

SPECIFICATIONS
MASTERS SERIES® FLOATING FOUNTAIN AERATOR SYSTEM (7.5-10HP)

1.0 GENERAL

1.1 DESCRIPTION

- A. Manufacturer shall furnish a floating fountain aerator system capable of pumping water from below the surface of a body of water.
- B. A submersible motor shall draw water into an impeller housing where it shall be pumped into the atmosphere in the form of a decorative spray - type fountain.
- C. The water droplets shall become oxygen enriched and return to the surface, therefore transferring oxygen from the atmosphere into the body of water. Surface area of water body shall also be increased through constant wave action resulting in additional atmospheric oxygen transfer.
- D. This repeated action shall effectively mix and de-stratify the body of water and distribute the dissolved oxygen continuously.
- E. Fountain aerator system shall include an oil-cooled motor sealed in a stainless steel housing, with shaft mounted naval brass impeller, attached to a float. This assembly shall be connected to an electrical control panel by underwater power cable, all of which as specified in SECTION 1.2.

1.2 AERATOR COMPONENTS DESCRIPTION

- A. **7.5 – 10HP Float** shall be made of linear low density polyethylene. Float systems shall be circular in design and its series 300 stainless steel mounting rails shall be bolted to the series 300 stainless steel cart frame.
- B. **Stainless Steel Cart** shall be formed series 300 stainless steel tubing, welded and bolted to form a compact stainless steel cart frame. The motor, motor housing and discharge assembly shall be bolted to this compact design for ease of removal. The four anchoring brackets shall be part of this assembly. Up to eight optional lights shall be capable of being installed into the fixture mounting areas. The frame shall be equipped with four heavy duty linear low density polyethylene wheels permanently mounted to the stainless steel frame. The wheels shall have a diameter of not less than ten inches and a width not less than five inches for ground bearing purposes.
- C. **Impeller** shall be precision machined and balanced, formed using Naval Brass. The impeller is connected to the motor shaft by a series 300 stainless steel bolt and lock washer.
- D. **Impeller Housing** shall be machined from nylon type 6 material. The impeller housing shall be precision machined to accept the float tube and capable of being bolted to the motor housing. The impeller housing shall house the naval brass impeller and flow straightener (if applicable).
- E. **Flow Straightener (where applicable)** shall be precision machined from nylon type 6 material and shall have numerous curved vanes. The vanes shall take the spinning discharge water from the impeller and convert it to a straight, vertical flow. The gap between the vanes shall be at least 9/16" wide and have a total length not less than 3" long. It shall be factory installed for various optional spray patterns.

- F. **Motor Housing** shall be Series 300 Stainless Steel. 7.5 – 10HP shall have a permanent series 300 stainless steel electrical hub welded on the side of the housing to allow electrical cable entry.
- G. **Motor** shall contain a 316 Stainless Steel shaft for superior corrosive resistance. Single Phase shall be a permanent split phase capacitor run motor and Three Phase shall be an induction motor. The rotor shall be dynamically balanced and run in a ball bearing supported system. The stator windings shall be double dipped and baked with a Class F insulation, designed for oil immersion operation. The oil shall be of a synthetic food grade quality, specially formulated for lubrication, meeting FDA Regulations. The oil shall provide continuous lubrication of bearings and internal seals and further function as an efficient heat transfer medium, allowing the motor to operate at 3450 RPM, at relatively low temperatures. The motor shall be contained in the motor housing by a series 300 stainless steel top plate.
- H. **Seals** used to protect the motor against water or oil leakage shall be a mechanical rotating type assembly composed of Silicon carbide, Series 300 Stainless Steel and brass positive drive system. The positive drive assembly shall be attached to the motor shaft with two allen head set screws. These set screws shall be tightened into pre-drill dimples drilled into the shaft to prevent the seal assembly from slipping at any time the motor shaft is rotating, thus creating a non slip positive drive system. All elastomers shall meet UL 778 requirements. This assembly shall then be encapsulated and protected within a series 300 stainless steel cartridge assembly. This assembly shall be filled with a synthetic food grade oil meeting FDA regulations.
- I. **Underwater Power Cable** shall be UL Listed and specifically designed for underwater use. The conductors are flexible, stranded copper wire sized for the amp draw and length of run. The conductors shall be resistant to oil, water and cracking. Power cable shall be fitted with a cable strain relief device, located within five feet of motor housing, capable of being attached to the latch mounted on the stainless steel cart. This will ensure that no potential damage can occur to any cable connections, due to tension on the cable.
- J. **Underwater Power Cable Disconnect** shall be located approximately five feet from the series 300 stainless steel motor housing. It is a two piece molding assembly made of thermoplastic material meeting the UL 778 requirements. The cap half of this disconnect shall be permanently attached to a wire reinforced braided hose assembly. The other end of this hose assembly shall be attached to a series 300 stainless steel hub which is welded to a series 300 stainless steel motor housing. This complete assembly shall be sealed with a flexible potting compound.
- K. **Fasteners and anchor connectors** shall be Series 300 Stainless Steel.
- L. **Electrical control panel** specifications, see SECTION 3.
- M. **Intake screen** shall be made of 16 Gauge, Series 300 Stainless Steel. The large custom intake screen shall completely enclose the motor power unit assembly. It shall have a minimum of 51% open area representing 692 square inches of open intake area for 7.5-10HP.

