waste water treatment plants

INTELLIGENT **eco** SOLUTIONS

roto
since 1949

Roto, an international company based in Murska Sobota, specialises in the production of plastic mass. The roots of the family-run business go back to 1949. ROTO employs more than 500 people in 7 factories located in 4 countries.
Roto generated revenues of €63 million in 2020, selling products in 63 countries around the world.

Roto is Europe's leading rotomoulding company, producing more than 4,000 different products. The company's development is ensured by continuous innovation, new technologies and materials that ROTO develops with scientific institutes, universities and other companies.

The Roto-branded product groups are divided into four segments: products for agriculture, garden, sport and ecology. The use of composites and biodegradable and recycled polymers enables the production of the most complex products on the market.

EY world
family award

Roto also manufactures a wide range of readymade products for various industries such as automotive, marine, construction and agricultural machinery, aquaculture and logistics. Added value comes from innovative design, the use of intelligent polymers and composites, and state-of-the-art manufacturing.

Europe distribution

ALWAYS NEAR TO YOUR BUILDING SITE

Slovenia
tel: +386 2 52 52 152
prodaja@roto.si

Austria
tel: +43 664 21 03 495
austria@roto-group.eu

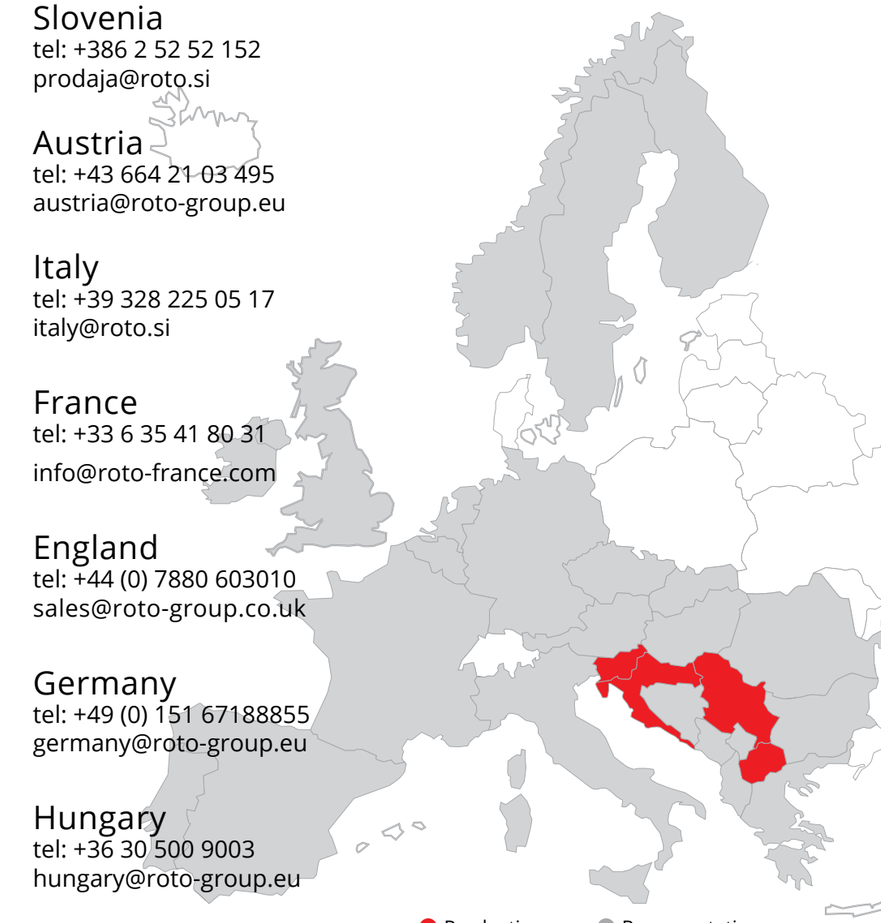
Italy
tel: +39 328 225 05 17
italy@roto.si

France
tel: +33 6 35 41 80 31
info@roto-france.com

England
tel: +44 (0) 7880 603010
sales@roto-group.co.uk

Germany
tel: +49 (0) 151 67188855
germany@roto-group.eu

Hungary
tel: +36 30 500 9003
hungary@roto-group.eu



Croatia
tel: +385 91 14 395 12
info@roto-grad.t-com.hr

tel: +385 98 240 332
info@okiroto.hr

Serbia
tel: +381 66 668 00 43
alibunar@roto.si

Macedonia
tel: +389 3 33 63 516
zoran@roto.mk

Bosnia
tel: +387 33 780 096
prodaja@roto.ba

Bolgaria
tel: +359 88 676 67 97
bulgaria@roto-group.eu

Slovakia
tel: +421 905 258 292
slovakia@roto-group.eu


Cernelavci, Slovenia


Cernelavci, Slovenia


Puconci, Slovenia


Vinica, Macedonia


Pregrada, Croatia


Alibunar, Serbia


Ivanic Grad, Croatia

More than 260,000 satisfied customers have been purifying their water with ROTO waste water treatment plants. In addition to the quality of the product, they are impressed by our technical support.

13 reasons why ROTO users are satisfied with their choice.

HIGH CLEANING PERFORMANCE
ROTO waste water treatment plants purify 97.2% of the water and are manufactured according to EU standard SIST EN 12566 and achieve a purification rate of BPK_5 < 30 mg/l, COD < 150 mg/l. They operate safely and reliably, are virtually silent and odourless, and are insensitive to fluctuations in the ambient temperature.

LOW OPERATING COSTS
ROTO waste water treatment plants are extremely efficient as all the processes are powered by an air compressors, which is located in the outside cabinet, protected from outdoor elements. Because of the air operating system – lift pump principle therefore the electricity consumption is less than €6 per person per year.

LONG LIFETIME
The waste water treatment plant tanks are made of polyethylene, which has a service life of 50 years. The waste water treatment plant can be disassembled into components and recycled after use.

EASY MAINTENANCE
The waste water treatment plants operate automatically as they are controlled by a control system. The mobile app allows you to monitor the performance of the waste water treatment plant at any time and easily maintain it. Roto also offers commissioning, installation and maintenance of the waste water treatment plant.

DELIVERY TO THE CONSTRUCTION SITE
ROTO waste water treatment plants are delivered with loader truck crane, which allows us to lift the WWTP into the construction pit upon delivery.

FAST DELIVERY
We mass-produce the waste water treatment plants, so they are delivered within a few days.

PLUG&PLAY
The waste water treatment plants are ready for immediate operation upon delivery.

24-HOUR SERVICE
We provide maintenance, commissioning and servicing. Our services include checking the condition and operation of the waste water treatment plant and it s vital components. Our ROTO professionals also check the cleaning efficiency and operating status as well as all WWTP functions. We instruct the user on maintenance and correct use. Because we at roto thrive to provide the full service, burial and installation can also be organised by our ROTO staff.

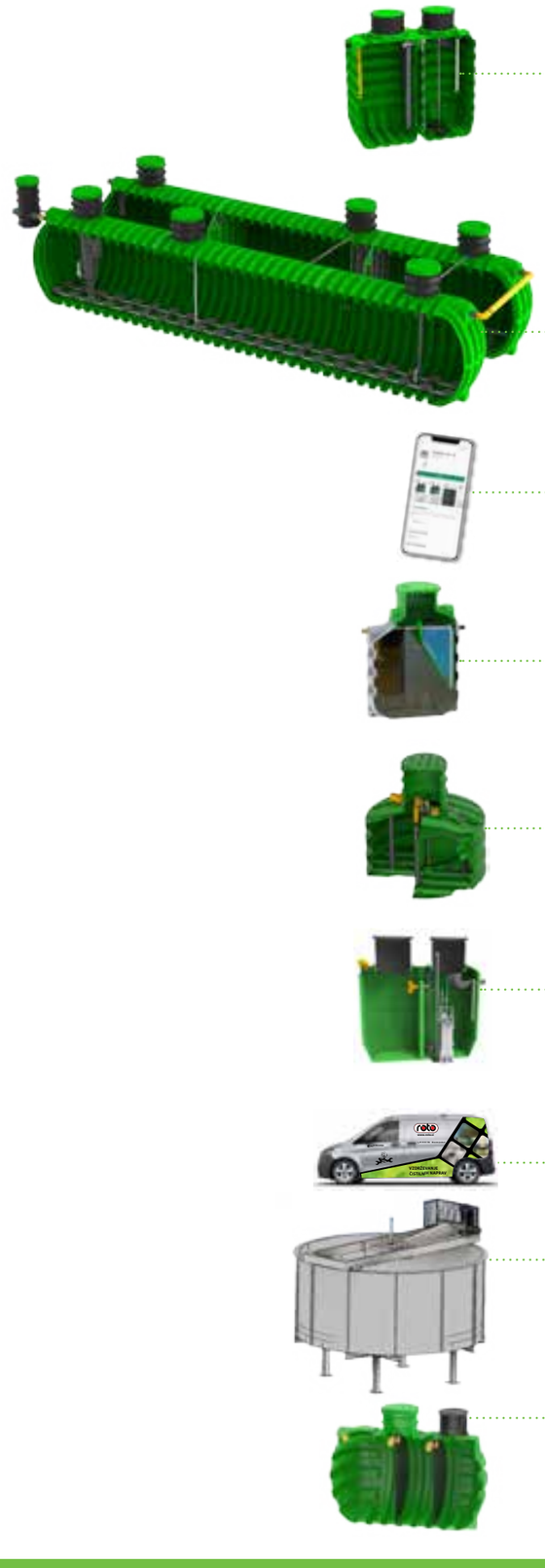
EASY INSTALLATION
ROTO waste water treatment plants are simple to install. Burying requires a very narrow construction pit and little backfill material, which makes installation cheap and fast. The low weight of the waste water treatment plant also makes it easy to install. ROTO also offers installation of waste water treatment plant or presence at the installation.

EXCELLENT QUALITY
The waste water treatment plants are manufactured in accordance with ISO 9001 and ISO 14001.
They are tested and certified in accredited laboratories and internationally recognised institutes such as ZAG - Zavod za gradbeništvo Slovenije, NLZOH - National Laboratory for Health, Environment and Food, PIA Germany, IGH Croatia, CERIB France, etc.

PRODUCT ADAPTATION TO THE PROJECT
ROTO has its own laboratory and development department for waste water treatment plants. That's why we carefully consider the customer's needs and tailor and optimise the cleaning system to their facility.

SLOVENIAN PRODUCER
All components of the waste water treatment plant are developed and manufactured at the ROTO factory in Slovenia.

RELIABILITY AND TRUST
ROTO is a pioneer in the production of waste water treatment plants in Slovenia and Europe. We install waste water treatment plants in 55 countries around the world. The award from the ZRMK Institute of Civil Engineering confirms the excellence of the product as judged by the building profession.



www.rotoECO.eu

ROTO and its technical team provide you with comprehensive support from the start of the project to the management of the facility. ROTO's smart water management solutions include a full range of services, from project development, design and engineering to procurement of system components and project management through technical operations and maintenance. We can also prepare all the necessary project documentation for you.

Check the existing input data

Visit the construction site

Searching the optimal technical solution

Project management, obtaining the required building approvals

Installation of products and hand over the required technical documentation

Operation and maintenance

Customer support

Roto sales engineers offer comprehensive technical assistance:

- construction companies,
- installers,
- municipalities,
- utility companies,
- architect,
- designer,
- traders and
- users.

Plans and documentation of ROTO water products are also published in software libraries architects and designers such as e.g. BIM.

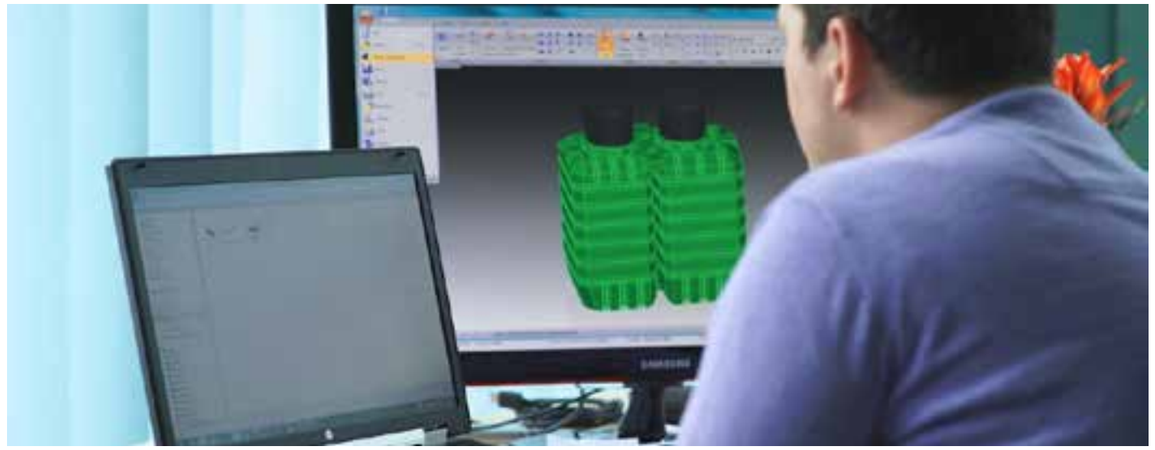
Installation and commissioning

Together with ROTO authorised installers, we offer our customers the option of turnkey installation. ROTO's expert staff can advise on the optimal product choice, and provide technical support, site visits, site selection advice and product installation.

All ROTO products come with installation instructions which include steps for correct in ground installation of the tank it self, as well as video instructions on how to start up ROTO wastewater treatment plants. All of the instructions are available online as well. The commissioning of the waste water treatment plant is carried out by the ROTO technical service, at which time the relevant documentation for the management/control of the waste water treatment plant is handed over and basic training of the owner/user of the waste water treatment plant on its correct use is carried out.

Maintenance, spare parts and service

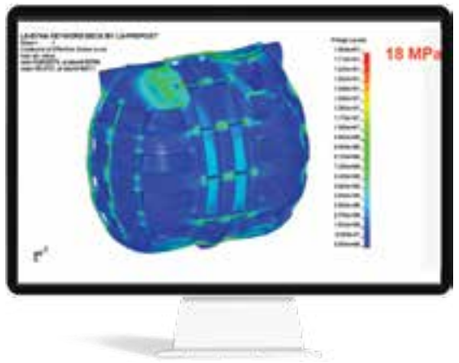
We stand by our customers even after the products have been handed over. We offer expert maintenance support, fast delivery of spare parts and product servicing.



The New Product Development Department develops three new products per week

ROTO offers complete solutions to its partner companies. From 3D computer-aided product design and simulation, 3D printer prototyping, tooling, production and mass production.

We are an innovative company, always looking for new technologies, ideas and solutions. The R&D centre employs 20 people who develop more than 150 different products a year.



Product adaptation Customized and individual solutions

- Construction drawings
- Building information modeling
- Technical reports
- Construction site communication
- Adaptation of products in the factory or on construction site according to the project

Prototypes and tool making

Product development at ROTO starts with gathering input and requirements from our customers. Once the information has been gathered, concepts and solutions are developed that will lead to the desired new product. The work is supported by a design team that will guide you through each phase of the project and present you with the appropriate technical solutions on an ongoing basis.

With the capacity to print prototypes up to 2x1 m, the 3D printer makes the process from idea to solution short and cost-effective. After the design and sample have been approved, the production tools are prepared.

Production of the largest polyethylene products

The rotational moulding process makes it possible to produce tanks in one piece. ROTO production is equipped with 39 different rotating machines. Among them is a machine for making monolithic tanks up to 25,000 litres.

The ROTO laboratory analyses various waste water parameters such as BPK5, COD, TOC, SS, etc. We also carry out in-house microscopic and microbiological analyses of waste water as well as the performance of oil traps

Testing ground

The ROTO test bed simulates the performance and impact of various external factors under different conditions of use, measuring the durability of materials, the cleaning performance of waste water treatment plants and oil traps, and much more.

Certification of our products is carried out **by different institutes in different countries**

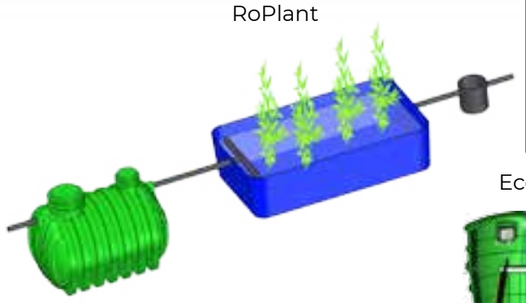
ROTO also produces a variety of tanks and containers made of composite materials. Certain circumstances, such ensuring greater stability, resistance to external influences, ground water, earth pressure, external installation or the need for transportability, require the choice of composite materials.

Stainless steel products

We manufacture pipelines and equipment for drinking water and waste water for water storage facilities, pumping stations, decanters for waste water treatment plants, and mixers for waste water treatment plants. We also carry out installation work on drinking water facilities.

