim** is a Belgian manufacturer of environmentally friendly plastic sandwich panels. «**KMK Group**» started its cooperation with **Paneltim** in 2013 and is currently the only representative in Ukraine. **Paneltim** products have many advantages. It has high strength in longitudinal and transverse bending, is resistant to various aggressive chemicals, meets all environmental European standards and is widely used in various fields.



 **RinoFlex System** is the first, national brand of waterproofing, made especially for the Ukrainian consumer. **KMK Group** has created its own innovative product on the basis of the world-famous **Alchimica**. **RinoFlex** products have absorbed many years of experience of Greek professional technologies of the world-famous waterproofing «**Alchimica**» and domestic developments in the field of production taking into account the natural climate of Ukraine.



About TOPAS wastewater treatment

Autonomous sewerage TOPAS

Automatic is designed to treat domestic wastewater from individual sources of pollution, such as private houses, industries, campsites, sanatoriums, rest homes, hotels, motels, restaurants, gas stations, cafes, cottages, etc. Many years of experience in the field of wastewater treatment and production of previous models well known in Ukraine, the EU and the CIS under the Topas trademark were used in the construction of the stations. Belgian polypropylene structural panels «**Paneltim**» are used for production of the case of station and guarantee long service life.

The Topas treatment plants have been certified by the SZÚ Brno testing laboratory and by the Deutsches Institut für Bautechnik.

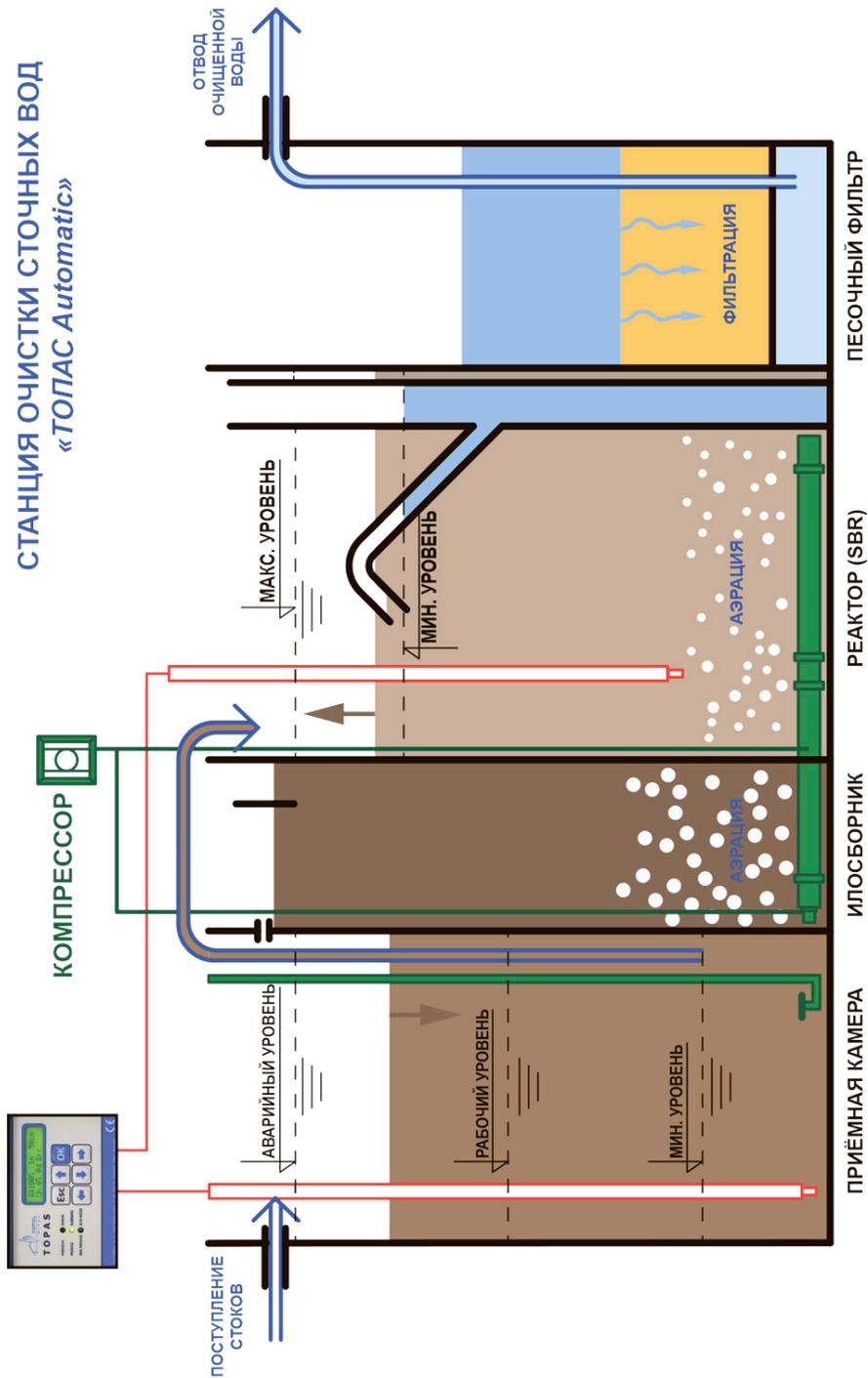
SAND FILTER - is one of the main differences from other biological treatment plants on the markets of Ukraine, Europe and the CIS. Design and technology of automatic sand filter cleaning are protected by European and Ukrainian patents. The presence of a sand filter in the cleaning process is tertiary degree of purification that allows to achieve real 98% of sewage treatment. The filter station consists of one vertical column made of polypropylene. The column is filled with neatly sifted filter material with calibrated granule size (quartz sand). This step is necessary to remove all suspended particles from the purified water. Further purification prolongs the life of the drainage system or better purified water that can be disinfected with an ultraviolet filtration unit without increasing the silt on the quartz (respectively, the quality of disinfection does not fall). When the filter is clogged,

