DYNAMIC FILTER
PRODUCT CATALOGUE

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Technical catalogue

Self-Cleaning Filter DYNAMIK DF

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Lamella Separator DF SLA / SLZ / SLW

Lamella Separator DF SLA / SLZ / SLW

Horizontal Sludge scraper DF ZD

Horizontal Sludge Scraper DF ZD

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Multifunctional Vertical Pressure Filter DF FPW
Pressure Filtration Kit DF FP
Vertical Pressureless Filter DF FPB
Self-Cleaning Filter DYNAMIK DF MULTI
Filtration Bed MULTIMAN 3M
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SELF-CLEANING FILTER DYNAMIK DF

Application

The self-cleaning filter DYNAMIK DF is a pressureless device of constant work cycle adapted to the water and wastewater treatment processes. The device size adjustment as well as kind and quantity of filter bed ensure reduction of suspension, turbidity, colour, as well as iron, manganese compounds, ammonium ions and other values to normative. The filter is used also for the final biological wastewater treatment.

Functioning

Raw water/wastewater/ rinsing water are poured into the device through the inlet stub pipe situated in upper part of shell and then directed to the distributors system which distribute the fluid in all the filter surface. The fluid flowing upwards is mechanically cleaned by the filtration bed of grain size and height adjusted for the individual technological systems. The filtrate is transferred outside the device through the controlled overflow duct in the upper device part. The contaminated sediment is gathered in the lower bed section and transferred by the air pump to the air-water wash bath. The patented structure solution of the wash bath ensures high bed cleaning efficiency with minimum cleaning water consumption. The bed cleaning water is taken from the filtrate inside the device – so there is no need of installing any additional washing systems. The contaminated sand is intensively cleaned in the air-water wash bath labyrinth. The rinsing water from the sand are directed outside, while cleaned sand drops to the upper bed layer. As a result, the sand bed is in constant movement down, and the water/wastewater treatment and sand cleaning processes happen simultaneously and constantly without a requirement of being controlled.
The presentation of Self-Cleaning Filter DYNAMIK DF may be found on our website www.dynamikfiltr.pl

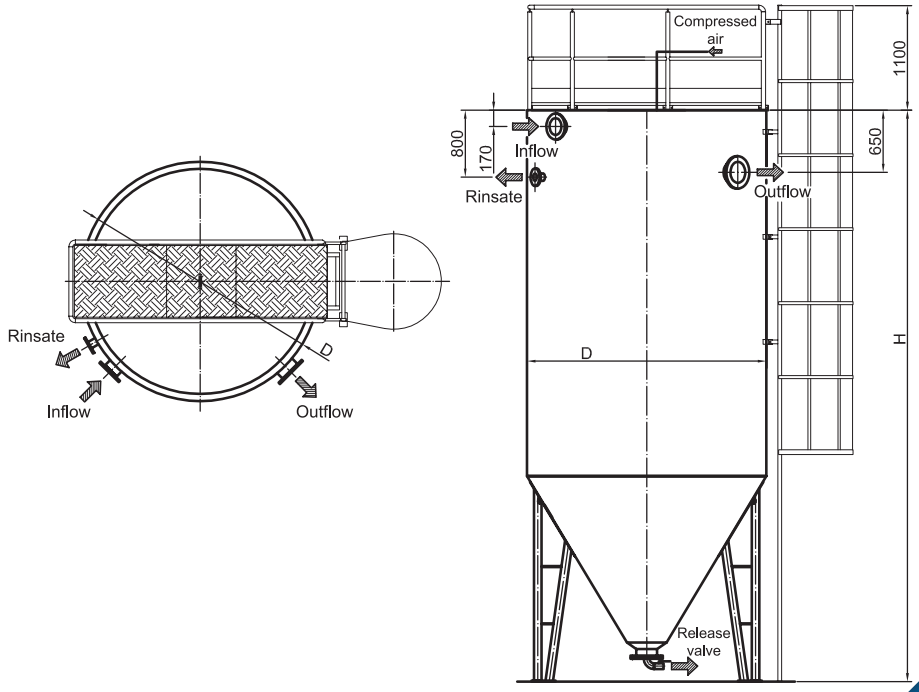
Equipment

- The innovative filtered fluid distribution system is equipped in the inspection plugs making possible periodic maintenance without necessity of removing bed from the device.
- The air pump used for contaminated bed transportation.
- Air-water sand wash bath.
- Power supply and control panel.
- Servicing bridge.
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Continuous filtration with constant filtration bed cleaning.
- Highly efficient removal of suspension, turbidity, colour, as well as compounds of iron, manganese, ammonium ions and others, reduction of suspension and BOD5 in the final wastewater treatment process.
- Possibility of nitrification and denitrification in order to remove nitrogen compounds from the wastewater (special version).
- Unique, patented air-water sand wash bath structure.
- Simple structure and easy operation.
- Compatibility with Lamella Separator.
- No need of automatic valves.
- Higher filtration layers.
- Pressureless device – no necessity of UDT (Office of Technical Inspection) control
- The device used in contact coagulation systems.
- Elimination of "initial filtrate" losses.
- Minimum maintenance costs.
- No loose parts.
- PZH (National Institute of Hygiene) certificate.

Construction drawing



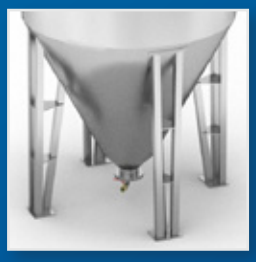
Specification

Type		Nominal flow [m³/h]	Filtration surface [m²]	D [mm]	H [mm]	Air demand [Nl/min]	Inlet stub pipes			Device weight [kg]	Bed volume [m³]
							DN supply	DN filtrate	DN rinsate		
DF 500-05	D	55	5,5	2650	7000	80	200	200	65	2450	16,3
	C				6500					2300	13,5
	B				6000					2150	10,8
DF 500-00	D	50	4,9	2500	7000	70				2350	14,4
	C				6500					2200	12,0
	B				6000					2050	9,5
DF 400-00	D	40	4,0	2250	6500	60				2000	11,5
	C				6000					1900	9,5
	B				5500					1800	7,5
DF 300-00	C	30	2,9	1920	5800	55	150	150		1700	6,7
	B				5000					1600	5,3
DF 200-00	C	20	2,0	1600	5000	45	125	125		1400	4,6
	B				4200					1300	3,6
DF 150-00	C	15	1,6	1440	5000	40				1300	3,7
	B				4200					1200	2,8
DF 70-00	B	7	0,7	960	4000	20	65	80	40	800	1,2
	A				3300					700	0,9
DF 30-00	B	3	0,3	640	3500	15	32	65	32	300	0,5
	A				2800					180	0,35

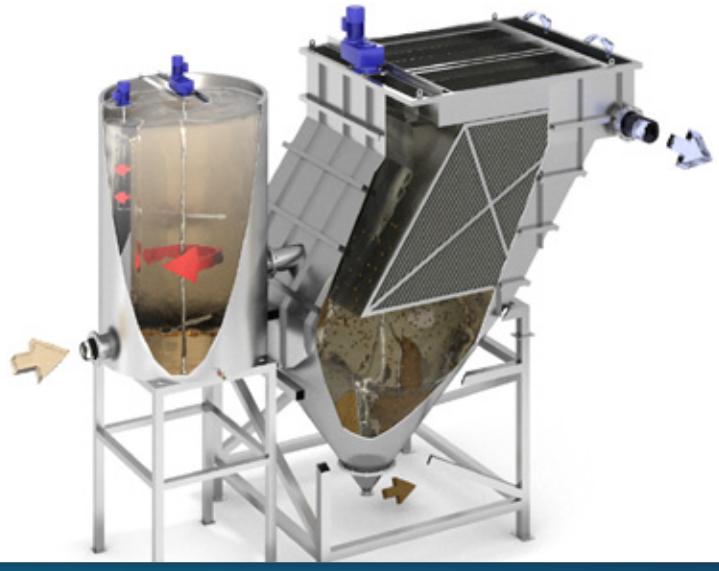
Depending on type selected, the filter may be filled with filtration material of deferent heights:
A 1000mm | B 1500mm | C 2000mm | D 250mm

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings



LAMELLA SEPARATOR DF SLA/SLZ/SLW



Application

Lamella Separator DF SLA/SLZ/SLW is a highly efficient multi-stream separator used in water and wastewater treatment processes, as well as for rinse water recovery from self-cleaning, pressure and gravitational filters. Lamella inserts, assembled under necessary angle, ensure separation of suspension from water or wastewater. The device is produced in three different types: SLA, SLZ, SLW.

Functioning

Raw water/wastewater/rinse water is poured into the flocculation tank, where quick and slow mixing processes occur. Thanks to the specially shaped internal surfaces, the optimal use of the reaction chamber is achieved. The fluid is then gravitationally transferred to the separator chamber, where it is equally distributed to multiple streams flowing between the Lamella inserts. The contaminations sediment on packages surfaces and slip freely to the sedimentation tank bottom. Inside the sedimentation section there is a rotary scraper which preliminarily condenses the sediment. The sludge is periodically drained from the device, automatically or manually. The cleaned fluid flows to the inflow channels located in the upper part of the device, from where it is transferred outside the separator. The sludge is cyclically removed depending on its volume.

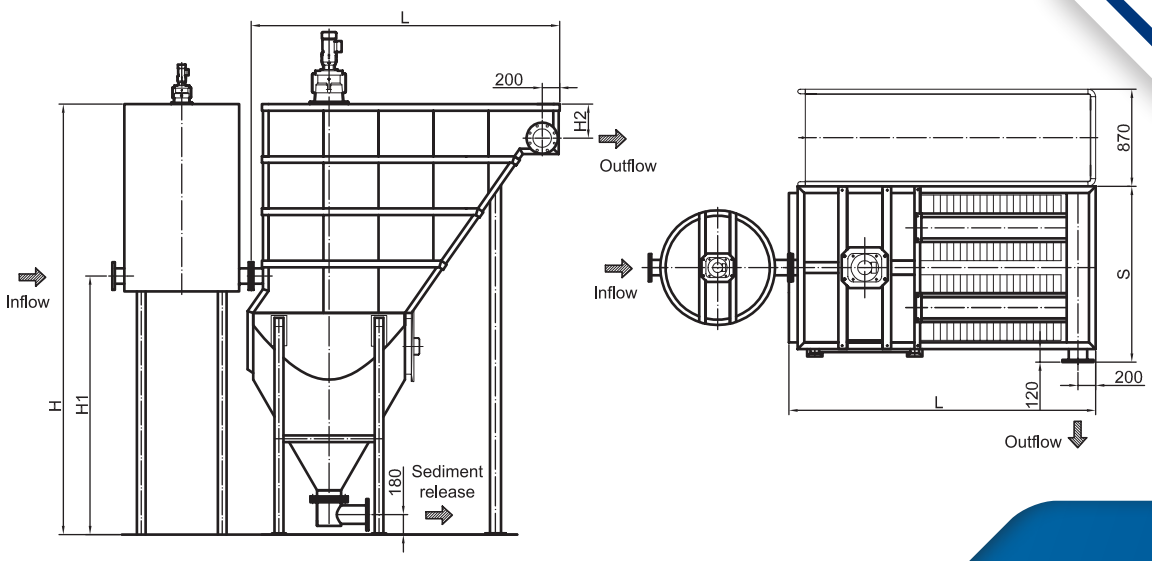
Equipment

- SLA: device equipped with conic sediment collector [sludge scraper as an option].
- SLZ: device equipped with cylindrical sediment collector [sludge scraper as a standard].
- SLW: Lamella packages to be assembled in vertical and horizontal sedimentation tanks.
- Lamella packages are made of steel or plastic.
- Optionally, flocculation tank equipped with quick rotation mixing chamber [option] and slow rotation mixing chamber [standard].
- Power supply – control panel.
- Servicing bridge.
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Hydraulic load: 0,5/1,5m³/m²/h.
- 90% surface saved in comparison to the classic horizontal sedimentation tank.
- 50% investment cost decrease.
- Easy and quick assembling.
- Water/wastewater treatment high efficiency.
- Compatible with self-cleaning, pressure or gravitational filters.
- Adaptable to the existing types of sedimentation tanks. Low maintenance cost.
- PZH (National Institute of Hygiene) certificate.

Construction drawing



Specification

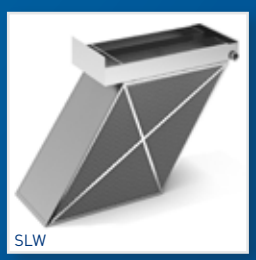
Type	Sedimentation surface in function of distance between the panels [m²]				H [mm]	H1 [mm]	H2 [mm]	L [mm]	S* [mm]	Inlet stub pipes			Motoreductors power [kW]		Device weight [kg]
	50 mm	60 mm	80 mm	100 mm						DN Inflow	DN outflow	DN sediment release	Sludge scraper	Flocculation tank mixers [option]	
DF SLA 10S	10	8	6	5	3300	2200	250	2200	1300	125	125	100	0,12	0,12 + 0,18	1200
DF SLA 15S	15	12	9	7	3500	2300	250	2400	1450	125	150	100	0,12	0,12 + 0,18	1500
DF SLA 25S	25	21	15	12	4000	2400	320	2800	1500	125	150	150	0,25	0,18 + 0,18	1800
DF SLA 40S	40	33	25	20	4800	3100	450	3400	1900	125	150	150	0,37	0,18 + 0,25	3200
DF SLA 60S	60	50	37	30	5500	3200	500	4000	1900	150	200	150	0,37	0,25 + 0,37	4500
DF SLZ 10S	10	8	6	5	3400	1800	250	2600	1800	125	125	100	0,12	0,12 + 0,18	1400
DF SLZ 15S	15	12	9	7	3600	1900	250	2800	1900	125	150	100	0,12	0,12 + 0,18	1700
DF SLZ 25S	25	21	15	12	4100	2000	320	3200	2000	125	150	150	0,25	0,18 + 0,18	2300
DF SLZ 40S	40	33	25	20	4700	2300	450	3700	2400	125	150	150	0,25	0,18 + 0,25	3500
DF SLZ 60S	60	50	37	30	5800	2800	500	4400	2400	150	200	150	0,37	0,25 + 0,37	5000

* In the SLZ separator the S dimension constitutes the total width of the device including the sediment containers. The selection of the flocculation tank is individual, based on treated fluid type and output.
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

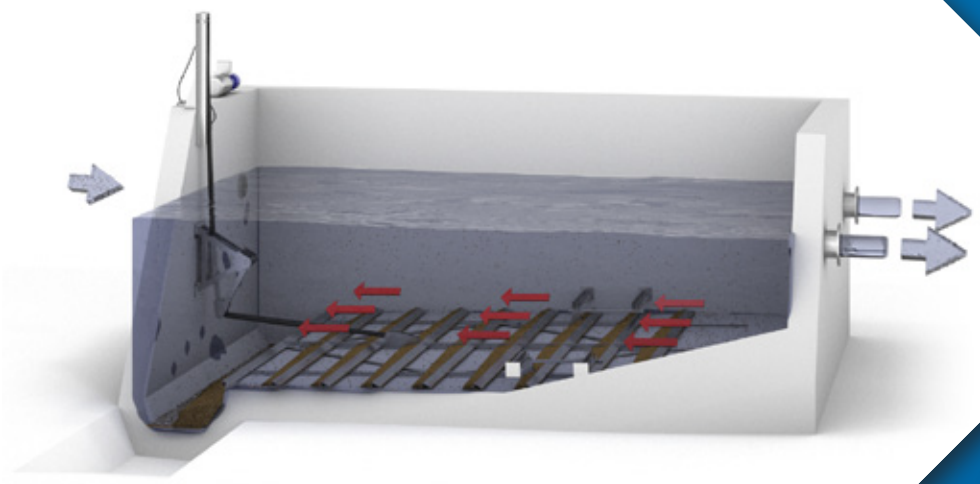
Options


SLA


SLZ


SLW

HORIZONTAL SLUDGE SCRAPER DF ZD



Application

The horizontal sludge scraper is a solution for condensing and removing bottom sludge. The device is used either in water or sewage and industrial wastewater treatment stations. Scraper of unique triangular concave shaped ensure efficient sludge movement in following sedimentation tanks: post-coagulation, preliminary, secondary, as well as desludgers and horizontal sand traps.

Functioning

The movement of sludge collected on the bottom is performed with two evenly assembled scraping parts. They cover the whole chamber bottom in a form of bobbing motion frame which slows down extremely when approaching the contamination release point – 0,1/1,0 m/min, and turning motion is performed three times quicker. Thanks to the unique scrapers shape the sludge is delicately moved towards the release point with a concave parts of them, and the sludge is carried over the scrapers in turning phase thanks to the triangular shape of the board. The innovative structure ensures continuous, constant and undisturbed transporting the sludge towards the release point built of the sedimentation hopper. The additional advantage caused by the above solution is a small whirl created within the sweeper which additionally condenses the sludge. The device may be additionally equipped with bottom measurement and automatic sludge release systems.

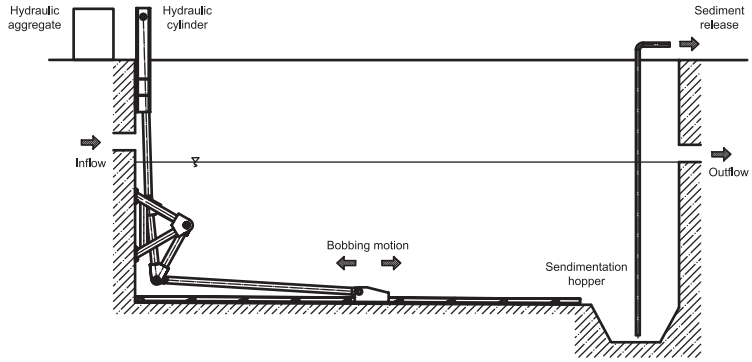
Equipment

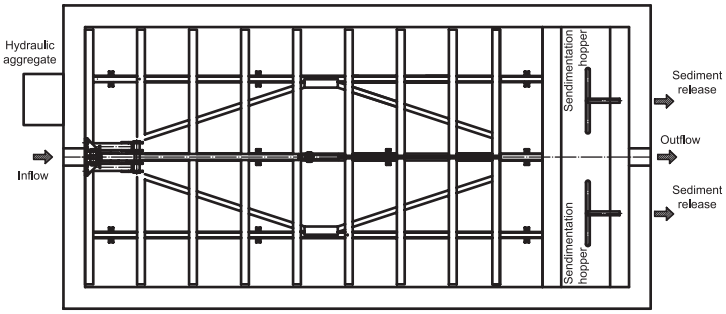
- Horizontal sliding mechanism equipped with set of triangular-concave shaped scrapers.
- Hydraulic cylinder integrated with torque transferring structure.
- Hydraulic aggregate.
- Power supply-control panel.
- Oil leak prevention system.
- Sludge level and density sensor [option].
- Sludge release system using the air, electric or submerged pumps [option].
- Material: stainless steel. Other materials may be used on demand.

