КРЕАЦИЯ

НОВ ЖИВОТ ЗА ВОДАТА

-РЕЗЕРВОАРИ ЗА ВОДА

-ПРЕЧИСТВАТЕЛНИ СТАНЦИИ

-КАЛОМАСЛОУЛОВИТЕЛИ

-МАЗНИНОУЛОВИТЕЛИ

-ДРЕНАЖНИ СИСТЕМИ

-ШАХТИ

-ПОМПЕНИ СТАНЦИИ

КРЕАЦИЯ ЕООД

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НОВ ЖИВОТ ЗА ВОДАТА

РЕЗЕРВОАРИ ЗА ВОДА

RoTerra WATER TANKS

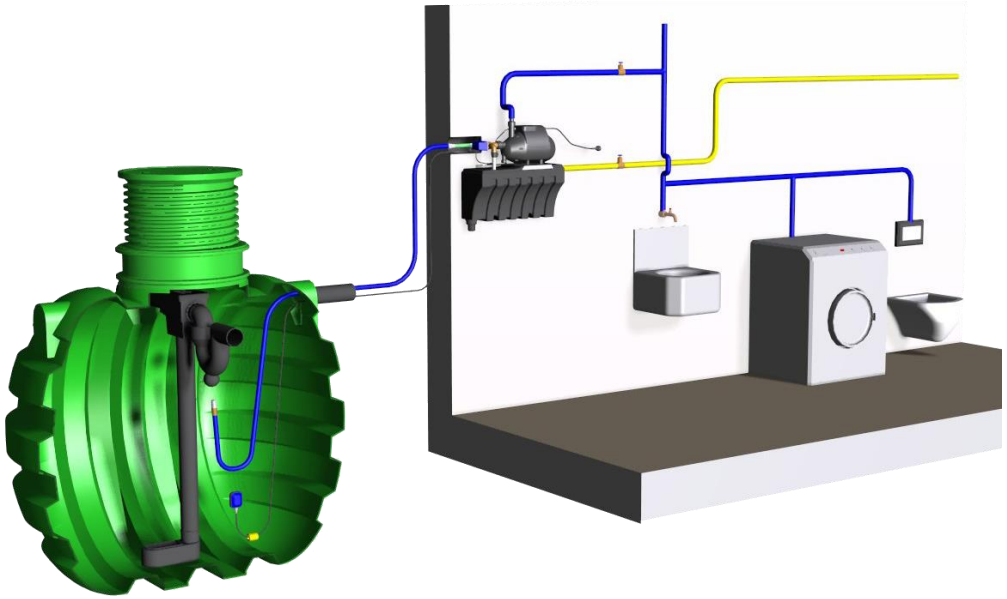
Code	Product	Dimensions (mm)	Picture
6716	Water tank RoTerra 2.200 L	1840 x 1400 x 1650	
6718	Water tank RoTerra 2.600 L	2150 x 1400 x 1650	
6717	Water tank RoTerra 3.000 L	2400 x 1400 x 1650	
6712	Water tank RoTerra 3.500 L	2080 x 1800 x 2050	
6713	Water tank RoTerra 5.000 L	2450 x 1800 x 2050	
6714	Water tank RoTerra 6.000 L	2820 x 1800 x 2050	
6254	Water tank RoTerra 8.000 L	2680 x 2310 x 2350	
6903	Water tank RoTerra 10.000 L	3040 x 2310 x 2310	
6250	Water tank RoTerra 12.000 L	3760 x 2310 x 2350	
6577	Water tank RoTerra 16.000 L	4480 x 2310 x 2350	
6257	Water tank RoTerra 20.000 L	6280 x 2310 x 2350	
86257	Water tank RoTerra 25.000 L	7370 x 2310 x 2350	
6235	Water tank RoTerra 30.000 L	8450 x 2310 x 2350	
86237	Water tank RoTerra 35.000 L	9890 x 2310 x 2350	
6237	Water tank RoTerra 40.000 L	10970 x 2310 x 2380	
86242	Water tank RoTerra 45.000 L	12410 x 2310 x 2350	
6242	Water tank RoTerra 50.000 L	13490 x 2310 x 2380	

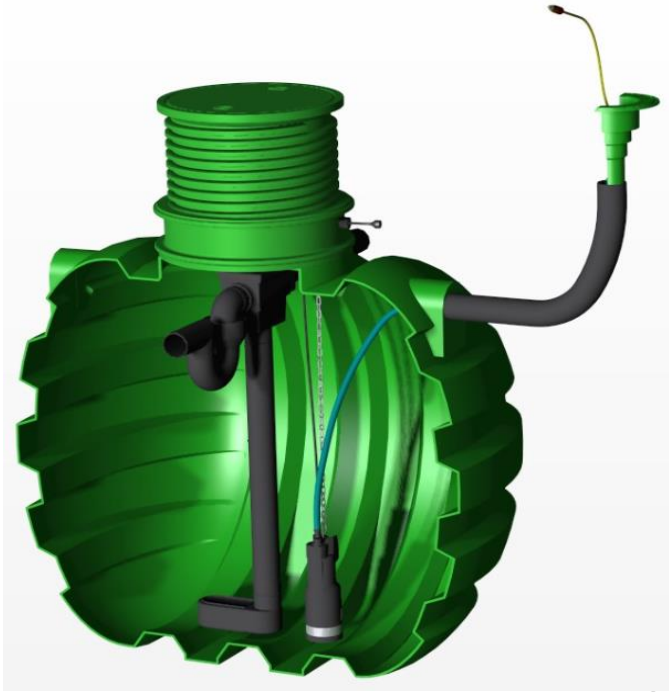
RoCko WATER TANKS

Code	Product	Dimensions (mm)	Picture
6740	Water tank RoCko 1.700 L	Ø 1200 x 2000	
6745	Water tank RoCko 2.000 L	Ø 1500 x 1820	
6746	Water tank RoCko 2.350 L	Ø 1500 x 2070	
6747	Water tank RoCko 2.700 L	Ø 1500 x 2320	
6726	Water tank RoCko 3.200 L	Ø 1800 x 2190	
6727	Water tank RoCko 4.000 L	Ø 1800 x 2560	
6728	Water tank RoCko 4.800 L	Ø 1800 x 2920	
6703	Water tank RoCko 3.500 L	Ø 2310 x 1250	
6249	Water tank RoCko 5.000 L	Ø 2310 x 1800	
26719	Water tank RoCko 6.500 L	Ø 2310 x 2180	
6701	Water tank RoCko 7.500 L	Ø 2310 x 2530	
6700	Water tank RoCko 10.000 L	Ø 2310 x 3200	
6732	Water tank RoCko 3.300 L	Ø2310x1385	
6733	Water tank RoCko 4.500 L	Ø2310x1710	
6734	Water tank RoCko 6.000 L	Ø2310x2070	
6735	Water tank RoCko 7.500 L	Ø2310x2430	
6736	Water tank RoCko 8.700 L	Ø2310x2790	
6737	Water tank RoCko 10.000 L	Ø2310x3150	

ЦЯЛОСТНО РЕШЕНИЕ

Ние предлагаме цялостно оборудване: резервоари, помпи, филтри, нивомери, пясъкоуловители, фини филтри, гумени уплътнители, удължители на ревизионни отвори



