

SPECIFICATIONS
FIXED BASE WATER FEATURE FOUNTAIN SYSTEM

1.0 GENERAL

1.1 DESCRIPTION

- A. Manufacturer shall furnish a fixed base fountain system capable of pumping water from below the surface of a body of water.
- B. A submersible motor shall draw water into 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 system shall include an oil-cooled motor sealed in stainless steel housing, with shaft mounted impeller inside a discharge tube. 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 FOUNTAIN COMPONENTS DESCRIPTION

- A. **Framework** shall be a weldment of rectangular and square series 300 stainless steel tubing with a minimum wall thickness of 1/8 inch. Pump support brackets (horizontal only) shall be made out of PVC, nylon, other non metallic material and series 300 stainless steel to give the power/pump unit proper support. All fasteners shall be series 300 stainless steel.
- B. **Discharge Tube** shall be manufactured out of PVC for proper diameter and shall be of proper length to insure that the discharge assembly and pattern are above the highest water level when the unit is running.
- C. **Impeller** shall be precision machined and balanced, formed using Series 300 Stainless Steel for 1-5HP and polypropylene polymer with brass shaft insert for 1/2HP. The impeller is connected to the motor shaft by a series 300 stainless steel bolt and lockwasher.
- D. **Impeller Housing** shall be molded from glass reinforced nylon type 6 material. The impeller housing shall be precision molded to accept the float tube and capable of being bolted to the motor housing. The impeller housing shall house the impeller, insert and flow straightener (if applicable).
- E. **Flow Straightener** shall be precision machined from nylon type 6 material and shall have 18 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 3/8" wide and have a total length not less than 2-1/2" long. It shall be factory installed for various optional spray patterns.
- F. **Motor Housing** shall be Series 300 Stainless Steel. 1-5HP shall have a permanent series 300 stainless steel electrical hub welded on the side of the housing to allow electrical cable entry. The 1/2HP shall have a series 300 stainless steel electrical hub welded on the bottom of the housing to allow electrical cable entry.

- G. **Motor** shall contain a Series 316 Stainless Steel shaft incorporating a permanent split phase capacitor run on single phase motors and a polyphase induction on three phase motors. 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 a highly refined, mineral oil of food grade quality, specially formulated for lubrication. It shall meet 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 and Series 300 Stainless Steel. All elastomers shall meet UL 778 requirements. This assembly shall then be encapsulated and protected within a series 300 stainless steel cartridge assembly.
- 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 motor housing clamp. 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 three feet from the motor housing. It is a two piece molded assembly made of thermoplastics, meeting UL 778 requirements. The cap end shall be permanently connected to the underwater pin and socket connector (see Section 1.2 Item J.). The body end of the disconnect shall be permanently attached to the underwater power cable and sealed with an approved compound. This is intended to prevent water entry if damage should occur to the cable. The disconnect shall be sealed with an internal o-ring and by an external series 300 stainless steel clamp ring, which can be easily opened.

- K. **Underwater Pin and Socket Connector** (1-5HP) shall consist of a Series 900 IP68 pin and socket connector. It shall be of a 4 pin configuration rated 32 amps at 600 volts AC. The pin end shall be potted into a series 300 stainless steel 90° adapter elbow with an approved ridged epoxy. This assembly shall be permanently attached to the series 300 stainless steel hub that is welded onto the side of the series 300 stainless steel motor housing. The socket end shall be attached to a 36” piece of UL Listed underwater power cable. It shall be permanently secured to the UL Listed power cable by means of an integrated clamp and series 300 stainless steel screws. It shall be completely epoxied to prevent entry of water or any other foreign matter. The other end of this assembly is permanently attached to the cap end of the underwater cable disconnect. It is sealed with a flexible potting compound.
- 1/2HP shall consist of a Series 900, IP68 pin and socket connector. It shall be of a 4 pin configuration rated 32 amps at 600 volts AC. The pin end shall be potted into a series 300 stainless steel straight bell-shaped adapter with an approved ridged epoxy. This assembly shall be permanently attached to a reinforced braided hose and a series 300 stainless steel elbow. This shall be attached to a series 300 stainless steel hub which is welded on the bottom of the motor housing. This complete assembly shall be sealed with an approved flexible potting compound. The socket end shall be attached to a 36” piece of UL Listed underwater power cable. It shall be permanently secured to the UL Listed power cable by means of an integrated clamp and Series 300 Stainless Steel screws. It shall be completely epoxied to prevent entry of water or any other foreign matter. The other end of this assembly shall be permanently attached to the cap end of the underwater cable disconnect. It shall be sealed with an approved flexible potting compound.
- L. **Fasteners and Anchor Connectors** shall be Series 300 Stainless Steel.
- M. **Electrical Control Panel** specifications, see SECTION 3.
- N. **Intake Screen** shall be made of 20 Gauge, Series 300 Stainless Steel. The screen shall have a minimum of 58% open area, representing 91 square inches of open intake area for 1-5HP and 76 square inches for 1/2HP.
- O. **Nozzles** (first one is included, must be specified, additional are optional) shall be interchangeable without the use of tools, in most cases. Nozzles will be sealed to the discharge tube utilizing an o-ring and series 300 stainless steel thumb screws to prevent leakage.
- P. **Large Custom Intake Screen** (optional for 1-5HP) shall be made of 18 Gauge Series 300 Stainless Steel and completely enclose the motor power unit assembly. It shall have a minimum of 58% open area, representing 765 square inches of open intake area. The screen hole size shall vary according to the horsepower for which it is to be used on.
- Q. **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.

