

KROFTA ENGINEERING LIMITED

UNICELL

Rectangular Dissolved Air Floatation Unit



settle at the bottom of the main tank and are removed periodically with the help of timer activated purge valves, leaving only the clear water to pass through the middle of the main DAF tank. This method of sludge removal generates a high consistency sludge, making it easier to handle for further sludge treatment. The entire system consists of a recycle pump, air compressor and pressure release valve.

The Unicell is designed to sustain high Total Suspended Solids (TSS), Fats, Oils and Grease (FOG) loads and can treat a range of water flow rates with the maximum being 150 m³/hr in a single unit.



The application of Dissolved Air Floatation (DAF) is to separate solids from liquid, with the help of micro bubbles. These bubbles formed in the Air Dissolving Tube (ADT), attach themselves to light solid particles and rise to the surface. The solids at the surface are swept by scrapper blades and removed from the top by the paddle wheel. The heavier solid particles

Advantages & Applications of UNICELL

- Low investment and operational cost due to optimized polymer consumption
- Completely metallic built unit with minimal to civil construction cost
- 30 minutes of retention time due to the height, giving high and efficient solids removal
- low sensitivity to variations in inlet parameters and shock loads
- Popular in edible oils, food and beverage and refinery applications as well as in slaughterhouses. Can be used for sludge thickening

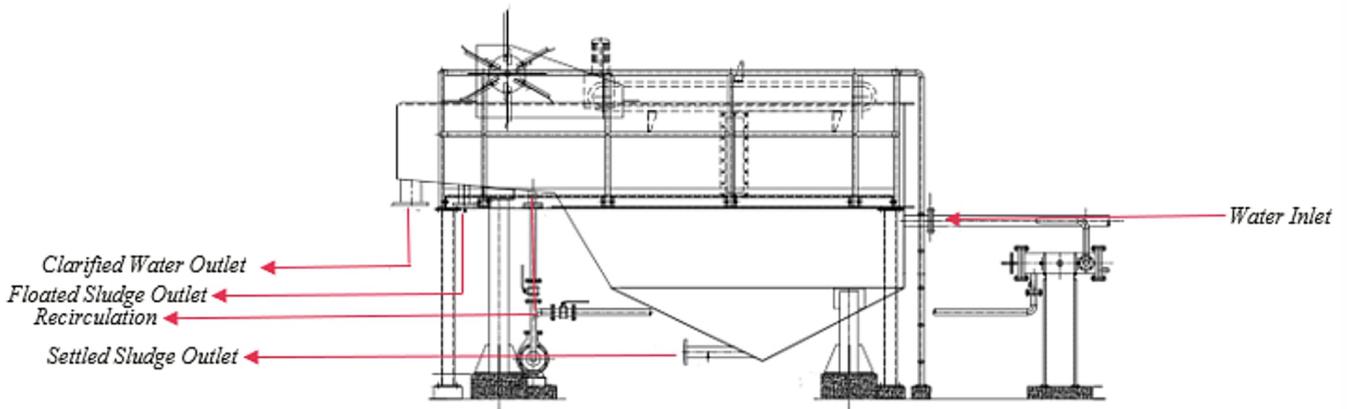




Krofta's patented Air Dissolving Tube (ADT) is used to saturate air into the recycled treated water. At atmospheric pressure, this created millions of micro bubbles in the size range of 30-50 micron.

The benefits of using our floatation unit with our ADT are:

- Entire process of air saturation takes only approximately 12 seconds
- Krofta ADT has a small footprint and easy O&M
- Micro bubbles lead to very high solids removal efficiency
- Other air systems may choke in the presence of TSS > 2000 mg/L



DAF Model	Max Flow (m ³ /hr)	Length (mm)	Width (mm)	Height (mm)	Motor Power (kW)	Machine Weight* (kg)	Weight with Effluent* (kg)
UNC – 10	10	3700	1500	2600	1.1	1300	5000
UNC – 15	18	4400	1500	3000	1.1	1800	7000
UNC – 30	36	4400	2500	3000	1.5	2260	12700
UNC – 50	60	6150	2500	3000	1.5	2640	22400
UNC – 70	84	8200	2500	3000	1.5	3300	31800
UNC – 90	108	10200	2500	3000	1.5	3800	41500
UNC – 110	132	10200	3000	3000	1.5	4100	52000
UNC – 140	168	10200	3350	3000	1.5	4670	76000

Table 1: Technical Details, *Approximate Values



KROFTA ENGINEERING LIMITED

Durga Bhavan, A-68, FIEE Complex, Okhla Industrial Area Ph-II,
 New Delhi-110020. INDIA • Tel: +91-11-4724 2500 Fax: 91-11-4160 7026
 Email: krofta@kroftaengineering.com • Website: www.kroftaengineering.com

