Crystal

where ideas flow™



COMMERCIAL & RESIDENTIAL FOUNTAIN PRODUCTS

2011

International

www.crystalfountains.com

Where ideas flow™...

Founded in 1967, Crystal Fountains™ is now a globally recognized leader in the commercial water feature industry. With a history of product innovation, design and custom manufacturing, our company has grown to a second-generation family business with offices in Canada, U.A.E., Singapore and Poland offering our legacy of water feature guidance.

Crystal Fountains Products

Previously manufactured under the DEFO name, Crystal Fountains produces a complete line of precision manufactured fountain products adhering to strict manufacturing guidelines:

- Lighting - LED and Traditional Halogen
- Nozzles - Programmable and Traditional
- Drains and Inlets
- Electrical Accessories
- Replacement Parts

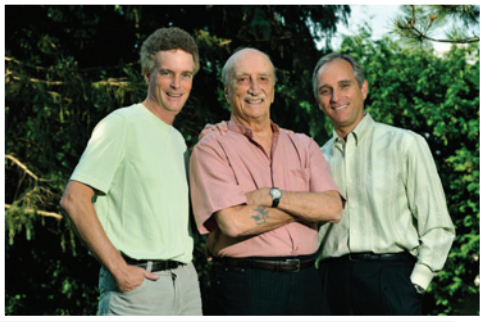
Custom Products
Don't see it in our catalog? We also manufacture a range of custom products to meet any application.

Residential Products
A line of pre-engineered products for the residential swimming pool and small fountain market.

Engineering and Design Services

We've surrounded ourselves with a team of talented design and engineering people who help our clients fulfill their water feature visions. Clients from around the world come to us to make sure their fountains look and operate at their best.

Free Product Technical Support
When you specify Crystal Fountains products, we can provide you with technical and visual product support to help your project flow. For fast, free and expert advice, we'll always deliver the highest standards in performance and service.



David L'Heureux, Roger L'Heureux, Paul L'Heureux

We have a deep understanding of water features, both big and small. As our family business has grown, we've been able to pass on our knowledge to customers, who share in the love of all things water. At Crystal Fountains you can count on a continuous flow of new ideas, products and problem-solving solutions.
Let us help you make your next water feature a success!





















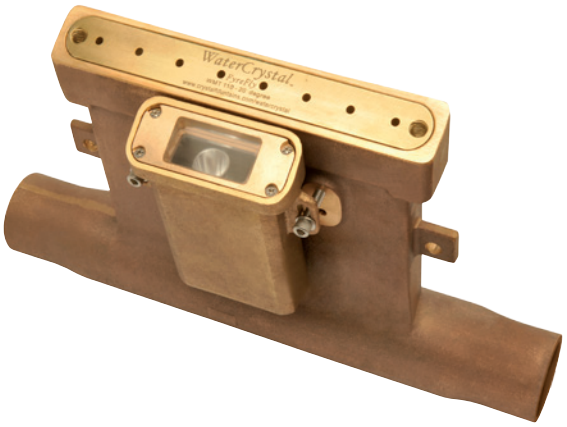

WaterCrystal



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Services:



Crystal Fountains is a full service manufacturing and design company offering:

- Catalog Custom Quality Product Manufacturing
- Testing Facilities
- Fast, Free Product Support
- Searchable Photo/Video Library
- Learning Resources and Accredited Courses
- Engineering Services
- Green Expertise
- Offices in Canada, Singapore, U.A.E and Poland

Custom Products



Crystal Fountains will customize any of our existing products to meet specialized applications. For example:

- Longer cord lengths
- Different spray heights or hole patterns
- Custom spray ring sizes and shapes

We also create completely new custom water feature products to meet specific design or performance ideas. A team of engineers and technicians manage all new and custom products from concept through to final testing and documentation phase prior to manufacturing.

If you have a water feature idea or problem to solve, contact us to find out more about custom product manufacturing.



Engineering and Design Services







Clients from around the world rely on Crystal Fountains talented design and engineering specialists to transform their water feature visions into reality. Fueled in part by today's more complex water features, Crystal Fountains specialist skills are in demand to ensure project success.

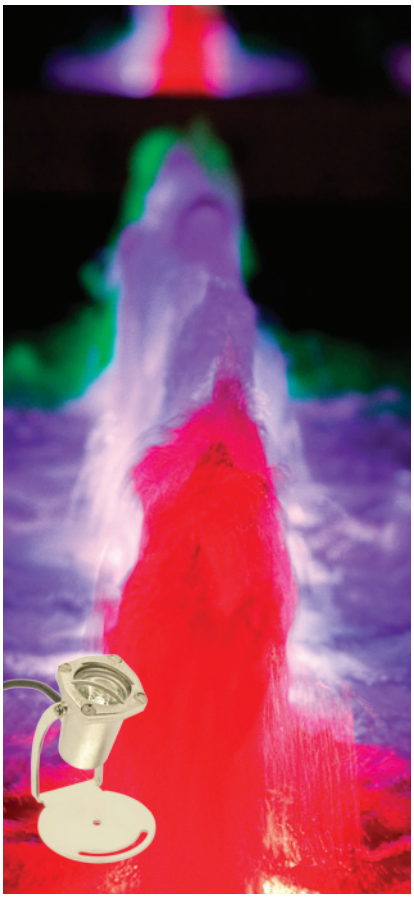
Testing Facilities

Crystal Fountains Applications Testing Team manage our 325 sq. m state-of-the art testing facilities. When you need to be sure – take advantage of our fully equipped conference room for design workshops and client meetings. Test water feature aesthetics, performance, lighting effects, splash, noise, safety and more:

- 3 test pools
- Waterfall tanks with adjustable heights from 1m to over 6m
- Exterior testing facility available for greater height requirements
- Waterfall frame with up to 1 ton capacity for holding any surface material
- Multiple pump outputs of flow and pressure
- Full instrumentation – flow, head, temperature, illumination and sound
- Multiple Control Systems
- Specialty lighting for photo and video production
- Controlled lighting environment
- Extreme PH and saltwater testing
- Photometric testing
- Pre-programming and choreography/rehearsals
- Splash and sound level verification
- Public health and safety testing











Product Manufacturing

Crystal Fountains has been manufacturing commercial water feature products since the purchase of DEFO (Decorative Fountain Products) in 1977. Known for quality, performance and innovation, a complete line of products are now manufactured under the Crystal Fountains brand name. Designed, tested, manufactured and assembled in accordance with Crystal Fountains strict quality guidelines. Our "Made in Canada" products are known for quality, performance and adhering to the strictest of safety and green standards.

Commercial Products:

Browse through Crystal Fountains comprehensive catalog of water feature commercial products:

- Accessories, Drains, Inlets, Electrical products, Lighting, Nozzles and Sequencing effects.
- Our most popular water feature products are always in stock (Look for the Quick Ship symbol throughout this catalog for products that can be shipped out in 1 – 2 days*).

Quick Ship

* Guaranteed **fast delivery** anywhere in the world
* Can't find what you need? We also create **Custom** products.













Residential Products:

The residential collection has been specially selected for swimming pools, small residential fountains. Each product comes with simple to use, step-by-step installation and are pre-engineered to make it easy.

Please visit www.crystalfountains.com to view and download the latest product information.



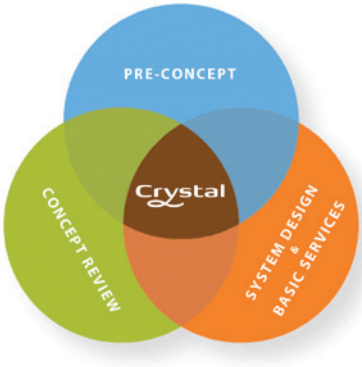


Product Support

When you specify Crystal Fountains products, take advantage of our expertise to help your water feature project flow smoothly from the start. We can provide you with fast-turnaround Free Product Support packages at various stages of the Design Process:

Pre-Concept

- Extensive Image/Video Library
- Design Principles - Match water feature effect to architectural style
- Product Design Principles - photos of working product, design brief, technical information and installation details



Concept Review

- Process Recommendations - best design and tendering process
- Recommend alternate and/or complementary water feature effects
- Risk Identification and Problem Solving

Preliminary System Design and Basic Services

- Typical Architectural Details
- Preliminary Equipment Room Layout
- Typical Product Installation Details
- Preliminary Order of Magnitude for Mechanical and Electrical Budget
- Preliminary Specification
- Introductory Mechanical and Electrical System Design
- Preliminary Engineering Assumptions







Our Website

The Crystal Fountains website *(www.crystalfountains.com)* contains our up to date product catalog and technical information and also contains a number of other excellent resources:

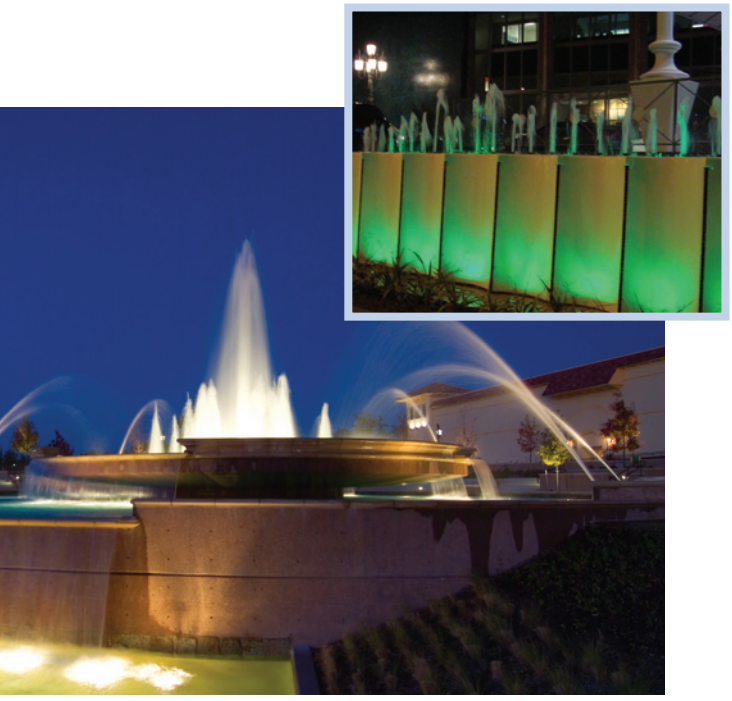
Technical Data/Product Catalog

- Our website is synchronized with our Engineering Department daily for the most current tech nical information.
- Register on the website and you can have access to the most current product technical data, Installation manuals and Block drawings.
- Download/view our current Crystal Fountains product catalog in imperial and metric versions at www.crystalfountains.com/Product-Catalog-2010.aspx

Learning Resources

- Articles Presentations – browse through various informative articles and presen tations to learn more about water features
- Accredited Courses recognized by ASLA, AIA, CSI and more
- Downloadable marketing material





Photos and Video Library

- Search through a growing library of online fountain photos and videos for creative ideas and inspiration. All conveniently located on the Crystal Fountains website. We also archive one of the most extensive databases of fountains images available. If you don't see what you need online, call us.
- Look through our Gallery to view Crystal Fountains projects past and current from around the world.
- Searchable Photo/Video library
- Client Gallery showcasing Crystal products
- Projects in Progress - read about projects Crystal Fountains is currently working on around the world
- If you've specified Crystal Fountains products in your project, send us your photos or videos. We'll help you promote your project on our website!

Check out our image galleries for Photo/Video library, Client Showcase, Project Showcase and Projects in Progress. www.crystalfountains.com/Gallery

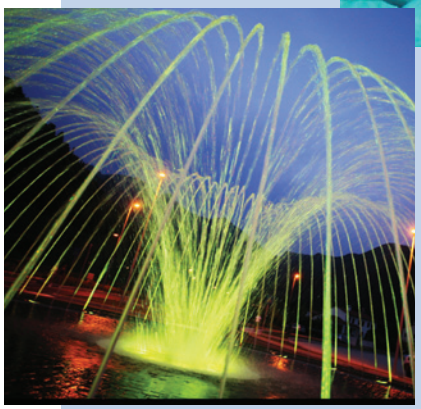
Green

Across the globe, companies are becoming more aware of the ways that their practices impact the environment. As a global company, Crystal Fountains promotes energy and water efficiency and all-around green awareness. This impacts how we run our operations at home and abroad as well as the way we look at designing water features now and in the future.



Green Design

Of paramount importance to Crystal Fountains is the proper operation of all water features, the safety and enjoyment of the viewing public. While not always possible, when designing new water feature systems Crystal Fountains also takes into consideration a myriad of green design details that can reduce, reuse or recycle.



Efficient Water Use

- Water conservation
- Water polishing
- Water re-use
- High efficiency nozzles
- High efficiency water treatment
- Minimal water volumes
- Reduce water loss and evaporation
- Alternate water sources
- Salt water chlorination
- Specifying materials

Efficient Electrical Systems

- LED Technology
- High Efficiency Pumps/Use of Gravity
- Smart control systems

Safety

Public enjoyment of water features is important to Crystal Fountains, but public safety is also of critical concern. Starting with water quality, Crystal Fountains designs water treatment systems that ensure optimum nozzle performance as well as assuring public safety. With the popularity of interactive water features, stringent water quality is central to good fountain design.



Think of us as your water feature watch dogs!

Our nozzles are tested to recommend optimum running height and consideration is also given to nozzle design to eliminate toe entrapment. We meet the most stringent legislation around public safety to keep little fingers, eyes and toes safe.





Ordering

We require written purchase orders so that we can more easily process and track orders. Fax or email your written orders to:
Customer Care Department | Fax: 1.905.660.6916 | Email: customercare@crystalfountains.com

Please note:

- Freight and Crating are extra
- Payments are to be made prior to shipping unless otherwise arranged
- A 50% deposit is required on all custom orders
- Applicable state and/or local taxes are the responsibility of the buyer
- For Terms and Conditions, please contact Customer Care at 1.905.660.6674 or at customercare@crystalfountains.com
- We accept Visa or MasterCard

Procurement:

Want the ease of one invoice or having someone else source specialized fountain equipment? If we don't make the product, we can source exact or equivalent items you are looking for and ship where and when needed. Contact Customer Care to find out more.

Product order form

60 Snow Boulevard Toronto, Ontario, Canada L4K 4B3 T: +1.905.660.6674 F: +1.905.660.6916 Toll-Free: 1.800.539.8858

Date: _____

Contact Name: _____

PST# (for Canadian customers): _____
*Exemption Certificate required if applicable for Canadian customers.

Fed Tax # (for US customers): _____

COMPANY NAME: _____

ADDRESS: _____

City: _____

Prov/State: _____

Zip Code: _____

Country: _____

Phone #: _____

Fax #: _____

E-Mail address: _____

Ship to address (if different from above): _____

Customer Ref/PO #: _____

Visa/MC #: _____

Expiry Date: _____

Name on Card: _____

3-digit Security Code on the back of the card: _____

Method of Shipment: _____

PART NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL



Shipping

Crystal Fountains has been shipping with North America and Internationally since 1972. We will work with you to meet your deadlines and your budget.

Types of shipping:

- Drop ship to a single address
- Split shipments to different locations
- Bulk ship all components and ship to one or multiple locations
- Blanket orders – save by placing an order weeks/months in advance and request a later shipping date
- EXW Ex works
- CFR Cost and freight
- CIF Cost, Insurance and Freight
- CIP Carriage and Insurance Paid to
- DDU Delivered Duty Unpaid
- DDP Delivered Duty Paid





Shipping companies:

- Use your own preferred shipper
- We work with Fedex, UPS, Purolator, TST Overland, YRC Yellow and Roadway
- Kintetsu World Wide Express (International AirOcean)













Quick Ship

Crystal Fountains is proud of our next day fulfillment on product shipments and analyzes our stock inventory on a regular basis.

- Look for this icon throughout our catalog and web site for products that are available for our Quick Ship program
- Quick Ship products represent a range of some of our most popular fountain components: nozzles, lights and electrical
- On pre-approved credit, items ordered will be shipped within 24 hours within Canada and U.S.A. (International Order ships in 48 hrs)
- If we don't meet this time line, your freight is free.*

*Subject to change without notice. For complete details of this program, see our website under "Products", view "Ordering, Shipping and Procurement" at http://www.crystalfountains.com/ordering2.aspx

Warranty

We promise that our products will perform according to our published high quality standards for 1 year from the date of shipment. For more details on our Warranty, please consult our website at www.crystalfountains.com. Extended warranties are available on select bronze and brass products. Please visit our website for more details http://www.crystalfountains.com/Return.aspx

Returns

Returns can be made by contacting Crystal Fountains Customer Service at:
T: 1.800.539.8858 (North American Toll Free)
T: +1.905.660.6674 (International)
F: +1.905.660.6916
E: customercare@crystalfountains.com

Note: We will need your invoice number, the quantity and part numbers of the item(s) you wish to return.





NEW ACCOUNT / CREDIT APPLICATION FORM

60 Snow Boulevard Toronto, Ontario, Canada L4K 4B3
T: +1.905.660.6674 F: +1.905.660.6916 Toll-Free: 1.800.539.8858

Fax back to Crystal Fountains: 905-660-6916 Attn: Credit Department

A) COMPANY INFORMATION

Company Name: _____ Customer No: _____

Street Address: _____ Town/City: _____

Province/State: _____ Country: _____

Postal/ZipCode _____ Telephone No.: _____

Fax No. _____ Proprietorship, Partnership or Corporation: _____

Year Established _____ Nature of Business: _____

FED. TAX ID/GST/VAT/ HST # _____ Accounts Payable Contact: _____

Telephone No. _____ Requested Credit Limit: $ _____

B) FINANCIAL INFORMATION

Bank Name: _____ Contact Name: _____

Bank Address: _____

Telephone No: _____

Account Number: _____

C) TRADE REFERENCES

Please fill-in or attach Name, Address, Telephone & Fax number (s).

1. _____ Phone No. _____
   _____ Fax No. _____
2. _____ Phone No _____
   _____ Fax No. _____
3. _____ Phone No. _____
   _____ Fax No. _____

D) AUTHORIZATION

Name: _____ Title: _____

Signature: _____ Date: _____

For Office Use Only:	Terms:	Limit:
Date Received:	Approved by: _____	Date: _____

Contact Page

Crystal Fountains Offices:

Toronto, CANADA
T: +1.905.660.6674
F: +1.905.660.6916
North American Toll Free: 1.800.539.8858

Dubai, U.A.E.
T: +9714.430.9443
F: +9714.430.9442

Warsaw, Poland
T: +48.22.575.7077
F:+48.22.575.7001

Singapore , Asia
T: +65.8188.5979

sales@crystalfountains.com
customercare@crystalfountains.com

The photographs shown in this catalog are for illustrative purposes only. As such some of the photographs may not contain Crystal Fountains components. We thank many of our clients for contributing photographs:

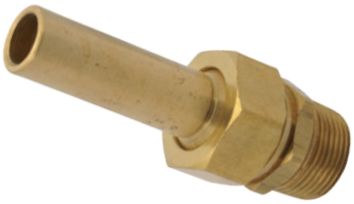
- Advanced Aquatic Technology Inc.
- Aqua Control
- Aquatic Creations
- Aquatic Design and Engineering
- Atlantic Fountains
- BWT
- Delta Engineering
- Fluidity
- Fountain Technologies
- Greenscape Pumps
- Hydrodramatics
- Hydrotech Engineering
- JML Consultants
- KHS&S
- Soucy Aquatik
- Daoust Lestage

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Associations

Crystal Fountains is proud to be a member of the following organizations who, in whole or in part, deal with the water feature industry.

New Products Preview

Have a look at some of our newest products! At Crystal Fountains we continuously improve our products to reduce cost, improve performance and develop innovative new technology features.







LED Lighting

We're at the forefront of LED lighting for water features producing LED's that are:

- Brighter
- Smarter (can be individually programmed)
- Easier to install (longest distance between power source and light on the market)
- Safe, 12V DC (24V DC also available) and comes in a variety of sizes and mount ing configurations.

Power/Data Supplies

LED lighting and nozzles operate as part of a total systems design. Check out Crystal Fountains fountain control panels compatible with many Crystal Fountains products.







New Products Preview

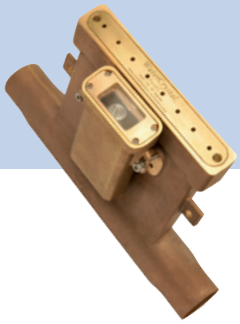


Residential Products

New products for small fountains and backyards!

- Manufactured to the highest specifications, the Residential line produces the same professional effects seen in commercial fountains the world over.
- Each product has been carefully selected for use in pools and small fountains.





Programmable Nozzles

Exciting new nozzle effects that can be fully choreographed. Many with built-in LED lighting. Check out our ChoreoSwitches™, Dynamite Blast™ and Leaper/Laminar products.







Crystal Fountains Products

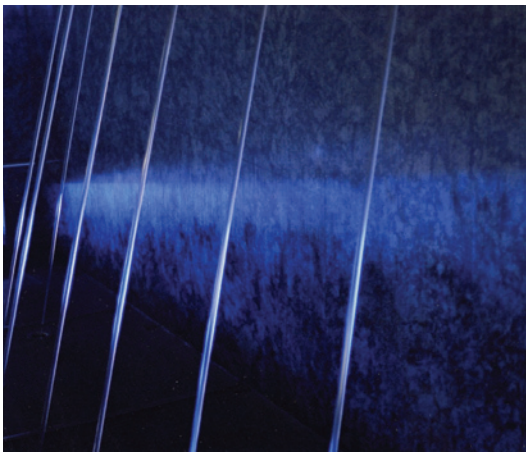














NOZZLES

Crystal Fountains has been manufacturing nozzle effects for over 40 years. From more traditional fountain components to technologically advanced nozzles that can be programmed, you can count on Crystal Fountains high-quality manufacturing. We can also help you select the optimum nozzle effect to suit your application.

Don't see it here? We also manufacture custom components to fulfill any water feature vision!
Have a look through our traditional nozzle effects by type:

- Foaming
- Streaming
- Fanning
- Simple Interactive

Also have a look through our Programmable Sequencing Nozzle section!



General Information on our Nozzles:

Water Level Dependencies
Throughout the nozzle section of the catalog, you will see reference to either **"Water level dependent"** or **"Not water level dependent"**. Different water level dependent nozzles requite the nozzle to be fully submerged in order to produce the desired effect. This type of nozzle uses fountain basin water as well as the water from the supply line to create the effect. The effect for a water level independent is produced solely by the supply water line and its water level placement in the basin is less critical.

Constant Flow versus Programmable
A constant flow nozzle is "on" at all times in one running position. Programmable nozzles can work at varying heights and produce exciting effects of "on" and "off". This is produced using a control panel and is part of a more complex systems approach.



Spread:
The measured spread on a spray jet includes the splash zone of the nozzle. This measurement is intended to be used when determining the position of a nozzle in relation to the pool edge.

Standard Threading:
Standard threading on components shall be National Pipe Thread (NPT) unless requested otherwise at the time of order. All thread sizes less than 25mm will be NPT. British Standard Pipe Thread (BSP) is available upon request.



Engineering:
At Crystal Fountains Inc., we are dedicated to engineering accuracy and stand behind our products. The spray jets manufactured by our company have been tested using calibrated instrumentation for flow rate and pressure head at the facilities of the Canadian Hydraulics Centre under the auspices of the National Research Council of Canada (NRC).

TRADITIONAL NOZZLES





25 FOAM NOZZLES
26 NCA Series – Cascade Jet
28 NCL Series – Lake Cascade Jet
29 NFO Series – Foam Jet
31 NIA Series – Aerator Jet
33 NIC Series – Funnel Cascade Jet
34 NPB Series – Medium Foam Pod
35 NPC Series – Crown Pod
36 NPF Series – Large Foam Pod
37 NPW Series – Large Watercastle Pod
38 NIF Series – Low Profile Foam Jet
39 STREAM NOZZLES
40 NBJ Series – Burst Jet
41 NEA Series – Plume Jet
43 NEF Series – Plume Jet
45 NES Series – Clear Stream Jet
47 NHC Series – Hollow Column Jet
48 NLC Series – Column Jet
49 NLF Series – Crown Jet
50 NLG Series – Ground Jet
52 NPA Series – Column Pod
53 NPD Series – Mist Column Pod
54 NSJ Series – Spray Jewel Jet
56 NSR Series – Spray Ring
58 NWA Series – Adjustable Watercastle Jet
59 NWC Series – Watercastle Jet
61 NWD Series – Multi-Adjustable Watercastle Jet
62 NMS Series – Mini-Spout Jet
63 NRC Series – Rain Curtain
64 FANNING NOZZLES
65 NGA Series – Fan Jet
66 NGB Series – Fan Jet
67 NGF Series – Finger Jet
68 NGL Series – Flat Jet
69 NLF Series – Crown Jet
70 NMB Series – Mushroom / Bell Jet
71 NMC Series – Tulip Jet
73 NMF Series – Bell Jet
74 NDH Series – Dandelion Hemisphere
75 NDS Series – Dandelion Sphere





Foam Nozzles

frothy, white, aerated water, carries light







NCA Series – Cascade Jet

One of our most popular effects, the Cascade Jet produces a geyser-like eruption of foamy white, aerated water. It bursts from the surface and then falls heavily in a conical pattern. The one-piece design provides optimum visual and sound effects moving a large mass of water. Ideal for medium-sized and large displays holding shape better at higher heights. Best used with non-turbulent water supply. Made of cast bronze with a machined orifice. Optional alignment swivel available (ASU). **Water level dependent.**

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

This product is available under our Quick Ship program! See page 15 for more details.

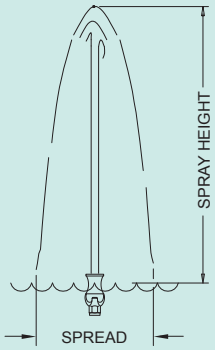


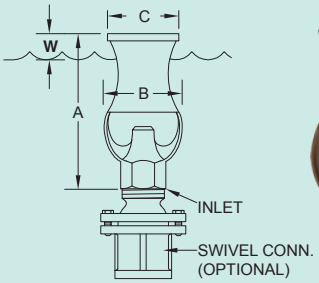




NCA Series – Cascade Jet









VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ ■ ■ ■
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ □ □ □

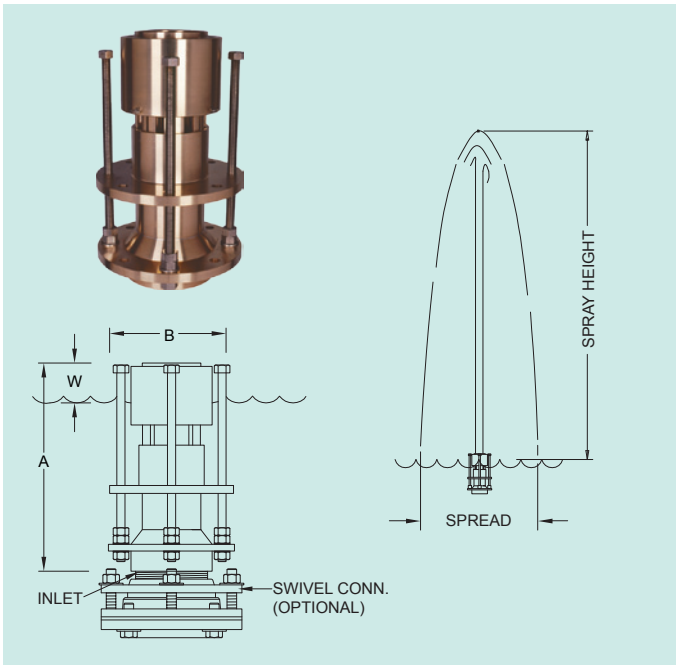
DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Spray height (m.)	0.6	1	1.3	1.6	1.9	2.5	3.1	3.7	4.6	6.1	7.7	9.2
NCA075	¾"	140	70	64	-26	9	LPM	45.0	57.0	61.0	76.0	76.0	87.0						
							Head (m.)	6.5	7	9.8	13.5	15.6	21.1						
							Spread (cm.)	26	28	44	61	77	87						
NCA125	1 ¼"	204	115	89	13	9	LPM	61.0	79.0	87.0	98.0	110.0	129.0	144.0	151.0				
							Head (m.)	3.7	5.5	7.1	8.6	11.3	15.3	17.7	19.9				
							Spread (cm.)	23	31	46	61	72	74	92	102				
NCA150	1 ½"	229	121	96	13	9	LPM	87.0	110.0	121.0	136.0	159.0	170.0	185.0	201.0	220.0			
							Head (m.)	3.4	4.3	5.5	7	9.8	11.3	14	15.3	18.9			
							Spread (cm.)	26	39	49	61	77	82	92	94	102			
NCA200	2"	274	140	115	13	9	LPM			159.0	178.0	189.0	231.0	254.0	269.0	284.0	348.0		
							Head (m.)			4.3	5.8	7.4	10.1	12.2	13.2	15	21.7		
							Spread (cm.)			39	51	51	92	102	110	127	140		
NCA300	3"	362	204	166	20	25	LPM				333.0	341.0	352.0	424.0	439.0	545.0	628.0	708.0	776.0
							Head (m.)				7.4	8	10.7	12.9	15	19.3	24.1	31.7	25.4
							Spread (cm.)				61	61	67	107	122	153	153	214	244

NCL Series – Lake Cascade Jet

Over 30m of foamy white water ideal for larger installations; lakes, ponds and large fountains. The Lake Cascade Jet provides a large-scale visual presence of grandeur and beauty. Provides heavy aeration as well as visual and auditory presence. Made of cast bronze and stainless steel. Optional alignment swivel available (ASU). **Water level dependent.**





**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)
NCL600	6"	610	331	153

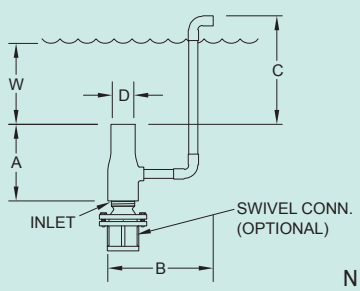
PERFORMANCE

Spray height (m.)	3.1	6.1	15.3	24.4	30.5
LPM	1552.0	2233.0	3502.0	4542.0	4921.0
Head (m.)	7.7	15.3	38.1	61	76.2
Spread (m.)	N/A	N/A	N/A	N/A	N/A

VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ ■ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ ■ ■
EFFICIENCY	■ □ □ □ □

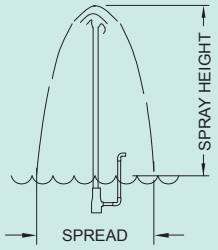
NFO Series – Foam Jet

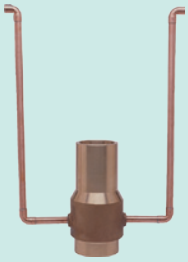
Easy to install, the Foam Jet creates a mass of aerated water run at lower heights, and becomes a splashy, frothy column at levels above 2.5m. Ideal for medium-sized and large displays holding shape better at lower heights. Provides optimum visual and sound effects. Optional alignment swivel available (ASU). Made of cast bronze and copper. **Water level dependent.**





NFO050-200





NFO300

VISIBILITY ■■■■■

SOUND LEVEL ■■■□□

WIND RESISTANCE ■■■■□

SPLASH/MIST ■■□□□

EFFICIENCY ■■■□□

This product (excluding NFO200 and NFO300) is available under our Quick Ship program! See page 15 for more details.

DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Spray height (m.)	0.4	0.7	1	1.3	1.6	1.9	2.5	3.1	4.6	6.1
NFO050	½"	83	108	89	13	64	4	LPM	23.0	26.0	34.0							
								Head (m.)	2.5	3.7	4.6							
								Spread (cm.)	18	31	31							
NFO100	1"	115	153	159	26	73	7	LPM	57.0	83.0	91.0	98.0	102.0	110.0				
								Head (m.)	1.6	2.2	3.4	4	4.6	5.5				
								Spread (cm.)	26	31	44	56	61	72				
NFO150	1 ½"	134	185	235	39	127	10	LPM	140.0	170.0	223.0	235.0	254.0	273.0	291.0	326.0		
								Head (m.)	2.2	3.4	4.9	6.1	7.1	8.6	9.2	12.5		
								Spread (cm.)	31	44	61	77	92	102	102	112		
NFO200	2"	178	197	254	51	73	13	LPM		182.0	220.0	235.0	257.0	280.0	310.0	322.0	435.0	
								Head (m.)		2.2	3.1	3.4	4	4.9	6.5	7.4	11	
								Spread (cm.)		26	41	46	61	81	92	102	127	
NFO300	3"	235	343	293	73	89	20	LPM		416.0	492.0	530.0	625.0	644.0	719.0	757.0	908.0	1098.0
								Head (m.)		2.2	2.9	3.4	4.3	4.6	6.5	7.4	10.1	14.4
								Spread (cm.)		39	67	92	92	122	153	178	204	229

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

NFO Series – Foam Jet



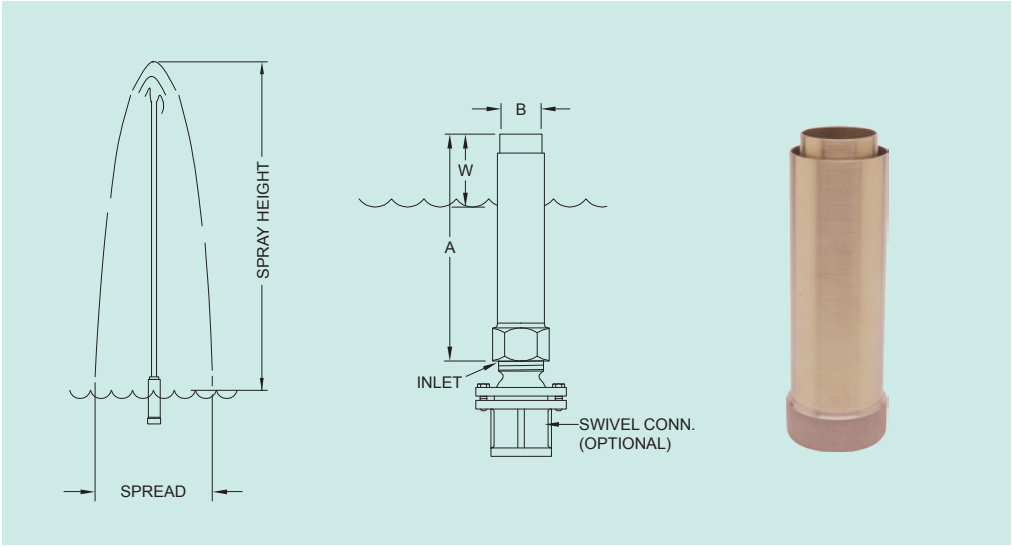




NIA Series – Aerator Jet

This jet provides highly aerated water in a slender, column shape. Ideal for shallow pools in small and medium-sized displays and can be grouped together closely. Beautiful when illuminated at night. Made of cast bronze, brass and copper. Optional alignment swivel available (ASU). **Water level dependent.**

VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ ■ □ □



**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS						PERFORMANCE						
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Spray height (m.)	1.3	1.6	3.1	3.7	4.9	6.1
NIA075	¾"	118	32	26	2	LPM	30.0	34.0	45.0			
						Head (m.)	3.1	4.3	6.9			
						Spread (cm.)	36	46	72			
NIA100	1"	153	35	26	2	LPM	42.0	53.0	68.0			
						Head (m.)	4	5.8	9.2			
						Spread (cm.)	23	41	51			
NIA125	1 ¼"	166	42	39	3	LPM	61.0	68.0	91.0			
						Head (m.)	4	5.2	8.9			
						Spread (cm.)	31	61	67			
NIA150	1 ½"	216	51	39	4	LPM	83.0	98.0	125.0	136.0		
						Head (m.)	4	5.5	8.6	10.4		
						Spread (cm.)	51	72	97	107		
NIA200	2"	229	70	51	5	LPM	110.0	129.0	163.0	178.0	197.0	
						Head (m.)	2.8	4	6.5	7.4	9.5	
						Spread (cm.)	41	46	61	77	122	
NIA300	3"	293	102	64	6	LPM	178.0	220.0	310.0	341.0	416.0	428.0
						Head (m.)	4	5.2	9.2	10.7	13.5	17.7
						Spread (cm.)	34	61	92	102	153	153

NIA Series – Aerator Jet



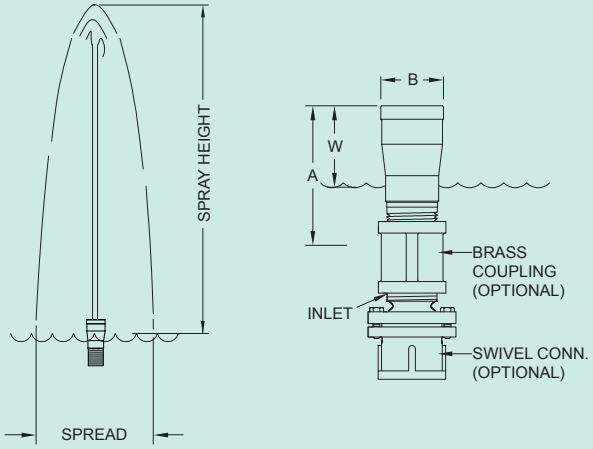


NIC Series – Funnel Cascade Jet

A compact, foamy effect that can deliver a highly aerated water spray. Ideal for small and medium-sized displays with shallow water. Optional alignment swivel available (ASU). Made of cast bronze. **Not water level dependent.**



VISIBILITY ■■■■□
SOUND LEVEL ■■■□□
WIND RESISTANCE ■■■□□
SPLASH/MIST ■■■□□
EFFICIENCY ■■■□□







**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NIC100	1"	93	42	51	7

PERFORMANCE

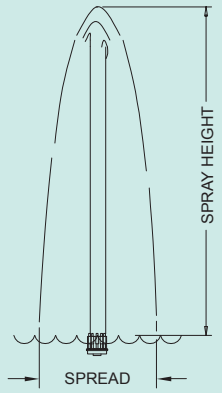
Spray height (m.)	0.6	1	1.3	1.6	1.9	2.5
LPM	87.0	106.0	121.0	129.0	136.0	159.0
Head (m.)	2.2	2.8	3.7	4.3	4.6	6.5
Spread (cm.)	18	31	44	51	61	74

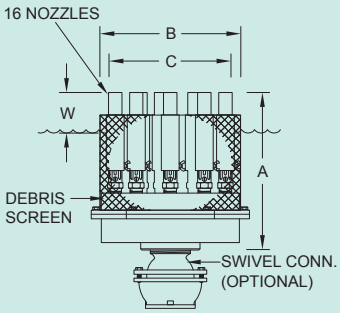
NPB Series – Medium Foam Pod

An easy to install, foamy column of water using 16 popular aerator nozzles all in one unit. A continuously changing pattern creates visual interest which pulsates as it rises in height. Ideal for medium-sized pools, water can rise up to 6.1m in height. Made of cast bronze, brass and copper with integral brass debris screen. Optional alignment swivel available (ASU). **Water level dependent.**



VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ ■ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ ■ □ □









**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Stream Size (mm)	Suction Strainer Openings max. mm.
NPB100	3"	356	305	280	77	280	6

Options	Add Suffix
Wave Suppression Device	W

PERFORMANCE

Spray height (m.)	3.1	3.7	4.6	6.1
LPM	791.0	810.0	852.0	988.0
Head (m.)	15.6	17.1	22	28.4
Spread (cm.)	214	N/A	N/A	N/A

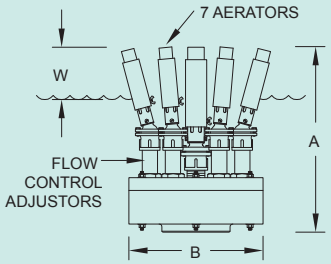
NPC Series – Crown Pod

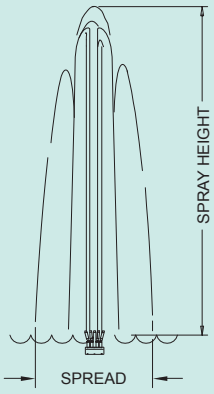
A versatile two-tiered display of foamy streams using 7 angled aerator nozzles all in one unit for easy installation. The Crown Pod produces an elegant outward spray of up to 15.3m with adjustable effect to allow for height and pattern changes. Perfect for large bodies of water as a center focus. Optional alignment swivel available (ASU). Made of cast bronze with adjustable height regulators. **Water level dependent.**



VISIBILITY ■■■■■
SOUND LEVEL ■■■■□
WIND RESISTANCE ■■■■□
SPLASH/MIST ■■■■□
EFFICIENCY ■■■□□







**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	Suction Strainer Openings max. mm.
NPC100	2"	356	229	51	4
NPC200	3"	420	305	64	6
NPC300	4"	508	356	77	9
NPC400	4"	610	496	102	9
NPC500	6"	635	496	89	13

PERFORMANCE

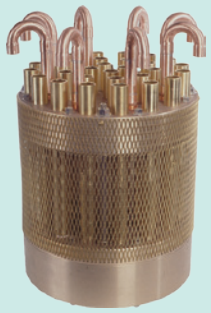
Part No.	Spray height (m.)	1.6	2.5	3.1	4.6	6.1	7.7	9.2	10.7	12.2	15.3
NPC100	LPM	170.0	189.0	220.0							
	Head (m.)	7.4	10.1	19.9							
	Spread (cm.)	305	427	488							
NPC200	LPM	242.0	291.0	329.0	394.0						
	Head (m.)	7.4	10.7	12.9	17.7						
	Spread (cm.)	305	427	610	854						
NPC300	LPM		352.0	390.0	454.0	481.0					
	Head (m.)		7.4	8.9	12.2	12.9					
	Spread (cm.)		488	610	793	915					
NPC400	LPM			825.0	939.0	1060.0	1196.0	1302.0	1488.0		
	Head (m.)			10.7	15.6	17.7	21.4	25.7	34.2		
	Spread (cm.)			610	976	1067	1342	1524	2012		
NPC500	LPM				1700.0	1961.0	2018.0	2294.0	2472.0	2646.0	3021.0
	Head (m.)				11.3	15.6	17.1	20.5	24.1	26.9	33.3
	Spread (cm.)				732	1037	1159	1281	1464	1768	2195

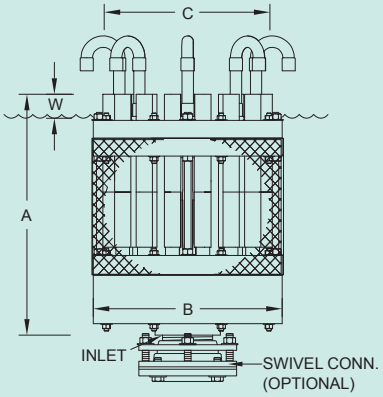
Options	Add Suffix
Wave Suppression Device	W

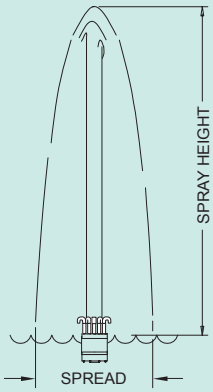
NPF Series – Large Foam Pod

A versatile, massive and foamy effect with 30 individual aerator nozzles all in one unit for easy installation. Available in two distinctive styles Pyramid (NPF-100) and Solid columnar effect with a bulbous crest (NPF-200). Spectacular when illuminated. Best used in larger pools of water. Made of cast bronze, brass and copper with integral brass debris screen and built-in air/water ratio adjustment to control foam aeration. Optional alignment swivel available (ASU). **Water level dependent.**


NPF100







**Contact Crystal Fountains for detailed specifications, installation and operation details.*

VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ ■ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ □ □ □

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NPF100	4"	470	381	331	51	5
NPF200	4"	470	381	331	51	5

PERFORMANCE

Spray height (m.)	3.1	4.6	6.1	7.7
LPM	1102.0	1355.0	1518.0	1673.0
Head (m.)	21.4	32.7	41.2	50.3
Spread (cm.)	77	92	107	122
LPM	1741.0	2180.0	2430.0	2714.0
Head (m.)	17.7	28.4	39.1	51.3
Spread (cm.)	183	214	244	275

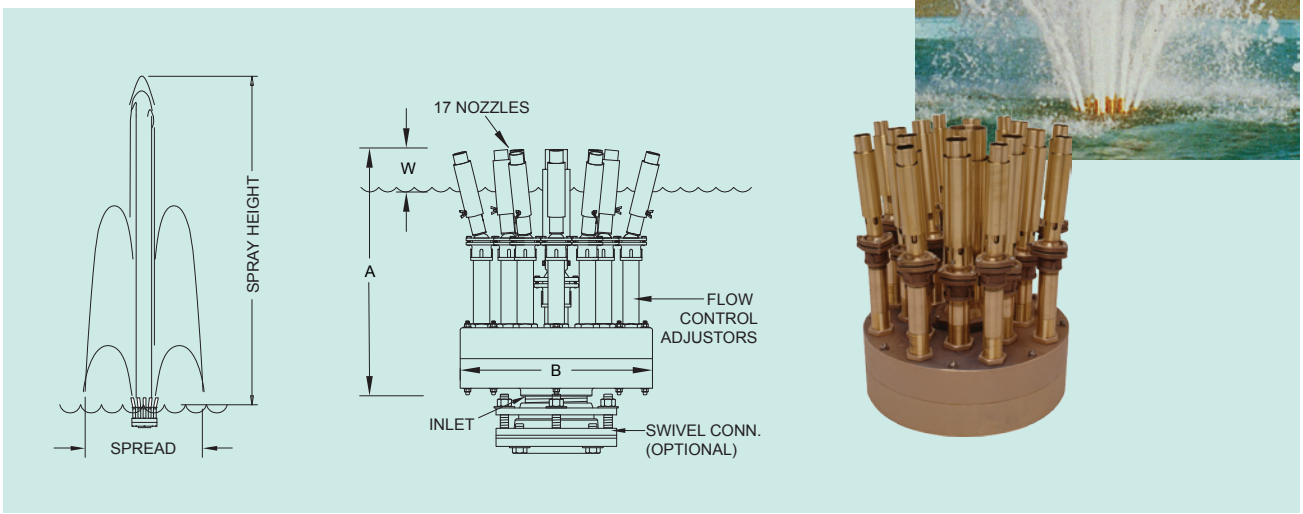
Options	Add Suffix
Wave Suppression Device	W

NPW Series – Large Watercastle Pod

A popular, three-tiered watercastle effect with 17 angled aerator nozzles all in one unit for easy installation. Effect is adjustable to allow for height and pattern changes. Produces a dramatic mass of aerated water ideal for viewing from great distances in a larger pool of water with spread up to 23.2m in diameter. Optional alignment swivel available (See ASU). Made of cast bronze, brass and copper complete with adjustable height regulators. **Water level dependent.**



VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ ■ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ □ □ □



**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NPW100	4"	610	496	102	7
NPW200	6"	635	496	102	7

PERFORMANCE

Spray height (m.)	3.1	4.6	6.1	9.2	12.2	15.3
LPM	1359.0	1654.0	1900.0	2309.0		
Head (m.)	10.7	15.6	19.9	28.4		
Spread (cm.)	610	854	1098	1403		
LPM		2173.0	2593.0	2888.0	3290.0	3611.0
Head (m.)		15	20.5	24.7	31.7	36
Spread (cm.)		732	1159	1342	1829	2317

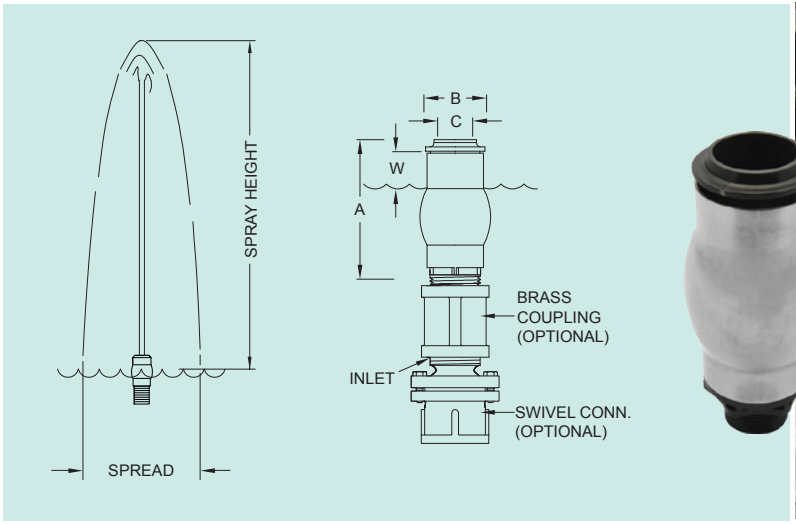
Options	Add Suffix
Wave Suppression Device	W

NIF Series – Low Profile Foam Jet

A column of frothy, white, aerated water that's beautiful when illuminated. Recommended for small and medium-sized displays in shallow pools. Low profile of jet permits installation in shallow pools with a neat appearance. Easy to install with 15° adjustment after installation. Made of stainless steel and plastic. **Water level independent.**



VISIBILITY ■■■■■
SOUND LEVEL ■■■□□
WIND RESISTANCE ■■■■□
SPLASH/MIST ■■■□□
EFFICIENCY ■■■□□





Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NIF100	1"	140	64	32	26	4

PERFORMANCE

Spray height (m.)	0.4	0.6	1	1.3	1.6	1.9	2.2	2.5	2.8	3.1
LPM	57.0	72.0	85.0	98.0	110.0	115.0	125.0	134.0	142.0	148.0
Head (m.)	1.4	2.2	3.1	4	5.1	5.7	6.6	7.7	8.4	9.2
Spread (cm.)	16	21	31	54	61	64	67	72	87	92

STREAM NOZZLES

Clear water, Shiny, Refracts light, Holds shape











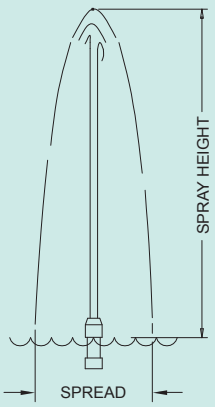


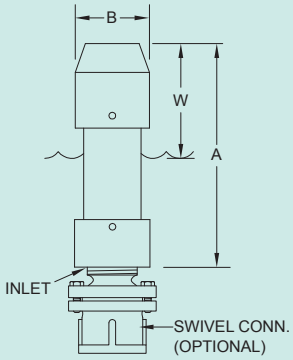
NBJ Series – Burst Jet

The NBJ Burst Jet is used for high single shot or "burst" effects of up to 27.5m. The design of the jet allows adjustment of the spray pattern and volume of the water. The jet creates a tight stream that rises rapidly but disperses at its peak to fall gently in a controlled manner. This jet requires a systems approach. Made of cast bronze. **Not water level independent.**



VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ ■ □ □









**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NBJ150	1 ½"	216	70	102	7

PERFORMANCE

Spray height (m.)	1.5	3	4.5	6	9	12	15.5	18.5	21.5	24.5	27.5
LPM	87.0	121.0	148.0	197.0	254.0	284.0	314.0	341.0	363.0	390.0	416.0
Head (m.)	2	4.5	7	11.5	19.5	28	35.5	46	53	61	70
Spread (m.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Options	Add Suffix
Spray Height Adjustment Key	K

NEA Series – Plume Jet

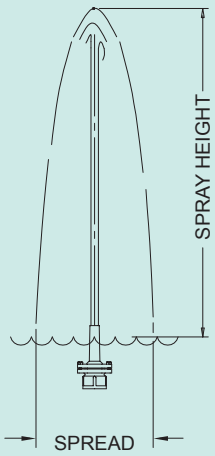
A long and slender column of water with an attractive plume shape at the end. The NEA Plume Jet holds its shape in vertical effects, angled spray bars and rings. Easy installation with an integral swivel connector. A large variety of stream sizes available and has universal applications. Stream diameters staring at 2mm–39mm. Available in male or female inlet types. Made of cast bronze and brass. **Not water level dependent.**

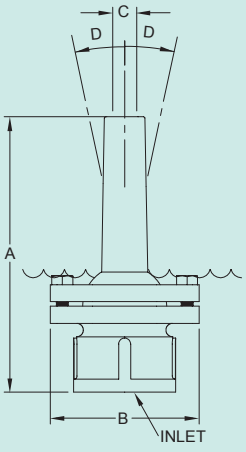
This product (excluding NEA200, NEA300 and NEA400) is available under our Quick Ship program! See page 15 for more details.



