

*Gelecek bugünden tasarlanır...  
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**Aykosan Engineering Wastewater Treatment Company (Aykosan Mühendislik Arıtma İnşaat Makine Kimya Sanayi ve Dış Tic. Ltd. Şti.) was founded by a group of engineers who specialized in domestic and industrial wastewater treatment plants.**

**Aykosan Engineering has a main office in İkitelli Organized Industrial Zone district and factory in Hayrabolu Organized Industrial Zone Tekirday, European part of Turkey.**

**Our main marketing locations are Turkey, Middle East, Central East, Balkanian Countries and Sub&Sahara Africa.**



# Compact Sewage Treatment Plant



Compact Sewage Treatment Plant, also known as Package Sewage Treatment Plant, is a complete solution for treatment of domestic wastewater originating from small communities, up to 1.000 population, as a single stream unit. Also it is easy to add multiple unit modules to increase the capacity of the plant up to 10.000 people.

Aykosan's compact sewage treatment plants include wastewater pumps, blower, diffusers, chlorine dosage system and electrical panel.

Compact Sewage Treatment Plant is an aerobic biological wastewater treatment plant working with SBR activated sludge process.



## Material Options

- ✓ Carbon Steel epoxy coated
- ✓ Glass-reinforced Plastic (GRP)
- ✓ Stainless Steel

“ Compact Sewage Treatment Plant, is an aerobic biological wastewater treatment plant working with SBR activated sludge process. ”



it is an all-in-one wastewater treatment plant for sewage treatment. All of the system running by PLC panel without a labor force.

## Compact Sewage Treatment Plant Options

Model	Population (cap)	Capacity (m <sup>3</sup> /day)	Lenght (m)	Width (m)	Height (m)
AYPE050	50	10	3,50	2,00	2,50
AYPE100	100	20	4,00	2,00	2,50
AYPE200	200	40	5,00	2,00	2,50
AYPE400	400	80	8,00	2,00	2,80
AYPE500	500	100	8,00	2,25	2,80
AYPE750	750	150	10,00	2,25	2,80
AYPE1000	1000	200	13,00	2,25	2,80

Aykosan has all the right to make changes for dimensions without a notification

Compact sewage treatment plants are also known as, small sewage treatment systems. Aykosan can manufacture custom design small sewage treatment plants for domestic wastewater. We can design underground type sewage treatment package to save the property space.



“ Sewage Treatment Plant, is an aerobic biological wastewater treatment plant working with SBR activated sludge process. ”

## Advantages

- ✓ Mobilization
- ✓ Easy to Install and Commissioning
- ✓ Speed Manufacturing
- ✓ Low Power Requirement
- ✓ Recycling for Irrigation
- ✓ Above and Underground Installation
- ✓ All Automatic System



## Areas of Usage

- ✓ Hotels
- ✓ Holiday Villages
- ✓ Summer Residential Sites
- ✓ Building Sites
- ✓ Villages and Towns
- ✓ Schools & Hospitals
- ✓ Camps
- ✓ Military Facilities
- ✓ Restaurants
- ✓ Petrol Stations (etc.)







*Penstocks | Sluice Gates |*





“ Penstocks and sluice gates used as water flow control equipments in channels and on weirs. ”

City Makine manufactures two types of penstock equipments as channel mounted and wall mounted.

Material thickness is calculated according to potential water pressure that is applied to penstock's surface.

Material may be AISI 304, AISI 316 stainless steel or st-37 carbon steel with epoxy protection dyed.

Drive can be achieved by hand wheel or motorized actuators.



All of the dimensions are custom desing.



# Screening

## Rotary Drum Screens



## Rotary Drum Screens

“Rotary drum screens are generally used in filtration of wastewaters containing filamentous and fibrous contaminants.”

City Makine manufactures special designed application of drum screens for the Domestic and Industrial Wastewater Treatment Plants.

Up to 800 m<sup>3</sup>/hour can be screened by the single unit.

Internally and Externally rotary drum screens may all of the main chassis and screens are made from stainless steel.

