acniti LLC
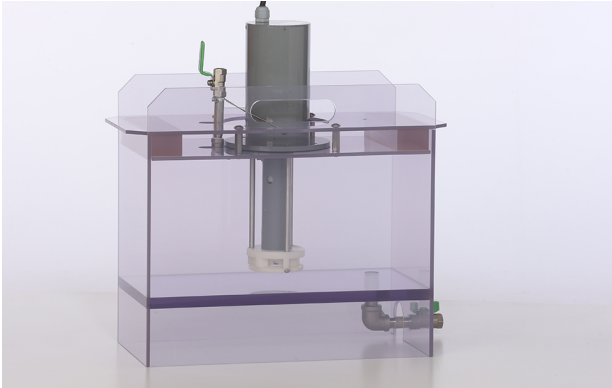1-2-9 Nyoidani
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Japan

microstar ozone

The hammermill-rotation concept of the microStar uses the least amount of energy in the industry to generate nanobubbles.

microStar research setup

microstar ozone

microstar ozone nanobubble generator

- ✔ Most energy efficient nanobubble generator in the market
- ✔ Strong in dissolving high concentrations of ozone
- ✔ Optimized for the creation of ozone nanobubbles
- ✔ Excellent research ultrafine bubble tool
- ✔ creating no turbulence in the water
- ✔ Proven track record in the oyster shell industry
- ✔ Suitable for removing external infections with norovirus, legionella, lysteria and salmonella in live animals.
- ✔ Motor life expectancy 80.000 hours
- ✔ Minimum rotation speed to generate nanobubbles 2000 RPM.

hammer-rotation

The microStar uses a unique concept for the generation of nanobubbles, which is called magnetic hammer-rotation. The hammer-rotation concept of the microStar uses the least amount of energy in the industry to generate nanobubbles. The microStar releases gas in a tube under a magnetic field and has rotating hammers inside the tube which crushes the gas into nanobubbles.

no turbulence

Another unique feature of this unit is that it does not generate any turbulence or strong movement in the water, compared to nanobubble generators that use a pump. This makes the microStar the perfect nanobubble generator for projects where high concentrations of gas and nanobubbles are needed and turbulence or strong flows in the water should be avoided. Think of projects like washing eggs to remove bacteria or bacteria bed filters which should not be disturbed but require adequate amounts of gas.

Contact us for more details about this unique product. Currently, we have 3 sizes available. The smallest unit is ideally suited for research purposes, the two larger units can be used for production purposes.

models & specs

FS	30	2	AC	-	S	W	1	-	Sp
1	2	3	4		5	6	7		8

1. Nanobubble generator
indicationname
FS   microStar

2. Motor nominal input
indicationmotor nominal input
30   30 Watt
40   400 Watt
15   150 Watt
75   750 Watt

3. Motor voltage
indicationmotor voltage
1   100V~110V (AC models only)
2   200V~220V (AC and DC models)

4. Motor Power
indicationpower type
AC   AC powered motor
DC   DC powered motor, high-spec higher nanobubble concentration.

5. microStar model
indicationnozzle
"S"   short type
"L"   long type (not available now)

6. Nanobubbles discharge
indication# directions
"W"   2 directions
"S"   1 direction

7. microStar Throughput and Bubble discharge size
indicationthroughput / maximum micro bubble discharge size (reference value)
"1"   Standard / 1-30µm peak
"2"   Medium / 20-60µm peak
"3"   Large / mixing purpose only (no UFB generation) * special order model

8. microStar special specs, special sign for customized model
indicationspecifications
"Sp"   special

microstar fs302ac-sw1 specs

	Description	Metric	Imperial
1	Model name	microStar FS302AC-SW1	microStar FS302AC-SW1
2	Model number	FS302AC-SW1	FS302AC-SW1
	Liquid	**Metric**	**Imperial**
3	Flow / minute	14 Liter	3.7 Gallon
4	Flow / hour	840 Liter	222 Gallon
5	water temperature minimum	0 °C	32 °F
6	water temperature maximum	40 °C	104 °F
7	Strainer availability and size		
	Ambient	**Metric**	**Imperial**
8	Ambient temperature minimum	-20 °C	-4 °F
9	Ambient temperature maximum	40 °C	104 °F
	Gas	**Metric**	**Imperial**
10	Minimum flow / minute	0.5 Liter	0.1 Gallon
11	Maximum flow / minute	1.0 Liter	0.3 Gallon
12	Minimum flow / hour	30 Liter	7.9 Gallon
13	Maximum flow / hour	60 Liter	16 Gallon
14	Pressure minimum	50 kPa	7 PSI
15	Pressure maximum	200 kPa	29 PSI
16	Gas quality	O2, O3, CO2, Air, N2	O2, O3, CO2, Air, N2
17	Gas remark		
	Electrical	**Metric**	**Imperial**