FIXED BASE WATER FEATURE FOUNTAIN DETAIL SPECIFICATIONS

2.0 DETAILED INFORMATION – Refer to TABLES 1 and 2 to complete of this section

- 2.1** This specification is intended to provide prospective bidders the necessary information pertaining to the fixed fountain(s) specified for the _____ Project.
- 2.2** The MOTOR(S) shall be _____ HP, operating at _____ Volts, 60 Hertz, _____ Phase at 3450 RPM.
- 2.3** Basin shall be _____ feet long by _____ feet wide (if rectangular) or _____ feet in diameter (if round) and have a depth of _____ inches.
- 2.4** The pattern specified shall be capable of creating a _____ pattern. It shall come complete with an electrical control panel and protective intake screen and _____ feet of _____ gauge, 3 (1/2 HP models only) or 4 conductor underwater power cable.
- 2.5** The fountain shall produce a SPRAY PATTERN _____ feet in diameter and _____ feet in height.

NOTE: Basic Flow Patterns (BFP) from TABLE 2 can only be used with VERTICAL MOUNTING CONFIGURATION

- 2.6** Fountain mounting configuration shall be horizontal or vertical (circle one) as determined by the basin depth from Section 2.3 and the chart below.

Horsepower	Basin Depth	Mounting
½ HP	15 - 25 inches	Horizontal
½ HP	26 inches and above	Vertical
1-5 HP	18 – 35 inches	Horizontal
1-5 HP	36 inches and above	Vertical

FIXED BASE WATER FEATURE FOUNTAIN 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**
 - 1. Single phase applications, a GFCI breaker shall provide overload and short circuit protection, combined with Class A ground fault protection.
 - 2. Three phase applications, a molded case breaker shall provide overload and short circuit protection, while a residual current device 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 overload relay. It is adjustable over the full load amperage draw of the motor. It shall have a visual trip indicator, test button and manual/automatic reset modes.
- F. **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 508: Industrial Control Panels and Category 778: Submersible Aerators and Aerating Fountain Pump Systems.

3.2 ACCEPTABLE MANUFACTURER

This fixed fountain's 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 shall have a 3 year warranty on parts and labor.

FIXED BASE WATER FEATURE FOUNTAIN DETAIL SPECIFICATIONS (cont.)

4.0 SAFETY TESTING

The fixed fountain system shall be tested and approved as a complete unit. This approval must meet Underwriters Laboratories Inc. requirements in compliance with Category 508: Industrial Control Panels and 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 fixed fountain, 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[®] FIXED BASE FOUNTAINS 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 1/2 – 5HP AQUAMASTER[®] FIXED BASE FOUNTAINS 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 5 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.

FIXED BASE FOUNTAIN LIGHTING SYSTEMS AND OPTIONS SPECIFICATIONS

- 5.0 LIGHTING SYSTEM** shall be LED/RGBW _____ Volts/Watts, Model #s)_____. There are _____ total fixtures, containing _____ (choose color(s): white, amber, blue, red, or green) color board assemblies.
- 5.1** A total length of _____ feet of _____ gauge 3(LED) or 5(RGBW) 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 may be required.
- 5.4 LARGE CUSTOM INTAKE SCREEN (1-5HP)** shall provide additional protected intake area if Fixed Fountain will operate in a potentially high debris filled aquatic environment. Yes ___ No ___
- 5.5 SERIES 316 STAINLESS STEEL UPGRADE** is available for sites with salt or brackish water. Yes ___ No ___

Please refer to TABLE 3 to assist in the completion of SECTION 5.

