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Mechanical Requirements

Electrical:

Electrical requirements (fig 22) will vary according to the size and type of installation. Pumps are sized according to waterfall flow requirements and vary considerably in size and electrical requirements. Most water features will operate within a range of 5 to 20 Amps. The standard pumps we use are rated for continuous use (24/7) and are sized to meet or exceed the flow requirements of the waterfall. All of our water features are equipped with PVC ball valves to allow precise setting of the water flow rate and sound level. Refer to the instructions provided with your pump for operating and maintenance. Depending on the scale of your water feature, multiple pumps may be required. Please refer to the submittals provided with your order for specific electrical requirements. All electrical work should be in accordance with local and national electrical codes and should be conducted by a licensed electrician. The power to the waterfall primary pump(s) only should be controlled by a single-pole switched outlet combination to control the on-off function of the water feature. All other water feature mechanical equipment requiring electrical power should remain live at all times. Provide (on site) two additional GFCI duplex outlets for the ozone water purification system (generator & injector) and the automatic drain pump system. Please keep in mind that our pumps cannot be hard-wired and have no integral switch. All of our quality pumps are submersible and installed with ball valves for precise manual flow settings. All water feature mechanical equipment is rated for continuous (24/7) operation.

Primary Pump(s):
(varies), 120V / 60Hz
Plug into GFCI switched outlet within mechanical area as noted.

Ozone Water Treatment System:
1Amp GFCI duplex outlet within mechanical area as noted. This duplex must remain live and not be controlled by switch.

Install ozone generator vertically as shown and connect 3/8” LLDPE polyethylene tubing from lower basin to ozone generator barbed fitting on bottom of generator.

Primary pump(s) to switched outlet control only.
Provide (3) GFCI duplex outlets:
#1&2 Primary pumps
#3 Ozone generator and ozone pump
#3 Drain pump system

Install all electrical components within 36” of lower basin mechanical exit conduit and as noted.

All electrical cords to be routed through 2” watertight conduit to mechanical area as specified including 3/8” LLDPE polyethylene tubing for ozone supply from lower basin to ozone generator.
Mechanical Requirements

Plumbing:

Automatic water supply and overflow connections are included standard with the Reveal 7 Pro Water Feature Systems. A ½" cold water supply is required with the connection fitting locations specified as required when ordering. All plumbing fitting locations should be coordinated as required with submittals: shop drawings (custom water features) or our standard component drawings for our Reveal 7 Professional Systems. Building water supply connection to the water feature must be protected from potential contamination from the water feature water. A reduce pressure zone (back-flow) preventer should be installed as specified and required by local and national plumbing codes. All water feature systems equipped with automatic water supply / float valve assemblies, reverse osmosis systems and / or drain pump systems should have the lower basin overflow connected to an approved drain. Float valve assemblies should be inspected periodically for wear or damage and repaired / replaced and corrected as necessary. In some installation locations, a water softening cartridge system may be necessary in advance of our reverse osmosis water purification. Water softening / reverse osmosis filtration is necessary for all water features in order to eliminate potentially damaging hard water deposits from dissolved solids. Water features and mechanical equipment are not warranted for damage caused by hard water. Use only CPVC, schedule 80 or schedule 40 PVC fittings and pipe in the installation of our waterfalls.

Testing:

All water features should be tested prior to use. Please refer to our installation guide for testing requirements.

IMPORTANT!
Do not fill the water feature using tap water. Water features should only be filled automatically via the reverse osmosis filtration system. The fill time will vary depending on size of water feature system and local water quality.

Plumbing:

Mechanical area components to be coordinated on site as required by others.

1/2" cold water supply from building to be connected to reverse osmosis water filtration system on site by others. Provide a shutoff as required from the building water supply before the reverse osmosis system. A back-flow prevention devise may be required by local officials- confirm as require.

Overflow: 1 1/2" FNPT to approved drain.

All plumbing connections on site to be PVC ONLY - copper or other metal pipe and fittings should not be used in any portion of the waterfall connections and assembly.

CAUTION: DO NOT USE PEX OR PEX FITTINGS!

Install the reverse osmosis system to the lower basin connection port using the supplied 3/8" LLDPE polyethylene tubing. The R.O. system must also be connected to an approved drain on site as required.

Reverse Osmosis Water Filtration:

Our waterfalls are offered with a quality reverse osmosis system (optional equipment) that is designed to work with a maximum water hardness not to exceed 10 grains per gallon, or 170 ppm. Water that exceeds a hardness level of 10 grains per gallon will require a softening system prior to the reverse osmosis system and waterfall. Water hardness levels that exceed 10 grains per gallon will likely cause damage to the waterfalls and waterfall equipment even with the use of our reverse osmosis system. Damage to the waterfalls, pumps and waterfall equipment caused by hard water is not covered under our limited warranty.

IMPORTANT: The reverse osmosis system is critical to the proper operation of the water feature. The water feature must be supplied automatically with make-up water via reverse osmosis filtration. Please note that eliminating the R.O. system will void our pump and water feature system limited warranty.