



Custom Built Marine & Offshore Cranes

MARINE & OFFSHORE

FOLDABLE TELESCOPIC CRANES



Stiff



Telescopic



Knuckle

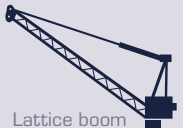
Fully foldable



Jib



Customised



Lattice boom

Power | Passion | Partnership



Our cranes are synonymous with safety, reliability and low operational costs.

HEILA CRANES GROUP:

Heila Cranes SpA in Italy
Heila Cranes Nederland BV in The Netherlands
Heila Cranes Southeast Asia Pte Ltd in Singapore

HIGHLIGHTS:

- ▶ Over 40 years of experience
- ▶ 5,250 marine cranes engineered and manufactured
- ▶ 197 cranes certified by class in the last 3 years
- ▶ Outstanding in-house engineering capability



Focus on our customer

The Heila Group focuses on establishing long-term relationships with its customers, speed, proactiveness, and technical reliability. With energy and passion. In practice this means engineering and manufacturing the most reliable custom-built marine and offshore cranes, with capacities ranging from 3 up to 4,000 tm. Always in cooperation with our customers. Always striving to find the perfect solution.

MISSION

We supply the most reliable custom-built cranes to our customers in the marine and offshore industry. We aim to satisfy their every need with respect to deck cranes.

“Quality, reliability and service are Heila’s unique selling points. The company has gathered together a group of true professionals who are reliable and skilled”

Neptune Shipyard BV

“We prefer quality cranes for our vessels and value at the same time a good understanding and relationship with our suppliers. No problem for Heila: our long-term cooperation with Heila proves this”

Damen Shipyards, Hardinxveld

FOUNDED IN ITALY, WITH WORLDWIDE PRESENCE

Heila Cranes has service, sales and dealer hubs throughout the world. This makes it possible to provide our customers with an optimal service. Check our website for a Heila representative in your area.



Heila Foldable Telescopic Cranes: the HLM and HLRM series

Heila foldable telescopic cranes are of superior quality. This is the result of more than 40 years of experience and technical expertise in designing, producing components and developing the manufacturing process to meet the highest quality standards.

Facts:

- more than 3,000 foldable telescopic cranes manufactured and delivered
- market leader in foldable telescopic cranes
- first to produce a HLRM 1000 crane; a 70-ton crane featuring a telescopic arm with a maximum reach of 30 m that is very compact in storage position.



Features:

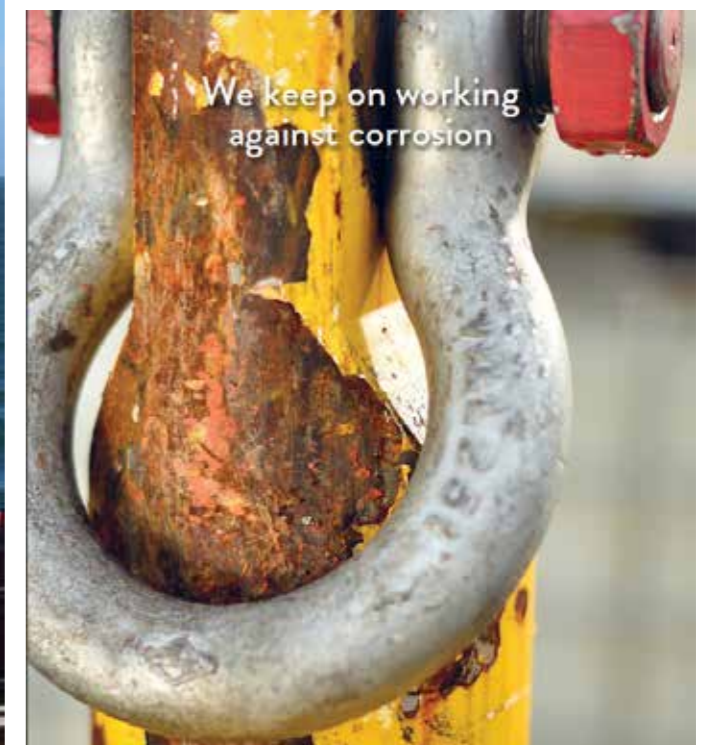
- Originally designed for a marine environment
- Compact
- Safe & reliable
- Easy operation
- Easy maintenance



Heila Anti-Corrosion Program

Our Anti-Corrosion Program ensures that the crane's structure and seals have a long life, even if the crane operates in a harsh environment.