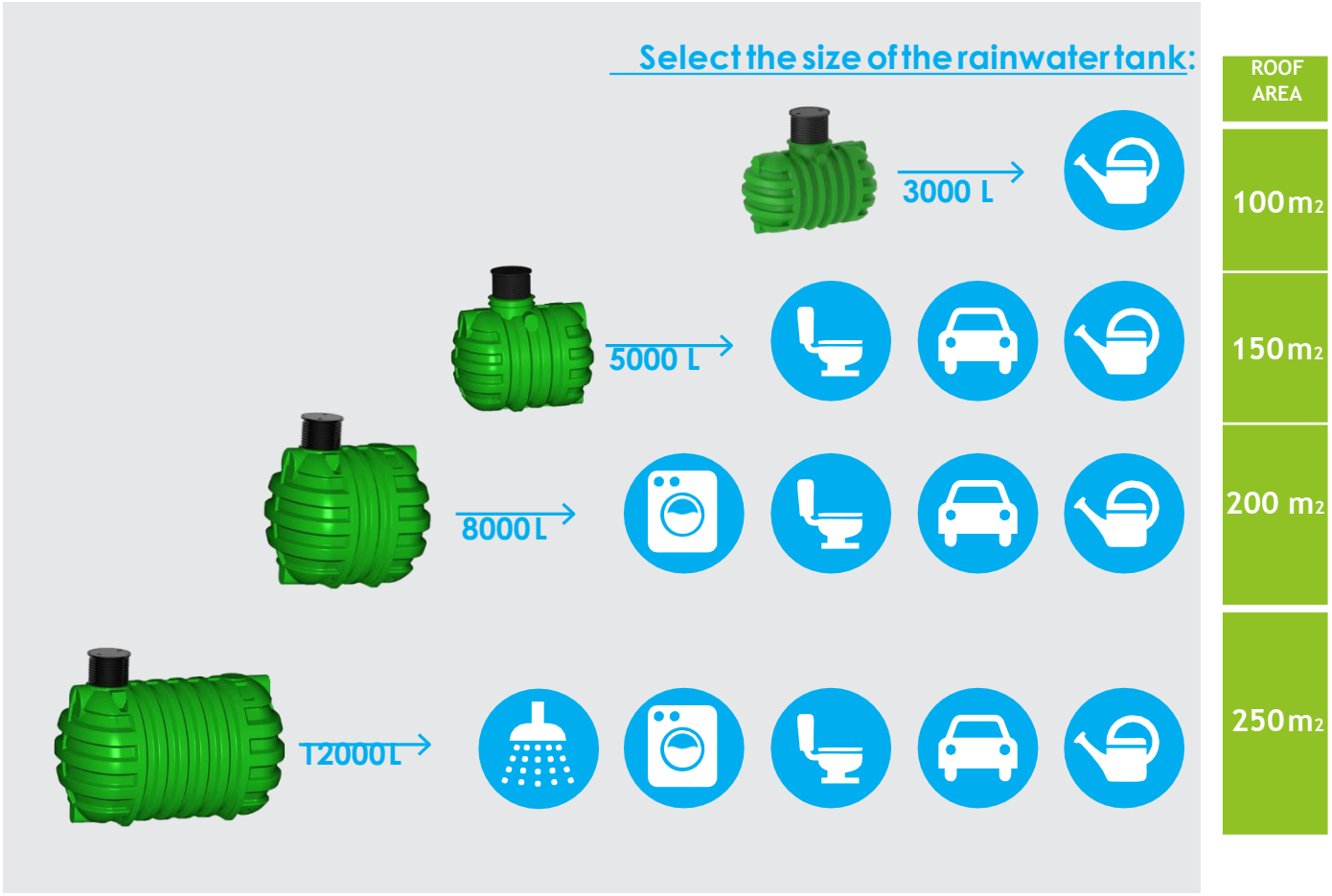


Steps to selecting your system

1) ROOF AREA –
determine the usable surface area on your buiding's roof

2) Storage –
select the size of the storage tank

3) CLEAN AND PUMP –
choose your system for filtering and water distribution



КРЕАЦИЯ
НОВ ЖИВОТ ЗА ВОДАТА

roto

ПРЕЧИСТВАТЕЛНИ СТАНЦИИ ЗА ОТПАДЪЧНИ ВОДИ

ВСИЧКИ ОТПАДЪЧНИ ВОДИ ОТ:

БАНЯ
- мивка
- душ
- вана

ДОМАКИНСТВО
- пералня
- съдомиялна
- кухня

КАКВО НЕ ТРЯБВА ДА ПОПАДА:
- Хлорни препарати
- Мокри кърпички, тампони, памук
- Мазнини
- Химикали, разтворители
- Бои

ОБЪРНЕТЕ ВНИМАНИЕ НА:
- Броя на потребителите
- Вида на обекта (къща, хотел, ..)
- Подходящо място за инсталиране
- Директен вход на водите
- Правилна инсталация

ОПРЕДЕЛЯНЕ РАЗМЕРА НА ПСОВ

- Размера на ПСОВ се определя от броя на еквивалентните жители (Е.Ж.)
- Един Е.Ж. изразходва вода от 0.15 до 0.20 кубични метра дневно.
- Оптималния обем на пречиствателната станция за един Е.Ж. е от 500 до 800 литра

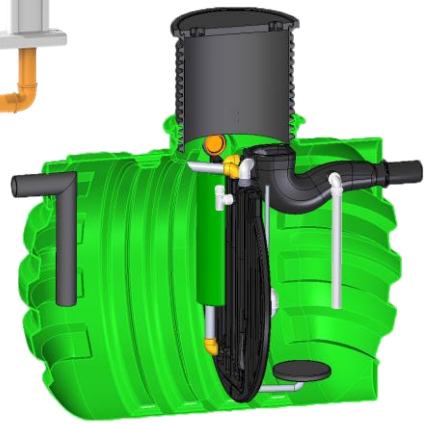
ОБЕКТ	БР. ХОРА	Е.Ж.
СЕМЕЙНИ ХОТЕЛИ	3	1
АПАРТАМЕНТИ	2	1
РЕСТОРАНТИ С КУХНЯ	2	1
РЕСТОРАНТИ БЕЗ КУХНЯ	3	1
КАФЕНЕТА БЕЗ КУХНЯ	10	1

- Информацията е необходима за правилния избор на оптималната пречиствателна станция.

ВИДОВЕ ПСОВ ПРЕДЛАГАНИ ОТ НАС

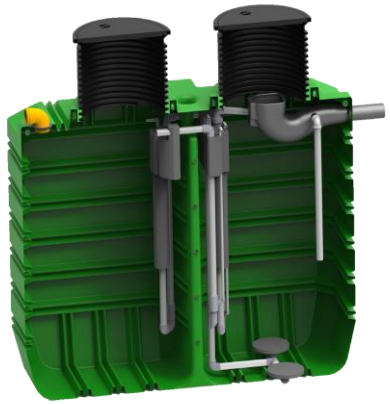
ПРОТОЧНА аеробна биологична

- Controlled by timer switch time clock socket
- Compressor is placed below the cover
- High purification capaci



SBR – Циклична партидна биологична

- Computer controlled
- avtomatska regulacija
- Compressor is placed in control unit
- Silent compressor
- High purification capacity



