









Typical Fountain Case Introduction

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Ver. 25.1

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01

Project completed in October of 2016.

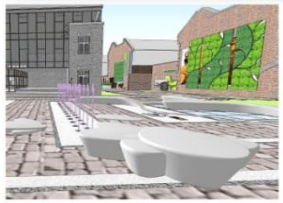


ZHANG YUAN SUBWAY PLAZA, SHANGHAI, CHINA.

Concept Design

Dry Fountain Layout

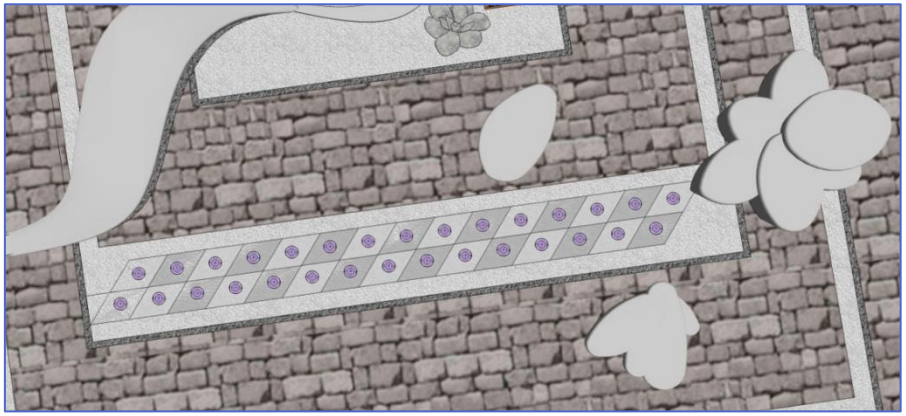


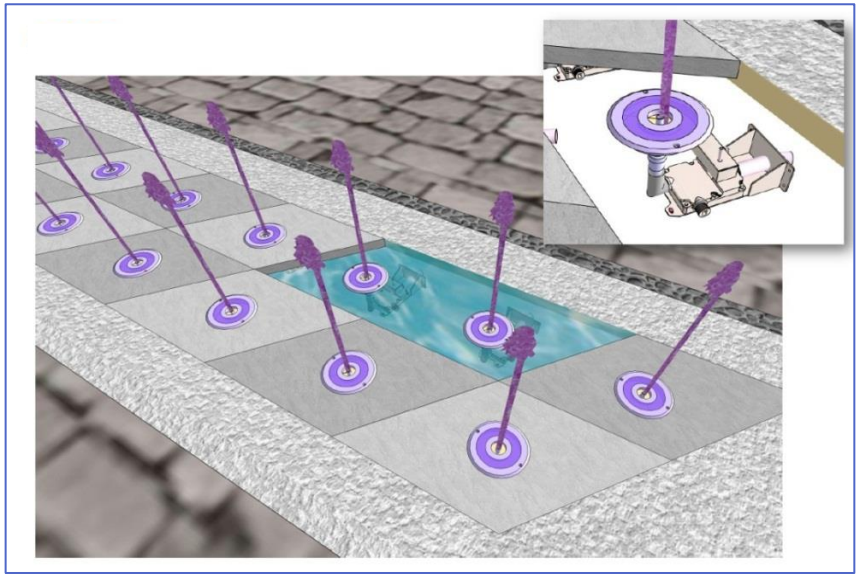




Comet shooter Jets

- 30 nos. WaterSwitch (WS2520) with comet nozzle (ZL25-12).
- 30 nos. underwater ring lights (HX170R-18T)
- Pump with VFD to produce variety spray height. Spray Ht. 0~1m.
- All of them are controlled by DMX individually.











PROJECT INTRODUCTION

The project is located at Zhangyuan subway plaza of Shanghai. The design of this fountain aims to create the pleasant visual effect of the combination of water and those underwater LED lights, which can have different color. The overall performance that given by the fountain and lights would impress every passing by spectator, particularly in the evening.

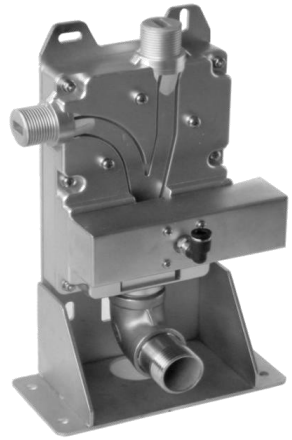
There are 31 shooter jets which composed of a (ZL25-12)comet nozzle with a (WS2520) WaterSwitch, a (HX170R-18T) LED ring light each. The spray height changes between 0~1.5m by the VFD controlled pumping.

The individual DMX signal makes sure that each light can present its best illumination effects that we all will enjoy seeing.



PROJECT FOUNTAIN PRODUCT WaterSwitch

WS2520



- WaterSwitch, a new kind of water spray shifter. Which can produce dynamic spray variation by change the direction of flow.
- The WaterSwitch can be connected to various nozzles such as Comet, Foam, Fan, Finger nozzle.

WaterSwitch + Comet Nozzle

Nozzle	ZL25-12		ZL40-13		ZL40-16	
Ht.	P	Q	P	Q	P	Q
1.0	0.5	25	0.5	33	1.0	44
1.5	0.6	34	0.8	40	1.5	52
2.0	0.8	37	1.1	47	2.0	60
3.0	1.2	47	1.7	60	3.0	78
4.0	1.8	58	2.2	70		
5.0	2.4	68	2.8	80		
6.0	3.0	75				

◆ Ht.= Spray height (m) ◆ P= Pressure demand (bar) ◆ Q= Flow rate (lpm)

Specification

- One G1" inlet, two G3/4" outlets.
- DC24V for solenoid valve.
- Switching speed 1/12 sec.
- Cleanable filter chip.
- Can be mounted on ground or suspended on horizontal or vertical bracket.

Material

Body – ABS
Mount – SS 316

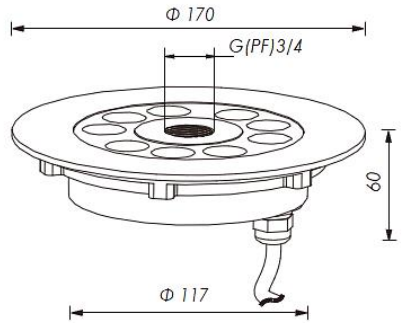




PROJECT FOUNTAIN PRODUCT Underwater ring light

Order No	Light source	IP Rating	Beam Angle (°)	Input Voltage (v)	Operating Current* (mA)		Consumption* (w)	Luminance* (lm)	IK Rating
HX170R-18T	9 x 2W RGB 3in1 Full color	IP 68	25	DC 24V	Red	600	25.2	774	IK 09
					Green	750			
					Blue	750			

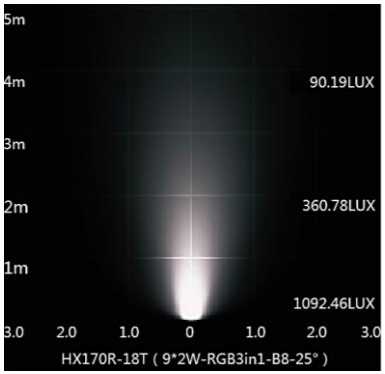
Dimensions (Unit: mm)

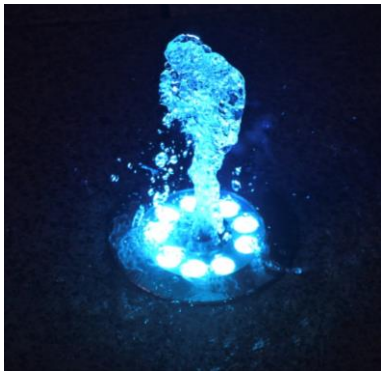


HX170R-18T



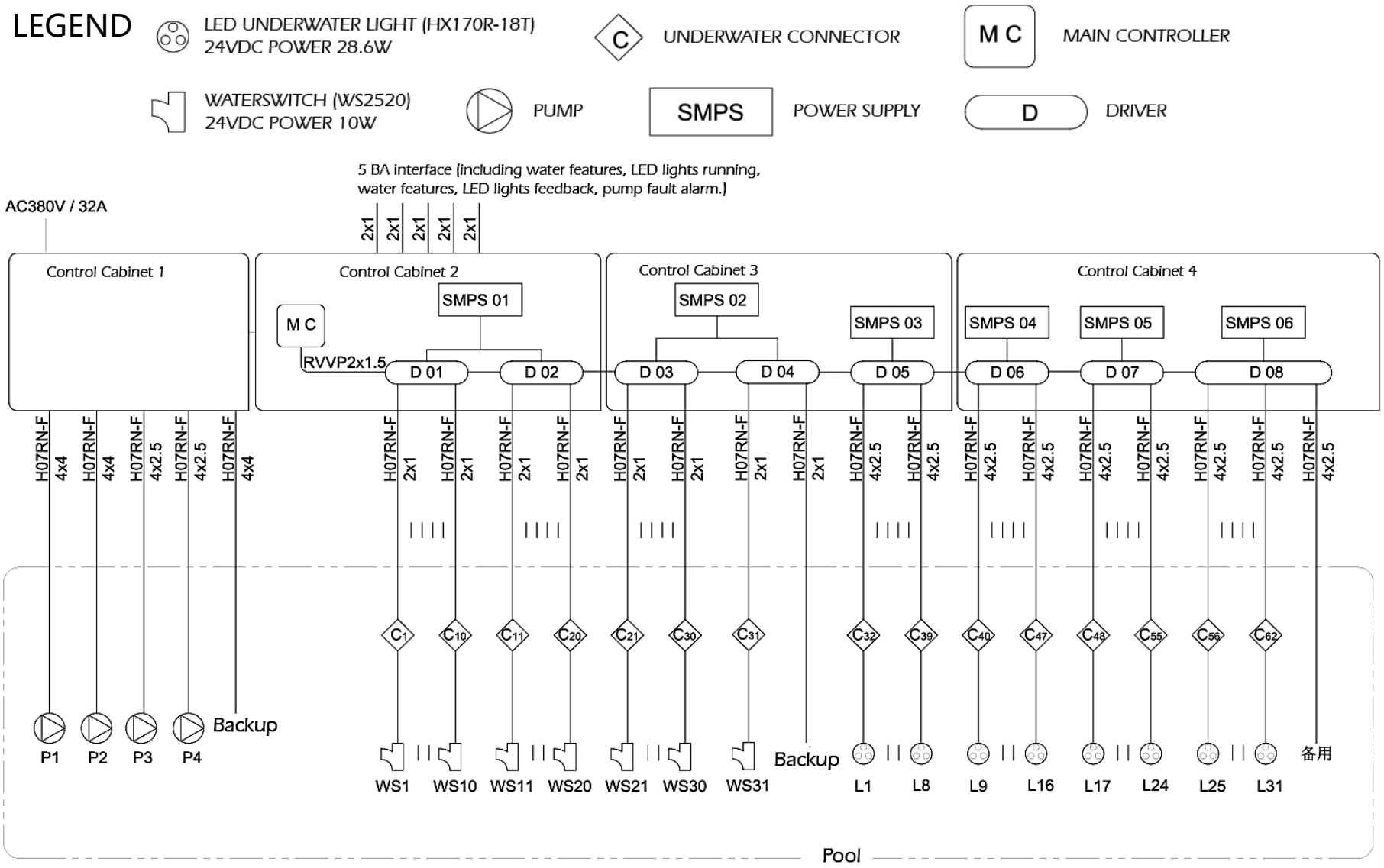
Housing	shaped stainless steel SUS 316#
Front cover	Stainless steel SUS 316L#
Gasket	EPDM gasket.
Glass	Step tempered glass. T=8mm.
Cable gland	IP-68 PG-11 copper with nickel-coated.
PCB	Excellent heat conductivity aluminum, coefficient of heat.
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	H07RN-F 2X1.0mm2 L=3m (for Single color) H07RN-F 4X1.0mm2 L=3m (for RGB)





All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.

SYSTEM DIAGRAM —— ELEC SYSTEM

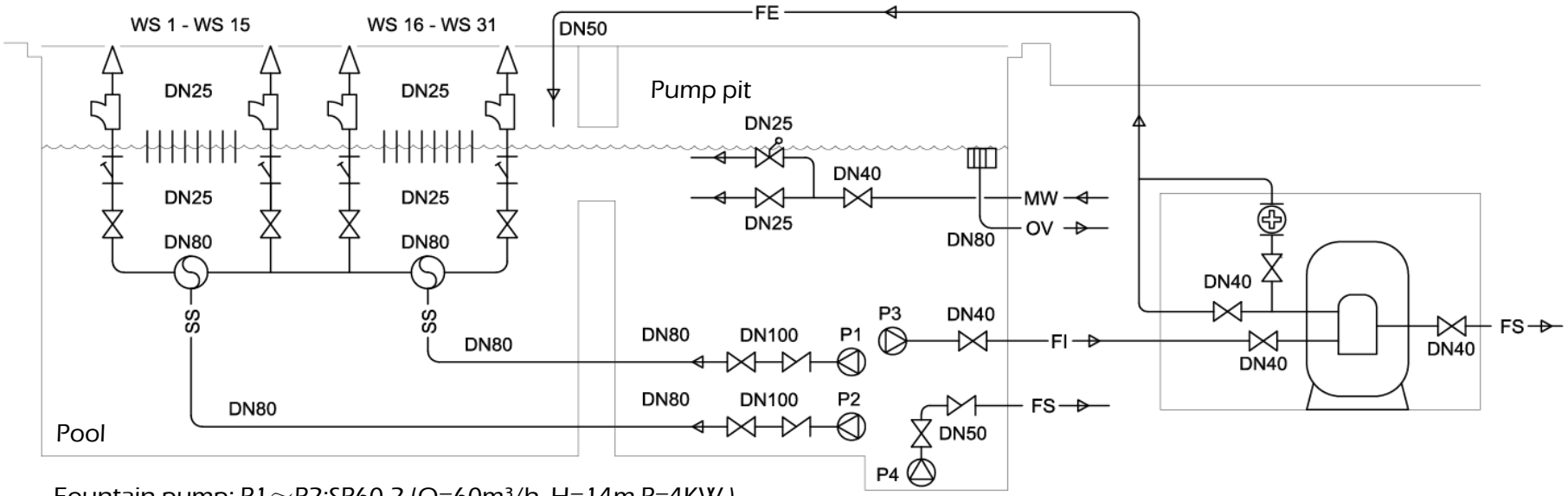


SYSTEM DIAGRAM —— WATER SYSTEM

LEGEND

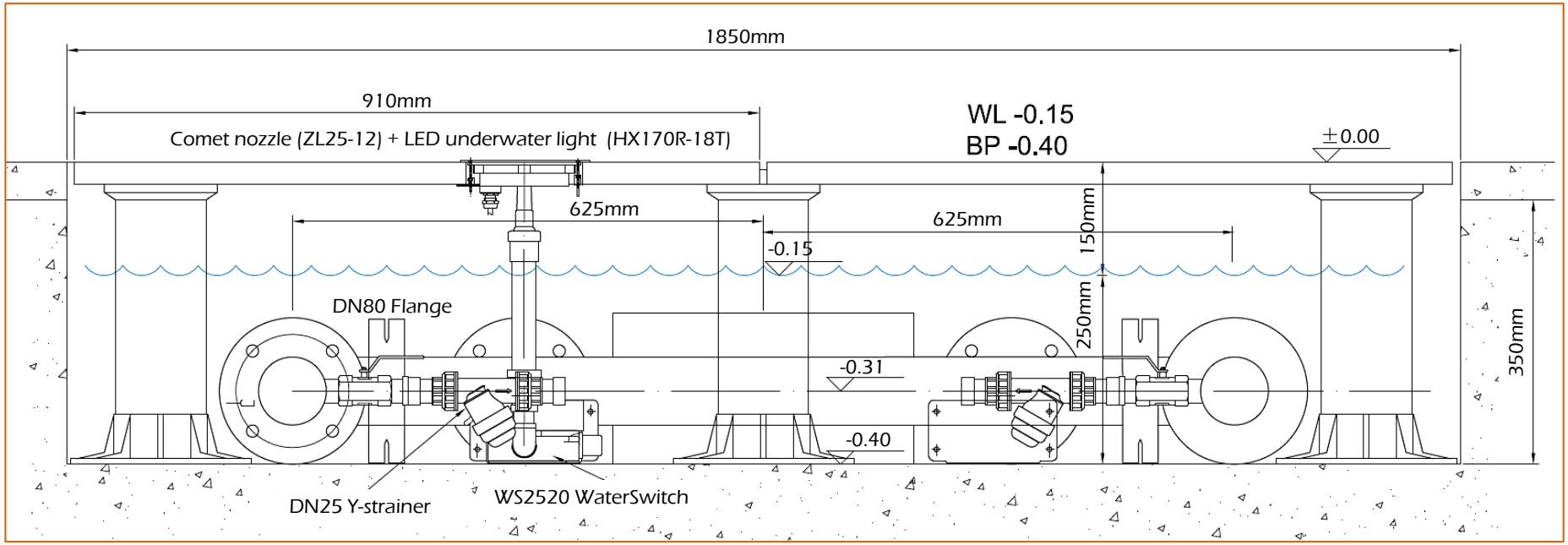
NOZZLE	CHECK VALVE	OVERFLOW	-SS-	FOUNTAIN WATER SUPPLY	
WATERSWITCH	FLOAT VALVE	PUMP	-FS-	SEWAGE DRAINAGE	
BALL VALVE	Y-STRAINER	MAIN PIPE	-FE-	FILTER EFFLUENT	
DOSING MACHINE	-OV-	OVERFLOW	-FI-	FILTER INFLUENT	-MW- MUNICIPAL WATER SUPPLY

31 nos. WaterSwitch(WS2520) with 31 nos. comet nozzle(ZL25-12)



Fountain pump: P1～P2:SP60-2 (Q=60m³/h, H=14m,P=4KW)
Filter pump: P3:AP35.40.06.A1 (Q=12m³/h, H=4.5m,P=0.6KW)
Drainage pump: P4:AP12.40.08.1 (Q=12m³/h, H=9m,P=0.8KW)

INSTALLATION DETAIL — WATERSWITCH

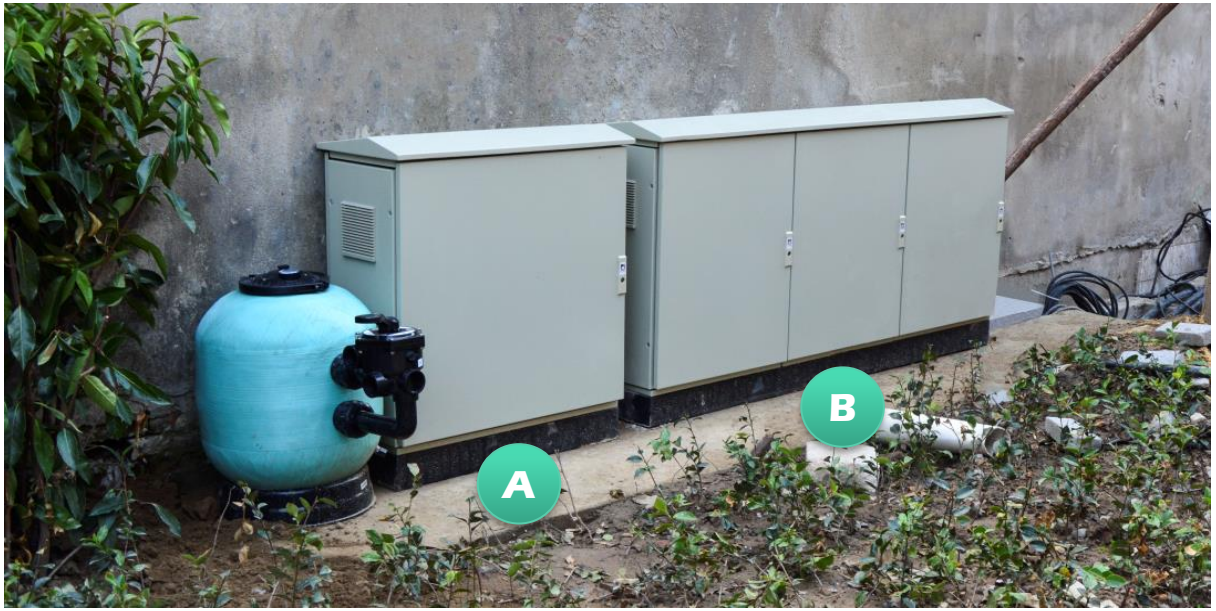








Control Cabinet

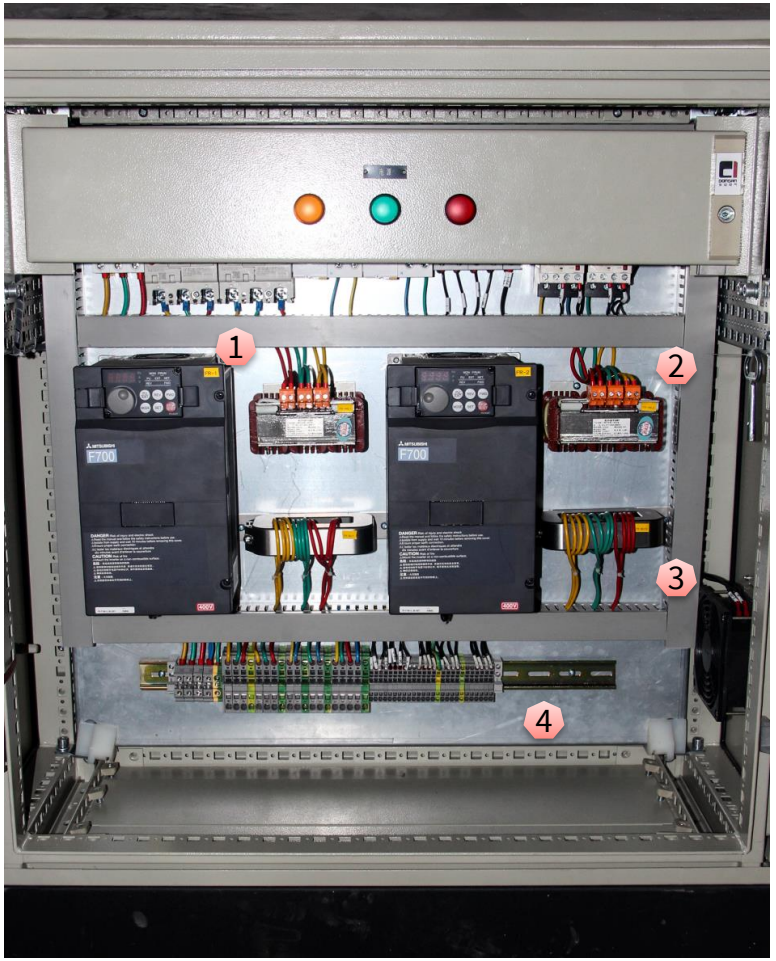






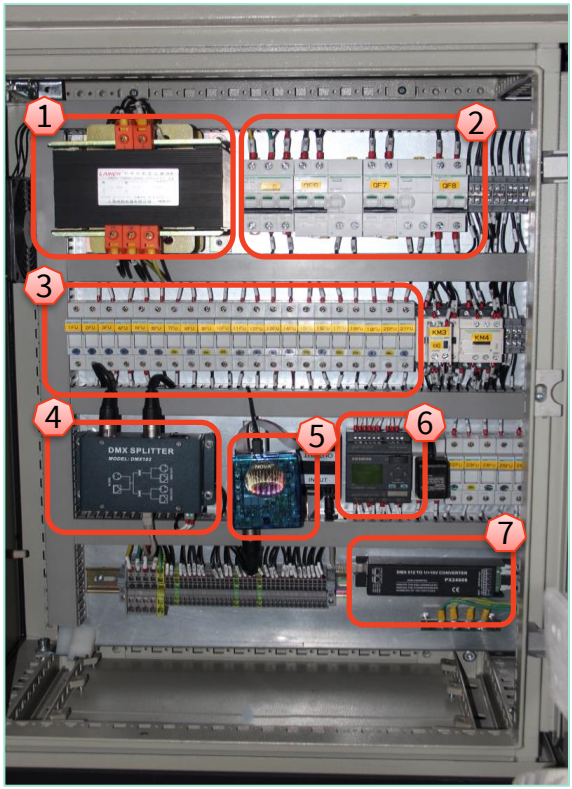
A. INVERTER CABINET

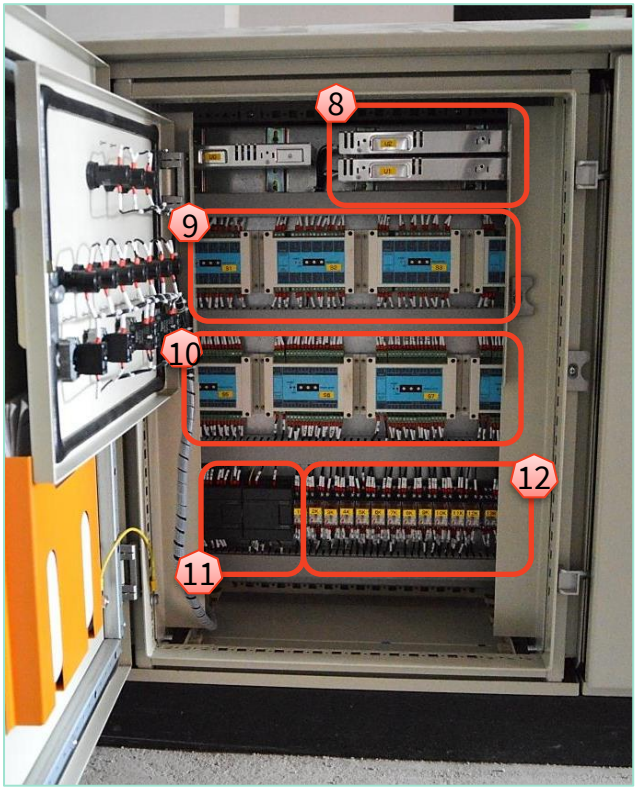


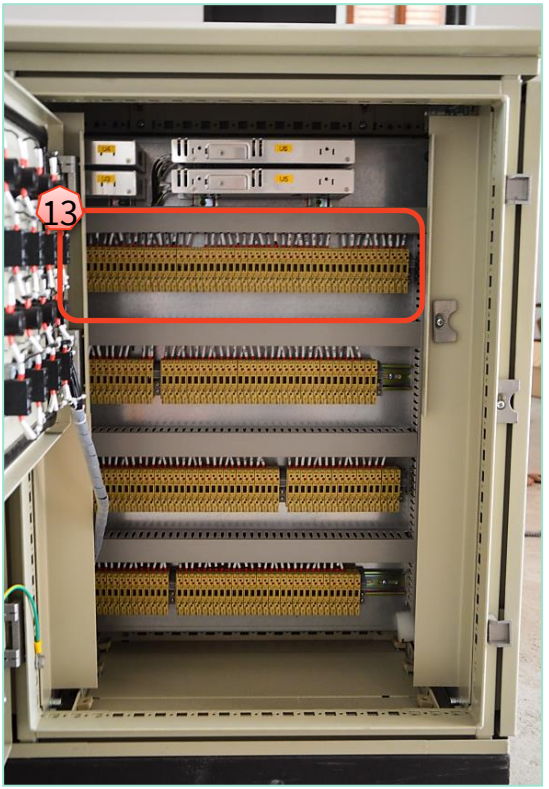


1. INVERTER
2. INPUT AC REACTOR FOR INVERTER
3. FILTER OF RESISTING AGAINST INTERFERENCE FOR INVERTER
4. TERMINAL

B. MAIN CONTROL CABINET



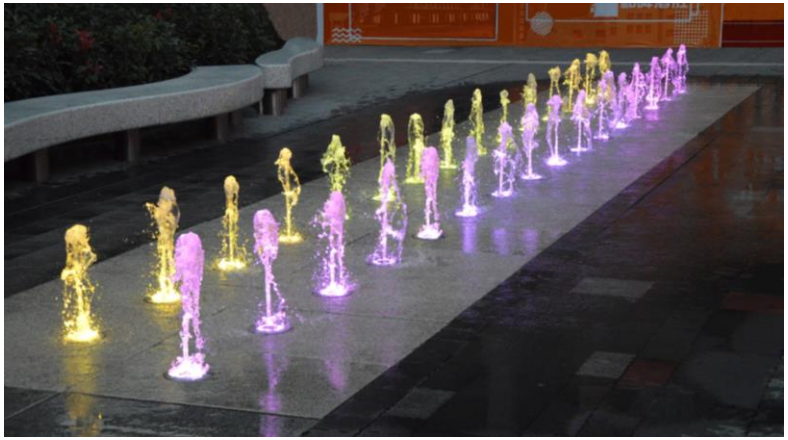




1. ISOLATION TRANSFORMER
2. RCCB
3. FUSE
4. DMX SPLITTER
5. MAIN CONTROLLER (FT7)
6. LOGO
7. DMX CONVERTER
8. POWER SUPPLY
9. DMX DRIVER (WATERSWITCH)
10. DMX DRIVER (LED LIGHT)
11. PLC
12. POWER SUPPLY
13. TERMINAL WITH FUSE

PROJECT PHOTOS











02

INTERNATIONAL DANCE CENTER, SHANGHAI, CHINA

Project completed in October of 2016

Concept Design

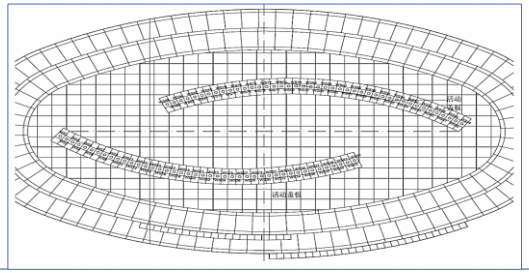


FOAM SHOOTER JET

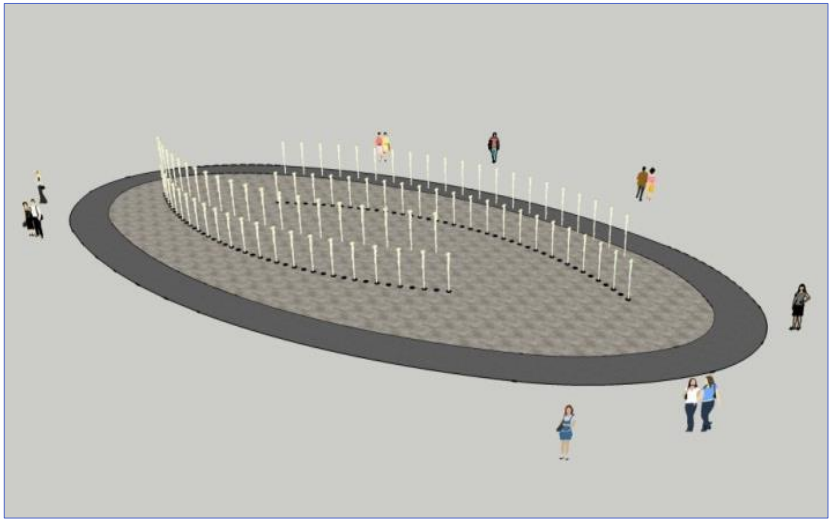
Shooter jets combined with LED ring lights, all lights use warm white.

