



# BAB™ Big Bubble Mixers

## Advanced Geysers Technology

1. EDI Big Bubble Mixers are engineered to deliver maximum mixing performance, particularly in process applications where minimum O<sub>2</sub> transfer is desired.

BAB™ bubble size is engineered with typical gas bubble volumes of:

**Model 4 = 2 to 3 ft<sup>3</sup>**

**Model 6 = 3 to 4 ft<sup>3</sup>**

Selection of the proper model mixer along with the simplified process control on BAB™ advanced Geysers mixing technology delivers maximum flexibility of operation.

2. EDI Big-Bubble technology is specifically designed to mix with minimum O<sub>2</sub> transfer to the surrounding liquids for anoxic and anaerobic mixing applications.
3. Low pressure operation using existing aeration blowers.
4. BAB™ mixers incorporate engineered siphon technology to create intermittent bubble release.
  - a. Discharge frequency is proportional to the supplied airflow  
(Note: the big bubble volume remains constant, only frequency changes)
  - b. Discharge rates are typically one discharge in five minutes up to about 30 discharges/min.
5. Diameter and length of ejection (discharge) pipes to optimize either mixing or pumpage capability.
6. Simple controls! Only airflow to the mixing system is controlled, orifices distribute air to the individual mixers.
7. No complicated stainless-steel piping required for BAB™ systems.
8. BAB™ mixers create 4 synergistic mixing regimens:
  - a. Direct pumpage lifts basin contents from near the floor to top of tank providing vertical mixing exchange.
  - b. Secondary induced flow enhances total liquid circulation with submerged vertical pumpage creating multiples of the direct flow liquid circulation. Deeper the discharge the greater the secondary circulation velocity and volume.
  - c. Bubble bursts create localized turbulence and non-laminar flow.
  - d. Interfering current mixing from staggered release of big bubbles from adjacent unit pumpage zone interfaces generate eddy current mixing



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9. Mounting techniques
  - a. Fixed-to-floor standard
  - b. Suspended from floating laterals for special applications.
  
10. Best value big bubble mixing system
  - a. Economical capital cost.
  - b. Low energy consumption.
  - c. Easy installation.
  
11. Install and discharge at any depth (*typical minimum depth is 5 to 6 feet*)
  - a. Unit typically mounted on the floor for maximum performance. Maximum depth is only limited by operating pressure of the air supply.
  - b. Submergence of the discharge tube can be controlled to deliver significant pumpage and significant bubble displacement.
  - c. Mixing is enhanced with greater depth
  
12. Integrated design

**BAB™ technology is specifically engineered to be integrated with diffuser systems in biological process applications. EDI big bubble mixers use air from the same air supply as aeration diffusers simplifies the overall piping vs. those systems which need special air supply, special piping, and valve actuators or high-pressure compressors.**
  
13. Excellent for conventional mixing/pumping applications:
  - a. Flow equalization.
  - b. Channel mixing.
  - c. Lake de-stratification.
  - d. Special air lift and liquid transfer projects.