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agriGaLF

Nanobubble generator to improve irrigation water quality in greenhouses, horticulture and agriculture for healthier roots, vigorous growth, and increased yield

agriGaLF

ultrafine agriGaLF nanobubble generator

- Hybrid design increases both dissolved oxygen levels and generates ultrafine bubbles.
- Optimized control suppresses the rise in temperature and reducing power consumption.
- Improve performance of plant factories, urban farming or city farming operations.
- Larger units available for horticulture greenhouse companies.
- Suitable for aeration of RAS and fish-tanks (Recirculating aquaculture system).
- agriGaLF requires a compressor or for better results an oxygen concentrator.

The agriGaLF uses a hybrid technology for optimization of dissolved oxygen and ultrafine bubble production. High dissolved oxygen levels in irrigation water accelerates the growth of plant roots and activates micro-organisms in the rootzone.

The agriGaLF is available in various sizes, the smallest unit is 1.5 m^3/h, 6 m^3/h and the largest is 12 m^3/h. There is an option to buy the agriGaLF pumpless, in this case the user needs to add the pump locally. The best way to operate the agriGaLF is to recirculate the water in the day storage tank, it's not recommended to use the agriGaLF inline with the dosing unit. The agriGaLF is equipped with a PLC for standalone operation but the PLC can be easily connected to any climate computer in a greenhouse.

The agriGaLF works best in combination with an oxygen concentrator. Alternatively, a compressor can be used to provide gas to the unit. A compressor supplies a little less than 20% oxygen while an oxygen concentrator supplies 95% oxygen. This makes the unit 5 times more efficient. From an electricity usage point of view its more economical to run the unit on an oxygen concentrator. The smaller agriGaLF units have a compressor on board the larger units need to have the compressor added locally when opting for a compressor instead of an oxygen concentrator.

agrigalf 15 specs

	Beschreibung	Metrisch	Kaiserlich
1	Model name	agriGaLF 15	agriGaLF 15
2	Model number	FZ1G-15	FZ1G-15
	Flüssigkeit	**Metrisch**	**Kaiserlich**
3	Flow / minute	25 Liter	6.6 Gallone
4	Flow / hour	1.5 M3	53.0 CF
5	water temperature minimum	0 ℃	32 ℉
6	water temperature maximum	50 ℃	122 ℉
7	Strainer availability and size	Yes 400 µm	Yes 400 µm
8	Recommended inlet filter(s)	Small pump inlet filter series	Small pump inlet filter series
	Umgebung	**Metrisch**	**Kaiserlich**
9	Ambient temperature minimum	0 ℃	32 ℉
10	Ambient temperature maximum	40 ℃	104 ℉
11	Relative humidity minimum	45 %	45 %
12	Relative humidity maximum	85 %	85 %
	Gas	**Metrisch**	**Kaiserlich**
13	Flow / minute	1.0 Liter	0.3 Gallone
14	Flow / hour	60 Liter	16 Gallone
15	Druck	130 kPa	19 PSI

	Gas	Metrisch	Kaiserlich
16	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.
17	Gas remark	Gas intake time 3 seconds / 2 minutes.	Gas intake time 3 seconds / 2 minutes.
	Elektrisch	**Metrisch**	**Kaiserlich**
18	Unit phase Ø voltage	1 Ø 110 ~ 120 VAC	1 Ø 110 ~ 120 VAC
19	Unit power consumption	1000 watts	1000 watts
20	Wetted parts	PP	PP
21	Pump phase Ø voltage	1 Ø 100 VAC / 1 Ø 200 VAC	1 Ø 100 VAC / 1 Ø 200 VAC
22	Pump motor 50Hz	170 Watt	0.2 hp
23	Pump motor 60Hz	265 Watt	0.4 hp
24	Pump head 50Hz	15 Meter	49 ft
25	Pump head 60Hz	21 Meter	69 ft
26	Pump phase Ø voltage 60Hz	1 Ø 100 VAC / 1 Ø 200 VAC	1 Ø 100 VAC / 1 Ø 200 VAC
27	Pump suction method	Spiral magnetic drive pump	Spiral magnetic drive pump
28	Pump pressure setting	Manual via valve	Manual via valve
29	Control	PLC-control	PLC-control
	Abmessungen & Gewicht	**Metrisch**	**Kaiserlich**
30	Abm. (B) x (T) x (H)	550 x 420 x 610 mm	21.7 x 16.5 x 24.0 Zoll
31	weight	69 Kg	152.1 lbs.
32	Shipping dim. (w)x(d)x(h)	104 x 96 x 104 cm	41 x 38 x 41 Zoll
33	Shipping weight	107 Kg	236 lbs.

