

Splashpad Proposal for Fort Vermillion

By



April 25, 2013

Spray Park Proposal

April 25, 2013

Thank you for the opportunity to submit the following proposal to design and construct your future splashpad. We have many years of experience in completing projects like this and we are extremely well suited to undertake this project.

We have created a proposal for you to consider which I think will integrate into your park and provide exceptional play value and aesthetics.

PlayQuest Recreation has been involved in recreational projects since 2004 and has completed hundreds of playground and water park projects. PlayQuest Recreation is also the exclusive distributor in Western Canada of many high quality recreational product lines including Vortex Aquatic equipment and BCI Burke playground equipment, we also can supply and install almost anything that a park project requires such as shelters, site amenities, surfacing, and pour in place rubber.

We look forward to discussing this project further with you and tailoring it to your specific needs. We know that a properly designed and constructed Splashpad can bring joy and excitement to the children and families of your community. We appreciate your consideration and value this opportunity to earn your business.

Sincerely,

Curtis Giesbrecht
PlayQuest Recreation
780-913-4011
curtisg@playquest.ca



vortex-intl.com

Fort Vermillion Splashpad®, AB - Revision 4 - View 1





vortex-intl.com

Fort Vermillion Splashpad®, AB - Revision 4 - View 3





vortex-intl.com

Fort Vermillion Splashpad®, AB - Revision 4 - View 4



Spray Park Proposal

FORT VERMILLION SPLASHPAD

Project ID 17345 Quote 1172 Rev 4

Proposal Date: April 25, 2013

PRICING

Supply the following Above Ground Features and components

Water Features

- FIRE HYDRANT with ACTIVATOR
- AQUA DOME N°1
- AQUALIEN SPINNER N°1
- CASCADES N°1
- 2 JET STREAMS
- 4 DIRECTIONAL WATER JETS
- 2 GROUND GEYSERS
- 2 LOOP N°1 Cannons
- WATERGARDEN FROG N°1
- PALM TREE

Water Management System

- Water Containment System, 3000 Gallon, Double Loop, 2 Manholes, 2 ladders, baffle
- Playsafe Drain No 1 with Conical Strain Basket
- Water Quality Management System custom
- Freight

Construction Services

- Provide construction services as detailed in the attached quotation

Total	\$ 332,857.03
GST	\$ 16,642.85
Grand Total	\$ 349,499.88

Payment Terms—50% to place order, 50% on receipt. Pricing is valid 60 days. Delivery is approximately 2-3 weeks for embedded equipment, 6-8 weeks for Play Products but may be sooner depending on manufacturer availability at time of order. To place order, please sign and return fax to (780) 461-9225 or email to info@playquest.ca.

Signature of Acceptance: _____ Title: _____

Print Name: _____ Date: _____

Spray Park Proposal



Fort Vermillion Splashpad®, AB - Revision 4 - View 1



16 WATER FEATURES

- FIRE HYDRANT with ACTIVATOR
- AQUA DOME N°1
- AQUALIEN SPINNER N°1
- CASCADES N°1
- JET STREAM
- GROUND GEYSER
- JET STREAM
- DIRECTIONAL WATER JET
- DIRECTIONAL WATER JET
- DIRECTIONAL WATER JET
- DIRECTIONAL WATER JET
- GROUND GEYSER
- LOOP N°1 Cannon
- LOOP N°1 Cannon
- WATERGARDEN FROG N°1
- PALM TREE

SPLASHPAD ACTIVATION

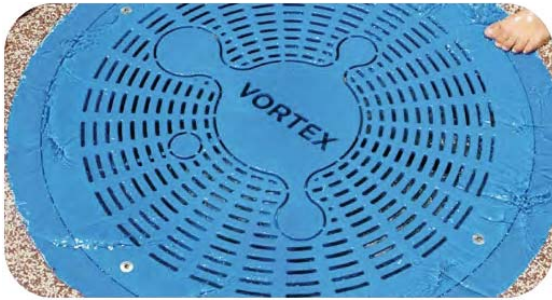
- FIRE HYDRANT with ACTIVATOR

PRODUCT FEATURES:

- STAINLESS STEEL CONSTRUCTION
- TAMPER-RESISTANT SYSTEMS
- REMOVABLE BRASS SPRAY NOZZLES
- DURABLE POWDER COAT FINISH
- SPECIAL RECESSED NOZZLE SYSTEMS
- NO PROTRUSIONS
- FLUSH MOUNTED GROUND SPRAYS
- NO TRIP HAZARDS
- SOFT TOUCH TOE GUARD COVERS
- PINCH FREE ROTATIONAL JOINTS
- ALL EQUIPMENT IS ADA COMPLIANT

Spray Park Proposal

Product Highlights



PlaySafe Drain No 1

- Constructed from stainless steel with a rubber coating adds to the aesthetics of the splashpad and is comfortable for bare feet
- Tamper resistant hardware
- Non-slip surface
- Can include an activator or spray feature

Failsafe Splashpad Activator

- Activators sequence play events to start at different times for an impressive water show that also saves water when an area is not in use.
- Impact-resistant colourful Activator includes a touch-activated sensor cap inside the post.
- No moving parts



Factory Certified Start up and Training Service

We will arrange for a Vortex trained technician to start up your new splashpad and provide your staff with training on how to operate your new facility.

Customer service support provided by Vortex

Comprehensive operating manual provided in electronic PDF form can be easily searched, printed and referenced for the life of your splashpad

Vortex Factory Warranty

25 Year Warranty On Stainless Steel & Aluminum Structures and Stainless Steel Anchoring Systems

5 Year Warranty on Brass Spray Components

2 Year Warranty on Color Coating, Polyurethane Components, Equipment Vault and All Moving Parts

Spray Park Proposal

Vortex Splashpad Unique Features and Benefits



Seeflow™

The bright translucent colors of Seeflow polymer creates some of the most visually stimulating aquatic play products available. Seeflow make the combination of the bright colors, water and sunlight a visual spectacle and is a high-strength, flexible material with extremely high impact and flammability resistance. Additionally, the material has lasting properties that minimizes the effects of UV and chemical exposure.



Safety Standards

Safety is prioritized throughout the engineering and design process. Rotational parts, spray heads and nozzles designed and manufactured to eliminate pinch points, protrusions, and head entrapment.



Vortex products meet or exceed ASTM F, CSA, DIN norms and Australian standards.

Fail Safe Activator

Activators sequence play events to start at different times for an impressive water show that also saves water when an area is not in use.

This impact-resistant colourful Bollard Activator includes a touch-activated sensor cap inside the post.

No moving parts



Toeguard™

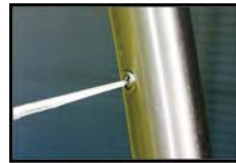
UV-resistant soft-touch elastomer. Long-lasting, high-quality blue elastomer for long term durability reduces skin abrasion.



Safeswap™

Unique, innovative anchoring system. Flexible universal attachment to add new products or interchange product locations.

Attractive ground sprays cover spaces reserved for future play products.



Stainless Steel Construction

Durable stainless steel structures, spray heads and nozzle components.



No Trip Hazards

Spray nozzles are designed to be flush with the spray deck so kids to accidentally trip on a nozzle that is obscured by water



Lead Free Brass Nozzles

Spray heads, ground sprays and nozzles on select above-grade products are machined from solid stock brass for long term durability.



PlaySafe Drain No. 1

Constructed from stainless steel with a rubber coating adds to the aesthetics of the splashpad and is comfortable for bare feet

Tamper resistant hardware

Spray Park Proposal

Splashpad Construction Detail with a Water Recirculation System installed in a Building

- Survey and excavate 300 mm and stockpile material onsite
- If subsoil is unsuitable then further excavation may be required at additional cost
- Construct feature foundations
- Install drain system using 6" piping, install feature lines using schedule 80 PVC
- Supply and install crushed aggregate to a depth of 150 mm and compact to 95 S.P.D.
- Construct concrete deck - 10mm rebar, 450 mm o/c, place and finish 150 mm thick pad with slab thickening around all features and drains, light to medium broom finish. Concrete specification 30 MPa, 5–8% air, Type 10, provide crack control cuts
- Assemble and install water play equipment.
- Grade site with existing topsoil, sod 1.5m around splashpad deck
- Use of backhoe is being donated

Water Quality Management Building

- Construct a 18'x14' building to house the water treatment system—include concrete floor, 2x4 walls, asphalt shingles, siding, piping vault, fan, access door.