It includes flanged; inlet, outlet and overflow lines.



### Drum Screens Options

Model	Flow	Motor	Diameter	Inlet
CM-RD305	50 m <sup>3</sup> /hr	0.37 kW	300 mm	DN100
CM-RD310	100 m <sup>3</sup> /hr	0.37 kW	300 mm	DN100
CM-RD608	160 m <sup>3</sup> /hr	0.55 kW	630 mm	DN125
CM-RD648	480 m <sup>3</sup> /hr	0.55 kW	630 mm	DN150
CM-RD680	800 m <sup>3</sup> /hr	0.75 kW	630 mm	DN200

Custom designs are also available.



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# Screening

## Static Sieve Screens

“ Static sieve screens are generally used in filtration of domestic & industrial wastewater as a physical treatment. ”

City Makine manufactures special designed application of static sieve screens for the Domestic and Industrial Wastewater Treatment Plants.

Up to 800 m<sup>3</sup>/hour can be screened by the single unit.

Static sieve screens known as also sieve bend screens may all of the main chassis and screens are made from stainless steel.

It includes flanged; inlet & outlet.



### Static Sieve Screens Options for 1 mm Openings

Model	Flow	Motor	Material	Inlet
CM-SSS305	50 m <sup>3</sup> /hr	-	AISI 304 SS	DN100
CM-SSS310	100 m <sup>3</sup> /hr	-	AISI 304 SS	DN100
CM-SSS608	160 m <sup>3</sup> /hr	-	AISI 304 SS	DN125
CM-SSS648	480 m <sup>3</sup> /hr	-	AISI 304 SS	DN150
CM-SSS680	800 m <sup>3</sup> /hr	-	AISI 304 SS	DN200

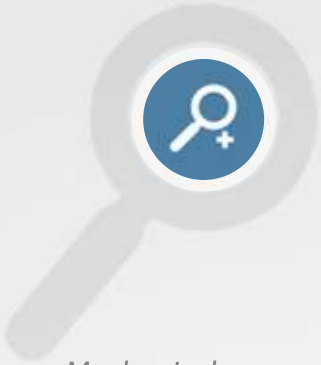
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“ *Mechanical Screens are used for safely removing coarse & fine contaminants (dust, garbage etc.), in sewage treatment by screening* ”

Mechanical screens produced by City Makine can be operated in a level- or time-adjusted manner through a PLC automation panel.

The automatically operated mechanical screen separates coarse contaminants from wastewater at the inlet channel and discharges the separated contaminants into conveyors or garbage containers, without the need for manpower.



### Mechanical Screens Options

Model	Motor	Openings	Main Body	PLC
CM-MS1	0,55 kW	5-25 mm	AISI 304 Stainless Steel	Included

### Advantages of Mechanical Screens

- ✓ do not require labor force
- ✓ can operate in a level- or time-adjusted manner
- ✓ can be used in open or closed channel applications
- ✓ suitable for high flow rates



Konveyör | Screening Conveyor |



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# Clarifiers

 Bridge Scrapers



Whole parts of the bridge part can be made from galvanized carbon steel and under water parts made from stainless steel.

According to our customers needs all of the materials made from stainless steel.

Half bridge scrapers are the main equipments for primary and secondary clarier tanks.

“

Peripheral driven half bridge scraper equipment can be manufactured circular sedimentation tanks which has diameter 4 meter up to 48 meter. ”



## Options

- ✓ Polyamid wheels
- ✓ Stainless steel
- ✓ 2-4 cm/sec. speed
- ✓ Tailor made
- ✓ Long life
- ✓ all package
- ✓ Easy montage

## Bridge Materials

Galvanized or epoxy dyed, AISI 304 or AISI 316 Stainless Steel

## Under Water Parts

AISI 304 or AISI 316 Stainless Steel

## Field of Activities

- ✓ Dairy Industry
- ✓ Textile Industry
- ✓ Food Industry
- ✓ Pharmaceutical Industry
- ✓ Petroleum Chemicals Industry
- ✓ Marble & Mining Industry
- ✓ Pulp & Paper Industry
- ✓ Edible Oil Industry
- ✓ Mines
- ✓ Acid & Coating Bath Filtration

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# DAF Dissolved Air Flotation



“ DAF is a method of removing oil and grease from wastewater with the help of pressured air by floating the upper part of the dissolved air flotation tank. ”

Air bubbles are formed in the water with the compressed air supplied to the system.