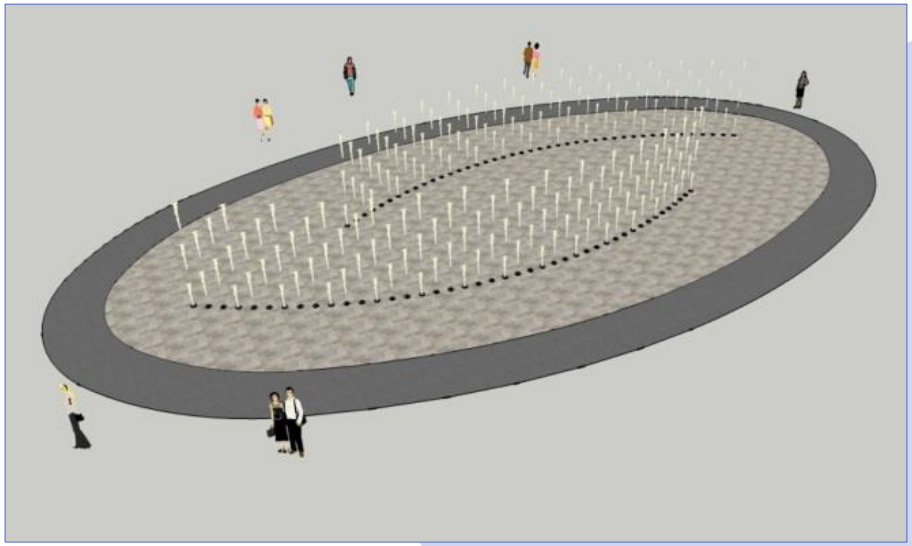
- 86 nos. WaterSwitch (WS2520) with foam nozzle (PM15)
- 86 nos. LED ring light (HX200R-24)
- pump with VFD to produce variety spray height 0~3 m.

















PROJECT INTRODUCTION

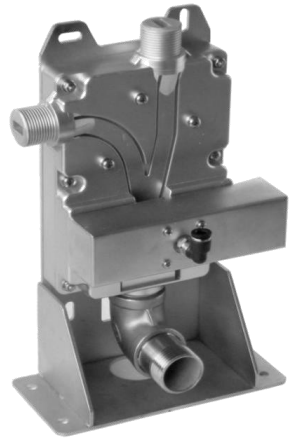
At the Shanghai International Dance Center, it seems only befitting that the water fountain design concept is synonymous with the graceful notion of dancing. With this fundamental concept in mind, the final design of the waterscape comprised two rows of water jets lined in a diametrical assembly to complement the elegant arches of the architectural landscape.

At night, water and light effects are controlled by the DMX system, synced to a melodious rhythmic water display. Its elegance is further accentuated by the warm white illumination of the water.

86 shooter jets are used (Foam nozzle PM15 with WaterSwitch WS2520 and LED ring light HX200R-24), and with the VFD, the jets are capable of spraying up to a height of 3 meters. It is integrated with the latest NOVA control panel, and a user-friendly system interface, allowing users to easily operate the system.

PROJECT FOUNTAIN PRODUCT WaterSwitch

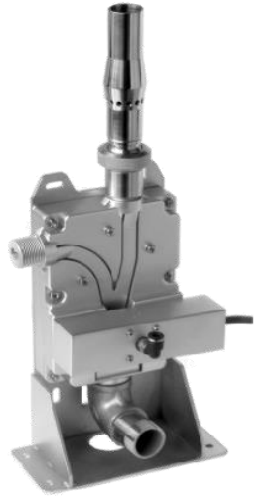
WS2520



- WaterSwitch, a new kind of water spray shifter. Which can produce dynamic spray variation by change the direction of flow.
- The WaterSwitch can be connected to various nozzles such as Comet, Foam, Fan, Finger nozzle.

WaterSwitch + Foam Nozzle

Nozzle	PM15		PM20		PM25	
Ht.	P	Q	P	Q	P	Q
0.5 m	0.3	21	0.4	26	1.0	42
1.0 m	0.6	33	0.7	37	2.0	60
1.5 m	0.9	40	1.0	44	2.6	70
2.0 m	1.2	46	1.4	50		
3.0 m	1.8	59	2.1	63		
4.0 m	2.5	70				
5.0 m	3.0	78				



◆ Ht.= Spray height (m) ◆ P= Pressure demand (bar) ◆ Q= Flow rate (lpm)

Specification

- One G1" inlet, two G3/4" outlets.
- DC24V for solenoid valve.
- Switching speed 1/12 sec.
- Cleanable filter chip.
- Can be mounted on ground or suspended on horizontal or vertical bracket.

Material

Body – ABS
Mount – SS 316



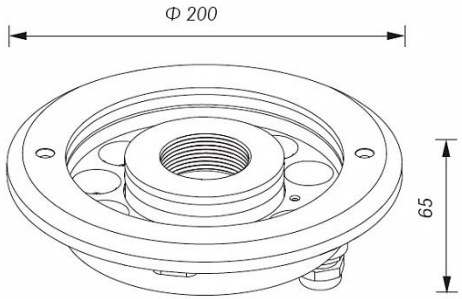
PROJECT FOUNTAIN PRODUCT Underwater ring light

Order No	Light source	IP Rating	Beam Angle (°)	Input Voltage (v)	Operating Current* (mA)	Consumption* (w)	Luminance* (lm)	IK Rating
HX200R-24	12 x 2W	68	25	DC 12V	1200	28.8	Cool white=2067 warm white=1610	09

Housing	Hard chrome plated molding shaped stainless steel SUS 316 #
Gasket	Silicone gasket
Light Window	Step tempered glass. T=10mm.
Cable gland	IP-68 PG-11 copper with nickel-coated.
PCB	Excellent heat conductivity aluminum, coefficient of heat. Conductivity ≥ 2.0w/mk
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	3m STW 18AWG

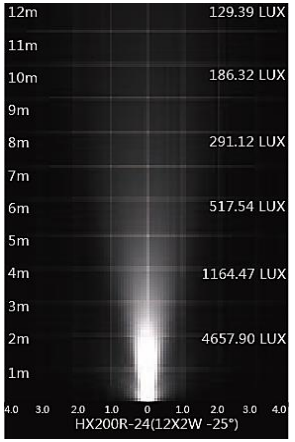


Dimensions (Unit: mm)



HX200R - 24





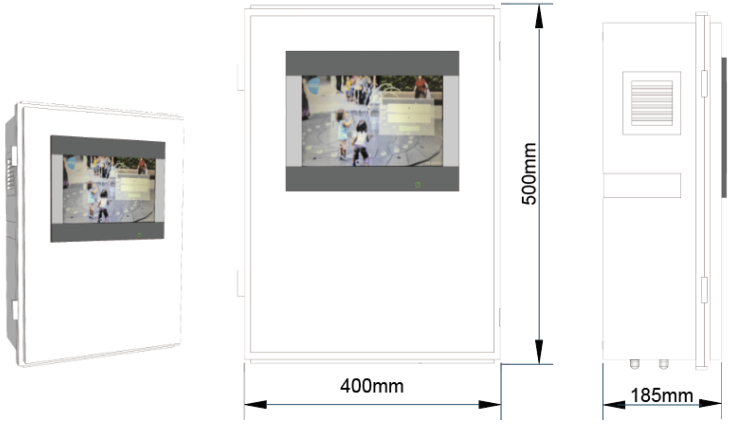
All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.

INTEGRATED CONTROL SYSTEM

ICS1024M/ICS1024



Dimensions (Unit: mm)



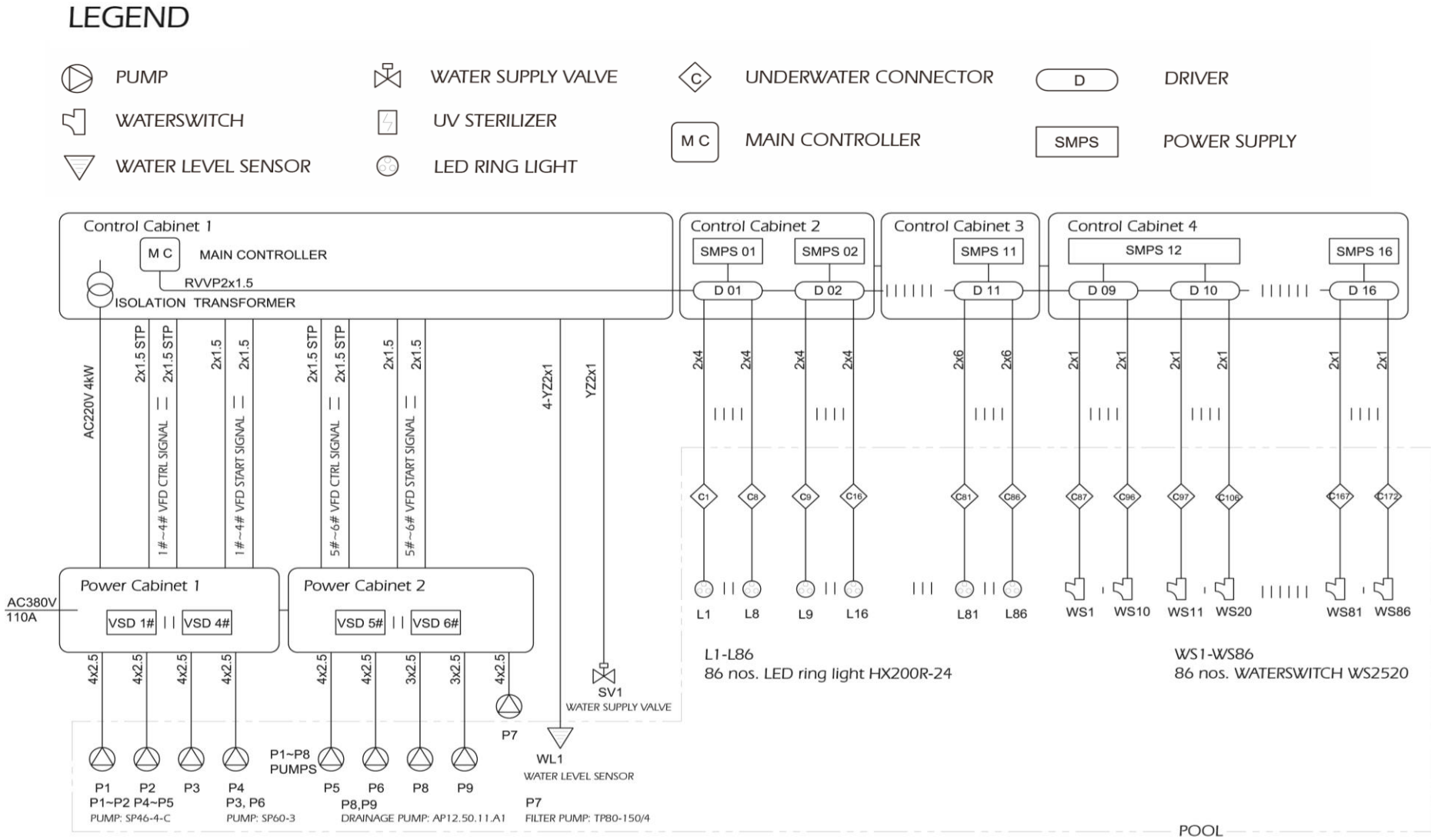
INTEGRATED CONTROL SYSTEM

ICS1024M/ICS1024



INTEGRATED CONTROL SYSTEM	ICS1024M	ICS1024
Dimensions (L x W x H) [mm]	400x185x500mm	400x185x500mm
Weight	10.2kg	10.2kg
Housing	ABS	ABS
Protection class	IP20	IP20
Backup Battery	3V lithium battery CR2032 x 1	
Backup Battery Life	It depends on the temperature used and the conditions of usage about 3years or more at 25°C	
Storage Temperature	0-50°C	0-50°C
Operation temperature	0-40°C/0-80°C humidity non-condensed	
Power supply	220V AC	220V AC
Outputs	16 x Digital out	16 x Digital out
Inputs	16 x Digital in	16 x Digital in
Memory	Micro SD-Card for Show-Files	
Operation	HMI	HMI
Audio	Yes	—
Standalone shows	ARC-Stream file& Audio file	
Interface	2x512DMX channels for ICS1024	2x512DMX channels for ICS1024M
Scheduler	General 10 nos. / Special 1 no.	
Action Manager & monitor	Event Actions: Digital Inputs can be linked with actions (water level) and monitor	
Software	Windows XP or better	Windows XP or better
Order no.	056501	056502

SYSTEM DIAGRAM —— ELEC SYSTEM

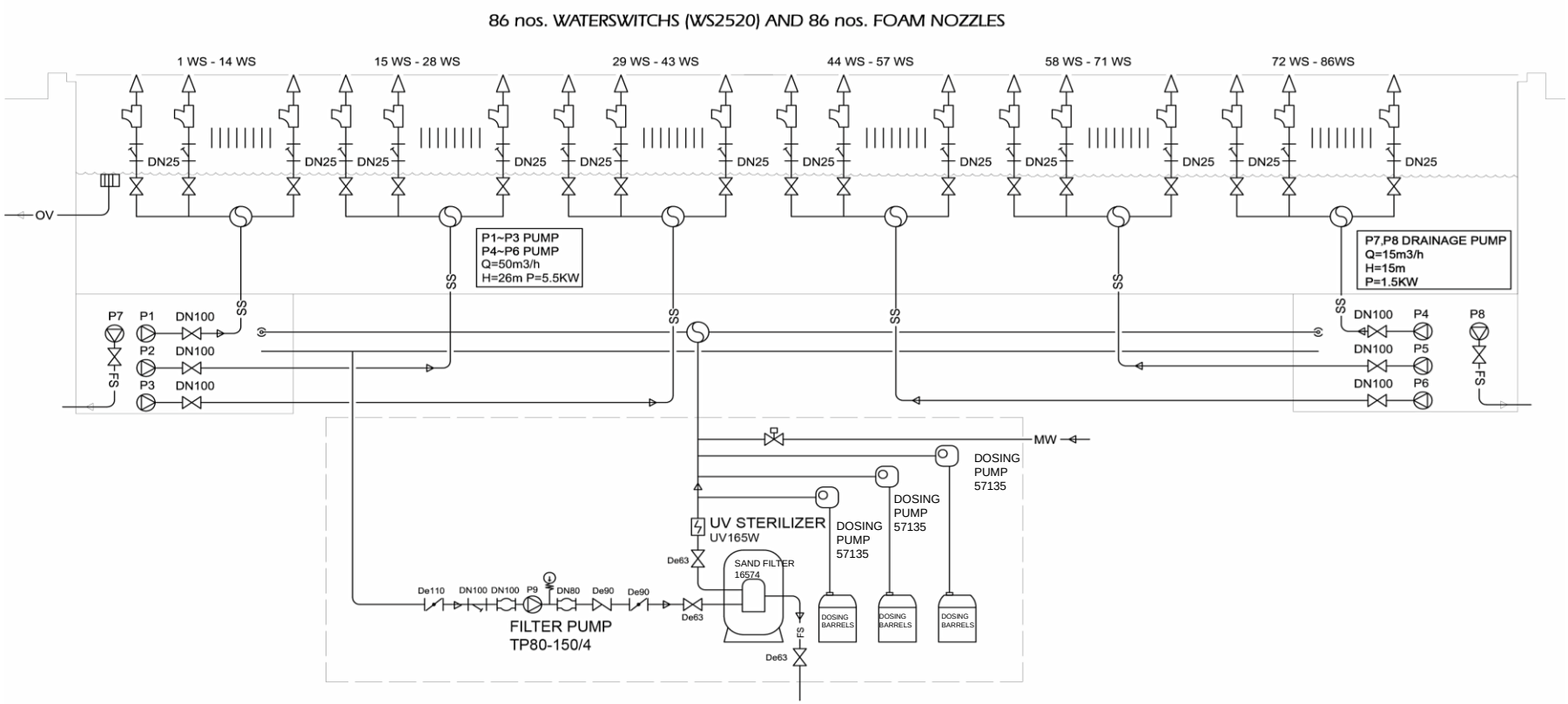


SYSTEM DIAGRAM —— WATER SYSTEM

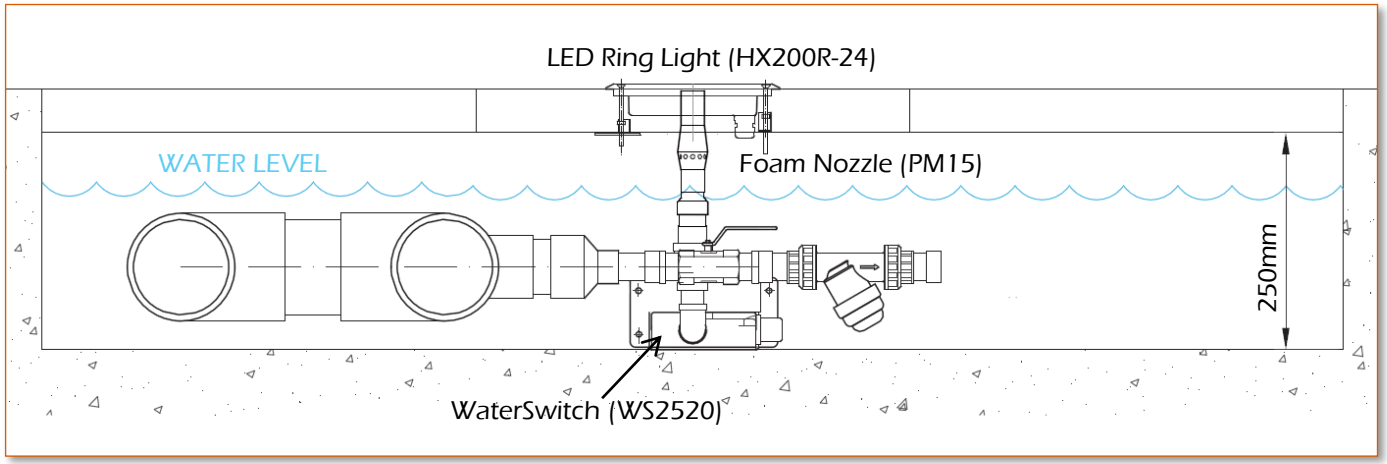
LEGEND

FOAM NOZZLE | BALL VALVE | SOFT CONNECTOR | GUTTER DRAIN | -SS- FOUNTAIN WATER SUPPLY | -OV- OVERFLOW

WATERSWITCH | Y-STRAINER | PUNP | MAIN PIPE | -FS- SEWAGE DRAINAGE | -MW- MUNICIPAL WATER SUPPLY



INSTALLATION DETAIL — WATERSWITCH













PLANT ROOM

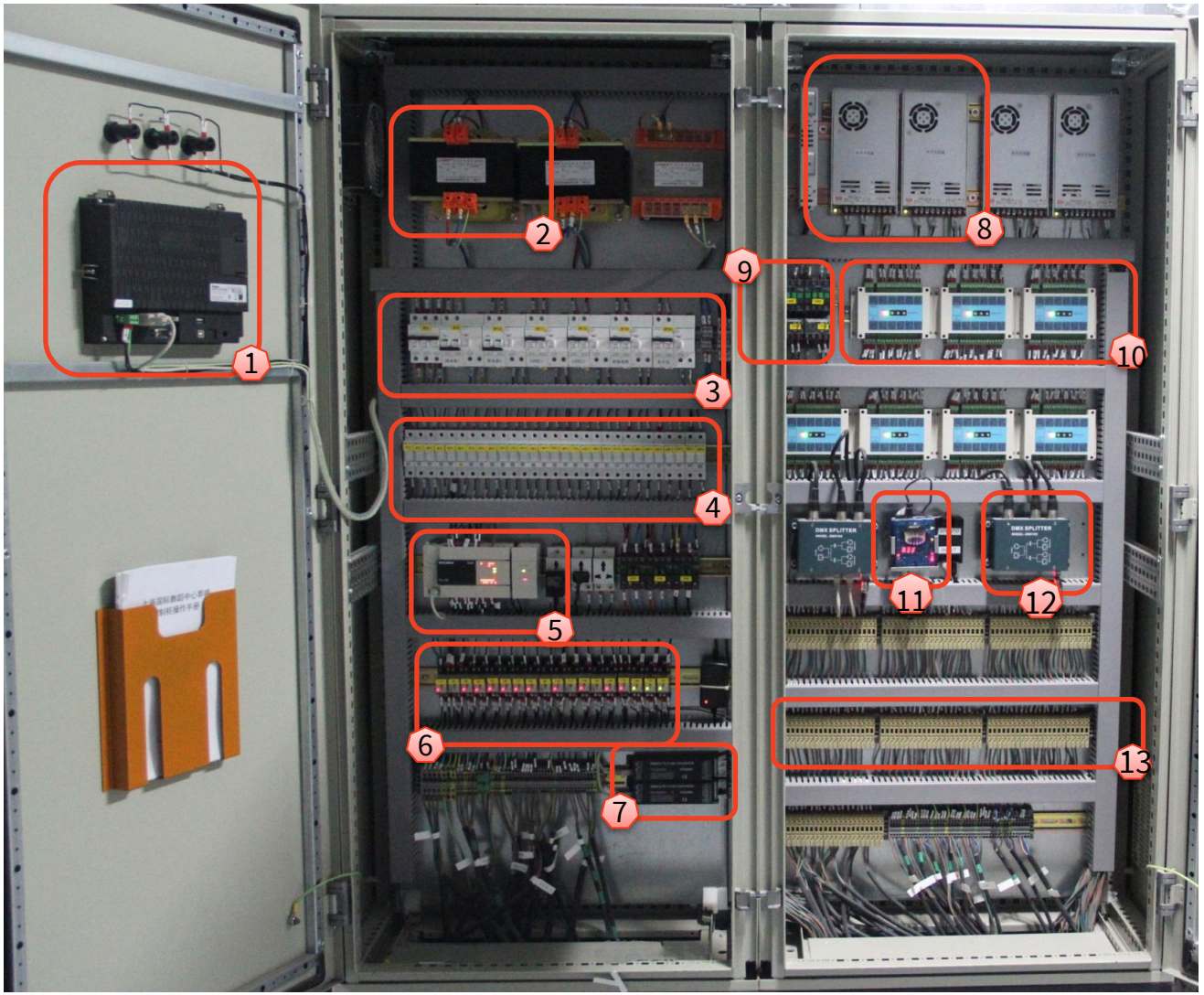


A. INVERTER CABINET



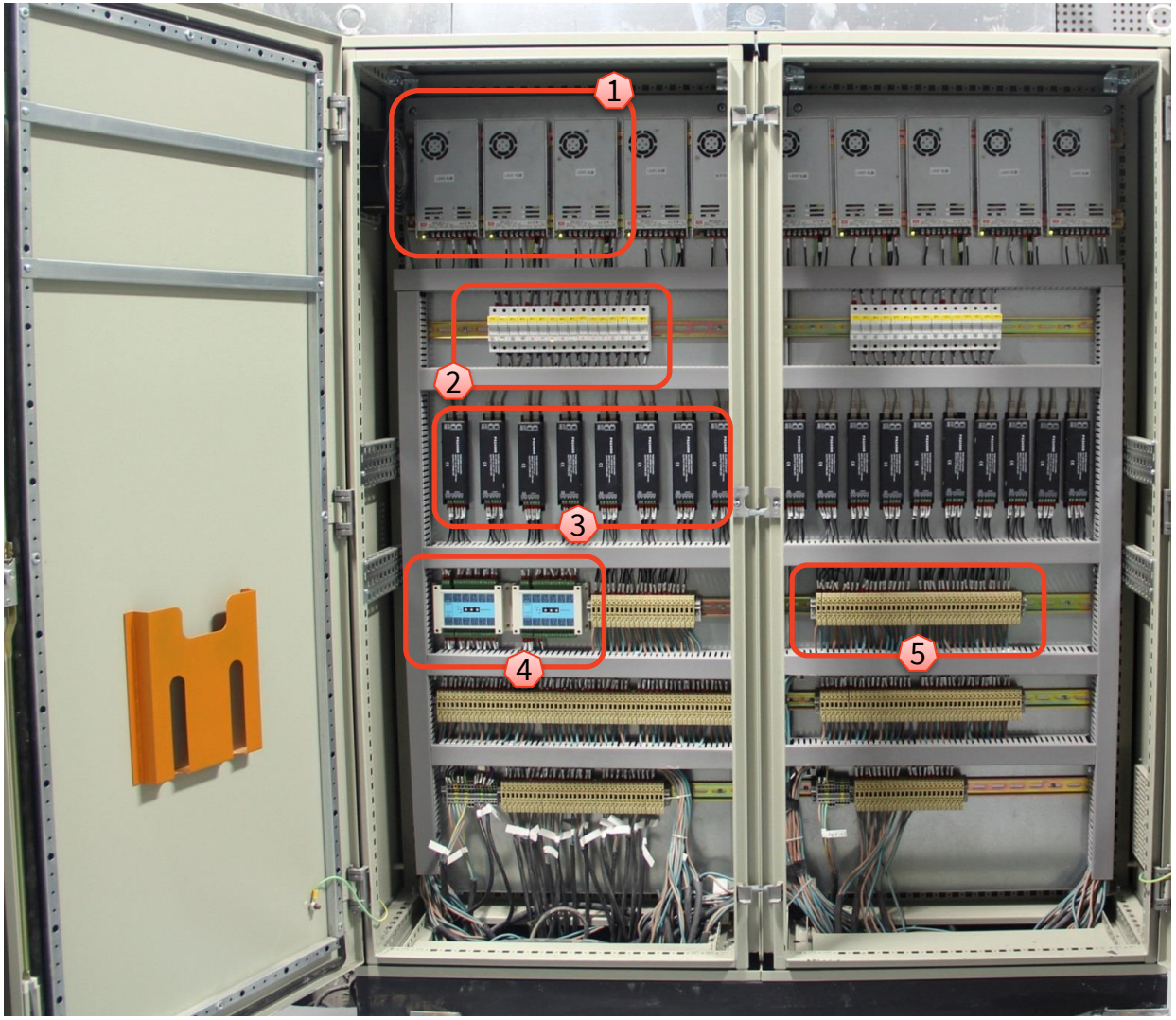
1. MCCB
2. ELCB FOR INVERTER
3. INPUT AC REACTOR FOR INVERTER
4. INVERTER
5. FILTER OF RESISTING AGAINST INTERFERENCE FOR INVERTER
6. TERMINAL

B. INTEGRATED CONTROL SYSTEM



1. HMI
2. ISOLATION TRANSFORMER
3. RCCB
4. FUSE
5. PLC
6. RELAY
7. DMX CONVERTER
8. POWER SUPPLY
9. CONTACTOR
10. DMX DRIVER (WATERSWITCH)
11. MAIN CONTROLLER (FT7)
12. DMX SPLITTER
13. TERMINAL WITH FUSE

C. LED LIGHTS CONTROL CABINET

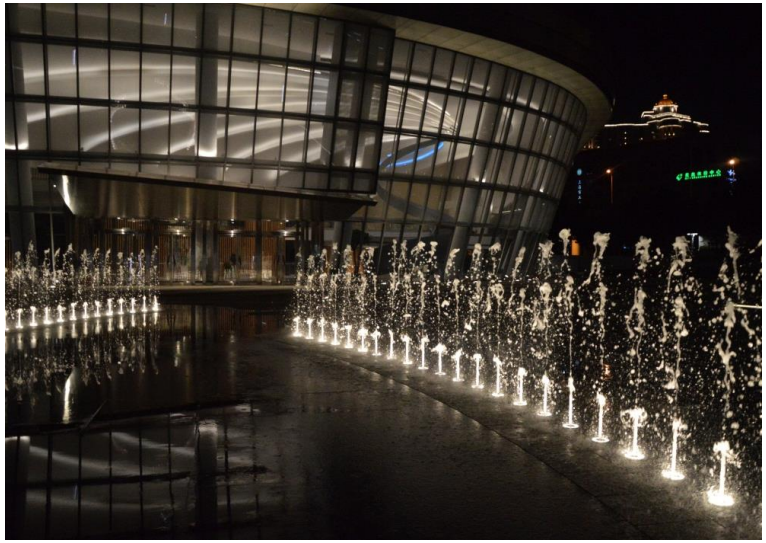


1. POWER SUPPLY
2. FUSE
3. DMX DRIVER (LIGHT)
4. DMX DRIVER (WATERSWITCH)
5. TERMINAL WITH FUSE

PROJECT PHOTOS

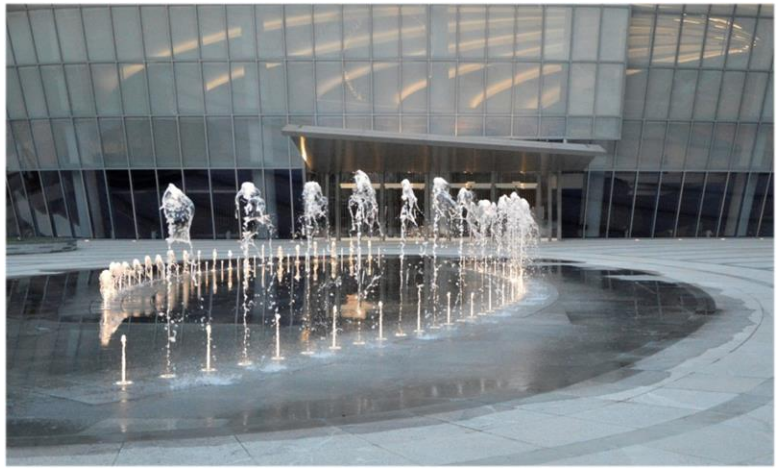


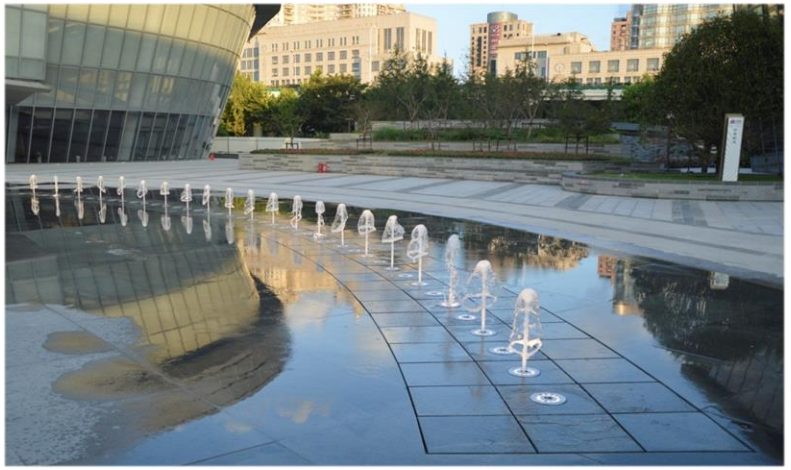






PROJECT PHOTOS









03

Project completed in October of 2013.