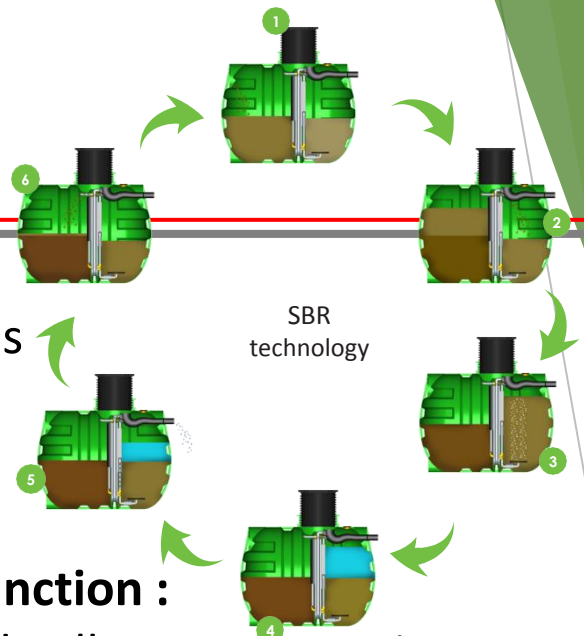
MBR technology

- A higher rate of purification capacity
- The possibility of reuse of purified water
- The possibility of purification of industrial water

MBBR technology

- It is desidned for the objects with irregular inflow
- Biofilm carriers
- High purification capacity

SBR SYSTEM OPERATION



- Computer controlled
- Computer is connected to the compressor and 4 solenoid valves
- Computer is placed in waterproof box
- 4 cycles per day – duration of one cycle –> 6 hour

In control unit we have 4 solenoid valves, each having their function :

- 1. First valve is activated for pumping of waste water from mud collector to aeration chamber
- 2. In aeration chamber air supply is conducted through compressor and air membrane on the bottom of the chamber
- 3. Purified water is pumped out from aeration chamber with compressor
- 4. Sediment in aeration chamber is pumped back to mud collector

REGULATIONS AND STANDARDS

ROTO WWTP are constructed according to European Standard EN 12566/3 and have the CE marking

Biological waste water treatment plant satisfies European standards , which is confirmed by a certificate.

One year testing has been done by the laboratory:

Universität Stuttgart, Institut für Siedlungswasserbau, Wassergüte und Abfallwirtschaft Prüfstelle für Kleinkläranlagen, number of testing: Nr. V02/2009

Declaration must contain:

- Type of WWTP
- Product code
- Manufacturers name
- Where and when it was tested
- Purifying results
- Number of declaration
- Validity of declaration
- Signature
- Stamp of manufacturer

HOW TO DIG CONSTRUCTION PIT FOR WWTP?

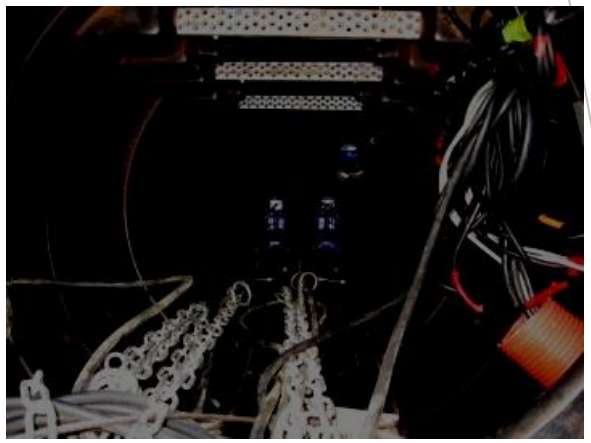
- Determine whether the surface of WWTP will be trafficable or only walkable
- Dig a pit 30 cm bigger pit than the ground plan dimensions of the WWTP
- Consolidate sand bed
- Put the WWTP in the construction pit and align with a bubble level

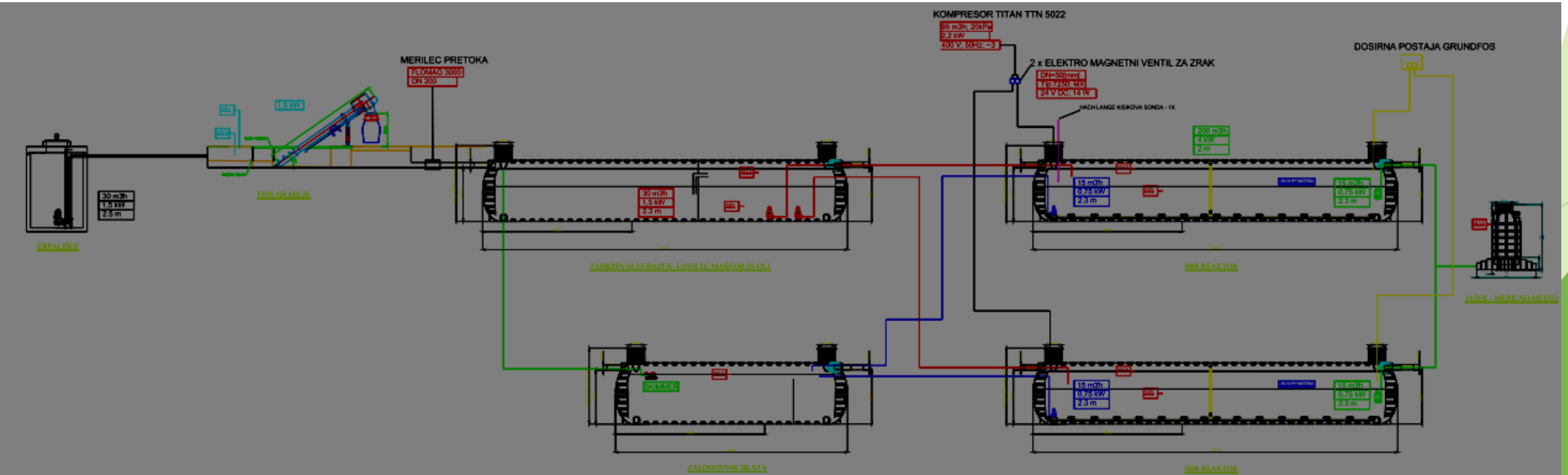
SPECIAL DIGGING OF PURIFYING PLANT

- **GROUNDWATER:**
  we need to fill construction pit with dry concrete
- **HILLY TERRAIN:**
  we need to make vertical reinforced concrete wall
- **IMPERABLE GROUND:**
  we need to make water drainage

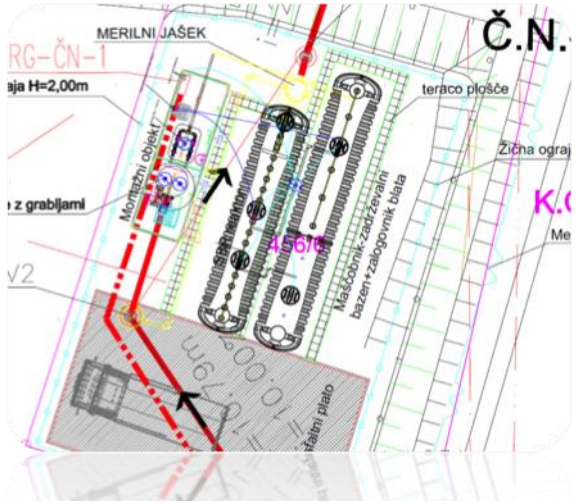
SEWAGE TREATMENT PLANTS FOR MUNICIPALITY