- N. **Nozzles** (optional) shall be interchangeable without the use of tools, in most cases. Nozzles will be sealed to the float tube utilizing an o-ring and series 300 stainless steel thumb screws to prevent leakage.

- O. **Series 316 Stainless Steel Upgrade** (optional) is available for sites with salt or brackish water. This option will upgrade all series 300 stainless steel components to series 316.

FOUNTAIN AERATOR DETAIL SPECIFICATIONS

2.0 DETAILED INFORMATION

- 2.1 This specification is intended to provide prospective bidders the necessary information pertaining to the fountain aerator(s) specified for the _____ Project.
- 2.2 The MOTOR(S) shall be _____ HP, operating at _____ Volts, 60 Hertz, _____ Phase at 3450 RPM.
- 2.3 The MASTERS SERIES® MODEL(S) specified shall be the _____ MODEL NUMBER _____ capable of creating a _____ pattern. It shall come complete with an electrical control panel, protective intake screen to be attached to a float assembly and _____ feet of _____ gauge, 4 conductor underwater power cable.
- 2.4 The fountain aerator shall produce a SPRAY PATTERN _____ feet in diameter and _____ feet in height.

Please refer to TABLES 1, 2 and 3 to assist in the completion of SECTION 2.0

FOUNTAIN AERATOR DETAIL SPECIFICATIONS (cont.)

3.0 ELECTRICAL CONTROL PANEL COMPONENTS DESCRIPTION

- A. **Electrical Enclosure** shall be NEMA 3R type, galvanized and powder-coat painted gray in color. Panel shall be both lock and mount capable.
- B. **Ground Fault Protection**
GFCI Breaker shall provide overload protection and be capable of disconnecting all incoming electricity from the control panel or a molded case breaker shall provide overload and short circuit protection, while a residual current device or ground fault relay kit rated at 30 mA shall provide ground fault protection.
- C. **Control Breaker** shall provide overload protection and be capable of disconnecting all incoming electricity from the control panel.
- D. **Motor Contactor** shall provide a means for disconnection of all motor leads. It shall be a magnetic, across the line starter type.
- E. **Overload Relay** shall provide overload protection by means of a bi-metallic element. It is adjustable over the full load amperage draw of the motor. It shall have a visual trip indicator, test button and manual/auto reset modes.
- F. **Soft Start (three phase ONLY)** shall provide ramped starting and stopping to minimize electrical and mechanical stresses to the motor and power source.
- G. **Digital Timer** shall be a single pole type, rated at 120 Volts, 16 Amps, capable of 8 ON / OFF functions per day for 7 days. Digital timer has a lithium battery to retain the programming when power is disconnected.

3.1 SAFETY TESTING CONTROL PANEL

The electrical control panel shall be tested and approved as a complete unit. It is inspected and listed by Underwriters Laboratories, Inc. under Category 778: Submersible Aerators and Aerating Fountain Pump Systems.

3.2 ACCEPTABLE MANUFACTURER

This fountain aerator electrical control panel, as specified in Section 3.0, shall be manufactured by AQUAMASTER® FOUNTAINS AND AERATORS, 16024 CTH X, Kiel, WI 53042, (800) 693-3144 or approved equal.

3.3 INSTALLATION

The electrical control panel must be installed in accordance with the installation instructions, in compliance with all local and National Electrical Code requirements. This should be done by a licensed electrical contractor. Any alterations to or substitution for items in this system, unless allowed by the installation instructions, will void the Underwriters Laboratories Listing and will void the product warranty. It may also create a hazardous installation. Read the instructions thoroughly before starting the installation and follow them carefully throughout.