The surface of the DAF tank covered by white air bubbles with the oil, grease particules.

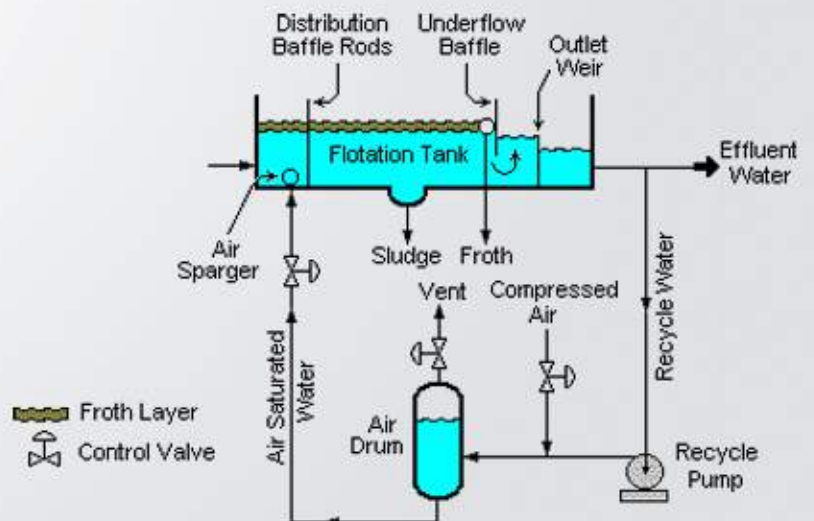
By help of a scraper floating surface phase collected to sludge part of the tank and treated water goes on to outlet of the tank.



DAF equipment is an all-in-one equipments with DAF tank, surface scraper, DAF pressure tank and high pressure pump.



## Dissolved Air Flotation Flow Scheme







*Mermer Filtre Presi | Marble Filter Press |*



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# Filter Press

## Marble Wastewater Treatment

“**Marble Wastewater Treatment Plant is a compact system designed by City Filter Press. All of the system runs automatically without labor force.**”

City Filter Press manufactures special designed application of FILTER PRESS IN the WASTE WATER TREATMENT for the Marble & Stone industries.

Up to 60 m<sup>3</sup>/hour can be recycled by the single silo stream.

Marble recycling plant consists of silo sedimentation tank, silo treated water storage tank, polymer preparation systems and sludge conditioning tank with mixer.



### Marble Filter Press Options

Model	Plate No	Cake Volume	Automation	Motor
CFP-MR251H	5 pcs	5 lt	Yes	1,1 kW
CFP-MR631H	10 pcs	100 lt	Yes	3,0 kW
CFP-MR632H	15 pcs	150 lt	Yes	3,0 kW
CFP-MR633H	20 pcs	200 lt	Yes	3,0 kW
CFP-MR802H	20 pcs	400 lt	Yes	4,0 kW

Custom designs are also available.



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# Filter Press



While pumping by a high pressured pump, fluid goes through the cloths and solid particals are captured between the polipropilene filter press plates.

Open or closed discharged type filter press equipments produced as manuel, semi automatic or fully automatic in order to running of operation.