SADONG JAYA, MALAYSIA

SEMBULAN RIVER PARK, KOTA KINABALU SABAH







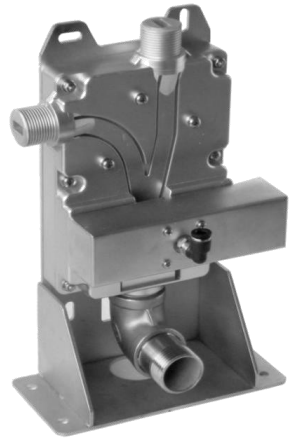
PROJECT INTRODUCTION

Located in the Sadong Jaya, the dry deck fountain comprises 50 nos. WaterSwitches (WS2520) with attached comet nozzles (ZL40-13) and LED lights (HX170R-18T). Pump with VFD to produce variety spray height, spray ht. 0~5 m.

This formation best highlights the dynamism and vitality of the waterscape design. Choreographed with DMX program controls, the variation of height and rhythm of the water jets forms a spectacular water show. Combined with color rich LED lighting, its magnificent visual effects are prominent even when viewed from a distance.

PROJECT FOUNTAIN PRODUCT WaterSwitch

WS2520



- WaterSwitch, a new kind of water spray shifter. Which can produce dynamic spray variation by change the direction of flow.
- The WaterSwitch can be connected to various nozzles such as Comet, Foam, Fan, Finger nozzle.

WaterSwitch + Comet Nozzle

Nozzle	ZL25-12		ZL40-13		ZL40-16	
Ht.	P	Q	P	Q	P	Q
1.0	0.5	25	0.5	33	1.0	44
1.5	0.6	34	0.8	40	1.5	52
2.0	0.8	37	1.1	47	2.0	60
3.0	1.2	47	1.7	60	3.0	78
4.0	1.8	58	2.2	70		
5.0	2.4	68	2.8	80		
6.0	3.0	75				

◆ Ht.= Spray height (m) ◆ P= Pressure demand (bar) ◆ Q= Flow rate (lpm)

Specification

- One G1" inlet, two G3/4" outlets.
- DC24V for solenoid valve.
- Switching speed 1/12 sec.
- Cleanable filter chip.
- Can be mounted on ground or suspended on horizontal or vertical bracket.

Material

Body – ABS
Mount – SS 316

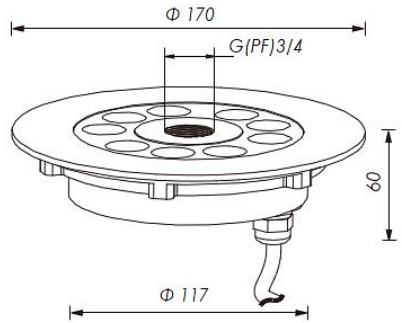




PROJECT FOUNTAIN PRODUCT Underwater ring light

Order No	Light source	IP Rating	Beam Angle (°)	Input Voltage (v)	Operating Current* (mA)		Consumption* (w)	Luminance* (lm)	IK Rating
HX170R-18T	9 x 2W RGB 3in1 Full color	IP 68	25	DC 24V	Red	600	25.2	774	IK 09
					Green	750			
					Blue	750			

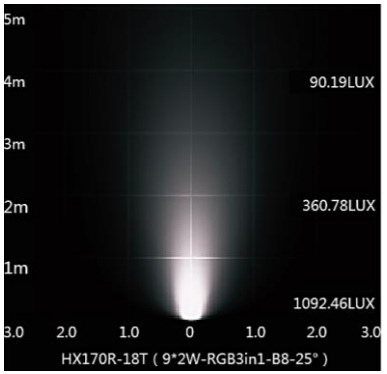
Dimensions (Unit: mm)

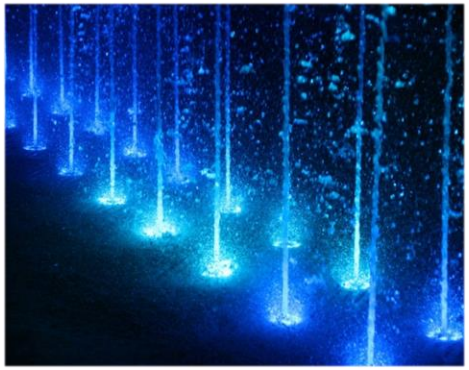


HX170R-18T



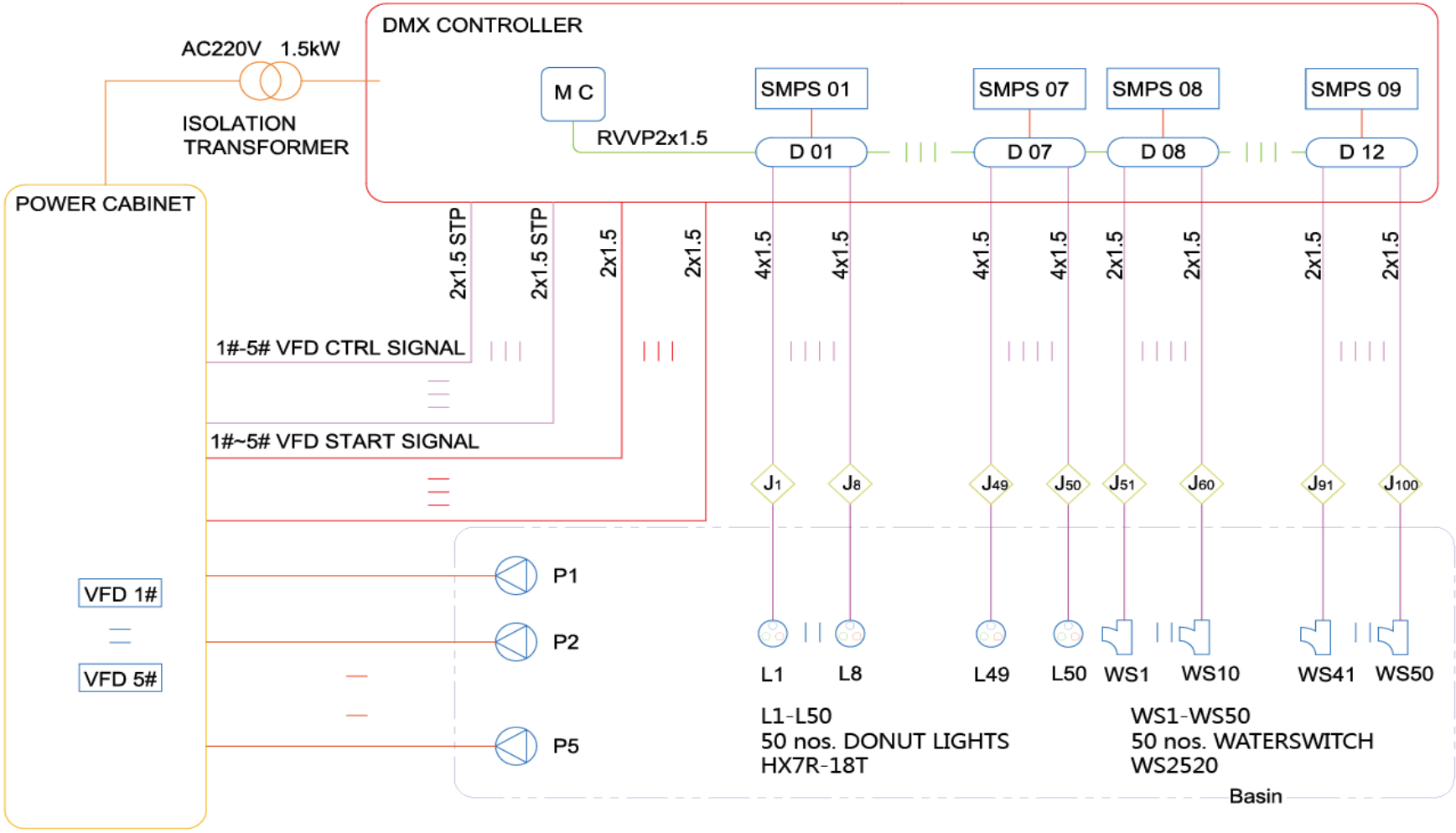
Housing	shaped stainless steel SUS 316#
Front cover	Stainless steel SUS 316L#
Gasket	EPDM gasket.
Glass	Step tempered glass. T=8mm.
Cable gland	IP-68 PG-11 copper with nickel-coated.
PCB	Excellent heat conductivity aluminum, coefficient of heat.
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	H07RN-F 2X1.0mm2 L=3m (for Single color) H07RN-F 4X1.0mm2 L=3m (for RGB)



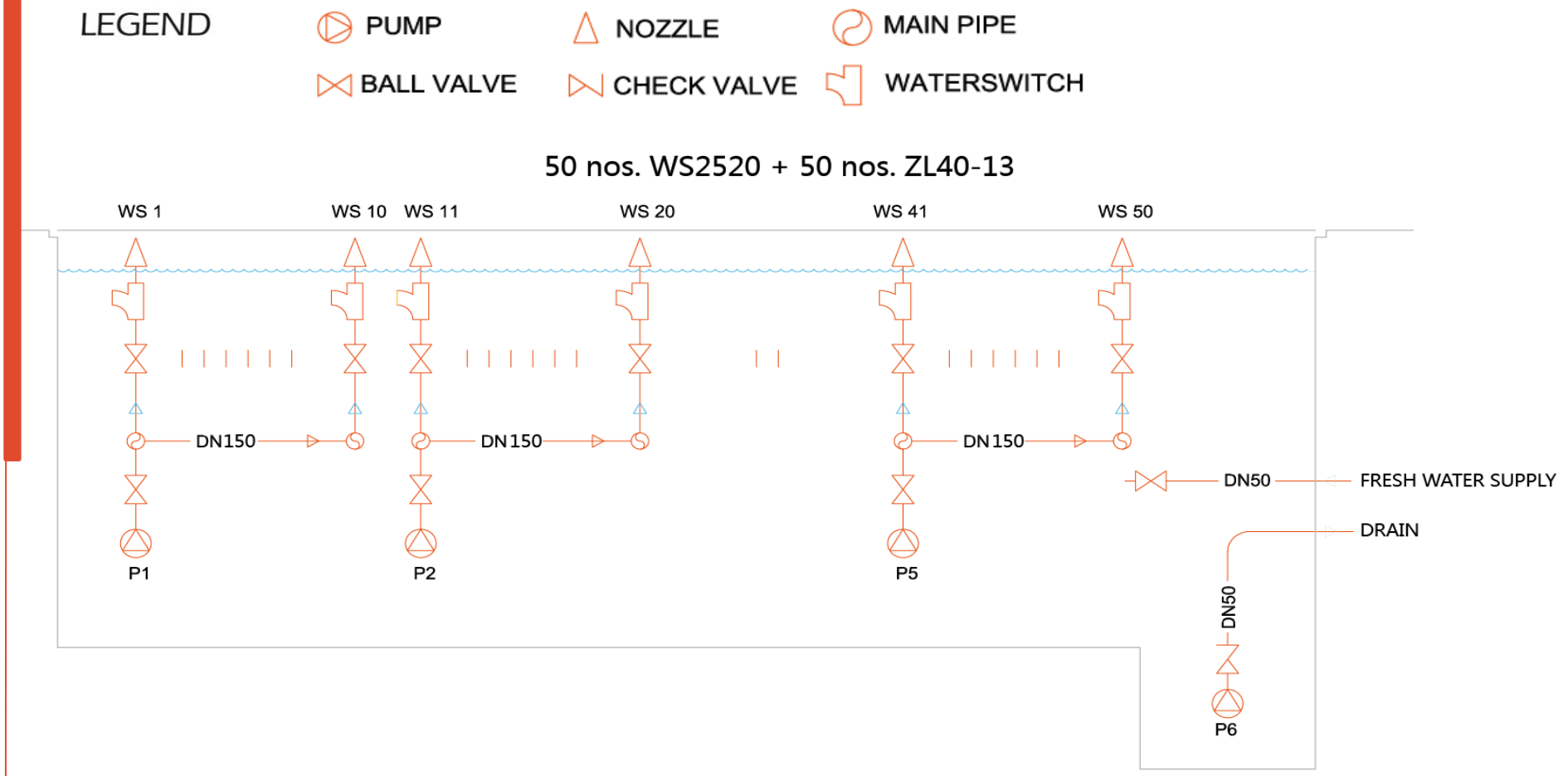


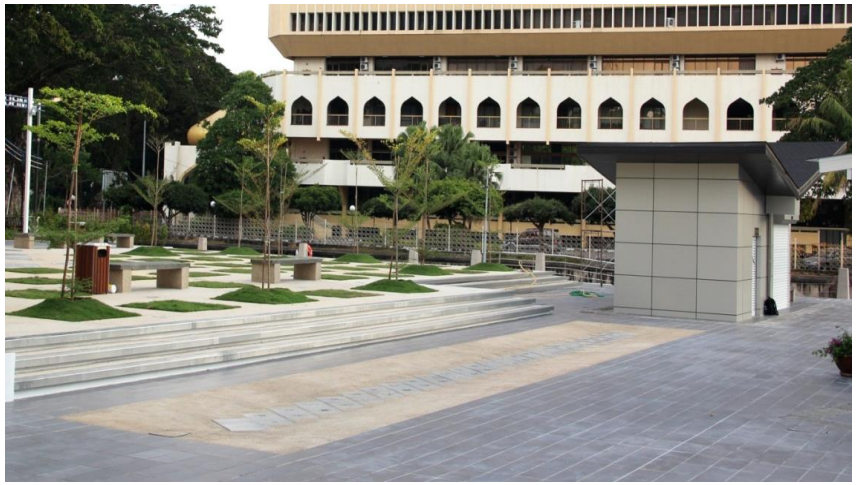
All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.

SYSTEM DIAGRAM —— ELEC SYSTEM



SYSTEM DIAGRAM —— WATER SYSTEM





Dry Deck Fountain Area

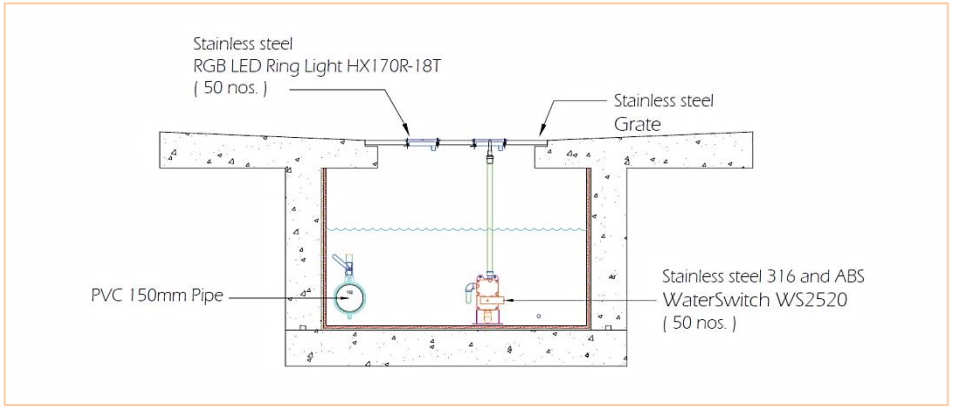


Control Room



INSTALLATION DETAIL — WATERSWITCH











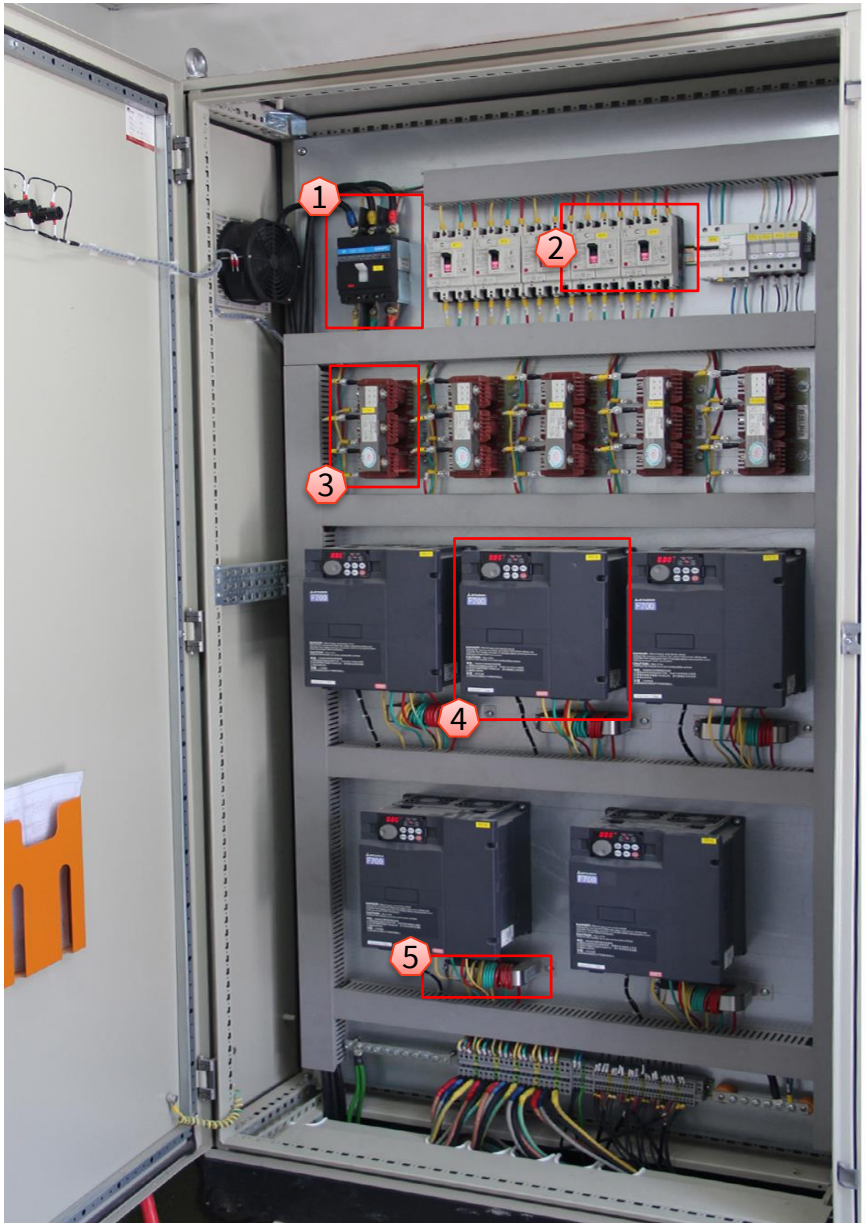


CONTROL CABINET



Advanced Dynamic Control

We are using DMX base easy programming. Each nozzle and light are synchronized together by programming.



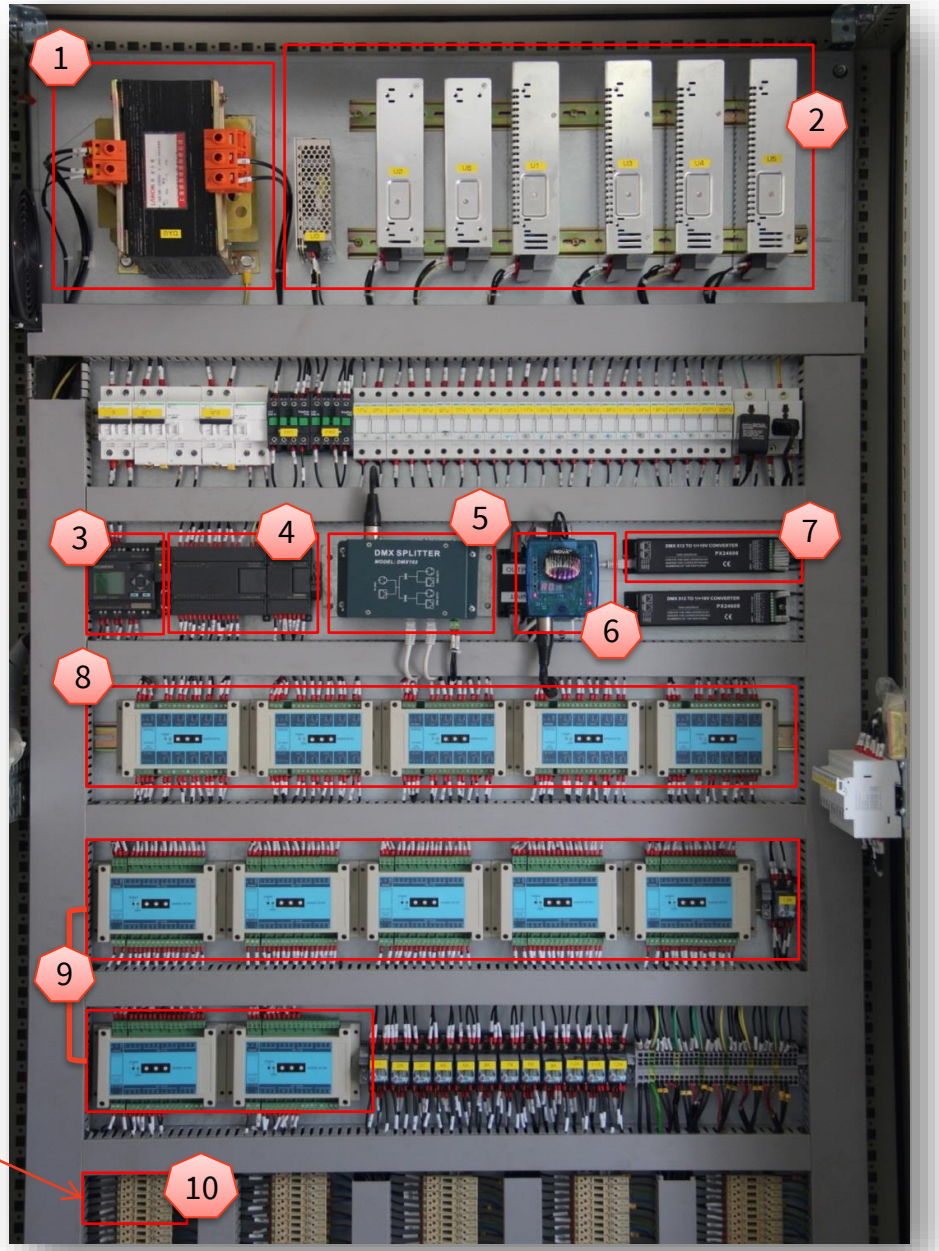
A. INVERTER CABINET

1. MCCB
2. ELCB FOR INVERTER
3. INPUT AC REACTOR FOR INVERTER
4. INVERTER
5. FILTER OF RESISTING AGAINST INTERFERENCE FOR INVERTER

B. DMX Control Cabinet

1. ISOLATION TRANSFORMER
2. POWER SUPPLY
3. LOGO !
4. PLC
5. DMX SPLITTER
6. DMX MAIN CONTROLLER
7. DMX CONVERTER
8. DMX DRIVER (WATERSWITCH)
9. DMX DRIVER (LED LIGHT)
10. TERMINAL WITH INDICATOR AND FUSE





PROJECT PHOTOS











04

VICTORIA PEAK, HONG KONG, CHINA.

Project completed in October of 2013

Concept Design

Original state*

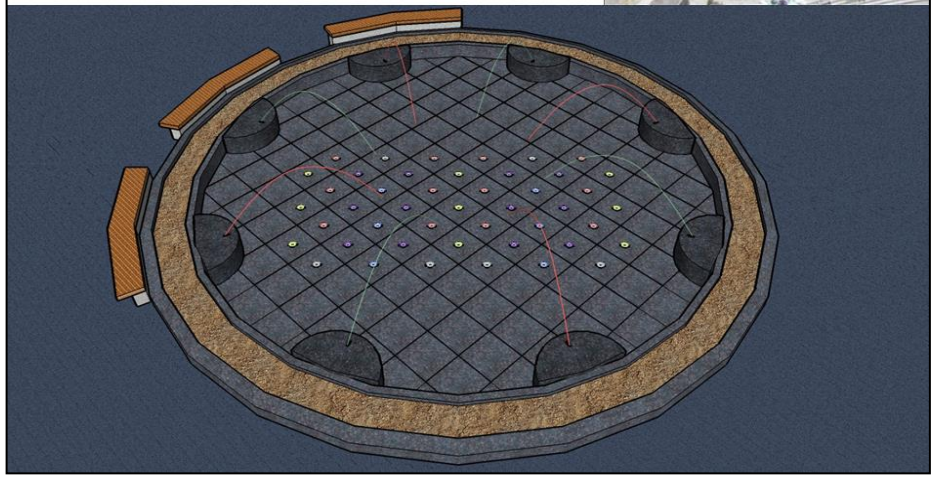




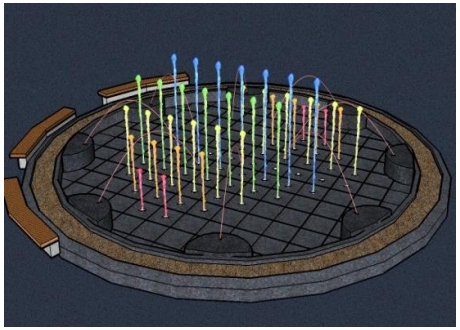
New design*

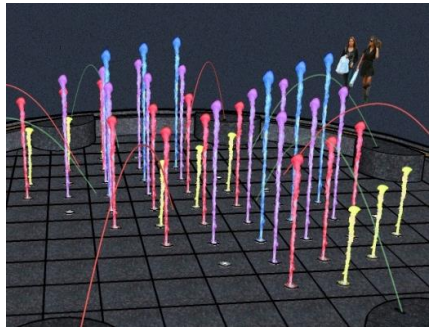
- Considering of the existing lower construction, we will remain the same layout of nozzles.
- Replace 45 granite slabs with new one which has central light hole, and another 8 for jumping jets.
- Raise 8 paving stone where jumping jet located since a few positions can not hold its height if under slab installation.



