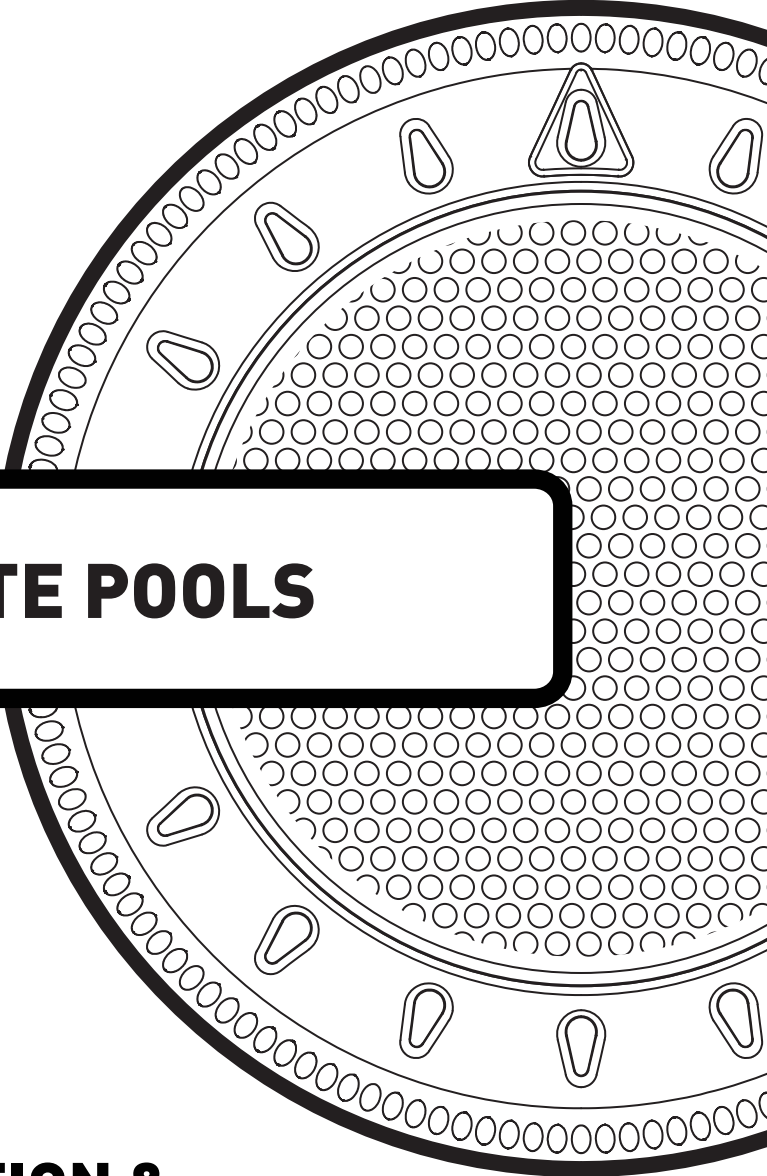




**QUANTUM**  
WN SERIES



**CONCRETE POOLS**

**INSTALLATION &  
OWNER'S MANUAL**



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## NOTICE

FRESH WATER USE ONLY  
HORIZONTAL MOUNT ONLY  
NOT INTENDED FOR OPERATION OUT OF WATER

FOR SUPPLY CONNECTION, USE ONLY AN ISOLATING LOW VOLTAGE POWER SUPPLY WITH UNGROUNDED OUTPUT, EVALUATED FOR SWIMMING POOL USE



# READ THIS FIRST

Congratulations on your purchase of a QUANTUM lighting system. All Spa Electrics lights are designed and manufactured in Australia from only the highest quality materials. For more information on Spa Electrics and our products, please visit [www.spaelectrics.com](http://www.spaelectrics.com)

## BEFORE YOU START:

- Cables can be shortened to suit individual installation requirements. Spa Electrics recommends all cabling is protected by conduit and that a junction box (or similar) is incorporated into pool cabling design to avoid siphoning.
- Ensure that the lighting system is installed by a qualified person (e.g. Registered pool builder and/or licenced electrician), in accordance with the most current edition and/or amendment of the NEC wiring code.
- For safe and proper installation, ensure that only those parts supplied with the system are used.
- Maximum installation depth for the **Quantum** Light (WN950) is 500mm (20") below nominal water level (to top of light)
- The **Quantum** Light (WN950) Must be correctly installed in the wall of the pool with the top of the lens no less than **4"** below the nominal water level.
- All lights should be mounted in a location that is easily accessible without the need for entering or lowering the pool water.
- At least 2.5ft of cable must remain stored within the Niche to ensure the light can be accessed above the waterline. (Maximum cable within niche :18AWG /16AWG = 8ft).