FLOATING FOUNTAIN LIGHTING SYSTEMS AND OPTIONS SPECIFICATIONS (cont.)

6.0 DESCRIPTION - LIGHTING

- A. **Light Set** shall consist of line voltage (120 VAC) 11W LED, 22W LED, 35W LED, 20W RGBW LED or 40W RGBW LED lighting system with either 2, 3, or 4 lights.
- B. **Lights** shall consist of a power supply/driver module with a 11W, 22W, 35W, 20W RGBW (5W red, 5W, green, 5W blue, 5W white), or 40W RGBW (10W red, 10W green, 10W blue, 10W white) LED light engine.
- C. **Light Fixture** 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 mounted with series 300 stainless steel brackets and fasteners.
- D. **Light Fixture Assembly** shall consist of a lens made of tempered glass with a clear non-diffusing surface with a minimum of 5/32nd thickness and sealed with “V” shaped lens gasket made of silicon. Clamp ring shall be of series 300 stainless steel. Fasteners and mounting hardware shall be of series 300 stainless steel.
- E. **Underwater Pin and Socket Connector** shall consist of a Series 900, IP68 pin and socket connector. It shall be of a 3(LED) or 5(RGBW) pin configuration rated 32 Amps at 600 VAC. The pin and socket ends shall each be attached to a UL Listed underwater power cable rated at 600 Volts. They both shall be permanently secured to their UL Listed power cables by an 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 fixture with a nonmetallic connector and potted using a flexible approved potting compound. The socket end assembly shall be permanently attached to the power cable. Both the pin end and socket end assemblies come with protector caps.
- F. **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 the first light fixture. This will ensure that no potential damage can occur to any cable connections, due to tension on the cable.
- G. **Light Controls** shall consist of a GFCI (Ground Fault Circuit Interrupter), overcurrent protection (fuse), digital timer with battery back-up. The Sequencer (optional) shall be capable of cycling light fixtures on and off, up to 8 fixtures. The RGBW controller (optional) is pre-programmed with assorted color, shows and holiday themed selectable programs. The controller can also adjust program speed and brightness. The standard controller shall consist of a programmable controller with push button interface. An optional programmable WiFi controller is available with an Android or iOS app included. An Android tablet preloaded with the app and connected to the controller is also available as a WiFi option.
- H. **Safety Testing** shall be tested and approved as a complete assembly. This approval must meet Underwriters Laboratories Inc. requirements in compliance with UL category 676: Underwater Luminaires.

- I. **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.

TABLE 1: 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.

Single Phase 3 conductor			3 conductor Copper Wire Gauge Size						
Unit	Volts	Approx Amps	#14	#12	#10	#8	#6	#4	#2
1/2HP	120	5.6	173	268	446	687	1093	1728	2679
1/2HP	208-240	2.8	599	929	1548	2381	3790	5991	9286

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
1HP	120	19.0	--	--	132	202	322	509	789
1HP	208-240	9.6	--	271	451	694	1105	1747	2708
2HP	208-240	12.6	--	206	344	529	842	1331	2063
3.5HP	208-240	15.2	--	--	285	439	698	1104	1711
5HP	208-240	27.1	--	--	--	246	392	619	959

Three Phase 4 conductor			4 conductor Copper Wire Gauge Size						
Unit	Volts	Approx Amps	#14	#12	#10	#8	#6	#4	#2
1HP	208-240	5.4	--	556	927	1426	2269	3587	5560
1HP	440-480	2.7	--	2352	3920	6031	9601	15176	23522
2HP	208-240	6.3	--	477	794	1222	1945	3075	4766
2HP	440-480	3.1	--	2049	3415	5253	8362	13218	20487
3HP	208-240	10.1	--	297	495	762	1213	1918	2973
3HP	440-480	5.1	--	1245	2076	3193	5083	8034	12453
5HP	208-240	18.0	--	--	278	428	681	1076	1668
5HP	440-480	9.0	--	706	1176	1809	2880	4553	7057

Actual voltage to motor will affect your fountain's performance.

