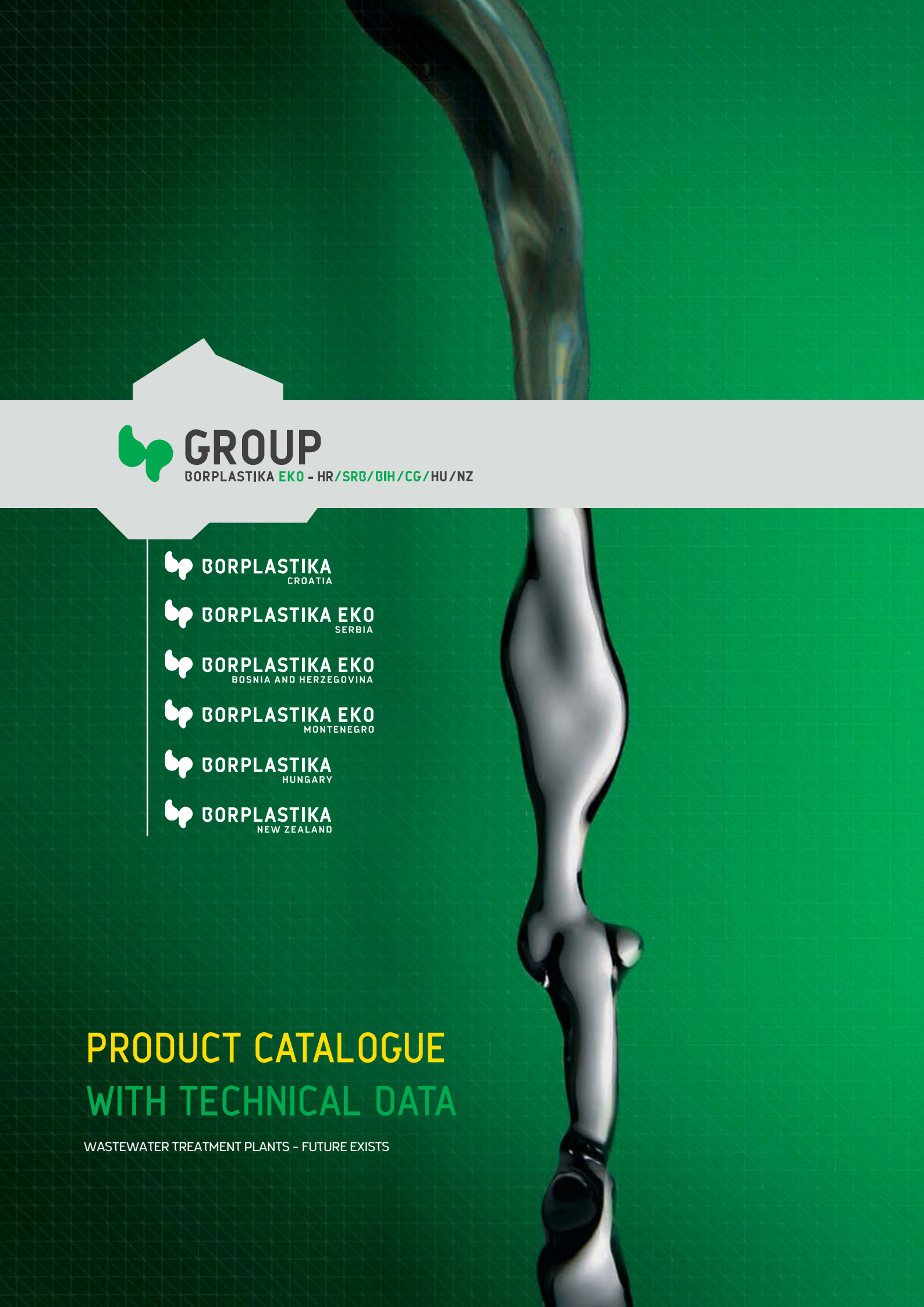

GROUP

BORPLASTIKA EKO - HR/SRB/BIH/CG/HU/NZ

BORPLASTIKA
CROATIA

BORPLASTIKA EKO
SERBIA

BORPLASTIKA EKO
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NEW ZEALAND

PRODUCT CATALOGUE
WITH TECHNICAL DATA

WASTEWATER TREATMENT PLANTS - FUTURE EXISTS

Our company was established in 1997, and is privately owned and operated. Over the years we have grown to provide a wide range of thermoplastic products for waste water treatment plants and air treatment. Our team of experts have developed new type of waste water treatment plants for different kind of waste waters.

All our products we designed and manufactured in full compliance with European standards (EN), and they are tested and certified by relevant authorities. The high quality of our products is guaranteed by the dedication and expertise of our employees; all of them hold certificates for polypropylene and polyethylene welding, in accordance with the guidelines of the German welding union DVS 2203 and DVS 2212. Our company is ISO certified: ISO 9001:2000 for established quality management system and certificate ISO 14001:2004 for environmental management system.

The environment protection became our prime goal, and our long term vision is preservation of the environment for future generations and sustainable development of entire regions. Bor-plastika , does not only invest in technologies, but also in his own new identity . This new website is designed to enable faster and easier browsing of our products, and we hope that you will find all information easily.

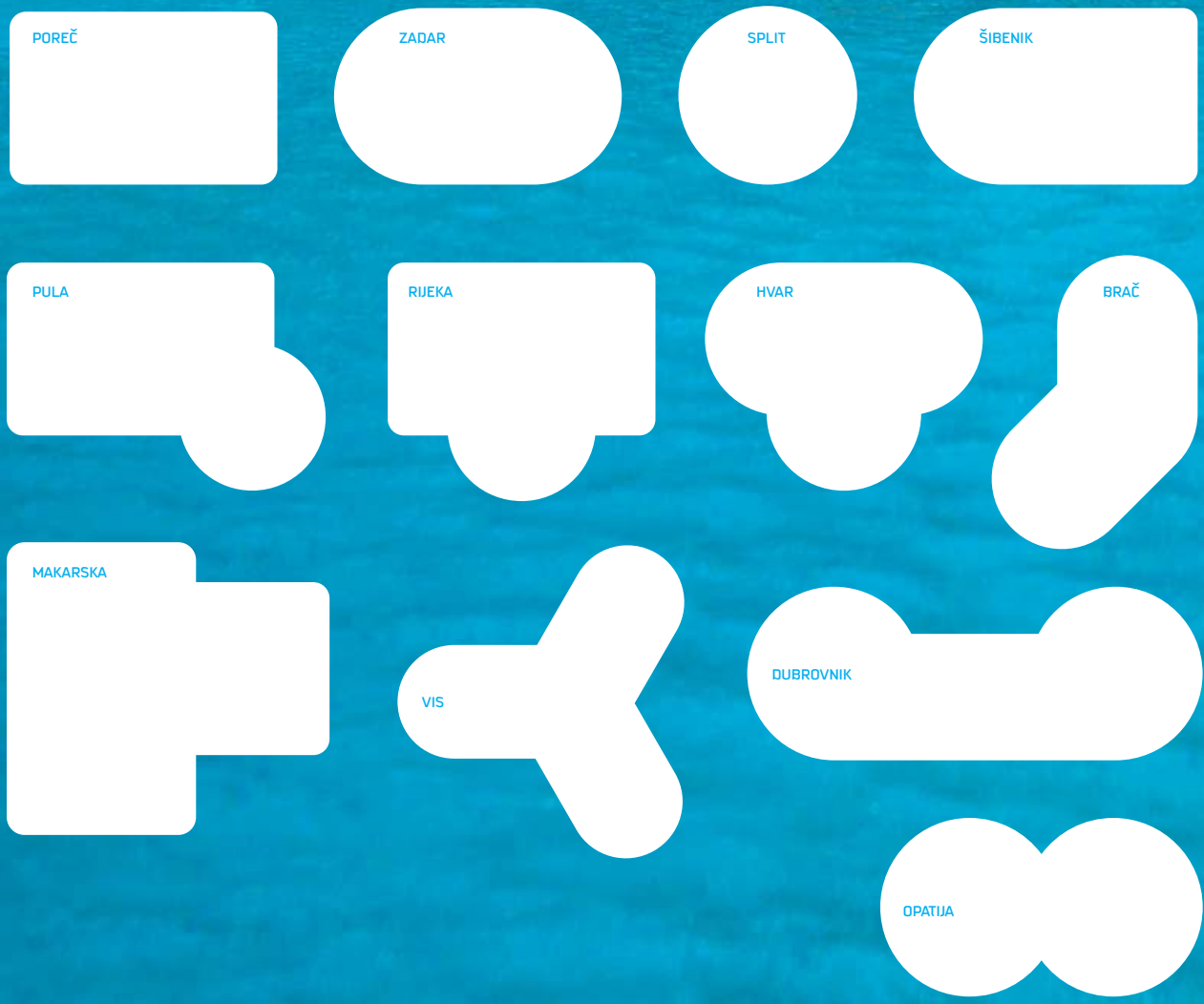
We are thankful for our employees and business partners, whose ongoing support and dedication is essential to our our current and future success.

Manager: Atila Borbas

CONTENTS

SWIMMING POOLS AND POOL TECHNIQUE

STANDARD SWIMMING POOL MODELS



SWIMMING POOLS WITH SPILLWAY

Swimming pools with spillway are mostly used for hotels, recreation centers and public baths. Because of the excellent quality of the clean water they can be recommended for personal use.

SWIMMING POOLS WITH SKIMMER

Swimming pools with skimmer are most often used for personal purposes, because of the small engine room.

WHIRLPOOL

Whirlpools are mostly used as massage baths and have a large assortment of fittings.

INSTALLATION OF SWIMMING POOLS

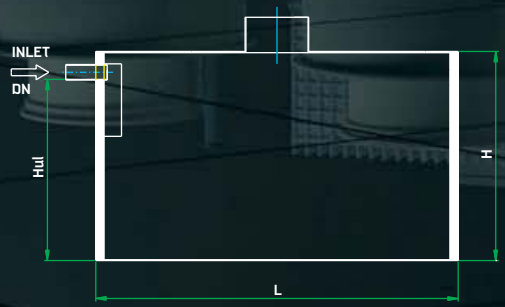
When a swimming pool is going to be set up on the place of assembly (swimming pools larger than 6,0 x 3,0 x 1,5 m1), it is necessary to make the surface flat. For the buried type of swimming pools, the upper edge of the pool should be about 10 cm higher than the ground level. In that way, the rainfall from the nearby area cannot enter the pool. The dimensions of the pit should be 20 – 25 cm wider than the pool. In the case that a pool is larger than 6,0 x 3,0 x 1,5 m1, and there is not a flat surface nearby for its assemble, the pit should be min. 60 – 75 cm. wider than the pool. The bearing foundation board, 15–20 cm. thick, has to be absolutely horizontal and even.

When concreting the sides of the pool, it is not necessary to make a shell. Concreting is performed by filling the pool with water in layers of 25–30 cm. After each layer of water there will be a layer of concrete and so on.

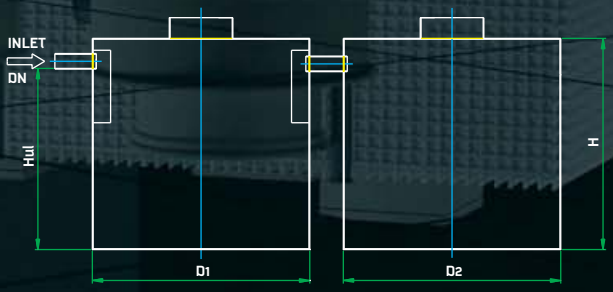
NORM: EN 12655-1

WATERPROOF COLLECTING TANKS

SQUARE CROSS SECTION



ANNULAR CROSS SECTION



Collecting tanks are systems for the collection of sanitary sewage water from households. They are used in cases when there is not a developed public sewage system. Collecting tanks are made of polypropylene and polyethylene and they are 100% waterproof.

SQUARE CROSS SECTION

COLLECTING TANK MODEL	PE	L(mm)	B(mm)	H(mm)	Hul(mm)	VOLUME(m^3)	WEIGHT(kg)
BP SEPTIK 5 P	5	3000	1160	2020	1750	4,6	589
BP SEPTIK 10 P	10	4000	1160	2020	1750	6,8	741
BP SEPTIK 15 P	15	3500	2160	2020	1750	10,8	860
BP SEPTIK 20 P	20	4500	2160	2020	1750	14,1	1030

ANNULAR CROSS SECTION

COLLECTING TANK MODEL	PE	D1(mm)	D2(mm)	H(mm)	Hul(mm)	VOLUME(m^3)	WEIGHT(kg)
BP SEPTIK 5 O/SN	5	1900	*	2040	1750	4,82	168
BP SEPTIK 10 O/SN	10	2300	*	2040	1750	7,06	203
BP SEPTIK 15 O/SN	15	2100	2100	2040	1750	11,76	332
BP SEPTIK 20 O/SN	20	2300	2300	2040	1750	14,12	364

WASTEWATER TREATMENT PLANTS - WWTP AEROBIC ANAEROBIC DEVICES

The biological WWT plant type "BP ASP" is designed as a container, so that it might be easily embedded and associated to a larger wastewater treatment plant. Outer and partitions walls are made of wall elements and polypropylene sheets. The machine – technological equipment of WWTP contains:

- pressed air sources (blowers)
- a fine-bubble aeration system and
- an electrical switch board

There has been assumed a BOD_5 of 60g per day for one population equivalent (PE) and 150 l of wastewater per day, which is in conformity with the European norm EN 12566-3 and 12255. The guaranteed outlet values are:

- BOD_5 25 mg/l,
- COD 100 mg/l and
- SS 25 mg.

CLASSIFICATION

BP ASP K (3-25 ES) – It is a biological wastewater treatment plant used for treating wastewater from family houses, small companies, hotels etc., with a capacity till 25 PE. There has been assumed a BOD_5 of 60g per day for one population equivalent (PE) and 150 lt. of wastewater per day, which is in conformity with the European norm EN 12566-3 and 12255. The guaranteed outlet values are BOD_5 25 mg/l, COD 120 mg/l.

BP ASP N (25-170 ES) – It is a biological wastewater treatment plant used for treating communal wastewater from: hotels small villages etc, factories etc, with a capacity till 1.000 PE. is designed as a container, so that it might be easily embedded and associated to a larger wastewater treatment plant. There has been assumed a BOD_5 of 60g per day for one population equivalent (PE) and 150 lt. of wastewater per day, which is in conformity with the European norm EN 12566-3 and 12255. The guaranteed outlet values are BOD_5 25 mg/l, COD 100 mg/l, SS 25 mg.

BP ASP N/pump (25-170 ES) – It is used when the sewage is too deep, so it is more economical to use a shallower device and sewage.

DESCRIPTION OF THE TECHNOLOGY

The sediments and light-weight elements are retained in the cleaning area (A). The mechanically cleared water flows into the activation area (B), which can be equipped with a biomass carrier. The organic matter is transformed by activation. The parameters allow the necessary conditions for nitrification. The sedimentation of the biological sludge (which is returned to the activation area) takes place in the cleaning tank (D). The device's outlet is regulated by the mammoth pump (F). All the superfluous sludge is automatically discharged, at regular intervals, from the activation area into the discharge area.

MAINTENANCE OPERATIONS

LIST OF MAINTENANCE OPERATIONS

The plant is designed so as not to require permanent attendance. Once on, it is necessary to carry out regular checks and the operations described below.

Visual check

The regular visual check is a primary condition for the successful operation of the plant. After opening the lid check:

- Aeration
- effluent trough and pipe
- connecting hole,
- overall situation.

Checking the volume of activated sludge and taking samples

The volume of sludge in the activation zone must be checked as follows:

- With the help of a ladle on a stick take water from the activation sludge and pour it into the Imhoff cone of a 1-liter graduated cylinder
- The filled Imhoff cone (or graduated cylinder), usually a 1-liter cylinder with water and sludge, must be put on a leveled surface and let settle down for 30 min.
- Watch at what height there is a distinct border between the water and the sludge settled on the bottom.

Extracting the excess of sludge. Sludge is extracted by using a cesspool vehicle and inserting a suction basket into the bottom of the sludge zone. The sludge zone is accessible after opening (removing) the smell-tight lid. In order to ensure the proper extraction of the sludge from the sludge area, it is necessary to break the top, usually grease cake, by using the reverse run of the cesspool vehicle, mixing the volume of the sludge zone and extracting then the sludge onto the cesspool vehicle.

- Switch off the blower before inserting the suction basket.
- Insert the suction basket into the sludge zone carefully, so as not to thrust the bottom of the tank or the technical partition walls.
- The operators of the cesspool vehicle break the cake and mix the content of the sludge zone by using the reverse run.
- Fill the sludge zone with clean water, right after completing the sludge extraction (e.g. by opening a tap in the connected building) and switch on the blower.
- Do not drain other zones of the plant tank except for the sludge zone.

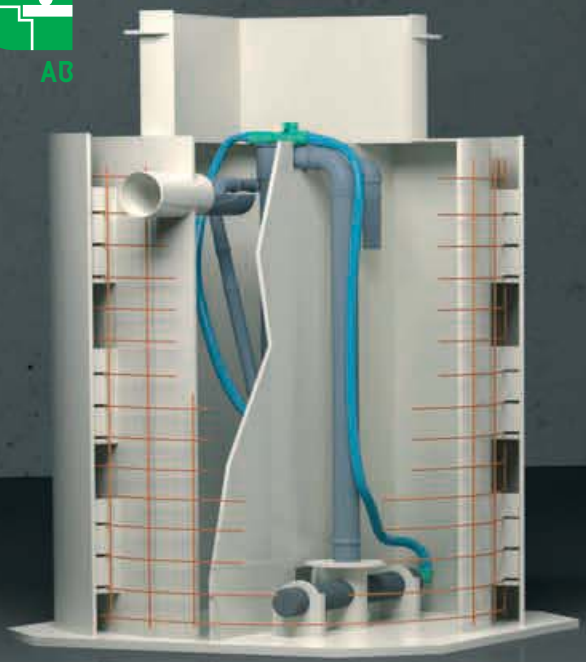
On your request, we can offer you WWTP, capacity from 1000 – 5000 PE.

NORM: EN 12566-3

AEROBIC ANAEROBIC UNITS
BP ASP K

USAGE: FAMILY HOUSES, SMALL COMPANIES, HOTELS

AB



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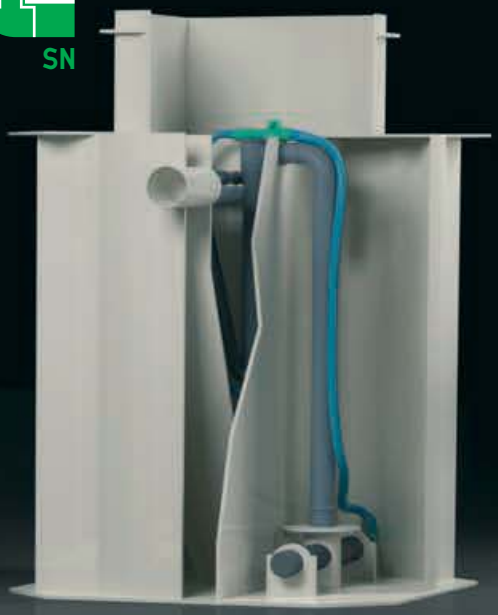
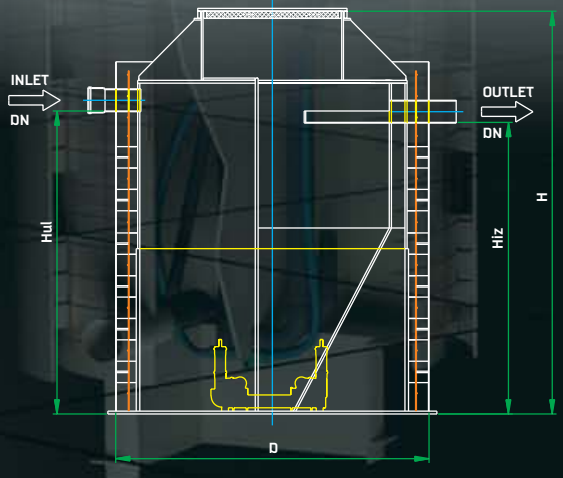
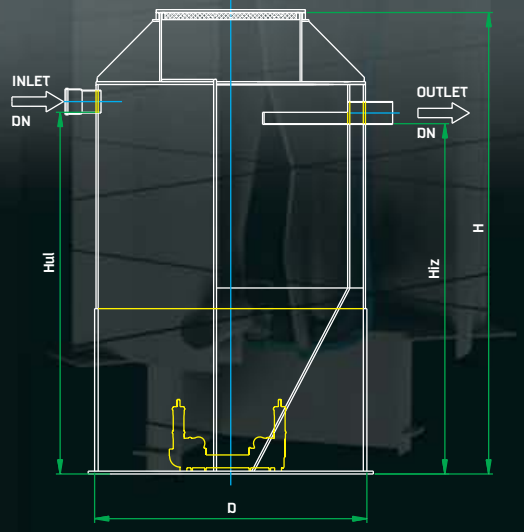






WWTP MODEL	PE	Q(m^3/day)	BOD_5(kg/day)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(W)	WEIGHT(kg)
BP ASP 5 K O/AB	3-7	0,75	0,30	1650	2120	1320	1260	160	60	239
BP ASP 10 K O/AB	8-12	1,50	0,60	1950	2120	1320	1260	160	60	292
BP ASP 15 K O/AB	13-17	2,25	0,90	2150	2550	1850	1750	160	100	382
BP ASP 20 K O/AB	18-25	3,00	1,20	2400	2550	1850	1750	160	100	437

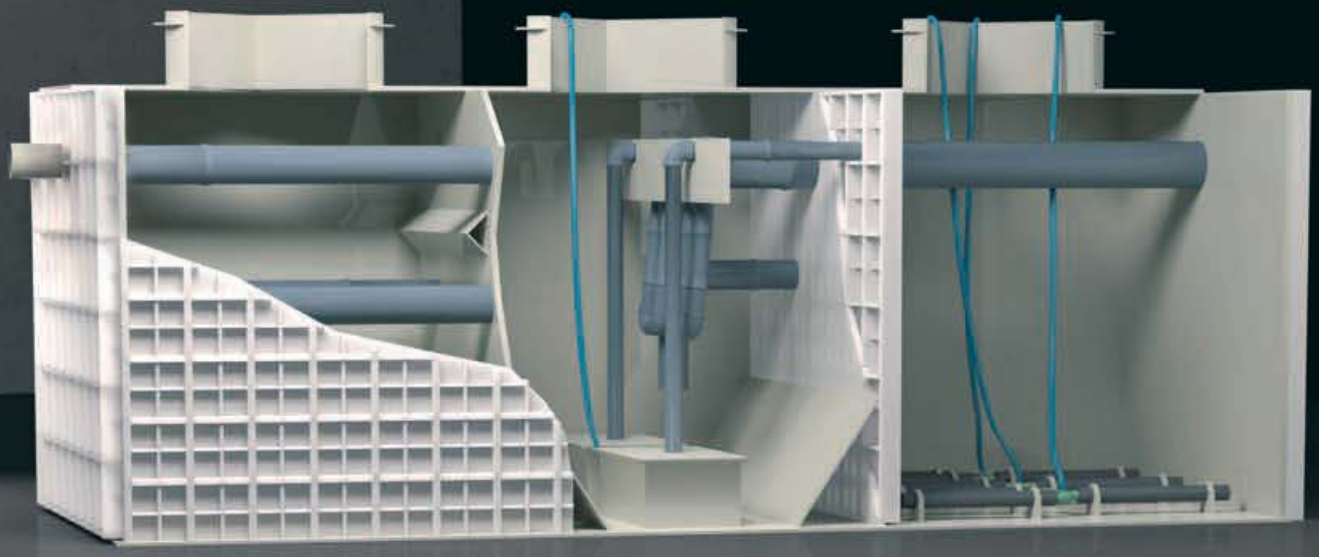
WWTP MODEL	PE	Q(m^3/day)	BOD_5(kg/day)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(W)	WEIGHT(kg)
BP ASP 5 K O/SN	3-7	0,75	0,30	1350	2120	1320	1260	160	60	213
BP ASP 10 K O/SN	8-12	1,50	0,60	1650	2120	1320	1260	160	60	255
BP ASP 15 K O/SN	13-17	2,25	0,90	1850	2550	1850	1750	160	100	331
BP ASP 20 K O/SN	18-25	3,00	1,20	2100	2550	1850	1750	160	100	376

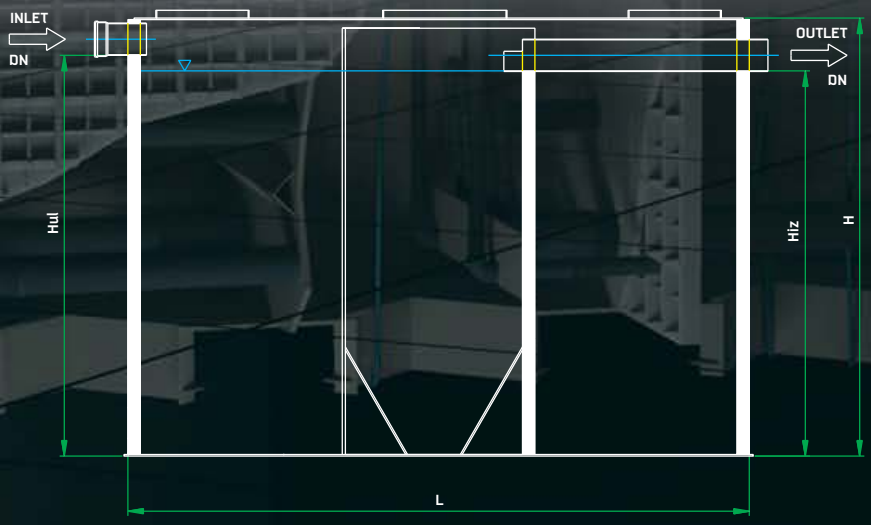
NORM: EN 12255

AEROBIC ANAEROBIC UNITS
BP ASP N

USAGE: HOTELS AND SMALL SETTELMENTS

AB SN



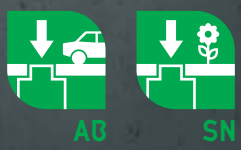


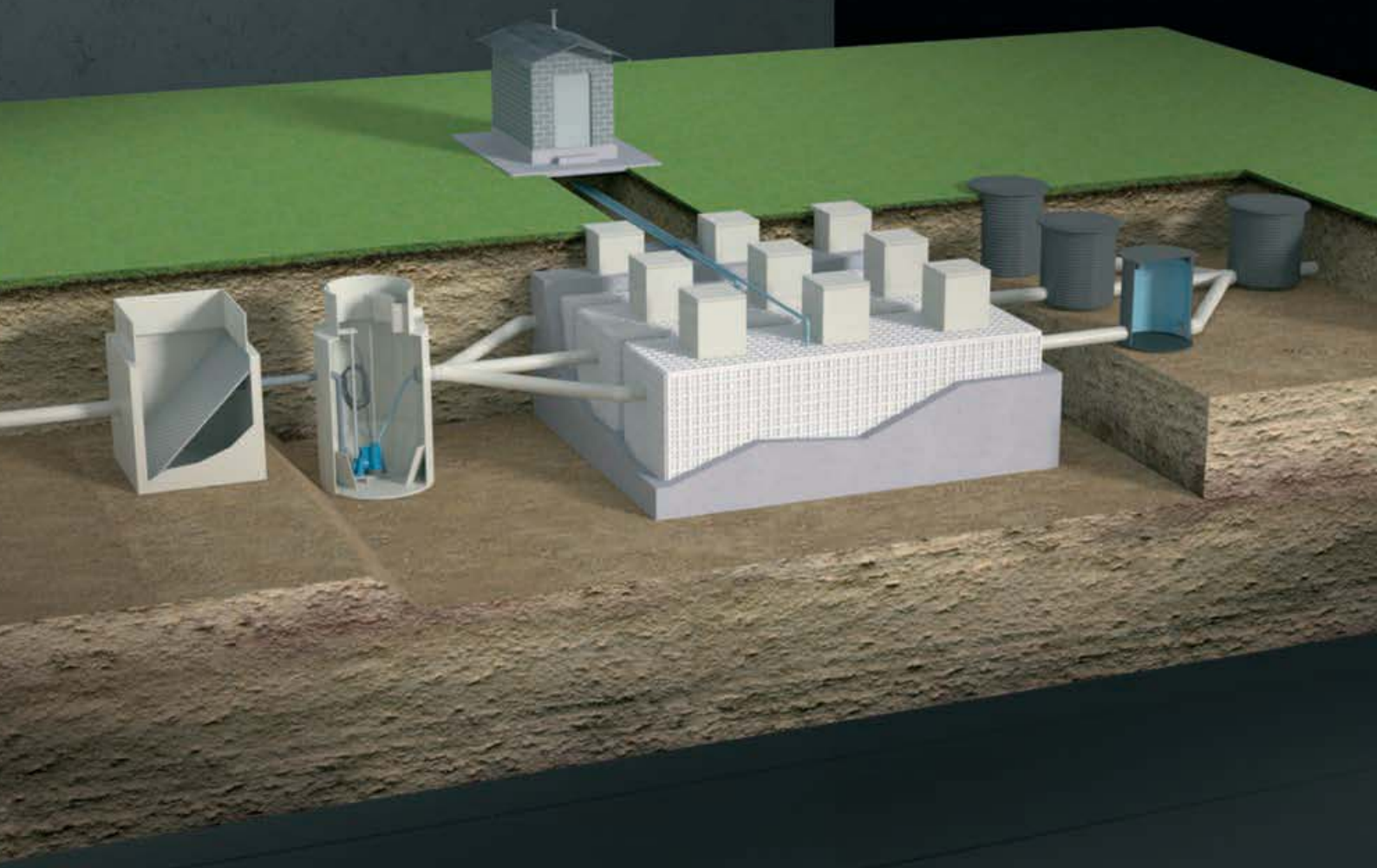
WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP ASP 30 N	26-35	4,5	1,8	2160	2000	2520	2080	1980	160	0,3	762
BP ASP 40 N	36-45	6	2,4	3160	2000	2520	2080	1980	160	0,3	911
BP ASP 50 N	46-55	7,5	3	4160	2000	2520	2080	1980	200	0,55	1060
BP ASP 60 N	56-70	9	3,6	4160	2000	2820	2530	2430	200	0,55	1169
BP ASP 80 N	71-90	12	4,8	5160	2000	2860	2530	2430	200	1,1	1332
BP ASP 100 N	91-110	15	6	6660	2000	2860	2530	2430	200	1,5	1577
BP ASP 125 N	111-135	19	7,5	7660	2000	2860	2530	2430	200	1,5	1740
BP ASP 150 N	136-170	23	9	8660	2000	2860	2530	2430	200	1,5	1904

NORM: EN 12255

AEROBIC ANAEROBIC UNITS
BP ASP 300-600 PE

USAGE: SMALL VILLAGES AND PARTS OF THE TOWN





The dimensioning of biological device is in conformity with the European norm EN 12255 and there has been assumed a BOD_5 of 60g per day for one population equivalent (PE) and 150 l of wastewater per day.

The treated water fulfills sufficient criteria for exiting into the recipient of 2nd category watercourses.

The guaranteed outlet values are BOD_5 of 25 mg/l and COD 100 mg/l. They are designed as containers and connected in parallel, depending on the required capacity.