- **SBR Technology 75 – 2650 PU include:**
  - *the pumping station*
  - *fine rakes*
  - *flow meter*
  - *oil separator, grease separator*
  - *retention basin*
  - *SBR reactor*
  - *ddissolved oxygen sensor*
  - *sludge hopper*
  - *sampling shaft*

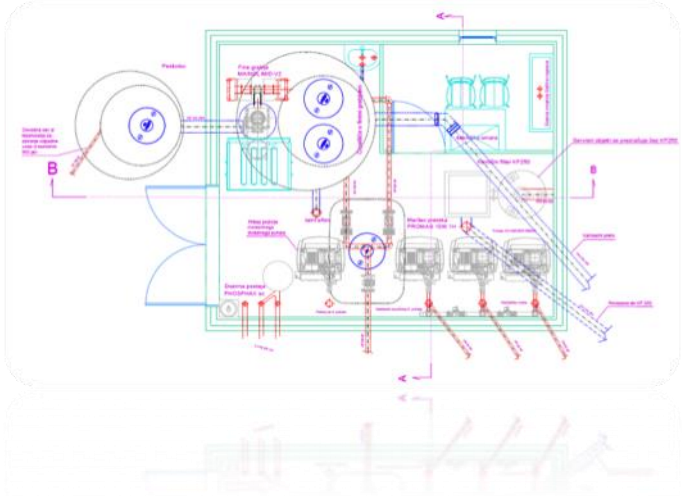


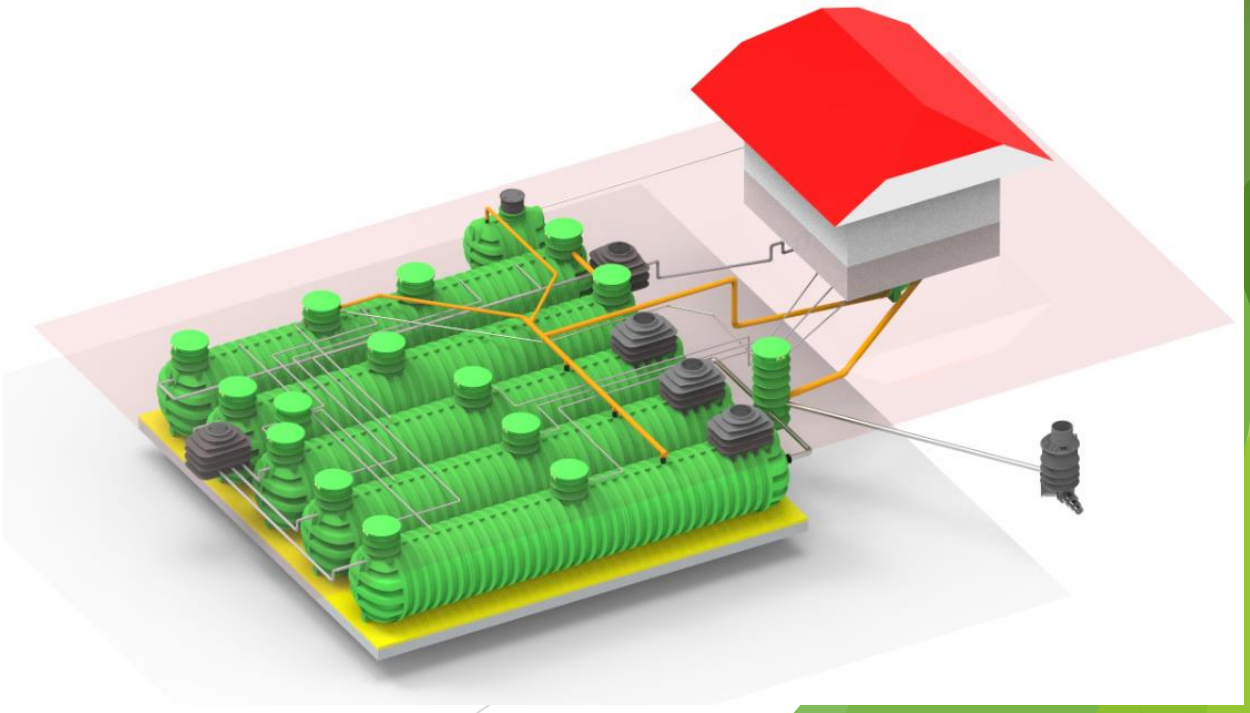


WWTP 300 PU



WWTP 1800 PU





REFERENCES AROUND THE WORLD











USEFUL INFORMATION

- Size from **2 to 2650 PU**
- Integrated **sample box**
- ROTO WWTP **need electricity** to operate
- ROTO WWTP are designed **according to European Standards**
- ROTO WWTP can we put in to **existing concrete septic tank**
- High **purification capacity**
- Long **lifetime** (more than 50 years)
- Electricity consumption approx. **4 EUR per person per year** (for small WWTP)
- Compressor are working approx. **10 hours per day** (for small WWTP)
- In Slovenia we have installed **more than 4000 WWTP**

ROTO OIL SEPARATORS

APPLICATION AND DESIGNED

Light liquid separators are designed according to **EN 858** for:

- petrol / Gas stations
- car washes
- vehicle workshops
- car - parks

Determination nominal size of oil separator

$$Ns = (Qr + fx * Qs) * fd$$

Ns = nominal volume (L/s)

Qr = maximal flow of rainwater (L/s)

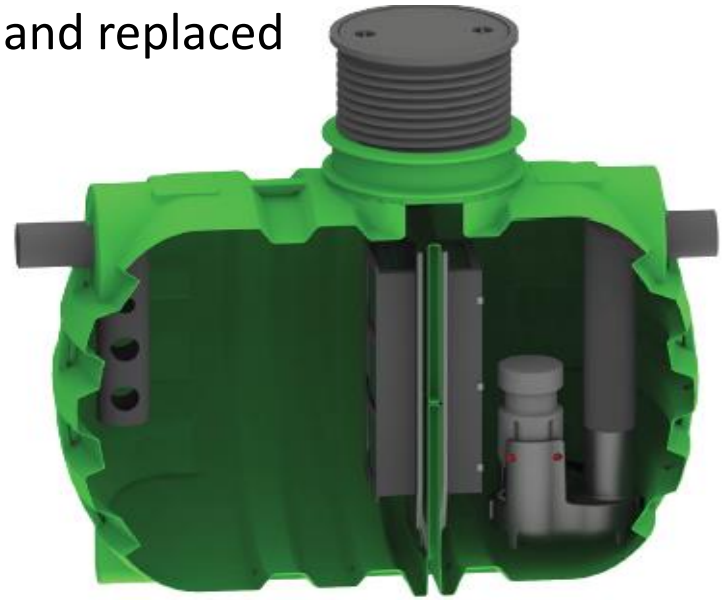
Qs = maximal flow of wastewater (L/s)

fx = retention factor, depending on the nature of release

fd = density factor for the suitable light fluid

Rosep - CLASS 1

- coalescing separators do not exceed the hydrocarbon concetration of 5 mg/L
- at repair garages, gasoline stations, car-washing facilities, where oily and flammambe liquid are produced
- oil separator is equipped with coalescent filter, automatic closure devices and/or electronic warning system
- coalescent filter are connected on the integrated wall and can be easily cleaned and replaced