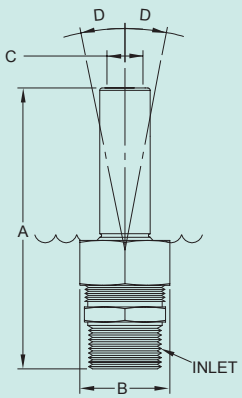


VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ ■ □ □





NEA200 - NEA400



NEA012 - NEA151

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

NEA Series – Plume Jet



NEA012-151



NEA200-300



NEA400

Options	Add Suffix
Nozzle Adjustment Key (NEA012 to NEA050)	K

DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Suction Strainer Openings max. mm.	Spray height (m.)	1.6	3.1	4.6	6.1	9.2	12.2	15.3	18.3	21.4	24.4	28.5	30.5
NEA012	1/8"	48	13	4	15°	2	LPM	4.0	4.0										
							Head (m.)	2.5	4.3										
							Spread (cm.)	13	18										
NEA025	1/4"	58	16	7	18°	3	LPM	9.0	11.0	13.0									
							Head (m.)	2.5	4.3	6.1									
							Spread (cm.)	16	18	23									
NEA037	3/8"	70	20	7	18°	4	LPM	15.0	21.0	23.0	25.0								
							Head (m.)	2.5	4.3	6.1	8.3								
							Spread (cm.)	16	21	31	41								
NEA050	1/2"	89	26	10	15°	5	LPM	26.0	34.0	45.0	53.0								
							Head (m.)	2.5	4.3	6.4	8.3								
							Spread (cm.)	21	31	41	59								
NEA078	3/4"	99	32	13	15°	7	LPM	42.0	61.0	76.0	95.0								
							Head (m.)	2.2	4	5.8	10.1								
							Spread (cm.)	21	31	41	59								
NEA101	1"	121	39	16	20°	8	LPM	53.0	72.0	91.0	106.0	125.0							
							Head (m.)	2.5	4.9	8	8.3	12.2							
							Spread (cm.)	21	31	41	59	102							
NEA151	1 1/2"	156	51	16	21°	10	LPM	68.0	95.0	117.0	132.0	182.0	223.0						
							Head (m.)	2.8	4.9	7.7	9.2	11	14.7						
							Spread (cm.)	31	61	89	110	150	199						
NEA200	2"	191	112	23	15°	12	LPM		170.0	212.0	254.0	326.0	428.0	443.0					
							Head (m.)		3.7	5.8	8	13.5	21.1	22.6					
							Spread (cm.)		46	67	117	163	194	224					
NEA300	3"	312	153	29	15°	14	LPM		299.0	356.0	439.0	519.0	659.0	746.0	871.0				
							Head (m.)		3.7	5.8	8.3	8.3	17.7	25	36				
							Spread (cm.)		N/A	N/A	N/A	N/A	N/A	N/A	N/A				
NEA400	4"	407	223	39	15°	20	LPM				750.0	980.0	1075.0	1211.0	1488.0	1541.0	1601.0	1878.0	1968.0
							Head (m.)				7.4	11.3	15.6	18.6	25.7	29.6	31.7	33.6	45.8
							Spread (cm.)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEF Series – Plume Jet

Similar to the NEA, the NEF creates an elongated column of water impressive vertical effects. Primarily for use in medium-sized and large displays with stream diameters ranging from 13mm - 51mm. Optional alignment swivel available (ASU). Made of cast bronze. **Not water level dependent.**



VISIBILITY ■■■□□
SOUND LEVEL ■■■□□
WIND RESISTANCE ■■□□□
SPLASH/MIST ■■■■□
EFFICIENCY ■■■□□

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	Suction Strainer Openings max. mm.
NEF100	1"	102	51	13	7
NEF150	1 ½"	127	64	16	8
NEF200	2"	153	77	23	9
NEF300	3"	254	102	29	13
NEF400	4"	280	127	40	13
NEF500	5"	356	166	51	26

PERFORMANCE

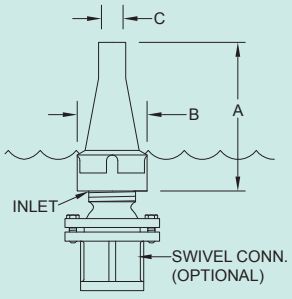
Part No.	Spray height (m.)	1.6	3.1	4.6	6.1	9.2	12.2	15.3	18.3	21.4	24.4	27.5	30.5
NEF100	LPM	45.0	61.0	79.0	87.0								
	Head (m.)	2.2	4	5.8	7.43								
	Spread (cm.)	3	3	8	8								
NEF150	LPM		129.0	132.0	144.0	174.0							
	Head (m.)		4.3	6.1	7.4	12.9							
	Spread (cm.)		6	9	11	13							
NEF200	LPM		155.0	231.0	265.0	341.0	428.0						
	Head (m.)		4.3	6.5	8.6	12.2	18.6						
	Spread (cm.)		8	12	13	16	21						
NEF300	LPM		269.0	295.0	469.0	564.0	651.0	712.0	810.0				
	Head (m.)		3.7	5.8	8	12.9	17.1	19.9	24.7				
	Spread (cm.)		N/A	N/A	N/A	N/A	N/A	N/A	N/A				
NEF400	LPM				757.0	1030.0	1139.0	1185.0	1446.0	1597.0	1908.0	2177.0	2271.0
	Head (m.)				7.4	12.9	15.6	17.1	24.7	29.9	40.9	44.2	50.3
	Spread (cm.)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NEF500	LPM				1552.0	2006.0	2271.0	2461.0	2763.0	2953.0	3180.0	3369.0	3558.0
	Head (m.)				8.3	12.9	16.8	21.4	25	29.6	33.6	39.7	45.8
	Spread (cm.)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

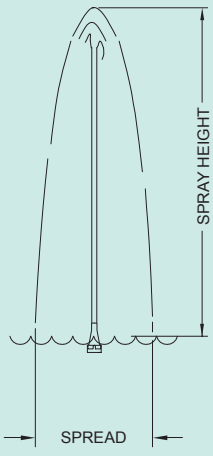
**Contact Crystal Fountains for detailed specifications, installation and operation details.*

NEF Series – Plume Jet







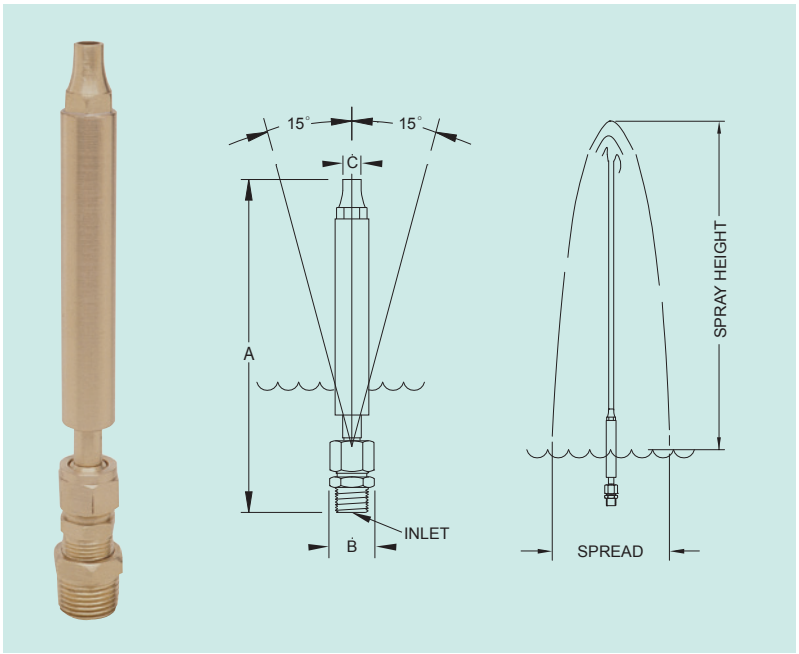


NES Series – Clear Stream Jet

The NES jet provides a clear stream performance and pressure regulation on manifolds and spray rings where uniform output is required. Provides up to 15 degrees of variance for ease of installation. Nozzle opening is ¼" and creates a dramatic display when grouped in a traditional arch or circle. Made of brass. **Not water level dependent.**

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ ■ □ □

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	Suction Strainer Openings max. mm.
NES050	½"	191	26	7	7

PERFORMANCE

Spray height (m.)	1.6	3.1	4.6
LPM	15.0	19.0	23.0
Head (m.)	3.1	5.8	6.8
Spread (m.)	N/A	N/A	N/A

NES Series – Clear Stream Jet



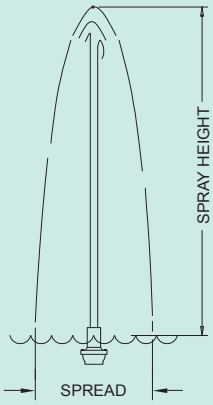


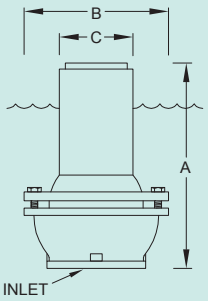
NHC Series – Hollow Column Jet

A hollow column of clear water that when run at low levels, appears to be an overflowing glass tube. Cresting water creates minimum splash. Spectacular when illuminated. Ideal for small pools and quiet locations. Made of cast bronze, brass and copper with integral swivel adjustment. **Not water level dependent.**

VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ ■ □ □









**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	Suction Strainer Openings max. mm.
NHC100	1"	140	64	29	2
NHC150	1 ½"	178	83	42	3
NHC200	2"	185	115	54	4
NHC300	3"	229	153	77	7

PERFORMANCE

Spray height (m.)	0.4	0.6	1	1.3	1.6	2.5	3.1
LPM	42.0	61.0	76.0	87.0	140.0		
Head (m.)	1	1.3	2.2	2.5	3.1		
Spread (cm.)	13	23	31	31	36		
LPM	83.0	117.0	140.0	163.0	178.0	227.0	254.0
Head (m.)	1	1.3	1.9	2.2	2.8	4	5.2
Spread (cm.)	23	31	36	41	51	69	97
LPM	110.0	144.0	174.0	201.0	220.0	280.0	307.0
Head (m.)	0.6	1.3	1.6	2.2	2.5	4	4.6
Spread (cm.)	23	34	41	46	69	122	122
LPM		284.0	344.0	409.0	469.0	598.0	689.0
Head (m.)		1	1.6	1.9	1.9	3.1	4
Spread (cm.)		46	61	77	92	107	143

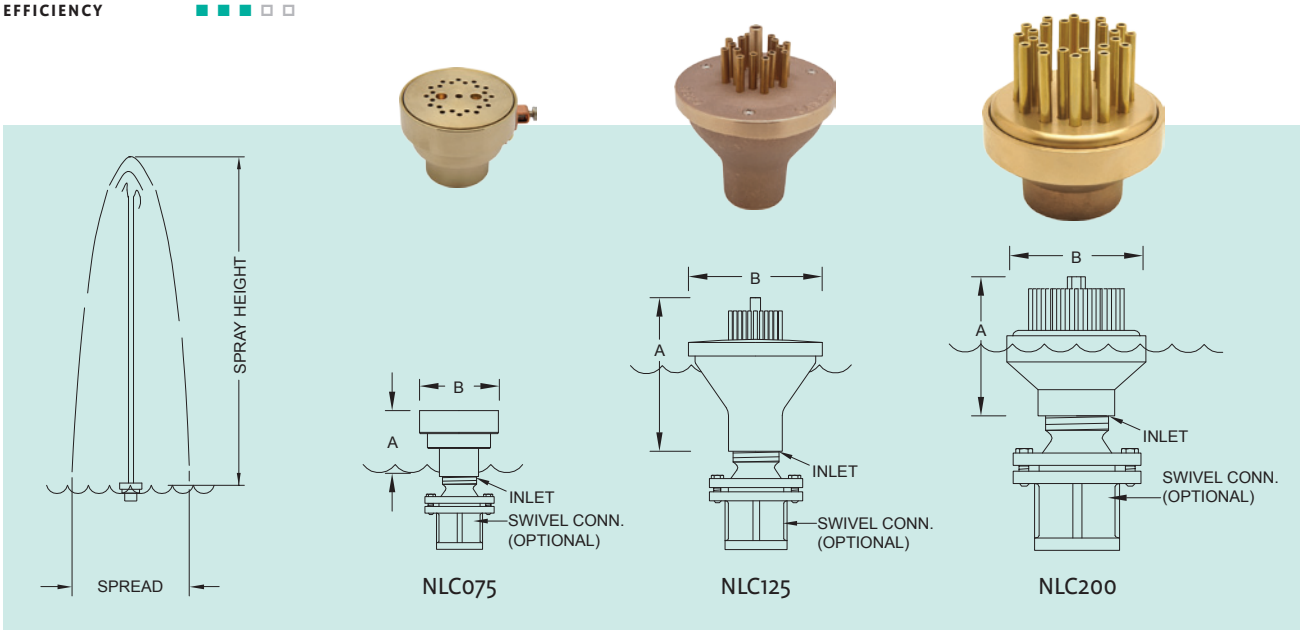
NLC Series – Column Jet

A simple, vertical column of clear water ideal as a focal point for small and medium-sized displays. Composed of an array of smaller, vertical jets to create a delicate upward spray. Also appropriate as a secondary effect for large displays. Optional alignment swivel available (ASU). Made of machined bronze and brass with removable top for easy cleaning. **Not water level dependent.**



This product (NLC075 only) is available under our Quick Ship program! See page 15 for more details.

VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ ■ □ □



Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NLC075	¾"	51	64	51	2
NLC125	1 ¼"	147	127	51	3
NLC200	2"	127	127	51	4

PERFORMANCE

Part No.	Spray height (m.)	0.6	1	1.3	1.6	1.9	2.5	3.1	3.7	4.6	6.1
NLC075	LPM	38.0	45.0	53.0	57.0	61.0					
	Head (m.)	1.3	1.9	2.5	2.8	3.4					
	Spread (cm.)	21	26	26	31	31					
NLC125	LPM		61.0	76.0	91.0	95.0	114.0	125.0	144.0		
	Head (m.)		1.6	1.9	2.8	3.1	4	4.6	6.1		
	Spread (cm.)		31	39	51	61	61	77	92		
NLC200	LPM				151.0	165.0	191.0	216.0	235.0	261.0	295.0
	Head (m.)				2.8	3.4	3.7	5.5	6.5	7.7	9.8
	Spread (cm.)				61	72	82	92	102	112	133

Options (NLC075 Only)	Add Suffix
Cover Removal Key	K
Winter Cover	W

NLF Series – Crown Jet

A versatile, smaller jet that can be used in play decks* or in a fountain. Ideal for small and medium sized pools providing gentle spray coverage and cooling. This effect creates a pretty, vertical tulip shape (also see NLF076 for a fanning effect). Optional alignment swivel available (ASU). Made of machined cast bronze with removable, flush-mounted faceplate for easy cleaning with optional security key. Optional winter cover also available. **Not water level dependent.**

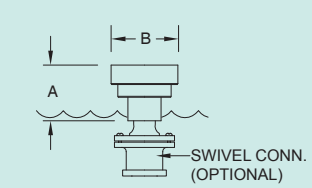
* For interactive play, do not exceed 6 meters per second.

VISIBILITY	■■■■□
SOUND LEVEL	■□□□□
WIND RESISTANCE	■■■□□
SPLASH/MIST	■■■■■
EFFICIENCY	■■■□□



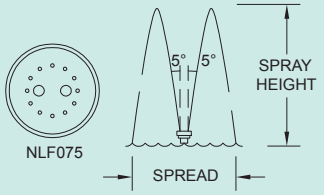


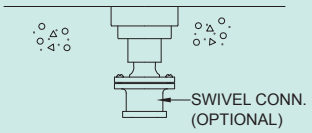
This product is available under our Quick Ship program! See page 15 for more details.





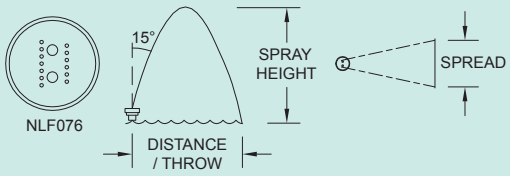
NLF075







NLF076



Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
NLF075	1"	64	51	2
NLF076	1"	64	51	2

PERFORMANCE

Spray height (m.)	0.6	1	1.3	1.9
LPM	15.0	19.0	23.0	26.0
Head (m.)	1	1.6	1.9	3.1
Spread (cm.)	4	6	8	11
LPM	19.0	19.0	23.0	34.0
Head (m.)	1.3	1.6	2.2	3.4
Spread (cm.)	9	14	20	31
Throw (m.)	0.6	1.3	1.3	2.2

Options	Add Suffix
Cover Removal Key	K
Winter Cover	W

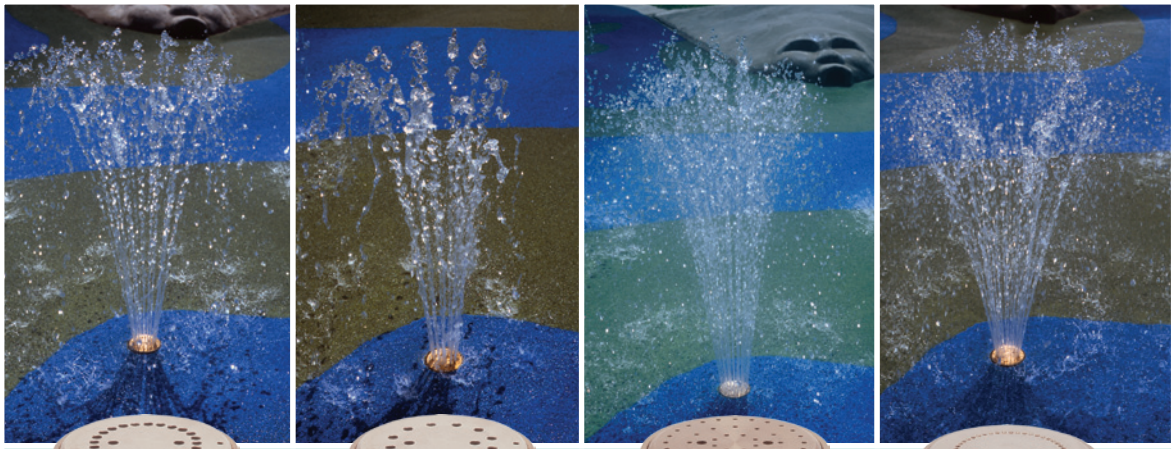
NLG Series – Ground Jet

A popular, multi-purpose spray jet that can be used in small and medium-sized fountains and playdecks*. Big brother to the NLF (Crown Jet), this nozzle is 127mm in diameter and creates a larger volume of gentle spray. Available with 4 interchangeable tops for different spray patterns that provide up to 3.5m of spread. Made of machined cast bronze with removable faceplate for easy cleaning with an optional security key. Optional alignment swivel available (ASU). Optional winter cover also available. **Not water level dependent.**

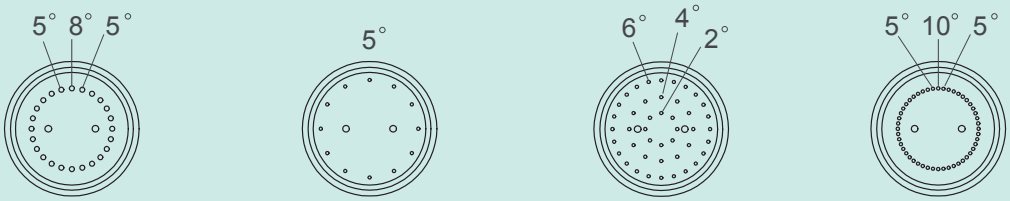
* For interactive play, do not exceed 6 meters per second.



VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ □ □ □ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ ■ □ □



NLG200 NLG201 NLG202 NLG203

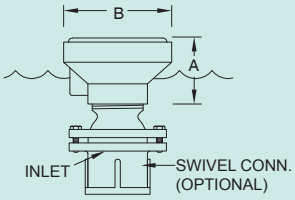


NLG200 NLG201 NLG202 NLG203

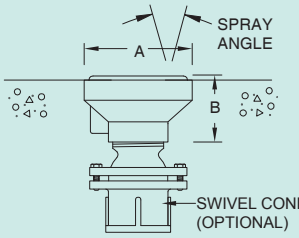
Contact Crystal Fountains for detailed specifications, installation and operation details.

NLG Series – Ground Jet

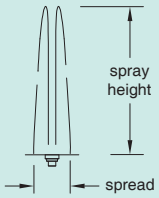




ABOVE WATER APPLICATION



IN GROUND APPLICATION



DIMENSIONS / PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.	Spray height (m.)	1	1.6	3.1
NLG200	2"	77	127	1	LPM	114.0	148.0	220.0
					Head (m.)	1.6	2.5	5.5
					Spread (cm.)	122	183	336
NLG201	2"	77	127	1	LPM	98.0	129.0	189.0
					Head (m.)	1.6	2.5	4.9
					Spread (cm.)	7	12	21
NLG202	2"	77	127	1	LPM	95.0	121.0	178.0
					Head (m.)	1.6	2.5	5.2
					Spread (cm.)	92	138	244
NLG203	2"	77	127	1	LPM	98.0	129.0	182.0
					Head (m.)	1.6	2.5	4.6
					Spread (cm.)	138	206	336

Options	Add Suffix
Security Key	K
Winter Cover	W

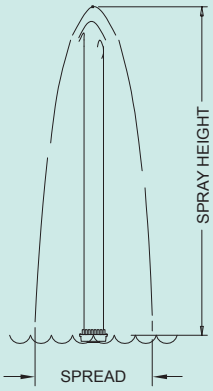
NPA Series – Column Pod

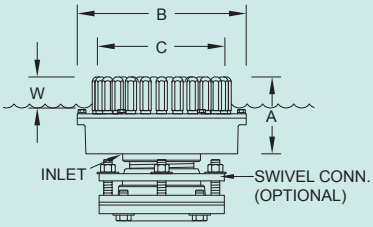
A large, vertical column consisting of 3 concentric rows of clear stream nozzles with one central nozzle. Available in 3 different stream sizes and can have spray heights up to 12m. Best used in larger pools providing excellent viewing at great distances, especially when illuminated. Optional alignment swivel available (ASU). Made of cast bronze with plume nozzles. **Not water level dependent.**

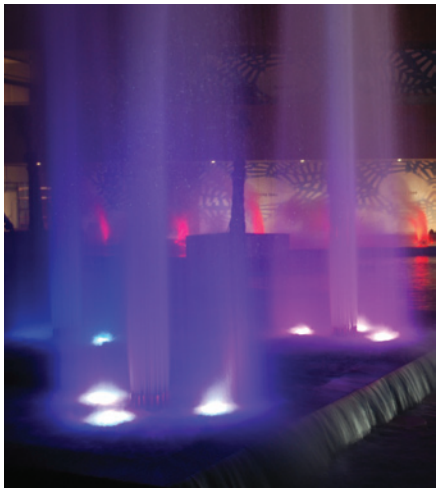


VISIBILITY ■■■■■
SOUND LEVEL ■■■■□
WIND RESISTANCE ■■■■□
SPLASH/MIST ■■■□□
EFFICIENCY ■■■□□









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DIMENSIONS									PERFORMANCE						
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Stream Size (mm)	No. of Jets	Suction Strainer Openings max. mm.	Spray height (m.)	3.1	4.6	6.1	7.7	9.2	12.2
NPA100	4"	153	254	204	51	229	51	4	LPM	803.0	984.0	1086.0	1170.0	1397.0	
									Head (m.)	5.2	8.6	10.1	11.3	16.5	
									Spread (cm.)	153	183	214	244	290	
NPA200	4"	229	305	254	77	254	36	5	LPM	1098.0	1363.0	1590.0			
									Head (m.)	6.1	9.2	12.2			
									Spread (cm.)	153	199	244			
NPA300	6"	267	407	305	77	305	36	5	LPM			1590.0	1817.0	2006.0	2385.0
									Head (m.)			10.7	12.2	13.8	16.8
									Spread (cm.)			275	305	336	366

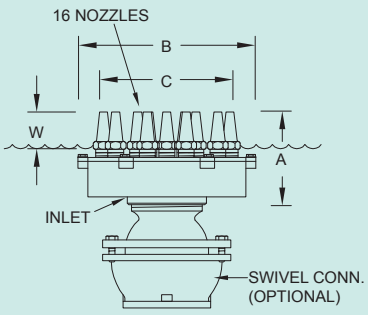
NPD Series – Mist Column Pod

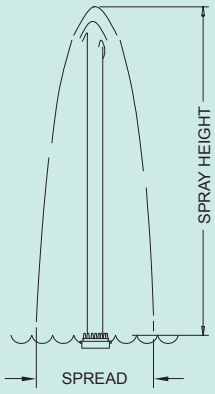
Similar to the Column Pod (NPA), the NPD produces a majestic, clear column of more misty and lacy water. A smaller number of concentric jets produce a less dense column of water. Ideal for medium to large pools and works well in a grouping. Produces a good visual effect from a distance and holds light well. Made of machined brass and cast bronze with 16 custom precision nozzles. Optional alignment swivel available (See ASU). **Not water level dependent.**



VISIBILITY ■■■■■
SOUND LEVEL ■■■■□
WIND RESISTANCE ■■■■□
SPLASH/MIST ■■■□□
EFFICIENCY ■■■□□









Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Stream Size (mm)	Suction Strainer Openings max. mm.
NPD100	3"	204	254	229	77	229	4

PERFORMANCE

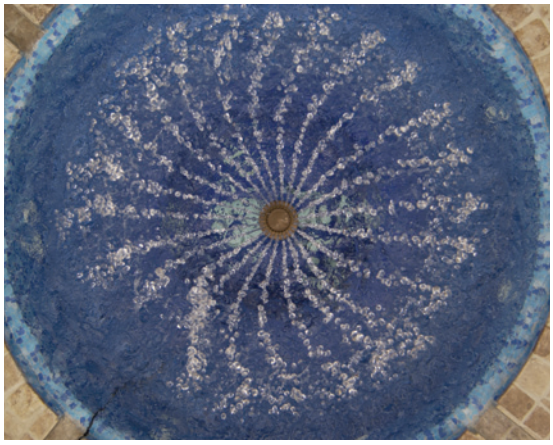
Spray height (m.)	3.1	4.6	6.1	7.7	9.2	10.7	12.2
LPM	379.0	492.0	556.0	628.0	700.0	768.0	837.0
Head (m.)	4	7.4	9.2	12.5	14.1	17.1	19.9
Spread (cm.)	122	153	183	214	244	275	305

NSJ Series – Spray Jewel Jet

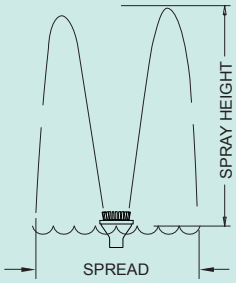
A graceful, outward spray effect that can be used as a centerpiece for small to large fountains and produces a delicate tulip effect. A popular and versatile jet, the Spray Jewel can shoot in height from 1m to 5m. Individual nozzles produce jewel-like streams when illuminated at night. Made of machined bronze and brass with removable top for easy cleaning. Optional alignment swivel available (See ASU). **Not water level dependent.**

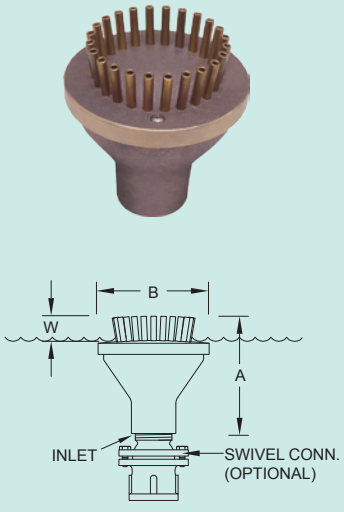
**Contact Crystal Fountains for detailed specifications, installation and operation details.*



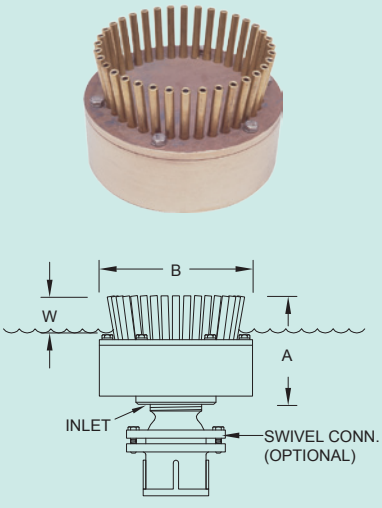


VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ ■ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ ■ □ □





NSJ100



NSJ200-600

NSJ Series – Spray Jewel Jet



DIMENSIONS

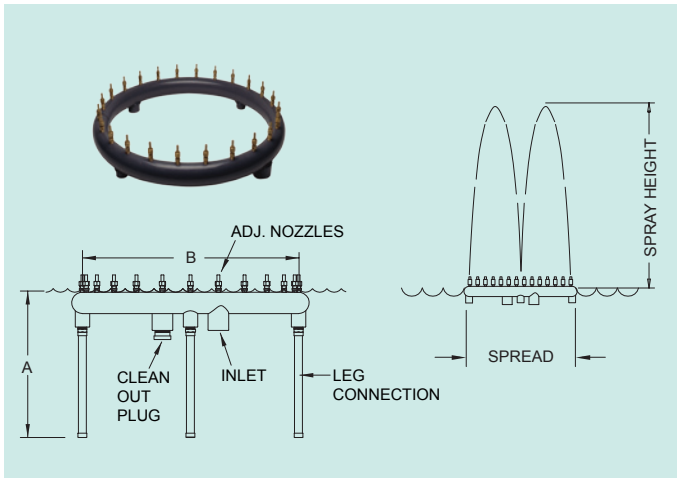
PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	No. of Jets	Spray height (m.)	1	1.6	2.5	3.1	4.6
NSJ100	1 ¼"	127	115	51	24	LPM	159.0	201.0	235.0		
						Head (m.)	1.3	2.2	3.4		
						Spread (cm.)	153	244	366		
NSJ200	2"	127	178	51	36	LPM	235.0	303.0	352.0		
						Head (m.)	1.3	2.2	3.4		
						Spread (cm.)	153	244	366		
NSJ300	3"	134	248	51	48	LPM	201.0	276.0	379.0	420.0	
						Head (m.)	1.6	2.5	3.7	4.3	
						Spread (cm.)	123	183	244	336	
NSJ400	4"	197	293	102	36	LPM	435.0	651.0	939.0	1189.0	1624.0
						Head (m.)	1.6	2.5	3.7	4.3	6.1
						Spread (cm.)	153	244	366	458	671
NSJ600	6"	242	362	102	48	LPM	579.0	1056.0	1249.0	1586.0	2158.0
						Head (m.)	1.6	2.5	3.7	4.3	6.1
						Spread (cm.)	183	244	397	458	671

NSR Series – Spray Ring

A classic, circular pattern of individual sprays with an outstanding visual effect. The spray appears lacy by day and sparkles when illuminated by night. Adjustable nozzles permit infall, straight or outfall spray pattern. Available in multiple sizes from 0.3m - 2.5m diameters but can be customized in size and shape to suit your needs. Made of extruded PVC with individually adjustable brass nozzles. **Not water level dependent.**





VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ □ □ □

DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	No. of Jets	Pipe Diameter (mm)	Suction Strainer Openings max. (mm)	Spray height (m.)	0.6	1	1.3	1.6	1.9	2.5	3.1	3.7	4.3
							Head (m.)	1.9	2.5	3.1	3.7	4.6	6.1	7.7	9.2	10.7
Nozzle Opening = 4 mm (Fine Spray)																
NSR122	1"	458	305	16	26	2	GPM	32.0	37.0	46.0						
NSR222	1" x 2	458	610	22	32	2		41.0	51.0	60.0						
NSR322	1 ¼" x 2	458	915	47	32	2		87.0	110.0	128.0	151.0	173.0				
NSR422	1 ¼" x 2	458	1220	50	39	2		91.0	114.0	137.0	160.0	182.0				
NSR522	1 ¼" x 2	458	1524	56	39	2		105.0	128.0	155.0	182.0	205.0	255.0			
NSR622	1 ¼" x 3	458	1829	75	51	2		137.0	173.0	205.0	241.0	273.0	341.0			
NSR822	1 ¼" x 4	458	2439	113	51	2		205.0	260.0	310.0	360.0	410.0	514.0	569.0		
Nozzle Opening = 5 mm (Heavy Spray)																
NSR223	1 ¼"	458	610	24	51	3	GPM	114.0	160.0	219.0	237.0	251.0				
NSR323	1 ¼" x 2	458	915	36	51	3		137.0	228.0	328.0	355.0	391.0				
NSR423	1 ½" x 2	458	1220	48	51	3		205.0	319.0	437.0	482.0	546.0				
NSR523	1 ½" x 2	458	1524	60	51	3		241.0	382.0	519.0	555.0	591.0	664.0			
NSR623	1 ½" x 3	458	1829	72	51	3		273.0	437.0	601.0	655.0	737.0	792.0			
NSR823	1 ½" x 4	458	2439	84	64	3		364.0	564.0	764.0	837.0	910.0	1028.0	1110.0	1182.0	1264.0

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

**Spread for NSR is the same as b dim.

NSR Series – Spray Ring







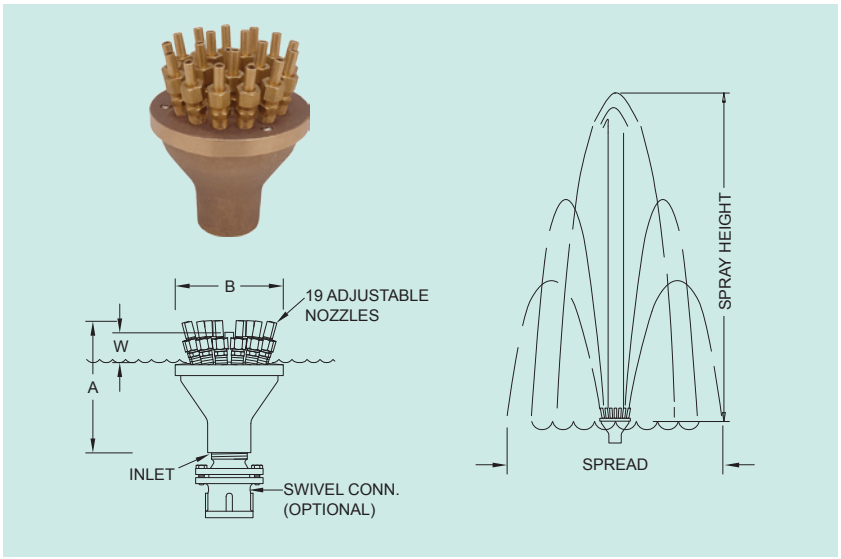
NWA Series – Adjustable WaterCastle Jet

Similar to the WaterCastle (NWC), this jet produces a graceful spray effect but has adjustable nozzles for creative spray patterns. With adjustable spray patterns, spread can go up to 5m. Ideal for small and medium sized displays. Made of cast bronze, machined brass and copper with adjustable nozzles and removable cap for easy cleaning. Optional alignment swivel available (See ASU). **Not water level dependent.**





VISIBILITY ■■■■□
SOUND LEVEL ■□□□□
WIND RESISTANCE ■■■□□
SPLASH/MIST ■■■■■
EFFICIENCY ■■■□□



**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NWA125	1 ¼"	147	127	51	4

PERFORMANCE

Spray height (m.)	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.7
LPM	79.0	83.0	98.0	106.0	117.0	121.0	132.0	144.0
Head (m.)	1.9	2.2	2.8	3.1	3.4	4	4.9	5.8
Spread (cm.)	168	183	260	275	336	336	366	488

NWC Series – WaterCastle Jet

A commercial quality, popular three-tiered effect of clear streams nozzles. Ideal for small and medium sized pools. Nozzle has individual concentric streams producing a layered effect. Illuminates well at night. Made of cast bronze, brass and copper with removable cap for easy cleaning. Optional alignment swivel available (See ASU). **Not water level dependent.**



VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ ■ □ □

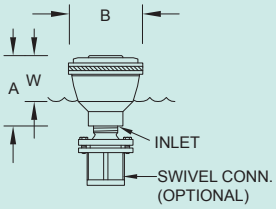
This product (NWC075 only) is available under our Quick Ship program! See page 15 for more details.

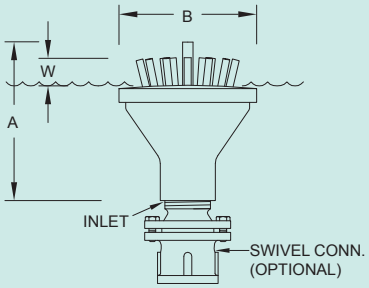


NWC075 - 31 nozzles



NWC125 - 25 nozzles





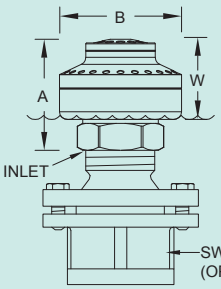


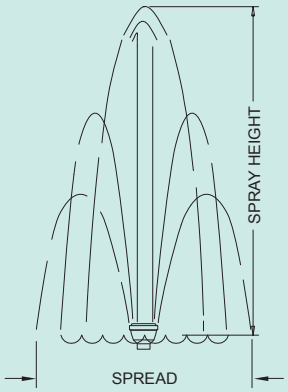


NWC150 - 25 nozzles



NWC151 - 37 nozzles





NWC Series – WaterCastle Jet



**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS						PERFORMANCE													
Part No.	Inlet (b.s.p.t.)	a dim. (mm.)	b dim. (mm.)	w dim. (mm.)	Suction Strainer Openings max. mm.	Spray height (m.)	1	1.3	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.7	4	4.3	4.6
NWC075	¾"	77	83	26	2	LPM	42.0	53.0	68.0	79.0									
						Head (m.)	2.2	3.1	3.7	8.6									
						Spread (cm.)	77	92	153	199									
NWC125	1 ¼"	147	127	26	4	LPM		72.0	79.0	87.0	95.0	106.0	114.0	125.0					
						Head (m.)		1.9	2.2	2.5	3.1	3.7	4.3	4.9					
						Spread (cm.)		92	122	153	183	214	244	275					
NWC150	1 ½"	93	102	64	3	LPM		148.0	159.0	174.0	193.0	204.0	216.0	223.0	235.0	242.0	254.0	265.0	276.0
						Head (m.)		1.9	2.2	2.6	2.9	3.4	3.7	3.9	4.2	4.5	4.8	5.4	5.7
						Spread (cm.)		153	168	199	229	260	275	290	321	336	366	381	397
NWC151	1 ½"	93	102	64	3	LPM		201.0	223.0	242.0	261.0	280.0	291.0	307.0	322.0	333.0	344.0	356.0	379.0
						Head (m.)		1.9	2.3	2.6	2.9	3.4	3.7	3.9	4.3	4.6	4.9	5.2	5.8
						Spread (cm.)		183	214	244	260	290	321	336	366	381	412	442	473

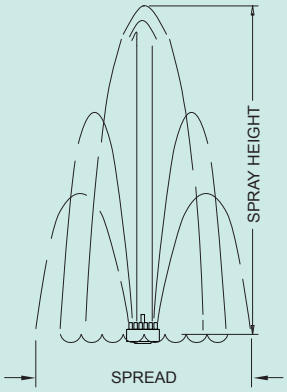
NWD Series – Multi-Adjustable WaterCastle Jet

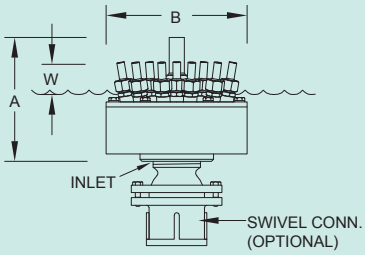
A part of the WaterCastle family of jets, this versatile three-tiered spray effect is the largest with the additional ability to adjust nozzles outwardly as well as to adjust height. The intermediate and outer rings of jets are independently height adjustable with controls located on top of the spray head. Can shoot up to 15m in height. Made of machined cast bronze and brass. **Not water level dependent.**



VISIBILITY ■■■■□
SOUND LEVEL ■■■□□
WIND RESISTANCE ■■□□□
SPLASH/MIST ■■□□□
EFFICIENCY ■■■□□









**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS					PERFORMANCE							
Part No.	Inlet (b.s.p.t.)	a dim. (mm.)	b dim. (mm.)	Suction Strainer Openings max. mm.	Spray height (m.)	2.5	3.1	4.6	6.1	9.2	12.2	15.3
NWD200	2"	178	178	4	LPM	182.0	201.0	261.0	310.0			
					Head (m.)	4.3	5.2	8	9.8			
					Spread (m.)	N/A	N/A	N/A	N/A			
NWD250	2 ½"	254	178	4	LPM	288.0	363.0	450.0	530.0	693.0	833.0	
					Head (m.)	3.4	5.2	7.7	10.1	15	19.3	
					Spread (m.)	N/A	N/A	N/A	N/A	N/A	N/A	
NWD300	3"	254	178	4	LPM		568.0	651.0	742.0	1291.0	1601.0	1889.0
					Head (m.)		4.6	6.1	8	13.2	17.7	21.4
					Spread (m.)		N/A	N/A	N/A	N/A	N/A	N/A
NWD400	4"	305	280	4	LPM		1064.0	1465.0	1620.0	1878.0	2082.0	2267.0
					Head (m.)		4	6.1	8	11.9	14.7	20
					Spread (m.)		N/A	N/A	N/A	N/A	N/A	N/A
NWD600	6"	381	280	4	LPM		1946.0	2502.0	2926.0	3755.0	4164.0	4618.0
					Head (m.)		4	6.1	8	11.9	14.7	20
					Spread (m.)		N/A	N/A	N/A	N/A	N/A	N/A

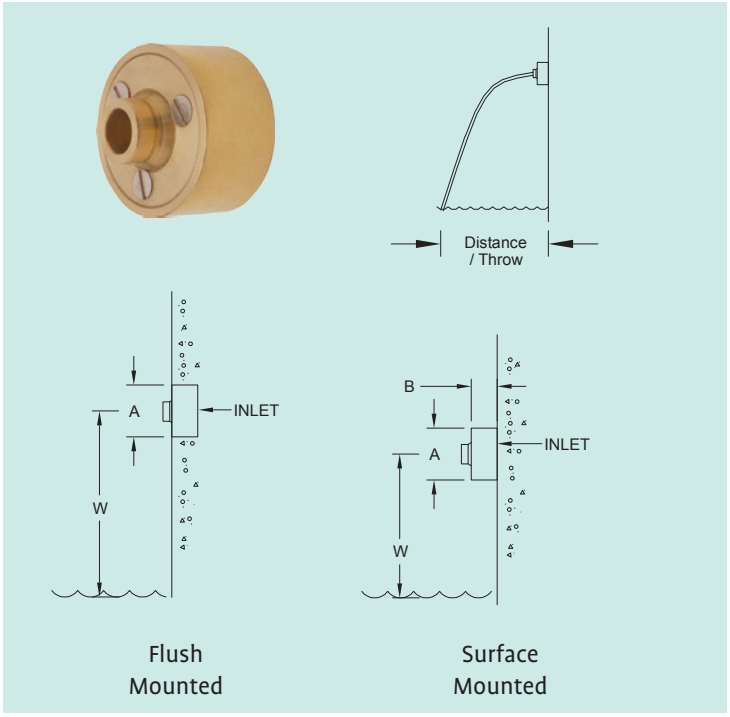
NMS Series – Mini-Spout Jet

A clear stream jet that falls gracefully into pools from a small wall spout. Used for wall mounted applications either flush or surface. Integral swivel permits directional adjustments to the stream, For use primarily in small architectural pools. Made of extruded brass. **Not water level dependent.**





VISIBILITY ■■■■□
SOUND LEVEL ■■□□□
WIND RESISTANCE ■■■□□
SPLASH/MIST ■■□□□
EFFICIENCY ■■■□□



**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NMS050	½"	51	26	508	7

Options	Add Suffix
Surface Flange	K
Membrane Clamp	L

PERFORMANCE

Throw (m.)	0.2	0.4	0.5
LPM	11.0	15.0	19.0
Head (m.)	0.6	0.6	0.6

NRC Series – Rain Curtain

A spectacular effect of water droplets raining down mylar laces. Contains:

Laces 7mm mylar:
NRC100 mylar spool length is 30.5m or **NRC101** mylar spool length is 183m.

Nozzles
NRC200 - 28LPM with minimum nozzle spacing of 29mm.

Splash suppressor
NRC300 – plastic housing - 1 per nozzle required

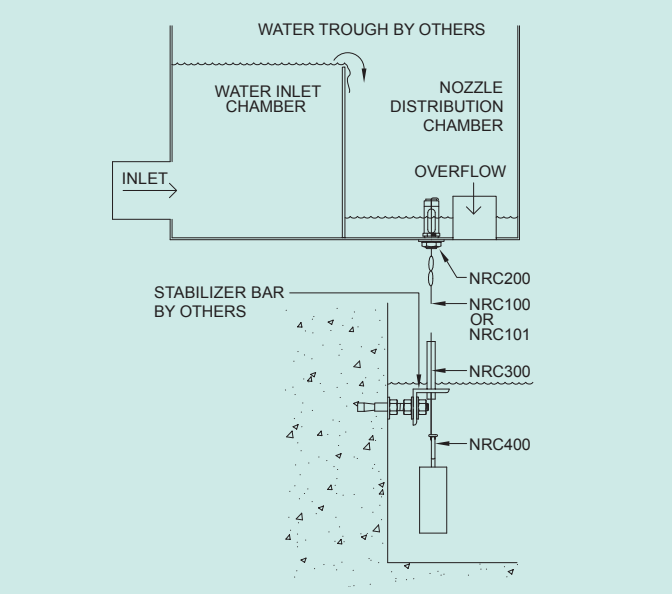
Lead Weights
NRC400 – 0.4kg - 1 per nozzle required

Note: Dimension and Performance Chart Not Applicable.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



Droplets fall from great heights in slow motion, quietly and without splash. Laces may be installed up to 20° and still have water stick to the rain curtain. Curtain can take many forms. Dazzling when illuminated. Use only filtered and softened water to prevent clogging and discoloring of curtain laces.









VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ □ □ □ □
WIND RESISTANCE	■ ■ ■ □ □
SPLASH/MIST	■ □ □ □ □
EFFICIENCY	■ ■ ■ □ □

FANNING NOZZLES

Spreading, cooling, sheeting or finger sprays











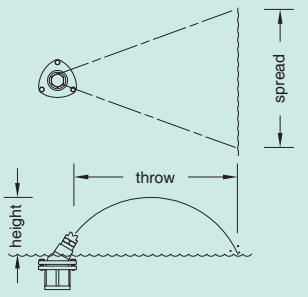


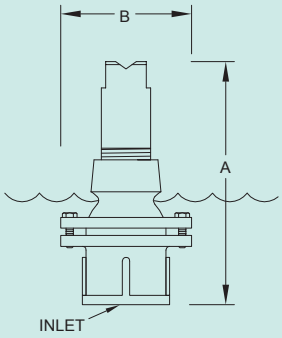
NGA Series – Fan Jet

A clear, fan-shaped display with narrow-based spread that can reach heights up to 3m. Ideal when angled to 45° and used as a peripheral effect in a location free of wind. Most effective used in multiples. Made of cast bronze, machined brass and copper with swivel base. **Not water level dependent.**



VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ ■ □ □







Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
NGA100	1"	102	64	4
NGA150	1 ½"	140	83	7
NGA200	2"	210	115	9

PERFORMANCE

Part No.	Throw (m.)	0.6	1	1.6	1.9	2.5	3.1
NGA100	LPM	11.0	19.0	19.0			
	Head (m.)	0.9	1.6	2.2			
	Spread (cm.)	54	145	260			
	Height (m.)	0.6	1.3	1.7			
NGA150	LPM	42.0	53.0	68.0	76.0	87.0	
	Head (m.)	1	1.3	1.9	2.5	3.1	
	Spread (cm.)	16	61	92	214	366	
	Height (m.)	0.8	1.1	1.7	2	2.8	
NGA200	LPM	34.0	42.0	53.0	64.0	72.0	79.0
	Head (m.)	0.6	1	1.3	1.9	2.2	2.5
	Spread (cm.)	16	31	61	122	122	183
	Height (m.)	0.5	0.6	1	1.6	1.6	1.9

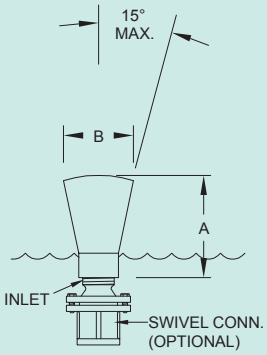
NGB Series – Fan Jet

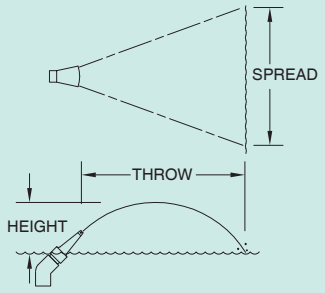
A clear, fan-shaped sheet of water with wider-based spread than the NGA. Fan Jet works best at lower heights. Ideal when angled to 45° and used as a peripheral effect in a location free of wind. Most effective used in multiples. Optional alignment swivel available (ASU). Made of cast bronze. **Not water level dependent.**



VISIBILITY ■ ■ ■ □ □
SOUND LEVEL ■ ■ □ □ □
WIND RESISTANCE ■ ■ ■ □ □
SPLASH/MIST ■ ■ ■ □ □
EFFICIENCY ■ ■ ■ □ □







**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
NGB100	1"	108	74	4

PERFORMANCE

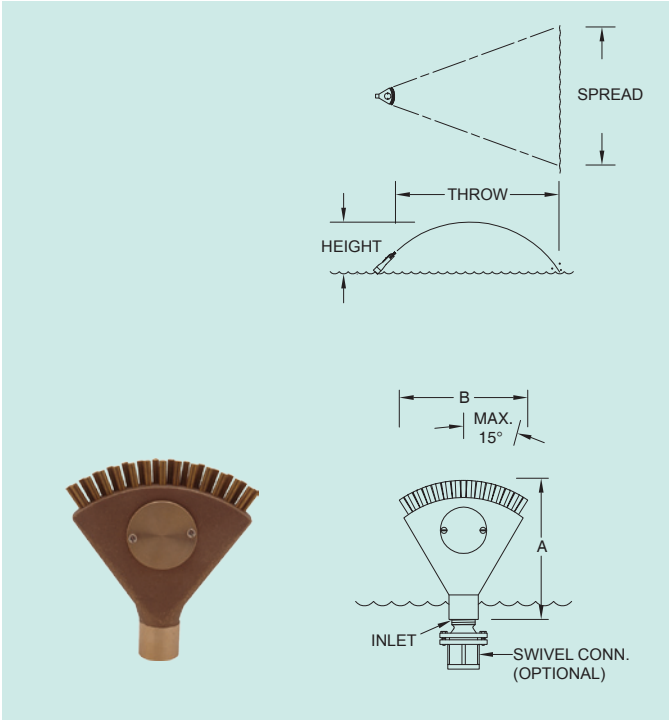
Throw (m.)	0.6	1	1.6	2.2
LPM	34.0	45.0	53.0	72.0
Head (m.)	1	1.3	1.9	2.5
Spread (cm.)	61	77	168	244
Height (m.)	0.6	0.7	1.2	1.4

NGF Series – Finger Jet

A finger-like fan spray ideal as a peripheral adornment to vertical central displays in medium-sized installations. Excellent in wall-mounted applications. Effective as an evaporative spray in pools and ponds or in water cooling. Comes with 27 plume jets in two rows. Large cleanout port. Optional alignment swivel available (ASU). Made of bronze, brass and stainless steel. **Not water level dependent.**







Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
NGF100	1"	178	153	4

PERFORMANCE

Throw (m.)	0.6	1	1.3	1.6	1.9
LPM	49.0	64.0	72.0	87.0	95.0
Head (m.)	1.3	1.6	1.9	2.5	3.1
Spread (cm.)	153	229	260	305	397
Height (m.)	0.5	0.8	0.9	1.3	1.4

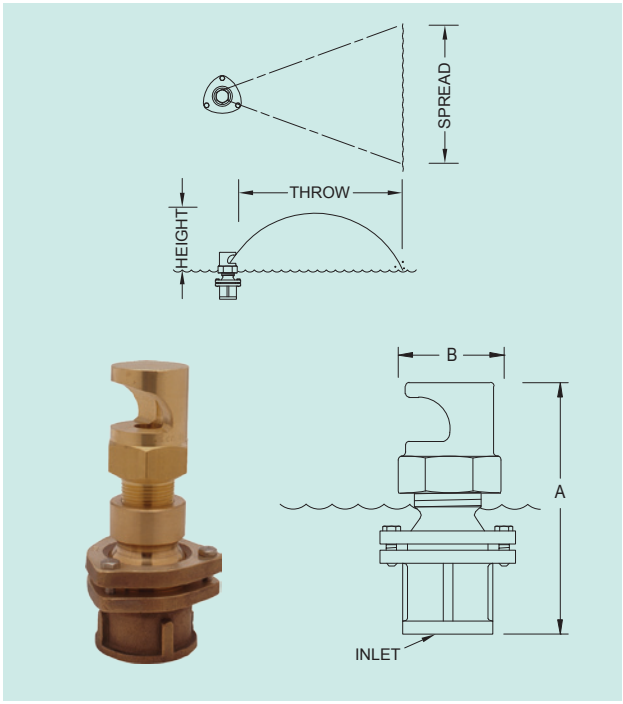
VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ ■ ■ □ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ ■ □ □

NGL Series – Flat Jet

A clear, horizontal, low, fan-shaped display with spread of up to 3m. Ideal as a peripheral effect in a quiet location free of wind. Made of cast bronze and brass with swivel connection. **Not water level dependent.**



VISIBILITY ■■■□□
SOUND LEVEL ■■□□□
WIND RESISTANCE ■■□□□
SPLASH/MIST ■■□□□
EFFICIENCY ■■■□□





**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS					PERFORMANCE				
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.	Throw (m.)	0.6	1	1.3	1.9
NGL050	½"	115	64	4	LPM	7.0	11.0	15.0	
					Head (m.)	1	1.3	1.9	
					Spread (cm.)	92	138	183	
					Height (cm.)	13	13	13	
NGL075	¾"	140	77	5	LPM	19.0	26.0	34.0	
					Head (m.)	1	1.3	1.6	
					Spread (cm.)	107	153	214	
					Height (cm.)	18	18	18	
NGL100	1"	178	83	5	LPM	38.0	45.0	64.0	125.0
					Head (m.)	1	1	1.6	2.5
					Spread (cm.)	92	122	214	305
					Height (cm.)	23	23	23	23

NLF Series – Crown Jet

A versatile, smaller jet that can be used in play decks* or in a fountain. Ideal for small and medium sized pools providing gentle spray coverage and cooling. This can be used at the edge of a swimming pool angled inward to create delicate finger sprays. Optional alignment swivel available (See ASU). Made of machined cast bronze with removable, flush-mounted faceplate for easy cleaning with optional security key. Optional winter cover also available. **Not water level dependent.**

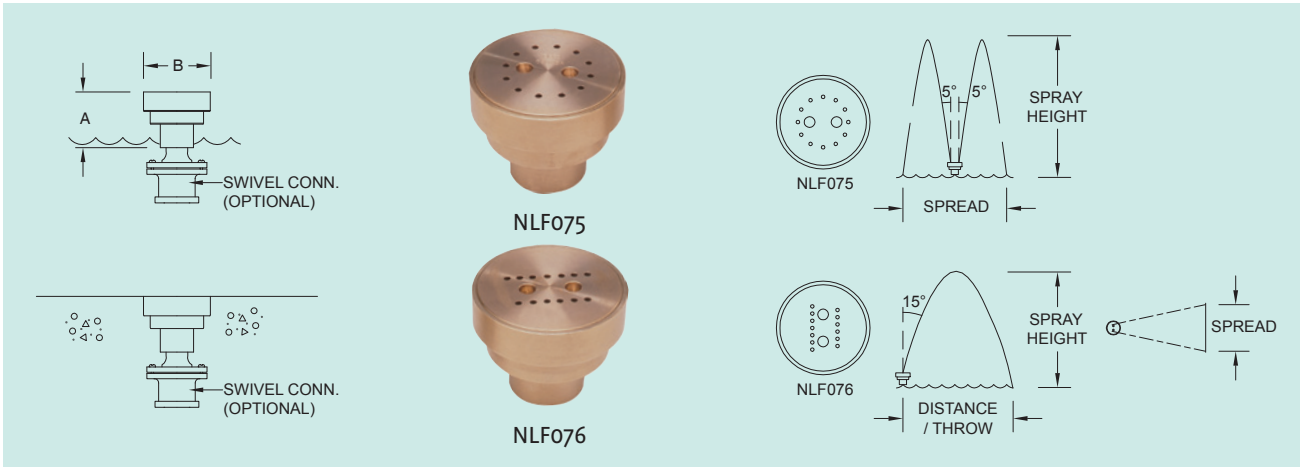
* For interactive play, do not exceed 6 meters per second.

VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ □ □ □ □
WIND RESISTANCE	■ ■ ■ □ □
SPLASH/MIST	■ ■ ■ ■ ■
EFFICIENCY	■ ■ ■ □ □





This product is available under our Quick Ship program! See page 15 for more details.



Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
NLF075	1"	64	51	2
NLF076	1"	64	51	2

PERFORMANCE

Part No.	Spray height (m.)	0.6	1	1.3	1.9
NLF075	LPM	15.0	19.0	23.0	26.0
	Head (m.)	1	1.6	1.9	3.1
	Spread (cm.)	45	60	90	120
NLF076	LPM	19.0	19.0	23.0	34.0
	Head (m.)	1.3	1.6	2.2	3.4
	Spread (cm.)	106	168	230	360
	Throw (m.)	0.6	1.3	1.3	2.2

Options	Add Suffix
Cover Removal Key	K
Winter Cover	W

NMB Series – Mushroom / Bell Jet

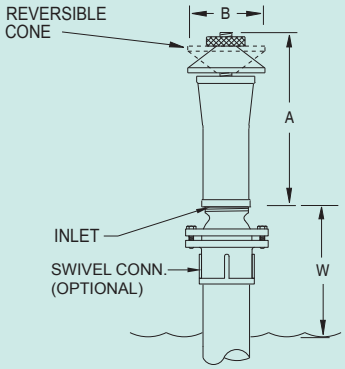
A clear sheet of pulsating water capable of assuming dual forms by adjusting the top cone. The effect can be changed from mushroom (flatter on top and wider spread) to a bell shape (clearer, rounder top and falls straight). Quiet and splash-free. Ideal for small areas which are free of wind. Optional alignment swivel available (See ASU). Made of machined cast bronze and brass. **Not water level dependent.**



VISIBILITY ■ ■ ■ □ □
SOUND LEVEL ■ □ □ □ □
WIND RESISTANCE ■ □ □ □ □
SPLASH/MIST ■ ■ □ □ □
EFFICIENCY ■ ■ ■ □ □







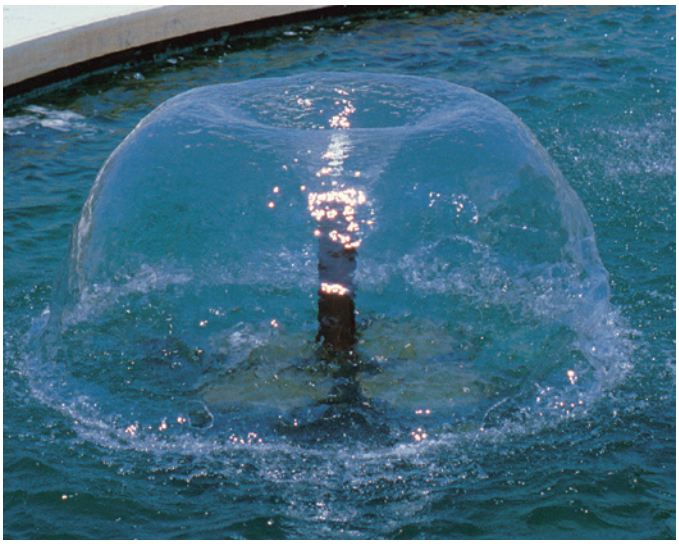


**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS						PERFORMANCE			
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Spray diameter (m.)	0.3	0.6	1
NMB075	¾"	121	51	229	2	LPM	15.0	19.0	
						Head (m.)	0.6	0.6	
NMB100	1"	147	61	229	2	LPM	19.0	26.0	38.0
						Head (m.)	0.6	0.6	1

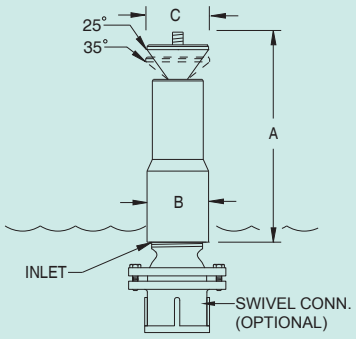
NMC Series – Tulip Jet

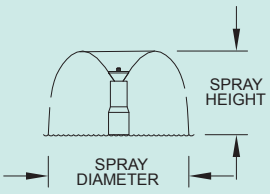
A clear, thicker sheet of pulsating water rising around a center point and falling in a 360° circle. There is very little sound or splash. Ideal for both serene and windy locations. Effective as a cooling and/or evaporative spray. Optional alignment swivel available (See ASU). Made of machined cast bronze and brass with adjustable top cone to adjust thickness of water and spread. Standard with 25° or 35° cone. Custom angled cones also available in 20°, 30°,40° and 45° upon request. **Not water level dependent.**











VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ ■ □ □

NMC Series – Tulip Jet

DIMENSIONS						PERFORMANCE										
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	Suction Strainer Openings max. mm.	Spray diameter (m.)	0.3	0.5	0.6	1	1.3	1.6	1.9	2.2	2.5	2.8
NMC135	1 ½"	191	58	58	4	LPM	53.0	64.0								
						Head (m.)	0.6	0.6								
						Spread (cm.)	23	28								
NMC225	2"	223	70	77	6	LPM			140.0	151.0	185.0	204.0				
						Head (m.)			0.6	0.6	1	1				
						Spread (cm.)			31	36	41	46				
NMC235	2"	223	70	77	6	LPM			136.0	163.0	167.0	193.0				
						Head (m.)			0.6	1	1	1				
						Spread (cm.)			39	44	54	67				
NMC325	3"	261	102	96	6	LPM						379.0				
						Head (m.)						0.6				
						Spread (cm.)						61				
NMC335	3"	261	102	96	6	LPM							492.0			
						Head (m.)							0.6			
						Spread (cm.)							46			
NMC425	4"	305	127	140	6	LPM			Full	Sheet	Pattern			644.0		
						Head (m.)								0.6		
						Spread (cm.)								77		
NMC435	4"	305	127	140	6	LPM									719.0	
						Head (m.)									0.6	
						Spread (cm.)									51	
NMC625	6"	451	197	172	6	LPM									833.0	
						Head (m.)									0.6	
						Spread (cm.)									92	
NMC635	6"	451	197	172	6	LPM										946.0
						Head (m.)										0.6
						Spread (cm.)										92

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

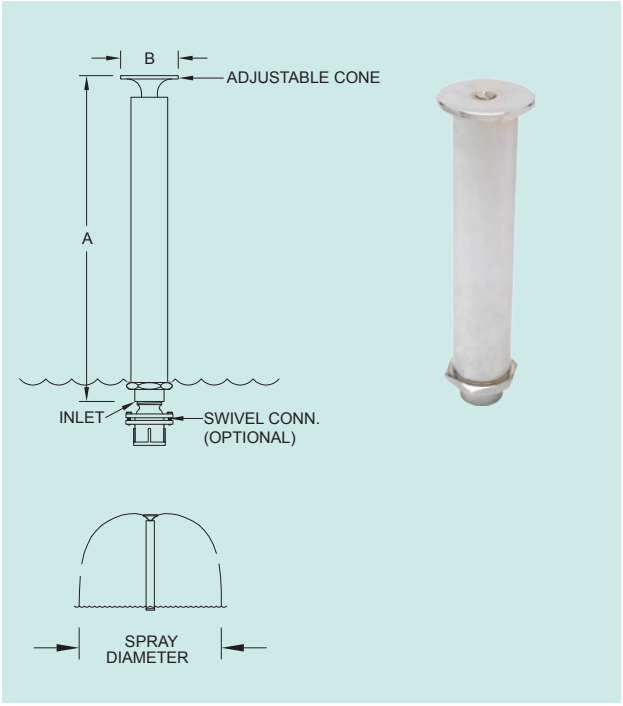
NMF Series – Bell Jet

A clear sheet of water in the shape of a 360° bell. Minimal sound or splash. Ideal for small and medium-sized displays in locations which are free of wind. Suitable for groupings in varying heights (3 different heights available) and beautiful when illuminated. Optional alignment swivel available (See ASU). Made of chrome-plated cast bronze with adjustable top cone to adjust thickness of water and spread. **Not water level dependent.**





VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ □ □ □ □
WIND RESISTANCE	■ □ □ □ □
SPLASH/MIST	■ □ □ □ □
EFFICIENCY	■ ■ ■ □ □



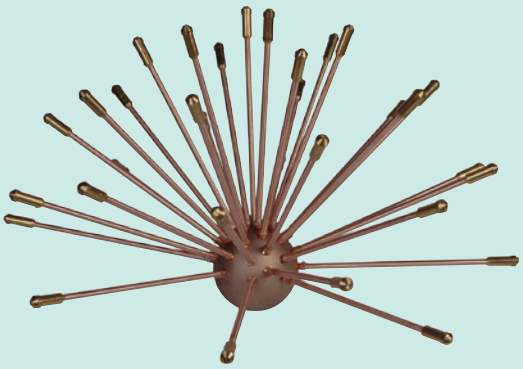
**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS					PERFORMANCE				
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.	Spray diameter (m.)	0.3	0.6	0.8	1.3
NMF051	½"	153	42	2	LPM	23.0	34.0	38.0	
NMF052		229			Head (m.)	1	1.6	1.9	
NMF053		305							
NMF101	1"	305	54	2	LPM	34.0	42.0	45.0	49.0
NMF102		458			Head (m.)	1	1.6	1.9	2.5
NMF103		610							

NDH Series – Dandelion Hemisphere

Delicate and floating with a dandelion type of effect that sits close to the water surface. The Dandelion Hemisphere has interconnecting discs of water which shimmer on the surface and illuminate well. Ideal for malls, foyers and areas which are free of wind. Nozzles are easily cleaned, individually adjustable and removable. Available with optional stand. Made of cast bronze, machined brass and copper. **Not water level dependent.**

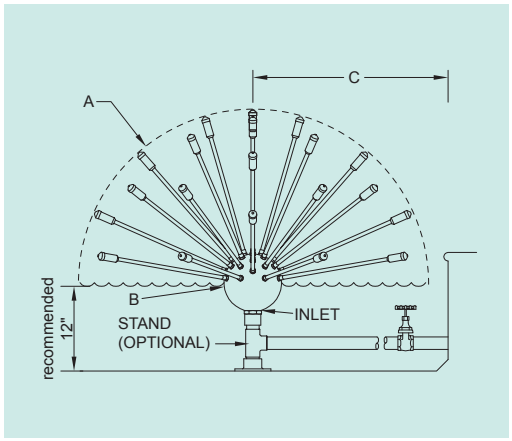






DIMENSIONS | **PERFORMANCE**

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	No. of arms	Suction Strainer Openings max. mm.	LPM	Head (m.)
NDH030	2"	915	204	1829	21	2	208.0	2.8
NDH040	2"	1220	204	2439	21	2	208.0	3.1
NDH045	2"	1220	204	2439	33	2	322.0	3.1
NDH060	2"	1829	204	3658	33	2	322.0	4.3
NDH065	3"	1829	254	3658	61	2	583.0	4.6
NDH080	4"	2439	305	4879	85	2	814.0	5.8
NDH100	4"	3048	305	6096	125	2	1189.0	6.8



**Contact Crystal Fountains for detailed specifications, installation and operation details.*

VISIBILITY ■■■■□
SOUND LEVEL ■■■□□
WIND RESISTANCE ■□□□□
SPLASH/MIST ■■■■□
EFFICIENCY ■■□□□

NDS Series – Dandelion Sphere

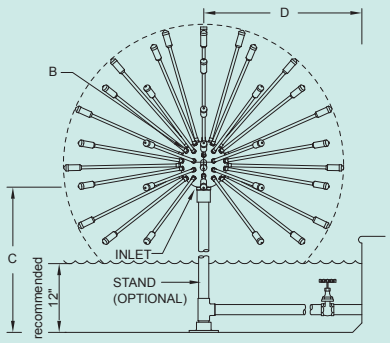
A pulsating sphere of interconnecting discs of water that rises above the water level on a stand up to 305mm high. When not in use as a water feature, the Dandelion Sphere appears sculptural. Ideal in enclosed malls, foyers, and areas which are free of wind. Breathtaking when illuminated. Nozzles are easily cleaned, individually adjustable (for water thickness) and removable. Available with optional stands. Made of cast bronze, machined brass and copper. **Not water level dependent.**

**Contact Crystal Fountains for detailed specifications, installation and operation details.*









DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	No. of arms	Suction Strainer Openings max. mm.	PERFORMANCE LPM	PERFORMANCE Head (m.)
NDS030	2"	36"	204	1524	1829	29	2	284.0	2.5
NDS040	2"	48"	204	1524	2439	29	2	284.0	3.1
NDS045	2"	48"	204	1829	2439	61	2	587.0	3.7
NDS060	2"	72"	254	2438	3658	61	2	587.0	4
NDS065	3"	72"	305	2438	3658	125	2	1200.0	4.3
NDS080	4"	96"	508	3048	4879	173	2	1650.0	4.9
NDS100	6"	120"	508	3658	6096	253	2	2400.0	5.8

VISIBILITY ■■■■□
SOUND LEVEL ■■■□□
WIND RESISTANCE ■□□□□
SPLASH/MIST ■■■■□
EFFICIENCY ■■□□□

SIMPLE INTERACTIVE NOZZLES

Non-Sequencing/Constant Flow

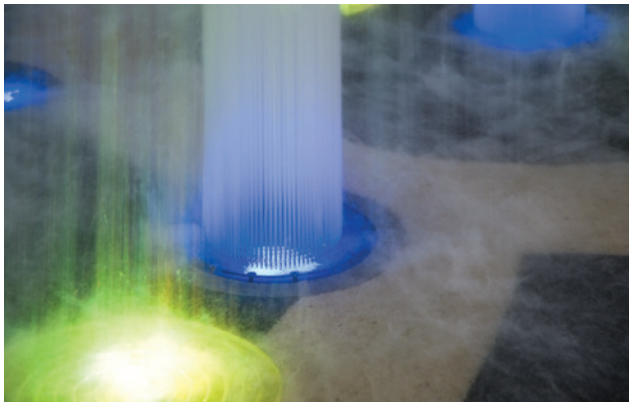
While choreographed water features can be exciting, similar effects can be achieved using non-sequenced nozzles. These constant flow nozzles don't require computer controls, simply turn the pump "on" and the fountain is in operation!

Fountains designed for public play require certain design features:

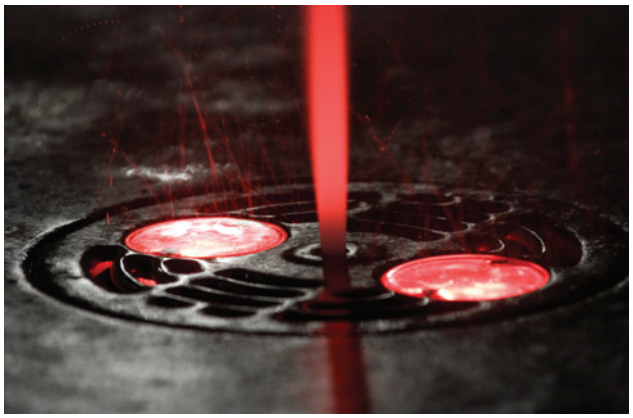
- Flush mounted (no trip hazards)
- Deck-friendly (no toe entrapment)
- Play-safe (soft water)
- Some smaller nozzles require lower GPM and can be supplied by municipal water supplies.

76	SIMPLE INTERACTIVE DECK JETS
77	AJD Series – Drain with Center Jet
78	NLG Series – Ground Jet
80	NLC Series – Column Jet
81	NCB Series – Deck Level Cascade Niche
82	NSS Series – Deck Level Spray Ring
83	NLH Series – Bi-Stream Ground Jet
84	NLF Series – Deck Level Crown Jet
85	Introduction to Illuminated Deck Jets
86	LED 170 Series – Illuminated Ground Jet
90	NNC Series – Dynamite Blast/V-Blast
92	More Simple Interactive Deck Jets











AJD Series – Drain with Center Jet

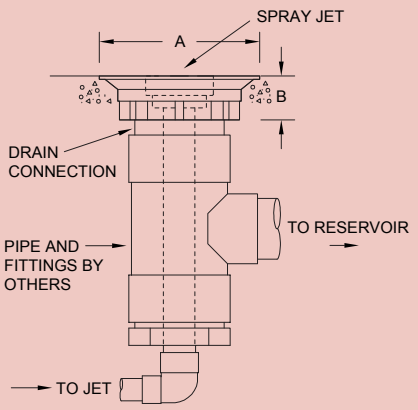
Primarily used in spray aprons for public playgrounds. This flush-mounted effect provides a cost effective solution that's both functional and decorative. The 102mm side outlet connects to a drain line. Water source is plumbed within drain piping. Made of machined cast bronze, brass and stainless steel fitted.

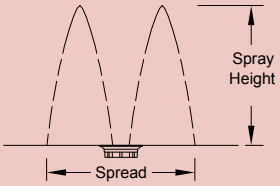
*For interactive play, do not exceed 6m per second.



VISIBILITY ■ ■ ■ □ □
SOUND LEVEL ■ ■ □ □ □
WIND RESISTANCE ■ □ □ □ □
SPLASH/MIST ■ ■ ■ ■ □
EFFICIENCY ■ ■ □ □ □









Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings (mm)
AJD100	1 ¼"	153	305	89	2

PERFORMANCE

Spray height (m.)	0.6	1	1.3	1.6	1.9
LPM	15.0	19.0	23.0	26.0	26.0
Head (m.)	1	1.6	1.9	2.5	3.1
Spread (cm.)	41	56	82	92	112

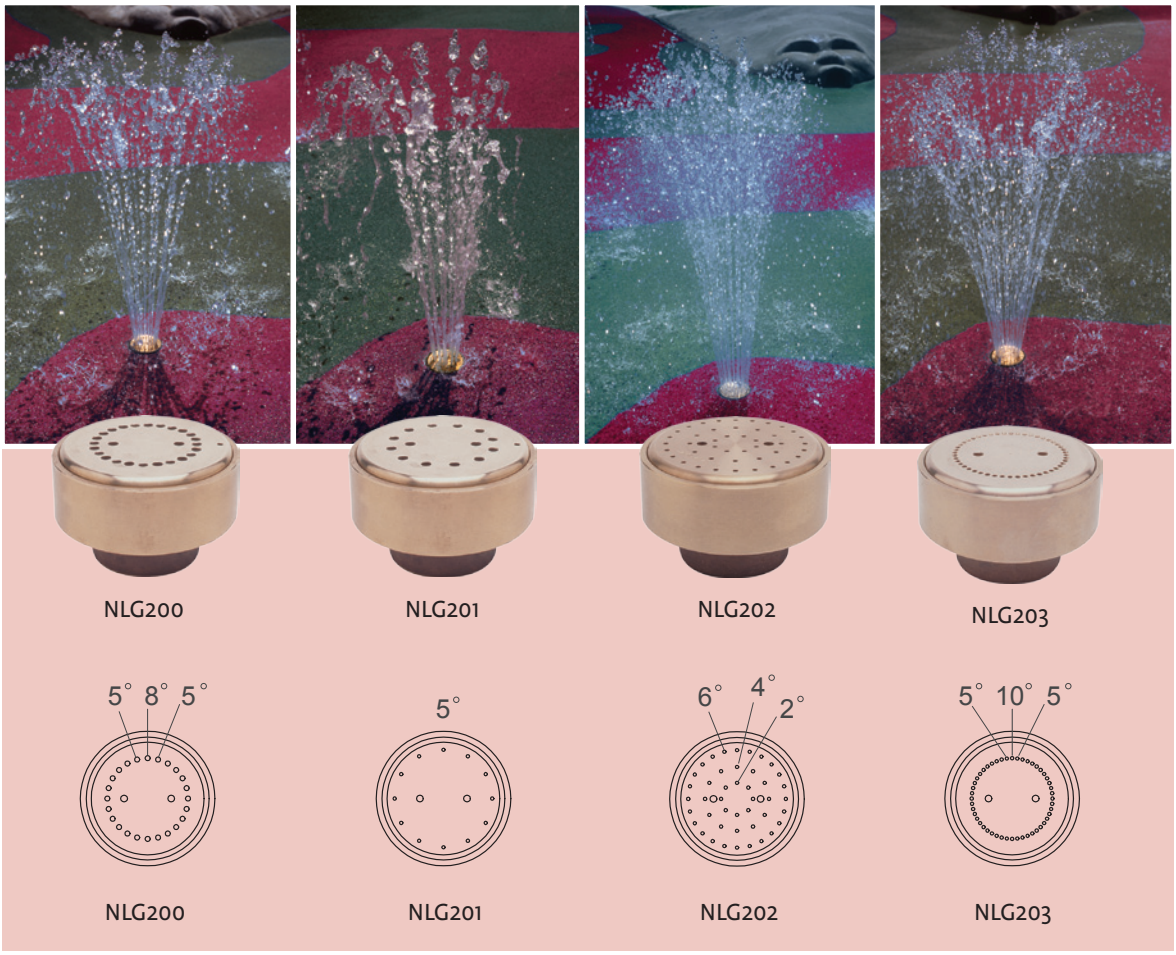
NLG Series – Ground Jet



A popular, multi-purpose spray jet that can be used in small and medium-sized playdecks*. Big brother to the NLF (Crown Jet), this nozzle is 127mm diameter and creates a larger volume of gentle spray. Available with 4 interchangeable tops for different spray patterns that provide up to 5m of spread. Made of machined cast bronze with removable faceplate for easy cleaning with an optional security key. Optional alignment swivel available (ASU). Optional winter cover also available. **Not water level dependent.**

*For interactive play, do not exceed 6 meters per second.

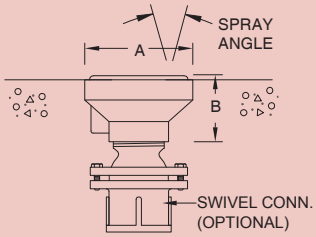
VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ □ □ □ □
SPLASH/MIST	■ ■ ■ ■ □
EFFICIENCY	■ ■ □ □ □

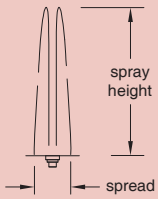


NLG Series – Ground Jet









**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS					PERFORMANCE			
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.	Spray height (m.)	1	1.6	3.1
NLG200	2"	77	127	1	LPM	114.0	148.0	220.0
					Head (m.)	1.6	2.5	5.5
					Spread (cm.)	122	183	336
NLG201	2"	77	127	1	LPM	98.0	129.0	189.0
					Head (m.)	1.6	2.5	4.9
					Spread (cm.)	7	12	21
NLG202	2"	77	127	1	LPM	95.0	121.0	178.0
					Head (m.)	1.6	2.5	5.2
					Spread (cm.)	92	138	244
NLG203	2"	77	127	1	LPM	98.0	129.0	182.0
					Head (m.)	1.6	2.5	4.6
					Spread (cm.)	138	206	336

Options	Add Suffix
Security Key	K
Winter Cover	W

NLC Series – Column Jet

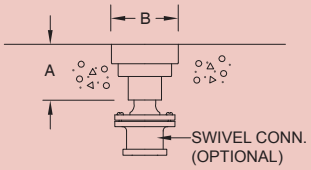
A simple, vertical column of clear water ideal as a focal point for small and medium-sized displays. Composed of an array of smaller openings to create a delicate upward spray. Also appropriate as a secondary effect for large displays. Optional alignment swivel available (ASU). Made of machined bronze and brass with removable top for easy cleaning. **Not water level dependent.**

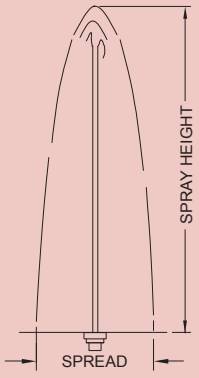
*For interactive play, do not exceed 6 meters per second.



VISIBILITY ■■■■□
SOUND LEVEL ■■□□□
WIND RESISTANCE ■■■■□
SPLASH/MIST ■■■□□
EFFICIENCY ■■□□□







Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (n.p.t.) (mm)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
NLC075	1"	51	64	51	2

PERFORMANCE

Spray height (m.)	0.6	1	1.3	1.6	1.9
LPM	38.0	45.0	53.0	57.0	60.0
Head (m.)	1.3	1.9	2.5	2.8	3.4
Spread (cm.)	21	26	26	31	31

Options	Add Suffix
Cover Removal Key	K
Winter Cover	W

NCB Series – Deck Level Cascade Niche

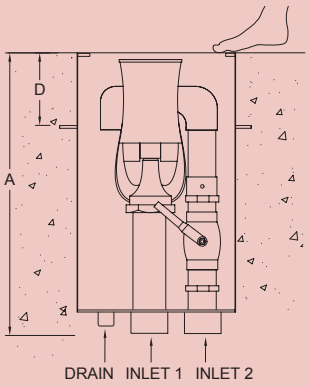
The Deck level Cascade Niche is specifically designed for dry or poured deck concrete fountains and is ideal for a main feature or for soft, interactive play*. The easy to maintain package incorporates the cascade nozzle and water level inlet piping to create the popular pyramid shaped mound of water. Niche is pre-plumbed for easy installation and comes with an integrated overflow adjustment valve. Also comes with a stainless steel cover and central stainless steel mesh for water flow and safety. Available with optional stainless steel winter cover, and tamperproof screwdriver. Made of bronze and stainless steel. Water level dependent.

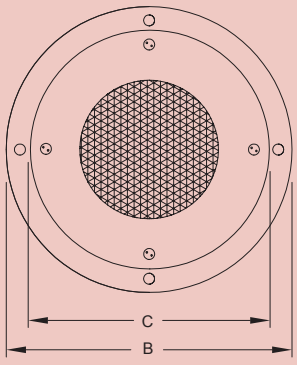
*For interactive play, do not exceed 6 m per second.



VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ ■ ■ ■
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ □ □ □







DIMENSIONS

Part No.	Inlet 1 (b.s.p.t.)	Inlet 2 (b.s.p.t.)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
NCB200	2"	2"	13	432	331	280	112

PERFORMANCE

Spray height (m.)	1.3	1.6	1.9	2.5
Inlet 1 LPM	159.0	178.0	189.5	231.0
Inlet 2 LPM	159.0	178.0	189.5	231.0
Head (m.)	5.5	7.1	9.8	11.3
Spread (m.)	N/A	N/A	N/A	N/A

NSS Series – Deck Level Spray Ring

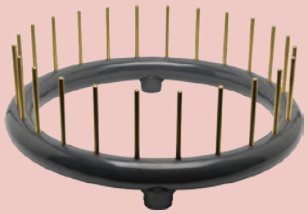
The Deck Level Spray Ring provides a classic look but is completely safe for interactive play. A range of 24 – 84 individual machined brass nozzles are placed in a circular pattern of between 0.6 m – 2.4 m in diameter. Custom sizes are also available upon request. Nozzle patterns create a lacy spray by day and sparkles when illuminated at night. Finishing of the spray ring is flush to the concrete making it ideal for interactive play*. Made of plastic and machined brass. Not water level dependent.

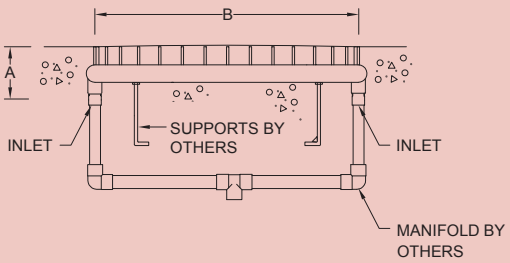
*For interactive play, do not exceed 6 m per second.

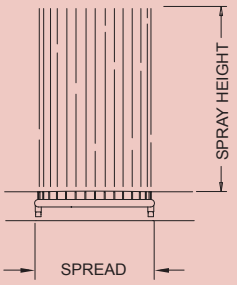




VISIBILITY ■■■■□
SOUND LEVEL ■■■□□
WIND RESISTANCE ■■□□□
SPLASH/MIST ■■■□□
EFFICIENCY ■■□□□







DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	No. of Jets	Pipe Diameter (mm)	Suction Strainer Openings max. mm.
Nozzle Opening = 4.7 mm						
NSS200	1 ¼" x 2	432	610	24	51	3
NSS300	1 ¼" x 2	432	915	36	51	3
NSS400	1 ½" x 2	432	1220	48	51	3
NSS500	1 ½" x 2	432	1525	60	51	3
NSS600	1 ½" x 3	432	1829	72	51	3
NSS800	1 ½" x 4	432	2134	84	64	3

PERFORMANCE

Spray height (m.)	0.6	1	1.3	1.6	1.9	2.5	3.1	3.7	4.3
Head (m.)	1.8	2.4	3	3.6	4.6	6.1	7.6	9.1	10.7
LPM									
NSS200	95.0	133.0	182.0	197.0	209.0				
NSS300	114.0	190.0	273.0	296.0	326.0				
NSS400	171.0	265.0	364.0	402.0	455.0				
NSS500	201.0	318.0	432.0	462.0	493.0	553.0			
NSS600	228.0	364.0	500.0	546.0	614.0	659.0			
NSS800	303.0	470.0	636.0	697.0	758.0	856.0	924.0	985.0	1053.0

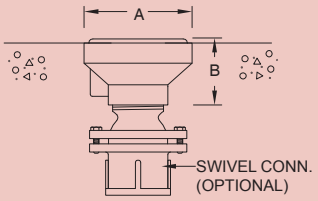
NLH Series – Bi-Stream Ground Jet

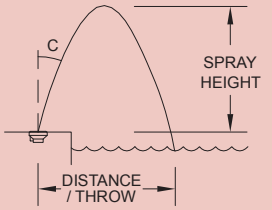
The Bi-Stream Ground Jet produces two streams of water that rises up to 1.2m in height and throw up to 3.6m. Face plate is removable for easy cleaning with an optional security key. A versatile effect, the Bi-Stream can be used in small and medium sized fountains and be installed in-ground or above water. Comes with optional winter cover and security key. Made of cast bronze. Not water level dependent.

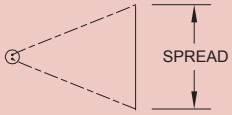


VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ □ □
WIND RESISTANCE	■ ■ ■ ■ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ ■ □ □









DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
NLH200	2"	77	127	1

PERFORMANCE

Throw (m.)	1.6	3.1	3.7
LPM	29.0	42.0	57.0
Head (m.)	1.3	2.5	3.2
Height (m.)	0.6	1.3	1.3
Spread (m.)	0.9	1.8	2.1

Options	Add Suffix
Security Key	K
Winter Cover	W

NLF Series – Deck Level Crown Jet

A versatile, smaller jet that can be used on play decks providing gentle spray coverage and cooling. This effect creates a pretty, vertical tulip shape. Optional alignment swivel available (ASU). Made of machined cast bronze with removable, flush-mounted faceplate for easy cleaning with optional security key. Optional winter cover also available. Not water level dependent.

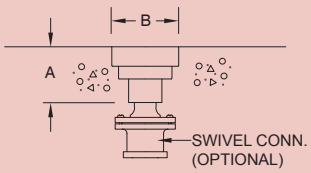
*For interactive play, do not exceed 6 m per second.





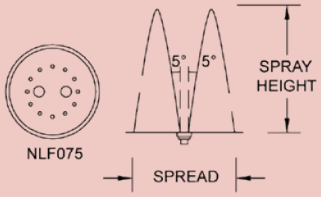


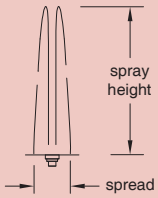
VISIBILITY ■■■■□
SOUND LEVEL ■□□□□
WIND RESISTANCE ■■■□□
SPLASH/MIST ■■■■■
EFFICIENCY ■■■□□





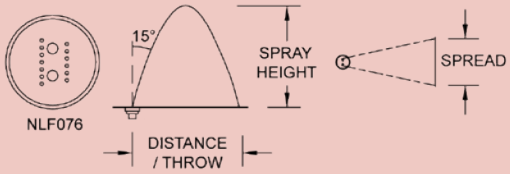
NLF075







NLF076



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
NLF075	1"	64	51	2
NLF076	1"	64	51	2

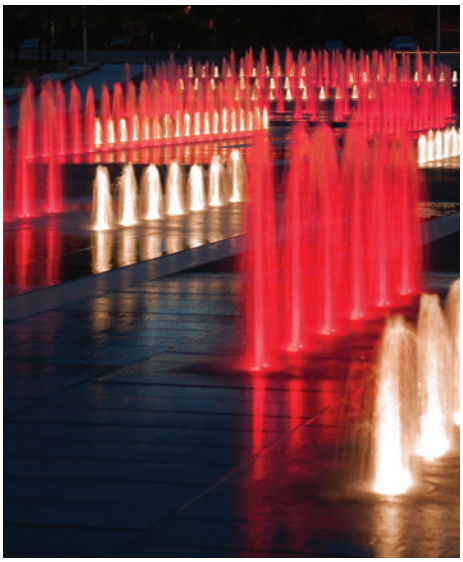
PERFORMANCE

Spray height (m.)	0.6	1	1.3	1.9
LPM	15.0	19.0	23.0	26.0
Head (m.)	1	1.6	1.9	3.1
Spread (cm.)	45	60	90	120
LPM	19.0	19.0	23.0	34.0
Head (m.)	1.3	1.6	2.2	3.4
Spread (cm.)	106	168	230	360
Throw (m.)	0.6	1.3	1.3	2.2

Options	Add Suffix
Cover Removal Key	K
Winter Cover	W

Introduction to Illuminated Deck Jets

When you are looking for a big deck effect, illuminate your nozzles with the Dynamite Blast™ or Illuminated Ground Jet!



Illuminated jets come with a center nozzle surrounded by a circular LED light producing a dramatic but safe water effect. By adding sequenced light shows, you can achieve dramatic evening effects at a lower cost than programmed nozzles. These nozzles are constant flow (not programmable) and are available with different interchangeable nozzle options for soft, fun water play. You can control water height using VFD drive pumps to produce simple sequencing effects for various audiences and day parts. This family of products are part of a more sophisticated LED system and require control panels and programming. Crystal Fountains' talented team can help you with pre-programmed shows or help develop a custom light show to meet your needs!

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





Ideal for:

- Playdecks
- Fountains

Safe:

- Flush-mounted nozzles mean no tripping hazards on deck for interactive play
- 10mm opening on grate meets safety code for toe entrapment
- Deck surrounds have no water accumulation
- Safe interactive play running at 6m per second
- Low voltage lights are covered with lexan covers to remain cool to the touch
- Vandal resistant

Versatile:

- 12 VDC LED RGB units produce dramatic evening light shows
- Multiple nozzles can produce a wide variety of geometric pat terns
- You can produce multiple heights using a variable speed drive pump
- Many products available in niche or slab hung applications

Easy Installation:

- The unit can be adjusted up to 5° for installation alignment
- Rotating grill assembly for fine-tuning layout pattern
- Comes standard with construction covers for use during installation

LED 170 Series – Illuminated Ground Jet

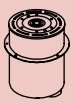
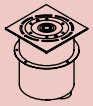
The 12 VDC LED 170 Series, Illuminated Ground Jet assembly is designed for poured or suspended deck fountains*. The easy to maintain package incorporates a nozzle and a circular light in a convenient, ready to install unit. Available with 4 different interchangeable nozzle options, allowing for a variety of soft, play-friendly displays by day and as a spectacular light show by night. The 10mm wide slots in decorative stainless steel grille allow for drainage and safety. This unique design includes the ability to adjust the jet 5° in any direction to ensure a vertical plume of water. Made of brass, bronze and stainless steel. Comes with optional vandal resistant screwdriver (FA0342). **Not water level dependent.**

*For interactive play, do not exceed 6 meters per second.

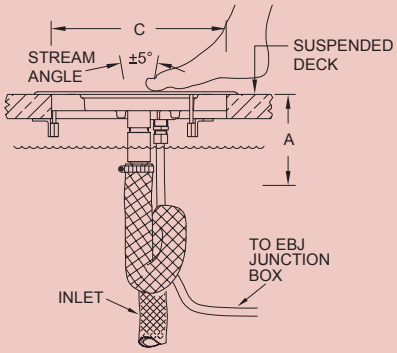
Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

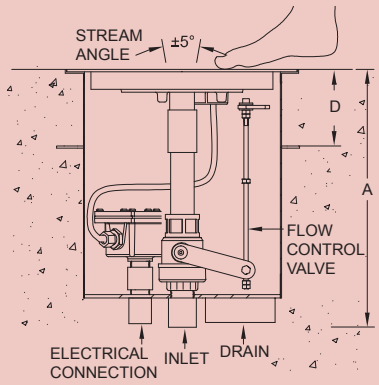


Which Foot-Friendly Non-Sequencing Jet with Lights Do I Need?

1. Choose Your Style	ROUND TOP				SQUARE TOP			
	SLAB HANGER		NICHED		SLAB HANGER		NICHED	
2.Choose Your Application								
3.Choose Your Lighting Effect	White LED	RGB LED	White LED	RGB LED	White LED	RGB LED	White LED	RGB LED
4.Get Part Number	LED170	LED172	LED174	LED176	LED171	LED173	LED175	LED177

VISIBILITY ■■■■□
SOUND LEVEL ■■□□□
WIND RESISTANCE ■■■□□
SPLASH/MIST ■■■■■
EFFICIENCY ■■■□□

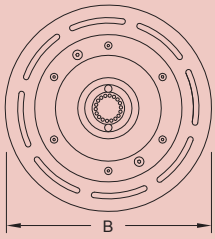


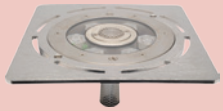


LED 170 Series – Illuminated Ground Jet

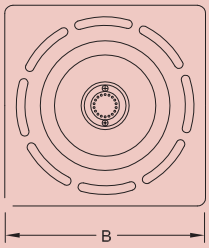


LED170/172



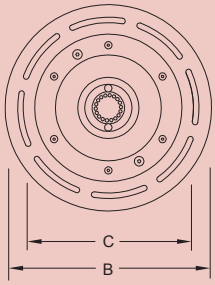


LED171/173



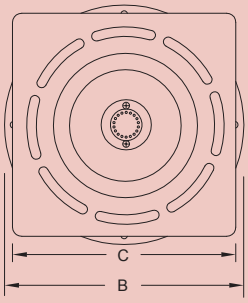


LED174/176





LED175/177

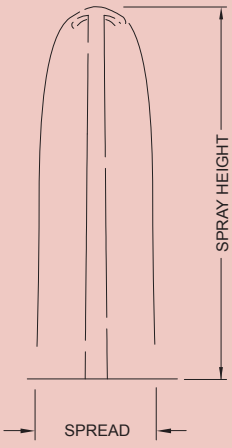




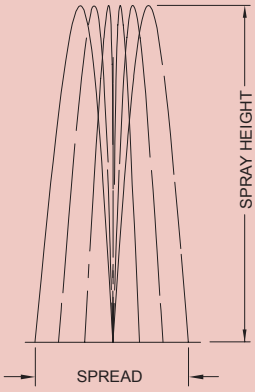








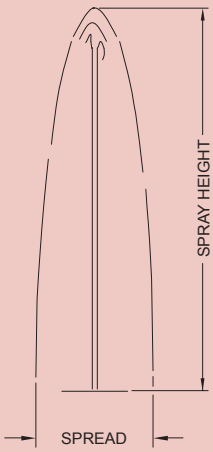
NWS110C115 -
Column Effect



NWS110C104 -
Angled Ring Effect



NWS110C108 -
Crown Effect with Center Jet



NWS110A122 -
Clear Stream Effect

LED 170 Series – Illuminated Ground Jet

NICHED VERSION

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Electrical Connection (mm)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Suction Strainer Openings max. mm.
LED174	1"	20	77	432	331	280	112	4
LED176	1"	20	77	432	331	280	112	4
LED175	1"	20	77	432	331	286	112	4
LED177	1"	20	77	432	331	286	112	4

PERFORMANCE

Nozzle	Spray height (m.)		1	1.6	2.2	2.8	3.4	4.3	4.9
NWS110C115	LPM		42.0	51.0	61.0	68.0	76.0	85.0	89.0
	Head (m.)		2.3	3.6	4.6	5.7	6.7	8.6	9.5
	Spread (cm.)		61	77	92	122	153	183	183
Nozzle	**Spray height (m.)**		**0.6**	**1**	**1.3**	**1.6**	**1.9**	**2.2**	**2.5**
NWS110C104	LPM		32.0	40.0	44.0	51.0	57.0	62.0	66.0
	Head (m.)		1.7	2.3	2.8	3.7	4.2	5.1	5.8
	Spread (cm.)		61	92	92	122	122	138	138
Nozzle	**Spray height (m.)**	**Plume**	**1**	**1.4**	**1.9**	**2.3**	**2.8**	**3.4**	**3.7**
		Ring	**0.5**	**0.6**	**0.8**	**1.1**	**1.3**	**1.6**	**1.9**
NWS110C108	LPM		38.0	45.0	53.0	59.0	66.0	74.0	78.0
	Head (m.)		1.9	2.6	3.4	4	4.8	5.8	6.5
	Spread (cm.)		61	61	77	92	122	153.0	183
Nozzle	**Spray height (m.)**		**1**	**1.6**	**2.2**	**3.1**	**4**	**4.6**	
NWS100A122	LPM		30.0	40.0	45.0	53.0	57.0	61.0	
	Head (m.)		1.9	2.6	3.6	4.9	6.5	7.2	
	Spread (cm.)		46	61	61	61	92	92	

SLAB HANGER VERSION

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	Suction Strainer Openings max. mm.
LED170	1"	83	280	254	4
LED172	1"	83	280	254	4
LED171	1"	83	286	254	4
LED173	1"	83	286	254	4

LED 170 Series – Illuminated Ground Jet

PERFORMANCE

Nozzle	Spray height (m.)		1	1.6	2.2	2.8	3.4	4.3	4.9
NWS110C115	LPM		42.0	51.0	61.0	68.0	76.0	85.0	89.0
	Head (m.)		2.3	3.6	4.6	5.7	6.7	8.6	9.5
	Spread (cm.)		61	77	92	122	153	183	183
Nozzle	**Spray height (m.)**		**0.6**	**1**	**1.3**	**1.6**	**1.9**	**2.2**	**2.5**
NWS110C104	LPM		32.0	40.0	44.0	51.0	57.0	62.0	66.0
	Head (m.)		1.7	2.3	2.8	3.7	4.2	5.1	5.8
	Spread (cm.)		61	92	92	122	122	138	138
Nozzle	**Spray height (m.)**	**Plume**	**1**	**1.4**	**1.9**	**2.3**	**2.8**	**3.4**	**3.7**
		Ring	**0.5**	**0.6**	**0.8**	**1.1**	**1.3**	**1.6**	**1.9**
NWS110C108	LPM		38.0	45.0	53.0	59.0	66.0	74.0	78.0
	Head (m.)		1.9	2.6	3.4	4	4.8	5.8	6.5
	Spread (cm.)		61	61	77	92	122	153.0	183
Nozzle	**Spray height (m.)**		**1**	**1.6**	**2.2**	**3.1**	**4**	**4.6**	
NWS100A122	LPM		30.0	40.0	45.0	53.0	57.0	61.0	
	Head (m.)		1.9	2.6	3.6	4.9	6.5	7.2	
	Spread (cm.)		46	61	61	61	92	92	

How to Order

CHOOSE DESIRED JET

Lighting	Mounting	Style	Lamp	Part No.
White LED	Slab Hanger	Round Top	Spot	LED170
		Square Top	Spot	LED171
	Niche	Round Top	Spot	LED174
		Square Top	Spot	LED175
RGB LED	Slab Hanger	Round Top	Spot	LED172
		Square Top	Spot	LED173
	Niche	Round Top	Spot	LED176
		Square Top	Spot	LED177

CHOOSE NOZZLE

Effect	Part No.
Column	NWS110C115
Angled Ring	NWS110C144
Crown	NWS110C108
Clear Stream	NWS110A122

CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Flood Optical Lens	LED160C006F
Vandel Resistant Driver Kit	FA0342

CHOOSE CABLE (Slab Hanger Version Only)

Cable For...	Cable Length	Part No.
White LED	3 m.	ELCORD005M03
	6 m.	ELCORD005M06
RGB LED	3 m.	EL CORD160M03
	6 m.	EL CORD160M06

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	Illuminated Ground Jet - RGB LED with Round Top Slab Hanger	LED172
1	6 m. RGB Cable	EL CORD160M06
1	Crown Nozzle	NWS110C108
1	Flood Optical Lens	LED160C006F
1	Vandal Resistant Driver Kit	FA0342

NNC Series – Dynamite Blast™ V-Blast

The Dynamite Blast produces a surprising eruption of 178mm of water from an acrylic faceplate. The blast of water is not only dramatic rising up to 10.7m but when run at interactive play levels * has minimal impact and is completely safe. Used as a central focal point in many play deck designs, the Dynamite Blast is available in three different versions (White LED, RGB LED, and unlit) and lit versions provide dramatic evening light shows. Available in a poured deck solution, nozzle can be adjusted by 3° to ensure a vertical plume of water. Made of brass, bronze, stainless steel and plastic. Self contained, pre-assembled unit from Crystal Fountains. Best used with filtered water supply (500 micron). **Water level independent.**

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

The Dynamite Blast is also available with a different configuration as the "V-Blast", creating a dramatic V-shaped blast of water that can hold shape up to 6m. The V-Blast conforms to the same specifications and dimensions as the Dynamite Blast.

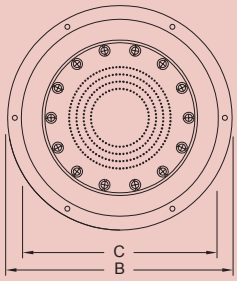
*For interactive play, do not exceed 6 meters per second.

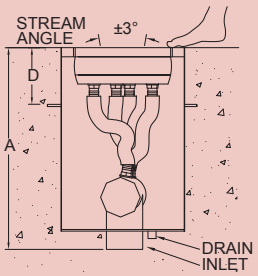
Which Dynamite Blast Jet Do I Need?

1.Choose Your Effect	Straight Stream			V Stream		
						
2.Choose Your Lighting Effect	No Light	White LED	RGB LED	No Light	White LED	RGB LED
3.Get Part Number	NNC101	LED151	LED152	NNC102	LED153	LED154

VISIBILITY	■ ■ ■ ■ ■
SOUND LEVEL	■ ■ ■ ■ ■
WIND RESISTANCE	■ ■ ■ □ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ □ □ □







Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Inlet 2 (b.s.p.t.)	Electrical Connection (b.s.p.t.)	Drain Connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Filtration Required
NNC101 / LED151 / LED152 / NNC102 / LED153 / LED154	3"	¾"	1 ¼"	2"	588	394	343	166	500 micron

PERFORMANCE

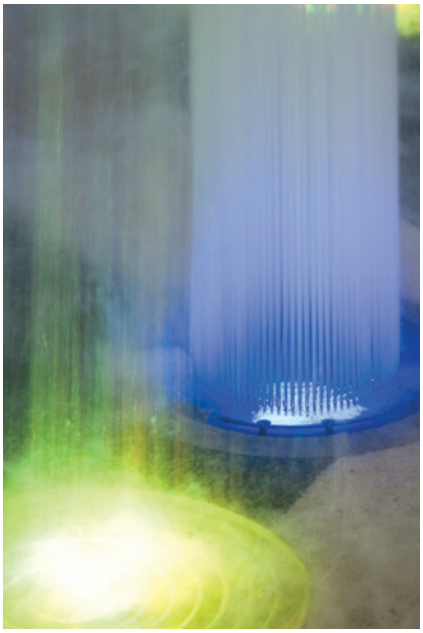
Part No.	Spray height (m.)	0.6	1.3	2.5	3.1	3.7	4.3	6.1	7.7	9.2	10.7
NNC101 / LED151 / LED152	LPM	187.0	220.0	309.0	367.0	382.0	416.0	500.0	564.0	623.0	647.0
	Head (m.)	3.7	5.5	8.3	10.4	12.5	18.6	24.1	27.8	35.1	35.4
NNC102 / LED153 / LED154	LPM	254.0	348.0	473.0	524.0	585.0	402.0	712.0			
	Head (m.)	6.2	8.4	11.2	12.7	14	15.4	17.8			
	Spray Diameter (m.)	0.6	1.2	1.8	1.8	2.4	2.4	3			

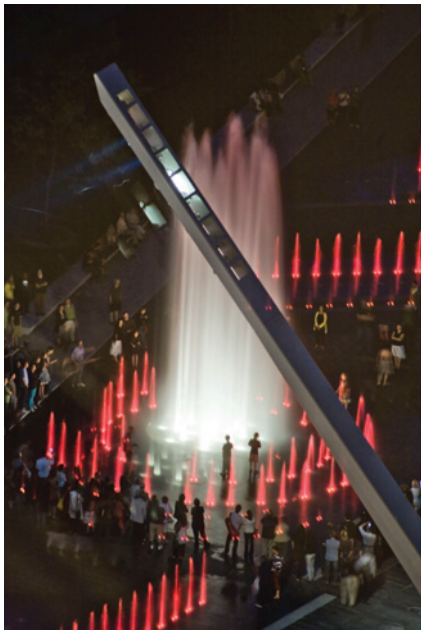
NNC Series – Dynamite Blast™ / V-Blast

How to Order

CHOOSE JET

Jet Effect	Lighting Option	Lamp	Part No.
Dynamite Blast	No light	Spot	NNC101
	White LED	Spot	LED151
	RGB LED	Spot	LED152
V Blast	No light	Spot	NNC103
	White light	Spot	LED153
	RGB light	Spot	LED154







V-Blast Effect







V-Blast Effect

More Simple Interactive Deck Jets

Crystal Fountains also manufactures a range of high-quality nozzles specifically designed for small fountains and residential applications. This series of nozzles are flush-mounted to prevent trip hazards and provide a range of beautiful, fun effects. You can also check out our complete section of Residential products in this catalog.



WMD115 TriStream Jet. The 3 gentle slender streams of water are shot out from the 5mm holes on the directional ball, which is vandal resistance but easy to adjust with the optional security key.



WMD100 Stream Jet. This directionally adjustable clear stream nozzle is designed for applications that require flush deck level mounting such as swimming pool decks and children's public water play areas*.



WMT Series FyreFly Jet. Sparkling streams form a wide arch, graceful, but with significant mass and form.



WMG Series CrystalFalls. Unique nozzle design creates a large mass of unbroken water that comes from the pool deck.



WMO Series Foam Jet. Foam jets produce a mound of frothy, aerated water that provide a substantial visual and sound impact.

RESIDENTIAL

With the same professional effects as Crystal Fountains commercial products, the Residential collection has been specially selected for swimming pools and small fountains. Many Residential products are effective for evaporative cooling in swimming pools in hot climates. Each product comes with simple to use, step-by-step installation guides and are pre-engineered to make it easy.

93	RESIDENTIAL
94	WMT Series – Fyrefly™ Jet
97	WMG Series – CrystalFalls™ Jet
99	WMV Series – Starburst Laminar
102	Stream Jets Series
103	WMD115 – Tristream Jet
104	WMD100 – 25mm Stream Jet
105	WMD110 – Stream Jet Multi
106	WMF076 – Crown Jet
107	WMO Series – Foam Jet
109	Fire and Water Bowls
110	The Moderno – WB100 Series
111	The Pantheon – WB200 Series
112	The Villa – WB300 Series
113	The Camelot – WB400 Series











WMT Series – Fyrefly™ Jet

Most pool designs can be complemented with this versatile cast in place jet. Eight sparkling streams form a wide arch, graceful, but with significant mass and form. Jets can be mounted on pool decks or walls at various angles. Available with no light, fiberoptic or RGB color-changing lighting and with three drill pattern inserts for different water effects. Single jets can act as accents while groups will form a strong focal point of water, light and sound. To prevent nozzle plugging due to debris, fine pump inlet screening (strainer openings 2mm is recommended). Available with optional mounting bracket for easier installation (WMT108). Made of cast bronze, brass and stainless steel. **Not water level dependent.**

*For interactive play, do not exceed 6 meters per second.

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

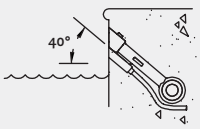
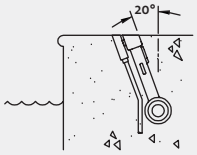
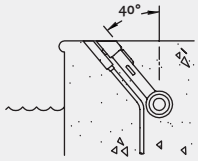
This product (excluding LED Series) is available under our Quick Ship program! See page 15 for more details.





VISIBILITY	■ ■ ■ ■ □
SOUND LEVEL	■ ■ ■ ■ □
WIND RESISTANCE	■ ■ ■ □ □
SPLASH/MIST	■ ■ ■ □ □
EFFICIENCY	■ ■ ■ □ □

Which Fyrefly Do I Need?

	WALL	DECK	
1. Choose Your Mounting Location			
2.Choose Your Angled Effect			
3.Choose Your Lighting Effect	No Light / Fiber Optic / RGB LED	No Light / Fiber Optic / RGB LED	No Light / Fiber Optic / RGB LED
4.Get Part Number	WMT120 / WMT122 / WMT126	WMT110 / WMT111 / WMT112	WMT120 / WMT121 / WMT124

Contact Crystal Fountains for detailed specifications, installation and operation details.

WMT Series – Fyrefly™ Jet

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	e dim. (mm)	f dim. (mm)	Mounting	Suction Strainer Openings max. mm.
WMT110 / WMT111 / WMT112	2 X 1 ½"	242	381	229	35	26	20°	Deck	2

PERFORMANCE

Nozzle	Throw (m.)	1	1.3	1.9	2.5	3.1	3.7
WMT110A501 (Heavy Spray)	LPM	25.0	43.0	55.0	64.0	70.0	81.0
	Head (m.)	1	1.7	2.6	3.4	4.3	5.2
	Spray Height (m.)	4.6	1	1.4	1.9	2.5	2.9
WMT110A507 (Light Spray)	LPM	22.0	32.0	40.0	45.0	47.0	51.0
	Head (m.)	0.8	1.7	2.3	3.1	3.6	4
	Spray Height (m.)	0.5	1	1.4	2	2.2	2.3
WMT110A508 (Fan Spray)	LPM	23.0	32.0	45.0	53.0	53.0	57.0
	Head (m.)	0.8	1.4	2.3	2.9	3.3	3.9
	Spray Height (m.)	0.5	1	1.4	1.9	2.3	2.5
	Spread (cm.)	107	168	244	305	366	427

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	e dim. (mm)	f dim. (mm)	Mounting	Suction Strainer Openings max. mm.
WMT120 / WMT121 / WMT124	2 X 1 ½"	242	381	229	35	26	40°	Deck	2

PERFORMANCE

Nozzle	Throw (m.)	0.6	1.3	1.9	2.5	3.1	3.7
WMT110A501 (Heavy Spray)	LPM	114.0	155.0	174.0	216.0	250.0	276.0
	Head (m.)	0.8	1.3	1.6	2	2.5	3.1
	Spray Height (m.)	0.4	0.5	0.6	0.8	1	1.1
WMT110A507 (Light Spray)	LPM	87.0	114.0	140.0	167.0	193.0	208.0
	Head (m.)	1	1	1.6	2.6	2.5	2.9
	Spray Height (m.)	0.4	0.5	0.6	0.8	1	1.3
WMT110A508 (Fan Spray)	LPM	19.0	26.0	30.0	38.0	42.0	47.0
	Head (m.)	0.5	1	1.1	2.3	2.5	3.6
	Spray Height (m.)	0.2	0.4	0.5	0.6	1	1.1
	Spread (cm.)	61	122	168	199	229	260

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	e dim. (mm)	f dim. (mm)	Mounting	Suction Strainer Openings max. mm.
WMT120 / WMT122 / WMT126	2 X 1 ½"	242	381	229	35	26	40°	Wall	2

PERFORMANCE

Nozzle	Throw (m.)	0.6	1.3	1.9	2.5	3.1	3.7
WMT110A501 (Heavy Spray)	LPM	432.0	587.0	659.0	818.0	946.0	1045.0
	Head (m.)	0.8	1.3	1.6	2	2.5	3.1
	Spray Height (m.)	0.4	0.5	0.6	0.8	1	1.1
WMT110A507 (Light Spray)	LPM	329.0	432.0	530.0	632.0	731.0	787.0
	Head (m.)	1	1	1.6	2.6	2.5	2.9
	Spray Height (m.)	0.4	0.5	0.6	0.8	1	1.3
WMT110A508 (Fan Spray)	LPM	72.0	98.0	114.0	144.0	159.0	178.0
	Head (m.)	0.5	1	1.1	2.3	2.5	3.6
	Spray Height (m.)	0.2	0.4	0.5	0.6	1	1.1
	Spread (cm.)	61	122	168	199	229	260

WMT Series – Fyrefly™ Jet



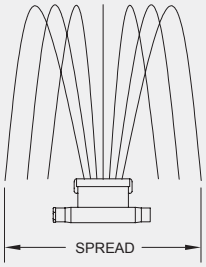
WMT110 - No Light

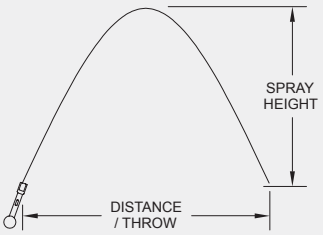


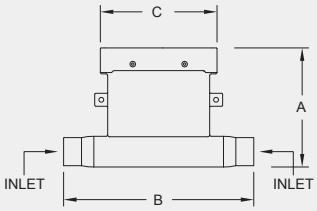
WMT111 - Fiberoptic Version

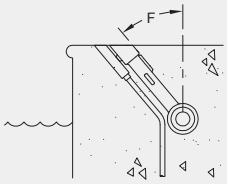


WMT112 - LED Version

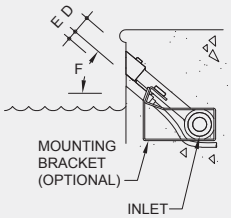




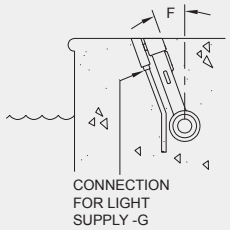




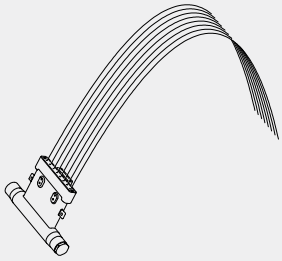
40 DEGREE DECK MOUNTED



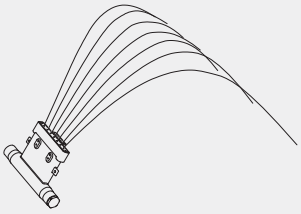
40 DEGREE WALL MOUNTED



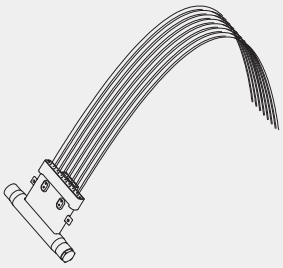
20 DEGREE DECK MOUNTED



LIGHT SPRAY (Fifteen 1/8'' Dia. holes)



FAN SPRAY - (Seven 3/16'' Dia. holes)



HEAVY SPRAY (Eight 3/16'' Dia. holes)

How to Order

CHOOSE FYREFLY JET

Application	Angle	Light Effect	Part No.
Deck	20°	N/A	WMT110
		Fiberoptic	WMT111
		RGB LED	WMT112
	40°	N/A	WMT120
		Fiberoptic	WMT121
		RGB LED	WMT124
Wall	40°	N/A	WMT120
		Fiberoptic	WMT122
		RGB LED	WMT126

CHOOSE NOZZLE

Angle	Nozzle	Effect
20°	WMT110A501	Heavy Spray
	WMT110A507	Light Spray
	WMT110A508	Fan Spray
40°	WMT120A501	Heavy Spray
	WMT120A507	Light Spray
	WMT120A508	Fan Spray

CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Mounting Brackets (Pair)	WMT108

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	40° Deck Mounted RGB LED Fyrefly Jet	WMT124
1	Heavy Spray Nozzle	WMT120A501
1	Mounting Bracket	WMT108

WMG Series – CrystalFalls™ Jet

This water feature series can be used with most pool designs to create dramatic arching waterfalls. Unique nozzle design creates a large mass of unbroken water that comes from the pool deck or wall. Jets are available with two different angles to produce a variation of spread and height. Single jets can act as an accent or a grouping creates a strong focal point. To prevent nozzle plugging recommend fine pump inlet screening or discharge strainer (strainer openings 2mm at a maximum of 7.5 meters). Available with no light, fiberoptic light or LED light. Comes with optional mounting brackets for easier installation (WMT108). Made of cast bronze, machined bronze or brass. **Not water level dependent.**

*For interactive play, do not exceed 6 meters per second.



