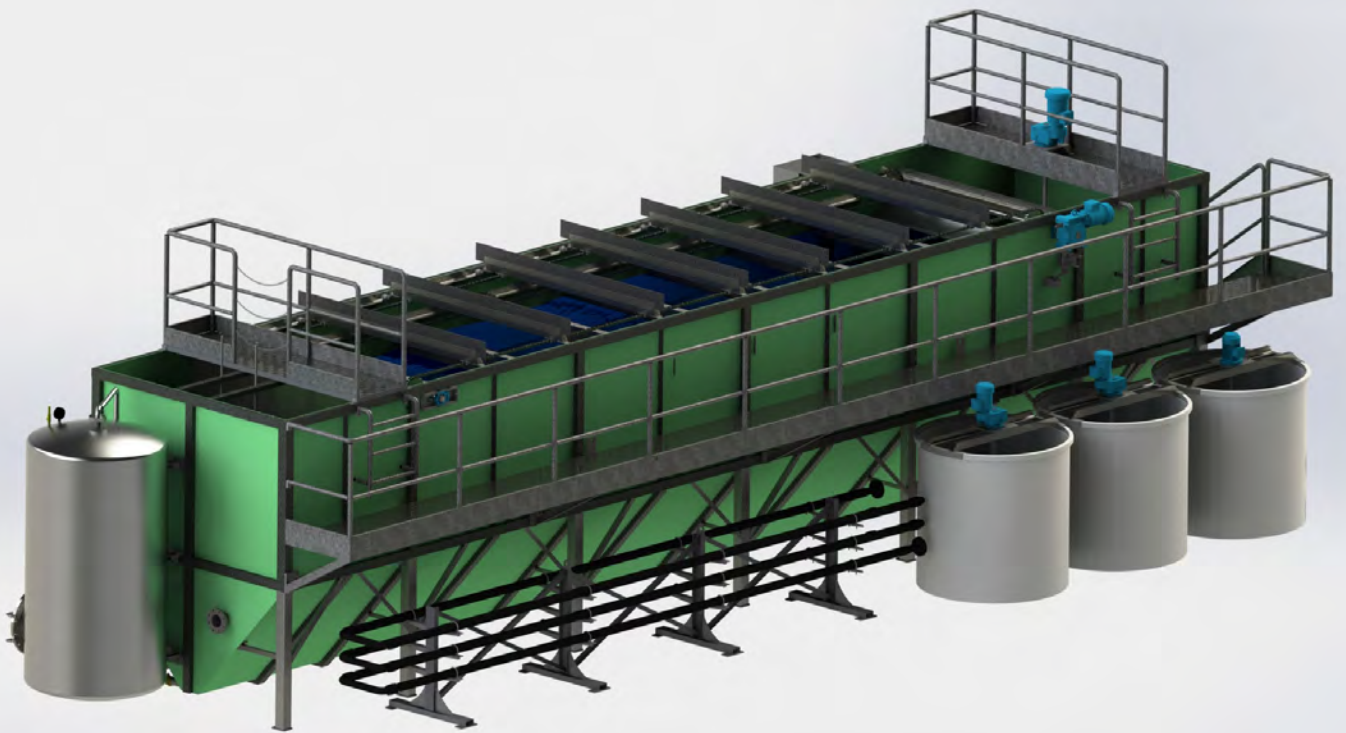




## **DAF SYSTEMS** (DISSOLVED AIR FLOTATION)



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# DAF SYSTEMS

## (DISSOLVED AIR FLOTATION)

### *General Description and Intended Use*

DAF systems are developed to remove materials such as turbidity, color, suspended solids, oil-grease which causes pollution in the wastewater. It helps to remove the pollutants with high efficiency and rapidly from the water.

DAF systems are generally used in slaughter houses, meat packing plants, oil production plants, canned food factories, textile industry, chemical industry, petrochemical industry.

The performance of the floating systems is affected by the factors such as the suspended solid concentration of the raw water, air amount, surface hydraulic load, particle elevation speed etc.

### *Working Principle Of Equipment*

The working principle of DAF is based on removal of pollutants such as oil-grease, suspended solids etc. from wastewater with the help of dissolved air.

The wastewater is passed through DAF tank flocculator. The chemical substance is dosed to flocculator and the homogeneously mixed wastewater is poured into the DAF tank. %30-40 of inlet wastewater flow rate is taken from DAF tank and transmitted to pressure setting tank. The air in the wastewater is dissolved under 4 -6 bar pressure. The wastewater discharged from pressure settling tank is recirculated to DAF tank inlet. When the wastewater in the DAF tank is exposed to the atmosphere, the micro bubbles are seen in the water. While the micro bubbles elevate to the water surface, they bring the pollutant materials such as suspended solids, oil-grease etc. to the DAF tank surface. These pollutants on the surface are scraped by the surface scrapers and taken to the oil weir. The oil accumulated in the oil weir is taken to oil collection tank. The sludge accumulated at the bottom of the DAF tank is pumped to sludge thickening tank by centrifuge type sludge pump.