Water Quality Management System installed in Building

- Install Water Quality Management System in the provided building.
- Construct feature piping vault to allow for proper gravity draining of the spray deck for winterizing procedures.
- Excavate as required for water containment system, pour concrete base complete with anchor bolts, install water containment system
- Install chemical reservoirs and connect to water treatment system
- Supply and install interconnecting piping between water containment system, chemical reservoirs and water treatment system

Utility Connections

- Connect the drain line connection to the sewer line that is next to building
- Connect the tank fill water supply to the water supply that currently exists in the building
- Connect the electrical service to the panel that is in the mechanical room of the building.

Spray Park Proposal

Water Quality Management System—Alberta Approved

A comprehensive system with an integrated command center, automated chemical control. It comes prewired, mounted and fully assembled on a fiber reinforced polymer platform that provides a durable, clean and dry environment.

Features

- Provides feature flow rate of 365 GPM
- Feature pump
- Two Filter pumps
- 2 High rate sand filters
- Required power of 208-230V, 1 phase
- Computer Controller monitors splashpad to ensure safe operation, creates play sequences, alerts operator of problems
- Automatically monitors and adjusts water quality
- Chemical Controller automatically adjusts chlorine and PH to meet pool regulations
- Two double wall chemical storage tanks



Water Containment System (WCS)

The WCS provides underground water storage and comes complete with a lockable access hatches, access ladder, piping connections, make-up water system and check valves. The reservoir is constructed of fibre reinforced polymer with a white interior to facilitate visual inspections. This comprehensive solution will provide superior performance and last longer than concrete tanks.

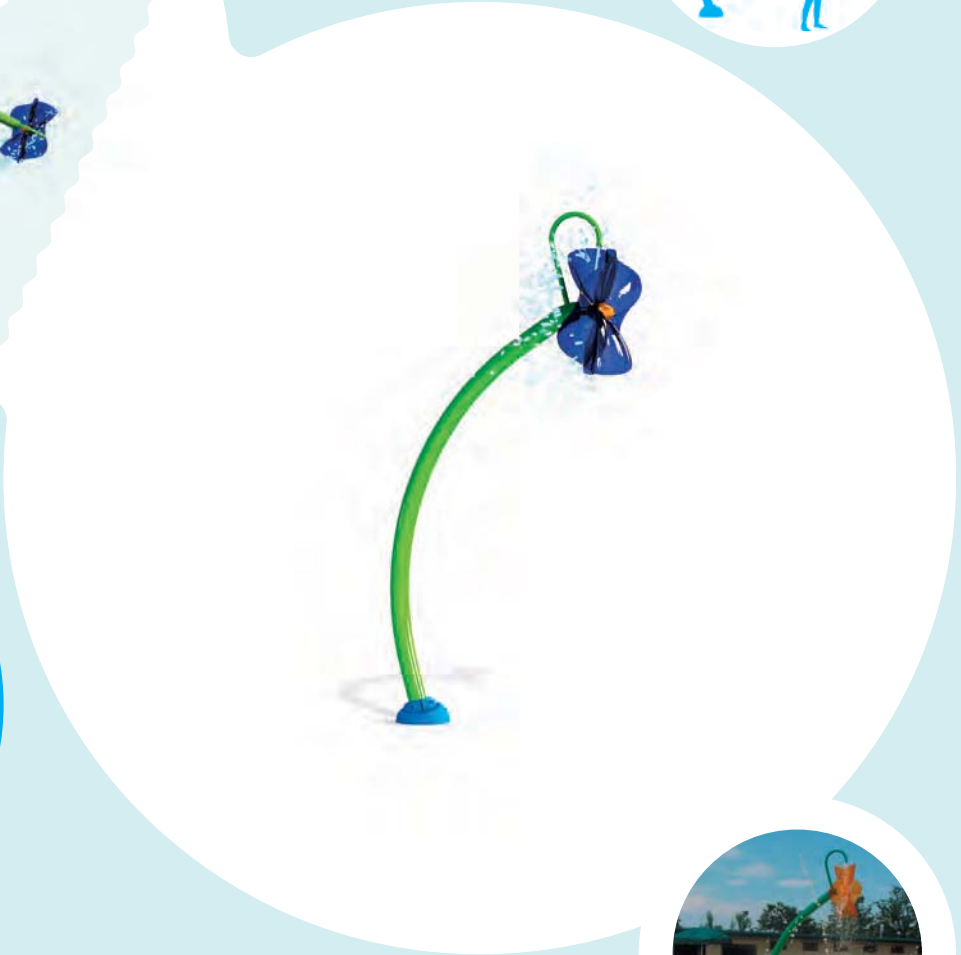
Features

- 3000 Gallons, **Double compartment tank**
- Heavy duty fibreglass construction with reinforcing ribs
- Anchor straps tied to a 6" concrete base slab ensures tank will never float or heave
- Aluminum lockable access hatch prevents unauthorized access and will never rust
- Internal aluminum permanently mounted access ladder allows for safe and easy inspection and for periodic tank maintenance
- All tank connections are heavily reinforced
- Factory assembled internal piping including foot valves on all suction lines
- Integrated low point drains valves for easy winterization
- Factory installed level control system automatically maintains correct water levels during operation.



Spray Park Proposal

Water Features



Aqualien Spinner N°1

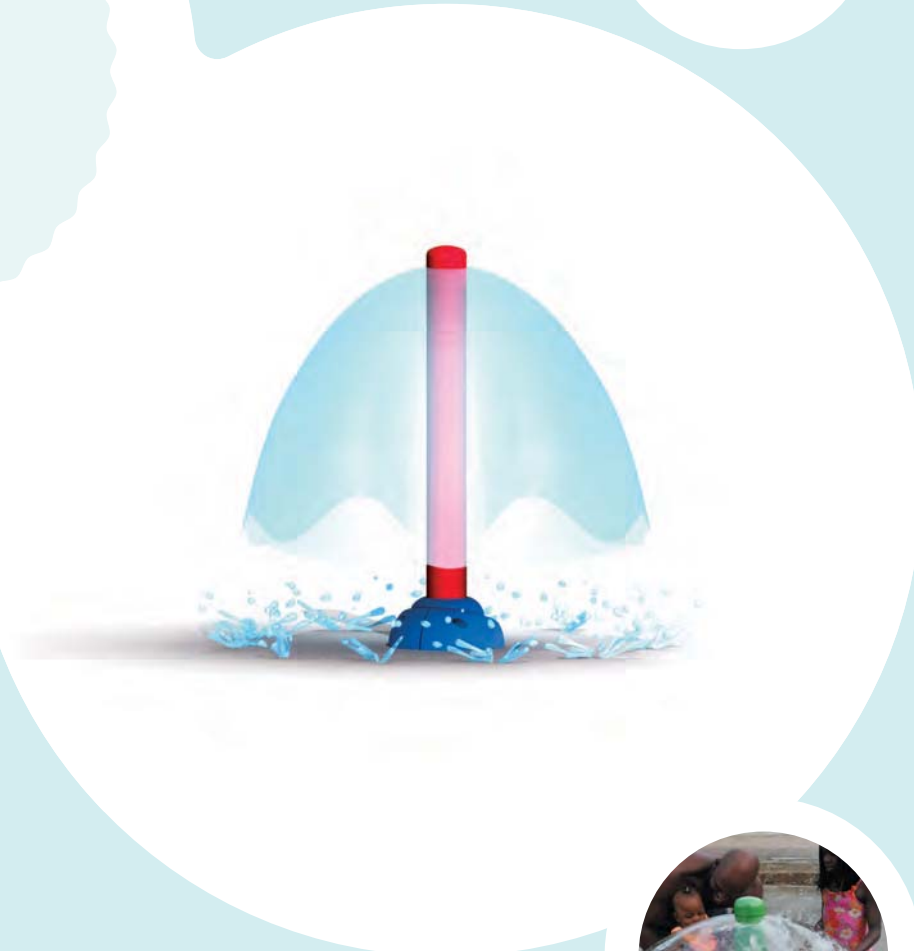
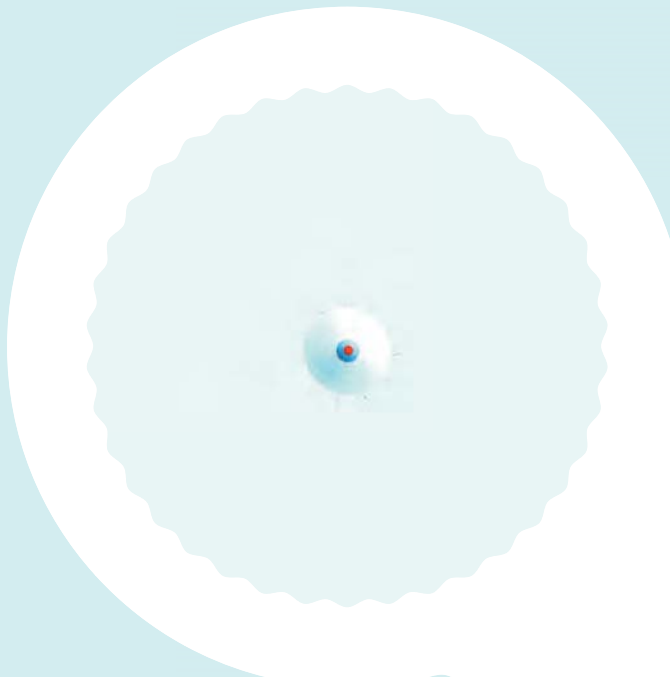
Family Bay