This product (excluding LED Series) is available under our Quick Ship program! See page 15 for more details.

VISIBILITY	■■■■□
SOUND LEVEL	■■■□□
WIND RESISTANCE	■■■■□
SPLASH/MIST	■■□□□
EFFICIENCY	■■□□□



WMG110

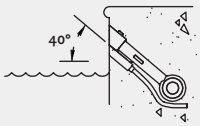
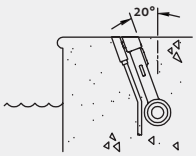
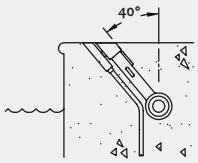


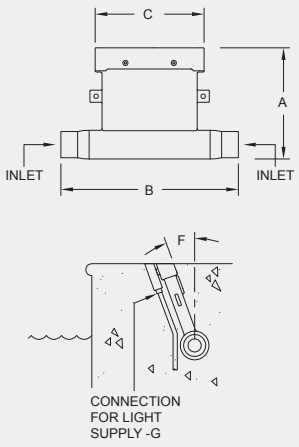
WMG111



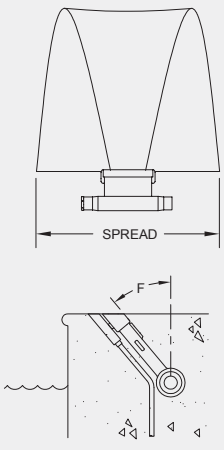
WMG112

Which Crystalfalls Do I Need?

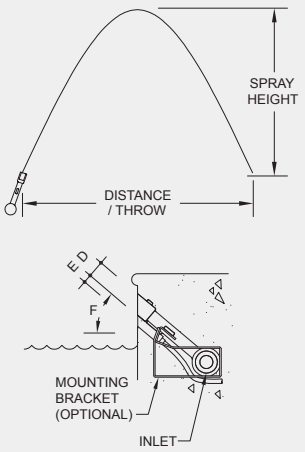
	WALL	DECK					
1. Choose Your Mounting Location							
2.Choose Your Angled Effect							
3.Choose Your Lighting Effect	No Light	Fiber Optic	RGB LED	No Light	Fiber Optic	RGB LED	No Light	Fiber Optic	RGB LED
4.Get Part Number	WMG120	WMG122	WMG123	WMG110	WMG111	WMG112	WMG120	WMG121	WMG121



20 DEGREE DECK MOUNTED



40 DEGREE DECK MOUNTED



40 DEGREE WALL MOUNTED

WMG Series – CrystalFalls™ Jet

DIMENSIONS									PERFORMANCE							
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	e dim. (mm)	f dim. (mm)	Mounting	Suction Strainer Openings max. mm.	Throw (m.)	0.6	1.3	1.6	1.9	2.5	3.1
WMG110 / WMG111 / WMG112	2 X 1 ½"	242	381	229	35	26	20°	Deck	2	LPM	104.0	138.0	151.0	165.0	193.0	257.0
										Head (m.)	1	1.4	1.6	1.9	2.3	4.3
										Spray Height (m.)	1	1.1	1.3	1.6	1.7	2.5
										Spread (cm.)	92	122	138	153	214	275
WMG120 / WMG121 / WMG124	2 X 1 ½"	242	381	229	35	26	40°	Deck	2	LPM	89.0	136.0	148.0	159.0	185.0	201.0
										Head (m.)	0.7	1.3	1.4	1.6	1.9	2.2
										Spray Height (m.)	0.8	1	1	1.1	1.3	1.3
										Spread (cm.)	61	122	153	153	244	305
WMG120 / WMG122 / WMG123	2 X 1 ½"	242	381	229	35	26	40°	Wall	2	LPM	95.0	127.0	138.0	151.0	180.0	204.0
										Head (m.)	0.8	1.1	1.3	1.6	1.9	2.3
										Spray Height (m.)	0.6	0.8	1	1	1.3	1.6
										Spread (cm.)	0.6	1.3	1.6	1.6	2.2	2.5

How to Order

CHOOSE CRYSTALFALLS JET

Application	Angle	Light Effect	Part No.
Deck	20°	N/A	WMG110
		Fiberoptic	WMG111
		RGB LED	WMG112
	40°	N/A	WMG120
		Fiberoptic	WMG121
		RGB LED	WMG124
Wall	40°	N/A	WMG120
		Fiberoptic	WMG122
		RGB LED	WMG123

CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Mounting Brackets (Pair)	WMT108

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	40° Wall Mounted RGB LED CrystalFalls Jet	WMT123
1	Mounting Bracket	WMT108

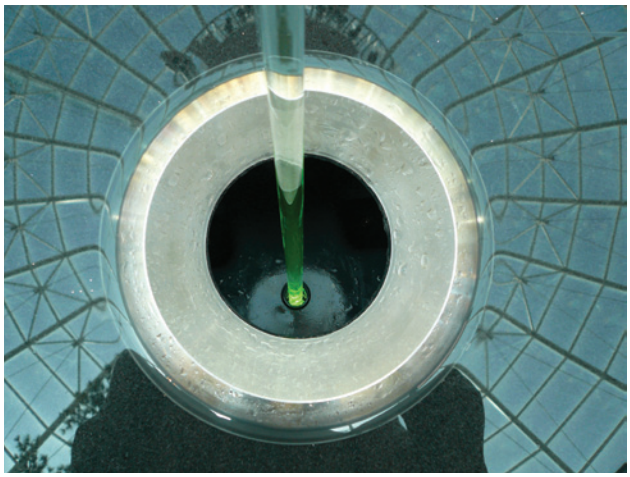


This product is available under our Quick Ship program! See page 15 for more details.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

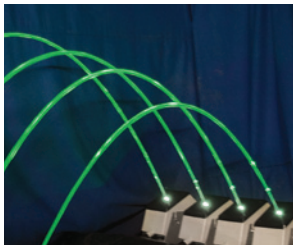
WMV Series – Starburst Laminar

The Crystal Fountains Starburst Laminar is a high-tech illusion. The water is so well controlled it creates a 13mm continuous glass-like rod of water that hits the water virtually sound/splash-free. The Starburst Laminar comes complete with the Starburst effect you can activate or not. The Starburst creates a traveling ball of light that appears from opening to end of the water stream when connected to a fiber optic or LED source. This, combined with the built-in light, produces breathtaking light shows with fast programming and an unlimited color palette including white. Available in Freestanding or Niched versions.











Versatile

- Multiple Laminars can produce a wide variety of patterns.
- You can produce multiple heights using a variable speed drive pump.
- The unit can be installed out of water or submerged to maximum water level shown.
- Can be flush mounted in a deck using niche model.

Easy Installation

- Has up to 50° installation adjustment built in
- 3 cable lengths to choose from

Programmable

- Each LED stream can be individually programmed for unlimited lighting shows

Made of high density polyethylene, ABS, stainless steel and brass with 26mm male n.p.t. LED light 12VDC. Available with animation panel to control lighting. **Water level independent.**

Not all LED's are created equally. Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also see Crystal Fountains power/data and controller products to create a complete LED system.

*For interactive play do not exceed 6 meters per second.
**A filtered water supply is required (cartridge filter or 50 micron max.)

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ □ □ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ □ □ □

This product (WMV107 only) is available under our Quick Ship program! See page 15 for more details.

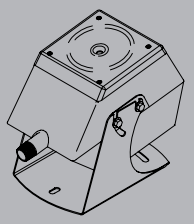
WMV Series – Starburst Laminar

Which Laminar Do I Need?

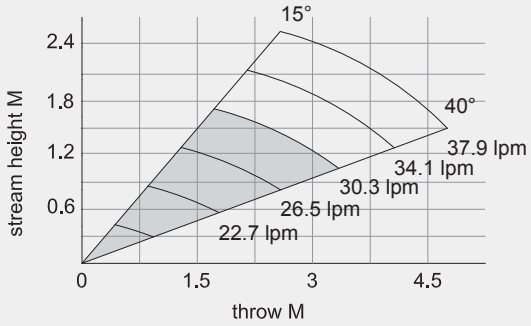
1.Choose Your Lighting Effect

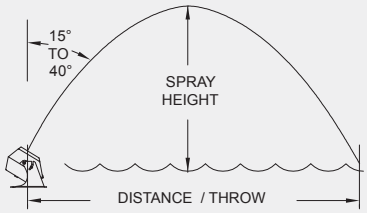
2.Choose Your Mounting Type

3.Get Part Number



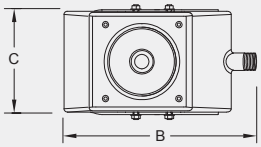
No Light or Fiberoptic Lighting		RGB LED Lighting	
Free Standing Laminar	Niched Laminar	Free Standing Laminar	Niched Laminar
WMV107	WMV111	WMV117	WMV123

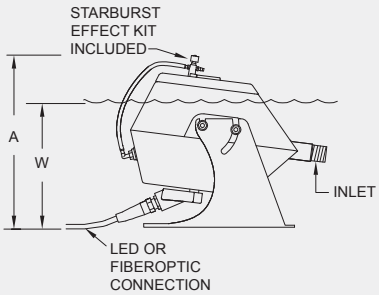






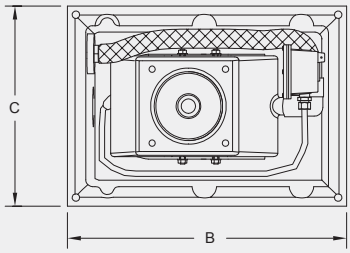
WMV107/117

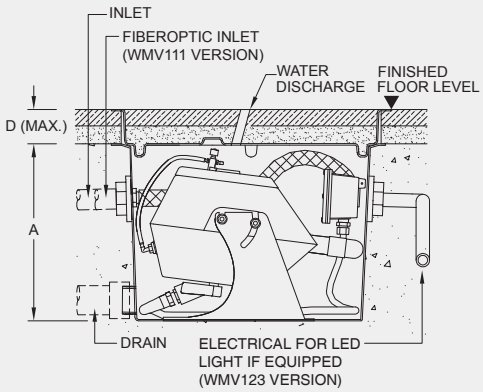






WMV111/123





WMV Series – Starburst Laminar

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Installation	Filtration Required
WMV107 / WMV117	1"	280	356	204	216	Residential	50 micron max.
						Commercial	5 micron max.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (max) (mm)	Installation	Filtration Required
WMV111 / WMV123	1"	51	420	578	432	77	Residential	50 micron max.
							Commercial	5 micron max.

How to Order - Choose Your Fiberoptic Laminar

CHOOSE MOUNTING

Mounting	Part No.
Stand	WMV107
Niche	WMV111

CHOOSE CABLE

Cable For...	Cable Length	Part No.
WMV107 / WMV111 - No Light	No cable required for no light version	N/A
WMV107 / WMV111 - Fiberoptic	Fiberoptic Cable 100 Strand (per m.)	EL CORD 8

CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Fiberoptic Illuminator (fiberoptic light only)	CL1505

* Note: To turn WMV107 or WMV111 into fiberoptic version a fiberoptic illuminator must be purchased with cable selection
** Note: Power cable included in all WMV models

Choose Your RGB LED Laminar

CHOOSE MOUNTING

Mounting	Part No.
Stand	WMV117
Niche	WMV123

CHOOSE CABLE

Cable For...	Cable Length	Part No.
WMV117	3 m.	EL CORD34
	6 m.	EL CORD36
	18 m.	EL CORD38
WMV123	Power Cable and LED Cable is Included with Laminar.	

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	RGB LED Laminar with Niche	WMV117
1	3 m Cable	EL CORD34

STREAM JETS SERIES

A simple, elegant water effect, stream jets come in various formats to suit your application. For fast and easy changes of water effects, the Stream Jet, Crown Jet and Tri-Stream nozzles are interchangeable!









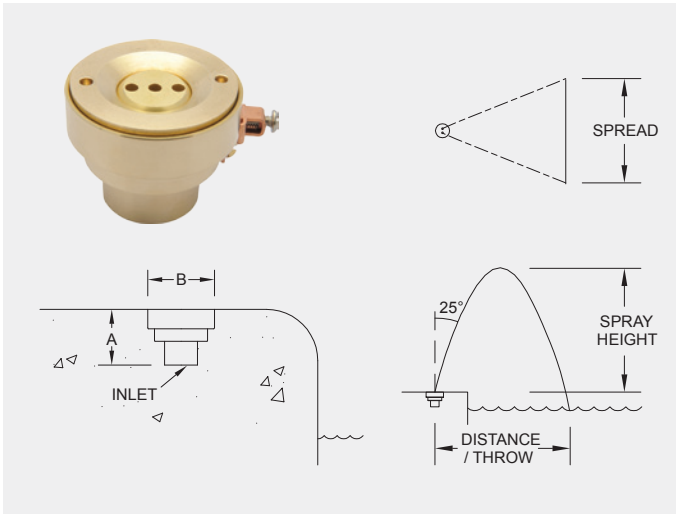




WMD115 – Tristream Jet

This directionally adjustable Tristream Jet is designed for swimming pools to public playground applications* that require flush deck level mounting. The 3 gentle slender streams of water are shot out from the 5mm holes on the directional ball, which is vandal resistance but easy to adjust with the optional security key. Recommend fine screening at pump for optimum effect (suction strainer openings 2mm). Available with optional winter cover (WMF081) and security key (WMF082). Made of machined cast bronze or brass. **Not water level dependent.**





VISIBILITY	■ ■ □ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ ■ ■ □

*For interactive play do not exceed 6 meters per second.

For fast and easy changes of water effects, the Stream Jet, Crown Jet and Tri-Stream nozzles are interchangeable!

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	Suction Strainer Openings max. mm.
WMD115	1"	51	64	2

PERFORMANCE

Throw (m.)	0.6	1.3	1.6	2.2	2.5	3.1	3.7
LPM	9.0	13.0	17.0	19.0	21.0	23.0	25.0
Head (m.)	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Spray Height (m.)	0.4	0.8	1	1.3	1.6	1.7	1.9
Spread (cm.)	31	69	77	107	122	199	214

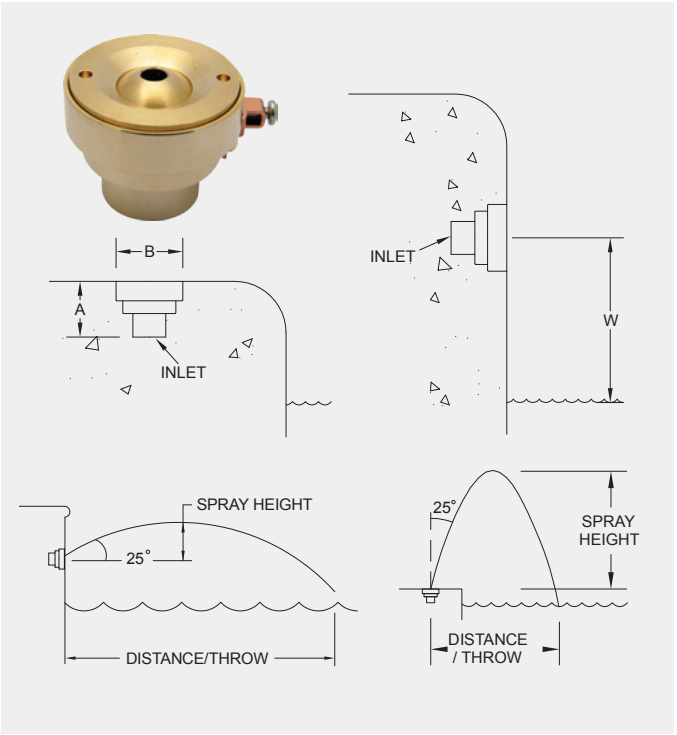
Options	Part No.
Cover Removal Key	WMF082
Winter Cover	WMF081

This product is available under our Quick Ship program! See page 15 for more details.

WMD100 – 25mm Stream Jet

This directionally adjustable clear stream nozzle is designed for applications that require flush deck level mounting such as swimming pool decks and children's public water play areas*. It can be installed vertically or horizontally with jet angle adjustment up to 25°. The gentle slender column of water produced by the 10mm diameter opening is best used as a small to medium water feature nozzle. Recommend fine screening at pump for optimum effect (suction strainer openings = 2mm). Available with optional winter cover (WMF081) and removal key (WMF082). Made of machined cast bronze and brass. **Not water level dependent.**





VISIBILITY	■ ■ □ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ ■ □ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ ■ ■ □

*For interactive play, water velocity should not exceed 6 meters per second.

For fast and easy changes of water effects, the Stream Jet, Crown Jet and Tri-Stream nozzles are interchangeable!

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

Quick Ship SHIPS IN 24 HOURS

This product is available under our Quick Ship program! See page 15 for more details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
WMD100	1"	51	64	102	2

Options	Part No.
Cover Removal Key	WMF082
Winter Cover	WMF081

PERFORMANCE

Part No.	Mounting	Throw (m.)	0.4	0.6	1	1.3	1.6	1.9	2.2	2.5	2.8	3.1
WMD100	Deck Mount	LPM	11.0	13.0	17.0	19.0	21.0	23.0	26.0	28.0	28.0	30.0
		Head (m.)	0.5	1	1	1.3	1.6	1.9	2.8	2.9	3.1	3.7
		Spray height (cm.)	20	41	61	81	105	122	138	138	183	199
	Wall Mounting	LPM	9.0	13.0	17.0	19.0	21.0	23.0	25.0	26.0	26.0	28.0
		Head (m.)	0.4	0.6	1	1.3	1.7	2	2.3	2.6	2.8	3.3
		Spray height (cm.)	11	13	16	20	22	26	28	35	37	41

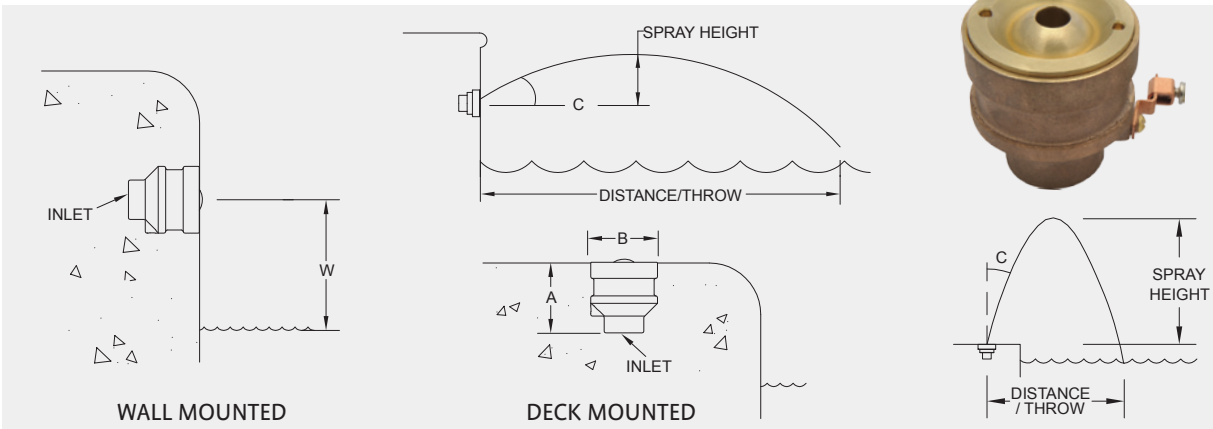
WMD110 – Stream Jet Multi



This directionally adjustable clear stream nozzle is designed for applications that require flush mounting such as swimming pool decks, walls and children's public water play areas *. It can be installed vertically or horizontally with jet angle adjustment up to 45°. The gentle slender column of water produced by the 10mm diameter opening is best used as a small to medium water feature nozzle. Recommend fine screening at pump for optimum effect (suction strainer openings 2mm). Available with optional winter cover (WMF081) and removal key (WMF082). Made of machined cast bronze and brass. **Not water level dependent.**

*For interactive play do not exceed 6 meters per second.

For fast and easy changes of water effects, the Stream Jet, Crown Jet, Stream Jet Multi and Tri-Stream nozzles are interchangeable!



Contact Crystal Fountains for detailed specifications, installation and operation details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
WMD110	1"	70	64	25°, 30°, 45°	102	2

PERFORMANCE

Mounting	Degree of Nozzle	Throw (m.)	0.6	1.3	1.9	2.5	3.1
Deck	25°	LPM	15.0	19.0	23.0		
		Head (m.)	1	1.3	1.9		
		Spray height (cm.)	41	81	122		
	30°	LPM	19.0	26.0	32.0	38.0	42.0
		Head (m.)	1	1.6	2.2	2.6	3.3
		Spray height (cm.)	31	56	87	114	138
	45°	LPM	19.0	25.0	30.0	34.0	38.0
		Head (m.)	1	1.6	2	2.5	2.9
		Spray height (cm.)	26	41	56	72	83
Wall	25°	LPM	13.0	19.0	23.0	26.0	28.0
		Head (m.)	0.6	1.3	2	2.6	3.3
		Spray height (cm.)	13	20	26	35	41
	30°	LPM	17.0	25.0	30.0	34.0	38.0
		Head (m.)	0.6	1.3	1.7	2.2	2.6
		Spray height (cm.)	20	28	35	44	53
	45°	LPM	21.0	25.0	28.0	32.0	38.0
		Head (m.)	0.8	1.1	1.6	1.9	2.3
		Spray height (cm.)	31	41	56	67	83

This product is available under our Quick Ship program! See page 15 for more details.

VISIBILITY ■ ■ □ □ □
SOUND LEVEL ■ ■ □ □ □
WIND RESISTANCE ■ ■ □ □ □
SPLASH/MIST ■ ■ □ □ □
EFFICIENCY ■ ■ ■ ■ □

Options	Part No.
Cover Removal Key	WMF082
Winter Cover	WMF081

WMF076 – Crown Jet

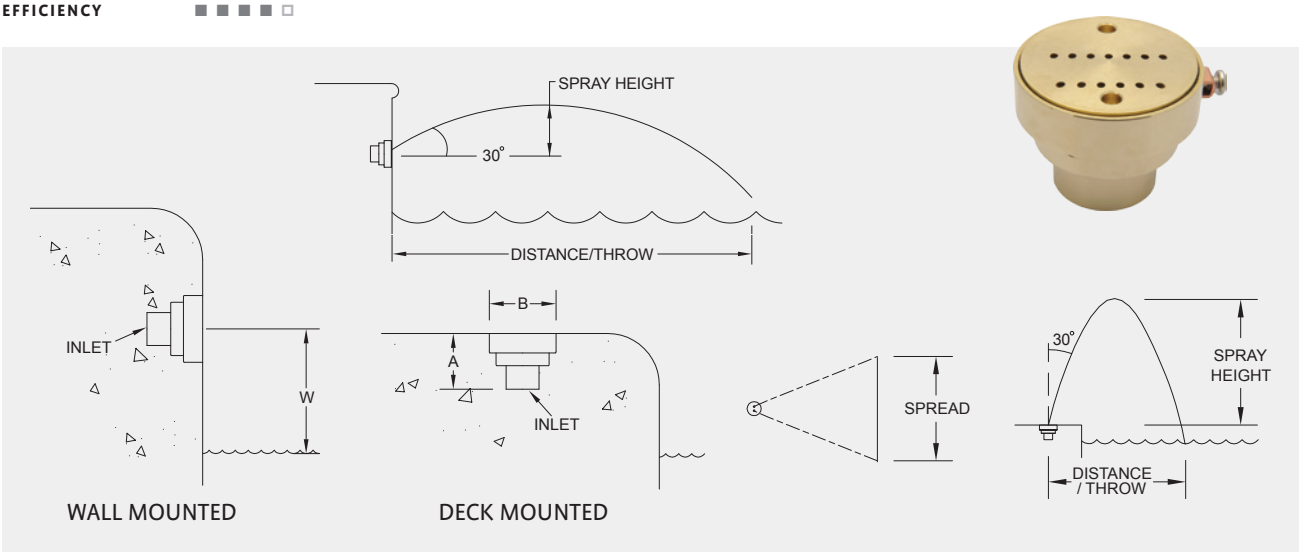


Designed to be flush mounted in a pool wall or deck, the Crown Jet has two rows of angled streams that create a gentle double spray that arch into the pool. Recommend fine screening at pump for optimum effect (suction strainer openings 1mm). Available with optional winter cover (WMF081) and removal key (WMF082). Made of machined cast bronze and brass.

* For interactive play do not exceed 6 meters per second.

For fast and easy changes of water effects, the Stream Jet, Crown Jet, Stream Jet Multi and Tri-Stream nozzles are interchangeable!

VISIBILITY ■ ■ ■ □ □
SOUND LEVEL ■ ■ □ □ □
WIND RESISTANCE ■ ■ □ □ □
SPLASH/MIST ■ ■ □ □ □
EFFICIENCY ■ ■ ■ ■ □



**Contact Crystal Fountains for detailed specifications, installation and operation details.*

This product is available under our Quick Ship program! See page 15 for more details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
WMF076	1"	51	64	102	2

Options	Part No.
Cover Removal Key	WMF082
Winter Cover	WMF081

PERFORMANCE

Mounting	Throw (m.)	0.4	0.6	1	1.3	1.6	1.9
Deck	LPM		19.0	25.0	30.0	36.0	38.0
	Head (m.)		1	1.3	1.6	1.9	2
	Spray height (m.)		0.4	0.6	0.7	0.8	0.9
	Spread (cm.)		83	117	135	171	205
Wall	LPM	9.0	13.0	21.0	26.0	30.0	36.0
	Head (m.)	0.5	0.4	0.8	1	1.3	1.6
	Spray height (m.)	0.2	0.2	0.3	0.3	0.4	0.4
	Spread (cm.)	31	41	68	87	107	133

WMO Series – Foam Jet

Foam jets produce a mound of frothy, aerated water that provide a substantial visual and sound impact. Ideal for use in beach entry pools. Flush-mounted, these can be arranged individually or in a grouping and are child-safe at low LPM*. Available with no light, fiberoptic or RGB LED versions. Made of machine cast bronze and plastic. **Water level dependent.**

*For interactive play do not exceed 6 meters per second.

VISIBILITY	■ ■ ■ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ ■ ■ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ ■ □ □

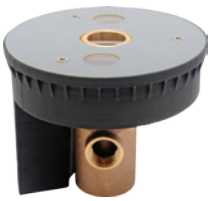
This product is available under our Quick Ship program! See page 15 for more details.



WMO101



WMO110



WMO112

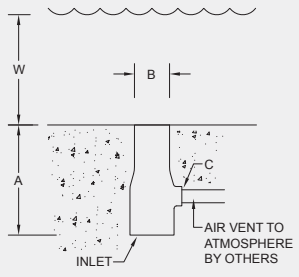




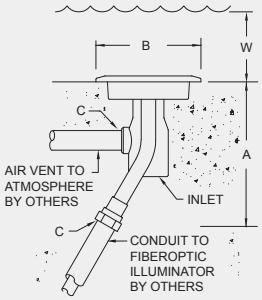




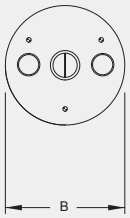
WMO Series – Foam Jet



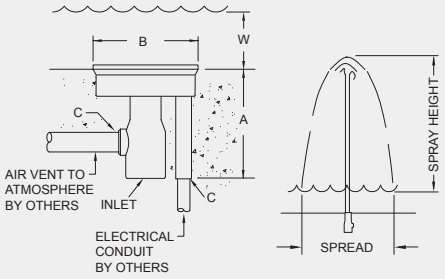
WMO101



WMO110



WMO112



WMO112

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (b.s.p.t.)	w dim. (max) (mm)	Suction Strainer Openings max. mm.
WMO101	1"	108	35	½"	127	7
WMO110	1"	159	115	½"	127	7
WMO112	1"	127	134	½"	127	7

PERFORMANCE

Part No.	Water Depth (mm.)	Spray Height (m.)	0.4	0.6	1	1.3
WMO101	77	LPM	79.0	102.0	125.0	136.0
		Head (m.)	2.8	4.6	7.1	8.6
		Spread (cm.)	31	46	72	92
	102	LPM	83.0	110.0	132.0	144.0
		Head (m.)	3.7	6.1	8.9	11
		Spread (cm.)	31	53	83	114
	127	LPM	91.0	121.0	140.0	159.0
		Head (m.)	4.3	7.4	10.4	13.2
		Spread (cm.)	31	53	83	107
WMO110	77	LPM	79.0	102.0	125.0	136.0
		Head (m.)	2.8	4.6	7.1	8.6
		Spread (cm.)	366	549	854	1098
	102	LPM	83.0	110.0	132.0	144.0
		Head (m.)	3.7	6.1	8.9	11
		Spread (cm.)	31	53	83	114
	127	LPM	91.0	121.0	140.0	159.0
		Head (m.)	4.3	7.4	10.4	13.2
		Spread (cm.)	31	53	83	107
WMO112	77	LPM	79.0	102.0	125.0	136.0
		Head (m.)	2.8	4.6	7.1	8.6
		Spread (cm.)	31	46	72	92
	102	LPM	83.0	110.0	132.0	144.0
		Head (m.)	3.7	6.1	8.9	11
		Spread (cm.)	31	53	83	114
	127	LPM	91.0	121.0	140.0	159.0
		Head (m.)	4.3	7.4	10.4	13.2
		Spread (cm.)	31	53	83	107

CHOOSE JET

Lighting Option	Part No.
No Light	WMO101
Fiberoptic	WMO110
RGB LED	WMO112

Options	Part No.
Winter Cover	WMO102

Fire and Water Bowls

Add the excitement of fire and water to your outdoor displays!

Or use the bowl as a planter, planter with water, water spillway or fire only displays. 4 beautiful bowl styles to choose from made of hammered copper or 4 colors of cast concrete. Great for use in backyards or small outdoor applications.

Versatile

- Bowls available in hammered copper or 4 different colors of cast concrete
- Bowl fill available in 3 different shapes of volcanic rock, decorative stone or 4 different colors of reflective glass
- Fire option operates using propane or natural gas

Easy installation

- Fire and Water bowls come as a complete kit
- Fire effect operates on 120VAC/60Hz or 220VAC/50Hz
- Water effect requires only 46-91 LPM

Safe

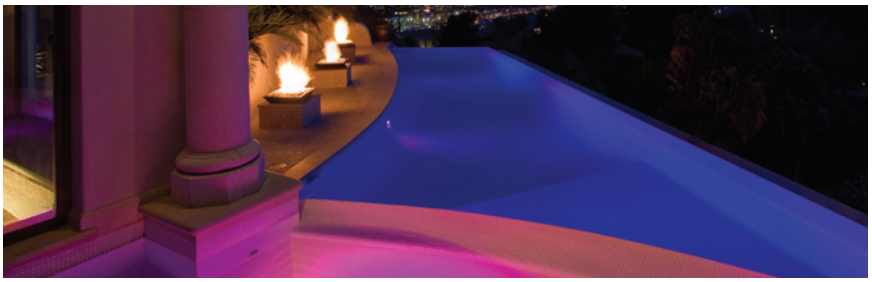
- Output voltage 24VAC
- Controls are electronic and comply with AGA and CSA standards

**Contact Crystal Fountains for detailed specifications, installation and operation details.*










The Moderno – WB100 Series

A clean-cut, contemporary bowl shape in hammered copper. A perfect addition for modern environments. Available in systems of 1 - 4 bowls that can run on one center panel, comes as a complete kit.

DIMENSIONS

Product Name	Series	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
The Moderno	WB100-Series	229	737	432	305 - 381

How to Order

Select Bowl

Part No.	Water	Fire	Number of Bowls
WB100	■		
WB110		■	1
WB110-2		■	2
WB110-3		■	3
WB110-4		■	4
WB120	■	■	1
WB120-2	■	■	2
WB120-3	■	■	3
WB120-4	■	■	4
WB130	Water Planter (planter not included)		
WB140	Decorative Bowl Only		

Add Propane Adder

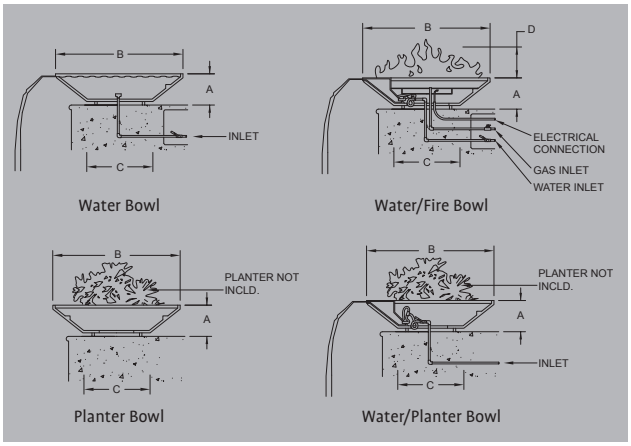
Part No.	Bowl Filling
PA001	1-Bowl System
PA002	2-Bowl System
PA003	3 or 4 - Bowl System

Add Bowl Filling

Part No.	Bowl Filling	
WBA100	Lava Spheres	
WBA101	Lava Rocks	
WBA102	Rocks, Spheres and Prisms	
WBA103	Decorative Stone	
WBA104	Black Glass	
WBA105	Blue Glass	
WBA106	Bronze Glass	
WBA107	Copper Glass	









The Pantheon – WB200 Series

A very traditional urn shape bowl in hammered copper. A versatile addition to any location. Available in systems of 1 - 4 bowls that run on one center panel. Comes as a complete kit.

DIMENSIONS

Product Name	Series	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
The Pantheon	WB200-Series	280	788	254	305 - 381

Select Bowl

Part No.	Water	Fire	Number of Bowls
WB200	■		
WB210		■	1
WB210-2		■	2
WB210-3		■	3
WB210-4		■	4
WB220	■	■	1
WB220-2	■	■	2
WB220-3	■	■	3
WB220-4	■	■	4
WB230	Water Planter (planter not included)		
WB240	Decorative Bowl Only		

Add Propane Adder

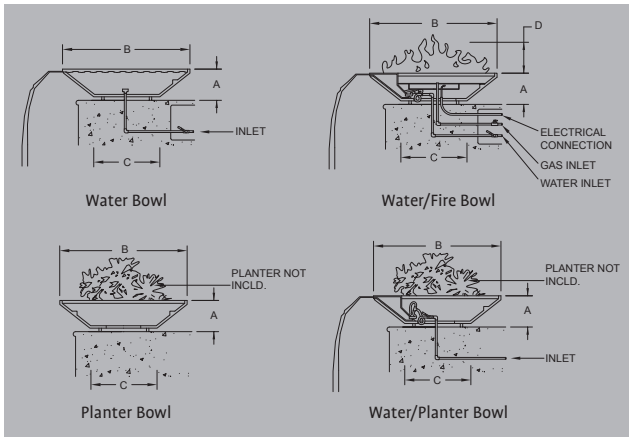
Part No.	Bowl Filling
PA001	1-Bowl System
PA002	2-Bowl System
PA003	3 or 4 - Bowl System

Add Bowl Filling

Part No.	Bowl Filling	
WBA100	Lava Spheres	
WBA101	Lava Rocks	
WBA102	Rocks, Spheres and Prisms	
WBA103	Decorative Stone	
WBA104	Black Glass	
WBA105	Blue Glass	
WBA106	Bronze Glass	
WBA107	Copper Glass	









The Villa – WB300 Series

A classic bowl shape of cast concrete with strong lines and substantial edge. Available in systems of 1 - 4 bowls that run on one control panel. Comes as a complete kit.

DIMENSIONS

Product Name	Series	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
The Villa	WB300-Series	254	788	254	305 - 381

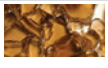
Select Bowl

Noir	Cocoa	Olive	Umber	Water	Fire	Number of Bowls
WB300	WB301	WB302	WB303	■		
WB310	WB311	WB312	WB313		■	1
WB310-2	WB311-2	WB312-2	WB313-2		■	2
WB310-3	WB311-3	WB312-3	WB313-3		■	3
WB310-4	WB311-3	WB312-3	WB313-3		■	4
WB320	WB321	WB322	WB323	■	■	1
WB320-2	WB321-2	WB322-2	WB323-2	■	■	2
WB320-3	WB321-3	WB322-3	WB323-3	■	■	3
WB320-4	WB321-4	WB322-4	WB323-4	■	■	4
WB330	WB331	WB332	WB333	Water Planter (planter not included)		
WB340	WB341	WB342	WB343	Decorative Bowl Only		

Add Propane Adder

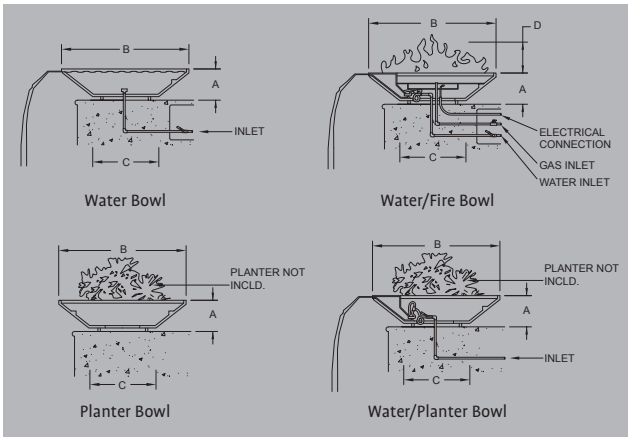
Part No.	Bowl Filling
PA001	1-Bowl System
PA002	2-Bowl System
PA003	3 or 4 - Bowl System

Add Bowl Filling

Part No.	Bowl Filling	
WBA100	Lava Spheres	
WBA101	Lava Rocks	
WBA102	Rocks, Spheres and Prisms	
WBA103	Decorative Stone	
WBA104	Black Glass	
WBA105	Blue Glass	
WBA106	Bronze Glass	
WBA107	Copper Glass	









The Camelot – WB400 Series

This low-profile bowl of cast concrete has an inviting shape and spherical ball-feet giving it real presence. Available in systems of 1 - 4 bowls that can run on one control panel. Comes as a complete kit.

DIMENSIONS

Product Name	Series	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
The Camelot	WB400-Series	229	813	458	305 - 381

Select Bowl

Noir	Cocoa	Olive	Umber	Water	Fire	Number of Bowls
WB400	WB401	WB402	WB403	■		
WB410	WB411	WB412	WB413		■	1
WB410-2	WB411-2	WB412-2	WB413-2		■	2
WB410-3	WB411-3	WB412-3	WB413-3		■	3
WB410-4	WB411-3	WB412-3	WB413-3		■	4
WB420	WB421	WB422	WB423	■	■	1
WB420-2	WB421-2	WB422-2	WB423-2	■	■	2
WB420-3	WB421-3	WB422-3	WB423-3	■	■	3
WB420-4	WB421-4	WB422-4	WB423-4	■	■	4
WB430	WB431	WB432	WB433	Water Planter (planter not included)		
WB440	WB441	WB442	WB443	Decorative Bowl Only		

Add Propane Adder

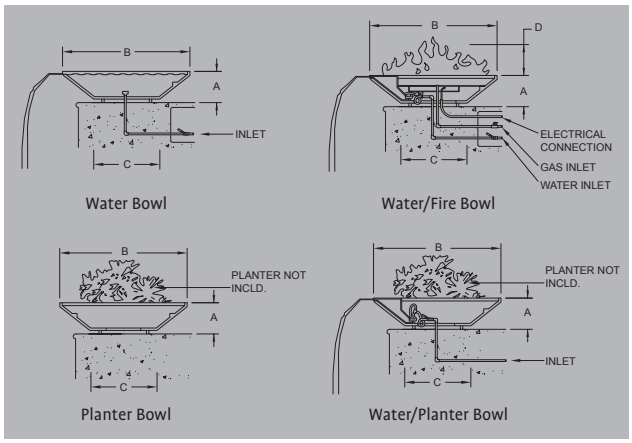
Part No.	Bowl Filling
PA001	1-Bowl System
PA002	2-Bowl System
PA003	3 or 4 - Bowl System

Add Bowl Filling

Part No.	Bowl Filling	
WBA100	Lava Spheres	
WBA101	Lava Rocks	
WBA102	Rocks, Spheres and Prisms	
WBA103	Decorative Stone	
WBA104	Black Glass	
WBA105	Blue Glass	
WBA106	Bronze Glass	
WBA107	Copper Glass	









PROGRAMMABLE SEQUENCING NOZZLES

Playful, Entertaining, Versatile Fountains and Playdecks

Over the past number of years, fountain designers have been experimenting with interactive water features enticing the public to not only watch but participate. Fountains that entertain and are choreographed with music and color-changing lighting have also become quite popular. Crystal Fountains has been at the forefront of these advanced water feature technologies with patented ChoreoSwitches that produce incredibly fast programmed effects and the optical illusion of playful Leapers, Laminars and Starburst Laminars.

These nozzles are part of a more sophisticated system and require control panels and programming. Crystal Fountains' talented team can help you with pre-programmed shows or help develop a custom water and light show to meet your needs!

114	PROGRAMMABLE SEQUENCING NOZZLES
115	ChoreoSwitch for Fountains and Decks
117	PROGRAMMABLE SEQUENCING NOZZLES FOR FOUNTAINS
118	ChoreoSwitch Sequencing Plume Nozzle
120	ChoreoSwitch Sequencing Aerator Nozzle
122	PROGRAMMABLE SEQUENCING NOZZLES FOR DECKS
125	Playdeck ChoreSwitch – Round Slab Hanger
126	Playdeck ChoreoSwitch – Square Slab Hanger
127	Playdeck ChoreoSwitch – Round Niche
128	Playdeck ChoreoSwitch – Square Niche
129	Playdeck ChoreoSwitch – How to Order
130	NPN Series – Pop Nozzle Jet
131	SWT Series – ChoreoSwitch Finger Jet





CHOREOSWITCHES®





Crystal Fountains proprietary ChoreoSwitch is a sequencing device used to create exciting programmed effects in interactive play decks* or more traditional but entertaining fountains. Each ChoreoSwitch is an all-in-one unit that makes it easy for installation, maintenance and public safety.

The key feature of the ChoreoSwitch is the solenoid device that can produce fast sequencing effects at high switching speeds (up to 10x per second with no waterhammer to piping)! The unique design also delivers constant flow to all nozzles ensuring equal heights.

*For interactive play, do not exceed 6 meters per second.

ChoreoSwitch standard Features:

- 12VDC or 24VAC
- Operates on International electrical frequencies (50/60Hz)
- Comes with patented clean-out door for easy main tenance
- Patented media isolation valve to protect solenoid from corrosion
- Built-in solenoid operation light

ChoreoSwitch Features - Playdeck:

- 4 different nozzle effects
- Choice of RGB LED light, White LED light or no light options
- Round Niche, Square Niche or Suspended deck applications
- Stainless steel finish

ChoreoSwitch Features - Fountains:

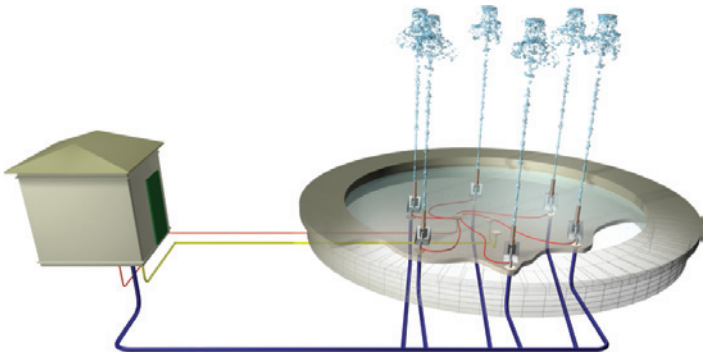
- Nozzles available in bronze or black plastic
- With 26mm or 39mm inlets
- Available in Plume or Aerator effects
- Adjustable stainless steel base
- Can operate in or out of water

*NOTE: Water quality needs to be monitored for optimum nozzle performance.

Typical Systems Design For ChoreoSwitches – Fountains

- For a more traditional but entertaining programmed fountain, Choreoswitches are installed within a fountain pool.
- Nozzles are placed in fountain pool
- Water then pumped to nozzles via a pumping station*
- Controllers and sequencing devices make the fountain more entertaining for all audiences.

*NOTE: Water quality needs to be monitored for optimum nozzle performance.

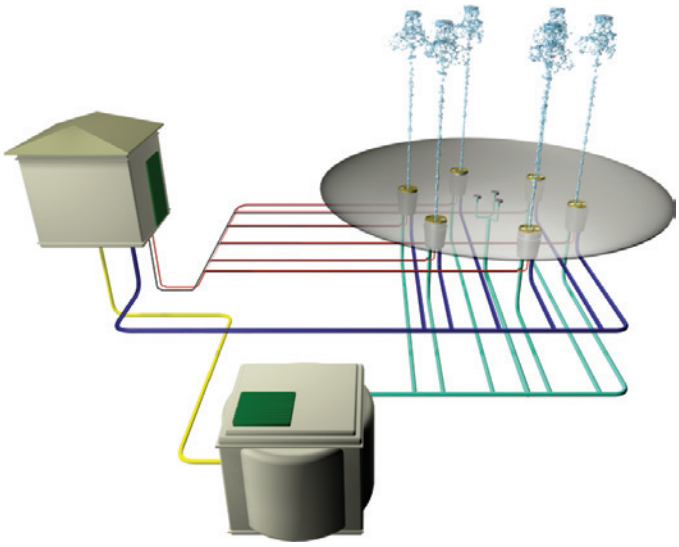


Electrical power to lights and ChoreoSwitch
Water supply to ChoreoSwitch
Drain line
Suction line to pump

Typical Systems Design For Choreoswitches – Play deck

- Interactive water features/play decks have become extremely popular inviting the public in to “play”.
- Nozzles are placed in a deck surround (poured dry deck or suspended deck)
- Water drains through the surround into a holding tank
- Water then pumped to nozzles via a pumping station*
- Controllers and sequencing devices make the play experience much more fun.

*NOTE: Water quality needs to be strictly monitored for public safety.



Electrical power to Lights
Electrical power to ChoreoSwitch
Water supply to ChoreoSwitch
Drain line
Suction line to pump

PROGRAMMABLE SEQUENCING NOZZLES – FOR FOUNTAINS

This section shows ChoreoSwitch® products appropriate for fountains with no public access/interaction (for deck mounted/ playdeck solutions with no standing body of water see next section.)

ChoreoSwitches for fountains are available in these variations:

- 2 types of nozzle effects (Plume = Streamy or Aerator = Foamy)
- 2 different inlet sizes for effect (26mm and 39mm)
- Available in 12VDC or 24VAC

The Crystal Fountains ChoreoSwitch is an exciting sequencing* unit that produces programmed effects at high sequencing speed (up to 10 times per second producing no waterhammer).

Versatile:

- Operates under 50/60 Hz AC signal for global applications
- Multiple ChoreoSwitches can produce a wide variety of geometric patterns
- You can produce multiple heights using a variable speed drive pump
- The unit can be installed out of water or submerged to maximum water level shown

Easy Installation:

- The unit can be adjusted up to 5° for installation alignment.

Easy Maintenance:

- Know when your unit is working - the ChoreoSwitch comes with a power current verifying LED light.
- Unique to the ChoreoSwitch, a service door compartment allows easy debris clean-out for maintenance.**

Comes with an optional Quick Connection Kit (SWS100A600 - 25mm gate valve, fittings and quick disconnect Cam-lock). Made of plastic and stainless steel complete with 3m of 18/3 STW submersible cable and 3m of reinforced flexible hose. Available with brass nozzles upon request. **Water level independent.**

*Recommend filtered water supply (500 microns) using a discharge filter.

****Contact Crystal Fountains for detailed specifications, installation and operation details.**

Which ChoreoSwitch Do I Need?

1. Choose Your Effect	Streamy Effect (Plume Nozzle)								Foamy Effect (Aerator Nozzle)			
1. Choose Your Size	1" Water Inlet				1 ½" Water Inlet				1" Water Inlet		1 ½" Water Inlet	
2.Select Voltage	12VDC		24VAC		12VDC		24VAC		12VDC	24VAC	12VDC	24VAC
3.Select Jet	Plastic Jet	Brass Jet	Plastic Jet	Brass Jet	Plastic Jet	Brass Jet	Plastic Jet	Brass Jet	Brass Jet	Brass Jet	Brass Jet	Brass Jet
4.Get Part Number	SWS127	SWS129	SWS101	SWS109	SWS139	SWS140	SWS151	SWS162	SWS145	SWS100	SWS152	SWS150

ChoreoSwitch® Sequencing Plume Nozzle



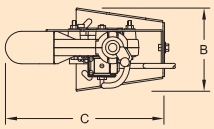


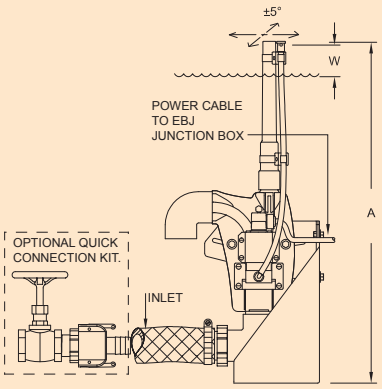


Plastic Nozzle



Brass Nozzle





ChoreoSwitch® Sequencing Plume Nozzle

DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Exhaust	Spray height (m.)	1.6	3.1	4.6	6.1	6.8
SWS127 / SWS101 (Plastic Jet)	1"	435	134	197	26	4	Not Submerged	LPM	34.0	49.0	61.0	68.0	72.0
								Head (m.)	6.5	11.3	17.1	21.4	23.2
								Spread (cm.)	46	122	138	138	138
							Submerged	LPM	38.0	49.0	61.0	72.0	76.0
								Head (m.)	6.1	11.3	17.4	23.2	25.7
								Spread (cm.)	61	107	138	138	138

DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Exhaust	Spray height (m.)	1.6	3.1	4.6	6.1	6.8
SWS129 / SWS109 (Brass Jet)	1"	435	134	197	26	4	Not Submerged	LPM	34.0	49.0	61.0	68.0	72.0
								Head (m.)	6.5	11.3	17.1	21.4	23.2
								Spread (cm.)	46	122	138	138	138
							Submerged	LPM	38.0	49.0	61.0	72.0	76.0
								Head (m.)	6.1	11.3	17.4	23.2	25.7
								Spread (cm.)	61	107	138	138	138

DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Exhaust	Spray height (m.)	0.9	2.2	3.1	4.0	4.6	6.8	7.4	9.2	10.7
SWS139 / 151 (Plastic Jet)	1 ½"	623	147	280	51	4	Not Sub-merged	LPM	57.0	76.0	97.0	110.0	114.0	136.0	163.0	174.0	189.0
								Head (m.)	3.1	5.1	8.1	10.3	11.6	17.4	25.7	30.8	37.5
								Spread (cm.)	46	77	138	153	153	168	305	336	366
							Sub-merged	LPM	55.0	81.0	95.0	110.0	117.0	148.0	185.0	201.0	220.0
								Head (m.)	3.1	5.8	8	10.4	11.9	20.8	26.6	31.1	38.1
								Spread (cm.)	46	61	138	153	153	275	305	336	366

DIMENSIONS

PERFORMANCE

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.	Exhaust	Spray height (m.)	0.9	2.2	3.1	4.0	4.6	6.8	7.4	9.2	10.7
SWS140 / 162 (Brass Jet)	1 ½"	623	147	280	51	4	Not Sub-merged	LPM	76.0	102.0	117.0	132.0	148.0	159.0	178.0	197.0	216.0
								Head (m.)	4.3	7.7	10.1	13.2	15.9	21.1	28.1	35.1	42.1
								Spread (cm.)	61	77	138	153	153	168	305	305	305
							Submerged	LPM	76.0	102.0	117.0	132.0	148.0	159.0	178.0	197.0	216.0
								Head (m.)	4.3	7.7	10.1	13.2	15.9	21.1	28.1	35.1	42.1
								Spread (cm.)	61	77	138	153	153	168	305	305	305

ChoreoSwitch® Sequencing Aerator Nozzle

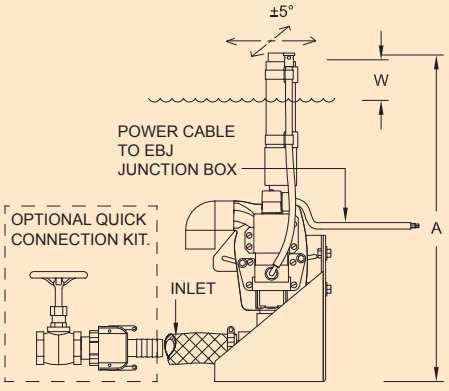




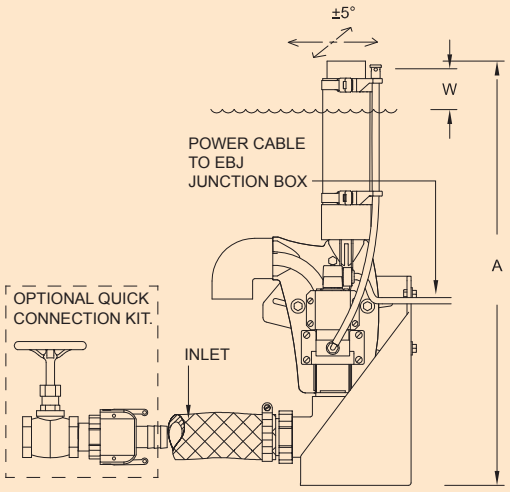




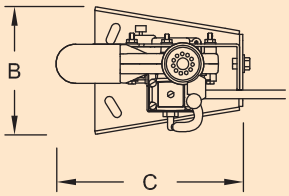




SWS145/100



SWS150/152



ChoreoSwitch® Sequencing Aerator Nozzle

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
SWS145 / SWS100 (Brass Jet)	1"	464	134	197	26	4

PERFORMANCE

Exhaust	Spray height (m.)	1.6	3.1	4.3
Not Submerged	LPM	45.0	60.0	72.0
	Head (m.)	10.7	19.3	26
	Spread (cm.)	77	153	153
Submerged	LPM	53.0	72.0	79.0
	Head (m.)	12.5	24.1	34.2
	Spread (cm.)	61	138	153

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
SWS150/ SWS152 (Brass Jet)	1 ½"	597	147	280	51	4

PERFORMANCE

Exhaust	Spray height (m.)	1	2.2	3.1	4.6	6.1	7.7	9.2	10.7
Not Sub-merged	LPM	76.0	102.0	127.0	167.0	176.0	185.0	204.0	227.0
	Head (m.)	5.1	10	13.6	28.7	34.5	40	47.3	58
	Spread (cm.)	46	77	153	153	244	305	336	366
Sub-merged	LPM	79.0	114.0	140.0	174.0	193.0	212.0	223.0	229.0
	Head (m.)	5.8	11.8	17	32.4	40.9	49.4	56.4	59.8
	Spread (cm.)	46	61	138	153	244	305	336	366

How to Order

CHOOSE CHOREOSWITCH

Desired Effect	Inlet Size (b.s.p.t.)	Voltage	Jet	Part No.
Streamy Effect (Plume Nozzle)	1"	12VDC	Plastic	SWS127
			Brass	SWS129
		24VAC	Plastic	SWS101
			Brass	SWS109
	1 ½"	12VDC	Plastic	SWS139
			Brass	SWS140
		24VAC	Plastic	SWS151
			Brass	SWS162
Foamy Effect (Aerator Nozzle)	1"	12VDC	Brass	SWS145
		24VAC	Brass	SWS100
	1 ½"	12VDC	Brass	SWS152
		24VAC	Brass	SWS150

CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Quick Connection Kit	SWS100A600

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	ChoreoSwitch for Fountain - 40 mm Streamy Effect 12VDC with Plastic Nozzle	SWS139
1	Quick Connection Kit	SWS100A600

PROGRAMMABLE SEQUENCING NOZZLES – FOR DECKS













PROGRAMMABLE SEQUENCING NOZZLES – FOR DECKS

This section of ChoreoSwitches® shows products with and without built-in LED lighting along with the nozzle. These products are appropriate for suspended deck or poured deck fountains (playdecks) with no standing body of water.