Product features

- Triangular-concave sweeping scrapers.
- Small number of loose parts.
- Loose parts made of abrasion resistant materials.
- Transportability of sludge of 0,1÷9% of dry mass.
- Condensation and stabilisation of sludge.
- Compatible with Lamella SLW and floating sludge scrapers.
- Adjustable to the existing sedimentation tanks.
- Low maintenance costs.
- Equal scraping surface.
- High efficiency.
- PZH (National Institute of Hygiene) certificate.

Construction drawing





Specification

Scraper length	up to 50m
Single scraper width	up to 5 m
Scraping movement length	0,5 – 0,75 m
Bobbing motion velocity	individually adjusted
Drive	hydraulical aggregate or electrical motor [option]
Sludge release	air, electric or submerged pumps

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

MULTIFUNCTIONAL VERTICAL PRESSURE FILTER DF FPW

Application

Multifunctional Vertical pressure filter DF FPB is a device used for rapid water filtration. Unique structure dividing filter in two autonomic chambers makes two stages of filtration possible in one device.

Functioning

Water is transferred to the filter through the upper stub pipe, form where it is equally distributed on the filtration bed. Filtration process is carried out in the same manner as in the traditional pressure filter, where water flows down through the filtration material being mechanically cleaned in the same time. Filtrate outflow after first treatment stage is carried through the stub pipe located in lower end cap, where preliminarily cleaned water is supplied through an inflow to the second chamber, where it is transported up through the filtration bed. Treated water is transferred through the duct located in the filtration chamber upper part. Both, filtration and flushing, are automatically regulated. Valves regulation and switching sequences are controlled by the control module provided together with the device.

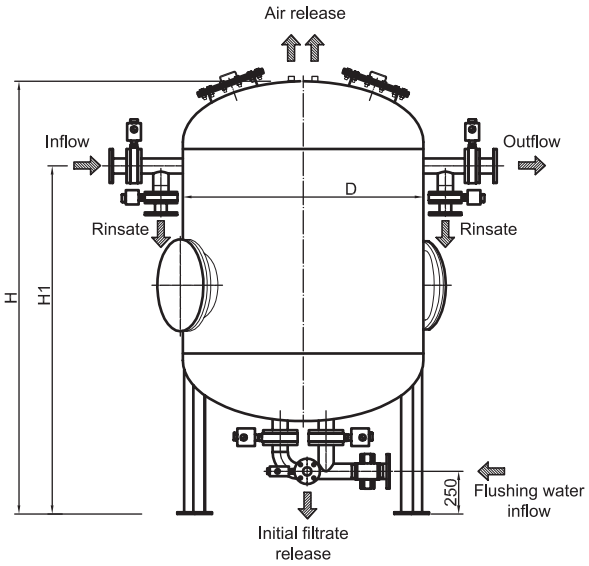
Equipment

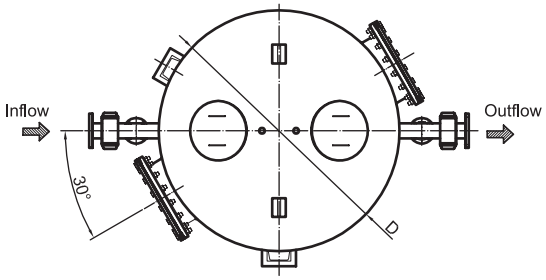
- The tank equipped with two autonomic filtration chambers
- Individually selected filtration bed, depending on treated water physical and chemical parameters.
- Set of automatically controlled valves.
- Air valves.
- Manometers
- Power supply-control panel with control module and wiring.
- Material: stainless steel. Other materials may be used on demand.

Product features

- Patented in Polish Republic Patent Office unique solution enabling two stages of filtration in single device.
- Autonomic flushing of each chamber if required
- Option of simultaneous filtration in both chambers
- Integrated filter control system.
- Ergonomic structure in comparison with traditional filtration systems.
- Removing suspension, turbidity, colour, as well as iron, manganese, ammonium ion and others.
- Pipelines system simplification.
- Purchase and maintenance cost decrease in comparison with two adequate separate traditional filters.

Construction drawing





Specification

Type	Total filter surface [m²]	Single chamber surface [m²]	D [mm]	H [mm]	H_1 [mm]	Stub pipes					Weight [kg]	Working capacity [m³]
						Inlet DN	Outlet DN	Rinsate DN	Flushing water DN	Release DN		
DF FPW 1400	1,54	0,77	1400	2650	2050	65	65	100	100	80	1100	2,8
DF FPW 1600	2,00	1,00	1600	2750	2100	80	80	100	100	80	1300	3,7
DF FPW 1800	2,54	1,27	1800	2850	2150	80	80	100	100	80	1600	4,9
DF FPW 2000	3,14	1,57	2000	3050	2300	80	80	150	150	100	2100	6,3
DF FPW 2200	3,80	1,90	2200	3150	2350	100	100	150	150	100	2400	7,8
DF FPW 2400	4,52	2,26	2400	3250	2400	100	100	150	150	100	2700	9,6
DF FPW 2800	6,16	3,08	2800	3450	2500	100	100	150	150	100	4000	13,9
DF FPW 3000	7,07	3,53	3000	3550	2550	125	125	150	150	100	4400	16,5

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

PRESSURE FILTRATION KIT DF FP

Application

Pressure Filtration Kit DF FP is designed for rapid filtration. The selection of the filtration material ensures the unfailing work of the device with small investment costs. The device is provided in two versions: simplified - filtration tank, or complete – filtration tank with filtration bed.

Functioning

Water is provided to the kit through the inlet stub pipe located in the upper part of shell, where from it is distributed equally on all the filtration bed surface. The contaminations in water are held on the filtration material and cleaned fluid is transferred outside the device with lower stub pipe. Filtration kit may be equipped either with drainage layers or pipes. The selection of filtration bed, its granulation and height depend on physical-chemical parameters of water. The kit may work either with single- and double-media bed.
Optionally the kit may be equipped with the "air-bubble supporting" system inside the device.

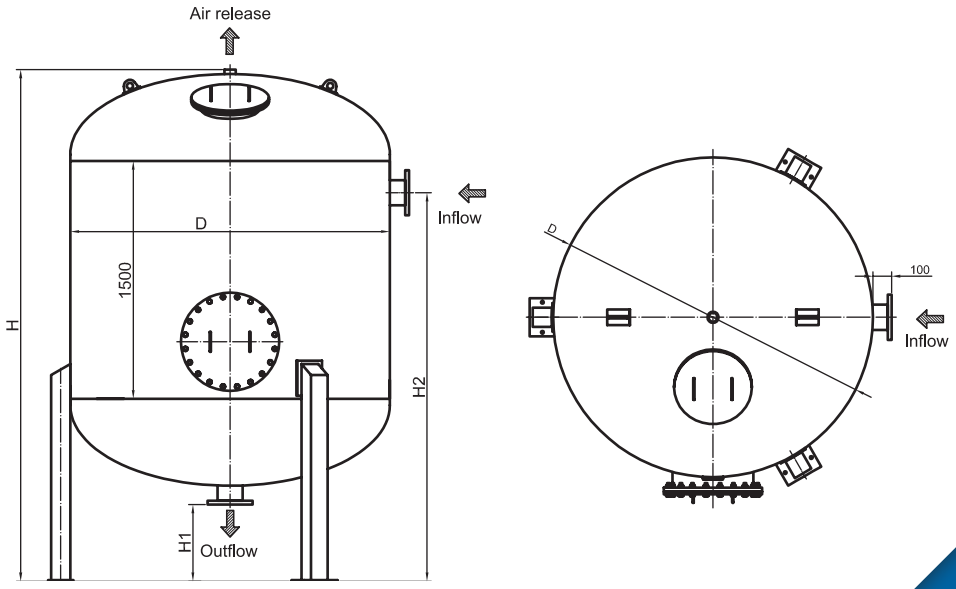
Equipment

- Inlet, outlet, release, compressed air [option] stub pipes.
- "Air-bubble support" system [option]
- Inspection or charging stub pipe.
- Filtration drainage layers or pipes.
- Filtration bed [option].
- Fittings [option].
- Survey and control equipment [option].
- Manometers [option].
- Air release valve [option].
- Material: stainless steel. Other materials may be used on demand.

Product features

- Removal of suspension, turbidity, colour, as well as iron, manganese compounds, ammonium ions and others.
- Wide range of used materials: stainless steel, painted or zinc coated engineering steel, chemically resistant materials.
- Plastic or stainless steel filtration nozzles with filtrating slit 0,2 or 0,5 mm wide.
- Nominal pressure 6 bar or 10 bar [option].
- Recognised and tested solutions.
- Low investment and maintenance costs.
- PZH (National Institute of Hygiene) certificate.

Construction drawing



Specification

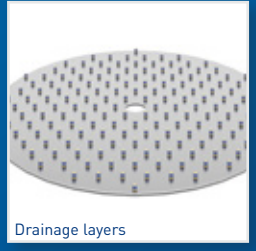
Type	Filtration surface [m²]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	Stub pipes		Weight [kg]	Working volume [m³]
						DN inlet	DN outlet		
DF FP 1000	0,78	1000	2500	300	1900	65	65	500	1,5
DF FP 1200	1,13	1200	2600	320	1970	80	80	650	2,2
DF FP 1400	1,54	1400	2700	320	2000	80	80	800	3,2
DF FP 1600	2,00	1600	2900	360	2100	100	100	1000	4,2
DF FP 1800	2,54	1800	3000	360	2160	100	100	1300	5,5
DF FP 2000	3,14	2000	3100	360	2200	100	100	1700	7,1
DF FP 2200	3,80	2200	3250	440	2340	150	150	2100	8,8
DF FP 2400	4,52	2400	3350	440	2400	150	150	2300	10,8
DF FP 2800	6,16	2800	3600	440	2500	150	150	3200	15,5
DF FP 3000	7,07	3000	3700	440	2550	150	150	3800	18,2

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

Options


Drainage pipes


Drainage layers

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VERTICAL PRESSURELESS FILTER DF FPB

Application

Vertical pressureless filter DF FPB is a device used for rapid water filtration. Depending on filtration material chosen the device may be used for treatment of water with increased content of iron, manganese ammoniac as well as with suspension, turbidity and colour. Because of its tight structure, unlike traditional open filters, the device may filter ozonised water without increasing ozone condensation in the air around.

Functioning

Water is transferred to the filter through the upper stub pipe, form where it flows down to the filtration bed. Fluid flowing downwards is cleaned by the filtration material. Selection of the filtration bed, its granulation, filtration layer thickness is dependent on water physical and chemical parameters, as well as on technological process implemented. The filtrate release is carried out through the filtration nozzles. The filter may completely tight which makes it useful in the final ozonised water treatment process stage as a carbon filter.

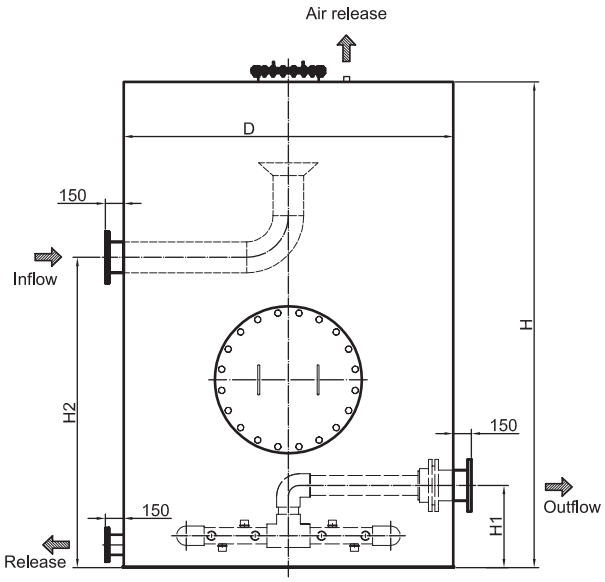
Equipment

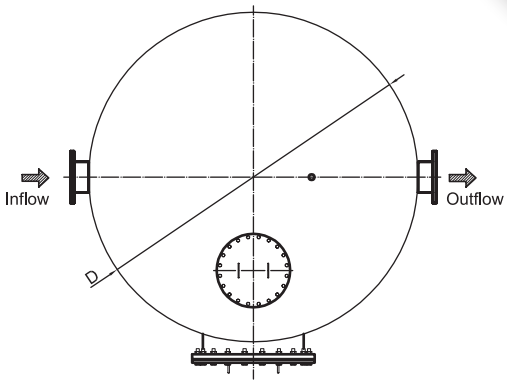
- Inlet, outlet, release, compressed air stub pipe [option],
- Charging and inspection hatches.
- Filtration drainage pipes.
- Filtration bed [option].
- Survey and control automated equipment and fittings [option].
- Residual ozone destruction system [option].
- Material: stainless steel. Other materials may be used on demand.

Product features

- Removing suspension, turbidity, colour, as well as compounds of iron, manganese, ammonium ion and others.
- Wide range of used materials: stainless steel, painted or zinc coated engineering steel, chemically resistant materials.
- Plastic or stainless steel filtration nozzles with filtrating slit 0,2 or 0,5 mm wide.
- Low investment and maintenance costs.
- PZH (National Institute of Hygiene) certificate.

Construction drawing





Specification

Type	Filtration surface [m²]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	Stub pipes			Weight [kg]	Working volume [m³]
						DN inlet	DN outlet	DN Rinsate		
DF FPB 1000	0,78	1000	2500	500	1800	65	65	32	500	1,65
DF FPB 1200	1,13	1200	2500	500	1800	80	80	32	570	2,37
DF FPB 1400	1,54	1400	2500	500	1800	80	80	40	650	3,23
DF FPB 1600	2,00	1600	2500	500	1800	100	100	40	750	4,22
DF FPB 1800	2,54	1800	2500	500	1800	100	100	40	850	5,34
DF FPB 2000	3,14	2000	2500	500	1800	100	100	40	950	6,60
DF FPB 2200	3,80	2200	2500	500	1800	150	150	50	1100	7,98
DF FPB 2400	4,52	2400	2500	500	1800	150	150	50	1500	9,50
DF FPB 2800	6,16	2800	2500	500	1800	150	150	50	1800	12,93
DF FPB 3000	7,07	3000	2500	500	1800	150	150	50	2000	14,84

The devices may be individually adjusted to the investor's requirements.
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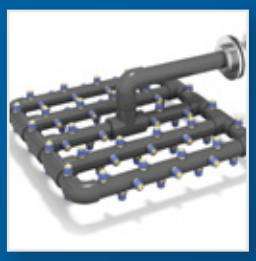
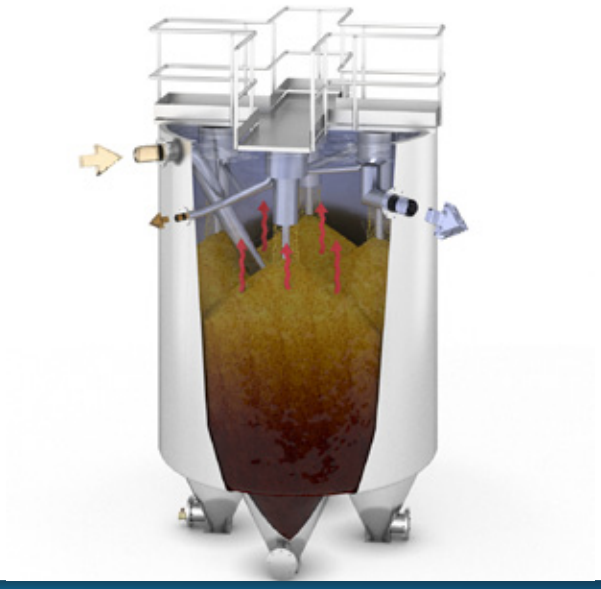
Detailed drawings



SELF-CLEANING FILTER DYNAMIK DF MULTI



Application

Self-cleaning Filter DYNAMIK DF Multi is a multi-stream pressureless device of constant operation used for water treatment. Large filtration surface with continuous bed cleaning process constitutes an efficient alternative for the traditional open filters.

Functioning

Multi filter is a continuation of the DYNAMIK DF filters concept, which helped to preserve the same functions. Implementation of DF Multi filters enabled to obtain larger filtration surfaces with slightly increased device dimensions. The above has been achieved thanks to four minor lower cones and four autonomic, parallel bed cleaning systems.

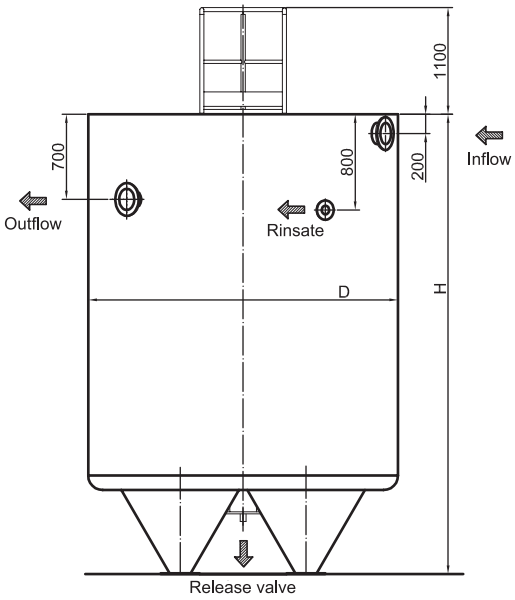
Equipment

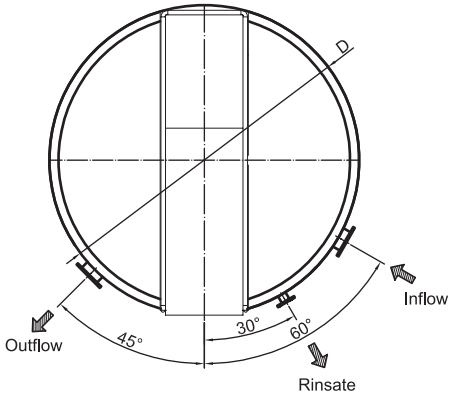
- Innovative filtrated fluid distribution system, equipped with inspection plugs enabling periodical maintenance without removing bed from the device.
- Four air pumps used for contaminated bed transportation.
- Four air-water sand wash baths.
- Power supply and control panel.
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Large filtration surface in relatively small device.
- Saved space in comparison with single filters of similar filtration surface.
- Continuous filtration with constant filtration bed cleaning process.
- Highly efficient removal of suspension, turbidity, colour, as well as compounds of iron, manganese, ammonium ions and others, reduction of suspension and BOD5 in the final wastewater treatment process.
- Possibility of nitrification and denitrification in order to remove nitrogen compounds from the wastewater (special version).
- Simple structure and easy operation.
- Low operation costs.
- No automatic valves and complicated operations systems necessary.
- Higher filtration payers in comparison with the conventional filters.
- Pressureless device – no necessity of UDT (Office of Technical Inspection) control
- Device used in contact coagulation, elimination of "first filtrate" losses.
- No loose parts.
- PZH (National Institute of Hygiene) certificate.