The fluid design of this Aqualien encourages creative play. Constantly changing water reflections provide a visual treat as the translucent Spinner turns and splashes.

Aqualien Spinner N°1				Aqualiens VOR 1332
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L
124 / 30 / 59 in	6 – 10 PSI	15 – 20 GPM	–	5 / 17 ft
315 / 77 / 150 cm	0.4 – 0.7 BAR	57 – 76 LPM	–	1,5 / 5,2 m
Material: Stainless steel, Seeflow™ polymer, EPDM				
Water Effect: Spinning water				

Aqualien Spinner N°1 VOR 1332





Aqua Dome N°1

Toddler Bay

The elegant water effect in the Aqua Dome looks like shimmering glass. Toddlers love to manipulate the pattern by placing their hands, body and face in the soft laminar water dome.

Aqua Dome N°1				Basics	VOR 0555
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L	
45 / 13 / 13 in	5 – 10 PSI	10 – 18 GPM	–	ø 12 ft	
115 / 33 / 33 cm	0.3 – 0.7 BAR	38 – 68 LPM	–	ø 3,7 m	
Material: Stainless steel, EPDM					
Water Effect: Laminar bell shape					



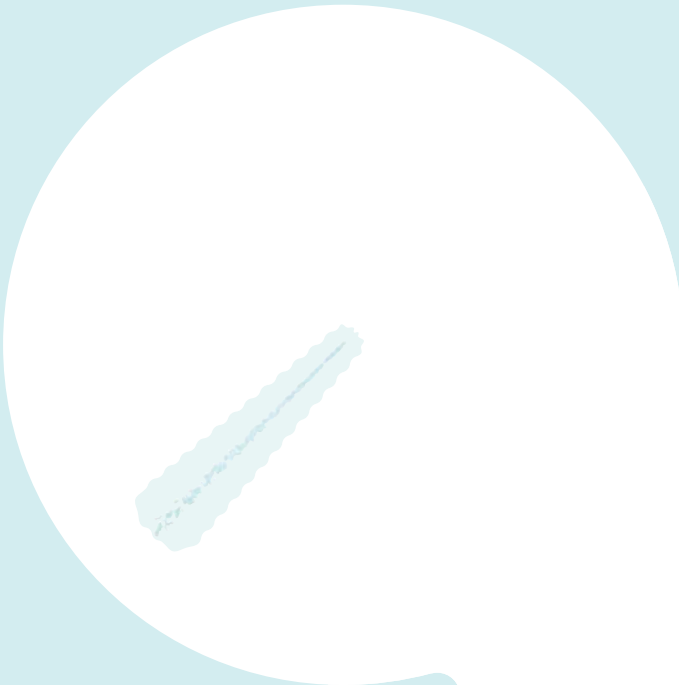


Palm Tree

Family Bay

Palm Trees stand tall and create a magical play area with water spraying up through the Center of the tree and then flowing off the leaves, like a rain forest.

Palm Tree				Toons	VOR 0509
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L	
151 / 82 / 82 in	10 – 15 PSI	20 – 30 GPM	–	ø 12 ft	
384 / 209 / 209 cm	0.7 – 1 BAR	76 – 114 LPM	–	ø 3,7 m	
Material: Stainless steel, Brass, EPDM					
Water Effect: Cascading water, Laminar cone shape					