	Electrical	Metric	Imperial
18	Unit phase Ø voltage	3 Ø 200/220 or 3 Ø 100 / 115	3 Ø 200/220 or 3 Ø 100 / 115
19	Unit power consumption	30 watts	30 watts
20	Wetted parts		
21	Pump model		
22	Pump phase Ø voltage		
23	Pump phase Ø voltage 60Hz		
24	Pump pressure setting		
25	Control	Frequency Drive	Frequency Drive

	Connections	Metric	Imperial
26	Water inlet		
27	Water outlet		
28	Gas inlet		

	Dimensions & weight	Metric	Imperial
29	Dim. (w) x (d) x (h)	150 x 150 x 330 mm	5.9 x 5.9 x 13.0 inch
30	weight	3.5 Kg	7.7 lbs.
31	Shipping dim. (w)x(d)x(h)	58 x 43 x 29 cm	23 x 17 x 11 inch
32	Shipping weight	16.2 Kg	36 lbs.

	Remarks		
33	Other remarks	✓ Acniti provides a presetup frequency drive and transformer to convert to the local electricity network. The units are a plug and plays. ✓ Seawater use possible ✓ Wetted parted PVC, Stainless Steel, POM	

microstar fs752dc-1 specs

	Description	Metric	Imperial
1	Model name	microstar FS752DC-1	microstar FS752DC-1
2	Model number	FS752DC-__1	FS752DC-__1
	Liquid	**Metric**	**Imperial**
3	Flow / minute	300 Liter	79 Gallon
4	Flow / hour	18,000 Liter	4,755.1 Gallon
5	water temperature minimum	0 °C	32 °F
6	water temperature maximum	40 °C	104 °F
7	Strainer availability and size		
	Ambient	**Metric**	**Imperial**
8	Ambient temperature minimum	-20 °C	-4 °F
9	Ambient temperature maximum	40 °C	104 °F
	Gas	**Metric**	**Imperial**
10	Minimum flow / minute	0.0 Liter	0.0 Gallon
11	Maximum flow / minute	30 Liter	7.9 Gallon
12	Minimum flow / hour	0.0 Liter	0.0 Gallon
13	Maximum flow / hour	1,800.0 Liter	476 Gallon
14	Gas quality	Air, O2, O3, N2, CO2	Air, O2, O3, N2, CO2
15	Gas remark		
	Electrical	**Metric**	**Imperial**
16	Unit phase Ø voltage	Input: 3 Ø 200 VAC => Output: 3 Ø 200VDC	Input: 3 Ø 200 VAC => Output: 3 Ø 200VDC
17	Unit power consumption	750 watts	750 watts

	Electrical	Metric	Imperial
18	Wetted parts	Ethylene propylene, FKM, Fluor, PVC, SUS316L, SUS316, POM	Ethylene propylene, FKM, Fluor, PVC, SUS316L, SUS316, POM
19	Pump model	Motor model: 4 poles SPM type brushless DC motor	Motor model: 4 poles SPM type brushless DC motor
20	Pump phase Ø voltage		
21	Pump phase Ø voltage 60Hz		
22	Pump pressure setting		
23	Control	Frequency Drive	Frequency Drive
	Connections	Metric	Imperial
24	Water inlet	submerge to appropriate depth as per manual	submerge to appropriate depth as per manual
25	Water outlet		
26	Gas inlet	22mm	22mm
	Dimensions & weight	Metric	Imperial
27	Dim. (w) x (d) x (h)	230 x 230 x 640 mm	9.1 x 9.1 x 25.2 inch
28	weight	18 Kg	39.7 lbs.
29	Shipping dim. (w)x(d)x(h)	40 x 40 x 80 cm	16 x 16 x 31 inch
30	Shipping weight	40 Kg	88 lbs.

