HYDAF DISSOLVED AIR FLOTATION SYSTEMS
INDUSTRIAL HD RANGE
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...

**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.

**ENCLOSURE**
The scraper is fully enclosed and facilitates odour extraction and control and contains all washwater overspray. It is designed with a completely clean and smooth exterior.

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

**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.

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

**SLUDGE**
Sludge is scraped from the surface into the sludge hopper from where it is typically pumped to a sludge storage tank for dewatering or disposal. The base of the HyDAF is designed with hoppers 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.
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 decanters. Solids handling and transfer systems are also supplied by Hydroflux.
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.

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

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.
Hydroflux Industrial Pty Ltd

Australia and Australasia
Head Office:
Level 26, 44 Market Street
Sydney NSW 2000 Australia

Victorian Office:
84 Hotham St. Preston
VIC 3072 Australia

Sutherland Engineering Office:
3-5 Stapleton Ave.
Sutherland NSW 2232 Australia

Queensland Office:
1 Westlink Court
Darra QLD 4076

New Zealand
Head Office:
Level 26, PwC Tower
188 Quay St
Auckland 1010, New Zealand

Fiji and Pacific Islands
Head Office:
Suva Business Centre
217 Victoria Parade
Suva, Fiji

United Kingdom and Europe
Head Office:
1000 Lakeside North Harbour Western Road
Portsmouth PO6 3EZ

Certificate Number: 47714001610008
Certificate Number: 47718001610008
Certificate Number: 4774801610008

Hydroflux Industrial is GRS Certified to the following standards

OHSAS 18001 & AS/NZS 4801 SAFETY MANAGEMENT SYSTEM

ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM

Int: +61 2 9089 8833
Aus: 1300 417 697
info@hydrofluxindustrial.com.au
www.hydrofluxindustrial.com.au

Int: +64 9 352 2052
NZ: 09 352 2052
info@hydroflux.nz
www.hydroflux.nz

Int: +679 773 6950
Fiji: 773 6950
info@hydroflux.com.fj
www.hydroflux.com.fj

Int: +44 23 9270 4087
UK: 0239 270 4087
info@hydroflux.uk
www.hydroflux.uk