



IDRAFLOT™

The new generation of flotation units.
Far over the traditional flotation systems.

WATER TECHNOLOGIES

Flotation technology

Principles

Flotation is a separation physical process of suspended solid which consists in blowing air into a water tank to be purified. In this way the components that are more similar to the air are dragged to the free surface of the tank by mean of gas bubbles, setting up a foam with minor density than the liquid, while the components taht are more similar to the water fall to the button setting up a mix with higher density than the liquid. Solid separation is achieved.

To make the flotation easier the addition of chemicals can occur which mix selectively with some solid or liquid components to give origin to the foam.

The type of flotation used by Veolia Italia is the Dissolved Air Flotation (DAF), in which dissolved into water air arise with different micro bubbles.

The bubbles adhere to the surface of the solid parts to be separated and reduce the basis weight by dragging them to the liquid surface in the form of foams then separated from the free surface of water by the help of a scraper.

IDRAFLOT EVOLUTION



IDRAFLOT™ progresses the flotation concept thanks to the compactness of the unit. But not only.

IDRAFLOT™ units allow such a high thickening and clarification results to be defined «ultra flotation», with the highest removal efficiency on COD, suspended solids and fat.

IDRAFLOT™ flotation units are protected by three patents. They are intended to assure a perfect mixing of the waste with saturated water and an uniform distribution of the water flow along the entire surface of the unit.

In addition, IDRAFLOT™ flotation units have mixing

volumes intended to optimize the process and the unit global handling.

Global volume reduction is intended to:

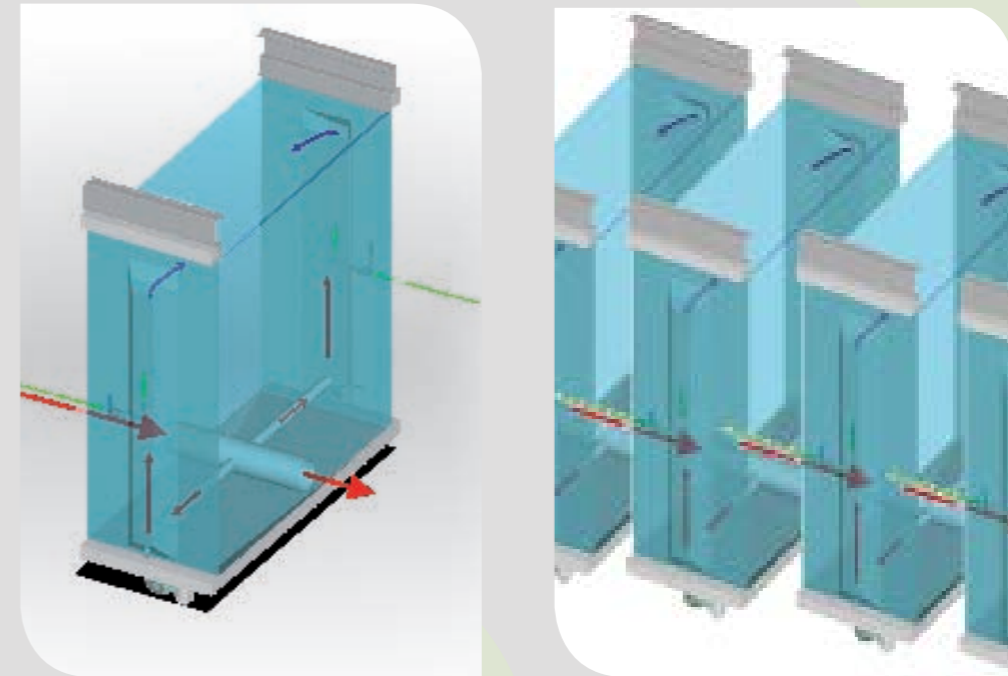
- reduce chemical additive dosing
- reduce the saturated water flow rate (up to 50% less compared to the actual models)
- avoid hydraulic short circuits
- reduce the unit management costs

A modular design for an innovative and effective water mixing device

compact and modular structure makes transport and any future re-placing easier

The attention to even more innovative engineering technological solution has made possible the achievement of the conception of a new modular structure which makes IDRAFLOT™ an extremely flexible DAF solution.

IDRAFLOT™ tank is designed by modules. The opportunity to replicate the same module along the whole structure of the unit gives benefits also in terms of process stability. A tank designed by modules allows the blowing of the air not just from one point as in the traditional systems. Modularity makes the air blowing possible along the whole surface of the unit allowing a real evolution.



water mixing omogeneity not achievable with traditional design system

Technical data

Units	Modules	Treatment capacity (m ³ /h)	Dimensions LxDxH (mm)
IFS 7	-	5-10	4600 x 1910 x 2260
IFS 15	-	6-25	5200 x 2040 x 2300
IFS 40	2	28-80	7165x2637 x 3260
IFS 60	3	42-120	8165x2637 x 3260
IFS 80	4	56-160	9235x2637 x 3260
IFS 100	5	70-200	10170x2750 x 3260
IFS 120	6	84-240	11170x2750 x 3260
IFS 140	7	98-280	12218x2750 x 3260
IFS 160	8	112-320	13218x2750 x 3260
IFS 180	9	126-360	14285x2830 x 3260
IFS 200	10	140-400	15285x2830 x 3260
IFS 220	11	154-440	16285x2830 x 3260
IFS 240	12	168-480	17285x2830 x 3260

