

# NOVOTEC

## DAF-FLOTATIONS

### DISSOLVED AIR FLOTATION

- **NFU**
- **NFP**
- **NFH**



**NOVOTEC NV**  
**Waste water treatment**

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### High performance DAF-units

DAF-units are a common used waste water treatment system, renowned for their high efficiency and ease-of-use.

Used as an efficient way to separate oils, fats and physico-chemical flocks, these units significantly reduce the load to biological treatments and protect them at the same time.

Alternatively, DAF-units are also used as an effective means to separate biological sludge flocks from the discharge effluent of biological treatment plants or are used as a polishing technique.

Due to their reduced surface requirements, the DAF-unit is an ideal replacement of the classic clarifier tank.

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### Variants

Novotec engineered a wide array of flotation units, in order to comply to the specific needs of our customers.

Depending on the composition of the waste water, the flotation-unit might be fitted with a lamella package. The functioning principle of the unit remains the same, regardless the type of unit.

The NFU unit is a dissolved air flotation with a low build and large surface, capable of delivering outstanding performance. The NFP unit features a lamella package combined with a higher build, resulting in a reduced surface demand, while maintaining optimal efficiency. Finally, The NFH unit is especially adapted to treat high flow rates, due to its specific construction and added lamella package.

All these units can be used to remove fats, oils, suspended solids and flocks from physical-chemical or biological treatment.



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#### How does it work?

The waste water flow to be treated is mixed with a flow of treated water, saturated with air, dissolved under high pressure.

Once this dissolved air reaches the flotation unit, the pressure expands to atmospheric conditions, resulting in fine air bubbles.

These micro bubbles, with a size of 30 to 50 micron, attach themselves to any impurities or flocks in the water. Due to the buoyancy of the air, the particles rise to the water surface and form a sludge blanket.

This blanket is scraped of the surface continuously by the scraper system. Due to the thickening grid installed in the flotation, our systems reach an exceptional dry content in the discharge sludge (3 to 6%).

By adding a lamella package, tilted to a 60° angle, to the flotation, the NFP and NFH units have a highly enlarged active settling surface, resulting in the ability to treat higher flow rates.



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#### Technical data

Capacity: 1 to 300 m<sup>3</sup>/h

Material construction: Stainless steel 304L or 316L  
or plastic (HD-PE or PP)

Parts: Rectangular construction  
Pressure vessel with digital pressure measurement, automatic compressed air feed and recirculation pump.  
Injection system with valves  
Effluent- & Sludge discharge compartment  
Bottom sludge discharge valves



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### Characteristics

- Compact
- Entirely preassembled
- Rigorously tested in our workshop
- Simple to install and operate
- Little to no maintenance
- Excellent efficiency, maximum separation of polluting particles.



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### Applications

Pre-treatment:

Manure treatment  
Slaughterhouses  
Fish processing  
Dairy industry  
Alimentation industry  
Chemical / Petrochemical industry  
Metal industry  
Textile industry  
Tanneries  
Paper- en pulp industry  
Mining industry

Post-treatment:

Behind an aerobic/anaerobic treatment as sludge separation

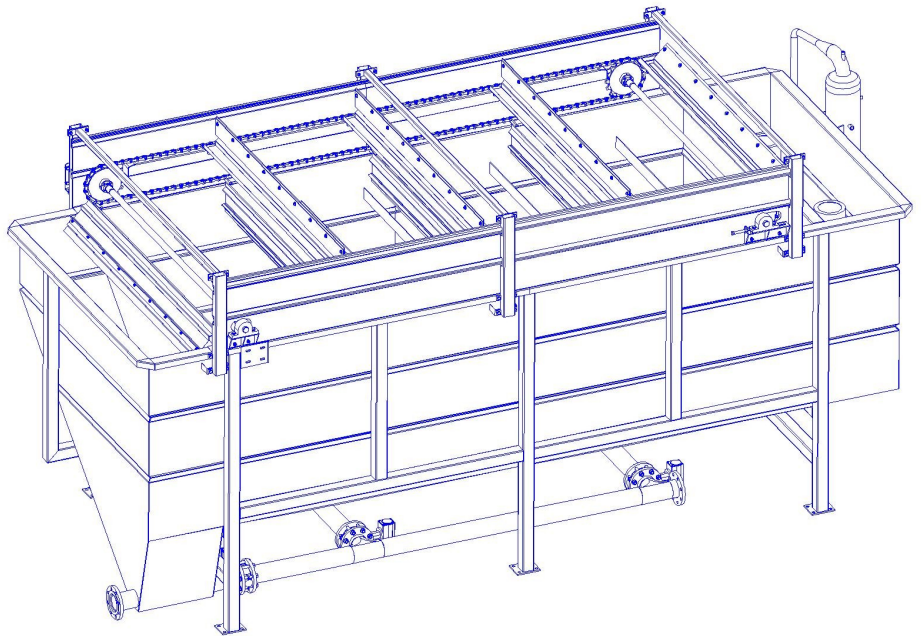


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### Lab and pilot tests

Novotec is capable of performing lab tests to determine efficiency rates of the flotation technique on your waste water. Furthermore, our laboratory is equipped to perform additional coagulation/flocculation tests to ensure the optimal treatment is offered in accordance to the customers specific needs.

In addition, Novotec provides the customer with a pilot flotation plant to further test the performance of the system in real life situations.

### Other products by Novotec NV

- **Physical treatment**

Static screens / drum screens / sand separators

Aerated grease skimmers / DAF flotations / lamella separators

- **Physical-chemical treatment**

Stirring and pipe flocculators / pH measurement

Dosing stations and polymer units

- **Biological treatment**

SBR / MBR / MMBR / SAF

- **Sludge treatment**

Drum thickeners / filter band presses / decanters

- **Accessories**

Pumping wells / flow measurement / storage tanks / commande modules with PLC, touch screen and remote control