agrigalf 60 specs

	Beschreibung	Metrisch	Kaiserlich
1	Model name	agriGaLF 60	agriGaLF 60
2	Model number	FZ1G-60	FZ1G-60
	Flüssigkeit	**Metrisch**	**Kaiserlich**
3	Flow / minute	100 Liter	26 Gallone
4	Flow / hour	6.0 M3	211.9 CF
5	water temperature minimum	0 ℃	32 ℉
6	water temperature maximum	50 ℃	122 ℉
7	Strainer availability and size	Yes 400 µm	Yes 400 µm
8	Recommended inlet filter(s)	Medium pump inlet filter series	Medium pump inlet filter series
	Umgebung	**Metrisch**	**Kaiserlich**
9	Ambient temperature minimum	0 ℃	32 ℉
10	Ambient temperature maximum	40 ℃	104 ℉
11	Relative humidity minimum	45 %	45 %
12	Relative humidity maximum	85 %	85 %
	Gas	**Metrisch**	**Kaiserlich**
13	Flow / minute	4.0 Liter	1.1 Gallone
14	Flow / hour	240 Liter	63 Gallone
15	Druck	130 kPa	19 PSI
16	Gas remark	Gas intake time 3 seconds / 2 minutes.	Gas intake time 3 seconds / 2 minutes.

	Elektrisch	Metrisch	Kaiserlich
17	Unit phase Ø voltage	3 Ø 200 ~ 240 VAC	3 Ø 200 ~ 240 VAC
18	Unit power consumption	2000 watts	2000 watts
19	Pump model	No corrosive gases. Can use Oxygen, Carbon Dioxide, Nitrogen or Ambient Air	No corrosive gases. Can use Oxygen, Carbon Dioxide, Nitrogen or Ambient Air

agrigalf 120 specs

	Beschreibung	Metrisch	Kaiserlich
1	Model name	agriGaLF 120	agriGaLF 120
2	Model number	FZ1G-120	FZ1G-120
	Flüssigkeit	**Metrisch**	**Kaiserlich**
3	Flow / minute	200 Liter	53 Gallone
4	Flow / hour	12 M3	424 CF
5	water temperature minimum	0 ℃	32 ℉
6	water temperature maximum	45 ℃	113 ℉
7	Strainer availability and size	Yes 400 µm	Yes 400 µm
8	Recommended inlet filter(s)	Medium pump inlet filter series	Medium pump inlet filter series
	Umgebung	**Metrisch**	**Kaiserlich**
9	Ambient temperature minimum	0 ℃	32 ℉
10	Ambient temperature maximum	40 ℃	104 ℉
11	Relative humidity minimum	45 %	45 %
12	Relative humidity maximum	85 %	85 %
	Gas	**Metrisch**	**Kaiserlich**
13	Flow / minute	8.0 Liter	2.1 Gallone
14	Flow / hour	480 Liter	127 Gallone
15	Druck	130 kPa	19 PSI

	Gas	Metrisch	Kaiserlich
16	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.
17	Gas remark	Gas intake time 3 seconds / 2 minutes.	Gas intake time 3 seconds / 2 minutes.
	Elektrisch	**Metrisch**	**Kaiserlich**
18	Unit phase Ø voltage	3 Ø 200 ~ 240 VAC	3 Ø 200 ~ 240 VAC
19	Unit power consumption	3000 watts	3000 watts