ChoreoSwitches appropriate for this application come in these variations:

- Suspended Deck (slab hanger style)
- Poured Deck (niche style)
- Niches - round or square
- 4 different nozzle effects (column, angled ring, crown effect, clear stream)
- Stainless Steel finish
- 12 VDC LED RGB or white lights (with spot or flood lamps) or unlit
- 12VDC or 24VAC ChoreoSwitches

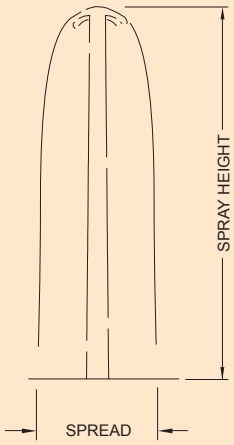
Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.



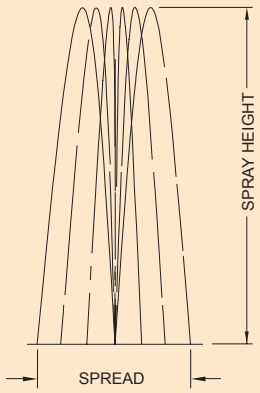




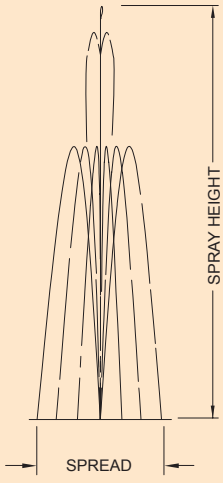




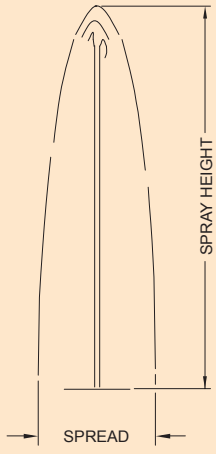
NWS110C115 -
Column Effect



NWS110C104 -
Angled Ring Effect



NWS110C108 -
Crown Effect with Center Jet



NWS110A122 -
Clear Stream Effect

**Contact Crystal Fountains for detailed specification, installation and operation details.*

PROGRAMMABLE SEQUENCING NOZZLES – FOR DECKS

The Crystal Fountains ChoreoSwitch® is an exciting interactive unit that produces programmed effects at high sequencing speed (up to 10 times per second producing no waterhammer).

Safe:

- Flush-mounted nozzles mean no tripping hazards on deck for interactive play *
- 10mm opening on grate meets safety code for toe entrapment
- Deck surrounds have no water accumulation
- Safe interactive play running at 6 meters per second
- Low voltage lights are covered with lexan covers to remain cool to the touch
- Vandal resistant

Versatile:

- 12 VDC LED RGB units produce dramatic evening light shows
- Multiple ChoreoSwitches can produce a wide variety of geometric patterns
- You can produce multiple heights using a variable speed drive pump
- The unit can be installed out of water or submerged to maximum water level shown

Easy Installation:

- The unit can be adjusted up to 5° for installation alignment
- Rotating grill assembly for fine-tuning layout pattern
- Comes standard with construction covers for use during installation

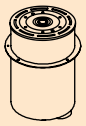
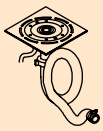
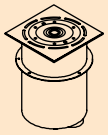
Easy Maintenance

- Know when your unit is working - the ChoreoSwitch comes with a power current verifying LED light
- Unique to the ChoreoSwitch, a service door compartment allows easy debris clean-out for maintenance

Comes with optional Vandal Resistant Screwdriver (FA0342). Made of plastic and stainless steel. Niche is preassembled, slab hanger style is preassembled with 3m of STW submersible cable and 3m of reinforced flexible hose. **Water level independent.**

*For interactive play, do not exceed 6 meters per second.
**Recommend filtered water supply (500 microns) using a discharge filter.

Which Dry Deck ChoreoSwitch Do I Need?

1. Choose Your Style	ROUND TOP						SQUARE TOP					
2.Choose Your Application	SLAB HANGER			NICHED			SLAB HANGER			NICHED		
												
3.Choose Your Lighting Effect	No Light	White LED	RGB LED	No Light	White LED	RGB LED	No Light	White LED	RGB LED	No Light	White LED	RGB LED
4.Get Part Number	SWS115	LED180	LED182	SWS132	LED184	LED186	SWS125	LED181	LED183	SWS138	LED185	LED187

Playdeck ChoreoSwitch® Round Slab Hanger Version





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
SWS115	1"	280	280	254	77 (min.)	4

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
LED180	1"	280	280	254	77 (min.)	4
LED182	1"	280	280	254	77 (min.)	4

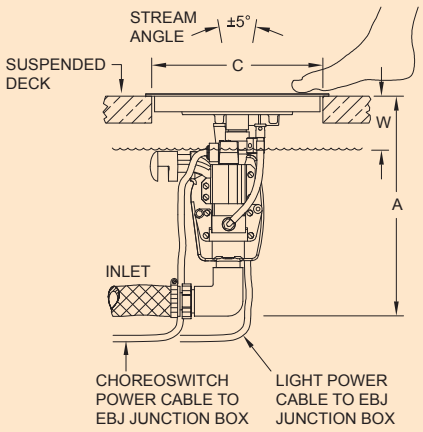
PERFORMANCE

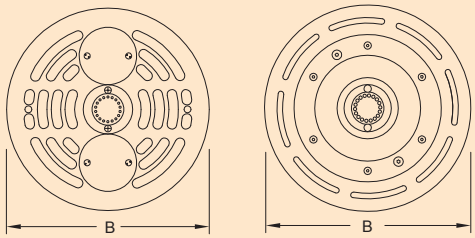
Nozzle	Spray height (m.)		1	1.6	2.2	2.8	3.4	4.3	4.9
NWS110C115	LPM		36.0	43.0	51.0	57.0	62.0	68.0	72.0
	Head (m.)		5.4	7.8	10.4	13	16.5	21.7	24.7
	Spread (cm.)		61	77	92	122	153	183	183
Nozzle	Spray height (m.)		0.6	1	1.3	1.6	1.9	2.2	2.5
NWS110C104	LPM		28.0	36.0	40.0	47.0	49.0	53.0	59.0
	Head (m.)		3.3	5.1	6.9	9.2	10.1	11.3	14.2
	Spread (cm.)		61	92	92	122	122	138	138
Nozzle	Spray height (m.)	Plume	1	1.4	1.9	2.3	2.8	3.4	3.7
		Ring	0.5	0.6	0.8	1.1	1.3	1.6	1.9
NWS110C108	LPM		32.0	36.0	40.0	47.0	51.0	55.0	57.0
	Head (m.)		4.2	5.7	7.1	8.9	10.1	13.2	14.4
	Spread (cm.)		61	61	77	92	122	153	183
Nozzle	Spray height (m.)		1	1.6	2.2	3.1	4	4.6	
NWS100A122	LPM		28.0	36.0	40.0	49.0	57.0	60.0	
	Head (m.)		3.6	5.4	6.9	10.1	13.2	15.4	
	Spread (cm.)		46	61	61	61	92	92	

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.



LED180/182





SWS115 LED180/182

Playdeck ChoreoSwitch® Square Slab Hanger Version





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
SWS125	1"	299	286	254	77 (min.)	4

DIMENSIONS

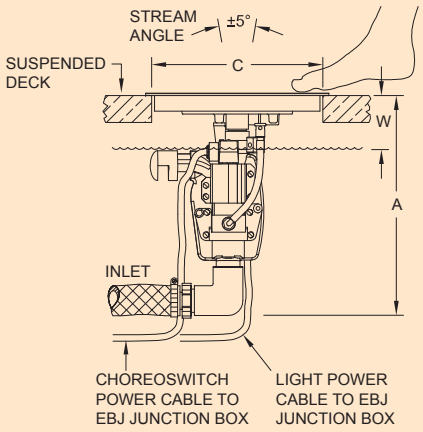
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Suction Strainer Openings max. mm.
LED181	1"	299	299	254	77 (min.)	4
LED183	1"	299	299	254	77 (min.)	4

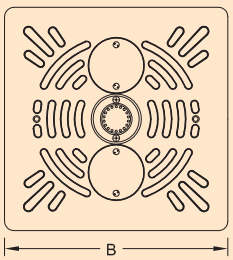
PERFORMANCE

Nozzle	Spray height (m.)		1	1.6	2.2	2.8	3.4	4.3	4.9
NWS110C115	LPM		36.0	43.0	51.0	57.0	62.0	68.0	72.0
	Head (m.)		5.4	7.8	10.4	13	16.5	21.7	24.7
	Spread (cm.)		61	77	92	122	153	183	183
Nozzle	Spray height (m.)		0.6	1	1.3	1.6	1.9	2.2	2.5
NWS110C104	LPM		28.0	36.0	40.0	47.0	49.0	53.0	59.0
	Head (m.)		3.3	5.1	6.9	9.2	10.1	11.3	14.2
	Spread (cm.)		61	92	92	122	122	138	138
Nozzle	Spray height (m.)	Plume	1	1.4	1.9	2.3	2.8	3.4	3.7
		Ring	0.5	0.6	0.8	1.1	1.3	1.6	1.9
NWS110C108	LPM		32.0	36.0	40.0	47.0	51.0	55.0	57.0
	Head (m.)		4.2	5.7	7.1	8.9	10.1	13.2	14.4
	Spread (cm.)		61	61	77	92	122	153	183
Nozzle	Spray height (m.)		1	1.6	2.2	3.1	4	4.6	
NWS100A122	LPM		28.0	36.0	40.0	49.0	57.0	60.0	
	Head (m.)		3.6	5.4	6.9	10.1	13.2	15.4	
	Spread (cm.)		46	61	61	61	92	92	

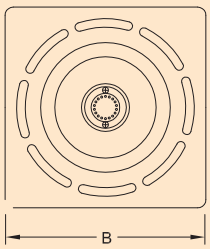


LED181/183





SWS125



LED181/183

Playdeck ChoreoSwitch® Round Niched Version





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Electrical Connection (mm)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Suction Strainer Openings max. mm.
SWS132	1"	20	77	407	331	293	112	4

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Electrical Connection (mm)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Suction Strainer Openings max. mm.
LED184	1"	20	77	407	331	280	112	4
LED186	1"	20	77	407	331	280	112	4

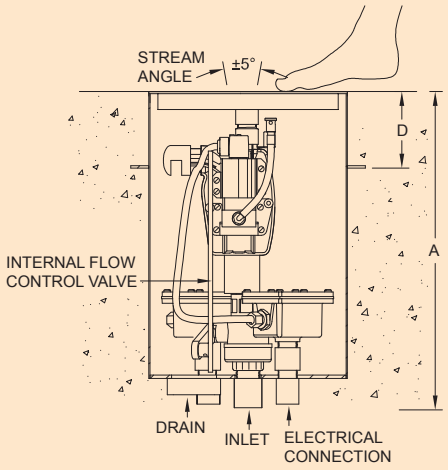
PERFORMANCE

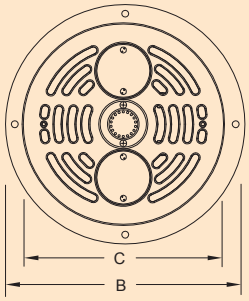
Nozzle	Spray height (m.)		1	1.6	2.2	2.8	3.4	4.3	4.9
NWS110C115	LPM		36.0	43.0	51.0	57.0	62.0	68.0	72.0
	Head (m.)		5.4	7.8	10.4	13	16.5	21.7	24.7
	Spread (cm.)		61	77	92	122	153	183	183
Nozzle	Spray height (m.)		0.6	1	1.3	1.6	1.9	2.2	2.5
NWS110C104	LPM		28.0	36.0	40.0	47.0	49.0	53.0	59.0
	Head (m.)		3.3	5.1	6.9	9.2	10.1	11.3	14.2
	Spread (cm.)		61	92	92	122	122	138	138
Nozzle	Spray height (m.)	Plume	1	1.4	1.9	2.3	2.8	3.4	3.7
		Ring	0.5	0.6	0.8	1.1	1.3	1.6	1.9
NWS110C108	LPM		32.0	36.0	40.0	47.0	51.0	55.0	57.0
	Head (m.)		4.2	5.7	7.1	8.9	10.1	13.2	14.4
	Spread (cm.)		61	61	77	92	122	153	183
Nozzle	Spray height (m.)		1	1.6	2.2	3.1	4	4.6	
NWS100A122	LPM		28.0	36.0	40.0	49.0	57.0	60.0	
	Head (m.)		3.6	5.4	6.9	10.1	13.2	15.4	
	Spread (cm.)		46	61	61	61	92	92	

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

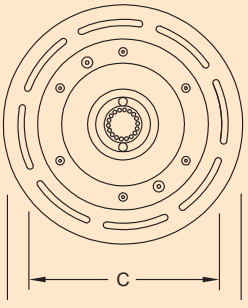


LED184/186





SWS132



LED184/186

Playdeck ChoreoSwitch® Square Niched Version





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Electrical Connection (mm)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Suction Strainer Openings max. mm.
SWS 138	1"	20	77	407	331	293	112	4

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Electrical Connection (mm)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Suction Strainer Openings max. mm.
LED185	1"	20	77	407	331	280	112	4
LED187	1"	20	77	407	331	280	112	4

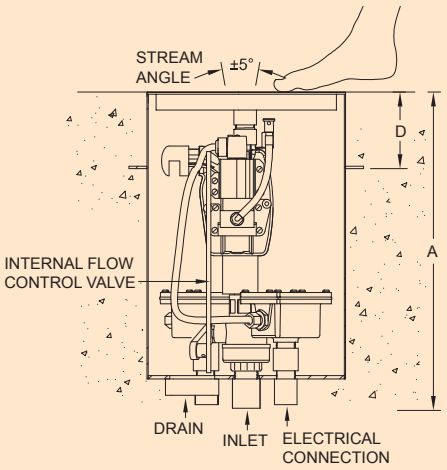
PERFORMANCE

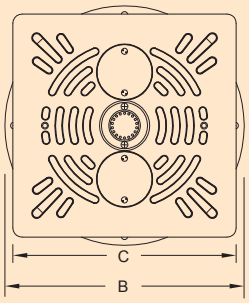
Nozzle	Spray height (m.)		1	1.6	2.2	2.8	3.4	4.3	4.9
NWS110C115	LPM		36.0	43.0	51.0	57.0	62.0	68.0	72.0
	Head (m.)		5.4	7.8	10.4	13	16.5	21.7	24.7
	Spread (cm.)		61	77	92	122	153	183	183
Nozzle	Spray height (m.)		0.6	1	1.3	1.6	1.9	2.2	2.5
NWS110C104	LPM		28.0	36.0	40.0	47.0	49.0	53.0	59.0
	Head (m.)		3.3	5.1	6.9	9.2	10.1	11.3	14.2
	Spread (cm.)		61	92	92	122	122	138	138
Nozzle	Spray height (m.)	Plume	1	1.4	1.9	2.3	2.8	3.4	3.7
		Ring	0.5	0.6	0.8	1.1	1.3	1.6	1.9
NWS110C108	LPM		32.0	36.0	40.0	47.0	51.0	55.0	57.0
	Head (m.)		4.2	5.7	7.1	8.9	10.1	13.2	14.4
	Spread (cm.)		61	61	77	92	122	153	183
Nozzle	Spray height (m.)		1	1.6	2.2	3.1	4	4.6	
NWS100A122	LPM		28.0	36.0	40.0	49.0	57.0	60.0	
	Head (m.)		3.6	5.4	6.9	10.1	13.2	15.4	
	Spread (cm.)		46	61	61	61	92	92	

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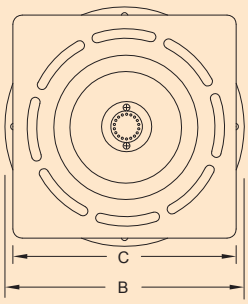


LED185/187





SWS138



LED185/187

Playdeck ChoreoSwitch® – How to Order





How to Order - Slab Hanger Version

Choose choreoswitch

Lighting	Style	Lamp	Part No.
None	Round Top	None	SWS115
	Square Top	None	SWS125
White LED	Round Top	Spot	LED180
	Square Top	Spot	LED181
RGB LED	Round Top	Spot	LED182
	Square Top	Spot	LED183

Choose cable

Cable For...	Cable Length	Part No.
No Light	3 m.	EL CORD70
	6 m.	EL CORD71
White LED	3 m.	ELCORD180M03
	6 m.	ELCORD180M06
RGB LED	3 m.	ELCORD182M03
	9 m.	ELCORD182M06

Choose nozzle

Effect	Part No.
Column	NWS110C115
Angled Ring	NWS110C104
Crown	NWS110C108
Clear Stream	NWS110A122

Choose additional options

Options	Part No.
Flood Optical Lens	LED160C006F

How to Order - Niched Version

Choose ChoreoSwitch

Lighting	Style	Lamp	Part No.
None	Round Top	None	SWS132
	Square Top	None	SWS138
White LED	Round Top	Spot	LED184
	Square Top	Spot	LED185
RGB LED	Round Top	Spot	LED186
	Square Top	Spot	LED187

Choose Nozzle

Effect	Part No.
Column	NWS110C115
Angled Ring	NWS110C104
Crown	NWS110C108
Clear Stream	NWS110A122

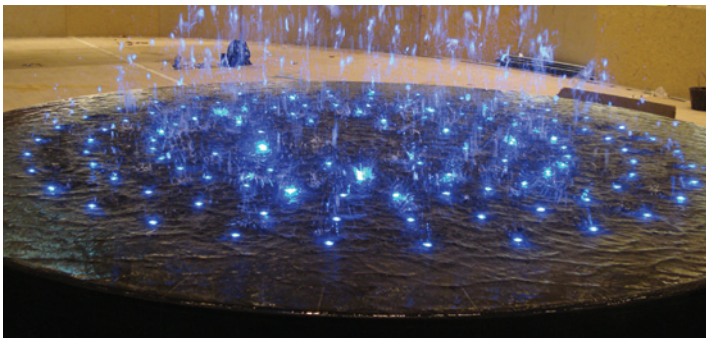
Choose additional options

Options	Part No.
Flood Optical Lens	LED160C006F
Vandal Resistant Driver Kit	FA0342

Example of How To Order

1	ChoreoSwitch for Deck - White LED with Square Top Niche	LED185
1	3 m. White LED Cable	ELCORD180M03
1	Crown Nozzle	NWS110C108
6	Flood Optical Lens	LED160C006F
1	Vandal Resistant Driver Kit	FA0342

NPN Series – Pop Nozzle Jet



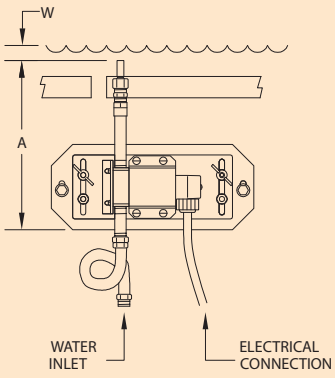
The NPN Pop nozzle can be PLC controlled and is designed for playful interactive displays. A 13mm ball or slug of water appears at the top of the water surface while each nozzle requires only 9 LPM. Water ball shape and height can be adjusted using the activation timing and inlet water pressure. Suitable for underwater and drydeck applications*, the Pop Nozzle produces a gently mesmerizing effect with low LPM requirements. Available in 12 and 24 VAC and either Wall or Floor Mounting. Not water level dependent.

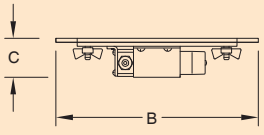
The NPN Pop Nozzle is also available with custom pipe or niche mounting. Contact Crystal Fountains for more details.

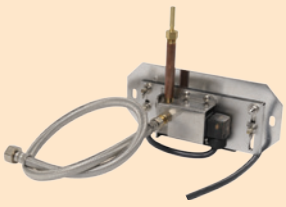
*For interactive play, do not exceed 6 m per second.

DIMENSIONS												PERFORMANCE			
Part No.	Water Inlet (b.s.p.t.)	Voltage	Watts Hold	Watts in Rush	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Valve	Filtration Required	Mount-ing	Spray height (m.)	0.3	0.6	1
NPN025	¼"	12 VAC	11 VA	20 VA	204	242	51	4 to 10	2 Way	500 Micron (max.)	Wall	LPM	8.0	8.0	8.0
												Head (m.)	11.3	21.1	28.1
												Spread (m.)	1.3	1.6	1.9
NPN026	¼"	24 VAC	11 VA	20 VA	204	242	51	4 to 10	2 Way	500 Micron (max.)	Wall	LPM	8.0	8.0	8.0
												Head (m.)	11.3	21.1	28.1
												Spread (m.)	1.3	1.6	1.9
NPN029	¼"	12 VAC	11 VA	20 VA	204	127	105	4 to 10	3 Way	500 Micron (max.)	Floor	LPM	8.0	8.0	8.0
												Head (m.)	11.3	21.1	28.1
												Spread (m.)	1.3	1.6	1.9
NPN030	¼"	24 VAC	11 VA	20 VA	204	127	105	4 to 10	3 Way	500 Micron (max.)	Floor	LPM	8.0	8.0	8.0
												Head (m.)	11.3	21.1	28.1
												Spread (m.)	1.3	1.6	1.9

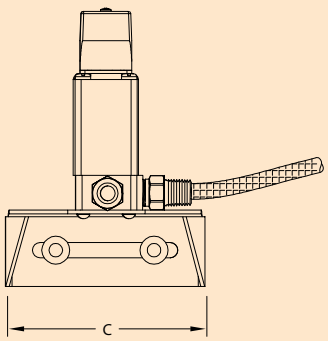
VISIBILITY ■■■□□
SOUND LEVEL ■□□□□
WIND RESISTANCE ■■■□□
SPLASH/MIST ■■■□□
EFFICIENCY ■■■■■

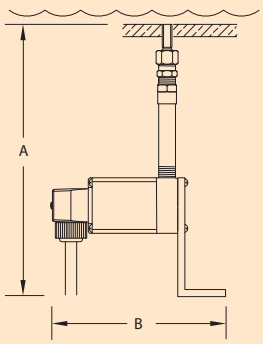






NPN025







NPN029

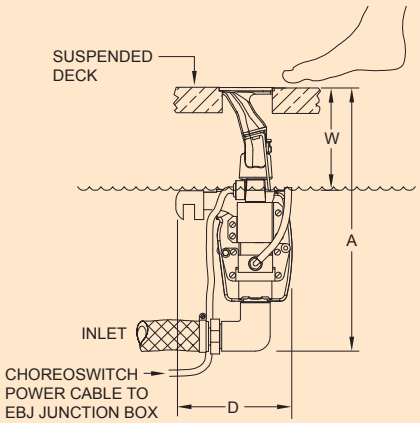
SWT Series – Playdeck ChoreoSwitch® Finger Jet Version

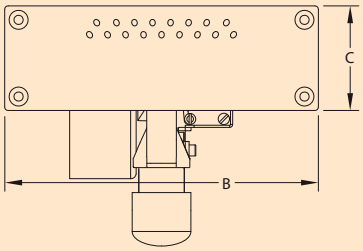
Originally developed for the cruise ship "Oasis of the Seas" Aqua Theatre, this unique Finger Jet produces a fine spray of 17 "streams" of of water from the deck. This 12VDC jet can be sequenced in a pulsing nature or streams can be "animated" using a Variable Frequency Drive. Perfect for playdecks* or other deck-mounted fountains. Comes with easy clean debris screen. Also available in niched version. Made of 316 stainless steel. **Not Water level dependent.**

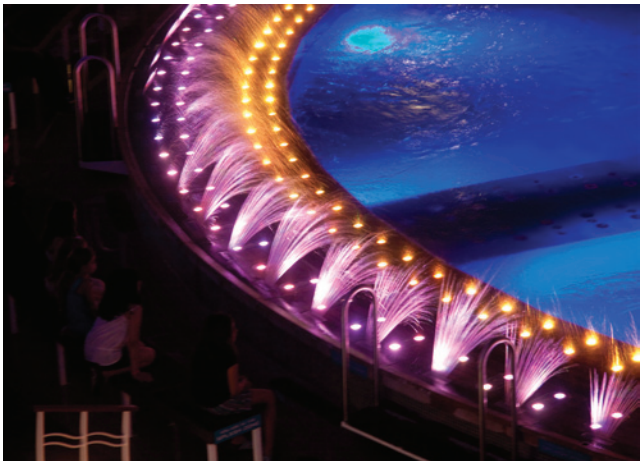
*For interactive play, do not exceed 6 m per second.

VISIBILITY ■■■■■
SOUND LEVEL ■■■□□
WIND RESISTANCE ■■■□□
SPLASH/MIST ■■■■□
EFFICIENCY ■■□□□













DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	Suction Strainer Openings max. mm.
SWT100	1"	360	170	225	75	2

PERFORMANCE

Throw (m.)	0.6	1.2	1.8	2.4	3
LPM	40.0	50.0	62.0	75.0	89.0
Head (m.)	5.3	11.0	15.9	22.4	34.0
Height (m.)	0.3	0.5	0.8	1.1	1.6
Spread (m.)	1.2	2.1	2.7	4.3	5.2

LAMINARS AND LEAPERS INTRO

Crystal Fountains has been at the forefront of innovative and entertaining water effects for decades. The Laminar and Leaper are two classic sequencing water effects that are always crowd pleasers:

Laminars – create a glass-like rod of water that is perfectly clear and still. When lit from the base unit, the water appears to glow when lit with built-in RGB LED light. Also available with a "Starburst" effect creating traveling "balls" of light.

Leapers – the same glass-like rod of water that's programmed to "jump". Makes for playful watching when jumping from one location to another. Can be lit with fiberoptics or with an internal RBG LED light.

132 LAMINARS AND LEAPERS INTRO
134 Electric Leaper Series
137 WMV Series – Starburst Laminar







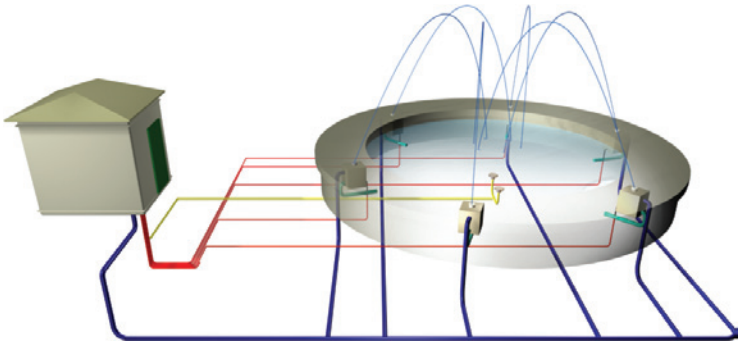
Leaper/Laminar fountains

provide endless entertainment and fascination.

Typical Installation for Fountain

- Nozzles are placed in fountain wall
- Water is pumped to nozzles via pumping station*
- Controllers and sequencing devices make the fountain more entertaining for all audiences.

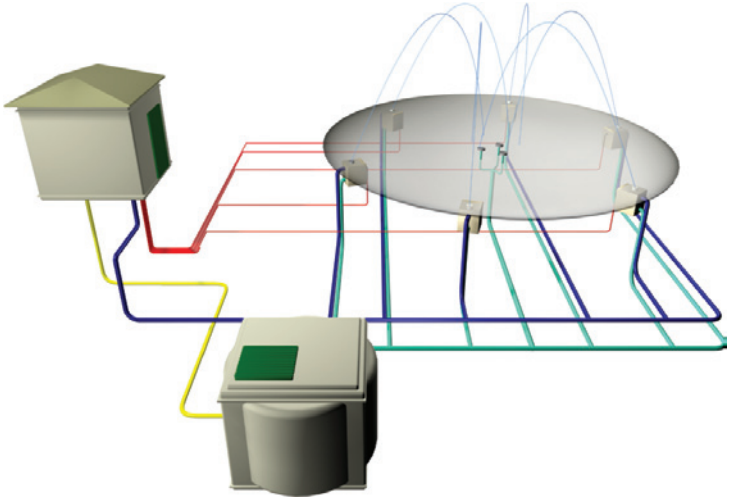
*NOTE: Water quality needs to be monitored for optimum nozzle performance.



Typical Installation for Playdeck

- Nozzles are niche-mounted in a deck surround
- Water drains through the surround into a holding tank
- Water then pumped to nozzles via a pumping station*
- Controllers and sequencing devices make the play experience much more fun.

*NOTE: Water quality needs to be strictly monitored for public safety.



Electric Leaper Series with Fiberoptic or LED Lighting

The Crystal Fountains Electric Leaper produces a 13mm diameter glass-like water rod that creates jumping and leaping effects. Available with three different lighting options – RGB LED, unlit, or with Fiberoptics

Versatile

- Multiple Leapers can produce a wide variety of patterns.
- You can produce multiple heights using a variable speed drive pump.
- The unit can be installed out of water or submerged to maximum water level shown.
- Available with niche or stand alone.

Easy Installation

- Has up to 50° installation adjustment built in
- 3 cable lengths to choose from

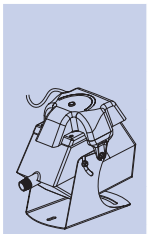
Programmable

- Program water speeds and lengths to create visual interest and entertainment.*

Lighting

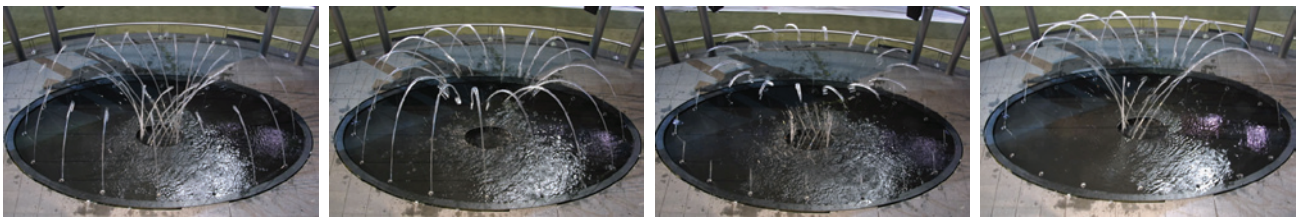
- Achieve dynamic color cost-effectively with fiberoptic connections or achieve greater programming versatility with LED lighting that can be individually programmed for unlimited lighting shows.

Which Leaper Do I Need?

		No Light or Fiberoptic Lighting		RGB LED Lighting	
1.Choose Your Lighting Effect					
2.Choose Your Mounting Type		Free Standing Leaper	Niched Leaper	Free Standing Leaper	Niched Leaper
3.Get Part Number		SWV100	SWV102	LED140	LED141

VISIBILITY	■ ■ □ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ □ □ □ □
SPLASH/MIST	■ □ □ □ □
EFFICIENCY	■ ■ □ □ □

Contact Crystal Fountains for detailed specification, installation and operation details.



Made of high-density polyethylene, polycarbonate and stainless steel with 26mm male N.P.T. Solenoid activated via 12VDC. **Water level independent.** CE marking. IP68, submersible rated.

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

*For interactive play do not exceed 6 meters per second.
**A filtered water supply is required (cartridge filter or 50 micron max.)

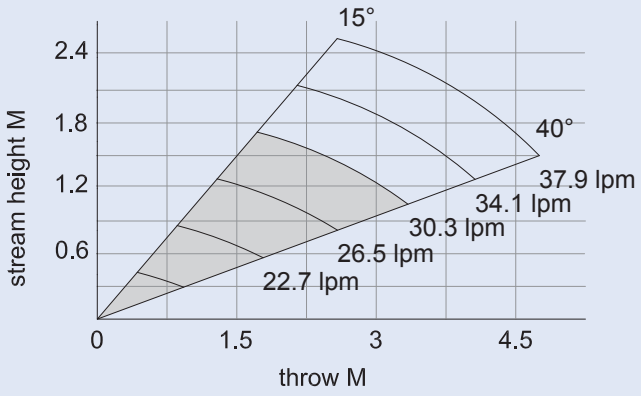
Electric Leaper Series with Fiberoptic or LED Lighting

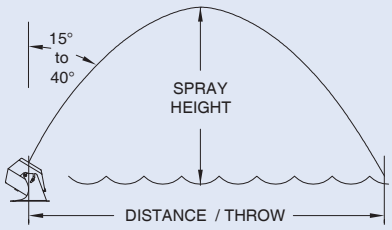
DIMENSIONS

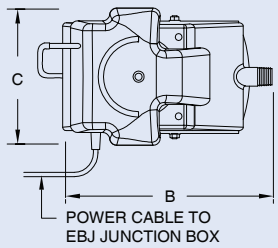
Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Installation	Filtration Required
SWV100 / LED140	1"	343	356	242	216	Residential	50 micron max.
						Commercial	5 micron max.

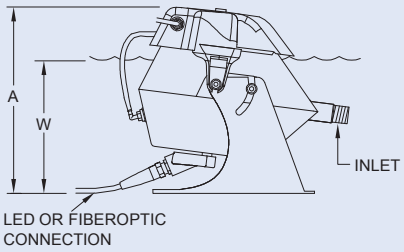
DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (max) (mm)	Installation	Filtration Required
SWV102 / LED141	1"	51	420	578	432	77	Residential	50 micron max.
							Commercial	5 micron max.



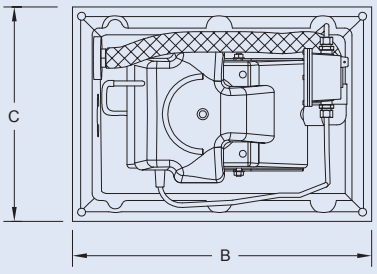


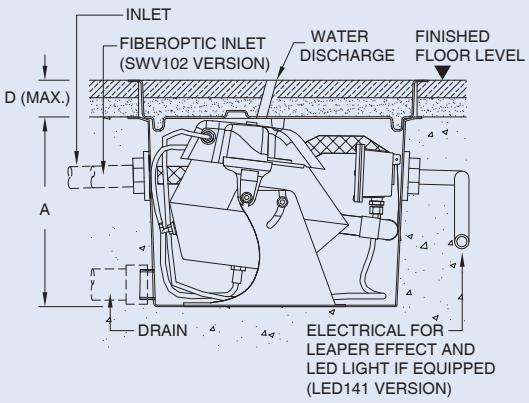


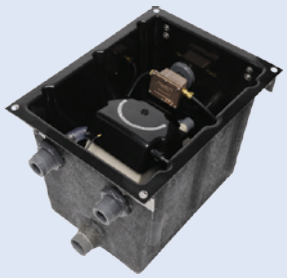




Freestanding Leaper







Niched Leaper

Electric Leaper Series with Fiberoptic or LED Lighting

How to Order

Choose Your No-Light or Fiberoptic Leaper

CHOOSE MOUNTING

Mounting	Part No.
Stand	SWV100
Niche	SWV102

CHOOSE CABLE

Cable for...	Cable Length	Part No.
SWV100 - No Light (Power Cable only)	3 m.	EL CORD100A105
	6 m.	EL CORD100A106
	18 m.	EL CORD100A107
SWV100 - Fiberoptic (Power Cable)	3 m.	EL CORD100A105
	6 m.	EL CORD100A106
	18 m.	EL CORD100A107
SWV100 - Fiberoptic (Fiberoptic Cable)	Fiberoptic Cable 100 Strand (per m.)	EL CORD 8

CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Fiberoptic Illuminator (Fiberoptic version only)	CL1505

*Note: To turn SWV100 or SWV102 into Fiberoptic version a Fiberoptic Illuminator and Fiberoptic Cable must be purchased.

Choose Your RGB LED Leaper

CHOOSE MOUNTING

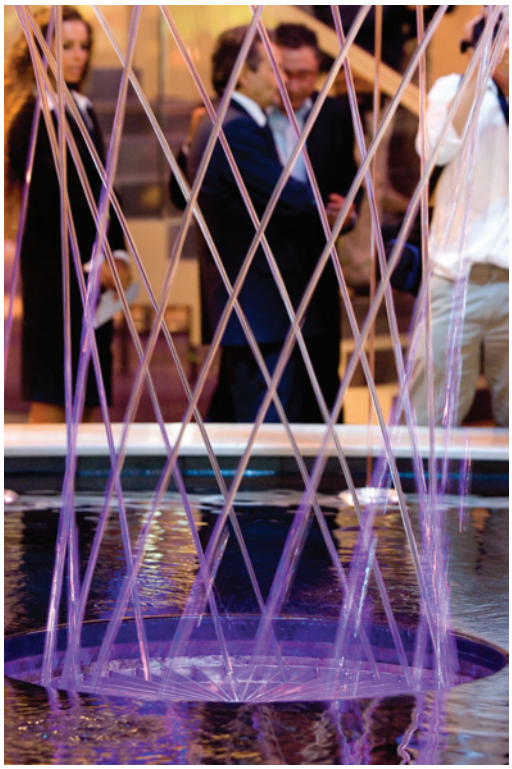
Mouting	Part No.
Stand	LED140
Niche	LED141

CHOOSE CABLE

Cable For...	Cable Length	Part No.
LED140 (Power Cable and LED Cable Kit)	3 m.	EL CORD206
	6 m.	EL CORD208
	18 m.	EL CORD210
LED141	Power Cable and LED Cable is Included with Leaper	

EXAMPLE OF HOW TO ORDER

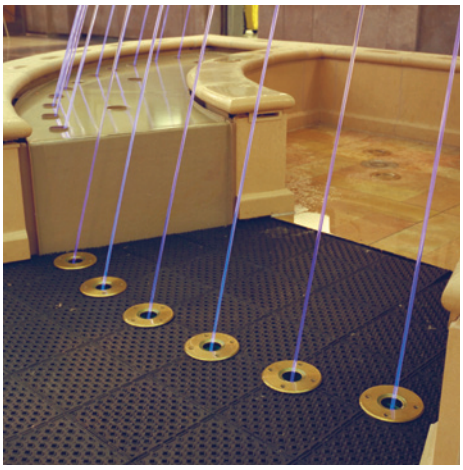
Quantity	Product	Part No.
1	LED Electric Leaper with Stand	LED140
1	3 m. Cable	EL CORD206





WMV Series – Starburst Laminar

The Crystal Fountains Starburst Laminar is a high-tech illusion. The water is so well controlled it creates a 13mm continuous glass-like rod of water that hits the water virtually sound and splash-free. The Starburst Laminar comes with the Starburst Kit creating a traveling 'starburst" light that appears from opening to end of the water stream when connected to a fiberoptic or LED source. This, combined with the built-in light, produces breathtaking light shows with fast programming and an unlimited color palette including white.





Versatile

- Multiple Laminars can produce a wide variety of patterns.
- You can produce multiple heights using a variable speed drive pump.
- The unit can be installed out of water or submerged to maximum water level shown.
- Can be flush mounted in a deck with optional niche.

Easy Installation

- Has up to 50° installation adjustment built in
- 3 cable lengths to choose from (LED model only)

Programmable

- Each LED stream can be individually programmed for unlimited lighting shows

Made of high density polyethylene, ABS, stainless steel and brass with 26mm male n.p.t. LED light 12VDC. Available with an optional niche, lid and animation panel to control lighting. **Water level independent.**
Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

*For interactive play do not exceed 6 meters per second.
**A filtered water supply is required (cartridge filter or 50 micron max.)

**Contact Crystal Fountains for detailed specification, installation and operation details.*

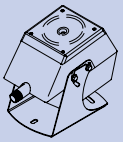
VISIBILITY	■ ■ □ □ □
SOUND LEVEL	■ ■ □ □ □
WIND RESISTANCE	■ □ □ □ □
SPLASH/MIST	■ ■ □ □ □
EFFICIENCY	■ ■ □ □ □

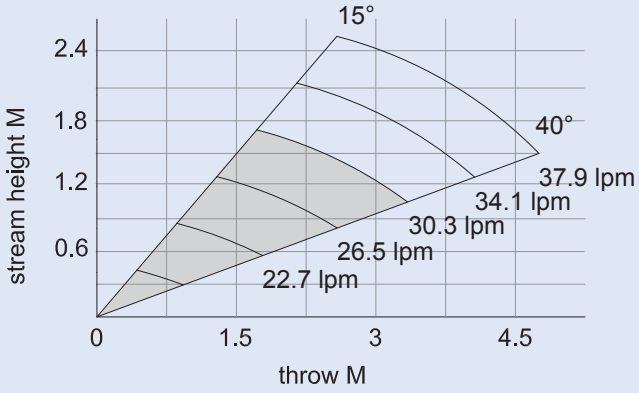
Quick Ship SHIPS IN 24 HOURS

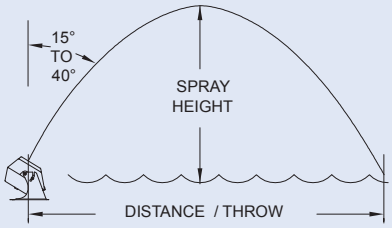
This product (WMV107 only) is available under our Quick Ship program! See page 15 for more details.

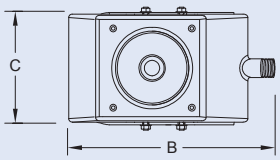
WMV Series – Starburst Laminar

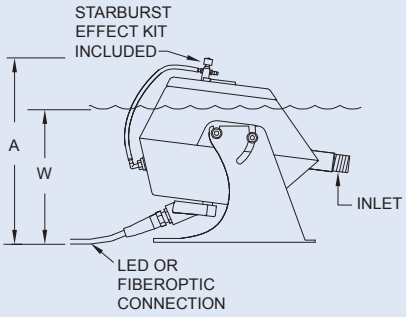
Which Laminar Do I Need?

		No Light or Fiberoptic Lighting		RGB LED Lighting	
1.Choose Your Lighting Effect					
2.Choose Your Mounting Type		Free Standing Laminar	Niched Laminar	Free Standing Laminar	Niched Laminar
3.Get Part Number		WMV107	WMV111	WMV117	WMV123



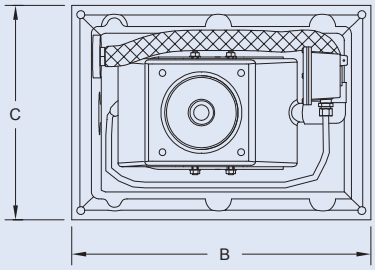


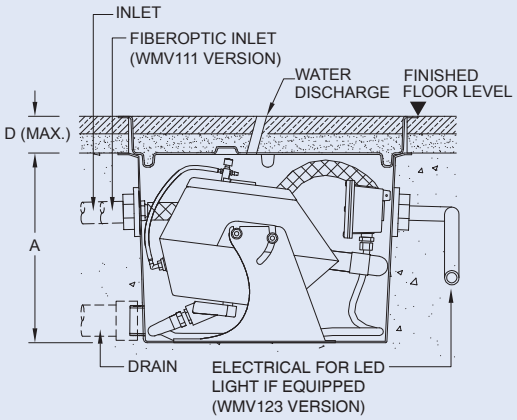


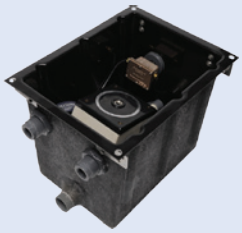




Freestanding Laminar







Niched Laminar

WMV Series – Starburst Laminar

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)	Installation	Filtration Required
WMV107 / WMV117	1"	280	356	204	216	Residential	50 micron max.
						Commercial	5 micron max.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Drain Connection (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (max) (mm)	Installation	Filtration Required
WMV111 / WMV123	1"	50	420	578	432	77	Residential	50 micron max.
							Commercial	5 micron max.

How to Order

Choose Your No-Light or Fiberoptic Laminar

Choose Mounting

Mounting	Part No.
Stand	WMV107
Niche	WMV111

CHOOSE CABLE

Cable For...	Cable Length	Part No.
WMV107 / WMV111 - No Light	No cable required for no light version	N/A
WMV107 / WMV111 - Fiberoptic	Fiberoptic Cable 100 Strand (per m.)	EL CORD 8

CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Fiberoptic Illuminator (WMV107 and WMV111 only)	CL1505

* Note: To turn WMV107 or WMV111 into fiberoptic version a fiberoptic illuminator must be purchased with cable selection
* Note: Power cable included in all WMV models

Choose Your RGB LED Laminar

CHOOSE MOUNTING

Mounting	Part No.
Stand	WMV117
Niche	WMV123

CHOOSE CABLE

Cable For...	Cable Length	Part No.
WMV117	3 m.	EL CORD34
	6 m.	EL CORD36
	18 m.	EL CORD38
WMV123	Power Cable and LED Cable is Included with Leaper	

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	RGB LED Laminar with Niche	WMV117
1	3 m. Cable	EL CORD34

LED LIGHTING TECHNOLOGY
Introduction

From LED's earliest years, Crystal Fountains has been at the forefront of exploring LED lighting technology for water features. LED lighting is an exciting new way of thinking about and installing a lighting system. At the heart of each LED (Light Emitting Diode) is a microprocessor that emits light when an electric current passes through it. Can be programmed individually, digital light shows can switch with incredible speed, variation and accuracy. With RGB color (Red, Green, Blue) you have a virtually unlimited palette of color to work with!

Other advantages of LED lighting:

- Lower power requirements
- High Efficiency/Produces Less Heat
- Long life/Saves Maintenance Time and Costs
- Limitless Design Flexibility with Color Intensity/Variety
- Can individually control each LED lamp for limitless color sequencing potential

LED lighting technology requires a systems approach. Crystal Fountains can supply all the components you require and assist you with product selection, sequenced show programming or technical support. LED Lighting works as an integrated total networked lighting system and includes 3 elements:

- LED Light Fixture and/or Nozzle
- Animation Panel with Power/Data supply keypad
- Power/Data cable

140	LED LIGHTING TECHNOLOGY
141	Types of LED Lights
142	LED002 Series – Compact LED Light
144	LED007 Series – Ultra Compact LED Light
145	LED051 Series – 24V/25W LED Color Changing Light
147	LED052 Series – 12V/30W LED Color Changing Light
149	LED053 Series – 24VDC/30W LED Color Changing Light
151	LED055 Series – 12VDC/18W LED White Light
153	LED160 Series – 12V/30W RGB or White LED Ring Light
156	LED190 Series – 12V/30W Niched RGB or White LED Playdeck Light











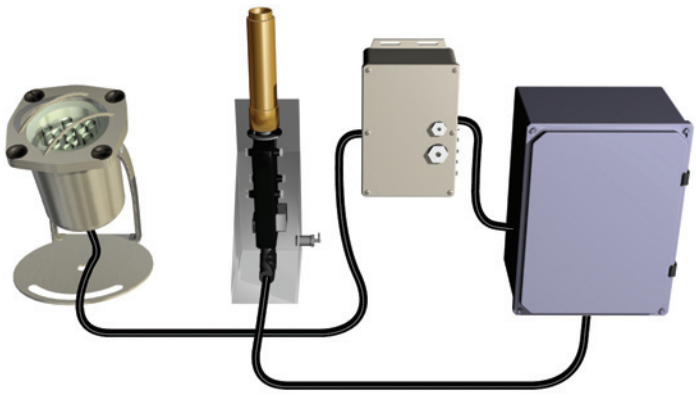
Types of LED Lights

Crystal Fountains manufactures a range of leading LED lighting products that can stand alone as lighting fixtures or have a combination of LED light and nozzle effect all in one unit. In this section we will show you our family of LED lights only.

Not all LED lights are created equally! Crystal Fountains manufactures a range of the brightest LED lighting products manufactured with perfect optical performance. We offer LED lighting:

- Safe 12VAC/DC and 24VDC
- Longer cable lengths between light and controller for easier installation
- Super compact to heavy duty with multiple mounting
- White to RGB color-changing - fully addressable
- For fountains or playdecks





Basic LED System (LED Light, Choreoswitch, Power & Data Supply, Control Panel)

LED002 Series – Compact LED Light - Wet and Dry

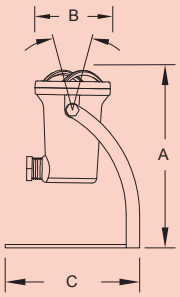
This attractive, compact LED light is available with either a warm or cool white LED or full RGB color LED. Its compact size allows close placement to any jet for maximum light usage or in tight surroundings. RGB provides limitless color sequencing potential. Light allows for gentle lighting of low effects and waterwalls as well as very good projection for high vertical nozzle effects. RGB (LEDEQMRF AND LEDEQMRS) lamps are fully programmable to suit your design needs and work in a systems approach with the LEDPS70 power supply and LEDQUE1 – I-player/DMX controller. Pre-programmed RGB lamps (EQS021A100) are also available that come standard with 24 programs and can work with optional handheld remote controller (EL RGBC 5W). Remote control can work with an unlimited number of lights to dim and change colors of individual lights. Available in different cable lengths and with many mounting configurations to suit your lighting needs from freestanding to niche mounted. Submersible IP68, CE Marking, cULus listed. Made of 316 stainless steel.

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*













DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LED002002	166	70	127

How to Order

CHOOSE LIGHT

Mounting	Part No.
Stand	LED002002

CHOOSE CABLE

Cable Length	Part No.
3 m.	ELCORD005M03
6 m.	ELCORD005M06

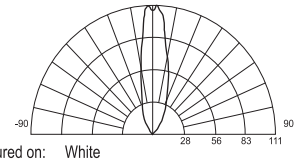
CHOOSE LAMP

Color	Type	Lamp	Part No.
RGB	5W24VDC	Flood	LEDQMRF
	5W24VDC	Spot	LEDQMRS
	5W12VDC	Spot	EQS021A100*
Warm White	3W12V (AC/DC)	Flood	EL002A102
	3W12V (AC/DC)	Spot	EL002A101
Cool White	3W12V (AC/DC)	Flood	EL002A104
	3W12V (AC/DC)	Spot	EL002A103

*EQS021A100 lamp is not UL listed

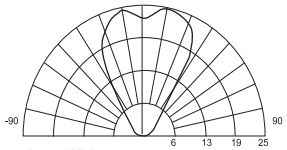
LED002 Series – Compact LED Light - Wet and Dry

CANDLE POWER DISTRIBUTION
FOR LEDEQMRS



Measured on: White
Beam Center: 106cd
Multipliers: 0.34 Red, 0.47 Green, 0.21 Blue

CANDLE POWER DISTRIBUTION
FOR LEDEQMRF



Measured on: White
Beam Center: 25cd
Multipliers: 0.4 Red, 0.18 Green, 0.42 Blue

ILLUMINANCE DISTRIBUTION
5W/24WATT LEDEQMRS LAMP

0.3 / 3.2	1.3 / 14.0	1.4 / 15.1	2.3 / 24.8	1.3 / 14.0	0.3 / 3.2
1.3 / 14.0	3.2 / 34.4	5.2 / 56.0	5.2 / 56.0	3.2 / 34.4	1.3 / 14.0
2.3 / 24.8	5.2 / 56.0	9.1 / 98.0	8.1 / 87.2	5.3 / 57.0	2.3 / 24.8
1.4 / 15.1	5.3 / 57.0	8.2 / 88.3	9.1 / 98.0	5.3 / 57.0	1.4 / 15.1
1.3 / 14.0	3.3 / 35.5	5.4 / 58.1	5.4 / 58.1	3.3 / 35.5	1.3 / 14.0
0.3 / 3.2	1.3 / 14.0	1.4 / 15.1	2.4 / 25.8	1.3 / 14.0	0.3 / 3.2

1.5'/0.5m
0'/0m
1.5'/0.5m
1.5'/0.5m
0'/0m
1.5'/0.5m

ILLUMINANCE DISTRIBUTION
5W/24WATT LEDEQMRF LAMP

0.4 / 4.3	0.5 / 5.4	0.7 / 7.5	0.9 / 9.7	0.6 / 6.5	0.4 / 4.3
0.6 / 6.5	1.0 / 10.8	1.2 / 12.9	1.1 / 11.8	0.9 / 9.7	0.6 / 6.5
0.9 / 9.7	1.2 / 12.9	1.7 / 18.3	1.6 / 17.2	1.1 / 11.8	0.9 / 9.7
0.7 / 7.5	1.1 / 11.8	1.6 / 17.2	1.7 / 18.3	1.2 / 12.9	0.7 / 7.5
0.5 / 5.4	0.9 / 9.7	1.1 / 11.8	1.2 / 12.9	1.0 / 10.8	0.5 / 5.4
0.4 / 4.3	0.5 / 5.4	0.7 / 7.5	0.9 / 9.7	0.6 / 6.5	0.4 / 4.3

1.0'/0.3m
0'/0m
1.0'/0.3m
1.0'/0.3m
0'/0m
1.0'/0.3m

Units: Footcandles/Lux
Measured on: All, reflectance 0
Distance from surface: 1'/0.3m (from bottom of grid with light at perpendicular to surface)

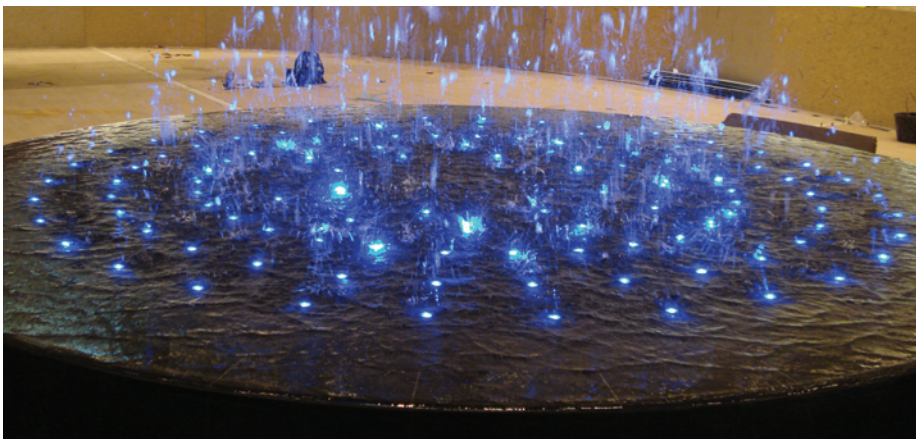




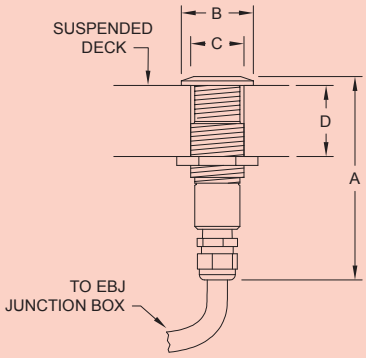


LED007 – Ultra Compact 5 watt LED Light - 12V

The LED007 is designed for situations where visibility of the light fixture needs to be de-emphasized and space near the nozzle is tight. The most compact 5 watt light on the market. Currently designed for suspended decks but can be used in multiple applications. Comes with spot light. Made of stainless steel and plastic.







DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
LED007	127	51	39	51

How to Order

CHOOSE LIGHT

Lighting	Mounting	Lamp	Part No.
RGB	Light with Slab Hanger	Spot	LED007

CHOOSE CABLE

Cable Length	Part No.
3 m.	ELCORD007M03
6 m.	ELCORD007M06

LED051 Series – 24V/25W LED Color Changing Light - Wet and Dry

General purpose 24V underwater, wet and dry location light fixture with RGB color-changing technology. Lots of flexibility to suit your application. Available in 4 different mounting styles from freestanding to niche mounted. Also available in 3 different cable lengths and spot or flood lamp. Best used to light no higher than 6m. Works in a systems approach with the LEDPS501 power supply and LEDQUE1 – I-player/DMX controller*. CE Marking and cULus listed to safety standards for use in traditional basin style fountains. (Not for swimming pool and spas). Cable and lamp to be ordered separately and pre-installed. Made of cast bronze, copper with stainless steel fasteners.

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

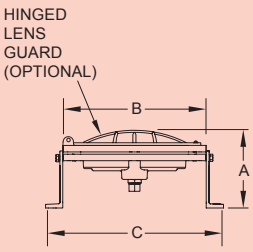
**Contact Crystal Fountains for detailed specifications, installation and operation details.*



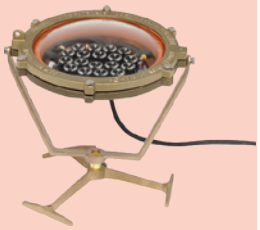


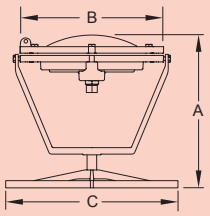






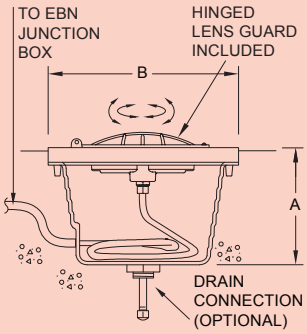
LEDB051
Light with T-Foot





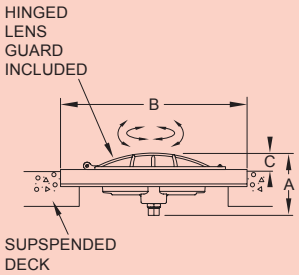
LEDC051
Freestanding Light





LEDD051
Light with Niche





LEDS051
Light with Slab Hanger

LED051 Series – 24V/25W LED Color Changing Light - Wet and Dry

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDB051	127	261	
LEDC051	280 to 407	280	248
LEDD051	229	331	
LEDS051	115	331	26

How to Order

CHOOSE LIGHT

Light Fixture		Part No.
Series	Options	
LEDB	n/a	LEDB051
	rockguard	LEDB051P
LEDC	280 mm. high	LEDC051
	407 mm. high	LEDC051L
	280 mm. w/. rockguard	LEDC051P
	407 mm. w/. rockguard	LEDC051LP
LEDD	n/a	LEDD051
LEDS	n/a	LEDS051

CHOOSE CABLE

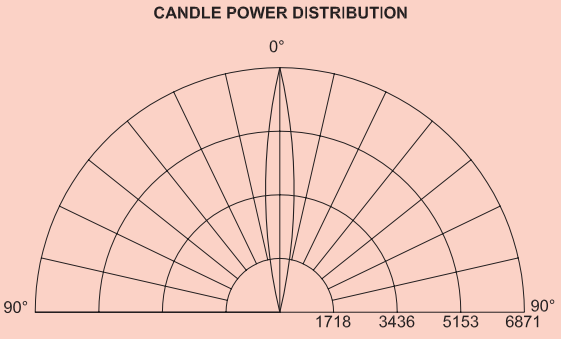
Cable Length	Part No.
3 m.	ELCORD050M03
6 m.	ELCORD050M06
15 m.	ELCORD050M15

CHOOSE LAMP

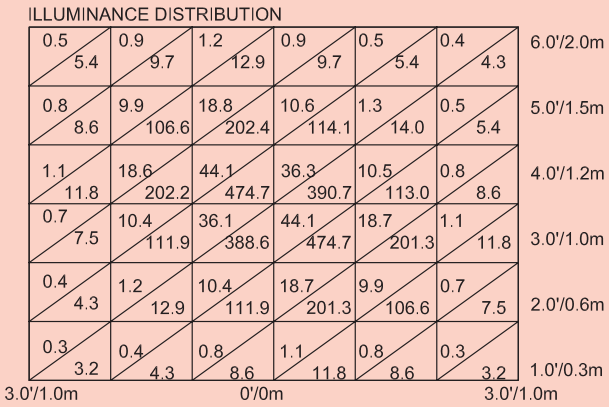
Lamp			
Volts	Watts	Beam	Part No.
24	25	spot	DLE C101
		flood	DLE C101F

Example of How to Order

Quantity	Product	Part No.
1	280 mm. Freestanding light with rockguard	LEDC051P
1	3 m. Cable	ELCORD050M03
1	Flood Lamp	DLEC 101F



Measured on: White (full Red,Green and Blue)
Beam Center: 6871 cd
Thin dashed lined : Indicates 50% of peak
Multipliers : 0.32 Red, 0.51 Green, 0.17 Blue



Units: Footcandles/Lux 10.8 lux : 1 fc
Measured on: All, reflectance model 80/50/20%
Location: Ceneter of grid, 3'/1m from and perpendicular to surface

LED052 Series – 12V/30W LED Color Changing Light - Wet and Dry

General purpose 12VDC underwater, wet and dry location light fixture with RGB color-changing technology. Lots of flexibility to suit your application - available in 4 different mounting styles from freestanding to niche mounted. Also available in 2 different cable lengths and spot or flood lamp. Best used to light no higher than 6m. Works in a systems approach with many generic power supplies and DMX controllers*. (See LED Accessories on pg 157). CE Marking and cULus listed to safety standards for use in traditional basin style fountains. (Not for swimming pool and spas). Cable to be ordered separately and pre-installed. Made of cast bronze, copper with stainless steel fasteners.

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

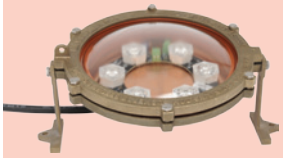
**Contact Crystal Fountains for detailed specifications, installation and operation details.*

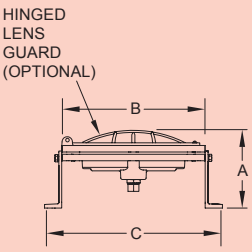






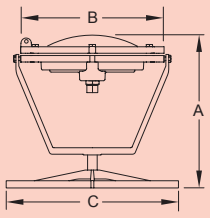






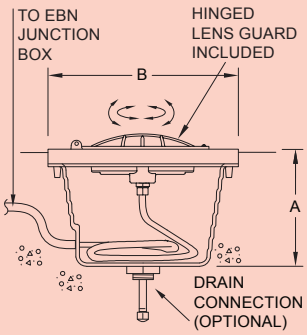
LEDB052 - Light with T-Foot



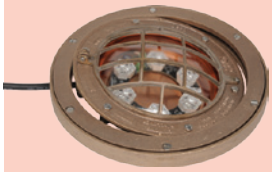


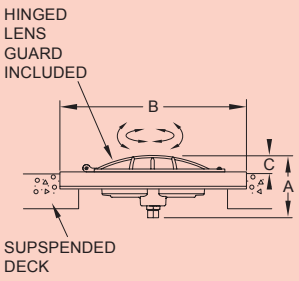
LEDC052 - Freestanding Light





LEDD052 - Light with Niche





LEDS052 - Light with Slab Hanger

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDB052	127	261	
LEDC052	280 to 407	280	248
LEDD052	229	331	
LEDS052	115	331	26

LED052 Series – 12V/30W LED Color Changing Light - Wet and Dry

How to Order

CHOOSE CABLE

Cable Length	Part No.
3 m.	ELCORD050M03
6 m.	ELCORD050M06

CHOOSE ADDITIONAL OPTIONS

OPTIONS	PART NUMBER
Flood Optics	LED160C006F

CHOOSE LIGHT

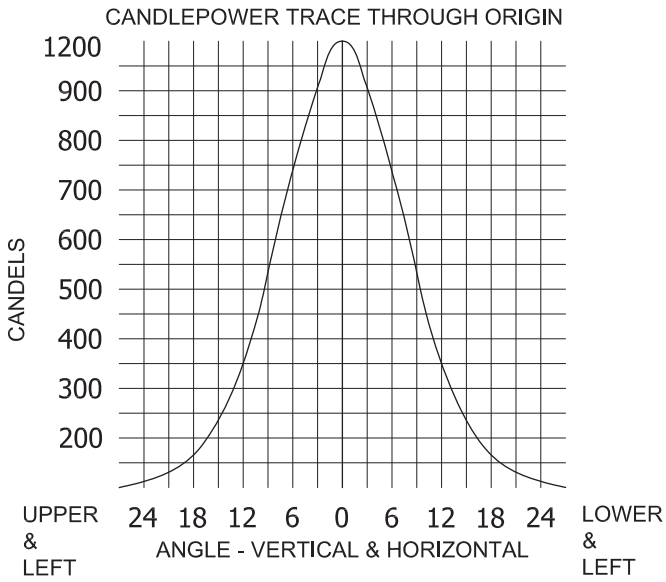
Light Fixture		Part No.
Series	Options	
LEDB	n/a	LEDB052
	rockguard	LEDB052P
LEDC	280 mm. high	LEDC052
	407 mm. high	LEDC052L
	280 mm. w/. rockguard	LEDC052P
	407 mm. w/. rockguard	LEDC052LP
LEDD	n/a	LEDD052
LEDS	n/a	LEDS052

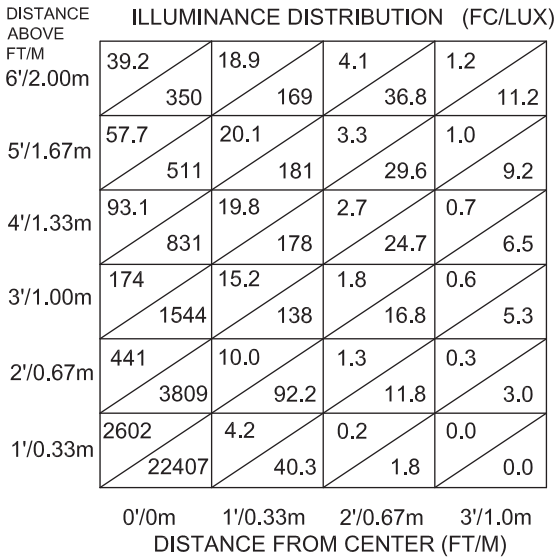
EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	Light with T-Foot	LEDB052
1	6 m. Cable	ELCORD050M06
6	Flood Optics	LED160C006F

RGB LED Light

Photometry Test is done in accordance with IES no. LM-35-1989





LED053 Series – 24VDC / 30 W LED Color Changing Light - Wet and Dry

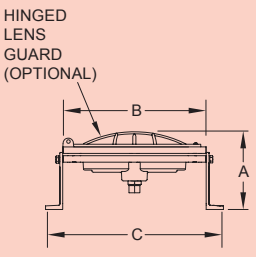
A general purpose 24VCD underwater, wet and dry location light fixture with RGB color changing technology. Lots of flexibility to meet your application – available in 4 different mounting styles from free standing to niche mounted. Also available in 2 different cable lengths and spot or flood lamp. Best used to light no higher than 6 m. Works in a systems approach with many generic power supplies and DMX controllers*. (See LED Accessories on pg 157). CE Marking and cULus listed to safety standards for use in traditional basin style fountains. (Not for swimming pool and spas). Made of cast bronze, copper with stainless steel.

Not all LED products are created equally. Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also see Crystal Fountains power/data and controller products to create a complete LED system.

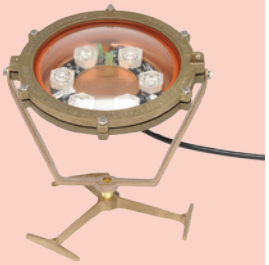


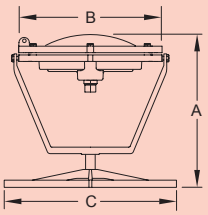






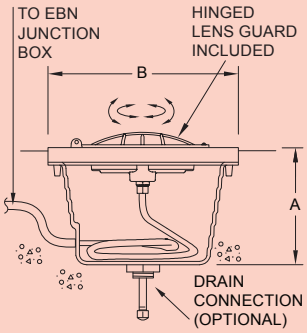
LEDB053 - Light with T-Foot



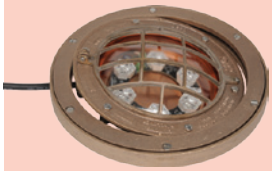


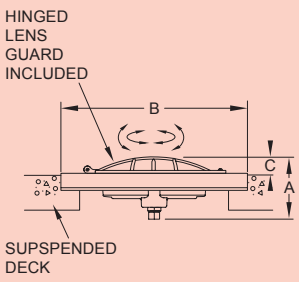
LEDC053 - Freestanding Light





LEDD053 - Light with Niche





LEDS053 - Light with Slab Hanger

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDB053	127	261	
LEDC053	280 to 407	280	248
LEDD053	229	331	
LEDS053	115	331	26

LED053 Series – 24VDC / 30 W LED Color Changing Light – Wet and Dry

How to Order

CHOOSE CABLE

Cable Length	Part No.
3 m.	EL CORD160M03
6 m.	EL CORD160M06

CHOOSE ADDITIONAL OPTIONS

OPTIONS	PART NUMBER
Flood Optics	LED160C006F

CHOOSE LIGHT

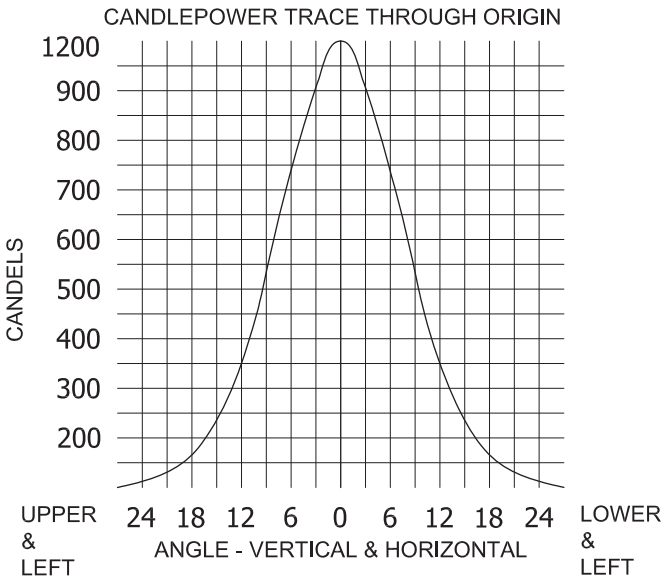
Light Fixture		Part No.
Series	Options	
LEDB	n/a	LEDB053
	rockguard	LEDB053P
LEDC	280 mm. high	LEDC053
	407 mm. high	LEDC053L
	280 mm. w/. rockguard	LEDC053P
	407 mm. w/. rockguard	LEDC053LP
LEDD	n/a	LEDD053
	drain	LEDD053D
LEDS	n/a	LEDS053

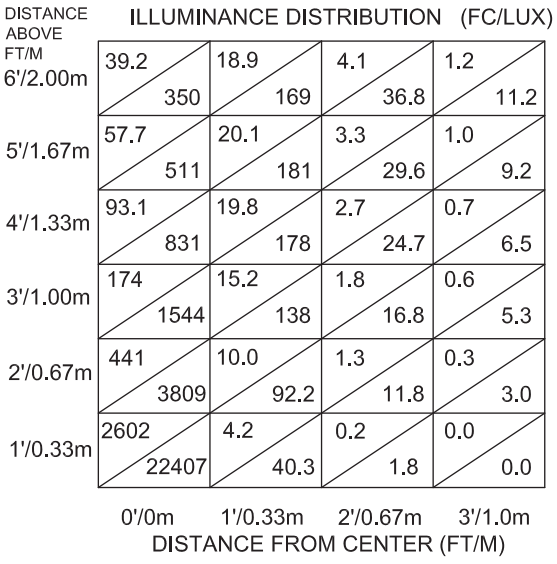
EXAMPLE OF HOW TO ORDER

Quantity	Product	Part Number
1	Niched Light with Drain	LEDD053D
1	3 m. Cable	EL CORD160M03

RGB LED Light

Photometry Test is done in accordance with IES no. LM-35-1989





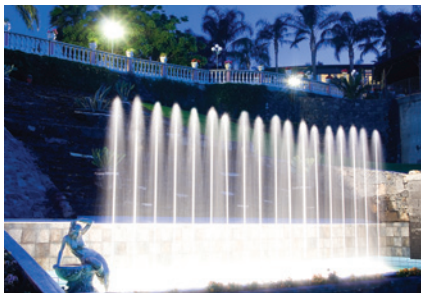
LED055 Series – 12VDC/30W LED White Light - Wet and Dry

General purpose 12VDC underwater, wet and dry location light fixture with white LED technology. Lots of flexibility to suit your application - available in 4 different mounting styles from freestanding to niche mounted. Also available in 2 different cable lengths and spot or flood lamp. Best used to light no higher than 6m. Powered using standard 12V power supply. CE Marking and cULus listed to safety standards for use in traditional basin style fountains. (Not for swimming pool and spas). Cable to be ordered separately and pre-installed. With the use of an external DMX controller and proper cable option, lights can be dimmed or turned on/off individually to create animated light sequences. Made of cast bronze, copper with stainless steel fasteners.

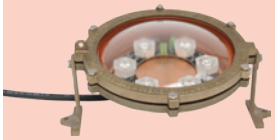
Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

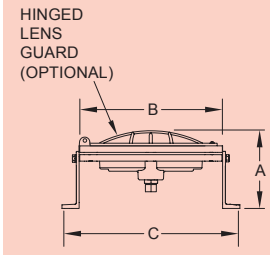
**Contact Crystal Fountains for detailed specifications, installation and operation details.*



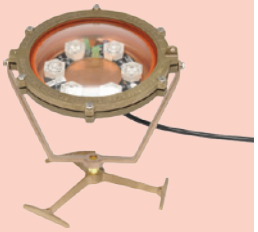


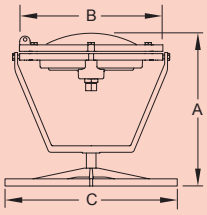






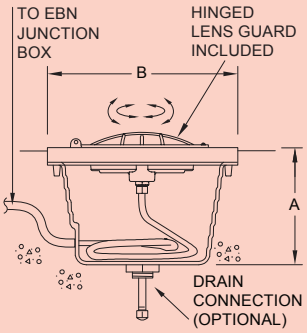
LEDB055 - Light with T-Foot



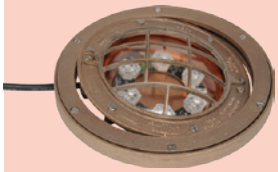


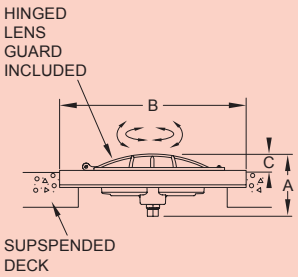
LEDC055 -Freestanding Light





LEDD055 - Light with Niche





LEDS055 - Light with Slab Hanger

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDB055	127	261	
LEDC055	280 to 407	280	248
LEDD055	229	331	
LEDS055	115	331	26

LED055 Series – 12VDC/30W LED White Light - Wet and Dry

How to Order

CHOOSE LIGHT

Light Fixture		Part No.
Series	Options	
LEDB	n/a	LEDB055
	rockguard	LEDB055P
LEDC	280 mm. high	LEDC055
	407 mm. high	LEDC055L
	280 mm. w/. rockguard	LEDC055P
	407 mm. w/. rockguard	LEDC055LP
LEDD	n/a	LEDD055
	drain conn.	LEDD055D
LEDS	n/a	LEDS055

CHOOSE CABLE

Cable For...	Cable Length	Part No.
White LED	3 m.	ELCORD005M03
	6 m.	ELCORD005M06
White LED Dim-mable	3 m.	ELCORD160M03
	6 m.	ELCORD160M06

CHOOSE ADDITIONAL OPTIONS

OPTIONS	PART NUMBER
Flood Optics	LED160C006F

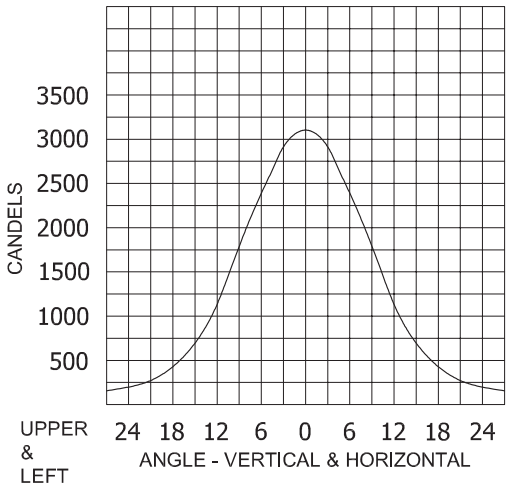
EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	Light with Niche	LEDD055
1	6 m. DMX Dimmable Cable	ELCORD160M06
6	Flood Optics	LED160C006F

WHITE LED Light

Photometry Test is done in accordance with IES no. LM-35-1989

CANDLEPOWER TRACE THROUGH ORIGIN



ILLUMINANCE DISTRIBUTION (FC/LUX)

DISTANCE ABOVE FT/M	0'/0m	1'/0.33m	2'/0.67m	3'/1.0m
6'/2.00m	87.4 / 786	42.4 / 381	10.4 / 93.6	3.4 / 30.7
5'/1.67m	125 / 1128	46.6 / 420	8.5 / 76.7	2.9 / 26.4
4'/1.33m	196 / 1778	47.8 / 430	7.7 / 69.0	2.3 / 20.9
3'/1.00m	349 / 3146	41.5 / 374	5.8 / 52.3	2.2 / 20.2
2'/0.67m	786 / 7008	30.6 / 276	5.0 / 45.4	1.7 / 15.7
1'/0.33m	3146 / 28888	20.2 / 180	2.6 / 22.8	0.5 / 4.0

DISTANCE FROM CENTER (FT/M)

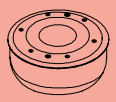
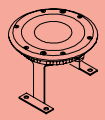
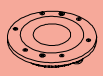
LED160 Series – 12V/30W RGB or White LED Ring Light - Wet and Dry

The LED160 series 12V LED light is one of our series of circular LED lights. With a center hole of 58mm diameter you can accommodate many Crystal Fountains nozzles and light the water 360°! This general-purpose underwater light is suitable for wet or dry locations and provides good wall washing or up-lighting. RGB works in a systems approach with many generic power supplies and I-player/DMX controllers*. (See LED Accessories on pg 157). White light powered using standard 12V power supply. The LED 160 Series light output is clear and bright. Available with multiple mounting options: T-Foot stand, foot-friendly (flush-mounted), niched to slab hanger. Also available in spot or flood lamps and a variety of cable lengths. With the use of an external DMX controller and proper cable option, lights can be dimmed or turned on/off individually to create animated light sequences. Made of 316 stainless steel.

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

Which Ring Light Do I Need?

	Slab Hanger Light with Hole for Jet	Foot Friendly Light Niche	Light with Stand	Foot Friendly Slab Hanger Light Only	Flush Mounted Slab Hanger Light with Hole for Jet
1.Choose Your Application					
2.Choose Your Lighting Effect	White LED / RGB LED	White LED / RGB LED	White LED / RGB LED	White LED / RGB LED	White LED / RGB LED
3.Get Part Number	LED 160003 / LED 160004	LED 160005 / LED 160006	LED 160007 / LED 160008	LED 160009 / LED 160010	LED 160011 / LED 160012



LED160003/160004



LED160005/160006



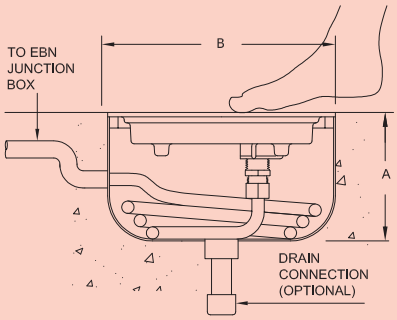
LED160007/160008



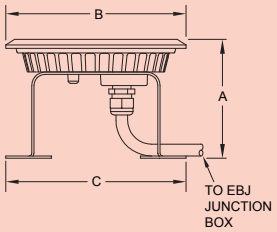
LED160009/160010



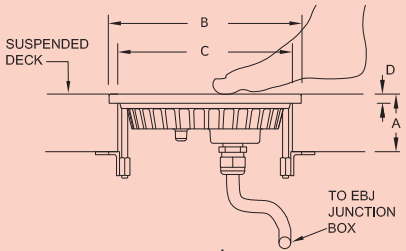
LED160011/160012



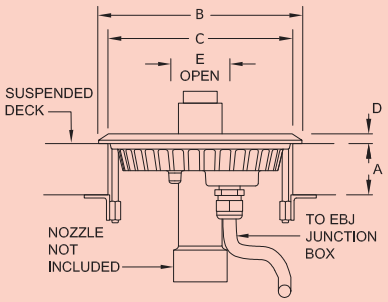
LED160005/160006



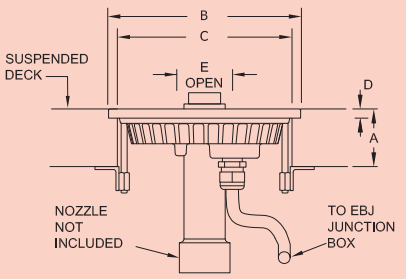
LED160007/160008



LED16009/160010



LED160003/160004



LED160011/160012

LED160 Series – 12V/30W RGB or White LED Ring Light - Wet and Dry









DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
LED160003	77	204	185	10
LED160004	77	204	185	10
LED160005	178	204		
LED160006	178	204		
LED160007	153	204	153	10
LED160008	153	204	153	10
LED160009	77	204	185	10
LED160010	77	204	185	10
LED160011	77	204	185	10
LED160012	77	204	185	10

How to Order

CHOOSE LIGHT

Lighting	Mounting	Lamp	Part No.
White	Slab Hanger Light with Hole	Spot	LED160003
	Foot Friendly Niched Light	Spot	LED160005
	Light with Stand	Spot	LED160007
	Foot Friendly Slab Hanger Light Only	Spot	LED160009
	Flush Mounted Slab hanger Light With Hole	Spot	LED160011
RGB	Light with Slab Hanger	Spot	LED160004
	Foot Friendly Niched Light	Spot	LED160006
	Light with Stand	Spot	LED160008
	Foot Friendly Slab Hanger	Spot	LED160010
	Flush Mounted Slab Hanger Light With Hole	Spot	LED160012

LED160 Series – 12V/30W RGB or White LED Ring Light - Wet and Dry

CHOOSE CABLE

Cable For...	Cable Length	Part No.
White LED	3 m.	ELCORD005M03
	6 m.	ELCORD005M06
White LED DMX Dim-mable	3 m.	ELCORD160M03
	6 m.	ELCORD160M06
RGB LED	3 m.	ELCORD160M03
	6 m.	ELCORD160M06

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	RGB LED Slab Hanger Light	LED160004
1	3 m. RGB Cable	ELCORD160M03
6	Flood Optics	LED160C006F

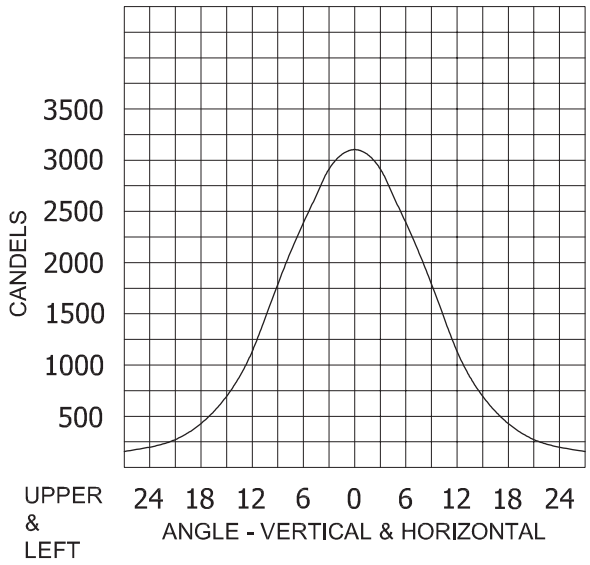
CHOOSE ADDITIONAL OPTIONS

Options	Part No.
Flood Optics	LED160C006F

WHITE LED Light

Photometry Test is done in accordance with IES no. LM-35-1989

CANDLEPOWER TRACE THROUGH ORIGIN



ILLUMINANCE DISTRIBUTION (FC/LUX)

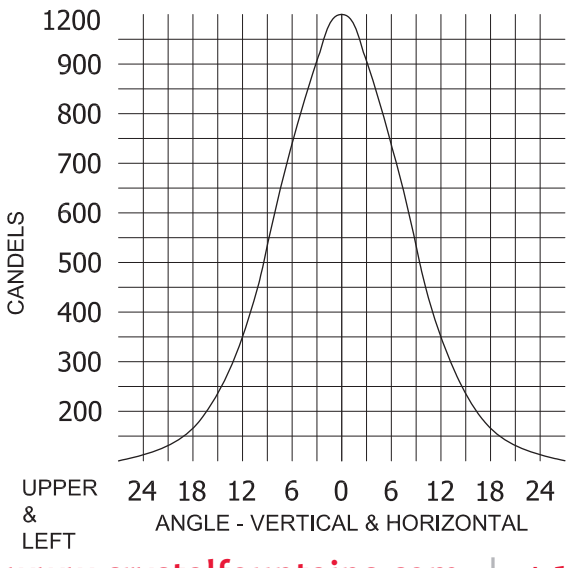
DISTANCE ABOVE FT/M	0'/0m	1'/0.33m	2'/0.67m	3'/1.0m
6'/2.00m	87.4 / 786	42.4 / 381	10.4 / 93.6	3.4 / 30.7
5'/1.67m	125 / 1128	46.6 / 420	8.5 / 76.7	2.9 / 26.4
4'/1.33m	196 / 1778	47.8 / 430	7.7 / 69.0	2.3 / 20.9
3'/1.00m	349 / 3146	41.5 / 374	5.8 / 52.3	2.2 / 20.2
2'/0.67m	786 / 7008	30.6 / 276	5.0 / 45.4	1.7 / 15.7
1'/0.33m	3146 / 28888	20.2 / 180	2.6 / 22.8	0.5 / 4.0

DISTANCE FROM CENTER (FT/M)

RGB LED Light

Photometry Test is done in accordance with IES no. LM-35-1989

CANDLEPOWER TRACE THROUGH ORIGIN



ILLUMINANCE DISTRIBUTION (FC/LUX)

DISTANCE ABOVE FT/M	0'/0m	1'/0.33m	2'/0.67m	3'/1.0m
6'/2.00m	39.2 / 350	18.9 / 169	4.1 / 36.8	1.2 / 11.2
5'/1.67m	57.7 / 511	20.1 / 181	3.3 / 29.6	1.0 / 9.2
4'/1.33m	93.1 / 831	19.8 / 178	2.7 / 24.7	0.7 / 6.5
3'/1.00m	174 / 1544	15.2 / 138	1.8 / 16.8	0.6 / 5.3
2'/0.67m	441 / 3809	10.0 / 92.2	1.3 / 11.8	0.3 / 3.0
1'/0.33m	2602 / 22407	4.2 / 40.3	0.2 / 1.8	0.0 / 0.0

DISTANCE FROM CENTER (FT/M)

LED190 Series – 12V/30W Niched RGB or White LED Playdeck Light

The LED190 Series 12V LED light is perfect for any playdeck water feature. Its pedestrian-friendly clear acrylic faceplate provides a dramatic up-light to many water features and is a perfect companion to Crystal Fountains Dynamite Blast™ nozzle. RGB works in a systems approach with many generic power supplies and I-player/DMX controllers*. (See LED Accessories on pg 157). White light powered using standard 12V power supply. Good for wet or dry locations and internally adjustable by up to 20° for different applications. The LED 190 Series light output is clear and bright. Made of stainless steel, copper, bronze and acrylic.

Not all LEDs are created equally! Crystal Fountains LED products produce a high intensity light and deliver perfect optical performance. Also, see Crystal Fountains power/data and controller products to create a complete LED system.

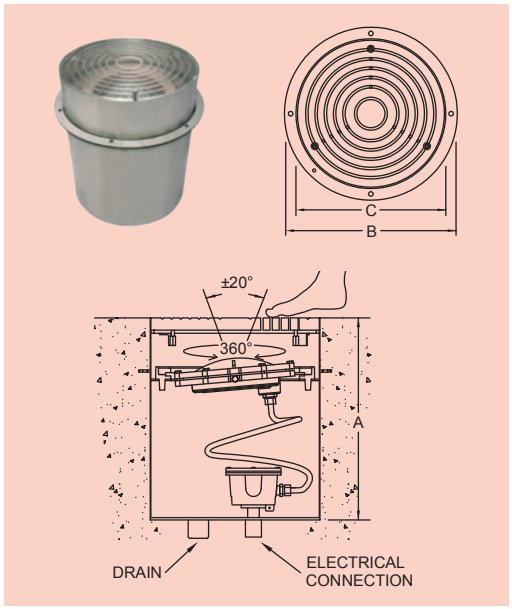
**Contact Crystal Fountains for detailed specifications, installation and operation details.*





Which Foot-Friendly Dry Deck Light Niche Do I Need?

	White LED	RGB LED
1.Choose Your Lighting Effect		
2.Get Part Number	LED190001	LED190002



DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LED190001	458	401	350
LED190002	458	401	350

How to Order

Choose Additional Options

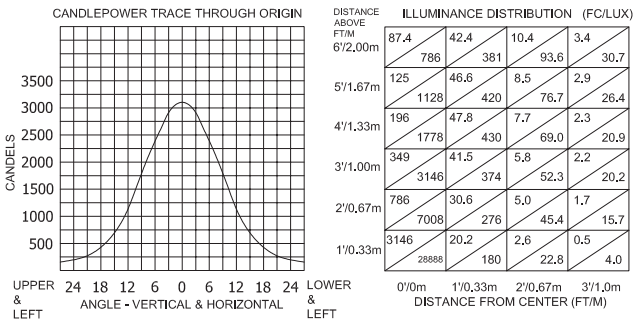
Options	Part No.
Flood Optics	LED160C006F

CHOOSE LIGHT

Lighting	Lamp	Part No.
White LED	Spot	LED190001
RGB LED	Spot	LED190002

WHITE LED Light

Photometry Test is done in accordance with IES no. LM-35-1989



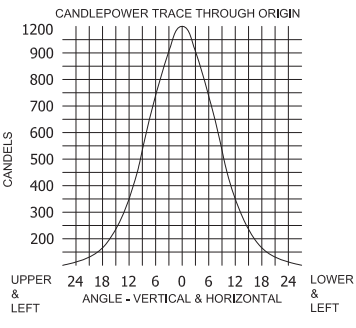
ILLUMINANCE DISTRIBUTION (FC/LUX)

DISTANCE ABOVE FT/M	0'/0m	1'/0.33m	2'/0.67m	3'/1.0m
6'/2.00m	87.4 / 786	42.4 / 381	10.4 / 93.6	3.4 / 30.7
5'/1.67m	125 / 1128	46.6 / 420	8.5 / 76.7	2.9 / 26.4
4'/1.33m	196 / 1778	47.8 / 430	7.7 / 69.0	2.3 / 20.9
3'/1.00m	349 / 3146	41.5 / 374	5.8 / 52.3	2.2 / 20.2
2'/0.67m	786 / 7008	30.6 / 276	5.0 / 45.4	1.7 / 15.7
1'/0.33m	3146 / 28888	20.2 / 180	2.6 / 22.8	0.5 / 4.0

DISTANCE FROM CENTER (FT/M)

RGB LED Light

Photometry Test is done in accordance with IES no. LM-35-1989



ILLUMINANCE DISTRIBUTION (FC/LUX)

DISTANCE ABOVE FT/M	0'/0m	1'/0.33m	2'/0.67m	3'/1.0m
6'/2.00m	39.2 / 350	18.9 / 169	4.1 / 36.8	1.2 / 11.2
5'/1.67m	57.7 / 511	20.1 / 181	3.3 / 29.6	1.0 / 9.2
4'/1.33m	93.1 / 831	19.8 / 178	2.7 / 24.7	0.7 / 6.5
3'/1.00m	174 / 1544	15.2 / 138	1.8 / 16.8	0.6 / 5.3
2'/0.67m	441 / 3809	10.0 / 92.2	1.3 / 11.8	0.3 / 3.0
1'/0.33m	2602 / 22407	4.2 / 40.3	0.2 / 1.8	0.0 / 0.0

DISTANCE FROM CENTER (FT/M)

LED ACCESSORIES – LED POWER/DATA, DMX SUPPLIES

All LED's operate as part of an overall system and require a power, data and DMX controller. Crystal Fountains manufactures a range of LED accessories that operate:

- LED002
- LED051 lights
- LED Electric Leaper Series (with built-in LED lights)
- LED Laminar Series (with built-in LED lights)

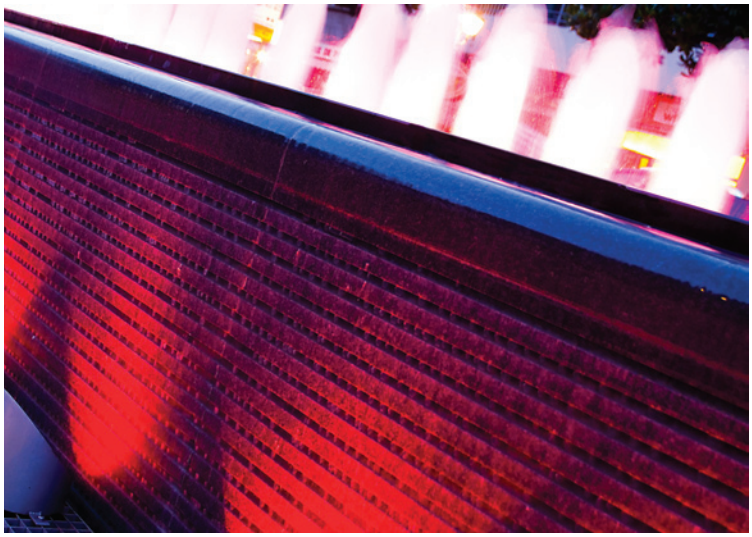
The LEDQUE1 DMX controller operates all Crystal Fountains LED products.

157 LED ACCESSORIES
158 LEDPS70 – 24V/70W Power and Data Supply
159 LEDPS501 – 24V/500W Power and Data Supply
160 LEDDATA101 – Extended Data Supply for LED Lights
161 LEDQUE1 – DMX Storage and Playback Unit for Fountain Light Shows
162 LEDPS250/251 – 12 & 24 VDC Power and Data Supply
163 LEDPS503/504 – 12 & 24 VDC Power and Data Supply
164 LEDP108/116 Series – Mini Fountain Controller
165 LEDDMXS8 – DMX Power and Distribution Board







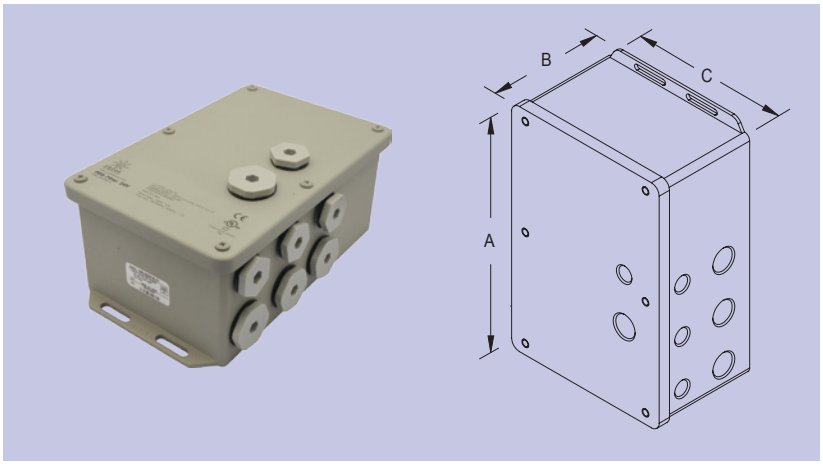


LEDPS70 – 24V/70W Power & Data Supply

Crystal Fountains LEDPS70 Power/Data Supply is one part of an overall LED system (power supply I-player/DMX controller LED lamp) and provides 70W of power/data supply. It works with Crystal Fountains LED002 Series underwater RGB LED lights.

The Nema 4-rated unit powers up to 12 RGB LED light fixtures and provides simplified wiring. IP66 and UL approved. The LEDPS70 Interface is designed for use with most DMX controllers, including Crystal Fountains LEDQUE1 I-Player. Operates using 120 or 240VAC. Comes with optional pre-programmed effects.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





Works with LED002

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDPS70	216	89	229

LEDPS501 – 24V/480W Power & Data Supply

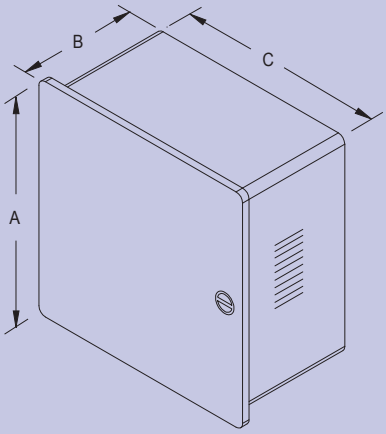
Crystal Fountains LEDPS501 is one part of an overall LED system (Power supply I-player/DMX controller LED lamp) and provides 480W of power/data supply. It works with the following Crystal Fountains RGB LED products:

- LED051 lights
- LED Electric Leaper Series (with built-in LED lights)
- LED Laminar Series (with built-in LED lights)

The Nema 4-rated unit powers up to 16 RGB LED light fixtures and provides simplified wiring. IP66 and UL approved. The LEDPS501 Interface is designed for use with most DMX controllers, including Crystal Fountains LEDQUE1 I-Player. Operates using 120 or 240VAC. Comes with optional pre-programmed effects.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





Works with following Crystal Fountains products:



LED051 - LED Color Changing Light



LED140/141 - LED Electric Leaper



WMV117/123 - LED Laminar

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDPS501	401	216	401

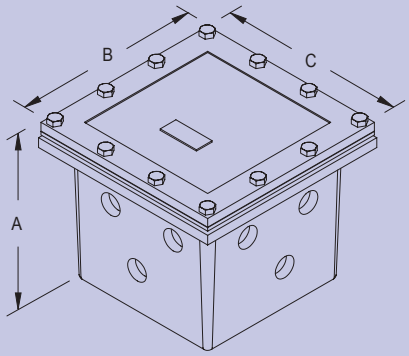
LEDDATA101 – Extended Data Supply for LED lights

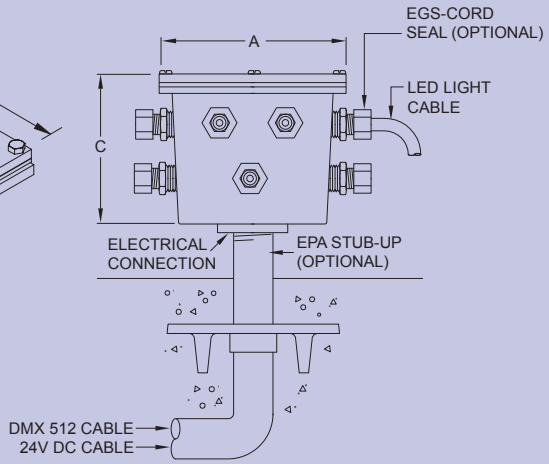
Submersible conduit-mounted data supply box that can be located in the fountain pool. This provides a solution where the application demands longer distances between LED light and LED power/data supply than can be provided by the standard LEDPS501.

Providing a 24 VDC power supply cable and DMX data supply cable to the LEDDATA101 completes the systems design. Comes with optional cord seals, stub ups and junction box potting compound. Junction box of cast bronze, equipped with neoprene gasket, fitted with stainless steel fasteners and internal ground connections.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*







Works with following Crystal Fountains products:



LED051 - LED Color Changing Light



LED140/141 - LED Electric Leaper



WMV117/123 - LED Laminar

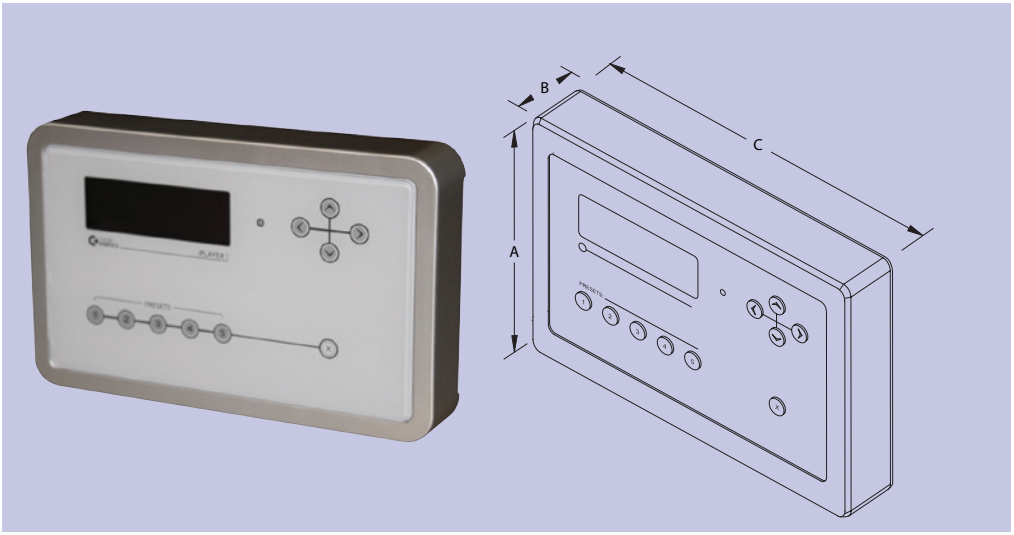
DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDDATA101	140	178	178

LEDQUE1 – DMX Storage and Playback Unit for Fountain Light Shows

LEDQUE1 controller is a compact yet powerful show storage and playback device capable of delivering light shows to installations with up to 340 unique light addresses. Controller operates all Crystal Fountains LED products. Packaged with light show software, LEDQUE1 is designed to add new levels of sophistication to your installations while eliminating the need for expensive lighting boards and technical programming expertise. The new LEDQUE1 includes a removable SD card and 5 programmable buttons for easy show, and date/time selections. Also available with a LEDQUER1 relay interface box to run other sequencing devices. Has both cULus and CE listing. Housing and mounting bracket of polycarbonate for indoor use in a dry environment and comes complete with LEDSOFT (software), wall-mount bracket with screws; USB cable; DMX data cable (1).

Contact Crystal Fountains for detailed specifications, installation and operation details.



DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDQUE	140	39	216

*The LEQUE1 operates all Crystal Fountains LED products.

LEDPS250/251 – 12 & 24VDC - Power Data Supply – 8 Lights

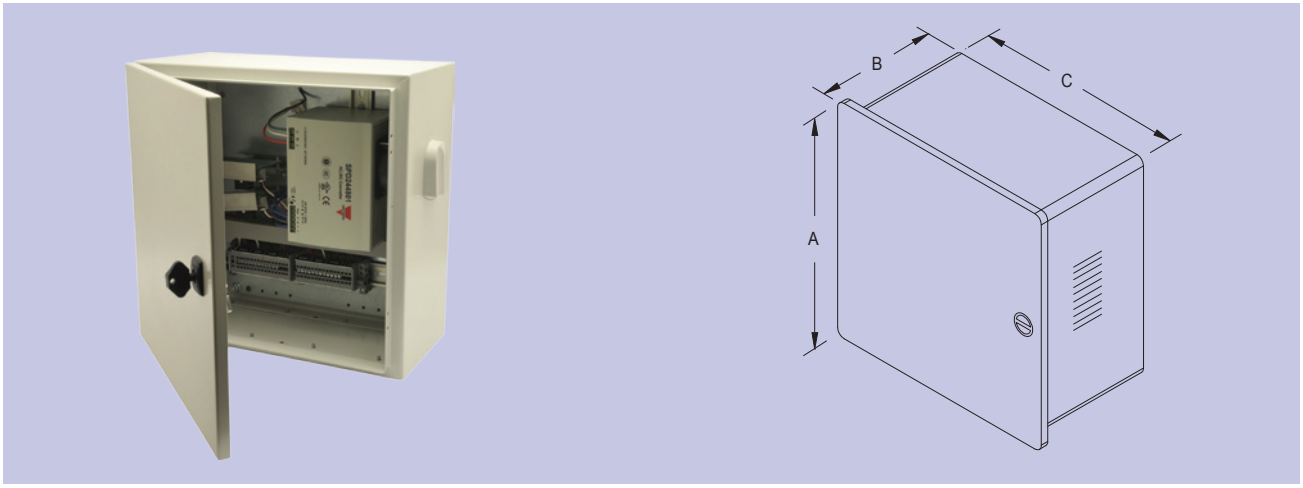
Crystal Fountains LEDPS250(12VDC) and LEDPS251(24VDC) power/data supply is one part of an overall LED system: (LED product LEDPS Power/data supply LEDQUE1 DMX Storage/Playback Unit) and provides up to 20 Amps of power/data. They work with the following Crystal Fountains LED products:

- LED007 Light Series
- LED160 Light Series
- LED170 Light Series
- LED180 Light Series
- LED052 Light Series
- LED053 Light Series
- LED FyreFly Series

The Nema 4-rated unit powers up to 8 LED light fixtures and provides simplified wiring.
The LEDPS250/251 Interface is designed for use with most DMX controllers, including Crystal Fountain LEDQUEI I-Player. Crystal Fountains Product Support Department would be happy to review your lighting and junction box layouts before purchase or installation. IP66 and UL approved.

**Contact Crystal Fountains for detailed specifications, installation and operation details or inquiries about custom programming.*

DIMENSIONS				PERFORMANCE		
Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	Output Voltage	No. of LED Lights Powered	LED Series
LEDPS250	401	216	401	12 VDC	8	LED160, LED170, LED180, LED052, LED Fyrefly
LEDPS251	401	216	401	24 VDC	8	LED053



LEDPS503/504 – 12 & 24VDC - Power Data Supply – 16 lights

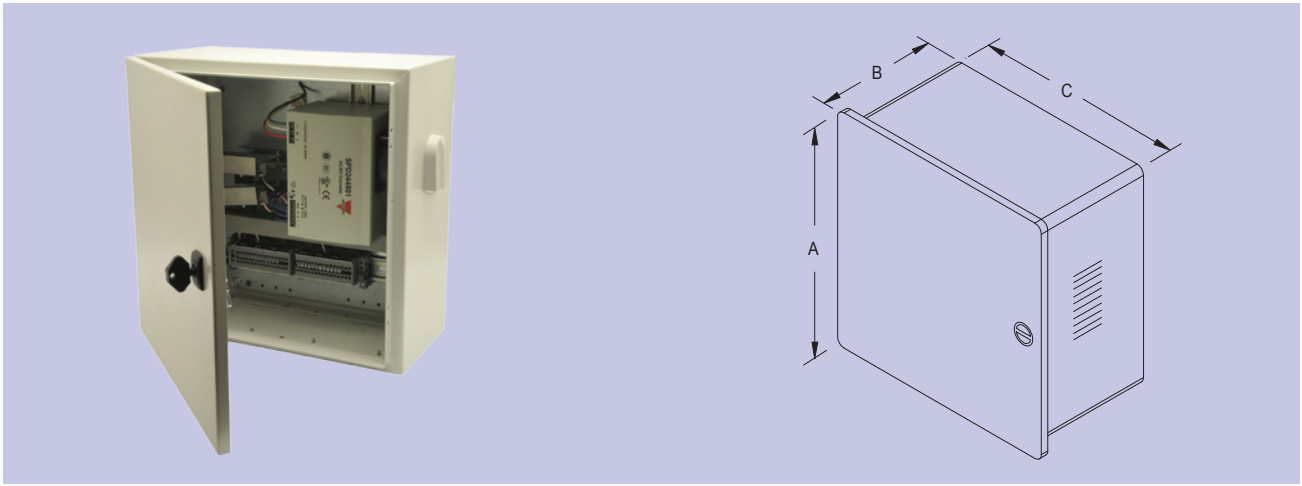
Crystal Fountains LEDPS503(12VDC) and LEDPS504(24VDC) power/data supply is one part of an overall LED system: (LED product LEDPS Power/data supply LEDQUE1 DMX Storage/Playback Unit) and provides 40 Amps of power/data. They work with the following Crystal Fountains LED products:

- LED007 Light Series
- LED160 Light Series
- LED170 Light Series
- LED180 Light Series
- LED052 Light Series
- LED053 Light Series
- LED FyreFly Series

The Nema 4-rated unit powers up to 16 LED light fixtures and provides simplified wiring.
The LEDPS503/504 Interface is designed for use with most DMX controllers, including Crystal Fountain LEDQUEI I-Player. Crystal Fountains Product Support Department would be happy to review your lighting and junction box layouts before purchase or installation. IP66 and UL approved.

**Contact Crystal Fountains for detailed specifications, installation and operation details or inquiries about custom programming.*

DIMENSIONS				PERFORMANCE		
Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	Output Voltage	No. of LED Lights Powered	LED Series
LEDPS503	401	216	401	12 VDC	16	LED160, LED170, LED180, LED052, LED Fyrefly
LEDPS504	401	216	401	24 VDC	16	LED053



LEDP108/116 Series – Mini Fountain Controller

This affordable control panel is designed specifically for smaller residential or commercial water features. Requires a closer proximity to the equipment. Available in two configurations able to run 8 or up to 16 different sequencing devices(Nozzles, Lights or combinations of both.) NEMA4 rated for outdoor installations. Crystal Fountains can provide up to 4 pre-programmed or custom programmed shows. UL listed.

Features:

- 24/7 clock for programming
- LCD touch-screen display
- Can control water level sensors
- Can control wind sensors
- Can control up to 4 relays for pumps
- Can control 1 VFD output
- Can operate with the most popular pool automation systems
- Can connect to optional hand-held remote control

Works with the following Crystal Fountains products:

- All Choreoswitch models
- All 12VDC LED lights (LED 052, 055, LED 160 Series, LED 170 Series, LED 180 Series)
- NNC Series Dynamite Blast
- Electric Leaper Series
- LED Laminar Series



12VDC LED Lights

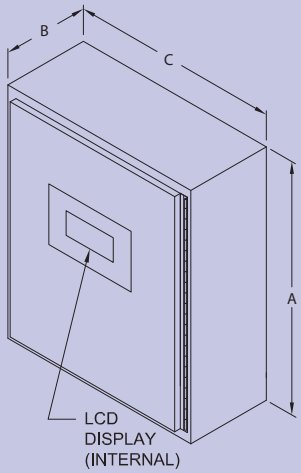


ChoreoSwitches



Electric Leapers or Laminars





**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part no.	a dim. (mm)	b dim. (mm)	c dim. (mm)
LEDP108/116	460	250	405

How to Order

SELECT THE CONTROLLER

Part No.	Description	Qty.
LEDP108	Fountain Controller for 8 units	1
LEDP116	Fountain Controller for 16 units	1

REQUIRED POWER SUPPLY

Part No.	Description	Qty.
LEDPS501	24VDC Power Supply required for LED140 Series	1
LEDPS70	24VDC Power Supply required for LED120 Series	1
WFC120	24VDC solenoids	1/unit

OPTIONS

Options	Part No.
8 port output DMX/12VDC SOLENOID module	LEDP108
16 port output DMX/12VDC SOLENOID module	LEDP116

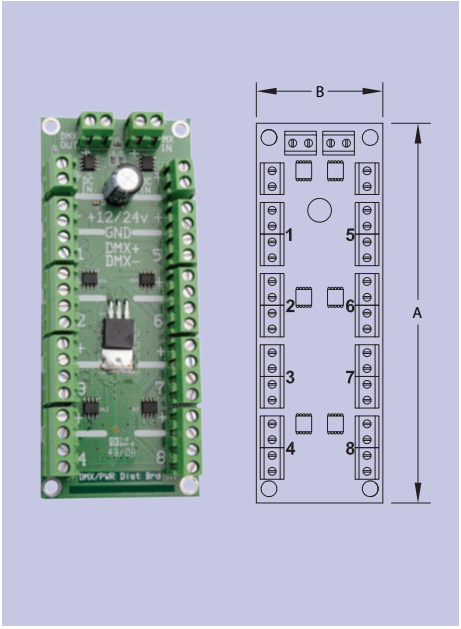
LEDDMXS8 – DMX Power and Distribution Board

Crystal Fountains DMX Power Board is a DMX power and data distribution board for LED lights only. Can be used as a DMX distribution board only, depending on your application and can run up to 8 lights. Uses universal DMX512. cURus and UL508A Compliant.