Construction drawing





Specification

Type		Filtration surface [m²]	D [mm]	H [mm]	Stub tubes			Weight [kg]
					DN inlet	DN outlet	DN rinsate	
DF MULTI 800	C	8,0	3200	4700	200	200	80	3900
	D			5200				4200
DF MULTI 1000	C	10,0	3600	4850	200	200	80	4500
	D			5350				4800
DF MULTI 1250	C	12,5	4000	5000	250	250	80	5000
	D			5500				5200
DF MULTI 1400	C	14,0	4200	5100	250	250	80	5800
	D			5600				6100

Depending on type selected, the filter may be filled with filtration material of different heights:
C 2000mm | D 250mm

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

FILTRATION BED MULTIMAN 3M

Application

Manganese dioxide catalytic MULTIMAN 3M bed is a highly efficient natural filtration granulate, composed mainly of manganese ore. MULTIMAN 3M is used in treatment of potable water with high manganese and iron content. It may be used either in quick pressure filtration or open and closed gravitational filters. MULTIMAN 3M bed complements filtration gravel, anthracite or MULTIMAN 2N in single stage filtration. In double stage filtration it is used in the second stage as a separate demanganising layer.

Functioning

MULTIMAN 3M bed functions as a insoluble catalyst accelerating the manganese compounds oxidation which enables its separation from water in form of insoluble manganese dioxide and its sorption on bed surface and in its deeper layers.
The bed has large specific surface, which results with efficient removal of colloidal structures which cause raw water turbidity and extending the filtering cycle which brings obvious economic profits.
MULTIMAN 3M is an insoluble catalyst, so it doesn't wear out! It is revered by air – water countercurrent washing, which removes suspension collected on bed granulate surfaces

Technology

Bed height (filtration layer thickness) and filtration speed is adjusted on the basis of raw water physical and chemical parameters.

Product features

- No bed start-up necessity – the bed works right after being applied.
- No necessity of chemical recovery.
- No necessity of chemical substances to be applied in raw water.
- Easy applicable in the existing filtration systems, water treatment stations with no need to reconstruct them.
- Thanks to the large specific surface the filtering cycle extends, which brings economical profits.
- High tolerance for contaminations condensation changes in the fluid.

Specification

MULTIMAN 3M	
Name	Manganese dioxide, catalytic bed, demanganiser, pyrolusite
Appearance	brown – black granulate, irregular shape, porous surface, sharp edges
Granulation	standard: 1,0-3,0 mm and 0,8-2,5 mm
Bulk density	ar. 2,0 Mg/m^3
Specific gravity	4,0 – 4,2 Mg/ m^3
SiO_2 content	to 82 %
Porosity	up to 3%
Package	bags 25, 50 kg on palettes
Applied filtration speeds	7-15 m/h
Bed expansion	25%
Water ph	to 7,0
Max. Fe content	up to 15 mg Fe/dm^3
Max Mn content	up to 1,5 Mn/dm^3

Product photos

www.dynamicfilter.ie

FILTRATION BED MULTIMAN 2N

Application

MULTIMAN 2N filtration bed consists mainly of cryptocrystalline silica. It has very wide specific surface, much larger than the quartz sand. MULTIMAN 2N is used as a filler in many kinds of filters: gravitational [open and closed], pressure; it is used for treatment of water with high iron and ammonium ion content. Used together with MULTIMAN 3M catalytic bed it forms a multilayer [one / multiple stage filtration] / multistage [two stage filtration] system for raw water deironing, demanganising and ammonium ion removal, and thanks to high porosity it may be also used to remove colloidal structures causing raw water turbidity.

Functioning

MULTIMAN 2N filtration bed is used as the first filtration layer used for suspension (e.g. oxidised iron) holding, thanks to its large internal surface being great environment for the bacterial microflora helping in ammonium ion/ammoniac oxidising – nitrifying bacteria. Thanks to the density difference comparing to MULTIMAN 3M, the filtration layers do not mix during the process. High porosity extends the filtering cycle and accelerates the process.

Technology

Bed height (filtration layer thickness) and filtration speed is adjusted on the basis of raw water physical and chemical parameters.

Product features

- Thanks to the large specific surface the filtering cycle extends, which brings economical profits.
- High tolerance for contaminations condensation changes in the fluid.
- Easy applicable in the existing filtration systems, in operating water treatment stations without necessity of their reconstruction.
- High weight capacity.
- Natural product.
- Possibility of increased filtration speeds.

Specification

MULTIMAN 2N	
Appearance	grey – white granulate, irregular shape, porous surface
Granulation	standard: 0,8-2,00mm other granulation on customer's demand
Bulk density	0,85-1,1Mg/m³
Specific gravity	2,65 Mg/ m³
Zawartość SiO_2	above 94%
Porosity	up to 30%
Package	bags 25 kg on palettes or big bags 1 m³
Applied filtration speeds	7-20 m/h
Bed expansion	25%
Max. Fe content	up to 15 mg Fe/dm³
Max NH3 content	up to 3,0 NH3/dm³

Product photos

www.dynamicfilter.ie

AERATION BLOCK DF WA

Application

Aeration Tower DF WA is a pressureless device used for water aeration and degasification equipped with the injection air-water mixing system. The device may be also used as a reactor. The tower structure enables using it both, in indoor and outdoor conditions.

Functioning

Water is supplied to the lower part of tower, where from it is transferred to the upper part, where injection air-water mixer is assembled. Then, the air-water mixture is transferred to the cascade-splash grate where it is intensively sprayed. Naturally aerated and degasified water is collected in the reactor, where compounds oxidation and degasification processes are continued. The natural water aeration is supported by the extraction fans assembled on the tower top. In order to limit suspension sedimentation the device bottom is equipped with grate loosening the sediment. The water level is adjusted regarding the hydrostatic, conductometric or floating probes indications.

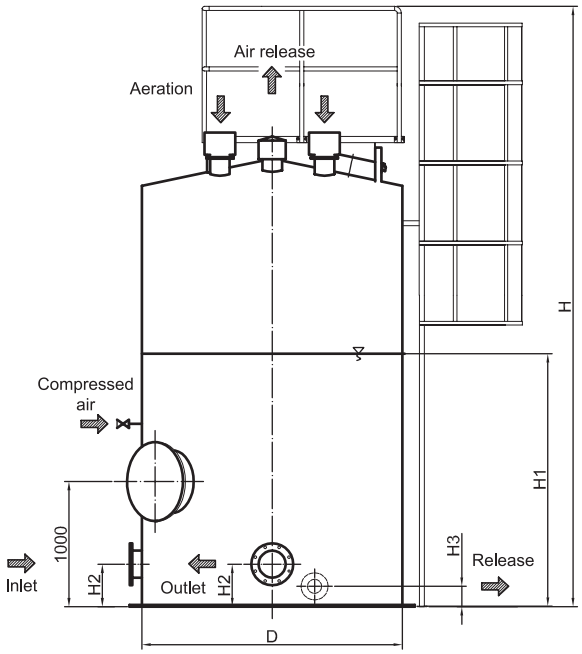
Equipment

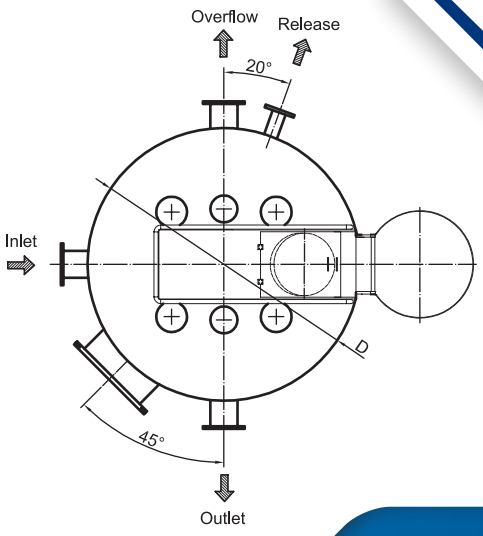
- Water aeration injector.
- Internal piping.
- Exhaust fans supporting water aeration/degasification process.
- Pneumatic sediment loosening system.
- Reactor chamber adjustable to water individual chemical and physical parameters [option].
- Hydrostatic/conductometric/floating probes water level measuring [option].
- Power supply-control panel [option].
- Winter package enabling outdoor installation of the device (option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Air-water mixing injector.
- Cascade-splash grates system.
- Outlet water aeration grade 8-11mgO_2/dm^3.
- Iron, manganese, ammonium ion and other compounds oxidation.
- Highly efficient [more than the pressure aeration] removal of aggressive CO_2 and hydrogen sulphide.
- Low maintenance costs.
- PZH (National Institute of Hygiene) certificate.

Construction drawing





Specification

Type	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Stub pipes				Weight [kg]	Total volume [m³]
						DN inlet	DN outlet	DN overflow	DN release		
DF WA 1000	1000	10500	Dobór indywidualny	180	120	150	150	150	80	2500	5,5
DF WA 1500	1500	10500		210	120	200	200	200		2900	12,0
DF WA 2000	2000	11000		240	120	250	250	250		3600	22,0
DF WA 2300	2300	11000		240	120	250	250	250		4000	29,0
DF WA 2500	2500	11500		270	120	300	300	300		5200	34,0
DF WA 3000	3000	11500		320	120	400	400	400		6300	50,0
DF WA 3500	3500	11500		320	120	400	400	400		7400	67,0
DF WA 4000	4000	11500		370	120	450	450	450		8500	87,0

The reactor's volume [H1] is selected individually on a basis of water paramters and technology used.
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

AERATION BLOCK DF BA

Application

Aeration Block DF BA is a highly efficient device used for pressure water aeration. Innovative connection of an air bubble cascade aerator equipped with a an injection air-water mixing system, which ensures intense outlet water aeration.

Functioning

Water supplied is intensively aerated with the inlet pipeline injector powered with the air recycled from the aerator main chamber. The water-air mixture is transferred to the crest in the device upper part, where from it drops down to the splash tray. Air bubble support system ensures maximum extension of compressed air contact with water. Air-water mixture flows down to the reactor, where compounds found in water are subject to further oxidation. The compressed air should be supplied to the device under pressure exceeding the one of the treated water. The aerator is equipped with gas release stub pipe assembled in the reactor, as well as stub pipe used for the compressed air recycling. The aeration innovative solution ensures optimization of the process with minimum operation expenses, in comparison with traditional solutions.

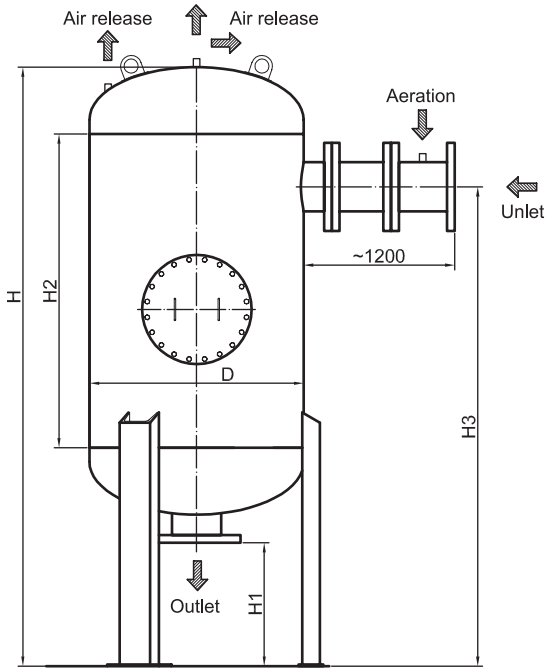
Equipment

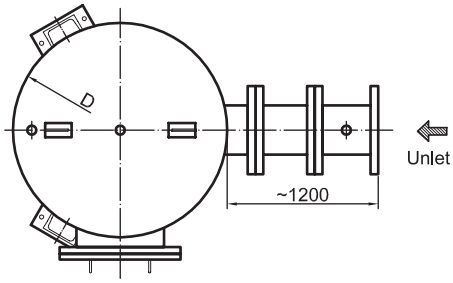
- The injector integrated with the device ensuring efficient treated water aeration.
- Automatically controlled air bubble.
- Compressed air automatic recycling system.
- Automatic device gas release system.
- Power supply-control panel [option].
- Material: stainless steel. Other materials may be used on demand.

Product features

- Pressure aerator equipped with air bubble mechanism.
- Injector and controlled air bubble water aeration.
- Compressed air recycling.
- Outlet water aeration : > 8 mgO_2/dm^3
- Iron, manganese, ammonium ion and other compounds oxidation.
- Aggressive CO_2 and hydrogen sulphide removal.
- Low operation costs in comparison with traditional solutions.
- PZH (National Institute of Hygiene) certificate.

Construction drawing





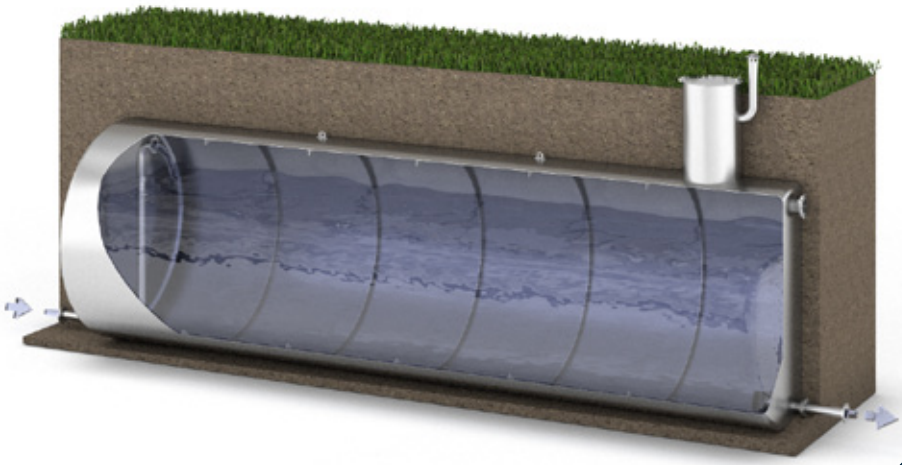
Specification

Type	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Stub pipes		Weight [kg]	Total volume [m³]
						DN inlet	DN outlet		
DF BA 600	600	2100	400	1200	1800	125	125	230	0,41
DF BA 800	800	2200	400	1200	1850	125	125	300	0,77
DF BA 1000	1000	2600	400	1500	2200	125	125	340	1,50
DF BA 1200	1200	2800	440	1500	2300	150	150	400	2,24
DF BA 1400	1400	3400	440	2000	2850	150	150	580	3,92

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand

Detailed drawings

HORIZONTAL WATER STORAGE TANK DF ZWH



Application

The Horizontal Water Storage Tank DF ZWH is used for raw and treated water storage purposes in water intakes, water treatment and pumping stations. The device may be used also as a grid distribution tank.
- water retention for the peak distribution,
- ensuring necessary access of disinfectants to water,
- ensuring necessary water supply for the fire-fighting purposes and filters cleaning.

The structure enables to use the tank either in above or underground applications.

Equipment

- Inlet, outlet, overflow and release stub pipes.
- Hatch duct with inspection hatch.
- Ventilation duct.
- Insulation secured against damaging and weather [for the above ground tanks].
- Additional anti-freeze control with heat wire [option].
- Tank filling control fittings – mechanical – floating valves, or electronic – water level probes [option].
- PZH (National Institute of Hygiene) certificate.

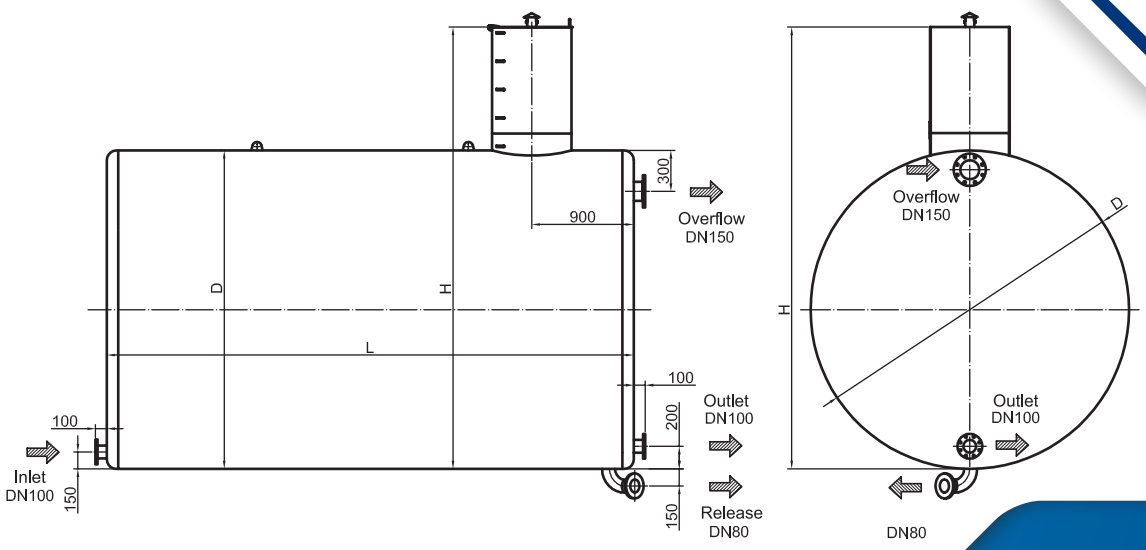
Structure

The tank is made of welded engineering or stainless steel. The standard device is equipped with boiler ends inlet, outlet, overflow and release stub pipes. The diameters may be adjusted on customer's demand. The above ground tank version is insulated with heat insulating material protected against mechanical damage and weather influence. The cover colour may be at customer's choice [RAL range].

The engineering steel tank is protected against corrosion with:
- from inside – thick layer of epoxy enamel used for contact with food products, ar. 300 µm thickness,
- from outside – epoxy anti-corrosion background ar. 140 µm thickness, and bituminous fiberglass based paint of colour selected on order [RAL range].

