

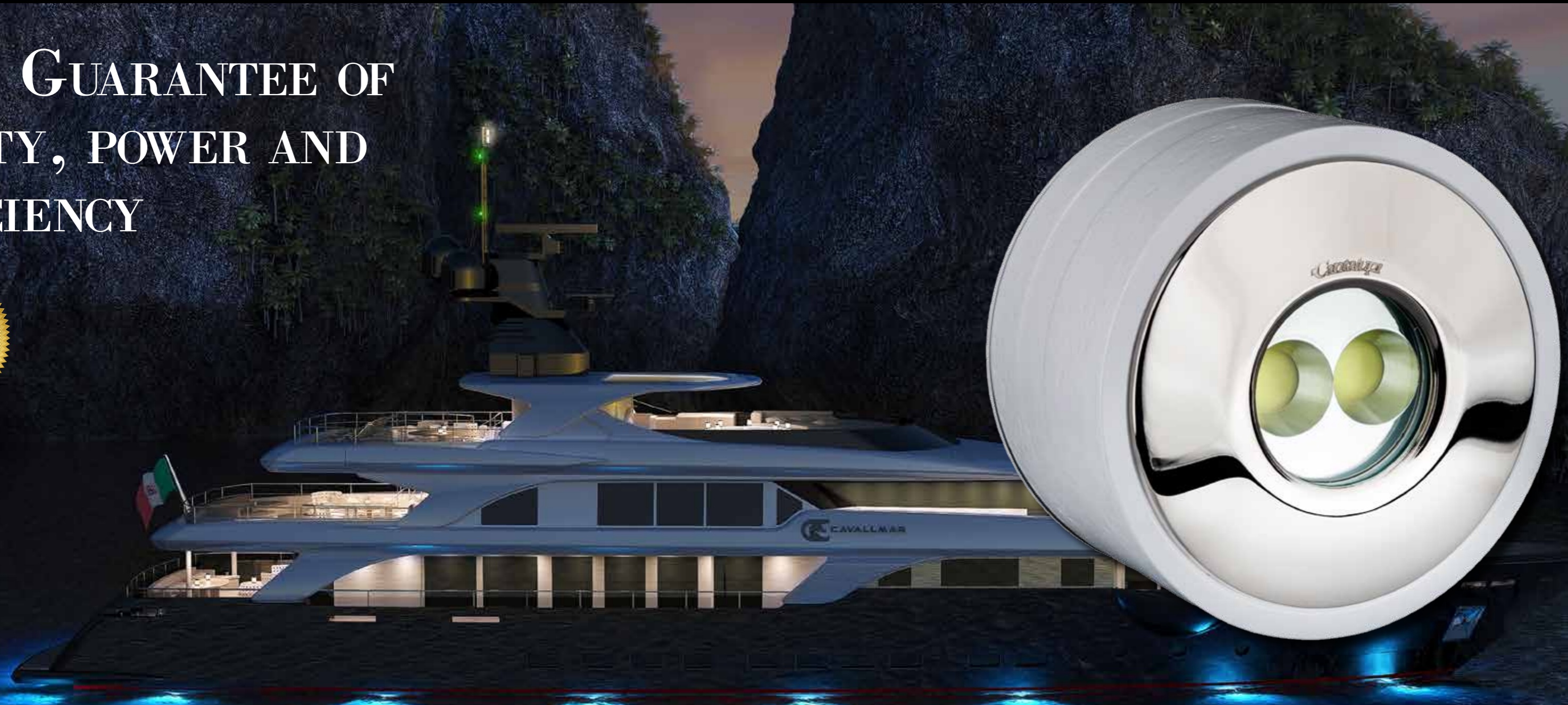
# SEALED®

# SY / SERIES



STEEL & ALUMINUM HULLS VERSIONS

THE GUARANTEE OF  
SAFETY, POWER AND  
EFFICIENCY

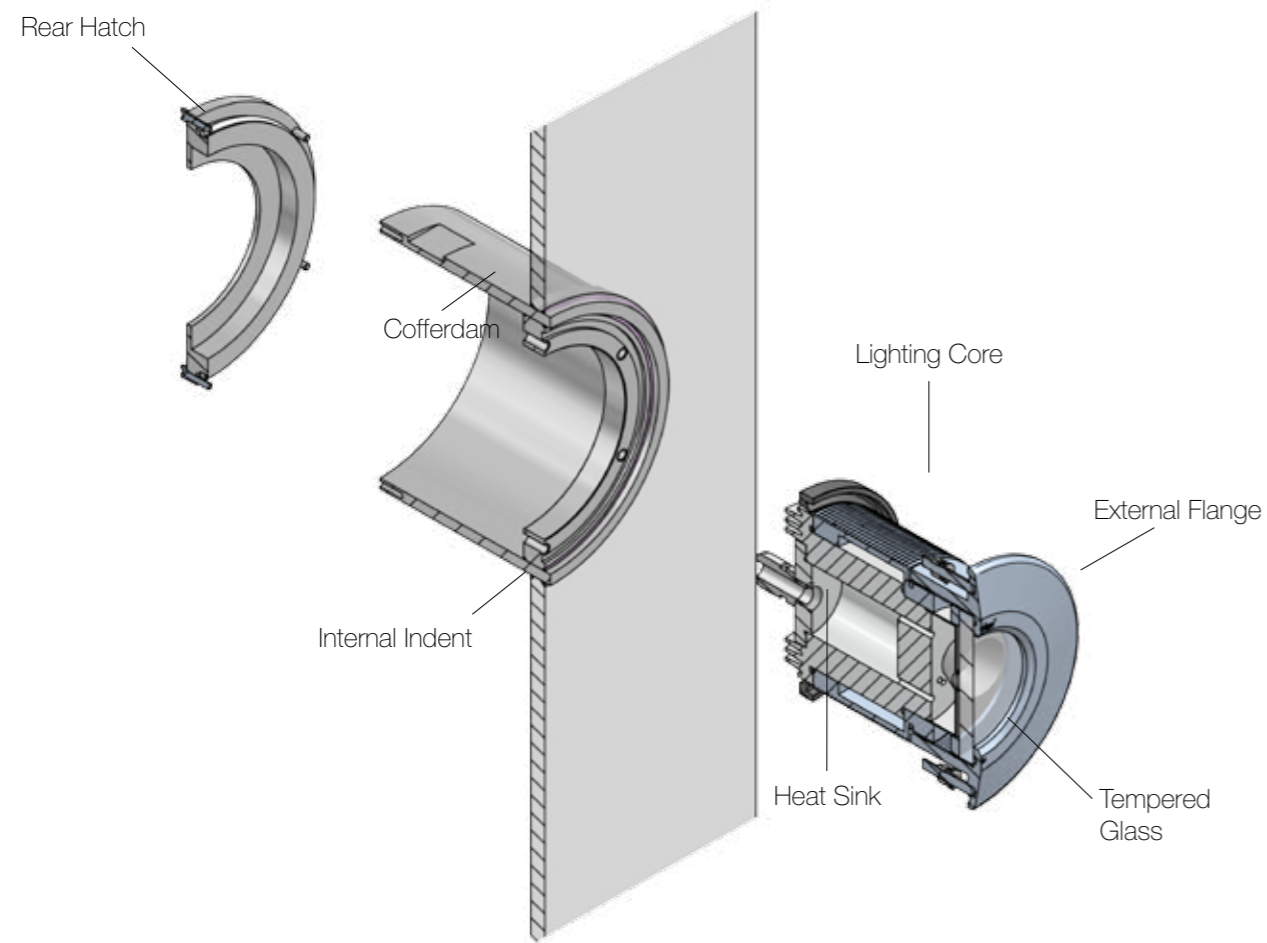


*“The SEALED® SY series is part of the widest and most innovative range of underwater lights for superyachts. All SEALED® lights are serviceable from inside the yacht for a quick and easy inspection of the light body.”*

*SEALED® SY lights are very powerful to create a beautiful halo effect around the yacht. They are born to guarantee the maximum safety onboard: three barriers are interposed between the hull and the inside of the yacht to assure a perfect watertight protection in respect of the marine certifications.*

*SEALED® SY are also available in RGB+W with Bus multimedia control to offer the most versatile and easy-to-use experience through a variety of standards and devices of the latest generation smartphones and tablets.”*

EXPLODED VIEW DRAWING



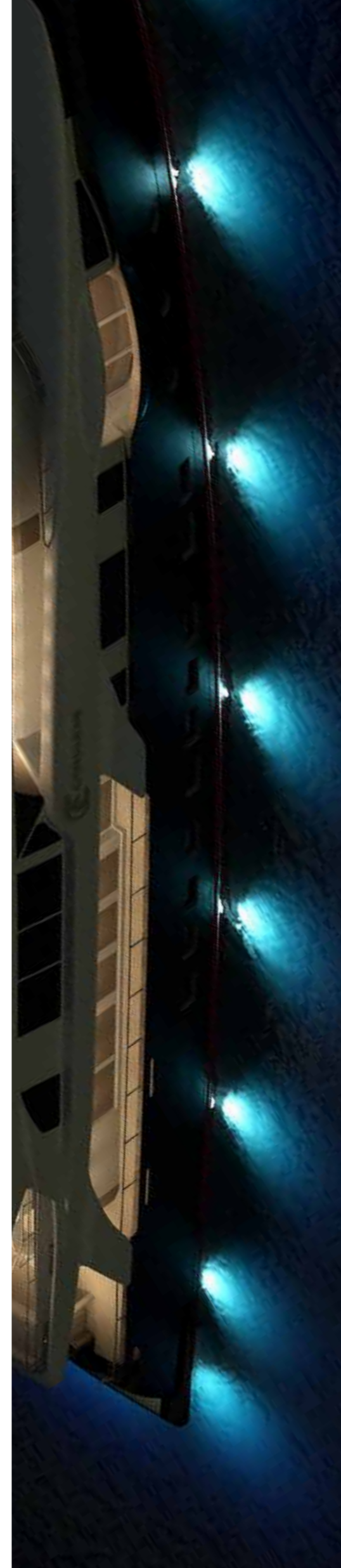
TECHNICAL DESCRIPTION

The care for the details guarantees the extreme reliability and safety of the SEALED® SY.