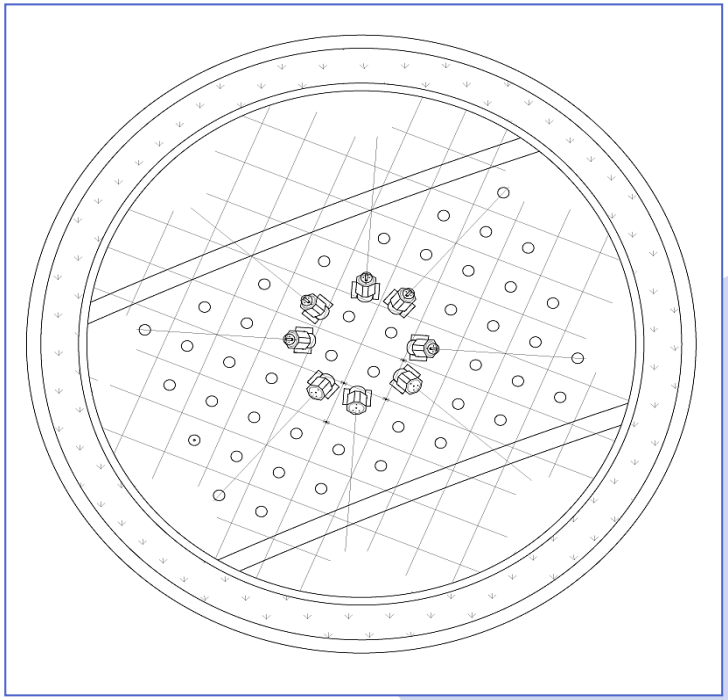


New spray pattern*





New layout*







PROJECT INTRODUCTION

Refurbishment of an old fountain. Original pneumatic pop jets have been removed. Being replaced with 44 pop jets (foam nozzle PM15+ WaterSwitch WS2520+ LED ring light HX200R-18T) which spray height varied from 0~2.2m and 8 jumping jets (J40-16) crisscross.

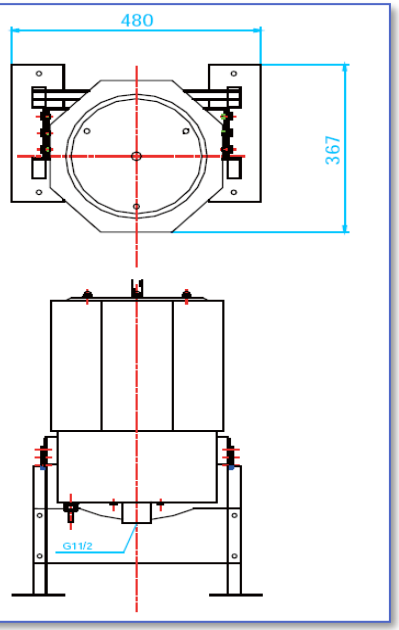
WaterSwitches are used to improve the uniformity of the spray height and the switching speed of the water jet. By changing all equipment with newly developed DMX sub-controllers, the system synchronization performance has been further enhanced.

PROJECT FOUNTAIN PRODUCT Jumping Jet



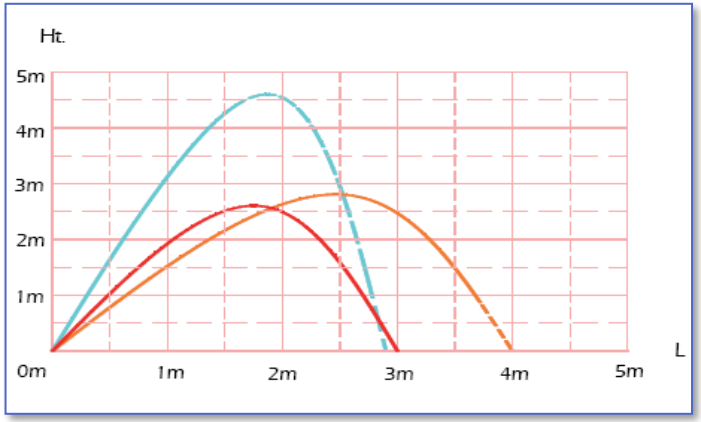
J40-16

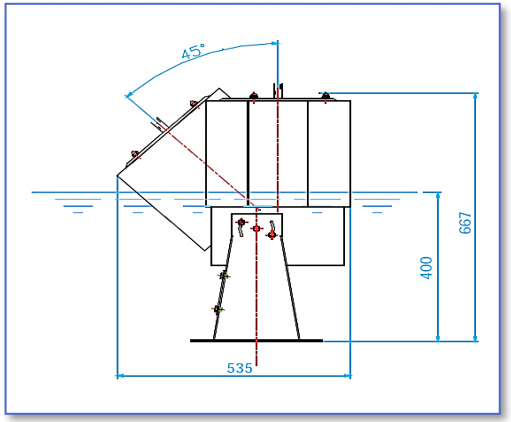
Orifice	16 mm	**Mechanism current**	2.4A
Vertical swivel range	45 ~85	**Lighting rated voltage**	DC 24V
Water head	7 m	**Power rating for LED light**	3W
Flow rate	5000 l/hr	**Material**	Stainless steel
Max water depth	400 mm	**Weight**	47 kg
Mechanism rated voltage	DC 24V		



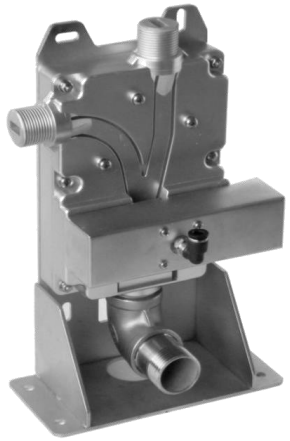








PROJECT FOUNTAIN PRODUCT WaterSwitch

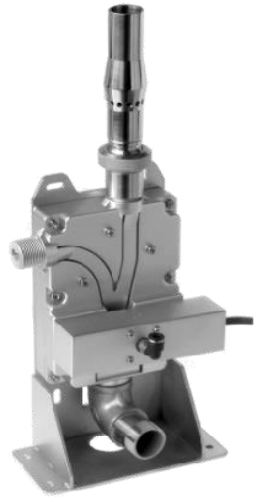


WS2520

- WaterSwitch, a new kind of water spray shifter. Which can produce dynamic spray variation by change the direction of flow.
- The WaterSwitch can be connected to various nozzles such as Comet, Foam, Fan, Finger nozzle.

WaterSwitch + Foam Nozzle

Nozzle	PM15		PM20		PM25	
Ht.	P	Q	P	Q	P	Q
0.5 m	0.3	21	0.4	26	1.0	42
1.0 m	0.6	33	0.7	37	2.0	60
1.5 m	0.9	40	1.0	44	2.6	70
2.0 m	1.2	46	1.4	50		
3.0 m	1.8	59	2.1	63		
4.0 m	2.5	70				
5.0 m	3.0	78				



◆ Ht.= Spray height (m) ◆ P= Pressure demand (bar) ◆ Q= Flow rate (lpm)



Specification

- One G1" inlet, two G3/4" outlets.
- DC24V for solenoid valve.
- Switching speed 1/12 sec.
- Cleanable filter chip.
- Can be mounted on ground or suspended on horizontal or vertical bracket.

Material

Body – ABS
Mount – SS 316

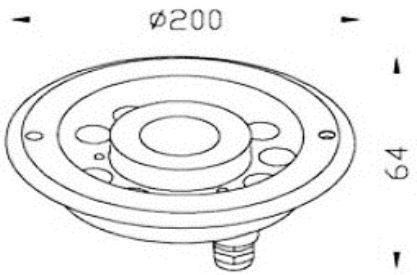
PROJECT FOUNTAIN PRODUCT Underwater ring light

Order No	Light source	IP Rating	Beam Angle (°)	Input Voltage (v)	Operating Current* (mA)		Consumption* (w)	Luminance* (lm)	IK Rating
HX200R-18T	9 x 2W RGB 3in1 Full color	IP 68	25	DC 24V	Red	284	28.6	774	IK 09
					Green	460			
					Blue	451			

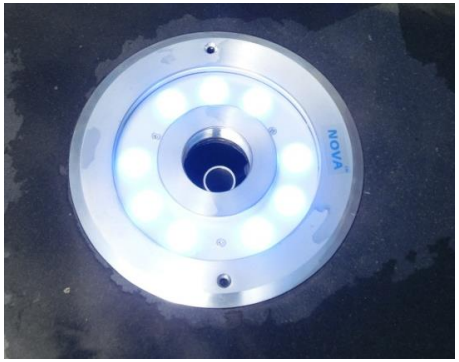
HX200R-18T

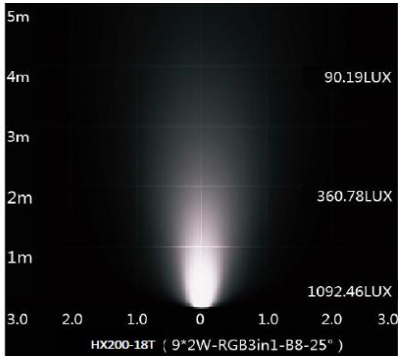


Dimensions (Unit: mm)



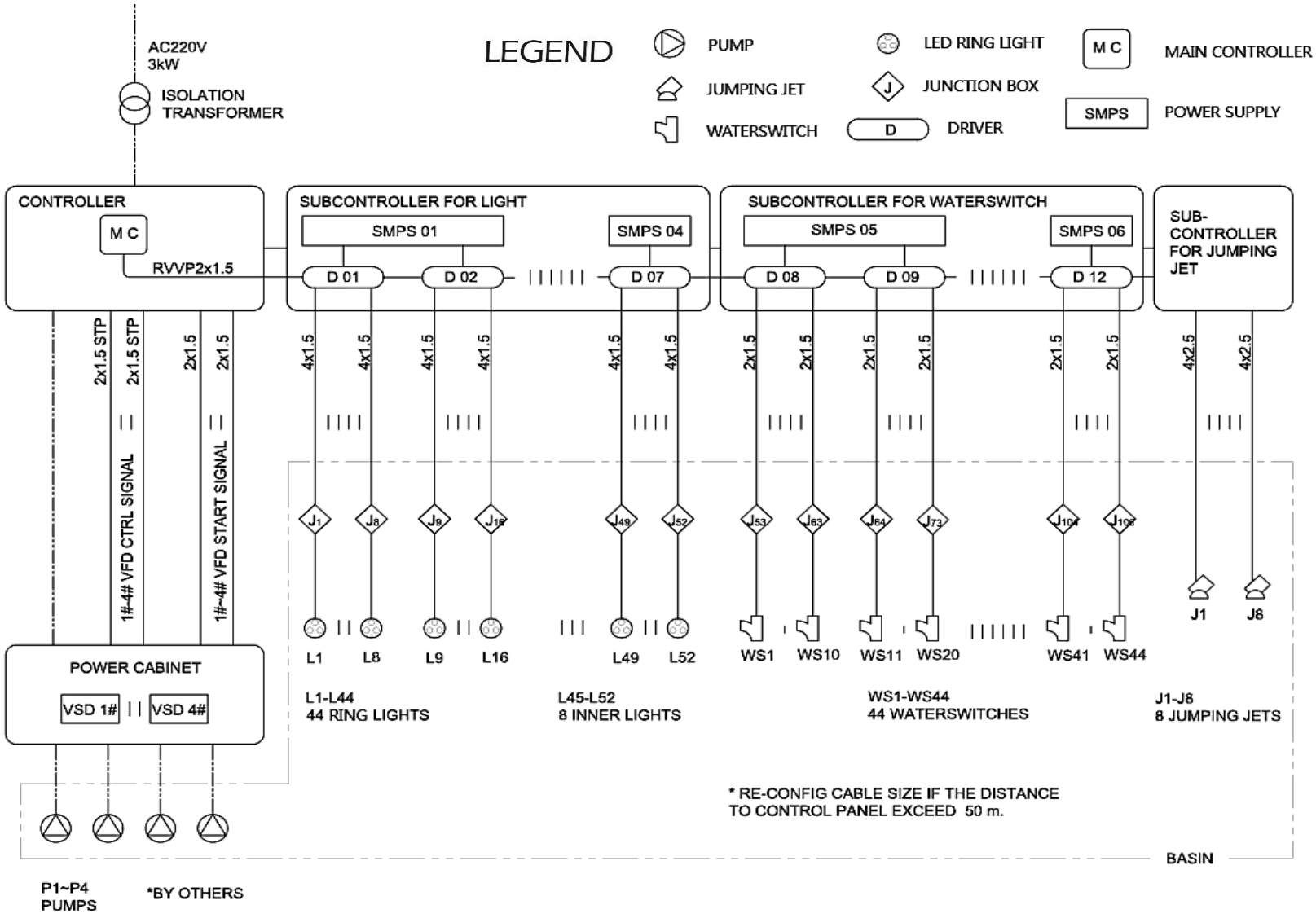
Housing	shaped stainless steel SUS 316#
Front cover	Stainless steel SUS 316L#
Gasket	EPDM gasket.
Glass	Step tempered glass. T=10mm.
Cable gland	IP-68 PG-11 copper with nickel-coated.
PCB	Excellent heat conductivity aluminum, coefficient of heat. Conductivity ≥ 2.0w/mk
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	H07RN-F 2X1.0mm2 L=3m (for Single color) H07RN-F 4x0.75mm² L=3m (for RGB)



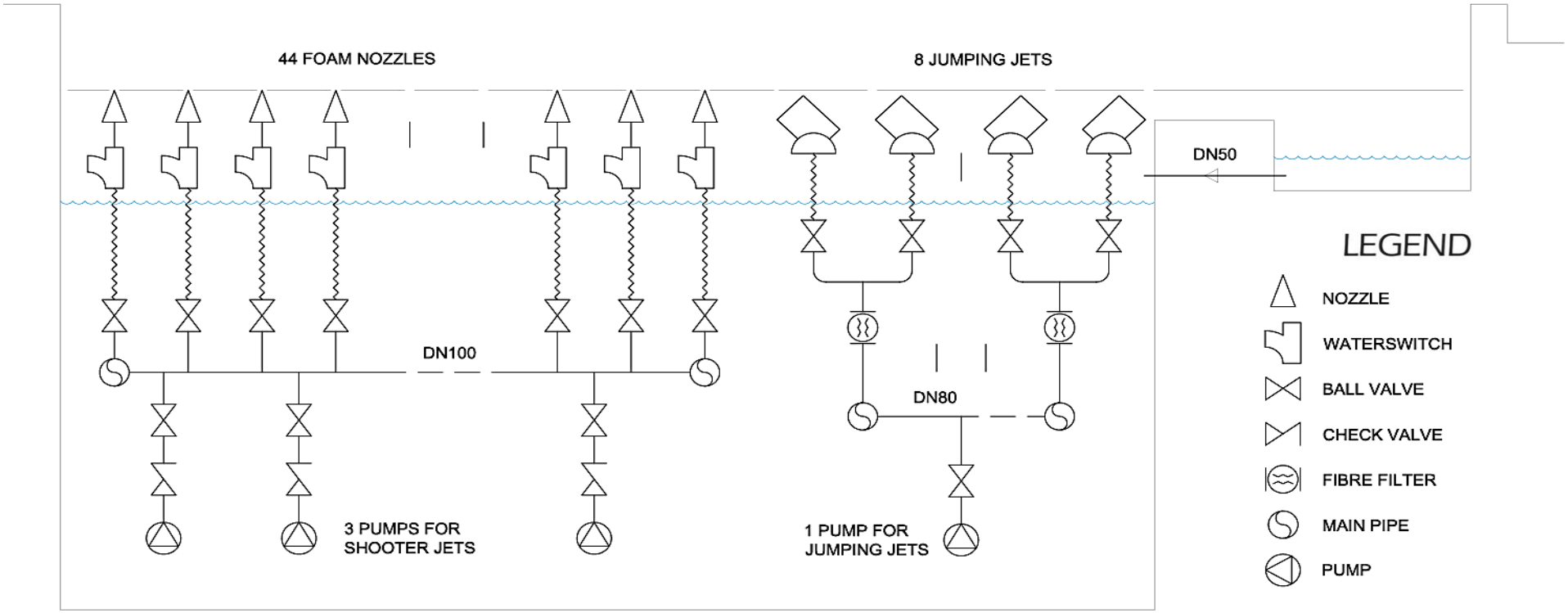


All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.

SYSTEM DIAGRAM —— ELEC SYSTEM

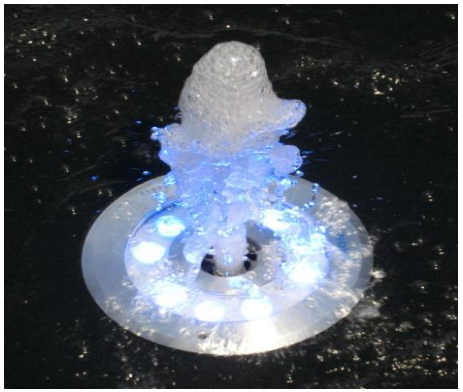


SYSTEM DIAGRAM —— WATER SYSTEM



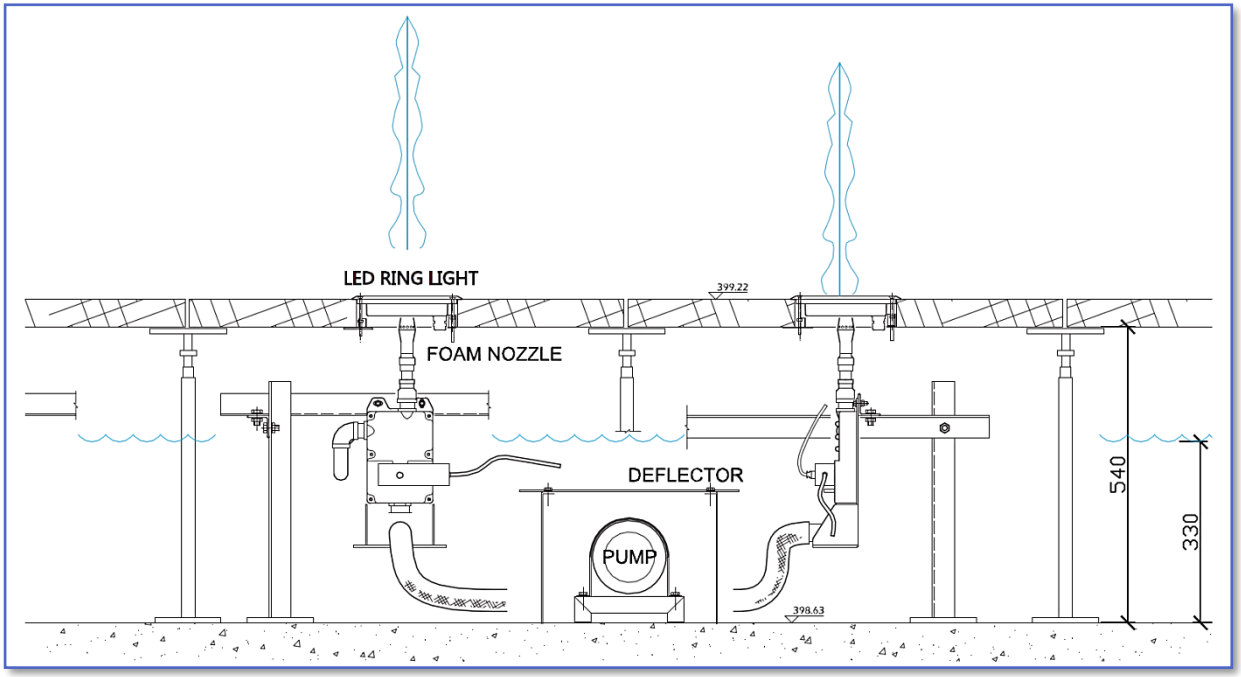
USE THE EXISTING PIPING SYSTEM FOR WATER SUPPLY,
REFILLING, DRAINAGE OVERFLOWING & FILTERATION.