Different materials may be used on demand.
Additional part included is strainer with return flow valve.
The underground tank should be assembled in previously prepared and stabilised trench, while the above ground version should be assembled on previously prepared foundation.

Construction drawing

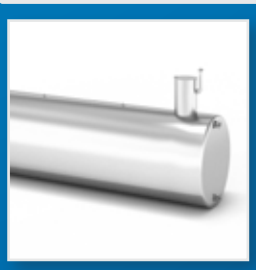


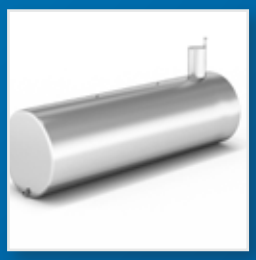
Specification

Type	D [mm]	H [mm]	L [mm]	Weight [kg]	Working capacity [m³]
DF ZWH 25	2800	3900	4750	2700	25
DF ZWH 50	2800	3900	9250	4200	50
DF ZWH 75	2800	3900	13000	6400	75

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings





ABOVE GROUND WATER STORAGE TANK DF ZWV

Application

The Above Ground Water Storage Tank DF ZWV is used for raw and treated water storage purposes in water intakes, water treatment and pumping stations. The device may be used also as a grid distribution tank.
The tank's functions are:
- water retention for the peak distribution,
- ensuring necessary access of disinfectants to water,
- ensuring necessary water supply for the fire-fighting purposes and filters cleaning.

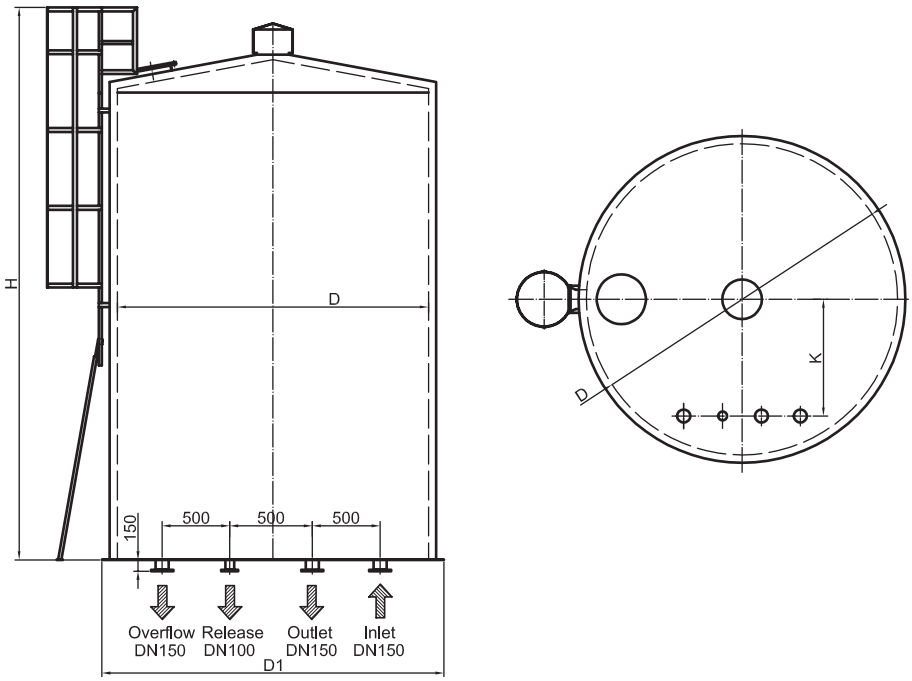
Equipment

- Inlet, outlet, overflow and release stub pipes and stub pipes used for survey probes assembly.
- External and internal ladder.
- Inspection hatch.
- Servicing bridge [option].
- Ventilation duct.
- Insulation secured against damaging and weather.
- Additional anti-freeze control with heat wire [option].
- PZH (National Institute of Hygiene) certificate.

Structure

The tank is made of welded engineering or stainless steel. The standard device is equipped with bottom inlet, outlet, overflow and release stub pipes. The diameters may be adjusted on customer's demand. Special stub pipes are used for assembling survey probes. The tank is insulated with heat insulating material protected against mechanical damage and weather influence. The cover colour may be at customer's choice [RAL range].
The engineering steel tank is protected against corrosion with:
- from inside – thick layer of epoxy enamel used for contact with food products, ar. 300 µm thickness,
- from outside – epoxy anti-corrosion background ar. 140 µm thickness, coloured at order [RAL range].
Different materials may be used on demand.

Construction drawing



Specification

Typ	D [mm]	D1 [mm]	H [mm]	K [mm]	Weight [kg]	Working capacity [m³]
DF ZWV 75	4000	4260	7400	1500	4300	75
DF ZWV 100	4500	4760	7800	1700	5000	100
DF ZWV 150	4500	4760	11000	1700	6500	150
DF ZWV 250	8000	8260	6500	3000	17000	250

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

AUTOSEP SAND TRAP
DF MULTI SB/SP/KP

Application

Autosep DF Multi SB/SP/KP Sand Trap is a device used for a complete mechanical filtration of sewage and industrial wastewater. The combination of mutually compatible devices ensures process optimisation and saves operation space. Sand wash bath, integrated with the sand trap chamber makes the solution exceptional in the market of mechanical wastewater treatment solutions.

Functioning

Wastewater flowing into the sand trap are transferred to the integrated sprue chamber where they get loosened. Then the fluid flows to the filtering block, where solid parts are separated. Screenings are held on following parts, depending on the device model:
SB: Rotary slotted sieve drum with worm conveyor.
SP: Fixed, cleaned perforated sieve with worm conveyor and sweeping brushes.
KP: Slotted grid with sweeping combs.
Sieve/drum/grid automatic cleaning system is enclosed depending on wastewater level increase outside the device. The screenings are additionally cleaned, and in SB and SP devices are also drained in their compressing-draining segments. The preliminarily treated wastewater is transferred to the sand trap chamber, where it is aerated, which supports light solid matter and fat floatation. In sand trap the sand and other mineral elements sedimentation occurs. Sand collected in the bottom is transported to the sand wash bath where it is cleaned with water and compressed air. Clean sand is removed outside the device with the worm conveyor. In the upper part of sand trap the flotate sweeper (mixer) is assembled, which transports fat to the chamber, from where it is pumped or transported gravitationally.

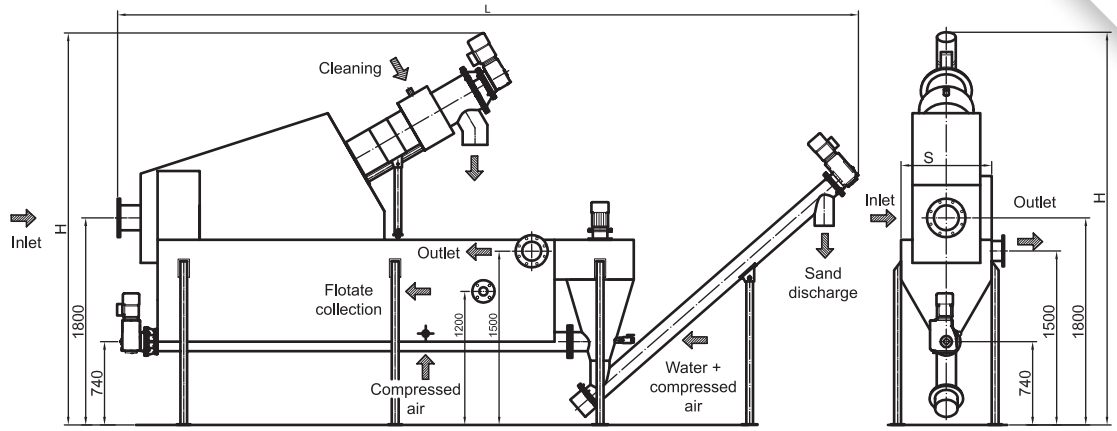
Equipment

- Diagonal slotted rum sieve [SB], perforated diagonal sieve [SP], or slotted grid.
- Drum/perforation automatic cleaning system, by-pass chamber with manually operated grid [option].
- Screenings cleaning and compressing system - compressing-draining block [option].
- Screenings bagging system [option].
- Horizontal sand trap with worm conveyor.
- Fine-bubble wastewater aeration system [option].
- Aeration fan [option].
- Automatic flotate and fat collection system [option].
- Fat pump [option].
- Integrated sand wash bath with slow rotation sweeper.
- Air-water sand cleaning system .
- Diagonal worm conveyor with reverse motion mode.
- Power supply-control panel.
- Ex version [option].
- Winter package enabling outdoor installation of the device (option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Innovative solution enabling sand cleaning in the integrated final cleaning chamber .
- Modular structure.
- All mechanical wastewater treatment processes in one device.
- Device dimensions functional and ergonomic optimisation .
- Solid contamination removal process hermetisation.
- Sand removal: 90-95% for grains > 0,2mm.
- Sand organic content reduction: max 99%.
- Screenings drainage 20%-60%.
- Screenings weight reduction 30%-60%.

Construction drawing

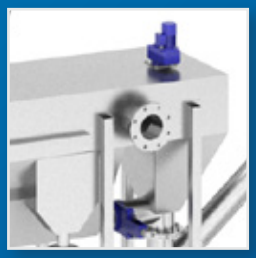


Specification

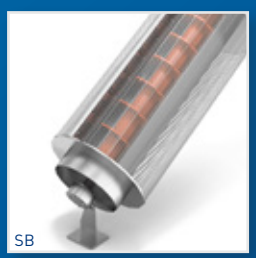
Type	Capacity [dm³/s]	S [mm]	L [mm]	H [mm]	Stub pipes			Drive power			
					DN inlet	DN outlet	DN release	Sieve [kW]	Diagonal conveyor [kW]	Horizontal conveyor[kW]	Rotary slow motion mixer [kW]
DF MULTI SB / SP / KP 20	20	850	5800	3500	150	200	65	0,55	0,37	0,37	0,25
DF MULTI SB / SP / KP 40	40		7000	4000	200	250		0,55	0,37	0,55	0,25
DF MULTI SB / SP / KP 50	50		8000	4500	250	300		0,75	0,37	0,55	0,25
DF MULTI 7 SB / SP / KP 0	70	1200	10200	4500	350	400	80	0,75	0,55	0,55	0,25
DF MULTI SB / SP / KP 100	100		14200	5000	400	450		1,10	0,55	0,55	0,25

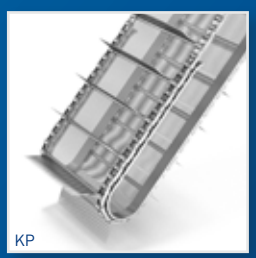
The capacities given concern perforation/slots 3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings



Options





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AUTOSEP SAND TRAP
DF SB/SP/ KP

Application

Autosep Sand Trap DF SB/SP/KP is a multifunctional mechanical sewage and industrial wastewater treatment device. The device structure enables efficient separation of both, screenings as well as mineral elements and flotate.

Functioning

The wastewater stream is first slowed down in the loosening chamber from where it flows to the filtration segment, where solid bodies are separated. Depending on model selected, the screenings are held by:
SB: Rotary slotted sieve drum with worm conveyor.
SP: Fixed, cleaned perforated sieve with worm conveyor and sweeping brushes.
KP: Slotted grid with sweeping combs.
Sieve/drum/grid automatic cleaning system is enclosed depending on wastewater level increase outside the device. The screenings are additionally cleaned, and in SB and SP devices are also drained in their compressing-draining segments. The wastewater filtered from solid elements flows to the rectangular sand trap chamber, where it is aerated, which supports light elements and fat floatation. The sand held in the sand trap is moved by the worm conveyor to the collection chamber. The upper part of the sand trap is equipped with sweeper, which transports fat to the chamber, from which it is pumped or transferred gravitationally

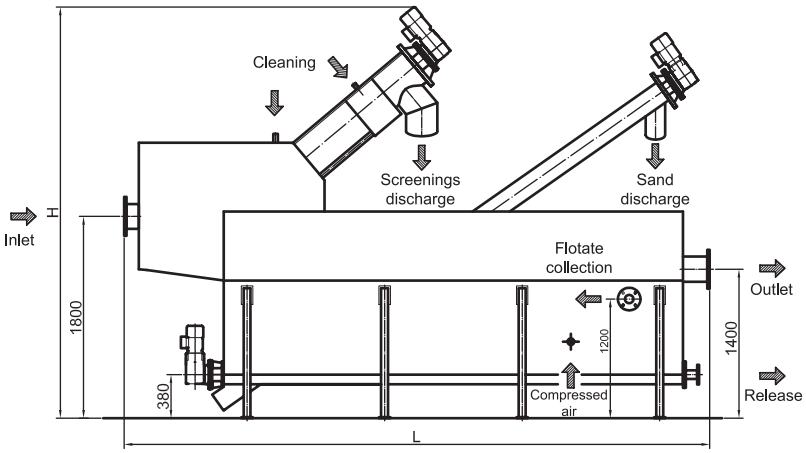
Equipment

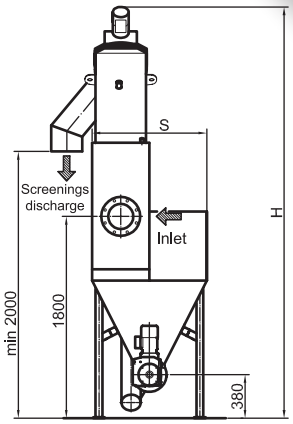
- Diagonal slotted drum sieve [SB], perforated diagonal sieve [SP], or slotted grid.
- Drum/perforation automatic cleaning system, by-pass chamber with manually operated grid [option].
- Screenings cleaning and compressing system - compressing-draining block [option].
- Screenings bagging system [option].
- Horizontal sand trap with two worm conveyors – diagonal and horizontal equipped with reverse motion mode.
- Fine-bubble wastewater aeration system [option].
- Aeration fan [option].
- Automatic flotate and fat collection system [option].
- Fat pump [option].
- Power supply-control panel.
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- All mechanical wastewater treatment processes in one device.
- Device dimensions functional and ergonomic optimisation.
- Solid contamination removal process hermetisation.
- Sand removal: 90-95% for grains > 0,2mm.
- Sand organic content reduction: max 99%.
- Screenings drainage 20%-60%.
- Screenings weight reduction 30%-60%.

Construction drawing



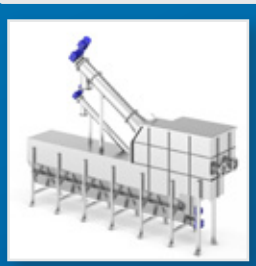


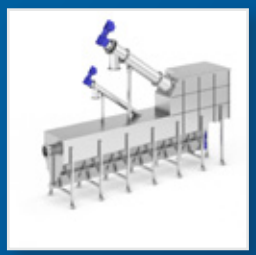
Specification

Type	Capacity [dm³/s]	S [mm]	L [mm]	H [mm]	Stub pipes			Drive power		
					DN inlet	DN outlet	DN release	Sieve [kW]	Diagonal conveyor [kW]	Horizontal conveyor [kW]
DF SB / SP 20	20	850	5000	3500	150	200	65	0,55	0,55	0,37
DF SB / SP 40	40		6200	4000	200	250		0,55	0,55	0,37
DF SB / SP 50	50		7200	4500	250	300		0,75	0,75	0,55
DF SB / SP 70	70	1200	9500	4500	350	400	80	0,75	0,75	0,55
DF SB / SP 100	100		13500	5000	400	450		1,10	0,75	0,55
DF KP 20	20	850	4500	3000	150	200	65	0,55	0,55	0,37
DF KP 40	40		5700	3500	200	250		0,55	0,55	0,37
DF KP 50	50		6700	4000	250	300		0,75	0,75	0,55
DF KP 70	70	1200	9000	4500	350	400	80	0,75	0,75	0,55
DF KP 100	100		13000	4500	400	450		1,10	0,75	0,55

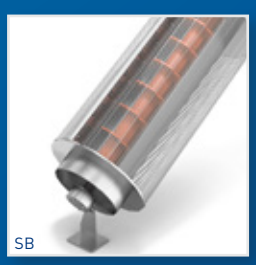
The capacities given concern perforation/slots 3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

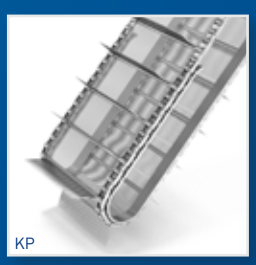
Detailed drawings





Options





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AUTOSEP SAND TRAP
DF SWB/SWP

Application

Autosep Sand Trap DF SB/SP/KP is a multifunctional mechanical sewage and industrial wastewater treatment device. The combination of compatible equipment components and small dimensions of the whole device make it an interesting alternative for the traditional solutions.

Functioning

The wastewater entering the device flow into the integrated loosening chamber from where they are transferred to the filtering segment, where solid parts are separated. Depending on the model, the screenings are held by:
SWB: slotted sieve drum with worm conveyor.
SWP: Fixed, cleaned perforated sieve with worm conveyor and sweeping brushes.
Screenings held by the sieve are transported up to the draining-compressing segment, where they are washed and drained. After, the wastewater without screenings is gravitationally transferred to the centrifugal sand trap assembled under the sieve, where it is aerated in order to support light solid matter and fat floatation.
The sand trap is integrated with the fat trap, from which the flotate is transported outside the device. Sand collected on the bottom is transferred through the draining worm conveyor.