1996 RoSep

1998 RoPlant



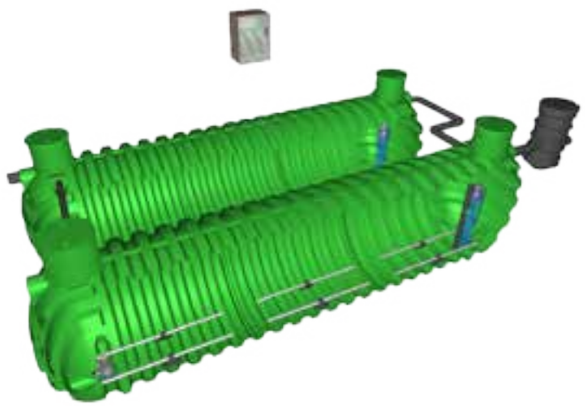
2001 BiOla

2004 Eco6

2005 RoClean

2006 RoClean 20+

2007 RoClean 100+



2008 Eco 4-6

2010 Vodalys

2011 EcoBox 2-5PE

2012 EcoBox 6-9PE

2013 EcoBlue

2014 RoSan 4PE

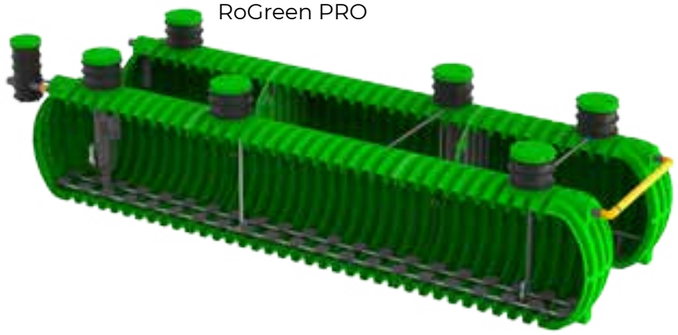
2015 RoMem

2017 BioCko

2019 RoClean EW

2020 Rokit

2020 RoGreen PRO



2021 EcoFloat

2004 MBBR

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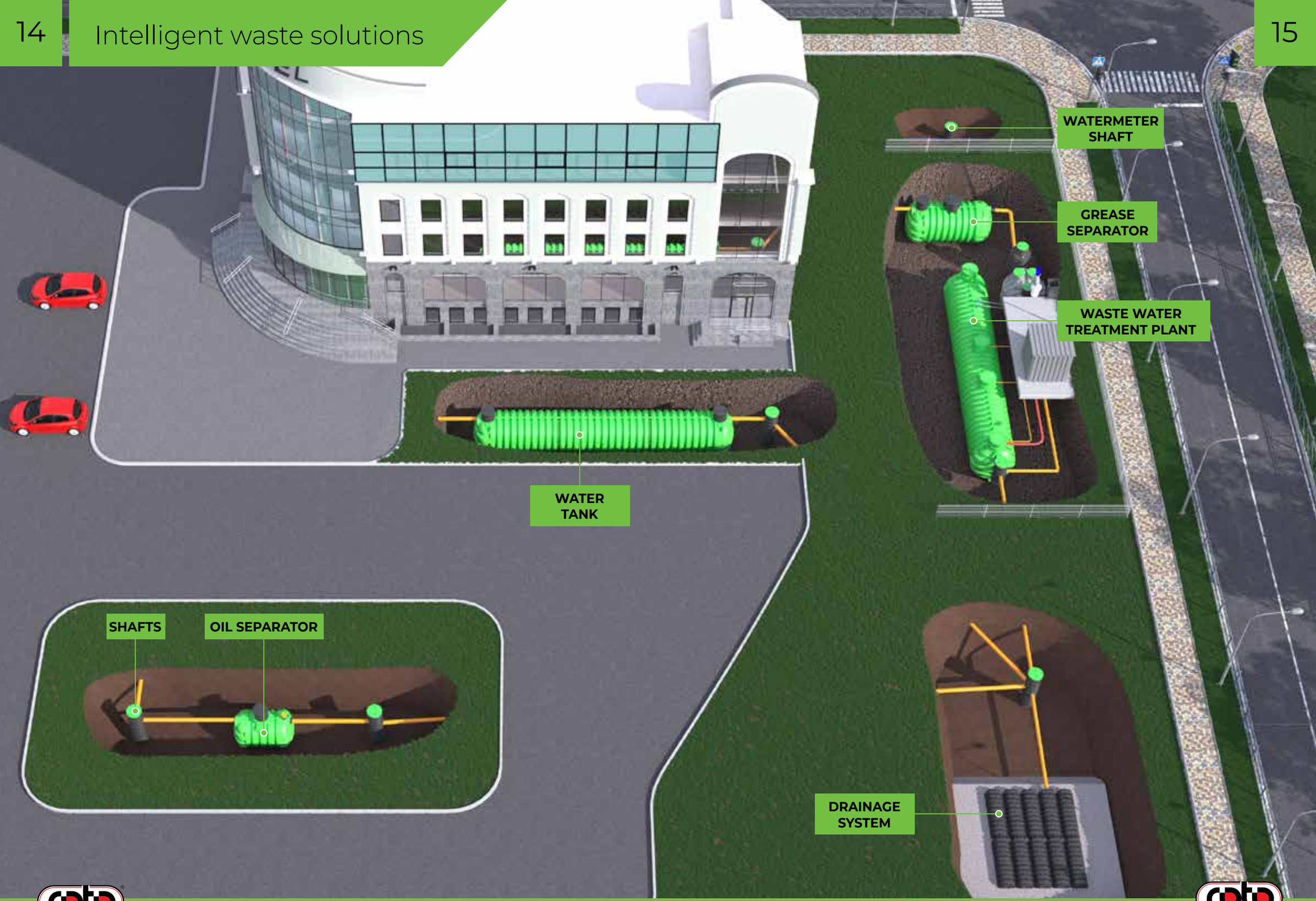

WATERMETER SHAFT
GREASE SEPARATOR
WASTE WATER TREATMENT PLANT
WATER TANK
SHAFTS
OIL SEPARATOR
DRAINAGE SYSTEM

questionnaire for selecting a suitable WWTP

To properly select the type of waste water treatment plant, cleaning technology and size, fill in the questionnaire.

A. TYPE OF FACILITY IN NEED OF A WWTP

- ☐ House maison, number of households: ☐ 1 ☐ 2 ☐ _____
- ☐ Mountain cottage _____
- ☐ Pub/bar (without food)
- ☐ Sport hall
- ☐ Tourist farm
- ☐ Other _____
- ☐ Restaurant
- ☐ Camp
- ☐ Buisness building, factory
- ☐ Workshop
- ☐ Holiday house

B. NUMBER OF USERS

Number of adults: _____ Number of children: _____

Number of guests / seats (only if you choose 2 and 5 on the first question) _____

C. AVERAGE WATER CONSUMPTION

_____ m^3/month

D. FREQUECY OF USERS

- ☐ Users who lives in building
- ☐ Users who lives in building at least 2 day / week
- ☐ Users who lives in building 4-6 days/month
- ☐ Users who lives in building only for season (write period / days): _____
- ☐ Other: _____

E. DO YOU USE KITCHEN IN BUILDING?

☐ YES ☐ NO

F. COMPOSITION OF WASTE WATER

No. of dry toilets		No. of flushing toilets	
No. of urinal toilets		No. of shower	
No. of wash basin		No. of dishwasher	
No. of chemical toilets		No. of washing machine	

G. SOIL TYPE AT THE INTENDED LOCATION OF WWTP

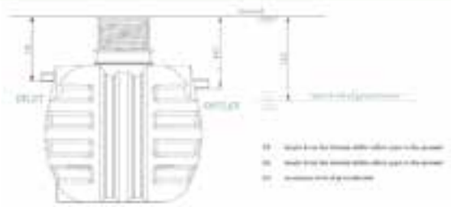
☐ Gravel	☐ hilly	☐ level		☐ Clay	☐ hilly	☐ level	
☐ Sand	☐ hilly	☐ level		☐ Stone	☐ hilly	☐ level	

H. DIMENSIONS

H1 _____ m

H2 _____ m

H3 _____ m



I. NOTES / OTHER

Type of facility	EcoBox	RoClean	RoGreen	RoEco	EcoBlue	RoMem	EkoFloat	RoSeptic
hotel		●	●					
camp		●	●		●			
village		●	●					
mountain lodge		●	●	●	●	●		
factory		●	●				●	
house	●			●				
holiday house				●				●

types of SBR WWTP

EcoBox

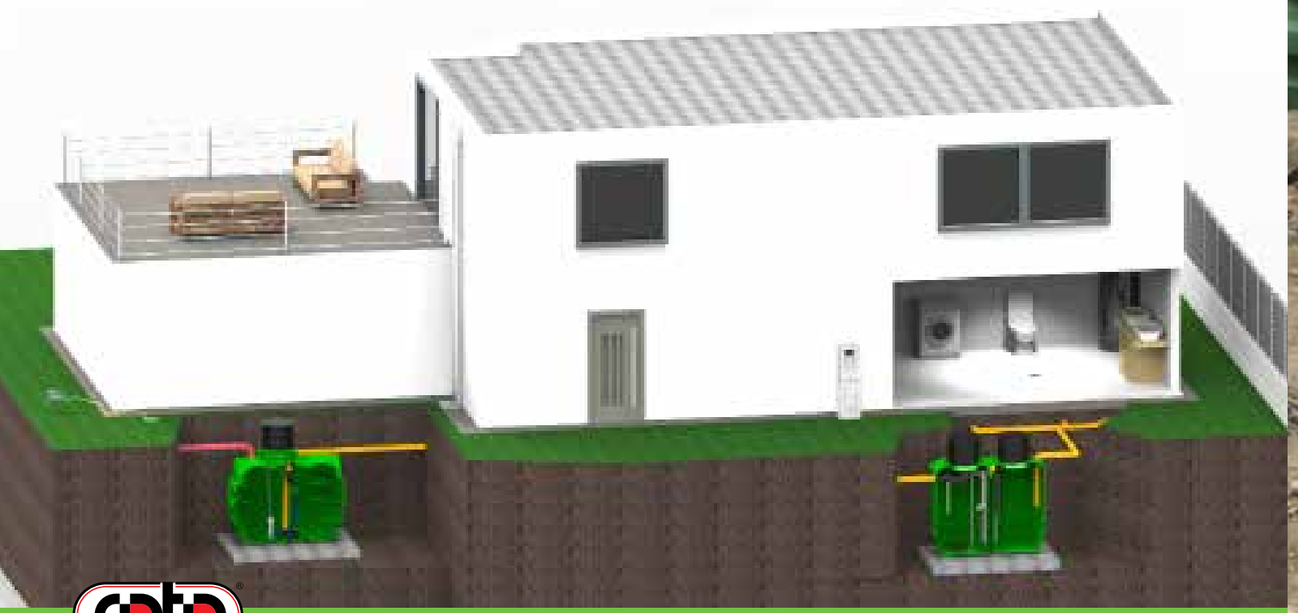
- From 2 – 5 population units [PU]
- Built in angular RoBox tank
- Appropriate for residental houses with a constant inflow of waste water
- Available as a basic and WEB control unit

RoClean

- From 4 - 300 population units [PU]
- Built in RoTerra water tank
- Appropriate for residental, commercial and tourist facilities with a constant inflow of waste water
- Air pumps allows constant movement of the content in the treatment plant
- No mechanical, electrical or moving parts inside the wwtp

RoGreen

- From 100 – 2500 population units [PU]
- Professional treatments plant for villages, hotels, camps, commercial facilities
- Control unit with the integrated PLC controller, allows water pumping between chambers or tanks
- Proffesional control unit is made according to the needs of the project.
- Basic waste water treatment can be upgraded with different additional equipment.
- Waste water treatment plant can be self adjustable, due to the sensors inside.
- Capacity of the population units can be modulary increased



SBR WASTE WATER TREATMENT PLANTS

EcoBox | RoClean | RoGreen

HIGH CLEANING EFFICIENCY

ROTO treatment plants purify water up to 97.2%. They operate safely and reliably, are virtually silent and odourless, and are insensitive to fluctuations in the ambient temperature. Urban waste water from toilets, bathrooms, kitchens and similar sources of pollution in houses is treated to the point where it can be safely discharged into surface water or a seepage pond.

RELIABILITY AND TRUST

ROTO is a pioneer in the production of waste water treatment plants in Slovenia, Europe and around the world. Several thousand ROTO waste water treatment plants ranging from 3 to 2500 units, septic tanks, oil and grease separators and water tanks have been installed. The award from the ZRMK Institute of Civil Engineering confirms the excellence of the product as judged by the building profession.

24H SERVICE

We guarantee fast delivery, maintenance, commissioning and servicing by ROTO's expert staff. Servicing by ROTO includes checking the condition and operation of the waste water treatment plant components, the cleaning efficiency, and checking the operational status as well as testing all plant functions. We instruct the user on the maintenance and correct use of the waste water treatment plant, and can also organise or supervise the installation and burial.

EASY INSTALLATION

Installation of the waste water treatments plants is fast and simple. Dig a constructuion pit, install a treatment plant, fill it with water and connect it with the inflow of wastewater from the house. The tank of the treatment plant has a telescopic extension, so the height of the tank can be adjusted to the requirements of the terrain.

100% RECYCLING

The waste water treatment plant can be dismantled after use and the polymer components can be fully recycled.

LOW OPERATING COSTS

Water purification is Easy, because all the components of the waste water treatment plant work on air-lift pump principle. The air compressor is located in the separate cabinet where it is protected from the enviroment, which reduces the potential for failures and makes the wastewater treatment plant extremely efficient, with yearly running costs under 6 €/year/person.

LONG LIFETIME

The waste water treatment plant tank is made of polyethylene, which has a service life of 50 years. It is made in one piece, so it is 100% waterproof. The waste water treatment plant tank has excellent statics and walls which are 8-14 mm thick, making it resistant to soil pressures and external influences.

EASY SAMPLING

All ROTO waste water treatment stations have a built-in sampling container from which we can check the purifying efficiency of the plant.

PROFESSIONAL CONTROL UNIT

The cleaning device works fully automatically as it is controlled by a computer built into the cabinet. This robust and stylish cabinet is made of polyethylene. The cabinet design ensures easy access for maintenance, protects the control unit, compressor and valves from external influences and thus prolongs their service life. The cabinets are available in different sizes, designs (free-standing or wall-mounted) and materials (polyethylene and concrete). Control units can be upgraded with remote monitoring – telemetry.

UNDERGROUND INSTALLATION

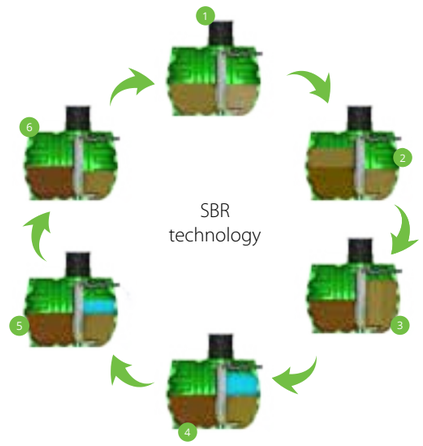
The waste water treatment plants are intended for underground installation, so when installed the treatment plant wont in any way affect your landscape or take up any additional space.

QUICK DELIVERY

Roto is Slovenian manufacturer. Delivery can be made in few days after the order

EU PRODUCT

ROTO WWTP's are 100% Slovenian product. Our factory has its own development, production and assembly line in Puconci near Murska Sobota (Slovenia). Roto waste water treatment plants are made according to the EU standards EN 12566-3 and reach purification stage BPK_5 < 30mg/l, KPK < 150 mg/l



SBR TECHNOLOGY:

Process is managed by computer which is installed into the special box. Softwear is stearing 4 magnetic valves. Each valve has specific function:

1. Pumping water from mud collector to the aerator.
2. Aeration in aeration chamber.
3. Pumping of purified water from aeration chamber to the outflow.
4. Pumping sediment mud from aerator chamber back to the mud collector

1 PRIMARY SETTLEMENT TANK
Waste water flows into the treatment plant and is collected in the first chamber-mud collector. Retention time is needed for mud to settles down.

2 PUMPING
First valve is activated for pumping of waste water from mud collector to aeration chamber.

3 AERATION
In aeration chamber air supply is conducted through compressor and air membrane on the bottom of the chamber. Computer regulates intervals and quantities of air through magnetic valve. Aeration cycles are determined by the size of waste water treatment plant.

4 SEDIMENTACION
After aeration, sedimentation phase begins. In this process purified water is is separated from the sediment. Compressor is turned off in this phase.

5 PUMPINF OF CLEAN WATER IN THE NATURE
Purified water is pumped out from aeration chamber with compressor.

6 RECYCLE PUMPING
Sediment in aeration chamber is pumped back to mud collector. Entire process is repeated several times a day.

Determining the size of the waste water treatment plant

The size of the waste water treatment plant is determined by population units (PU) or equivalent users, while at the same time defining the biochemical capacity of the treatment plant.
The PU unit signifies the specific consumption of water ranging from 0.15 to 0.20 m^3/person/day and the biochemical load of 0.06 kg BNO_5/person/day.
Working volume which is necessary to purify the waste water is from 500 to 800 liters per person.

ACCOMMODATIONS:
3 person = 1 PU

APARTMENTS:
2 person = 1 PU

RESTAURANTS:
with kitchen - 2 person = 1 PU
without kitchen - 3 person = 1 PU
garden terrace - 10 person = 1 PU
(without kitchen)

Information is important in the design, structure, calculation of PU AND OF COURSE THE PURCHASE.

Cleaning efficiency of WWTP

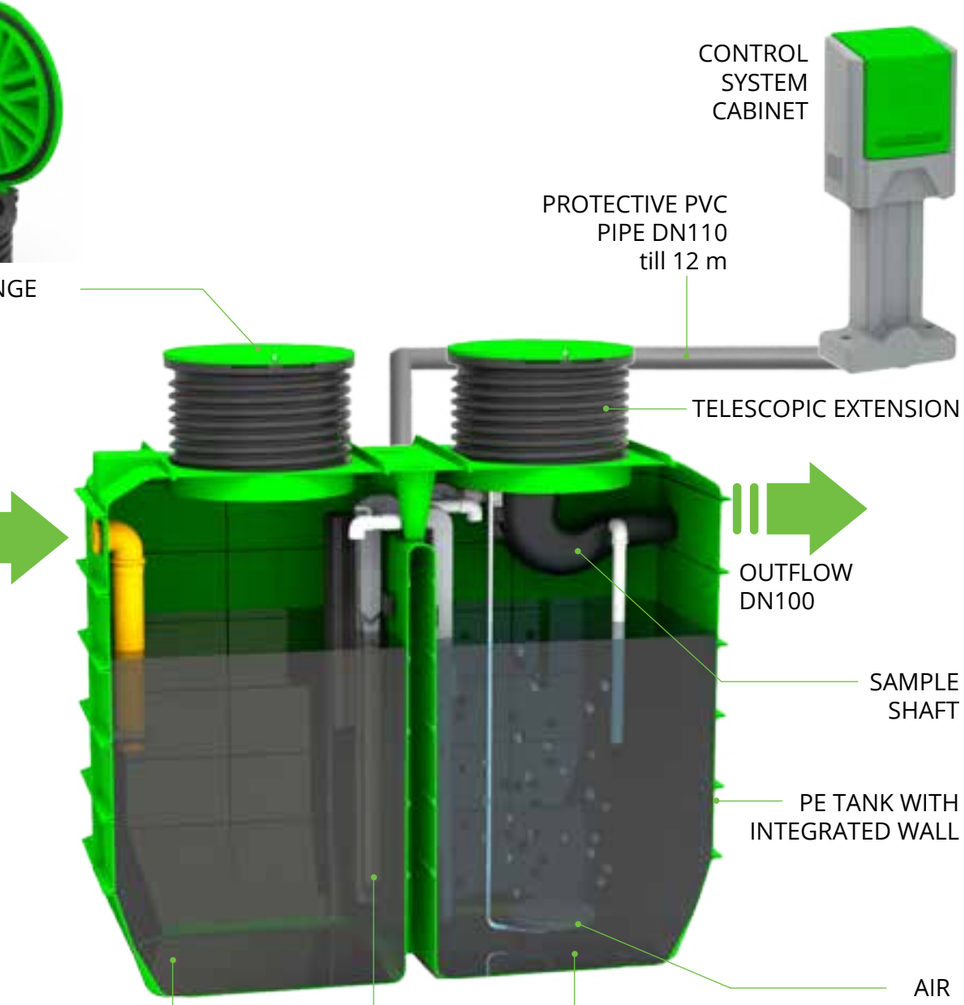
	Limit values	Statutory limit values	Values Roto SBR
	inflow	outflow	outflow
KPK	300 - 1000	<200	93
BPK_5	150 - 500	-	14
SS	200 - 700	-	21

All values are expressed in mg/L.

