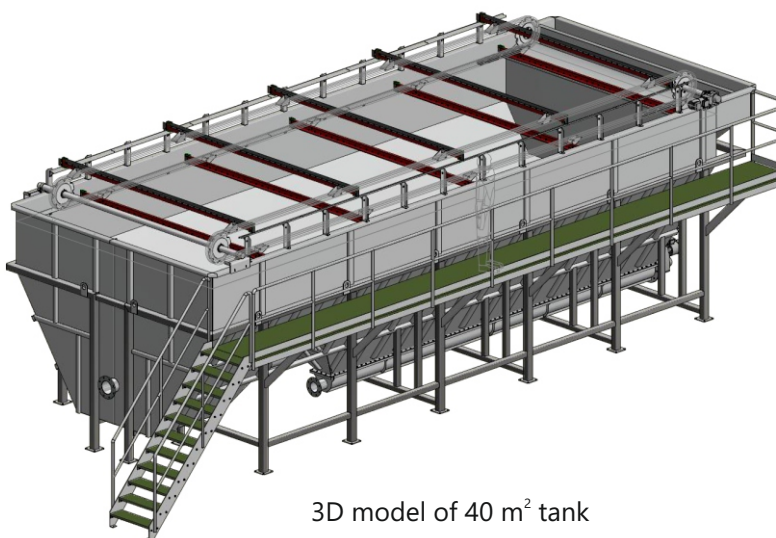
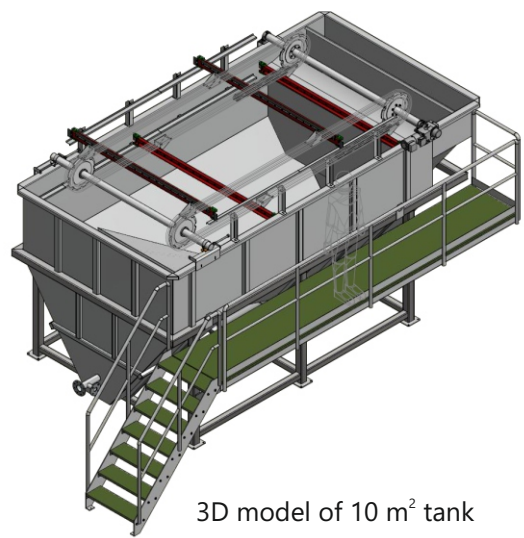


## FLOTATION UNIT

# KUNST - i - FLOT



3D model of 40 m<sup>2</sup> tank



3D model of 10 m<sup>2</sup> tank

### TECHNICAL PARAMETERS:

Surface area of the tank	m <sup>2</sup>	10	15	20	25	30	40
Useful volume	m <sup>3</sup>	15	23	30	45	55	75
Weight excl. content	kg	3 000	4 000	5 000	6 000	7 000	9 000
Weight incl. content	kg	18 500	27 500	35 500	52 000	63 000	85 000
Length	m	5 250	7 250	9 250	7 450	8 700	11 200
Width (excl. service paths)	m	2 730	2 730	2 730	4 450	4 450	4 450
Height	m	3 125	3 125	3 125	3 850	3 850	3 850
Installed power	kW	4,9	9,4	9,4	15,1	15,1	18,6
Inflow	-	DN80	DN100	DN125	DN125	DN150	DN200
Sludge water outflow	-	DN80	DN100	DN125	DN125	DN150	DN200
Floated sludge outflow	-	DN100	DN100	DN100	DN150	Dn150	DN200
Desludging	-	DN150	DN150	DN150	DN150	DN150	DN150

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## FLOTATION UNIT

# KUNST - i - FLOT

### USE

Dissolved air flotation (DAF) is a process used for treatment of potable water or cleaning of waste water (municipal, industrial, from food-processing industry, etc.) that has been contaminated with suspended solids, oils and fats. If coagulation precedes the flotation process, residual phosphor may be removed from the waste water. The whole process may be enhanced by dosing of flocculant/coagulant.

### PRINCIPLE

Basic principle of DAF is a separation of suspended solids using aggregation of air microbubbles and particles (or oil droplets). The air microbubbles attach to the particle and rise it to the surface (the aggregate has a lower specific weight than water) and forms floated sludge layer.

### EQUIPMENT DESCRIPTION

The flotation tank has a total of four connection points for technological pipes: Inlet nozzle, purified water outlet, floated sludge outlet, and pipe for desludging from the bottom sediments with a release option. First, the flotation tank is filled with water. Then using a centrifugal pump, the water is pumped from the outlet of flotation section into a pressure saturation tank at 5–6 bar. At the same time, pressure air from the compressor is pumped into the saturation tank. Recycle water is saturated with air at high pressure, and then flows into the inlet part of the flotation tank. High pressure is released in the recycle circuit, and thanks to rapid decrease in pressure a large volume of micro bubbles is released. Gradually, air dispersion forms in the inlet flotation part of the tank and in its

upper parts. Once the contaminated water enters the flotation tank, micro bubbles attach to the whole surface of the floc particles. The produced mass floats to the surface and is mechanically removed by a skimmer into a sludge tank. Outlet from the sludge tank may use the form of gravity or a pump controlled by a pressure sensor. Purified water flows away by the force of gravity, and leaves the tank through the outlet weir.

### MATERIAL DESIGN

Standard material for the tank is stainless steel 1.4301, skimmer is made of plastic/stainless steel.

### OPERATION AND MAINTENANCE

Operation of the facility does not require a nonstop attendance. The maintenance needs to be done in accordance with the instructions.

### DELIVERY

The flotation unit is delivered as a whole including peripheral devices and their instalment, or as requested. General layout of the unit (as well as the dimensions specified in the chart) may be individually adjusted and may be a subject for further discussion. Technology design of the unit follows pilot testing. The supplier reserves a right to make changes to the delivery not stated in the original specifications, as long as the parameters remain the same.

### DELIVERY DATES

According to contract.



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