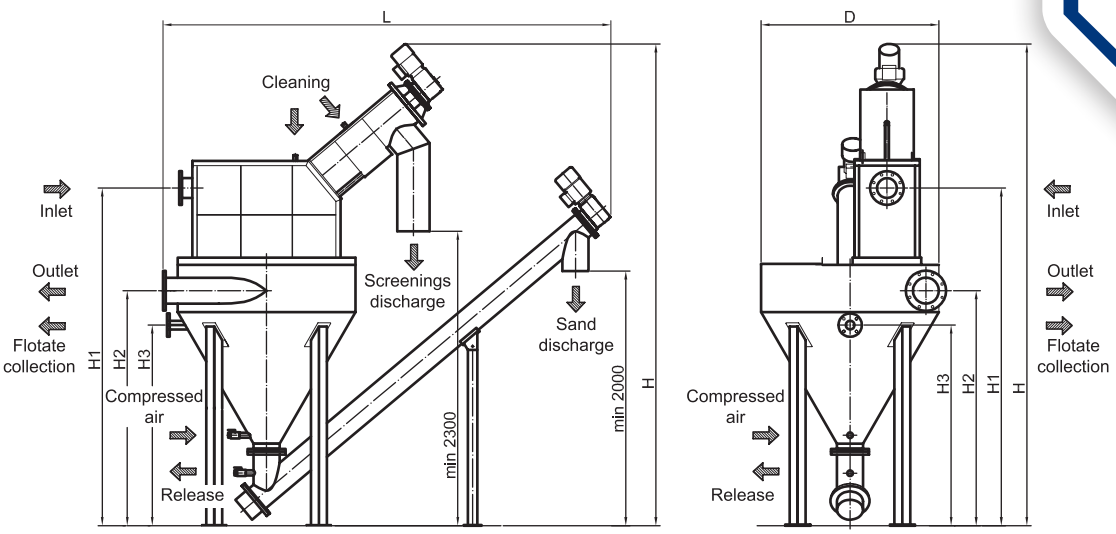
Equipment

- Diagonal slotted drum sieve [SWB], perforated diagonal sieve [SWP].
- Drum/perforation automatic cleaning system.
- Screenings cleaning and compressing system [option].
- Screenings bagging system [option].
- Centrifugal sand trap equipped with reverse mode worm conveyor.
- Fine-bubble wastewater aeration system [option].
- Aeration fan [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Modular device structures.
- Simplified structure [with preservation of full functionality] in comparison with conventional solutions based on horizontal sand traps.
- Solid contamination removal process hermetisation.
- Sand removal: 90-95% for grains > 0,2mm.
- Screenings drainage 20%-60%.
- Screenings weight reduction 30%-60%.

Construction drawing



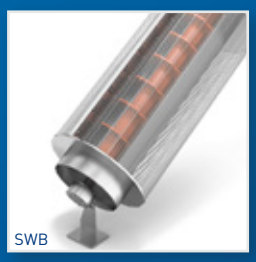
Specification

Type	Capacity [dm³/s]	D [mm]	L [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Stub pipes			Drive power [kW]	Weight [kg]
								DN inlet	DN outlet	DN release		
DF SWP / SWB 10	10	1300	3500	3600	2465	1740	1400	125	150	50	0,55 + 0,37	800
DF SWP / SWB 20	20	1500	4100	4150	3000	2000	1700	150	200	50	0,55 + 0,37	100
DF SWP / SWB 25	25	1800	4700	5150	3750	2360	2000	200	250	50	0,75 + 0,55	1300
DF SWP / SWB 30	30	2000	5200	5700	4150	2600	2300	200	250	50	0,75 + 0,55	1500
DF SWP / SWB 40	40	2300	6000	6700	4700	3000	2700	200	250	50	0,75 + 0,75	1800

The capacities given concern perforation/slots 3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

Options



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AUTOSEP SAND TRAP DF BW

Application

Autosep Sand Trap DF BW is an integrated device used for comprehensive mechanical sewage and industrial wastewater treatment. Ergonomic structure and multifunctional character make the device a perfect solution for limited room for assembly and construction of wastewater preliminary treatment cycle.

Functioning

The wastewater flows to the filtration part through the loosening chamber. Screenings held on sieve are removed with adjustable rotary brushes, which are automatically cleaned by the inertial sweeper. The screenings are collected through the discharge mechanism, optionally connected to the Screenings Press DF PU. Wastewater, after solid parts removal, are transferred gravitationally to the centrifugal sand trap assembled under the sieve, where it is first aerated in order to support light and fat components floatation. Fat trap is assembled in the upper part, out of which the flotate is transported outside the sand trap. In the sand trap chamber sand and mineral elements sedimentation is carried out. The sand collected on the bottom is transported with the air-water pump to the sand separator, where the sand is cleaned with water and compressed air. Cleaned sand is removed from the device with the diagonal worm conveyor.

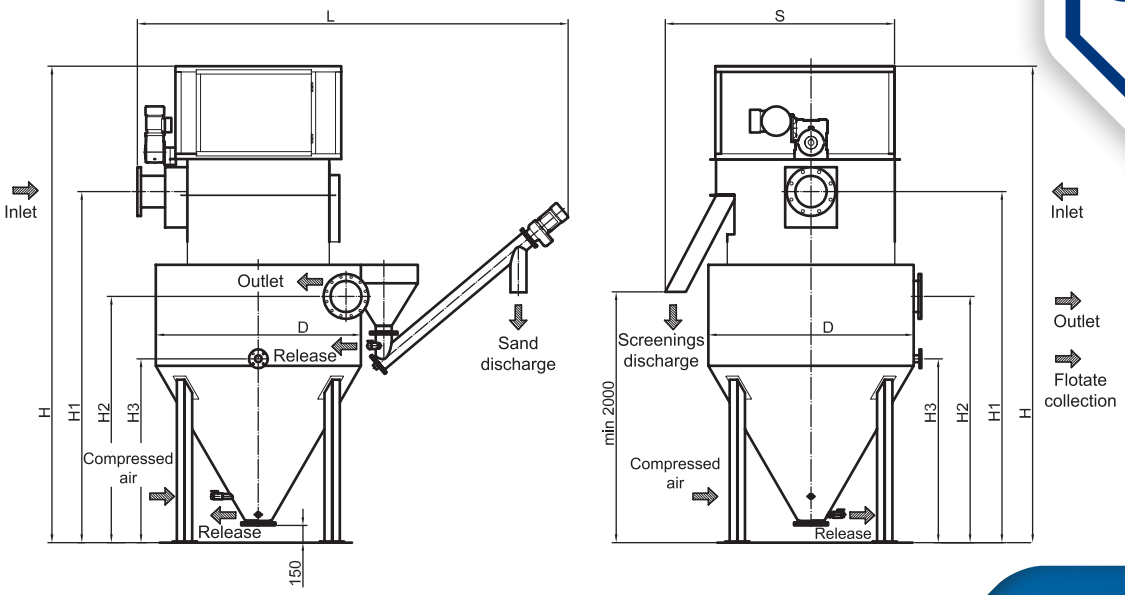
Equipment

- 1,0-10,0mm perforation sieve.
- Perforation automatic cleaning system.
- Screenings bagging system [option].
- Integrated sand separator equipped with worm conveyor with reverse mode.
- Fine-bubble wastewater aeration system [option].
- Aeration fan [option].
- Automatic flotate and fat collection system [option].
- Fat pump [option].
- Screenings press [option].
- Air-water pump.
- Power supply-control panel.
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Minimum room necessary for variety of device processes and capacities.
- Modular device structure.
- All mechanical wastewater treatment processes in one device.
- Solid contamination removal process hermetisation.
- Sand removal: 90-95% for grains > 0,2mm.

Construction drawing



Specification

Type	Capacity [dm³/s]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	S [mm]	Stub pipes				Drive power [kW]	Weight [kg]
									DN inlet	DN outlet	DN release	DN Flotate collection		
DF BW 30	30	1800	3800	2800	2000	2000	4000	2150	200	250	40	65	0,25 + 0,25	1250
DF BW 40	40	2200	4150	3150	2350	2350	4400	2550	250	300			0,37 + 0,25	1900
DF BW 60	60	2500	4500	3500	2600	2600	4700	2850	300	350	50	80	0,55 + 0,25	2600
DF BW 80	80	3000	5000	4000	3050	3050	5200	3350	350	400			0,75 + 0,37	3000
DF BW 110	110	3500	5300	4300	3500	3500	5800	3850	400	450			0,76 + 0,37	3500

The capacities given concern perforation/slots 3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

SCREENING SIEVE DF B/D

Application

Screening Sieve DF B/D is a device for mechanical separation of solid contamination from sewage and industrial wastewater. Simple, tested in many application sieve structure and wide range of possible sizes and compositions makes the device perfect for all kinds of facilities of mechanical wastewater treatment.

Functioning

The wastewater flowing in is conducted to the perforated filtrating section. Depending on the separation effect assumed, the perforation applied may be of 1,0-10,0mm clearance. Cleaned fluid is transported to the lower tank, from where it is gravitationally transferred outside the device. The screenings held on the sieve are removed with adjustable rotary brushes, which are automatically cleaned by the inertial sweeper. The screenings collection is performed through the discharge mechanism, which may be optionally equipped with Screenings Press DF PU. Should the fat screens be used , an innovative sequential perforation cleaning system may be applied.

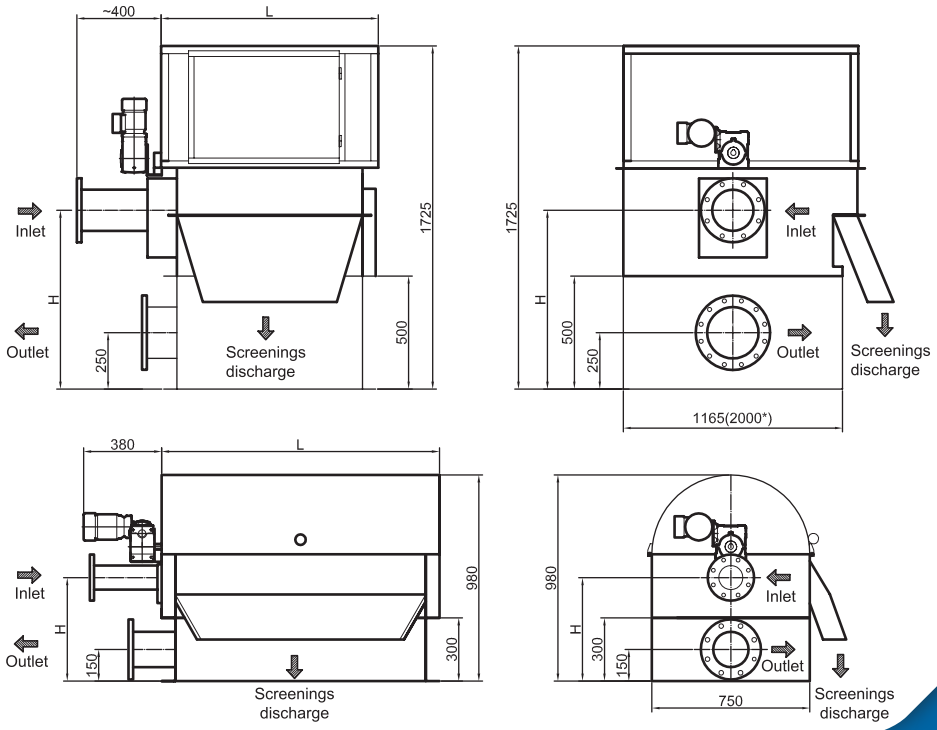
Equipment

- Sieve perforation 1,0-10,0mm.
- Perforation automatic cleaning .system.
- Additional, sequential perforation cleaning system [option].
- Power supply-control panel [option].
- Screenings press [option].
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Wide range of applications.
- 100% elimination of screenings exceeding perforation applied.
- Solid contamination removal process hermetisation.
- Compatible with screenings press.
- Simple structure and easy maintenance.
- Low investment and operation costs.

Construction drawing



Specification

Type	Efficiency regarding fluid treated				L [mm]	H [mm]	Stub pipes		Drive power [kW]	Weight [kg]
	heat exchange water [m³/h]	sewage [m³/h]	industrial wastewater [m³/h]	abattoir wastewater [m³/h]			DN inlet	DN outlet		
DF B2	40	7	5	4	560	to be agreed	80	100	0,12	150
DF B4	80	15	10	7	930		100	150	0,12	200
DF B5	120	20	15	11	1030		150	200	0,12	220
DF B6	150	25	18	13	1320		150	200	0,12	260
DF D8	240	45	30	22	1050		200	250	0,12	400
DF D12	360	68	45	33	1430		250	300	0,12	550
DF D16	480	90	60	45	1740		350	400	0,25	650
DF D20	560	105	70	52	2100		350	400	0,25	800
DF D24	720	140	90	67	2520		to be agreed		0,37	1100
DF D45	1360	260	170	127	2520				0,37	1500
DF D60	1800	340	225	170	3280				0,55	1800
DF D75	2240	430	280	210	4000				0,75	2000
DF D90	2800	540	350	260	4700				0,75	2500

* width concerns sieves of D60, D75, D90 types
The capacities concern perforations of Ø3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

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VERTICAL SPIRAL SIEVE DF SP

Application

Vertical Spiral Sieve DF SP SBO is a device used for the mechanical separation of solid bodies from sewage or industrial wastewater. The sieve may be successfully used in installations where other solutions are impracticable because of insufficient room. Compact size makes the device perfect to be assembled in outdoor installations i.e wastewater pumping stations, collection stations or sewage pits.

Functioning

The wastewater enter the device through the inlet chamber, where they get loosened and slowed down. The inlet chamber is also the emergency overflow in the event of excessive wastewater flow or power breakdown. The fluid flows to the cylindrical filtering basket, where sold bodies are separated. The screenings held on the internal surface are removed by the sweeping brushes system assembled on the worm conveyor. The contamination is transported with worm conveyor to the upper segment of the device from where it is transferred to the discharge mechanism. The sieve drive is automatically engaged with proper level of wastewater collected. The screenings are drained when transported and their weight is reduced thanks to compression-drainage block equipped with automatic flushing system. Extended knife gate valve pin enables operation without human presence in the sieve chamber.

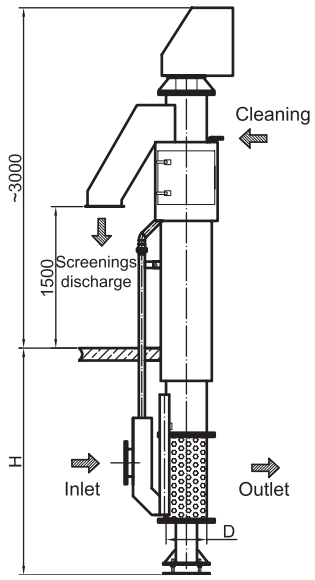
Equipment

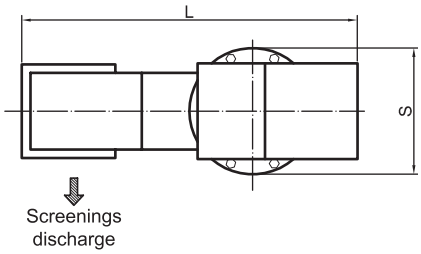
- Inlet chamber equipped with emergency overflow.
- Filtration basket of 1,0-10,0mm perforation.
- Worm conveyor equipped with reverse motion mode.
- Automatic perforation cleaning system.
- Power supply-control panel equipped with programmable driver.
- Screenings bagging system [option].
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Less room necessary for assembling.
- Efficient elimination of solid bodies.
- Securing the pumps against damaging.
- Screenings drainage and weight reduction.
- Solid contamination removal process hermetisation.
- Low investment and operation costs.

Construction drawing





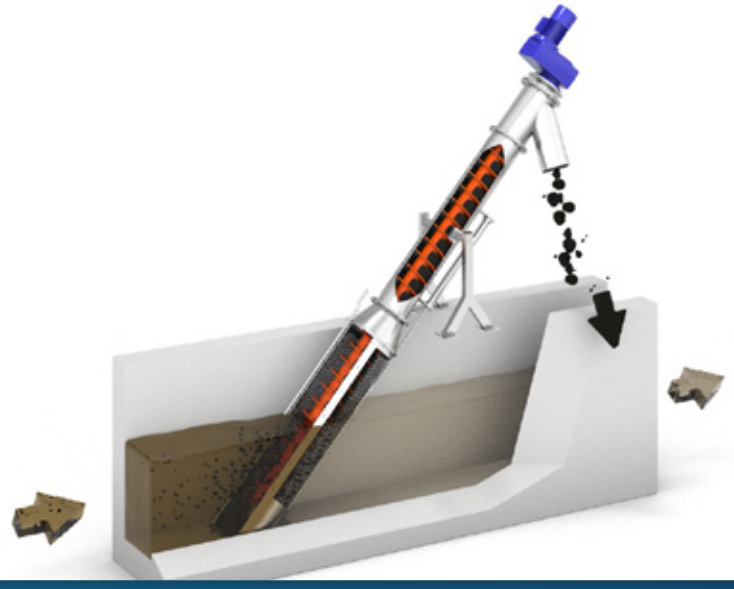
Specification

Type	Capacity [m³/h]	H [mm]	Filter diameter D [mm]	Inlet stub pipe DN	Worm conveyor diameter DN	L [mm]	S [mm]	Drive power [kW]
DF SP 300	100	to be agreed	300	200	300	1000	400	0,75 ÷ 1,50
DF SP 350	140		350	250		1050	450	0,75 ÷ 1,50
DF SP 400	180		400	250		1100	500	1,10 ÷ 1,50
DF SP 450	210		450	300		1150	550	1,10 ÷ 1,50
DF SP 500	250		500	300		1200	600	1,10 ÷ 2,20

The capacities concern perforations of Ø 3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

SPIRAL DUCT SIEVE
DF SSP / DF SSB



Application

Spiral Duct Sieve DF SSP / DF SSB is used for mechanical separation of solid bodies contained in sewage and industrial wastewater. The sieve is assembled either in indoor or outdoor ducts systems. Depending on type selected it may be equipped with perforated filtration part or slotted rotary drum.

Functioning

The wastewater flowing into the filtration part which consists of either perforated plate, or slotted drum sieve. The clearance applied is between 1,0-10,0mm which ensures efficient separation of screenings meeting the investor's demand.
SSP: Screenings held on the perforated sieve are swept by the brushes integrated with worm conveyor. The contaminated material is then transported up where it is flushed and drained by the compressing-draining segment. The screenings are transferred outside the sieve through the discharge duct.
SSB: The filtering part is the slotted sieve assembled on rotary drum integrated with the worm conveyor. After achieving assumed contamination level the drum starts rotating and water-mechanical cleaning process commences simultaneously. The screenings held are dropped to the worm conveyor which transports them up where they are flushed and drained in compressing-draining segment. Transferring screenings outside the sieve is performed through the discharge duct.

