One of the prime Mediterraneo’s concerns is the preservation of our historic lighthouse heritage. Consequently, we are specialized in designing optical, lighting and control equipment for big lighthouses, by offering a complete service in this chapter.

We have many years of experience and we develop a continuous labour of R+D+I in order to reach new improvements in this field. Proof of this is our recent launching of our MLL 50 LED lamp to be used in long-range lighthouses.

We complete our classic equipment of advanced technology with a comprehensive service of rehabilitation and modernization works suited to customer needs.

Likewise, we always follow IALA-AISM Recommendations.

**Products:**

- **MLL LED Lamps**
  New LED technology advances allow to obtain luminous sources able to provide suitable outputs with both old glass lenses and modern acrylic optics.

  In MSM, we study each particular case and we offer the best solution to match LED technology with major optical Fresnel systems. Thus, by using LED lamps we reach a considerable power reduction and an exceptional free-maintenance, long average life; by keeping the luminous range.

- **MLC 02 Special lampchangers**
  Automatic 2-position lampchangers for lighthouses, with high mechanical and environmental resistance.

  Two types:
  - MLC 02A, for lamp power up to 1,000W.
  - MLC 02B, for all type of lamps and lampholders, lamp power up to 3,000W.

- **MHO New classical lenses**
  Innovating acrylic optics, cut and polished, replacing old major glass lenses to obtain a cost-effective solution and optimal output.

  Taylor-made design, according to customer’s specifications: range, flash character or focal distance.

  Manufactured from acrylic material, UV stabilised.
  Dioptric and catadioptric rings.
  High-precision cut and polishing.
  Anodised aluminium frames.
HISTORIC LIGHTHOUSE RENOVATION

**MRM revolving pedestals**
- Double, electronic, gearless and brushless rotating motors.
- One only slow-moving balanced assembly, minimum friction.
- Able to make big glass lenses rotate, up to 1,200 kg.
- Field adjustable rotating speed from 1 to 6 rpm.
- Manual or automatic operation.
- High reliability and availability.

**Control units**
- MMC 160 motor control units.
- MLC 160 lamp control units.
- MTF 3000 universal lighthouse control units.
- Microprocessor based circuits.
- Manual and automatic operation.
- Easy configuration and user friendly.
- Ready for remote control and monitoring.
- Watertightness degree IP 65.

**Lem and lam lanternhouses**
- Maximum quality in materials for a longest service life.
- Two types:
  - Cylindrical structure with helicoidal uprights to avoid dark areas and provide higher sturdiness. High-homogeneity curved-glass panes to minimise refraction losses and reduce back reflections. Semi-spherical cupola.
  - Polygonal structure, taylor made according to customer specifications.

**Services**
- Renovation of the lanternhouse.
- Restoration of the old glass lens with its corresponding frame.
- Substitution of the old lens with a twin acrylic MHO optic.
- Renovation of lighting equipment, by using lamps of latest technology.
- Replacement of the old drive machine by our MRM modern rotating pedestals.
- Lighthouse automation by our MTF 3000, MMC 160 and/or MLC 160 control units.
- Lighthouse Remote Monitoring and Control System.
- Renovation of the lightning protection system, including replacement of lightning conductor and grounding to land or sea on cliffs.

Specifications subject to change without previous notice.