

DATASHEET APPLICATION NOTE A062-GP99 - AERATION

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Aeration

Bronkhorst offers mass flow meters and controllers up to 5000 l/min Air equivalent. In aeration applications up to 50% of the MASS-STREAM flow measurement and control instruments are sold with multi-functional display which offers a wide range of additional options.

This application note introduces aeration presenting several ideas for using our instruments in different industrial sectors. Aeration is a process which circulates, mixes or dissolves air, oxygen, carbon dioxide or other gases in a liquid or substance.

The process of aeration is applied in food and beverage markets, waste water treatment, as well as in fish tanks and fish farms. Examples are oxygen level control in beer brewing and winemaking to allow fermentation. Also milk, sparkling water and other carbonated drinks, like cola, need a throughflow of gases to remove odors or to add CO₂. Similar to the use of air pumps in a fish aquarium, industrial gas flow control is used to aerate ponds to grow fish or algae.



Application requirements

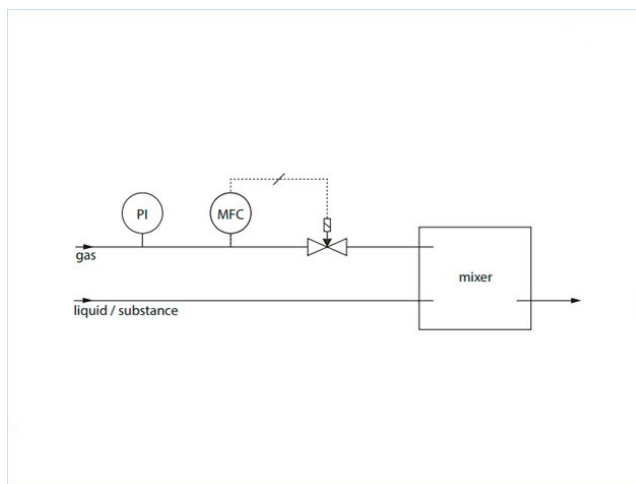
- Robustness
- High repeatability
- Easy to check actual gas flow
- Gas consumption monitoring
- Ingress protection class IP65 rugged and waterproof housing

Industrial sectors

- Food and beverage
- Beer brewing and winemaking
- Production of carbonated drinks
- Bioreactors and fermenters
- Waste water treatment
- [Fish and algae farms](#)
- ...

Optional features

- Multi-functional display
- Additional interface
- Up to 8 calibration curves in one instrument
- Pressure rating P1 up to 20 bar(g)
- Compression type fittings



General flow scheme for control in aeration

Recommended Products



MASS-STREAM D-6310 MFM

Min. flow 0,01...0,2 l/min

Max. flow 0,1...2 l/min

Pressure rating up to 20 bar

Rugged sensor and housing (IP65)

Optional integrated TFT display



MASS-STREAM D-6371/004BI MFC

Min. flow 2...100 l/min

Max. flow 20...1000 l/min

Pressure rating up to 10 bar

Rugged sensor and housing (IP65)

Optional integrated TFT display



BRONKHORST HIGH-TECH B.V.

Nijverheidsstraat 1A

NL-7261 AK Ruurlo (NL)

Tel. +31 573 45 88 00

info@bronkhorst.com