- Complete Surface Treatment: structural design, surface preparation and painting process compliant with ISO 12944-C5M.
- High-durability, chrome-plated hydraulic cylinder rods.
- Geomet-coated structural bolts.
- Stainless steel AISI 316 pin locking system designed according to DIN 15058.
- Hydraulic fittings protected by special silicone spray and special vulcanised rubber tape.
- All non-structural screws and bolts made from stainless steel protected with silicone.
- Rigid pipes and relevant fittings in AISI316 stainless steel
- Stainless Steel junction boxes and encoders.



HLM CRANES: Fully foldable telescopic cranes with rack and pinion slewing system



HLM 25/3S

The **HLM cranes** with their rack and pinion slewing system are very compact and light. This makes the HLM type ideal for use on small vessels, especially where space is limited. Cranes of this type, our 'workhorses of the sea', are indispensable for auxiliary vessels including multifunctional work boats, tugs and pontoons.

CHARACTERISTICS

- The crane is able to work in any configuration; with boom extended upwards or folded downwards offering great manoeuvrability
- Rotation exceeds 360°. This is possible because the crane is fitted with a double rack and pinion system with bronze bushes that guarantees safe operation, even at excessive heel and trim angles.

CONTROL AND SAFETY

- Stationary fixed control console
- Counterbalance valves directly mounted on each cylinder provide a fast response
- Proportional Electrohydraulic Control Valve

Block with internal compensation for simultaneous movements and self-centring manual levers; supplied by primary world-wide producers

- Electrohydraulic load moment limiting device; prevents the crane being overloaded and damaged.

STRONG AND RELIABLE

Doubling the number of racks and cylinders doubles the power of the slewing system. Moreover, the life of these components is extended because the load is shared.

CUSTOMISATION

The HLM crane series is standardised, however, there are a surprising number of options allowing a degree of customisation.

HORIZONTAL LOAD HLM CRANES

Crane model	nr of extensions	HEILA Cranes STANDARD Products Table											
		Revision 1 – 1 June 2018											
		Length of boom (m) and crane lifting capacity (kg)											
		3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m	13 m	14 m
HLM 3	1S	m	3.5		5.17								
		Kg	1,000		680								
	2S	m	3.58		5.25	6.91							
		Kg	980		660	500							
HLM 6	1S	m	3.54		5.25								
		Kg	1,800		1,250								
	2S	m	3.63		5.3	6.97							
		Kg	1,700		1,150	850							
HLM 8	1S	m		4.20	5.90								
		Kg		2,100	1,500								
	2S	m		4.30	5.90		7.47						
		Kg		2,100	1,500		1,200						
	3S	m		4.37	5.99		7.64		9.30				
		Kg		1,950	1,400		1,100		850				
HLM 10	1S	m		4.64		6.54							
		Kg		2,300		1,650							
	2S	m		4.65		6.55		8.41					
		Kg		2,250		1,600		1,200					
	3S	m		4.81		6.65		8.52		10.30			
		Kg		2,150		1,500		1,150		930			
HLM 16	1S	m		4.92		6.92							
		Kg		3,400		2,400							
	2S	m		4.93		6.99			9.01				
		Kg		3,200		2,200			1,680				
	3S	m		4.99		6.99			9.00	10.99			
		Kg		3,150		2,150			1,600	1,200			
HLM 25	2S	m		4.68		6.64		8.62					
		Kg		5,200		3,600		2,800					
	3S	m		4.81		6.75		8.72		10.58			
		Kg		5,000		3,450		2,600		2,100			
	4S	m		4.94		6.88		8.85		10.71		12.63	
		Kg		4,850		3,350		2,450		1,800		1,450	
5S	m			5.02	6.97		8.93		10.79		12.79		14.69
	Kg			4,700	3,200		2,400		1,800		1,400		1,150



Condition: Sea state 0 or harbour conditions

Horizontal loads, lifting by hook in harbour conditions. For the minimum outreach, please check the technical data sheet.