Volume [L]	NS [L/s]	Code	Dim. A x B x C [mm]	Cover [mm]	Pipes DN [mm]
2.200	3	7595	1840 x 1400 x 2100	Ø600	110
3.000	6	7597	2400 x 1400 x 2100	Ø600	125
3.500	10	7275	2080 x 1800 x 2500	Ø600	160
5.000	15	7599	2450 x 1800 x 2500	Ø600	200
6.000	20	7588	2820 x 1800 x 2500	Ø600	200
8.000	30	7273	2680 x 2310 x 2830	2xØ600	250
10.000	40	7278	3040 x 2310 x 2310	2xØ600	250
12.000	50	7276	3760 x 2310 x 2310	2xØ600	315
16.000	65	7200	4480 x 2310 x 2310	2xØ600	315
22.000	80	7289	6280 x 2310 x 2830	2xØ600	315
25.000	100	7421	7370 x 2310 x 2830	2xØ600	315
30.000	125	7201	8450 x 2310 x 2830	2xØ600	400
35.000	150	7592	9890 x 2310 x 2830	2xØ600	400
40.000	200	7598	10970 x 2310 x 2830	2xØ600	400
45.000	250	7600	12410 x 2310 x 2830	2xØ600	400
50.000	300	7202	13490 x 2310 x 2830	2xØ600	500

Rosep - CLASS 2

- gravitation separators
- are designed to achieve a concetration of less than 100 mg/L oil under standard test condition
- they are suitable for a lower quality requirement applies (for example: where the effluent passes to the waste water treatment for municipality)

Rosep bypass 10 %

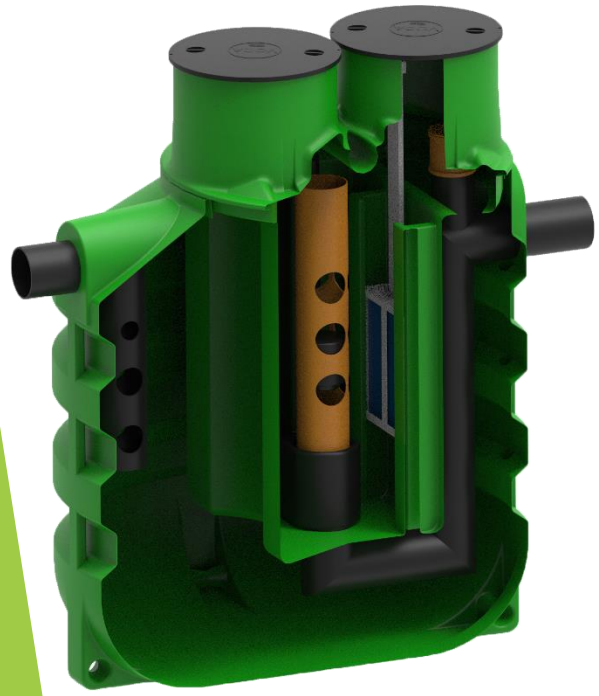
- bypass separators fully treat all flows generated by rainfall rates of up to 6.5 mm/hr
- are used when it is considered an acceptable risk no provide full treatment for high flows

Rosep bypass 20 %

- bypass separators fully treat all flows generated by rainfall rates of up to 6.5 mm/hr
- are used when it is considered an acceptable risk no provide full treatment for high flows

Rooil- class 1

- for underground instalation
- for all nominal sizes are suitable sampling chambers and alarm equipment available
- easy clean inside surface – low servising costs



Volume [L]	Flow rate [L/s]	Code	Dim. A x B [mm]	Pipes DN [mm]
400	1	77596	Ø800 x 1500	110 b.z.
680	1,5	77594	Ø800 x 1750	110 b.z.
1.200	3	77595	Ø1000 x 1750	110
1.500	6	77597	Ø1200 x 2000	125
2.350	10	77275	Ø1500 x 2050	160
2.700	15	77599	Ø1500 x 2300	200
4.000	20	77588	Ø1800 x 2350	200
6.000	30	77273	Ø2310 x 2300	250
7.500	40	77278	Ø2310 x 2700	315
10.000	50	77276	Ø2300 x 3000	315

Volume [L]	Flow rate [L/s]	Code	Dim. A x B [mm]	Pipes DN [mm]
1.200	1,5/15	76882	Ø1000 x 1750	200
1.500	3/30	76890	Ø1200 x 2000	200
2.700	5/50	76897	Ø1500 x 2300	250
3.200	8/80	76898	Ø1800 x 1950	315
4.000	10/100	76892	Ø1800 x 2350	315
6.000	15/150	76893	Ø2310 x 2300	400
7.500	20/200	76894	Ø2310 x 2700	400

Rooil- bypass 10%

Volume [L]	Flow rate [L/s]	Code	Dim. A x B [mm]	Pipes DN [mm]
1.200	3/15	76880	Ø1000 x 1750	200
1.500	6/30	76881	Ø1200 x 2000	200
2.350	8/40	76896	Ø1500 x 2070	250
2.700	10/50	76850	Ø1500 x 2300	250
4.000	15/75	76888	Ø1800 x 2350	315
6.000	20/100	76884	Ø2300 x 2300	315
7.500	30/150	76852	Ø2310 x 2700	400
8.700	40/200	76853	Ø2310 x 3000	400