3.4 ELECTRICAL CONTROL PANEL WARRANTY

All control panels and their components have a 3 year warranty on parts and labor.

FOUNTAIN AERATOR DETAIL SPECIFICATION (cont.)

4.0 SAFETY TESTING

The floating fountain aeration system shall be tested and approved as a complete unit. This approval must meet Underwriters Laboratories Inc. requirements in compliance with Category 778: Submersible Aerators and Aerating Fountain Pump Systems. Individual component testing and wet niche environment equipment approval are not acceptable.

4.1 ACCEPTABLE MANUFACTURER

This fountain aerator, as specified in Sections 2.2, 2.3 and 2.4, shall be manufactured by AQUAMASTER® FOUNTAINS AND AERATORS, 16024 CTH X, Kiel, WI 53042, (800) 693-3144, or approved equal.

4.2 INSTALLATION

All AQUAMASTER® FOUNTAIN AERATORS are designed and built to be installed with an AQUAMASTER® UL Listed control panel and to be operated as a complete system. Any alterations to or substitution for items in this system, unless allowed by the installation instructions, will void the UL Listing and will void the product warranty. It may also create a hazardous installation. Read the instructions thoroughly before starting the installation and follow them carefully throughout.

4.3 WARRANTY

All 7.5-10HP AQUAMASTER® THE MASTERS SERIES® FOUNTAIN AERATORS motor, seal assembly, float and underwater power cable (referred to as in-water components) are covered under warranty at 100% replacement cost should it fail due to defects in materials or workmanship for a period of 3 years on parts and labor. This is in effect from the date of shipment, when given normal and proper usage as determined by The Seller upon examination, and when owned by the original user.

FOUNTAIN AERATOR LIGHTING SYSTEMS AND OPTIONS SPECIFICATIONS

- 5.0 **LIGHTING SYSTEM** shall be LED/Halogen _____ Volt/Watts, Model #(s)_____. There are _____ total fixtures, containing _____ (clear or choose color(s): amber, blue, red, green or turquoise) lenses.
- 5.1 A total length of _____ feet of _____ gauge 3 conductor underwater power cable is required. Two runs of cable may be required; reference cable sizing chart.
- 5.2 **MULTI-PURPOSE ELECTRONIC LIGHT SYSTEM SEQUENCER** shall be capable of cycling light fixtures off and on, up to 6 programs. Yes ___ No ___
- 5.3 A total length of _____ feet of _____ gauge 4 conductor underwater power cable is required for sequencer. Two runs of cable is required.
- 5.4 **SERIES 316 STAINLESS STEEL UPGRADE** is available for sites with salt or brackish water. Yes ___ No ___

Please refer to TABLE 4 to assist in the completion of SECTION 5.

6.0 DESCRIPTION

- A. **Lamp Housings** shall be of Series 300 Stainless Steel construction. They shall have a permanent series 300 stainless steel electrical hub welded on the bottom of the housing to allow electrical cable entry and be trunnion mounted to cart framework for ease of light fixture adjustment.
- B. **Construction** shall consist of nonmetallic Cord Connectors to prevent water from entering the lamp housing. Halogen lamp holders shall be double contact base constructed of stainless steel with wires rated for a minimum of 105 degrees Celsius. Reflectors shall be metal spun with Alzak finish for high reflectivity. Lamps shall be high intensity, quartz halogen flood, double contact bayonet base rated at 130VAC, mounted vertically.
- C. **Light Fixture Assembly** shall consist of "V" shaped Lamp gaskets made of silicon construction. Lens shall be of tempered glass with a clear non-diffusing surface with a minimum of 5/32nd thickness. Clamp ring shall be of series 300 stainless steel. Fasteners and mounting hardware shall be of series 300 stainless steel.
- D. **Underwater Pin and Socket Connector** shall consist of a Series 900, IP68 pin and socket connector. It shall be of a 3 pin (4 pin when a sequencer is used) configuration rated 32 Amps at 600 VAC. The pin and socket ends shall each be attached to a 30" piece of UL Listed underwater power cable rated at 600 Volts. They both shall be permanently secured to their UL Listed power cables by a integrated neoprene grommet and compression nut assembly. These assemblies shall be epoxy filled to prevent entry of water or any other foreign matter. The pin end assembly shall be permanently attached to the light housing with a nonmetallic connector. This shall be potted using a flexible approved potting compound. The underwater disconnect is a two piece molded assembly made of glass reinforced nylon meeting UL 676 requirements. The socket end assembly shall be permanently attached to the underwater disconnect cap end with a nonmetallic connector. The body end of the underwater disconnect shall be permanently attached to the power cable assembly with a nonmetallic connector. Both cap and body ends shall be potted with an approved sealing compound. The disconnect shall be sealed with an o-ring and by and external series 300 stainless steel clamp ring, which can be easily opened.
- E. **Safety Testing Lighting** shall be tested and approved as a complete assembly. This approval must meet Underwriters Laboratories Inc. requirements in compliance with UL Category 676: Underwater Lighting Fixtures.
- F. **Warranty** on all AQUAMASTER® LIGHTING SYSTEMS are covered under warranty at 100% replacement cost should it fail due to defects in materials or workmanship for a period of 3 years including the LED light engine, lamps have no warranty. This is in effect from the date of shipment, when given normal and proper usage as determined by The Seller upon examination, and when owned by the original user.