Features:

- Originally designed for a marine environment
- One (1) cylinder for multiple telescopic movements
- Designed for easy maintenance
- High degree of customisation



HLRM CRANES: Fully foldable telescopic cranes &

Foldable knuckle telescopic cranes



Fully foldable telescopic



Foldable knuckle telescopic crane, HLRM 580/3S

HLRM cranes featuring slew bearings and continuous rotation, are available as fully foldable telescopic cranes and as telescopic knuckle boom cranes.

THE BEST LIFTING PERFORMANCE

The fully foldable telescopic cranes are designed to provide the best lifting performance combining exceptional boom strength with a powerful slewing ring rotation system. The cranes are suitable for a wide range of on-board and off board activities including buoy handling and the hoisting of structures and equipment.

NO COMPROMISE ON QUALITY

Heila provides all of the features and uses quality components to construct cranes that offer excellent performance. The cranes are designed for the tough environmental conditions at sea. We protect all of our cranes – large and small - by thoroughly sand blasting them, applying marine paint systems and using stainless steel pipe fittings.

HEAVY DUTY OPERATION

Each crane component is selected and designed for heavy duty operation in a marine environment, they feature:

- Heila Anti-Corrosion Program
- Standard design temperature -20°C +45°C
- Minimum IP 56 protection standard on all electric cabinets and junction boxes on the crane
- Electronic Safety System protects the crane from being overloaded

ALWAYS PUSHING THE ENVELOPE

Starting from the first development of the Heila telescopic knuckle boom crane, Heila has always strived to build bigger and better cranes. Heila was the first to build many of the larger cranes of this type, culminating in the HLRM 1000-6S in 2018.

This crane is able to lift 14,300kg at a reach of almost 30m and 52,500kg at 13.4m.

Despite its small footprint, it is a high-capacity crane. In combination with various options, including Active Heave Compensation (AHC), this crane is a cost-effective, highly versatile but compact tool, suitable for many offshore activities, thus greatly reducing mobilisation time of vessels. It is the offshore equivalent of a Swiss army knife.

HLRM CRANES: Foldable knuckle telescopic cranes with slewing bearing system



Leadership in foldable telescopic cranes

Heila, with its HLRM series, is the market leader in foldable knuckle boom cranes. We design, develop and deliver our HLRM cranes as standard cranes or completely custom made. The entire range from small to large cranes is available and can be delivered quickly.

The HLRM crane is the perfect solution when high capacity is required at a short outreach and when deck space is limited. We develop solutions for customers in areas ranging from the fishing industry to the offshore sector and other areas of the maritime sector.

Heila was the first company to supply a 340 tm knuckle boom telescopic crane. It was also the first to supply a HLRM 460 tm dredging crane and the first to supply a HLRM 580 tm crane. The natural next step was to break the 1000 tm barrier.

HLRM 1000-6SL

The company has supplied numerous sub-sea and active and passive heave compensation installations. Our HLRM 1000-6SL, a 70-ton foldable knuckle telescopic crane, will dramatically change the heavy-duty crane market. Even though it is equipped with a telescopic arm that can extend to a maximum radius of 30 metres, the crane only requires a limited space.