Rooil- bypass 20%

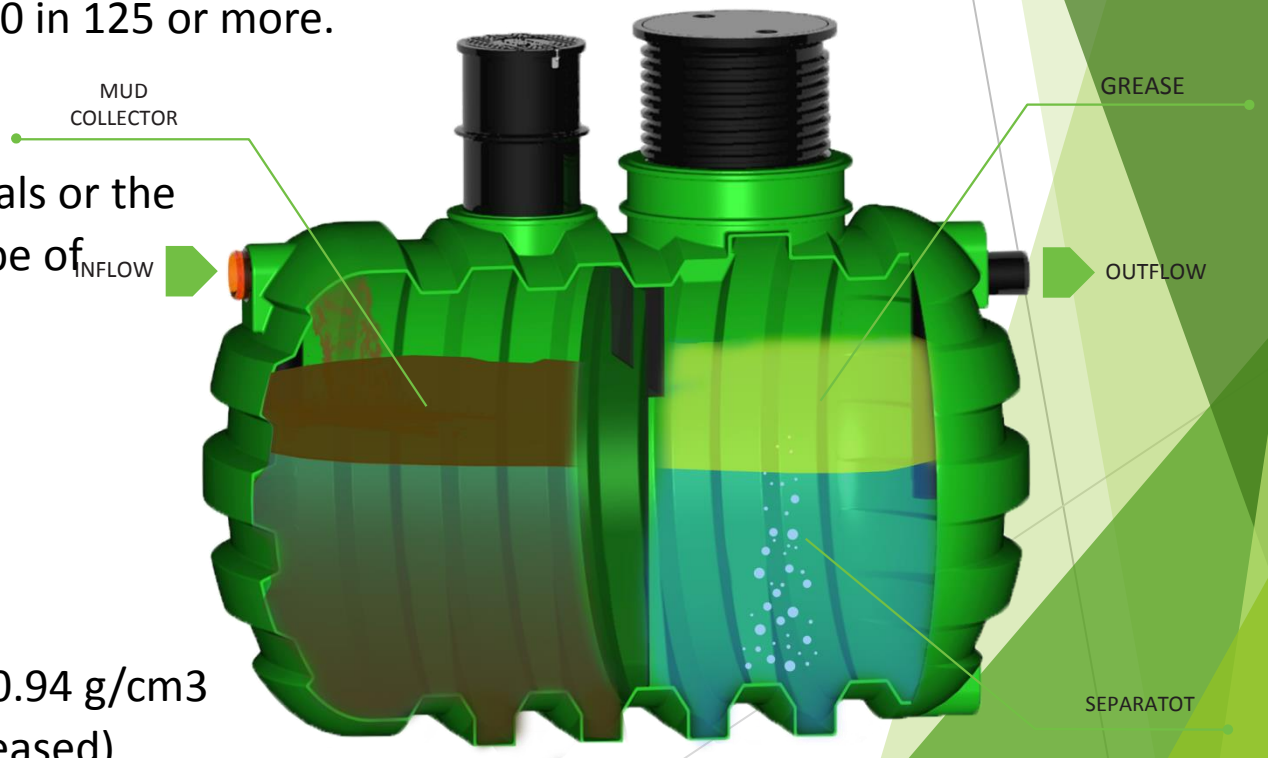
ROTO GREASE SEPARATORS

APPLICATION AND DESIGNED

- are designed according to **EN 1825-1**
- in business which produce wastewater containing fat or grease
- they should be installed close to the source of contamination, inside or outside the building
- underground separator should be located close to the building in areas where release of strong and aggressive odors will not pose a problem Φ 50, 100 in 125 or more.

DETERMINATE THE SIZE

Size of grease trap is determined by number of meals or the maximum possible flow of contaminated water, type of pollution, effluent temperature and detergent use.



Size can calculated by the formula:

NG = Qs * fd * ft * fr * fm

Qs - the amount of waste water in l/s

fd - density of grease (if it is greater or lesser than 0.94 g/cm3

ft - temperature factor (if higher than 50 °C, is increased)

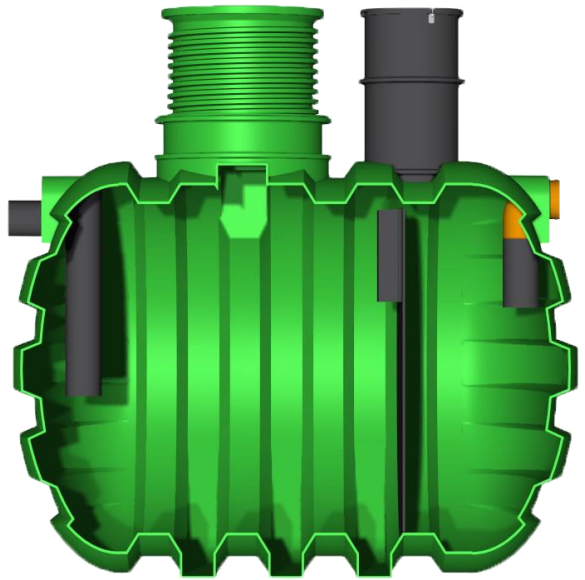
fr - detergents factor

fm - increased grease factor

Rofett grease separators

- grease tends to form heavy congestion that steadily, stops wastewater flow, damages the sewage infrastructure, pose a public health hazard and result in business losses
- extremely efficient in cleaning water contaminated with grease of organic origins
- compatible with other water treatment systems

Volume [L]	NG	Code	Dim. A x B [mm]	Cover [mm]
500	2	7531	1130 x 860 x 890	400
1.000	3	7537	1580 x 1060 x 1080	400
2.000	4	7532	2100 x 1300 x 1350	600
3.500	6	7533	1987 x 1800 x 2050	600
5.000	10	7536	2480 x 1800 x 2050	600
6.000	15	7534	2480 x 1800 x 2050	600
8.000	20	7539	2680 x 2310 x 2350	600
12.000	25	77797	3800 x 2310 x 2870	600



Rogre grease separators

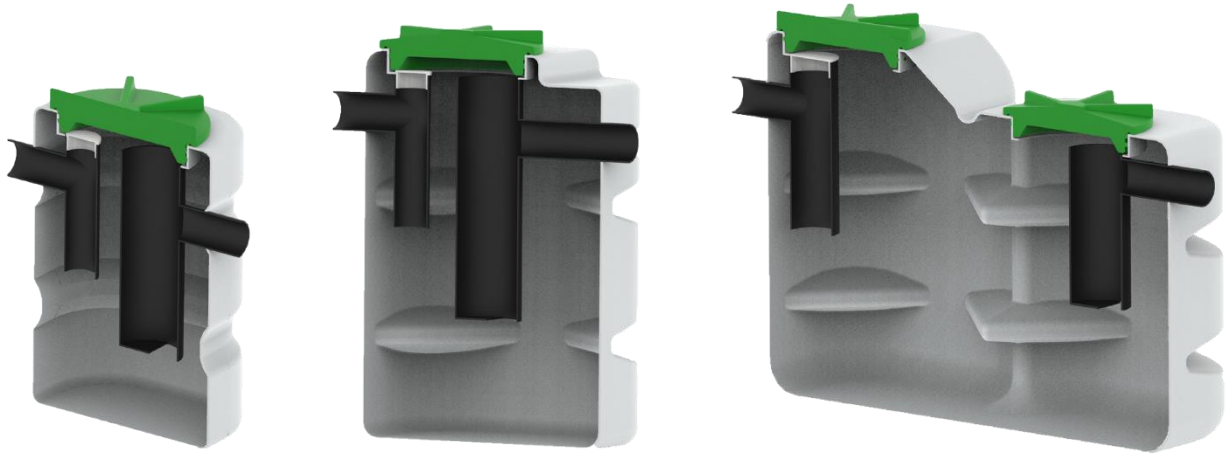
- compact vertical design of handling, installation and maintenance
- for underground installation
- friendly design for maintenance; due big opening, easy to clean

Volume [L]	NG	Code	Dim. A x B x C [mm]
1.000	2	77531	Ø1200 x 1750
2.000	4	77532	Ø1500 x 1800
3.200	7	77533	Ø1800 x 1950
4.000	10	77534	Ø1800 x 2350
6.000	15	77796	Ø2300 x 2300
7.500	20	77536	Ø2300 x 2700

Romast grease separators

- small free standing solutions to separate grease from wastewater
- they fit under the sink of the kitchen or you can install them also in the basement

Volume [L]	NG	Code	Dim. A x B x C [mm]	Pipe DN [mm]
100	0,25	77810	530 x 530 x 420	110
250	0,5	77788	600 x 600 x 928	110
500	1	77794	760 x 760 x 1100	110
1.000	2	77858	1520 x 760 x 1150	110
2.000	4	7529	2250 x 750 x 1600	160



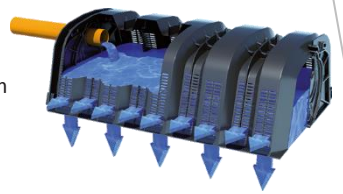
NG NG 1 NG 2

ROTO DRENING SYSTEMS

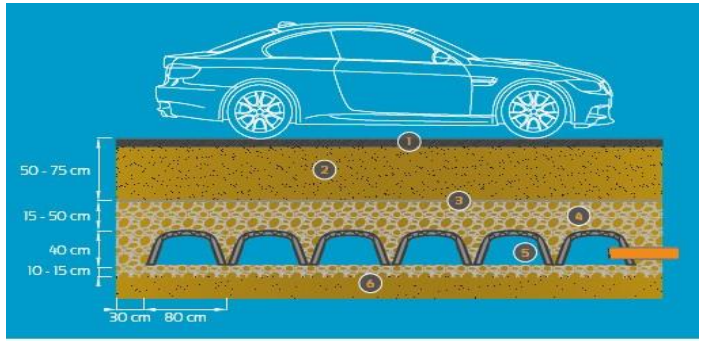
Drening

rainwater accumulation and draining system and disposal of wastewater

infiltration sufrace resistant lightweight drening:
1200 x 800 x 400 mm
- cap: 700 x 400 mm