TABLE 1: THE MASTERS SERIES® PERFORMANCE SPECIFICATIONS

TECHNICAL DATA
 REFERENCE MATERIAL FOR SECTION 2.0 DETAILED INFORMATION

Model Number	HP	Voltage and Phase	Running Amp Draw	Minimum Operating Depth	Ship Weight LBS.	LAKEWOOD FULL FLOW (no nozzle)	MASTERS NOZZLE SERIES
							Masters Geyser
M5472-SC	7.5	220-240 - 1PH	38	4'	675 lbs.	16 x 40 GPM N/A	34 x 2 GPM N/A
M5472-3SC		208-240 - 3PH	24				
M5474-3SC		440-480 - 3PH	12				
M5512-SC	10	220-240 - 1PH	56	4'	700 lbs.	16.5 x 50 GPM N/A	40 x 2 GPM N/A
M5512-3SC		208-240 - 3PH	33.5				
M5514-3SC		440-480 - 3PH	16.7				
Model Number	HP	Voltage and Phase	Running Amp Draw	MASTERS NOZZLE SERIES			
				Masters Wide Geyser	Masters Crown & Geyser	Masters Crystal Geyser	Par
M5472-SC	7.5	220-240 - 1PH	38	32 x 10 GPM N/A	Geyser Ht 27 Crown 9 x 52 GPM N/A	26 x 34 GPM N/A	Upper 17 Lower 7 x 42 GPM N/A
M5472-3SC		208-240 - 3PH	24				
M5474-3SC		440-480 - 3PH	12				
M5512-SC	10	220-240 - 1PH	56	36 x 10 GPM N/A	Geyser Ht 34 Crown 10 x 54 GPM N/A	32 x 34 GPM N/A	Upper 22 Lower 8 x 45 GPM N/A
M5512-3SC		208-240 - 3PH	33.5				
M5514-3SC		440-480 - 3PH	16.7				
Model Number	HP	Voltage and Phase	Running Amp Draw	MASTERS SERIES NOZZLE NOZZLES REQUIRING FLOW STRAIGHTENERS			
				Biscayne	Eagle	Valhalla	Champion
M5472-SC	7.5	220-240 - 1PH	38	Upper 25 Lower 16 x 28 GPM N/A	22 x 12 GPM N/A	Upper 20 Middle 14 x 22 Lower 7 x 40 GPM N/A	19 x 50 GPM N/A
M5472-3SC		208-240 - 3PH	24				
M5474-3SC		440-480 - 3PH	12				
M5512-SC	10	220-240 - 1PH	56	Upper 32 Lower 18 x 28 GPM N/A	23 x 13 GPM N/A	Upper 28 Middle 16 x 22 Lower 8 x 60 GPM N/A	24 x 56 GPM N/A
M5512-3SC		208-240 - 3PH	33.5				
M5514-3SC		440-480 - 3PH	16.7				
Model Number	HP	Voltage And Phase	Running Amp Draw	NOZZLES REQUIRING FLOW STRAIGHTENERS			
				Firestone	Medinah	Turnberry	Half Moon
M5472-SC	7.5	220-240 - 1PH	38	Upper 21 Middle 13 x 27 Lower 6 x 40 GPM N/A	20 x 26 GPM N/A	12.5 x 28 GPM N/A	14 x 38 GPM N/A
M5472-3SC		208-240 - 3PH	24				
M5474-3SC		440-480 - 3PH	12				
M5512-SC	10	220-240 - 1PH	56	Upper 24 Middle 16 x 28 Lower 8 x 65 GPM N/A	25 x 30 GPM N/A	15 x 35 GPM N/A	15 x 40 GPM N/A
M5512-3SC		208-240 - 3PH	33.5				
M5514-3SC		440-480 - 3PH	16.7				