The HLRM 1000 features:

- Outreach up to 30 metres
- Lifting capacity up to 70 tons
- Compact crane in storage position
- Suitable for sub-sea application
- Originally designed for a marine environment

Options and Accessories

Optional features for Heila cranes

DESIGN FEATURES

- ▶ **CERTIFICATION & CLASSIFICATION**
Heila Crane S.p.A marine cranes comply with EN 13001 / DIN 15018 and, if required, the principal international standards for shipboard and offshore applications including EN13852-1 and API-2C. All cranes can be certified in accordance with the rules of international classification societies including:
 - American Bureau of Shipping (ABS)
 - Bureau Veritas (BV)
 - China Classification Society (CCS)
 - Det Norske Veritas – Germanischer Lloyd (DNV-GL)
 - Lloyd's Register of Shipping (LRS)
 - Registro Italiano Navale (RINA)
 - Norwegian Maritime Authority (NMA)
 - Russian Maritime Register of Shipping (RMRS)
 - Others on special requestWe use 3D CAD systems, verified ANSYS software and FEA techniques (Finite Element Analysis) to check and assure the structural integrity of our equipment.
- ▶ **AUTOMATIC AND MANUAL OVERLOAD PROTECTION SYSTEM (AOPS/MOPS)**
The AOPS system features safety equipment that automatically safeguards and protects the crane against overload and 'overturning-moment' when operating by allowing the hook to be pulled away from the crane in a controlled manner so avoiding significant damage. When the MOPS system is activated, if there is the risk of overload, the crane operator is warned to manually operate the winch release. AOPS/MOPS is mandatory for certified offshore cranes that perform ship-to-ship or ship-to-platform lifting operations. Heila offers a turnkey system.

- ▶ **LOW TEMPERATURE AND ARCTIC SOLUTIONS**
An extensive range of options and accessories are available to operate in low temperature conditions. Special steel for use in low temperatures and specific technical solutions for winterisation assure the safe operation of the cranes in the most severe low temperatures and Arctic environmental conditions.
- ▶ **ATEX / NEC505 HAZARDOUS AREA EXECUTION**
Heila offers solutions for use of its cranes in hazardous areas (explosion proof execution) including Zone 0, I and II and temperature class T3 or T4. All such cranes are supplied with a dedicated EX-ATEX Declaration of Conformity. Upon request, Heila can supply equipment for other zones and classes.

LIFTING DEVICES AND LOAD CONTROL

- ▶ **HOISTING WINCHES**
Heila provides a wide range of winches. From a single line pulling capacity of 500 kG up to more than 50 metric tons, multiple speeds, multiple drum rope capacities and in accordance with customer requirements. They are equipped with an electric/hydraulic load limiting device that controls the pulling force on the rope and that will not allow the maximum safe working load of the crane to be exceeded. All Heila winches are fitted with non-rotating galvanised and greased steel cables to ensure the best performance in all working conditions.



- ▶ **PERSONNEL LIFTING COMPLIANT WITH EN 13852-1 OR API-2C**
Heila offers its customers a complete range of solutions for personnel lifting that comply with EN 13852-1 or API-2C. Heila can equip its cranes with 'dedicated winches' for personnel lifting or 'dual use winches' that can be used for both cargo handling and personnel lifting up to 8 metric tons
- ▶ **CONSTANT TENSION (CT) WINCHES**
A Heila constant tension winch system combines a special winch, a customised electronic control system and a dedicated PLC. Constant tension winches are used for difficult lifting operations in marine environments. The system creates a constant line-pull between the load and the winch. Prior to starting the operation the line-pull is set. It is measured by a load sensor and monitored by the PLC central control system. If the actual value differs from the pre-set value, the winch will pay in or pay out wire rope to maintain the pre-set value. Constant tension winch systems are suitable for pre-tensioning the

wire rope used in buoy-laying operations, but also when positioning and connecting floating pipelines during dredging projects. Moreover, they are perfect for raising and lowering tender boats or deck equipment from a vessel into sea.

- ▶ **ACTIVE HEAVE COMPENSATION (AHC)**
Current offshore and subsea projects require advanced technology to position loads on the seabed for subsea installations or to position them in the air, for instance when servicing wind turbines. An AHC system on the crane compensates for the vessel's motion. Heila supplies tailor-made AHC systems on winches that rely on the input of motion sensors. Responding to the signal from these sensors, the winch pays in or pays out wire rope to keep the load at a constant elevation. An AHC system on a winch responds rapidly and, when combined with active hydraulic accumulators, reduces power consumption significantly.

