Function

The Crystal Fountains ChoreoSwitch® is a water level independent sequencing nozzle assembly that produces programmed effects at high switching speeds, up to 10 times per second, when receiving a signal from a programmable logic controller (PLC). Grouped together, multiple choreoswitches can produce a wide variety of geometric patterns. Varying heights can be produced using a variable frequency drive (VFD) pump. The ChoreoSwitch® is a low maintenance device that produces no water hammer. The plastic plume nozzle creates an elongated column of water impressive vertical effects.

Specifications

Construction shall be plastic and stainless steel complete with:

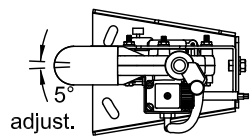
1. 12VDC (SWS127) or 24VAC (SWS101) signal and common for sequencing device, 5 Watt DC or 8 Watt AC non-polarized coil. Inrush current 20VA, holding current 11VA.
2. Solenoid equipped with power current verifying LED indicator.
3. Solenoid assembly shall be serviceable.
4. Patented Front access door for slide-out easy-clean debris screen.
5. Patented media isolation valve to protect the solenoid from corrosion

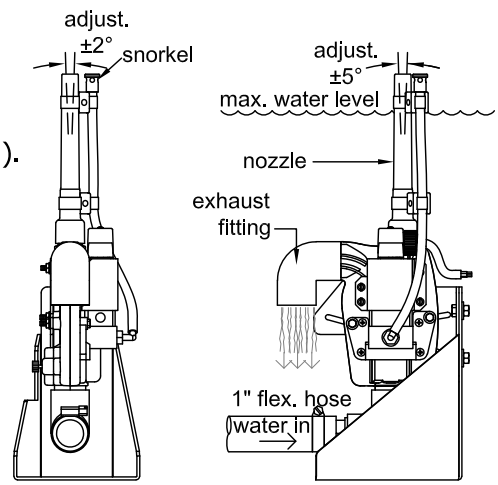
Options

Quick connect kit: Part No. SWS100A600, includes 1" brass gate valve, quick-disconnect cam-lock.

Notes

1. Minimum 1/8" (3mm) suction strainer required. Discharge filter 500 micron recommended.
2. Connect submersible cable to Crystal Fountains' EBJ series junction box with EGS051 cord seal.
3. Air snorkel (see front view) must be kept at a minimum of 1" (25mm) above water level to ensure desired water effect.
4. May be installed out of water or submerged to maximum water level shown (see Performance chart).
5. Fuse all outputs to switches in panel box.
6. 24VAC ChoreoSwitch® must have GFCI protection.
7. For interactive play, DO NOT exceed 20ft/sec. (6m/s) or 11.95 GPM (45 LPM).
8. Exhaust fitting included (shipped loose): 1" Tee and 1" elbow of PVC sch.40. Use elbow for exposed-exhaust application and use Tee for submerged application to minimize rocking thrust.
9. Pivot point for the stainless steel stand centered at top of nozzle for maximum angle adjustment while minimizing nozzle movement.
10. Contact Crystal Fountains for detailed specification, installation and operation details.