The exploded view drawing (fig.1) shows a dedicated design focused on the simplicity for an easy installation and inspection of the light.

The tempered glass couples the Cofferdam with the External Flange.

The Rear Hatch bolted to the Cofferdam grants the watertight protection to the case. The quality of the materials used and the perfect design of the Heat Sink are unique points of strength for the light efficiency.



FIXTURE COMPOSITIONING

SEALED® SY are designed and manufactured to perform at the highest levels. The materials used are of the best quality to work in the harshest environments. The Light Body (fig.1) is assembled and sealed in one piece in the factory to grant the highest watertight protection. The glass is made of Tempered Glass 10mm thick highly resistant to the impacts.

The aluminum reflector, protected from the environment by a film of sprayed metallic paint, offers the widest beam angle for the maximum light efficiency. The light body guarantees, through allen screws and O-Rings, the perfect mechanical holding. Everything has been tested in compliance with the highest standard and regulations.

Figure 2 shows how easy is to remove the Lighting Core from inside the hull without hauling the yacht should servicing ever be required.

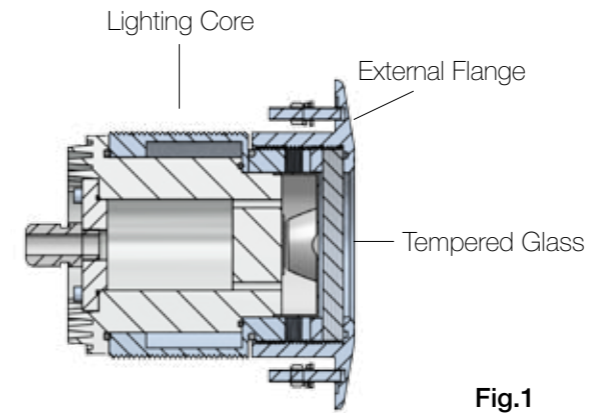


Fig.1

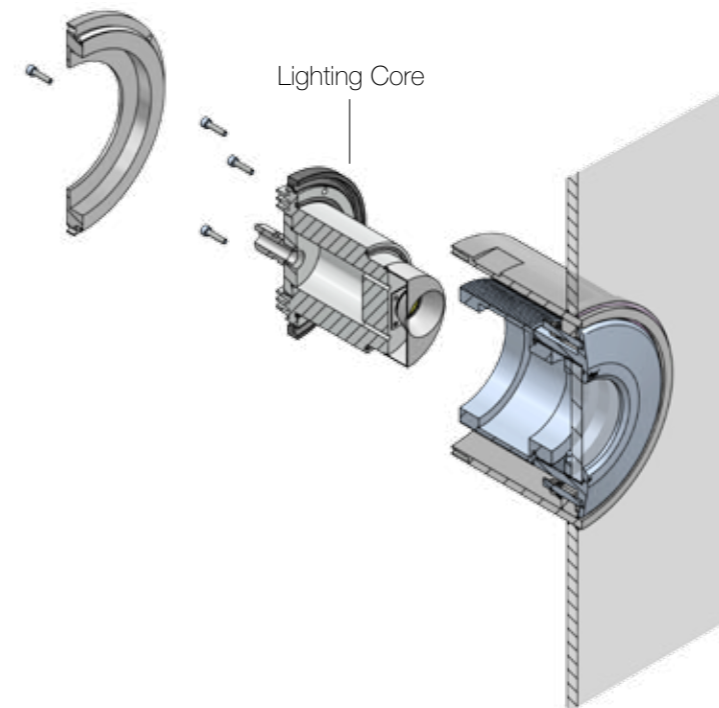


Fig.2

WATERTIGHT PROTECTION

The SEALED® SY are designed to offer three protection barriers (fig.3) against the external water pressure. Each barrier is tested through dedicated procedures in compliance with the naval certifications (prior approval supplied by the naval certifications):

1st Barrier: External Flange – Tempered Glass – Counter Flange screwed to the cofferdam.

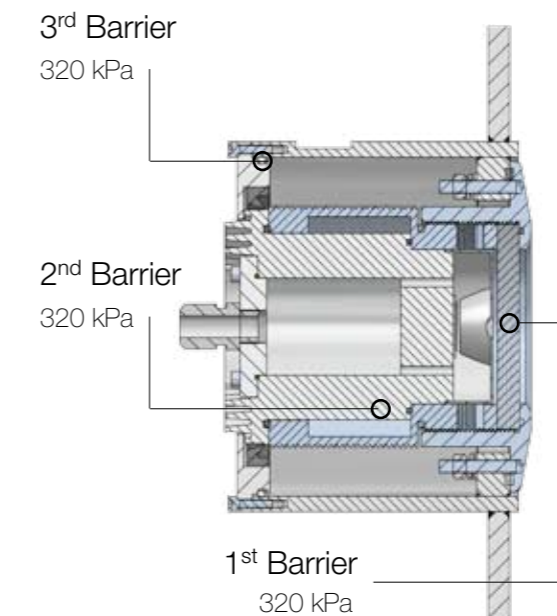
This is first and most important protection against the water pressure. The External Flange, the Tempered Glass and the Counter Flange hinged to the cofferdam form a single body that guarantees the perfect watertight protection. In the lab a 320 kPa pressure is applied to this part to pass the tests.