The LEDDMXS8 works with the following Crystal Fountains products:

- LED 052 Light Series
- LED 053 Light Series
- LED 160 Light Series
- LED 170 Light Series
- LED 180 Light Series
- NNC Series Dynamite Blast

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)
ELDMXS8	127	51

TRADITIONAL LIGHTING
Introduction

While many fountain projects are turning to LED lighting, there are still those who prefer traditional halogen lighting products. Crystal Fountains manufactures a range of traditional lighting types from compact to heavy duty and many come with various mounting options to suit your application. Whatever your lighting needs, there are some practical guidelines when lighting water features:

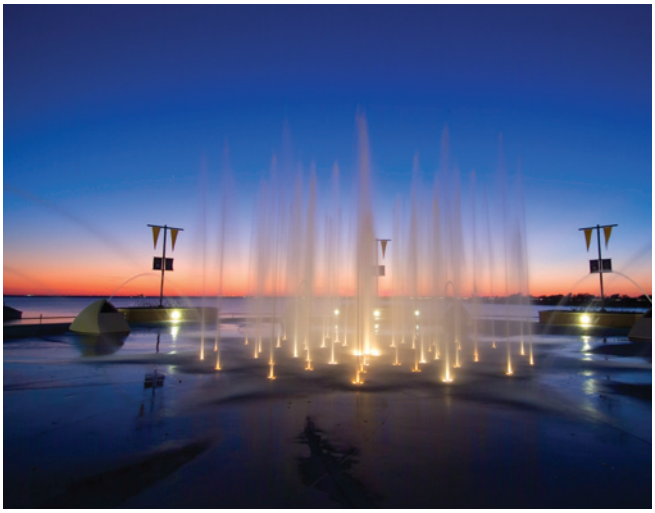
166 TRADITIONAL LIGHTING
167 General considerations for Lighting
168 EL002 Series – Compact Fountain Light
169 EL030 Series – 12VAC Underwater Light
171 EL040 Series – 12 or 24VAC Underwater Light



















General considerations for Lighting

There are three important factors to be considered when selecting the number of fixtures and type of lamps to illuminate a fountain:

Type of water effect:

- Single Nozzle – normally two fixtures per color with spot lamps
- Spray Rings – normally one fixture per color on 1.3m centers to 4.6m using wide flood lamps. For over 4.5m one fixture on 1m centers using medium flood lamps.

Color Selection:

Various colors require different lighting intensities to achieve optimum levels i.e:

- Amber and Turquoise – requires 50% more light than clear.
- Red – requires 100% more light than clear.
- Blue and Green – require 250% more light than clear.

Example: A fountain requiring illumination to 3m using red lens will require a lamp with light projection to 5.5m with clear lens.

Note: High ambient light levels tend to wash out colored lights. In these conditions, we suggest you use clear, amber or turquoise.

EL002 Series – Compact Fountain Light

This attractive, compact light is available in a variety of wattage and voltage configurations. Its compact size allows close placement to any jet for maximum light usage or in tight surroundings. Halogen lamps are available in spot and flood to allow gentle lighting of low effects and waterwalls as well as very good projection for high vertical nozzle effects. Available freestanding with integral rockguard, thermal cutoff, different cable lengths to suit your application.Submersible IP68, CE Marking, UL and ULC listed. Made of 316L stainless steel. Fixture must be submerged while in operation.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)
EL002002	166	77	127	51

How to Order

CHOOSE LIGHT

Mounting	Part No.
Stand	EL002002

CHOOSE CABLE

Cable Length	Part No.
3 m.	EL CORD005M03
6 m.	EL CORD005M06
10 m.	EL CORD005M10
15 m.	EL CORD005M15

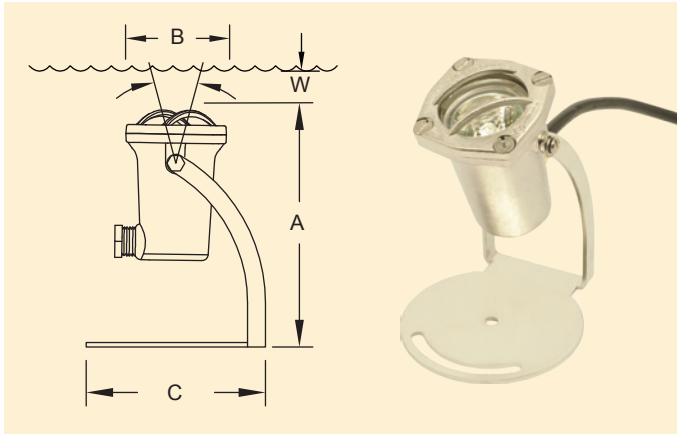
CHOOSE LAMP

Lamp			Part No.
Volts	Watts	Beam	
12	20	Spot	EQS010
		Flood	EQS011
	35	Spot	EQS012
		Flood	EQS013
	50	Spot	EQS014
		Flood	EQS015
	75	Spot	EQS016
		Flood	EQS017

This product (with 12V light fixture, 75W lamp and 6m cable only) is available under our Quick Ship program! See page 15 for more details.







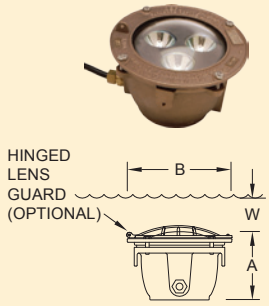
EL030 Series – 12VAC Underwater Light

This versatile, low-profile 12VAC underwater light fixture can be used in water depths from 204mm to 458mm. Ideal for lighting heavy water effects in traditional fountains (not swimming pools or spas) and can be installed in a daisy-chain format. Available in a variety of mounting options from freestanding to niche mounted and with cable lengths to suit your application. Also available with a range of 105W to 225W lamps. Optional rockguard or lens colors available. CE Marking, UL and ULC listed. Made of cast bronze with cast glass lens. Fixture must be submerged while in operation.

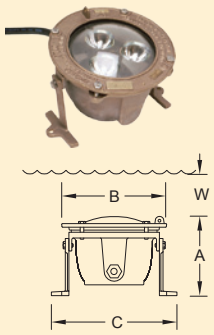
**Contact Crystal Fountains for detailed specifications, installation and operation details.*



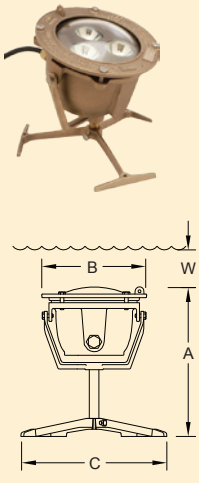




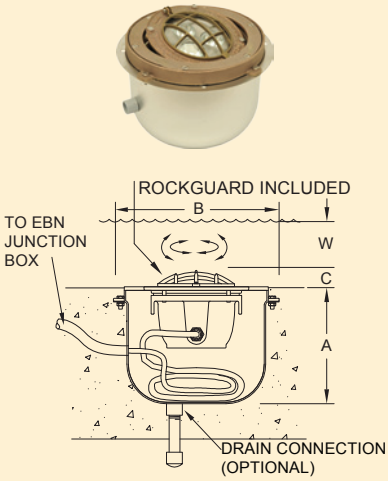
ELA028 - Basic Light



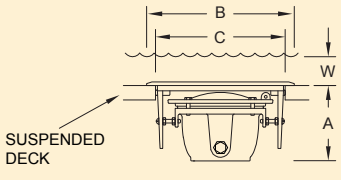
ELB030 - Light with T-Foot



ELC030 - Freestanding Light



ELD030 - Light with Niche



ELS030 - Light with Slab hanger

EL030 Series – 12VAC Underwater Light

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (mm)
ELA030	134	185		51
ELB030	159	185	223	51
ELC030	197 or 407	185	254	51
ELD030	204	293	51	51
ELS030	140	261	223	51

How to Order

CHOOSE LIGHT

Light Fixture		Part No.
Series	**Options**	
ELA	n/a	ELA030
	rockguard	ELA030P
ELB	n/a	ELB030
	rockguard	ELB030P
ELC	197 mm. high	ELC030
	407 mm. high	ELC030L
	197 mm. w/. rockguard	ELC030P
	407 mm. rockguard	ELC030LP
ELD	n/a	ELD030
	drain conn.	ELD030D
ELS	n/a	ELS030

CHOOSE CABLE

Cable Length	Part No.
3 m.	EL CORD030M03
6 m.	EL CORD030M06
9 m.	EL CORD030M09
12 m.	EL CORD030M12
Over 12 m.	Contact Factory

CHOOSE LENS

Lens Color	Part No.
clear	EL LENS 2C
amber	EL LENS 2A
blue	EL LENS 2B
green	EL LENS 2G
red	EL LENS 2R
turquoise	EL LENS 2T

CHOOSE LAMP

Lamp		Part No.
Volts	**Watts**	
12	35	EQS012
	50	EQS015
	75	EQS016

EXAMPLE OF HOW TO ORDER

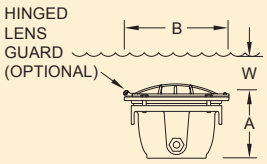
Quantity	Product	Part No.
1	Light with Slab Hanger	ELS030
1	3 m. Cable	EL CORD030M03
1	Clear Lens	EL LENS 2C
3	35 Watt Lamp	EQS012

EL040 Series – 12 or 24VAC Underwater Light

This versatile 12VAC, low-profile underwater light fixture can be used in water depths from 204mm to 458mm. Ideal for lighting medium-sized water effects. May be installed in daisy-chain format. Available in a variety of mounting options from freestanding to niche mounted and with various cable lengths. Also available in 24V. Optional lens colors or rockguard available. CE marking, UL and ULC listed for traditional basin fountains. Made of cast bronze with cast glass lens. Fixture must be submerged while in operation.

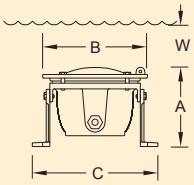
**Contact Crystal Fountains for detailed specifications, installation and operation details.*





ELA040 - Basic Light

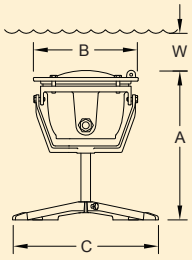




ELB040 - Light with T-Foot

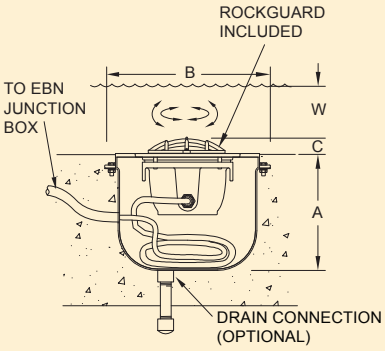






ELC040 - Freestanding Light

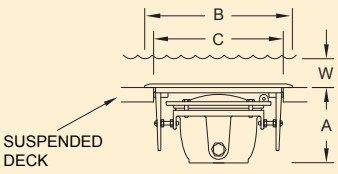




ELD040 - Light with Niche







ELS040 - Light with Slab Hanger

EL040 Series – 12 or 24VAC Underwater Light

DIMENSIONS

Part No.	a dim.	b dim.	c dim.	w dim. (min.)
ELA040	134	185		51
ELB040	159	185	223	51
ELC040	197 or 407	185	254	51
ELD040	204	293	51	51
ELS040	140	261	223	51

How to Order

CHOOSE LIGHT

Light Fixture			Part No.
Series	Options	VAC	
ELA	n/a	12	ELA040
		24	ELA04024
	rockguard	12	ELA040P
		24	ELA04024P
ELB	n/a	12	ELB040
		24	ELB04024
	rockguard	12	ELB040P
		24	ELB04024P
ELC	197 mm. high	12	ELC040
		24	ELC04024
	407 mm. high	12	ELC040L
		24	ELC04024L
	197 mm. w/. rockguard	12	ELC040P
		24	ELC04024P
	407 mm. w/. rockguard	12	ELC040LP
		24	ELC04024LP
ELD	n/a	12	ELD040
		24	ELD04024
	drain conn.	12	ELD040D
		24	ELD04024D
ELS	n/a	12	ELS040
		24	ELS04024

CHOOSE CABLE

Cable Length	Part No.
3 m.	EL CORD030M03
6 m.	EL CORD030M06
9 m.	EL CORD030M09
12 m.	EL CORD030M12
Over 12 m.	Contact Factory

CHOOSE LENS

Lens Color	Part No.
clear	EL LENS 2C
amber	EL LENS 2A
blue	EL LENS 2B
green	EL LENS 2G
red	EL LENS 2R
turquoise	EL LENS 2T

CHOOSE LAMP

Lamp		Part No.
Volts	Watts	
12	35	EQS012
	50	EQS015
	75	EQS016

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	24 VAC 407 mm. Freestanding Light with Rockguard	ELC04024LP
1	12 m. Cable	EL CORD030M12
1	Clear Lens	EL LENS 2C
4	50 Watt Lamp	EQS015

ELECTRICAL

Crystal Fountains provides a full range of all the peripheral electrical equipment required to operate your water feature:

- Wind Controls
- Water Level Controls
- Junction Boxes
- Cord Seals
- Stub Ups

Most water features run on automated systems allowing the fountain to self-monitor operations - wind, water and lighting. Using these devices in an overall system design creates a more efficient water feature.

General Information for Electrical

Standard Threading:

Standard threading on components are National Pipe Thread (NPT) unless requested otherwise at the time of order. All thread sizes less than 26mm will be NPT.

173 ELECTRICAL
174 EBJ Series – Underwater Junction Box
175 EBN Series – Underwater Junction Box
176 ECL Series – Water Level Control Panel
177 ECW Series – Wind Control Panel
178 EGN Series – Junction Box Cord Seal - Flush Mounted
179 EGS Series – Junction Box Cord Seal - Standard
180 EP Series – Stub Up
181 ESD Series – Deck Mounted Level Sensor
182 ESF Series – Conduit Mounted Level Sensor
183 ESG Series – Conduit Mounted Level Sensor
183 ESL Series – Adaptable Level Sensor
184 ESN Series – Cast-In Level Sensor
185 ESO Series – Electronic Level Control and Overflow
186 ESP Series – Wall Mounted Level Sensor
187 ESS Series – Moveable Level Sensor
188 ESW Series – Wall Mounted Level Sensor







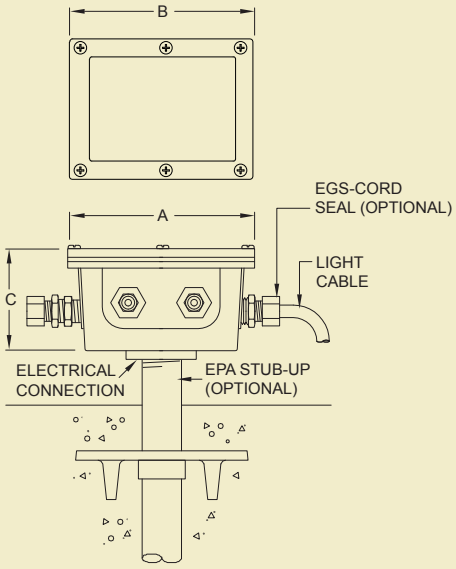
EBJ Series – Underwater Junction Box

Submersible conduit mounted junction boxes for underwater lights and pumps. Junction boxes come in various sizes and are best used with brass cord seals (EGS) and brass conduit stub ups (EPA). Recommend to seal with junction box sealant (EBJC10 or EBJC20). UL and ULC listed. Made of cast bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	side connections (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	inside vol. (cu. cm.)
EBJ202	¾"	2 x ½"	102	83	83	78
EBJ204	¾"	4 x ½"	115	115	96	149
EBJ208	1"	8 x ½"	140	140	89	265
EBJ212	1 ¼"	12 x ½"	140	140	115	420
EBJ216	1 ½"	16 x ½"	178	178	140	768





EBJ202, EBJ204 and EBJ208 are available under our Quick Ship program! See page 15 for more details.

EBN Series – Underwater Junction Box

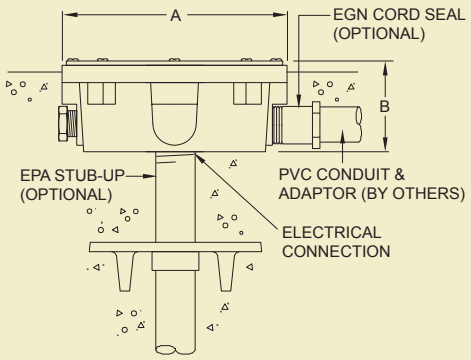
Flush-mounted underwater electrical junction box for poured-in-concrete applications. Can also be conduit-mounted. Available in two sizes best used with brass cord seals (EGN) and brass conduit stub ups (EPA). Recommend to seal with junction box sealant (EBJC10/C20). UL and ULC listed. Made of cast bronze.

***Contact Crystal Fountains for detailed specifications, installation and operation details.**

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	side connections (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	inside vol. (cu. cm.)
EBN104	¾"	4 x ½"	64	166		149
EBN208	13 to 2"	8 x ½" or ¾"	194	166	115	400

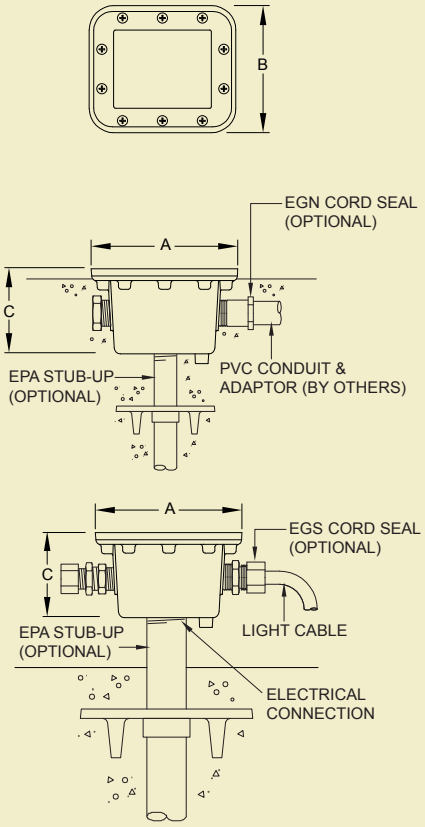




EBN104

EBN104 is available under our Quick Ship program! See page 15 for more details.





EBN208

ECL Series – Water Level Control Panel

The ECL water level control panel is used in conjunction with the AVQ Solenoid Fill Valve and water level sensors to monitor water levels in a fountain. It can monitor up to three water level operations depending on version selected. Operates on 120 or 220 volts. Panel interior NEMA 12 construction with optional weather-proof enclosure:

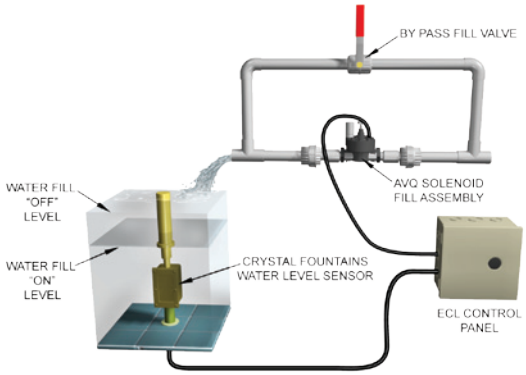
Quick-Fill Operation:
Fills or replenishes pool water loss due to evaporation or splash.

Safe-Off Operation:
Shuts off in-pool electrical (lighting/pumps during low water level situations.

Max. Level Control: With the inclusion of a third sensor applications are expanded i.e

- To signal a high water level in traditional fountains
- Regulate start-up and shut-down water volumes on waterfall applications
- More precision control of high and low water volumes

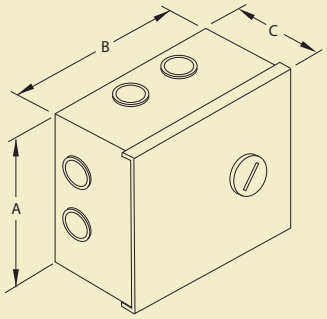
**Contact Crystal Fountains for detailed specifications, installation and operation details.*



TYPICAL SYSTEM DESIGN

DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
ECL100	159	153	108
ECL200	185	134	134
ECL300	286	235	159



How to Order

CHOOSE SENSOR

No. of Sensors	Function	Specific Application	Part No.
1	Quick fill	N/A	ECL100
	Safe-off	N/A	ECL101
2	Quick fill and safe-off	N/A	ECL200
3	Quick fill, safe-off and maxi-level control	Reservoir	ECL300
		Differential	ECL301
		High Water Alarm	ECL302



ECL100



ECL300

CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Weather Proof Enclosure	W

EXAMPLE OF HOW TO ORDER

Quantity	Product	Part No.
1	Quick fill and safe-off water level control panel with weather proof enclosure	ECL200W

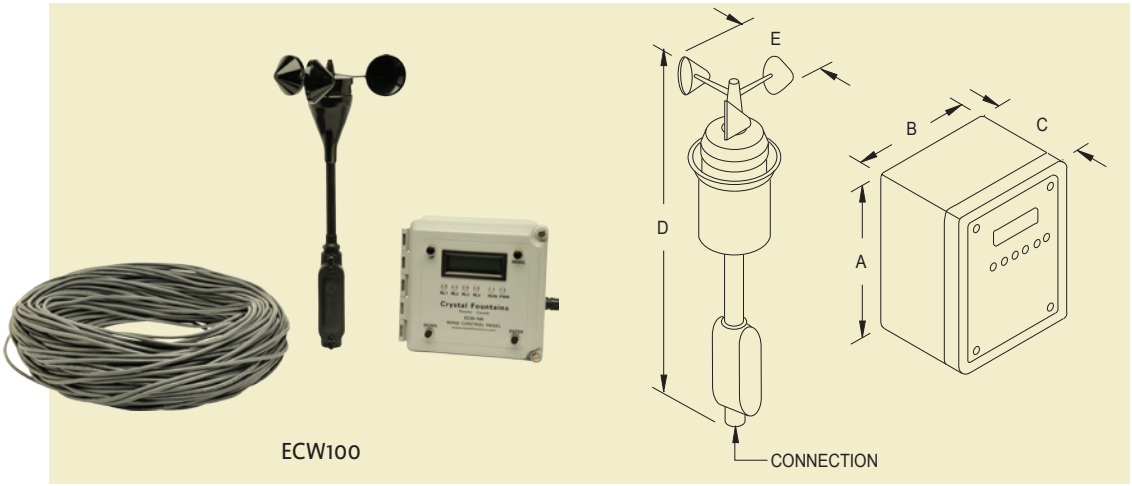
ECW Series – Wind Control Panel

The ECW series wind control panel accurately senses wind velocity and adjusts the fountain controls to enable the system to continue to operate in less than perfect wind conditions. Panel includes an LCD display panel with adjustable wind-speed set points. Can monitor up to two wind zones at once using the dual sensor capability (ECW200). Can control up to 4 relays (i.e. pumps, sequencing devices etc) and comes with memory back up. Available in 120V/220V. Control panel housing of plastic NEMA 4x rated. Wind sensor with plastic sensing head, rubber boot enclosure and copper and aluminum stem. Cable - 92m length.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	No. of sensors	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	e dim. (mm)
ECW100	1	166	204	127	337	153
ECW200	2	166	204	127	337	153



ECW100

EGN Series – Junction Box Cord Seal – Flush Mounted

Compression cord seal for use with EBN flush-mounted junction box. Provides watertight connection of underwater cables connecting junction boxes with lights. Threaded connector, compression nut and friction washer made of brass with neoprene compression seal.

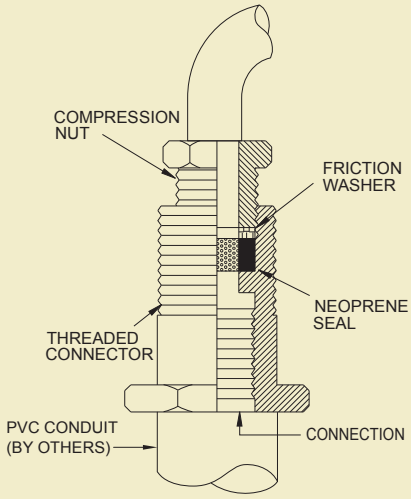
**Contact Crystal Fountains for detailed specifications, installation and operation details.*

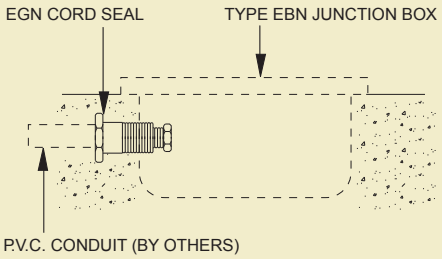
DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	cable size	awg types
EGN075	¾"	10 mm - 12 mm	18/3, 18/4, 16/3, 16/4 ...
EGN100	1"	17 mm	10/3--



EGN075





EGN075 is available under our Quick Ship program! See page 15 for more details.

EGS Series – Junction Box Cord Seal - Standard

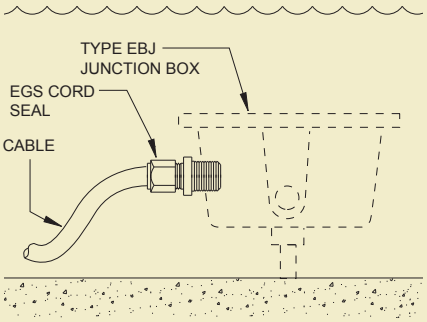
For watertight connections of underwater cables connecting EBJ junction boxes with lights, water level sensors and pumps. Threaded connector, compression nut and friction washer made of brass with neoprene compression seal.

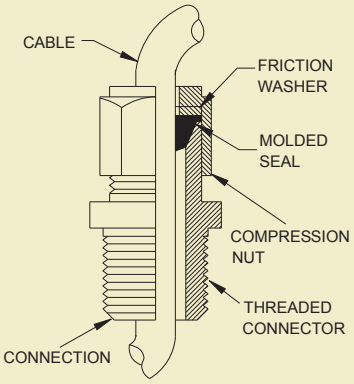


EGS052



EGS053





**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	cable size	awg types
EGS052	½"	10 mm - 12 mm	18/3, 18/4, 16/3, 16/4 ...
EGS053	½"	13 mm	18/5
EGS071	¾"	10 mm - 13 mm	16/5, 14/3 ...
EGS073	¾"	13 mm - 16 mm	14/5, 12/3, 12/4, 10/3 ...
EGS074	¾"	16 mm - 20 mm	12/5, 10/4, 8/3 ...

EGS052 is available under our Quick Ship program! See page 15 for more details.

*EGS053 is only to be used with:

- LED160 Series
- LED170 Slab Hanger Series
- LED180 Slab Hanger Series
- LED052 Series
- LED053 Series
- LED055 Series

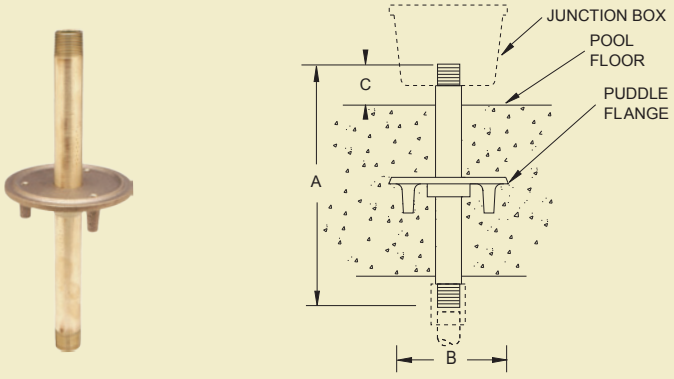
EP Series – Stub Up

Flanged bronze conduit stub ups adheres to electrical code, are leak-proof and strong. Stub ups provide watertight and secure penetrations through concrete and membranes directly into fountain pools. Works with EBJ or EBN bronze underwater junction boxes. Available in 3 versions for different applications. Made of red brass with cast bronze and available in custom lengths.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DIMENSIONS

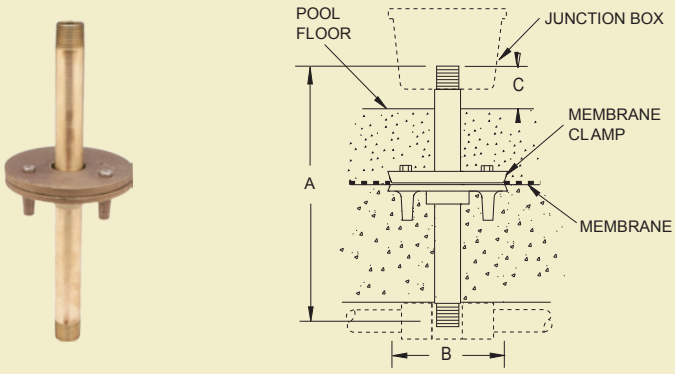
Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)
EPA050	½"	305	118	102
EPA075	¾"	305	118	102
EPA100	1"	305	118	102
EPA125	1 ¼"	305	118	102
EPA150	1 ½"	305	118	102
EPA200	2"	305	118	102
EPA300	3"	305	118	102



EPA - No Membrane Application

DIMENSIONS

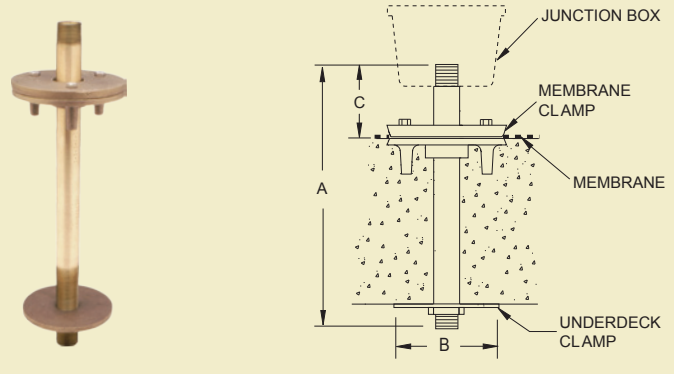
Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)
EPB050	½"	305	118	102
EPB075	¾"	305	118	102
EPB100	1"	305	118	102
EPB125	1 ¼"	305	118	102
EPB150	1 ½"	305	118	102
EPB200	2"	305	118	102
EPB300	3"	305	118	102



EPB - Sub Surface Membrane Application

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)
EPC050	½"	305	118	102
EPC075	¾"	305	118	102
EPC100	1"	305	118	102
EPC125	1 ¼"	305	118	102
EPC150	1 ½"	305	118	102
EPC200	2"	305	118	102
EPC300	3"	305	118	102



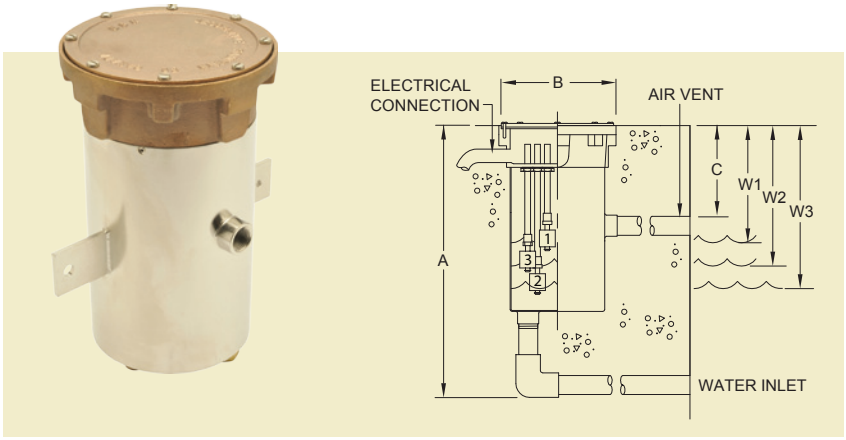
EPC - Cored Hole Applicationplication

This product (exclusingEPA50 and EPA300) is available under our Quick Ship program! See page 15 for more details.

ESD Series – Deck Mounted Level Sensor

12 VAC 0.5 amp deck-mounted electronic water level sensor automatically monitors quick fill and safe-off functions from outside of the pool. Water entry and air vent tubes extend through pool wall. Top access facilities final float adjustment. Low voltage for safety. Connects to ECL control panel. Available in 3 versions with 1 – 3 sensors for quick-fill or safe-off or maxi-level control. Made of cast bronze, brass, copper and stainless steel.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



1. Quick Fill or Safe off Sensor
2. Quick Fills Sensor
3. Maxi-Level Sensor

**For typical system design see page 176.

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w1 dim. (mm)	w2 dim. (mm)	w3 dim. (mm)
ESD100	½"	369	166	147	254		
ESD200	½"	369	166	147	197	254	
ESD300	½"	369	166	147	197	223	254

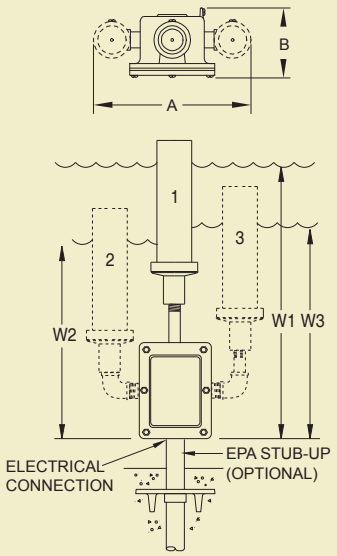
ESF Series – Conduit Mounted Level Sensor

12VAC/DC 0.28 amp conduit mounted electronic water level sensor automatically monitors quick fill and safe-off functions. Low voltage for safety. Connects to ECL control panel. Available in 3 versions with 1 – 3 sensors for quick-fill or safe-off or maxi-level control. Also available with custom sensor heights to meet any water depth application. Made of cast bronze and brass.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ESF100



1. Quick Fill or Safe off Sensor
2. Quick Fills Sensor
3. Maxi-Level Sensor

**For typical system design see page 176.

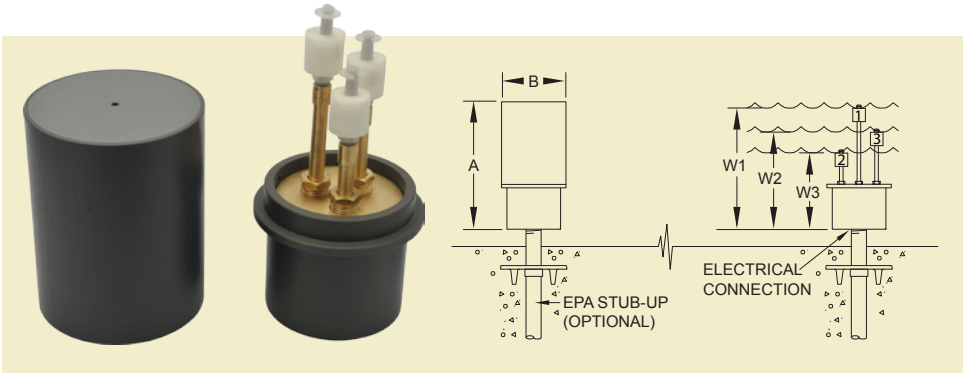
DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w1 dim. (mm)	w2 dim. (mm)	w3 dim. (mm)
ESF100	¾"	83	83	254		
ESF200	¾"	102	204	204	254	
ESF300	¾"	102	204	204	229	254

ESG Series – Conduit Mounted Level Sensor

12VAC/DC 0.28 amp conduit mounted electronic water level sensor automatically monitors quick fill and safe-off functions. Low voltage for safety. Connects to ECL control panel. Available in 3 versions with 1 – 3 sensors for quick-fill or safe-off or maxi-level control. Made of extruded plastic, brass, copper and stainless steel.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



1. Quick Fill or Safe off Sensor
2. Quick Fills Sensor
3. Maxi-Level Sensor

**For typical system design see page 176.

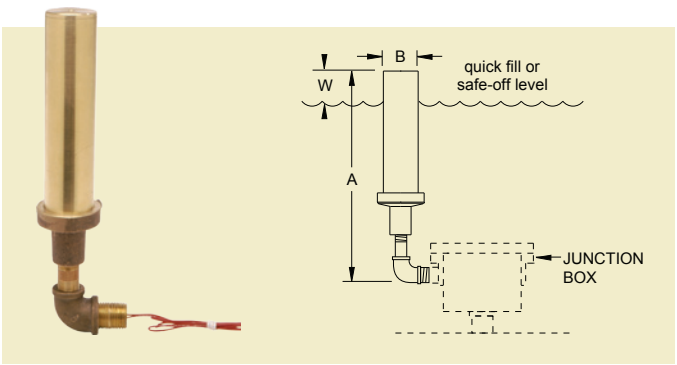
DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w1 dim. (mm)	w2 dim. (mm)	w3 dim. (mm)
ESG100	¾"	229	115	216		
ESG200	¾"	229	115	216	166	
ESG300	¾"	229	115	216	185	166

ESL Series – Adaptable Level Sensor

The 24 VAC/DC 0.28 amp water level sensor is adaptable to most junction boxes for varied applications and good for fountain renovation. Sensors can be used for quick-fill and/or safe-off functions on pools where level controls either were not provided or are no longer functional. Connects to ECL control panel. Available in custom sizes for various water depths. Made of bronze and brass.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



**For typical system design see page 176.

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)
ESL100	½"	242	39	51

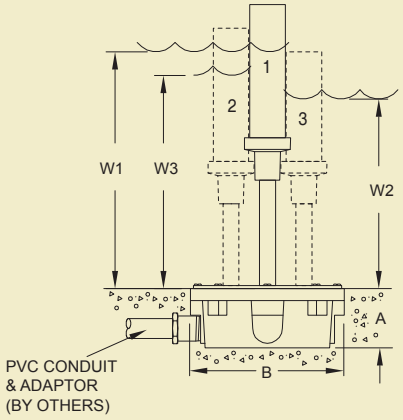
ESN Series – Cast-In Level Sensor

24VAC/DC 0.28 amp cast-in electronic water level sensor automatically monitors quick fill and safe-off functions in very shallow water depths. Sensor is adjustable in height after installation. Low voltage for safety. Connects to ECL control panel. Available with either side or bottom power connection and is available in 3 versions with 1 – 3 sensors for quick-fill or safe-off or maxi-level control. Also available in custom sizes for various water depths. Made of cast bronze and brass.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ESN200



1. Quick Fill or Safe off Sensor
2. Quick Fills Sensor
3. Maxi-Level Sensor

**For typical system design see page 176.

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w1 dim. (mm)	w2 dim. (mm)	w3 dim. (mm)
ESN100 / ESN101	½"	64	166	254		
ESN200 / ESN201	½"	64	166	254	204	
ESN300 / ESN301	½"	64	166	254	204	229

How to Order

CHOOSE SENSOR

Function	No. of Sensors	Connection	Part No.
Quick fill or safe-off	1	Side	ESN100
		Bottom	ESN101
Quick fill and safe-off	2	Side	ESN200
		Bottom	ENS201
Quick fill, safe-off and maxi-level control	3	Side	ESN300
		Bottom	ESN301

ESO Series – Electronic Level Control and Overflow

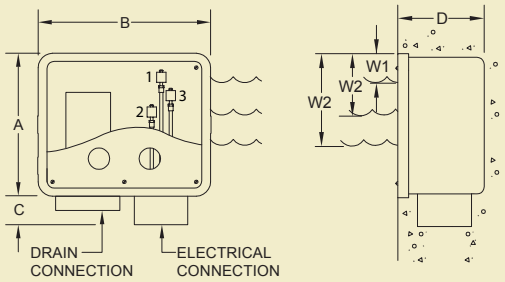
12VAC 0.5 amp flush, wall mounted, combination electronic water level controller and overflow drain. Automatically monitors quick fill and safe-off functions, and drains overflow water through a built in drain. Integral adjustments on level sensors and standpipe facilitate adjustments after installation. Low voltage for safety. Connects to ECL control panel. Available in 3 versions with 1 – 3 sensors for quick-fill or safe-off or maxi-level control. Also available with vandal resistant kit or brass cover plate. Made of cast bronze with resistant stainless steel cover and molded plastic enclosure. Overflow drain assembly of brass, copper and extruded plastic fitted.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

This product is available under our Quick Ship program! See page 15 for more details.



ESO300



1. Quick Fill or Safe off Sensor
2. Quick Fills Sensor
3. Maxi-Level Sensor

**For typical system design see page 176.

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	Drain connection (n.p.t.) (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	w1 dim. (mm)	w2 dim. (mm)	w3 dim. (mm)
ESO100 / ESO101	¾"	77	254	305	51	147	64		
ESO200 / ESO201	¾"	77	254	305	51	147	64	115	
ESO300 / ESO301	¾"	77	254	305	51	147	64	89	115

How to Order

CHOOSE SENSOR

Function	No. of Sensors	Cover Material	Part No.
Quick fill or safe-off	1	Stainless Steel	ESO100
		Brass	ESO101
Quick fill and safe-off	2	Stainless Steel	ESO200
		Brass	ESO201
Quick fill, safe-off and maxi-level control	3	Stainless Steel	ESO300
		Brass	ESO301

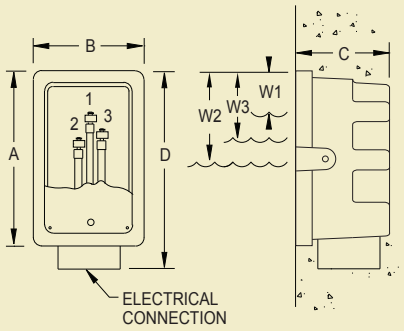
ESP Series – Wall Mounted Level Sensor

12VAC/DC 0.28 amp flush, wall mounted, electronic water level sensor automatically monitors quick fill and safe-off functions. Low voltage for safety. Connects to ECL control panel. Available in 3 versions with 1 – 3 sensors for quick-fill, safe-off or maxi-level control. Also available with vandal resistant kit or brass cover plate. Made of cast bronze frame with stainless steel.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ESP300



1. Quick Fill or Safe off Sensor
2. Quick Fills Sensor
3. Maxi-Level Sensor

**For typical system design see page 176.

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	w1 dim. (mm)	w2 dim. (mm)	w3 dim. (mm)
ESP100 / ESP101	¾"	261	166	134	312	51		
ESP200 / ESP201	¾"	261	166	134	312	51	102	
EPS300 / EPS301	¾"	261	166	134	312	51	77	102

How to Order

CHOOSE SENSOR

Function	No. of Sensors	Cover Material	Part No.
Quick fill or safe-off	1	Stainless Steel	ESP100
		Brass	ESP101
Quick fill and safe-off	2	Stainless Steel	ESP200
		Brass	ESP201
Quick fill, safe-off and maxi-level control	3	Stainless Steel	ESP300
		Brass	ESP301

This product is available under our Quick Ship program! See page 15 for more details.

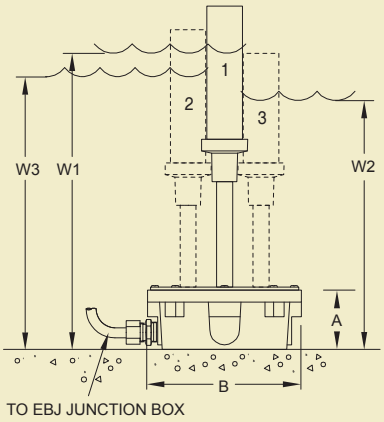
ESS Series – Moveable Level Sensor

24 VAC/DC 0.28 amp moveable electronic water level sensor automatically monitors quick fill and safe-off functions in very shallow water depths. Connects to a junction box that can be moved to anywhere within its cable reach. Sensor is adjustable in height after installation. Low voltage for safety. Connects to ECL control panel. Available in 3 versions with 1 – 3 sensors for quick-fill or safe-off or maxi-level control. Made of cast bronze and comes with 2.7m type submersible cable.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ESS200



1. Quick Fill or Safe off Sensor
2. Quick Fills Sensor
3. Maxi-Level Sensor

**For typical system design see page 176.

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w1 dim. (mm)	w2 dim. (mm)	w3 dim. (mm)
ESS100	½"	64	166	254		
ESS200	½"	64	166	254	204	
ESS300	¾"	64	166	254	204	229

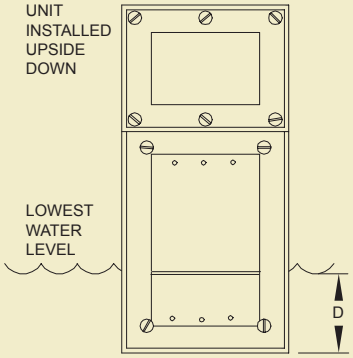
ESW Series – Wall Mounted Level Sensor

24 VAC/DC 0.28 amp flush, wall mounted, electronic water level sensor automatically monitors quick fill and safe-off functions. May be mounted upside down for shallow applications. Standard with back connection. Low voltage for safety. Connect to ECL control panel. Available in 2 versions with 1 or 2 sensors for quick-fill or safe-off. Also available with optional bottom connection, surface flange or membrane clamp. Made of cast bronze.

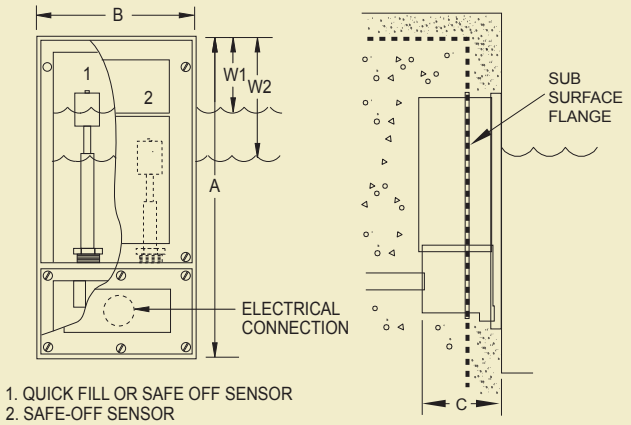
**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ESW200



Low Water Depth Application



ESW200

**For typical system design see page 176.

DIMENSIONS

Part No.	Electrical connection (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	w1 dim. (mm)	w2 dim. (mm)
ESW100 - ESW105	½"	254	121	77	64	64	
ESW200 - ESW205	½"	254	121	77	64	64	83

How to Order

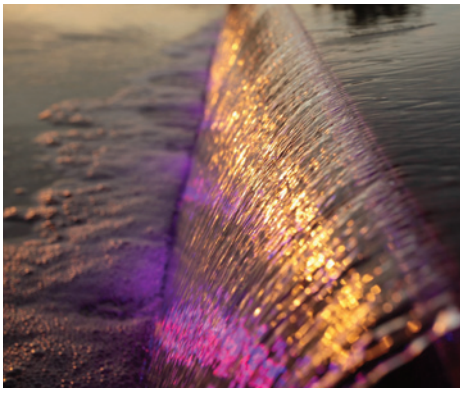
CHOOSE SENSOR

Function	No. of Sensors	Connection	Waterproof Membrane Clamp	Waterstop Subsurface Flange	Part No.
Quick fill or safe-off	1	back	no	no	ESW100
				yes	ESW101
			yes	yes	ESW102
		bottom	no	no	ESW103
				yes	ESW104
			yes	yes	ESW105
Quick fill and safe-off	2	back	no	no	ESW200
				yes	ESW201
			yes	yes	ESW202
		bottom	no	no	ESW203
				yes	ESW204
			yes	yes	ESW205

DRAINS AND INLETS

Crystal Fountains manufactures a full line of safe, functional drains and inlets.
Commercial quality drains and inlets with a 10 year warranty. For 40 years Crystal Fountains has manufactured a line of components for the fountain industry. From drains designed for interactive use to more functional drains, Crystal Fountains products are guaranteed to last.

189 DRAINS AND INLETS
190 DOA Series – Overflow Drain
191 DOB Series – Overflow Drain
192 DOL Series – Overflow Drain
193 DOW Series – Overflow Drain
194 DPB Series – Outlet Drain
195 DSA Series – Suction Drain
196 DSB – Foot Friendly Suction Drain
197 DTS Series – Threaded Sleeve Fitting
198 IEA Series – Inlet Fitting
199 IEB Series – Inlet Fitting
199 IET Series – Trough Inlet
200 IFA Series – Inlet Fitting









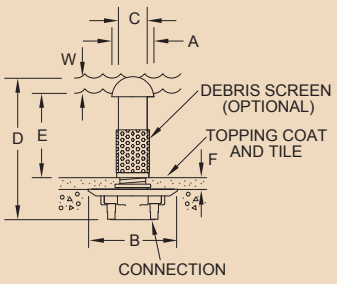
DOA Series – Overflow Drain

Combination overflow and pool drain. Excess water overflows into standpipe. Slip connection on standpipe facilitates removal for draining. Available with optional debris screen, other stand-pipe sizes or underdeck clamp for low tile applications. Made of cast bronze with copper standpipe and stainless steel fasteners.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DOA200



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (max.) (mm)	e dim. (mm)	f dim. (mm)
DOA200	2"	83	166	51	553	458	51
DOA300	3"	108	223	77	553	458	39
DOA400	4"	134	229	102	553	458	26

PERFORMANCE

Part No.	Flow (LPM)	38.0	46.0	57.0	76.0	95.0	113.0	132.0	151.0
DOA200	water level above drain (w dim.) (mm)	16	35	51	64	70	80	108	242
DOA300		16	19	35	54	83	127		
DOA400		16	13	26	29	39	54	67	86

CHOOSE ADDITIONAL OPTIONS

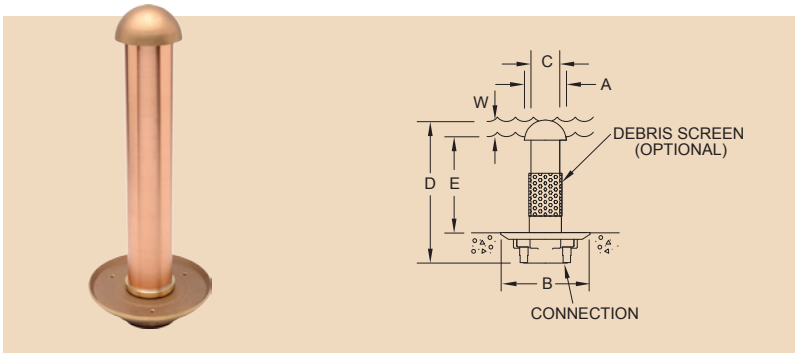
Options	Add Suffix
Debris Screen	D
Stand Pipe Greater than 450 mm	S
Underdeck Clamp	U

This product is available under our Quick Ship program! See page 15 for more details.

DOB Series – Overflow Drain

This combination overflow and pool drain is the economical sister to the DOA Overflow Drain. Ideal for applications that do not require waterproofing membranes and clamp collars. Excess water flows into a standpipe which has a slip connection for easy draining. Available with optional debris screen and other standpipe sizes upon request. Made of cast bronze with copper standpipe and stainless steel fasteners.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (max.) (mm)	e dim. (mm)	f dim. (mm)
DOB200	2"	83	166	51	553	458	51
DOB300	3"	108	223	77	553	458	39
DOB400	4"	134	229	102	553	458	26

PERFORMANCE

Part No.	Flow (LPM)	19.0	38.0	57.0	76.0	95.0	113.0	132.0	151.0
DOB200	water level above drain (w dim.) (mm)	16	35	51	64	70	80	108	242
DOB300		16	19	35	54	83	127		
DOB400		16	13	26	29	39	54	67	86

CHOOSE ADDITIONAL OPTIONS

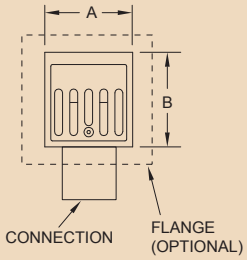
Options	Add Suffix
Debris Screen	D
Stand Pipe Greater than 450 mm	S
Underdeck Clamp	U

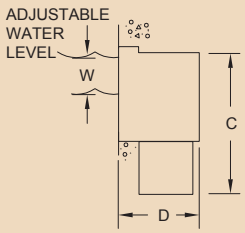
DOL Series – Overflow Drain

Light duty, wall mounted overflow drain regulates water level. Excess water spills over adjustable weir. Single screw adjusts overflow tube to desired level after installation. Available with optional surface flange or membrane clamp. Made of cast bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*







This product is available under our Quick Ship program! See page 15 for more details.

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	w dim. (mm)
DOL150	1 ½"	83	89	134	83	39

CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Surface Flange	K
Membrane Clamp	L

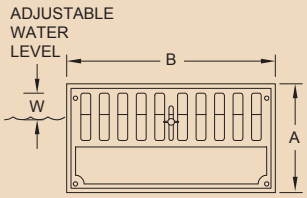
DOW Series – Overflow Drain

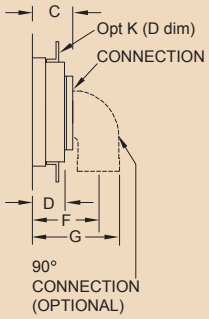
Heavy-duty, wall mounted overflow drain regulates water level. Excess water spills over adjustable weir. Single screw adjusts weir plate to desired level after installation. Available with optional open grate, surface flange, membrane clamp, 90° solder elbow or winter cover. Made of cast bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DOW300





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	f dim. (mm)	g dim. (mm)	w dim. (mm)
DOW300	3"	159	305	64	32 to 51	120	159	51
DOW400	4"	159	305	64	32 to 51	147	185	51

PERFORMANCE

Flow (LPM)	19.0	38.0	56.0	76.0	95.0	113.0	132.0	151.0	170.0	189.0	208.0	227.0	246.0	265.0	284.0	303.0	322.0	341.0	360.0	378.0	397.0	416.0	435.0
water level above drain (w dim.) (mm)	10	13	16	21	26	32	35	39	45	51	69	89	121										
	7	13	20	23	26	32	39	39	45	48	54	58	61	64	64	70	70	80	96	115	131	150	169

CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Open Grate	E
Surface Flange	K
Membrane Clamp	L
90° Solder Elbow	M
Winter Cover	W

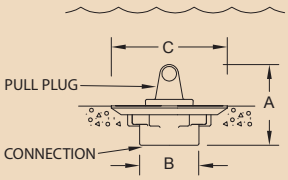
DPB Series – Outlet Drain

Outlet drain for draining pools. Plug has slip connection for easy removal. Ideal for applications that do not require waterproofing membranes and clamp collars. Made of cast bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DPB200



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)
DPB200	2"	89	89	166
DPB300	3"	127	102	166
DPB400	4"	134	127	166

DSA Series – Suction Drain

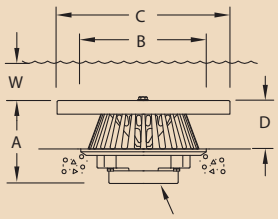
Pump suction drain for concrete pools. Low profile and inverted cone shaped "maxi-flo" strainer intercepts debris and anti-vortex plate prevents air entrainment. Available with optional adjustable flow regulator, cast bronze anti-vortex plate, debris screen, flat grate, membrane clamp, underdeck clamp, fiberglass square anti-vortex plate or fiberglass square anti-vortex plate recessed for tiles. Made of cast bronze with textured anti-vortex plate and stainless steel fasteners.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

DSA200 and DSA300 are available under our Quick Ship program! See page 15 for more details.



DSA300



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	w dim. (mm)	Strainer/Grate Free Area (cm. squared)
DSA200	2"	134	166	204	89	77	142
DSA300	3"	166	229	305	102	102	304
DSA400	4"	166	229	305	102	204	304
DSA600	6"	166	305	407	102	254	517
DSA800	8"	254	356	407	178	254	968

CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Adjustable Flow Regulator	A
Cast Bronze Anti-vortex Plate	C
Debris Screen	D
Flat Grate	G
Membrane Clamp	L
Underdeck Clamp	U
Fiberglass Square Anti-vortex Plate	V
Fiberglass Square Anti-vortex Plate recessed for tiles	Y
Winter Cover	W

DSB – Foot Friendly Suction Drain

The DSB series comes with foot friendly flat grate and is perfect for interactive water features.