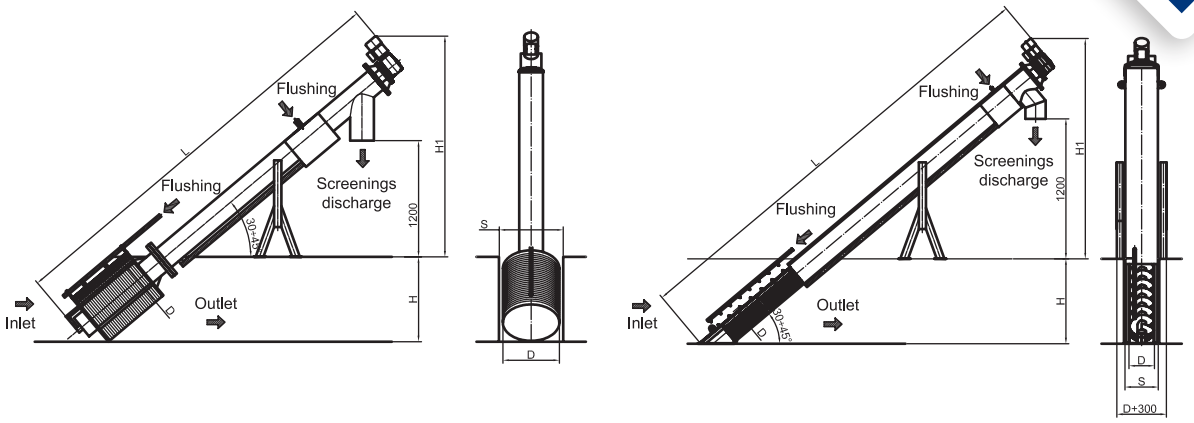
Equipment

- Diagonal perforated sieve [SPP] or diagonal slotted drum sieve [SBB].
- Worm conveyor assembled under angle of 30-45º, equipped with reverse motion mode.
- Drum/perforation clearance 1,0-10,0mm.
- Drum/perforation automatic cleaning system.
- Screenings cleaning and compressing system [option].
- Power supply-control panel equipped with programmable driver.
- Screenings bagging system [option].
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Efficient solution even for very demanding wastewater.
- Adjustable to existing ducts.
- Solid contamination removal process hermetisation.
- Efficient elimination of solid bodies from wastewater.
- Screenings drainage in 20-60%.
- Screening weight reduction in 30-60%.
- Separated screenings organic content reduction.
- Low operation costs.

Construction drawing



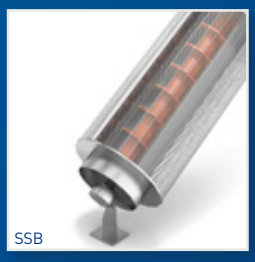
Specification

Type	Capacity [m³/h]	L [m]	H [mm]	H1 [mm]	D [mm]	DN filtering part diameter	Drive power [kW]	Weight[kg]
DF SSP 250	90	4,8	750	2000	350	250	0,55	300
DF SSP 300	110	5,0	750	2000	450	300	0,75	450
DF SSP 400	160	5,0	850	2200	600	400	0,75	600
DF SSP 500	230	5,5	950	2200	700	500	1,10	750
DF SSP 600	290	6,5	950	2200	800	600	1,10	900
DF SSP 700	350	7,0	1050	2200	900	700	1,50	1100
DF SSB 600	140	4,5	700	2000	800	600	0,75	300
DF SSB 700	200	4,5	700	2000	900	700	0,75	400
DF SSB 800	250	5,5	850	2200	1000	800	1,10	500
DF SSB 900	306	6,0	950	2200	1100	900	1,10	700
DF SSB 1000	350	6,0	1050	2200	1200	1000	1,50	850
DF SSB 1200	480	7,0	1150	2200	1400	1200	2,20	1200

The dimensions above concern the devices equipped with diagonal worm conveyor 35º.
The capacities concern perforations/slots of Ø3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

Options



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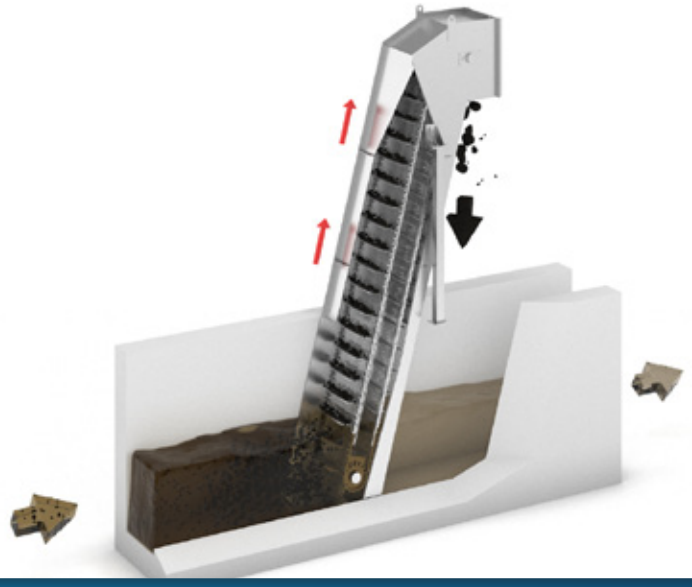
DUCT LOUVER
DF KS



Application

Duct Louver DF KS is used for the mechanical separation of solid elements from treated sewage and industrial wastewater. The device structure enables its use either in the existing or new designed facilities.

Functioning

The wastewater transferred through duct encounter filtering barrier, where solid parts are held. The screenings are held on the steel grille of 5,0-50,0mm clearance. The contamination is transported up by the sweeping system. The screenings are washed intensively when transported up, which reduces their weight and organic content. System solution enables sweeping combs automatic cleaning. The upper device segment is equipped with discharge, from where the screenings are transferred to the container or to further treatment [e.g. compressing with Screenings Press DF PU]. The device is adjustable to the existing working conditions of given facility which considerably decreases investment costs.

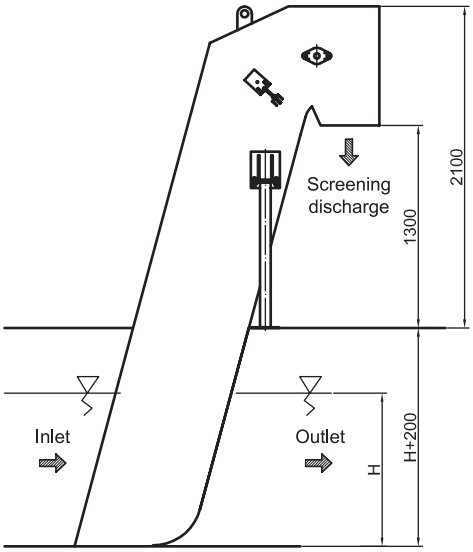
Equipment

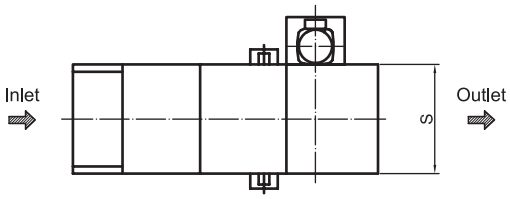
- Steel filtering grille of 5,0-50,0mm clearance.
- Sweeping combs.
- Automatic combs cleaning
- Transported screenings washing system [option].
- Lateral overflow [option].
- Power supply-control panel.
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Efficient solution for wastewater with high content of large solid bodies.
- Product adjustable to the given facility conditions [width and height].
- Easily assembled and disassembled with no necessity of complex preliminary works.
- Solid contamination removal process hermetisation.
- Screenings weight, organic compounds reduction.
- Easy accessible mechanical parts.
- Low investment and maintenance costs.

Construction drawing





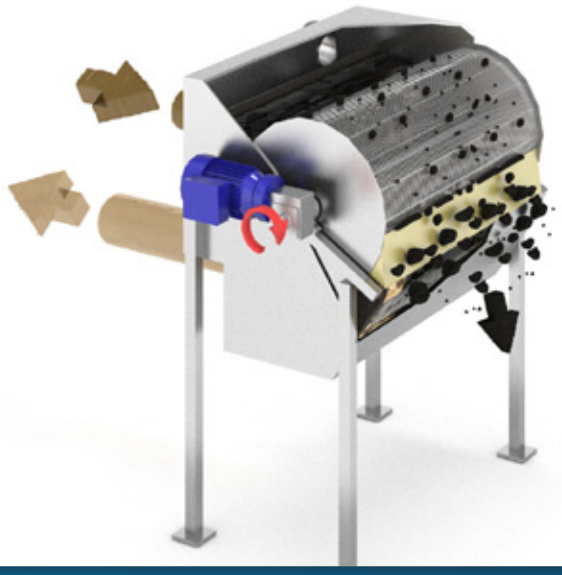
Specification

Type	Capacity [m³/h]	H [mm]	S duct width [mm]	Clearance [mm]	Drive power [kW]	Weight [kg]
DF KS 45	45	800	400	5	0,37	250
DF KS 70	70	800	600	3	0,55	350
DF KS 100	100	800	800	5	0,75	400
DF KS 150	150	1000	1000	5	0,75	500
DF KS 190	190	1000	1200	5	1,10	600
DF KS 230	230	1000	1400	5	1,10	700
DF KS 260	260	1000	1600	5	1,50	800

The capacities given concern perforation/slots 3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

ROTARY DRUM SIEVE
DF SBO



Application

Rotary Drum Sieve DF SBO is a device used for the mechanical separation of solid bodies from sewage or industrial wastewater. The filtration rotary drum structure ensures efficient screenings separation with minimum water and power consumption. Rotary drum application in filtration reduced required room with preservation of high efficiency.

Functioning

The wastewater enter the device through the inlet chamber, where they get loosened and slowed down. The chamber working capacity is adjusted to ensure equal distribution of wastewater in all the filter surface. Proper separation of solid contamination is obtained with drum shaped slotted sieve being in constant motion. The screenings held on the internal filter walls are moved quickly, thanks to the rotation, to the comb which cleans the filtering part. The filtered wastewater after flowing through the perforated drum flow down to the lower collection chamber. In order to ensure 100% flow capacity the drum is additionally flushed with water. The sieve may be integrated with wash press or screenings press.

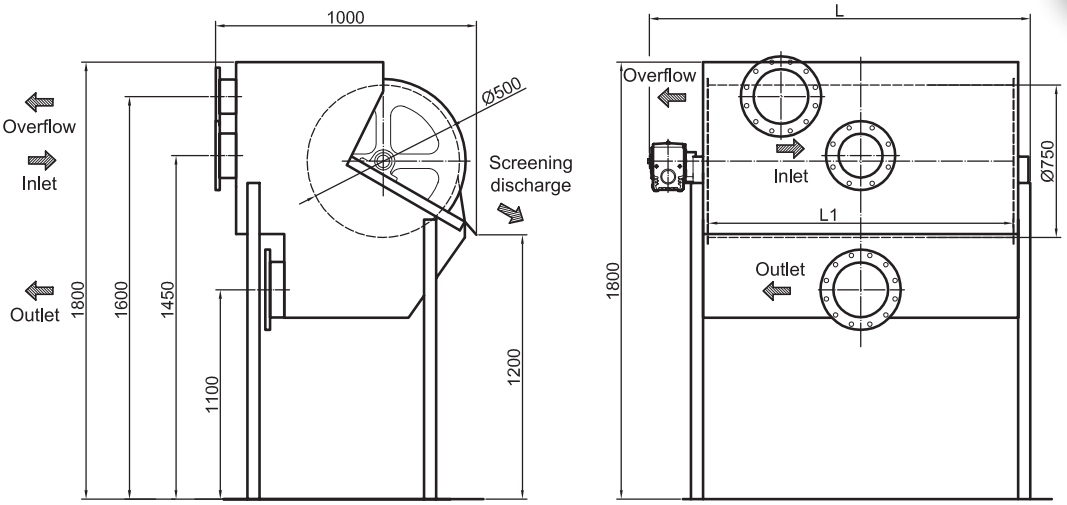
Equipment

- Untrapped inlet chamber.
- Drum slotted sieve of 0,5-6,0mm clearance.
- Mechanical and hydraulic sieve cleaning system.
- Screenings discharge.
- Power supply – control panel.
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Less room necessary.
- Wide range of applications.
- 100% of screenings of diameter exceeding applied perforation eliminated.
- Device compatible with wash press or screenings press.
- Simple structure and easy maintenance.
- Low investment and operation costs.

Construction drawing

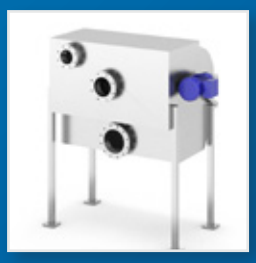


Specification

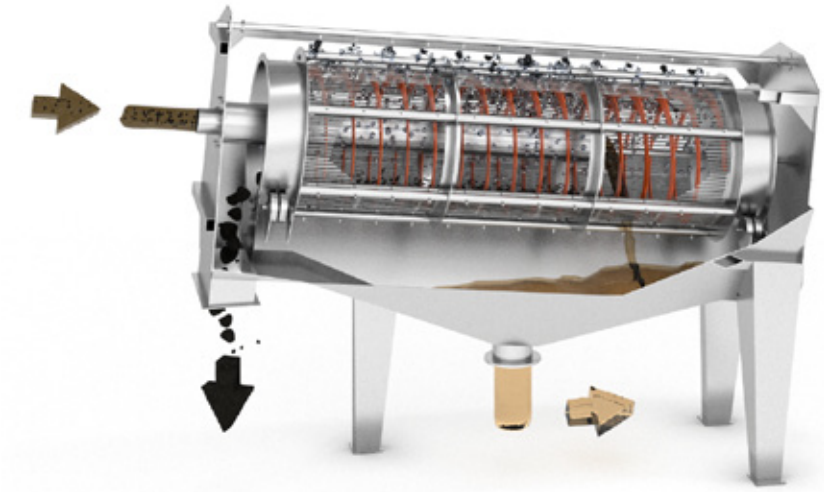
Type	Capacity [m³/h]	L [mm]	L1 [mm]	Stub pipes			Weight [kg]	Drive power [kW]
				DN inlet	DN outlet	Overflow [mm]		
DF SBO 20	20	800	500	150	200	200	200	0,18
DF SBO 30	30	1100	800	150	200	200	300	0,25
DF SBO 40	40	1300	1000	200	250	250	400	0,37
DF SBO 50	50	1600	1200	200	250	250	550	0,55
DF SBO 60	60	1900	1500	250	300	300	700	0,55

The capacities concern perforations/slots of Ø3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings



DRUM SIEVE
DF SB



Application

Drum Sieve DF SB is used for mechanical wastewater filtering from solid bodies. Its simplicity, easy maintenance and high capacities make this device universal.

Functioning

The contaminated wastewater is transferred through the inlet stub pipe to the rotating drum. Thanks to the flow deflector applied the wastewater loses its energy and separating segment is equally charged. Solid bodies are held from the internal side of the barrier and the drum rotations coupled with wormwheel moves them to the screenings discharge. Wastewater without solid parts in flows down to the lower tank, from where it is transferred through the outlet stub pipe outside. depending on wastewater treated, the filtrating barrier may be perforated, slotted or made of net. In order to assure 100% flow capacity the drum is additionally flushed with water. The screenings transported are partially drained (thanks to the drum proper angle) and flushed.

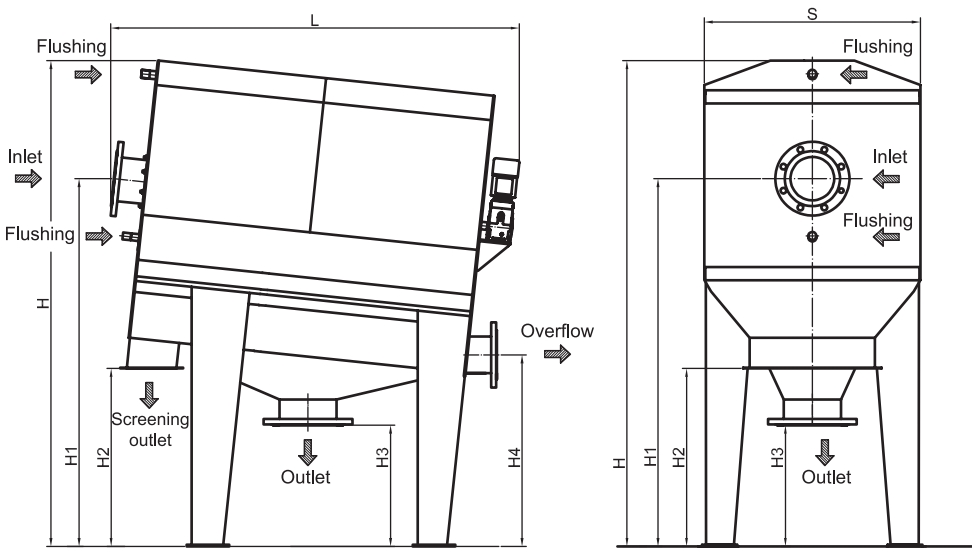
Equipment

- Inlet chamber equipped with the deflector.
- Filtrating barrier - perforated, slotted or made of net.
- Rotary wormwheel.
- Sieve hydraulic flushing system.
- Screenings cleaning system [option].
- Power supply-control panel.
- Screenings bagging system [option].
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Universal application.
- Simple structure and easy maintenance.
- Sieve self-cleaning.
- Flexible filtering barrier adjustment to the wastewater type.
- High capacity.
- Low operation costs.

Construction drawing



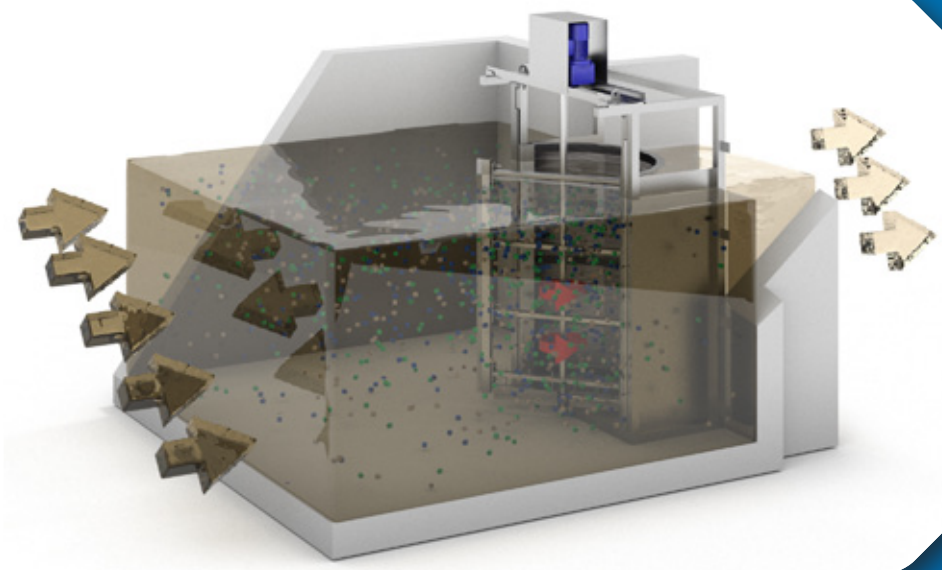
Specification

Type	Capacity [m³/h]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	S [mm]	Stub pipes				Driver power [kW]
									DN inlet	DN outlet	Screeinings outlet [mm]	Ovelflow [mm]	
DF SB 25	25	1600	1220	615	450	660	1200	700	100	150	400/150	80	0,25
DF SB 35	35	1600	1220	615	440	650	1250	700	100	150	400/150	80	0,25
DF SB 50	50	1860	1410	680	460	730	1560	830	150	200	480/190	125	0,55
DF SB 60	60	2150	1625	780	550	820	1850	970	150	200	560/220	125	0,55
DF SB 70	70	2440	1840	870	630	940	1950	1100	200	250	630/250	150	0,75
DF SB 90	90	2440	1840	870	610	920	2160	1100	200	250	630/250	150	0,75
DF SB 100	100	2440	1840	870	590	900	2360	1100	200	250	630/250	150	1,10

The capacities concern perforations/slots of Ø3mm.
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

FLOW SIEVE
DF BV / DV



Application

Flow Sieve DF BV/DV is a device used for separation of biological reactor suspended bed blocks. Solid, faultless structure and simple maintenance make this device almost self-operating.

