

Hydro-Industrial DAF

Effectively remove waste materials from industrial water.

Product Profile

Reliably and effectively remove solids, fats, oils, metals and phosphates from industrial water.

The Hydro-Industrial DAF is a high-performance dissolved air flotation system optimised for removing nuisance and by-product materials from industrial water and wastewater, enabling businesses to save money on effluent surcharges, treatment costs and equipment wear and tear.

The Hydro-Industrial DAF system captures oil products, suspended solids, fats and other materials that are not dissolved, and its high purification efficiency means that wastewater meets quality standards appropriate for discharge into city sewer networks.

Its high performance and removal efficiency prevents materials from passing downstream, preventing the clogging, blockages and abrasion damage that can cause costly downtime or shorten equipment lifetimes.

Benefits

Cut costs and extend equipment lifetimes.

- » **Reduce surcharge costs** and prevent compliance breaches - discharge treated, environmentally compliant effluent
- » **Cut treatment costs** - eliminate the need for additional water treatment processes
- » **Improve operational efficiency** - automated processes and low-input uninterrupted operation
- » **Prevent downstream damage, blockages and wear** - reliably capture abrasive and clogging materials
- » **Discharge directly into city networks** - generate effluent with high purification efficiency



Applications

Effective separation technology for a range of industrial sectors

- » Meat and poultry slaughter and processing
- » Dairy and milk processing
- » Fish canning
- » Oil and fat processing
- » Chemicals and petrochemicals
- » Textiles and leather production
- » Iron and steelmaking



Industrial Water

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Technical specifications

- » Recirculation coefficient: 20-200%
- » Recycle pressure: 75-95 psi
- » Flotation surface area: 0.5-21 m²
- » Lamella block volume: 0.15-16 m³
- » Effective lamella block surface: 5-93 m²

Features

- » **Self-cleaning system:** extends the equipment routine cleaning period
- » **Polyurethane scrapers:** guarantees long service life
- » **Adjustable scraper mechanism:** to handle large volumes of flotation sludge and foam
- » **Safety and convenience:** ventilation box, explosion-proof design, foam extinguishing devices, service platforms
- » **Automatic integration:** with related equipment such as mechanical cleaning units, tanks, conveyors etc
- » Material options include AISI 304 stainless steel, AISI 316 or fibre-reinforced polymer

Exceptional proven performance

Demonstrated removal rates:

COD: **80%**

TSS: **98%**

FOG: **95%**

Phosphates: **90%**

Sulfides: **99%**

Metals: **95%**

Local factors affect performance efficiency, and one size does not fit all. Our experts will be happy to evaluate your water treatment conditions and schedule testing or an on-site solution pilot or demonstration.

How it works

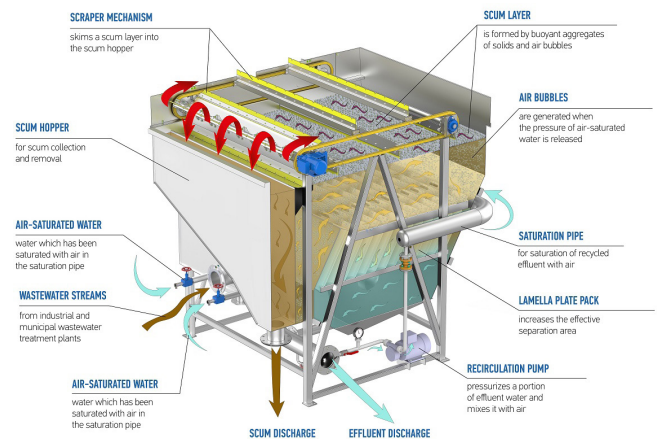
Initial wastewater is pumped to the mixer inlet (flocculator), where the wastewater is treated with reagents. Treated effluents enter the mixing chamber of the flotator with a simultaneous supply of a water-air mixture. The air bubbles and waste form flotation complexes that float to the surface.

Larger flotation complexes reach the surface in the mixing chamber, while the rest passes along with the waste water to the flotation chamber, where it is separated from the liquid.

The resulting foam is removed from the surface of the water with a scraper mechanism and discharged into the collection tray. Heavy contaminants settle on the bottom, from where they are removed through a special pipe.

Clarified wastewater is discharged through a controlled overflow into the tank for purified water and removed from the installation. Part of the purified water is taken by the recirculation pump to saturate it with air.

After that, the air-water mixture is distributed for dispersed supply into the flotation and reagent wastewater treatment areas.



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We'll help you to solve your challenges.

Our experts will consult with you to identify your requirements, define your objectives and develop the specific treatment solution that delivers the business benefits that you need.