* Average ROTO values of waste water treatment plants testing at the accredited laboratory of the National Institute of Public Health Maribor.

All ROTO waste water treatment plants are included in the list of standard WWTPs published by the Chamber of Commerce and Industry of Slovenia.

EcoBox



Find other **accessories** on the page 34

EcoBox

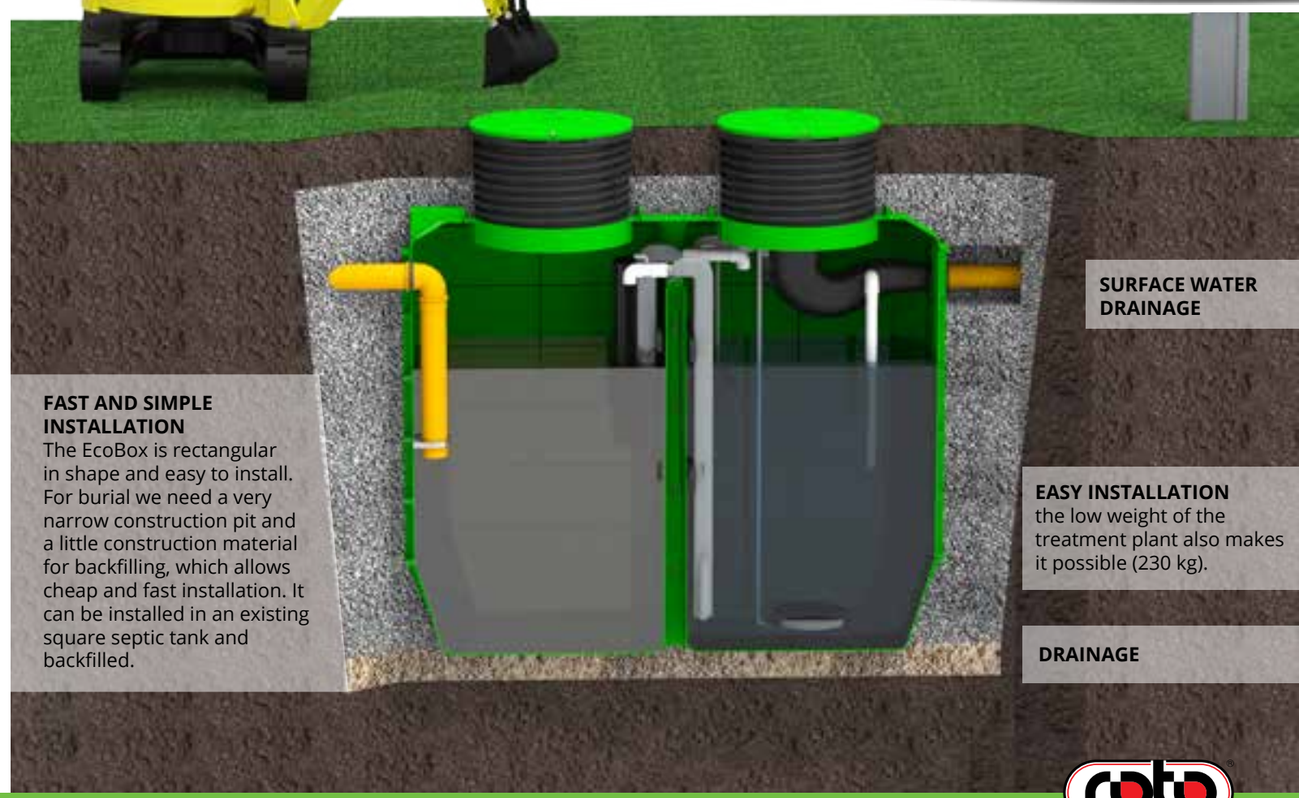
EASY AND SAFE ACCESS
The EcoBox has two DN 600 inspection openings, allowing easy access, maintenance and servicing of the waste water treatment plant. Two telescopic extensions are mounted on the opening to adjust the height upon instalation. They are covered by hinged lids/covers with locking option.

CONTROL CABINET
The maximum distance between the control cabinet and the treatment plant is 15 m. A 3 x 2.5 mm^2 electrical conductor must be routed to the control box to supply the control unit.

INSTALLATION UNDER A TRAFFIC SURFACE
The tank has excellent statics, so it can be installed on the traffic surface. In this case, install the iron cast cover with a concrete ring and follow the specific instructions for installations under the traffic surface.

COVER WITH HINGE
- Simple use and maintenance
- 100% recyclated material afte ruse
- UV resistant material
- resistance to (corrosion) and chemicals
- excellent gas tightness of the cover

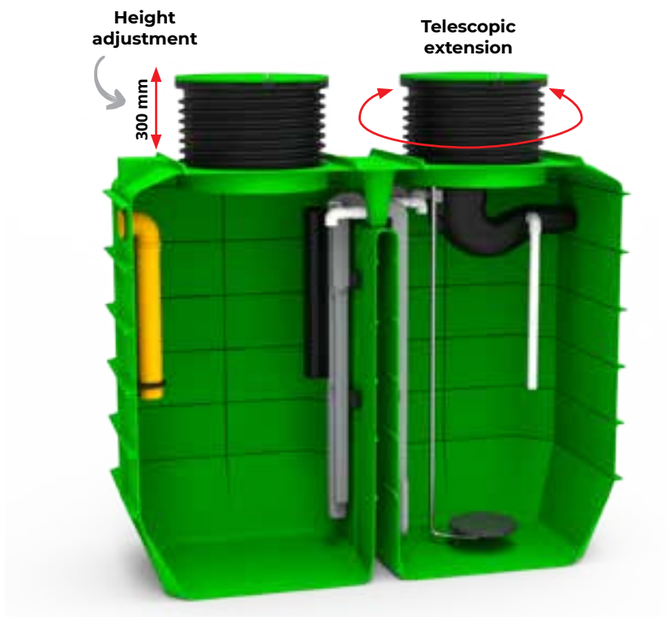
TELESCOPIC EXTENSION
The telescopic extension allows quick and easy height adjustment upon installation.
Dimensions: Ø600 x 400 mm.



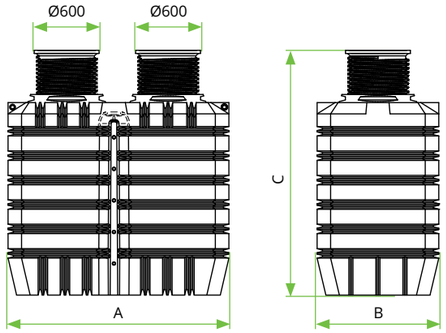
FAST AND SIMPLE INSTALLATION
The EcoBox is rectangular in shape and easy to install. For burial we need a very narrow construction pit and a little construction material for backfilling, which allows cheap and fast installation. It can be installed in an existing square septic tank and backfilled.

EcoBox

2-5 PE



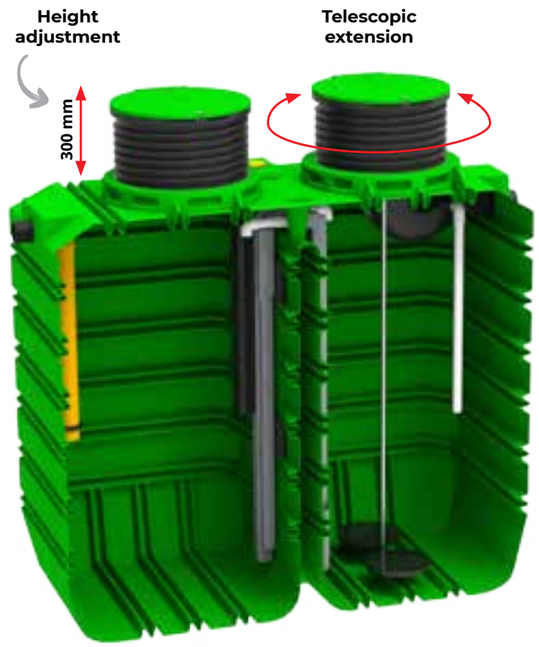
PU	2-5 PU
Code	7100079950
Max. day inflow [l/dan]	750
Volume [L]	4000 L
Dimension A x B x C [mm]	2330 x 1175 x 2000–2300
Diameter of inspeciton opening	2 x DN600
Height of inflow/outflow [mm]	1610/1530
Diamater of inflow/outflow pipe	DN 110
Airflow volume (compresor) [l/min]	80
Power consuption (compresor) [W]	58
Sound level [dB]	36 dB
Control system cabinet	P5
Control unit	RC
Sample shaft	5 L



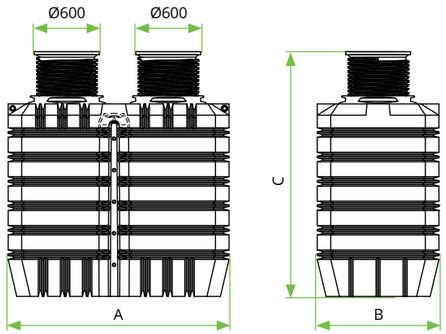
Options of control unit:

EcoBox

6-9 PE



PU	6-9 PU
Code	7100076730
Max. day inflow [l/dan]	1350
Volume [L]	6000 L
Dimension A x B x C [mm]	2450 x 1350 x 2300–2600
Diameter inspeciton opening	2 x DN600
Height of inflow/outflow [mm]	1960/1880
Diamater of inflow/outflow pipe	DN 110
Airflow volume (compresor) [l/min]	150
Power consuption (compresor) [W]	130
Sound level [dB]	48 dB
Control system cabinet	P5
Control unit	RC
Sample shaft	5 L

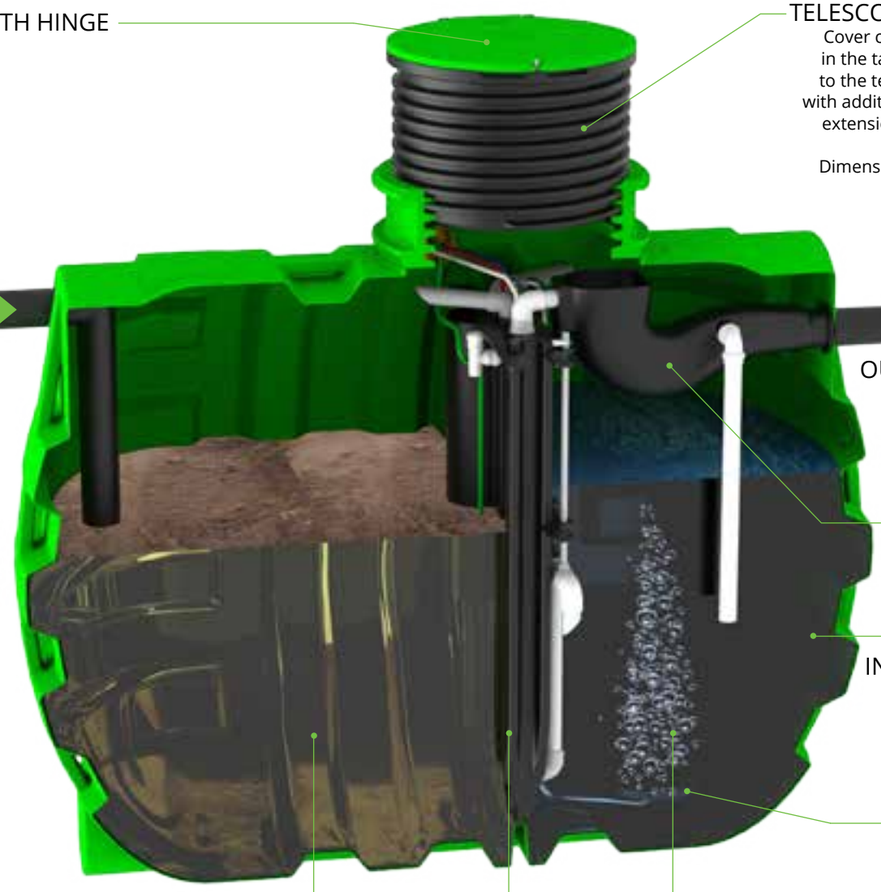


Options of control unit:

Roclean

COVER WITH HINGE

TELESCOPIC EXTENSION
Cover can be simple screwed in the tank and easy adjusted to the terrain. It is compatible with additional extension of the extension in the case of deep ground installation. Dimensions of extensions are Ø600 x 300 mm.



INFLOW

OUTFLOW

SAMPLE SHAFT

PE TANK WITH INTEGRATED WALL

AIR DIFFUSER

PRIMARY SETTLEMENT TANK

AIR LIFT PUMPS

AERATION TANK

Find other **accessories** on the page 34

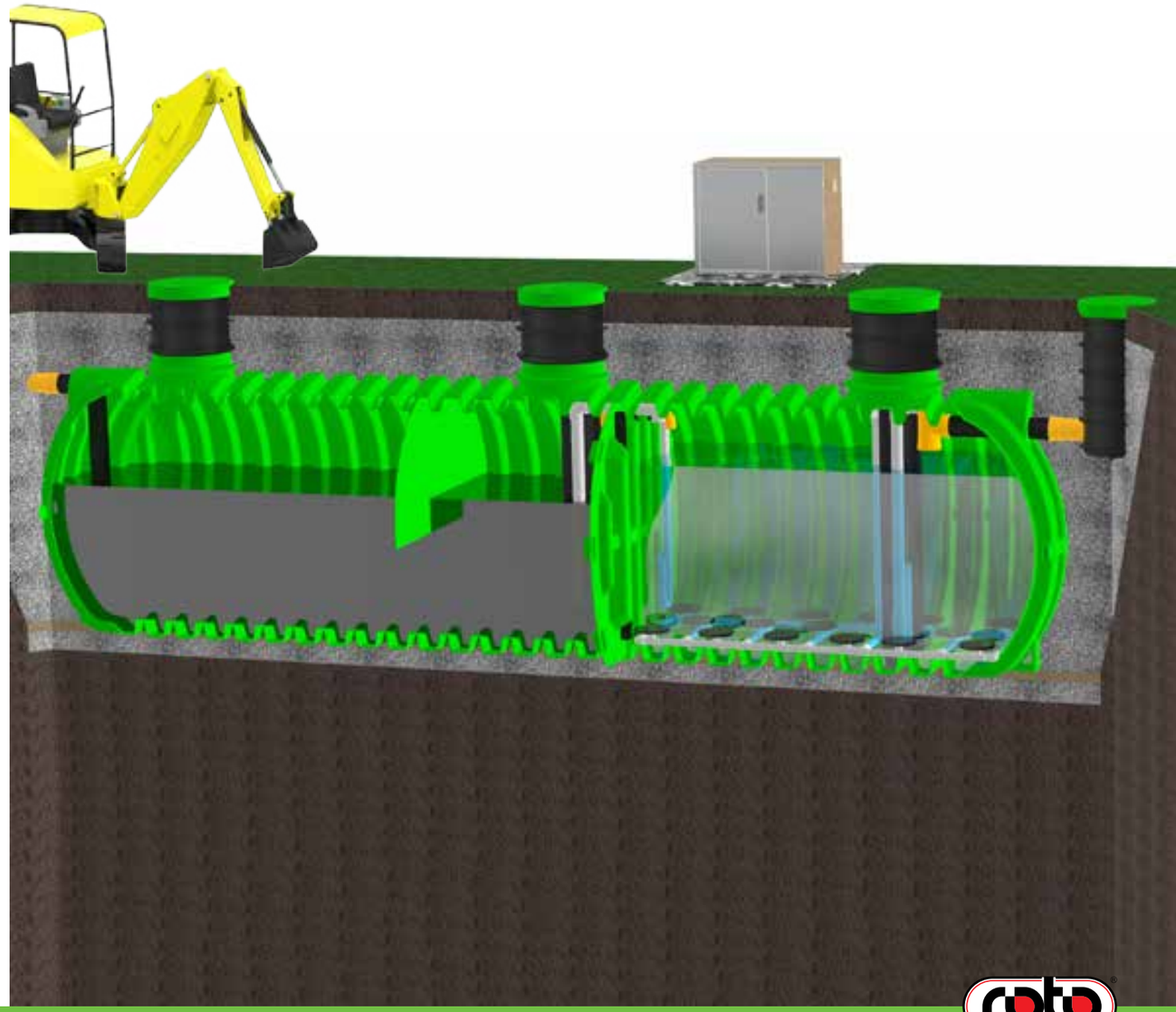
EASY AND SAFE ACCESS
RoClean has an inspection opening DN 600 or DN 800, which allows easy access and maintenance and servicing of the waste water treatment plant.

SAMPLE SHAFT
In the case of smaller RoClean units, the sample shaft is integrated and self-cleaning and easily accessible through the inspection opening. For larger waste water treatment plants, it is installed in a DN600 shaft.

TELESCOPIC EXTENSION
The telescopic extension allows quick and easy height adjustment upon installation.

CONTROL CABINET
Waste water treatment plants up to 75 PE have a polyethylene control unit locker, while those above 100 PE have a concrete control locker. A 3 x 2.5 mm^2 power lead must be connected to the control box to supply the control unit.

TANK
is made from a single piece of polyethylene using a rotational moulding process. Durability and longevity are ensured by walls with a thickness of 8 mm to 14 mm. Reinforcing ribs improve the tank's strength and resistance to soil pressures.