INSTALLATION DETAIL — WATERSWITCH











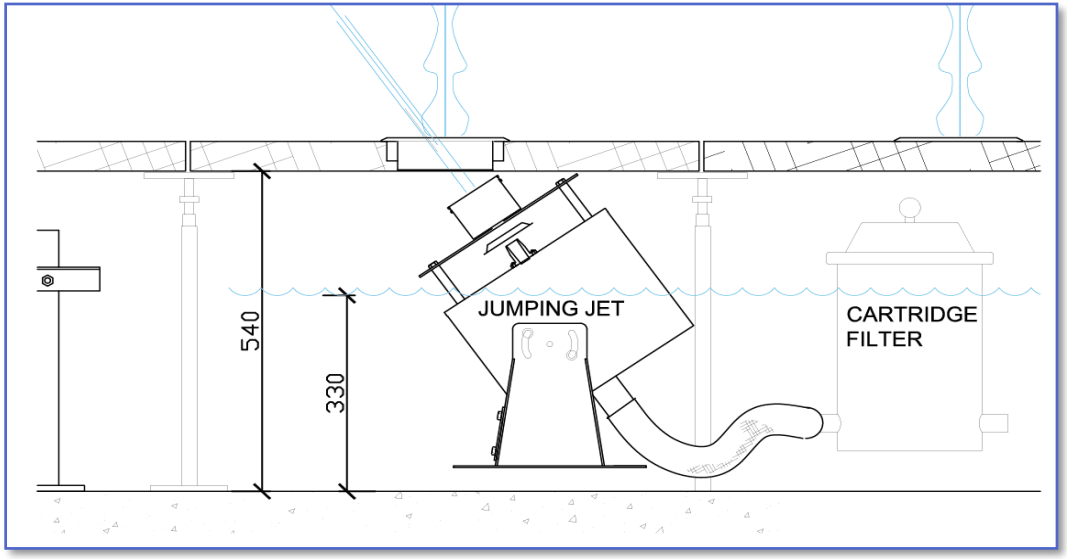


INSTALLATION DETAIL — JUMPING JETS

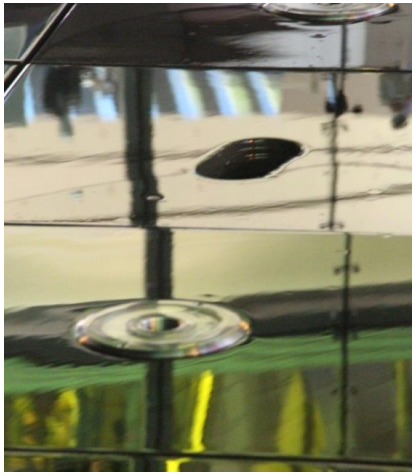


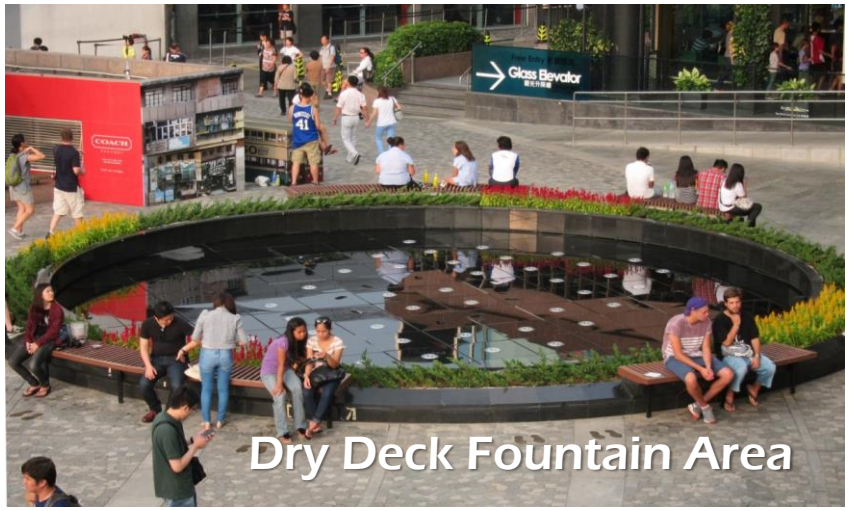






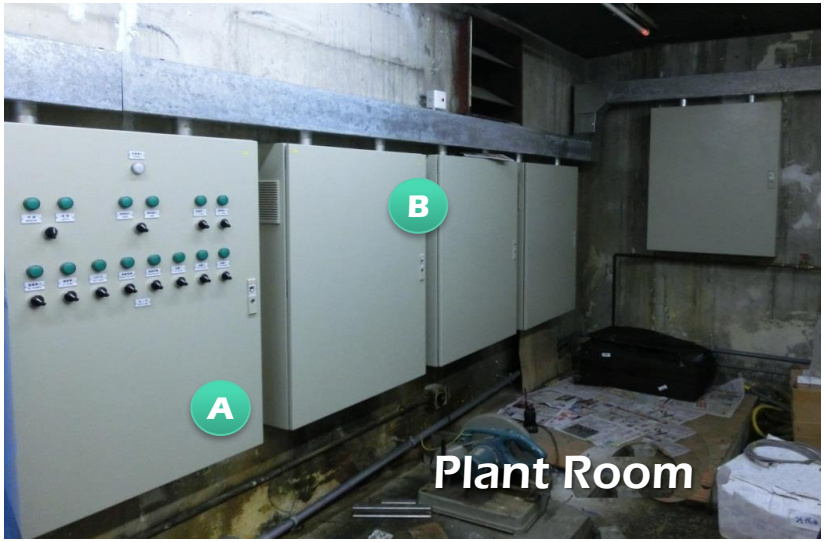


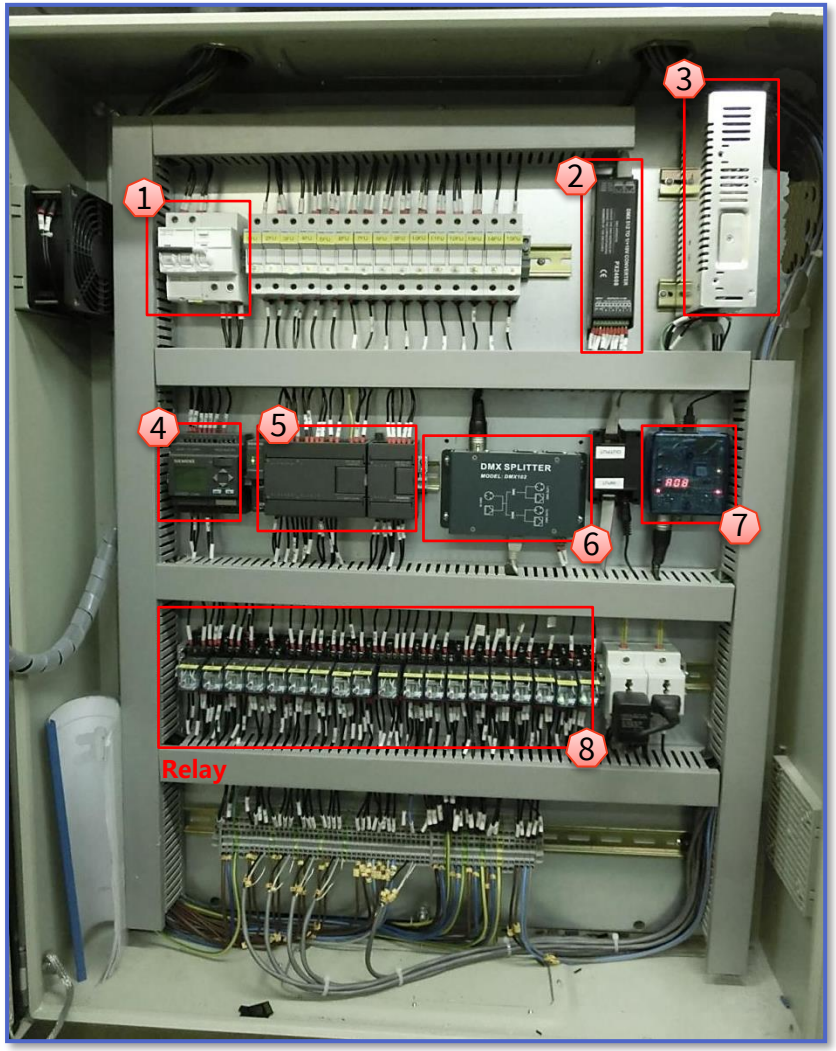



Glass Bevator
Dry Deck Fountain Area



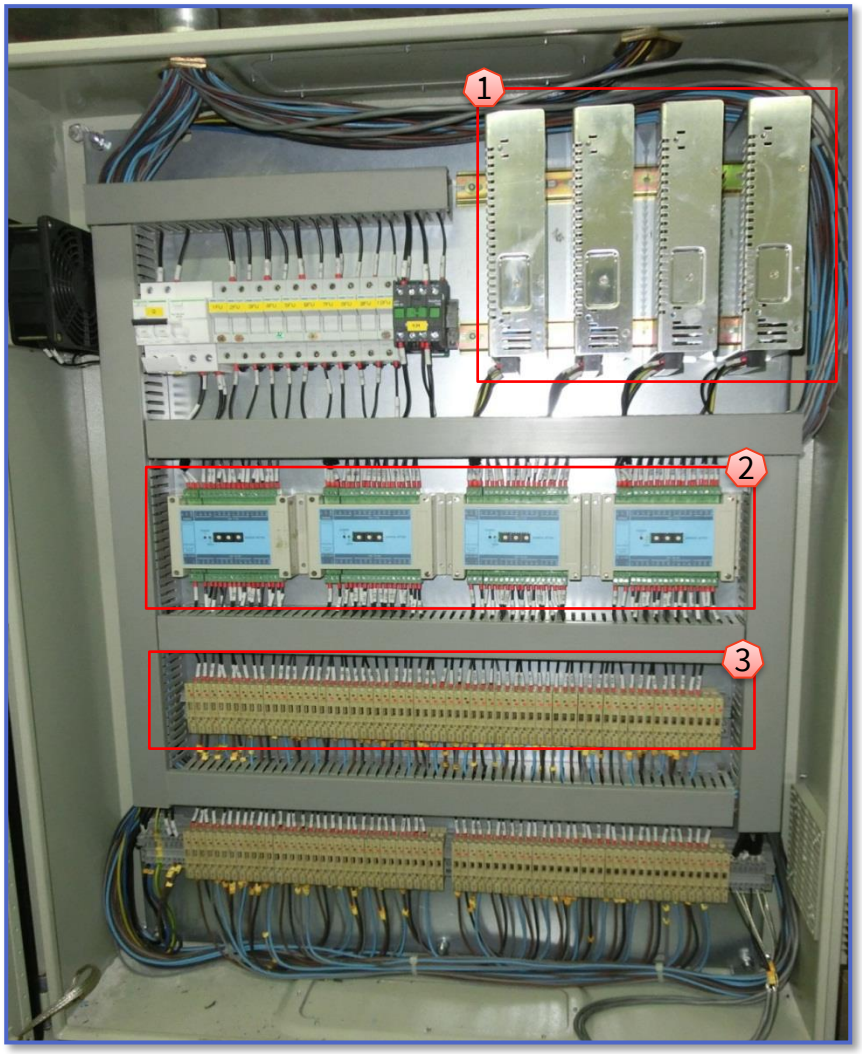



B
A
Plant Room



A. DMX Control Cabinet

1. RCCB
2. DMX CONVERTER
3. POWER SUPPLY
4. LOGO !
5. PLC
6. DMX SPLITTER
7. DMX MAIN CONTROLLER
8. Relay



B. DMX Control Cabinet

1. POWER SUPPLY
2. DMX DRIVER (LED LIGHT)
3. TERMINAL WITH INDICATOR AND FUSE

PROJECT PHOTOS

















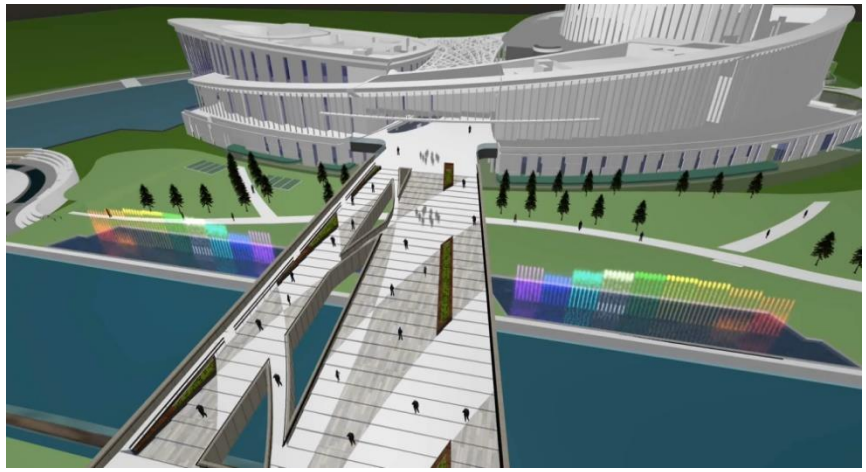
05

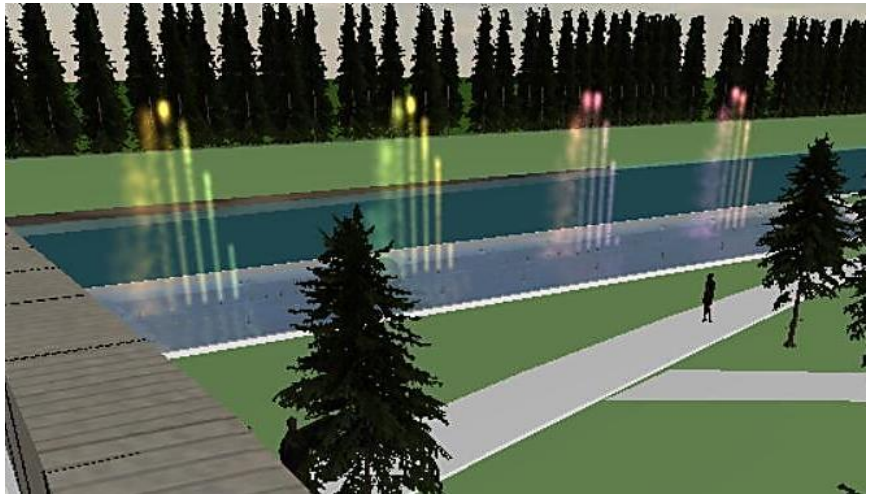
Project completed in October of 2019.

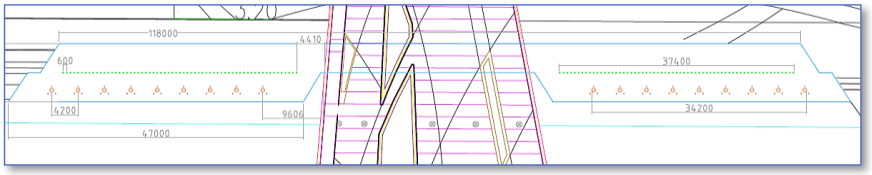


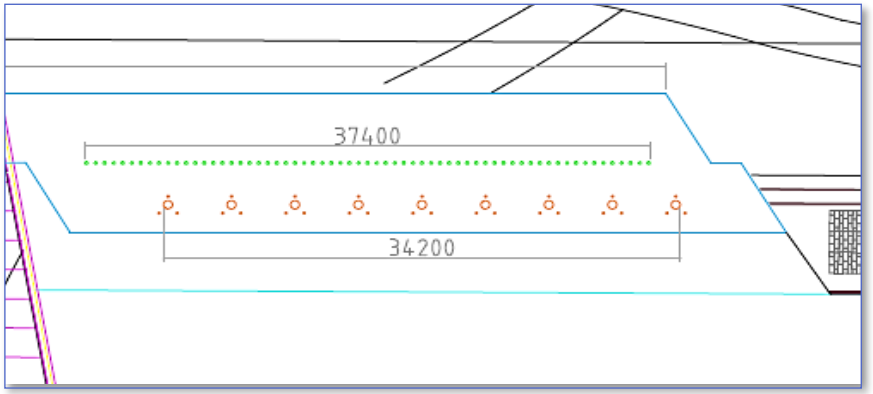
NINE TREE FUTURE ART CENTER, SHANGHAI, CHINA

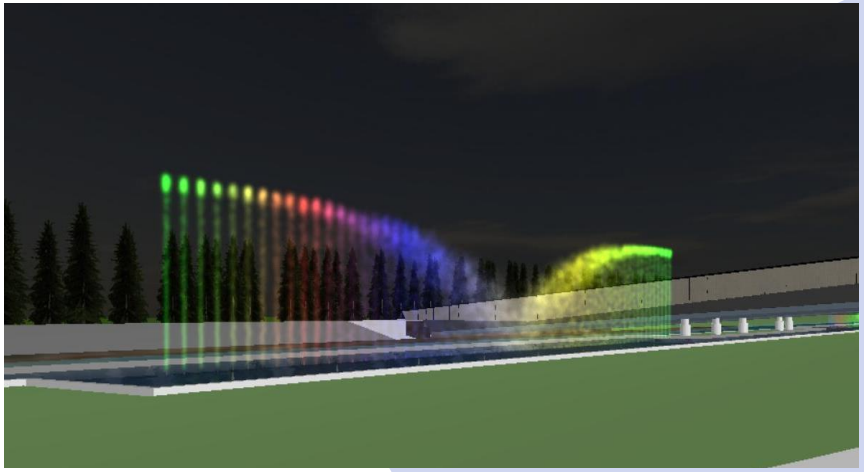
Concept Design













PROJECT INTRODUCTION

The Nine Tree Future Art Center features the combination of concepts of forest, architecture, nature, civic center, water, humanity and art. The design of its fountain is built upon the theme of "Nine Tree Future Art Center", which artistically integrates the element of water and gives vitality to the project. Not only does the fountain embrace the surrounding environment seamlessly, but add unique beautiful effect as well.

By using different varieties of fountain equipments, the fountain produces superb effects of combination of lights and dynamic watery scene. The beautiful watery scene along with colorful light renders grandeur that attract numerous spectators.

There are 18 Air Blast units (AB30) that are being built on both sides of the bridge, 9 units on each side.
The in between distance for each unit is 4.2 meters, with 20 meters max spraying height. Air Blast nozzles equips with 3 underwater spot lights with warm white (HX150T-36). In addition, 126 shooting units (waterswitch (WS4040) + comet nozzle (ZL40-16) + underwater ring lights (HX182R-24QD)) are also being installed on both sides of the bridge. Each side has 63 nos.

By using inverter to control the pump, the fountain can achieve the effect of producing continuing changes of different shooting heights. The lights are controlled by NOVA's DMX/RDM system, which features the change of white light and full color range. RDM System can also change DMX address from distance, as a result, the operating equipments can be monitored in real time and the running message can be read by RDM simultaneously.

PROJECT FOUNTAIN PRODUCT WaterSwitch

WaterSwitch + Comet Nozzle		
Nozzle	**ZL40-16**	
Ht.	P	Q
4.0 m	1.25	100
4.5 m	1.5	115
5.0 m	1.6	123
6.0 m	1.85	130
7.0 m	2.15	150
8.0 m	3.4	190
9.0 m	4.2	220

- ✓ WaterSwitch, a new kind of water spray shifter. Which can produce dynamic spray variation by change the direction of flow.
- ✓ The WaterSwitch can be connected to various nozzles such as Comet, Foam, Fan, Finger nozzle.





WS4040

- ◆ Ht.= Spray height (m)
- ◆ P= Pressure demand (bar)
- ◆ Q= Flow rate (lpm)

Specification

- One G1 1/2" inlet, two G1 1/2" outlets.
- DC24V for solenoid valve.
- Switching speed 1/12 sec.
- Cleanable filter chip.



PROJECT FOUNTAIN PRODUCT Air Blast Nozzle

- ✓ The compressed air driven AB30 is controlled by a DMX signal and a solenoid valve 24VDC.
- ✓ Normally, AB30 needs to be connected to an air compressor.
- ✓ DMX control system can be used to replenish air in real time.
- ✓ With music, amazing music fountain performance can be achieved in different scenes.
- ✓ Suitable for underwater installation.

AB30



Performance

Dimension：L*W*H（mm）	**680×330×1280**
Flow rate（L/One time）	25
Weight（Kg）	40
Pressure demand（bar）	8
Voltage（VDC）	24
Rated current（A）	0.83
Spray height（m）	30
Air inlet	G1”
Material	SS304



PROJECT FOUNTAIN PRODUCT

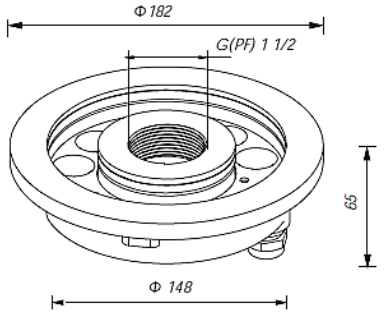
Underwater ring light

Order No	Light source	Beam Angle (°)	Input Voltage (v)	Operating Current* (mA)	Consumption* (w)	Luminance* (lm)	IK Rating
HX182R-24QD	6 x 4W RGB 4in1 Full color	30	24V DC	1083	26	1208	09

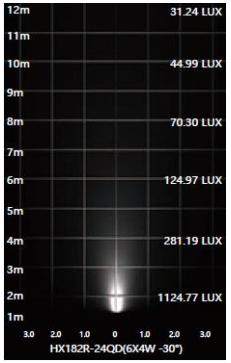
HX182R-24QD



Dimensions (Unit: mm)







Housing	hard chrome plated molding shaped stainless steel SUS 316 #
Front cover	hard chrome plated stainless steel SUS 316L #
Light Window	step tempered glass. T=10mm
Gasket	EPDM gasket
Cable gland	IP-68 PG-13.5 copper with nickel-coated
PCB	excellent heat conductivity aluminum, coefficient of heat conductivity≥2.0w/mk
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Signal type	DMX 512/ RDM signal
Power cable	3m STW 18AWG

All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.

PROJECT FOUNTAIN PRODUCT

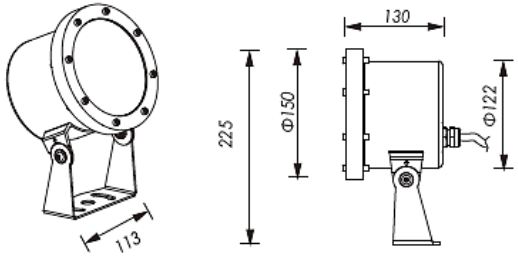
Underwater Spot light

Order No	Light source	Beam Angle (°)	Input Voltage (v)	Operating Curren t* (mA)	Consumption* (w)	Luminance* (lm)	IK Rating
HX150T-36	12 x 3W	30	24V DC	1600	38.4	Cool white=3031 Warm white=2668	10

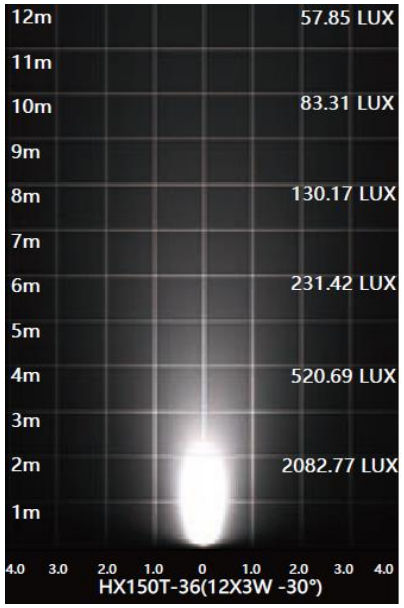
HX150T-36



Dimensions (Unit: mm)

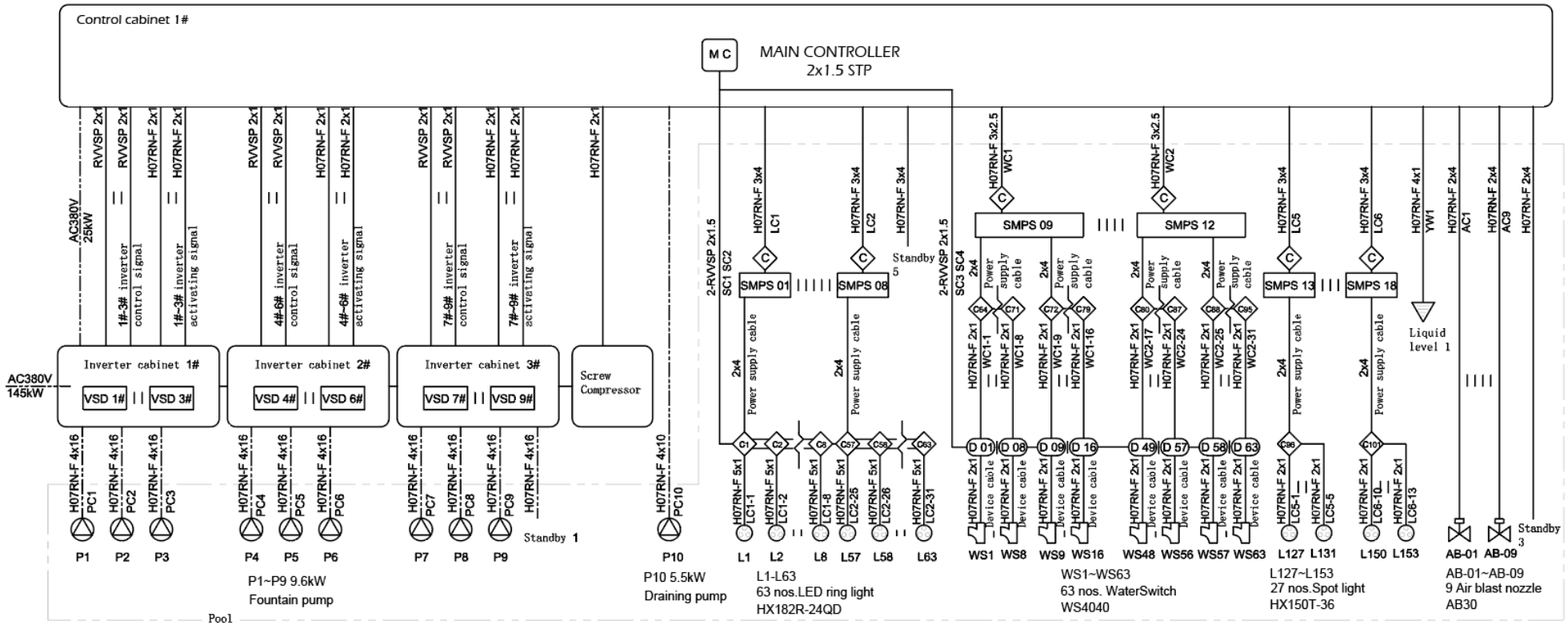


Front cover & Housing	hard chrome plated molding shaped stainless steel SUS 316L #
Light Window	PMMA 8mm
Gasket	silicone gasket
Cable gland	IP-68 PG-11 copper with nickel-coated
PCB	excellent heat conductivity aluminum, coefficient of heat conductivity≥2.0w/mk
Application e nvironment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	3m STW 18AWG



All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.

SYSTEM DIAGRAM —— ELEC SYSTEM

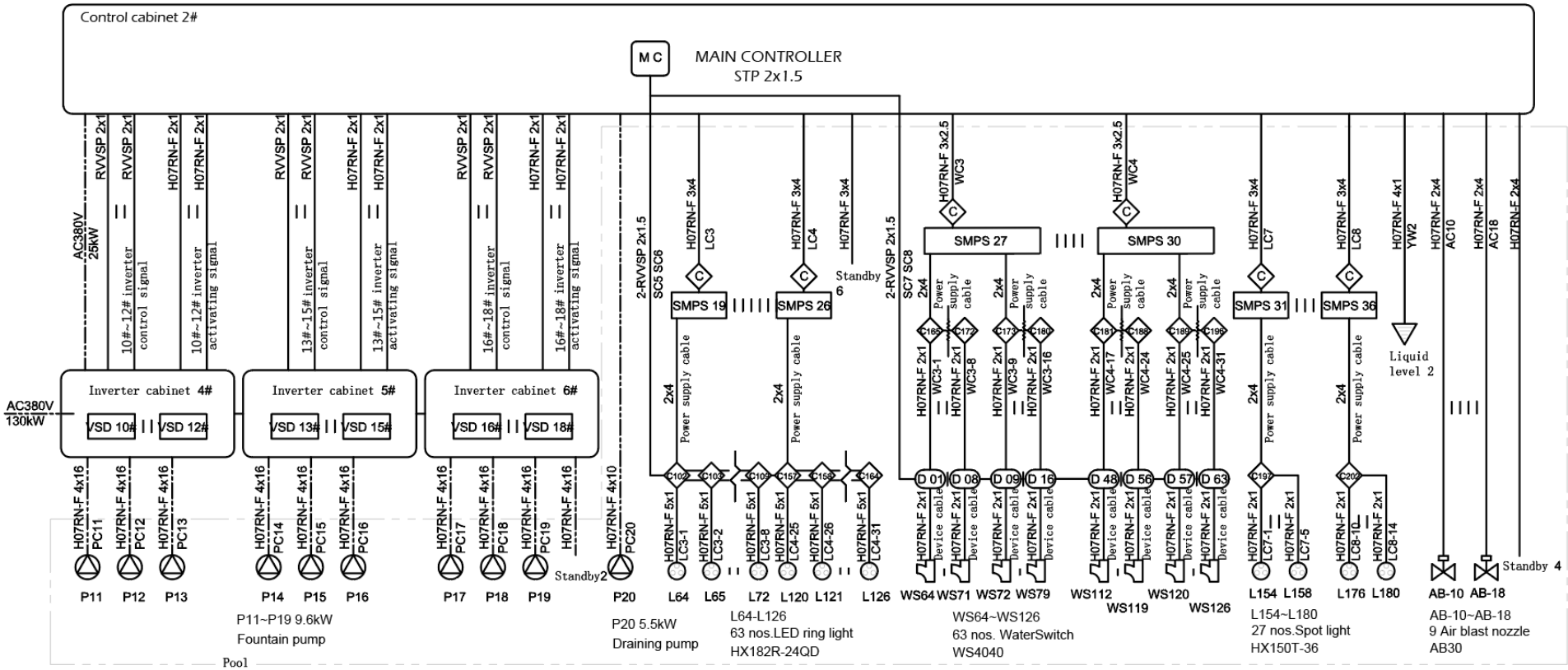


LEGEND

- Pump
- WaterSwitch
- LED light
- Underwater connector
- Main controller
- Solenoid valve
- Driver
- supply Underwater power

1 Electrical system diagram(Left)

SYSTEM DIAGRAM —— ELEC SYSTEM

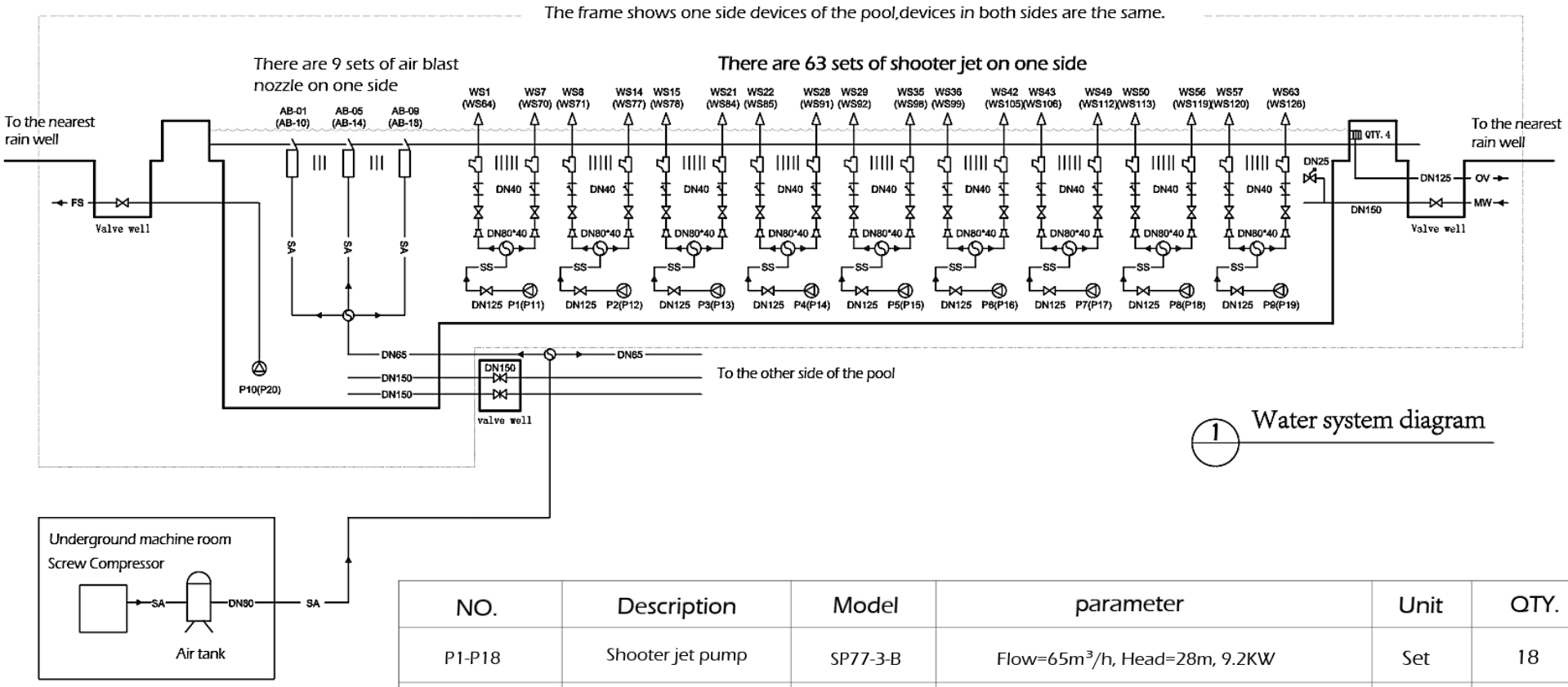


LEGEND

- Pump
- WaterSwitch
- LED light
- Underwater connector
- Main controller
- Solenoid valve
- Driver
- supply Underwater power

1 Electrical system diagram(Left)

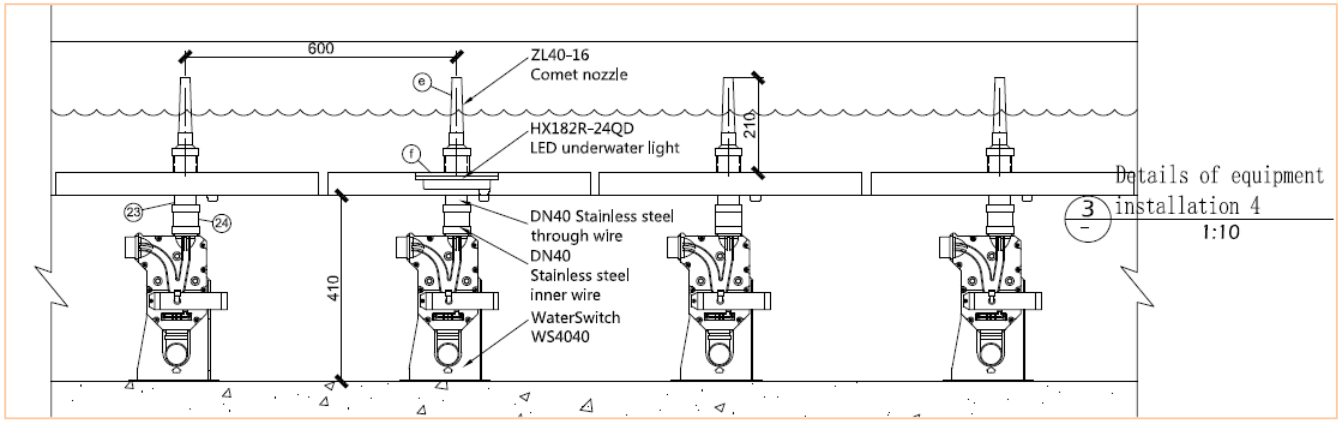
SYSTEM DIAGRAM —— WATER SYSTEM



1 Water system diagram

NO.	Description	Model	parameter	Unit	QTY.
P1-P18	Shooter jet pump	SP77-3-B	Flow=65m³/h, Head=28m, 9.2KW	Set	18
P19-P20	Draining pump	SP95-1	Flow=100m³/h, Head=10m, 5.5KW	Set	2

