

HYDAF - MUNICIPAL HD RANGE

DISSOLVED AIR FLOTATION SYSTEMS



DESIGNED SPECIFICALLY FOR MUNICIPAL WASTEWATER TREATMENT

The HyDAF Dissolved Air Flotation system's simplicity and exceptional performance in municipal applications are just two of the reasons why the HyDAF is the Dissolved Air Flotation system of choice for municipal wastewater treatment.

The Hydroflux HD-DAF system is specially designed for the treatment of municipal wastewater with proven systems successfully operating in numerous applications.

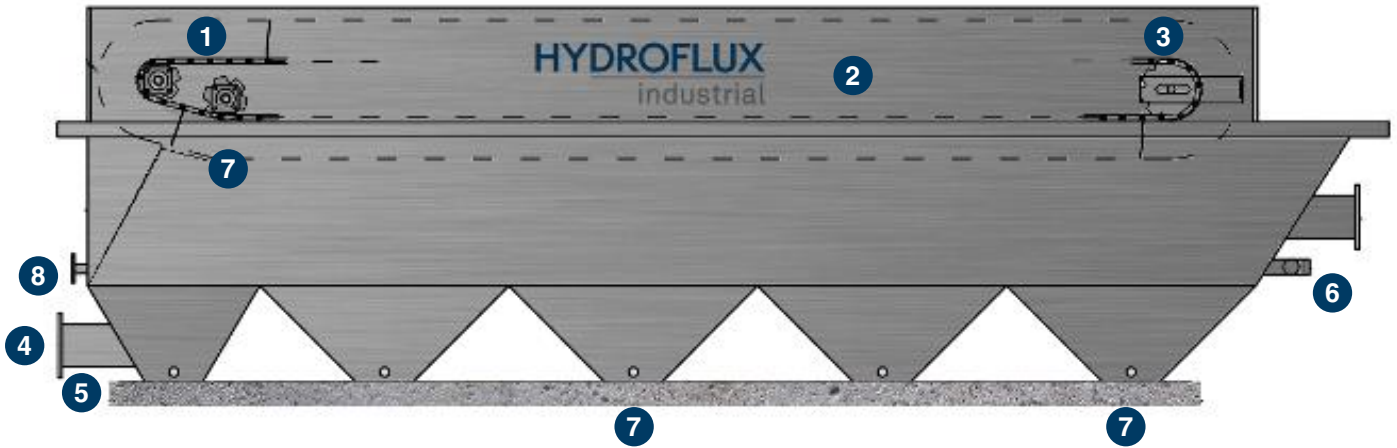
SIMPLE, COMPACT AND EFFECTIVE

The Hydroflux HyDAF HD range of DAF systems offer superior performance in terms of wastewater quality and sludge dryness over other conventional dissolved air flotation units:

- Proven counter-current scraping system providing improved performance and drier sludge.
- Ability to handle very high solids or grease loadings using one of a range of select recycle systems to provide guaranteed air to solids ratios in all cases.
- Removal of heavy and neutral density particles whilst producing two distinct, easily separable phases – the treated water and surface sludge.
- Power and air consumption are very low, maintenance is infrequent and the volume of sludge generated is considerably reduced due to the system's inherent sludge thickening nature.



KEY FEATURES



1 Scraper

The HyDAF Scraper is a heavy duty, low maintenance, roller chain system with multiple blades that minimises the water content in the removed float.

2 Enclosure

The scraper is fully enclosed and facilitates odour extraction and control and contains all wash-water overspray. It is designed with a completely clean and smooth exterior.

3 Bearings

Externally mounted bearings that allow maintenance without the removal of guards.

4 Inlet

A specially designed hex-mixer installed at the inlet of the HyDAF system optimises contact of the dissolved air stream with the wastewater to improve bubble attraction and enhance performance compared to traditional units.

5 6 Dissolved Air

The dissolved air stream is formed by using treated wastewater from the outlet of the HyDAF (6) pressurising it with air in a dissolved air saturator and injecting the stream back at the inlet (5). The dissolved air system is an automated continuous, non-blocking process.

7 8 Sludge

Sludge is scraped from the surface into the sludge hopper (8) from where it is typically pumped to a sludge storage tank for dewatering or disposal. The base of the HyDAF is designed with hoppers (7) to facilitate settled sludge removal without fully draining the system.