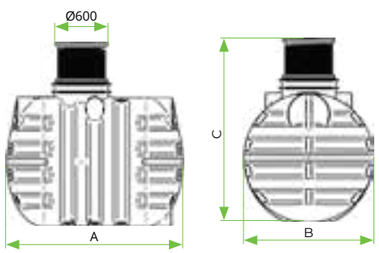


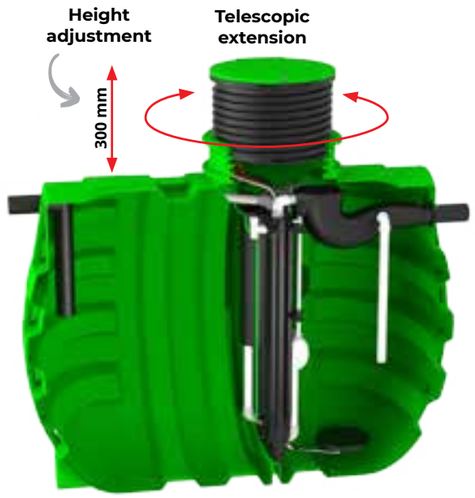
Roclean

4-50 PE

RoClean is the ideal waste water treatment plant for small accommodations, hotels, housing estates, apartment buildings, schools, factories and office buildings, campsites, etc., which are not connected to the public sewage network.

The waste water in RoClean water does not flow freely through the system, but its feedes with specific volumes from the storage tank into the SBR reactor, where it is processed through several treatment cycles. This results in different water levels in different tanks.





Options of control unit:

Clasic | RoWeb | GSM

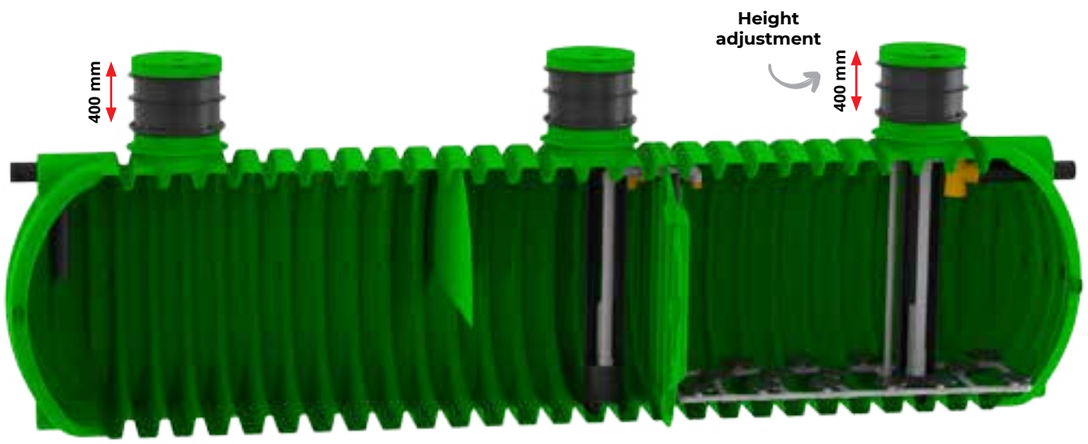
PU	4	6	8	12	16	20	30	40	50
Code	7200079840	7200079850	7200079860	7200063770	7200063780	7200063790	7200063760	7200063820	7200063830
Max. day inflow [l/dan]	600	900	1200	1800	2400	3000	5000	6000	8000
Volume [L]	3500	5000	6000	8000	10000	12000	16000	16000	22000
Dimension A x B x C [mm]	2080 x 1800 x 2050 - 2350	2450 x 1800 x 2050 - 2350	2820 x 1800 x 2050 - 2350	2680 x 2300 x 2550 - 2850	3050 x 2300 x 2550 - 2850	3760 x 2300 x 2550 - 2850	4840 x 2300 x 2550 - 2850	4840 x 2300 x 2550 - 2850	6280 x 2300 x 2550 - 2850
Diameter of inspeciton opening	DN600	DN600	DN600	2 x DN600	2 x DN600	2 x DN600	3 x DN600	3 x DN600	3 x DN800
Diamater of inflow/ outflow pipe	DN 110	DN 110	DN 110	DN 110	DN 110	DN 125	DN 125	DN 125	DN 125
Airflow volume (compresor) [l/min]	80	80	120	150	200	250	300	300	425
Power consuption (compresor) [W]	58	58	122	130	186	202	298	298	400
Sound level [dB]	36	36	46	48	48	55	56	56	51
Control system cabinet	P6	P6	P6	P6	P6	P5	P5	P5	P5
Control unit	RC/RW/ RGSM	RC/RW/ RGSM	RC/RW/ RGSM	RC/RW/ RGSM	RC/RW/ RGSM	RC/RW/ RGSM	RC/RW/ RGSM	RC/RW/ RGSM	RC/RW/ RGSM
Sample shaft	5 L	5 L	5 L	5 L	5 L	5 L	5 L	5 L	5 L

Roclean

75-300 PE

The RoClean waste water treatment plant is installed in a single tank, which consists of two compartments: the sludge storage tank and the SBR reactor.
It works on the airlift pump. It is suitable for the treatment of municipal waste water from settlements, catering and commercial buildings with a constant influx of large volumes of waste water.

RoClean is sized according to SIST EN 12255-1, -4, -6, -10, -11, -12, where a daily flow of 150 L/day/person is foreseen. Treated water may be discharged into watercourses of another category.
The control unit is mounted in a polyethylene or concrete cabinet, which is specified by our professionals according to the type of plant and the number of accessories.



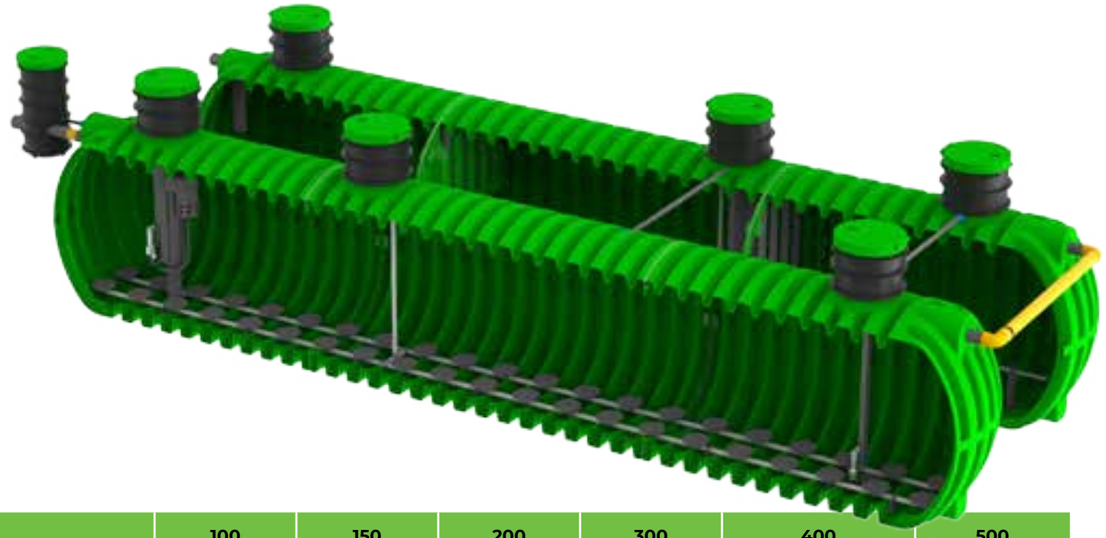
PU	75	100	150	200	300
Code	7200063850	7200063840	7200063860	7200063870	7200063880
Max. day inflow [l/dan]	120000	150000	230000	300000	450000
Volume [L]	25.000	30.000	40.000	50.000	65.000
Dimension A x B x C [mm]	7370 x 2300 x 2550-2850	6620 x 2425 x 2700-3000	8600 x 2425 x 2700-3000	10960 x 2425 x 2700-3000	13600 x 2425 x 2700-3000
Diameter of inspeciton opening	3 x DN800	2 x DN800	2 x DN800	3 x DN800	3 x DN800
Diamater of inflow/outflow pipe	DN200	DN200	DN200	DN200	DN200
Airflow volume (compresor) [l/min]	35	35	95	95	165
Power consuption (compresor) [W]	700	700	1600	1600	3000
Sound level [dB]	55	55	66	66	72
Control system cabinet	B8	B8	B8	B8	B8
Control unit	RC/RW	RC/RW	RC/RW	RC/RW	RC/RW
Sample shaft	56 L	56 L	56 L	56 L	56 L

RoGreen PRO

100-500 PE

Fully automated processes and additional sensors allow the waste water treatment plant to automatically adapt its operation to the specifics of the facility. The data collected from the sensors is used by the smart control to modify and optimise the operating regime in order to clean as efficiently as possible and minimise operating costs. A phone app allows you to remotely monitor and control the waste water treatment plant.

RoGreen's smart municipal waste water treatment plant responds automatically to changing influent conditions, which competitors' waste water treatment plants do not provide. This results in higher waste water treatment efficiency, lower electricity consumption and lower maintenance costs as the operator does not have to adjust the operating settings to the changing inflow.

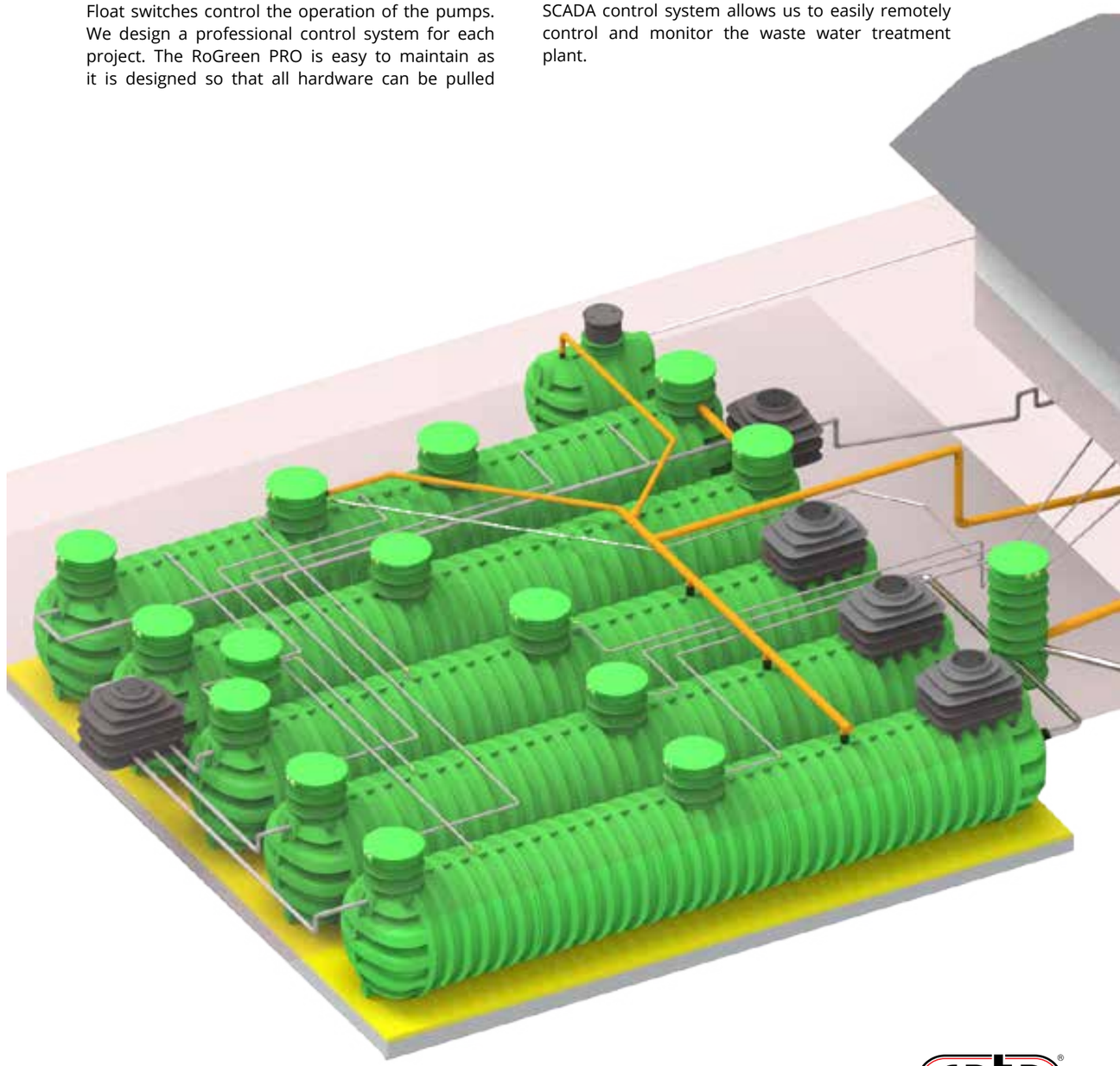


PU	100	150	200	300	400	500
Code	7200063841	7200063861	7200063871	7200063881	7200063891	7200063901
Max. day inflow [l/dan]	15000	22500	30000	45000	60000	75000
Volume [L]	30.000	40.000	50.000	65.000	1x 40.000 1x 45.000	2x 50.000
Dimension A x B x C [mm]	6550 x 2425 x 2700-3000	8510 x 2425 x 2700-3000	10850 x 2425 x 2700-3000	13460 x 2425 x 2700-3000	1x (8510 x 2425 x 2700-3000) 1x (9870 x 2425 x 2700-3000)	2x (10850 x 2425 x 2700-3000)
Diameter of inspeciton opening	2 x DN600	2 x DN600	3 x DN600	3 x DN600	5 x DN600	6 x DN600
Diamater of inflow/ outflow pipe	DN200	DN200	DN200	DN200	DN200	DN200
Airflow volume (compresor) [l/min]	35	95	95	165	265	265
Power consuption (compresor) [W]	700	1600	1600	3000	4000	4000
Sound level [dB]	55	66	66	72	73	73
Control system cabinet	B8	B8	B8	B8	B13	B13
Control unit	Green PRO	Green PRO	Green PRO	Green PRO	Green PRO	Green PRO
Sample shaft	56 L	56 L	56 L	56 L	56 L	56 L

RoGreen PRO

650-2500 PE

RoGreen PRO 650+ are professional WWTPs for residential or tourist facilities and factories. The waste water treatment plants are built into RoTerra tanks. A computer controls a system of pumps in the waste water treatment plant, which pump water between the chambers and to the outlet, via a PLC. Float switches control the operation of the pumps. We design a professional control system for each project. The RoGreen PRO is easy to maintain as it is designed so that all hardware can be pulled out through the inspection openings for servicing. The basic version can be upgraded with various accessories. Sensors adjust the processes in the waste water treatment plant to the volume of waste water flow, increasing the efficiency of treatment. Capacity can be increased modularly. The additional SCADA control system allows us to easily remotely control and monitor the waste water treatment plant.



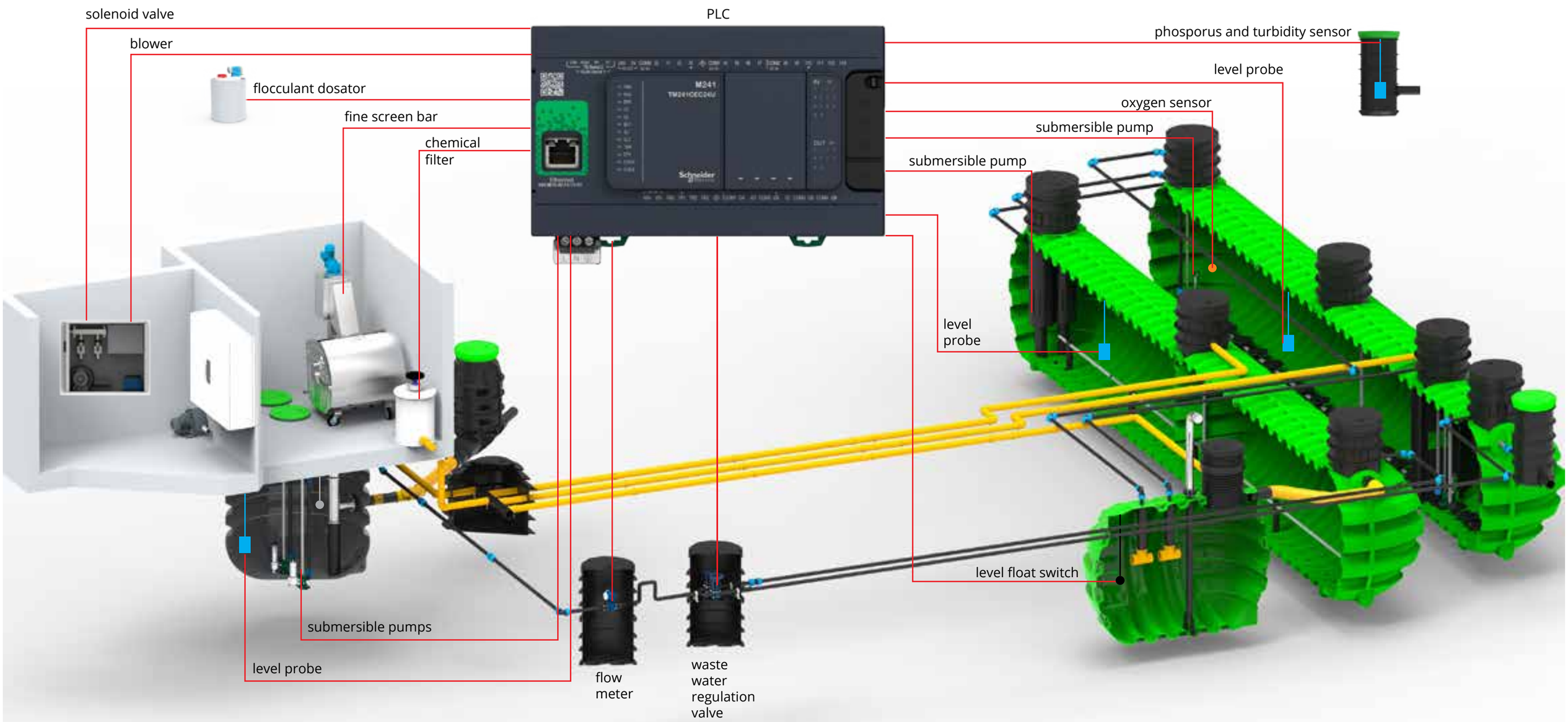
Rogreen PRO

100-2500 PE

Because we recognise the importance of protecting the environment, we closely monitor and control the performance of major waste water treatment plants. With the latest hardware, electrical equipment and information technology, all processes in ROTO waste water treatment plants can be controlled remotely.