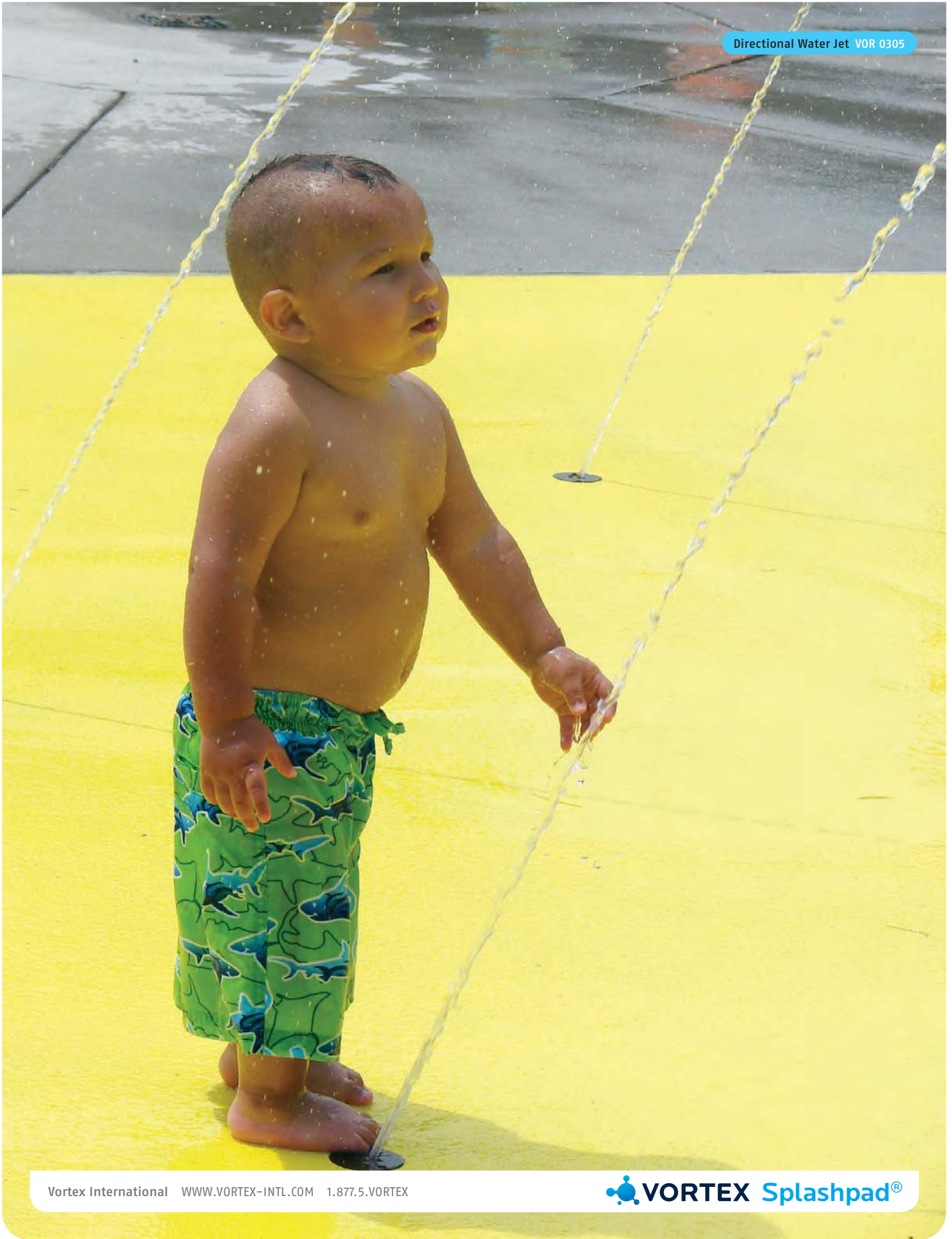


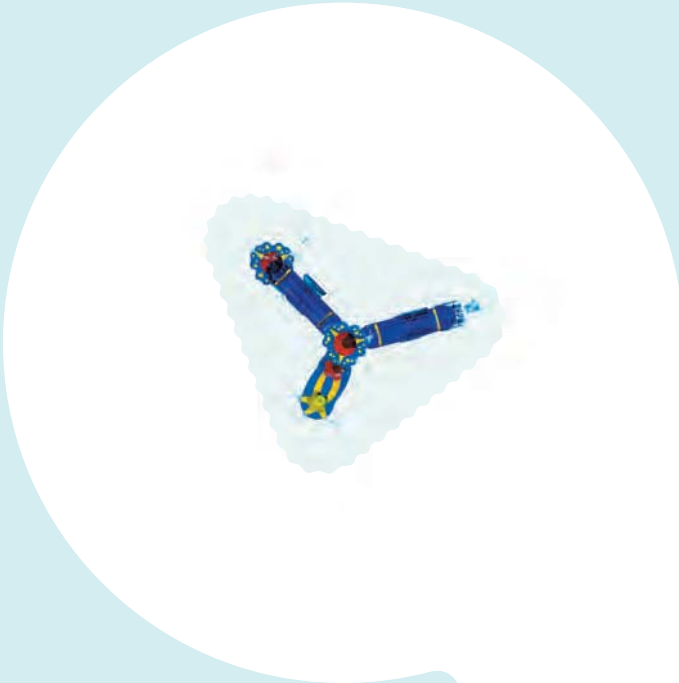
Directional Water Jet

Family / Toddler Bay

A versatile design element, the Directional Water Jet can be angled to create the perfect arc of water. A lower arc is ideal for little ones while a high arc adds energy to any play area.

Directional Water Jet				Basics	VOR 0305
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L	
24-72 / 6 / 36-120 in	5 - 10 PSI	3 - 5 GPM	2 - 3 GPM	3 / 12 ft	
61-183 / 15 / 91-305 cm	0.3 - 0.7 BAR	11 - 19 LPM	8 - 12 LPM	0,9 / 3,7 m	
Material: Stainless steel, Brass					
Water Effect: Stream sprays					





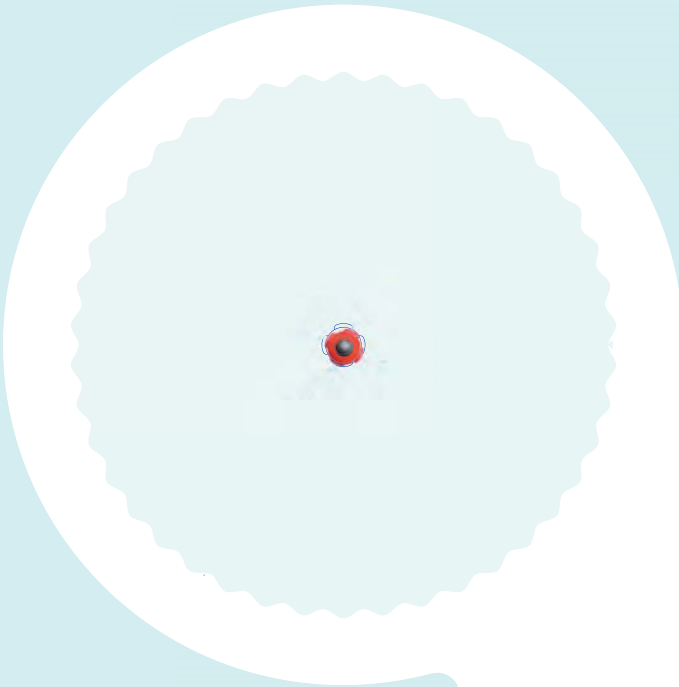
Cascades N°1

Toddler Bay

Splashpadders must work together to keep the water flowing from one piece to the next in the Cascade, giving everyone a chance to participate and encouraging team play.

Cascades N°1				Poolplay VOR 7042
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L
35 / 91 / 118 in	5 – 10 PSI	10 – 30 GPM	–	13 / 13 ft
89 / 232 / 300 cm	0.3 – 0.7 BAR	38 – 114 LPM	–	4 / 4 m
Material: Stainless steel, Seeflow™ polymer, EPDM				
Water Effect: Cascading water				





Fire Hydrant Activator

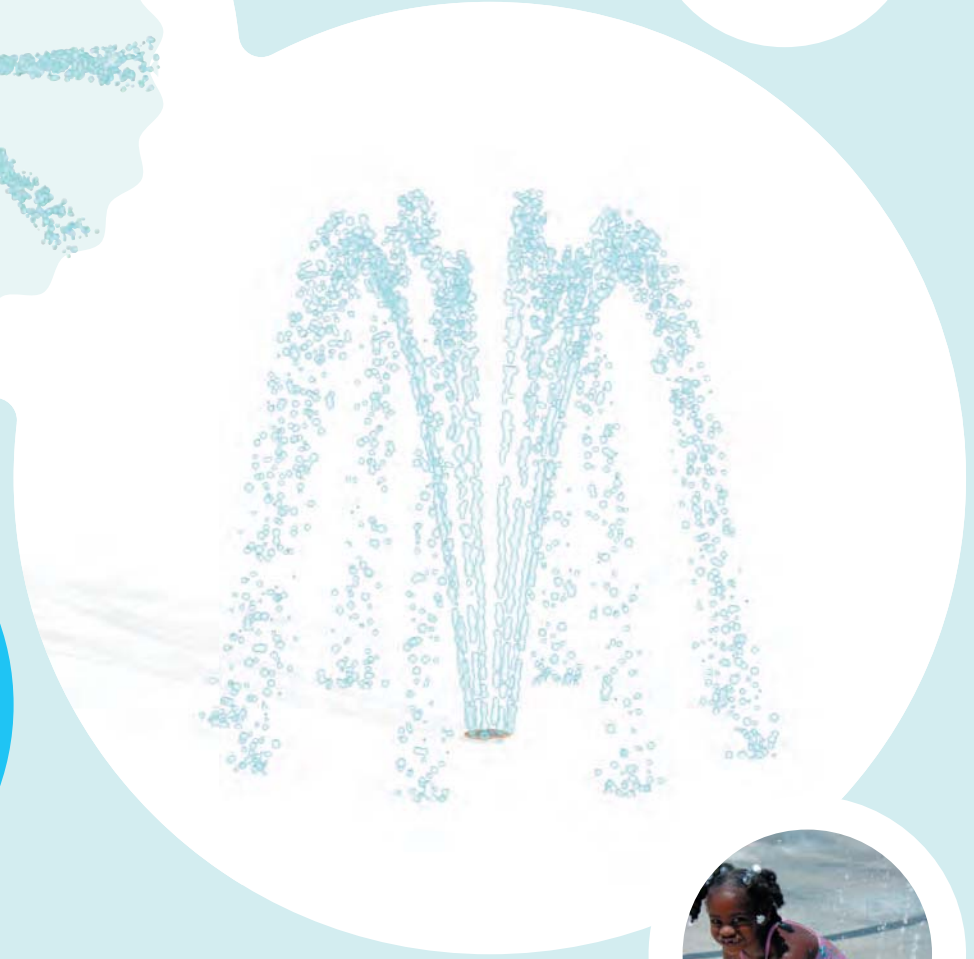
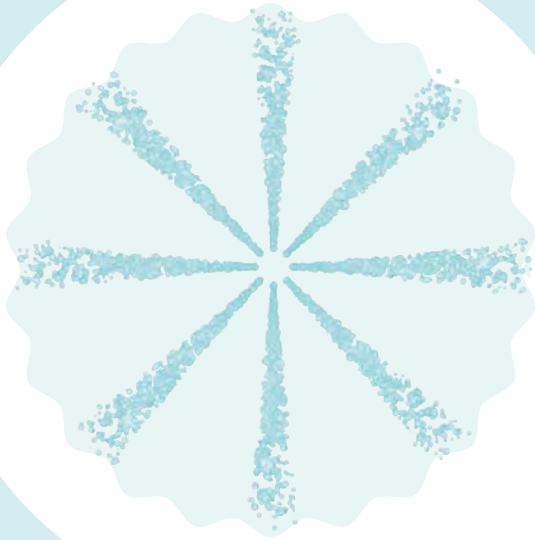
Family Bay