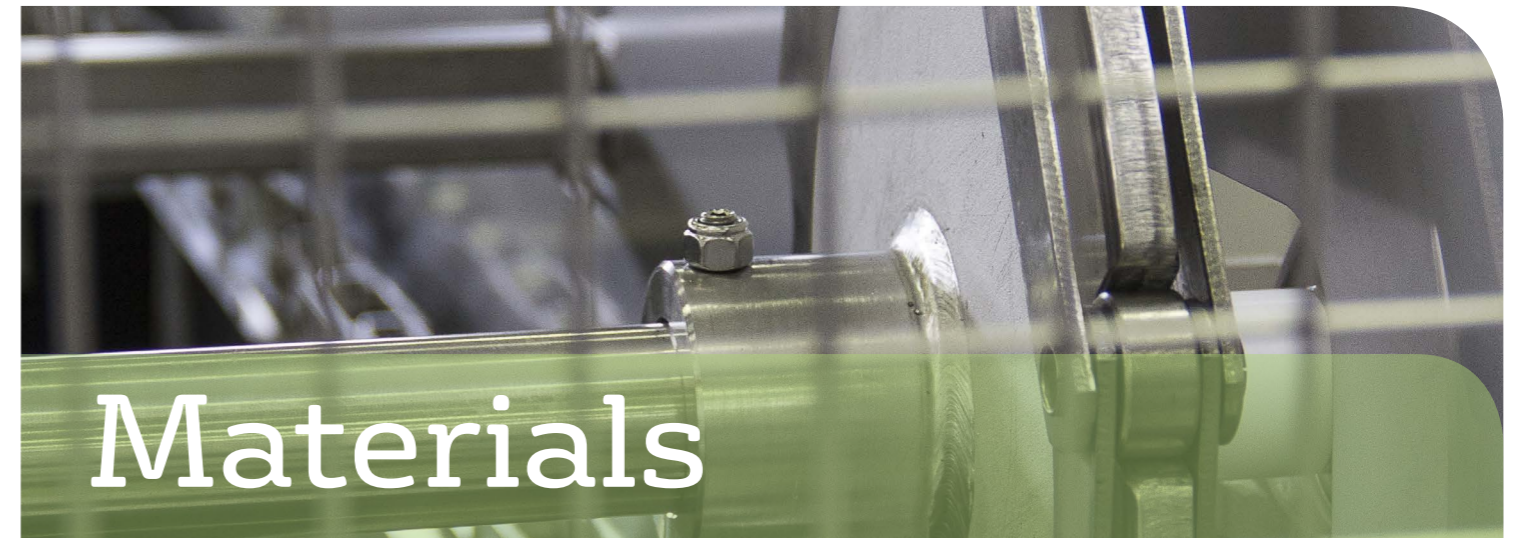
« Satisfying our customers' needs is made possible with the conception of a new modularity solution capable to cope with costs and delivery time reduction requirements. »
Veolia Technologies Italia's Engineering Team.

Industries and Application sectors

IDRAFLOT™ is an excellent solution in all fields where water clarification and depuration are required.

- Dairy
- Slaughterhouses, meat and fat processing
- Fish processing
- Cannery industry
- Wine industry
- Confectionery industry
- Soft drinks production
- Dye-works, tanneries
- Pulp & Paper industry
- and many more

A suitable solution also for biological treatment and thickening of activated sludge from biological plants.



The corrosion resistance is one of the IDRAFLOT™ basic characteristics, substantial in case of handling extremely concentrated liquids. That's why all IDRAFLOT™ flotation units use AISI 304 e 316.

Austenitic stainless steel
AISI 304/304L
W. N. Number: 1.4301/1.4307
EN: X5CrNi 18-10 / X2CrNi 19-11

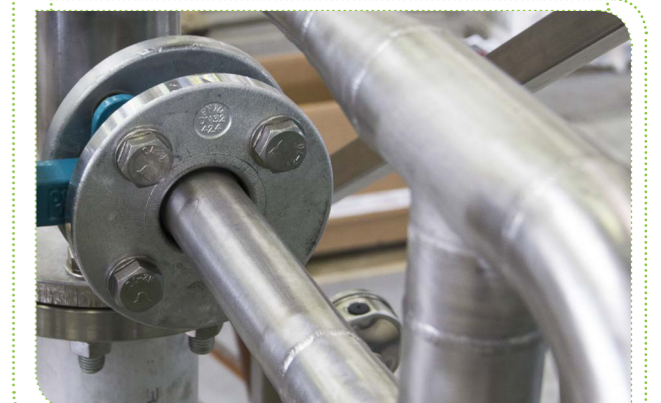
Cold work hardenable austenitic Cr-Ni steel, non-magnetic. Resistant to intergranular corrosion. Its low percentage of Carbon endows it with some resistance to corrosion in relation to a certain tange of substances, with limitations in presence of chlorides.

Superduplex stainless steel
W. N. Number: 1.4415
EN: X2CrNiMo 25-7-4

Cr-Ni.Mo steel, austenitic-ferritic structure, magnetic. The high percentage of Chrome gives excellent resistance to localised corrosion, suitable for use in chloride containing media.

Austenitic stainless steel
AISI 316/316L
W. N. Number: 1.4401/1.4404
EN X5CrNiMo 17-12-2 / X2CrNiMo 17-12-2

Austenitic Cr-Ni molybdenum-alloyed steel, cold hardenable, non-magnetic. Resistant to intergranular corrosion. Its resistance to corrosion is very good in a wide range of salts and organic acids, even in a presence of chlorine ions, and fairly good presence of reducing acids.



Resourcing the world

Veolia Water Technologies Italia has a firm commitment to reduce the CO₂ emissions of its technological offer. Careful analysis has enabled us to calculate the CO₂ emissions of our solutions.

Contact us for a customized Carbon Footprint Assessment.
www.veoliawaterst.it



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