The SCADA control system is a quick and transparent way for the user to manage the entire treatment process, while allowing us to adjust the operation according to the influent and effluent parameters.

Data is transmitted from the sensors to the controller and stored in a central control centre. You can remotely control individual components of the waste water treatment plant and monitor the system's performance anytime, anywhere via smart devices.



Additional equipment allows us to measure various inlet and outlet parameters such as pH, flow, dissolved oxygen, turbidity, flocculant dosing or control of pumps, chemical filters or compressor operation.

PICTURE	NAME	CODE	DESCRIPTION
	FINE SCREEN BAR		Mechanical removal of non - degradable particles in wastewater
	PUMPING STATION		Pumping fecal water to a higher level
	CHEMICAL FILTER	7900520790 7900520710	Removal of unpleasant odors from WWTP
	DECANTER		Leakage of purified water from the reactor
	UV DISINFECTION		Tertiary water treatment when purified water goes and bathing water or reused
	DOSING SYSTEM	7900520730	The set contains a dosing pump and a PE tank up to 100 L
	SUBMERSIBLE VERTICAL MIXER	7900520740	Nitrogen removal in the storage / SBR reactor
	OXIGEN SENSOR	7900520750	Measurement and regulation of molten oxygen in the wastewater and the reactor.
	CONTINUOUS LEVEL GAUGE	7900520780	Measurement of wastewater level in the tank and reactor
	CONTAINER		Container for installation of hardware and electrical equipment

Classic
control unit
in cabinet
RC, FR

RoWeb
Remote control and monitoring,
with touch screen and mobile app.
R1, R2

GSM MODULE
Control unit
with GSM alarm
RM

SCADA APP
Remote control and monitoring
With the graphic display of individual components on the touch screen
RG

RoControl control unit

WWTP TECHNOLOGY	SBR		Flow technology		MBBR	MBR
	DE	1290013	RE	8840	NB	MS
	FR	8874	TM	3730015	IE	
	RC	8873				
	R1	8876				
	R2	8866				
	RG	8864				
	RM	1295002				

SCADA

SCADA APP

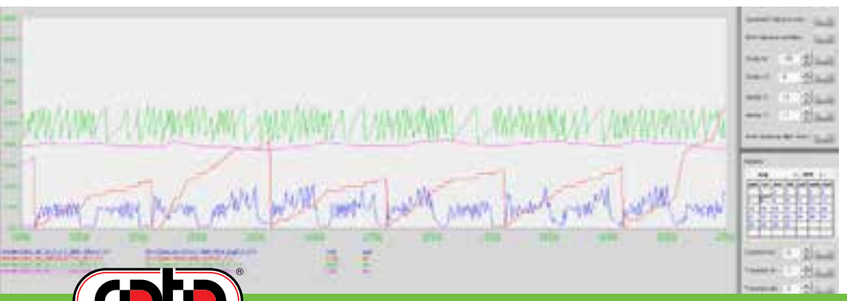
REMOTE CONTROL OF WASTE WATER TREATMENT PLANT

SCADA SUPPORTS M2M COMMUNICATIONS FOR DATA TRANSFERING:

- Operating mode,
- SCADA control center (facilities can be integrated in the WEB SCADA control),
- Possibility to set up new center or integration of existing control center, which supports standard communication protocols for communication with dislocated facilities,
- Remote control and acces can be reach via internet, smart phones, Ipads, and other mobile devices,
- Communication between different locations.

SCADA APPLICATIONS

- Reporting of errors on your mobile device,
- Possibility to check history of errors,
- Saving of information on SD card.



ADVANTAGES OF SCADA APPLICATIONS:

- Visual display of current process and hisory of operating,
- on/off possiblity of all devices from SCADA,
- remote settings of all parameters on waste water purifying plant,
- automatic creation of reports,
- remote control for maintance stuff,
- alarm filtering by day, user name and type of alarm (for later analysis and system debugging),
- review of working hours, number of starts, consumption, service intervals.

The SCADA system is an efficient technological solution for the control and remote control of clean and wastewater plants. SCADA remote monitoring has a positive effect on the operation of systems, maintenance, implementation of improvements and savings in the management of treatment plants and other facilities.

GSM

GSM MODULE

Remote operating control
Waste water treatment plant

The RG controller with GSM module is an advanced version of the basic RC controller.

Communicates information about the operation of the control unit to the user. A SIM card is installed in the controller to ensure data transfer.

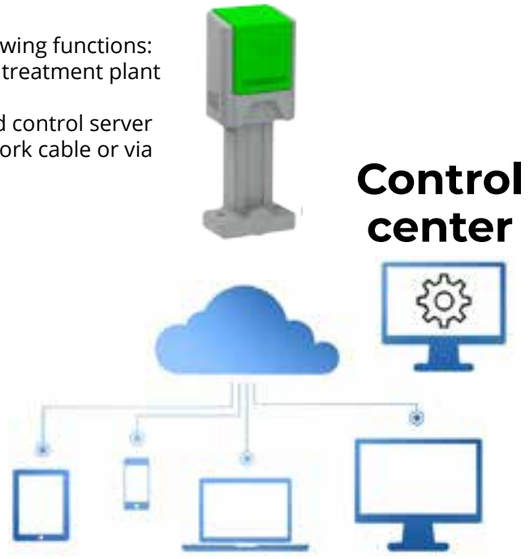
Via SMS, the user receives a message on his phone about whether the control unit is energized and if there may be faults in the operation of the treatment plant.

It allows remote monitoring of the operation of the control unit of the treatment unit and facilitates maintenance.

RoWeb

Control unit

The control unit provides the following functions:
- monitoring the operation of the treatment plant
- touch screen operation
- transmitting data to the RoCloud control server
- network connection with a network cable or via WiFi wireless connection



RoCloud control server

RoCloud provides the following features:
- storing treatment plant data
- notifying users of malfunctions via e-mail

APP RoWeb

The RoWeb app allows the user to:
- RoWeb is supported by Android/iOS operating systems, as well as home computers Windows or Mac
- monitoring of all operating parameters of the treatment plant
- notification of malfunctions via push messages
- one-click mud and service pumping order
- archive logs of maintenance and servicing

The mobile app is available on Google Play in two languages [Slovenian and English]. Users can install it by searching for the keyword RoWeb or simply by scanning the QR code below.

The first time you start the application. Enter the serial number of the device and select save. Between the menus of the application, the user scrolls to the left or right to acces all the menus.

The second screen below shows the status of WWTP in the NORMAL operating mode.
User can click on the button to access the instructions of operation.
By clicking on the button info the user can activate the HOLIDAY mode. By clicking the same button again the NORMAL MODE is switched on again.

On the third screen below displays information of the WWTP operation.

Screen abowe shows the user personal data and the e-mail address of the service company.
Screen below shows the current alarm, and the user has the option to turn on notifications.
Below the notifications tabs, there is shown history of the last 100 alarms, which cannot be deleted and is also permanently stored in our control center.

RoWeb control unit allows the operation of Waste water treatment plant (WWTP) up to 40 population units (PU).
Control of the WWTP is possible as a local operation - without network connection, or connected with network allowing user to manage and monitor WWTP.

Network connection with the control unit is sending data to the control center, which can be directly accessable with your smart phone. Management takes place via the built-in touch screen and the mobile app available on Google Play.

The control unit have two levels of acces. The first is for the user (owner of the WWTP) and the second for the servicer or managers.

The user settings menu allows you to choose between INFO, ALARMS, SERVICE, PROGRAM, ANALYSIS.

The basic picture shows all the most important elements of the operation of the treatment plant such as serial number, operating mode (eg normal or holiday), operating schedule (cycles), adequacy of operation and possible malfunctions and user settings.

The **INFO** menu shows the operating hours of the WWTP, the number of hours until depletion, the operating hours of the compressor and the number of hours until the compressor is serviced.

The **ALARM** menu shows WARNINGS and ERRORS.

The **SERVICE** menu allows manual activation of all treatment plant actuators. It is intended to test the operation of an individual actuator.

The **LAB DATA** menu allows you to display the last laboratory analysis of the WWTP. Laboratory analyzes are entered via the service settings of the mobile application or directly from the operator control center.

The **ABOUT** menu allows you to view the system data of the WWTP like date, time, IP adress, serial number, device name, program version and operating time.

Get it on Google play

RoWeb SLO

RoWeb EN

award for inovation

Gospodarska zbornica Slovenije

ZRMK Gradbeni inštitut ZRMK, d.o.o.

WASTE WATER TREATMENT PLANT GREASE TRAP

CAMPING ŠOBEC

LESCE – BLED, SLOVENIA

Project Description

Camp Šobec is the biggest and most popular campsite in Slovenia, located in Triglav national park.
Camp „Šobec“ are currently expanding and renovaiting the camp. With the increased demand of visitors and campers they decided to tottaly upgrade their old sewage system.
Installation of underground RoClean SBR waste water treatment plant for 1500 population unit and all necessary connections.

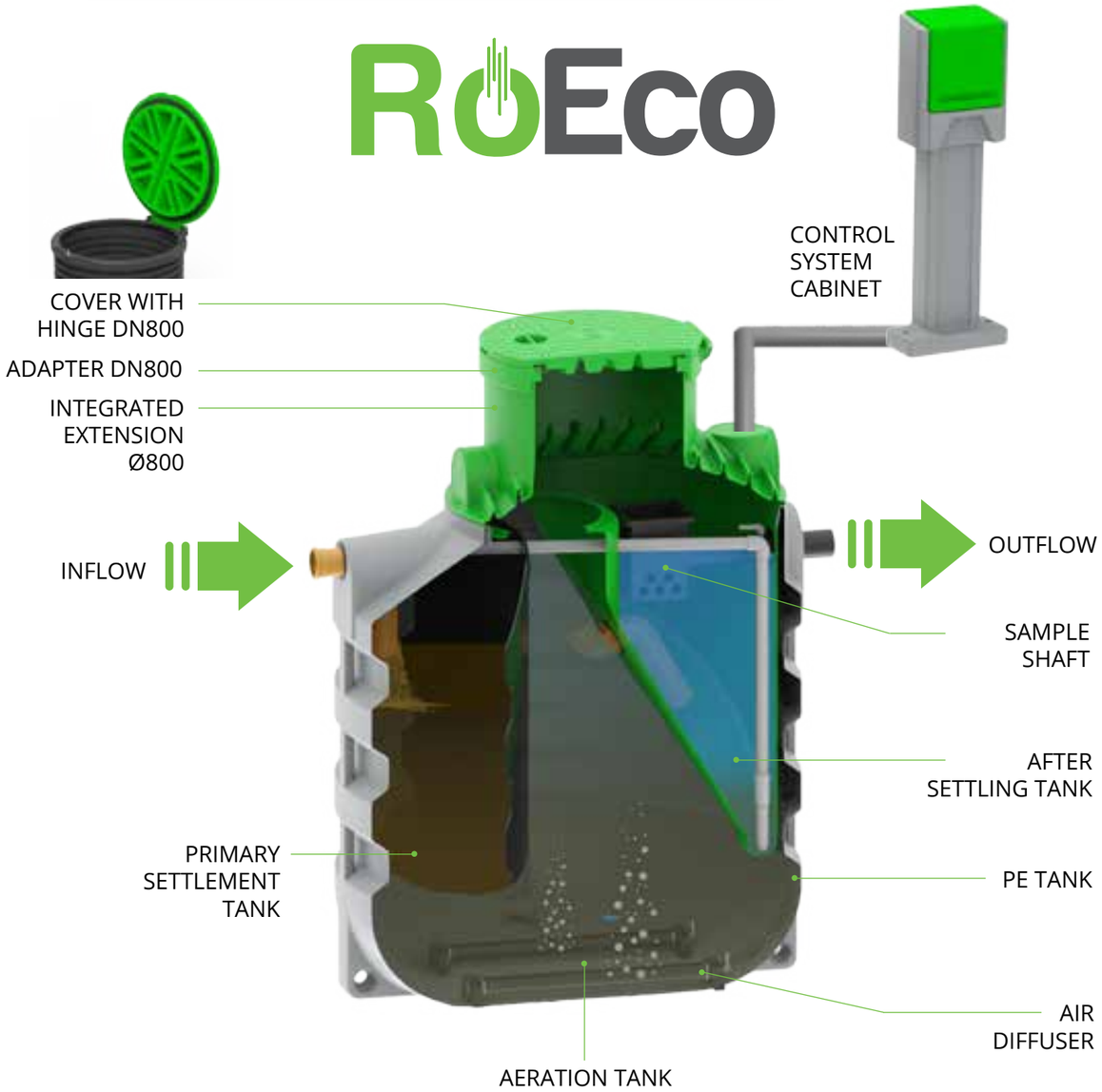
ROTO team provides the ongoing servicing for the whole site, visiting twice a week to ensure that all the plant is working correctly and that the final effluent discharge remains at a high standard. Outflow of the WWTP is in the crystal clear water of the river Sava Dolinka.

Additional equipment

Dissolved Oxygen sensor, dosing system, pH sensor, phosphate analyzer, and telemetry system allow the system to be monitored 24 hours per day remotely ensurig the system is constantly working at optimum performance. Remote access via internet and mobile devices also allows parameters to be adjusted if necessary. The WWTP automaticly adjusts the process according to the amount of the inflow.

FLOW WASTE WATER TREATMENT PLANT

RoEco



FLOW TECHNOLOGY

The RoEco biological treatment plant purifies water in 3 steps:
1 PRIMARY settler - water from the household flows into the primary settler in which floating non-degradable particles are retained

2 AERATION - water flows into the aeration chamber through an opening in the bottom of the primary settler. At the bottom of the treatment plant, pipe diffusers are installed through which we supply air, which enables the biological cleaning process.

3 CLEANER - over the overflow elbow, water flows from the aerator to the clarifier, where sedimentation follows. With the help of an air pump, the sediments are pumped back into the primary settler.

Using flow technology, wastewater is treated in accordance with legal limit values. All components of the treatment plant are made in Slovenia from high quality materials.

USE
The RoEco flow-through waste water treatment plant is designed to treat waste water from households: kitchens, bathrooms and toilets.

RoEco achieves high cleaning efficiency with minimal operating costs.

It is characterised by its simple operation, low maintenance, low energy consumption, quiet operation, excellent quality and long service life.

INLETS, OUTLETS - all connections on the treatment plant are already equipped with seals with a diameter of 110 mm.

COVER WITH HINGE DN800 allows easy access, sampling and servicing. The cover can hold up to 600 kg of downword presure which makes it suitable for cars to pass over it. Its green color makes it blend in with a grass. The watertight cover prevents gas leakage and rainwater inflow. An integrated lid locking system ensures safety against children and third parties.

The EXTENSION is integrated in a tank with a diameter of 800 mm and a height of 500 mm. To make it easier to adjust the depth of the inlet, cut it to the desired height during installation.

TANK is made of one piece, made of polyethylene by rotary casting. Durability and long service life are ensured by walls from 6 mm to 12 mm thick. Reinforcement ribs improve tank strength and resistance to soil pressures. The flat bottom allows easy and quick installation. Due to the upright shape, a smaller construction pit is required, so installation is cheaper and faster.

CABINET is installed next to the treatment plant, regardless of the distance from the house.

LIFTING LUGS on the tank allow easier transport, easy installation in the pit or anchoring in the case of groundwater.

The SAMPLING CONTAINER is integrated, self-cleaning and easily accessible through the inspection opening.

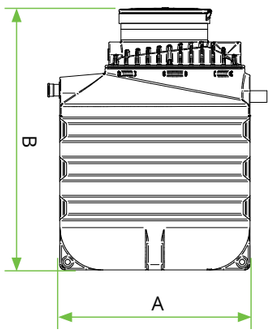
Fill the tank with water in 30 cm layers at the same time and fill it. This equalizes the pressure on tank walls.