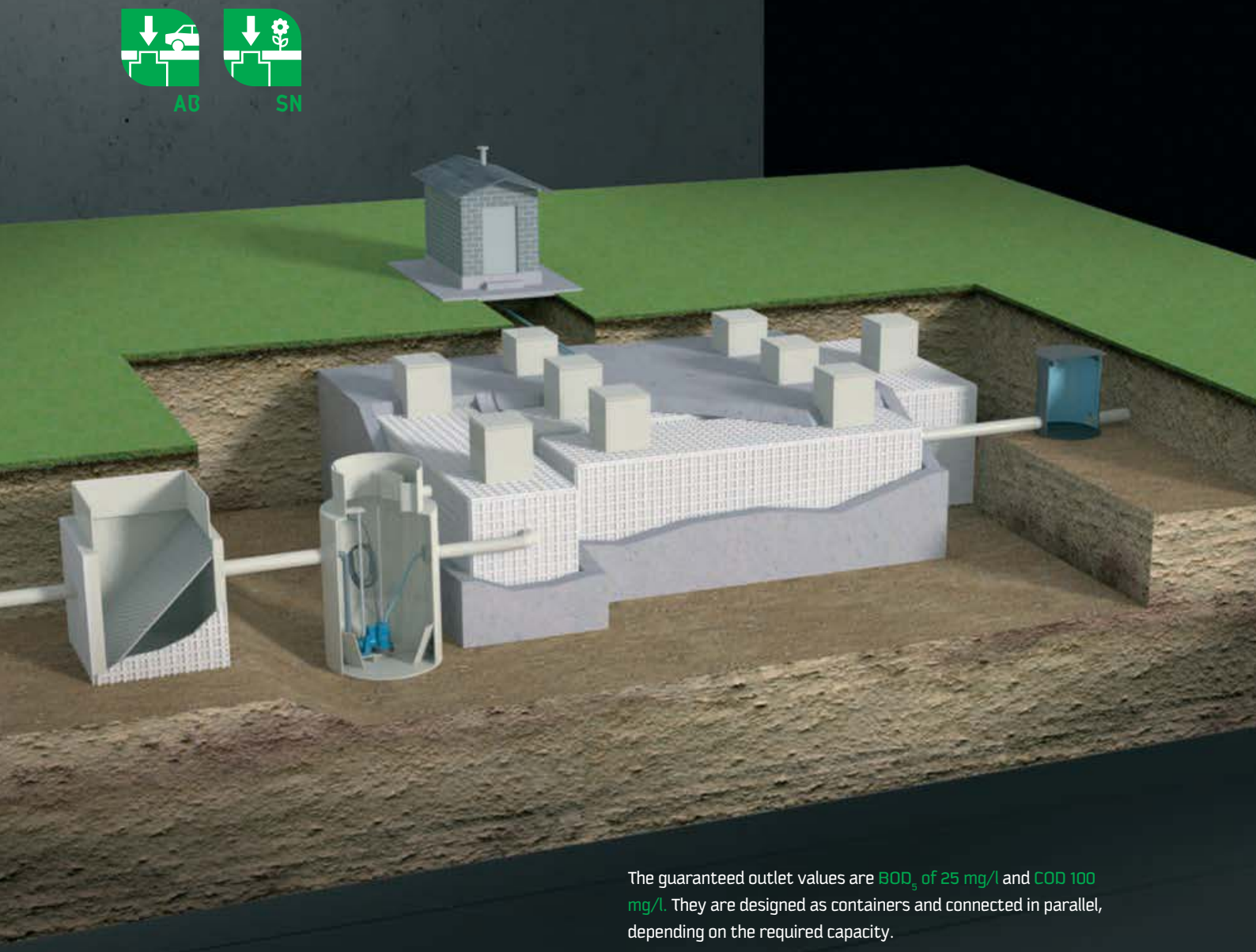
They are used for the biological treatment of sanitary-fecal wastewater of small villages and parts of the town. The device can be equipped with remote control equipment.

WWTP MODEL	PE	Q(m^3/day)	BOD_5(kg/day)	No. OF CONTAINERS	NECESSARY SURFACE(m)	USABLE VOLUME(m^3)	POWER(kW)
BP ASP 300 P	250-349	45	18	2	9×6	80	3,0
BP ASP 400 P	350-449	60	24	2	9×6	90	3,0
BP ASP 500 P	450-549	75	30	3	9×8	117	4,5
BP ASP 600 P	550-649	90	36	3	9×8	131	4,5

NORM: EN 12255

AEROBIC ANAEROBIC UNITS
BP ASP 500-800 PE

USAGE: VILLAGES AND PARTS OF THE TOWN



The dimensioning of biological device is in conformity with the European norm EN 12255 and there has been assumed a BOD_5 of 60g per day for one population equivalent (PE) and 150 l of wastewater per day.

The treated water fulfills sufficient criteria for exiting into the recipient of 2nd category watercourses.

The guaranteed outlet values are BOD_5 of 25 mg/l and COD 100 mg/l. They are designed as containers and connected in parallel, depending on the required capacity.

The device consists of mechanical pre-treatment, pre-pump shaft, denitrification tank, nitrification tank, secondary sedimentation tank, and sludge tank.

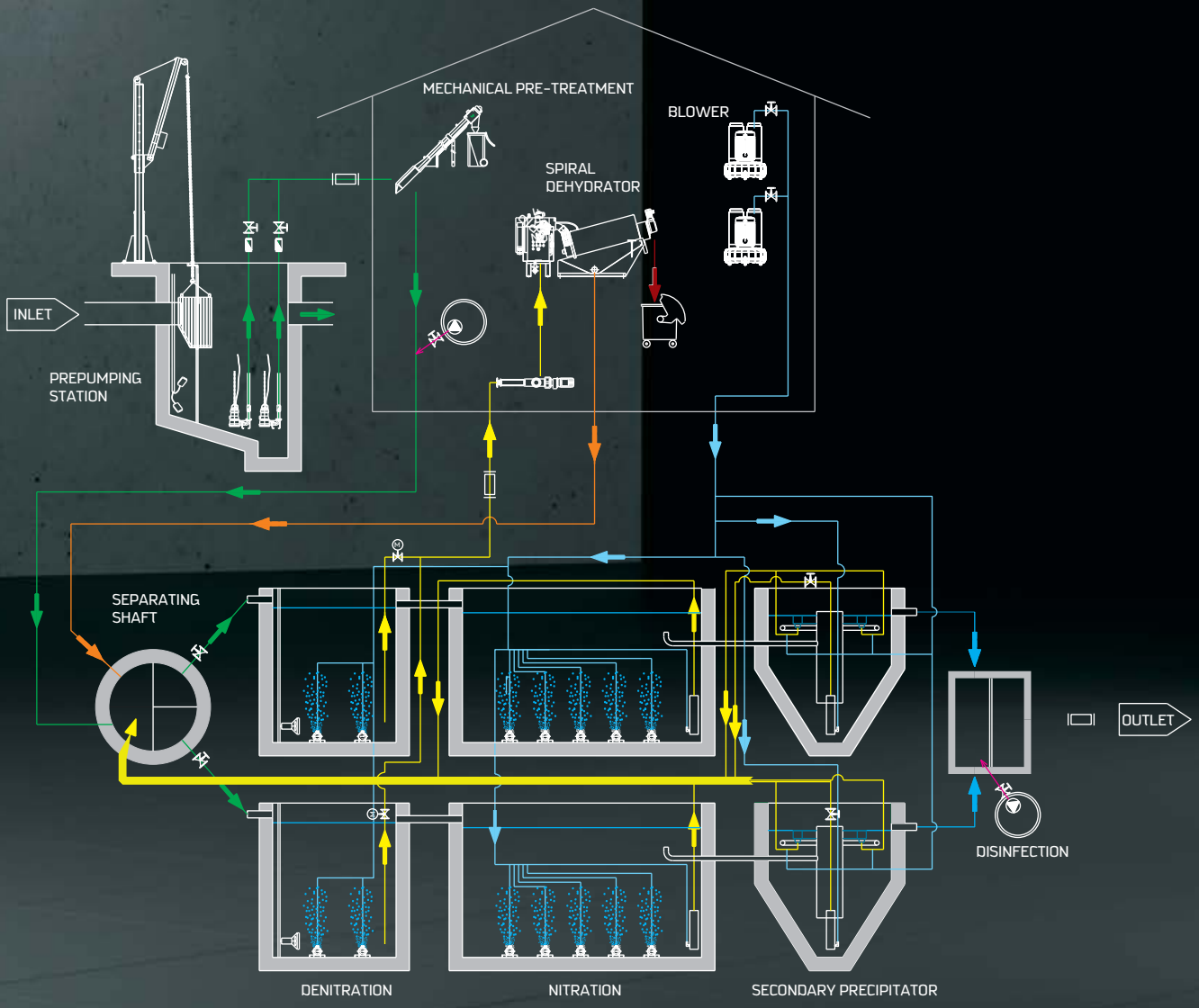
They are used for the biological treatment of sanitary-fecal wastewater of villages and parts of the town. The device can be equipped for remote control operation.

WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	No. OF CONTAINERS	NECESSARY SURFACE(m)	USABLE VOLUME(m³)	POWER(kW)
BP ASP 500 S	476-525	75	30	5	10.0×10.0	155	11
BP ASP 550 S	526-575	82.5	33	5	10.0×10.5	165	12
BP ASP 600 S	576-625	90	36	5	10.0×11.0	180	12.7
BP ASP 650 S	626-675	97.5	39	7	12.0×12.5	201	13.8
BP ASP 700 S	676-725	105	42	7	12.0×13.0	216	14.7
BP ASP 750 S	726-775	112.5	45	7	13.5×12.5	230	15.9
BP ASP 800 S	776-825	120	48	7	13.5×12.5	235	17

NORM: EN 12255

BP ASP 500-5000 B

USAGE: VILLAGES AND PARTS OF THE TOWN



The dimensioning of wastewater treatment plant (Biological device) is in conformity with the European norm EN 12255 and there has been assumd BOD_5 of 60 g per day for one population equivalent (PE) and 150 l of wastewater per day. The treated water has sufficient criteria for exiting to the recipient of II. category watercourses. The guaranteed outlet values are BOD_5 25 mg/l and COD 100 mg/l.

The design of wastewater treatment devices is based on the latest findings of mechanical, biological and chemical wastewater treatment.

The device consists of: pre-ump shaft, mechanical pretreatment, denitrification pool, nitrification pool, secondary sedimentation tank and precipitation of phosphorus by chemical method.

They are used for the biological treatment of sanitary-fecal wastewater of villages and parts of the town. The device can be equipped for remote control operation.

SBR PLANTS

GENERAL

SBR plants are one of the options for biological WWTP with aeration, in conformity with the European norm EN 12566-3, and the second part of DIN 4261. They are used for treating communal wastewater from: small hotels, restaurants and objects with variable hydraulic load.

WORKING PRINCIPLE

Water Treatment in SBR units is a process consisting in 3 cycles per day and 4 phases per cycles.

The phases are:

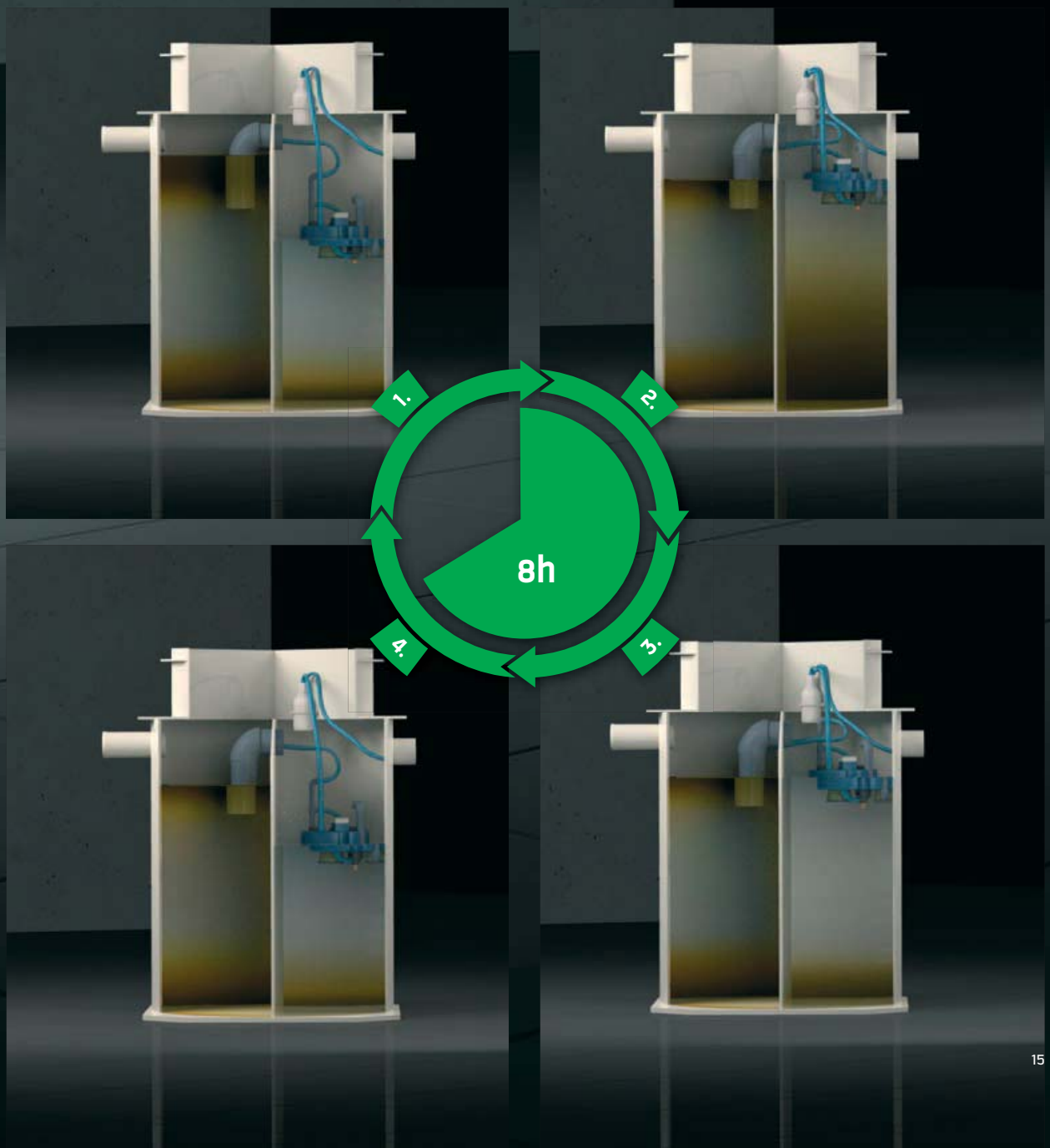
ADMISSION OF WASTEWATER INTO THE SBR REACTOR.
The waste water flows from the pre-treated part into the SBR reactor.

AERATION – An immersed blower supplies the necessary quantity of oxygen for micro-organisms. That micro-organisms that are in the water decompose the biological substances.

SEDIMENTATION – In the phase of sedimentation the air stops being enriched with oxygen and sludge precipitates onto the bottom of the unit.

DRAINAGE OF PURIFIED WATER, OUTLET – The layer of treated water is drained out of the unit with the help of an air pump. After that a new cycle starts.

Every cycle lasts 8 hours, i.e. 3 cycles per day. The formed active sludge is pumped into the primary sedimentation tank and, in case of necessity, it is neutralized, together with the sludge from primary sedimentation tank. Filling is carried out by using the sludge pumps of the SBR reactor.

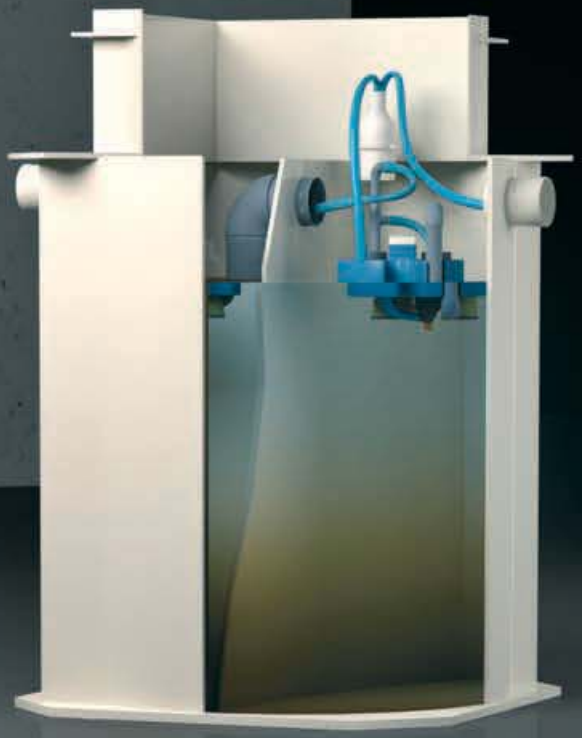


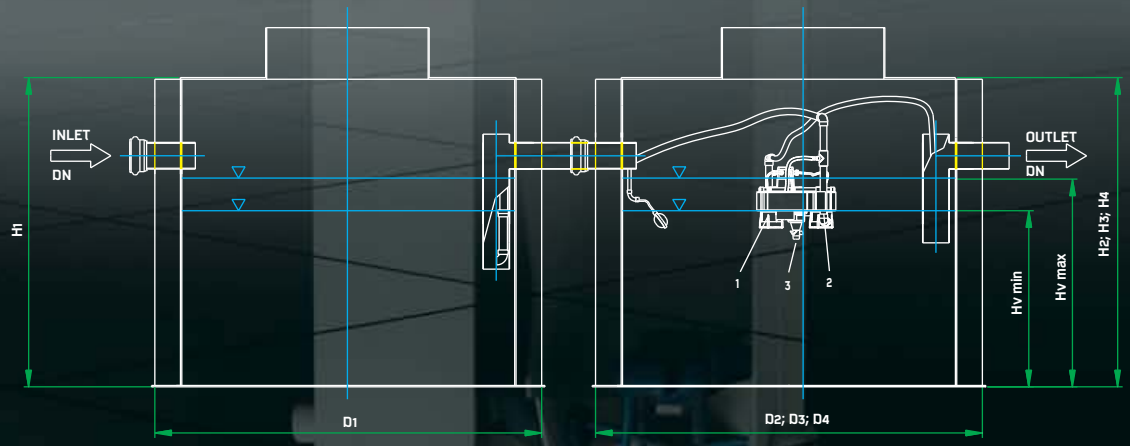
NORM: EN 12566-3

SBR PLANTS
BP SBR

USAGE: FAMILY HOUSES, SMALL COMPANIES AND HOTELS

SN





WWTP MODEL	PE	D1(mm)	H1(mm)	D2(mm)	H2(mm)	D3(mm)	H3(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP SBR 4 O/SN	4	1850	2020	*	*	*	*	1800	1750	110	0,06	210
BP SBR 6 O/SN	6	2150	2020	*	*	*	*	1800	1750	110	0,09	249
BP SBR 8 O/SN	8	2450	2020	*	*	*	*	1800	1750	110	0,12	290
BP SBR 10 O/SN	10	2700	2020	*	*	*	*	1800	1750	110	0,15	327
BP SBR 12 O/SN	12	2800	2020	*	*	*	*	1800	1750	110	0,20	343
BP SBR 16 O/SN	16	2800	2020	1900	2020	*	*	1800	1750	110	0,20	557
BP SBR 20 O/SN	20	2800	2270	2000	2270	*	*	2050	2000	110	0,30	581
BP SBR 25 O/SN	25	2400	2270	2400	2270	2200	2270	2050	2000	110	0,30	826
BP SBR 30 O/SN	30	2500	2270	2500	2270	2400	2270	2050	2000	160	0,50	910
BP SBR 40 O/SN	40	2800	2270	2800	2270	2700	2270	2050	2000	160	0,60	1049

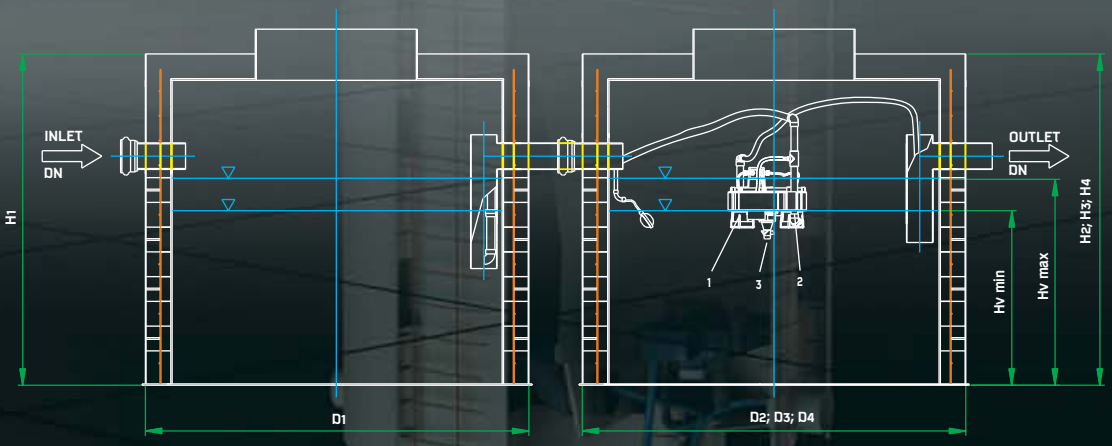
On request, we produce WWTP for 1000 to 5000 PE (Population equivalent).

NORM: EN 12566-3

SBR PLANTS
BP SBR

USAGE: FAMILY HOUSES, SMALL COMPANIES AND HOTELS

AB



WWTP MODEL	PE	D1(mm)	H1(mm)	D2(mm)	H2(mm)	D3(mm)	H3(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP SBR 4 O/AB	4	1850	2150	*	*	*	*	1800	1750	110	0,06	270
BP SBR 6 O/AB	6	2150	2150	*	*	*	*	1800	1750	110	0,09	285
BP SBR 8 O/AB	8	2450	2150	*	*	*	*	1800	1750	110	0,12	330
BP SBR 10 O/AB	10	2700	2150	*	*	*	*	1800	1750	110	0,15	391
BP SBR 12 O/AB	12	2800	2150	*	*	*	*	1800	1750	110	0,20	408
BP SBR 16 O/AB	16	2800	2150	1900	2150	*	*	1800	1750	110	0,20	678
BP SBR 20 O/AB	20	2400	2400	2000	2400	*	*	2050	2000	110	0,30	720
BP SBR 25 O/AB	25	2400	2400	2400	2400	2200	2400	2050	2000	110	0,30	1058
BP SBR 30 O/AB	30	2500	2400	2500	2400	2400	2400	2050	2000	160	0,50	1102
BP SBR 40 O/AB	40	2800	2400	2800	2400	2700	2400	2050	2000	160	0,60	1293

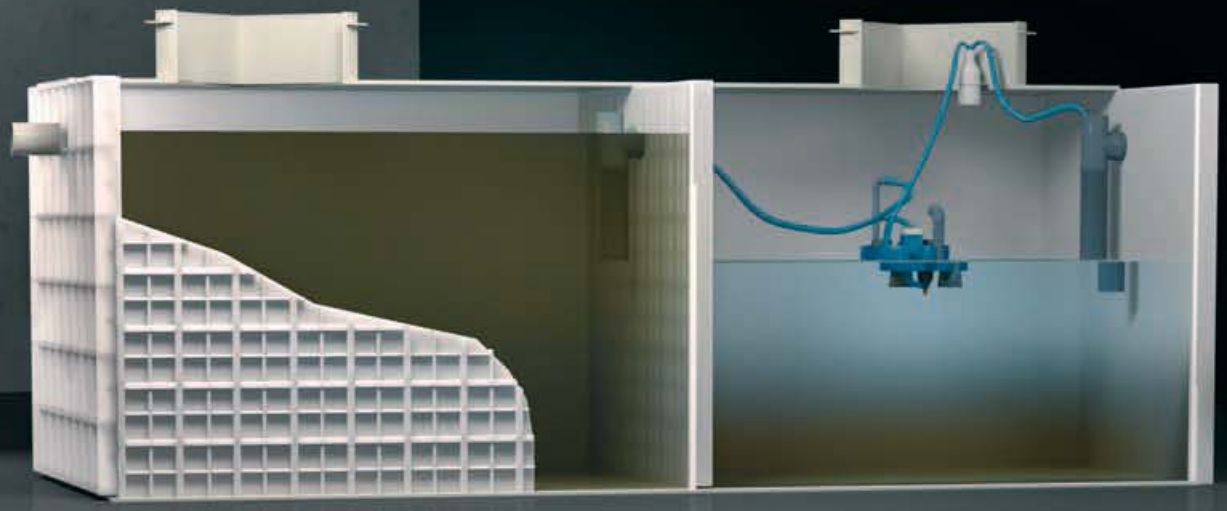
On request, we produce WWTP for 1000 to 5000 PE (Population equivalent).

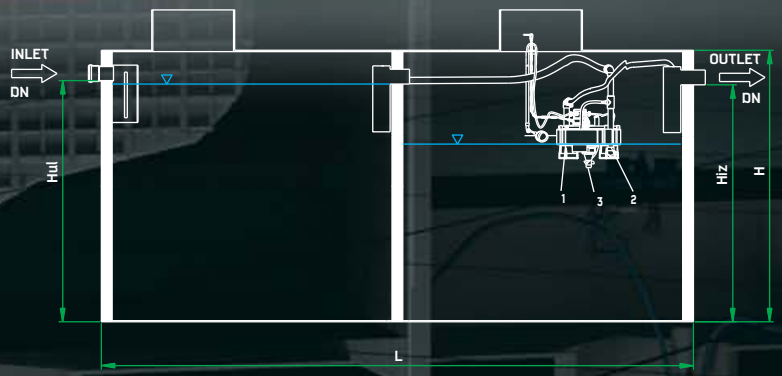
NORM: EN 12566-3
ATV/DWA M 210

SBR PLANTS
BP SBR

USAGE: SMALL SETTELMENTS, INDIVIDUAL OBJECTS

AB SN





WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP SBR 4 P	4	0,60	0,24	3000	1160	1520	1320	1270	110	0,06	367
BP SBR 10 P	10	1,50	0,60	4500	1660	1520	1320	1270	110	0,15	610
BP SBR 20 P	20	3,00	1,20	4500	2160	2020	1820	1770	110	0,30	871
BP SBR 30 P	30	4,50	1,80	6000	2160	2460	2110	2060	160	0,50	1421
BP SBR 40 P	40	6,00	2,40	8000	2160	2460	2110	2060	160	0,60	1792

WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP SBR 6 E P	6	0,90	0,36	2000	1660	1520	1370	1320	110	0,09	330
BP SBR 12 E P	12	1,80	0,72	3000	1660	2020	1870	1820	110	0,20	540
BP SBR 25 E P	25	3,00	1,20	4000	2160	2020	1870	1820	110	0,30	774
BP SBR 30 E P	30	3,75	1,50	4500	2160	2020	1820	1770	160	0,50	848
BP SBR 40 E P	40	6	2,4	6500	2160	2160	1810	1760	160	0,50	1194

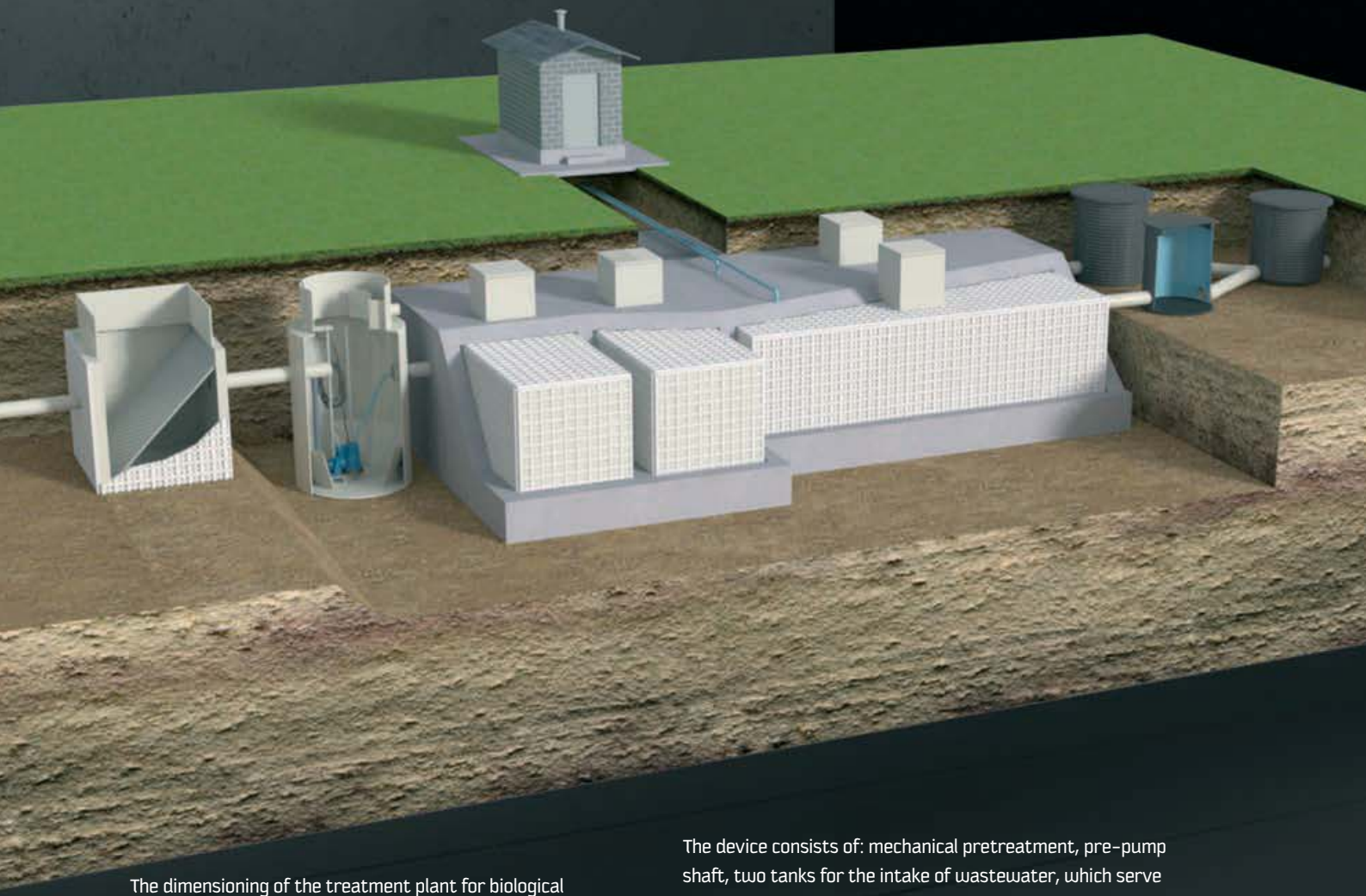
WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	L(mm)	B(mm)	H(mm)	L1(mm)	B1(mm)	H1(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP SBR 51 P	51	7,65	3,06	4000	2160	2520	*	*	*	2300	2200	160	0,80	819
BP SBR 60 P	60	9,00	3,60	4500	2160	2520	*	*	*	2300	2200	160	1,10	904
BP SBR 80 P	80	12,00	4,80	5500	2160	2660	*	*	*	2390	2290	160	1,20	1202
BP SBR 100 P	100	15,00	6,00	7000	2160	2660	*	*	*	2390	2290	160	1,50	1464
BP SBR 125 P	125	18,75	7,50	8500	2160	2660	*	*	*	2390	2290	160	1,90	1726
BP SBR 150 P	150	22,50	9,00	6500	2160	2660	4000	2160	2660	2390	2290	160	2,30	2316
BP SBR 175 P	175	26,25	10,50	7500	2160	2660	5000	2160	2660	2390	2290	160	2,60	2665
BP SBR 200 P	200	30,00	12,00	8500	2160	2660	5500	2160	2660	2390	2290	160	3,00	2928
BP SBR 250 P	250	37,50	15,00	9160	2400	2660	6160	2400	2660	2390	2290	160	3,80	3319

On request, we produce WWTP for 1000 to 5000 PE (Population equivalent).

NORM: EN 12255

SBR PLANTS
BP SBR 300-500 PE

USAGE: SMALL FACTORIES, HOTELS, RESORTS



The dimensioning of the treatment plant for biological wastewater is in conformity with the European norm EN 12255 and there has been assumed a BOD_5 per day and 150 l of wastewater per day.

The treated water fulfills sufficient criteria for exiting into the recipient of 2nd category watercourses.

The guaranteed outlet values are BOD_5 25 mg/l and COD 100 mg/l. They are designed as containers.

The device consists of: mechanical pretreatment, pre-pump shaft, two tanks for the intake of wastewater, which serve as primary precipitators and reservoirs for the excess of sludge, and two activation tanks, which serve as secondary precipitators.

They are used for the biological treatment of sanitary-fecal wastewater from small factories, hotels, or whenever the quantity of water and pollution varies over time. The device can operate with remote control equipment.

WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	No. OF CONTAINERS	NECESSARY SURFACE(m)	USABLE VOLUME(m³)	POWER(kW)
BP SBR 300	276-325	45	18	4	10.5×5.0	105	4.5
BP SBR 350	326-375	52.5	21	4	11.5×6.0	123	5.3
BP SBR 400	376-425	60	24	4	12.5×6.5	139	6.0
BP SBR 450	426-475	67.5	27	4	13.5×7.5	159	6.8
BP SBR 500	476-525	75	30	4	14.0×8.0	175	7.5

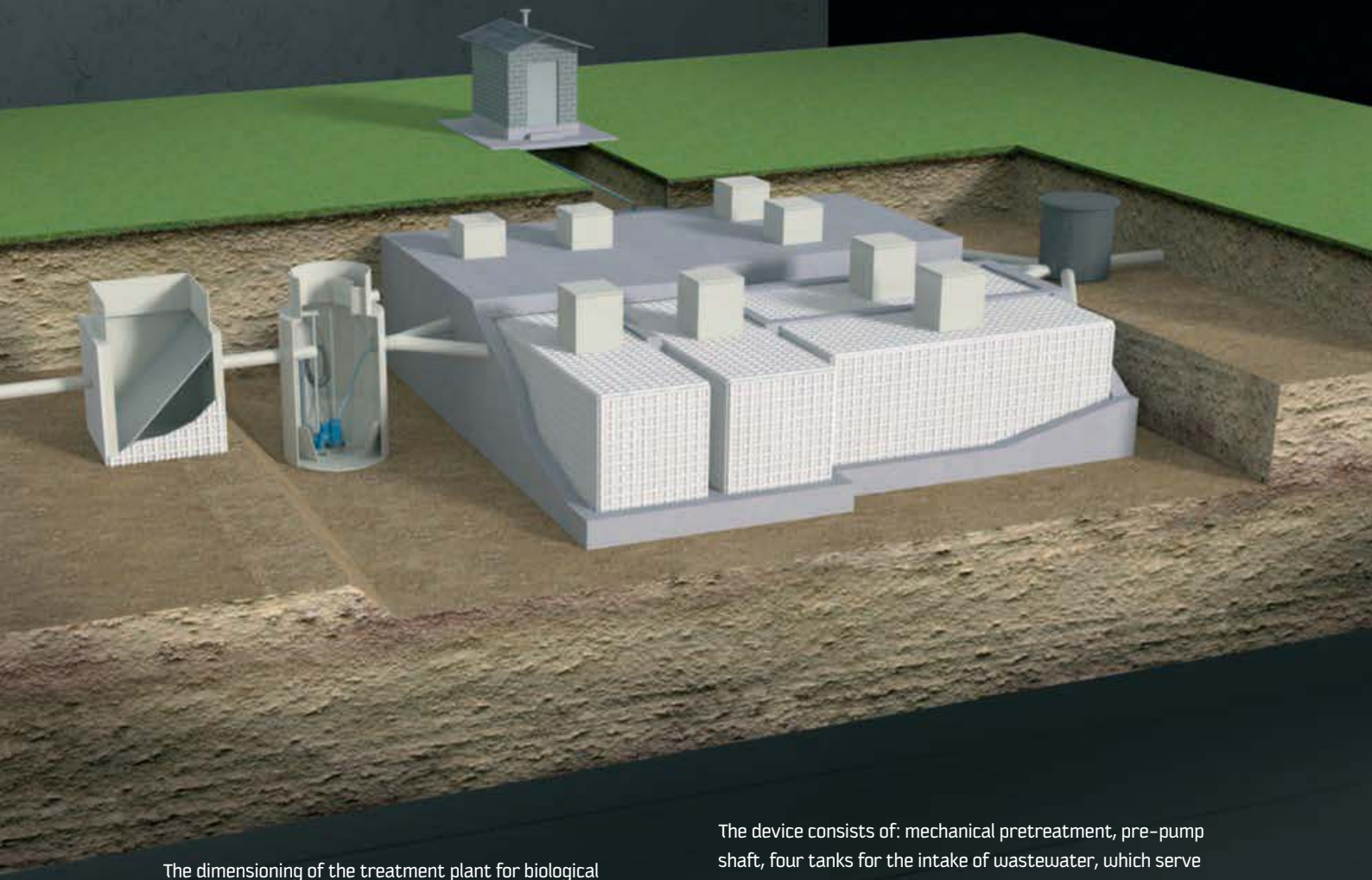
On request, we produce WWTP for 1000 to 5000 PE (Population equivalent).

NORM: EN 12255

SBR UREĐAJI
BP SBR 600-1000 PE

USAGE: SMALL FACTORIES, HOTELS, RESORTS

AB SN



The dimensioning of the treatment plant for biological wastewater is in conformity with the European norm EN 12255 and there has been assumed a BOD_5 of 60 g per day and 150 l of wastewater per day.

The treated water fulfills sufficient criteria for exiting into the recipient of 2nd category watercourses.

The guaranteed outlet values are BOD_5 25 mg/l and COD 100 mg/l. They are designed as containers.

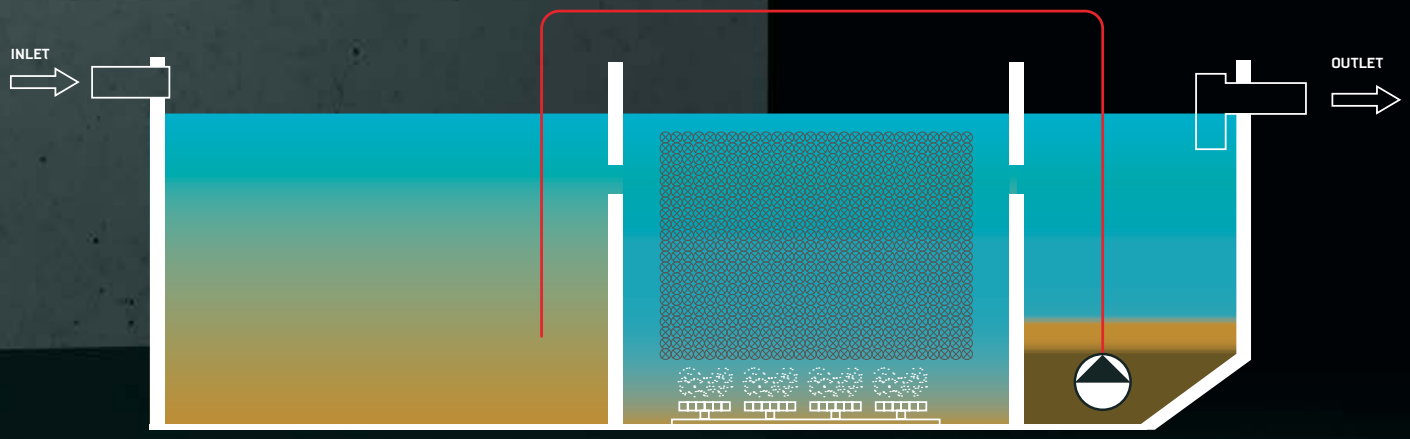
The device consists of: mechanical pretreatment, pre-pump shaft, four tanks for the intake of wastewater, which serve as primary precipitators and reservoirs for the excess of sludge, and four activation tanks, which serve as secondary precipitators.

They are used for the biological treatment of sanitary-fecal wastewater from small factories, hotels, resorts or whenever the quantity of water and pollution varies over time. The device can operate with remote control equipment.

WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	No. OF CONTAINERS	NECESSARY SURFACE(m)	USABLE VOLUME(m³)	POWER(kW)
BP SBR 600	550-649	90	36	8	10.5×10.0	210	9.0
BP SBR 700	650-749	105	42	8	12.0×11.5	247	10.6
BP SBR 800	750-849	120	48	8	13.0×12.5	278	12.0
BP SBR 900	850-949	135	54	8	15.5×13.5	318	13.6
BP SBR 1000	950-1049	150	60	8	16.0×14.0	350	15.0

Na zahtjev nudimo uređaje većih kapaciteta i drugačijih dimezija, u skladu s potrebama kupca.

BP FBR DEVICES



IN GENERAL

BP FBR is biological device for purification of waste water with submerged carrier of biomass and it is using for purification of sanitary sewerage and industrial waste water.

It consists of three parts:

- Container for receiving waste water,
- Bio reactor with carrier of biomass,
- Secondary precipitator

Device for purification of waste watter is using biofilm technology. Biofilm is complex heterogenic matrix of microbs who is affixed on submerged biomass carriers.

This tipe of biological device is resistant on unequal hidraulic and organic load during day time, week or month and it needs less surface for placement.

DESCRIPTION OF DEVICE FUNCTIONING

Waste watter is comming in to container for reciving whitch is consist from two or tree chambers. First and second chamber is primary precipitation tank and place for keeping extra activated sludge who is generated in process of purification, unless separate tank is not used in this purposse.

Second chamber is buffer tank in whitch is pump for transporting waste water in to bioreactor. In bioreactor are paced submerged biomass carriers with colonies of microorganisms. Biomass carriers are made from polyethylene, resistant on adverse impacts of waste watter and it is not bio degradable, and it have specific surface of 100 – 300 m^2/m^3.

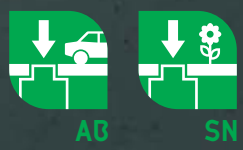
Form of biomass carrier enable great mixing of reactor content. Microorganisms are converting organic disolved polutants from waste water in to sediment and mineral matters. This process is mainly done by aerobic microorganisms. Oxigen is pumping in to the water by compressors thru membranic aerators who are fixed on bottom of tank below biomass carriers. After treatment waste water is gravitationaly flowing in to the secondary tank. In this container excess of active sludge is separated from layer of purified water. From this container purified water is relising in to recipient and settled sludge is transporting by pump in to tank for sludge or in primary precipitator.

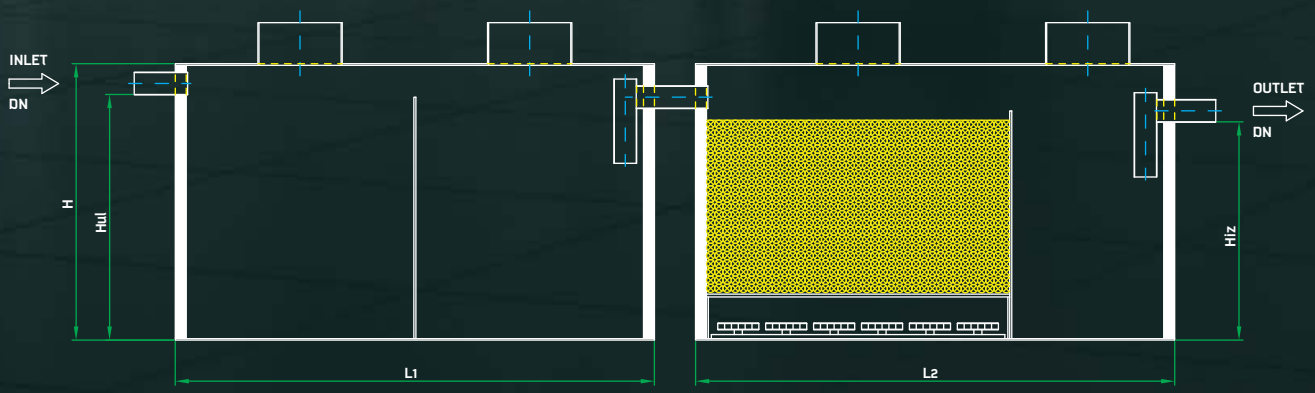
Guaranteed outlet parameters are: BOD_5 25 mg/l, COD 125 mg/l

NORM: ATV/DWA

FBR DEVICES

USAGE: SMALL SETTELMENTS, INDIVIDUAL OBJECTS





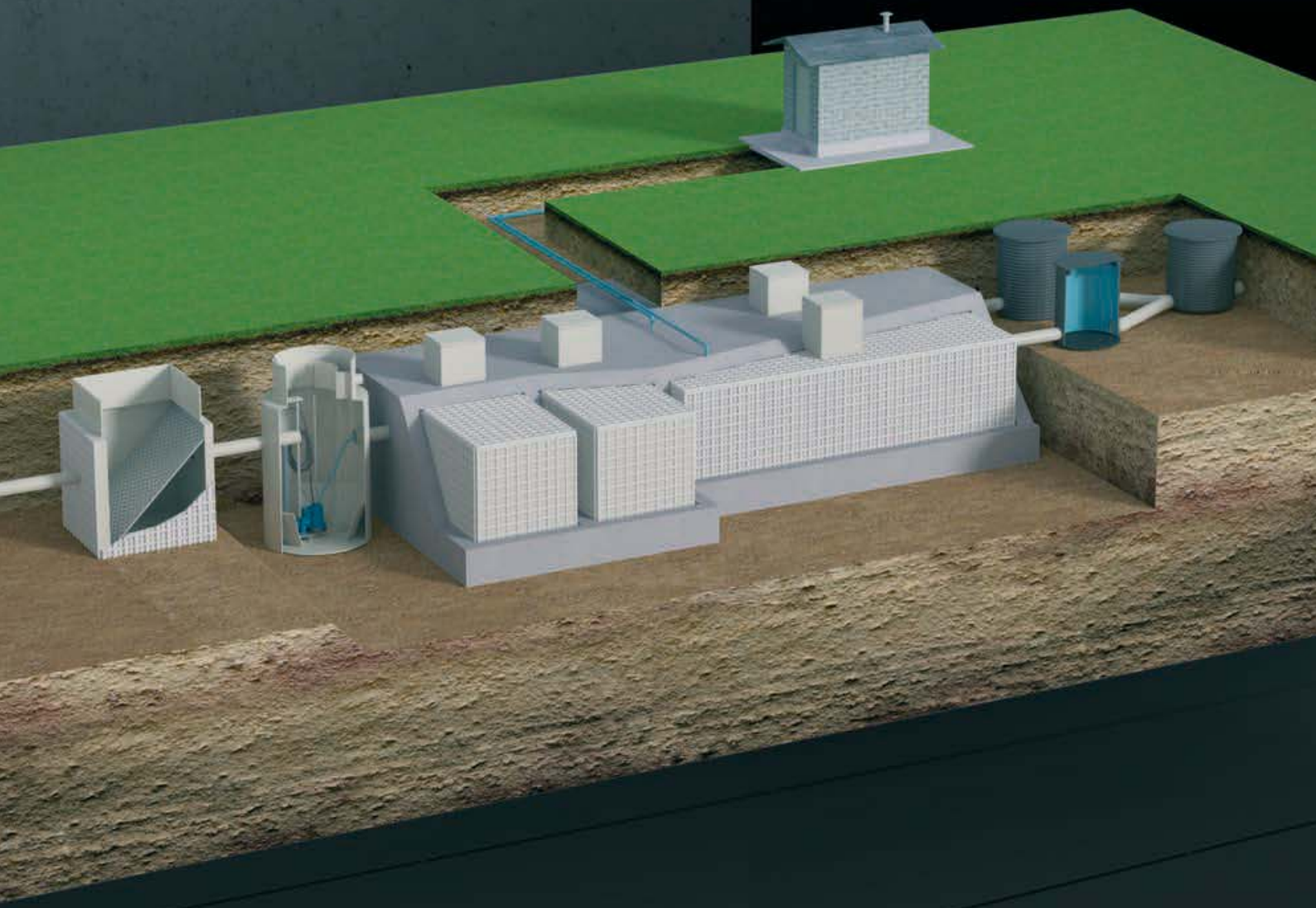
WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	L1(mm)	B1(mm)	H1(mm)	L2(mm)	B2(mm)	H2(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP FBR 51 P	51	7,65	3,06	3500	2160	2860	*	*	*	2530	2380	110	1,02	1116
BP FBR 75 P	75	11,25	4,5	4500	2160	2860	*	*	*	2530	2380	110	1,50	1383
BP FBR 100 P	100	15,00	6	6000	2160	2860	*	*	*	2530	2380	110	2,00	1758
BP FBR 125 P	125	18,75	7,5	7000	2160	2860	*	*	*	2530	2380	160	2,50	2041
BP FBR 150 P	150	22,50	9	8500	2160	2860	*	*	*	2530	2380	160	3,00	2415
BP FBR 175 P	175	26,25	10,5	6000	2160	2860	4500	2160	2860	2530	2380	160	3,50	3137
BP FBR 200 P	200	30,00	12	6500	2160	2860	5000	2160	2860	2530	2380	160	4,00	3379
BP FBR 250 P	250	37,50	15	8500	2160	2860	5500	2160	2860	2530	2380	160	5,00	4081
BP FBR 300 P	300	45,00	18	9500	2160	2860	6500	2160	2860	2530	2380	160	6,00	4647

On request, we produce WWTP for 1000 to 5000 PE (Population equivalent).

NORM: ATV/DWA

FBR DEVICES

USAGE: SMALL FACTORIES, HOTELS, RESORTS



WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	No. OF CONTAINERS	NECESSARY SURFACE(m²)	USABLE VOLUME(m³)	POWER(kW)
BP FBR 350 P	350	52,5	21	3	12×6	91	7,0
BP FBR 400 P	400	60	24	3	12×6	100	8,0
BP FBR 450 P	450	67,5	27	3	13×7	108	9,0
BP FBR 500 P	500	75	30	3	13×7	117	10,0
BP FBR 600 P	600	90	36	3	14×9	137	12,0
BP FBR 700 P	700	105	42	4	12×10	162	14,0
BP FBR 800 P	800	120	48	5	16×8	190	16,0
BP FBR 900 P	900	135	54	5	17×9	216	18,0
BP FBR 1000 P	1000	150	60	5	18×10	234	20,0

On request, we produce WWTP for 1000 to 5000 PE (Population equivalent).

MICROFILTRATION

IN GENERAL

Microfiltration technology constitutes a combination of the conventional activation process and a very effective separation of solid (activated sludge) and liquid phases (treated wastewater). The mechanically pre-treated water is aerated, biologically treated and cleaned later, with the help of membranes, of all solid substances bigger than the size of membrane pores (0.000035 mm). The quality of the outlet water is very high. Only colloids and viruses can pass the membrane. The water can be reused for washing cars, watering plants etc.

We offer the following equipment:

- BP ASP K ULTRA – is wastewater treatment plant used for treating domestic wastewater of the family houses, small companies, hotels etc. capacity till 25 PE
- BP ASP N ULTRA – used for treating communal wastewater for: hotels, small villages, factories etc. capacity till 1.000 PE.

There has been assumed a BOD_5 of 60g per day for one population equivalent (PE) and 150 lt. of wastewater per day, which is in conformity with the European norm EN 12566-3 and 12255. Guaranteed outlet values are BOD_5 5 mg/l, COD 25 mg/l.

DESCRIPTION OF THE PROCESS

Wastewater flows to a primary sedimentation tank of the WWTP, which is simultaneously used as a container for the excess of sludge. Sedimented and floating impurities are caught there and further subject to anaerobic decomposition . The mechanically pre-treated water overflows to an activation area, where there is a microfiltration module. The activation area is used to ensure the biological treatment of wastewater, as well as the microfiltration through membranes. In the bottom of this area there is an aeration system, which serves for aerating the tank and cleaning the membranes, onto which air is blown from a blower. One of the advantages of WWTP VARIOcomp Ultra is an accumulation area in the entire space of the activation tank, which is used for the accumulation of wastewater and as a steady outlet from the treatment plant. The activated mixture is filtrated under pressure through the membranes. In case that the module is out of order, the mixture flows into a vertical secondary sedimentation tank, where the emerged sludge flocks are sedimented. After that, the treated water flows into the outlet. The condensed sludge from the bottom part of the secondary sedimentation tank returns to the sludge tank. A part of activated sludge from the activation area is pumped as excess sludge to the sludge tank.

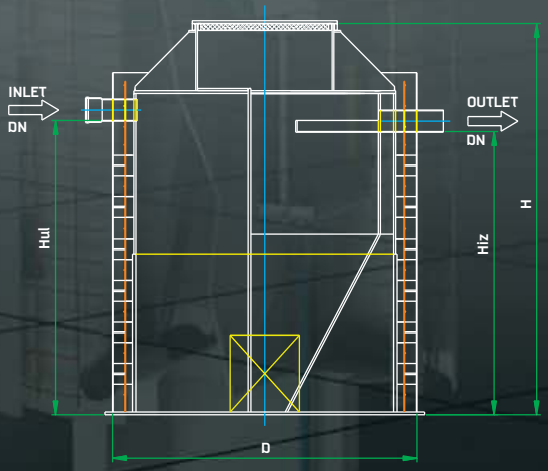
NORM: EN 12566-3
EN 12255

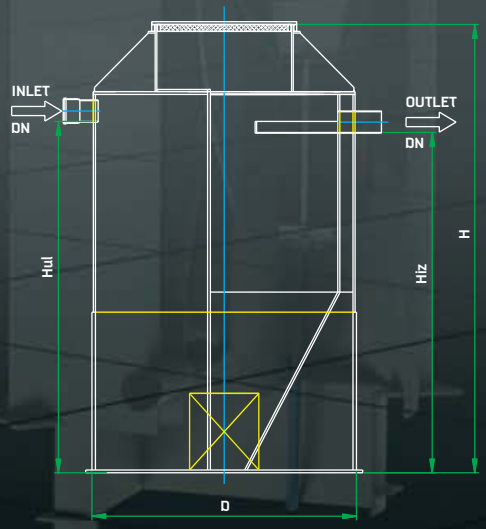
MICROFILTRATION
BP ASP K ULTRA

USAGE: FAMILY HOUSES, SMALL COMPANIES AND HOTELS

AB

SN





WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP ASP 5 K ULTRA O/AB	3-7	0,75	0,30	1650	2120	1360	1260	160	0,15	254
BP ASP 10 K ULTRA O/AB	8-12	1,50	0,60	1950	2120	1360	1260	160	0,20	306
BP ASP 15 K ULTRA O/AB	13-17	2,25	0,90	2150	2550	1850	1750	160	0,45	409
BP ASP 20 K ULTRA O/AB	18-25	3,00	1,20	2400	2550	1850	1750	160	0,45	464

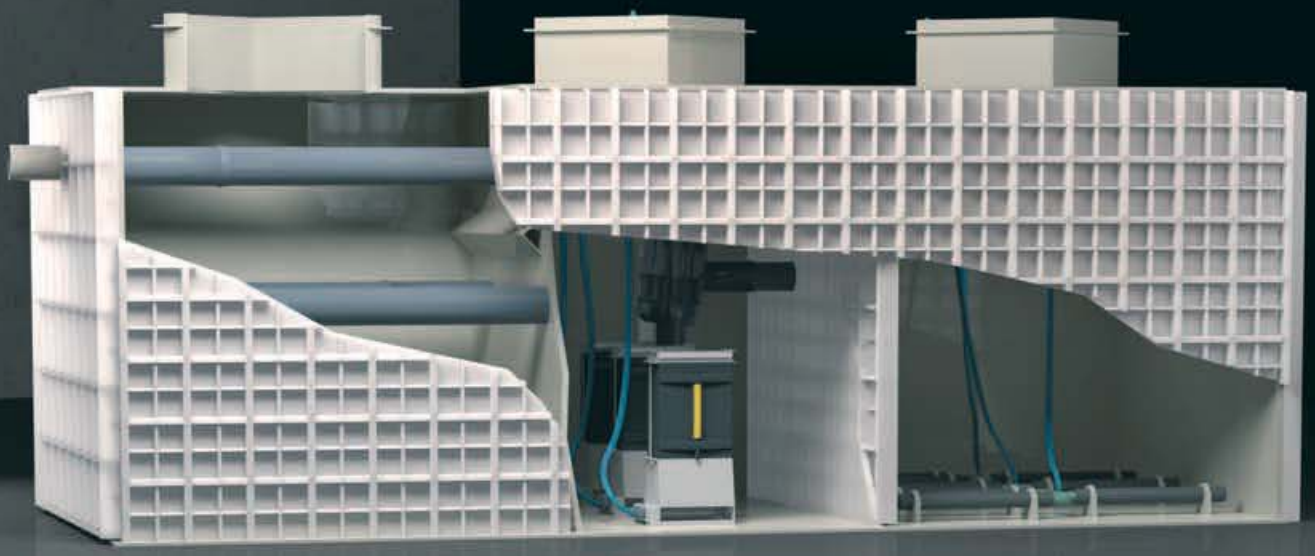
WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	POWER(kW)	WEIGHT(kg)
BP ASP 5 K ULTRA O/SN	3-7	0,75	0,30	1350	2120	1360	1260	160	0,15	227
BP ASP 10 K ULTRA O/SN	8-12	1,50	0,60	1650	2120	1360	1260	160	0,20	269
BP ASP 15 K ULTRA O/SN	13-17	2,25	0,90	1850	2550	1850	1750	160	0,45	358
BP ASP 20 K ULTRA O/SN	18-25	3,00	1,20	2100	2550	1850	1750	160	0,45	403

NORM: EN 12566-3
EN 12255

MICROFILTRATION
BP ASP N ULTRA

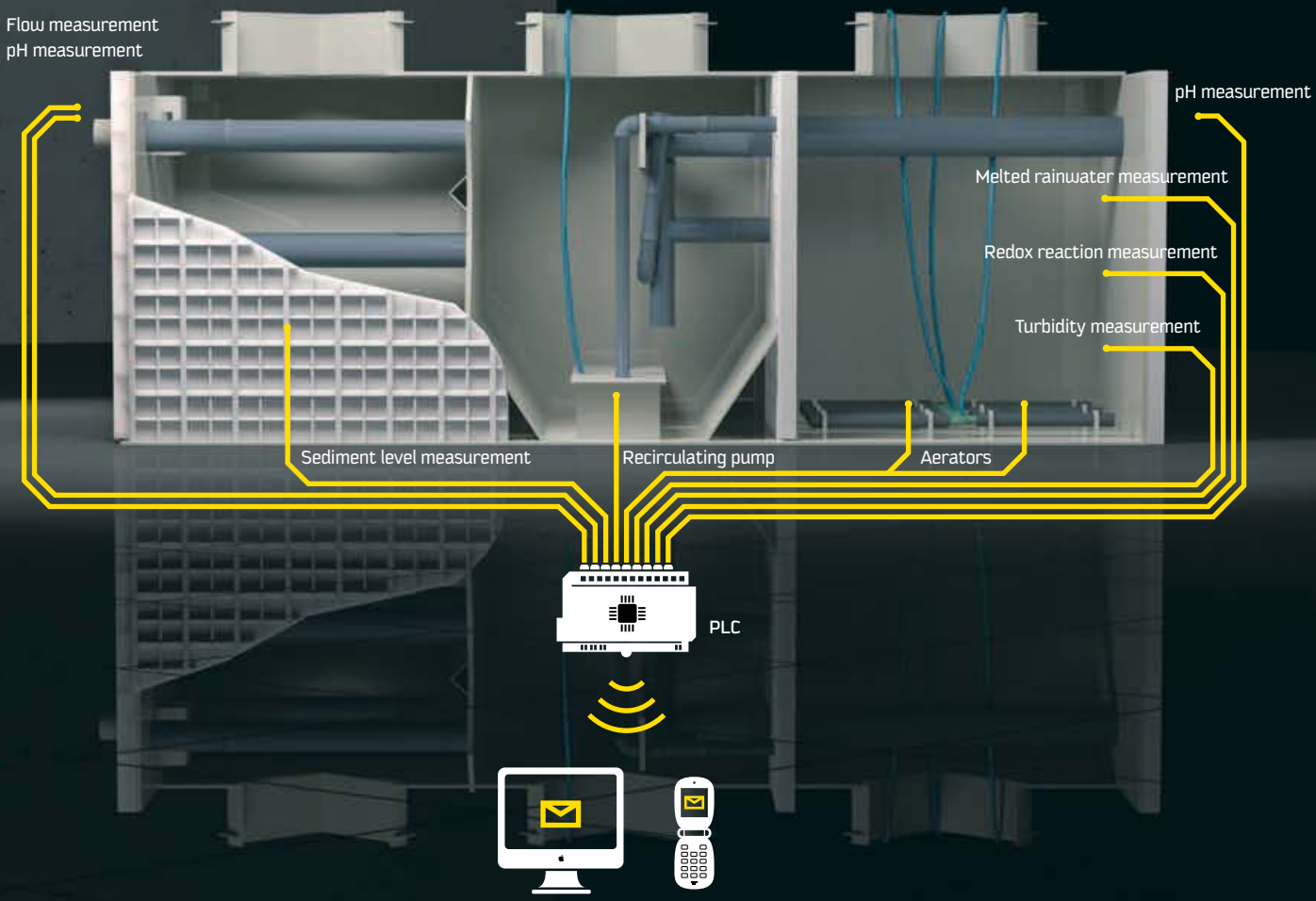
USAGE: SMALL SETTELMENTS, INDIVIDUAL OBJECTS

AB SN



WWTP MODEL	PE	Q(m³/day)	BOD_5(kg/day)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	POWER(kW)	WEIGHT(kg)
BP ASP 30 N ULTRA	26-35	4,5	1,8	2160	2000	2520	2080	1980	0,50	809
BP ASP 40 N ULTRA	36-45	6,0	2,4	3160	2000	2520	2080	1980	0,70	954
BP ASP 50 N ULTRA	46-55	7,5	3,0	4160	2000	2520	2080	1980	1,00	1199
BP ASP 60 N ULTRA	56-70	9,0	3,6	4160	2000	2820	2530	2430	1,50	1238
BP ASP 80 N ULTRA	71-90	12,0	4,8	5160	2000	2860	2530	2430	1,80	1454
BP ASP 100 N ULTRA	91-110	15,0	6,0	6660	2000	2860	2530	2430	2,50	1722
BP ASP 125 N ULTRA	111-135	19,0	7,5	7660	2000	2860	2530	2430	2,50	1889
BP ASP 150 N ULTRA	136-170	23,0	9,0	8660	2000	2860	2530	2430	2,50	2057

TELE-SUPERVISING CONTROL



DESCRIPTION

Due to our environmental awareness, we invest nowadays many more efforts, in order to improve the manufacture technology of wastewater treatment plants.

If you need to be able to control WWTP at any time, in cooperation with renamed domestic and foreign companies, we are able to offer you Tele-Supervising control of WWTP.

This simple system is used to measure a few parameters, such as: pH, flow, amount of slush oxygen, sludge level, control of the recirculation pump and blower.

With this system, we can supervise SMS or PC-s. These sophisticated systems give us the option to control the entire technological process.

UV DISINFECTION AND CHEMICAL TREATMENT

Nowadays, when water is so valuable, ecological awareness suggests that wastewater can be treated and reused. Post-treatment consists in disinfection, which can be: chemical treatment (chlorination) and UV treatment.

CHLORINATION

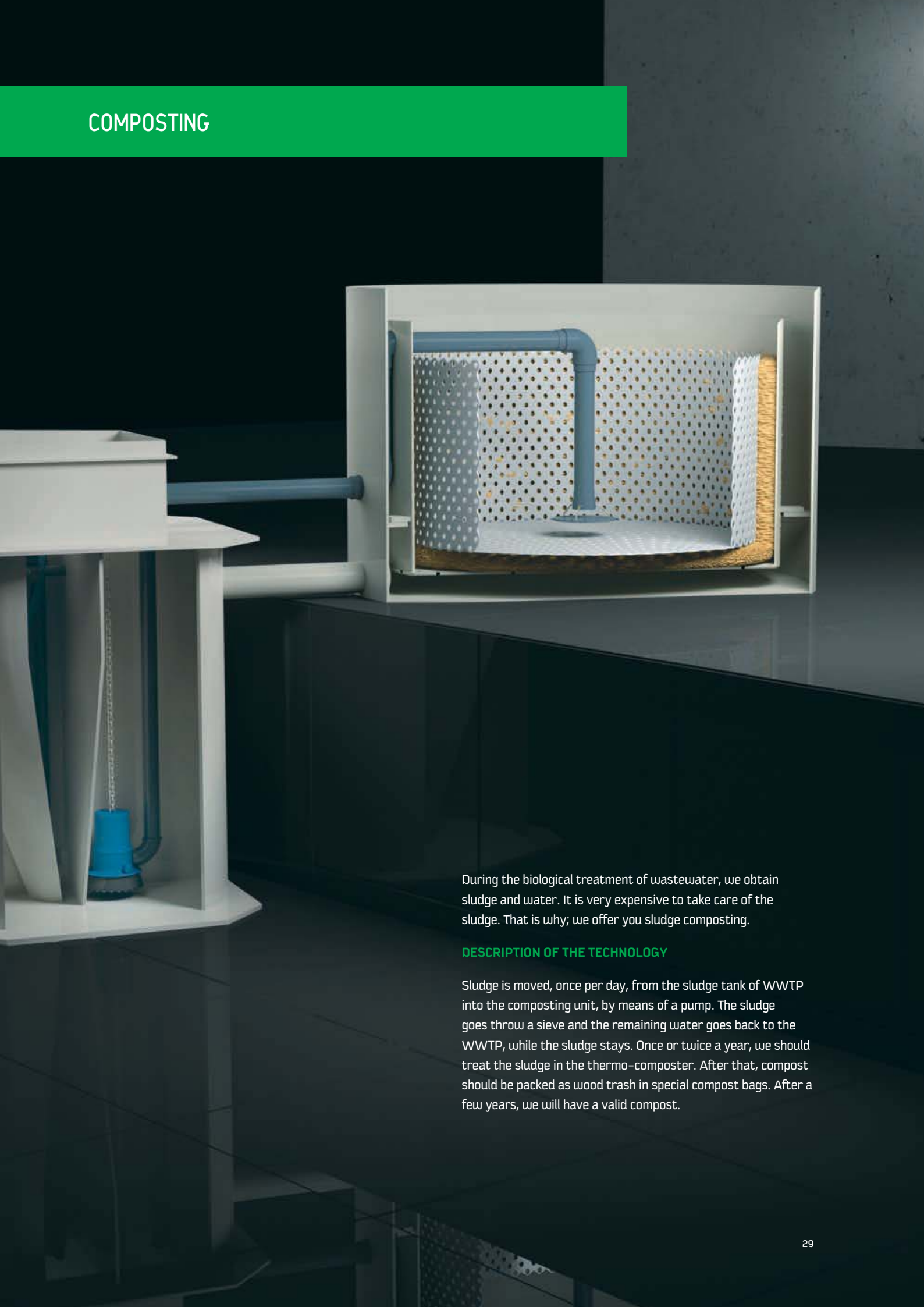
Many wastewater treatment systems use chlorination as disinfection method. Chlorination is the process of adding of chlorine compounds to water, in order to remove all microorganisms, blocking their grown and division. Water can be disinfected by using chlorine-dioxide, gaseous chlorine, sodium-hypochlorite and calcium-hypochlorite.

UV DISINFECTION

UV disinfection is effective way to fight all bacteria, viruses and spores, including pathogenic ones, which are immune to chlorine, by carrying out photochemical changes inside the cells of the organism.

UV disinfection is done by using lamps, which work on a wavelength of 180-1370 nm.

COMPOSTING



During the biological treatment of wastewater, we obtain sludge and water. It is very expensive to take care of the sludge. That is why; we offer you sludge composting.

DESCRIPTION OF THE TECHNOLOGY

Sludge is moved, once per day, from the sludge tank of WWTP into the composting unit, by means of a pump. The sludge goes throw a sieve and the remaining water goes back to the WWTP, while the sludge stays. Once or twice a year, we should treat the sludge in the thermo-composter. After that, compost should be packed as wood trash in special compost bags. After a few years, we will have a valid compost.