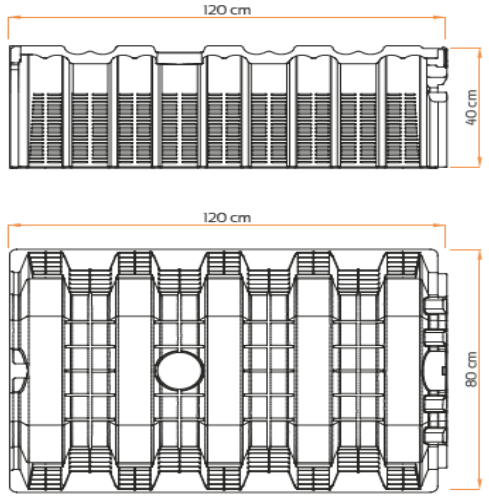


- ening is made of HDPE (high density regenerated polyethylene)
- Drening is a modular element.
- It is designed for the creation of underground retention ponds used
- for “in-situ” rainwater management.



Road finishing
Covering
Geotextile

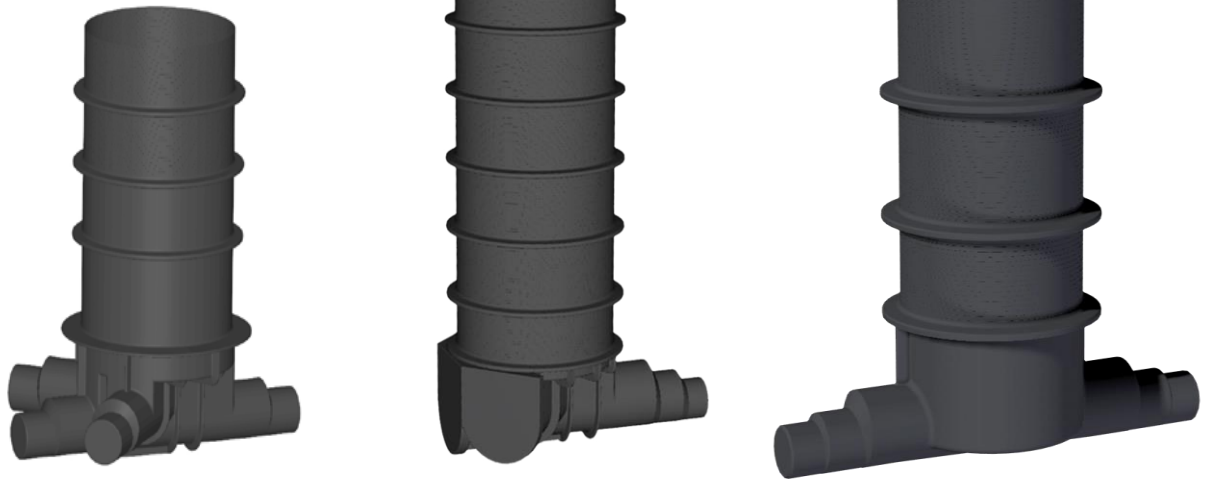
4 Washed gravel 20/40 mm 5 Drening
6 Existing ground

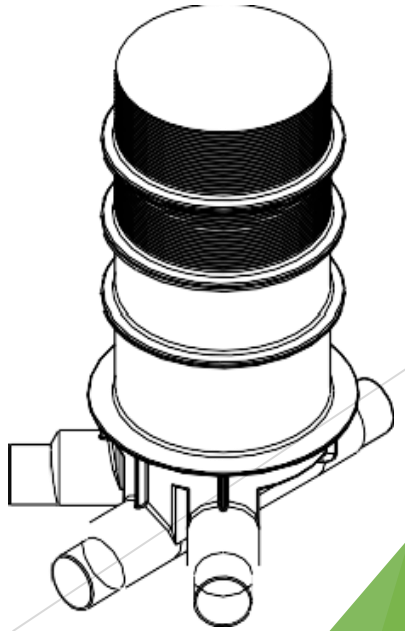


ROTO SHAFTS

SHAFTS (SEWAGE)

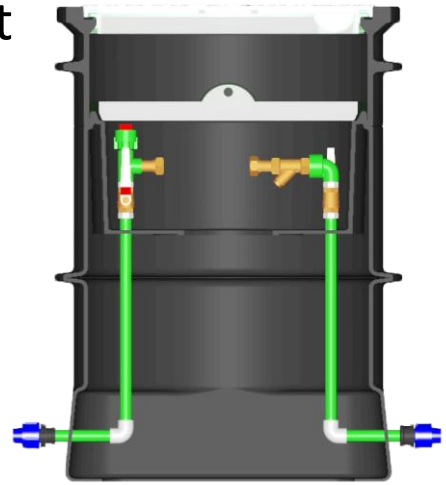
- polyethylene sewage and drainage inspection/manhole are used for the construction of a sewage system
- top quality accessories – watertight rubber seals for pipe connection, corrosion ressistant steps (integrated, metal or plastic)
- simple to drill a hole in the plastic wall and instal rubber seals and pipes





WATER SHAFTS

- used for installation of water meters or flow measurement devices
- watershafts are reliable, efficient and cost-effective alternative to concrete shafts or pipes
- covered with a plastic lid or with a cast-iron cover
- inside the shaft is installed EPS isolation cover
- thermal isolation in the walls protects the shaft frost in the coldes winter days
- strong ribs prevent deformation of the shaft