TABLE 1: THE MASTERS SERIES® PERFORMANCE SPECIFICATIONS

TECHNICAL DATA
 REFERENCE MATERIAL FOR SECTION 2.0 DETAILED INFORMATION

Model Number	HP	Voltage And Phase	Running Amp Draw	NOZZLES REQUIRING FLOW STRAIGHTENERS			
				Prestwick	Augusta	Bayside	Royal
M5472-SC	7.5	220-240 - 1PH	38	Upper 16 x 32 Lower 8 x 48 GPM N/A	17 x 45 GPM 532	Upper 20 x 25 Lower 6 x 30 GPM N/A	Upper 12.5 x 40 Lower 4 x 40 GPM N/A
M5472-3SC		208-240 - 3PH	24				
M5474-3SC		440-480 - 3PH	12				
M5512-SC	10	220-240 - 1PH	56	Upper 20 x 46 Lower 12 x 80 GPM N/A	23 x 60 GPM 692	Upper 24 x 28 Lower 6 x 34 GPM N/A	Upper 15 x 50 Lower 5 x 60 GPM N/A
M5512-3SC		208-240 - 3PH	33.5				
M5514-3SC		440-480 - 3PH	16.7				
Model Number	HP	Voltage And Phase	Running Amp Draw	NOZZLES REQUIRING FLOW STRAIGHTENERS			
				Arabella	Sanibel	Reflection	Sawgrass
M5472-SC	7.5	220-240 - 1PH	38	Please Consult Factory	20 x 16 GPM N/A	Upper 14 X 22 Lower 4 x 40 GPM N/A	Upper 16 x 26 Lower 8 x 44 GPM N/A
M5472-3SC		208-240 - 3PH	24				
M5474-3SC		440-480 - 3PH	12				
M5512-SC	10	220-240 - 1PH	56	Please Consult Factory	22 x 18 GPM N/A	Upper 16 x 24 Lower 5 x 46 GPM N/A	Upper 19 x 28 Lower 9 x 52 GPM N/A
M5512-3SC		208-240 - 3PH	33.5				
M5514-3SC		440-480 - 3PH	16.7				
Model Number	HP	Voltage And Phase	Running Amp Draw	SPECIALTY NOZZLE			
				Captiva	Kiawah		
M5472-SC	7.5	220-240 - 1PH	38	23 x 8 GPM N/A	Please Consult Factory		
M5472-3SC		208-240 - 3PH	24				
M5474-3SC		440-480 - 3PH	12				
M5512-SC	10	220-240 - 1PH	56	25 x 8 GPM N/A	Upper 30 Lower 18 x 50 GPM N/A		
M5512-3SC		208-240 - 3PH	33.5				
M5514-3SC		440-480 - 3PH	16.7				

Your overall performance may vary due to actual voltage, intake restrictions and cable lengths.

* GPMs not yet available for 7.5 & 10 HP. Please contact the factory.

TABLE 2: CABLE SIZING CHARTS

Maximum recommended length (in feet) from fountain aerator to control panel

AquaMaster® recommends consulting a Licensed Electrician to properly size any underground cable from the main power source to our control panel. Cable runs to the panel located away from main power source requires recalculating voltage drop to insure proper cable sizing. Please contact AquaMaster® if assistance is required.

4 conductor: Required on all 1 - 10HP Single Phase & Three Phase Aerators									
Single Phase 4 conductor			4 conductor Copper Wire Gauge Size						
Unit	Volts	Approx Amps	#14	#12	#10	#8	#6	#4	#2
7.5HP	240 *	38.0	--	--	--	175	279	441	684
10HP	240 *	56.0	--	--	--	119	190	300	464

* The 7.5 and 10HP 1PH require a minimum voltage of 220.