its proper functioning is restored by blowing back with air and rinsing with clarified water. This operation is performed automatically in the regeneration phase.

TOPAS biological treatment plant has a number of advantages:

- Topas stations can be installed and maintained independently, as the station is fully equipped and ready for quick installation.
- Due to the self-supporting body, no additional construction work is required during the installation of the station in any type of soil.
- Our own production capacity allows us to produce both small stations for a country houses and a big ones for a cottage towns.
- Due to the high quality materials used and European equipment components, the service life of the station is over 50 years.
- Unlike to other companies, Topas Ukraine has its own professional service department with extensive experience.
- Installing «Topas», you will avoid the appearance of an unpleasant odor, as SBR technology prevents the process of decay.
- Our service team is always ready to consult you regarding installation of stations or any related questions.

СТАНЦИЯ ОЧИСТКИ СТОЧНЫХ ВОД «ТОПАС Automatic»



Wastewater treatment plants

Topas automatic 8 - 15

These stations usually used for private homes, cottages, country residences.

The case of the station is made of high-quality structural panels of the **Paneltim** trademark. The component material has a cellular structure filled with air, which increases the quality and stability of wastewater treatment even in winter without additional insulation. For Topas 8, 10 and 15 cases, a material 20 mm thick is used, which allows to bury the equipment even to a depth of 3 m without strengthening the structure and concreting. The automatic equipment has been tested for years by the world-famous manufacturers **Pedrollo** and **IVR**. Compressors - **Hiblow** (Japan).

All this together allows us to be confident in the quality of our products and we also happy to give you the opportunity to see it!

Topas automatic 8 SPF

Productivity	from 0.3 to 1.6 m ³ / day
Electricity consumption	80 W / hour
Dimensions of the station	1650(L) x 1200(W) x 2380(H)
Dimensions of the required pit	2100(d) x 1600(w) x 2340(d)



Wiring diagram by QR code

Topas automatic 10 SPF

Productivity	from 0.45 to 2.0 m ³ / day
Electricity consumption	100 W / hour
Dimensions of the station	2000(L) x 1200(W) x 2380(H)
Dimensions of the required pit	2400(d) x 1600(w) x 2340(d)



Wiring diagram by QR code

Topas automatic 15 SPF

Productivity	from 0.6 to 3.0 m ³ / day
Electricity consumption	120 W / hour
Dimensions of the station	2400(L) x 1200(W) x 2380(H)
Dimensions of the required pit	2800(d) x 1600(w) x 2340(d)



Wiring diagram by QR code



Wastewater treatment plants

Topas automatic 20 - 40

Topas Automatic 20 - 40 systems are mainly used for mini restaurants, small hotels, households, schools, townhouses, etc.