INSTALLATION DETAIL — WATERSWITCH

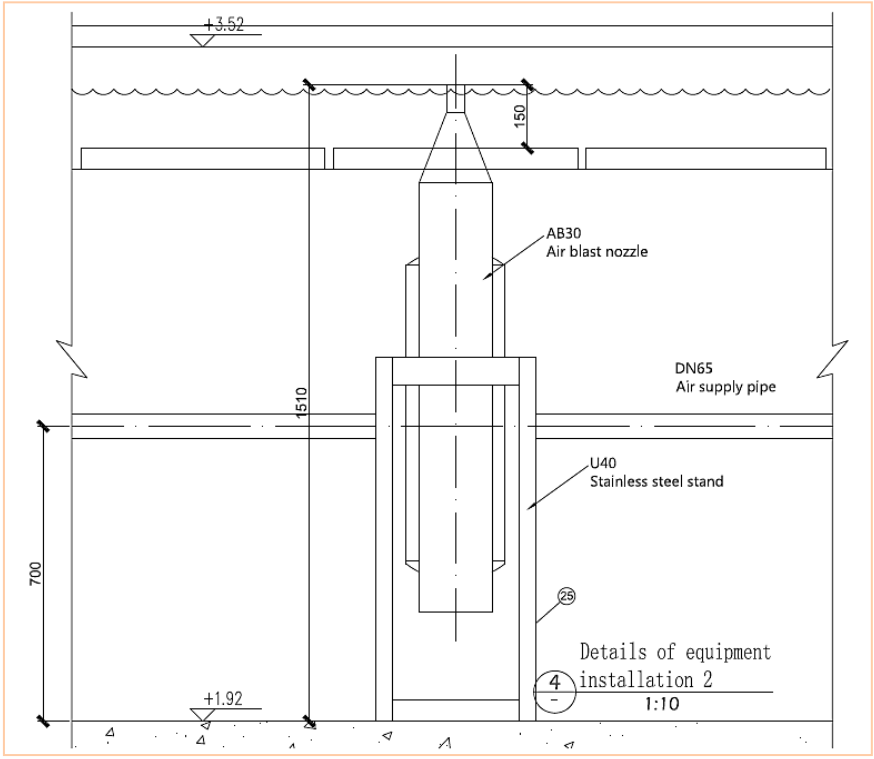






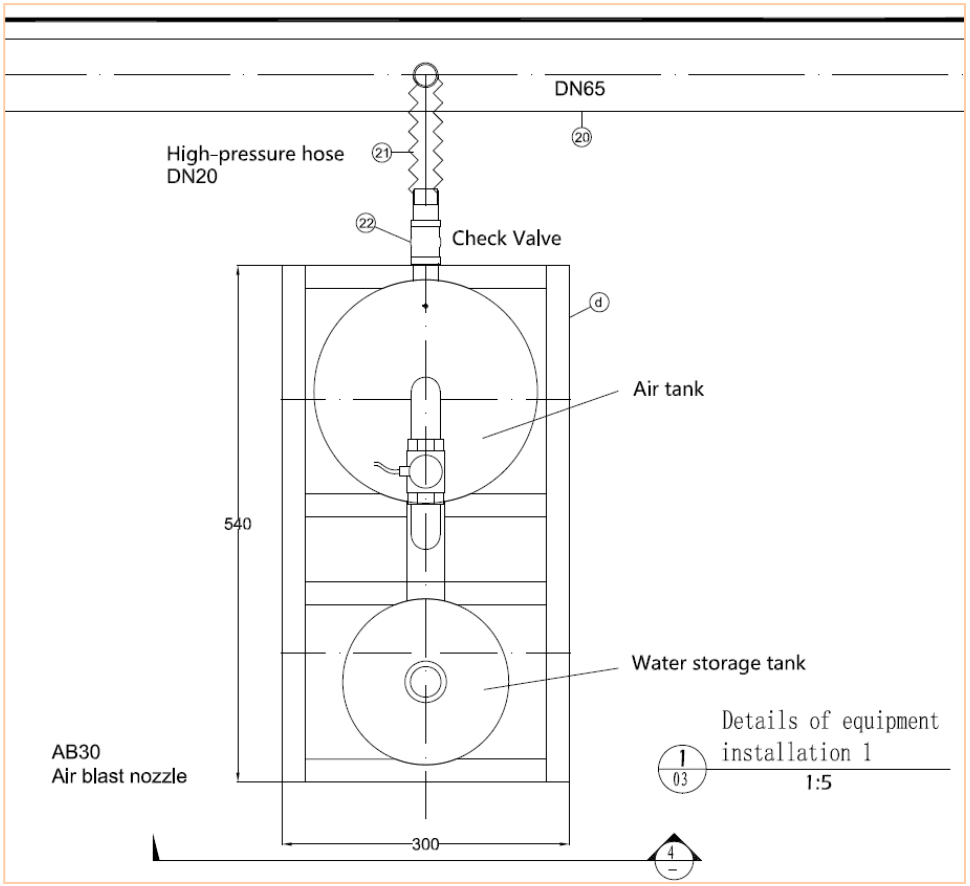


INSTALLATION DETAIL — AIR BLAST NOZZLE





INSTALLATION DETAIL
— AIR BLAST NOZZLE







CONTROL CABINET



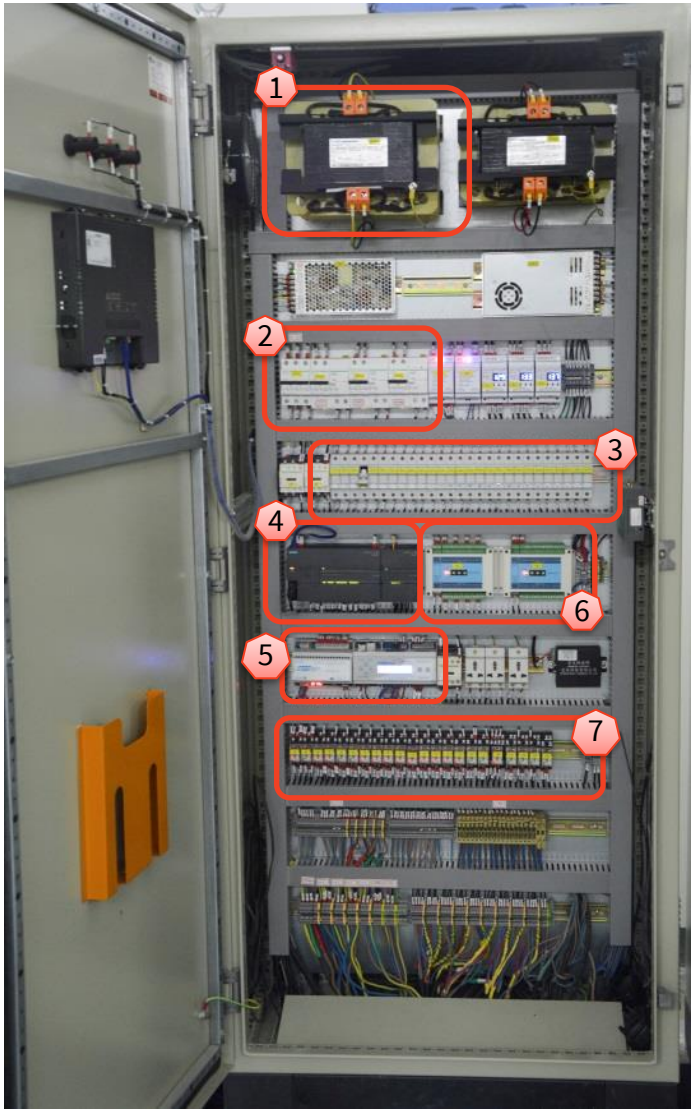
A. Main control cabinet

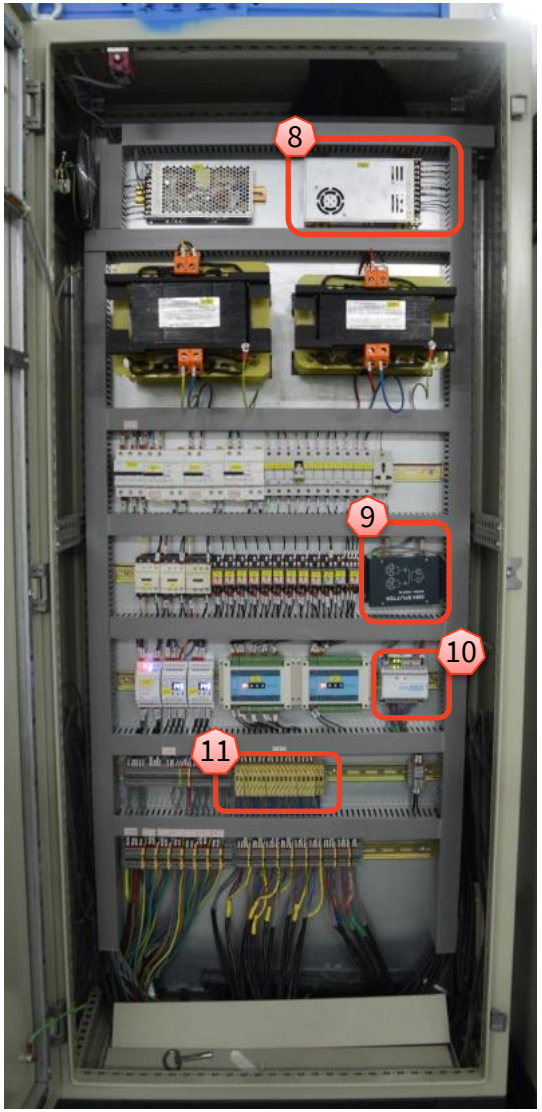
B. Inverter cabinet

C. Air compressor

D. Air collector & accessories

A. MAIN CONTROL CABINET



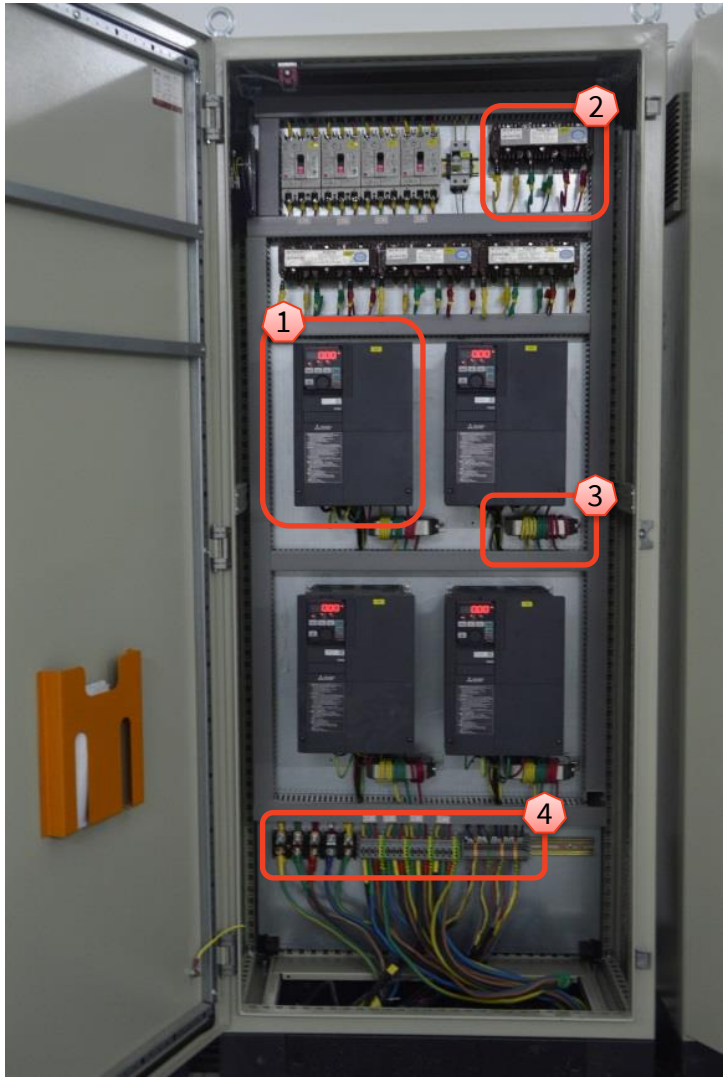


1. ISOLATION TRANSFORMER
2. RCCB
3. FUSE
4. PLC
5. MAIN CONTROLLER

(V-Nano 1024 music)

6. DMX DRIVER (AIR BLAST)
7. RELAY
8. POWER SUPPLY
9. DMX SPLITTER
10. RDM SIGNAL AMPLIFIER
11. TERMINAL WITH FUSE

B. INVERTER CABINET





1. INVERTER
2. INPUT AC REACTOR FOR INVERTER
3. FILTER OF RESISTING AGAINST INTERFERENCE FOR INVERTER
4. TERMINAL

PROJECT PHOTOS









PROJECT PHOTOS









06

BALEKAMBANG Dancing Fountain , Indonesia

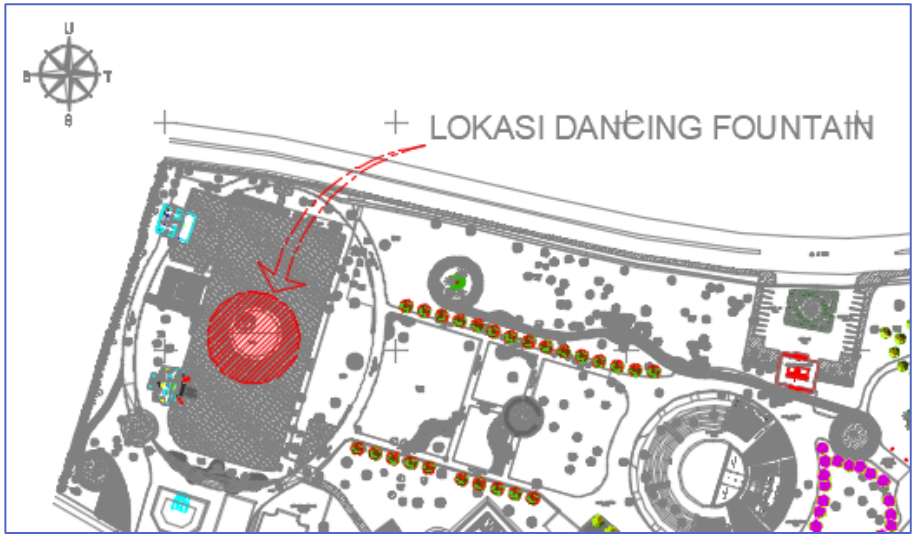
Project completed in October of 2023

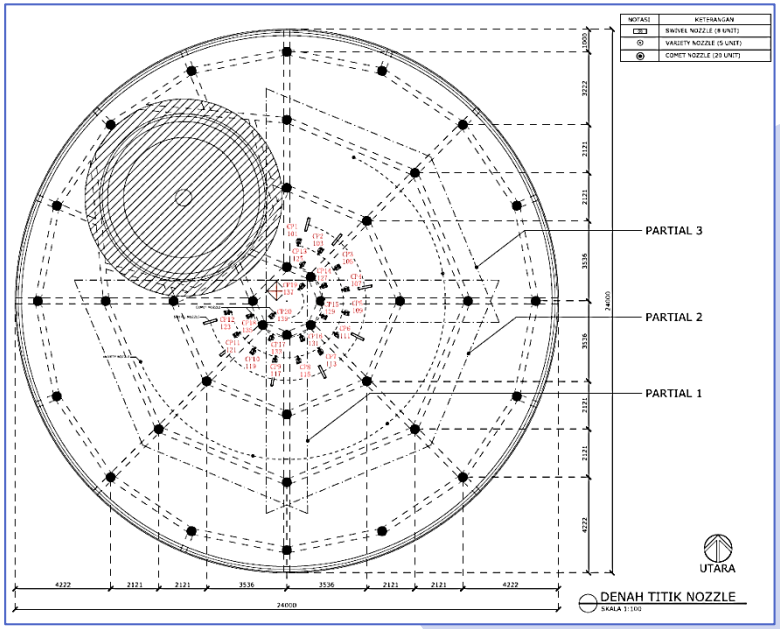


PROJECT INTRODUCTION

The project aims to design a unique beautifying water feature for the Indonesian celebrity sculpture. Through careful design and high-tech fountain equipment, the water and light are perfectly integrated to bring a visual feast to visitors.

Concept Design









PROJECT INTRODUCE

We take Indonesian celebrities as inspiration for our design and showcase their historical and cultural charm through the combination of sculpture and water features. At the same time, advanced fountain technology and lighting system are used to create a water feature space that is both ornamental and artistic.

Fountain equipment: around the sculpture, we arranged eight One-dimension Swivel Jet equipment, which can produce a rich and varied water flow effect. At the same time, the combination of 5 sets of Digital Variety Jet equipment can further increase the sense of layers and dynamics of the water feature. In addition, we also arranged 20 sets of Controllable Pumps in the ring area combined with comet nozzles, which can produce water columns of different heights and shapes to enhance the visual effect of the water feature.

Through the perfect combination of different types of fountain equipment and lighting, we successfully created a very ornamental water feature space. At night, colorful lights reflect on the gushing water, forming a spectacular picture. The beautiful water features and lights complement each other, creating a mysterious and enchanting atmosphere that attracts countless visitors to stop and look.

Lighting system: We use NOVA's DMX/RDM system to control the lighting, which has the ability to change the full color range. RDM system also has the ability to remotely change the DMX address, which is easy to monitor the operating status of the equipment in real time and read the relevant information.

FOUNTAIN PRODUCT

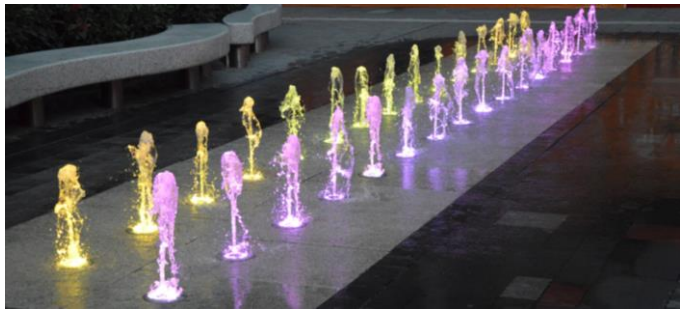
Comet Nozzle



- Stainless steel 304
- Clear stream jet
- Good resistance to wind
- With flow regulator
- Adjustable spray angle

Art.NO.	ZL15-6		ZL20-8		ZL25-12		ZL40-13		ZL40-16	
Wt. (kg)	0.084		0.16		0.22		0.54		0.5	
Ht.	Q	P	Q	P	Q	P	Q	P	Q	P
0.5	7	0.05	11	0.05	23	0.60				
0.75	10	0.08	15	0.10	25	0.08				
1	12	0.10	19	0.15	27	0.10	42	0.14		
1.5	15	0.15	23	0.20	35	0.15	46	0.18		
2	17	0.20	27	0.25	55	0.21	50	0.20	80	0.20
2.5			31	0.30	58	0.25	57	0.25	88	0.25
3			35	0.40	63	0.35	63	0.30	98	0.30
4			37	0.50	75	0.50	79	0.48	118	0.45
5					87	0.70	102	0.70	140	0.60
6					95	0.85	120	1.10	180	0.80
8							140	1.90	200	1.00
10							180	2.30	230	1.20

- Wt.= Weight (kg)
- Ht.= Spray height (m)
- P= Pressure demand (bar)
- Q= Flow rate (lpm)





FOUNTAIN PRODUCT

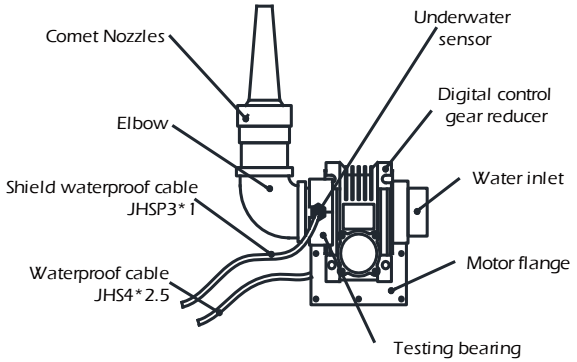
One-dimension Swivel Jet



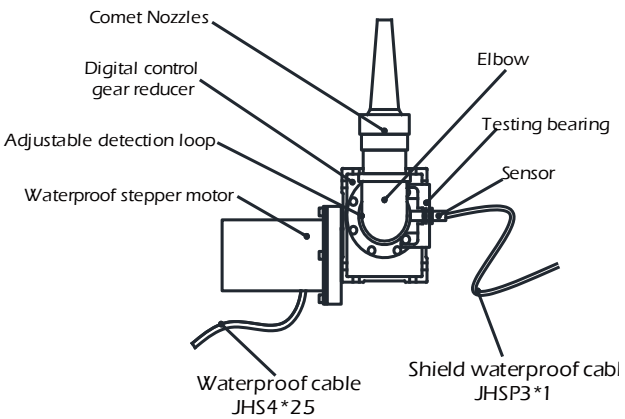
Material	Stainless steel 304
Worm gear ratio	1:10
Max transmission distance via cable	500m
Stepper motor voltage	80V AC
Stepper motor power	300W
Max torque of stepper motor	6n.m
Sensor input voltage	24V DC
Max spray high	18m
Max speed	75rpm
180°round trip(times/minute)	42
90°round trip(times/minute)	70
45°round trip(times/minute)	135
5°round trip(times/minute)	1200
Weight	12kg
Power cable length	1m



HXL1-50S



Front view



Left view

FOUNTAIN PRODUCT

Controllable Pump

VP-80



◆ Quiet and high efficient BLDC motor drived water pump,high efficient design of volute and impeller.
◆ Dry running protection If pump is running without water,it will stop automatically to prevent failure from wear.
◆ Over heat protection Pump will stop running if the motor temperature is high.
◆ Over current protection To prevent motor failure from shortening.
◆ DMX signal to control pump speed Input DMX signal to control pump stop or start and adjust speed.
◆ Stand-by model of lowest speed Pump is run at lowest speed.
◆ IP68,submersible or dry installation Install submersed or dry to make dry or inner water fountain.
◆ FOC driver,exactly stable speed control
◆ 0.6 second speed ramp from stand-by mold to max speed Fastest seep reaction to ensure better fountain cense.

Type	VP-80
Motor type	BLDC
Control signal	DMX
Q max	7000L/H
H max	5m
Speed from 0%~100%	0.6s
Working Voltage	24V DC
Max Power input	80W
Protection class	IP68
Weight	5kg
Suction side connection	G1 1/2"
Output side connection	G1 1/4"
Pump housing	Plastic
Ambient temperature	Less than 40℃
Cable for DMX input	1.5m RVV 3x0.5
Cable for DMX output	1.5m RVV 3x0.5
Cable for pump	3m H05RN - F 3x0.5
Cable for power input	1.5m H05RN - F 2x0.5

FOUNTAIN PRODUCT

Variety Nozzle

- The Variety jet creates a dynamic variable water pattern
- The nozzle is driven by two pumps controlled with VFD
- Compact robust stainless steel 304 Nozzle
- 2 pressure connections
- Nozzle with DN40 nipple



VJ40

Type	VJ40			
Spray patten	Water bell		Single stream	
Wt.	6.5			
Ht.	Q	P	Q	P
m	lpm	bar	lpm	bar
0.5	80	0.15		
1	123	0.30	111	0.40
2	187	0.57	170	0.65
2.5	220	0.74		
3			220	0.90

- Wt.= Weight (kg)
- Ht.= Spray height (m)
- P= Pressure demand (bar)
- Q= Flow rate (lpm)



FOUNTAIN PRODUCT

Underwater ring light

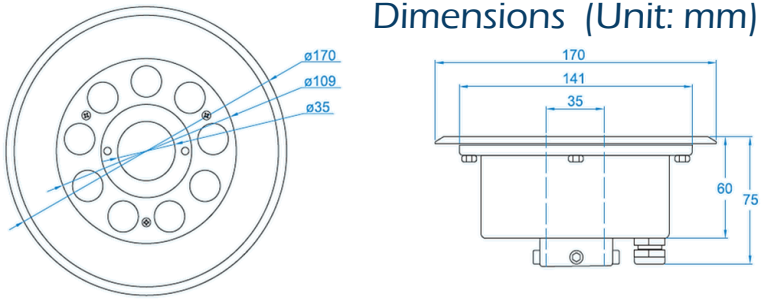


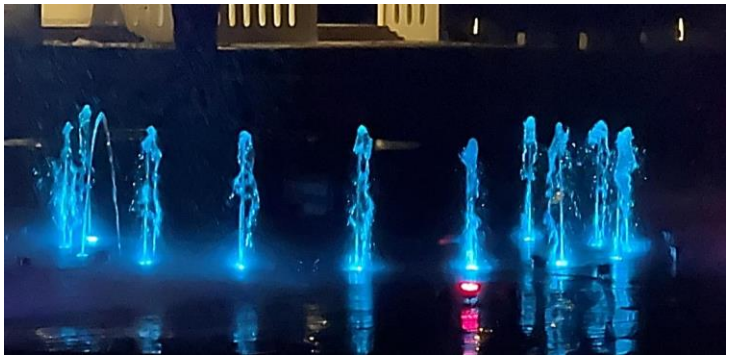
RY170R-36TD

All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.

Body size	Φ180 x H76mm (nozzle hole size 42 mm)
Beam angle	10° 30° 60° 90°
IP Grade	IP68
Housing material	Stainless steel 304
Cable size	H05RN 5G0.75/H05RN 2G1.0, 1.5m
LED chip	Edison / Epistar
Life time	>50000H

Dimensions (Unit: mm)





Type	Light source	Input voltage	Color	Line way	Control mode
RY170R-36TD	12×3W (3in1)	DC24V	RGB	DMX+/DMX-/V+/V-GND	DMX512

FOUNTAIN PRODUCT

Underwater spot light



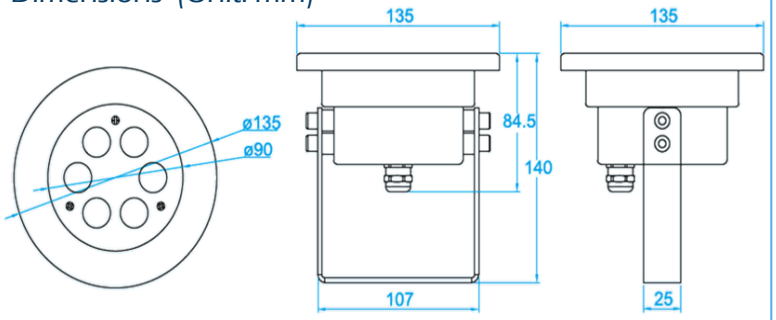
RY135T-18TD

All NOVA LED lights can be programmed to dim, synch and color change to create infinite combinations of kaleidoscopic displays.