2nd Barrier: Lighting Core.

The Lighting Core is potted inside the fixture to protect the light from water ingress.

3rd Barrier: Rear Hatch.

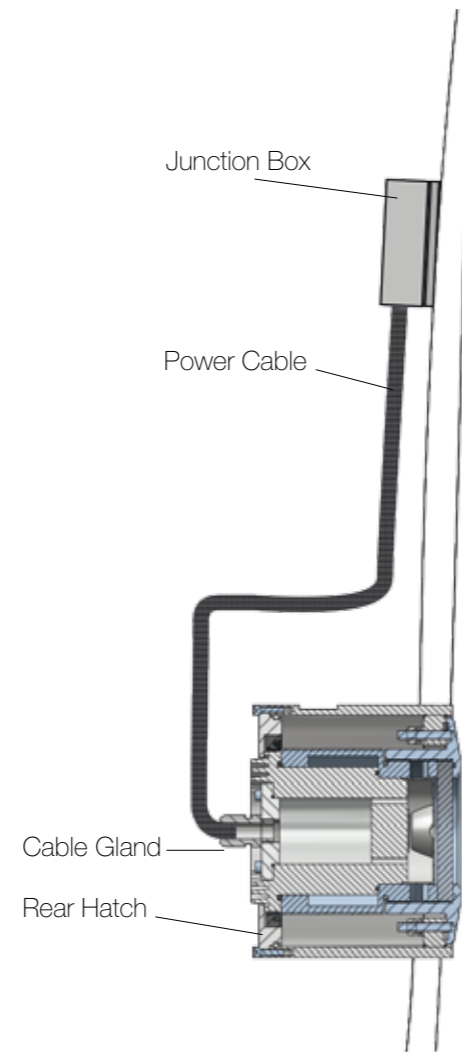
The rear hatch bolted to the cofferdam makes the case completely watertight. This is the last and ultimate barrier against the accidental water ingress. It grants the maximum safety level to the yacht.



STANDARD INSTALLATION

The SEALED® SY are the most innovative underwater lights present in the market place. The standard installation considers the secure fixing of the light body to the Cofferdam, the closure of the case through the rear hatch completes the installation to assure a perfect watertight protection in respect of the marine certifications.

With the built-in driver the power cable goes through an IP68 Cable Gland and connects directly to the 24V DC line guaranteeing the safest installation onboard.



TANK INSTALLATION

Shown in Fig. 1, the SY TANK is the next step in the underwater light technology. SY TANK is unique in its field and recognized as an innovative advancement in installations where the access from the inside of the yacht is difficult if not impossible. Should the light ever fail or be damaged, it can be removed from the outside of the hull, lifted above the waterline, replaced and re-installed without hauling the boat. Two dead holes on the front flange will help the extracting tool (included in the supply) to remove the light from its seat.

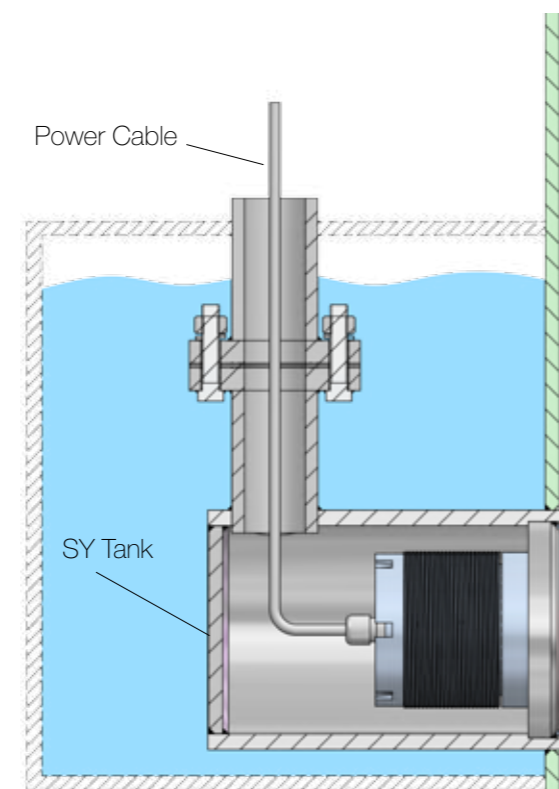


Fig.1



COFFERDAM

The Cofferdam (fig.2) is made either in carbon Steel API5LX52 or aluminum 6060 and protected with anti-corrosion primer. The Cofferdam and the Light Body form a single piece, compact and resistant thus safe. All weldings to the Cofferdam are made by expert and qualified operators in compliance with the uni En iso 3834:2006 standards. The weldings are certified and tested with the utmost accuracy. All cofferdams are able to counter any angle of the hull: the standard cofferdam compensates up to 35° angle. Upon request we can supply a longer cofferdam.

