

**KROFTA ENGINEERING LIMITED, INDIA**

# MINICELL

## The Simplest Circular Dissolved Air Floatation 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 removed by the scoop system. The heavier solid particles 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 on to the side. 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.

Our Minicell models are 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 over 700 m<sup>3</sup>/hr in a single unit.



## Advantages & Applications of MINICELL

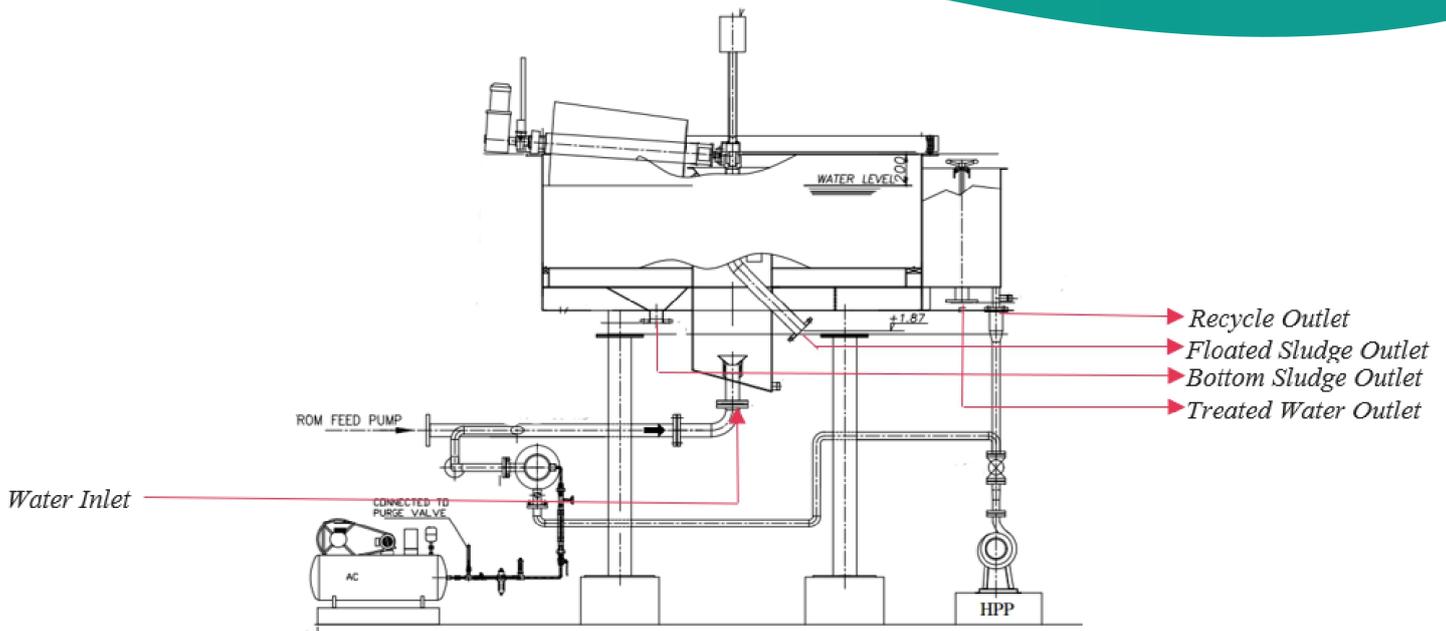
- Competitive pricing as compared to traditional larger height circular DAF units
- No requirement for a pipe flocculator, in line dosing achieves high removal efficiency
- Low Footprint, fully metallic structure with minimal to no civil construction required and is highly compact
- 3 height options available for the most efficient performance based on the inlet characteristics
- Popular in food and beverage, automobiles and paint as well as chemical industries



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 <sup>3</sup> /hr)	Flotation Area (m <sup>2</sup> )	Diameter (mm)	Height Options (mm)			Motor Scoop Power (kW)	Motor Carriage Power (kW)	Machine Weight* (kg)	Weight with Effluent* (kg)
MNC - 6	16	2.7	1850	1000	1500	-	0.25	-	800	3000
MNC - 8	34	4.5	2400	1000	1500	-	0.25	-	1000	5000
MNC - 10	60	8.1	3200	1000	1500	2000	0.37	-	1600	8000
MNC - 12	90	12	3900	1000	1500	2000	0.55	-	2000	12000
MNC - 15	115	15.9	4500	1000	1500	2000	0.75	-	2600	15000
MNC - 18	180	23.8	5500	1000	1500	2000	0.75	0.75	3100	34000
MNC - 20	220	29.2	6100	1000	1500	2000	0.75	0.75	4000	42000
MNC - 22	250	35.2	6700	1000	1500	2000	1.5	1.5	4800	51000
MNC - 24	300	40.7	7200	1000	1500	2000	1.5	1.5	5400	60000
MNC - 27	386	51.2	8100	1000	1500	2000	1.5	1.5	6200	62000
MNC - 30	477	63.6	9000	1000	1500	2000	1.5	1.5	7000	64000
MNC - 33	588	78.5	10000	1000	1500	2000	1.5	1.5	8100	69000
MNC - 36	712	95	11000	1000	1500	2000	1.5	1.5	9000	75000

Table 1: Minicell Technical Details, \*Approximate Values



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