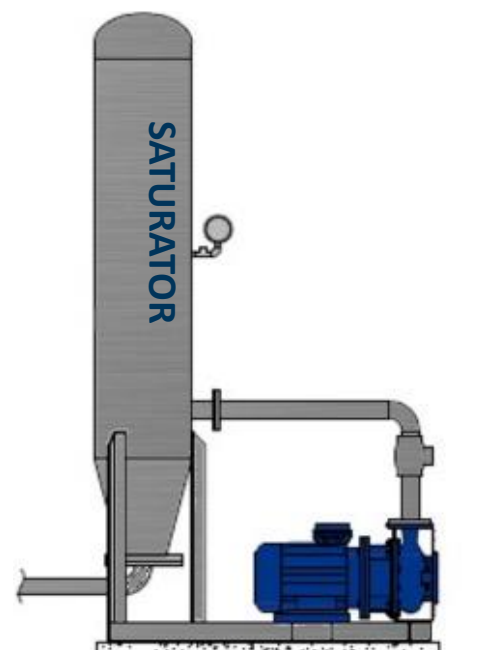
An optional bottom sludge removal screw can be provided.

High efficiency, low power and extremely small air bubbles for maximum performance.

A recycle stream of treated effluent is taken from the discharge end of the HyDAF and is pressurised to 450kPa.

This pressurised flow is injected into a specially designed Hydroflux dissolved air saturator. Air is added to the saturator to maintain a "headspace" which acts to provide contact between the air and the treated effluent and it is here that air is dissolved into the recycle stream.

To precipitate the dissolved air back into the effluent as microscopic air bubbles, the pressure is relieved through a unique pressure regulating valve. This promotes perfectly sized microscopic bubbles to maximise performance.



EVERY PLANT IS DIFFERENT

The HyDAF system is the central hardware of the wastewater treatment plant but it is surrounded by expertly designed ancillary components that ensure the overall treatment system is simple to operate and maintain with optimum performance.

Our engineers have installed hundreds of DAF systems and have invaluable design and operating experience to ensure that the system is tailored specifically for your facility.



APPLICATIONS

Applications for the HyDAF system in Municipal Sewage and Drinking Water Plants include:

- Waste Activated Sludge (WAS) Thickening – with and without polymer dosing.
- Potable Water Treatment – raw water clarification from dams, rivers and ponds.
- Algae Removal from treatment ponds and lagoons.
- Phosphorous Removal from secondary treatment applications.
- Pre-Treatment to Advanced Membrane Filtration (MF and UF).
- Seawater Clarification.



THE HYDAF RANGE

The HyDAF system is fabricated in Australia in a range of sizes to suit any municipal application with a dissolved air unit matched to the solids load in each case.



HyDAF HD Model Number	Typical Flow Range (kL/hr)	Typical WAS Thickening (kL/hr)
HD10	5 - 15	2 - 4
HD20	15 - 25	4 - 8
HD35	35 - 40	7 - 14
HD50 / HD50V	40 - 60	10 - 20
HD75 / HD75V	65 - 85	15 - 30
HD100 / HD100V	85 - 120	20 - 40
HD200 / HD200V	150 - 255	30 - 60
HD300	250 - 350	45 - 95
HD500	400 - 600	80 - 150

FlooDAF Model Number	Typical Flow Range (kL/hr)
FlooDAF49	365 - 425
FlooDAF65	500 - 625
FlooDAF115	650 - 750
FlooDAF149	800 - 990

ENGAGE PROFESSIONALS

Engaging a professional wastewater treatment company to look after the entire wastewater project is a convenient, economical and hassle free option for industry.

Hydroflux Epco can provide all process design works, manufacture and fabrication, construction and even complete operation of your wastewater treatment plant.

When Hydroflux Epco provides complete solutions, we can either undertake a contract on a turnkey basis or work together with building services engineers and other construction professionals to ensure that the project is delivered smoothly, without interruption and on time.



Hydroflux is a sustainability driven organisation delivering unrivalled engineering, scientific and technological solutions for a more secure future, with a focus on water, wastewater, renewable energy, climate resilience and environmental protection.

Hydroflux Epco is an experienced municipal wastewater treatment company. Our goal is to provide high performing, sustainable energy efficient equipment and technology for maximising life cycle value and reducing operational costs.

Provides municipal clients and contractors a sustainable and diverse range of water and wastewater screening, solid liquid separation, sludge handling and biological treatment equipment and solutions from Australia and around the globe.

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