LIGHT LIQUID SEPARATORS

The water, together with light liquids, should be treated before release into the recipient.

Light liquid separators can be classified in:

- oil separators
- grease separators (traps)

All units are made of polyethylene/polypropylene, 100% watertight, corrosive and abrasive resistant, easy for embedding and maintenance.

GREASE TRAPS

Grease traps – Device is designed for catching oil and grease contained in the wastewater from kitchens, food-processing operations, meat-processing operations, etc. Basic technological parameters of the grease trap are designed in accordance with German DIN 4040, and with European norm EN 1825-1.

OIL SEPARATORS

Oil separators we can share on:

- with gravitational filter
- with coalescent filter
- with sorption filter

GRAVITATIONAL SEPARATORS

They are used for waste water treatment from industrial plants, gas stations, car wash, agricultural farms, etc., Or anywhere where there are contamination of rainwater or process water oily liquids, and the recipient is a collector-sewer. They work on the principle of smaller specifčnih weight liquid. The expected concentrations of oil at the separator exit is 70-100mg / l.

OIL SEPARATORS WITH COALESCENT FILTER

They are designed in accordance with EN 858-2, and are designed to treat waste water from industrial facilities, gas stations, car wash, agricultural farms, etc., Or anywhere where there are contamination of rainwater or process water oily liquids, and the recipient's water watercourse Category II. Guaranteed oil concentration at the outlet of the separator is 5 mg / l. In accordance with EN 858-2, oil separators with coalescent FLTR offenses according to the size of the sludge:

BP OLEX M/KF – settling volume = 100 × Q (l / s) roads, parking lots, gas stations covered

BP OLEX L/KF – settling volume = 200 × Q (l / s) gas stations, laundries cars, car repair shops

BP OLEX XL/KF – settling volume = 300 × Q (l / s) laundry truck, laundries agricultural and construction machinery

OIL SEPARATORS WITH SORPTION FILTER

They are used to purify stormwater, technological or process water from oil, where the recipient water supply area. The filter is made of polypropylene fibers, which have a certain density of the property to the water bounce and absorb oil. Sorption fltar sets after already treated water in the separator with coalescent FLTR. Guaranteed oil concentration at the outlet of the separator is from 0.5 to 0.2 mg / l.

OIL SEPARATORS WITH BYPASS

The treated water has sufficiant criteria to exit to the recipient of 2. category watercourses. Guaranteed quantity of oil after the purification of waste water with the specified input parameters is to 5 mg/l. They are designed to purify all waste water on scheduled area in the anticipated amount to 6,5 mm/h of rainfall.

OIL SEPARATOR MAINTENANCE

Visual function check is necessary 1-2 times a month. The operating staff checks the water level in all the parts of the separator, as well as the condition of the sludge filters and the quantity of oil substances on the water surface. This operation can also be carried out, together with sludge removal, by a special authorized company. The disposal of the removed oil substances must comply with the regulations on waste liquidation. According to law, oil substances are classified as dangerous waste. The sorption filter must be replaced with a new one. Immediately after extracting the sludge, the separator must be refilled with water up to the original level.

GREASE TRAP MAINTENANCE

Visual function check is necessary 1-2 times a month. The operating staff checks the water level in all the parts of the separator, as well as the condition of the sludge filters and the quantity of oil substances on the water surface. This operation can also be carried out, together with sludge removal, by a special authorized company. The disposal of the removed oil substances must comply with the regulations on waste liquidation. According to law, oil substances are classified as dangerous waste. The sorption filter must be replaced with a new one. Immediately after extracting the sludge, the separator must be refilled with water up to the original level.

GREASE SEPARATORS (TRAPS)

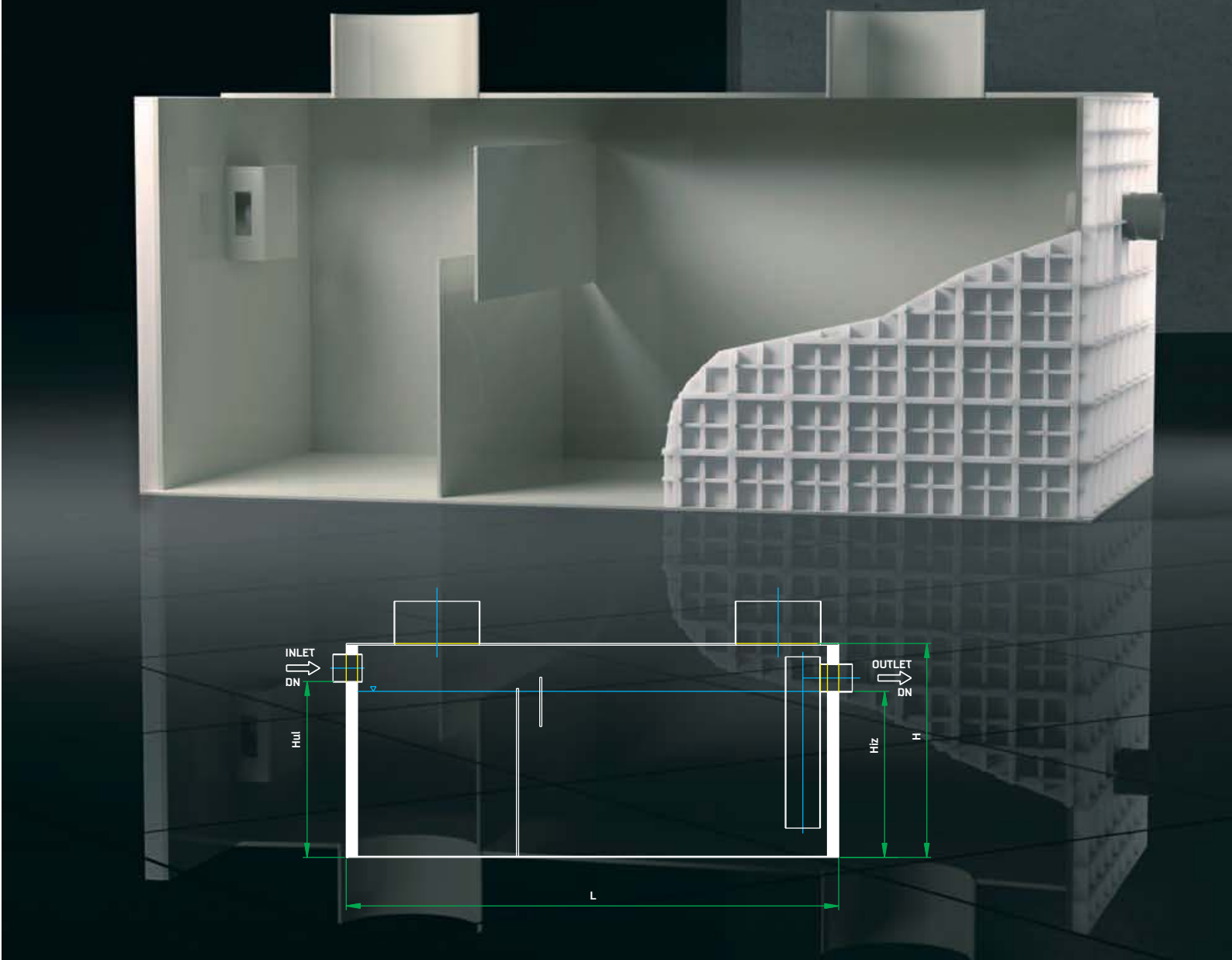
Grease traps – Devices designed for catching the oil and grease contained in the wastewater from kitchen, food-processing, meat-processing operations etc. The basic technological parameters of the grease trap are established in accordance with the German standard DIN 4040 and the European norm EN 1825-1.

NORM: EN 1825-1
DIN 4040

GREASE SEPARATORS - TRAPS
BP FETEX

USAGE: KITCHEN, RESTAURANTS AND MEET-PROCESSING

AB SN



They are designed in accordance with EN 1825-1 and DIN 4040 are used for separation of oils and fats that are found in waste water kitchens, meat industry, food industry, etc. Grease separating the precipitate and fat, as well as prevention of clogging of the sewerage system.

TRAP MODEL	Q(l/s)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP FETEX 1 P	1	750	700	1020	850	800	110	53
BP FETEX 2 P	2	1500	1000	1020	850	800	110	65
BP FETEX 4 P	4	2000	1160	1020	850	800	110	89
BP FETEX 7 P	7	2000	1160	1520	1300	1250	160	99
BP FETEX 10 P	10	3000	1160	1520	1300	1250	160	136
BP FETEX 15 P	15	3000	2160	1520	1260	1210	200	245
BP FETEX 20 P	20	4000	2160	1520	1260	1210	200	311
BP FETEX 25 P	25	4500	2160	1520	1260	1210	200	344

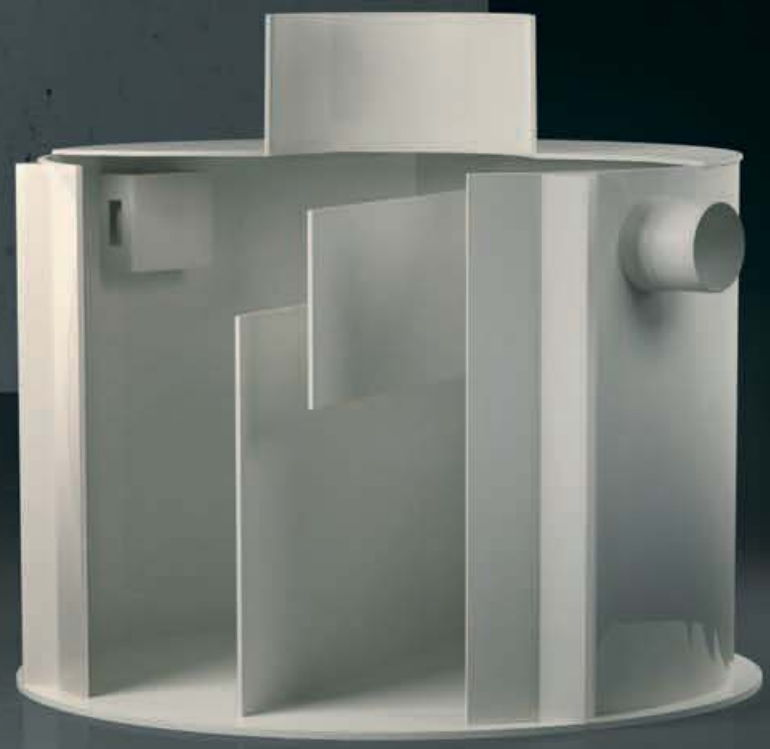
In addition to these traps on request we offer grease traps with greater capacity and flow.

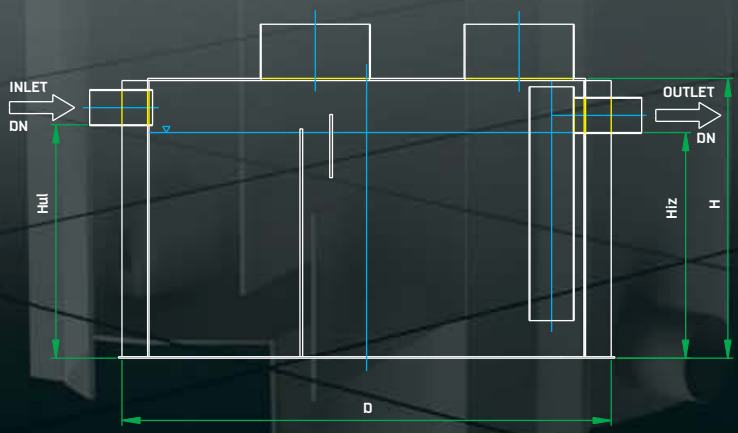
NORM: EN 1825-1
DIN 4040

GREASE TRAPS
BP FETEX

USAGE: KITCHEN, RESTAURANTS AND MEET-PROCESSING

SN





TRAP MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP FETEX 1 O/SN	1	1100	1020	850	800	110	71
BP FETEX 2 O/SN	2	1420	1020	850	800	110	132
BP FETEX 3 O/SN	3	1610	1020	850	800	110	154
BP FETEX 4 O/SN	4	1700	1520	1350	1300	110	179
BP FETEX 7 O/SN	7	1900	1520	1300	1250	160	204
BP FETEX 10 O/SN	10	2080	1770	1550	1500	160	258
BP FETEX 15 O/SN	15	2400	1770	1510	1460	200	297

In addition to these traps on request we offer grease traps with greater capacity and flow.

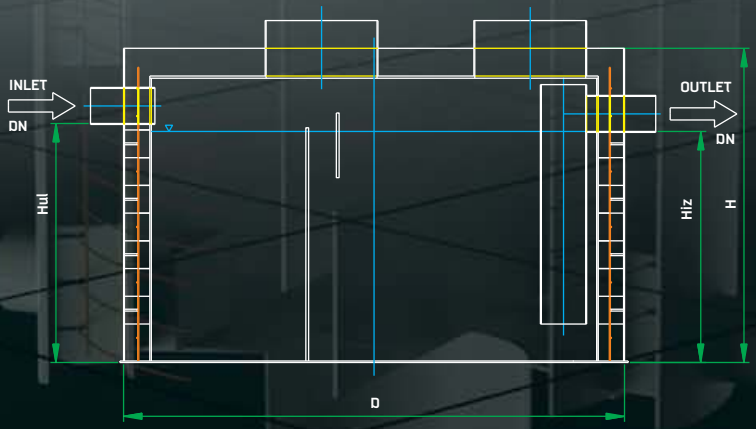
They are designed in accordance with EN 1825-1 and DIN 4040 are used for separation of oils and fats that are found in waste water kitchens, meat industry, food industry, etc. Grease separating the precipitate and fat, as well as prevention of clogging of the sewerage system.

NORM: EN 1825-1
DIN 4040

GREASE TRAPS
BP FETEX

USAGE: KITCHEN, RESTAURANTS AND MEET-PROCESSING

AB



They are designed in accordance with EN 1825-1 and DIN 4040 are used for separation of oils and fats that are found in waste water kitchens, meat industry, food industry, etc. Grease separating the precipitate and fat, as well as prevention of clogging of the sewerage system.

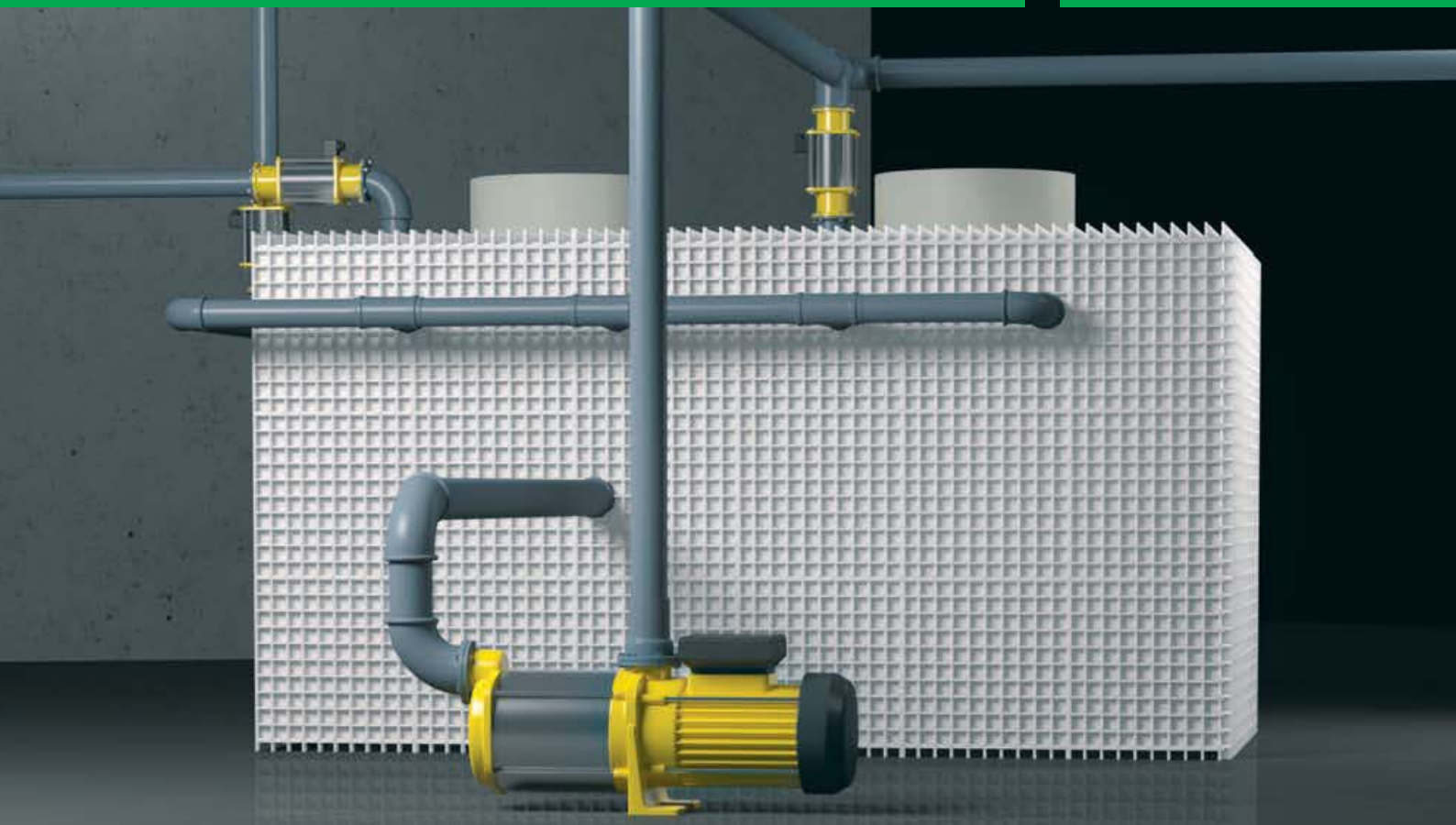
TRAP MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	BETON(m^3)	WEIGHT(kg)
BP FETEX 1 O/AB	1	1100	1150	850	800	110	0,5	89
BP FETEX 2 O/AB	2	1420	1150	850	800	110	0,7	159
BP FETEX 3 O/AB	3	1610	1150	850	800	110	1,1	187
BP FETEX 4 O/AB	4	1700	1650	1350	1300	110	1,2	201
BP FETEX 7 O/AB	7	1900	1650	1300	1250	160	1,5	232
BP FETEX 10 O/AB	10	2080	1900	1550	1500	160	1,8	288
BP FETEX 15 O/AB	15	2400	1900	1510	1460	200	2,4	348

In addition to these traps on request we offer grease traps with greater capacity and flow.

NORM: EN 1825-1
DIN 4040

GREASE TRAPS WITH HALFAUTOMATIC/AUTOMATIC CLEANING – BP FETEX

USAGE: KITCHEN, RESTAURANTS



If necessary, the fat separating devices may perform the semi-automatic / automatic cleaning of the separated fat.

They are used in case that the resulting waste water contains organic fat, among other things. Therefore, this type of separator is mainly used in buildings for tourist purposes, i.e. restaurants, hotels etc. The units are autonomously installed, in the basement or in a room for similar purposes.

CLEANING PRINCIPLE OF THE SEPARATOR WITH SEMI-AUTOMATIC / AUTOMATIC CLEANING

Visual inspection determines whether it is necessary to discharge the devices. If necessary, they will be discharged as follows:

- Liquid circulates in the fat separator;
- discharge is carried out with the help of a pump or directly through the respective outlets;
- cleaning is performed with cold or warm water (CIP system that works on the high pressure principle)
- automatic filling with cold water.

TRAP MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	POWER(kW)	WEIGHT(kg)
BP FETEX 2-3 O/AU	3	1190	1020	790	720	1,6	220
BP FETEX 4 O/AU	4	1430	1520	1340	1270	1,6	250
BP FETEX 7 O/AU	7	1670	1520	1340	1270	1,6	300
BP FETEX 9 O/AU	9	1910	1520	1340	1270	1,6	450
BP FETEX 11 O/AU	11	2150	1520	1340	1270	1,6	510

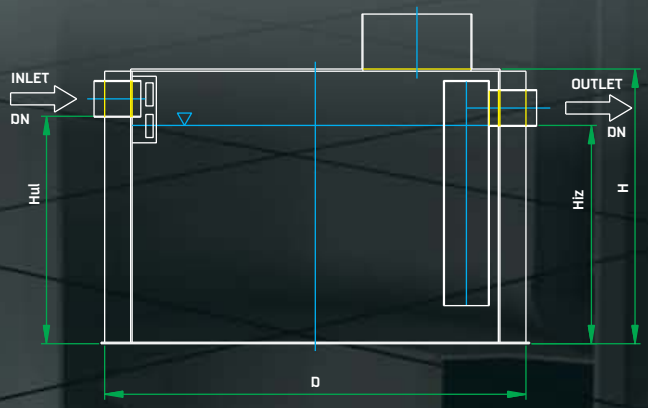
In addition to these traps on request we offer grease traps with greater capacity and flow.

NORM: EN 858-1

OIL SEPARATORS WITH GRAVITATIONAL FILTER
BP OLEX G

USAGE: PARKING AREAS, ROADS, COVERED GAS-STATIONS

SN



Separators are used specifically for treating waste-water from parking areas, roads and covered gas stations, as well as from other places, where there sewage is the recipient. They work according to the principle of lower specific weight of liquids.

The maximum outlet concentration of light liquids from this type of separator is 70-100 mg/l

SEPARATOR MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX MINI G/O/SN	0,5	1120	900	730	680	110	62
BP OLEX 1,5 G/O/SN	1,5	1280	1520	1350	1300	110	97
BP OLEX 3 G/O/SN	3	1520	1520	1350	1300	110	135
BP OLEX 6 G/O/SN	6	1760	1520	1300	1250	160	160
BP OLEX 10 G/O/SN	10	2000	1520	1300	1250	160	186
BP OLEX 15 G/O/SN	15	2470	1520	1260	1210	200	245
BP OLEX 20 G/O/SN	20	2720	1520	1260	1210	200	292

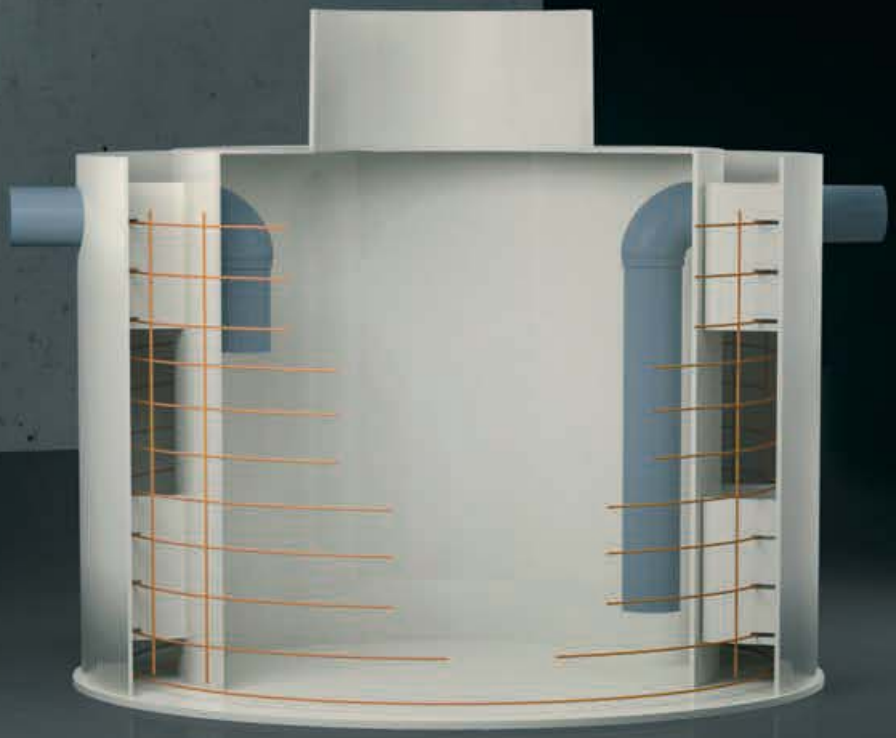
In addition to these separators on request we offer oil separators with greater capacity and flow.

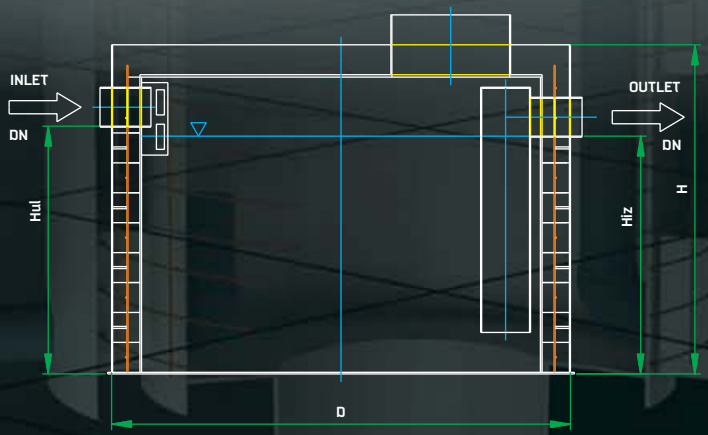
NORM: EN 858-1

OIL SEPARATORS WITH GRAVITATIONAL FILTER BP OLEX G

USAGE: PARKING AREAS, ROADS, COVERED GAS-STATIONS

AB





SEPARATOR MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	BETON(m^3)	WEIGHT(kg)
BP OLEX MINI G/O/AB	0,5	1310	1030	730	680	110	0,6	87
BP OLEX 1,5 G/O/AB	1,5	1280	1650	1350	1300	110	1,0	112
BP OLEX 3 G/O/AB	3	1520	1650	1350	1300	110	1,2	142
BP OLEX 6 G/O/AB	6	1760	1650	1300	1250	125	1,5	174
BP OLEX 10 G/O/AB	10	2000	1650	1300	1250	160	1,6	208
BP OLEX 15 G/O/AB	15	2470	1650	1260	1210	200	2,0	280
BP OLEX 20 G/O/AB	20	2720	1650	1260	1210	200	2,3	322
BP OLEX 30 G/O/AB	30	2960	2220	1730	1680	300	3,3	429
BP OLEX 40 G/O/AB	40	2960	2420	1930	1880	300	3,5	506

In addition to these separators on request we offer oil separators with greater capacity and flow.

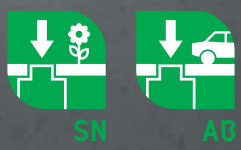
Separators are used specifically for treating waste-water from parking areas, roads and covered gas stations, as well as from other places, where there sewage is the recipient. They work according to the principle of lower specific weight of liquids.

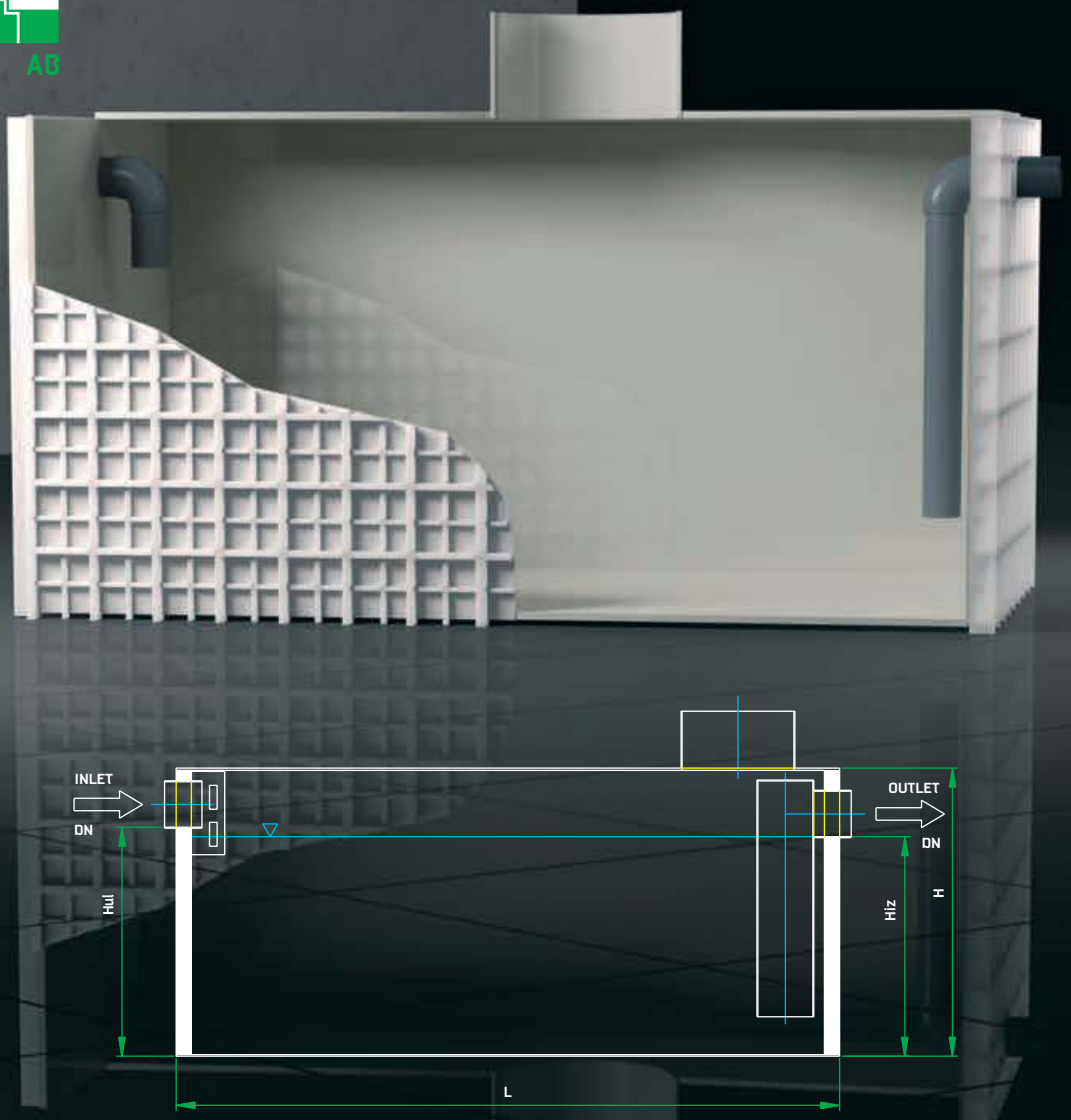
The maximum outlet concentration of light liquids from this type of separator is 70-100 mg/l

NORM: EN 858-1

OIL SEPARATORS WITH GRAVITATIONAL FILTER
BP OLEX G

USAGE: PARKING AREAS, ROADS, COVERED GAS-STATIONS





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SEPARATOR MODEL	Q(l/s)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 3 G/P	3	1500	1160	1520	1300	1250	160	240
BP OLEX 6 G/P	6	2000	1160	1520	1300	1250	160	293
BP OLEX 10 G/P	10	2000	1160	2020	1800	1750	160	377
BP OLEX 15 G/P	15	2160	1500	2020	1800	1750	160	450
BP OLEX 20 G/P	20	2660	1500	2020	1800	1750	160	520
BP OLEX 30 G/P	30	3160	2000	2020	1760	1710	200	670
BP OLEX 40 G/P	40	3660	2000	2020	1710	1660	250	744
BP OLEX 50 G/P	50	4500	2160	2020	1710	1660	250	890
BP OLEX 65 G/P	65	5500	2160	2160	1850	1800	250	1050
BP OLEX 80 G/P	80	6500	2160	2160	1850	1800	250	1200
BP OLEX 100 G/P	100	5160	2400	2660	2300	2250	300	1250
BP OLEX 125 G/P	125	6600	2360	2660	2200	2150	400	1502

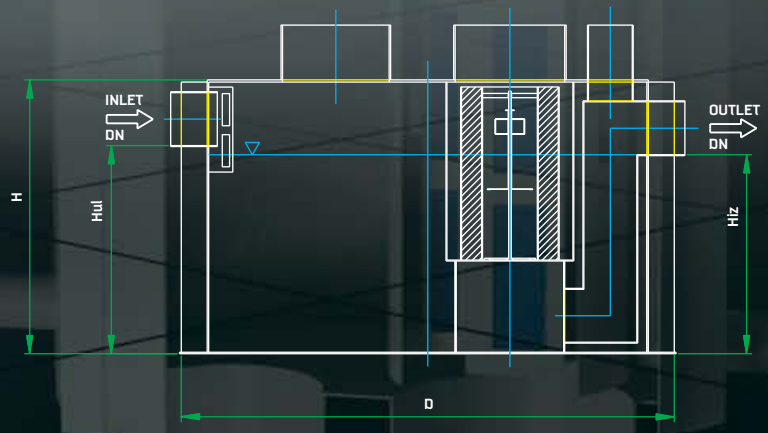
In addition to these separators on request we offer oil separators with greater capacity and flow.