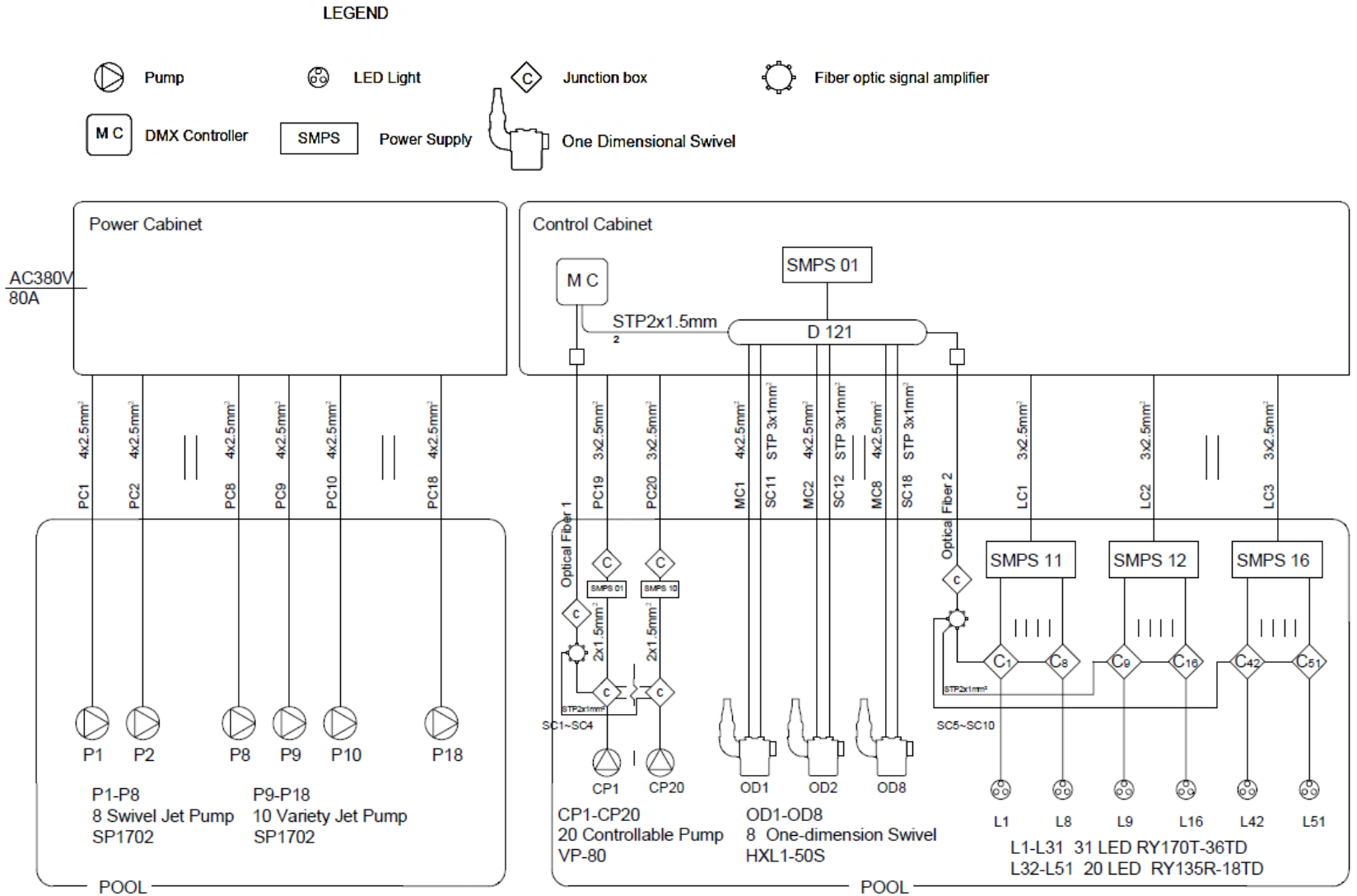
Body size	Φ135 x H157mm
Beam angle	10° 30° 60° 90°
IP Grade	IP68
Housing material	Stainless steel 304
Cable size	H05RN 5G0.75/H05RN 2G1.0, 1.5m
LED chip	Edison / Epistar
Life time	>50000H

Dimensions (Unit: mm)

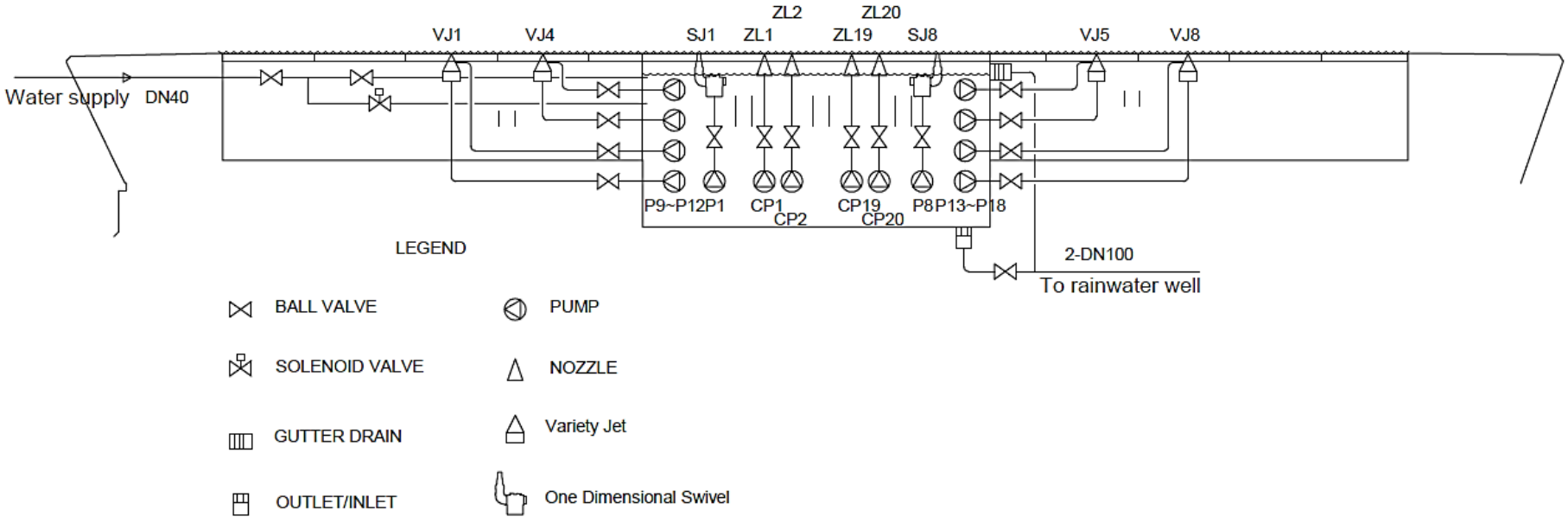


Type	Light source	Input voltage	Color	Line way	Control mode
RY135T-18TD	6×3W (3in1)	DC24V	RGB	DMX+/DMX-/V+/V-GND	DMX512

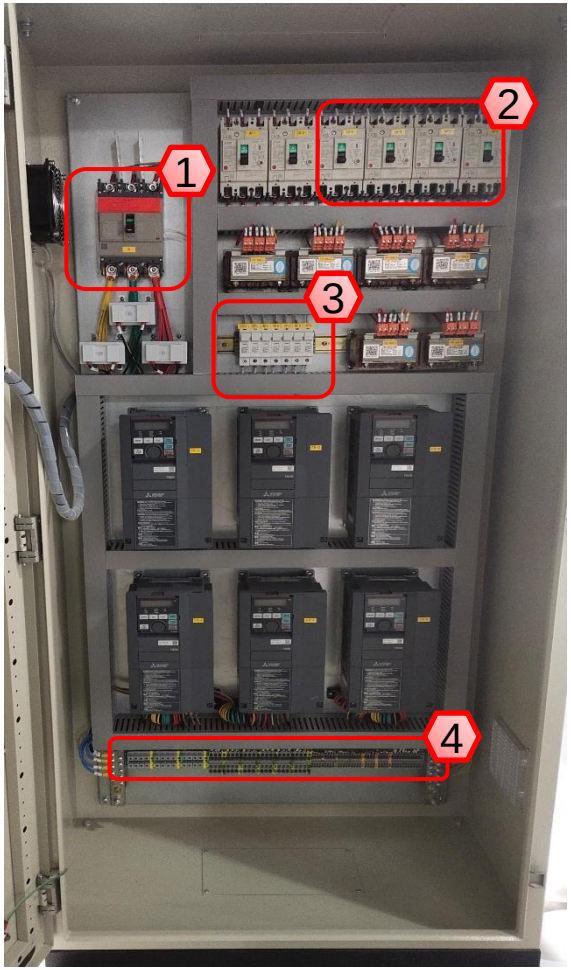
SYSTEM DIAGRAM —— ELEC SYSTEM

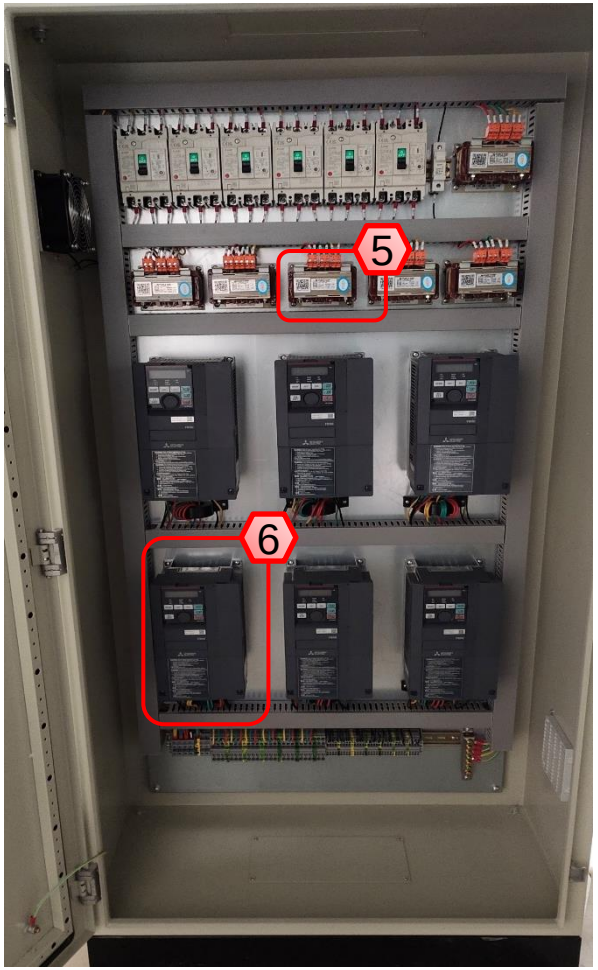


SYSTEM DIAGRAM —— WATER SYSTEM



CONTROL CABINET





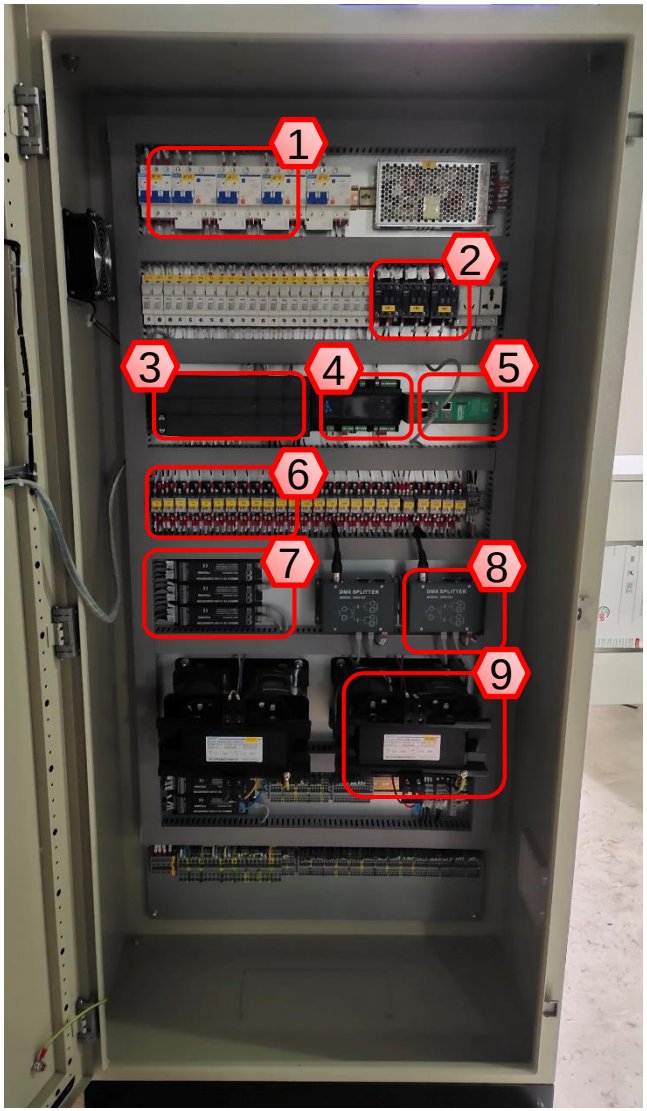


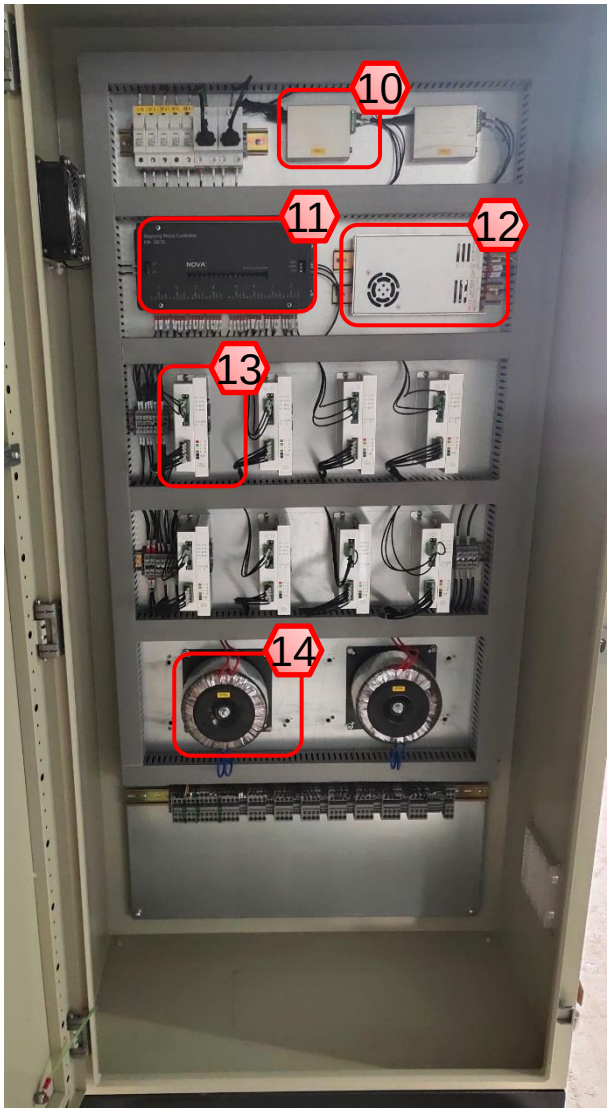
1. MCB
2. RCCB
3. FUSE

4. TERMINAL
5. INPUT AC REACTOR FOR INVERTER
6. INVERTER

7. FITTER OF RESISTING AGAINST INTERFERENCE FOR INVERTER

CONTROL CABINET





1.RCCB

2. AC CONTACTOR

3. PLC

4. DMX MAIN CONTROLLER

5. NETWORKING MODULE

6. RELAY

7. DMX CONVERTER

8. DMX SPLITTER

9. ISOLATION TRANSFORMER

10. FIBER OPTIC SIGNAL CONVERTER

11. DECODE FOR STEPER MOTOR

12. POWER SUPPLY

13. DRIVER FOR STEPER MOTOR

14. ISOLATION TRANSFORMER

PROJECT PHOTOS







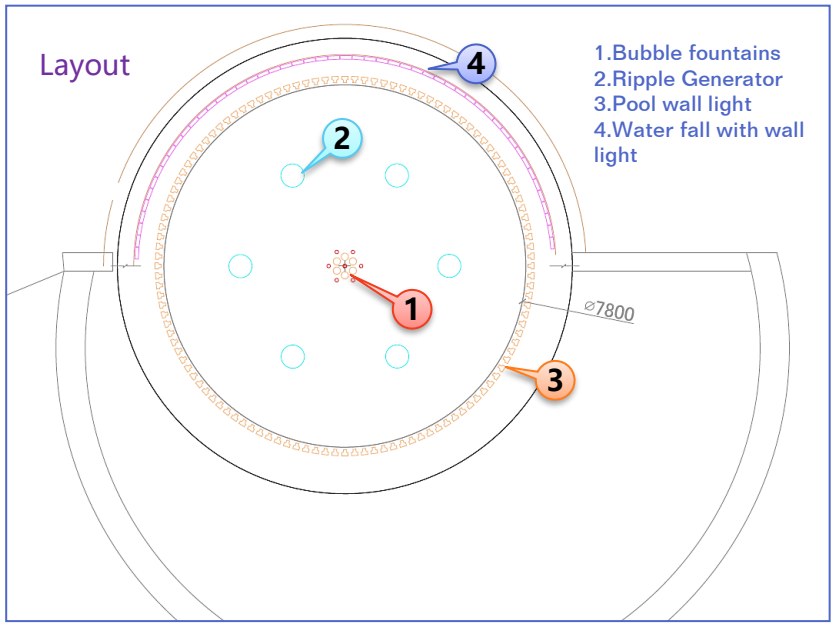
07

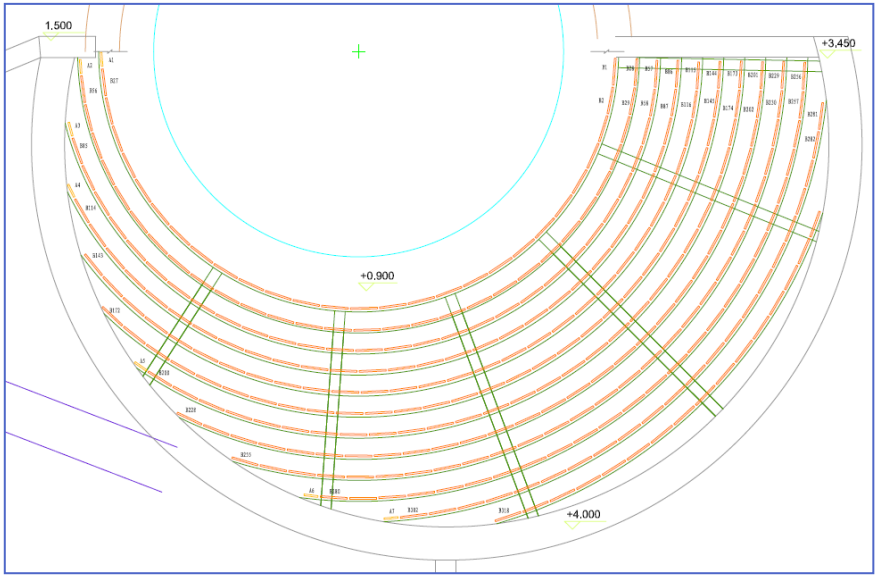
Project completed in October of 2020.



JING'AN SUBWAY PLAZA, SHANGHAI, CHINA

Concept Design

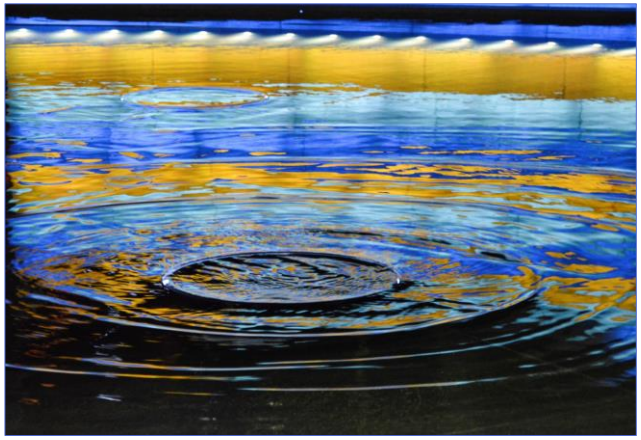












PROJECT INTRODUCTION

The ancient Jing'an temple is famous with its eight sights. The spring so called "The Sixth Spring Under Heaven" is one of them. Time had caused the old spring to disintegrate into shattered memories.
In 2020, GCS has refurbished the fountain with more technology in original site.

Nowadays the new image of the fountain is a lilied jade ring. With 120 LED bright spots(HX69B-3Q) around the inner wall of the pool and 48 inner LED lights (HX250BL-12Q)around the pool. In the middle there are 7 cascade fountains, with 6 SB50 surrounding a SB80 with 6 LED spot light(HX150T-30Q),6 ripple generators around them, visitors enjoy the quiet time with the ripples.325 LED spot light(HX510TLG-12Q) in a stepped arrangement.
At night, the lights complemented the fountain, Integrate the ancient spring into the modern urban atmosphere.

FOUNTAIN PRODUCT

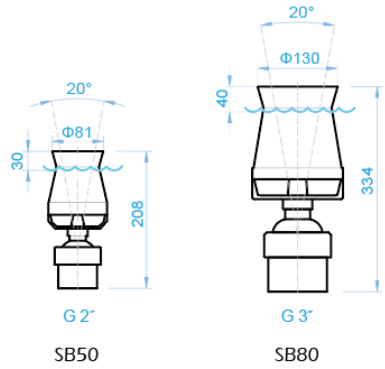
Cascade Nozzles

Type	SB50		SB80	
Wt.	1.16		3.85	
Ht.	Q	P	Q	P
m	lpm	bar	lpm	bar
0.25	101	0.20		
0.5	108	0.25		
0.75	116	0.35		
1	125	0.45	381	0.40
1.5	142	0.55	432	0.70
2	158	0.70	484	1.00
3	192	1.10	542	1.30
4	226	1.50	606	1.60
5	260	1.90	670	1.90
6	294	2.30	734	2.20
7	328	2.70	798	2.50
8	362	3.10	862	2.80
9			926	3.10
10			990	3.40

◆ Wt.= Weight (kg) ◆ Ht.= Spray height (m)
◆ P= Pressure demand (bar) ◆ Q= Flow rate (lpm)



Dimensions (Unit: mm)



Characteristics

- Stainless steel 304
- Cone-shaped effect
- Foamy effect with rich mixture of air
- Water saving
- Water level dependent
- SB series with adjustable spray angle



FOUNTAIN PRODUCT

Ripple Generator

RP500

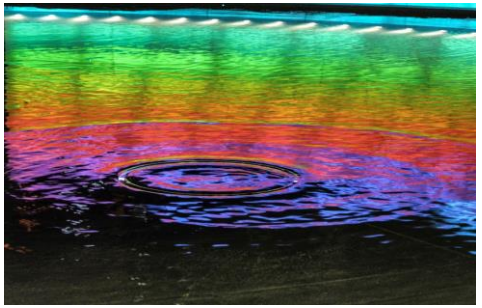


Ripple Generator

- Wave System
- Ideal for calm reflective pool
- Argent coated stainless steel design.
- Main mechanical parts comprising of controllable pump and Neon Flex.
- Delivered as a complete unit for integration with pool structure and finishes.

Note : The product don't include the circular top tile cover.

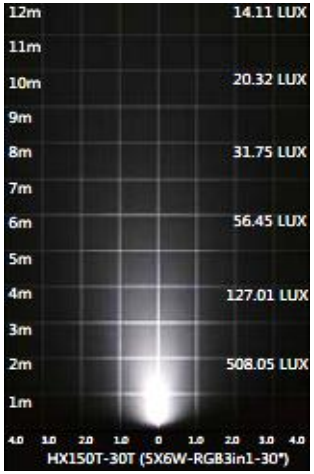




Ring nozzle diameter(mm)	500	**Power input with Neon Flex**	1m power cable
Dimension=L*W*H(mm)	522*522*375	**DMX input with pump**	1m DMX cable
Power consumption of max(W)	220	**DMX output with pump**	1m DMX cable
Nominal voltage(VDC)	24	**Total number of DMX channel**	5 channels
Protection class	IP68	**Material**	Stainless steel316/Plastic
Power input with pump	3m power cable	**Weight**	38 kg

FOUNTAIN PRODUCT Underwater spot light

Order No	Light source	Lens Degree (°)(Θ1/2)	Input Voltage (v)	Operating Current* (mA)	Consumption* (w)	Luminance* (lm)	IK Rating
HX150T-30Q	6 x 5W RGBW	30°	DC 12V	1600	36	835	IK 10

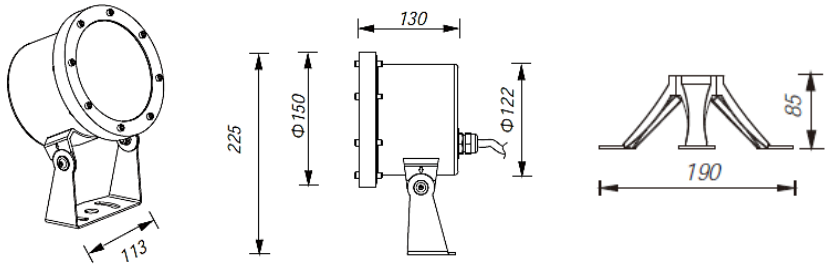


Housing	shaped stainless steel SUS 316 #
Front cover	Stainless steel SUS 316L #
Gasket	EPDM gasket.
Glass	Step tempered glass. T=8mm.
Cable gland	IP-68 PG-11 copper with nickel-coated.
PCB	Excellent heat conductivity aluminum, coefficient of heat. Conductivity ≥ 2.0w/mk
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	3m STW 18AWG

HX150T-30Q



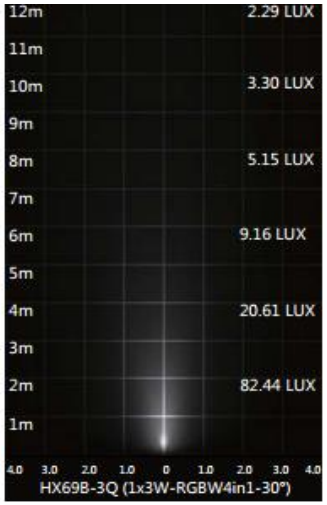
Dimensions (Unit: mm)





FOUNTAIN PRODUCT Underwater pool light

Order No	Light source	Lens Degree (°)(Θ1/2)	Input Voltage (v)	Operating Current* (mA)	Consumption* (w)	Luminance* (lm)	IK Rating
HX69B-3Q	1 x 3W RGBW 4in1 Full color	30°	DC 12V	125	3	85	IK 06

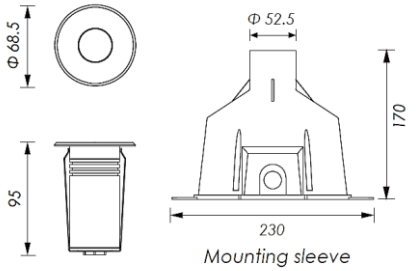


Housing	shaped stainless steel SUS 316#
Front cover	Stainless steel SUS 316L#
Gasket	EPDM gasket.
Glass	Step tempered glass. T=7mm.
Cable gland	IP-68 PG-11 copper with nickel-coated.
PCB	Excellent heat conductivity aluminum, coefficient of heat. Conductivity ≥ 2.0w/mk
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	3m STW 18AWG
Mounting sleeve	ABS

HX69B-3Q



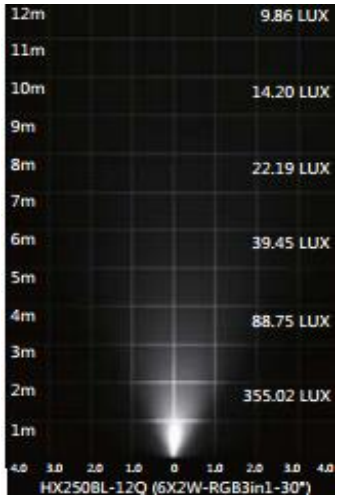
Dimensions (Unit: mm)





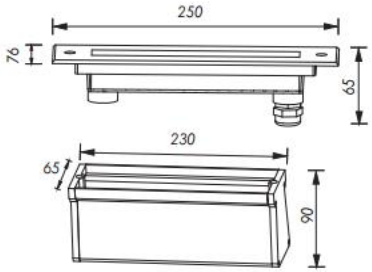
FOUNTAIN PRODUCT Underwater pool light

Order No	Light source	Lens Degree (°)(Θ1/2)	Input Voltage (v)	Operating Current* (mA)	Consumption* (w)	Luminance* (lm)	IK Rating
HX250BL-12Q	6 x 2W RGBW 4in1 Full color	30°	DC 12V	1000	16.8	465	IK 08



Housing	shaped stainless steel SUS 316＃
Front cover	Stainless steel SUS 316L＃
Gasket	EPDM gasket.
Glass	Step tempered glass. T=9mm.
Cable gland	IP-68 PG-11 copper with nickel-coated.
PCB	Excellent heat conductivity aluminum, coefficient of heat. Conductivity ≥ 2.0w/mk
Application environment	Temperature of water between -20℃~40℃ less than 1 meter depth
Power cable	3m STW 18AWG
Mounting sleeve	ABS

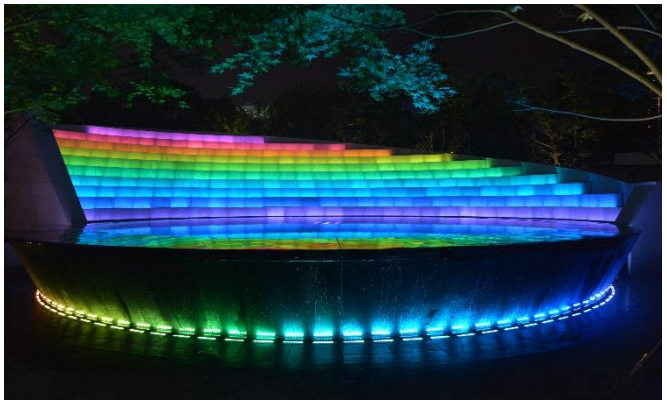
Dimensions (Unit: mm)



Mounting sleeve

HX250BL-12Q





FOUNTAIN PRODUCT Spot light

Order No	Light source	Lens Degree (°)(Θ1/2)	Input Voltage (v)	Operating Current* (mA)	Consumption* (w)	Luminance* (lm)	IK Rating
HX510TLG-12Q	12 x 2W RGBW 4in1 Full color	30°	DC 24V	1020	24.4	1082	IK 02

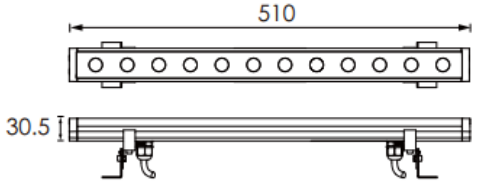


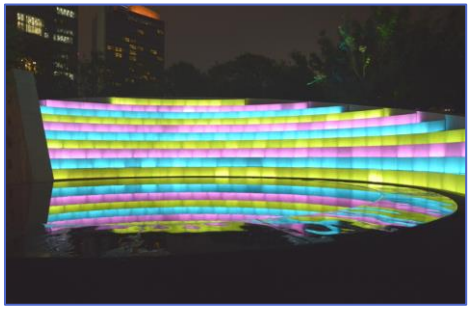
Housing	Extruded aluminum, powder coated
LENS	Optical lens, efficiency≥85%
Gasket	Glass and housing are silicone sealed
Glass	Step tempered glass. T=4mm.
Cable gland	IP-68 PG-9 PA66
BRACKET	Hard chrome plated stainless steel SUS 316L# T=1.5mm
Application environment	Temperature of water between -20℃~40℃
Power cable	2XH05RR-F 5x0.75mm² L=0.5m