Activators sequence play events to start at different times for an impressive water show that also saves water when an area is not in use. This impact-resistant colourful Activator incorporates a touch-activated sensor cap into a Fire Hydrant design.

Fire Hydrant Activator				Toons	VOR 0601
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L	
43 / 16 / 16 in	10 – 25 PSI	8 – 12 GPM	4 – 8 GPM	ø 16 ft	
110 / 41 / 41 cm	0.7 – 1.7 BAR	30 – 45 LPM	15 – 30 LPM	ø 4,9 m	
Material: Stainless steel					
Water Effect: Misty spray					

Fire Hydrant Activator VOR 0601





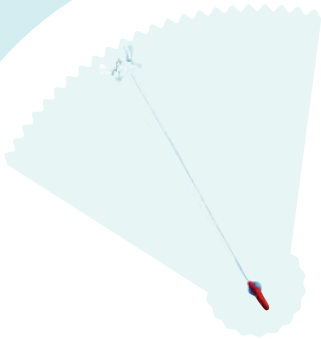
Ground Geyser

Family Bay

Multiple streams spray water out at symmetrical angles forming an elegant fountain effect. The soft frothy water falling down forms a contrast to the more powerful streams spraying up from the Center.

Ground Geyser				Basics	VOR 0301
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L	
24-60 / 18-40 / 18-40 in	5 - 10 PSI	5 - 10 GPM	2 - 7 GPM	ø 8 ft	
61-152 / 46-102 / 46-102 cm	0.3 - 0.7 BAR	19 - 38 LPM	8 - 26 LPM	ø 2,4 m	
Material: Stainless steel, Brass					
Water Effect: Stream sprays					



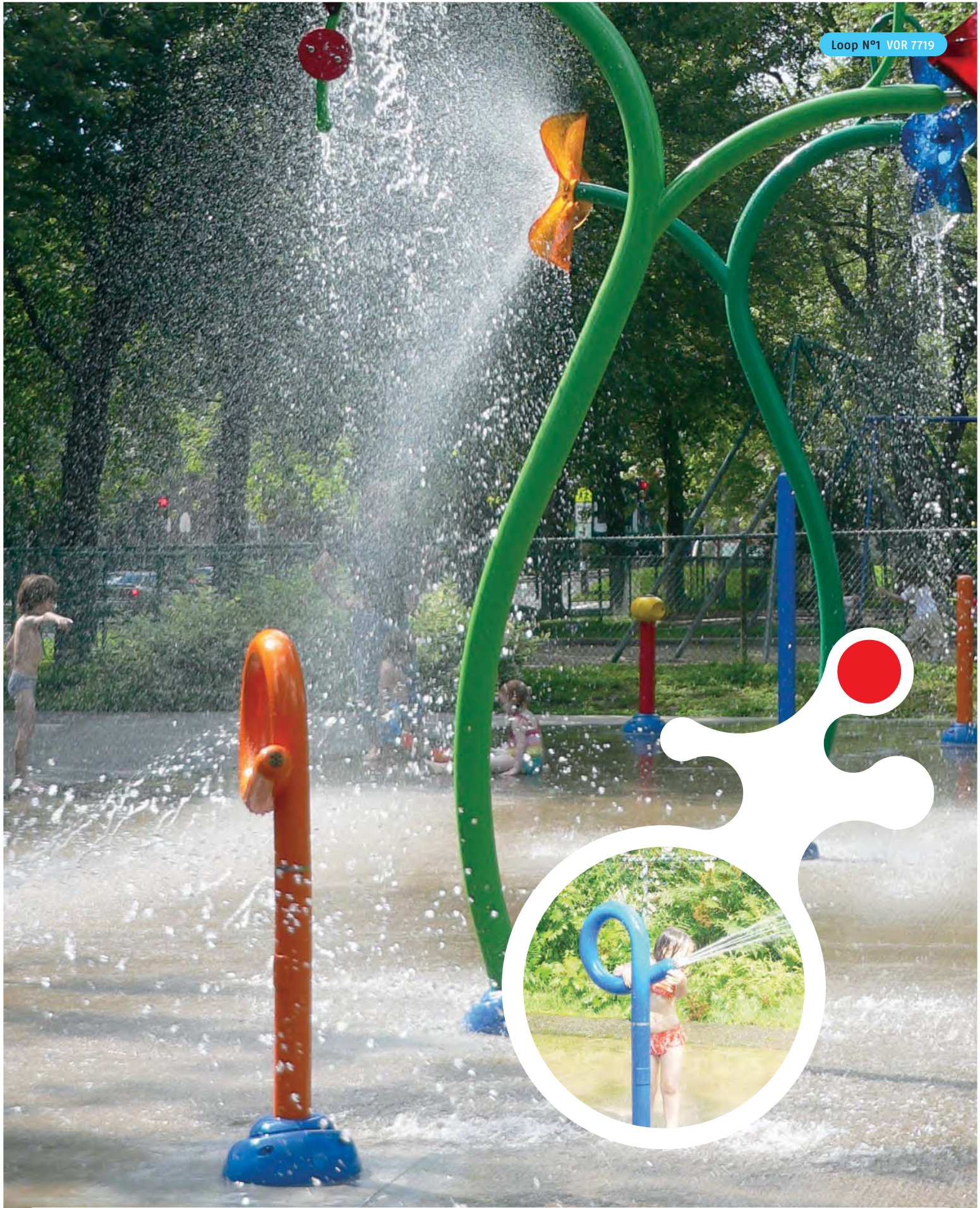


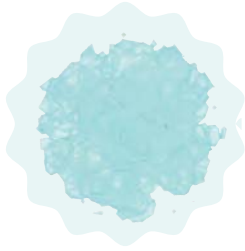
Loop N°1 Family Bay

A playful, fun geometric shape, the Loop gives the impression that it's spraying behind itself. A wonderful accent piece in any design, Loops spark imagination and give an unexpected twist to many creative games.

Loop N°1				Basics	VOR 7719
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L	
51 / 13 / 23 in	10 – 15 PSI	5 – 10 GPM	2 – 7 GPM	21 / 20 ft	
130 / 33 / 59 cm	0.7 – 1 BAR	19 – 38 LPM	8 – 26 LPM	6,4 / 6,1 m	
Material: Stainless steel, Brass, EPDM					
Action: Interactive rotation Water Effect: Projection spray					

Loop N°1 VOR 7719





Jet Stream

Family Bay

A concentrated jet of water sprays up in a sleek Jet Stream, making an impressive show when arranged with other Jet Streams in sequence. Used individually or in groups, the Jet Stream is a wonderful design element.