The case of the station is made of high-quality structural panels of the **Paneltim** trademark. The material, as mentioned above, has a cellular structure filled with air, which increases the quality and stability of wastewater treatment even in winter without additional insulation. For Topas 20, 30 and 40 cases, a material with a thickness of 20 - 50 mm is used, which allows it to be installed in the ground to a depth of 3 meters without strengthening the structure and concreting. The operation of «**Topas Automatic**» is not affected by temperature changes and seasonal shutdown. The automatic equipment has been tested for years by the world-famous manufacturers **Pedrollo** and **IVR**. Compressors - **Hiblow** (Japan).

Topas automatic 20 SPF

Productivity	from 0.6 to 4.0 m ³ / day
Electricity consumption	150 W / hour
Dimensions of the station	2000(L) x 1600(W) x 2380(H)
Dimensions of the required pit	2400(d) x 2000(w) x 2340(d)



Wiring diagram by QR code

Topas automatic 30 SPF

Productivity	from 0.9 to 5.0 m ³ / day
Electricity consumption	240 W / hour
Dimensions of the station	2000(L) x 2200(W) x 2440(H)
Dimensions of the required pit	2400(d) x 2600(w) x 2400(d)



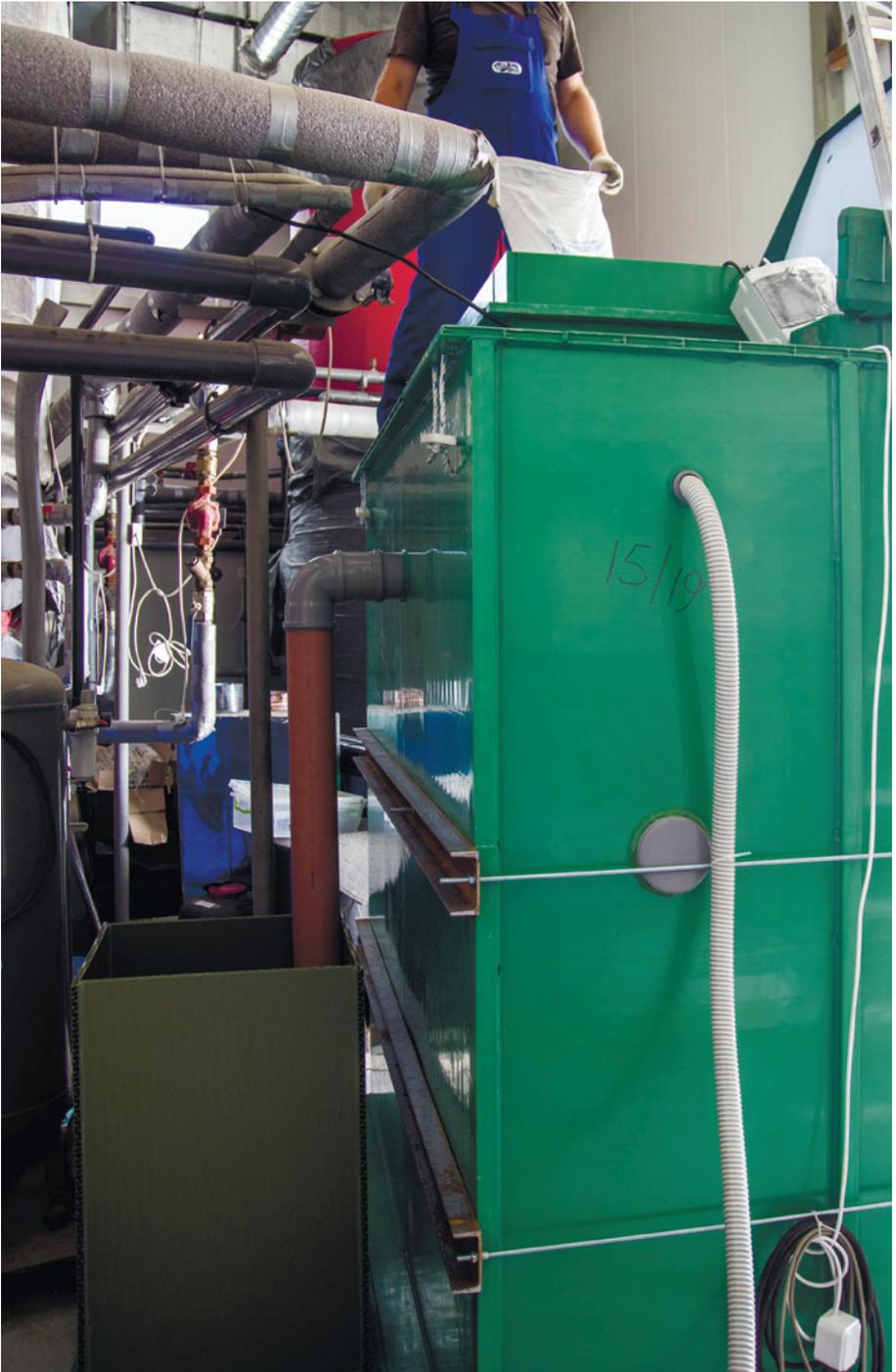
Wiring diagram by QR code

Topas automatic 40 SPF

Productivity	from 1.2 to 6.0 m ³ / day
Electricity consumption	300 W / hour
Dimensions of the station	2600(L) x 2200(W) x 2440(H)
Dimensions of the required pit	3000(d) x 2600(w) x 2400(d)



Wiring diagram by QR code



Wastewater treatment plants Topas automatic 50 - 100

Sewage treatment systems «**Topas Automatic**» 50 - 100 are designed to service restaurants, gas stations, large households, schools, cottage townships and more.