TABLE 2: FIXED BASE FOUNTAIN SPRAY PATTERN DESCRIPTIONS

1. **Frothy Geyser – Fixed Base Fountain Pattern**
A multi-port nozzle achieves a dramatic vertical pattern in a solid column of water.
SPECIFICATION DESCRIPTION: FROTHY VERTICAL COLUMN

2. **Masters Series® ACE - Basic Flow Pattern (BFP)**
Full circle, two-tiered pattern with multi-point center formation.
SPECIFICATION DESCRIPTION: POINTED FAN SHAPE

3. **Masters Series® ARABELLA – Straightened Flow Pattern (SFP)**
Sparkling, two-tiered pattern consisting of an upper multi-stream and a lower full conical spray design.
SPECIFICATION DESCRIPTION: COMBINED FAN AND STREAMS

4. **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

5. **Masters Series® BAYSIDE – Straightened Flow Pattern (SFP)**
Narrower version of Red Tail, excellent in smaller contained areas.
SPECIFICATION DESCRIPTION: COMBINED FAN AND STREAMS

6. **Masters Series® BAYTREE – Straightened Flow Pattern (SFP)**
Frothy tri-tiered pattern providing aeration benefits beautifully.
SPECIFICATION DESCRIPTION: TRI-TIER FROTHY SPRAY

7. **Masters Series® BIRDIE - Basic Flow Pattern (BFP)**
Creates a dense, round ball of water, perfect for smaller containments of water.
SPECIFICATION DESCRIPTION: ROUND

8. **Masters Series® BISCAYNE - Basic Flow Pattern (BFP)**
Variation of classic two-tier with taller, narrower lower spray.
SPECIFICATION DESCRIPTION: UPRIGHT FAN & COLUMN

9. **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

10. **Masters Series® COLONIAL – Straightened Flow Pattern (SFP)**
Two tier pattern that has a narrow center geyser, surrounded by a multi-streamed lower tier.
SPECIFICATION DESCRIPTION: FAN SHAPED INDIVIDUAL STREAMS WITH CENTER GEYSER

TABLE 2: FIXED BASE FOUNTAIN SPRAY PATTERN DESCRIPTIONS (cont.)

11. **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
12. **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
13. **Masters Series® DIAMONDBACK – Straightened Flow Pattern (SFP)**
Low height pattern sending streams of water in tremendous diameter.
SPECIFICATION DESCRIPTION: WIDEST LOW FAN SHAPE
14. **Masters Series® DORAL – Straightened Flow Pattern (SFP)**
A two-tiered multi-streamed arch pattern.
SPECIFICATION DESCRIPTION: TWO TIERED FAN SHAPED INDIVIDUAL STREAMS
15. **Masters Series® DOUBLE EAGLE – Straightened Flow Pattern (SFP)**
Statuesque, frothy vertical pattern creates a stunning full profile.
SPECIFICATION DESCRIPTION: SOLID VERTICAL COLUMN
16. **Masters Series® EAGLE - Basic Flow Pattern (BFP)**
Elongated, frothy vertical pattern creates a beautiful, full profile.
SPECIFICATION DESCRIPTION: FROTHY VERTICAL COLUMN
17. **Masters Series® FIRESTONE – Straightened Flow Pattern (SFP)**
Beautiful tri-tier, perfect for smaller area applications.
SPECIFICATION DESCRIPTION: TRI-TIER MULTIPLE STREAMS
18. **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
19. **Masters Series® HALF MOON – Straightened Flow Pattern (SFP)**
Gorgeous multi-stream pattern results in a full floral effect.
SPECIFICATION DESCRIPTION: SCALLOPED FAN SHAPE
20. **Masters Series® IMPERIAL – Straightened Flow Pattern (SFP)**
Spectacular tri-tier, multiple-point rotating formation creating a dramatic effect.
SPECIFICATION DESCRIPTION: ROTATING COMBINED FAN AND STREAMS WITH CENTER GEYSER

TABLE 2: FIXED BASE FOUNTAIN SPRAY PATTERN DESCRIPTIONS (cont.)