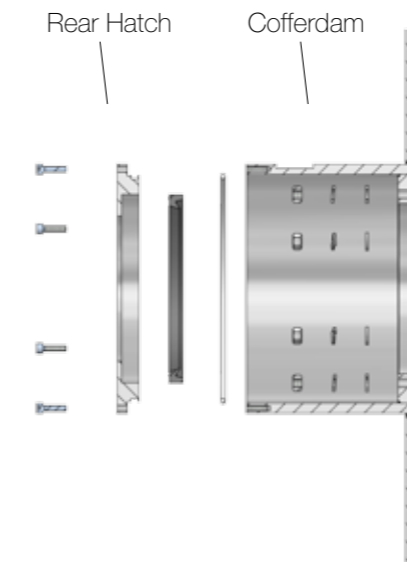


Fig.2

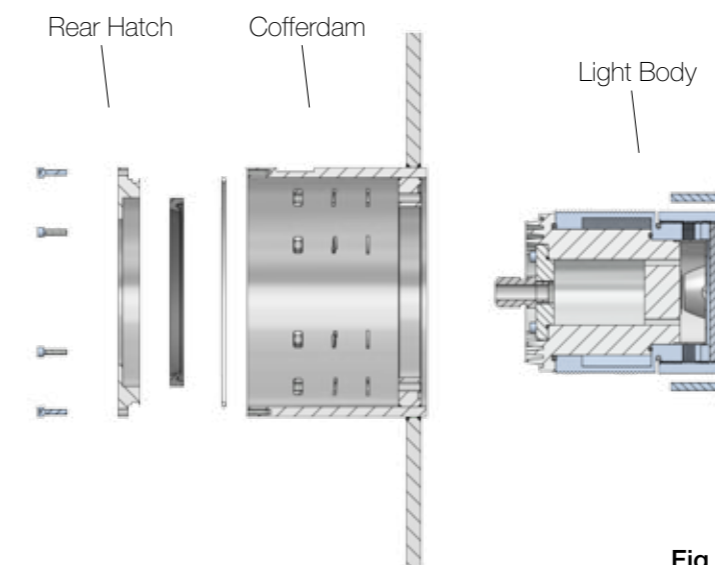


Fig.3

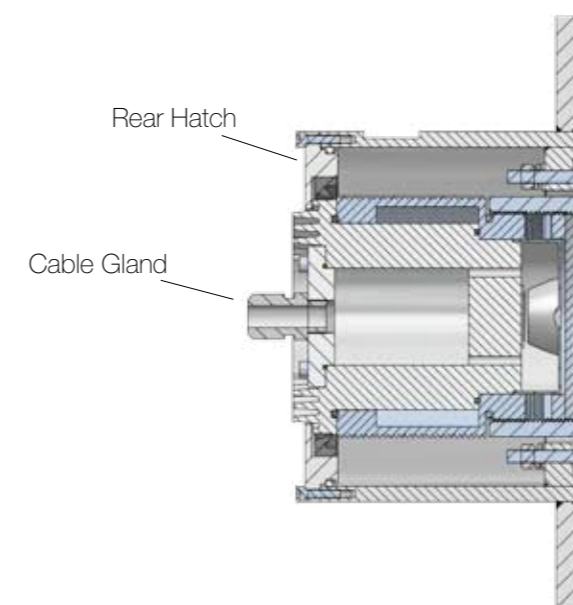


Fig.4

MOUNTING SYSTEM

The Light Body comes already pre-assembled and factory-sealed to guarantee the watertightness since the first installation. The Light Body is coupled to the Cofferdam with six allen screws (fig.3) and secured to the Rear Hatch with a lip gasket and an O-Ring for the maximum protection against the water ingress.

The Light Body is now tightened to the cofferdam structure becoming the second safety barrier.

FINAL INSTALLATION STAGE

When the Light Body is fixed inside the Cofferdam the Rear Hatch has to be settled. (fig.4)

By bolting the Rear Hatch to the Cofferdam the case becomes 100% watertight: this is the last and ultimate safety barrier.

The highest quality of the materials used and the thermal control guarantee the best light performances and the longest lifespan to the LEDs.

## BUILT-IN DRIVER

In the SEALED® SY the driver is integrated in the Lighting Core offering the maximum protection against electrical spikes, interferences and overheating.

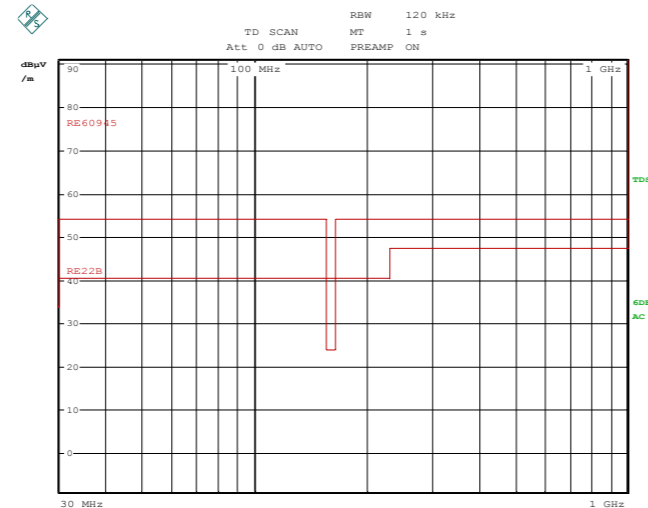
Thanks to the built-in driver the light operates at 24V DC and can be connected to the DC line for the safest installation onboard.