## CLEANING

- Only use warm water and a soft brush or cloth to clean Quantum series lights. DO NOT use detergents or spirits as this can damage the light and void your warranty.

## USE

- Do not operate light unless completely submerged in water.
- Operating the light for at least 15 minutes every week is advised (all year round).
- Quantum lights are suited for both domestic and commercial installations and can be operated continuously (24/7) if required.
- Temperature range for installation, operation and servicing: +32°F ~ +104°F (0°C ~ +40°C)



## WARNING

**The Quantum Light must only be used with a UL listed 12V AC power supply or a power source intended for swimming pool use (not included).**

**Minimum power source wattage requirement - 15 Watts per light.**

- DO NOT use electronic or switch-mode transformers with WN950-series lights. These transformers will damage the light and void your product warranty.
- Pool chemicals & pH levels: Due to the corrosive nature of unbalanced pool chemicals, Spa Electrics strongly recommend that your pool water is balanced prior to installing your pool lights or any plastic or stainless steel components, and tested weekly to maintain these levels. pH levels should be maintained between 7.2 – 7.6 at all times to ensure the longevity of these components.
  - > Failure to do so can result in chemical damage to the light housing and pool fittings, including stainless steel components.
  - > Please note: Lights or components found to have excessive chemical damage will not be covered under our manufacturer's warranty policy
- This light contains no user-serviceable parts; opening the light will void the product warranty.

# TOOLS REQUIRED

- No. 2 Phillips screwdriver



## IMPORTANT NOTE

- The use of power tools during installation is **not** recommended as these devices can cause damage to the light and components.
- All installation steps should be carried out with manual tools only.
- The enclosed images are for illustrative purposes only. Appearances of parts and assemblies may vary from the enclosed illustrations.
- Please contact your reseller if you have any questions regarding the correct installation of this product.



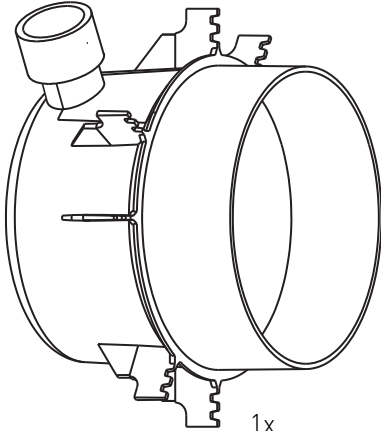
## WINTERIZATION

- Lights **MUST** be removed from pool wall and cable disconnected via plug connection & stored in a safe place.
- Red plug cover must be fitted to plug top prior to reinstalling into niche for winter.
- Unless niche/conduit connection is adequately sealed; pool water level must be drained down **12" below** the lowest light(s) position in pool wall.
- If possible, all conduits should be checked for accumulated water and drained if required.
- Consult your local pool professional for complete pool winterization process.

## PRODUCT SUPPORT & INFORMATION

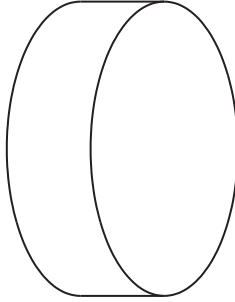
For the most update to date installation information and contact information for assistance in your region, please visit [www.spaelectrics.com](http://www.spaelectrics.com)

# INCLUDED PARTS

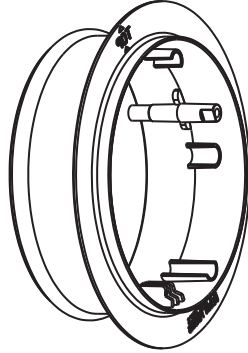


1x  
NICHE

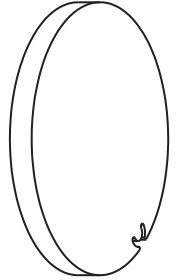
(TOP CABLE EXIT - NO GLAND)