Jet Stream				Basics	VOR 7512
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L	
24-72 / 6-12 / 6-12 in	5 - 10 PSI	2 - 3 GPM	—	Ø 5 ft	
61-183 / 15-30 / 15-30 cm	0.3 - 0.7 BAR	8 - 11 LPM	—	Ø 1,5 m	
Material: Stainless steel, Brass					
Water Effect: Stream sprays					



Watergarden Frog N°1

Toddler Bay

Grasp the Frog and rotate the soft laminar spray. Toddlers can explore the non-intimidating water effect and develop their cognitive and motor skills by learning the cause and effect of rotating the colorful head in different directions which is linked to an on and off operation.

Watergarden Frog N°1			Watergarden VOR 7200	
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L
24 / 20 / 20 in	5 – 10 PSI	10 – 12.5 GPM	–	Ø 8 ft
60 / 51 / 51 cm	0.3 – 0.7 BAR	38 – 47 LPM	–	Ø 2,4 m
Material: Stainless steel, Seeflow™ polymer, CPSIA compliant lead-free brass, EPDM				
Action: 360° Interactive rotation Water Effect: Laminar stream				

Spray Park Proposal

Water Quality Management and Control System

WATER QUALITY MANAGEMENT SYSTEM: SKIDPACK

WATER AND ENERGY CONSERVATION BUILT-IN

Vortex Water Quality Management Systems (WQMS) are specifically engineered and constructed to handle the heavy usage that Splashpad® need to endure. Vortex offers several WQMS models to accommodate various flow rates, heal and safety codes with special features that significantly reduce water and energy consumption. Vortex WQMS incorporate only high quality commercial grade components to ensure the most reliable system and backed by an industry leading warranty.

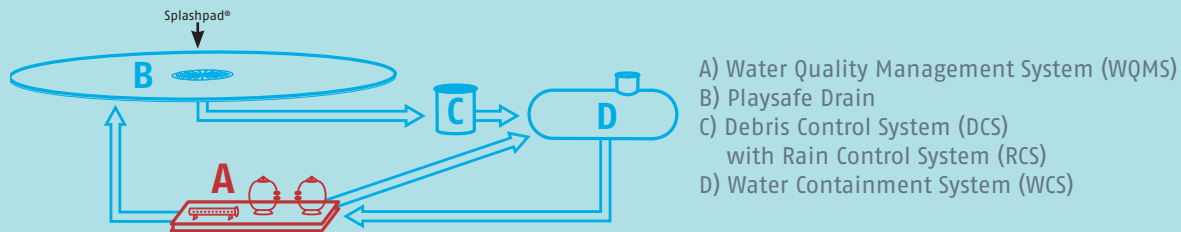


Figure 1. ILLUSTRATION OF WATER CIRCULATION AND SUBSYSTEMS OF THE WMS

The Vortex Skidpack

The Vortex Water Quality Management System (WQMS) consists of these sub-systems:

A. Water Distribution System (WDS)

Distributes the water to the play features on the Splashpad®. Both flow and water pressure can be adjusted to optimize the operation of each independent spray feature. The primary components of the WDS are:

- **Stainless steel manifold** provides the structural backbone to resist water hammer and vibration.
- **Solenoid valves** are connected to the system controller to create spray sequences.
- **Circulation pump** provides the power to move the water through the system.
- **By-pass system** protects the circulation pump from dead heading.

B. Filtration System

Removes organic and/or inorganic suspended particles from the water. The filters used are commercial grade, high rate, sand media filters. Incorporating the Vortex Debris Control System will provide a primary screening of larger particles prior to entering the sand filters, resulting in less backwashing, water use and ultimately, maintenance.

C. Automation and Control Systems

Provide play feature sequencing, operational time control, water flow and water quality monitoring and adjustment.

The primary components consist of:

- **Smart Touch Logics Controller** controls the operational hours, spray sequences and interfaces with the motor starters and chemical controller to respond to any alarm conditions.
- **Water Chemistry Controller**, see Sanitization system.
- **Variable frequency drives** for pumps regulate water pressure, flow and reduce energy consumption.
- **Flow meters** provide readings on filtration rates and circulation rates to ensure proper operation and are mandated by most health regulations.

D. Sanitization System

Contributes to providing healthy water conditions for the safe operation of Splashpads®. The main components consist of:

- **Water Chemistry Controller** provides continuous monitoring and adjustments of chemical additions to manage a balanced water chemistry. When chemicals are imbalanced, the controller sets off an signal indicating conditions are outside of safe parameters.
- **Chemical Feed System** comes with injection pumps and liquid chemicals or a chlorinator, such as the alternative chemical dosing system.
- **Chemical containment resevoir** offered in below-grade or above-grade options for liquid chlorine and muriatic acid systems.
- **Ultraviolet system**, this optional UV light disinfection provides added protection against nuisance micro organisms – such as Cryptosporidium Parvuum – in water. The system is integrated into the Vortex WQMS to provide proper compatibility and smooth operation.

The **Skidpack system** comes prewired, mounted and fully assembled on a fiber reinforced polymer platform that provides a durable, clean and dry environment. With a recommended space of at least three feet (0,9 m) around for easy access and maintenance to equipment, the Vortex WQMS Skidpack is an effective solution for public parks or environments that have an existing building to house the system.



Industry Leading Warranty all standard Skidpack and Domepack systems are backed by a comprehensive warranty.

Training and Start-up programs

As with all recreational water treatment systems, the Vortex WQMS requires a daily maintenance by trained staff. Vortex offers training programs and system start-up services to ensure the successful implementation and operation of your system. Please inquire about these services with Vortex or our local representative.

Vortex offers Optional Service Plans & Training

- Vortex Premium Service Plan
- Vortex Certified Maintenance Program
- Vortex Certified Training Program

WATER CONTAINMENT SYSTEM

WATER MANAGEMENT SYSTEM FOR HIGHFLOW SPLASHPAD®

In a recirculating Splashpad®, the water is stored in a subterranean reservoir. The Vortex vessel has been engineered specifically for usage within the WQMS Splashpad® configuration. Its fiber reinforced polymer construction generates structural integrity, while remaining impermeable and corrosion resistant, minimizing leaching and chemical consumption. The Vortex Water Containment System arrives on site ready for installation and includes flanged connections, integrated check valves, automated water level control system, lockable access hatch and a pre-installed corrosion resistant access ladder to provide safe operation and easy maintenance.

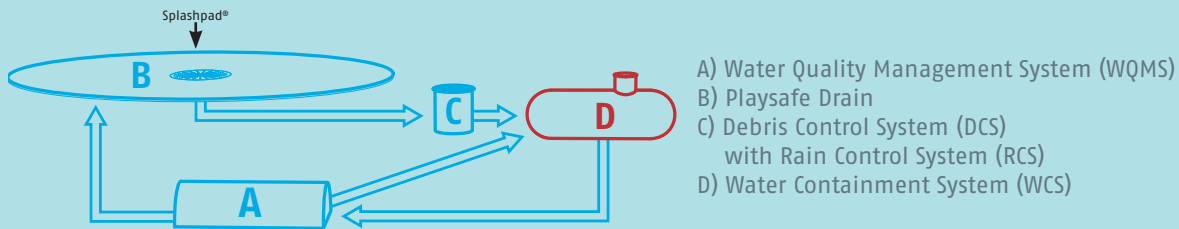


Figure 1. ILLUSTRATION OF WATER CIRCULATION AND SUBSYSTEMS OF THE WMS

Highlights

- White interior facilitates visual inspections
- Lockable access hatch and integrated ladder facilitates access
- Automated refill system for make-up water, ensure proper water levels
- Includes anchors and anchor straps to ensure proper installation
- Integrated plumbing connection points to facilitate installation
- Check valves included in the reservoir
- Chemical distribution manifold at the bottom of reservoir