The sludge accumulated at the bottom of the DAF tank is removed from the system with sludge pumps.



## TECHNICAL SPECIFICATIONS

- It treats the wastewater in any flow rate in parallel uses.
- The power and control panel are prepared by using materials in accordance with TSE.
- DAF is installed on a concrete base and it is mounted on such base.
- DAF has different color options

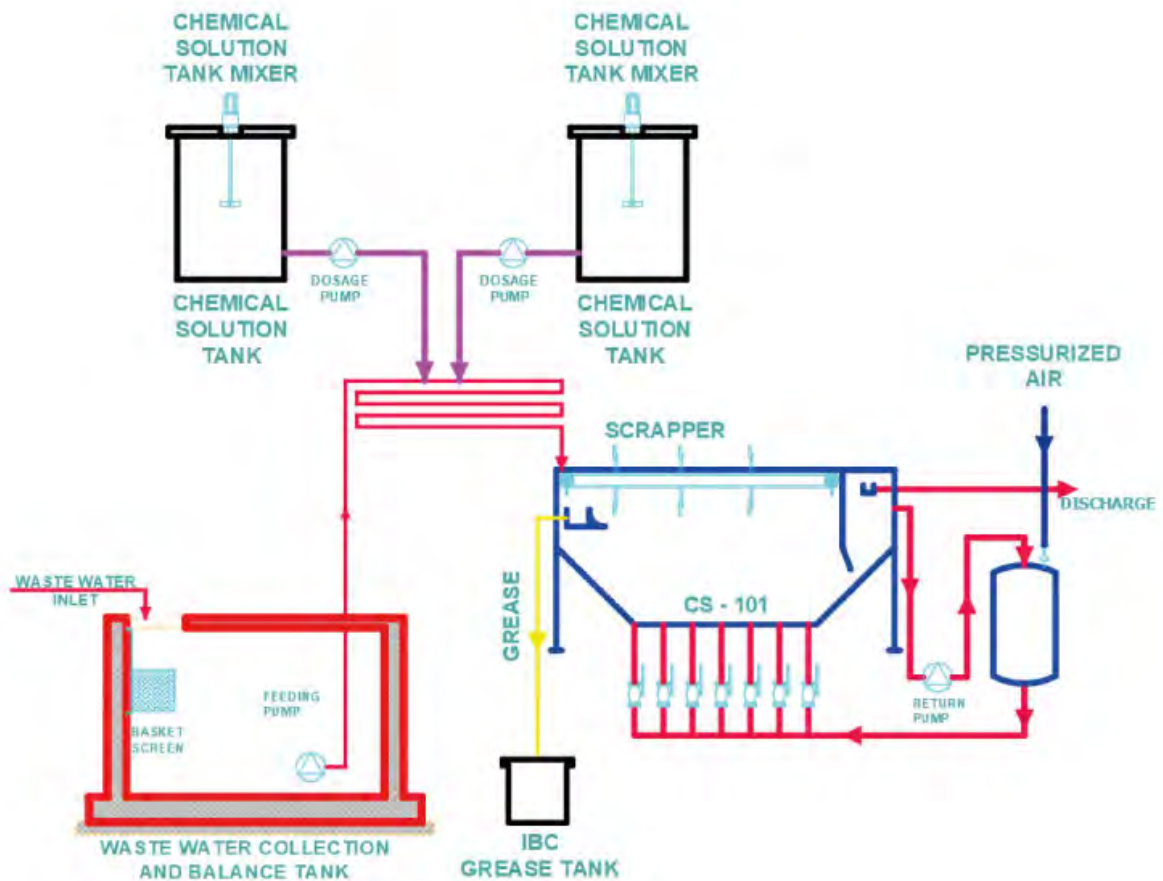
which will complete the aesthetic consistency according to the place where they will be installed.

- The treatment plant is periodically visited during the guarantee period and the operational performance of the plant is kept under control.
- If the wastewater complies with the design parameters, the outlet water quality is provided according to the legislation in force.

## ADVANTAGES

- Project Based Special Design Possibility,
- Compact Design,
- Easy Transportation and Mounting / Demounting,
- Long Operation Life,
- Possibility to Control and Follow the System Operation Over SCADA,
- Minimizing the Field Requirement Reserved for Treatment Plant,
- Aesthetic Consistency in the Installation Field,
- Full Automatic Operation of Package Plants Without Personnel,
- Easy Operation and Maintenance,
- Low Operation and Maintenance Costs,
- Odor- and Noise-Free Operation,
- Suitable for Outdoor Operation.