Three Phase 4 conductor			4 conductor Copper Wire Gauge Size						
Unit	Volts	Approx Amps	#14	#12	#10	#8	#6	#4	#2
7.5HP	208-240	24.0	--	125	208	321	511	807	1251
7.5HP	440-480	12.0	--	529	882	1357	2160	3415	5293
10HP	208-240	33.5	--	--	149	230	366	578	896
10HP	440-480	16.7	--	--	634	975	1552	2454	3803

TABLE 3: FOUNTAIN AERATOR SPRAY PATTERN DESCRIPTIONS

1. **Masters Series® ARABELLA – Straightened Flow Pattern (SFP)**
A sparkling, two-tiered pattern consisting of an upper multi-stream, and a lower full conical spray design.
SPECIFICATION DESCRIPTION: COMBINED FAN AND STREAMS
2. **Masters Series® AUGUSTA – Straightened Flow Pattern (SFP)**
Beautiful multi-tiered streamed pattern with a center geyser to add height.
SPECIFICATION DESCRIPTION: FAN SHAPE INDIVIDUAL STREAMS WITH CENTER GEYSER
3. **Masters Series® BAYSIDE – Straightened Flow Pattern (SFP)**
Narrower version of Red Tail, excellent in smaller contained areas.
SPECIFICATION DESCRIPTION: COMBINED FAN AND STREAMS
4. **Masters Series® BISCAYNE – Basic Flow Pattern (BFP)**
Variation of classic two-tier with taller, narrower lower spray.
SPECIFICATION DESCRIPTION: UPRIGHT FAN & COLUMN
5. **Masters Series® CAPTIVA – Specialty Pattern**
Heavy-water vertical frothy column, excellent in open areas.
SPECIFICATION DESCRIPTION: DENSE FROTHY COLUMN
6. **Masters Series® CHAMPION – Straightened Flow Pattern (SFP)**
Multi-stream pattern with specific points resulting in a dramatic surface effect.
SPECIFICATION DESCRIPTION: INDIVIDUAL STREAMS FAN SHAPE
7. **Masters Series® CROWN & GEYSER – Basic Flow Pattern (BFP)**
A beautiful, dramatic pattern still achieves aeration results. This nozzle combines the Lakewood Full Flow with the vertical Geyser column of water through its center.
SPECIFICATION DESCRIPTION: COMBINED FAN & COLUMN
8. **Masters Series® CRYSTAL GEYSER– Basic Flow Pattern (BFP)**
This nozzle produces a very decorative crystalline spray pattern in an abstract, multi-tiered formation.
SPECIFICATION DESCRIPTION: FROTHY SPRAY
9. **Masters Series® EAGLE– Basic Flow Pattern (BFP)**
Elongated, frothy vertical pattern creates a beautiful, full profile.
SPECIFICATION DESCRIPTION: FROTHY VERTICAL COLUMN
10. **Masters Series® FIRESTONE – Straightened Flow Pattern (SFP)**
Beautiful tri-tier, perfect for smaller area applications.
SPECIFICATION DESCRIPTION: TRI-TIER MULTIPLE STREAMS

TABLE 3: FOUNTAIN AERATOR SPRAY PATTERN DESCRIPTIONS (cont.)

11. **Masters Series® GEYSER – Basic Flow Pattern (BFP)**
A multi-port nozzle achieves a dramatic vertical pattern in a solid column of water, fanning slightly at the top.
SPECIFICATION DESCRIPTION: SOLID VERTICAL COLUMN
12. **Masters Series® HALF MOON – Straightened Flow Pattern (SFP)**
Gorgeous multi-stream pattern results in a full floral effect.
SPECIFICATION DESCRIPTION: SCALLOPED FAN SHAPE
13. **Masters Series® KIAWAH – Specialty Pattern**
Elegant two tier pattern combining a center geyser and multi-streamed lower tiered spray ring available with 32 or 64 nozzles.
SPECIFICATION DESCRIPTION: TWO-TIERED MULTI-STREAM FAN SHAPED WITH CENTER GEYSER.
14. **LAKWOOD FULL FLOW – Basic Flow Pattern (BFP)**
Internal impeller technology creates this full, more upright cone pattern, **without a nozzle**. This is the base model for The Masters Series®.
SPECIFICATION DESCRIPTION: FAN SHAPE
15. **Masters Series® MEDINAH – Straightened Flow Pattern (SFP)**
Taller, narrower version of the Turnberry.
SPECIFICATION DESCRIPTION: NARROW FAN SHAPE
16. **Masters Series® PAR – Basic Flow Pattern (BFP)**
Heavy-water version of the Crown & Geyser, excellent choice in open areas.
SPECIFICATION DESCRIPTION: DENSE COMBINED FAN & COLUMN
17. **Masters Series® PRESTWICK – Straightened Flow Pattern (SFP)**
Dramatic multi-streamed two-tiered pattern.
SPECIFICATION DESCRIPTION: TWO-TIERED MULTIPLE STREAMS
18. **Masters Series® REFLECTION – Adjustable Straightened Flow Pattern (ASFP)**
Dazzling, full circle, two-tiered pattern with multiple-point formation.
SPECIFICATION DESCRIPTION: ADJUSTABLE COMBINED FAN AND STREAMS
19. **Masters Series® ROYAL – Straightened Flow Pattern (SFP)**
Spectacular two-tier, multiple-point rotating formation creating a dramatic effect.
SPECIFICATION DESCRIPTION: ROTATING COMBINED FAN AND STREAMS
20. **Masters Series® SANIBEL – Adjustable Straightened Flow Pattern (ASFP)**
Taller and frothier version of Medina.
SPECIFICATION DESCRIPTION: NARROW FAN SHAPED