RoEco

3-8 PE

3 PE 5 PE 8 PE

PU	3	5	8
Code	7200668100	7200663800	7200663810
Max. day inflow [l/dan]	450	700	1200
Volume [L]	3200	4000	6000
Dimension A x B [mm]	Ø1800 x 2000	Ø1800 x 2350	Ø2300 x 2300
Diameter of inspeciton opening	1x DN800	1x DN800	2x DN600
Diamater of inflow/outflow pipe	DN 110	DN 110	DN 125
Airflow volume (compresor) [l/min]	80	80	150
Power consuption (compresor) [W]	58	58	170
Sound level [dB]	36	36	46
Control system cabinet	P4	P4	P5 upper part
Control unit	RoControl RE	RoControl RE	RoControl RE
Sample shaft	20 L	20 L	20 L



Biocko

Easy and low cost installation

Material: polyethylene

Easy sampling

Tank is certified for waterproofing and stability

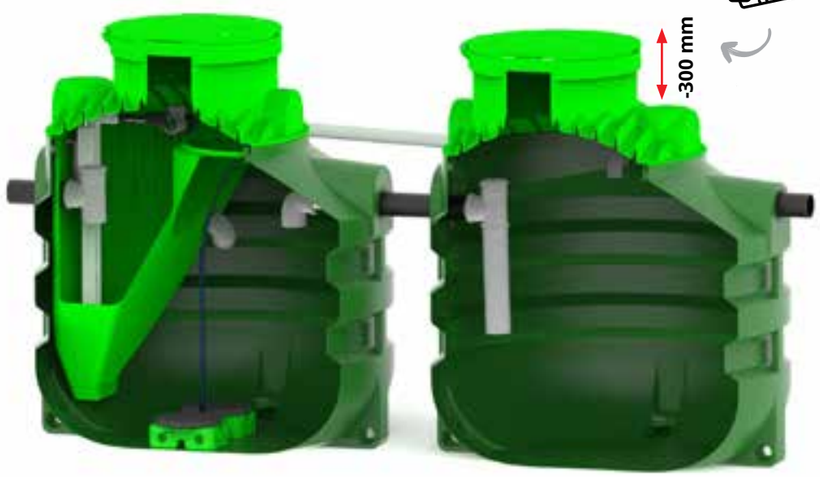
Wall thickness 8 - 14 mm

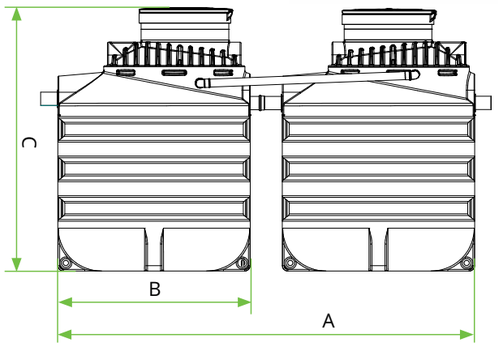
Possibility to adjust the height of the elevation to the requirements of the terrain

The product can be 100% recycled after use

Biocko

3-45 PE



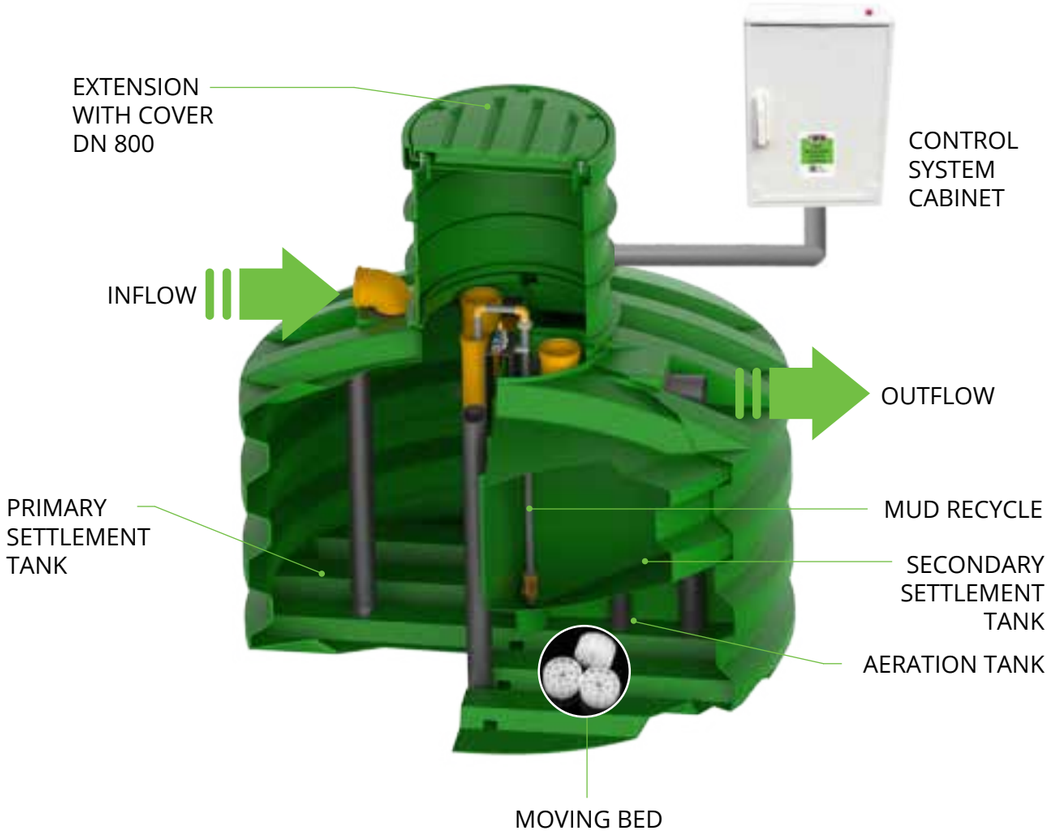


PU	2-5	6-10	11-15	16-20	21-30	36-45
Code	7200070390	7200070410	7200070420	7200070430	7200070440	7200070370
Max. day inflow [l/dan]	750	1500	2250	3000	4500	6750
Volume [L]	3500	5000	8000	8000	10000	12000
Dimension A x B [mm]	2960 x 2xØ1300 x 1900	3600 x 2xØ1500 x 2270	4210 x 2xØ1800 x 2090	4220 x 2xØ1800 x 2460	4740 x 1xØ2310 + 1xØ1800 x 2460	5180 x 2xØ2310 x 2790
Diameter of inspeciton opening	DN620	DN620	DN820	DN820	DN610/DN820	DN610
Diamater of inflow/outflow pipe	DN110	DN125	DN125	DN125	DN125	DN125
Airflow volume (compresor) [l/min]	60	80	125	150	200	350
Power consuption (compresor) [W]	39	58	128	130	200	280
Sound level [dB]	35	36	38	43	44	50
Control system cabinet	P4	P4	P5	P5	P5	P5
Control unit	TM	TM	TM	TM	TM	TM

MBBR WASTE WATER TREATMENT PLANT

EcoBlue

Eco Blue



MBBR TECHNOLOGY

Black and grey water (waste water) is collected in sedimentitation chamber, where it settles. Volume of this chamber is bigger than in conventional SBR systems. After certain time in sedimentation chamber, waste water flows in to aeration chamber with biofilm carriers.
In second chamber two diffusors are installed for aeration. They are connected with compressor and steering unit, which regulates air suply in intervals. Pressure gauge detects defects in system (clogging). Biofilm carriers offers habitat for bacteria to live and reproduce, which results in better efficency of cleaning and longer live span of bacteria.

Subsequent sedimentation is more efficient due to conical sedimentation tank in third chamber. Clean water flows out at top of third chamber through outlet pipe and sediment is returned to first chamber (pre-cleaning) by steering unit and compressor.

Eco Blue

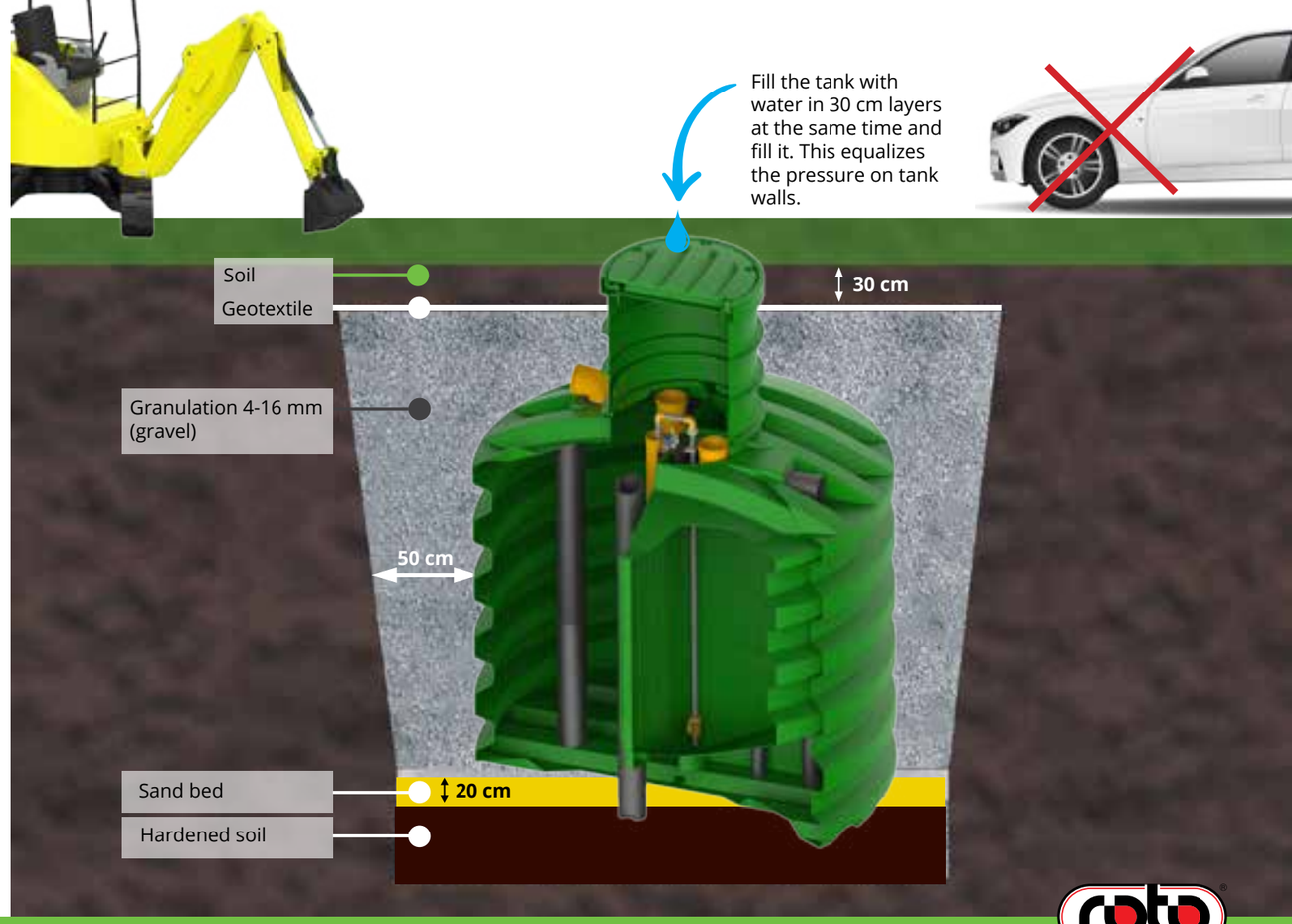
CABINET – the controller and compressor are built into a PE cabinet. The control unit is ready for immediate operation. The LCD display of the controller records the operating hours of the compressor. All alarm warnings for deviations from normal operation are displayed on the LCD screen and acoustically signalled.

TANK - The Eco Blue is made of a three-chamber tank. The first chamber provides pre-treatment, the second serves as a free-running reactor and the third as a settling tank. Waste water moves through the system by means of blowing, free flow and free-moving bacteria carriers.

INFLOW and OUTFLOW pipe - Standard inflow and outflow is DN160.

The 800 mm diameter COVER allows easy access, sampling and servicing. The PE cover can bear up to 200 kg and is inconspicuous on the lawn, as it is green in colour and completely flush with the ground after installation. The watertight cover prevents leakage of gases and rainwater inflow. The integrated locking system of cover ensures safety from children and third parties.

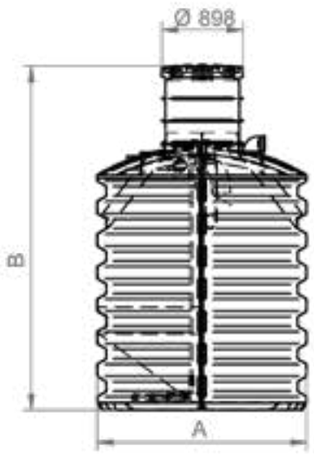
The EXTENSION has a diameter of 800 mm and a height of 500 mm. To facilitate adjustment of the inlet depth, it can be cutted to the desired height during installation.



EcoBlue

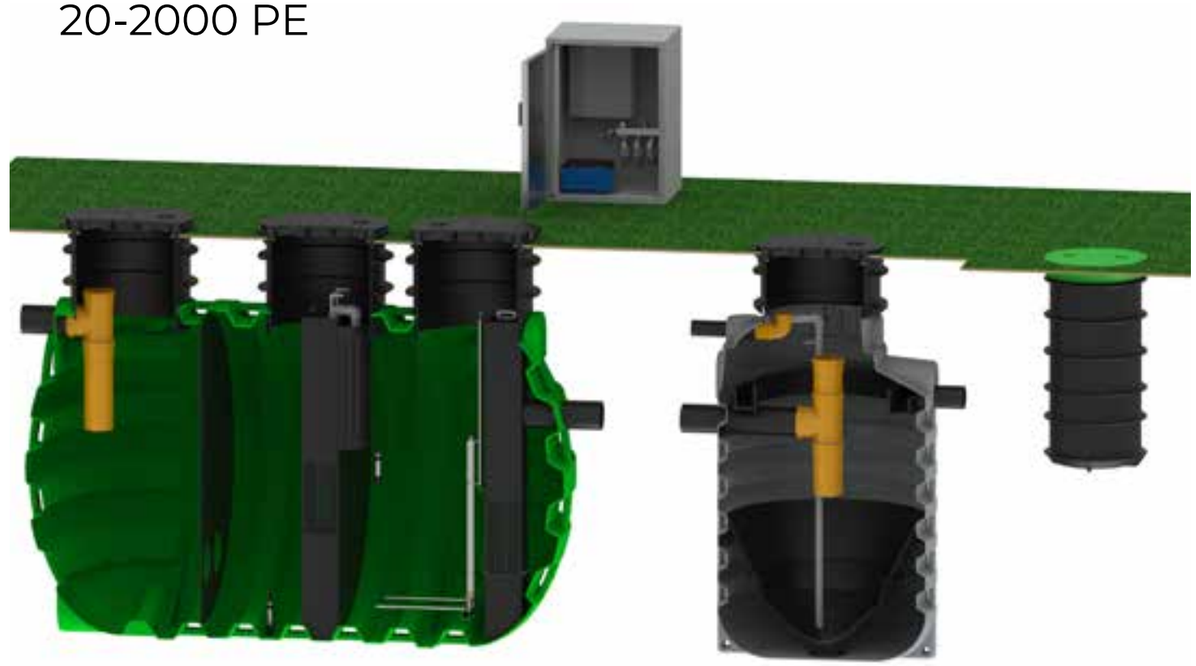
4-14 PE

PU	4-6	8-10	12-14
Code	7200079870	7200079880	7200079890
Max. day inflow [l/dan]	900	1500	2400
Volume [L]	5000	7500	10000
Dimension A x B [mm]	Ø2310 x 2410	Ø2310 x 3110	Ø2310 x 3800
Diameter of inspeciton opening	DN800	DN800	DN800
Diamater of inflow/outflow pipe	DN160	DN160	DN160
Airflow volume (compresor) [l/min]	80	80	80
Power consuption (compresor) [W]	50	50	50
Sound level [dB]	38	38	38



EcoBlue PRO

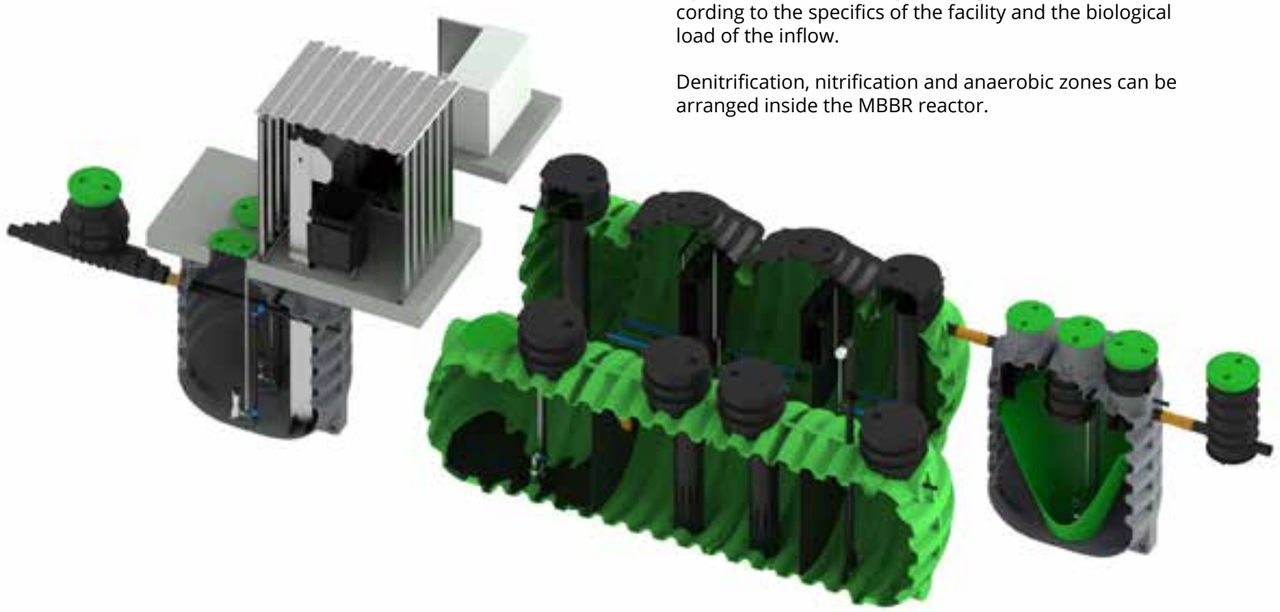
20-2000 PE



We produce treatment plants with MBBR technology for larger facilities up to a capacity of 2000 PE.

Operation and technological design are adjusted according to the specifics of the facility and the biological load of the inflow.

Denitrification, nitrification and anaerobic zones can be arranged inside the MBBR reactor.



WASTE WATER TREATMENT PLANT ECO BLUE 8-10 PE

Data: Daily inflow: 1,5 m^3 / day
Effluent values: COD: 96,7 mg/L
BOD_5: 92,7 mg/L
SS: 92%

MOUNTAIN LODGE, ČRETA (altitude 966 m)

VRANSKO, SLOVENIA

Project Description

Moutain lodge on Čreta located on the central part of the Dobrovlje platea is a holiday lodge which can accommodate up to 50 people. Due to odor and new regulation laws a replacement of old septic tank was necessary.

Customer support

ROTO team provides the ongoing servicing for the whole site, visiting twice a year to ensure that all the plant is working correctly and that the final effluent discharge remains at a high standard and regulations.

Quick installation of waste water treatment plant

Installation of Roto Products is fast because of plug and play system of all the products. The mountain lodge Čreta underground plant for 8 – 10 PE was installed and ready to work in one day.