Functioning

The wastewater flows perpendicularly to the semi-round sieve, which holds the suspended bed blocks. The filtered fluid flows to further stage of biological treatment and blocks remain in the reactor chamber. The perforated surface is constantly cleaned preserving the device hydraulic capacity. The controlled cleaning system is driven with motoreducer secured against weather conditions. Guides system enables easy and quick disassembly of the sweeper. The device is assembled on reactor wall in manner stopping the blocks from getting outside the tank.

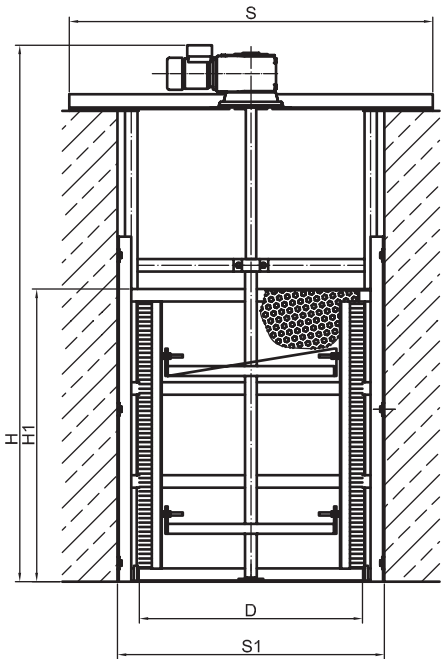
Equipment

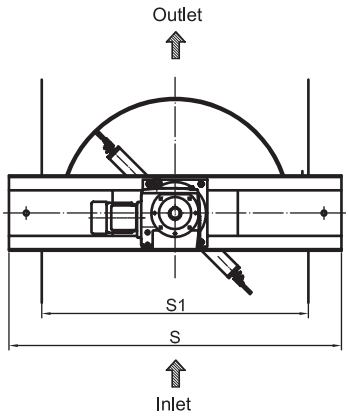
- Perforated filtering part of clearance adjusted to the suspended bed blocks
- Automatic cleaning-sweeping system.
- Supporting structure equipped with guides enabling easy and quick disassembly of the sweeper. Motoreducer secured against weather conditions.
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Biological reactor suspended bed blocks separation system.
- Adjustable cleaning-sweeping system.
- Low investment and maintenance costs.

Construction drawing





Specification

Type	Capacity [m³/h]	D [mm]	S [mm]	S1 [mm]	H * [mm]	H1 [mm]	Drive power [kW]	Weight [kg]
DF BV 2	20	600	950	750	900	300	0,12	70
DF BV 4	45				1200	600	0,12	120
DF BV 5	60				1450	850	0,12	150
DF BV 6	75				1700	1100	0,12	180
DF DV 8	135	1150	1600	1350	1500	800	0,12	200
DF DV 12	200				2050	1300	0,12	300
DF DV 16	265				2500	1700	0,25	450
DF DV 20	315				2800	2000	0,25	600
DF DV 24	420				3500	2700	0,37	800
DF DV 45	500	1900	2700	2200	2900	2000	0,37	800
DF DV 60	1000				4900	4000	0,55	1400
DF DV 75	1300				5900	5000	0,75	1800
DF DV 90	1600				6900	6000	1,10	2300

* minimum height
The capacities concern perforations/slots of Ø3mm
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

WASH PRESS
DF PR

Application

The Wash Press is the device used for screenings flushing, draining, transporting and compressing. Washed away organic matter, as well as screenings weight and volume reduction has considerably decreases wastewater treatment plant operation costs preserving maximum level of environment protection.

Functioning

Screenings charged to the cleaning zone are intensively flushed with water under pressure of 4 bar. Specially designed nozzles system supported by the automatic water mixing system, ensures efficient removal of organic matter and contamination weight reduction. Cleaned screenings are then transported by the conveyor to the compressing-drainage block, from where they are directed to the discharge mechanism. The whole process is automated, individual phases are adjusted to the screenings contamination level and to assumed technological result.

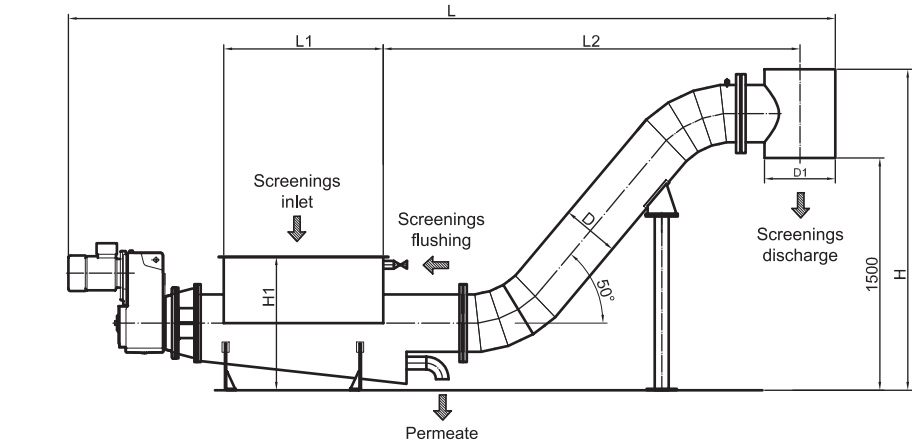
Equipment

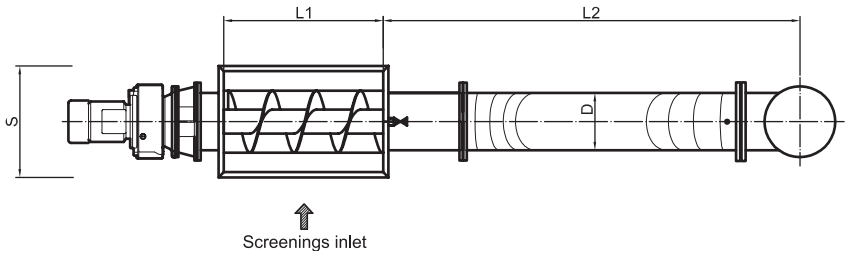
- Worm conveyor coated with abrasion resistant plastic.
- Automatic screenings flushing system.
- Sequential water mixing system.
- Automatic permeate transfer system [option].
- Power supply – control panel equipped with programmable driver [option].
- Screenings bagging system [option].
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Screenings drainage between 40-80%.
- Screenings weight reduction between 40-80%.
- Separated screenings organic compounds reduction.
- Solid contamination removal process hermetisation.
- Transported screenings drainage and weight reduction.
- Water or cleaned wastewater flushing available.
- Economical maintenance.

Construction drawing





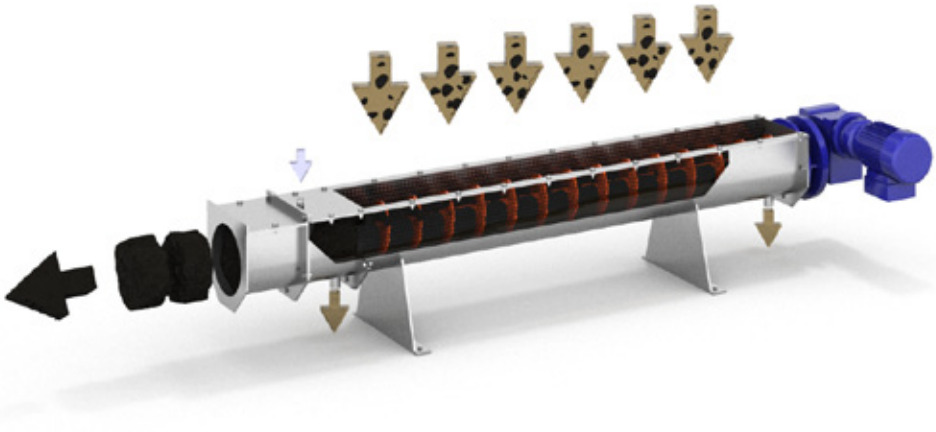
Specification

Type	Press capacity [m³/h]	D [mm]	D1 [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	S [mm]	Drive power [kW]
DF PR 200	0,25	200	250	L1+L2+1000	to be agreed	2100	1900	650	400	1,5
DF PR 250	0,40	250	350	L1+L2+1100		2300	1950	700	450	2,2
DF PR 300	0,70	300	400	L1+L2+1200		2500	2000	750	500	2,2
DF PR 400	1,30	400	500	L1+L2+1250		2800	2100	850	600	2,2

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

SCREENINGS PRESS DF PU



Application

Screenings Press DF PU is the device used for screenings drainage and compression. Its structure enables compatibility with other mechanical wastewater treatment devices, i.a. screenings, vertical and duct sieves.

Functioning

Screenings discharged to the device are entered to the weigh hopper, from where they go to the space between the worm conveyor lines transporting them to the compressing-draining block. Thanks to the diagonal conveyor the screenings are preliminarily drained. The process is fully automated. The device is also equipped with perforation water flushing system. We recommend to coordinate press operation with screenings separator.

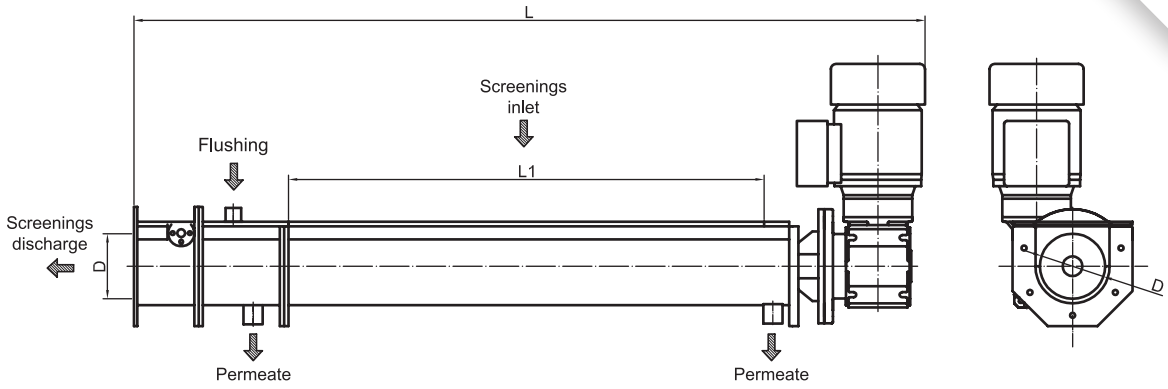
Equipment

- Worm conveyor coated with abrasion resistant plastic.
- Automatic compression-drainage system.
- Permeate transfer system.
- Automatic water perforation flushing system.
- Power supply-control panel [option].
- Ex version [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Screenings drainage between 30-60%.
- Screenings weight reduction between 30-60%.
- Separated screenings organic compounds reduction.
- Transported screenings drainage and weight reduction.
- Economical maintenance.

Construction drawing



Specification

Type	Press capacity [m³/h]	D [mm]	L [mm]	L1 [mm]	Drive power [kW]
DF PU 100	0,06	100	L1+600	to be agreed	0,25
DF PU 150	0,18	150	L1+700		0,37
DF PU 200	0,50	200	L1+850		0,55
DF PU 250	1,00	250	L1+1000		0,75
DF PU 300	1,60	300	L1+1100		1,10

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

CENTRIFUGAL SAND TRAP WITH SAND SEPARATOR DF PSZ

Application

The Centrifugal Sand Trap with Sand Separator DF PSZ is the device used for separation of sand and solid bodies found in the wastewater with flotate filtration. The separator integrated with the sand trap enables sand washing flushing and drainage which decreases necessary operation space.

Functioning

The wastewater enter the cylindrical internal ring, the form of which makes the fluid circulate. The centrifugal force and weight makes the sand and solid bodies of high specific weight drop down to the conical collection chamber bottom, to the collection hopper. Thanks to the fine-bubble aeration fat and other flotate is kept within sand trap internal ring, from where they are removed periodically with flotate filtration system. Filtrated wastewater is removed outside with outlet stub pipe. The sand-water pulp from the collection chamber is transferred to the sand separator with the air pump. In the separator, the pulp flows into wash and sedimentation chamber. The organic contamination is washed away from the mineral matter with air provided to the chamber. Cleaned sand drops down to the bottom and the fluid surplus with organic suspension flows through the overflow back to the external ring, form where it is transferred outside with worm conveyor.

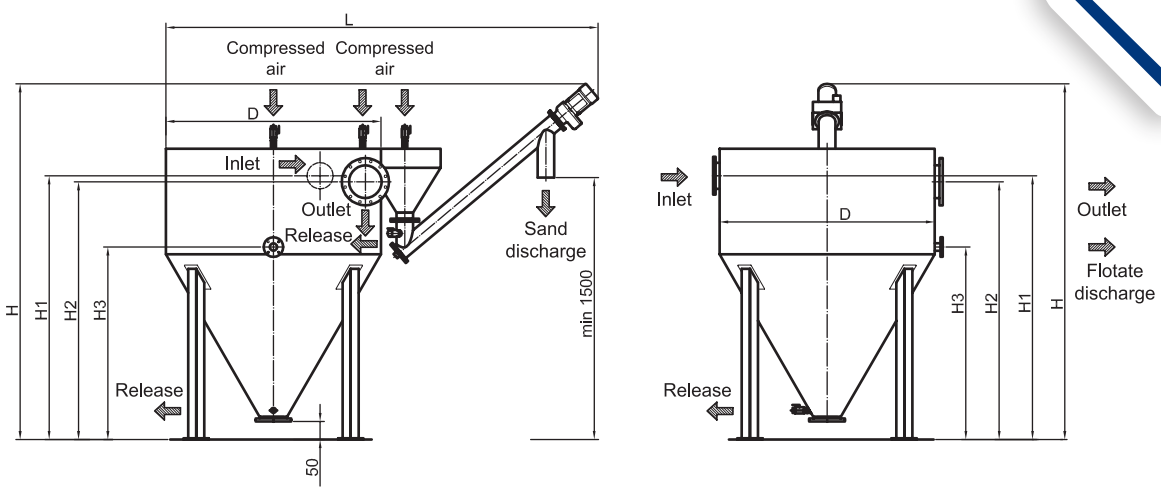
Equipment

- Cylindrical body connected with conical sedimentation segment.
- Internal separation ring.
- Wastewater aeration system [option].
- Automatic flotate and fat filtration system [option].
- Sand transportation air pump.
- Sand separator integrated with the sand trap.
- Diagonal draining worm conveyor set under angle of 35-45º equipped with reverse motion mode.
- Power supply-control panel.
- Ex-version available [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Sand separation and cleaning processes in one device.
- Sand removal: 90-98% for grains > 2,0mm.
- Organic matter reduction from sand: max 99%.
- Fluid ring separation system.
- Sand drainage.
- Flotate and fat filtration.
- Less room required/small assembly space.

Construction drawing

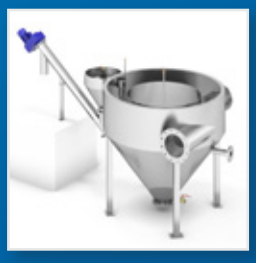


Specification

Type	Capacity [m³/h]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	Stub pipes				Drive power [kg]	Weight [kW]
								DN inlet	DN outlet	DN emergency release	DN flotate discharge		
DF PSZ 60	60	1300	2500	1500	1450	950	3300	150	200	40	50	350	0,25
DF PSZ 120	120	1800	3000	1950	1900	1400	3800	200	250	40	65	600	0,25
DF PSZ 160	160	2200	3700	2600	2550	2050	4300	250	300	40		900	0,25
DF PSZ 200	200	2500	4100	2850	2800	2300	4600	300	350	50	80	1200	0,25
DF PSZ 300	300	3000	4500	3250	3200	2700	5100	350	400	50		1500	0,37
DF PSZ 400	400	3500	4900	3750	3700	3200	5600	400	450	50		1800	0,37

The dimensions above concern the devices equipped with worm conveyor assembled under 35°
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings



CENTRIFUGAL SAND TRAP WITH WORM CONVEYOR DF PSS

Application

The Centrifugal Sand Trap integrated with Worm Conveyor DF PSS is used for separation and discharge of sand and solid bodies from the wastewater treated with sand-water pulp drainage for the flotate discharge purposes. Multiple functions and small size makes this device an interesting alternative either for sewage or industrial treatment plants.

Functioning

The wastewater enter the cylindrical internal ring, the form of which makes the fluid circulate. The centrifugal force and weight makes the sand and solid bodies of high specific weight drop down to the conical collection chamber bottom, from where they are periodically transferred outside with the worm conveyor. The sand-water pulp is drained gravitationally during being transported. The wastewater with suspension are transferred outside the sand trap through the stub pipe assembled on the device shell. The fluid ring distribution system ensures high quality of sand separation process. The sand trap is equipped with fine-bubble aeration system, which prevents sedimentation of organic matter and sand, as well as supports fat floatation process. Flotate filtration is carried out through the adjusted flow process.