## EMC / RADIO MARINE TEST

Electromagnetic Compatibility:

1. Radiated Radio Frequency emission test
2. Immunity to conducted disturbance, inducted by radio frequency fields.



SY9

S.STEEL CODE: 90SEALESY9SSACC

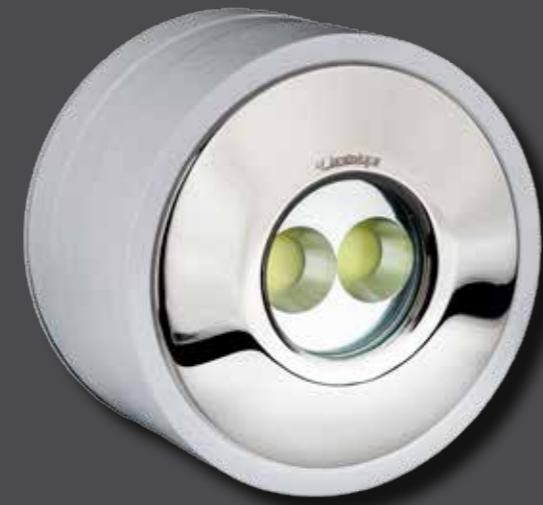
ALUMINUM CODE: 90SEALESY9AAN

**LUMENS: 9.000**      **WATTS: 80 W**

SEALED® SY9 includes the cofferdam and the built-in driver working at 24 V DC.

Technical Data:

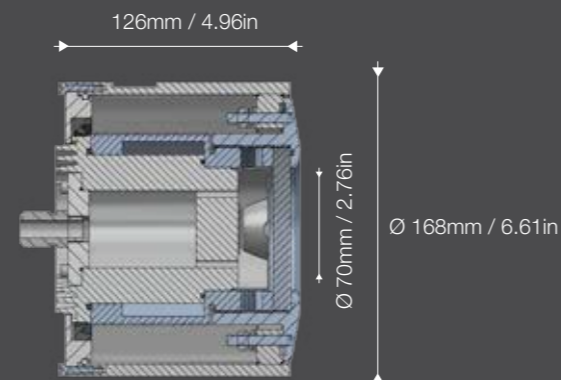
- Power: 80 W
- Power Supply: 24 V DC
- Current / Amp draw: 3,5 A @ 24 V DC
- Efficiency: 97 Lm/W
- Color Temperature: 5000 K
- Optional Power Supply: 110 - 220 V AC
- Also available in Blue colour



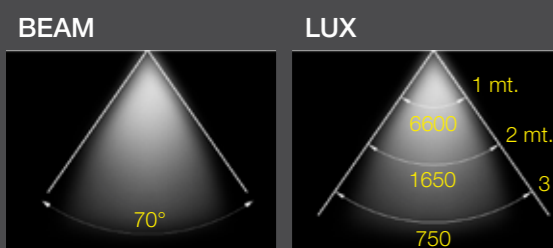
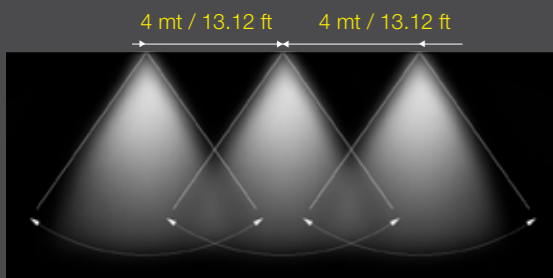
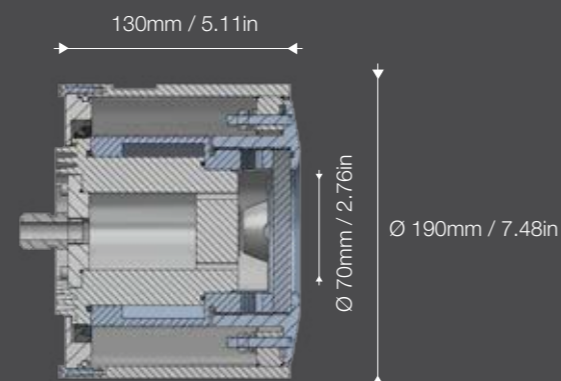
LIGHT POSITIONING

In order to create the best lighting effect around the yacht, we will provide advice about quantity, depth of fixture and spacing between each SEALED®. The effect in the water can vary from straight spears of light to a nice and relaxing halo around the hull simply positioning the lights at the desired distance one from the other. As a general rule we advise to place the lights at a maximum distance of 4mt one from the other.