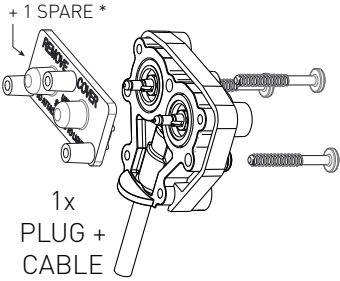
1x  
FOAM  
INSERT



1x  
MOUNTING RING

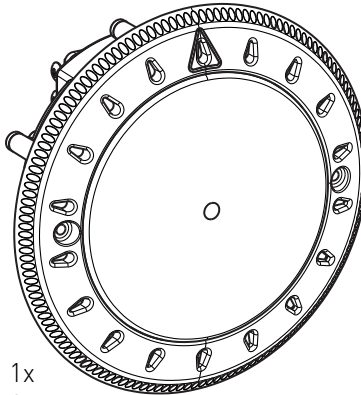


1x  
FOAM  
INSERT



+ 1 SPARE \*  
1x  
PLUG +  
CABLE

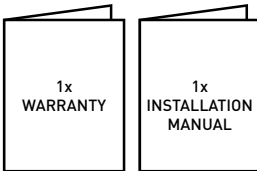
\* 1 SPARE TERMINAL COVER PROVIDED FOR WINTERIZATION (SEE PAGE 6)



1x  
LIGHT



2x  
MOUNTING  
SCREWS



1x  
WARRANTY

1x  
INSTALLATION  
MANUAL

## UL LISTING #

NICHE	# WN9081 US
LIGHT (Blue)	# WN9 CBL US
LIGHT (White)	# WN9 CW4 US
LIGHT (Multi)	# WN9 CMC US
LIGHT (P / Z*)	# WN9 CMC P US
PLUG & CABLE (80ft)	# WNP 18AWG 80 US
PLUG & CABLE (100ft)	# WNP 18AWG 100 US
PLUG & CABLE (150ft)	# WNP 16AWG 150 US

## REQUIRED PART (NOT INCLUDED)

### UL LISTED 12V AC POWER SUPPLY OR POWER SOURCE INTENDED FOR SWIMMING POOL USE

Minimum power source wattage requirement - 15 Watts per light

Spa Electrics recommends the use of our "LVX" series safety transformers with our QUANTUM 6" lights.

For more information visit [www.spaelectrics.com](http://www.spaelectrics.com)

# INSTALLATION

## 1 ATTACH NICHE TO REINFORCEMENT BARS

### (Before spraying concrete)

Attach the niche to either horizontal or vertical steel mounting bars using wire ties or similar. Ensure conduit entry is at the top of the niche. (Fig. 1)

### CAUTION:

The Quantum (WN950) light must be correctly installed in the wall of the pool with the top of the lens no less than 4" below the nominal waterline of the pool.