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER
BP OLEX M/KF

USAGE: PARKING AREAS, ROADS, COVERED GAS-STATIONS

SN



SEPARATOR MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 1 M/KF/O/SN	1	960	1020	850	800	110	92
BP OLEX 3 M/KF/O/SN	3	1500	1270	1100	1050	110	149
BP OLEX 6 M/KF/O/SN	6	1500	1770	1590	1540	125	170
BP OLEX 10 M/KF/O/SN	10	1750	1520	1300	1250	160	200
BP OLEX 15 M/KF/O/SN	15	1800	1520	1260	1210	200	205
BP OLEX 20 M/KF/O/SN	20	1900	1520	1260	1210	200	216
BP OLEX 30 M/KF/O/SN	30	2200	1520	1210	1160	250	252
BP OLEX 40 M/KF/O/SN	40	2400	2020	1660	1610	300	314

In addition to these separators on request we offer oil separators with greater capacity and flow.

Oil separators with coalescent filter are used for catching and separating free light liquids (mainly oil liquids) from waste-water.

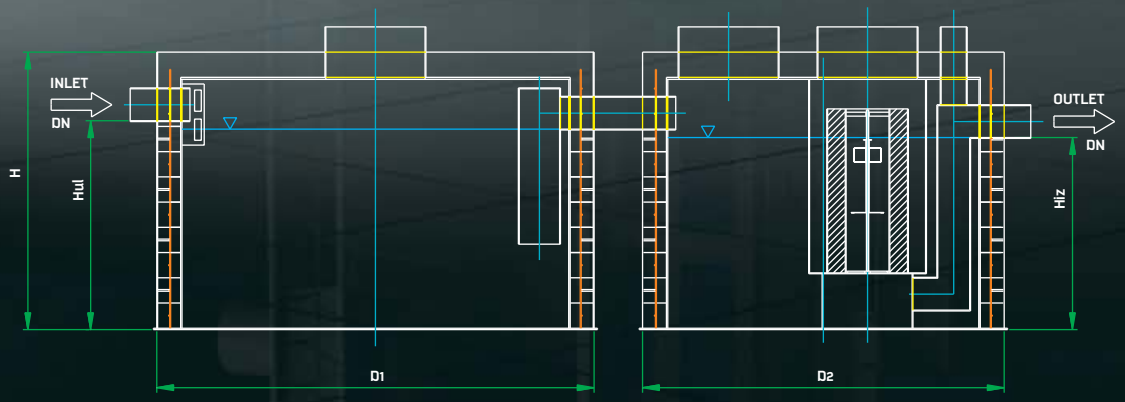
The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l.
RC – are used to drain rainfall from personal car parking areas with small amount of sludge volume 100 x Q(l/s)

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER
BP OLEX M/KF

USAGE: PARKING AREAS, ROADS, COVERED GAS-STATIONS

AB



Oil separators with coalescent filter are used for catching and separating free light liquids (mainly oil liquids) from waste-water.

The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l. RC – are used to drain rainfall from personal car parking areas with small amount of sludge volume 100 x Q(l/s).

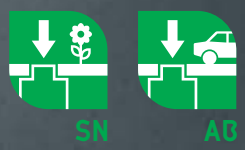
SEPARATOR MODEL	Q(l/s)	D1(mm)	D2(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	BETON(m^3)	WEIGHT(kg)
BP OLEX 1 M/KF/O/AB	1	960	*	1150	850	800	110	0,6	103
BP OLEX 3 M/KF/O/AB	3	1500	*	1400	1100	1050	110	1,0	163
BP OLEX 6 M/KF/O/AB	6	1500	*	1900	1590	1540	125	1,1	187
BP OLEX 10 M/KF/O/AB	10	1750	*	1650	1300	1250	160	1,3	219
BP OLEX 15 M/KF/O/AB	15	1800	*	1650	1260	1210	200	1,4	225
BP OLEX 20 M/KF/O/AB	20	1900	*	1650	1260	1210	200	1,5	237
BP OLEX 30 M/KF/O/AB	30	2200	*	1650	1210	1160	250	1,7	313
BP OLEX 40 M/KF/O/AB	40	2400	*	2150	1660	1610	300	2,3	343
BP OLEX 50 M/KF/O/AB	50	2650	*	2150	1660	1610	300	2,6	405
BP OLEX 65 M/KF/O/AB	65	2750	*	2400	1910	1860	300	3,0	422
BP OLEX 80 M/KF/O/AB	80	2400	2200	2400	1910	1810	300	4,5	598
BP OLEX 100 M/KF/O/AB	100	2300	2300	2400	1910	1810	300	4,8	630
BP OLEX 125 M/KF/O/AB	125	2400	2400	2400	1910	1810	300	5,0	664
BP OLEX 150 M/KF/O/AB	150	2800	2800	2400	1910	1810	300	6,0	858

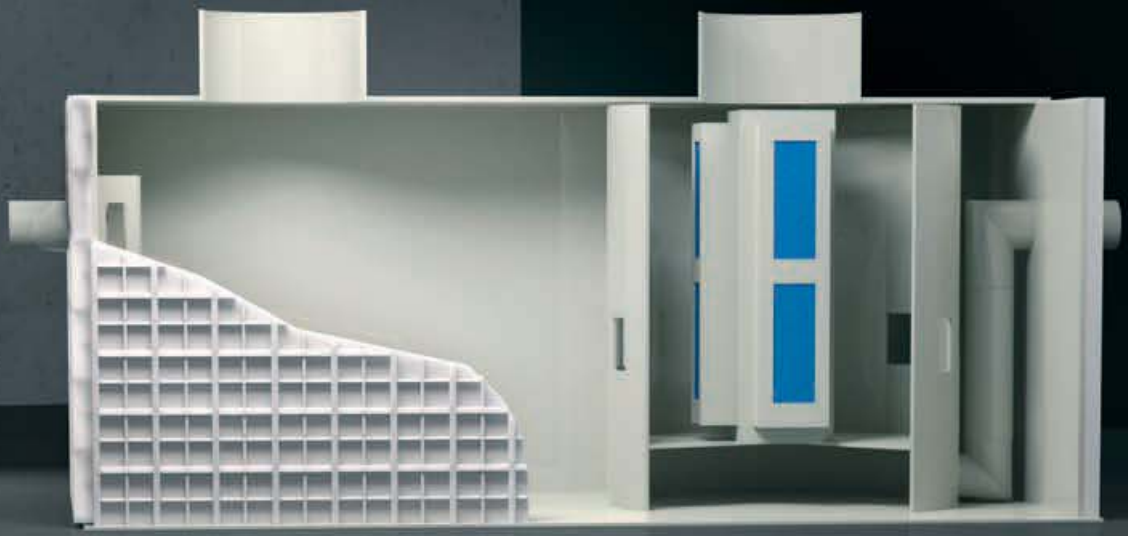
In addition to these separators on request we offer oil separators with greater capacity and flow.

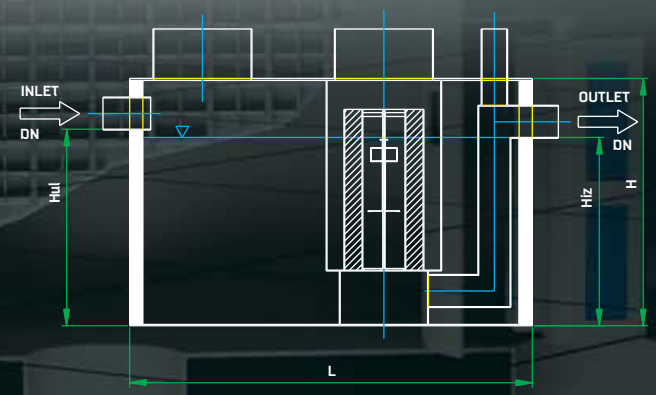
NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER BP OLEX M/KF

USAGE: PARKING AREAS, ROADS, COVERED GAS-STATIONS







SEPARATOR MODEL	Q(l/s)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 1 M/KF/P	1	750	750	1020	850	800	110	56
BP OLEX 3 M/KF/P	3	1000	750	1520	1350	1300	110	89
BP OLEX 6 M/KF/P	6	1000	1000	1520	1340	1290	125	108
BP OLEX 10 M/KF/P	10	1000	1160	1720	1500	1450	160	190
BP OLEX 15 M/KF/P	15	1500	1160	1520	1260	1210	200	220
BP OLEX 20 M/KF/P	20	2000	1160	1520	1260	1210	200	269
BP OLEX 30 M/KF/P	30	2500	1160	1520	1210	1160	250	318
BP OLEX 40 M/KF/P	40	3000	1660	1520	1160	1110	300	403
BP OLEX 50 M/KF/P	50	3000	2160	1520	1160	1110	300	518
BP OLEX 65 M/KF/P	65	4000	2160	1520	1160	1110	300	645
BP OLEX 80 M/KF/P	80	4500	2160	1720	1360	1310	300	764
BP OLEX 100 M/KF/P	100	5000	2160	1660	1230	1180	300	832
BP OLEX 125 M/KF/P	125	5000	2160	2160	1630	1580	400	964
BP OLEX 150 M/KF/P	150	5500	2160	2160	1630	1580	400	1048
BP OLEX 200 M/KF/P	200	6000	2160	2660	2130	2080	400	1289
BP OLEX 250 M/KF/P	250	8000	2160	2660	2030	1980	500	1634
BP OLEX 300 M/KF/P	300	9000	2160	2660	2030	1980	500	1813

In addition to these separators on request we offer oil separators with greater capacity and flow.

Oil separators with coalescent filter are used for catching and separating free light liquids (mainly oil liquids) from waste-water.

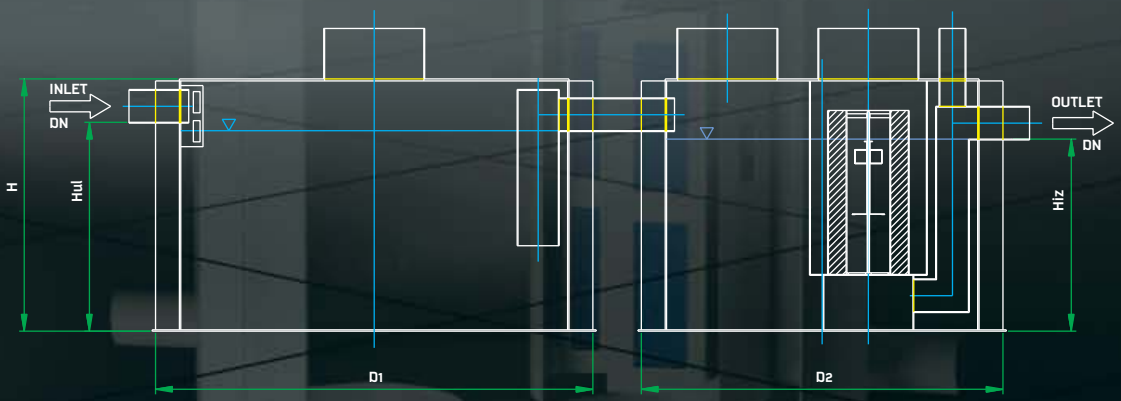
The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l.
RC – are used to drain rainfall from personal car parking areas with small amount of sludge volume 100 x Q(l/s)

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER
BP OLEX L/KF

USAGE: GAS-STATIONS, CAR WASHING, TRUCK PARKING AREAS

SN



Oil separators with coalescent filter are used for catching and separating free light liquids (mainly oil liquids) from waste-water.

The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l. VF – Used to drain rainfall from gas stations, car washings, truck parking areas etc., with moderate quantities of sludge volume 200 x Q(l/s).

SEPARATOR MODEL	Q(l/s)	D1(mm)	D2(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 1 L/KF/O/SN	1	1020	*	1020	830	780	110	96
BP OLEX 3 L/KF/O/SN	3	1520	*	1270	1080	1030	110	151
BP OLEX 6 L/KF/O/SN	6	1650	*	1520	1320	1270	125	174
BP OLEX 10 L/KF/O/SN	10	2000	*	1520	1280	1230	160	232
BP OLEX 15 L/KF/O/SN	15	2200	*	1520	1240	1190	200	277
BP OLEX 20 L/KF/O/SN	20	2300	*	1520	1240	1190	200	318
BP OLEX 30 L/KF/O/SN	30	2400	*	1770	1440	1390	250	388
BP OLEX 40 L/KF/O/SN	40	2200	2200	2020	1640	1540	300	428
BP OLEX 50 L/KF/O/SN	50	2400	2400	2020	1640	1540	300	502
BP OLEX 65 L/KF/O/SN	65	2400	2400	2270	1890	1790	300	597

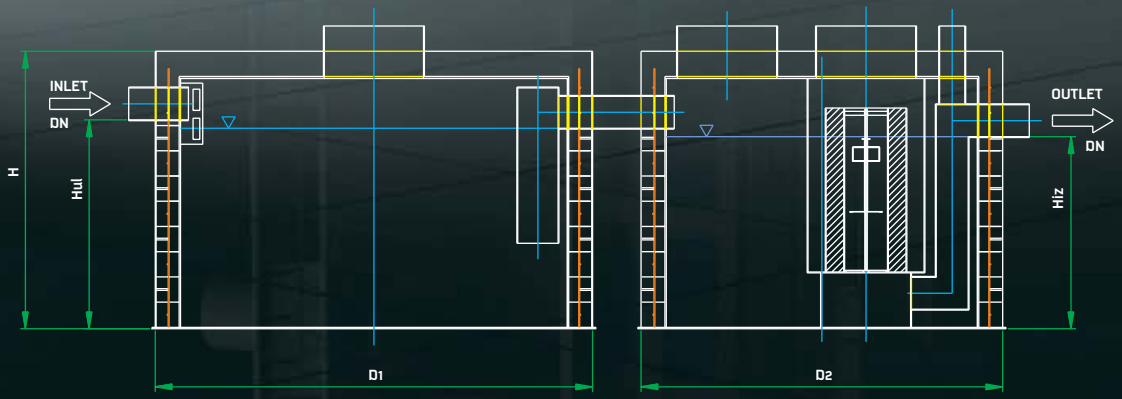
In addition to these separators on request we offer oil separators with greater capacity and flow.

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER BP OLEX L/KF

USAGE: GAS-STATIONS, CAR WASHING, TRUCK PARKING AREAS

AB



SEPARATOR MODEL	Q(l/s)	D1(mm)	D2(mm)	D3(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	BETON(m^3)	WEIGHT(kg)
BP OLEX 1 L/KF/O/AB	1	1020	*	*	1150	830	780	110	0,6	107
BP OLEX 3 L/KF/O/AB	3	1520	*	*	1400	1080	1030	110	1,0	170
BP OLEX 6 L/KF/O/AB	6	1650	*	*	1650	1320	1270	125	1,2	201
BP OLEX 10 L/KF/O/AB	10	2000	*	*	1650	1280	1230	160	1,5	253
BP OLEX 15 L/KF/O/AB	15	2200	*	*	1650	1240	1190	200	1,7	279
BP OLEX 20 L/KF/O/AB	20	2300	*	*	1650	1240	1190	200	1,8	300
BP OLEX 30 L/KF/O/AB	30	2400	*	*	1900	1440	1390	250	2,0	333
BP OLEX 40 L/KF/O/AB	40	2200	2200	*	2150	1640	1540	300	4,2	642
BP OLEX 50 L/KF/O/AB	50	2400	2400	*	2150	1640	1540	300	4,6	716
BP OLEX 65 L/KF/O/AB	65	2400	2400	*	2400	1890	1790	300	5,4	745
BP OLEX 80 L/KF/O/AB	80	2300	2300	2300	2400	1890	1740	300	7,5	1054
BP OLEX 100 L/KF/O/AB	100	2400	2400	2400	2400	1890	1740	300	8,1	1123

In addition to these separators on request we offer oil separators with greater capacity and flow.

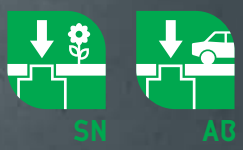
Oil separators with coalescent filter are used for catching and separating free light liquids (mainly oil liquids) from waste-water.

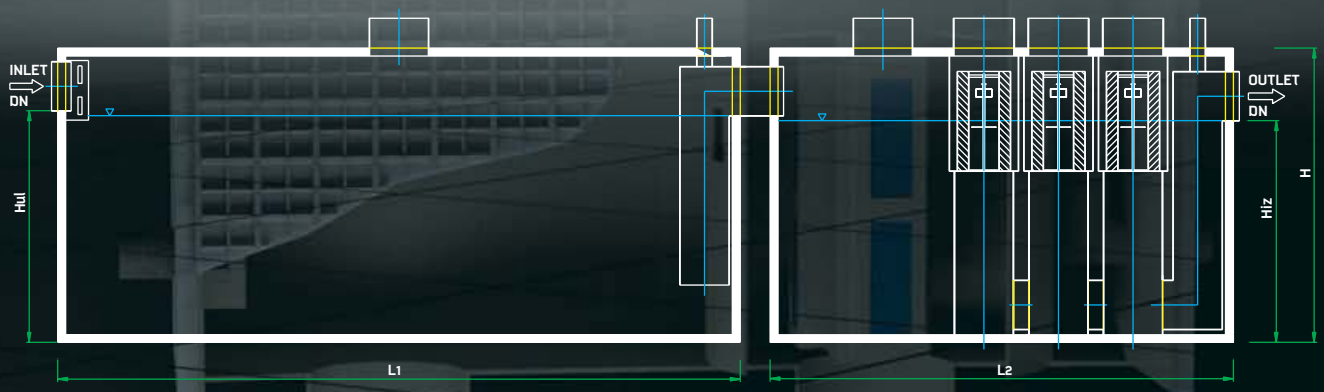
The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l.
VF – Used to drain rainfall from gas stations, car washings, truck parking areas etc., with moderate quantities of sludge volume 200 x Q(l/s).

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER
BP OLEX L/KF

USAGE: GAS-STATIONS, CAR WASHING, TRUCK PARKING AREAS





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The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l. VF – Used to drain rainfall from gas stations, car washings, truck parking areas etc., with moderate quantities of sludge volume 200 x Q(l/s).

SEPARATOR MODEL	Q(l/s)	L1(mm)	L2(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 1 L/KF/P	1	1000	*	750	1020	850	800	110	71
BP OLEX 3 L/KF/P	3	2000	*	1160	1020	850	800	110	203
BP OLEX 6 L/KF/P	6	2500	*	1160	1020	830	780	125	241
BP OLEX 10 L/KF/P	10	2000	*	1160	1520	1300	1250	160	318
BP OLEX 15 L/KF/P	15	3000	*	1160	1520	1260	1210	200	367
BP OLEX 20 L/KF/P	20	2500	*	2160	1020	760	710	200	357
BP OLEX 30 L/KF/P	30	3500	*	1660	1520	1210	1160	250	645
BP OLEX 40 L/KF/P	40	5000	*	1160	2160	1730	1680	300	728
BP OLEX 50 L/KF/P	50	5000	*	1660	1660	1230	1180	300	888
BP OLEX 65 L/KF/P	65	5000	*	2160	1660	1230	1180	300	946
BP OLEX 80 L/KF/P	80	7000	*	2160	1660	1230	1180	300	1156
BP OLEX 100 L/KF/P	100	7500	*	2160	1660	1230	1180	300	1118
BP OLEX 125 L/KF/P	125	6000	*	2160	2160	1630	1580	400	1464
BP OLEX 150 L/KF/P	150	7000	*	2160	2660	2130	2080	400	1724
BP OLEX 200 L/KF/P	200	9000	*	2160	2660	2130	2080	400	1907
BP OLEX 250 L/KF/P	250	6000	7000	2160	2660	2030	1980	500	2716
BP OLEX 300 L/KF/P	300	7000	7000	2160	2660	2030	1980	500	3082

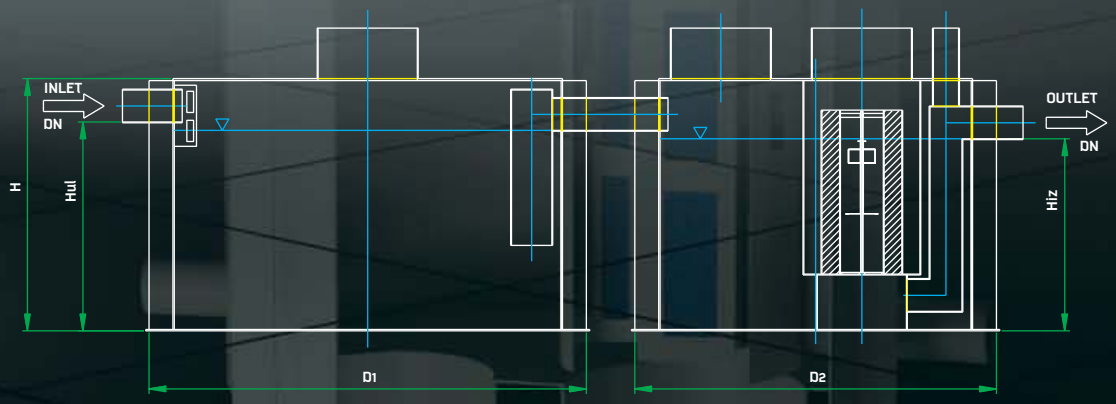
In addition to these separators on request we offer oil separators with greater capacity and flow.

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER
BP OLEX XL/KF

USAGE: AUTOMATIC CAR WASHING, AND TRUCK WASH

SN



SEPARATOR MODEL	Q(l/s)	D1(mm)	D2(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 1 XL/KF/O/SN	1	1150	*	1020	830	780	110	110
BP OLEX 3 XL/KF/O/SN	3	2000	*	1020	830	780	110	186
BP OLEX 6 XL/KF/O/SN	6	2300	*	1020	820	770	125	229
BP OLEX 10 XL/KF/O/SN	10	2070	*	1520	1280	1230	160	236
BP OLEX 15 XL/KF/O/SN	15	2500	*	1520	1240	1190	200	299
BP OLEX 20 XL/KF/O/SN	20	2500	*	2020	1740	1690	200	342
BP OLEX 30 XL/KF/O/SN	30	2800	*	2270	1940	1890	250	483
BP OLEX 40 XL/KF/O/SN	40	2400	2400	2270	1890	1840	300	1071
BP OLEX 50 XL/KF/O/SN	50	2800	2400	2270	1890	1840	300	1325
BP OLEX 65 XL/KF/O/SN	65	2750	2750	2270	1890	1840	300	1570

In addition to these separators on request we offer oil separators with greater capacity and flow.

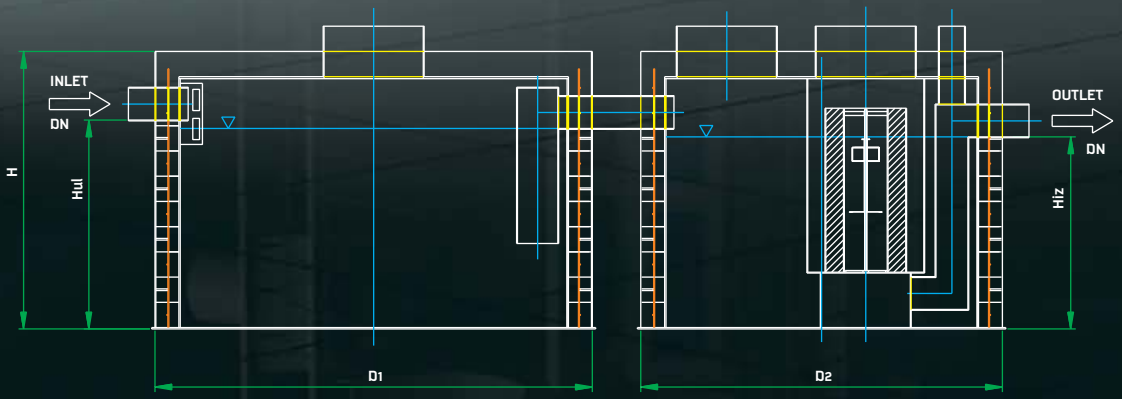
Oil separators with coalescent filter are used for catching and separating free light liquids (mainly oil liquids) from waste-water.

The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l.
P – Used for industrial wastewater, water from car-washing and water from industrial areas, with large quantities of sludge 300 x Q(l/s)

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER
BP OLEX XL/KF

USAGE: AUTOMATIC CAR WASHING, AND TRUCK WASH



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The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l.
P – Used for industrial wastewater, water from car-washing and water from industrial areas, with large quantities of sludge 300 x Q(l/s)

SEPARATOR MODEL	Q(l/s)	D1(mm)	D2(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	BETON(m^3)	WEIGHT(kg)
BP OLEX 1 XL/KF/O/AB	1	1150	*	1150	830	780	110	0,7	109
BP OLEX 3 XL/KF/O/AB	3	2000	*	1150	830	780	110	1,1	195
BP OLEX 6 XL/KF/O/AB	6	2300	*	1150	820	770	125	1,2	216
BP OLEX 10 XL/KF/O/AB	10	2070	*	1650	1280	1230	160	1,6	259
BP OLEX 15 XL/KF/O/AB	15	2500	*	1650	1240	1190	200	1,9	326
BP OLEX 20 XL/KF/O/AB	20	2500	*	2150	1740	1690	200	2,4	374
BP OLEX 30 XL/KF/O/AB	30	2800	*	2400	1940	1890	250	3,0	464
BP OLEX 40 XL/KF/O/AB	40	2400	2400	2400	1890	1840	300	5,2	1005
BP OLEX 50 XL/KF/O/AB	50	2800	2400	2400	1890	1840	300	5,5	1181
BP OLEX 65 XL/KF/O/AB	65	2750	2750	2400	1890	1840	300	5,8	1724

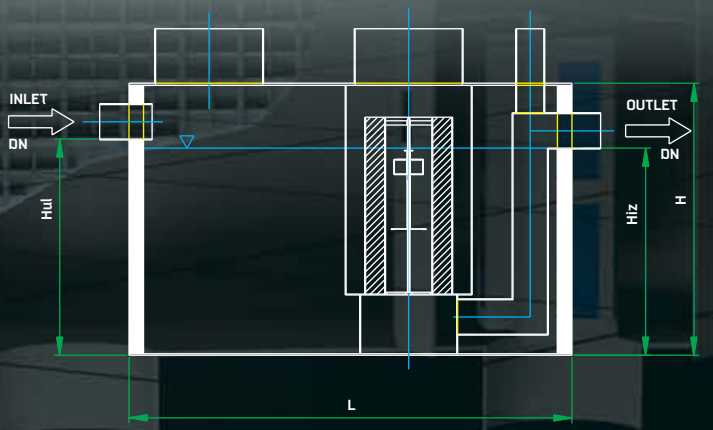
In addition to these separators on request we offer oil separators with greater capacity and flow.

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT FILTER
BP OLEX XL/KF

USAGE: AUTOMATIC CAR WASHING, AND TRUCK WASH

AB SN



SEPARATOR MODEL	Q[l/s]	L[mm]	B[mm]	H[mm]	Hul[mm]	Hiz[mm]	DN[mm]	WEIGHT[kg]
BP OLEX 1 XL/KF/P	1	2000	910	1020	850	800	110	178
BP OLEX 3 XL/KF/P	3	2000	1160	1520	1350	1300	110	269
BP OLEX 6 XL/KF/P	6	2500	1160	1520	1340	1290	125	318
BP OLEX 10 XL/KF/P	10	2500	1160	1770	1550	1500	160	357
BP OLEX 15 XL/KF/P	15	4000	1160	1520	1260	1210	200	465
BP OLEX 20 XL/KF/P	20	3000	2160	1520	1260	1210	200	518
BP OLEX 30 XL/KF/P	30	5000	2160	1660	1280	1230	250	814
BP OLEX 40 XL/KF/P	40	6000	2160	1660	1220	1170	300	946
BP OLEX 50 XL/KF/P	50	6500	2160	1660	1220	1170	300	1013
BP OLEX 65 XL/KF/P	65	7000	2160	2160	1720	1670	300	1271
BP OLEX 80 XL/KF/P	80	6500	2160	2660	2220	2170	300	1376
BP OLEX 100 XL/KF/P	100	7000	2160	2660	2220	2170	300	1464
BP OLEX 125 XL/KF/P	125	8500	2160	2660	2120	2070	400	1726
BP OLEX 150 XL/KF/P	150	9000	2160	2660	2120	2070	400	1813

In addition to these separators on request we offer oil separators with greater capacity and flow.

Oil separators with coalescent filter are used for catching and separating free light liquids (mainly oil liquids) from waste-water.

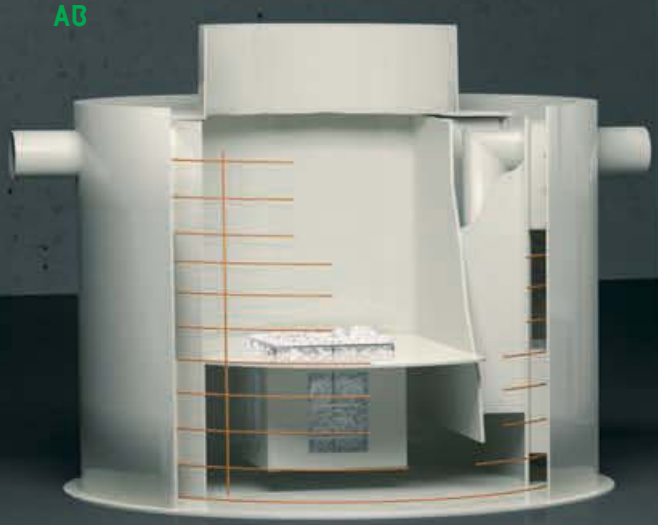
The maximum outlet concentration of the light liquids for separators with coalescent filter is 5 mg/l.
P – Used for industrial wastewater, water from car-washing and water from industrial areas, with large quantities of sludge
300 x Q(l/s)

NORM: EN 858-1

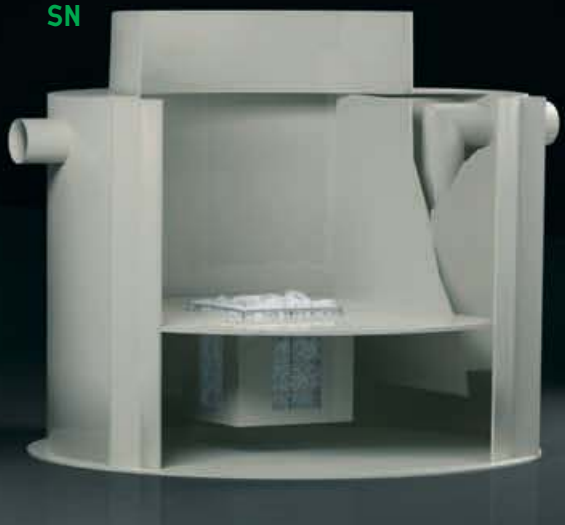
OIL SEPARATORS WITH SORPTION FILTER
BP OLEX SF

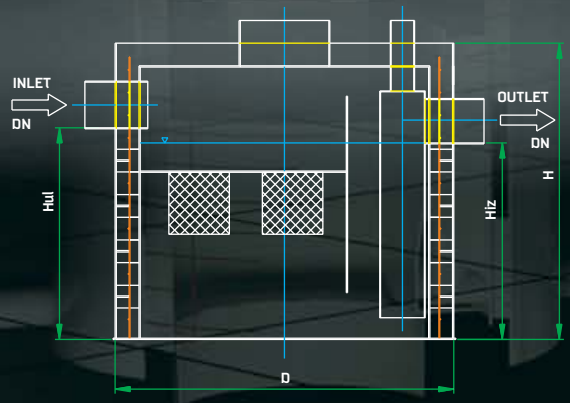
USAGE: WATER SUPPLY AREAS

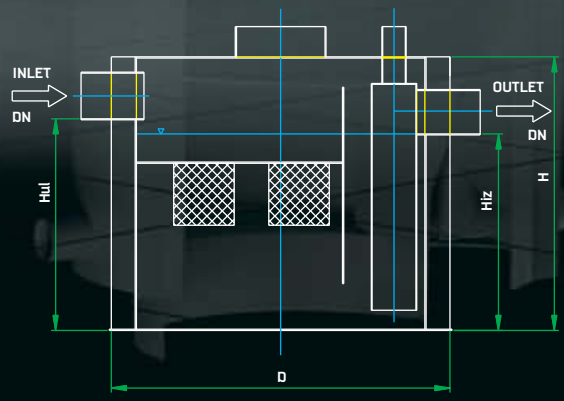
AB



SN







They are used in water supply areas. They are designed in accordance with the European norm EN 858-2. Sorption filters are made from polyethylene fibers. They are able to absorb oil and repel water. Wastewater is treated with a sorption filter, after being treated in an oil separator with coalescent filter.

In the case of light liquid separators with coalescent and sorption filters, the maximum outlet concentration of light liquids is under 0,5 – 0,2 mg/l.