STAINLESS STEEL VERSION.



ALUMINUM VERSION.



SY5

S.STEEL CODE: 90SEALESY5SSACC

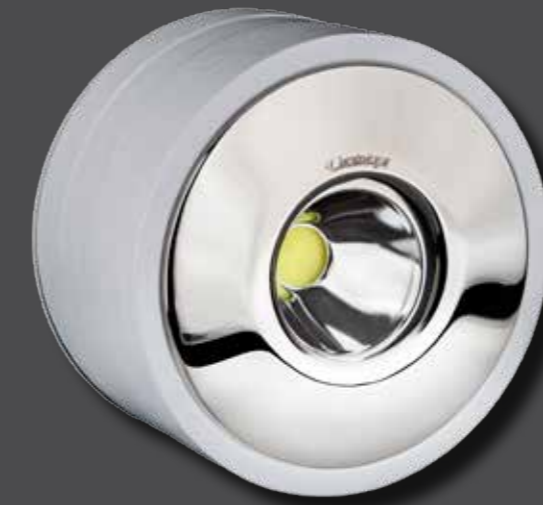
ALUMINUM CODE: 90SEALESY5AAN

**LUMENS: 5.000**      **WATTS: 40 W**

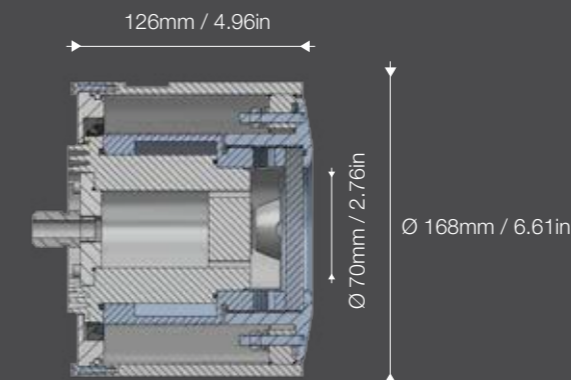
SEALED® SY5 includes the cofferdam and the built-in driver working at 24 V DC.

Technical Data:

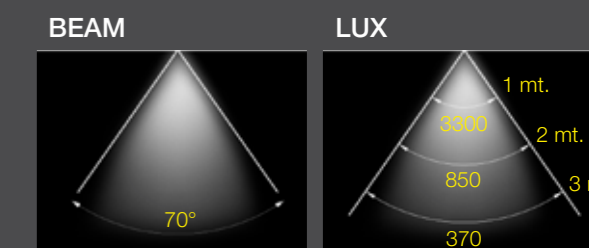
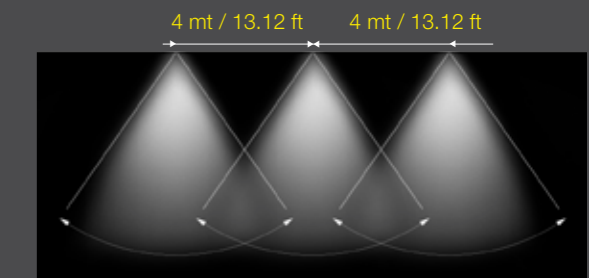
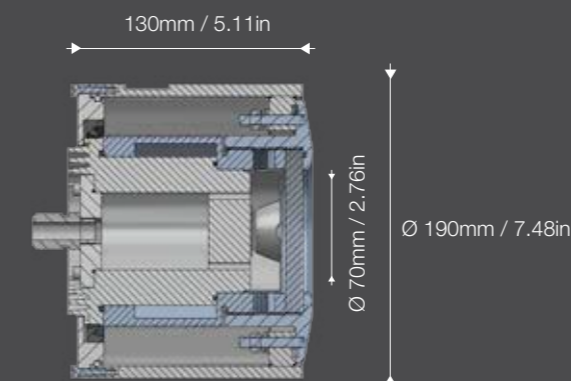
- Power: 40 W
- Power Supply: 24 V DC
- Current / Amp draw: 1,7 A @ 24 V DC
- Efficiency: 106 Lm/W
- Color Temperature: 5000 K
- Optional Power Supply: 110 - 220 V AC
- Also available in Blue colour



STAINLESS STEEL VERSION.



ALUMINUM VERSION.



SYR2

S.STEEL CODE: 90SEALESYR2SSACC

ALUMINUM CODE: 90SEALESYR2AAN

WATTS: 130 W

The SEALED® SYR2 brings millions of colours into your life. Any colour can be selected to best suit your personal taste or to maximize the effect in the water in every condition. Colours can be controlled via any devices with a colour palette through a third party interface. The most advanced LEDs can combine up to 16 million shades of colours for a superior effect in the water.

SEALED® SYR2 includes the cofferdam, the IP67 rated driver at 24VDC and 2 mt power cable with IP68 Souriau Plug & Play connectors.

