



DA Fine Bubble Air Diffusers for Water Aeration, Oxidation & Mixing



Typical applications

- Industrial wastewater treatment
- Activated sludge, wastewater
- Landfill leachate waste water
- Extended diffused aeration systems
- Agricultural waste water
- Reduction of THMs by air stripping
- Oxidation of ferric, manganese and arsenic
- Destratification of lakes or reservoirs
- Wetland water treatment systems
- Aquaculture for fish & shrimps

Key features

- Semi-flexible, tubular construction
- Self ballasted
- Available in 9 lengths from 0.3 - 3m.
- Air handling capacity from 1 - 10m³/hr
- Less than 0.2 Bar (3 psi) pressure differential
- Oxygen transfer efficiency up to 5 kg/kwhr
- Resistant to calcification
- Easy to clean and maintain
- Robust and long-lasting (typical lifespan in chemically aggressive landfill leachate plants is more than 10 yrs)

Air Diffusers : Simple, efficient and sustainable water treatment without chemicals

Comparative Advantages of DA Fine Bubble Air Diffusers

Maintenance

- Solid diffusers suffer from problems of blockage from carbonate and iron deposition and are therefore very difficult to clean and maintain.
- Flexible membrane type diffusers stay largely free of fouling but, need a heavy frame or, must be anchored to the base of the aeration tank.
- DA diffusers are hybrid units. As they are semi flexible, carbonates and metal oxides simply crack off the unit.

Efficiency

- Surface aerators waste a huge amount of kinetic energy with an O_2 transfer coefficient of 1 - 2 kg of O_2 per kW.
- Membrane diffusers are more efficient at 2 kg to 3 kg of oxygen per kW.
- DA fine bubble air diffusers have an average bubble size of 1mm with Oxygen transfer coefficient of over 5 kg of O_2 per kW.

DA fine bubble air diffusers are therefore the most efficient available and are ideal for retrofit applications as a simple drop-in product, for lakes, tanks, lagoons and aeration channels, for both clean water and waste water treatment.

Pre-Treatment of Process Water



Iron and Manganese Oxidation



Aquaculture



Landfill Leachate Treatment



Summary

Summary Specification

- Semi flexible tubular construction up to 3 m in length
- Outer polyester jacket with Internal glass bead ballast
- Plastic & stainless fittings
- Self ballasted. No secondary anchorage required
- Air flow from 1 to 10 m³/h
- 1 x 3 m air diffuser and 10 m³/h of air provide 1 kg of O₂/h.
- Less than 0.2 Bar (3psi) pressure differential
- Average Bubble size < 1mm
- Oxygen transfer efficiency up to 5 kg/kwh.
- Can be maintained while air- blowers are operating and water reservoir is full

Article	Description	Diffuser Weight kg	Air Flow m ³ /hr (+/- 20 %)	Oxygen Transfer kg of O ₂ / day per diffuser at different depths		
				2m	3m	4m
CY-70000	0.33 m Diffuser	0.5	1	2 kg O ₂	2.5 kg O ₂	3 kg O ₂
CY-70001	0.66 m Diffuser	1.0	2	4 kg O ₂	5.0 kg O ₂	6 kg O ₂
CY-70002	1.00 m Diffuser	1.5	3	6 kg O ₂	7.5 kg O ₂	9 kg O ₂
CY-70003	1.33 m Diffuser	2.0	4	8 kg O ₂	10 kg O ₂	12 kg O ₂
CY-70004	1.66 m Diffuser	2.5	5	10 kg O ₂	12 kg O ₂	15 kg O ₂
CY-70005	2.00 m Diffuser	3.0	6	12 kg O ₂	15 kg O ₂	18 kg O ₂
CY-70006	2.33 m Diffuser	3.5	7	14 kg O ₂	17 kg O ₂	21 kg O ₂
CY-70007	2.66 m Diffuser	4.0	8	16 kg O ₂	20 kg O ₂	24 kg O ₂
CY-70008	3.0 m Diffuser with NRV	4.5	9	18 kg O ₂	22 kg O ₂	27 kg O ₂
CY-70020	75 x 75mm weight with 2 x 1/2" connectors for installations > 5m depth					
CY-70021	75 x 75mm weight with 5 x 1/2" connectors for multiple diffuser connections					