Build your Playdeck Choreswitch®

1. Choose your Model/Voltage

Part No.	Nozzle	Voltage
SWS101	plastic	24 VAC
SWS127	plastic	12 VDC

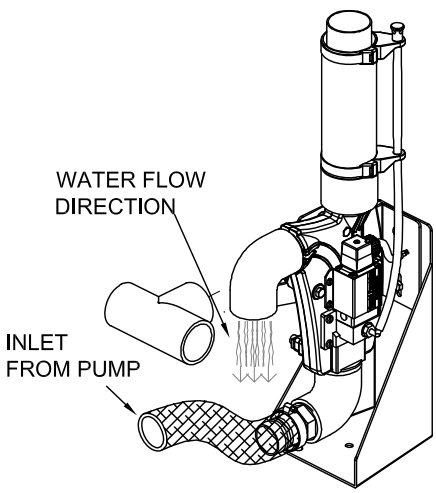
2. Choose Cable

Cable Length	Part # North America
9ft	ELCORDSWSL09
20ft	ELCORDSWSL20

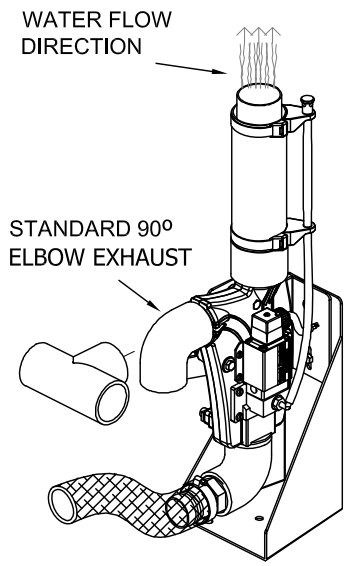
Cable Length	Part # European Region
3m	ELCORDSWSM03
6m	ELCORDSWSM06

Function of Choreoswitch

The Crystal Fountains ChoreoSwitch™ is a switch capable of directing water on and off to nozzles without any water hammer associated with normal valves that shut the water off which causes destructive water hammer, the Crystal Fountains ChoreoSwitch™ never actually shuts the water off. When the fountain controller closes the water discharge port, the water is diverted to the water by-pass ports. the diverted water exits the unit via the water bypass port elbows, which then flows back to the reservoir using a 12VDC or 24VDC signal from a control.