TABLE 3: FOUNTAIN AERATOR SPRAY PATTERN DESCRIPTIONS (cont.)

21. **Masters Series® SAWGRASS – Adjustable Straightened Flow Pattern (SFP)**
Slightly taller, more upright version of the Reflection.
SPECIFICATION DESCRIPTION: ADJUSTABLE COMBINED FAN AND STREAMS

22. **Masters Series® TURNBERRY – Straightened Flow Pattern (SFP)**
Upright funnel shape creates a stunning full profile pattern.
SPECIFICATION DESCRIPTION: HEAVY FAN SHAPE

23. **Masters Series® VALHALLA – Straightened Flow Pattern (SFP)**
Stunning tri-tier resulting in both excellent height and diameter.
SPECIFICATION DESCRIPTION: TRI-TIER SPRAY

24. **Masters Series® WIDE GEYSER – Basic Flow Pattern (BFP)**
A modification of the Geyser nozzle produces a less dense, more decorative version.
SPECIFICATION DESCRIPTION: WIDE VERTICAL COLUMN

TABLE 4: FOUNTAIN AERATOR LIGHTING SYSTEMS

AQUAMASTER® FOUNTAIN AERATORS are even more dramatic at night, with the addition of a UL and cUL Listed NIGHT GLOW LIGHTING SYSTEM.

Any lighting system choice includes stainless steel lamp housings, ready to be installed in the float, sealed with clear tempered glass lenses in a stainless steel clamp ring. Minimal installation is required. All lights remain water-cooled and out of sight below the surface.

All necessary electrical controls, including timer, are pre-wired into the fountain aerator’s existing UL Listed control panel. Optional glass colored lenses (amber, blue, red, green or turquoise), with or without an optional sequencer complete your dramatic aquatic display.

For uniformity of spray pattern coverage, 4 lights minimum is recommended.

LINE VOLTAGE: 120 Volt Halogen Lighting Systems

A. 7.5 - 10HP Fountain Aerator Lighting Systems available in 150, 250 or 500 watt fixtures

150 Watt Fixtures	Each system includes:
3 light system: Model # 870443	
4 light system: Model # 870444	
6 light system: Model # 870446	
8 light system: Model # 870448	
250 Watt Fixtures	<ul style="list-style-type: none"> • 150 or 250 Watt quartz halogen flood lamps • 100' of underwater cable • GFCI Protection • Digital Timer • Clear lenses • UL and cUL Listing
3 light system: Model # 870453	
4 light system: Model # 870454	
6 light system: Model # 870456	
8 light system: Model # 870458	
500 Watt Fixtures	Each system includes:
3 light system: Model # 870463	
4 light system: Model # 870464	
6 light system: Model # 870466	
8 light system: Model # 870468	
	<ul style="list-style-type: none"> • 500 Watt quartz halogen flood lamps • 100' of underwater cable • GFCI Protection • Digital Timer • Clear lenses • UL and cUL Listing

TABLE 4: FOUNTAIN AERATOR LIGHTING SYSTEMS (cont.)

LINE VOLTAGE: 120 Volt LED Lighting Systems

A. 7.5 - 10HP Fountain Aerator Lighting Systems available in 18 or 21 watt fixtures

18 Watt Fixtures	Each system includes: <ul style="list-style-type: none"> • 18 or 21 Watt LED light engine • 100' of underwater cable • GFCI Protection • Digital Timer • Clear lenses • UL and cUL Listing
3 light system: Model # 871443	
4 light system: Model # 871444	
6 light system: Model # 871446	
8 light system: Model # 871448	
21 Watt Fixtures	
3 light system: Model # 871453	
4 light system: Model # 871454	
6 light system: Model # 871456	
8 light system: Model # 871458	

TABLE 4: FOUNTAIN AERATOR LIGHTING SYSTEMS (cont.)