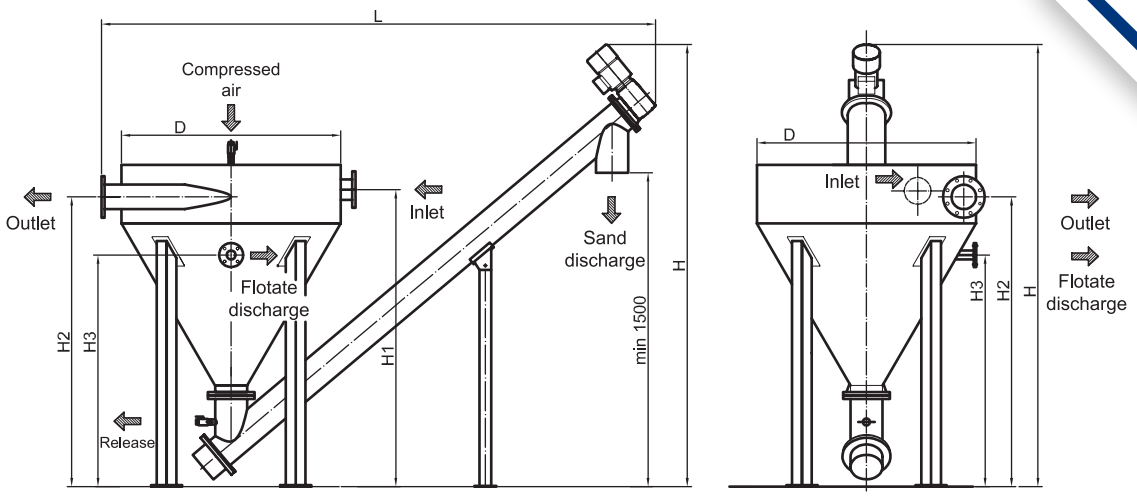
Equipment

- Cylindrical body connected with conical sedimentation segment.
- Internal separation ring.
- Fine-bubble wastewater aeration system [option].
- Automatic flotate and fat filtration system [option].
- Diagonal worm conveyor set under angle of 35-45° equipped with reverse motion mode.
- Power supply-control panel.
- Ex-version available [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Sand removal: 90-98% for grains > 2,0mm.
- Fluid ring separation system.
- Less room required/small assembly space.
- Sand pulp organic compounds reduction.
- Flotate and fat filtration.

Construction drawing



Specification

Type	Capacity [m³/h]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	Stub pipes			Drive power [kg]	Weight [kW]
								DN inlet	DN outlet	DN flotate discharge		
DF PSS 25	25	1000	2300	1500	1300	900	3000	80	100	50	0,37	300
DF PSS 45	45	1150	2500	1650	1600	1200	3500	100	150	50	0,37	400
DF PSS 60	60	1300	3200	1900	1850	1450	4200	150	150	50	0,55	500
DF PSS 120	120	1800	3600	2100	2050	1650	4800	250	300	65	0,55	800
DF PSS 150	150	2300	4000	2700	2650	2250	5100	300	350	80	0,75	1300

The dimensions above concern the devices equipped with worm conveyor assembled under 35°.
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

CENTRIFUGAL SAND TRAP DF PSK

Application

Centrifugal Sand Trap DF PSK is used for separation of sand and solid bodies from wastewater with simultaneous holding of floating elements. Thanks to its highly efficient sand separation it constitutes a necessary component of every mechanical wastewater treatment system.

Functioning

The wastewater is provided through the inlet stub pipe to the ring assembled inside the device. Its oval shape makes the fluid circulate. The centrifugal motion and weight makes the sand and solid bodies of high specific weight drop down to the collection chamber bottom. Wastewater and suspension flow to the device external part, from where they are transferred outside the sand trap through the stub pipe assembled on the shell. The fluid ring distribution system ensures high quality of sand separation process. The sand trap is equipped with fine-bubble aeration system, which prevents sedimentation of organic matter and sand, as well as supports fat floatation process. Flotate filtration is carried out through the adjusted flow process. Water-sand pulp is transported from the collection chamber with submerged or air pump.

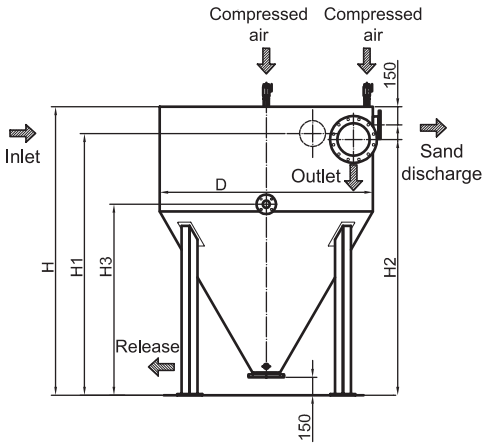
Equipment

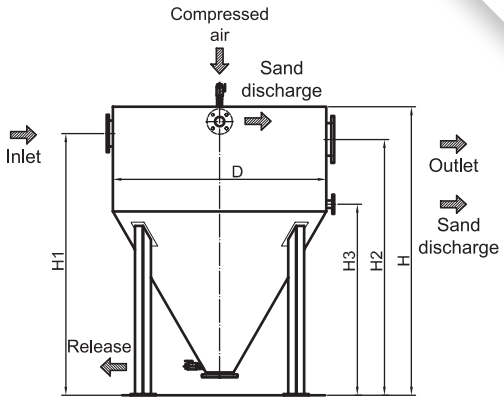
- Cylindrical body connected with conical sedimentation segment.
- Internal separation ring.
- Fine-bubble wastewater aeration system [option].
- Automatic flotate and fat filtration system [option].
- Sand pulp air pump [standard] / sand pulp electric pump [option].
- Power supply-control panel.
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Sand removal: 90-98% for grains > 2,0mm.
- Fluid ring separation system.
- Less room required/small assembly space.
- Sand pulp organic compounds reduction.
- Flotate and fat filtration.

Construction drawing





Specification

Type	Capacity [m³/h]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Stub pipes					Weight [kg]
							DN inlet	DN outlet	DN emergency release	DN sand discharge	DN flotate discharge	
DF PSZ 60	60	1300	1750	1500	1450	950	150	200	40	65	50	280
DF PSZ 120	120	1800	2200	1950	1900	1400	200	250	40	80	65	500
DF PSZ 160	160	2200	2850	2600	2550	2050	250	300	40	80		800
DF PSZ 200	200	2500	3100	2850	2800	2300	300	350	50	100	80	1100
DF PSZ 300	300	3000	3550	3250	3200	2700	350	400	50	125		1350
DF PSZ 400	400	3500	4100	3750	3700	3200	400	450	50	125		1650

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

SAND SEPARATOR
DF SW

Application

Sand Separator DF SW is the device used for the final sand separation from sand-water pulp transferred from the sand trap.

Functioning

The wastewater flows into the internal part of separator, where it is put in circulation in order to increase separation efficiency – centrifugal force and gravity ensure optimal conditions for the above process. The separated sand collects in lower, conical part of the device. The separator may be equipped with slow motion mixer, which shovels and mixes sand. Water flushing and compressed air aeration ensures high organic matter removal efficiency. Filtrated wastewater is transferred outside through the outlet stub pipe. The sand collected on the bottom is transported outside with worm conveyor being gravitationally drained in the same time. The separator is equipped with opened cover being a revision hatch in the same time.

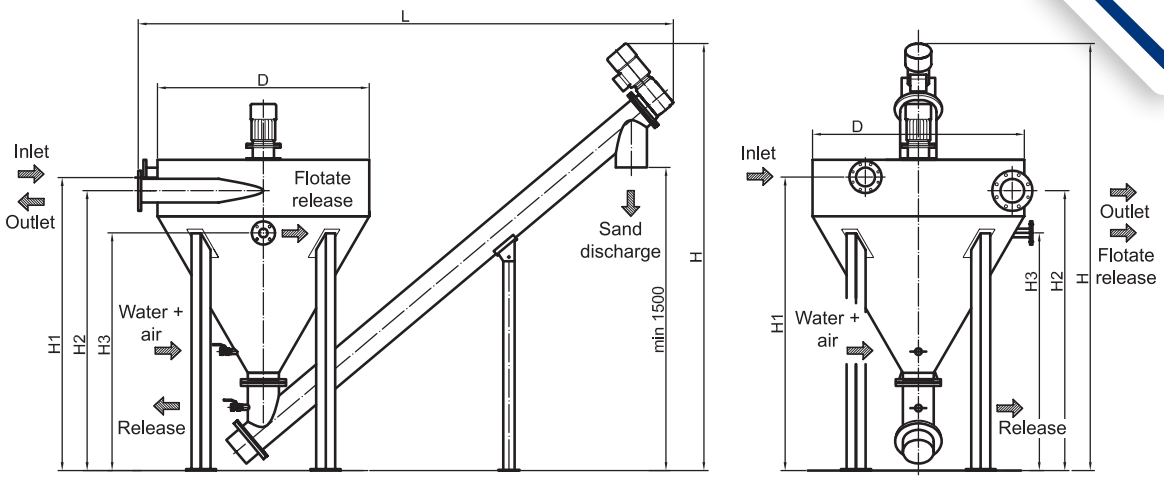
Equipment

- Cylindrical body connected with conical sedimentation segment.
- Internal separation ring.
- Air-water flushing system [option].
- Slow motion mixer [option].
- Cover.
- Diagonal draining worm conveyor set under angle of 35-45° equipped with reverse motion mode.
- Ex-version available [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Organic matter reduction from sand: max 99%.
- Ring fluid separation system.
- Sand drainage.
- Sand pulp organic matter reduction.
- Flotate and fat collection.

Construction drawing



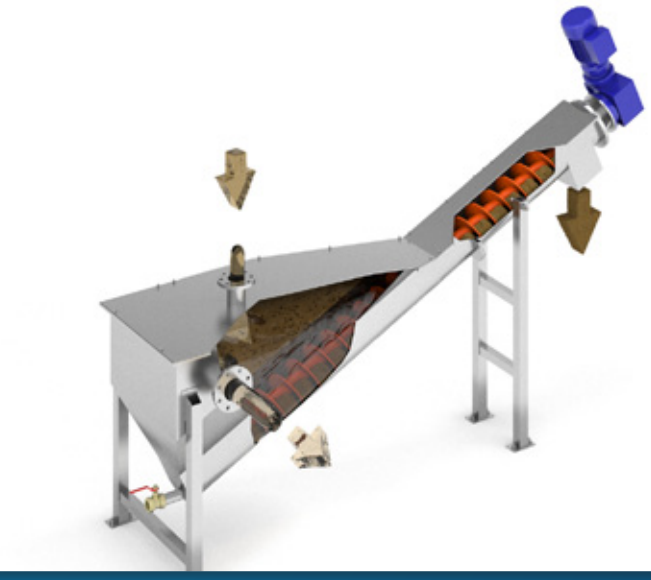
Specification

Type	Capacity [m³/h]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	Stub pipes				Separator capacity [m³]	Drive power [kW]	Weight [kg]
								DN inlet	DN outlet	DN water flushing	DN release			
DF SW 10	10	800	2400	1550	1500	1200	2800	80	100	25	50	0,4	0,37+0,25	180
DF SW 25	25	1000	2550	1700	1650	1350	3100	80	100			0,6	0,37+0,25	320
DF SW 45	45	1500	3000	2100	2050	1750	3600	100	150			1,5	0,55+0,25	500
DF SW 65	65	2000	3400	2600	2550	2250	4250	150	200			3,0	0,55+0,55	900
DF SW 80	80	2300	3700	2850	2800	2500	4600	200	250			4,4	0,75+0,75	1200

The dimensions above concern the devices equipped with worm conveyor assembled under 35°
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

SAND SEPARATOR
DF SG



Application

The Sand Separator DF SG is the device used in sewage and industrial wastewater treatment plants, for the final sand separation from sand-water pulp transferred from the sand trap.

Functioning

Sand-water mix is provided the separator through the inlet stub pipe on the device shell. Inside the separator the fluid stream is slowed down which makes the contamination with heavier specific weight drop down to the separator's bottom. Special barrier keeps the sand away from the outlet. The sand collected on the bottom is transported outside with the worm conveyor, being gravitationally drained in the same time.

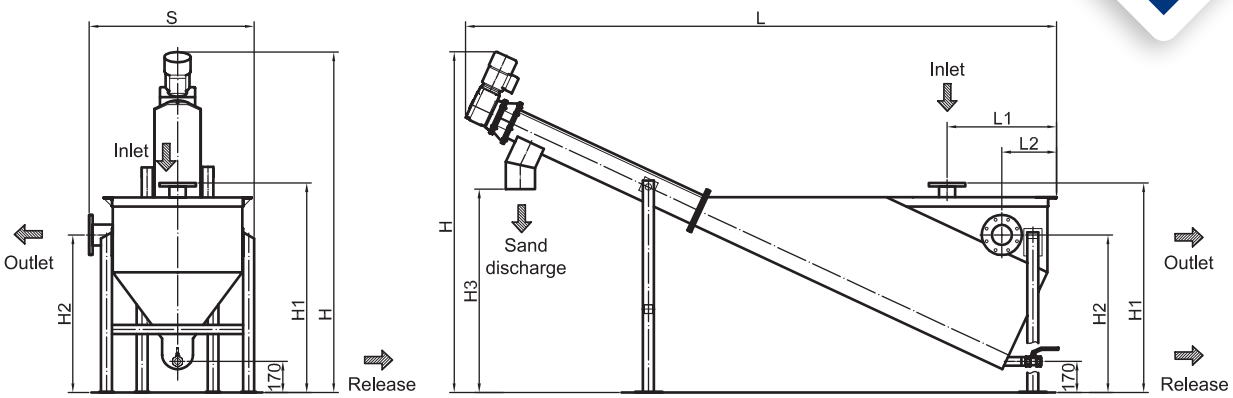
Equipment

- Body.
- Sand barrier.
- Safety cover.
- Worm conveyor equipped with reverse mode.
- Power supply-control panel.
- Ex-version available [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Sand separation high efficiency.
- Sand pulp organic compounds reduction.
- Sand drainage.
- Ergonomic size.

Construction drawing



Specification

Type	Capacity [m³/h]	S [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	L [mm]	L1 [mm]	L2 [mm]	Stub pipes		Driver power [kW]	Weight [kg]
										DN inlet	DN outlet		
DF SG 18	18	800	2200	1350	870	1300	3400	600	300	80	100	0,55	350
DF SG 40	40	970	2900	1750	1160	1700	4500	700	400	100	125	0,55	550
DF SG 70	70	1150	3300	2000	1300	1950	5000	800	500	100	125	0,55	750
DF SG 100	100	1330	4400	2600	1730	2550	6600	900	600	125	150	0,75	1100
DF SG 120	120	1510	4800	2800	1830	2750	7100	1000	700	150	200	0,75	1500

The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

SAND WASH
DF PP

Application

Sand Wash DF PP is used for washing away all kinds of organic and volatile contaminations from the sand provided from the sand trap or separator. Water or filtered wastewater based process ensures efficient reduction of organic matter contained in sand.

Functioning

The sand provided containing highly condensed organic and volatile matter flows into the mixing and sedimentation chamber equipped with slow motion mixer. Washed sand is shovelled and mixed and water with compressed air flowing from the bottom flushes and carries away organic matter to the outlet stub pipe. The programmable driver helps to adjust technological cycle parameters to the installation features. Flushing water and air is provided to the conical section and the sand washed away is collected from the lower hopper with worm conveyor. The sand is drained gravitationally during the transportation.

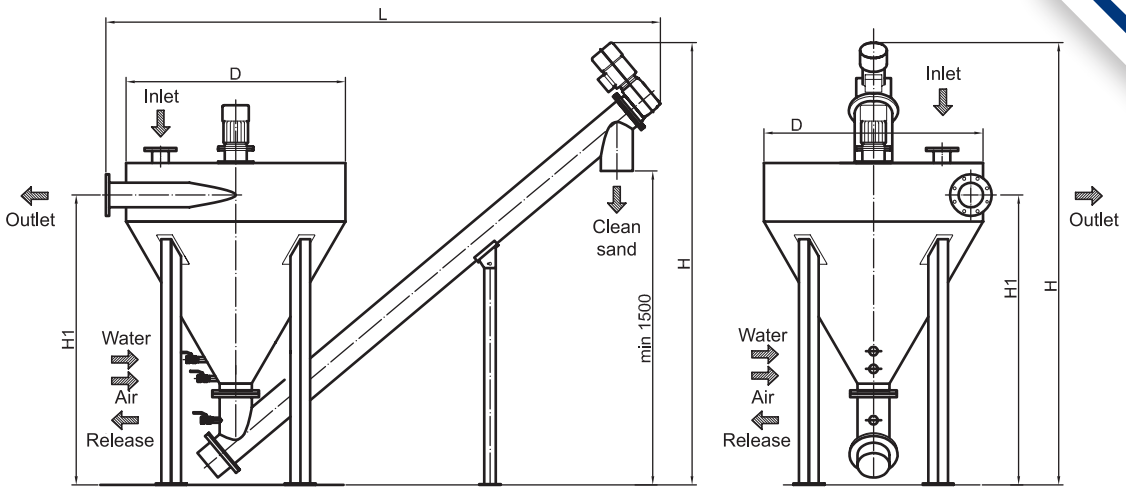
Equipment

- Cylindrical body connected with conical sedimentation segment.
- Slow motion mixing sweeper.
- Air-water flushing system.
- Accessible safety cover.
- Diagonal draining worm conveyor set under angle of 35-45° equipped with reverse motion mode.
- Power supply-control panel.
- Ex-version available [option].
- Winter package enabling outdoor installation of the device, system operated through signals from two autonomic thermostats (as an option).
- Material: stainless steel. Other materials may be used on demand.

Product features

- Organic matter reduction from sand: max 99%.
- Sand drainage.
- Small size.

Construction drawing



Specification

Type	Max. volume of flushed sand [dm³/d]	D [mm]	L [mm]	H [mm]	H1 [mm]	Stub pipes		Drive power [kW]	Weight [kg]
						DN inlet	DN outlet		
DF PP 600	650	600	2800	2000	1150	80	100	0,25 + 0,25	170
DF PP 700	950	700	3000	2100	1250	80	100	0,25 + 0,25	200
DF PP 800	1100	1400	3300	2300	1400	80	100	0,25 + 0,25	220
DF PP 900	2300	1600	3500	2400	1500	100	150	0,25 + 0,25	270
DF PP 1000	3400	1800	3700	2500	1550	100	150	0,25 + 0,25	330
DF PP 1100	4400	2000	3900	2600	1650	100	150	0,37 + 0,25	370
DF PP 1200	6400	2200	4100	2650	1750	150	200	0,37 + 0,25	430
DF PP 1300	7200	2400	4200	2700	1800	150	200	0,37 + 0,25	480
DF PP 1400	9400	2800	4400	2800	1900	150	200	0,37 + 0,25	540
DF PP 1500	11700	3000	4600	2900	2000	150	200	0,37 + 0,25	650

The dimensions above concern the devices equipped with worm conveyor assembled under 35°
The devices may be individually adjusted to the investor's requirements.
We provide devices dimension AutoCAD schedules on demand.

Detailed drawings

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