acniti LLC
1-2-9 Nyoidani
Minoh Osaka
562-0011
Japan

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

	Description	Metric	Imperial
1	Model name	agriGaLF 15	agriGaLF 15
2	Model number	FZ1G-15	FZ1G-15
	Liquid	**Metric**	**Imperial**
3	Flow / minute	25 Liter	6.6 Gallon
4	Flow / hour	1.5 M3	53.0 CF
5	water temperature minimum	0 °C	32 °F
6	water temperature maximum	50 °C	122 °F
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
	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	Flow / minute	1.0 Liter	0.3 Gallon
14	Flow / hour	60 Liter	16 Gallon
15	Pressure	130 kPa	19 PSI

	Gas	Metric	Imperial
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.
	Electrical	**Metric**	**Imperial**
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 model		
22	Pump phase Ø voltage	1 Ø 100 VAC / 1 Ø 200 VAC	1 Ø 100 VAC / 1 Ø 200 VAC
23	Pump motor 50Hz	170 Watt	0.2 hp
24	Pump motor 60Hz	265 Watt	0.4 hp
25	Pump head 50Hz	15 Meter	49 ft
26	Pump head 60Hz	21 Meter	69 ft
27	Pump phase Ø voltage 60Hz	1 Ø 100 VAC / 1 Ø 200 VAC	1 Ø 100 VAC / 1 Ø 200 VAC
28	Pump suction method	Spiral magnetic drive pump	Spiral magnetic drive pump
29	Pump pressure setting	Manual via valve	Manual via valve
30	Control	PLC-control	PLC-control
	Connections	**Metric**	**Imperial**
31	Water inlet		
32	Water outlet		
33	Gas inlet		
	Dimensions & weight	**Metric**	**Imperial**
34	Dim. (w) x (d) x (h)	550 x 420 x 610 mm	21.7 x 16.5 x 24.0 inch

	Dimensions & weight	Metric	Imperial
35	weight	69 Kg	152.1 lbs.
36	Shipping dim. (w)x(d)x(h)	104 x 96 x 104 cm	41 x 38 x 41 inch
37	Shipping weight	107 Kg	236 lbs.

agrigalf 60 specs

	Description	Metric	Imperial
1	Model name	agriGaLF 60	agriGaLF 60
2	Model number	FZ1G-60	FZ1G-60
	Liquid	**Metric**	**Imperial**
3	Flow / minute	100 Liter	26 Gallon
4	Flow / hour	6.0 M3	211.9 CF
5	water temperature minimum	0 °C	32 °F
6	water temperature maximum	50 °C	122 °F
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
	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	Flow / minute	4.0 Liter	1.1 Gallon
14	Flow / hour	240 Liter	63 Gallon
15	Pressure	130 kPa	19 PSI
16	Gas quality		
17	Gas remark	Gas intake time 3 seconds / 2 minutes.	Gas intake time 3 seconds / 2 minutes.

	Electrical	Metric	Imperial
18	Unit phase Ø voltage	3 Ø 200 ~ 240 VAC	3 Ø 200 ~ 240 VAC
19	Unit power consumption	2000 watts	2000 watts
20	Wetted parts		
21	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
22	Pump phase Ø voltage		
23	Pump phase Ø voltage 60Hz		
24	Pump pressure setting		
25	Control		
	Connections	**Metric**	**Imperial**
26	Water inlet		
27	Water outlet		
28	Gas inlet		

agrigalf 120 specs

	Description	Metric	Imperial
1	Model name	agriGaLF 120	agriGaLF 120
2	Model number	FZ1G-120	FZ1G-120
	Liquid	**Metric**	**Imperial**
3	Flow / minute	200 Liter	53 Gallon
4	Flow / hour	12 M3	424 CF
5	water temperature minimum	0 °C	32 °F
6	water temperature maximum	45 °C	113 °F
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
	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	Flow / minute	8.0 Liter	2.1 Gallon
14	Flow / hour	480 Liter	127 Gallon
15	Pressure	130 kPa	19 PSI

	Gas	Metric	Imperial
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.
	Electrical	**Metric**	**Imperial**
18	Unit phase Ø voltage	3 Ø 200 ~ 240 VAC	3 Ø 200 ~ 240 VAC
19	Unit power consumption	3000 watts	3000 watts
20	Wetted parts		
21	Pump model		
22	Pump phase Ø voltage		
23	Pump phase Ø voltage 60Hz		
24	Pump pressure setting		
25	Control		
	Connections	**Metric**	**Imperial**
26	Water inlet		
27	Water outlet		
28	Gas inlet		