

**MORE  
THAN  
JUST  
MARINE  
CRANES**



#1 TECHNICAL SUPPORT

#1 QUALITY

#1 AFTERSALES SUPPORT

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Melcal Technology

Company Quality

Product Quality

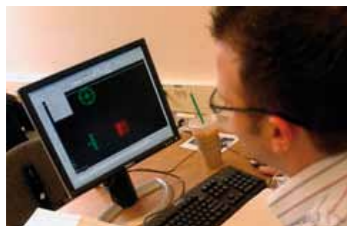
Marine Treatment

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Maintenance Programs

## About us



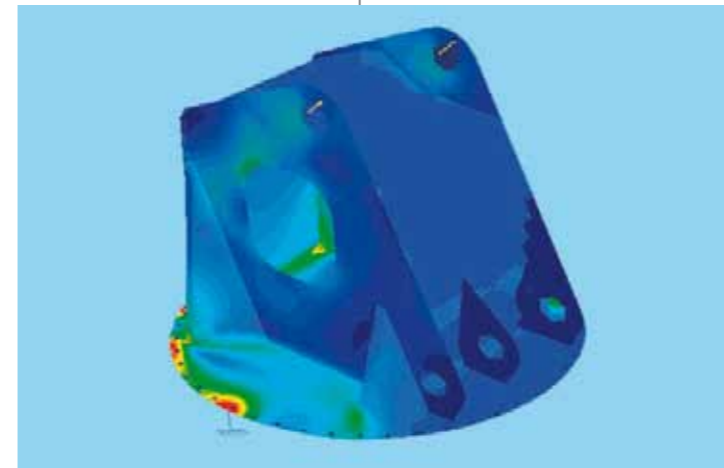
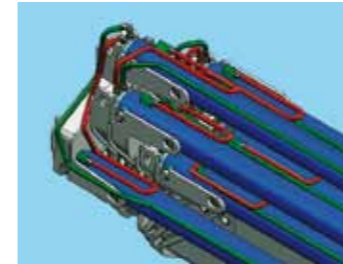
**Melcal Marine** is a dynamic engineering, research and manufacturing company, building on the world known Italian tradition of hydraulic lifting devices and dedicated to the marine and offshore industry. **Melcal Marine** cranes are always tailor made to your specific requirements at standard product quality and price. Sales, engineering, production development and after sales support take place in our main offices in Alcamo, Italy and are internationally supported through worldwide factory trained and supported sales and service partners.

At the preliminary stages of any project **Melcal Marine** works closely with you in finding the most efficient solution, always bearing in mind innovative design, safety, international regulations and reliability. As an independent company, all departments within our company pull together to guarantee feasibility and quick response. Our clients have a significant participation during the preliminary steps of each project, choosing desired accessories, safety features, special requirements, painting procedures, etc.

**Melcal Marine's** key areas of research and expertise are box boom pedestal marine & offshore cranes, having one of the world's largest ranges of stiff boom, telescopic boom, knuckle telescopic boom, knuckle jib boom and foldable knuckle telescopic boom cranes. **Melcal Marine's** wide product range covers all marine and offshore applications from 10mt to 2000mt. Research and design focus on safety, reliability, stress/load conditions within the corrosive marine environment during daily lifting operations.

All **Melcal Marine's** innovative cranes are designed and manufactured to meet all international standards and regulations, including BS, FEM, DIN, API 2C (others upon request) and can be certified by all leading classification societies (ABS, DNV, LRS, BV, RINA, LG, RMRS, IRS (other upon request).

## Melcal Technology



**Melcal Marine** is a highly qualified engineering company. Our in-house technical department has years of proven experience in projecting marine and offshore lifting solutions, having diversified technical backgrounds and coming from different international experiences. These years of accumulated know-how are the reason why we are a reliable technical partner, capable of providing dedicated tailor made, functional and reliable solutions. **Melcal Marine** research for innovation is a day to day challenge working with clients, service partners, suppliers, universities and research institutes.

Our products are designed and manufactured using state-of-the-art technical tools, 3D modeling, design & analysis programs, finite element and structural analysis, finite element fatigue analysis and simulation software, such as Solid Edge, Cosmos and Catia.

A firm analysis of stress concentration points on each single component is executed in order to avoid over stressing and fatigue, increasing product life span and eliminating possible structural risks, which mean also low maintenance costs

and no down time.

Moreover the primary focus of our design criteria is defeating and protecting the crane structure against massive side loads and stress during lifting operations. It is essential that an optimal quantity of elasticity is reached within the whole crane structure, with reinforcements and plates throughout. All mechanical, hydraulic and electrical components used are selected on the basis of their use and the requirements of strength and safety.

All cranes are designed on a modular approach, using the same basic machinery, but with different disposition of components, this permits quick responses to our clients needs and future changes, studied to maintain low and easy maintenance costs.

