



# General Specifications

1451b Ellis Street, Kelowna, BC, Canada, V1Y 2A3  
phone: 800.590.5552, 250.712.3393 fax: 250.861.4814  
sales@waterplay.com www.waterplay.com



# G eneral Specifications

## Spray Park General Specifications

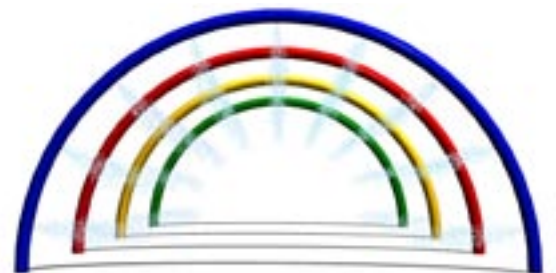
- ◆ Spray fixtures shall be Waterplay® named designs and model numbers, as manufactured by Waterplay® Manufacturing Inc., British Columbia, Canada (Tel. 01- 250 – 712 - 3393).
- ◆ For products specified by naming only one product and manufacturer, there will be no substitutions unless the substitution is approved as an equal or better, 2 weeks prior to bid opening.
- ◆ All spray structures and control systems shall be installed in accordance with the manufacturer's specifications. The contractor shall use due care when installing the spray structures. Protective wrapping shall be left intact throughout the installation and be removed only upon completion. Spray structures shall be installed in accurate locations, square, centered, plumbed, and at the required elevation relative to final grade on footings as per the spray park plans.
- ◆ All phases of the spray structure installation shall be inspected by the owner, or an authorized representative of the owner, up to and including the final inspection as laid out in the Waterplay Project Inspection Checklist.



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## Spray Features

- ◆ Above ground spray fixtures shall be constructed of Stainless steel Type A304, A304L or A316, schedule 40 or schedule 10
- ◆ Stainless steel base plate materials will be of a 2B finish at 3/8" (10mm) thick. Each spray fixture shall have a 1 1/2" (38mm) NPT or BSF coupling water inlet.
- ◆ In-ground spray fixtures shall be 2 1/2" (64mm) schedule 40, type A304 stainless steel canisters with a machined nozzle seat. Each fixture will have a 1" (25mm) or 1 1/2" (38mm) NPT coupler water inlet. Each fixture shall have a 8" x 4" x 1/4" (200mm x 100mm x 6mm) base plate with two 1/2" (13mm) holes to accommodate two (2) stainless steel 1/2" (12mm) j-bolt anchor bolts to be set in a concrete footing.
- ◆ Vendors with ISO 9002 approvals shall supply all pipe and plate, stainless or aluminum.
- ◆ Spray fixtures are to meet ADA compliance for handicap accessibility, and meet or exceed current ASTM or CSA playground safety standards.
- ◆ Spray fixtures will be supplied with all necessary anchoring hardware and installation templates to accommodate site work. For above ground features, anchor templates shall include wooden template, stainless J bolts 1/2" (12mm) diameter x 9" (229mm), complete with 8 x 1/2" (12mm) stainless steel flat washers and 8 x 1/2" (12mm) stainless steel nuts. For In-ground spray features, anchor templates shall include wooden template, stainless J bolts 3/8" (10mm) diameter x 8" (203mm), complete with 4 x 3/8" (10mm) stainless steel flat washers and 4 x 3/8" (10mm) stainless steel nuts.
- ◆ All spray fixtures shall have fittings that allow for pressure testing and winter close off.



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## Nozzles

- ◆ Spray fixture nozzles shall be constructed of Delrin or a non-corrosive, impervious to galling type alloy, precision machined, and interchangeable. Nozzles shall be capable of providing varying water displays and consumptions to meet the hydraulic requirements of the spray fixtures and the individual park. Brass nozzles are also available and must be machined from solid brass.
- ◆ Nozzles shall be tamper resistant and shall be secured using tamper resistant fasteners.



## Coatings

- ◆ Fixtures shall be coated with a Primid polyester based powder coat finish similar to Tiger Drylac U.S.A. Inc. or an approved equal.
- ◆ Powder coatings shall be weather resistant and have ultraviolet inhibitors. Coating will have a gloss finish, withstand 1/10th no removal @ 160 PSI or 820 kPa, exceed all specifications of organic coatings, and a film thickness of between 1.5 to 3.0 mils (0.038mm to 0.076mm) (determined by color and finish).

# G eneral Specifications

## Controllers and Electrical

- ◆ All electronic operating systems shall be manufactured by Waterplay Manufacturing Inc.
- ◆ All electrical operating systems including activation fixtures, and control panels shall be CSA approved specifically for spray park operations and must bear said certification logos.
- ◆ All activation mechanisms shall have no moving parts and be made accessible only with the use of manufacturer supplied, tamper resistant, stainless steel security hardware.
- ◆ The actuating device shall be encapsulated within a cast urethane or machined nylon activation button, or hand plate, and be UV, moisture, graffiti, and impact resistant.
- ◆ All control system materials are to be of industrial grade quality and controller enclosures shall be rated @ NEMA 4X Fiberglass. Extended controller warranties are available beyond the standard 2 year manufacturers warranty in 3, 4 and 5 year increments. (For a total of 5 years)
- ◆ All Waterplay® components shall be grounded using bare #6 AWG wire and an approved ground lug in the 3/8" (10mm) hole provided in the base plates. Consult local electrical inspector for local codes and final inspection.
- ◆ Electrical connection shall be 1" NPT or BSF coupler to be located near the bottom of the component. Conduit shall run up inside of tubular section to activation sensor chamber. The conduit shall be welded via 1/4" (6mm) fillet weld to the component and be completely watertight.



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- ◆ Power supply to the Waterplay control panel shall be 120/240V AC, 2A Full Load Max. Activator wire type shall be 3 conductor SJOW with a diameter of 0.31" (7.87mm). Each activator requires 1 full, uninterrupted run of wire through a 1" (25mm) conduit to the controller location, and 1 additional ground wire, #14 AWG.
- ◆ All wire connections must be watertight.
- ◆ Solenoid valves must be brass or PVC, and of type having 24V AC, 250mA max. holding current coil rating with flow control (Rainbird PGA series or equal). Valve wire shall be #14 AWG type R90, one per valve, plus one common back to the controller location.
- ◆ All Activators that do not utilize water, shall provide a 1/2" NPT or BSF coupler located near the bottom of tubular section for drainage. It shall be A304L stainless steel, or aluminum 6061 and affixed to the support column with a watertight fillet weld. be CSA/UL approved specifically for spray park operations and must bear said certification logos.



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## Water Distribution Manifold

- ◆ The manifold header shall be a CNC machined, stainless steel header and shall have a 2" (51mm) water supply inlet.
- ◆ The manifold shall include a 2" (51mm) PVC ball-type master valve, a pressure gauge, 1.5" (38mm) PVC ball-type shut off valves to the individual spray structures, 1" (25mm) PVC solenoid valves to the individual spray structures. Valves shall be joined using threaded unions.
- ◆ Solenoid valves must be brass or PVC, and of type having 24V AC, 250mA max. holding current coil rating with flow control (Rainbird PGA series or equal). Valve wire shall be #14 AWG type R90, one per valve, plus one common back to the controller location.