Remarks

31	Other remarks	

- ✓ the microStar comes with a specially programmed variable frequency drive, which must be used.

- ✓ The microstar 752 series generates effectively nanobubbles in a 10 meter diameter circel with a depth of 2 meter for short model (SS / SW).

- ✓ The micorStar 752 series are available with a 2-way (W) or 1-way water outlet (S).

- ✓ MicroStar is not suitable for underwater / submersible use.

- ✓ The microstar DC series requires a cooling fan on top op de motor, which needs a single phase 100 ~115 or 200~240 ac volt input. 10~15 Watt

- ✓ Regular maintenance: replace packing and oil seal

- ✓ Inverter drive frequency ~116,8 Hz

- ✓ Fine bubble concentration NanoBubbles (50~200nm) approx. 2.8x8, Microbubble 1~100 micron meter. Cumulative 50.000 or more

microstar fs752dc-ss3 specs

	Description	Metric	Imperial
1	Model name	microstar FS752DC-SS3	microstar FS752DC-SS3
2	Model number	FS752DC-SS3	FS752DC-SS3
	Liquid	**Metric**	**Imperial**
3	Flow / minute	400 Liter	106 Gallon
4	Flow / hour	24,000 Liter	6,340.1 Gallon
5	water temperature minimum	0 °C	32 °F
6	water temperature maximum	40 °C	104 °F
7	Strainer availability and size		
	Ambient	**Metric**	**Imperial**
8	Ambient temperature minimum	-20 °C	-4 °F
9	Ambient temperature maximum	40 °C	104 °F
	Gas	**Metric**	**Imperial**
10	Minimum flow / minute	0.0 Liter	0.0 Gallon
11	Maximum flow / minute	110 Liter	29 Gallon
12	Minimum flow / hour	0.0 Liter	0.0 Gallon
13	Maximum flow / hour	6,600.0 Liter	1,743.5 Gallon
14	Gas quality	Air, O2, (O3), N2, CO2	Air, O2, (O3), N2, CO2
15	Gas remark		
	Electrical	**Metric**	**Imperial**
16	Unit phase Ø voltage	Input: 3 Ø 200 VAC => Output: 3 Ø 200VDC	Input: 3 Ø 200 VAC => Output: 3 Ø 200VDC
17	Unit power consumption	750 watts	750 watts

	Electrical	Metric	Imperial
18	Wetted parts	Ethylene propylene, FKM, Fluor, PVC, SUS316L, SUS316, POM	Ethylene propylene, FKM, Fluor, PVC, SUS316L, SUS316, POM
19	Pump model	Motor model: 4 poles SPM type brushless DC motor	Motor model: 4 poles SPM type brushless DC motor
20	Pump phase Ø voltage		
21	Pump phase Ø voltage 60Hz		
22	Pump pressure setting		
23	Control	Frequency Drive	Frequency Drive
	Connections	Metric	Imperial
24	Water inlet	submerge to appropriate depth as per manual	submerge to appropriate depth as per manual
25	Water outlet		
26	Gas inlet	22mm	22mm
	Dimensions & weight	Metric	Imperial
27	Dim. (w) x (d) x (h)	230 x 230 x 640 mm	9.1 x 9.1 x 25.2 inch
28	weight	18 Kg	39.7 lbs.
29	Shipping dim. (w)x(d)x(h)	40 x 80 x 40 cm	16 x 31 x 16 inch
30	Shipping weight	20 Kg	44 lbs.

Remarks

31 Other remarks	✔ the microStar comes with a specially programmed variable frequency drive, which must be used.
	✔ The microstar 752 series generates effectively nanobubbles in a 10 meter diameter circel with a depth of 2 meter for short model (SS / SW).
	✔ The micorStar 752 series are available with a 2-way (W) or 1-way outlet (S).
	✔ MicroStar is not suitable for underwater / submersible use.
	✔ The microstar DC series requires a cooling fan on top op de motor, which needs a single phase 100 ~115 or 200~240 ac volt input. 10~15 Watt
	✔ Regular maintenance: replace packing and oil seal
	✔ Inverter drive frequency ~116,8 Hz
	✔ Fine bubble concentration NanoBubbles (50~200nm) approx. 2.8x8, Microbubble 1~100 micron meter. Cumulative 50.000 or more