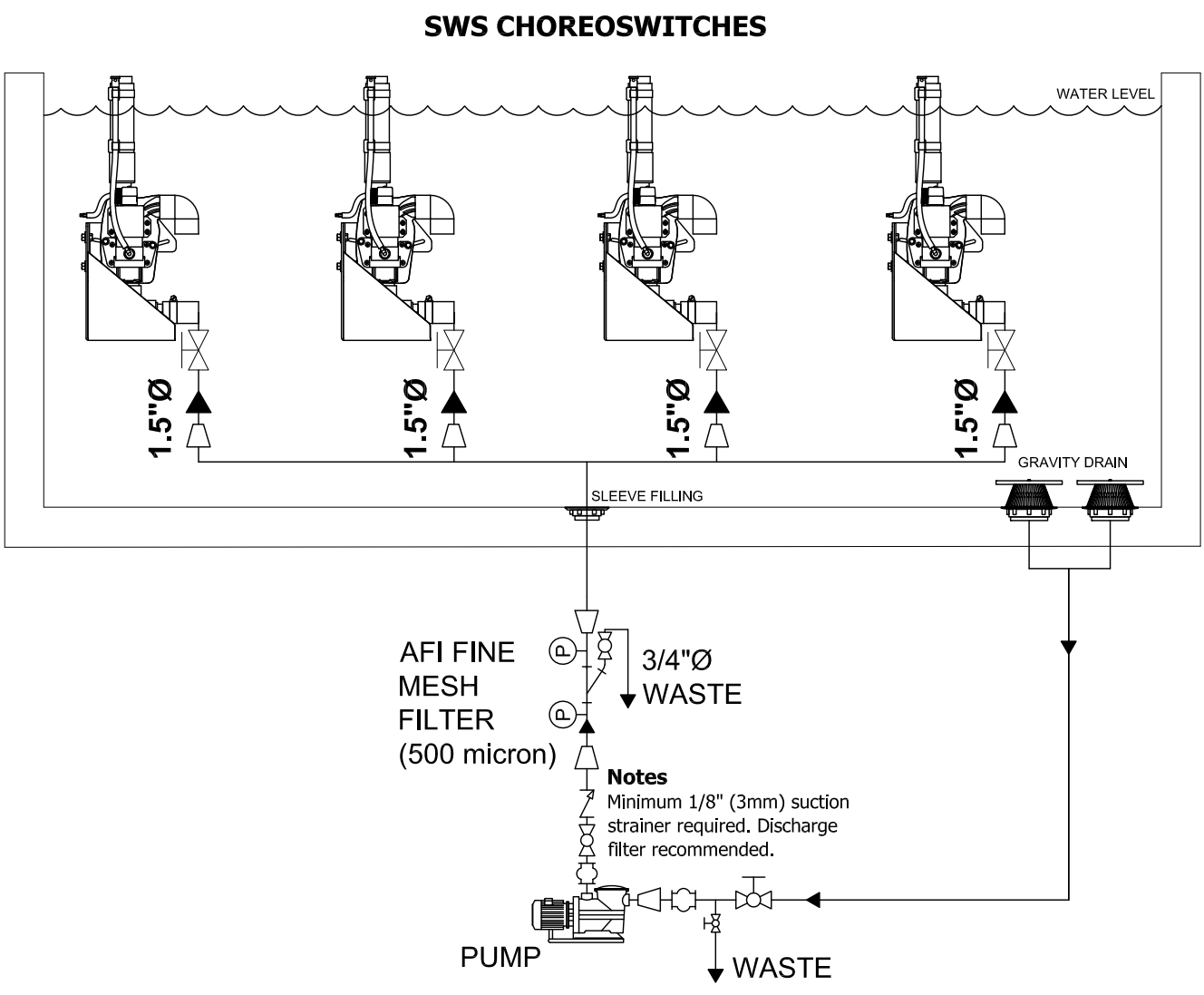
ChoreoSwitch De-energize



ChoreoSwitch Energize

Note: When not submerged the elbow attachment for the bypass port creates a thrust that in some cases may causes the ChoreoSwitch™ to rock. this can be eliminated by using the supplied Tee-fitting where the application allows the water to be ported out the sides while maintaining while desired effect.