HX510TLG-12Q

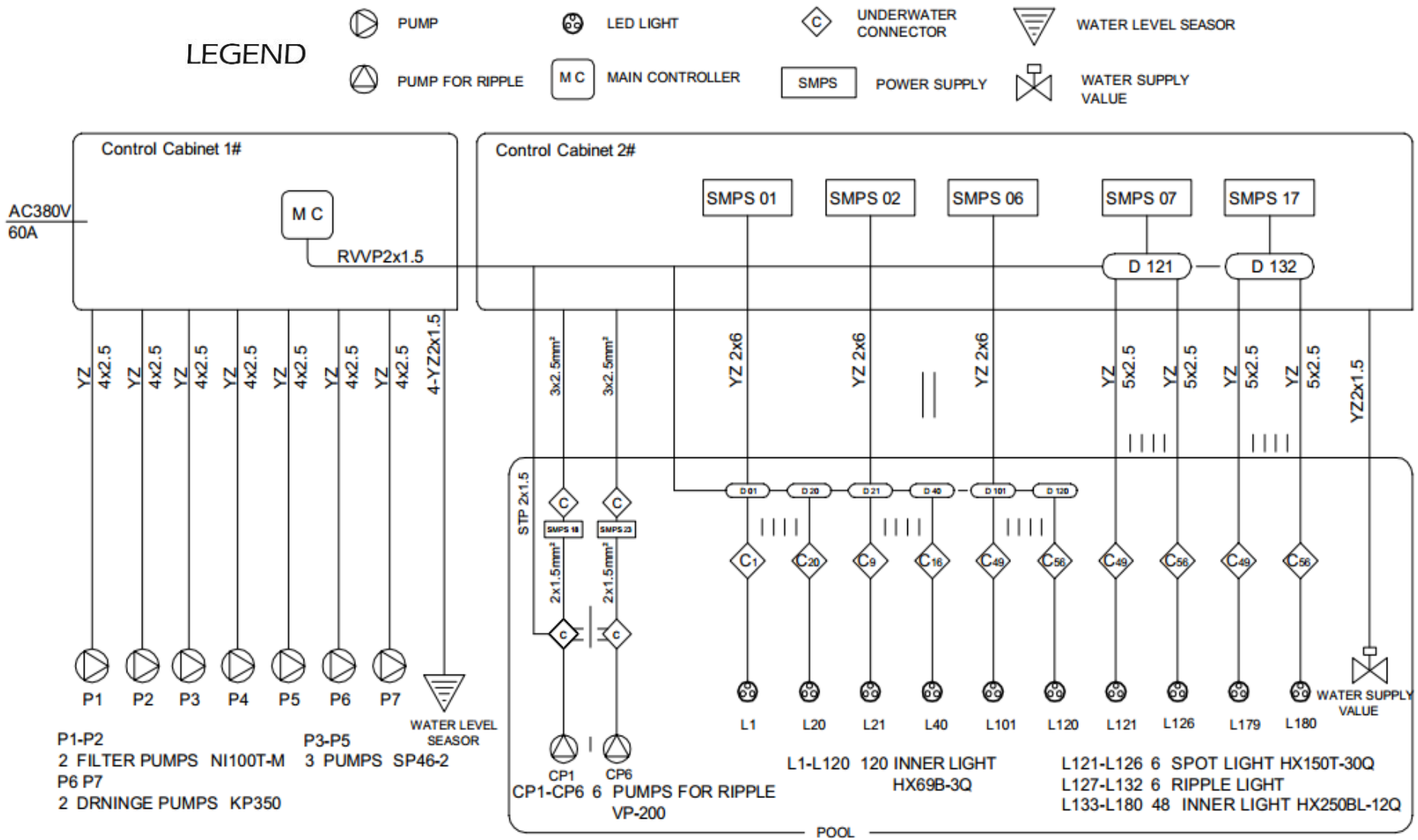


Dimensions (Unit: mm)

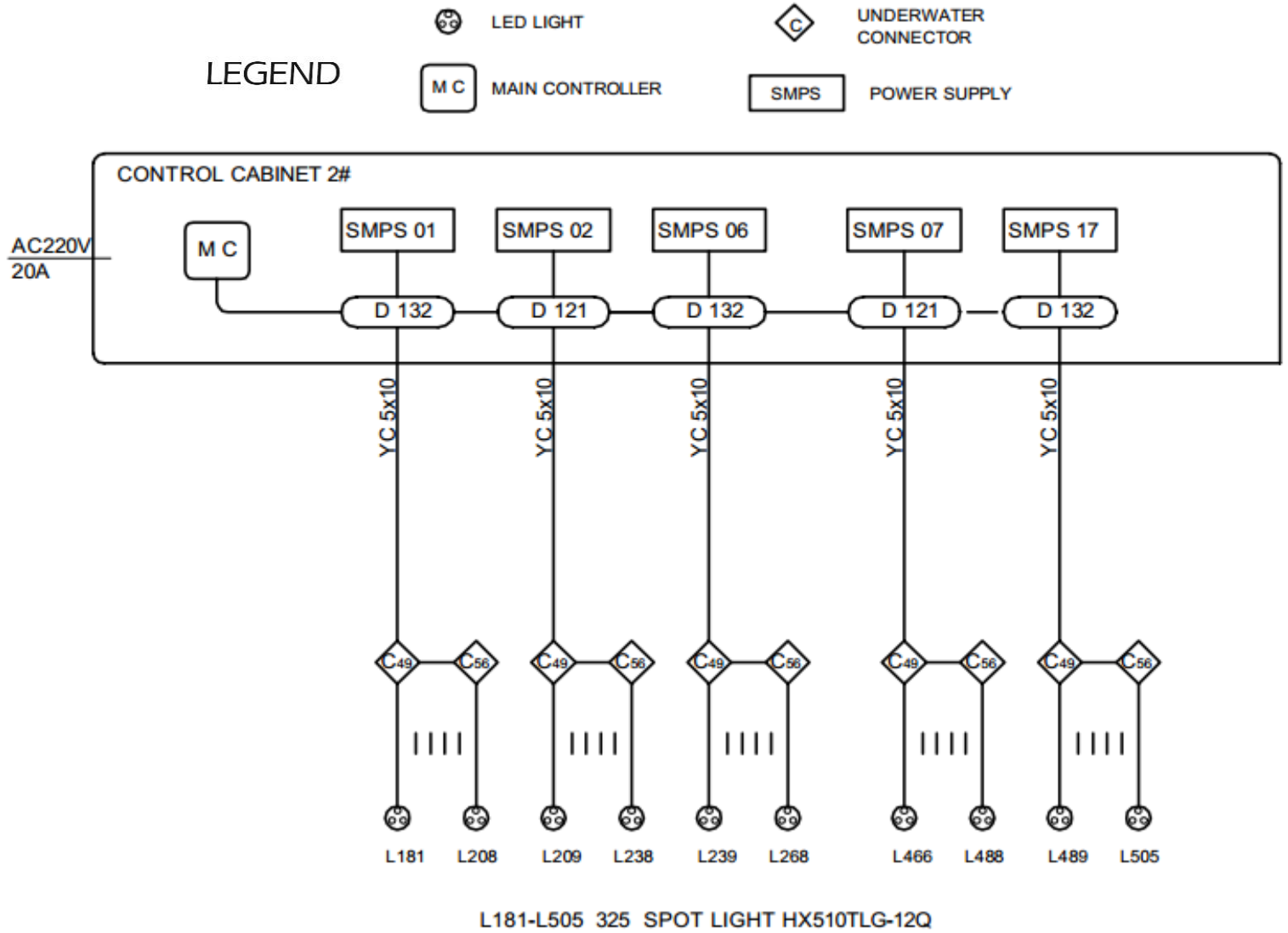




SYSTEM DIAGRAM —— ELEC SYSTEM 1

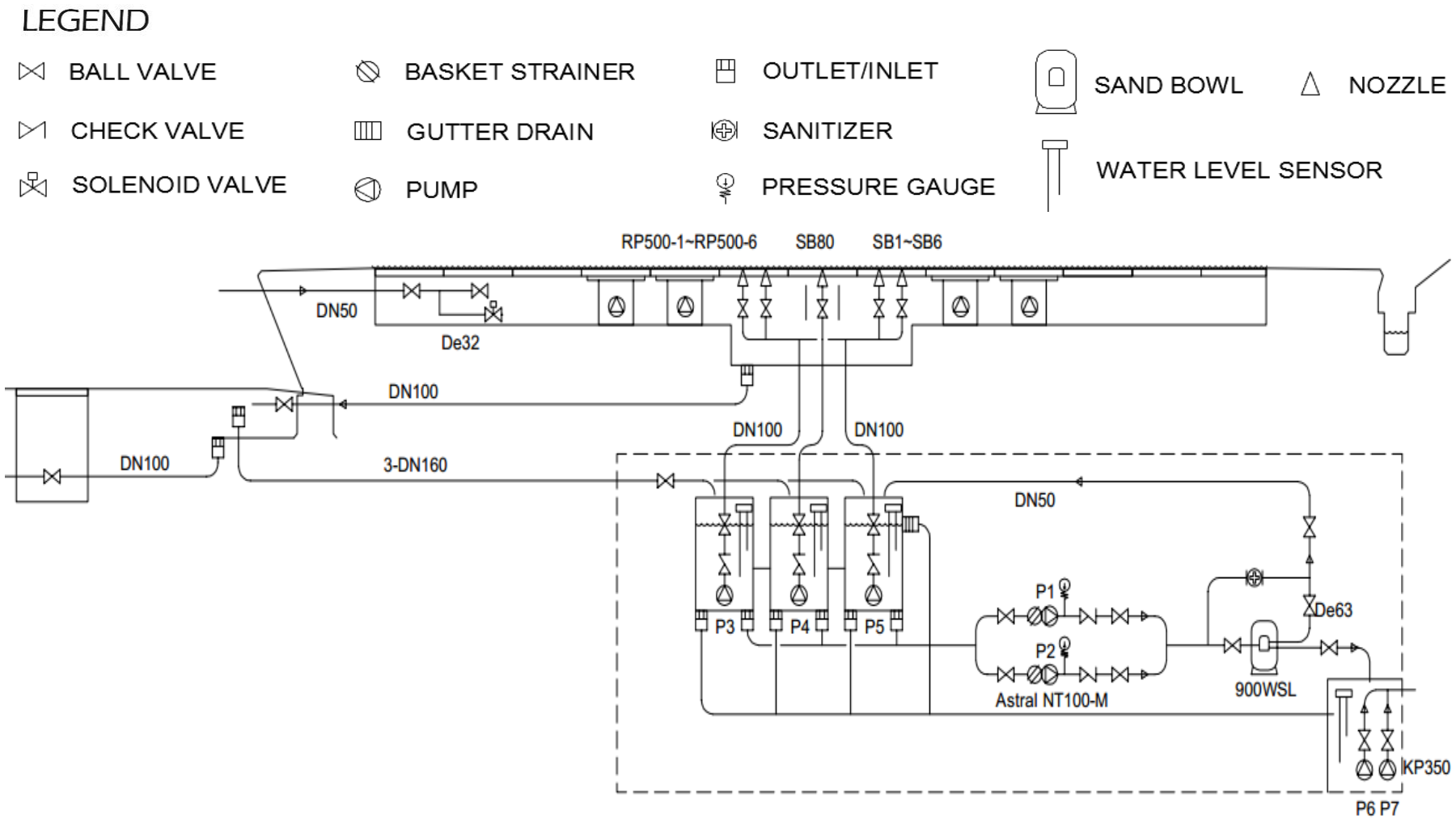


SYSTEM DIAGRAM —— ELEC SYSTEM 2



L181-L505 325 SPOT LIGHT HX510TLG-12Q

SYSTEM DIAGRAM —— WATER SYSTEM

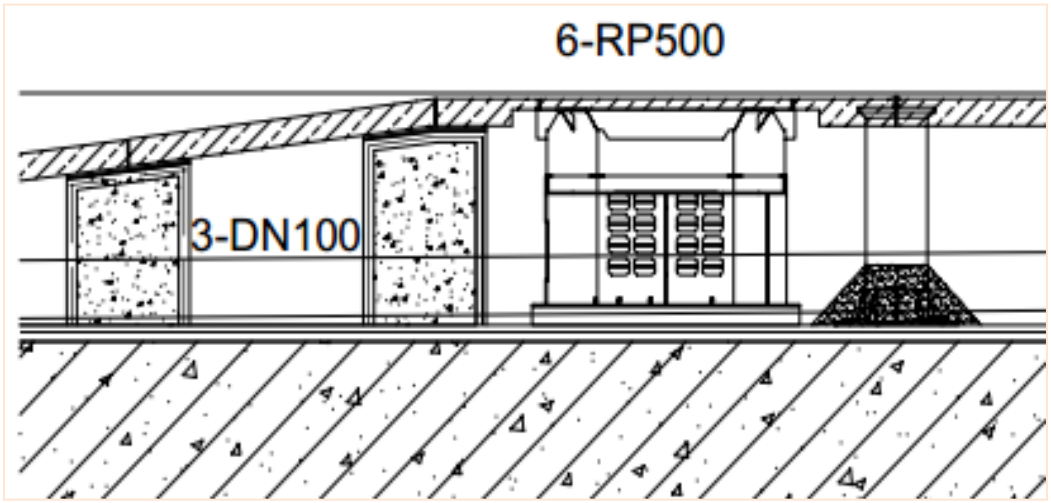


INSTALLATION DETAIL — *Ripple Generator*

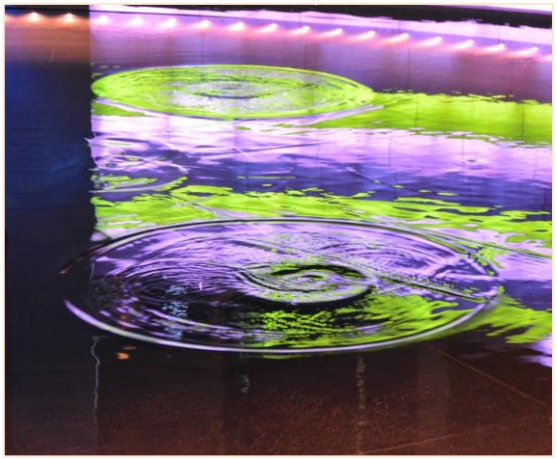






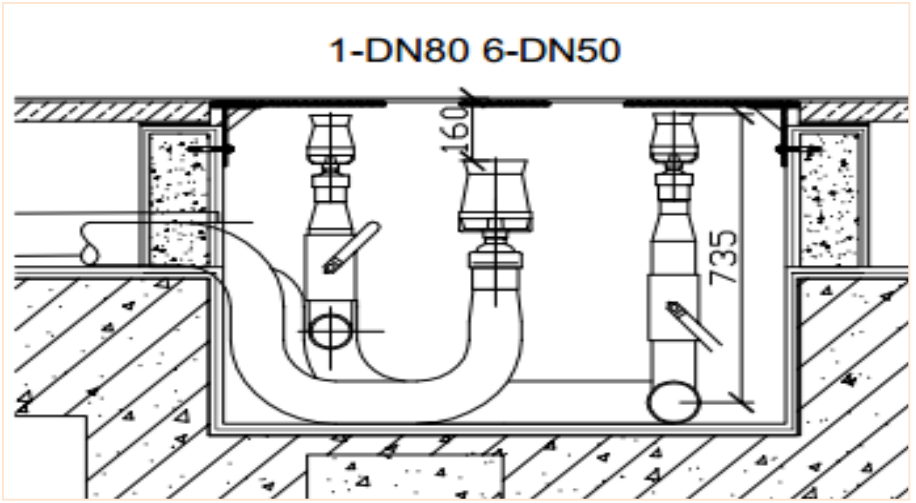






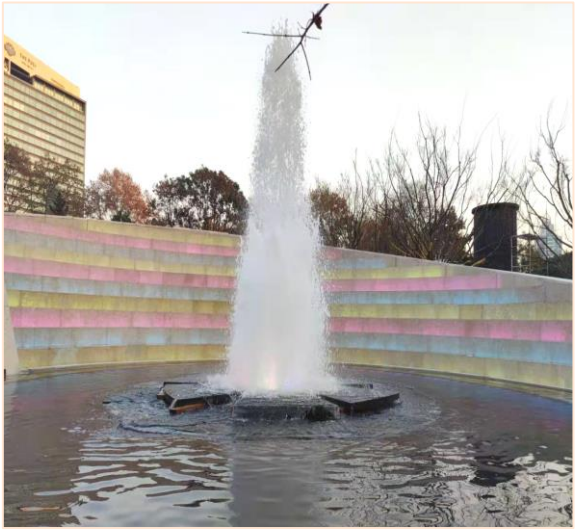
INSTALLATION DETAIL — Cascade Nozzle



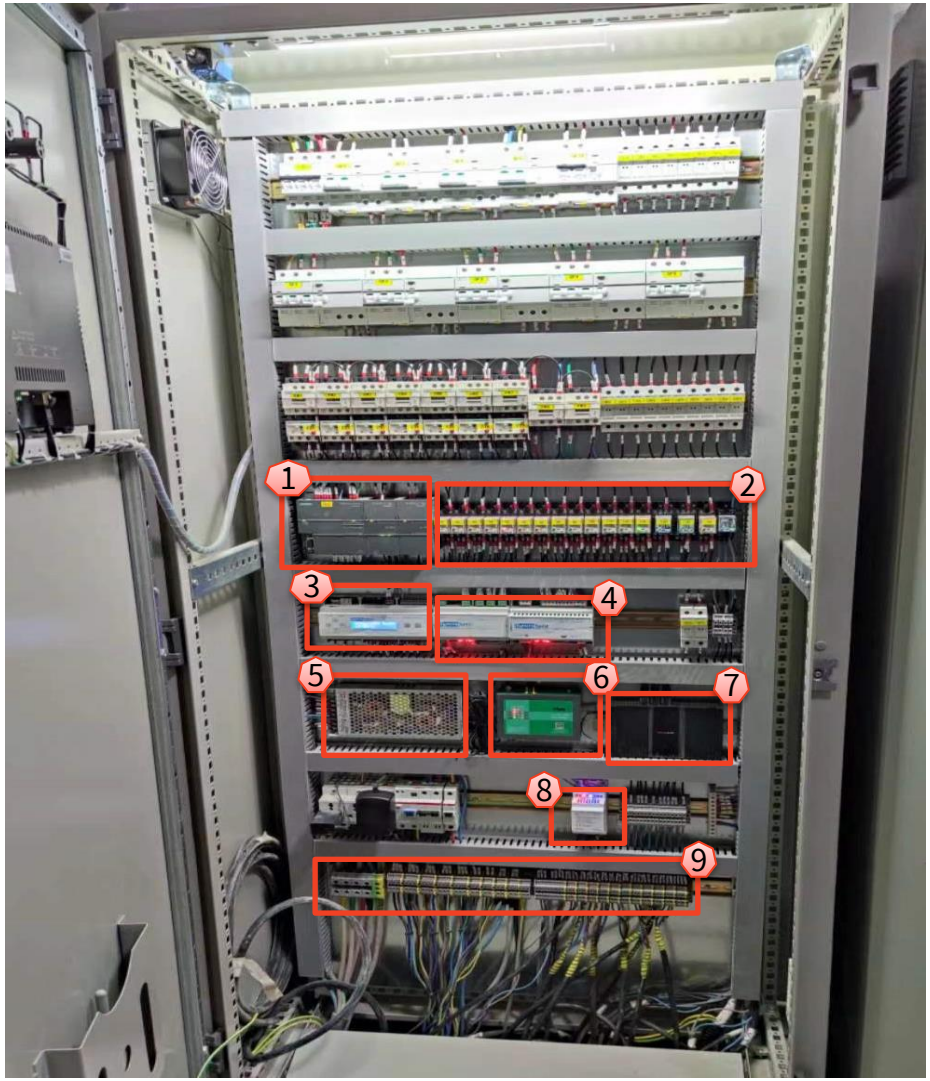






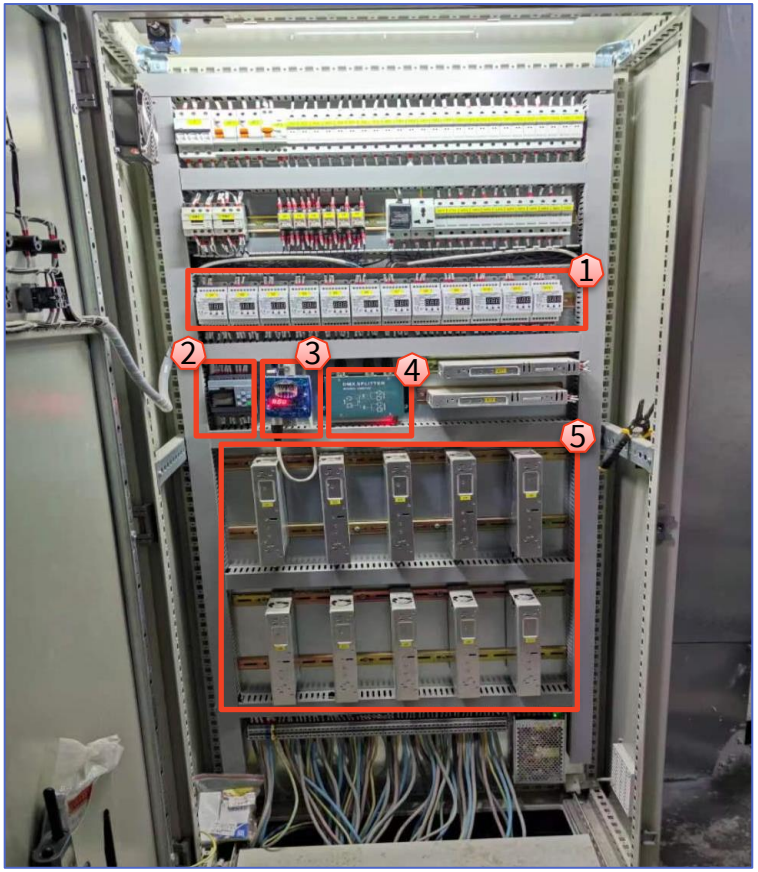


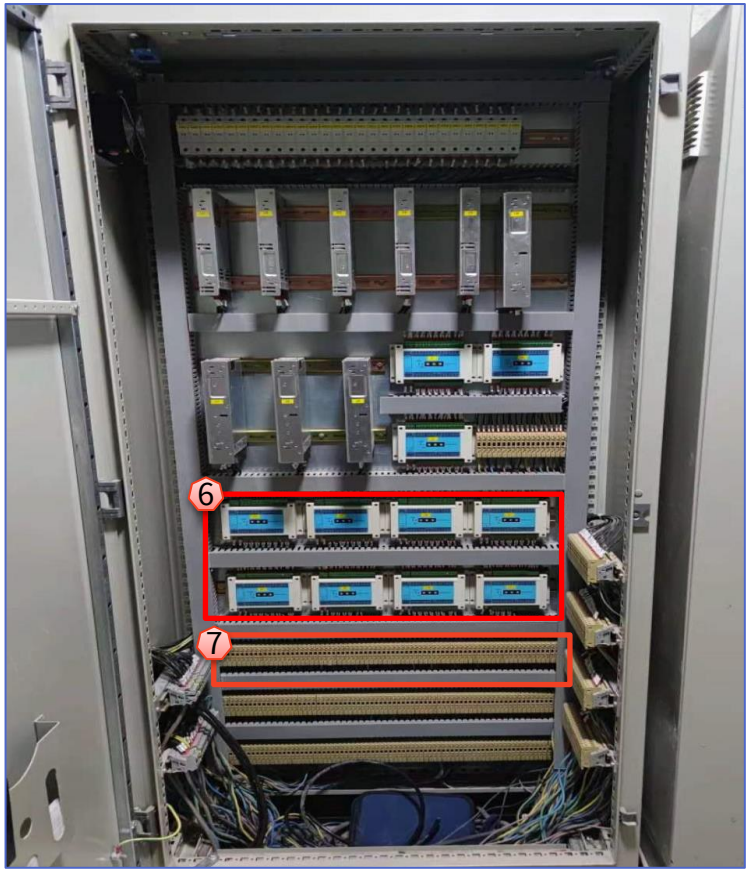
CONTROL CABINET



1. PLC
2. INTERMEDIATE RELAY
3. DMX MAIN CONTROLLER
4. DMX SPLITTER
5. POWER SUPPLY
6. NETWORKING MODULE
7. EXCHANGER
8. DMX SPLITTER
9. TERMINAL

CONTROL CABINET

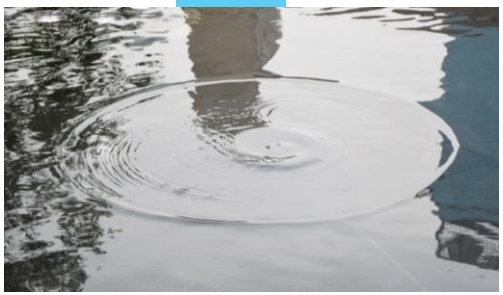




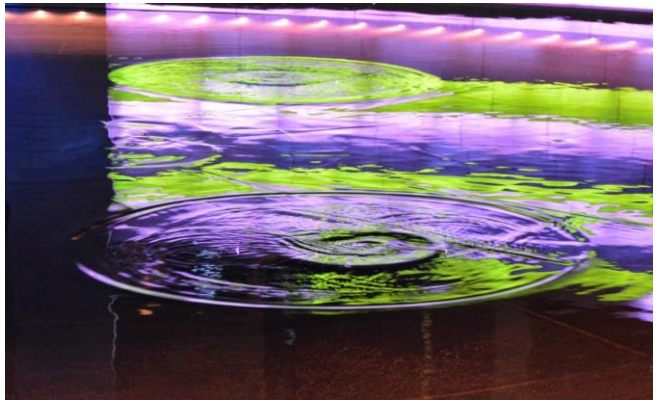
1. DMX DRIVER(DECODE) FOR HX510TLG-12Q
2. LOGO!
3. DMX MAIN CONTROLLER
4. DMX SPLITTER
5. POWER SUPPLY
6. DMX DRIVER(DECODE) FOR LED LIGHT IN BASIN
7. TERMINAL WITH INDICATOR AND FUSE

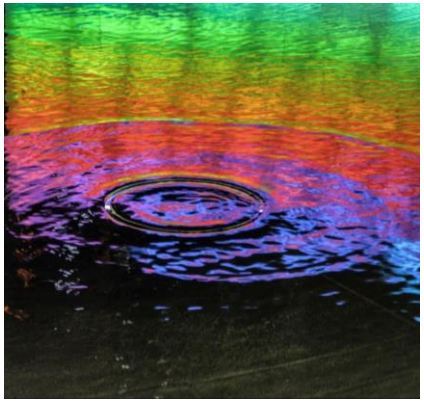
PROJECT PHOTOS

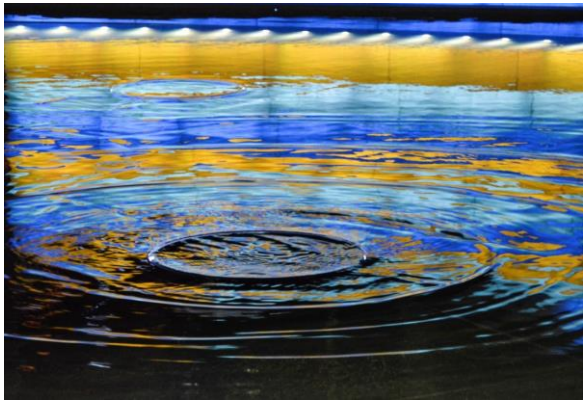






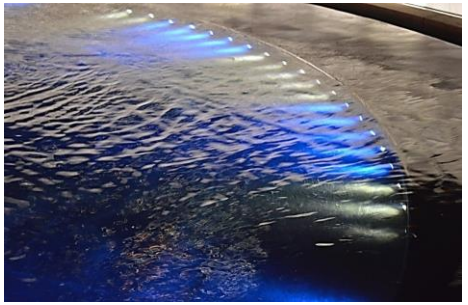




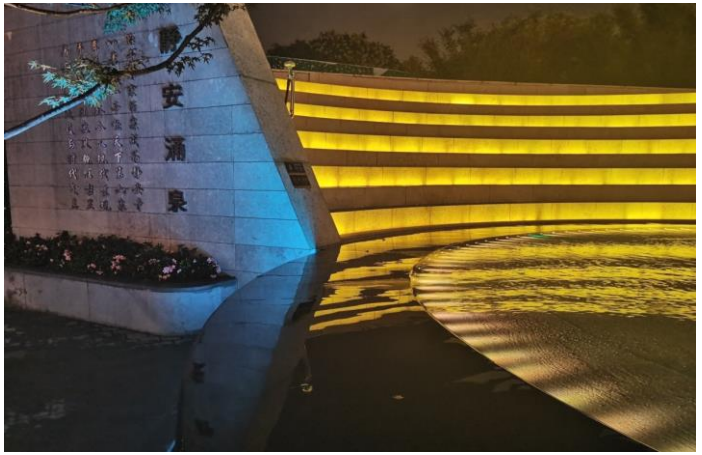


PROJECT PHOTOS













GCS SERVICES

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