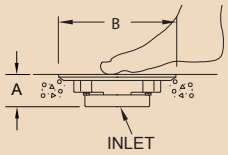
Safe for interactive play

- Openings are no more than 10mm to prevent toe entrapment.
- Flush mounted for no trip hazards. Made of cast bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DSB300



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (mm)	Strainer/Grate Free Area (cm. squared)
DSB300	3"	17	59	note	168
DSB400	4"	17	59	note	168
DSB600	6"	17	78	note	291

DTS Series – Threaded Sleeve Fitting

Threaded sleeve fitting facilitates watertight penetrations through concrete slabs for supply and drain lines. Available with optional membrane clamp or underdeck clamp. Made of cast bronze with stainless steel fasteners.

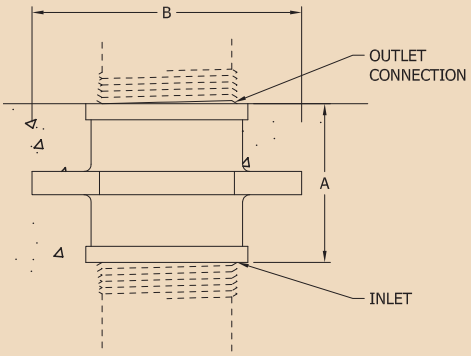
**Contact Crystal Fountains for detailed specifications, installation and operation details.*

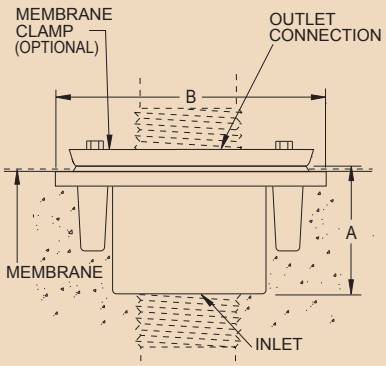


DTS150-400



DTS600-800





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)
DTS075	¾"	58	127
DTS100	1"	58	127
DTS125	1 ¼"	58	127
DTS150	1 ½"	58	127
DTS200	2"	58	166
DTS300	3"	70	229
DTS400	4"	70	229
DTS600	6"	70	293
DTS800	8"	77	343

CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Membrane Clamp (DTS300-800 only)	L
Underdeck Clamp (DTS300-800 only)	U

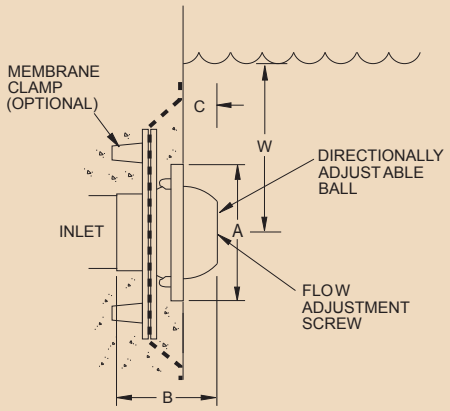
DTS100, DTS150 and DTS200 are available under our Quick Ship program! See page 15 for more details.

IEA Series – Inlet Fitting

Precision engineered for heavy-duty fountain water recirculation. Adjustable eyeball filter return for pool recirculation. External adjustment makes flow regulation and balancing easy. Available with optional surface flange, membrane clamp or winter cover. Made of cast bronze with stainless steel fasteners.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w dim. (min) (mm)
IEA150	1 ½"	99	74	26	153

Choose Additional Options

Options	Add Suffix
Surface Flange	K
Membrane Clamp	L
Winter Cover	W

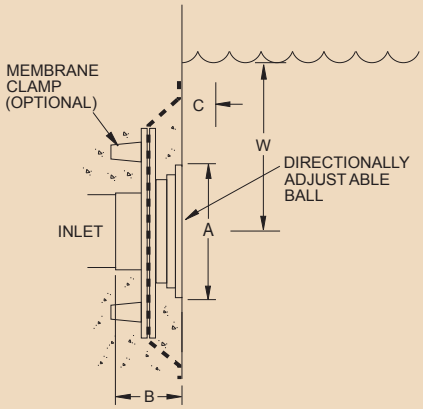
This product is available under our Quick Ship program! See page 15 for more details.

IEB Series – Inlet Fitting

A directionally adjustable eyeball filter return for pool recirculation without flow regulator. Available with optional surface flange or membrane clamp. Made of bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	w dim. (min) (mm)
IEB160	1 ½"	89	77	153

CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Surface Flange	K
Membrane Clamp	L
Face Plate Removal Key	R
Winter Cover	W

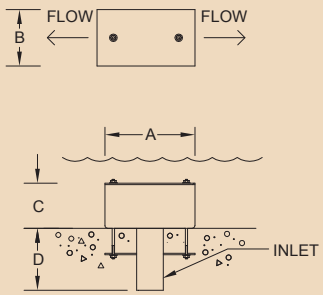
IET Series – Trough Inlet

Compact sized inlet to be used in small troughs in waterfalls or stepped cascades. Diverter plate conceals opening and diverts inlet water. Made of stainless steel or PVC.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



IET200



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
IET200	2"	204	127	102	127
IET300	3"	254	204	102	127
IET400	4"	254	204	102	127

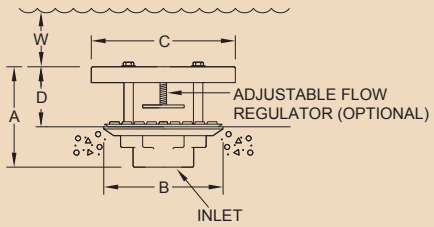
IFA Series – Inlet Fitting

Supply inlet for concrete pools with diffuser plate to disperse flow and reduce surface turbulence. Ideal for waterfalls and cascade fountains.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



IFA200



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)	w dim. (min) (mm)
IFA200	2"	140	166	204	89	77
IFA300	3"	166	229	305	102	102
IFA400	4"	166	229	305	102	204
IFA600	6"	178	305	407	102	254
IFA800	8"	254	356	407	178	254

CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Adjustable Flow Regulator	A
Cast Bronze Diffuser Plate	C
Membrane Clamp	L
Underdeck Clamp	U
Fiberglass Square Anti-vortex Plate	V
Fiberglass Square Anti-vortex Plate recessed for tiles	Y
Winter Cover	W

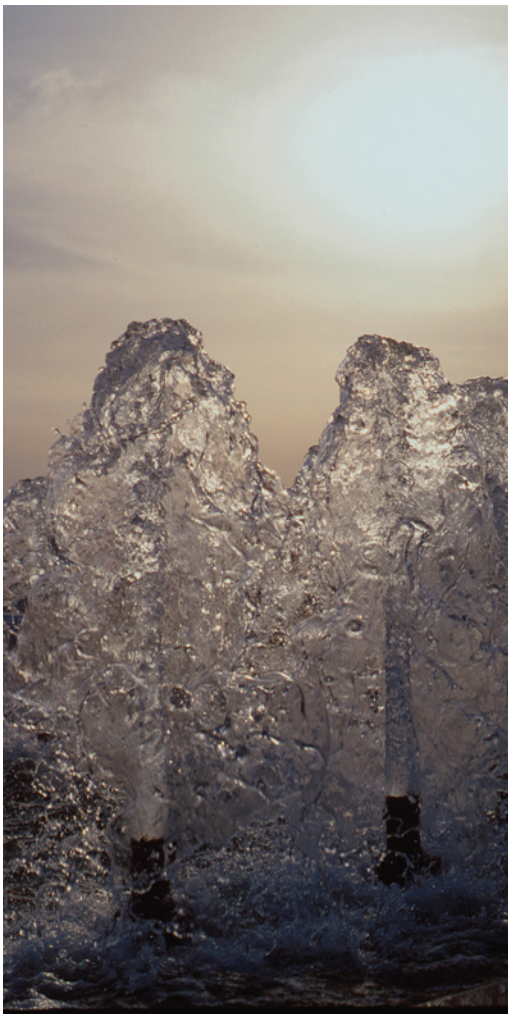
ACCESSORIES

Crystal Fountains manufactures a select line of water feature accessories.
From swivel units to help align spray nozzles to hydraulic fill valves, Crystal Fountains manufactures a full line of commercial quality accessories for your fountain needs.

General Information for Accessories

Standard Threading:
Standard threading on components are National Pipe Thread (NPT) unless requested otherwise at the time of order. All thread sizes less than 26mm will be NPT.

201	ACCESSORIES
202	ACF Series – Heavy-Duty Hydraulic Water Level Control
203	ACX Series – Light Duty Hydraulic Water Level Control
204	ADF Series – Spray-Thru Sleeve
204	ADG Series – Spray-Thru Sleeve
205	ADP Series – Debris Pan for Sump
205	AFG Series – Grate with Frame
206	AFI Series – Discharge Filter
207	APS Series – Submersible Fountain Pump
207	ASU Series – Swivel Connector
208	AVQ Series – Solenoid Actuated Fill Valve
209	AVR Series – Solenoid Valve with Manifold
210	AWA Series – Vacuum Fitting
210	AWB Series – Vacuum Fitting
211	AWO Series – Combination Hydraulic Water Level and Overflow Assembly
212	AWS Series – Wall Skimmer





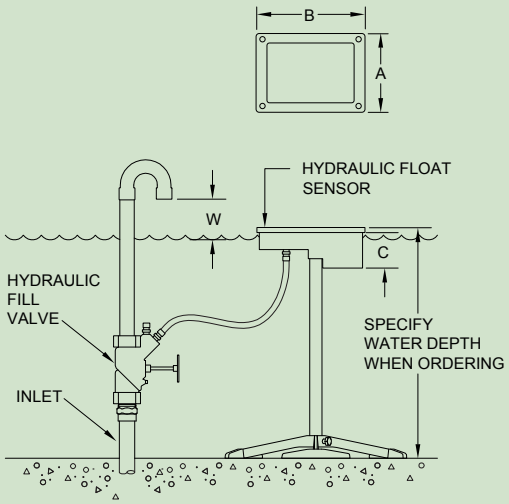
ACF Series – Heavy-Duty Hydraulic Water Level Control

Freestanding, non-electric hydraulic water level controls with quick fill action for medium-sized and large pools. Variable height adjustments and slow closing feature prevent shock from water hammer. Fill spout and valve assembly attach to in-pool water supply. Specify water depth when ordering. Made of brass, copper and stainless steel.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ACF100

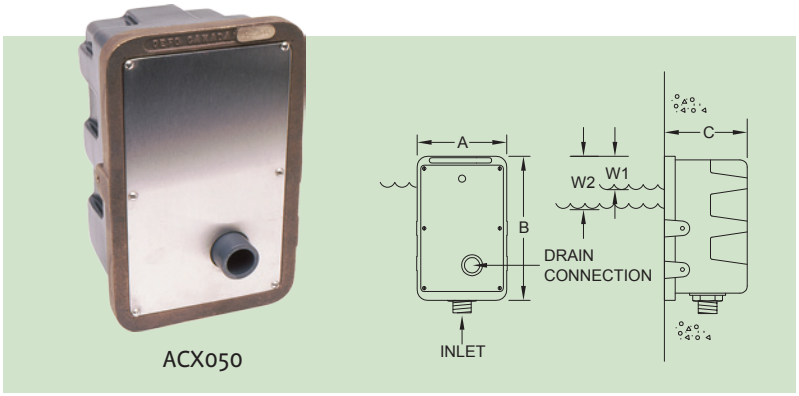


DIMENSIONS					PERFORMANCE
Part No.	inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	LPM at 15 PSI
ACF075	¾"	77	153	89	151.0
ACF100	1"	77	153	89	151.0
ACF125	1 ¼"	77	153	89	322.0
ACF150	1 ½"	77	153	89	341.0
ACF200	2"	77	153	89	454.0

ACX Series – Light Duty Hydraulic Water Level Control

Flush, wall mounted, non-electric hydraulic water level control with built-in level adjustment automatically fills smart fountains. Available with optional brass cover plate or vandal resistant kit. Made of cast bronze frame with stainless steel cover.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ACX050

DIMENSIONS								PERFORMANCE	
Part No.	inlet (b.s.p.t.) (auto fill)	Drain Conn. (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w1 dim. (mm)	w2 dim. (mm	Recommended Water Pressure (PSI)	Recommended Flow (LPM)
ACX050 / ACX051	½"	2"	166	254	147	61	93	25 to 50	19.0
ACX100 / ACX101	1"	2"	166	254	147	51	83	35 max.	34.0

How to Order

Choose Sensor

Sensor Type	Cover Material	Part No.
19 LPM	Stainless Steel	ACX050
	Brass	ACX051
34 LPM	Stainless Steel	ACX100
	Brass	ACX101

CHOOSE ADDITIONAL OPTIONS

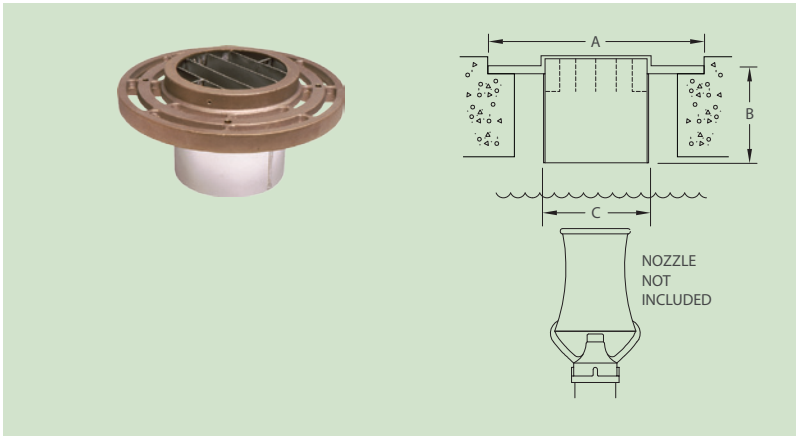
Options	Add Suffix
Chromed Frame	Q
Vandal Resistant Driver Kit	V

This product is available under our Quick Ship program! See page 15 for more details.

ADF Series – Spray-Thru Sleeve

Used in “dry pool” applications where it is desirable to conceal water reservoir and jets beneath pool floor slab. Ideal for areas prone to vandalism. Cascading water projects through sleeve and drains through the surface flange. Made of cast bronze and stainless steel.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



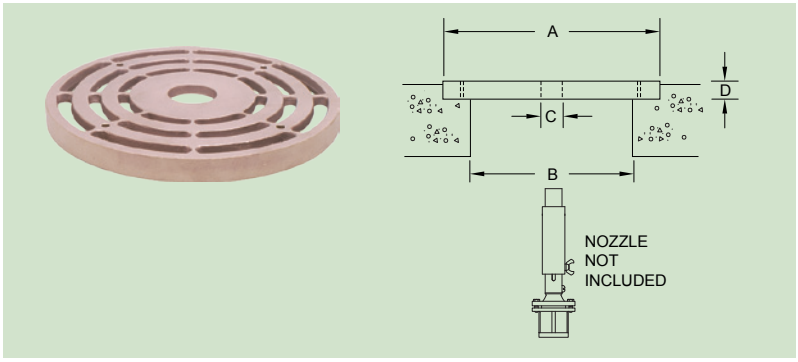
DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)
ADF100	305	159	159

ADG Series – Spray-Thru Sleeve

Used in “dry pool” applications to conceal water reservoir and jets beneath pool floor slab. Ideal for areas prone to vandalism. Cascading water projects through sleeve and drains through the surface flange. Made of bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
ADG100	305	140	26 to 102	26

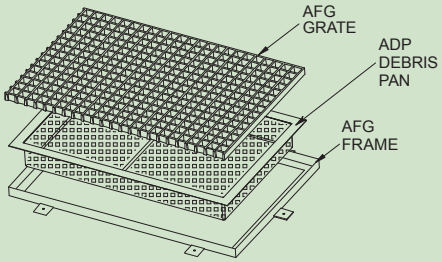
ADP Series – Debris Pan for Sump

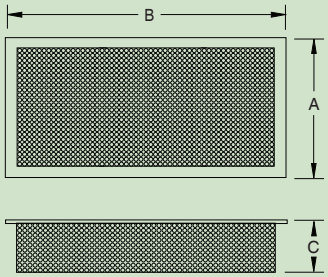
Fine 4mm screen debris pan fits between type AFG series sump grate to collect debris before reaching suction drains. The lift handle facilitates removal. Available in custom sizes and with optional screen openings.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ADP320





DIMENSIONS

Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	Open Area (cm. squared)
ADP200	610	610	102	840
ADP320	610	915	102	1290
ADP330	915	915	102	2130
ADP430	915	1220	102	2775
ADP440	1220	1220	102	4065
ADP640	1220	1524	102	5170

CHOOSE ADDITIONAL OPTIONS

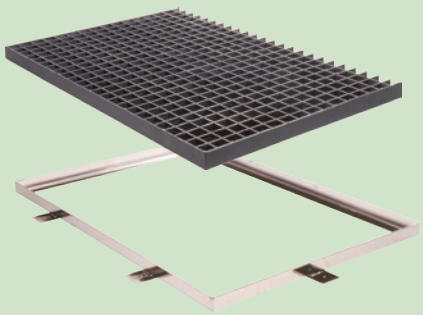
Options	Add Suffix
2 mm Screen Openings	A
5 mm Screen Openings	B

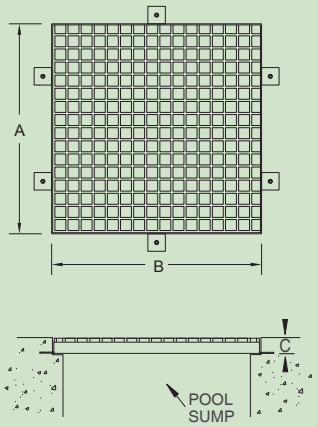
AFG Series – Grate with Frame

For use in sumps and pump pits or access to underdeck equipment. Permits water passage while providing a safety cover to the sump. Available in custom sizes or with optional ADP series stainless steel fine screen debris pan. Made of fiberglass with a heavy-duty stainless steel frame.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*

AFG320





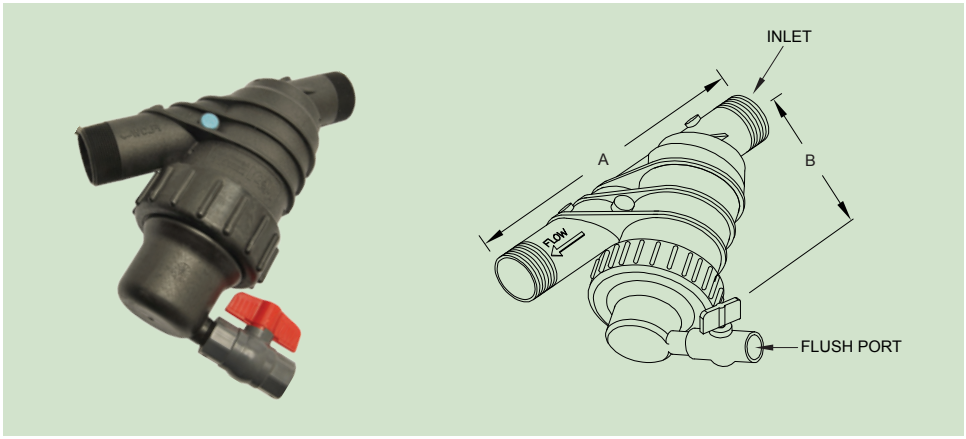
DIMENSIONS

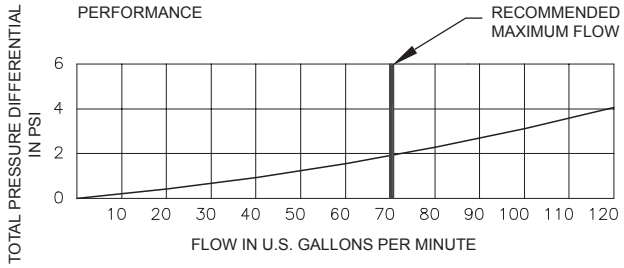
Part No.	a dim. (mm)	b dim. (mm)	c dim. (mm)	Open Area (cm squared)
AFG200	610	610	39	2580
AFG320	610	915	39	3870
AFG330	915	915	39	5810
AFG430	915	1220	39	7750
AFG440	1220	1220	39	10325
AFG640	1220	1524	39	12905

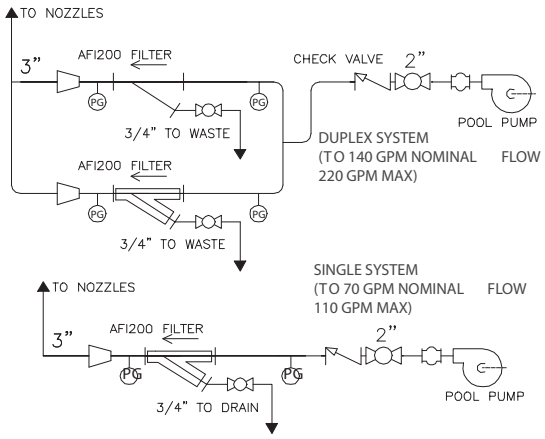
AFI Series – Discharge Filter

The AFI series pump discharge filter is designed to be used with Crystal Fountains ChoreoSwitches™ or any other nozzle with small discharge passages to protect nozzles from clogging. Can be combined with other AFI filter products to increase filtration. Made of plastic and stainless steel. Available in imperial (NPT) size only.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*







DIMENSIONS

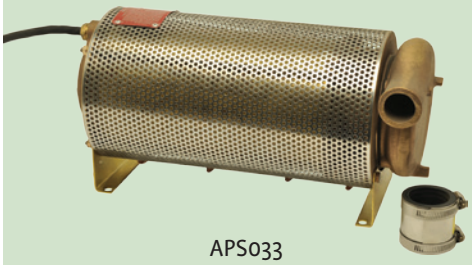
PERFORMANCE

Part No.	Inlet (b.s.p.t.)	Flush Port (mm)	a dim. (mm)	b dim. (mm)	Mesh Opening Size (mm)	Water Pressure (PSI)	Flow Best (LPM)	Flow Max. (LPM)
AFI200	2"	20	305	305	0.6	150 max.	0.0 to 320.0	416.0

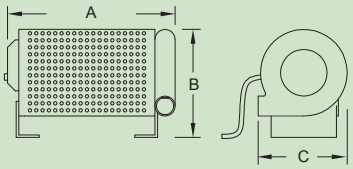
APS Series – Submersible Fountain Pump

APS series submersible fountain pumps are designed for continuous operation. Comes with diaphragm pressure equalizer, automatic current and thermal overload protection. UL and ULC listed. Made of bronze construction with brass suction screen.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



APS033



DIMENSIONS

Part No.	Power (hp)	Voltage (v)	a dim. (mm)	b dim. (mm)	c dim. (mm)
APS033	⅓	115	407	204	197
APS050	½	115	407	204	197
APS075	¾	115	407	204	197
APS100	1	230	407	204	197

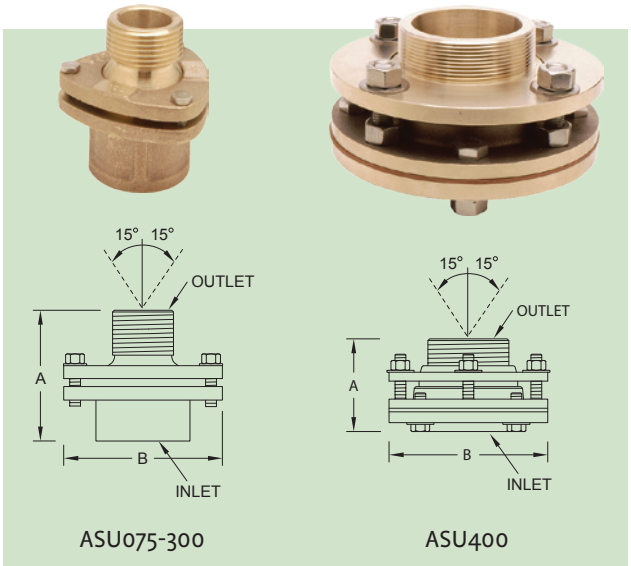
PERFORMANCE

Head (m.)	3.1	4.6	6.1	7.7	9.2	10.1	12.2	13.8	15.3
Flow (LPM)	272.0	246.0	204.0	163.0	113.0				
	341.0	314.0	272.0	238.0	204.0	159.0	106.0		
	378.0	352.0	318.0	284.0	250.0	219.0	174.0	113.0	
	424.0	405.0	386.0	360.0	333.0	303.0	257.0	204.0	151.0

ASU Series – Swivel Connector

Connects to the bottom of nozzles to help directional alignment after installation (up to 15° of adjustment from center line). Made of cast bronze and stainless steel fitted.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



ASU075-300 ASU400

DIMENSIONS

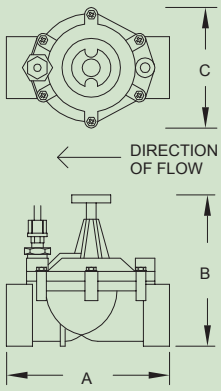
Part No.	Inlet (b.s.p.t.)	Outlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)
ASU075	¾"	¾"	64	58
ASU100	1"	1"	70	64
ASU125	1 ¼"	1 ¼"	83	77
ASU150	1½"	1 ½"	96	83
ASU200	2"	2"	127	115
ASU300	3"	3"	147	153
ASU400	4"	4"	132	226

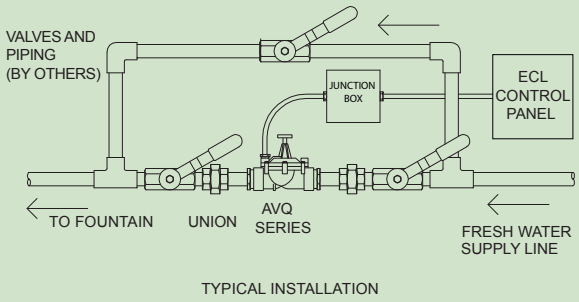
These products (excluding ASU300) are available under our Quick Ship program! See page 15 for more details.

AVQ Series – Solenoid Actuated Fill Valve

Solenoid fill valve used in conjunction with electronic water level sensors and ECL control panel to maintain optimum pool water levels. Has manual shut off as well as slow open/close feature to prevent waterhammer. Available in 24VAC. Made of PVC and stainless steel.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





Fountain Quick Fill Assembly



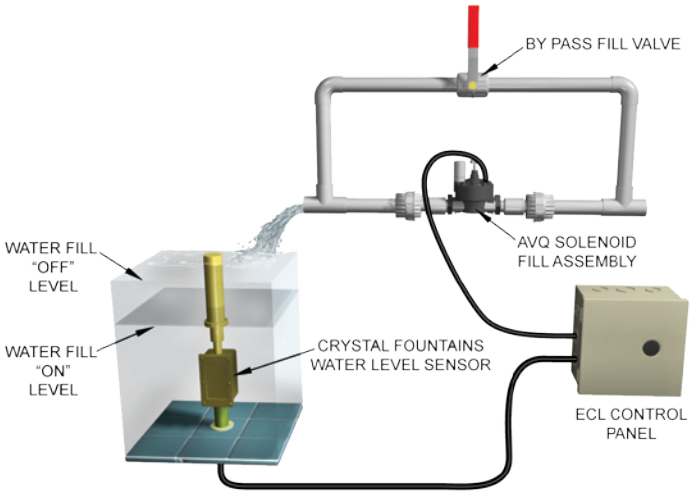
AVQ100

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Voltage	Watts Hold	Watts in Rush	a dim. (mm)	b dim. (mm)	c dim. (mm)
AVQ100	1"	24 VAC	4.8 VA	9.6 VA	102	121	77
AVQ150	1 ½"	24 VAC	4.8 VA	9.6 VA	140	197	108
AVQ200	2"	24 VAC	4.8 VA	9.6 VA	159	216	127
AVQ300	3"	24 VAC	4.8 VA	9.6 VA	207	267	162

PERFORMANCE

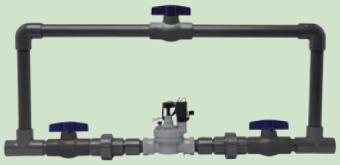
Flow (LPM)	38.0	57.0	76.0	113.0	151.0	189.0	227.0	303.0	378.0	454.0	530.0
Head (m.)	0.8	1.6	2.9	3.7							
			0.8	0.8	1.6	2.2	2.9				
					0.8	0.8	1.1	1.6	2.9		
					1.6	1.6	1.6	2.2	2.9	3.7	4.3

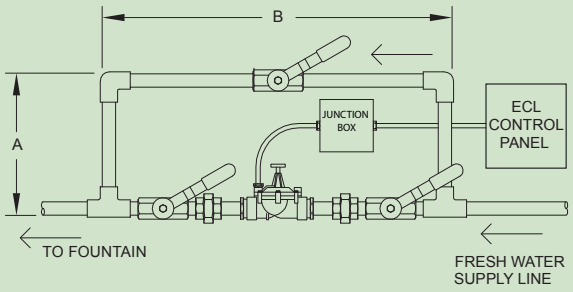


TYPICAL SYSTEM DESIGN

AVR Series – Solenoid Activated Fill Valve with Manifold

Solenoid fill valve used in conjunction with electronic water level sensors and ECL control panel to maintain proper pool water levels. This version comes equipped with a pre-assembled manifold (solenoid fill valve, unions and shut off valve) for easy installation. Fill valve has manual shut off as well as slow-open/close feature to prevent waterhammer. Available in 24VAC. Made of PVC and stainless steel.





TYPICAL INSTALLATION

DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Voltage	Watts Hold	Watts in Rush	a dim. (mm)	b dim. (mm)
AVR100	1"	24 VAC	4.8 VA	9.6 VA	254	458
AVR150	1 ½"	24 VAC	4.8 VA	9.6 VA	254	458
AVR200	2"	24 VAC	4.8 VA	9.6 VA	381	762
AVR300	3"	24 VAC	4.8 VA	9.6 VA	381	762

PERFORMANCE

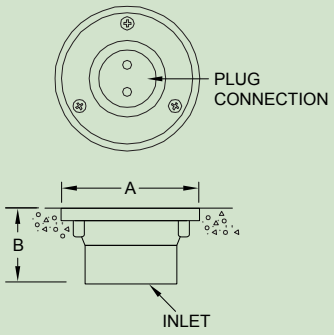
Flow (LPM)	38.0	57.0	76.0	113.0	151.0	189.0	227.0	303.0	378.0	454.0	530.0
Head (m.)	0.8	1.6	2.9	3.7							
			0.8	0.8	1.6	2.2	2.9				
					0.8	0.8	1.1	1.6	2.9		
					1.6	1.6	1.6	2.2	2.9	3.7	4.3

AWA Series – Vacuum Fitting

Precision engineered for heavy-duty fountain use. Supplied with vandal resistant vacuum plug. Available with optional security key/cover removal or membrane clamp. Made of cast bronze with stainless steel fasteners.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Plug (mm)	a dim. (mm)	b dim. (mm)
AWA150	1 ½"	39	159	48

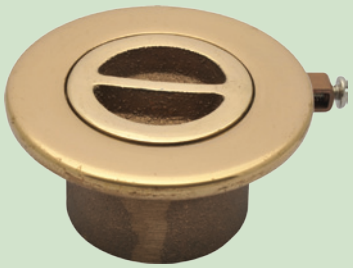
CHOOSE ADDITIONAL OPTIONS

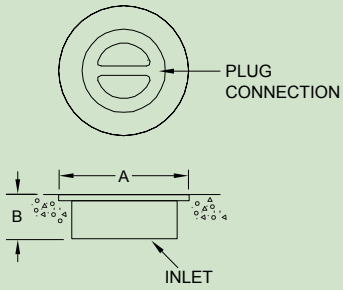
Options	Add Suffix
Security Key	K
Membrane Clamp	L

AWB Series – Vacuum Fitting

Cast-in-concrete vacuum fitting used for pool maintenance. Supplied with vacuum plug. Made of cast bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*





DIMENSIONS

Part No.	Inlet (b.s.p.t.)	Plug (mm)	a dim. (mm)	b dim. (mm)
AWB150	1 ½"	39	159	45

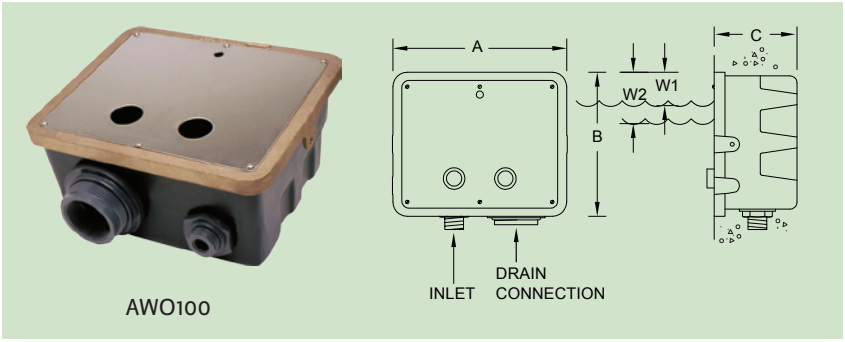
CHOOSE ADDITIONAL OPTIONS

Options	Add Suffix
Security Key	K
Membrane Clamp	L

AWO Series – Combination Hydraulic Water Level and Overflow Assembly

Flush, wall mounted, non-electric combination hydraulic water level control with built-in level adjustment and overflow drain. Automatically fills small to medium-sized pools and drains overflow water through a built-in adjustable drain. Available with optional brass cover plate or vandal resistant kit. Made of bronze with stainless steel cover, plastic body and quick-fill valve.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



AWO100

DIMENSIONS **PERFORMANCE**

Part No.	Inlet (b.s.p.t.) (auto-fill)	Outlet (n.p.t.) (mm)	a dim. (mm)	b dim. (mm)	c dim. (mm)	w1 (mm)	w2 (mm)	Recommended Water Pressure (PSI)	Recommended Flow (LPM)
AWO050	½"	51	305	254	140	61	86	25 to 50	19.0
AWO100	1"	51	305	254	140	45	77	35 max.	34.0

How to Order

CHOOSE SENSOR

Sensor Type	Cover Material	Part No.
19 LPM	Stainless Steel	AWO050
	Brass	AWO051
34 LPM	Stainless Steel	AWO100
	Brass	AWO101

CHOOSE ADDITIONAL OPTIONS

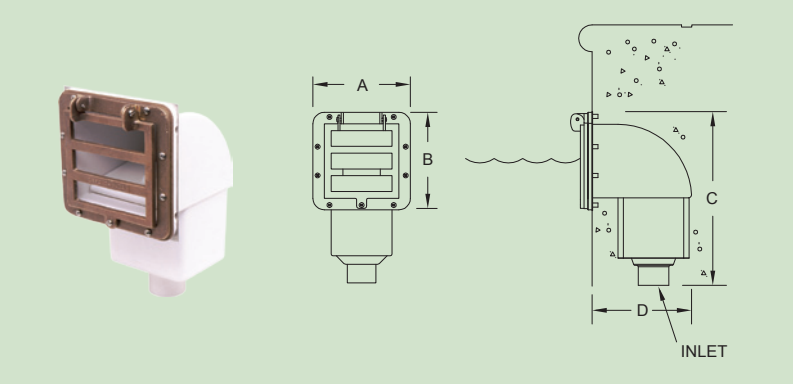
Options	Add Suffix
Vandal Resistant Driver Kit	V

This product is available under our Quick Ship program! See page 15 for more details.

AWS Series – Wall Skimmer

Ideal for surface skimming of leaves and debris. Front access allows for easy cleaning. Hinged and secured face grille prevents vandalism. Wall skimmer made of extruded plastic. Integral debris basket and floating weir skimmer, face plate and hinged grille made of cast bronze.

**Contact Crystal Fountains for detailed specifications, installation and operation details.*



DIMENSIONS

Part No.	Inlet (b.s.p.t.)	a dim. (mm)	b dim. (mm)	c dim. (mm)	d dim. (mm)
AWS150	1 ½"	191	185	318	159

This product is available under our Quick Ship program! See page 15 for more details.

REPLACEMENT PARTS

Commercial quality components can be refurbished with replacement parts
Look through the following pages for replacement parts for a range of Crystal Fountains components - nozzles, lighting, electrical, accessories and more! We do make replacement parts for any product we manufacture. If you don't see the item you need, please contact us.

213 REPLACEMENT PARTS
214 Replacement Parts for Nozzles
215 Replacement Parts for ChoreoSwitches®
216 Replacement Parts for Leapers
217 Replacement Parts For Laminars
218 Replacement Parts for Lighting
219 Replacement Parts for Electrical
220 Replacement Parts for Drains and Inlets







Nozzles

Contact Crystal Fountains if you have a specific replacement requirement that you don't see here.

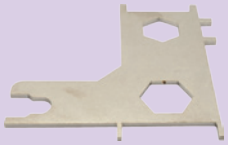
Nozzle Level – NLA100

Assists in the levelling of jets during installation to ensure water direction uniformity. For use with all Crystal Fountain nozzle products.



Cover Removal Key – WMF082

Assists in the removal of deck level nozzles (NLF, NLG, WMO, WMF).



Swivel Connectors – ASU Series

Connects to the bottom of nozzles to help directional alignment after installation (up to 15° of adjustment from center line). Made of cast bronze and stainless steel fitted. Also see page 207 under Accessories.



Winter Covers Series – WMF081

For use to protect nozzles in colder climates. For use with nozzles NLF075/076 and WMF076, WMO100, WMO110, WMO115, WMD100, WMD110, WMD115.



Winter Cover Series – NLG3200C15

For use to protect nozzles in colder climates. For use with NLG nozzles.



Spray Ring Jets – NEA012, NEA025

For use with NSR Series Spray Rings to replace individual jets.
NEA012 is used with NSR122 through 822.
NEA025 is used with NSR223 through 823.



ChoreoSwitches®

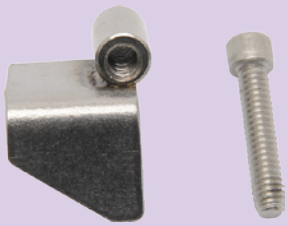
Solenoid Assembly – SWS100A500 (12V), SWS100A510 (24V)

Solenoid assembly for use on all Crystal Fountains ChoreoSwitch products comes complete with 3m cable.



Hold down clamps – SWS110C131

Holds ChoreoSwitch slab hanger cover into place.



Nozzles for ChoreoSwitch®

Replacement nozzles available in 3 different styles for use on playdeck or fountain products:

- Plastic nozzles are available in 25 mm and 40 mm sizes – SWS100C301 (25mm) and SWS150C301 (40mm)
- Bronze nozzles are available in 25mm and 40mm sizes – NWS100C301 (25mm) and SWS150C401 (40mm)
- Bronze Aerator nozzles are available in 25mm and 40mm sizes – NWS100A400 (25mm) and NWS150A400 (40mm)



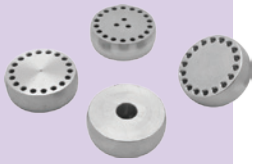
Bronze for Deck level ChoreoSwitch in 4 models:

- NWS110C112 – Column Effect
- NWS110C114 – Angled Ring Effect
- NWS110C118 – Crown Effect
- NWS110A120 – Clear Stream Effect



Stainless Steel nozzles for Playdeck ChoreoSwitch in 4 models:

NWS110C115 – Column Effect
NWS110C104 – Angled Ring Effect
NWS110C108 – Crown Effect
NWS110A122 – Clear Stream Effect



Leapers

Basket – NWV107C301 (Fiberoptic Version) and LED107C200 (LED Version)

Replacement basket for leaper products SWV100, SWV102, LED140 and LED141
O-Ring for basket is also available - NWVC301 (Fiberoptic) and OR0132 (LED)



Leaper Top/ Diverter Lid – SWV100A

Replacement diverter for SWV100 and LED140.



Fiberoptic Kit – NWV107C201 – Fiber Rod WMV107A102 – Fiber Tip

Replacement fiberoptic tip and fiberoptic rod for SWV100, SWV102, WMV107 and WMV111.



LED Assembly – LED107A100

Replacement LED assembly for LED140, LED141.



Power Cords for SWV100 SWV102 (Fiberoptic)

Available in two different sizes:

- EL CORD 100A100 – 3m
- EL CORD 100A1001 – 7.7m



Laminars

Basket – NWV107C301 (Fiberoptic Version) and LED107C200 (LED Version)

Replacement basket for leaper products WMV107, WMV117, LED140, LED141
O-Ring for basket is also available - NWVC301 (Fiberoptic) and OR0132 (LED)



Starburst Laminar Valve Kit – WMV108

Starburst Laminar replacement valve and assembly.



Fiber Optic Kit – NWV107C201 – Fiber Rod
WMV107A102 – Fiber Tip

Replacement fiberoptic tip and fiberoptic rod for WMV107, WMV111, WMV117, WMV123.



LED Assembly – LED107A100

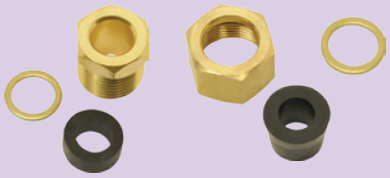
Replacement LED assembly for WMV117, WMV123



Lighting

Cable Seal Kits (Cable Washer Nut Kit)

Replacement for halogen and LED lights.
EL SEAL KIT 030 – For use with lights EL030/040 Series.



Lens Gaskets

Replacement lens gaskets for halogen and LED lights.
EL GASKET 2 – For LED051 Series
EL GASKET 3 – For EL030/040 Series
EL GASKET 6 – For LED052
EL GASKET 10 – For EL002/LED002



Sockets

EL SOCKET 6 – For use with EL030/040 Series
EL SOCKET 10 – For use with EL002/030/040 and LED002/030 Series



Lenses

EL LENS 2A (amber) – For use with light fixture EL030/040
EL LENS 2B (blue)
EL LENS 2C (clear)
EL LENS 2G (green)
EL LENS 2R (red)
EL LENS 2T (turquoise)
EL LENS 3A (amber) – For use with light fixture LED050/052
EL LENS 3B (blue)
EL LENS 3C (clear)
EL LENS 3G (green)
EL LENS 3R (red)
EL LENS 3T (turquoise)
EL LENS 5C (clear) – For use with light fixture EL002 and LED002

*Note: All lenses for LED Lighting to be clear only





Cable Assemblies for Traditional Lighting

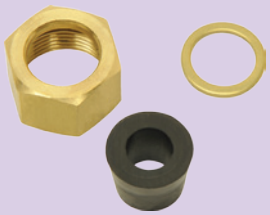
EL CORD 1 – 16/3 cable (PER FT)
EL CORD 4 – 10/3 CABLE (PER FT) EL030/040

Cable Assemblies for LED Lighting

EL CORDA105 – 3m cable. For use with LED002
EL CORDA120 – 6m cable. For use with LED002
EL CORD050L09 – 3m cable. For use with LED051
EL CORD050L20 – 6m cable. For use with LED051
EL CORD160L09 – 3m cable. For use with LED052/055 and 160 Series
EL CORD160L20 – 6m cable. For use with LED052/055 and 160 Series

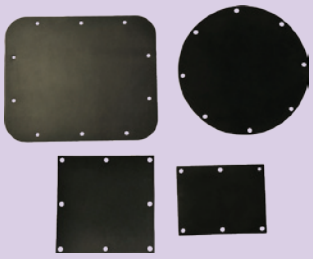
Electrical

Cable Seal Kits (Grommet, Washer Nut Kit)



Replacement for EGS cord seals.
EL SEAL KIT 015 – for use with EGS052 cord seals
EL SEAL KIT 010 – for use with EGN075 cord seals
EL SEAL KIT 071 – for use with EGN071/073 cord seals
EL SEAL KIT 074 – for use with EGS074 cord seals.
*Note: No Seal Kit available for EGN100

Junction Box Gaskets



Replacement cover gaskets for junction boxes
EBN104C30 – for use with EBN104
EBN208C20 – for use with EBN208
EBJ202C30 – for use with EBJ202
EBJ204C30 – for use with EBJ204
EBJ208C30 – for use with EBJ208/212
EBJ216C30 – for use with EBJ216
EBJ220C30 – for use with EBJ220

Junction Box Potting Compound



EBJC10 – 21 oz.
EBJC20 – 12 oz.

Water Level Sensors



Replacement parts for various Crystal Fountains electrical products.
ES C40 – Gem Sensor Float Switch for ESD/ESF/ESG/ESL/ESN/ESO/ESP/ESS/ESW Water Level Sensors
EL SEAL KIT 010 – Grommet, Washer Nut Kit for ESD/ESF/ESG/ESL/ESN/ESO/ESP/ESS/ESW Water Level Sensors
ES C50 – Brass Stem for ESD/ESF/ESG/ESL/ESN/ESO/ESP/ESS/ESW Series Water Level Sensors
ES C15 – Brass Shroud for ESF/ESL/ESN/ESS Series Water Level Sensors
ESWC45 – Cover Gasket (2) for ESW Series Water Level Sensors
EBN104C30 – Cover Gasket for ESD/ESN/ESS Series Water Level Sensors
EBJ202C30 – Gasket for ESF Sensor

DRAINS AND INLETS

General Information for Drains

Standard Threading

Standard threading on components shall be National Pipe Thread (NPT) unless requested otherwise at the time of purchase. All thread sizes less than 26mm will be NPT.

DRAIN PLUGS

Part No.	Use with Drains
D3C55	DPB200
D3C55	DPB300
D4C40	DPB400



STRAINER BASKETS

Part No.	Use with Drains
D2C35	DSA200
D3C35	DSA300/400
D4C30	DSA600
D6C30	DSA800



OVERFLOW DOMES

Part No.	Use with Drains
D2C60	DOA200
D3C60	DOA300
D4C60	DOA400



BRONZE A.V. PLATES

Part No.	Use with Drains
D2C65	DSA200
D3C65	DSA300/400
D6C35	DSA80



DEBRIS SCREENS

Part No.	Use with Drains
D2S10	DSA200
D3S10	DSA300
D4S10	DSA400
D6S10	DSA600
D8S10	DSA800



FLAT DRAIN GRATES

Part No.	Use with Drains
D2C85	DSA200
D3C85	DSA300/400
D6C85	DSA600



INLET EXTENSION RODS

Part No.	Use with Inlets
IF2C10	IFA200
IF3C10	IFA300
IF4C10	IFA400
IF6C10	IFA600
IF8C10	IFA800



FIBERGLASS A.V. PLATES

Part No.	Use with Drains
D2C60	DSA200
D3C80	DSA300/400
D6C50	DSA600/800



OVERFLOW STANDPIPES

Part No.	Use with Stand Pipe Assemblies
DOA/F200A10	DOA/DOF200
DOA/F300A10	DOA/DOF300
DOA/F400A10	DOA/DOF400



Engineering Data and Conversion Factors

The following pages contain a number of handy reference charts:

- Engineering Data and Conversion Factors
- Pipe Flow Guide and Waterfall Requirement
- Conductor Sizes in Conduits or Tubing
- Electrical Usage
- Flow Capacity and Friction Loss
- Friction Loss in Fittings

QUICK CONVERSION FACTORS

Convert From	Multiply By	Convert Into
FLOW		
USGPM	0.0631	Litres/second
USGPM	3.785	Litres/minute
USGPM	227.3	Litres/hour
Litres/sec.	15.85	USGPM
Litres/min.	0.264	USGPM
Litres/hour	0.0044	USGPM
Cu. Ft./sec.	448.83	USGPM
Cu. M./min.	264.2	USGPM
PRESSURE		
PSI	6.895	KPA
PSI	2.31	Ft. Head
KPA	0.145	PSI
KPA	0.334	Ft. Head
Ft. Head	2.99	KPA
Ft. Head	0.433	PSI
Ft. Head	0.305	Metric Head
Ft. Head	3.28	Ft. Head
VOLUME		
U.S. Gals.	231	Cu. In.
U.S. Gals.	0.1336	Cu. Ft.
U.S. Gals.	3.785	Litres
U.S. Gals.	0.0038	Cu. Meters
Litres	0.2642	U.S. Gals
Litres	0.0353	Cu. Ft.
Cu. Metres	35.311	Cu. Ft.
Cu. Metres	264.2	U.S. Gals.
Cu. Ft.	7.48	U.S. Gals
Cu. Ft.	28.329	Litres
Cu. Ft.	0.028	Cu. Metres

QUICK CONVERSION FACTORS

Convert From	Multiply By	Convert Into
WEIGHT		
U.S. Gals	8.35	Lbs.
Litres	2.2	Lbs.
Cu. Ft. Of Water	62.46	Lbs.
Cu. M. Water	22.06	Lbs.
LENGTH		
Inches	2.54	Centimeters
Feet	0.3048	Metres
Metres	39.37	Inches
Metres	3.28	Feet
HORSEPOWER		
HP	0.746	Kilowatts
HP	745.7	Watts
Kilowatts	1.34	HP
U.S. PUMP CHARTS		
GPM (60 cy)	0.8	GPM (50 cy)
Head (60 cy)	0.6	GPM (50 cy)

Pipe Flow Guide and Waterfall Requirements

Pipe sizes and capacities are those recommended as good practice for fluid velocities on hydronic applications.

Example:
To determine the LPM requirements for a 3 m long waterfall with a 1.25 m fall height; specified with 7.5 mm spill thickness, multiply 3m x 187 LPM = 561 LPM

Note: Turbulent water may require greater flow.

PIPE FLOW GUIDE

Pipe Size	Flow (LPM)	Pipe Size	Flow (LPM)
40 mm	38-95	125 mm	757-1892
50 mm	76-189	150 mm	1249-3028
75 mm	208-511	200 mm	2649-4920
100 mm	435-1041	150 mm	4731-6624

WATERFALL REQUIREMENTS

Spill	LPM	Maximum Fall Height
2.5 mm	62	0.30 m
5.0 mm	125	1.00 m
7.5 mm	187	1.25 m
10.0 mm	250	1.50 m
12.5 mm	312	1.75 m
15.0 mm	374	2.00 m
17.5 mm	436	2.25 m
20.0 mm	498	2.50 m
22.5 mm	558	2.75 m
25.0 mm	620	3.00 m

*Water falling a distance greater than 1.2 m will break up and laminar effect will be lost.

Electrical Usage – Wire Size Selection

115 VOLTS - 1 PHASE

Amps	AWG Wire Size							
	14	12	10	8	6	4	2	0
2	595	946	1479					
3	397	630	986					
4	298	470	740	1161	1808			
5	238	378	592	926	1447			
6	198	315	493	774	1206	1842		
7	170	270	423	663	1033	1579		
8	149	236	370	581	904	1381		
9	132	210	329	516	804	1228	1871	
10	119	189	296	464	723	1105	1684	
12	99	158	247	387	603	921	1403	
14		135	211	332	517	789	1203	1622
16		118	185	290	452	691	1052	1420
18			164	258	402	614	935	1201
20			148	232	362	553	842	1136
22			134	211				
24			123	194				

Maximum Distance of Wire Run.

200 VOLTS - 1 PHASE

Amps	AWG Wire Size							
	14	12	10	8	6	4	2	0
2	1035	1644						
3	690	1096	1715					
4	518	822	1287					
5	414	658	1029	1615				
6	345	548	858	1346	2097			
7	296	470	735	1154	1797			
8	259	411	643	1010	1573	2403		
9	230	365	572	897	1398	2136		
10	207	329	515	808	1258	1922	2928	
12	173	274	429	673	1048	1602	2440	
14		235	368	577	899	1373	2091	2821
16		206	322	505	786	1201	1830	2469
18			286	449	699	1068	1627	2194
20			257	404	629	961	1464	1975
22			234	367	572	874	1331	1795
23			214	337	524	801	1220	1646
26				311	484	739	1126	1519
28				288	449	686	1046	1411
30				269	419	641	976	1317
35				231	359	549	837	1129
40					315	481	732	988
45					280	427	651	878
50					252	384	586	790
55						349	532	718
60						320	488	658

Maximum Distance of Wire Run.

Electrical Usage – Wire Size Selection

230 VOLTS - 1 PHASE

Amps	AWG Wire Size							
	14	12	10	8	6	4	2	0
2	1190	1891						
3	794	1261						
4	595	946	1479					
5	476	756	1184	1858				
6	397	630	986	1548	2411			
7	340	540	845	1327	2067			
8	293	473	740	1161	1808	2763		
9	265	420	658	1032	1607	2456		
10	238	376	592	929	1447	2210	3367	
12	198	315	493	774	1206	1842	2806	
14		270	423	663	1033	1579	2405	3245
16		236	370	581	904	1381	2105	2839
18			329	516	804	1228	1871	2524
20			296	464	723	1105	1684	2271
22			269	422	658	1005	1531	2065
23			247	387	603	921	1403	1893
26				357	556	850	1295	1747
28				332	517	789	1203	1622
30				310	482	737	1122	1514
35				265	413	632	962	1298
40					362	553	842	1136
45					321	491	748	1009
50					239	442	673	909

Maximum Distance of Wire Run.

200 VOLTS - 3 PHASE

Amps	AWG Wire Size							
	14	12	10	8	6	4	2	0
2	1195	1899	2971					
3	797	1266	1981	3109				
4	598	949	1486	2332	3632			
5	478	760	1188	1865	2905			
6	398	633	990	1554	2421			
7	341	543	849	1332	2075	3170		
8	299	475	743	1166	1816	2774		
9	266	422	660	1036	1614	2466		
10	239	380	594	933	1453	2219	3381	
12	199	316	495	777	1211	1849	2817	
14		271	424	666	1038	1585	2415	3258
16		237	371	583	908	1387	2113	2851
18			330	518	807	1233	1878	2534
20			297	466	726	1110	1690	2281
22			270	424	660	1009	1537	2073
24			248	389	605	925	1409	1900
26				359	559	854	1300	1754
28				333	519	793	1207	1629
30				311	484	740	1127	1520
35				266	415	634	966	1303
40					363	555	845	1140
45					323	493	751	1014
50					291	444	676	912
55						404	615	829
60						370	563	760
65						341	520	702
70							483	652
75							451	608
80							423	570
85							398	537
90							376	507
95								480
100								456

Maximum Distance of Wire Run.

Electrical Usage – Wire Size Selection

460 VOLTS - 3 PHASE

Amps	AWG Wire Size							
	14	12	10	8	6	4	2	0
2	2749							
3	1833	2912						
4	1374	2184	3417					
5	1100	1747	2733					
6	916	1450	2278	3575				
7	785	1248	1952	3064				
8	687	1092	1708	2681				
9	611	971	1519	2383				
10	550	873	1367	2145	3341			
12	458	728	1139	1788	2784			
14		624	976	1532	2386	3646		
16		546	854	1341	2088	3190		
18			759	1192	1856	2836		
20			683	1073	1671	2552		
22			621	975	1519	2320	3535	
24			569	894	1392	2127	3240	
26				825	1285	1963	2991	
28				766	1193	1823	2777	
30				715	1114	1701	2592	3497
35				613	955	1458	2222	2997
40					835	1276	1944	2623
45					742	1134	1728	2331
50					668	1021	1555	2098
55						928	1414	1907
60						851	1296	1748
65						785	1196	1614
70							1111	1499
75							1037	1399
80							972	1311
85							915	1234
90							864	1166
95								1104
100								1049

Maximum Distance of Wire Run.

230 VOLTS - 3 PHASE

Amps	AWG Wire Size							
	14	12	10	8	6	4	2	0
2	1375	2184	3417					
3	916	1456	2278	3575				
4	657	1092	1708	2681				
5	550	873	1367	2145	3341			
6	458	728	1139	1788	2784			
7	393	624	976	1532	2386			
8	344	546	854	1341	2038	3190		
9	305	485	759	1192	1856	2836		
10	275	437	683	1073	1671	2552		
12	229	364	569	894	1392	2127	3240	
14		312	488	766	1193	1823	2777	
16		273	427	670	1044	1595	2430	3278
18			380	596	928	1418	2160	2914
20			342	536	835	1276	1944	2623
22			311	488	759	1160	1767	2884
24			285	447	696	1063	1620	2186
26				413	643	982	1495	2017
28				383	597	912	1389	1873
30				358	557	851	1296	1748
35				306	477	729	1111	1499
40					418	638	972	1311
45					371	567	864	1166
50					334	510	778	1049
55						464	707	954
60						425	648	874
65						393	598	807
70							555	749
75							518	699
80							486	656
85							457	617
90							432	583
95								552
100								525

Maximum Distance of Wire Run.

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