21. **LAKWOOD - 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
22. **Masters Series® MEDINAH – Straightened Flow Pattern (SFP)**
Taller, narrower version of the Turnberry.
SPECIFICATION DESCRIPTION: NARROW FAN SHAPE
23. **Masters Series® MONTEREY – Straightened Flow Pattern (SFP)**
Frothy tri-tiered pattern combines both aesthetics and aeration.
SPECIFICATION DESCRIPTION: TRI-TIER FROTHY SPRAY
24. **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
25. **Masters Series® PRESTWICK – Straightened Flow Pattern (SFP)**
Dramatic multi-streamed two-tiered pattern.
SPECIFICATION DESCRIPTION: TWO-TIERED MULTIPLE STREAMS
26. **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
27. **Masters Series® RIVIERA – Straightened Flow Pattern (SFP)**
Dazzling, three tier display that combines a narrow multi-streamed geyser with two surrounding conical shaped tiers. Great for applications that require a tiered, narrower pattern.
SPECIFICATION DESCRIPTION: TWO TIERED FAN SHAPED INDIVIDUAL STREAMS WITH CENTER GEYSER
28. **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
29. **Masters Series® SANIBEL – Adjustable Straightened Flow Pattern (ASFP)**
Taller and frothier version of Medina.
SPECIFICATION DESCRIPTION: NARROW FAN SHAPED
30. **Masters Series® SOMERSET – Straightened Flow Pattern (SFP)**
Heavy upright multi-stream fan shape with a geyser creates a stunning full profile pattern.
SPECIFICATION DESCRIPTION: HEAVY INDIVIDUAL STREAM FAN SHAPE WITH CENTER GEYSER

TABLE 2: FIXED BASE FOUNTAIN SPRAY PATTERN DESCRIPTIONS (cont.)

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

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

33. **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 3: FIXED FOUNTAIN LIGHTING SYSTEMS

AQUAMASTER® FIXED BASE FOUNTAINS 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, sealed with clear tempered glass lenses in a stainless steel clamp ring. All lights remain water-cooled.

All necessary electrical controls, including timer, are pre-wired into the fountain’s existing UL Listed control panel. Color board assemblies (White, Red, Green, Blue, or Amber) must be selected for each light. An optional sequencer can complete your dramatic aquatic display. **For uniformity of spray pattern coverage, 3 lights minimum is recommended.**

1. LINE VOLTAGE: 120 Volt LED Lighting Systems

11 Watt LED Fixtures (1/2, 1-3, 5HP)	Each system includes: <ul style="list-style-type: none"> • 11, 22, or 35 Watt LED light engine • GFCI Protection • Digital Timer • Clear lenses • UL and cUL Listing • Choice of Red, Green, Blue, or Amber Light Engine
2 light system: Model # 870724, 870727, 870730	
3 light system: Model # 870725, 870728, 870731	
4 light system: Model # 870726, 870729, 870732	
22 Watt LED Fixtures (1-3, 5 HP)	
2 light system: Model # 870623, 870626	
3 light system: Model # 870624, 870627	
4 light system: Model # 870625, 870628	
35 Watt LED Fixtures (1-3, 5 HP)	
2 light system: Model # 870800, 870803	
3 light system: Model # 870801, 870804	
4 light system: Model # 870802, 870805	

LINE VOLTAGE: 120 Volt RGBW LED Lighting Systems

20 Watt Fixtures (1/2 HP)	Each system includes: <ul style="list-style-type: none"> • 20 or 40 Watt RGBW LED light engine • GFCI Protection • Digital Timer • Clear lenses • UL and cUL Listing
2 light system: Model # 870765	
3 light system: Model # 870766	
4 light system: Model # 870767	
40 Watt Fixtures (1-3, 5HP)	
2 light system: Model # 870688, 870691	
3 light system: Model # 870689, 870692	
4 light system: Model # 870690, 870693	

TABLE 3: FIXED FOUNTAIN LIGHTING SYSTEMS (cont.)

CABLE SIZING CHARTS FOR LED LIGHTS

*Maximum recommended length (in feet) 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
11	2	120	0.183	5279	8182	13636
11	3	120	0.275	3519	4615	9091
11	4	120	0.367	2639	3462	6818
22	2	120	0.283	3416	5294	8824
22	3	120	0.425	2277	3529	5882
22	4	120	0.567	1708	2647	4412
35	2	120	0.583	1659	2571	4286
35	3	120	0.875	1106	1714	2857
35	4	120	1.167	829	1286	2143

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
11	3 or 4	120	10558	16364	27272
22	3 or 4	120	6832	10588	17648
35	3 or 4	120	3318	5142	8572

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

CABLE SIZING CHART FOR RGBW LED LIGHTS

5 Conductor				Copper Wire Gauge Size		
Watts Per Fixture	# of Fixtures	Volts	Approx Amps	#14	#12	#10
20	2	120	0.333	2903	4500	7500
20	3	120	0.500	1935	3000	5000
20	4	120	0.667	1452	2250	3750
40	2	120	0.667	1452	2250	3750
40	3	120	1.000	968	1500	2500
40	4	120	1.333	726	1125	1875