Cost efficency

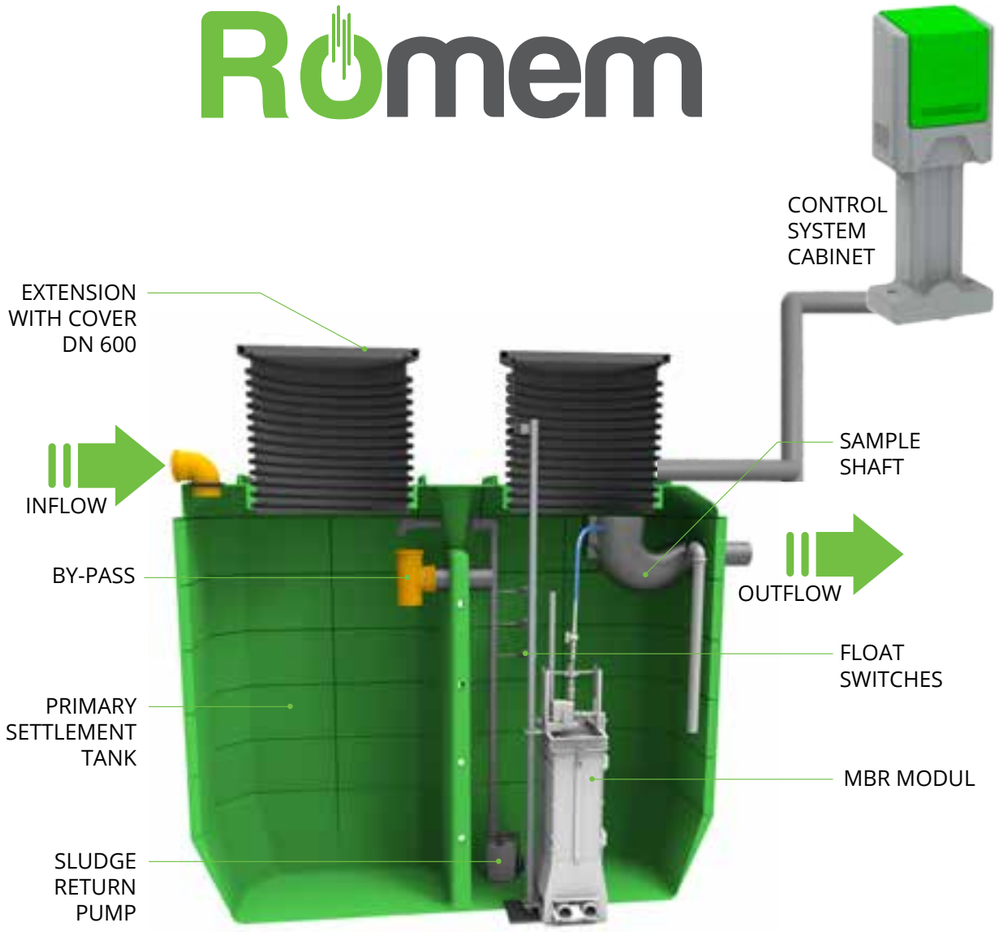
MBBR process allows the system to be operated at high organic loads with less sensitivity to shock loading or temporary spikes. Due to daily and night regime waste water treatment plant is highly cost effective.

www.rotoECO.eu

MBR WASTE WATER TREATMENT PLANT

Romem

Romem



MBR TECHNOLOGY:

A membrane bioreactor (MBR) is a waste water treatment process that combines membrane filtration and biological treatment. This innovative technology offers a number of advantages over the conventional sludge activation process, such as higher biomass concentration and elimination of the need for additional treatment.

RoMem purifies waste water into clean, high-quality water that can be discharged into nature, or used for irrigation and some sanitation purposes.

The MBR module consists of polypropylene panels with a polymer membrane on each side and a frame. The membranes are installed in a RoBox polyethylene tank. In addition to filtration, aeration takes place in the tank. The membranes are cleaned once or twice a year.

The elevated biomass concentration in the MBR process allows for very efficient removal of both soluble and insoluble particles of biodegradable materials at high loading rates. Extended retention times ensure that the waste water is fully nitrified even in very cold weather.

Romem

4-6 PE

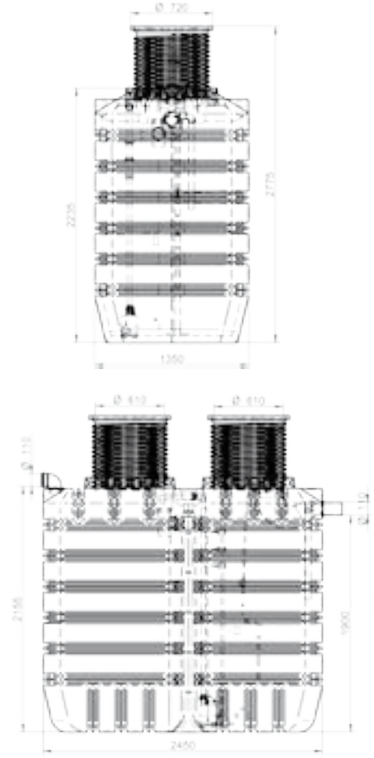
In wastewater treatment with MBR technology, the biological treatment process is combined with a filtration unit (membrane filter). The membrane filter consists of a large number of membranes through which water is separated from biomass.

With MBR technology we achieve better quality of purified water at the outlet.

ADVANTAGES

- higher degree of purification
- possibility to reuse purified water (for watering, rinsing, etc....)
- possibility of industrial water treatment
- minimized unpleasant odor
- it also works reliably in intermittent inflows

PU	4	6
Code	7200088800	7200088810
Max. day inflow [l/dan]	600	900
Volume [L]	4000	6000
Dimension A x B [mm]	2330 x 1175 x 2440	2450 x 1350 x 2775
Diameter of inspeciton opening	DN600	DN600
Diamater of inflow/outflow pipe	DN110	DN110
Airflow volume (compresor) [l/min]	120	120
Power consuption (compresor) [W]	130	130
Sound level [dB]	48	48
Control system cabinet	P5	P5
Control unit	MS	MS
Sample shaft	5 L	5 L



Romem

WASTE WATER TREATMENT PLANT MBR 20 PE

Data: Daily inflow: 3 m³ / day
Effluent values: COD: 21,7 mg/L
BOD_5: 2,1 mg/L
NH_4-N: 6 mg/L

POŠTARSKI DOM (altitude 1688 m)

VRŠIČ, KRANJSKA GORA, SLOVENIA

Project description

The Poštarski dom mountain hut is situated on a terrace south of 1737 m high Vršič, the highest road pass in the eastern Julian Alps. The mountain hut is located in the Triglav National Park, so the requirements for clean water discharge are very strict.
Due to the inadequate functioning of the old waste water treatment plant, the investor was looking for a new solution. Together with ROTO's technical experts, the investor opted for the RoMem waste water treatment plant, which allows for high treatment efficiency and reuse of the treated water.
The RoMem waste water treatment plant is integrated in a remote-controlled system, which allows remote monitoring of the plant's operation.

The waste water treatment plant has membrane filters installed directly in the ventilation chamber.

	Name	Type of waste water treatment plant	Material and use	Code	Dimensions
	P4	RoEco 3 - 5PE BioCko 2-10 PE	Polyethylene For external use	7200088310	455 x 235 x 1350
	P5	EcoBox 2 - 9PE EcoBox WEB 2 - 9PE RoMem 4-6PE RoClean 20-40PE RoClean WEB 4-40PE BioCko 11-45 PE	Polyethylene For external use	7200088670	350 x 450 x 1350
	P6	RoEco 8PE RoClean 4-16PE Vodalys 6-14 PE	Polyethylene For internal and external use	Upper part: 7200088020 7200088040 Lower: 7200088030	Upper part: 450 x 355 x 800 Lower part: 470 x 420 x 830 (1630)
	B8	RoClean 50-300 PE RoClean WEB 50-300 PE RoGreen 100-300 PE	Concrete For external use	7102150940	1380 x 640 x 835
	B13	RoGreen 400-500 PE	Concrete For external use	7102150950	1380 x 640 x 1140

Spare parts shop

We provide the user and the maintenance service with a fast delivery of all spare parts and technical assistance in maintenance. Spare parts and maintenance equipment can be ordered through the roto online store www.shop-roto.si

Compressors

	Flow [l/min]	Code
compressor AL 80	80	7111056
compressor AL 120	120	7111049
compressor AL 150	150	7111030
compressor AL 250	250	7111036
compressor AL 300	300	7111032

Air pipes, valves, air diffusers

	Type of WWTP	Code
pipe DN13x20	RoClean	1210204
pipe DN19x26	RoEco	1210330
electromagnetic valve	RoClean	3144170
electromagnetic valve	RoEco	3144008
difuzor krožni	RoClean, EcoBox	1210297
1x difuzor krožni z utežjo	RoClean, EcoBox	7200140000
2x difuzor krožni z utežjo	RoClean, EcoBox	7200140010
4x difuzor krožni z utežjo	RoClean, EcoBox	7200140020
diffuser tube	RoEco	0006910

Sample shaft

Volume	Dimensions (mm)	Code
5 L	1000 x 225 x 350	7200088160
16 L	280 x 280 x 380	7200088140
56 L	400 x 1500	7600066350
Ladle for sample		7200888140
Measurecylinder		7208001206

1 SERVICE INSPECTION

OVERVIEW AND ADAPTATION OF THE ROTO WASTE WATER TREATMENT PLANT

- Testing the control unit's operation
- Checking and adjusting the control system settings
- Inspection of the built-in parts in the waste water treatment plant tank
- Entering the status report of the waste water treatment plant in the operating logbook
- Checking for the presence of possible non-degradable particles and grease in the waste water treatment plant

2 MINI SERVICE

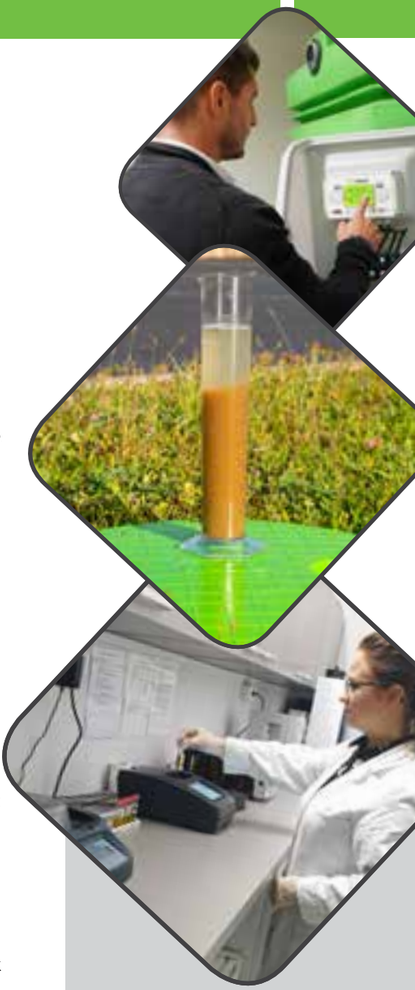
ANNUAL BASIC REVIEW OF THE ROTO WASTE WATER TREATMENT PLANT

- Technological condition monitoring of the waste water treatment plant
- Inspection of the covers, tank and installation parts of the waste water treatment plant
- Checking the control system settings, aeration and compressor operation, valves
- Water sampling at the waste water treatment plant
- Field measurements of basic technological parameters :oxygen concentration, temperature, pH, activated sludge volume
- Appraisal of the maintenance to date and advice on the future maintenance of the waste water treatment plant
- Entering the status report of the waste water treatment plant in the operating logbook

3 MAXI SERVICE

ANNUAL DETAILED PERFORMANCE REVIEW OF THE ROTO WASTE WATER TREATMENT PLANT

- Check the technological status of the wastewater treatment plant,
- Inspection of the covers, tank and installation parts of the waste water treatment plant
- Checking the control system settings, aeration and compressor operation, valves
- Appraisal of the maintenance to date and advice on the future maintenance of the waste water treatment plant
- Entry of the status report of the waste water treatment plant in the operating logbook
- Water sampling at the waste water treatment plant
- Field measurements of basic technological parameters: oxygen concentration, temperature, pH, activated sludge volume
- Internal laboratory measurements:
  chemical oxygen demand COD,
  5-day biochemical oxygen demand BPK5
- Arranging for the removal of excess sludge when necessary (costs to be borne by the customer)
- Arranging the delivery of activated sludge when necessary (costs to be borne by the customer)



REGULAR, HIGH-QUALITY MAINTENANCE

- efficient waste water treatment
- lower operating costs
- environmental protection
- longer lifetime

EkoFloat

EkoFloat industrial water systems operate on the principle of dissolved air flotation system (DAF), which is designed to remove common suspended solids, fats, oils and greases.

Advantages

- the possibility of renting a pilot device
- own development center
- technologically advanced design
- package solutions
- many years of experience in the field of sewage treatment plants

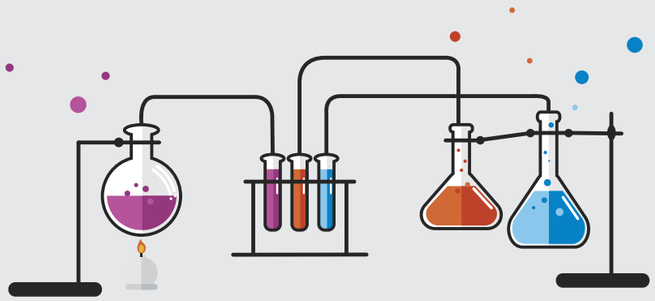
Fields of application

Industry

- Slaughterhouses
- Dairies
- Breweries
- Distilleries
- Fish processing
- Bakeries
- Food processing
- Refineries
- Industrial chemical cleaning
- Textile industry
- Paper industry
- Plastics industry

Communal waters

- Primary treatment before biological
- Sludge cleaning
- Thickening of sludge
- Tertiary treatment
- Surface water treatment
- Gray water treatment (hotels)
- Drinking water



PILOT INSTALLATIONS
We also offer the possibility to rent pilot systems for industrial water. You can pre-test the pilot plants and check the performance of the systems for your business.

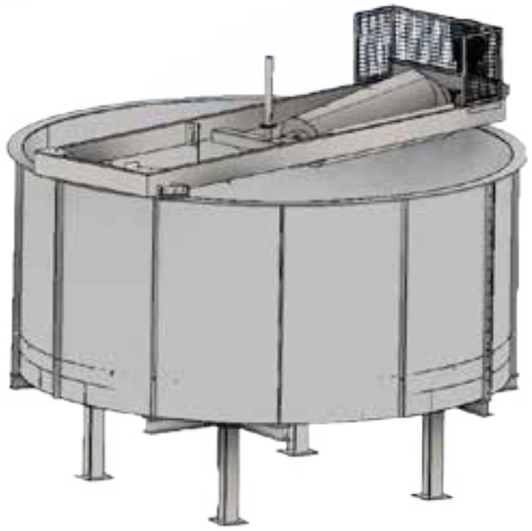
INDUSTRIAL TREATMENT PLANTS

EkoFloat

EkoFloat-E

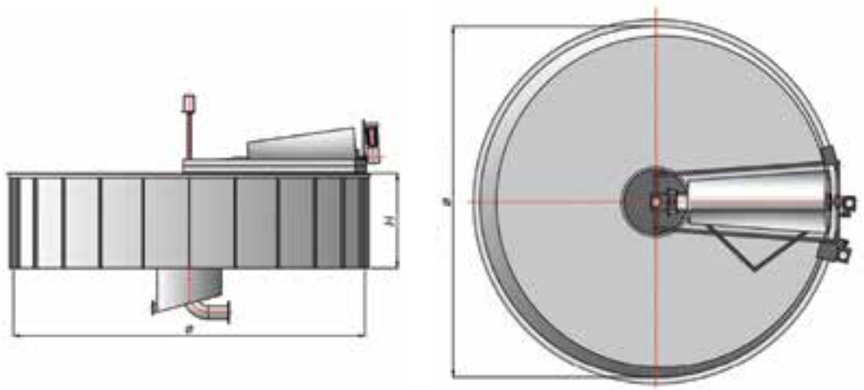
Optimized DAF Clarifier

The EkoFloat-E is a very compact circular DAF clarifier designed specifically for smaller application. The Unit is prefabricated into transportable sections and minimizes installation and maintenance costs. All wetted parts are in stainless steel or chemical resistant materials.



Tip	Max. flow (m³/h)*	Tank ø (mm)	Tank H (mm)	Motor Scoop (kW)	Motor Carriage (kW)	Weight full of water (tons)
E 18.5	16	1850	1000/1500	0,25	-	3/4,3
E 25	34	2500	1000/1500	0,25	-	5/ 7,2
E 32	60	3200	1000/1500/2000	0,37	-	8/11,5/15
E 39	90	3900	1000/1500/2000	0,37	-	12/18/24
E 45	115	4500	1000/1500/2000	0,55	-	15/23/31
E 55	180	5500	1500/2000	0,75	0,75	34/46
E 61	220	6100	1500/2000	0,75	0,75	42/57
E 67	250	6700	1500/2000	1,5	1,5	51/68
E 72	300	7200	1500/2000	1,5	1,5	60/85
E 81	400	8100	1500/2000	1,5	1,5	80/96
E 90	450	9000	1500/2000	2,2	2,2	108/140

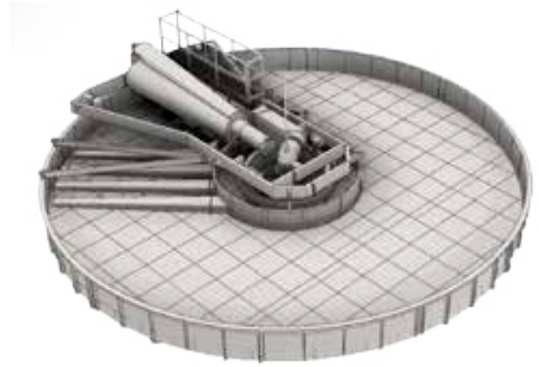
*The maximal flow includes recycle flow and is dependent on suspended solids loading and application.



EkoFloat-R

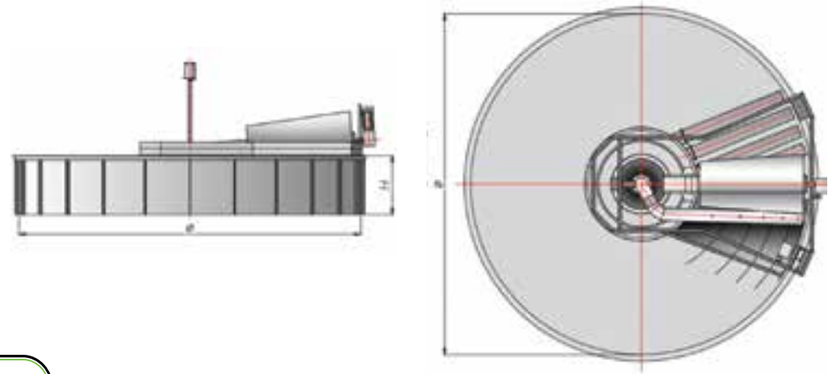
Optimized DAF Clarifier

The EkoFloat-R advanced flotation clarifier is a cost effective, continuously operating clarifier for liquids solids separation. The Unit is prefabricated into transportable sections and minimizes installation and maintenance costs. All wetted parts are in stainless steel or chemical resistant materials.