Specifications

Reservoir material:	Fiber Reinforced Polymer
Access size:	30 inches (762 mm)
Ladder material:	Fiber Reinforced Polymer
Overflow line:	Connects to the sanitary system
Anchoring straps :	Secure resevoir in place
Access hatch:	Aluminium

Product no.	Model	Total Capacity (gal/l)	Diameter (ft/m)	Length (ft/m)
VOR 5312	WCS 2,000	2,000 / 7,750	6 / 2	12 / 3.7
VOR 5311	WCS 3,000	3,000 / 11,356	6 / 2	17 / 5.1
VOR 5313	WCS 4,000	4,000 / 15,142	6 / 2	21 / 6.5



VORTEX COMMAND CENTERS

The Splashpad® is an automated aquatic facility. With a touch of a hand, the play area springs to life as the water features begin spraying, dumping, squirting, spinning and gushing water. This phenomenon is governed by the Vortex Command Center. The Command Center controls water flow, spray sequences, the intervals of operation and other functions. It comprises a System Controller, water distribution manifold, pressure control, backflow protection – everything assembled and tested in our factory.

SMARTTOUCH™ CONTROLLER

Vortex touchpad user interface technology

Designed for ease of use, the SmartTouch™ Controller's touchpad user interface allows for simple menu driven configuration changes. Examples of common on-screen configuration settings are; changing the sequencing, reverting to the factory sequencing, changing the daily available operational hours, manually triggering the start and stop of a pump or manually triggering a valve to open or close.

Features and benefits

- Best suited for Highflow (recirculated) Splashpads
- Intuitive touchpad interface
- Onscreen help menus for operator training
- 10, 18, 26, 42 outputs
- Housed in a NEMA 4X rated enclosure
- Onscreen sequence changes
- StairStart mode to prevent water hammer
- Pump control
- Alarm management
- Expandable



STAINLESS STEEL MANIFOLD

Quality and durability

Designed for durability, the Vortex distribution manifold features a high quality stainless steel header pipe.

Features and benefits

- 304/304L Stainless steel is structurally strong, durable and resistant to corrosive environments
- 304/304L Stainless steel less susceptible to water hammer damage
- 304/304L Stainless steel prevents the cracking of male-female couplings due to overtightening
- Prefabricated system containing piping, valves, electrical wiring and pressure gauge
- Factory assembled and water pressure tested
- Can be wall mounted or contained in a vault/cabinet





Playsafe Drain N° 1

With its blue color, this industrial strength drain is both visually pleasing and functional by preventing the build-up of pooling water on the Splashpad®. This drain suits all size Splashpads®

Playsafe Drain N° 1				VOR 1001.4000
Product H/W/L	Pressure	Flow	Smart Flow	Spray Zone W/L
16 / 30 / 30 in	–	–	–	–
41 / 76 / 76 cm	–	–	–	–
Material: Stainless steel				
Action: Drain				

Spray Park Proposal

Product Features & Warranty

WATER EFFECTS

Water effects are critical elements to creating an effective aquatic play area. From light mists to spectacular dumping buckets, these effects have a significant impact on the aesthetic appeal, atmosphere and entertainment value of the area. Small children appreciate soft effects like the laminar bell while teens prefer the projection spray from the water cannons used to dose their friends. At Vortex we have developed numerous water effects that when properly combined will maximize play while creating an attractive and safe environment.



Super splash



Laminar bell shape



Laminar cone shape



Dumping water



Misty spray



Water curtain



Cascading water



Projection spray



Rain curtain



Fan jet



Fan streams



Water sheet



Rotating water



Frothy water



Spinning water



Stream sprays

SAFETY STANDARDS

Durability & Safety

Vortex is committed to providing customers with superior quality products. All Vortex Water Features are not only built to work, they are built to last over time and sustain frequent use wear-and-tear, an essential combination when calculating your return on investment. Vortex products are designed to surpass all industry regulations for public play areas and are conceived with extended play life and ongoing safety. Durability is demonstrated through our design.

As an advocate of injury-free and safe playgrounds, Vortex Play is committed to meeting globally-recognized safety standards for products.



CSA Z614-07

The Canadian Standards Association for Manufacture, Construction, Operation and Maintenance of aquatic play equipment.



ASTM F2461-09

The American standard for Manufacture, Construction, Operation and Maintenance of aquatic play equipment.



EN 1176

The European Standards for Playground Equipment and Surfacing administered by DIN.



UL Standards are met for electrical components.



CE

Vortex play products adhere to the European Union directives and standards.



Vortex is a member of **IPEMA**, a third-party Product Certification service for U.S. and Canadian public play equipment.

AS 4685:2004

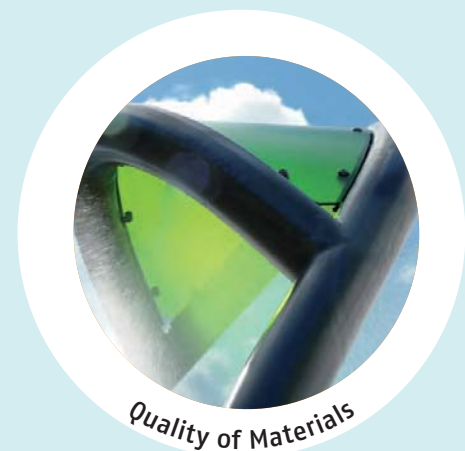
Australian Standards for Playgrounds including the design, installation, maintenance and operation of playgrounds.



Antiskid Surface



Head Clearance



Quality of Materials

SAFESWAP™

ANCHORING SYSTEM

Any aquatic facility requires a significant infrastructure investment. Concrete, plumbing equipment, electrical equipment and earthwork represent a large portion of the overall cost. With proper master planning, Vortex' unique Safeswap™ anchoring system provides owners with the flexibility to add new products, interchange products or completely replace products without any modifications to the infrastructure.

Expansion

The Vortex Safeswap™ solution allows owners to make their investment in play products over time as capital becomes available. The infrastructure planning will take into consideration the future play elements to be added. In the interim, the future play products are substituted by an attractive Safeswap™ ground spray.

Interchange

For owners of several Vortex Splashpads®, the Safeswap™ solution provides the ability to interchange products from one location to the other, creating novelty without additional costs.

Transform

Although Vortex products will last for decades, some owners may want to transform the look of their facility or provide guests with new attractions. Safeswap™ makes it feasible to swap out a few products or change from one Vortex design line to another, effectively transforming the appearance of the facility without the costs associated with infrastructure modifications.



Toeguard™



Safeswap™ with interim spray cap



Fully installed product

COLOR CHOICES

Vortex Colors

The following pages contain the standard color choices for the main stainless steel structures and the various accessories. Colors have been carefully selected to provide a wide range of options for effective color concepts for the design lines. The color choices for accessories such as the Seeflow™ components, handle spheres and dumping buckets are purposely in vibrant colors in order to accentuate these points of interest.



Handle Spheres



Polished stainless steel finish is available on select products. Additional charges will apply.

Posts



Toeguard™



Seeflow™ blue



Seeflow™ red



Seeflow™ yellow

Dumping Bells



Seeflow™ blue



Seeflow™ green



Seeflow™ orange



Seeflow™ red

Spinners

Leaf



Seeflow™ green



Seeflow™ red

Dumping Flower



RAL 6018



RAL 1023



RAL 3000



RAL 2011



RAL 5012

Dumping Buckets

MATERIALS

1

Vortex uses premium materials and abides to the highest quality manufacturing standards to provide the most reliable products available.



Stainless Steel

Vortex employs stainless steel as its primary material of construction. The structural strength and corrosion resistant properties of stainless steel make it ideal for all structural members, anchoring systems and hardware.