The case of the station is made of high-quality structural panels of the Paneltim trademark. Installation of the equipment takes from 1 day. Sewage effluents are treated up to 98%, which allows discharge into reservoirs or use for technical purposes. Biological treatment plants are designed in accordance with all the requirements of the legislative level. For Topas 50, 75 and 100 housings, only 50 mm thick material is used, which allows to bury the equipment even to a depth of 3.5 meters without strengthening the structure and concreting. The automatic equipment has been tested for years by the world-famous manufacturers **Pedrollo** and **IVR**. Compressors - **Mapro** (Italy).

Topas automatic 50 SPF

Productivity	from 1.2 to 7.5 m ³ / day	
Electricity consumption	1.1 kW / hour	
Dimensions of the station	3000(L) x 2200(W) x 2740(H)	
Dimensions of the required pit	3400(d) x 2600(w) x 2700(d)	

Wiring diagram by QR code

Topas automatic 75 SPF

Productivity	from 2.25 to 11.25 m ³ / day	
Electricity consumption	1.1 kW / hour	
Dimensions of the station	4000(L) x 2200(W) x 2740(H)	
Dimensions of the required pit	4400(d) x 2600(w) x 2700(d)	

Wiring diagram by QR code

Topas automatic 100 SPF

Productivity	from 3.0 to 15.0 m ³ / day	
Electricity consumption	1.2 kW / hour	
Dimensions of the station	5000(L) x 2200(W) x 2740(H)	
Dimensions of the required pit	5400(d) x 2600(w) x 2700(d)	

Wiring diagram by QR code





Standard cellar (with vertical entrance)

Dimensions - 2600 (d) x 2300 (w) x 2640 (h)

Internal volume: 10.04 m³

Weight: 421 kg

At low groundwater - does not require a concrete base. Occupies a minimum of space on the land.

Finnish cellar (with horizontal entrance)

Dimensions - 2600 (d) x 2300 (w) x 2350 (h)

Internal volume: 10.04 m³

Weight: 537 kg

Entrance corridor length: 1350

Does not require any fortifications and concrete base at all. It has a double door and a corridor, which minimizes changes in temperature.