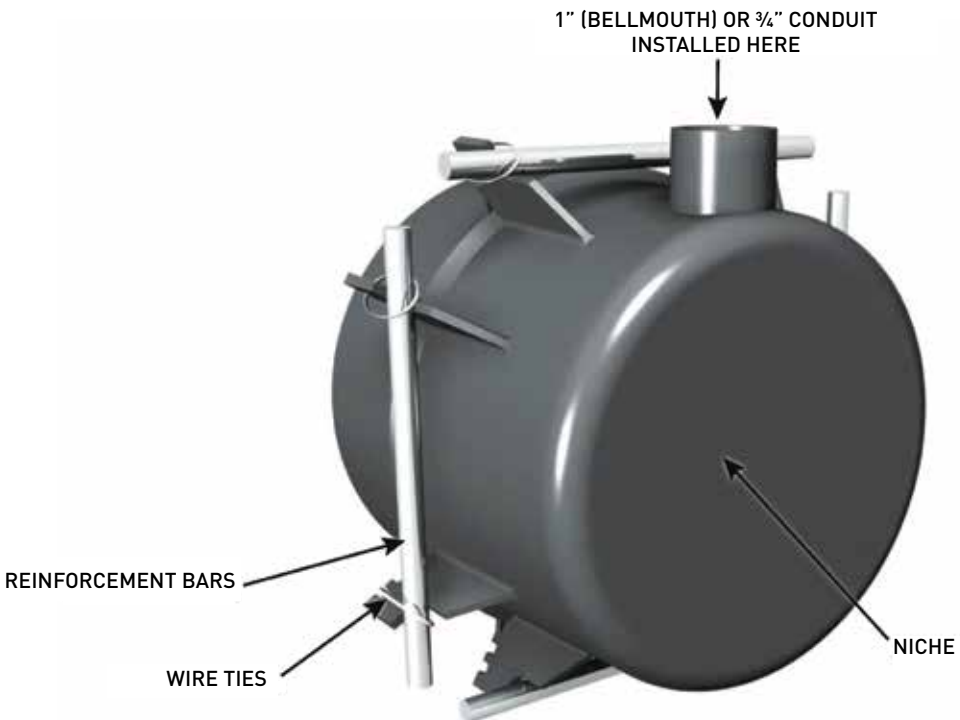


Fig.1

## 2 INSERT AND GLUE 3/4" CONDUIT INTO NICHE

Glue length of 1" (bellmouth) or 3/4" conduit into top of niche using PVC solvent cement (suitable for ABS plastics). Conduit should extend above the water level of the pool.

**CAUTION:** Ensure that sufficient area behind the niche is dug out to allow for 2-3" of concrete coverage around the entire niche.



# 3

## INSTALL SECONDARY CONDUIT

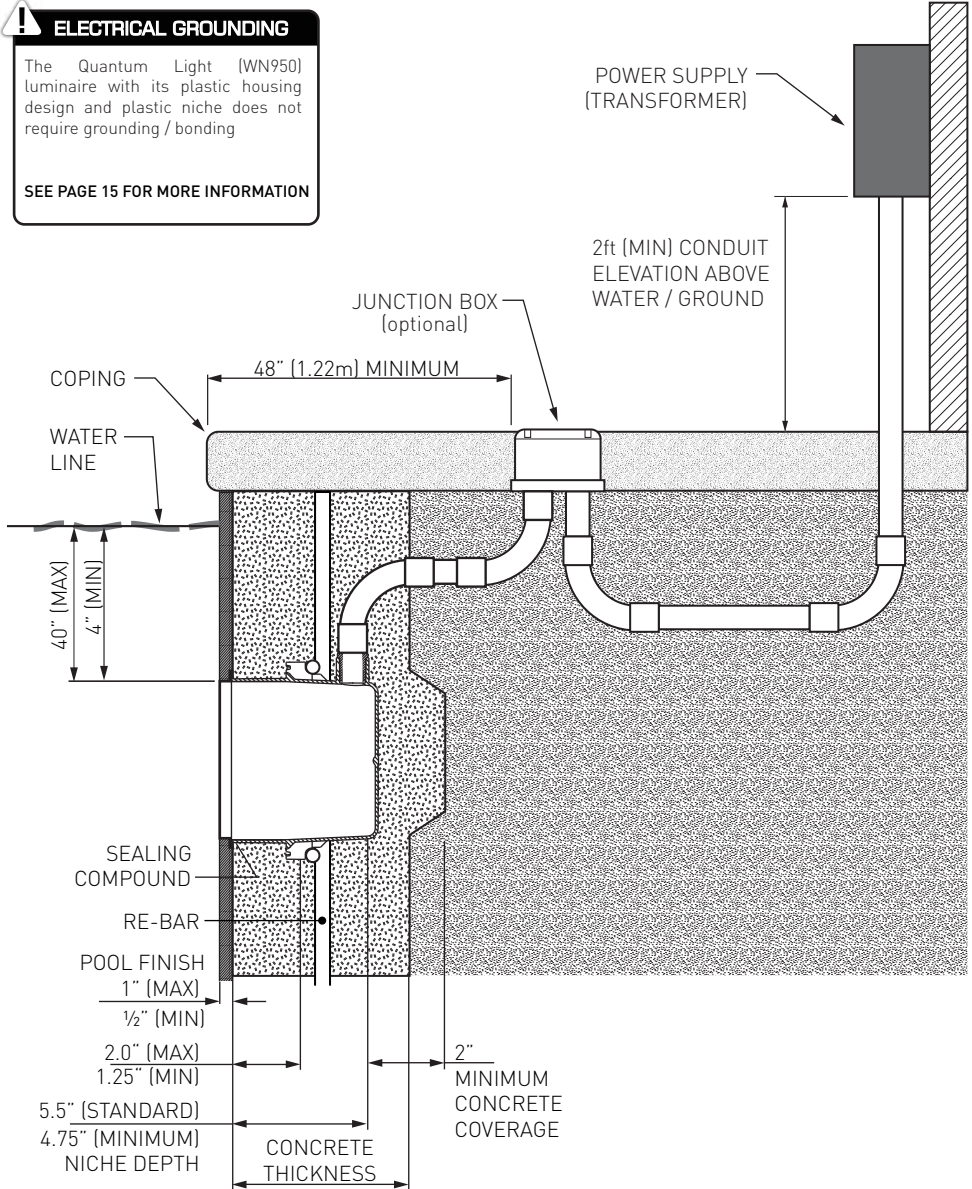
Depending on your installation requirements, conduits may run to a common junction box or return directly to the power supply. In either case, it is imperative that the conduit extends above the water level of the pool at some point in order to prevent syphoning.