Seeflow™ Polymer

The bright translucent colors of Vortex' Seeflow™ polymer creates some of the most visually stimulating aquatic play products available. The optical properties of Seeflow™ make the combination of the bright colors, water and sunlight a visual spectacle. Seeflow™ is a high-strength, flexible material with extremely high impact and flammability resistance. Additionally, the Seeflow™ material has lasting properties that minimizes the effects of UV and chemical exposure.



Aluminum

Vortex employs aluminum on certain mechanical equipment such as the access hatches for equipment vaults and water containment systems. The light weight yet strong properties of aluminum make it ideal for this application. Aluminum is also used on certain accent components such as handle spheres and counter weights for the dumping bells and flowers. All aluminum components are chemically treated and painted to provide a lasting finish.



Brass

Spray heads, ground sprays and nozzles on select above-grade products are machined from solid stock brass for long term durability.



Soft-touch elastomer

The Toeguard™ was specifically developed with this material to provide the best solution for protection from anchoring hardware. This high-tensile strength, soft -touch elastomer material provides high impact, UV, and chemical resistance while providing a soft, non-slip surface to absorb unintentional knocks from toes and feet. The UV stable color is impregnated through the thickness of the Toeguard™. Consequently, any scratches will not remove the color.

INCLUSIVE PLAY DESIGN

FUNDAMENTALS

Making play accessible to ALL children is a fundamental part of a child's development. Also known as Universal Play or Universal Accessibility (UA), Inclusive Play Design is the framework of every Vortex zero-depth installation. Our solutions inherently consider people with disabilities engaging and playing with the rest of the population. Making design provisions beyond wheelchair access – a requirement of the "American with Disabilities Act" (ADA) – Inclusive Play Design encourages the **physical, functional** and **social development** of the child.

EXPERIENCING WATER

Water is a tactile experience. Properties inherent to water – pressure, flow and volume – as well as its ability to reflect color, provide additional sensory-rich experiences in play. By touching, sliding, tipping and spinning water features throughout the environment, children develop senses and are able to interpret and integrate with others in their own way and at their own pace.

INCLUSIVE DESIGN VALUES

1. **Equitable Use:** The Bay concept allows children to move from one area to the next without being segregated in any way.
2. **Flexibility in use:** Water Features can be grouped in clusters or pairs or at various heights to encourage active or passive play habits, team play or to encourage individual discovery.
3. **Simple and Intuitive play:** Manipulating water in its simplest form – interacting with a groundspray or touching an Aqua Dome – are experiences that are instinctively sought out. Varying water pressures can provide contrasting experiences to users with sensory limitations.
4. **Perceptible information:** Layout and product selection includes provisioning of recognizable shapes so the child can intuitively identify the product and activity, as well as approach it. Precise layout of products and even ground color cues can inform users of the type and intensity of water features. For instance, when planning predictable and unpredictable zones: water features near Splashpad® parameters may have smooth and soft water effects and then transition to high energy, active zones that are closer to the center of the Splashpad®. Vortex's Seeflow™ polymer in select products also adds to create visually stimulating references.
5. **Tolerance for Error:** Fail safe components are built into our play products and controllers to ensure ongoing safety. All products are safely anchored into the ground. Hardware is covered with our ToeGuard™ technology, soft-touch elastomer material, to absorb unintentional knocks from toes and feet. And water management systems automatically shut down when water does not meet safety levels.
6. **Low physical effort:** To provide easy play for all, Vortex offers various reach ranges to accommodate different ages and developmental stages. Furthermore, select features require low effort to pivot or rotate, making manoeuvrability simple and single hand operation possible. Activation is performed with the touch of a hand or foot on the Activation Bollard.
7. **Size and Space for Approach and Use:** Sight lines are well thought-out in design layouts to make play features comfortable for any seated or standing user. A clearance space of minimum of 36 inches (91 cm) make manoeuvring wheelchairs trouble-free.



*For a complete list of water features meeting the inclusive play requirements contact Vortex.

WARRANTY

WATER MANAGEMENT AND OPERATING SYSTEMS

Vortex Aquatic Structures International warrants that all its products will conform in kind and quality to the specifications set forth in the specifications sheet for the products, and will be free of defects in manufacturing and material; under normal use and service for the periods set forth below:

10 Year Warranty on reinforced fiberglass skid, sand filter fiberglass tank and cartridge filter fiberglass tank.

5 Year Warranty on subterranean vault (enclosure and access hatches), stainless steel manifold, drain boxes, hair and lint strainers, electrical enclosures and chemical controllers and polyurethane components.

2 Year Warranty on holding tank, circulation pumps, chemical injection pumps, chlorinator, acid feed system, poly vinyl chloride (PVC); piping, fittings and ball valves. Check valves, cartridge elements, pressure gauges, chemical sensing probes, motor starters, electrical relays, terminal blocks, solenoid valves, programmable logic controller (PLC), time switches, manual switches, transformers, breakers, electrical wiring and connections.

All the warranties start on the date of the Seller's invoice. Replacement parts will be warranted for the balance of the original warranty. With regards to defects covered by this warranty, Vortex shall repair or replace the defective part or parts at no charge.

Within 120 days of the invoice date, warranted items will be shipped no charge. After 120 days all freight costs are the responsibility of the purchaser. At all times, all costs for removal and installation required to perform repairs or replacements, including any labor, travel and rental equipment costs, shall be the responsibility of the purchaser.

The warranty stated above is valid only if the structures and/or equipment are erected and/or installed in conformance with Vortex's installation and assembly instructions and maintained according to the maintenance procedures furnished by Vortex; have been subjected to normal use for the purpose for which the products were designed; have not been subject to misuse, negligence, vandalism, or accident; have not been subjected to addition or substitution of parts; and have not been modified, altered, or repaired by persons other than Seller or Seller's designees in any respect which, in the judgment of the Seller, affects the condition or operation of the structures and or components.

To make a claim, please contact your local representative or send your written statement of claim, along with the original project number and/or project name to:

Vortex Aquatic Structures International
328, Avro Street, Pointe-Claire (Montreal) Quebec, Canada H9R 5W5
or you may fax us at 514.335.5413

To contact Vortex with any questions or comments, call:
Toll-free (US/Canada): 877.5VORTEX (877.586.7839) / (outside North America) 514.694.3868
Email: support@vortex-intl.com

WARRANTY

AQUATIC PLAY PRODUCTS

Vortex Aquatic Structures International warrants that all its products will conform in kind and quality to the specifications set forth in the specifications sheet for the products, and will be free of defects in manufacturing and material; under normal use and service for the periods set forth below:

25 Year Warranty on stainless steel structures, stainless steel anchoring systems and aluminum spheres.

5 Year Warranty on brass components including; spray nozzles, spray caps and spray heads, high-density polyethylene components, polyurethane components and ultra high molecular weight polyethylene components.

2 Year Warranty on color coating, all moving parts, stainless steel hardware, fiberglass products, Seeflow™ polymer products, and the Toeguard™, made of soft-touch elastomers.

All the warranties start on the date of the Seller's invoice. Replacement parts will be warranted for the balance of the original warranty. With regards to defects covered by this warranty, Vortex shall repair or replace the defective part or parts at no charge.

Within 120 days of the invoice date, warranted items will be shipped no charge. After 120 days all freight costs are the responsibility of the purchaser. At all times, all costs for removal and installation required to perform repairs or replacements, including any labor, travel and rental equipment costs, shall be the responsibility of the purchaser.

The warranty stated above is valid only if the structures and/or equipment are erected and/or installed in conformance with Vortex's installation and assembly instructions and maintained according to the maintenance procedures furnished by Vortex; have been subjected to normal use for the purpose for which the products were designed; have not been subject to misuse, negligence, vandalism, or accident; have not been subjected to addition or substitution of parts; and have not been modified, altered, or repaired by persons other than Seller or Seller's designees in any respect which, in the judgment of the Seller, affects the condition or operation of the structures and or components.

To make a claim, please contact your local representative or send your written statement of claim, along with the original project number and/or project name to:

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Email: support@vortex-intl.com