“ Filter press, equipment is commonly used for sludge dewatering & industrial solid - liquid seperation processes ”



## Dimensions of Filter Press Plates

- ✓ 1250x1250 mm
- ✓ 630x630 mm
- ✓ 400x400 mm
- ✓ 1000x1000 mm
- ✓ 500x500 mm
- ✓ 250x250 mm
- ✓ 800x800 mm

## Filter Cloths Options

Polipropilene, polyester or cotton

## Filter Plate Options

Chamber, Plate & Frame, Gasket or Membrane Plate



## Field of Activities

- ✓ Dairy Industry
- ✓ Textile Industry
- ✓ Food Industry
- ✓ Pharmaceutical Industry
- ✓ Petroleum Chemicals Industry
- ✓ Marble & Mining Industry
- ✓ Pulp & Paper Industry
- ✓ Edible Oil Industry
- ✓ Madenler
- ✓ Acid & Coating Bath Filtration



# Filter Press

Laboratory Filter Press

“*Laboratory Filter Press, equipment is commonly used for sludge dewatering & industrial solid - liquid separation processes*”

High quality mini laboratory filter press, For Pharmaceutical Industries, Chemical Laboratories and Research & Deveopment Centers

Pilot scale filter press to provide an optimal means of determining filtration requirements and sizing information at the real plant



## Laboratory Filter Press Options

Model	Plate No	Cake Volume	Stainless Steel Opt.	Filter Paper
CFP-L05	5 pcs	2,5lt	All or Wet Lines	Applicable
CFP-L10	10 pcs	5 lt	All or Wet Lines	Applicable
CFP-L15	15 pcs	7,5lt	All or Wet Lines	Applicable



## Filter Plates

- ✓ Polypropylene material
- ✓ No Corrosion

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Rapid and slow mixer are used in the process of coagulation and flocculation or small system of sludge conditioning units.

The scale of impeller design according to dimensions of tanks.

“ Rapid and slow mixers are often used for chemical wastewater treatment plant, dosing units and automatic polymer preparation systems. ”



## Tips

To avoid vortex formation, it should be a impact plates in the tank.  
Or position of mixer should be asymmetric in the tank

## Features

- Stainless steel material
- Easy installation
- High efficiency

# Aeration

## Aspirating Aerator



Aspirating aerator equipment is surface type aerator for wastewater treatment plants.

It's generally used in aerobic activated sludge units to supply oxygen to waste water instead of blower-diffuser system.

It supplies strong horizontal flow in carousel and rectangular aeration tanks.



“ Aspirating aerator is easy to mount an effective oxygen supply equipment for biological aeration unit of wastewater treatment plants. ”



Floating type aspirating aerator is an all-in-one equipments to mount on any biological aeration tank.

### Aspirating Aerator Models

Model	Power (kW)	Oxygen Efficiency	Total O2 Efficiency	Montage	Material
CA050	5,00	1,5 kg O2/kwh	7,5 kg/O2	Fixed-Floating	CRP & SS
CA075	7,50	2 kg O2/kwh	15 kg/O2	Fixed-Floating	CRP & SS
CA110	11,00	2 kg O2/kwh	22 kg/O2	Fixed-Floating	CRP & SS
CA150	15,00	2 kg O2/kwh	30 kg/O2	Fixed-Floating	CRP & SS
CA185	18,50	2 kg O2/kwh	37 kg/O2	Fixed-Floating	CRP & SS
CA220	22,00	2 kg O2/kwh	44 kg/O2	Fixed-Floating	CRP & SS

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# Filtration

## Sand & Activated Carbon Filters



“ Sand filters used to capture suspended solids (SS) in water are widely used in clean water supply, industrial water conditioning and wastewater treatment. ”

Sand filters which are used in water supply or industrial water treatment systems; extend the service and operation life of activated carbon filters and reverse osmosis systems.

In wastewater treatment, it helps prevent leaks of bacteria or suspended solids that may be present in the treated water.



### Sand Filter Options

Model	Flow	Valves	Diameter	Inlet
CM-SF305	10 m <sup>3</sup> /hr	Manuel	900 mm	DN100
CM-SF310	20 m <sup>3</sup> /hr	Manuel	900 mm	DN100
CM-SF608	30 m <sup>3</sup> /hr	Automatic	1200 mm	DN125
CM-SF648	50 m <sup>3</sup> /hr	Automatic	1200 mm	DN150
CM-SF680	75 m <sup>3</sup> /hr	Automatic	1600 mm	DN200

Custom designs are also available.



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