**NOTE:** Conduit should contain a draw wire to allow for easy installation of power cable.

**⚠ ELECTRICAL GROUNDING**

The Quantum Light (WN950) luminaire with its plastic housing design and plastic niche does not require grounding / bonding

SEE PAGE 15 FOR MORE INFORMATION



# 4

## CONCRETE SPRAYING

Spray concrete, paying particular attention to covering the entire niche. Using fingers, scoop out the concrete around the front edge of the niche. (Fig 3)

**WARNING:** Ensure that the concrete is well compacted around the rear and base of the niche, otherwise the pool may leak.

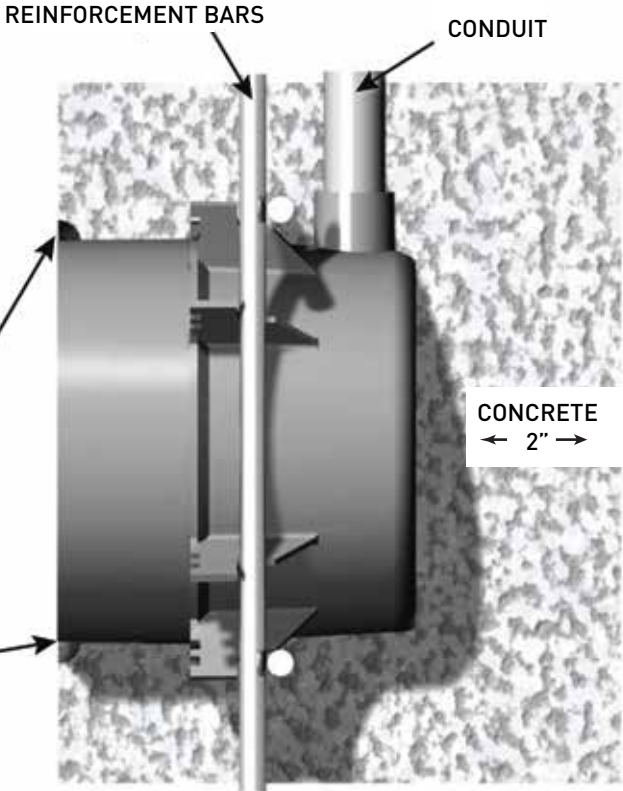
**CAUTION:** The front of the niche should not be recessed into the concrete.

**! \* SEALING NOTES**

SEALING COMPOUND OR HYDRAULIC CEMENT REQUIRED TO PREVENT WATER EGRESS THROUGH POOL WALL.

ENSURE NICHE RIM IS CLEAN, DRY AND FREE OF DEBRIS PRIOR TO APPLICATION OF SEALING COMPOUND.

ENSURE SEALING COMPOUND IS SUITABLE FOR USE WITH ABS PLASTIC



SCOOP OUT CONCRETE AROUND FRONT EDGE OF NICHE AND APPLY WATERPROOF SEALANT IN RECESS

TRIM (MAX 3/4") NICHE BACK TO WALL SURFACE.