SEPARATOR MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 1,5 SF/O/SN	1,5	960	770	490	440	200	51
BP OLEX 3 SF/O/SN	3,0	1250	770	490	440	200	67
BP OLEX 5 SF/O/SN	5,0	1350	1020	740	690	200	89
BP OLEX 10 SF/O/SN	10,0	1580	1270	990	940	200	115
BP OLEX 15 SF/O/SN	15,0	1900	1270	990	940	200	156
BP OLEX 20 SF/O/SN	20,0	2160	1270	990	940	200	186
BP OLEX 30 SF/O/SN	30,0	2250	1770	1390	1340	300	232
BP OLEX 40 SF/O/SN	40,0	2400	1770	1390	1340	300	253
BP OLEX 50 SF/O/SN	50,0	2400	2020	1640	1590	300	271

SEPARATOR MODEL	Q(l/s)	D(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	BETON(m^3)	WEIGHT(kg)
BP OLEX 1,5 SF/O/AB	1,5	960	900	490	440	200	0,5	52
BP OLEX 3 SF/O/AB	3,0	1250	900	490	440	200	0,6	71
BP OLEX 5 SF/O/AB	5,0	1350	1150	740	690	200	0,8	97
BP OLEX 10 SF/O/AB	10,0	1580	1400	990	940	200	1,0	127
BP OLEX 15 SF/O/AB	15,0	1900	1400	990	940	200	1,2	175
BP OLEX 20 SF/O/AB	20,0	2160	1400	990	940	200	1,4	211
BP OLEX 30 SF/O/AB	30,0	2250	1900	1390	1340	300	1,9	266
BP OLEX 40 SF/O/AB	40,0	2400	1900	1390	1340	300	2,0	292
BP OLEX 50 SF/O/AB	50,0	2400	2150	1640	1590	300	2,3	314

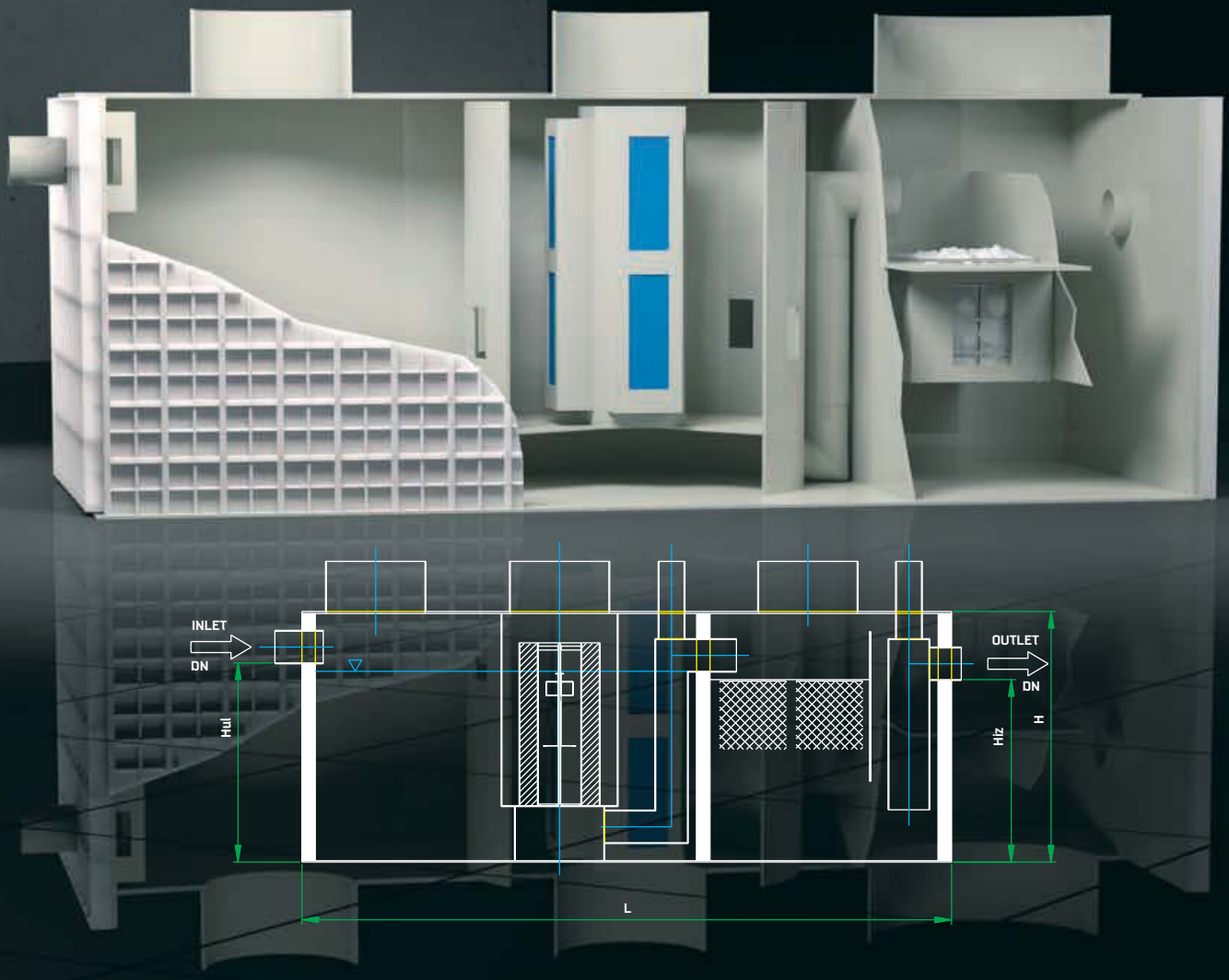
In addition to these separators on request we offer oil separators with greater capacity and flow.

NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT AND SORPTION FILTER – BP OLEX M/KF/SF

USAGE: PARKING AREA IN WATER SUPPLY AREA

SN AB



SEPARATOR MODEL	Q(l/s)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 15 M/KF/SF/P	15	3000	1160	1520	1260	1210	200	411
BP OLEX 20 M/KF/SF/P	20	4000	1160	1520	1260	1210	200	485
BP OLEX 30 M/KF/SF/P	30	4000	1660	1520	1210	1160	250	566
BP OLEX 50 M/KF/SF/P	50	4500	1660	1520	1160	1110	300	606
BP OLEX 65 M/KF/SF/P	65	5500	1660	1660	1230	1180	300	773
BP OLEX 80 M/KF/SF/P	80	6500	1660	1660	1220	1170	300	858
BP OLEX 100 M/KF/SF/P	100	8000	1660	2160	1720	1670	300	1206
BP OLEX 125 M/KF/SF/P	125	8500	1660	2160	1620	1570	400	1258

In addition to these separators on request we offer oil separators with greater capacity and flow.

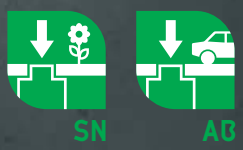
They are used in water supply areas. They are designed in accordance with the European norm EN 858-2. Sorption filters are made from polyethylene fibers. They are able to absorb oil and repel water. Wastewater is treated with a sorption filter, after being treated in an oil separator with coalescent filter.

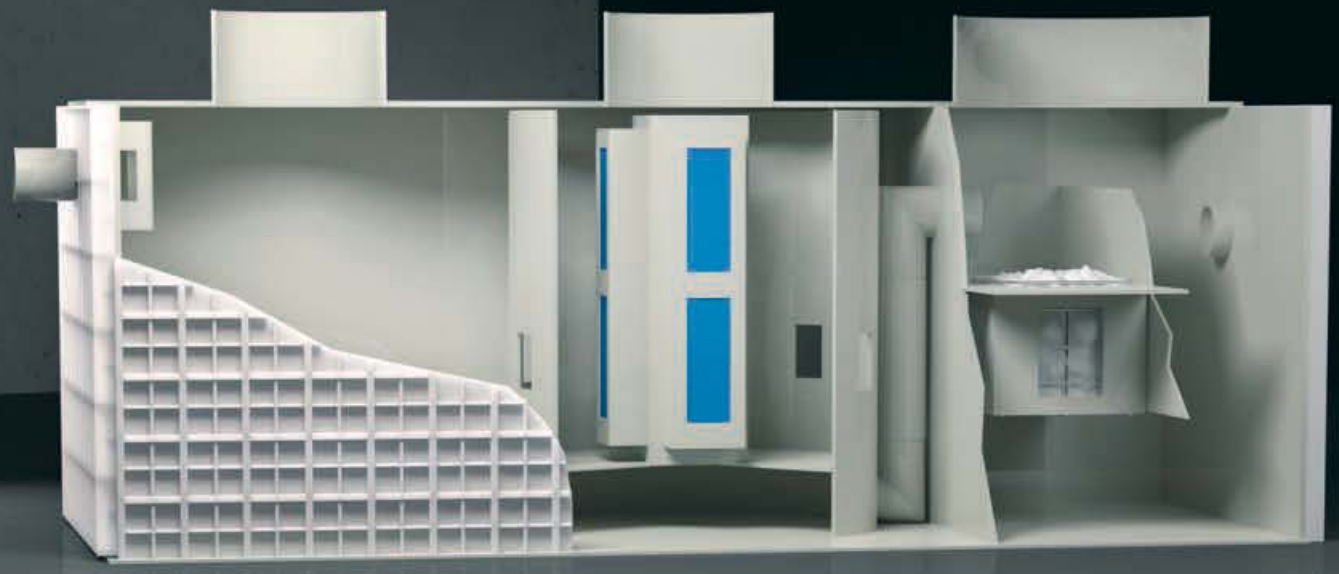
In the case of light liquid separators with coalescent and sorption filters, the maximum outlet concentration of light liquids is under 0,5 – 0,2 mg/l.

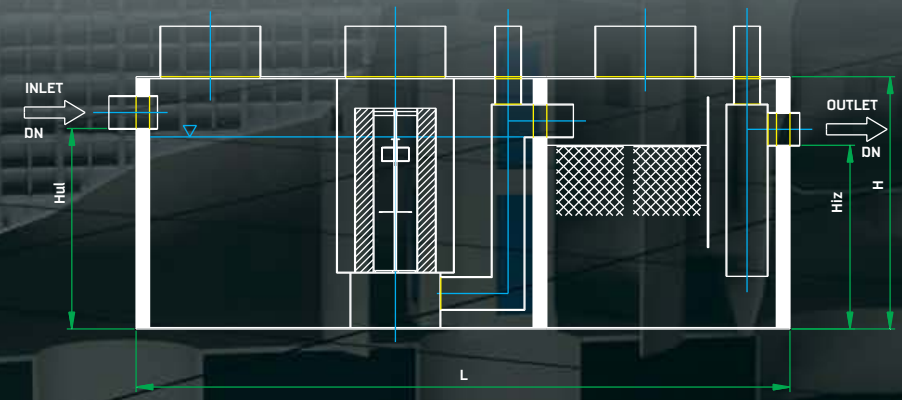
NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT AND SORPTION FILTER – BP OLEX L/KF/SF

USAGE: GAS-STATION
INWATER SUPPLY AREA







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In the case of light liquid separators with coalescent and sorption filters, the maximum outlet concentration of light liquids is under 0,5 – 0,2 mg/l.

SEPARATOR MODEL	Q(l/s)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 3 L/KF/SF/P	3	1500	600	1520	1350	1300	110	221
BP OLEX 6 L/KF/SF/P	6	2500	1160	1520	1340	1290	125	373
BP OLEX 10 L/KF/SF/P	10	3000	1160	1520	1300	1250	160	411
BP OLEX 20 L/KF/SF/P	20	3500	2160	1520	1260	1210	200	605
BP OLEX 30 L/KF/SF/P	30	4500	2160	1520	1260	1210	200	689
BP OLEX 50 L/KF/SF/P	50	7000	2160	1660	1230	1180	300	958
BP OLEX 65 L/KF/SF/P	65	7500	2160	1660	1230	1180	300	1044
BP OLEX 80 L/KF/SF/P	80	8500	2160	1660	1230	1180	300	1134
BP OLEX 100 L/KF/SF/P	100	9000	2160	2160	1730	1680	300	1435
BP OLEX 125 L/KF/SF/P	125	8000	2160	2660	2130	2080	400	1561

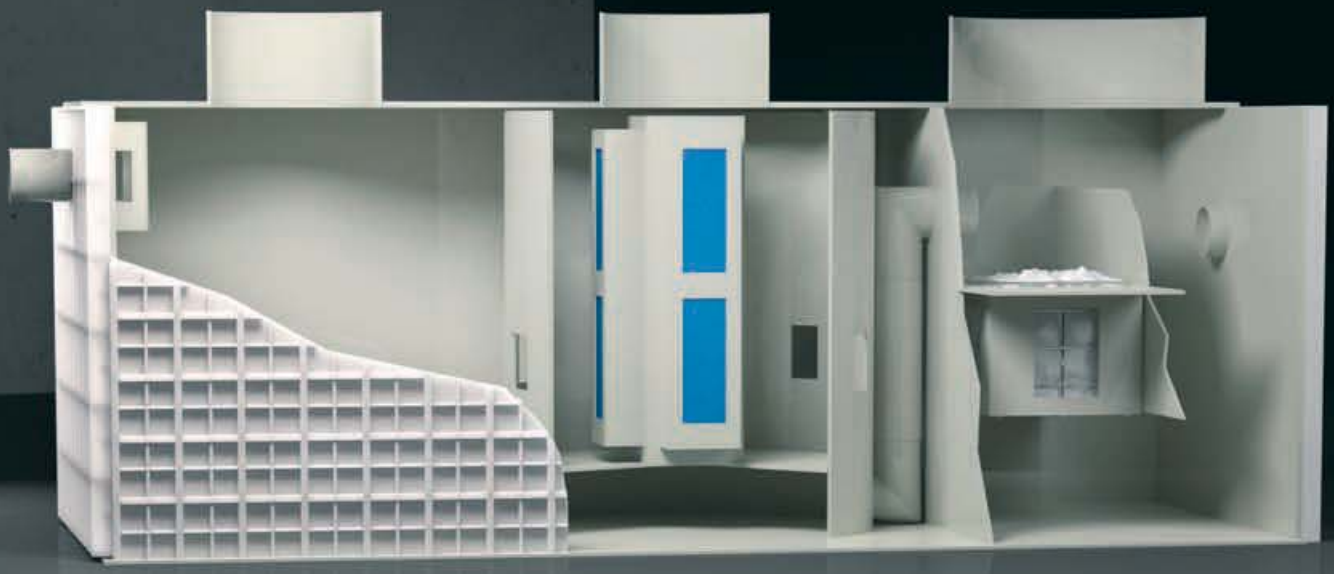
In addition to these separators on request we offer oil separators with greater capacity and flow.

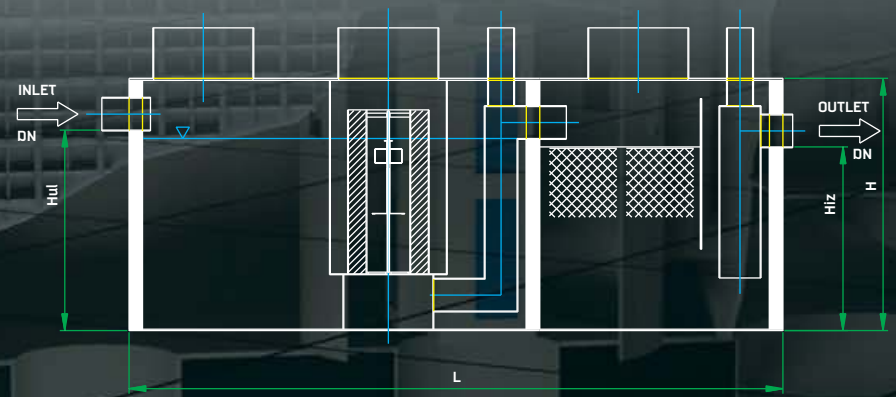
NORM: EN 858-1

OIL SEPARATORS WITH COALESCENT AND SORPTION FILTER – BP OLEX XL/KF/SF

USAGE: GAS-STATION IN WATER PROTECTED AREA

SN AB





SEPARATOR MODEL	Q(l/s)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 1,5-3 XL/KF/SF/P	1,5 - 3	1500	750	1520	1350	1300	110	242
BP OLEX 6 XL/KF/SF/P	6	2500	1160	1520	1340	1290	125	373
BP OLEX 10 XL/KF/SF/P	10	3500	1160	1520	1300	1250	160	448
BP OLEX 15 XL/KF/SF/P	15	5000	1160	1520	1260	1210	200	601
BP OLEX 20 XL/KF/SF/P	20	4000	2160	1520	1260	1210	200	689
BP OLEX 30 XL/KF/SF/P	30	6500	2160	1660	1280	1230	250	996

In addition to these separators on request we offer oil separators with greater capacity and flow.

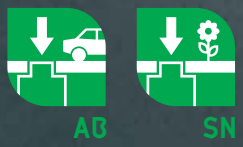
They are used in water supply areas. They are designed in accordance with the European norm EN 858-2. Sorption filters are made from polyethylene fibers. They are able to absorb oil and repel water. Wastewater is treated with a sorption filter, after being treated in an oil separator with coalescent filter.

In the case of light liquid separators with coalescent and sorption filters, the maximum outlet concentration of light liquids is under 0,5 – 0,2 mg/l.

NORM: EN 858-1

OIL SEPARATORS WITH BYPASS
BP OLEX M

USAGE: CAR PARKING

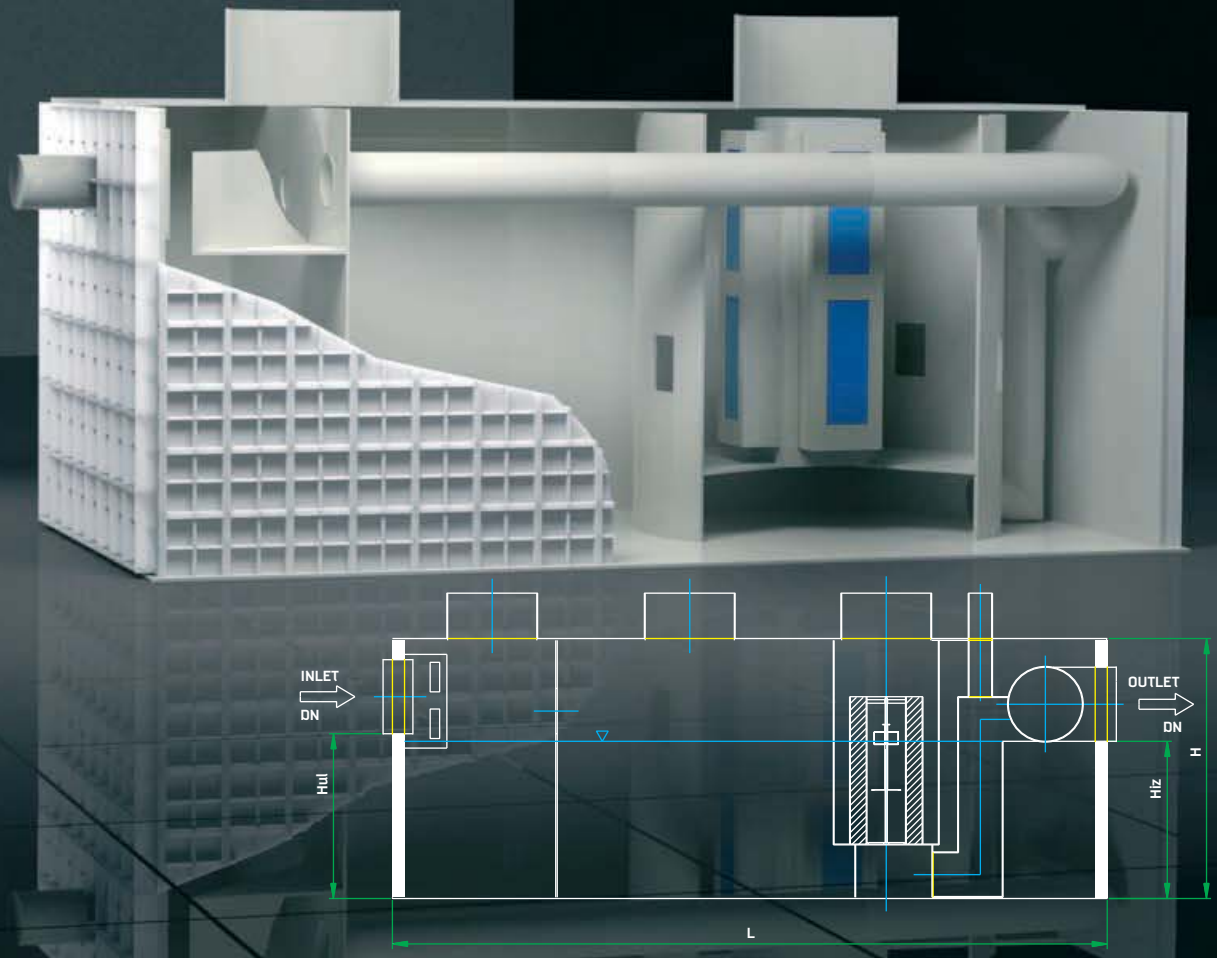


The treated water fulfills sufficient criteria for exiting to the recipient of 2nd category watercourses.

The guaranteed quantity of oil after the purification of wastewater, with the specified input parameters, is up to 5 mg/l.

They are designed to purify all wastewater on a specified up to 6,5 mm/h of rainfall. That covers the most usual quantities of rainfall.

During the first storm surge, the first rush of contaminated water passes through the separator, allowing the purification of wastewater. As the rainfall increases, the amount of oil is significantly reduced and water flows into the recipient through the bypass and not through the filter. The by-pass flow was designed at a ratio of 1:5.

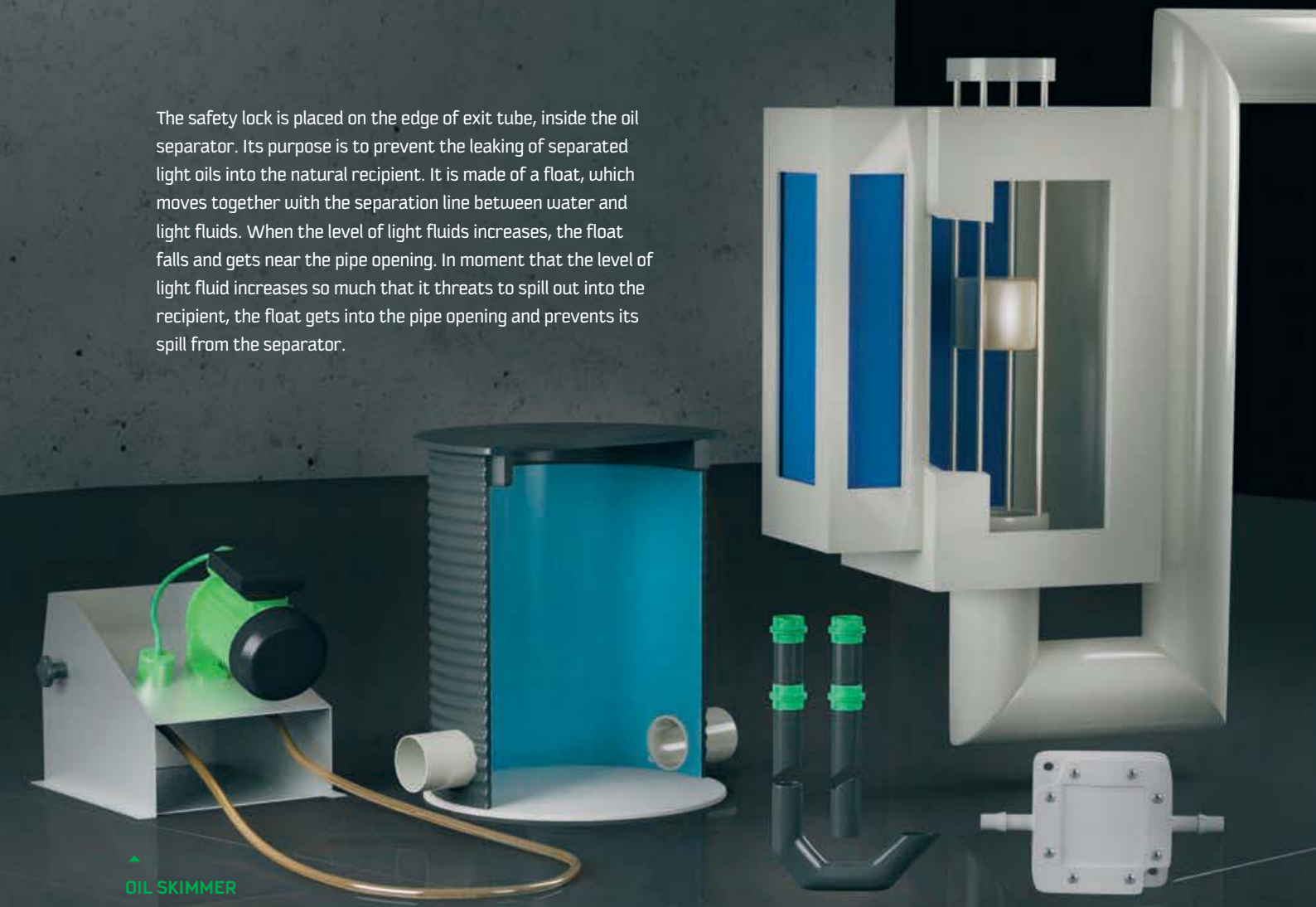


They are used in places susceptible to low contamination (e.g. personal automobile parking), or when we may accept the risk of not carrying out a full water treatment at high flow rates. In other cases, it is not acceptable to use oil separators with bypass.

SEPARATOR MODEL	Q(l/s)	L(mm)	B(mm)	H(mm)	Hul(mm)	Hiz(mm)	DN(mm)	WEIGHT(kg)
BP OLEX 3/15 M/KF/P	3/15	1500	750	2020	1760	1710	200	224
BP OLEX 6/30 M/KF/P	6/30	1500	1160	2020	1710	1660	250	276
BP OLEX 10/50 M/KF/P	10/50	2000	1160	2020	1660	1610	300	336
BP OLEX 15/75 M/KF/P	15/75	3000	1160	2020	1660	1610	300	454
BP OLEX 20/100 M/KF/P	20/100	3500	1160	2020	1660	1610	300	514
BP OLEX 30/150 M/KF/P	30/150	3500	1660	2020	1560	1510	400	607
BP OLEX 40/200 M/KF/P	40/200	3500	2160	2020	1560	1510	400	700
BP OLEX 50/250 M/KF/P	50/250	4000	2160	2020	1460	1410	500	774
BP OLEX 65/325 M/KF/P	65/325	4500	2160	2020	1460	1410	500	848
BP OLEX 80/400 M/KF/P	80/400	5500	2160	2160	1530	1480	500	1041
BP OLEX 100/500 M/KF/P	100/500	6000	2160	2560	1830	1780	600	1255
BP OLEX 125/625 M/KF/P	125/625	6500	2160	2560	1830	1780	600	1340
BP OLEX 150/750 M/KF/P	150/750	7000	2160	2760	1830	1780	800	1502
BP OLEX 200/1000 M/KF/P	200/1000	8000	2160	2760	1830	1780	800	1681

SAFETY LOCK, SAMPLE COLLECTING SHAFT, OIL SKIMMER

The safety lock is placed on the edge of exit tube, inside the oil separator. Its purpose is to prevent the leaking of separated light oils into the natural recipient. It is made of a float, which moves together with the separation line between water and light fluids. When the level of light fluids increases, the float falls and gets near the pipe opening. In moment that the level of light fluid increases so much that it threats to spill out into the recipient, the float gets into the pipe opening and prevents its spill from the separator.



OIL SKIMMER

The oil skimmer is device which separates oil, fat and other carbohydrates from the water surface. The device is equipped with a hose, belt or disc that passes through the water surface and binds fats or oils onto its surface. The collected oil or fat is removed by using a scraper and then drained in to the tank. In order to extract more complex fat onto the device, there is a set of heaters, used to soften the fat and facilitate its removal. Oil skimmers are used for extracting oil from the coolant, oil separators and grease separators, as well as in the treatment of industrial wastewater in wells and places, where it is necessary to extract the floating oil and grease from liquids.

SAMPLE COLLECTING SHAFT

Before releasing wastewater into the recipient, it is necessary to take a sample of purified water, so that it will be tested by an authorized laboratory. Samples must satisfy certain criteria (guaranteed outlet parameters), which are guaranteed by the manufacturer of the device.

D(mm)	H(mm)
679	500
679	1000
679	1500
679	2000

ACCESSORIES FOR THE EXTRACTION OF SLUDGE OR OIL FROM THE SEPARATOR

Tools are made in a way that enables simple sludge (oil) extraction from the separators. On the cover of the oil separator, there has been placed a coupling, onto which the device for sludge or oil extraction is connected.

SAMPLING PUMP

In a case that the sampling shaft is deeper, we can supply a special pump for the collection of samples. In that way, the investor can perform much more easily the quality control of the wastewater that is discharged into the recipient.

SAFETY DEVICES

Safety devices serve to prevent the discharge of wastewater into the recipient. That is achieved in the following ways:

- By warning about the high levels of light liquids in the separator;
- by accepting large quantities of spilled light liquids.

ALARM DEVICES OF OIL AND GREASE SEPARATORS

The purpose of this type of alarm device is warning of the need to drain the separators, i.e. to remove the accumulated sludge, oil or grease from the machine. The use of an alarm represents the only way to ensure preventive environmental protection and to maintain the functionality and cost-effectiveness of the device. It is important to mention that the alarm device can be connected to a remote control system by means of the Internet, resulting in even higher levels of performance and efficiency. Standards EN 858-1 and DIN 19999-100 regulate the application of alarm devices in light liquid separators.

EN 858-1: Light liquid separators should be equipped with an automatic warning.

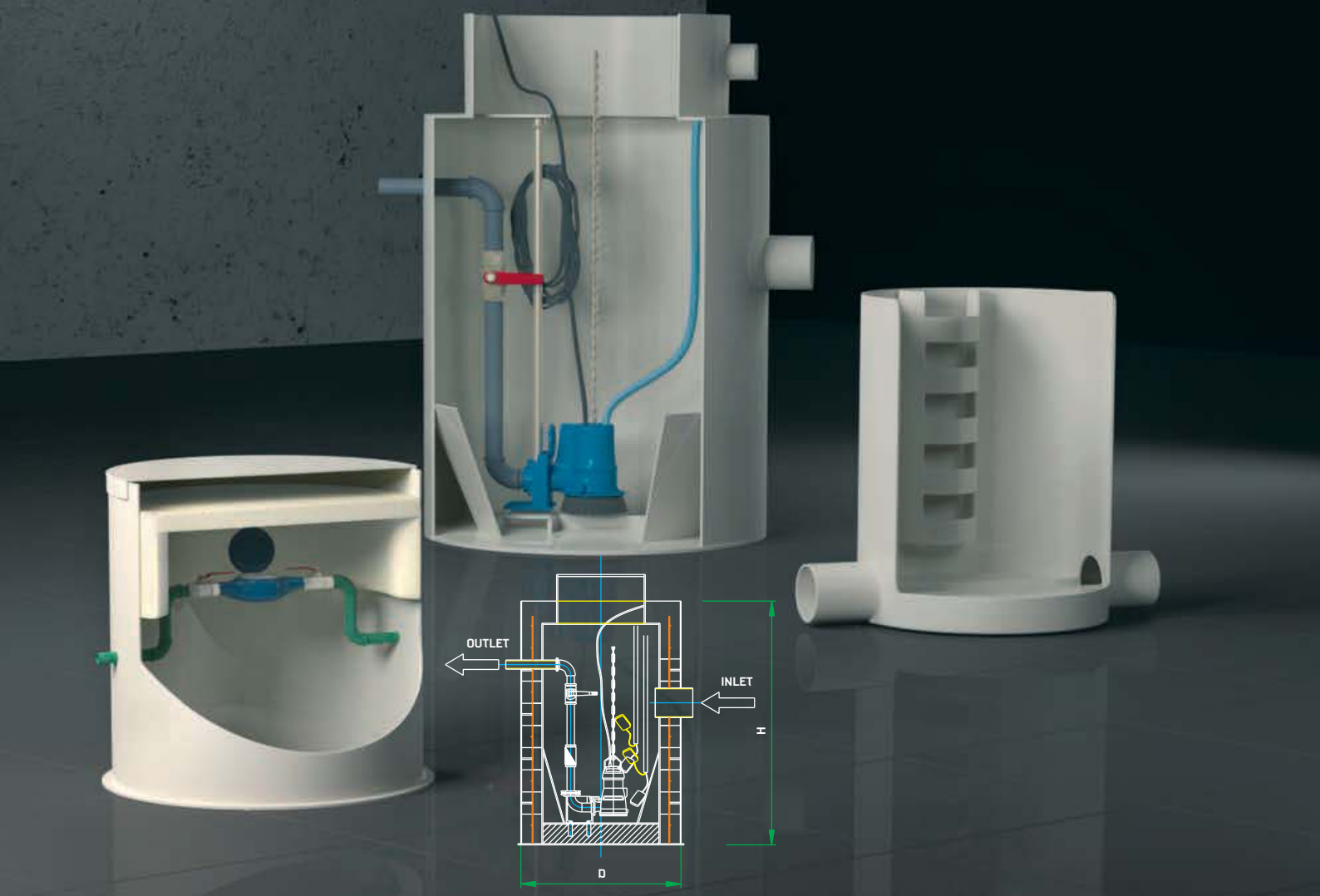
DIN 19999-100: The built-in devices for independent automatic warning must react to critical light-liquid levels. Given that the aforementioned standards represent recommendations, local authorities may allow the use of the separator without an automatic warning device, in case that there is no possibility of discharging the light liquids.

BUFFER TANK

The buffer tank is used to absorb larger amounts of light liquid, in case that oil products spill from the tank. It is dimensioned according the VOLUME of the tank for the transport of light liquids and it is installed in the place of transfer. In case of damage, it accepts the total amount light liquids that reached the sewage system. The safety valves located in the outlet of the separator are closed when there are large quantities of oil products in the sewage and later in the oil separator, The liquid is bypassed to the buffer tank.