CABLE SIZING CHARTS FOR HALOGEN LIGHTING

Maximum recommended length (in feet) from fountain lights to control panel

AquaMaster® recommends consulting a Licensed Electrician to properly size any underground cable from the main power source to our control panel. Cable runs to the panel located away from main power source requires recalculating voltage drop to insure proper cable sizing. Please contact AquaMaster® if assistance is required.

3 Conductor				Copper Wire Gauge Size								
Watts Per Fixture	# of Fixtures	Volts	Approx Amps	#14	#12	#10	#8	#6	#4	#2		
150	2	120	2.5	387	600	1000	1538	2449	3871	6000		
150	3	120	3.8	255	395	658	1012	1611	2547	3947		
150	4	120	5	194	300	500	769	1224	1935	3000		
150	6	120	7.5	129	200	333	513	816	1290	2000		
150	8	120	10	--	150	250	385	612	968	1500		
250	2	120	4.2	230	357	595	916	1458	2304	3571		
250	3	120	6.3	154	238	397	611	972	1536	2381		
250	4	120	8.5	114	176	294	452	720	1139	1765		
250	6	120	12.5	--	120	200	308	490	774	1200		
250	8	120	17									
<i>2 runs of cable required</i>				114	176	294	452	720	1139	1765		
500	3	120	12.5	--	120	200	308	490	774	1200		
500	4	120	17									
<i>2 runs of cable required</i>				114	176	294	452	720	1139	1765		
500	6	120	25									
<i>2 runs of cable required</i>				--	120	200	308	490	774	1200		
500	8	120	34									
<i>2 runs of cable required</i>				--	88	147	226	360	569	882		

Cable Sizing Chart for lights when ordered with a sequencer

3 & 4 Conductor see notes below			Copper Wire Gauge Size						
Watts Per Fixture	# of Fixtures	Volts	#14	#12	#10	#8	#6	#4	#2
150	3 or 4	120	400	600	1000	1600	2500	4300	-
150	6 (3 colors)	120	200	300	500	800	1250	2150	-
150	8 (4 colors)	120	200	300	500	800	1250	2150	-
250	3 or 4	120	250	400	650	1000	1600	2600	-
250	6 (3 colors)	120	125	200	325	500	800	1300	-
250	8 (4 colors)	120	125	200	325	500	800	1300	
500	4 (4 colors)	120	--	200	325	500	800	1300	2000
500	6 (3 colors)	120	--	100	175	250	400	650	1000
500	8 (4 colors)	120	--	100	175	250	400	650	1000

Lighting sequencer requires 2 runs of cable:

- 1) Sequencer with 3 colors require (1) run of 3 conductor cable and (1) run of 4 conductor cable
- 2) Sequencer with 4 colors require (2) runs of 4 conductor cable

TABLE 4: FOUNTAIN AERATOR LIGHTING SYSTEMS (cont.)

CABLE SIZING CHARTS FOR LED LIGHTS

Maximum recommended length from fountain aerator to control panel

AquaMaster® recommends consulting a Licensed Electrician to properly size any underground cable from main power source to our control panel. Cable runs to panel located away from main power source requires recalculating voltage drop to insure proper cable sizing. Please contact AquaMaster® for assistance.

3 Conductor				Copper Wire Gauge Size		
Watts Per Fixture	# of Fixtures	Volts	Approx Amps	#14	#12	#10
12	2	120	0.178	5437	8427	--
12	3	120	0.267	3625	5618	--
12	4	120	0.356	2718	4213	--
12	6	120	0.534	1812	2809	--
12	8	120	0.712	1359	2107	--
18	2	120	0.404	2395	3713	6188
18	3	120	0.606	1597	2475	4125
18	4	120	0.808	1198	1856	3094
18	6	120	1.212	798	1238	2063
18	8	120	1.616	599	928	1547
18	12	120	2.424	399	619	1031
21	2	120	0.432	2240	3472	5787
21	3	120	0.648	1493	2315	3858
21	4	120	0.864	1120	1736	2894
21	6	120	1.296	747	1157	1929
21	8	120	1.728	560	868	1447
21	12	120	2.592	373	579	965

Lighting sequencer requires 2 runs of cable:

- 1) Sequencer with 3 colors require (1) run of 14-3 conductor cable and (1) run of 14-4 conductor cable
- 2) Sequencer with 4 colors require (2) runs of 14-4 conductor cable