Fig.3

# 5

## FOAM REMOVAL

**(After concrete is sprayed and dry)**

Remove foam from niche and if necessary, trim niche back to wall surface. Apply a waterproof sealant in the recess between the niche and the concrete wall. (Fig 3)

**CAUTION:** Do not trim more than 3/4" from the front of the niche or there may not be sufficient depth remaining for inserting the light.

# 6

## MOUNTING RING PREPARATION

Apply PVC solvent cement to bubble at rear of the mounting ring, and also to the inside of the niche where the mounting ring is likely to finish. (Approximately 1 ½" inside niche) (Fig. 4)

**WARNING:** Ensure PVC solvent cement is suitable for ABS plastics.

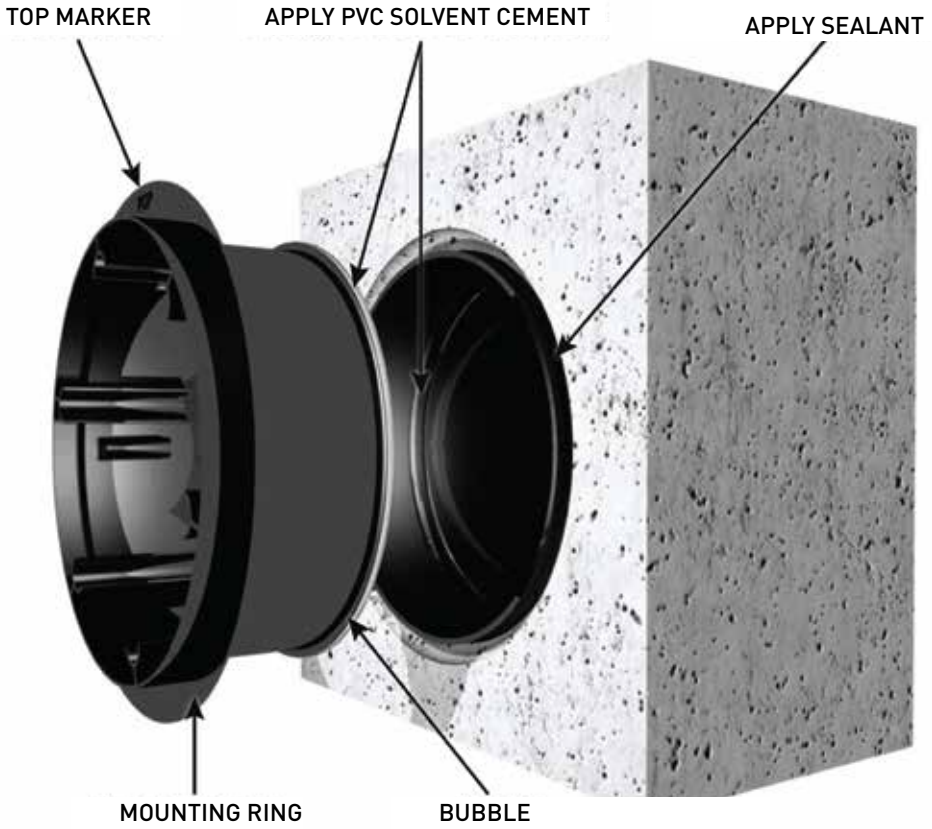


Fig.4

# 7

## ASSEMBLE MOUNTING RING INTO NICHE

Slide mounting ring into niche, with 'TOP' arrow up; insert until flush against pool wall.

**CAUTION:** Ensure that the mounting ring is parallel with pool wall as the interior pool surface must be level with this ring.

# 8

## APPLY POOL FINISH

Plaster or tile interior pool surface, level with raised edge of mounting ring.

**CAUTION:** Interior surface should not finish more than 1/2" higher than raised edge of mounting ring, or the light may not be able to be mounted.

