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## **ultrafine minigalf nanobubble generator I lab-scale r&d university**

The ultrafine miniGaLF is an entry-level GaLF nanobubble generator for research, designed for universities, laboratories, and OEMs who want to explore ultrafine bubble technology. It connects directly to a water tap and gas source and can be configured with a Plus recirculation option to achieve higher ultrafine bubble concentrations for water treatment, aquaculture, agriculture, and product development.



# ultrafine minigalf nanobubble generator | lab-scale r&d university

## minigalf: entry-level ultrafine nanobubble generator for research & development

- ✓ compact design, small footprint
- ✓ Direct connection to faucet
- ✓ miniGaLF Plus: expand the unit with a pump, to recirculate water and generate high concentrated bubble water.
- ✓ efficient gas dissolution
- ✓ 18 liter Plexiglass water tank available.

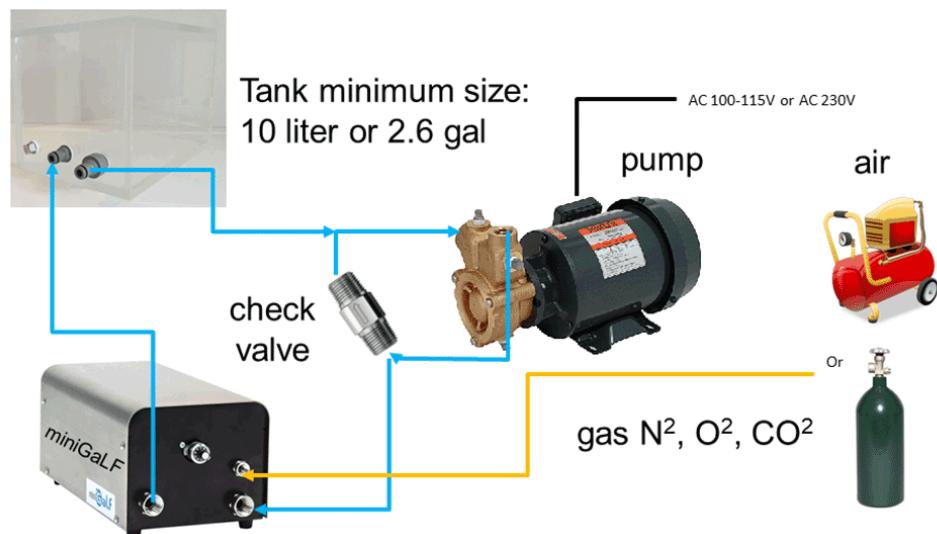
### research

The miniGaLF is an entry-level GaLF model designed for companies, universities, research institutes, and individuals who want to learn about ultrafine bubble technology. The miniGaLF offers numerous possibilities for creating your ultrafine bubble application, as it is easily fitted and retrofitted into existing machines and processes. In the most straightforward setup, just connect the miniGaLF to your water tap and add a gas source, either from a compressor or a gas cylinder, and you are ready to go. In the more advanced setup, you can add a recirculation system to achieve higher concentrations of ultrafine bubble water, which we refer to as Plus as an option. The "-Plus" version has a check valve and a pump. Read the blog post about the miniGaLF -Plus version for more information on how to integrate the unit with a pump.

### easy to install and use

The nanobubble unit is the most popular model. The miniGaLF comes with a power adapter from 115 Volts to 230 Volts, so it always matches the local power in your office or home. When connecting the miniGaLF to a faucet, ensure the water supply is at least 7.5 liters/minute. Test this by running the faucet for 1 minute, collecting the water in a bucket, and measuring the volume.

## acniti miniGaLF -Plus



### more options

When you need to work with ozone or want to avoid turbulence, check out our microStar.

Besides the miniGaLF, Acniti provides other GaLF models such as agriGaLF, high-concentration GaLF, and custom-built units. When larger volumes of liquids are required, consider the agriGaLF as this is our high-volume solution, or the Turbiti UFB Mixers for lake, pond, or seawater treatment. For researchers and product developers who require the highest density of bubbles, Acniti provides the high-concentration GaLF. This top model delivers the smallest bubble size with the highest concentration of ultrafine bubbles in the industry.

## minigalf ufb specs

Description			Metric	Imperial
1 Model name			miniGaLF UFB	miniGaLF UFB
2 Model number			FZ1N-04FB	FZ1N-04FB
Liquid			Metric	Imperial
3 Flow / minute			7.5 Liter	2.0 Gallon
4 Flow / hour			450 Liter	119 Gallon
5 water temperature minimum			0 °C	32 °F
6 water temperature maximum			50 °C	122 °F
7 Strainer availability and size			No strainer (Remark minimum water pressure miniGaLF 300kPa, or 43.5 psi)	No strainer (Remark minimum water pressure miniGaLF 300kPa, or 43.5 psi)
8 Recommended inlet filter(s)			Small pump inlet filter series	Small pump inlet filter series
Ambient			Metric	Imperial
9 Ambient temperature minimum			0 °C	32 °F
10 Ambient temperature maximum			40 °C	104 °F
11 Relative humidity minimum			45 %	45 %
12 Relative humidity maximum			85 %	85 %
Gas			Metric	Imperial
13 Minimum flow / minute			0.3 Liter	0.1 Gallon
14 Maximum flow / minute			0.4 Liter	0.1 Gallon
15 Minimum flow / hour			18 Liter	4.8 Gallon
16 Maximum flow / hour			24 Liter	6.3 Gallon

Gas	Metric	Imperial
17 Pressure minimum	100 kPa	15 PSI
18 Pressure maximum	300 kPa	44 PSI
19 Gas quality	Do not use corrosive gases. Use of Oxygen, Carbon Dioxide, Nitrogen or Ambient Air is allowed.	Do not use corrosive gases. Use of Oxygen, Carbon Dioxide, Nitrogen or Ambient Air is allowed.

20 Gas remark	Gas intake time 5 seconds. Produce bubbles time 50 seconds.	Gas intake time 5 seconds. Produce bubbles time 50 seconds.
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Electrical	Metric	Imperial
21 Unit phase Ø voltage	1 Ø 100 ~ 240 VAC	1 Ø 100 ~ 240 VAC
22 Unit power consumption	65 watts	65 watts
23 Wetted parts	SUS304, Nylon, Copper, PVC	SUS304, Nylon, Copper, PVC

24 Pump model

25 Pump phase Ø voltage

26 Pump phase Ø voltage  
60Hz

27 Pump pressure setting

28 Control

**Pump**

29 @option miniGaLF pump option Lowara PM21

30 @option Ebara PRA 0.50

31 @option Aquavar e-ABII

32 @option Grundfos CM1-4

Connections	Metric	Imperial
33 Water inlet	Rc 1/2"	Rc 1/2"
34 Water outlet	RC 1/2	RC 1/2
35 Gas inlet	RC 1/4	RC 1/4

Dimensions & weight	Metric	Imperial
36 Dim. (w) x (d) x (h)	175 x 320 x 142 mm	6.9 x 12.6 x 5.6 inch
37 weight	6.9 Kg	15.2 lbs.
38 Shipping dim. (w)x(d)x(h)	32 x 34 x 42 cm	13 x 13 x 17 inch
39 Shipping weight	8.5 Kg	19 lbs.
Remarks		
40 Other remarks	<input checked="" type="checkbox"/> Remark minimum water pressure miniGaLF 300kPa, or 43.5 psi	