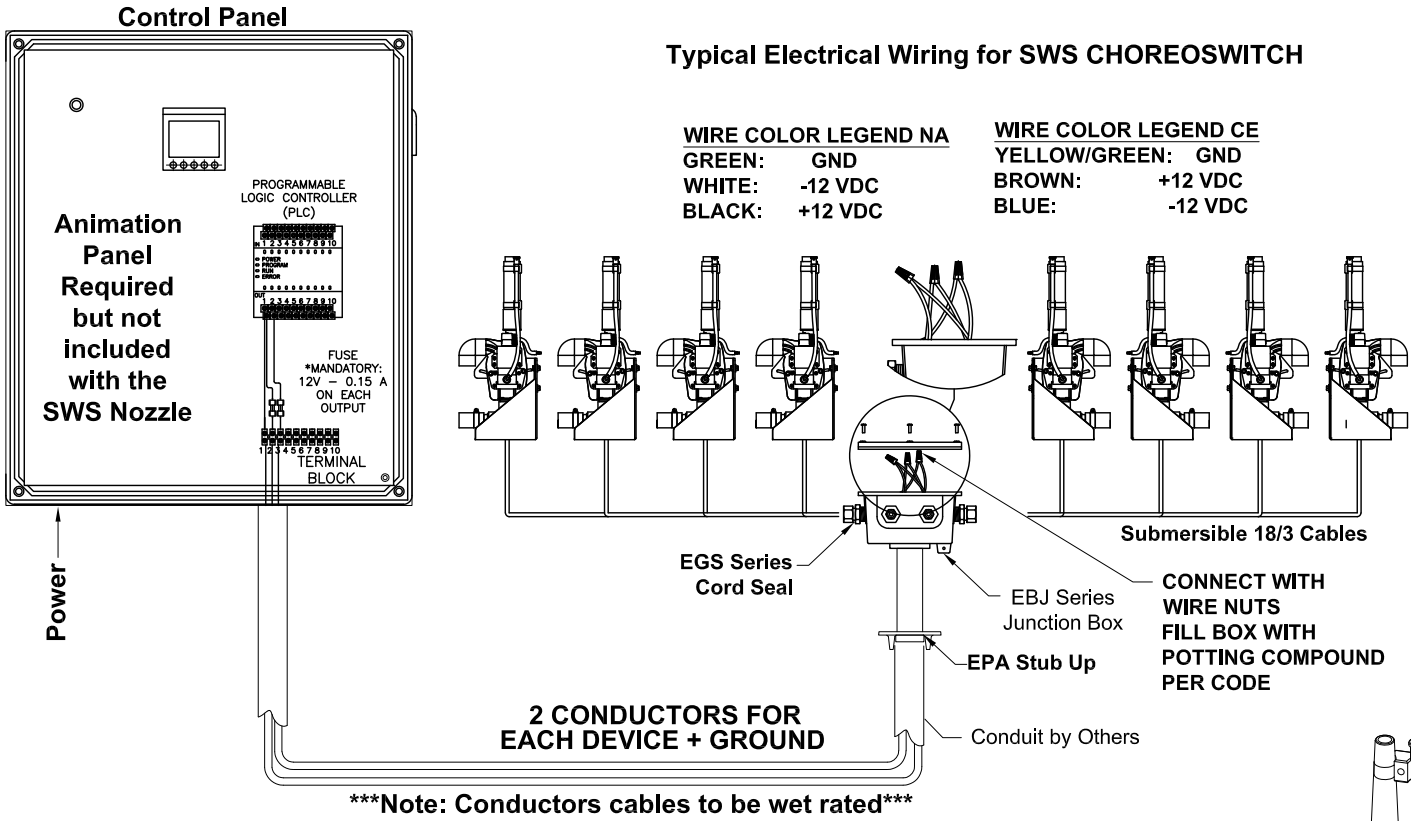
Sample Mechanical Process Flow Diagram

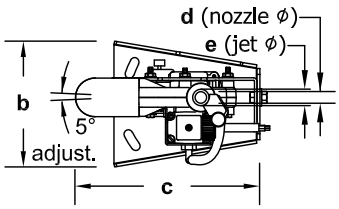


Notes

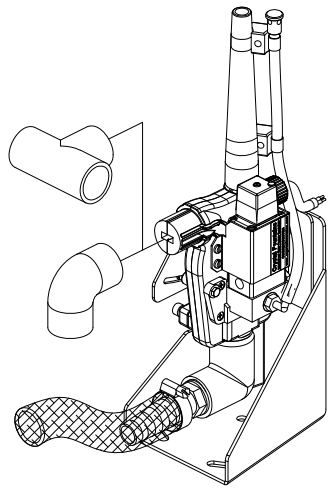
1. Minimum 1/8" (3mm) suction strainer required. 500 micron Discharge filter recommended.

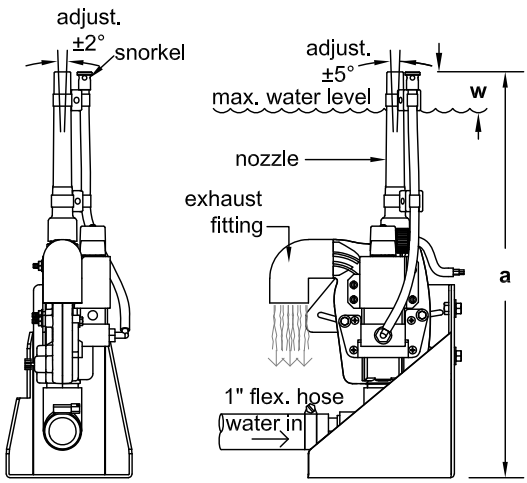
Typical Electrical Wiring for SWS CHOREOSWITCH





Exhaust fitting included (shipped loose): 1" Tee and 1" elbow of PVC sch.40. Use elbow for exposed-exhaust application and use Tee for submerged application to minimize rocking thrust.





Dimensions

Inlet (N.P.T.) in • (mm)	a in • (mm)	b in • (mm)	c in • (mm)	d nozzle⌀ in • (mm)	e jet ⌀ in • (mm)	w in • (mm)
1" (25)	17 ⅛" (435)	5 ¼" (135)	7 ¾" (195)	¾"+ (19+)	½" (13)	1" (25)

Performance

Installation	Spray Height	5 ft (1.5m)	10 ft (3m)	15 ft (4.5m)	20 ft (6m)	22 ft (6.7m)
Exhaust not submerged	GPM / (LPM)	9 (34)	13 (49)	16 (60.5)	18 (68)	19 (72)
	Head ft./(mwc)	21' (6.4)	37' (11.2)	56' (16.2)	70' (21.4)	76' (23.2)
	spread ft./(mm)	1.5'(457)	3.6'(1097)	4.3'(1311)	4.3'(1311)	4.3'(1311)
Exhaust submerged	GPM / (LPM)	10 (38)	13 (49)	16 (60)	19 (72)	20 (76)
	Head ft./(mwc)	20' (6.1)	37' (11.3)	57' (17.4)	76' (23.2)	84' (25.6)
	spread ft./(mm)	1.6'(488)	3.5'(1067)	4.3'(1311)	4.3'(1311)	4.3'(1311)

Notes

1. Fixtures must be installed by a qualified electrician and have ground fault protected circuitry per local and national codes.
3. Contact Crystal Fountains for detailed specification, installation and operation details.