All **Melcal Marine** cranes are designed and manufactured to meet international standards and regulations, including BS, FEM, DIN, API 2C and others upon request. All products can be certified according to all leading classification societies, such as ABS, DNV, LRS, BV, RINA, LG, RMRS, IRS, and others upon request.

## Company Quality

Quality assurance system certified to ISO 9001:2000 standards, in addition to the Vision Rules verified and accredited by Lloyd's Register Quality Assurance.



### Approval Certificate No: LRC 6006131/QMS

Achieving a quality management system assures maximum quality design, manufacturing, testing and inspection, but for **Melcal Marine** this is only a starting point. Professional quality management is a solid fundamental in **Melcal Marine's** company philosophy, as constant communication within all company departments, monitoring and inspection are essential in a process that continuously aims for improvement, due to the changing and demanding circumstances.

As we are constantly working on three frontiers:

- **Melcal Marine** Human Resources, full of enthusiasm and highly motivated. As **Melcal Marine** contributes to the personnel success of our staff, our staff contributes to the success of **Melcal Marine**;
- **Melcal Marine** Suppliers, which believe in communication, innovation, reliability and safety of components;
- **Melcal Marine** Clients, whose requirements and expectations are at the center of our activity. Communication and close contact are a must for feedback and implementation of feedback on products and services.

**Melcal Marine's** Crane Management Data System (CMDS) and quality management system involves a continual process of research, product development and improvement, from client sales and technical support, engineering, procurement, production, painting, to assembly, testing, final inspection and commissioning constantly adapting to changing industry demands.

## Product Quality

**Melcal Marine** products are designed around the corrosive and harsh marine environment during lifting operations. Compact design, modular approach, low weight and low center of gravity are just a few of **Melcal Marine's** product qualities.

The quality of the main components used on **Melcal Marine** cranes are an essential part of our commitment to safety, quality and reliability. From certified high grade materials to world known suppliers. All mechanical, hydraulic and electrical components used are selected on the basis of their use and the requirements of marine environment, safety and reliability.

**Melcal Marine** internal procedures selects suppliers which take into account quality, innovation and product reliability. Collaborating actively with main suppliers in improving the competitive abilities of **Melcal Marine** products and allowing us to maintain quality and innovation.

We use highly reputed brands such as Brevini, Bosch Rexroth, Danfoss, Siemens, Manuli, Telemecanique, etc.



## Marine Treatment



The **Melcal Marine Treatment "MMT"** is the result of many years of research on long lasting surface protection, delivering an efficient and low maintenance protection. As a standard we use International Marine Coatings, thus our clients have the freedom of choosing specific coating processes (including metalizing) and paint brands (Awlgrip, Jotun, Hempel, Sigma, and others upon request). Each **Melcal Marine** product will have its own paint certificate.

Before painting the crane and all main components and loose gear, including slewing ring, slewing gearboxes, valves, etc. are carefully degreased to eliminate dust and impurities from surface and guaranteeing maximum paint adhesion. All main steel components are dismantled and painted separately.

Our **"MMT"** painting process consists of:

- Shot blasting SA 2.5 (ISO8501-1)/(DIN55928);
- A cycle of Intershield bronze (International Marine Coatings): 100 micron;
- A cycle of Intershield aluminum (International Marine Coatings): 100 micron;
- A first cycle of Interfine (International Marine Coatings): 50 micron;
- A second cycle of Interfine (International Marine Coatings): 50 micron.

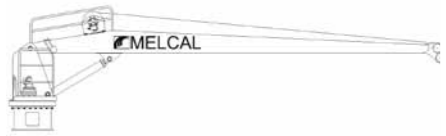
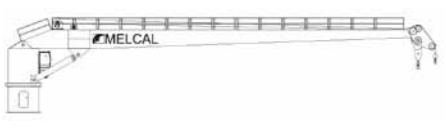
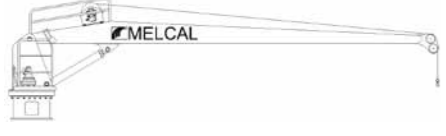
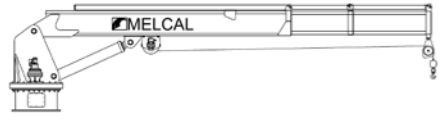
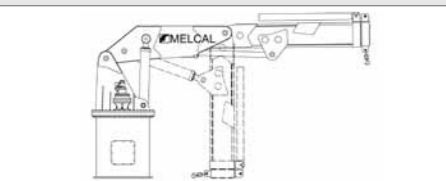
For a total top layer of approx. 300-350 micron.