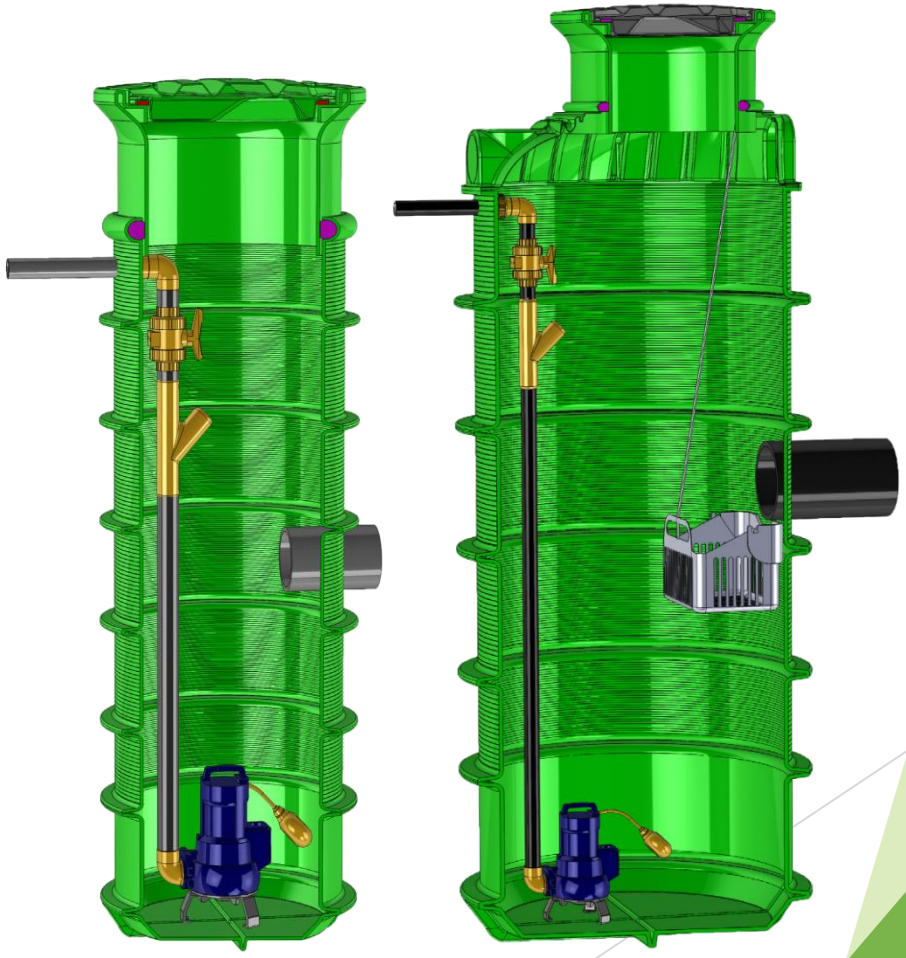
ROTO PUMPING SHAFTS

Pumping stations Ø400, 500, 600, 800, 1000 mm

Adaptive telescopic extension

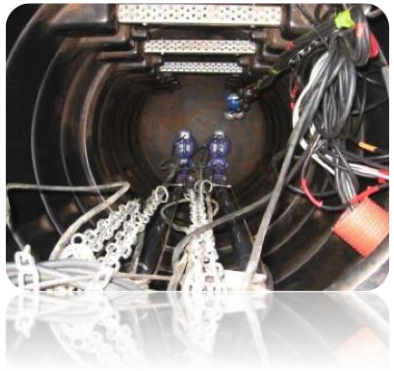
The pumping stations are available as a single station for distribution of clean or waste water.

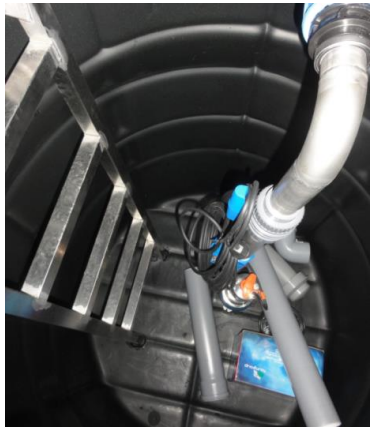
Fast installation thanks to high degree of pre-fabrication and simple connection using fixed connecting pieces for inlet.

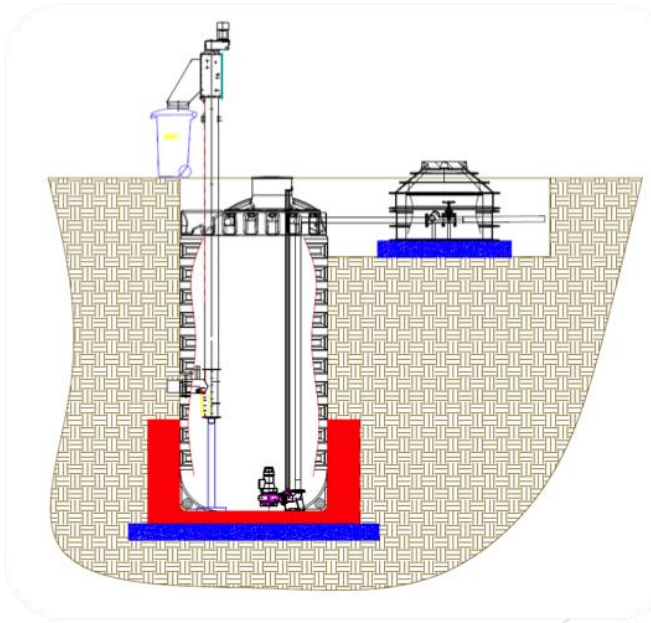


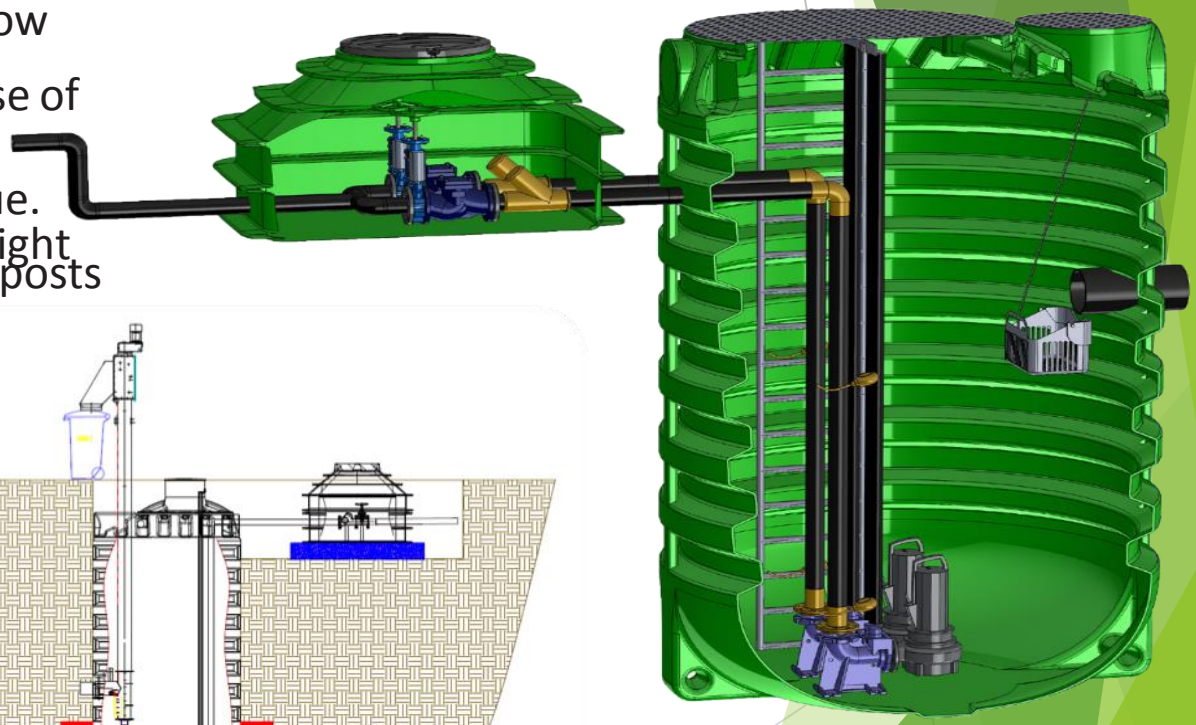
Pumping stations
Ø1300, 1500, 1800, 2300 mm

- The upper part of the tank can have one large or two separate openings with covers DN600, depends on how many pump you would like to install.
- The bottom of the tank has places for anchoring in case of ground water.
- Simple installation thanks to the low weight of the tank/shaft components and easy connection technique.
- Long-term reliability thanks to the absolutely water-tight chamber system which is resistant to sedimentary deposts and aggressive media as well as root infiltration.
- Simple pump servicing through openings.









- ***Thank you very much for your attention.***