Technical Data:

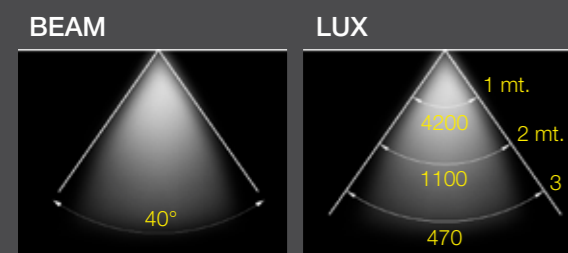
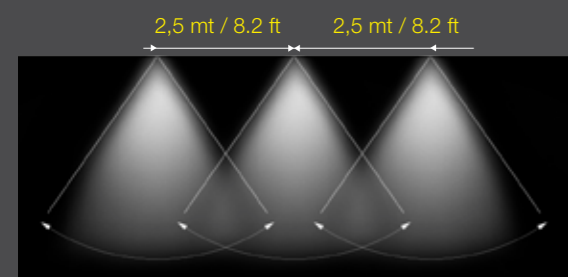
- Power: 130 W
- Power Supply: 24 V DC
- Current / Amp draw: 5.5 A @ 24 V DC
- Efficiency: 20 Lm/W
- Color Temperature: RGB+W
- Optional Power Supply: 110 - 220 V AC



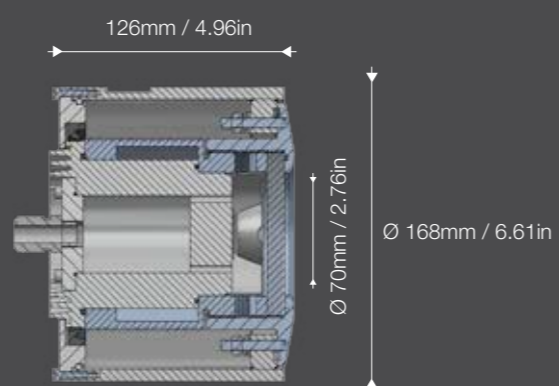
LIGHT POSITIONING

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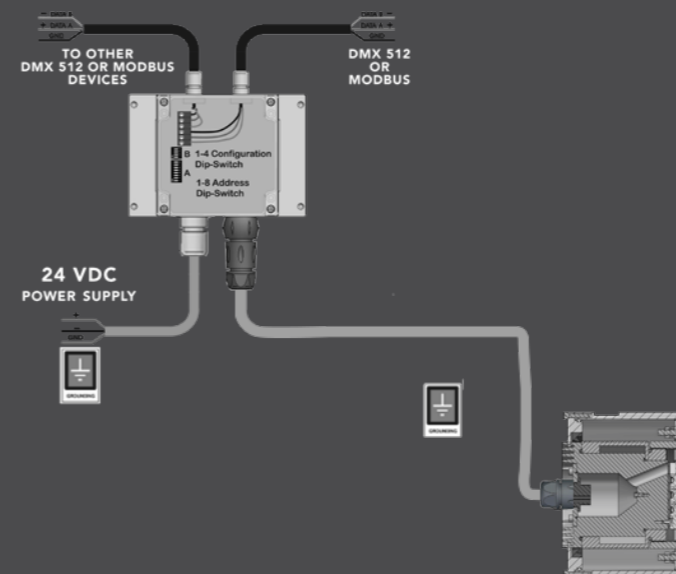
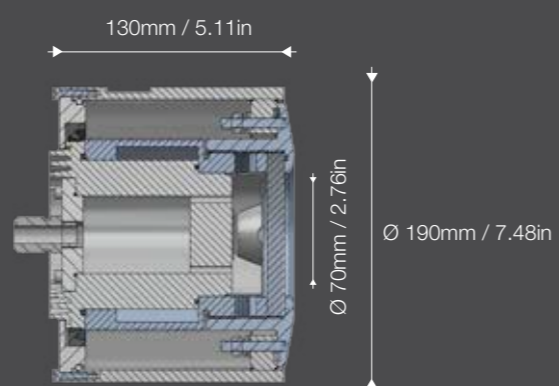
The effect in the water can vary from straight spears of light to a nice and relaxing halo around the hull simply positioning the lights at the desired distance one from the other. As a general rule we advise to place the lights at a maximum distance of 2,5mt one from the other.



STAINLESS STEEL VERSION.



ALUMINUM VERSION.



DRIVER SPECIFICATIONS

Input Voltage	24 V DC
Min / max operating voltage	20 - 32 V DC
Current / Amp Draw	5.5 A @ 24 V DC
Power consumption	130 watts
Width	165mm
Length	175mm
Height	80mm
Connector Type	IP68
DMX / Mod Bus Compatible	Yes
Over / Under voltage protection	Yes
Reverse polarity protection	Yes
Transient spike protection	Yes
EMC Compliant	Yes
IP Rating of Unit	IP67

DOMOTIC SPECIFICATIONS

Domotic interface enhances the options of the lighting project and make life easier and more functional thanks to the use of most advanced technologies like ModBus or DMX 512.

The system can be applied in any living area onboard like the comfort, the safety, the energy saving, the multimedia and the control from remote.

The system is ready to integrate any application or device right from the beginning without limiting the future upgrades to new systems or communication standards.