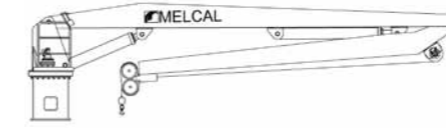
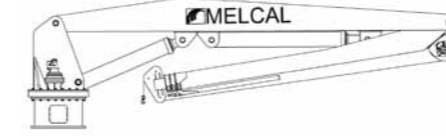
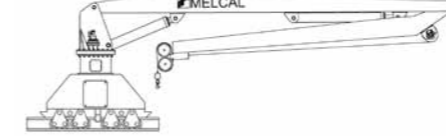
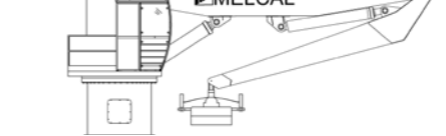
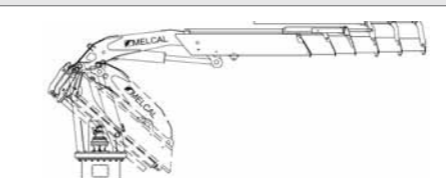


- Main steel structures have rounded edges to guarantee paint adhesion;
- All lifting and knuckle cylinder rods made of NIKROM 350;
- All extension cylinder rods have special protection against corrosion;
- All bushings are made of special marine environment self lubricating bronze;
- All pipes are of stainless steel 316-L;
- All bolts and nuts are of stainless steel (class A4), except connections where high tensile strength bolts are required;
- Control valve block control levers are in stainless steel 316-L;
- All fittings will be covered by Denso tape, a special rubber hose or tape to guarantee waterproof sealing;
- Hydraulic hoses are made of high quality rubber, in accordance with EN 856/ EN 857, to guarantee resistance against sea environment;
- All slewing ring nuts and motor reduction gear nuts are protected with grease filled caps;
- All grease lines and grease nipples are in stainless steel 316-L;
- All critical items are painted with a special resin with type 316-L leafing pigment and covered by a special marine grease;
- All surfaces where steel is in contact with steel are protected with special grease;
- All internal surfaces are sprayed with a special transparent wax that guarantees a hard transparent film.





	<h3>SL Series</h3> <p>The SL Series, stiff box boom pedestal cranes, are a reliable crane for general cargo handling, service and offshore use. Onboard various ship types and offshore units. Tailor made to your requested specifications, in different boom lengths and lifting capacities from 10mt to 1000mt and for different sea state working conditions. All SL Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>
	<h3>SL/CH Series</h3> <p>The SL/CH Series, stiff box boom pedestal cranes, are a reliable general cargo handling crane, designed for heavy lifting operations. Onboard various ship types and offshore units. The SL/CH Series crane operator cabin is located below main boom, guarantying max unrestricted view during cargo lifting operations. Tailor made to your requested specifications, in different boom lengths and lifting capacities from 400mt to 2000mt, for different working conditions. All SL/CH Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>
	<h3>SL/HH Series</h3> <p>The SL/HH Series, explosion proof hose handling cranes, are a reliable hose handling and service crane in the hazardous cargo manifold area on tankers, bunker, carriers and on offshore production units. The SL/HH Series cranes are self contained units, having a built in explosion proof electro hydraulic power pack. All explosion proof components are fully ATEX certified. Tailor made to your requested specifications, in different boom lengths and lifting capacities from 10mt to 750mt. All SL/HH Series cranes can be equipped with different accessories, according to OCIMF and class certified by all leading classification societies.</p>
	<h3>TL Series</h3> <p>The TL Series, telescopic box boom pedestal cranes, are a reliable general cargo handling, service and offshore crane. Onboard various ship types and offshore units. The TL Series telescopic boom cranes offer a compact design when in stowed position solution. Tailor made to your requested specifications, in different boom lengths and lifting capacities, from 5mt to 2000mt, for different sea state working conditions. All TL Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>
	<h3>KL Series</h3> <p>The KL Series, knuckle telescopic box boom pedestal cranes, are a reliable crane for general cargo handling, service and offshore use. Onboard various ship types and offshore units. The KL Series cranes offer a compact design when in stowed position. Tailor made to your requested specifications, in different boom lengths and lifting capacities, from 10mt to 1500mt, for different sea state working conditions. All KL Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>