NORM: EN 13476-1, EN 1277
EN 13598-2

WATER METER, OVER-PUMP SEWAGE AND SEWAGE SHAFT



WATER METER SHAFT

Water meter shafts are made of polypropylene or polyethylene. They are equipped with a double cover (i.e. they are insulated). two valves, a breather and connectors for water installations.

SHAFT MODEL	L(mm)	B(mm)	H(mm)
BP VO 1510 P	1500	1500	1000
BP VO 1515 P	1500	1500	1500

SHAFT MODEL	D(mm)	H(mm)
BP VO 4010 O/SN	400	1000
BP VO 4015 O/SN	400	1500
BP VO 9610 O/SN	960	1000
BP VO 9615 O/SN	960	1500

OVER-PUMP SEWAGE SHAFTS

Over-pump sewerage shafts are used in case that the main sewage pipe is higher then new one. They are equipped with two pumps and other automatic operation equipment, as well as with optical and sound signalizations.

SHAFT MODEL	D_v/D_u(mm)	H(mm)
BP PO 700/600 × H O/SN	700/600	1000-3000
BP PO 900/800 × H O/SN	900/800	1000-3000
BP PO 1200/1000 × H O/ SN	1200/1000	1000-3000

SHAFT MODEL	D_v/D_u(mm)	H(mm)
BP PO 1500/1200 × H O/AB	1500/1200	2000-6000
BP PO 1800/1500 × H O/AB	1800/1500	2000-6000
BP PO 2100/1800 × H O/AB	2100/1800	2000-6000
BP PO 2400/2100 × H O/AB	2400/2100	2000-6000
BP PO 2700/2400 × H O/AB	2700/2400	2000-6000

SEWERAGE SHAFTS

Sewerage shafts are made of polypropylene or polyethylene. They enable the easy access to the pipes.

They are made on the investor's demand, i.e. it is possible to make all connections according demands.

DRAINAGE CHANNELS

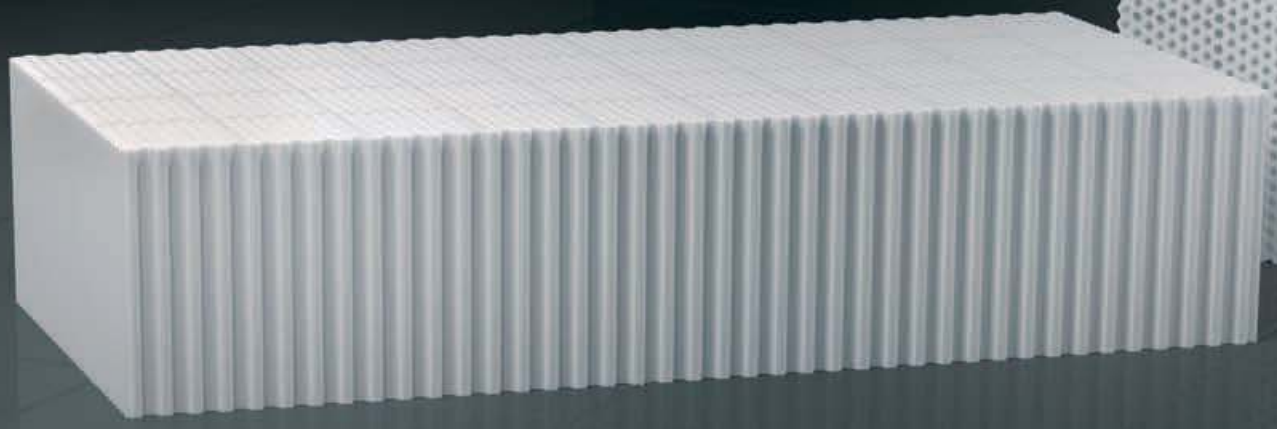
Drainage channels are used for the drainage of storm water on large surfaces (e.g. roads, highways, parking lots, airports, logistics centers and other handling areas). This product provided the quick and efficient drainage of storm water from the aforementioned areas. Drainage channels can be combined with all types of paving. They are made of the following materials: high strength concrete, reinforced concrete and recycled polypropylene.

Lattice channels are available in several different varieties, in accordance with the required payload and the installation conditions:

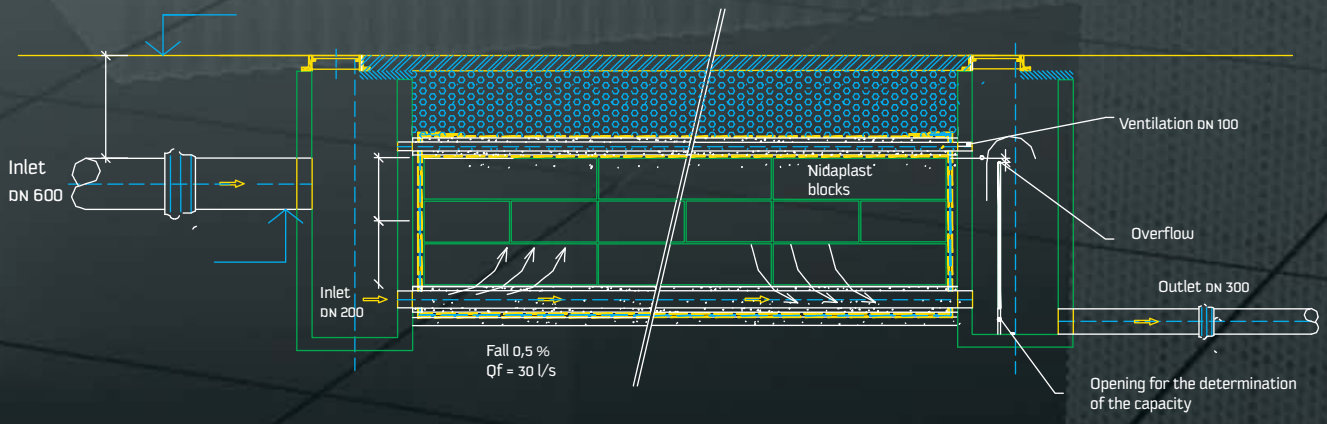
- Long steel or stainless steel gratings,
- galvanized metal bars,
- cast-iron grills,
- grates with holes.

All the detailed information (drawings, dimensions, technical descriptions and installation instructions) can be sent on your request.

NIDAPLAST



Longitudinal section



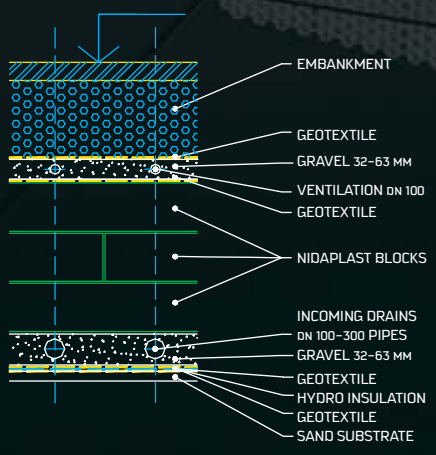
When large amounts of rainfall cannot flow into the sewerage, we need to secure the admission and release of water, when rain stops. Usage of "Nidaplast" blocks:

- Industry: as a core of sandwich panels.
- Public Works as:
  - lightweight embankment,
  - water storage and
  - soil reinforcement.

It is made of polypropylene with the following dimensions 2400x1200x520 mm. The accumulation of water is 95 %, with a lightness of 65 kg/m^3. The Nidaplast block structure is ideal for containment with the following bearing capacity:

- Vertical = 400 kN/m^2,
- Horizontally = 20 kN/m^2.

Cross section



RAINFALL EXPLOITATION DEVICES

SN

RAIN WATER COLLECTING PLANTS (AS REWA EO/PB)

Rain water we can be used for less demanding purposes, such as laundering and dish washing.

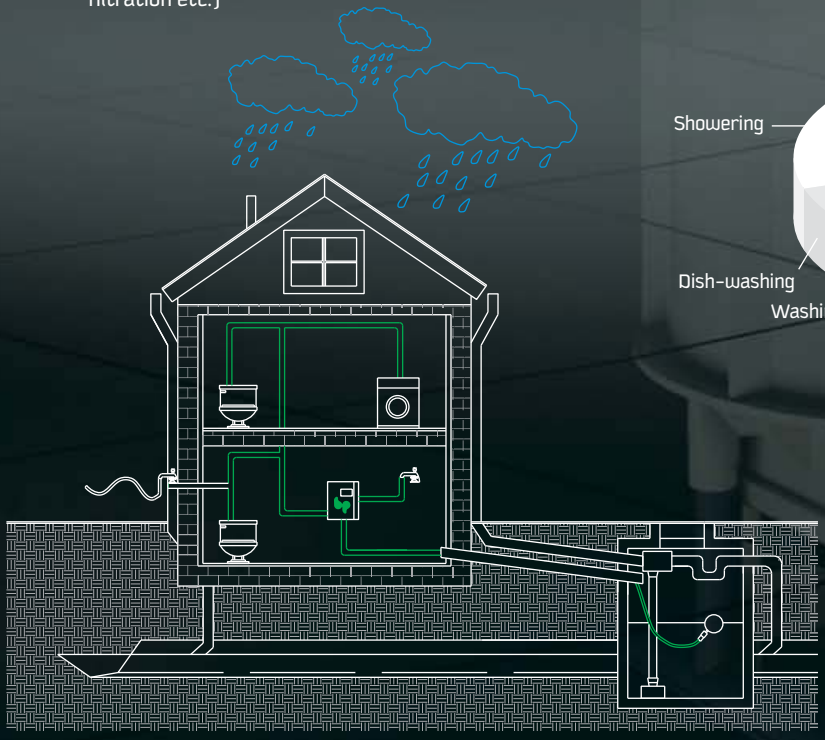
The device consists of a container and a technological part. The container is usually embedded underground, because there is a small deference in the temperature. Technology consists of:

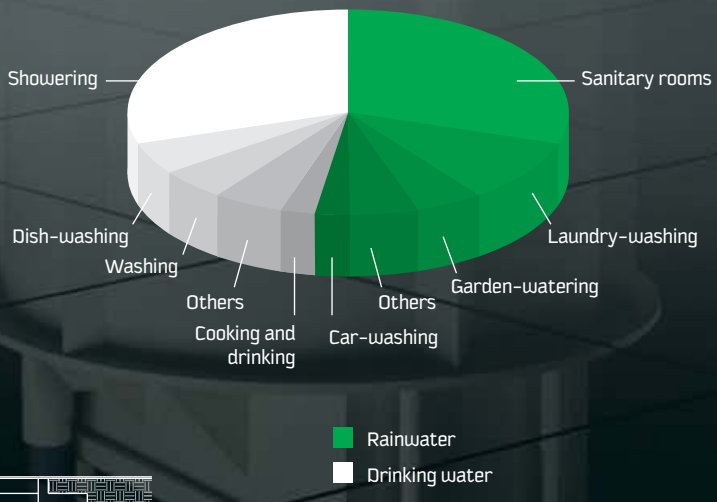
- Water filter,
- pump and
- connection for the house water system.

When dimensioning the container, there should be taken into consideration 6 % of the annual precipitation (E) as both, accumulation and volume (V = E). The quantity of annual precipitation is calculated as follows:

$V\ [m^3] = E\ [l] \times 0{,}06$

$E[l] = N[l/m^2] \times A[m^2] \times B$
$N[l/m^2]$ = local annual quantity of rain
$A[m^2]$ = area of the building (L[m] x B[m])
B = technological losses 0,7 to 0,8 (evaporation filtration etc.)





NORM: DVS 2202
DVS 2205

TANKS FOR FOOD THE PROCESSING AND CHEMICAL INDUSTRY **BP SHS**

TANKS FOR FOOD THE PROCESSING INDUSTRY

Tanks made of polypropylene are used in the food industry for:

- fermentation and storage of wine,
- storage of alcohol,
- storage of vinegar,
- water etc.

Tanks for the food processing industry can be delivered with special approvals!

TANKS FOR THE CHEMICAL INDUSTRY

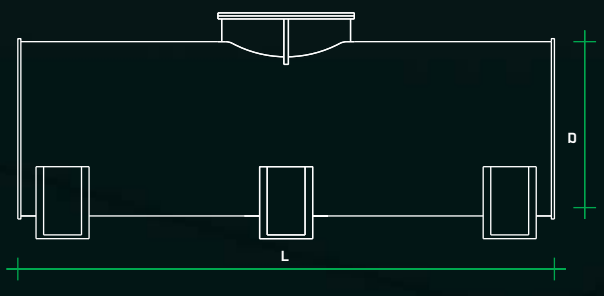
Tanks made of polypropylene or polyethylene are used in the chemical industry for:

- storage of technological water and other liquids,
- storage of acids, bases and other chemicals,
- tanks for galvanization and neutralization.

HORIZONTAL TANK WITH ROUNDED SHAPE

TANK MODEL	D[mm]	H[mm]	CAPACITY[l]
BP SHS 100	400	830	100
BP SHS 220	535	1000	220
BP SHS 500	660	1500	500
BP SHS 1000	960	1500	1000
BP SHS 2500	1350	1750	2500
BP SHS 5000	1750	2000	5000
BP SHS 10000	2050	3000	10000
BP SHS 20000	2800	3500	20000
BP SHS 50000	3800	4500	50000

We can manufacture tanks, not only with the aforementioned dimensions, but also according to the investor's demands. They can be manufactured in many different shapes: cylindrical, square, barrel-shaped, tubular, reservoir-shaped etc. PP tanks are available in sizes from 100 l to 50 000 l, according to the customer's request.



NORM: DVS 2202
DVS 2205

TANKS FOR FOOD THE PROCESSING AND CHEMICAL INDUSTRY BP SVS

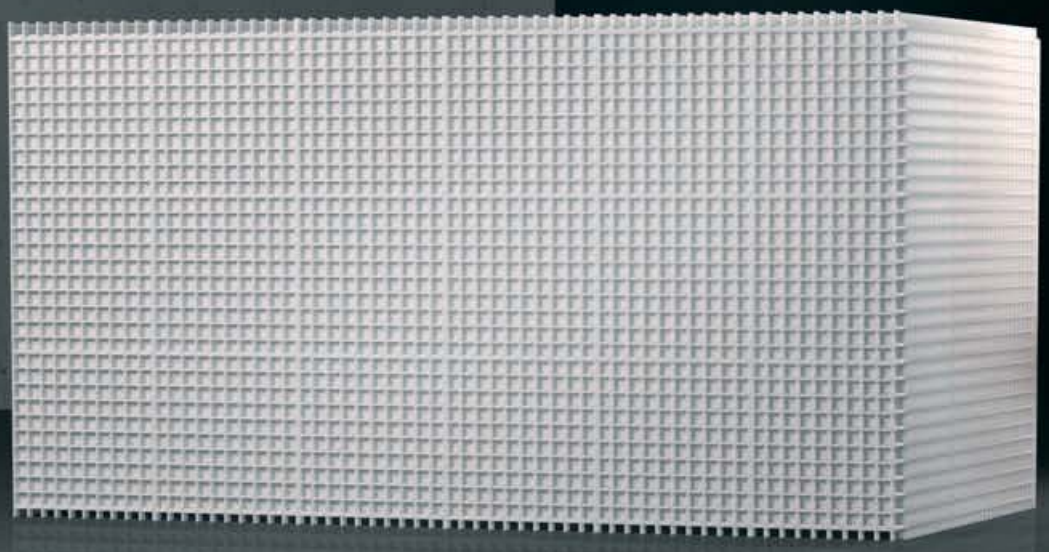
VERTICAL TANKS WITH ROUNDED SHAPE

TANK MODEL	D[mm]	H[mm]	CAPACITY[l]
BP SVS 100	400	830	100
BP SVS 220	535	1000	220
BP SVS 500	660	1500	500
BP SVS 1000	960	1500	1000
BP SVS 2500	1350	1750	2500
BP SVS 5000	1750	2000	5000
BP SVS 10000	2050	3000	10000
BP SVS 20000	2800	3500	20000
BP SVS 50000	3800	4500	50000

We can manufacture tanks, not only with the aforementioned dimensions, but also according to the investor's demands. They can be manufactured in many different shapes: cylindrical, square, barrel-shaped, tubular, reservoir-shaped etc. PP tanks are available in sizes from 100 l to 50 000 l, according to the customer's request.

NORM: DVS 2202
DVS 2205

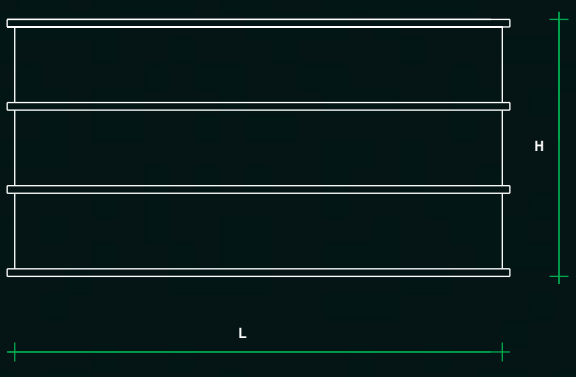
TANKS FOR FOOD THE PROCESSING AND CHEMICAL INDUSTRY **BP SCS**



We also manufacture self-supporting tanks and tanks that can be embedded underground. Square tanks are made of "wall elements" (80 mm thick) and can be strengthened by means of iron strengtheners.

TANK MODEL	L(mm)	B(mm)	H(mm)	CAPACITY(l)
BP SCS 250	500	500	1000	250
BP SCS 500	1000	500	1000	500
BP SCS 1000	1000	1000	1000	1000
BP SCS 2250	1500	1000	1500	2250
BP SCS 5000	2500	2000	1000	5000
BP SCS 9000	3000	3000	1000	9000
BP SCS 13500	3000	3000	1500	13500
BP SCS 22500	5000	3000	1500	22500
BP SCS 50000	7500	3000	2300	50000

We can manufacture tanks, not only with the aforementioned dimensions, but also according to the investor's demands. They can be manufactured in many different shapes: cylindrical, square, barrel-shaped, tubular, reservoir-shaped etc. PP tanks are available in sizes from 100 l to 50 000 l, according to the customer's request.



PONTOONS

Pontoons are stable, comfortable and safe floating objects, easy to transport and install, with a large “capacity range”, durable and environmentally friendly.

Floating pontoons are used for the following purposes:

- For binding vessels,
- movement of persons,
- the transport passengers and cargo across (smaller) water surfaces,
- sunbathing and swimming,
- as rafts,
- as scaffolds
- etc.

SELECTION OF MATERIALS

Satisfactory mechanical resistance and corrosion resistance are achieved by selecting the following materials:

MATERIAL	ELEMENT	PROPERTIES OF THE ELEMENT
• High-density polyethylene (HDPE)	• Floating elements (filled with expanded polystyrene, if necessary)	• Resistance to the effects of devastating marine events • Resistance to harmful UV radiation
• Aluminum alloy/stainless steel	• Load-bearing structure of the floating elements	• Corrosion resistance
• Galvanized steel	• Pontoon platform frame	• Mechanical resistance to the effect of the wavy motion of the sea • Mechanical resistance to the inadequate tugging of the vessel
• Wood/polypropylene/polyethylene	• Pontoon platform	• Slip resistance

INDIVIDUAL SOLUTIONS FOR EVERYBODY

Production of pontoons from the selected materials is in accordance with the customer demand.

PONTOON-STILT HOUSE

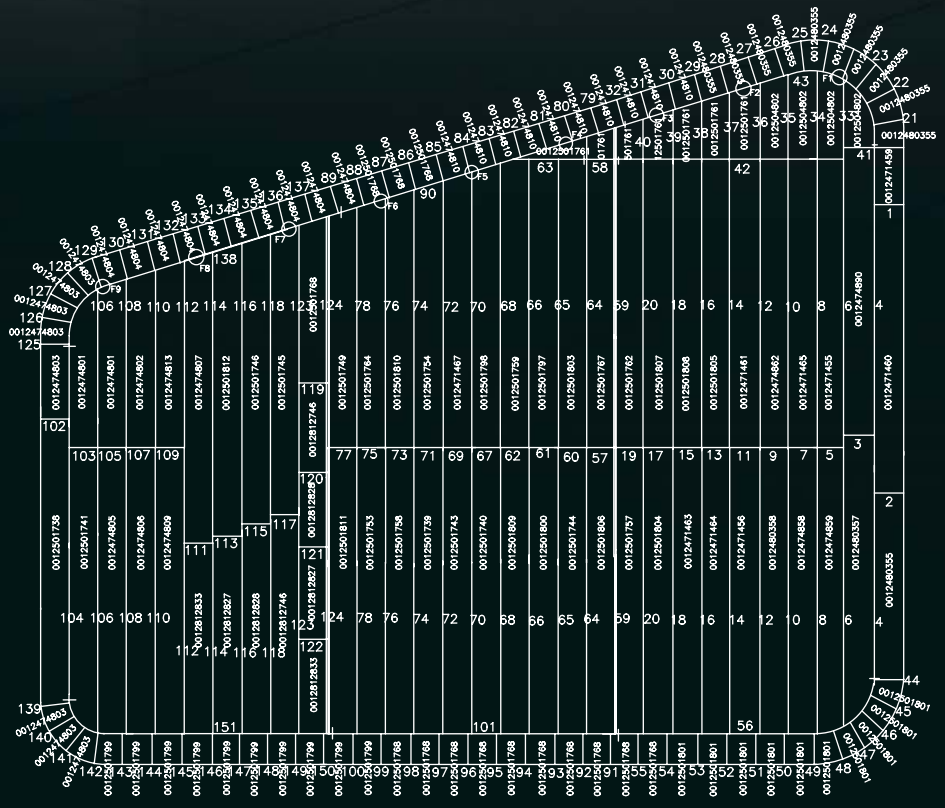
Pontoon-stilt houses are energy independent facilities. All the power and resources can be obtained from natural sources, with the help of a windmill, photovoltaic panels and devices for the accumulation and use of rainwater. The aforementioned devices are designed and constructed in accordance with the STANDARDS and requirements prescribed by the EU. They have the appropriate certificates proving their compliance. The operation of the devices does not harm the environment and fully meets all the necessary environmental standards. USAGE:

- Team building
- Taking a break from the hasty life of modernity
- Return of people to nature
- "Charging the batteries"
- An oasis of peace and tranquility
- Psychical relaxation before making important life decisions
- etc.

Stilt houses are located on a 9 x 6 m wooden floor composed of three interconnected pontoons. The layout dimensions of the housing units are 4 × 3.7 m. The concept of environmentally friendly buildings is applied in the selection of the building materials. The basis of the supporting structure of the building is made of wooden columns and beams. For the construction of the walls, we use only certain types of coniferous wood containing natural resins as additional protection against moisture. Energy efficiency is achieved by ensuring the adequate thermal insulation of the walls, including the use of a three-layer laminated glass. A gable roof covered with shingles stretches over the layout of the house with overhangs of one meter. The square-shaped tilt house consists of four rooms: central room (kitchen and bedroom), sanitary room with shower and toilet, engine room and storage room.

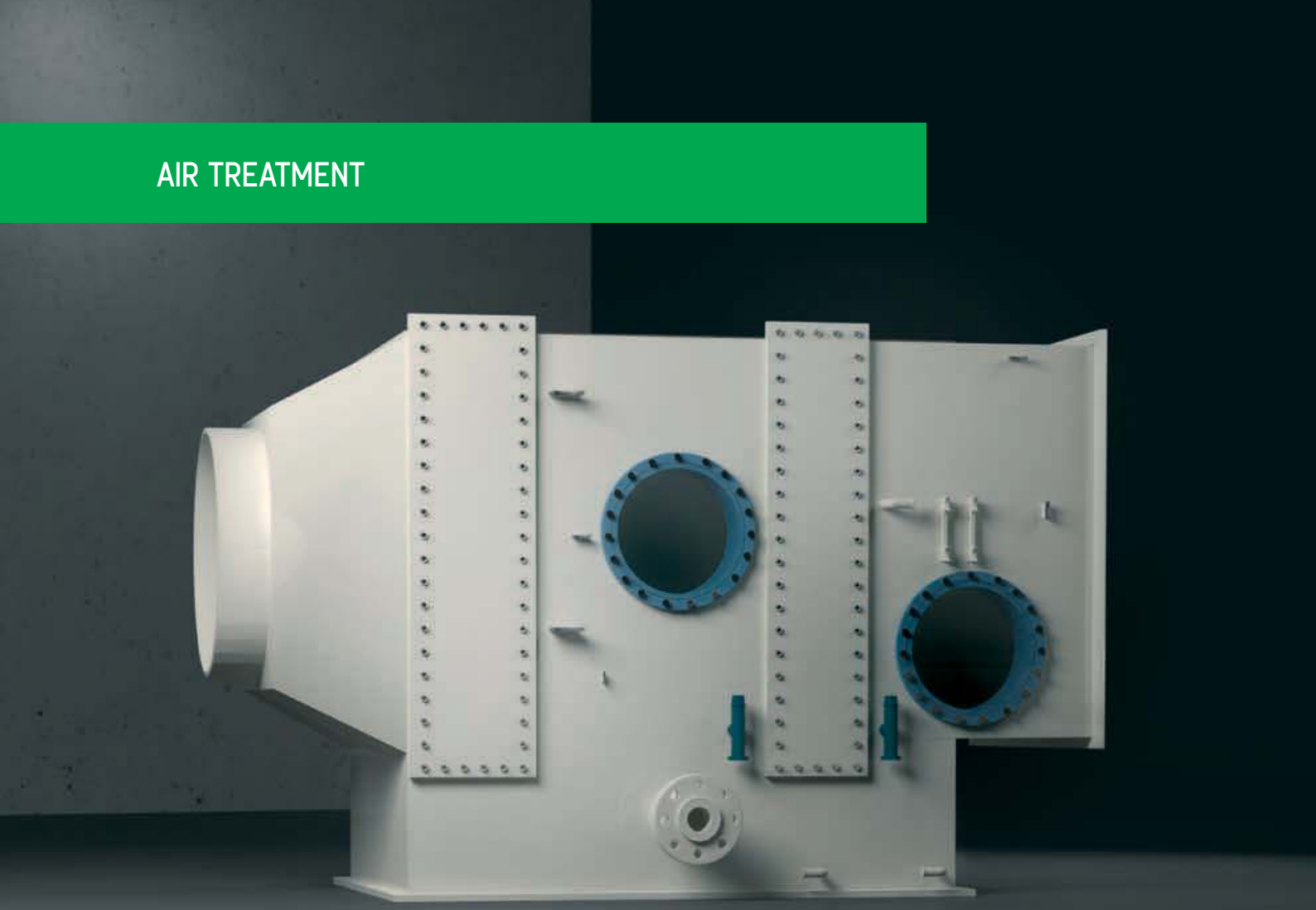
DEPOTS - LAGOONS

In case of larger quantities of wastewater and solid agents, we need more space to store them, such as lagoons or depots. We make lagoons and depots with the help of geo membranes made of high density polyethylene (HDPE), with different thickness levels and smoothed or rough surfaces. The Geo membrane foil is very resilient and resistant to chemical substances and UV light. We can produce different types of lagoon, depending on usage, most often: depots for waste, tanks for different types of water and accumulation lagoons for waste and rain water, wherever it is necessary to achieve a watertight layer.



Plan for placing a watertight foil at a solid waste depot.

AIR TREATMENT



We have extended our business activities to the field of air treatment, in cooperation with the French company EUROPE ENVIRONNEMENT. Together, we can offer you:

- Design and production of plastic ventilation systems:
  - Bio-filtration
  - Active carbon filtration
  - Gas scrubbers
  - Gas and odor control
  - Design and production of plastic ventilation systems

We will explain you some air treatment methods:

BIO-FILTRATION

The gas to be treated crosses a bio filter containing a biomass support. This support is filled, during the start up of the plant, with bacteria. The pollutants are absorbed by the water and neutralized by the bacteria.

Bio filter walls can be made of concrete or plastic materials, supplied by us.

ACTIVE CARBON FILTRATION

Carbon has a high surface per volume. Many pollutants can be adsorbed onto its surface and retained thereby.

Depending of the pollutant to be treated (odor, VOC'S etc.) we can propose different types of carbon. Some types have an impregnated surface, in order to improve the adsorption effect. When carbon is full of pollutant, it is necessary to replace the carbon by a new load.

GAS SCRUBBERS

Gas scrubbing consists in the solubility of gaseous pollutants in a liquid. This liquid can be either clean water or water with reagents or solvents. There are different type of gas scrubbers, such as random packing scrubber, spray gas scrubber and venturi scrubber.

GAS AND ODOR CONTROL

With adequate measuring instruments, we can measure pollution and, if necessary, we can also control the gas treatment process.

DESIGN AND PRODUCTION OF PLASTIC VENTILATION SYSTEMS

In case of ordering ventilation systems for gas mixtures and aggressive pollutants, we can produce fans, pipes and ventilation trenches made of polypropylene, as required by the designer.

TREATMENT OF INDUSTRIAL WATER

Besides communal wastewater treatment, we can also offer industrial wastewater treatment.

Depending on the type of pollution, industrial wastewater can be classified into: wastewater containing organic or inorganic agents, easier or harder to decompose from the biological point of view.

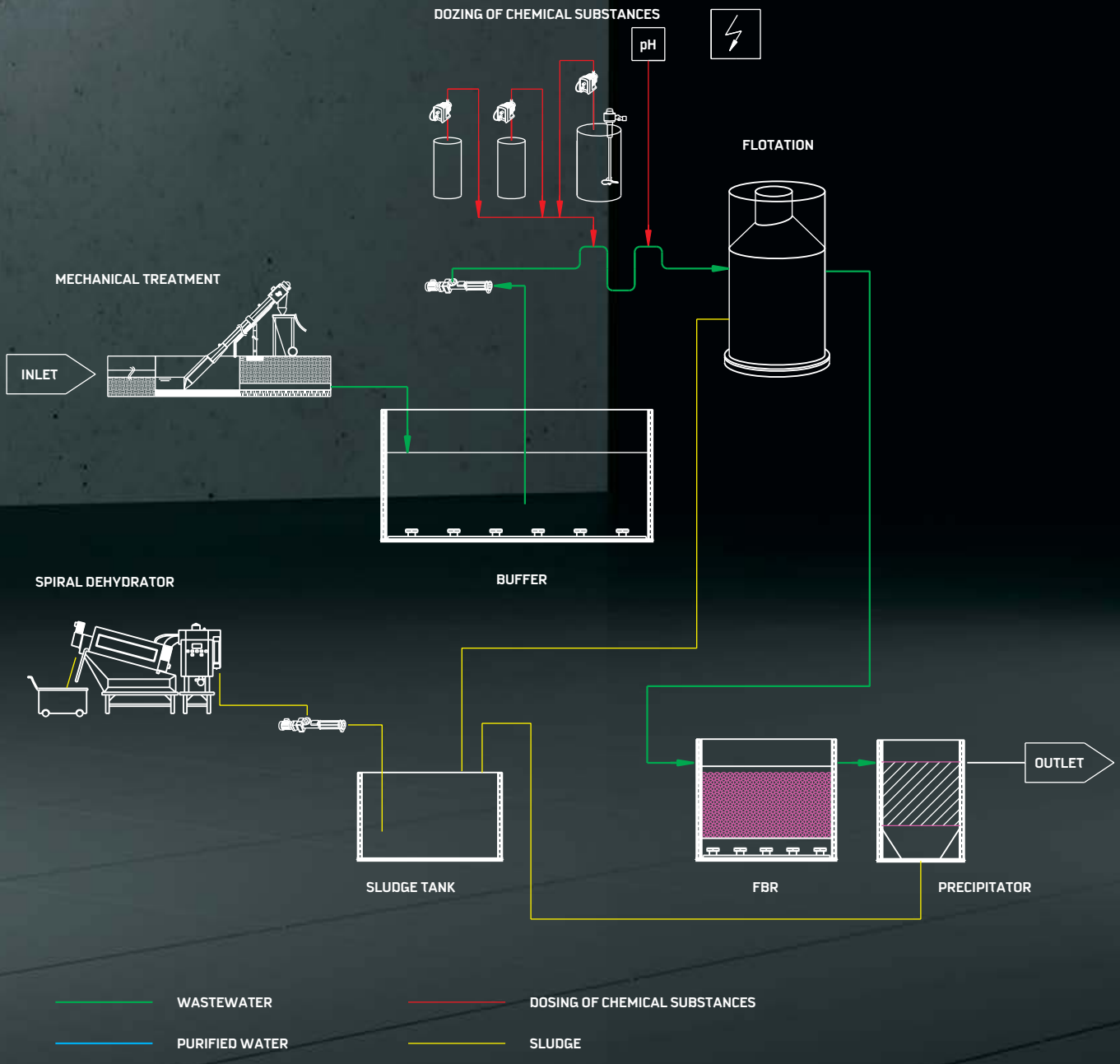
Industrial wastewater is an increasing problem that causes the pollution of surface and underground waters.

The most frequent and largest quantities of wastewater come from the following industries:

- chemical industry
- metal chemical industry
- metal industry
- food industry
- textile industry
- paper industry and
- energy industry.

We can offer systems for industrial wastewater treatment, according to the demand.