Finnish and standard type polypropylene cellars

Convenient, durable and fully equipped cellar for storage of preparations, vegetables, fruits and wine. Made of environmentally friendly food polypropylene «**Paneltim**». It is a fully ready-to-install cellar, equipped with shelves inside, a system of natural supply and exhaust ventilation, lighting with a sealed electric wire inside the cellar. The service life of such a cellar is more than 50 years. The design has made according to individual requirements and necessary filling: quantity of shelves, racks under wine, barriers or any changes in a configuration. Our own production allows us to make a cellar exactly according to your wishes and needs.



Service and maintenance

Buying a Wastewater treatment plants, every buyer is interested in maintenance and care of treatment equipment. Our task is to provide you with confidence in the full productivity and maximum efficiency of the wastewater treatment plant, and we do everything necessary for this: we provide competent advice, repair trips as soon as possible, regular maintenance. During the design of the biological wastewater treatment plant, the possibility of self-maintenance of the plant by the user was taken into account. Installation is simple and does not require specially trained personnel. Autonomous sewerage for a private house Topas Automatic is equipped with an electronic unit, which at the time of power supply measures the level in the receiving chamber, SBR reactor and independently turn on the required mode. If the client wants to service the system independently, it is necessary to perform a number of simple actions periodically:

- visual control of purified water;
- removal of waste sludge from the settling tank with a pump once a quarter or once every six months, depending on the accumulation of sludge in the sludge collector;
- replacement of compressor membranes every 3-4 years;
- cleaning of the device of collecting of the particles which are not processed 3-4 times a year;
- removal and cleaning of the filter of large fractions 1 time in 3 months;
- replacement of aeration elements 1 time in 10-12 years.

If necessary, all these works can be

carried out by «**Topas service**» after sign of the agreement. But, like in any other equipment and automation, while using a stand-alone sewer there are cases of unexpected breakdowns. Representatives of **Topas Ukraine**, in addition to scheduled maintenance, provide services for repair, modernization of stations and reconstruction of both **TOPAS Automatic** stations and treatment plants of other manufacturers.

In our company we care about our customers and do everything possible for the comfort of our clients. To ensure a high level of customer satisfaction, we have developed a special service program that takes into account all the wishes and needs.

More than just a service

- Own service mechanics.
- Own on-site service, which goes to the facilities on fully equipped service cars.
- We process more than 1000 service applications per year.
- Maintenance of stations of different generations and modifications (including with their competitors for the possibility of improvement).
- Instant response to repair and maintenance requests.
- We work throughout whole Ukraine.
- Telephone counseling in cases of self-service.
- Constant availability of spare parts and components in their own warehouses with possible shipment without calling a specialist to the facility.



Products for order

Also our company is engaged in embodiment of your ideas by our forces in polypropylene products!

In our work we use only the highest quality materials for which we have all the necessary permits for use in the chemical or food industry. Many years of experience in the construction industry and professional workers and engineers, provide the opportunity to sell in plastic products even with complex configurations



and shapes: air scrubbers, chemical tanks, drinking water storage tanks, swimming pools, nurseries for fisheries, fire tanks, bio-filters, heat exchangers and even bar counters or garden furniture.

The company has all the necessary tools and machines for implementation of your ideas! It is also possible to assemble and solder at the customer's site, even in hard-to-reach places or even indoors. We are always happy to help with the calculations of structures and the development of special solutions.

Structural polypropylene panels Paneltim

Due to their unique performance in terms of strength, rigidity, chemical resistance, ease of processing, thermal insulation properties - **Paneltim** panels have become popular around the world and are effectively used in various fields of construction, production and design. The following are the main advantages over classic materials:

Sandwich structure

The panels are made with a thickness of 50, 35 or 20 mm and have a sandwich structure. Thanks to the unique structure of cells with ribs of rigidity of 50/50 mm or 50/100 mm mm panels are absolutely integral and strong in both directions, in length, and width.