Type	Max. flow (m³/h)*	Tank ø (mm)	Tank H (mm)	Motor Scoop (kW)	Motor Carriage (kW)	Weight full of water (tons)
R 18.5	16	1850	755	0,18	0,18	2,2
R 25	34	2500	850	0,25	0,25	4,4
R 32	61	3200	850	0,37	0,37	6,9
R 39	92	3900	900	0,55	0,55	9,9
R 45	123	4500	950	0,75	0,75	12,7
R 55	185	5500	950	0,75	0,75	19,1
R 61	228	6100	950	1,1	1,1	23,3
R 67	275	6700	950	1,1	1,1	27,7
R 72	319	7200	950	1,5	1,5	33
R 81	405	8100	950	1,5	1,5	40,9
R 90	513	9000	950	2,2	2,2	49,1
R 100	632	10000	950	2,2	2,2	63
R 110	765	11000	950	2,2	2,2	75,4
R 122	942	12200	950	2,2	2,2	91,2
R 134	1135	13400	950	3,0	3,0	109
R 148	1387	14800	950	4,0	4,0	135
R 167	1785	16700	1050	4,0	4,0	185
R 189	2160	18900	1050	4,0	4,0	245
R 213	2700	21300	1050	5,5	5,5	300

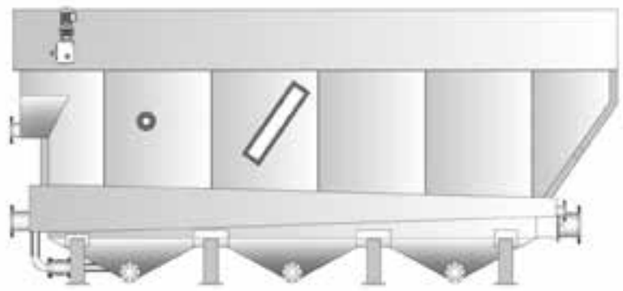
*The maximal flow includes recycle flow and is dependent on suspended solids loading and application.



EkoFloat-H

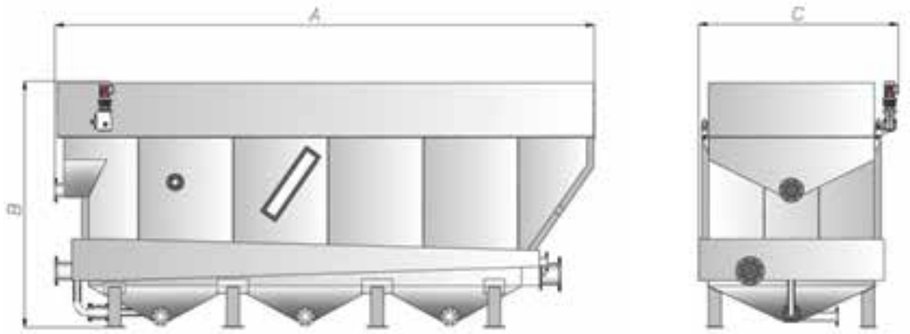
Optimized Horizontal DAF Clarifier

The EkoFloat-H is a re-designed state of the art high rate dissolved air flotation (DAF) clarifier which, in a break from traditional clarifier, use “U-Shaped-Separators“ and provide maximum flowrate per surface area of footprint. The Unit is prefabricated into transportable sections and minimizes installation and maintenance costs. All wetted parts are in stainless steel or chemical resistant materials.



Tip	Max. flow (m³/h)*	A (mm)	B (mm)	C (mm)	Motor Scraper (kW)	Motor Paddle Wheel (kW)	Weight full of water (tons)
H 25	25	2000	2800	1500	-	0,18	2,5
H 50	50	2800	2800	1500	0,18	-	4,5
H 75	75	2900	2800	2000	0,18	-	8
H 100	100	3000	2800	2500	0,18	-	11
H 150	150	3600	2800	2500	0,18	-	14
H 200	200	4600	2800	2500	0,18	-	18
H 250	250	5200	3000	2500	0,18	-	22
H 312	312	6600	3000	2500	0,18	-	28
H 375	375	7600	3000	2500	0,18	-	35
H 500	500	9600	3000	2500	0,37	-	44
H 625	625	9800	3000	2500	0,37	-	52
H 625 - 2	625	9300	3300	4600	1,5	0,75	55
H 750	750	10400	3400	3300	0,37	-	66
H 750 - 2	750	9100	3300	4600	1,5	0,75	67
H 1000 - 2	1000	11100	3800	4600	1,5	0,75	116
H 1250 - 2	1250	12700	3800	5000	1,5	0,75	165

*The maximal flow includes recycle flow and is dependent on suspended solids loading and application.



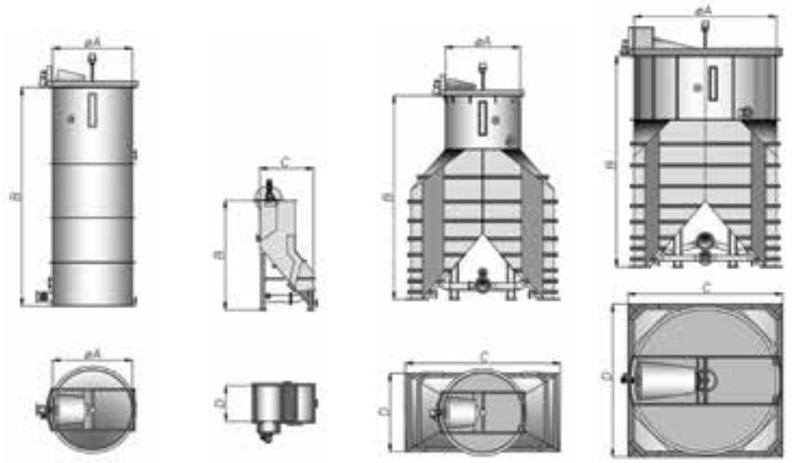
EkoFloat-V

Optimized Vertical DAF Clarifier

The EkoFloat-V is a state of the art high rate dissolved air flotation clarifier (DAF) which, in a break from traditional clarifier, use “U-Shaped-Separators“ and provide maximum flowrate per surface area of footprint. The Unit is prefabricated into transportable sections and minimizes installation and maintenance costs. All wetted parts are in stainless steel or chemical resistant materials.

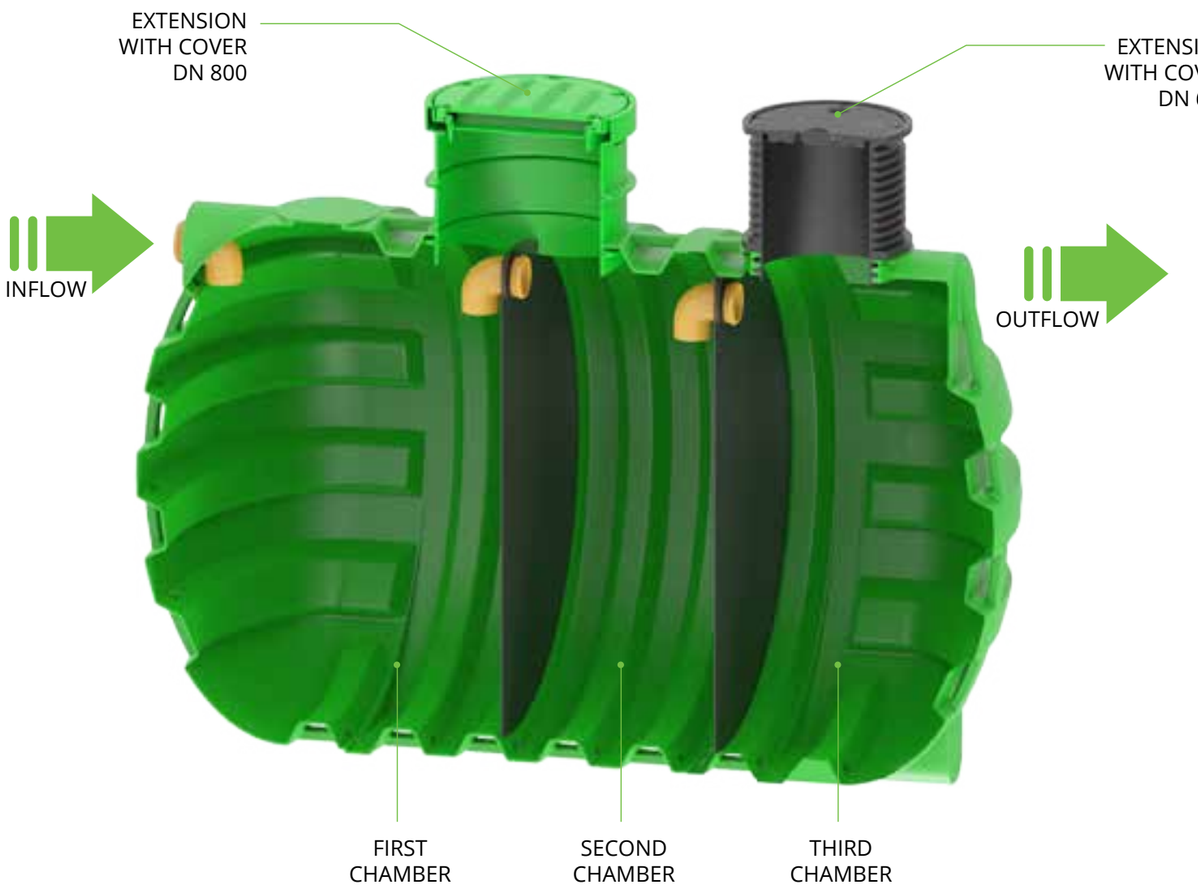
Type	Max. flow (m³/h)*	A ø (mm)	B (mm)	C (mm)	D (mm)	Motor (kW)	Weight full of water (tons)
Ø V 75	75	2250	4250	-	-	0,55	17
Ø V 100	100	2250	5250	-	-	0,55	22
Ø V 150	150	2250	6250	-	-	0,55	27
Ø V 200	200	2250	7250	-	-	0,55	32
Ø V 250	250	2250	8250	-	-	0,55	38
Ø V 375	375	3000	9000	-	-	0,55	65
# V 12,5	12,5	-	3100	1500	550	0,12	1,9
# V 25	25	-	3100	1500	1000	0,12	3,2
# V 50	50	-	4100	1500	1000	0,12	5,1
# V 75	75	-	4100	1500	1500	0,12	7,5
# V 250-2	250	2100	5350	4300	2300	0,55	25
# V 375-2	375	2100	6900	4300	2300	0,55	35
# V 500-2	500	2100	8100	4300	2300	0,55	60
# V 500-4	500	4000	5350	4350	-	0,55	80
# V 750-4	750	4000	6600	4350	-	0,55	110
# V 1000-4	1000	4000	7650	4350	-	0,55	150
# V 1250-4	1250	4000	8800	4350	-	0,55	200

*The maximal flow includes recycle flow and is dependent on suspended solids loading and application.



Type Ø V | **Type # V** | **Type # V -2** | **Type # V -4**

Roseptic



SEPTIC TANK

Roseptic

Roseptic

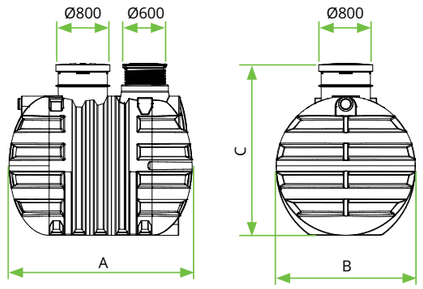
1.000-25.000 L

DETERMINING THE SIZE OF THE SEPTIC TANK
- Recommended size: 150L/person/day
- Inlet pipe size DN110 till DN160

Types:
- two-chamber
- three-chamber

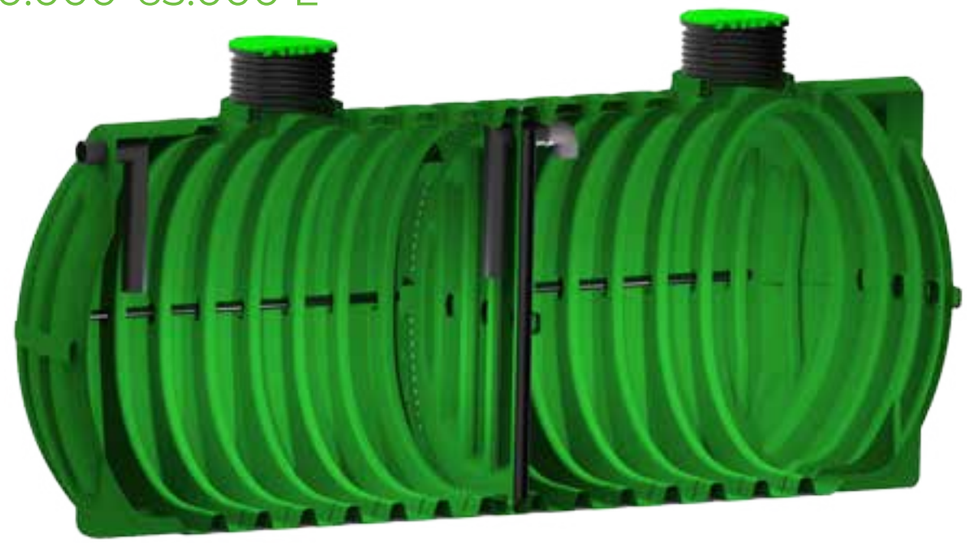
Septic tanks are built as an impermeable collector for municipal wastewater, from which municipal wastewater is taken for treatment or treatment at a municipal wastewater treatment plant. Exceptionally, municipal wastewater may be collected in a non-flowing septic tank only in areas where the treatment of municipal wastewater in the WWTP is not technically feasible due to special circumstances such as special geographical conditions or sparsely populated buildings.

Volume [L]	2-chamber (code)	3-chamber (code)	A (d) [mm]	B (š) [mm]	C (v-min) [mm]	C (v-max) [mm]	D (H inflow) [mm]	DN (inflow/ inflow pipe) [mm]
1.000	75000636 10	-	1580	1060	1000	1380	850	110
2.200	75000676 10	-	1840	1400	1600	2100	1250	110
2.600	75000673 80	-	2150	1400	1600	2100	1250	110
3.000	75000636 00	-	2400	1400	1600	2100	1250	110
3.500	75000633 00	-	2080	1800	2050	2550	1600	110
5.000	75000623 90	75000636 20	2450	1800	2050	2550	1600	110
6.000	75000632 80	75000632 90	2820	1800	2050	2550	1600	110
8.000	75000625 50	75000625 60	2680	2300	2350	2850	2100	160
10.000	75000690 31	75000690 32	3040	2300	2350	2850	2100	160
12.000	75000625 10	75000625 30	3760	2300	2350	2850	2100	160
16.000	75000661 90	75000662 00	4840	2300	2350	2850	2100	160
22.000	75000625 90	75000626 90	6280	2300	2350	2850	2050	160
25.000	75000676 20	75000676 40	7370	2300	2350	2850	2050	160

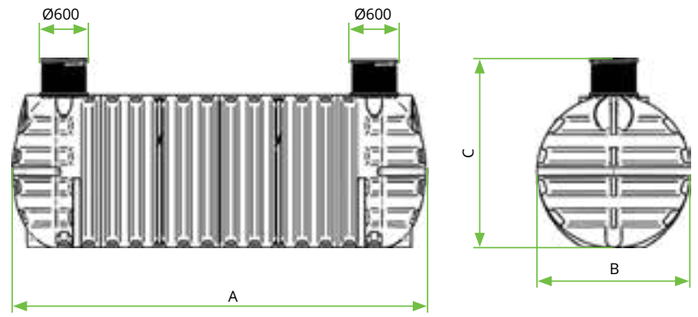


Roseptic

30.000-65.000 L



Volume [L]	2-chamber (code)	3-chamber (code)	A (d) [mm]	B (š) [mm]	C (v-min) [mm]	C (v-max) [mm]	D (H inflow) [mm]	DN (inflow/ inflow pipe) [mm]
30.000	7500065000	7500065001	6550	2425	2700	3000	2400	160
35.000	7500065010	7500065011	7530	2425	2700	3000	2400	160
40.000	7500065020	7500065021	8510	2425	2700	3000	2400	160
45.000	7500065030	7500065031	9870	2425	2700	3000	2400	160
50.000	7500065040	7500065041	10850	2425	2700	3000	2400	160
55.000	7500065050	7500065051	11500	2425	2700	3000	2400	160
60.000	7500065060	7500065061	12480	2425	2700	3000	2400	160
65.000	7500065070	7500065071	13460	2425	2700	3000	2400	160



okiseptic

1.500-3.500 L

USE
Septic tanks are used for sewage and are used in new construction, adaptation of existing houses, buildings or other residential and commercial buildings.

USER TIPS
• Check your active mud level monthly
• When emptying, contact an authorized utility company

DIMENSIONING OF A SEPTIC CAVE
The recommended size per person is 150 l / day. The size of the inlet pipes can be Ø110 or Ø125. Septic tanks are not flow-through and can be:
• two-chamber
• three-chamber

Volume [L]	Code	Dimensions [mm]	Weight [kg]
1.500 2-chamber	7504022060	1823 x 1100x 1415	81
3.500 3-chamber	7504056060	2490 x 1440 x 1845	197

1500 L 2-chamber

3500 L 3-chamber


VILLAGE


APARTMENT BLOCK


VILLAGE


VILLAGE


SPORT CENTER


VILLAGE


MILITARY BASE


EDUCATION CENTER


SCHOOL


LOGISTIC CENTER


INDUSTRIAL HALL


INDUSTRIAL HALL


FUEL STATION


OFFICE BUILDING


ELECTRIC POWER PLANT


INDUSTRIAL ZONE

SHOPPING CENTER


CAMP


HOTEL


HOTEL


HOLIDAY LODGE


SKI RESOURCE


GLAMPING


HOLIDAY LODGE


INDUSTRIAL HALL


HOTEL


CAMP

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more than 40 years of experiences in producing quality products
exports to 52 countries all over the world

PRODUCT DEVELOPMENT
one stop source from design, 3D printing, mould production, lab testing
2 new products a week

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production in 4 european coutries, at 6 factories, 40 rotomoulding machines
one of the largest rotomoulding machine – products up to 3 x 6 m

BROAD PORTFOLIO OF PRODUCTS
wide range of rotomolded products serving over 16 different industries
ROTO manufactures more than 4000 different products

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quality, efficiency, customer service to deliver superior products and competitive pricing
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