	<h3>JL/SL Series</h3> <p>The JL/SL Series, knuckle jib box boom pedestal cranes, are a reliable and effective crane for general cargo handling, service and offshore use. onboard various ship types and offshore units. Tailor made to your requested specifications, in different boom lengths and lifting capacities, from 10mt to 2000mt, for different sea state working conditions. All JL/SL Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>
	<h3>JL/T Series</h3> <p>The JL/T Series, knuckle telescopic jib box boom pedestal cranes, are a reliable crane for general cargo handling and service onboard various ship types and offshore units. Having telescopic extensions on jib, the JL/T Series cranes offer a compact design when in stowed position. Tailor made to your requested specifications, in different boom lengths and lifting capacities, from 10mt to 1500mt, for different sea state working conditions. All JL/T Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>
	<h3>JL/CR Series</h3> <p>The JL/CR Series, knuckle jib cargo rail box boom pedestal cranes, are a reliable and precise crane for general cargo handling, service and offshore use onboard offshore units. Totally remote controlled. Tailor made to your requested specifications, in different boom lengths and lifting capacities, from 10mt to 400mt, for different sea state working conditions. All JL/CR Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>
	<h3>JL/PH Series</h3> <p>The JL/PH Series knuckle jib crane for pipe handling operations on offshore and pipe drilling rigs/barges from 25mt to 600mt. Fully explosion proof, the JL/PH Series is equipped with a hydraulic operated pipe-gripper unit equipped with auto parallel function, pendulum dampening and failsafe gripper function. The crane is operated from the operators cabin and remote control. All JL/PH Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>
	<h3>FL Series</h3> <p>The FL Series, foldable knuckle telescopic box boom pedestal cranes, are a reliable crane for general cargo handling and service onboard various vessel types and offshore units. The FL Series cranes offer a compact design when in stowed/folded position, ideal for work areas where limited space is available. Tailor made to your requested specifications, from 10mt to 100mt, in different boom lengths and lifting capacities for different sea state working conditions. All FL Series cranes can be equipped with different accessories and class certified by all leading classification societies.</p>

## Standard Equipment

- 360° continuous rotation;
- -20°C to +40°C working temperature;
- Certified S355 & S690 steel structure;
- Pedestal ready for mounting or welding to vessel main structure;
- Stainless steel pipes and nuts;
- Stainless steel grease nipples;
- All cylinders in Nikrom 350;
- Precise step less speed control;
- Simultaneous operation of 2 or more functions;
- Emergency hydraulic stop device;
- Emergency hand operated pump;
- Dead man type lever controls;
- Load limiting system;
- Load Holding Valves;
- Slew Fail Safe Brakes & Load Holding Valve;
- Integrated left or right hand side operator platform;
- Melcal Marine Treatment, with paint certificate;
- Full set of documentation (including material certificates and operation manuals).

## Optional Equipment

- Low temperature packages up to -50 °C;
- Hydraulic power units;
- Certification for lifting of personnel;
- Radio or cable remote control;
- Constant tension winches;
- Operator cabins with AC and heating;
- ATEX packages & certification;
- Man riding winches;
- Centralized greasing system;
- Multiple setting of load limiting system;
- PLC & Human Machine Interface Systems (HMIS);
- Manual Overload Protection System (MOPS);
- Automatic Overload Protection System (AOPS);
- Warning & working lights;
- Load indicator systems;
- Visual & audible warning alarms;
- and others upon request.

## Customer Support

Melcal Marine and its partners are fully aware of our clients expectations. We are committed to long term relationships with ship owners, designers, consultants and shipyards who value quality and trustworthiness.

To Melcal Marine **commissioning, installation, maintenance, spare parts** and **training** are not only after sales services, but a commitment and a responsibility we have to our clients' expectations in delivering safe, cost effective and efficient high quality service solutions.

Melcal Marine after sales/maintenance staff is continuously analyzing product feedback and day to day experiences from our clients and service partners.

Melcal Marine worldwide factory trained service network has been set up and continues to grow meeting our life cycle management commitment.



Our qualified standby multi-skilled service engineers are located in key locations around the globe, having great troubleshooting knowledge and always supported by factory based specialists. Available at any time and under any working conditions.

In order for us keep our commitment, **Melcal Marine** is delighted to provide our demanding clients qualified expertise along with **Alatas Crane Service Worldwide**. No other service company can qualify with the proven expertise and know-how that **Alatas Crane Service Worldwide** has known to build up and for which it is recognized worldwide.

Please check our website for your nearest **Melcal Marine** partner service stations.



## Maintenance Programs

Regular care, maintenance and servicing add value to your assets and are indispensable for ensuring maximum availability. While you focus on your business, we reduce costs and increase productivity making efficiency affordable.

**Melcal Marine** offers a range of affordable planned maintenance solutions, created to protect your equipment and avoid downtime. Our planned maintenance programs are built to meet your specific operating needs, increasing crane efficiency, less down time, safety for your crew and longer product life span.

Either you are interested in us totally taking care of your equipment or rather an assistance support to call on, our range of planned maintenance agreements include these services:

- Periodic inspection, with detailed reports;
- Minor adjustments to equipment;
- Change of defined tear and wear parts;
- Complete greasing of equipment;
- Hydraulic inspections;
- Wire rope inspections;
- Check up of required spare parts storage;
- Load tests;
- Technical documentation
- Class society inspection reports;
- Re certification;
- Training of new personnel.



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