



▼ HYDAF DISSOLVED AIR FLOTATION SYSTEMS INDUSTRIAL HD RANGE

Designed specifically for industrial wastewater treatment...

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



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

“Australia’s most experienced wastewater treatment company”



Key features of the HyDAF...

▼ SCRAPER¹

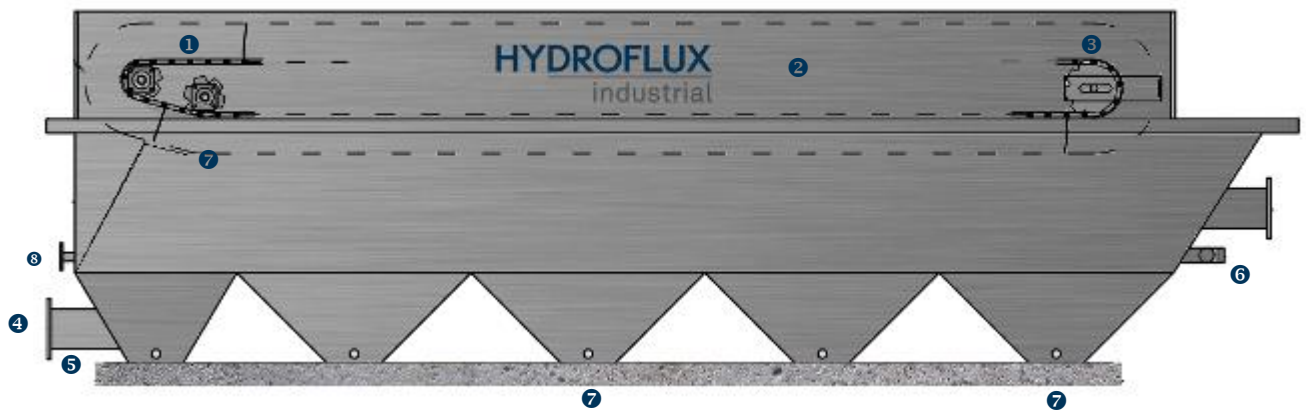
The HyDAF Scraper is a heavy duty, low maintenance, roller chain system with multiple blades that minimises the water content in the removed float.

▼ ENCLOSURE²

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.

▼ BEARINGS³

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



▼ INLET⁴

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.

▼ DISSOLVED AIR^{5 6}

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.

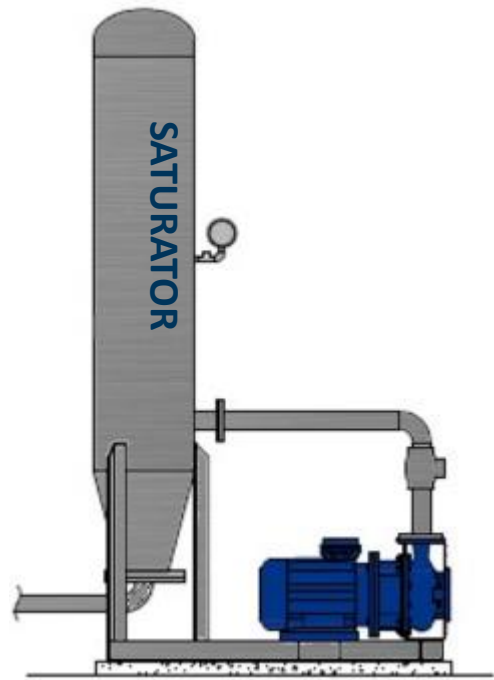
▼ SLUDGE^{7 8}

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.



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 450 kPa.

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.

▶ 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. Dry solids concentrations in the sludge can exceed 10 percent in certain applications, depending on the chemical program used.



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We know that 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.

▶ A complete primary treatment plant comprises more than just the HyDAF system. Hydroflux Industrial will supply all the components necessary to ensure that the overall treatment process is complete.

- Upstream screening of the wastewater using rotary or static mesh or wedge wire.
- Balancing of wastewater is often essential and Hydroflux can supply a range of steel or concrete agitated tanks to equalise the wastewater characteristics prior to treatment.
- Flocculators and chemical reaction tanks are often necessary and can be supplied upstream of the DAF system to ensure chemical pre-treatment is optimised.
- Chemical dosing equipment including fully automated polymer dosing systems are designed and supplied by Hydroflux.
- Sludge can be stored in suitable tanks for offsite disposal or in many cases dewatered using screw presses, belt presses or decaners. Solids handling and transfer systems are also supplied by Hydroflux.



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Designed and Manufactured in Australia...

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



Model	Capacity (kL/hr)	L (mm)	B (mm)	H (mm)
HD-10	10	3000	1400	1600
HD-20	20	4000	1800	1600
HD-35	35	4350	2400	1950
HD-50	50	5650	2800	1950
HD-75	75	6950	2800	1950
HD-100	100	8450	2900	2050
HD-200	200	9800	3900	2450
HD-300	300	11800	4900	2450

▶ Dimensions are based on the main DAF body only

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

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

When Hydroflux Industrial 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.



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