# ACCESSORIES

- Flocculator
- Pressure Settling Tank
- Pressure Settling Tank Safety Valve
- Pressure Settling Tank Solenoid Valve
- Pressure Settling Tank Manometer
- Pressure Settling Tank Water Level Indicator
- Pressure Settling Tank Nozzle
- Pressure Settling Tank Level Sensor
- Pressure Settling Tank Discharge Valve
- Fixed Pressure Valve

- Dissolved Air Injection Nozzle
- Surface Scraper Drive Reducer
- Surface Scraper Group
- Oil Weir
- Discharge Weir
- Pressure Setting Pump
- Compressor\*
- Oil Collection Tank Mixer\*
- Solution Preparation and Dosing Unit\*
- Sludge Pump\*
- Emergency Button\*
- Local Power and Control Panel\*

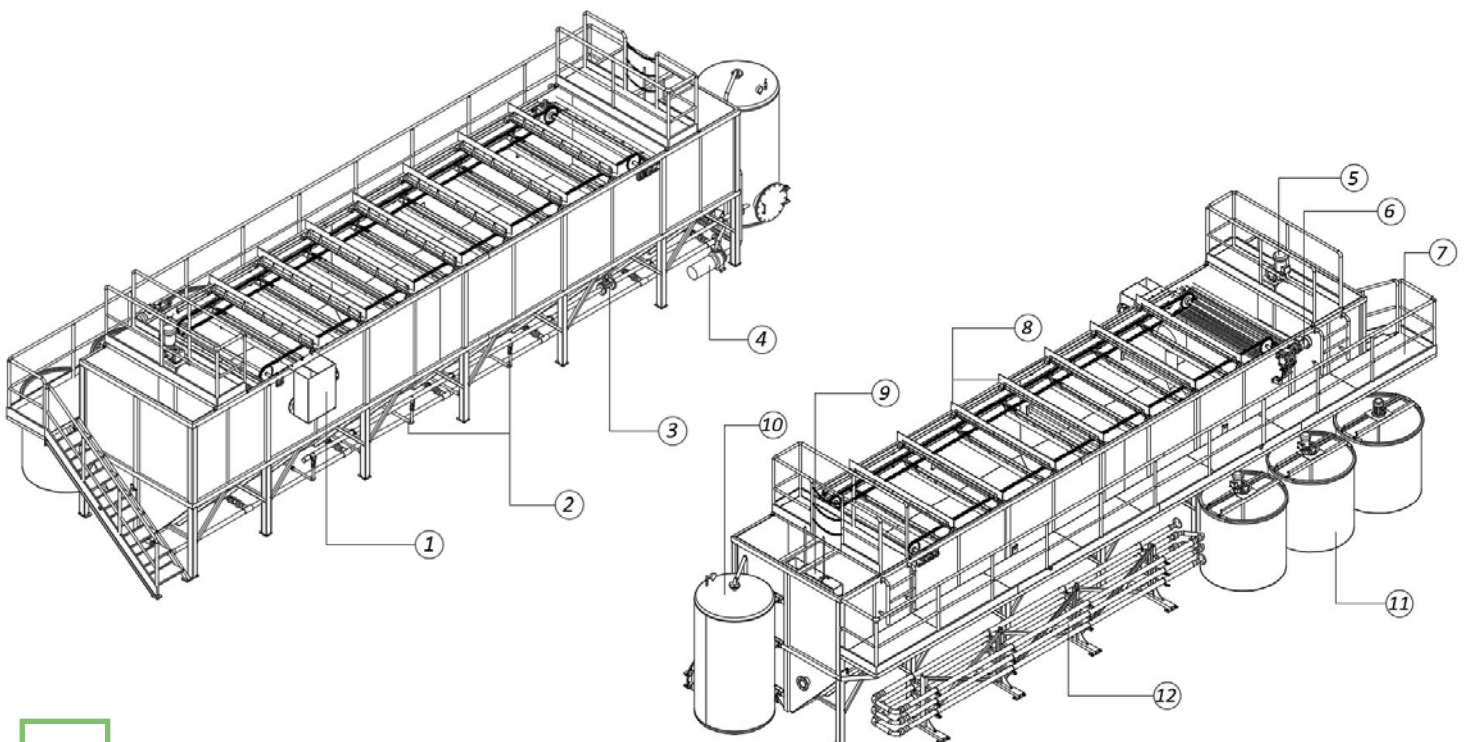
\* Optional accessories are defined.

## Material Details

- Tank: Produced as S235JR + Epoxy Paint.
- Platform: Produced as S235JR + Epoxy Paint.
- Mixers: They can be produced as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Surface Scraper Pallet: They can be produced as DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Chain: They can be produced as DIN 1.4301 (AISI 304), DIN 1.4401 (AISI 316) or S235JR.

“Different materials can be preferred in accordance with the request of the customer.”

No	Part Name
1	Wastewater Inlet Tank
2	Dissolved Air Injection Nozzles
3	Fixed Pressure Valve
4	Pressure Setting Pump
5	Oil Collection Tank Mixer
6	Surface Scraper Drive Reducer
7	Intervention and Maintenance Platform
8	Surface Scraper Group
9	Discharge Weir
10	Pressure Settling Tank
11	Solution Preparation and Dosing Unit
12	Floculator





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