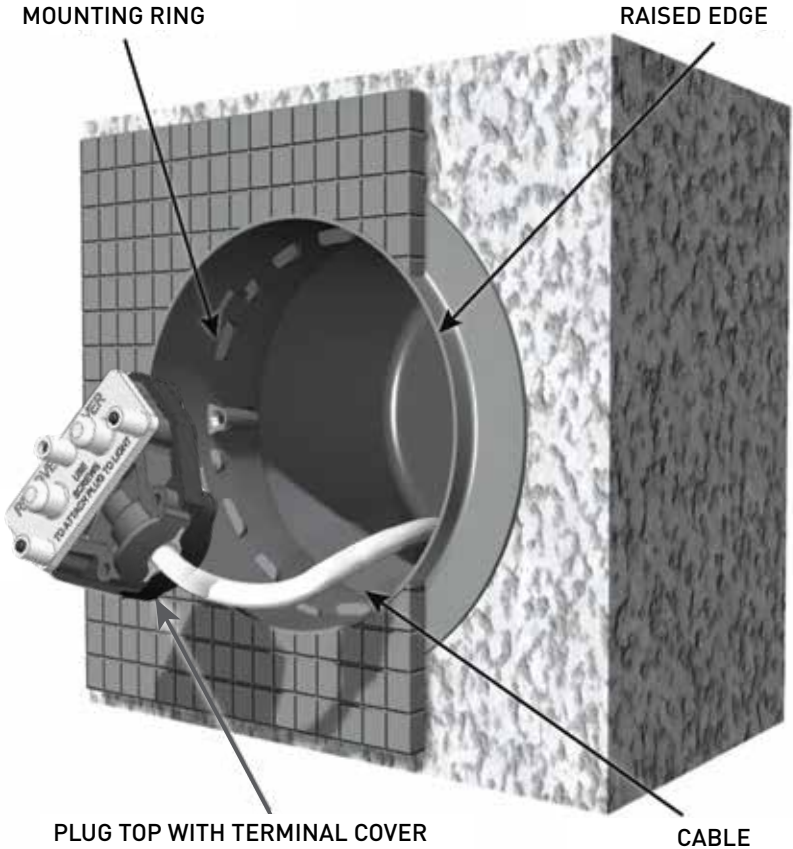


Fig.5

# 9

## INSERT CABLING

Using the draw wire, feed the cable from the pool interior, through the niche and conduit to transformer. Ensure that approximately 2.5ft (min) of cable extends from the niche to the light, in order to allow the light to be lifted from the water to the pool surround for servicing.

**CAUTION:** Do not install the light until after the pool has been acid washed. (Fig. 5)

# 10

## CABLE ATTACHMENT

Remove the terminal covers from both the light housing and the plugtop. Ensure both plug top seals are present and located within their grooves. Attach plug top to light housing using the three fixing screws provided and tighten firmly by hand, using phillips-head screwdriver. (Fig. 6)

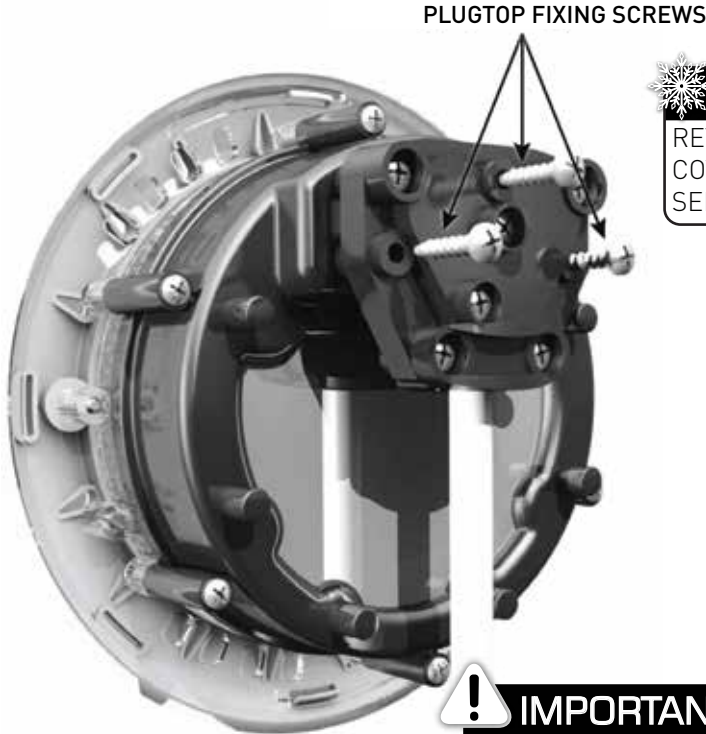


Fig.6



### WINTERIZATION

RETAIN PLUG TERMINAL COVER FOR WINTERIZATION. SEE PG 6 FOR DETAILS



### IMPORTANT NOTES

- > DO NOT OVERTIGHTEN SCREWS
- > DO NOT USE POWER-TOOLS
- > DO NOT ADD SEALANTS OR GREASES
- > ENSURE ALL SURFACES ARE CLEAN AND DRY
- > **DO NOT ASSEMBLE UNDERWATER**