Optimal hygiene

The internal structure of the cells ensures that all sides of the panel always remain closed from dirt, water or other substances inside the panels. They can be quickly and easily cleaned with water under high pressure, as their surface is smooth, quick-drying and low-adhesion to water and dirt.

Easy to use

From the standard **Paneltim** panel you can make a design of any shape and size. To do this, use a table for butt welding, an extruder and / or a hair dryer for welding plastics.

Insulation

Due to the low thermal conductivity of the panels and hermetically sealed air in the cells, the panels have excellent thermal insulation properties.

Environmentally friendly

Paneltim panels are made of both primary and secondary raw materials. 100% recyclable without loss of raw material. The panels do not contain toxins and comply with European Directive 2002/95 / EC. In the case of repair work can be used repeatedly.

Classification of fire safety

According to the ENISO 11925-2 standard, panels are included in a class E of fire safety. If necessary, the panels can obtain higher fire protection by making fire-retardant additives.



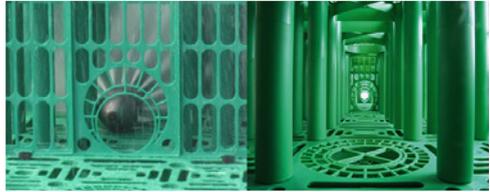
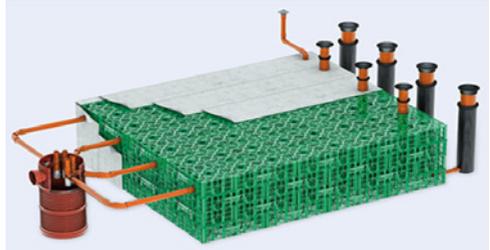
Drainage systems

The **Stormbox** system manufactured according to TU 2291-006-96467180-2013 is designed for the collection of surface stormwater, treated wastewater after treatment plants «**Topas**» and subsequent infiltration into the soil.

Blocks and pallets of the **Stormbox** system are made of primary raw materials of polypropylene PP-B by injection molding. The primary raw material has a manufacturer's certificate. The units have three internal channels for viewing through the teleinspection system and for the passage for cleaning equipment. Stormbox units are IBAK certified and OFI Technologies & Innovation GmbH certified, confirming the possibility of teleinspection and the possibility of hydraulic cleaning at a pressure not exceeding 180 bar.

Advantages over pipe drainage and drainage wells:

- excellent characteristics at rather low weight
- high useful volume for water storage - 206 l / unit (for further uniform infiltration into the soil)
- large coefficient of useful volume - 95.5%
- blocks can be inspected both vertically and horizontally (have 3 horizontal and 2 vertical channels)
- possibility of installation under parking lots



Design recommendations

Classification of soils and their properties			
Penetration rate 12,5 liters of water (min.)	Penetration (min/cm)	Soil type	Penetration class
< 20	< 1,4	Gravel with sand, gravel, coarse sand	A - Very good
20-30	1,4 - 2,1	Medium and fine sand, sand with clay	B - Good
30-180	2,1 - 12,8	Sandy clay	B - Medium
> 180	> 12,8	Clay and silt with a small inclusion of sand	Γ - Low

Penetration class	Hydraulic permeability			Darcy's ratio
	m/s	m/h	m/d	
Very good: gravel, coarse homogeneous sand	$>10^{-3}$	$>3,6$	$> 86,4$	>100
Good: inhomogeneous coarse sand	$10^{-4} - 10^{-3}$	0,36 - 3,6	8,64 - 86,4	10 - 100
Medium: fine sand, forest	$10^{-5} - 10^{-4}$	0,036 - 0,36	0,864 - 8,64	1 - 10
Low: silty and clayey, silty clay, sandstone	$10^{-6} - 10^{-5}$	0,0036-0,036	0,0864 - 0,864	0,1 - 1
Semi-permeable rocks: clay, mud, hardened silt, point silt	$10^{-8} - 10^{-6}$	0,000036 - 0,0036	0,000864 - 0,0864	0,001 - 0,1
Penetrating rocks: silt, clay limestone, compacted silty clay, limestone anthem	$<10^{-8}$	$<0,000036$	$<0,000864$	$<0,001$



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