TREATMENT OF WASTEWATER FROM FOOD INDUSTRY



Wastewater from food industry is highly loaded with waste substances. In most cases, wastewater from food industry presents dissolved substances that are easily degradable. In case that there are hardly biodegradable compounds, it is necessary to carry out chemical oxidation in order to decompose them. Wastewater treatment plants use a combination of several methods: mechanical grid or sieve to remove solid impurities from wastewater. The physical-chemical treatment applies a flotation device, in order to clean wastewater of any substances that might disturb the biological. The necessary chemical, coagulants and flocculants are previously added.

A sequential batch reactor (SBR) is used to ensure the biological process and, if necessary, a membrane biological reactor (MBR) can also be applied.

The sludge resulting from the biological reactor and the flotation device is collected in a sludge tank and drained through a spiral dehydrator. The mass of sludge is reducing several times, and it can be easily processed or disposed. The treated water fulfills sufficient criteria for exiting to the recipient of a 2nd category watercourse. The guaranteed parameters are BOD_5 25 mg/l and COD 100 mg/l.

MECHANICAL WASTEWATER TREATMENT

Mechanical treatment devices are used for the mechanical treatment of municipal and industrial wastewater. During the purification process of municipal wastewater there should be removed all solid matter that might be floating or dispersed on the wastewater (plastic bags, rags, leaves, pieces of wood or other substances). In the case of industrial waste water, it is necessary to remove all raw materials that may interfere with the proper operation of the treatment plants (clogging of pipelines, pumps etc.). Devices for the mechanical treatment of wastewater are used also for reducing the organic load of wastewater (BOD_5 and COD).

The device is equipped with bars, as follows:

- rough bar with a light opening of 10 – 100 mm
- fine grid or screen with a light opening of 0.5 – 6 mm

Rough bars are used for the treatment of municipal wastewater in devices with 200 – 5000 PE, as well as in some industries where such treatment meets the anticipated output parameters. Such devices can be manual or automatic. In the case of manual devices, the collected waste is removed by hand, while automatic devices have an automatic system for the extraction and disposal of wastewater into a suitable container

Fine grids or screens are used for the treatment of municipal wastewater in devices with 500 – 5000 PE, as well as in the treatment of industrial water. They may have a semi-automatic and automatic cleaning device for the accumulated substances, which are stored in a suitable container.

Wastewater is lead to mechanical treatment gravitationally or by pressure, depending on the needs and conditions in the field.

The units can be equipped with:

- Automatic cleaning system,
- automatic washing system,
- frost protection system,
- separate waste compactor,
- system for packaging separated waste into an infinite bag,
- conveyor for the transport of separate waste.

MANUFACTURE MATERIAL

Stainless steal AISI 304 – 316L, depending on the application of the device.

PERFORMANCE

The device may be:

- located in an open channel,
- have a compact design with an integrated chamber

The design and selection of the equipment should be performed in accordance with the type and quantity of wastewater, as well as with the conditions determined by the process following the mechanical treatment of wastewater.

NEUTRALIZATION AND PIPE MIXER

NEUTRALIZATION OF WASTEWATER

Neutralization is the process of bringing the existing wastewater pH to a neutral value (pH 7.0). A neutral pH is a prerequisite for the performance of biological wastewater treatment. The neutralization process is commonly used in industrial wastewater which, depending on the type of applied technology, can have a pH of 1–14. The adjustment of pH values is carried out by adding chemicals into the wastewater. The type and amount of the chemicals depend on the pH value of the wastewater. The most commonly used base is NaOH and the most commonly used acid is HCl.

The neutralization process is carried out before the secondary wastewater treatment processes. The Neutralization System consists of:

- Chemical tank,
- dose pumps,
- pH probe,
- control unit,
- mixer.

The design is carried out according to the requirements of the specific wastewater treatment.

PIPE MIXER

Pipe mixers belong to the group of static mixers and provide the highly intense mixing of fluids with a length of only a few tube diameters. Fully three-dimensional mixing is possible thanks to the corrugated panels of the mixer.

Properties of pipe mixers:

- Made of polypropylene
- Resistant to aggressive chemicals
- Extremely effective in the short mixing length
- Suitable for low-viscosity mixing liquids,
- minimum pressure drop in the mixing place

They are used for:

- Mixing liquids, chemicals and additives in water treatment and in wastewater treatment
- Mixing liquids and air in oxidation processes,
- Process operations in chemical plants,
- Process operations in cases when it is necessary to achieve highly efficient mixing.

FLOTATION

FLOTATION DEVICE

Disolved air flotation (DAF) is used in the physical – chemical treatment of industrial wastewater. It is used to remove suspended and floating particles from wastewater (oil, grease, emulsions etc..). Purified water and sewage sludge are obtained at the end of the device. The purified water is discharged into the drain or treated further, depending on the required level of wastewater purification.

The flotation device is used as an integral part of the wastewater treatment installation in the following industries:

- Food industry (dairy industry, meat industry, slaughterhouses, fruit and vegetables processing, oil processing etc.),
- paper industry,
- metal industry,
- oil refineries,
- etc.

DESCRIPTION OF THE DEVICE

With the help of an eccentric pump, wastewater is drained from the equalization container to the flotation device. It passes through the pipe mixer, where it is treated. Wastewater is neutralized and flocculants and coagulants are added. After chemical treatment, the water contains a great quantity of dispersed large particles, called floccules, which are removed with the help of tiny air bubbles. The bubbles are produced by delivering water (with heated air under a pressure between 3 and 6 bar) into the flotation device, which is under atmospheric pressure. The aforementioned process leads to the expansion of the heated air, which is released from the water in the form of micro-bubbles, with a size of 20–40 µm. These bubbles are attached to the floccules and emerge together with them to the surface, where they form floating sludge. The sludge from the reactor is removed with the help of a scrapper or is released through conical opening, with the help of compressed air. The effluent (purified water) is released from the reactor of the flotation device for further purification or into the sewage. The sludge is released into the sludge container or to mechanical dehidration.

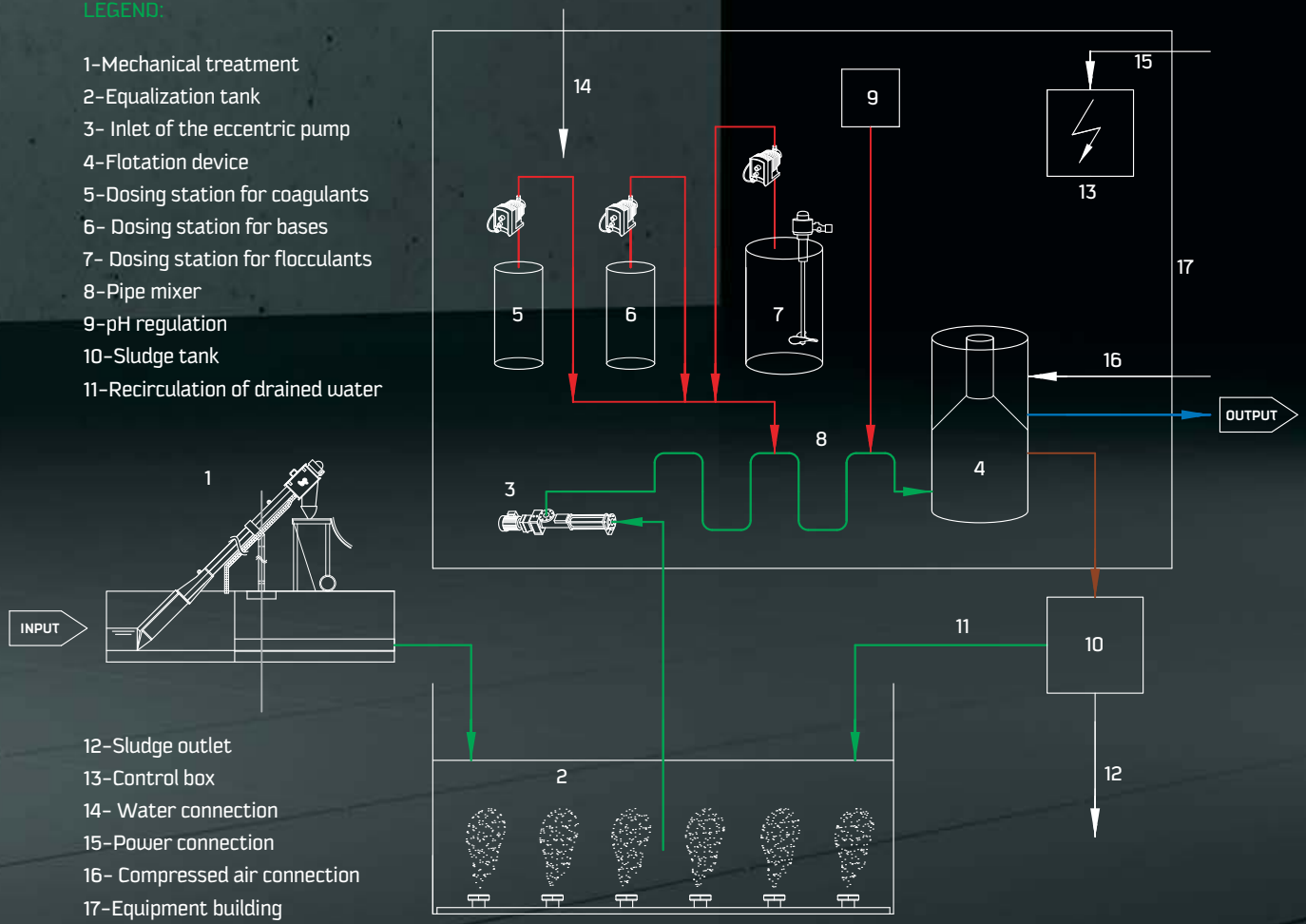
COMPONENTS OF THE DEVICE

- Circular vertical reactor made of polypropylene,
- inlet eccentric pump,
- multiphase recirculation pump,
- pipe mixer with equipment for injecting air and chemicals,
- dosing station for chemicals.

FLOTATION

LEGEND:

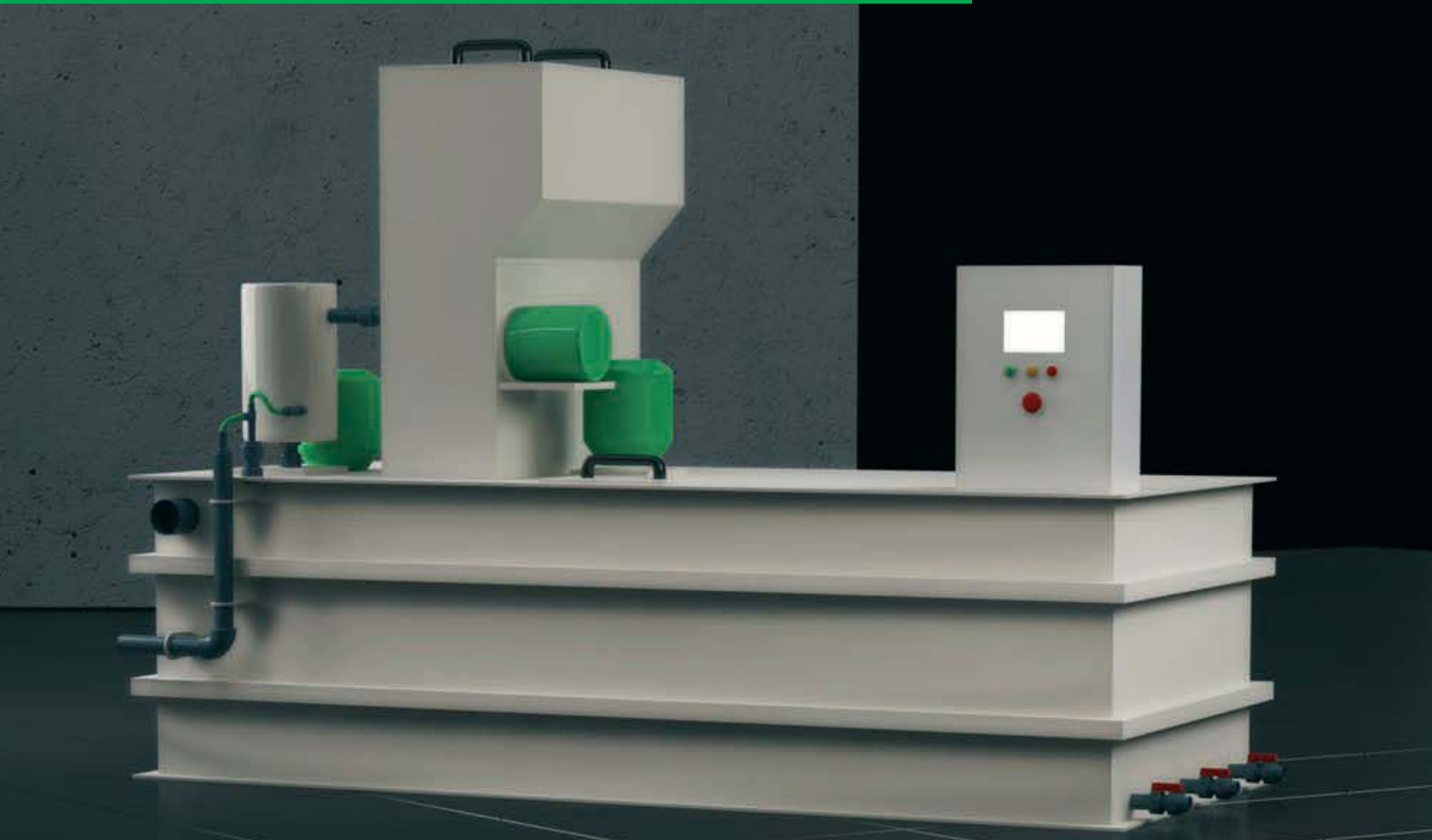
1-Mechanical treatment
2-Equalization tank
3- Inlet of the eccentric pump
4-Flotation device
5-Dosing station for coagulants
6- Dosing station for bases
7- Dosing station for flocculants
8-Pipe mixer
9-pH regulation
10-Sludge tank
11-Recirculation of drained water



12-Sludge outlet
13-Control box
14- Water connection
15-Power connection
16- Compressed air connection
17-Equipment building

DEVICE MODEL	FLOTATION CAPACITY(m^3/h)	WASTE WATER AMOUNT (m^3/day)	BUFFER TANK VOLUME (m^3)	INSTALLED POWER(kW)	SPACE REQUIREMENTS(m^2)
BP KF-1	1,0	8-24	5-15	5	4
BP KF-2	1,0-2,0	25-48	15-29	5	4
BP KF-3	2,0-3,0	49-72	30-43	5	5
BP KF-5	3,0-5,0	73-120	44-72	5	6
BP KF-8	5,0-8,0	180	108	7	7
BP KF-10	8,0-10,0	240	144	7	7

DEVICES FOR THE PREPARATION OF POLY-ELECTROLYTES



A fully automated preparation and dispensing device for continuous operation. The device is compact, i.e. it combines preparation, dispensing, soaking and dissolution. Law requirements regarding the quality of wastewater treatment for industrial and drinking water, impose the application of technology which implies, among other things, oxidants, coagulants and flocculants, i.e. chemicals for clearing the drinking water.

In wastewater treatment plants, oxidants, coagulants and flocculants are dosed in concentrations of 0.05 to 1.5%, with the help of a pump for the dispensing of chemicals (it is not possible to dose higher concentrations). In case of procuring a ready solution, the mass and volume of the chemicals are increased up to 2000 times. Due to the increased need for the transportation and storage of chemicals, which are subject to additional legislation, the most cost-effective solution is very often the purchase of concentrated chemicals in the form of powder granules . This device enables the preparation of solutions with the desired contents between 0.01% and 2%, by using concentrated chemicals in the form of powder granules .

Devices for the preparation of poly-electrolytes are used for:

- Processing of wastewater,
- coagulation,
- flocculation.

Application in the industry:

- Treatment of industrial wastewater from chemical, metal and food industries,
- recycling,
- paper production,
- preparation of softened water and demineralized water.

Application in the technological process for the production of drinking water:

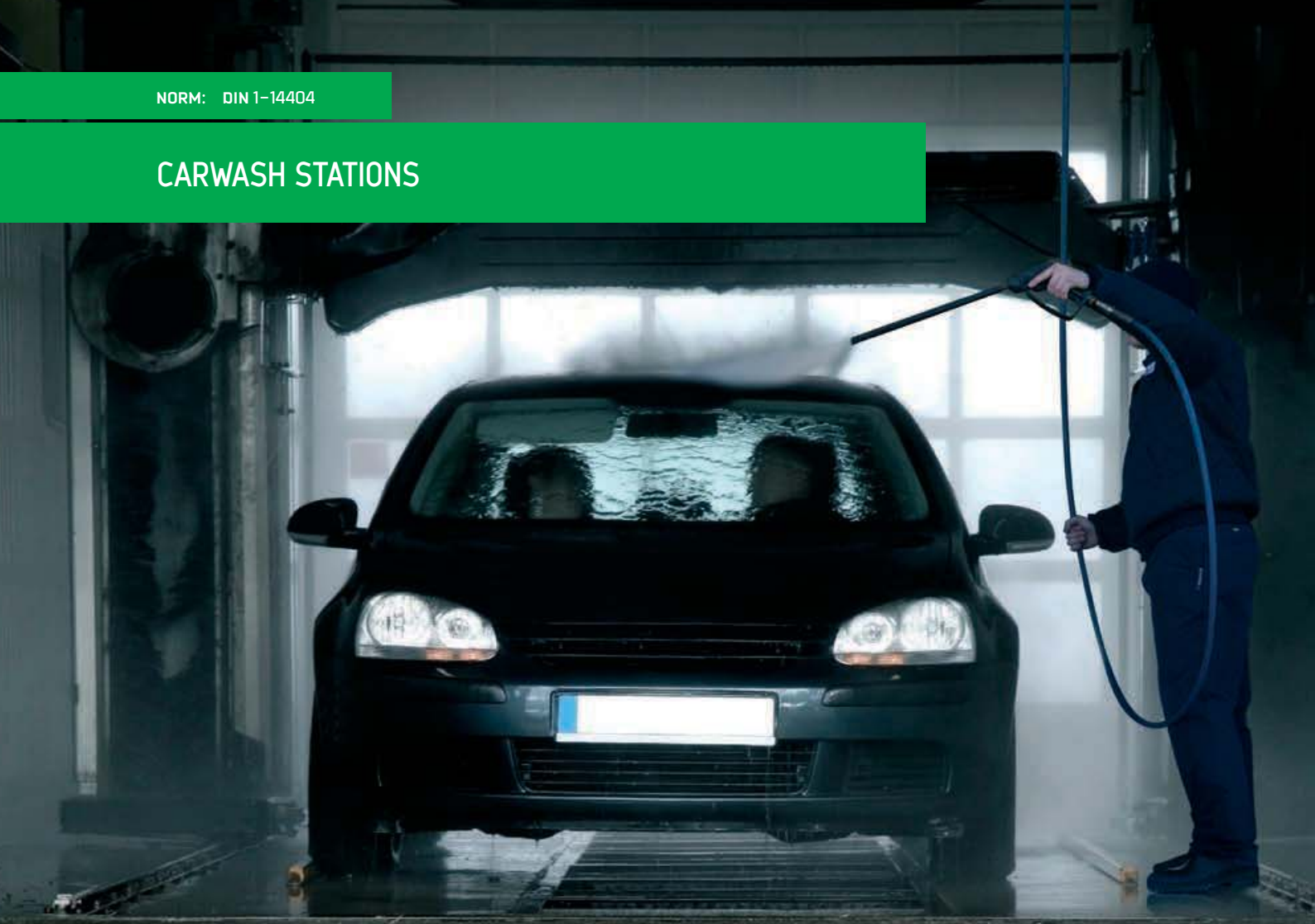
- Pre-oxidation of raw water,
- coagulation of water,
- flocculation of water

Treatment of industrial wastewater for drinking water and with the possibility of returning water back into production.

DEVICE MODEL	CAPACITY(l/h)
BPF – 400	400
BPF – 1000	1000
BPF – 1500	1500
BPF – 2000	2000
BPF – 5000	5000
BPF – 10000	10000

NORM: DIN 1-14404

CARWASH STATIONS



The design, manufacture and installation of self-service carwash stations are provided in collaboration with a renowned manufacturer from the European Union with many years of experience (since 1993) in development and servicing.

Self-serving devices for car washing under high pressure represent a unique solution in terms of cost, convenience and environment protection. The car washing process is very simple and consists of two stages: WASHING and RINSING, without using brushes, sponges or any other mechanical aids. The design and manufacture of the devices meets the following criteria:

- Safety and reliability of the device,
- easy use,
- easy maintenance.

The washing process starts by inserting coins, credit cards, chips or memory keys (programmed by means of a special device). The average time required for washing is 5-6 minutes, depending on the size and degree of contamination of the vehicle. The offer of our company consists in the design of solutions and the choice of the best option, as well as in the manufacture, supply, installation and servicing of equipment. In order to achieve energy and water savings, ensuring environmental protection at the same time, we offer wastewater treatment and recycling systems.

In this way, we achieve water savings of 80 % compared to the previous values. The remaining 20 % supplements the existing water preparation system.

The main parts of the self-service car wash system under pressure are: generator, water-preparing device, coin-device, water anti-freezing system, substations, remote monitoring and self-service vacuum cleaner.

The generator has the following parts: washing gun under high pressure, rotary connector tube (360 °) and high-pressure programmable pump.

The water-preparing device can be used for:

- the removal of calcium from water,
- Reverse osmosis.

The substation contains: Water-preparing equipment, energy source for heating the water used in car washing (gas, electricity etc.) and under-floor heating system.

DEVICE MODEL	BOX NUMBER (pcs)	SPACE REQUIREMENTS(m^2) L(m)	B(m)	POWER(kW)
GULD MAM 100-KR-P-G-2	2	14	6	10,70
GULD MAM 100-KR-P-G-4	4	24	6	15,70
GULD MAM 100-KR-P-G-6	6	36	6	23,30
GULD MAM 100-KR-P-G-8	8	47	6	30,70

Detailed information (drawings, dimensions, technical descriptions and installation instructions) is delivered on Your request.

MARKS

DEVICE (bearing capacity)	MARK	FILLING	NUMBER OF WALLS
SELF-BEARING	SN	-	1
REINFORCED	AB	REINFORCED CONCRETE	2

MEANING	MARK
FIVE-DAY BIOCHEMICAL CONSUMPTION OF RAINWATER	BOD_5
CHEMICAL CONSUMPTION OF RAINWATER	COD
SUSPENDED SUBSTANCE	SS

SHAPE OF THE DEVICE	MARK
SQUARE	P
ROUND	O

WASTEWATER TREATMENT PLANTS

DEVICE TYPE	MARK
AEROBIC-ANAEROBIC DEVICE	BP ASP
AEROBIC-ANAEROBIC DEVICE WITH MEMBRANE FILTRATION	BP ASP ULTRA
SBR DEVICE	BP SBR
DEVICE WITH BIOMASS SUPPORT	BP FBR

PE	MARK
TO 30	K
FROM 30 TO 200	N

CONSTRUCTION OF THE DEVICE	MARK
PARALLEL	P
SERIAL	S
IN CONCRETE	B
ECONOMIC	E

SEPARATORS

TYPE OF DEVICE	MARK
OIL SEPARATOR	BP OLEX
GREASE SEPARATOR	BP FETEX

OIL SEPARATOR

	MARK	SIZE
SLUDGE PRECIPITATOR	M	100xQ (l/s)
	L	200xQ (l/s)
	XL	300xQ (l/s)

	MARK	TYPE
FILTER	KF	COALESCENT
	SF	SORPTION
	KF/SF	COALESCENT AND SORPTION

PROPERTIES OF THE POLYMERS

Plastics are organic, high molecular compounds obtained artificially or synthetically.

Polypropylene is a polymer obtained by a process of coordinated polymerization, in which several small monomer (propene) molecules, are properly allocated and bound into long chains or macromolecules. They are processed by injection into molds or by squeezing (extrusion) at temperatures between 200 °C and 300 °C. Polyethylene (PE) is a macromolecular product obtained by the polymerization of ethylene.

The basis for the production of our products consists in polypropylene and polyethylene panels. Panels are formed according to user's requirements and bound by welding. We offer 3 types of welding:

- Welding by means of hot air and an electrode,
- extruding by means of hot air and an electrode,
- butt, machine welding.

PROPERTIES	UNIT OF MEASURE	BLACK POLYSTONE PE 300	GREY POLYSTONE PP (COPO)	GREY POYSTONE PP (HOMO)	STANDARD
SPECIFIC WEIGHT	g/cm^3	0,953	0,9	0,9	ISO 1183
MOLECULAR WEIGHT	Mio./m.	>0,25	*	*	*
TENSILE STRENGTH	N/mm^2	22	26	33	ISO 527-1
LIMIT TENSILE STRENGTH	N/mm^2	32	*	*	ISO 527-1
ELONGATION DUE TO BREAKING	%	>800	>50	*	ISO 527-1
ELASTICITY MODULE	N/mm^2	800	950	1300	ISO 527-1
SENSITIVITY	m'/mm^2	12	40	6	ISO 179
HARDNESS(DUE TO THE PRESSURE OF THE BALL 30S)	N/mm^2	40	50	65	ISO 2039-1
HARDNESS (ALONG THE SHORE)	*	63	69	72	ISO 868
RESISTANCE TO WEAR	*	450-550	*	*	*
MELTING POINT	°C	130-135	160-168	160-168	DIN 53736
THERMAL CONDUCTIVITY	W/mK	0,43	0,22	0,22	DIN 52612
LINEAR EXPANSION COEFFICIENT [20-100 ° C]	K×1/10	$2×10^{-4}$	$<2×10^{-4}$	$1×10^{-4}$-$2×10^{-4}$	DIN 53752
VICAT [SOFTENING TEMPERATURE VSP/A/50]	°C	123	149	155	ISO 306
VICAT [SOFTENING TEMPERATURE VSP/B/50]	°C	67	73	90	ISO 306
SPECIFIC PASSING RESISTANCE	Ω×cm	$>10^{13}$	$>10^{15}$	$>10^{15}$	DIN VDE 0303
SURFACE RESISTANCE	Ω	$>10^{14}$	$>10^{16}$	$>10^{16}$	DIN VDE 0303
DIELECTRIC STRENGTH	kV/mm	50	50	50	DIN VDE 0303
DIELECTRIC NUMBER (AT 2-10^6 Hz)	*	2,5	2,3	2,3	IEC 250
DIELECTRIC LOSS FACTOR (AT 10 Hz)	*	$6×10^{-4}$	$3,5×10^{-4}$	$3,5×10^{-4}$	IEC 250

POLYPROPYLEN

- Low own weight (density: 0,855 g/cm^3 – amorphous; 0,946 g/cm^3- crystalline)
- Excellent stability (PP is resistant to chemicals and aggressive environments (suitable for draining domestic and industrial wastewater), resistant to high temperatures (suitable for applications up to 95 °C), resistant to impacts at low temperatures, which makes possible to set the temperature below 0 °C.)
- Environmentally friendly (used materials are recyclable, while the complete water tightness of the system prevents the pollution of the environment.)
- Hydraulic properties (extremely smooth internal walls in order to minimize clogging, abrasion damages and the deposition of sediments and microorganisms.)

REINFORCED CONCRETE

- Significant own weight (light concrete (BULK DENSITY up to 1900 kg/m^3), normal concrete (1900-2500 kg/m^3) and heavy concrete (over 2500 kg/m^3))
- Relatively high conductivity of sound and heat
- Relatively complex works (It is necessary to install, remove and clean the slabs, as well as to place and bind the reinforcement, i.e. the reinforcement mesh. Concrete work is done in layers, due to the heat generated during the hydration of the cement.)
- Difficulties may appear while checking the valves in the construction after completing the concrete works
- Harsh winter works
- No concrete is waterproof (Resistance levels VDP1 VDP3, i.e. from <10mm up to <50mm)

METHOD OF INSTALLATION

INSTALLATION OF ROUND DOUBLE-WALLED DEVICES - AB TYPE (pavement surface, high groundwater, deeper installation)

Before the installation of the device, it is necessary to excavate a trench in the ground, about 40 cm larger than the diameter of the device. The supervising engineer should inspect the trench before the unit is installed. At the bottom of the trench there should be laid a tampon layer made of gravel or sand, with a thickness of 15–20 cm. The layer is roughly planned and compacted, in such a way that the required compaction module might be obtained under the foundation substructure. A double reinforced base slab with a thickness of 20–25 cm will be concreted thereon. The class of the concrete, as well as the arrangement and dimensions of the reinforcement, are determined depending on the planned load, the required bearing capacity and the geomechanical and hydrological conditions. The concrete must be thoroughly smoothed, in order to avoid subsequent damage of the device. The device is placed in the middle of the trench (at a distance of 20 cm from its edges) and connected to the inlet and outlet piping. When filling the space between the double walls of the device with low consistency concrete, their interior should be filled with water, in layers that follow the concrete layers (30–40 cm above the last layer of concrete). The maximum height of the concrete should not exceed 1 m/day. The device must be covered with wet sand in layers of 15 cm, by compacting the layers manually. Above the installed device, there should be placed a reinforced concrete slab suitable for the foreseen loads (concrete class, reinforcement arrangement and panel thickness should be adequate for future loads). The device must be full of water.

INSTALLATION ROUND SINGLE-WALLED DEVICES - SN TYPE (green areas)

It is necessary to excavate a trench in the ground, about 40 cm larger than the diameter of the device. The supervising engineer should inspect the trench before the unit is installed. At the bottom of the trench there should be laid a tampon layer made of gravel or sand, with a thickness of 15–20 cm. The layer is roughly planned and compacted, in such a way that the required compaction module might be obtained under the foundation substructure. A double reinforced base slab with a thickness of 20–25 cm will be concreted thereon.

cm. The class of the concrete, as well as the arrangement and dimensions of the reinforcement, are determined depending on the planned load, the required bearing capacity and the geomechanical and hydrological conditions. After that, the device is placed in the middle of the trench and connected to the inlet and outlet piping. When filling the space between the device and the trench with wet sand, the device must be completely filled with water (in layers up to 30 cm), up to the top. The device must be full of water.

INSTALLATION OF SQUARE-SHAPED DEVICES (pavement surface, high groundwater, greater depth of installation)

Before the installation of the device, it is necessary to excavate a trench in the ground, about 160 cm larger than the dimensions of the device. The supervising engineer should inspect the trench before the unit is installed. At the bottom of the trench there should be laid a tampon layer made of gravel or sand, with a thickness of 15–20 cm. The layer is roughly planned and compacted, in such a way that the required compaction module might be obtained under the foundation substructure. A double reinforced base slab, with a thickness of 20–25 cm, is concreted thereon.

The class of the concrete, as well as the arrangement and dimensions of the reinforcement, are determined depending on the planned load, the required bearing capacity and the geomechanical and hydrological conditions. The concrete must be thoroughly smoothed, in order to avoid subsequent damage of the device. After that, the device is placed in the middle of the trench and connected to the inlet and outlet piping. When filling the space between the double walls of the device with low consistency concrete, their interior should be filled with water, in layers that follow the concrete layers (30–40 cm above the last layer of concrete). The maximum height of the concrete should not exceed 1 m/day. Special attention should be paid to the proper execution of the concreting extensions (waterproofing of the concrete). The device must be covered with wet sand in layers of 15 cm, by compacting the layers manually. Above the installed device, there should be placed a reinforced concrete slab suitable for the foreseen loads (concrete class, reinforcement arrangement and panel thickness should be adequate for future loads). The device must be full of water.

INSTALLATION OF SQUARE-SHAPED DEVICES (green areas)

It is necessary to excavate a trench in the ground, about 40 cm larger than the dimensions of the device.

The supervising engineer should inspect the trench before the unit is installed. At the bottom of the trench there should be laid a tampon layer made of gravel or sand, with a thickness of 15–20 cm. The layer is roughly planned and compacted, in such a way that the required compaction module might be obtained under the foundation substructure. A double reinforced base slab with a thickness of 20–25 cm will be concreted thereon. The class of the concrete, as well as the arrangement and dimensions of the reinforcement, are determined depending on the planned load, the required bearing capacity and the geomechanical and hydrological conditions. After that, the device is placed in the middle of the trench and connected to the inlet and outlet piping. When filling the space between the device and the trench with wet sand, the device must be completely filled with water, up to the top. The device must be full of water.

Installation instructions are just for information. They should be adjusted to the conditions on the ground (geomechanical, hydrological, infrastructural etc.). Any specific information regarding the installation of devices may be obtained from their designer and manufacturer.

FOTO GALLERY

SWIMMING POOLS



WASTEWATER TREATMENT PLANTS



INDUSTRY

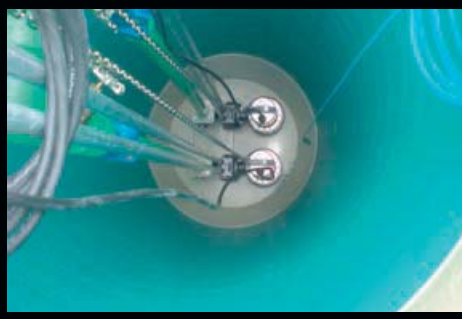


NIDAPLAST



OVER PUMP SEWERAGE SHAFTS





AIR TREATMENT



GREASE TRAPS



OIL SEPARATORS



TANKS



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