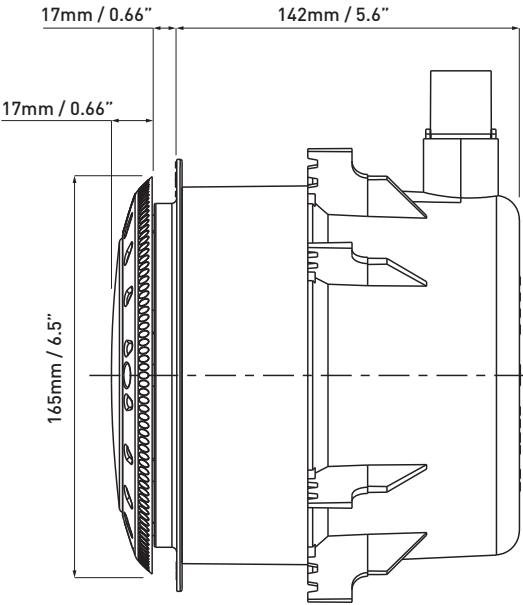
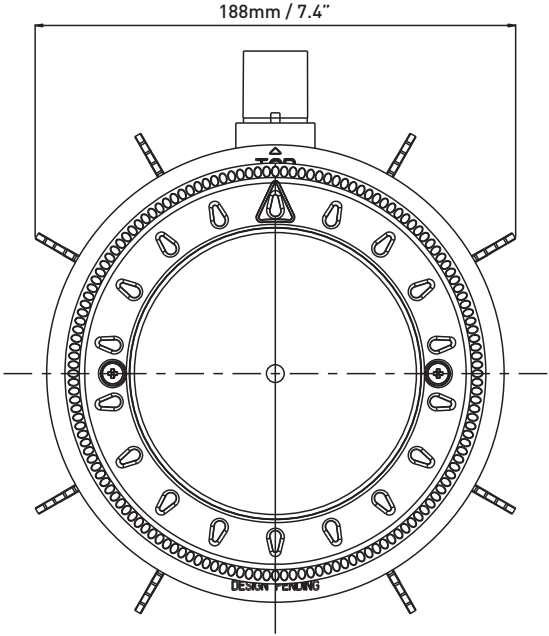
# 11

## ASSEMBLE LIGHT INTO NICHE

Coil the remaining cable into the niche (not around the light body) in a clockwise rotation. Continue turning in a clockwise direction until all cable is inside the niche and the plug top on the light is at the 12 o'clock position. Gently push the light back into the niche. Insert the two fixing screws provided and lightly tighten.

**WARNING:** Ensure that the light is not operated until it is fully submerged in water.

# KEY DIMENSIONS



# ELECTRICAL GROUNDING

## Underwriters Laboratories (UL) Statement

Per the NEC, NFPA 70, Article 680.23 (B)(5), states that bonding shall not be required for luminaires that are listed for the application and have no non-current carrying metal parts. In addition, per Article 680.26 (B)(4), exception states that Listed low-voltage lighting systems with non-metallic forming shells shall not require bonding.

Therefore, luminaires with polymeric/non-current carrying metal parts are not required to be grounded / bonded.

## Manufacturers Statement

Spa Electrics Quantum & Atom (WN950 & EM) luminaires with their plastic housing designs and plastic niches do not require grounding / bonding.

Spa Electrics Quantum & Atom (WN950 & EM) luminaires have also been determined to comply with the applicable requirements for wet-niche, LED type Swimming Pool and Spa Luminaires.

# FCC COMPLIANCE STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two (2) conditions:

- (1) This device may not cause harmful interference, and
- (2) This device may not accept any interference received, including interference that may cause undesired operation.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant of part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

**Do not make any changes or modifications to the equipment unless otherwise specified in the manual**



## NOTE

PLEASE STORE THIS  
MANUAL IN A SAFE PLACE  
FOR FUTURE REFERENCE



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**Spa** Electrics



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