Options and Accessories

▶ INTEGRATED PULLEY HEAD AND/OR PULLEY BLOCK

When a winch is used rather than a fixed hook, different solutions are required to lift the loads. Heila offers the optimal solution to its customers by integrating either a pulley head or top sheave into the last boom extension. To be able to work with both a winch and a fixed hook, Heila provides a pulley block that can be connected, when required, to the last boom extension hook connection point. As an additional option, Heila can install single line pull or multiple line pull solutions according to the customer's needs.

MISCELLANEOUS OPTIONS

- Standing platform
- Local control operator panel
- Remote control
- Operator cabin

SAFETY AND OPERATION

▶ SEA STATE SELECTOR

Heila marine cranes can optionally be designed to operate in different sea states. To be able to select the type of operation for the different states, a crane is fitted with a sea state selector switch on its control panel (either at a fixed location or as wireless control unit). The sea state selector switch allows the crane to be operated safely and precisely in difficult marine conditions.

▶ ACOUSTIC AND VISUAL ALARMS

Acoustic and visual alarms can be installed on cranes to allow the crane to be operated reliably and safely. A green / yellow / red light is installed on the crane column. This shows, respectively, the 90% / 100% / 110% SWL load being experienced by the crane. In addition to the visual alarm, an acoustic alarm can be installed. Acoustic and visual alarms are mandatory for use on fully IACS certified cranes.

▶ LOAD AND RADIUS INDICATORS

Depending on the type of application and/or in agreement with the customer, Heila can provide specific load and radius indicators that can be displayed on one or more portable remote units or on video screens installed in operator control stations and/or in operator cabins. We can also provide the crane with a visual indication of the loads and 3D controls.

▶ LED FLOODLIGHT

LED floodlights can be fitted to the tip of the crane's boom to illuminate the working area around the crane. Heila offers swivelling or fixed solutions with different power outputs ranging from 100 to 1000 equivalent Watt (W).

▶ LOAD SENSING (LS) SYSTEM

In situations where a more complex hydraulic circuit is used, Heila can fit a main hydraulic control valve block that can be used with load sensing (LS) pumps. This solution increases the efficiency of the hydraulic circuit and reduces both the power loss of the system and the heating of the oil. For the best solution, this feature must be discussed with the customer.

▶ CENTRALISED GREASING SYSTEM

Heila marine cranes have greasing points on all pins and pivot points to keep them operating efficiently and to prevent excessive wear. A 'Manual Central Greasing System' can be installed as an optional feature on all Heila cranes to simplify maintenance and extend the crane's life. On request, an 'Automatic Central Greasing System' can be installed to programmably and automatically grease the crane without any risk or human intervention.

SURFACE TREATMENT AND ANTI-CORROSION SOLUTIONS

▶ FLAME METALLISATION TREATMENT

Flame metallisation is a thermal spray coating process that is used to coat anti-corrosive metals onto surfaces, it is long lasting and highly effective. On request, Heila can thermally spray zinc and aluminium onto all of the crane's structural steel parts providing the highest grade of corrosion protection.

▶ PAINTING AND CUSTOM CRANE COLOUR

The standard Heila paint system complies with ISO 12944-5 (C5M – marine/offshore applications); the standard colour is RAL 1005 'Honey Yellow'. However, Heila also offers alternative paint systems. These systems comply with NORSOK M-501. Special isocyanate-free paint systems and/or special customer-specific paint systems are also possible. All top coats are available in specific customer-specified RAL colours..

▶ HYDRAULIC CYLINDER ROD COATING HD4+ AND HD4stars

Heila has improved the corrosion resistance and wear-resistance of its hydraulic cylinder rods with two unique treatments registered under the names HD4+ and HD4stars. These innovative hi-tech solutions efficiently protect the cylinder rods from corrosion and help to protect against leaks, coating peeling and seal wear. (For more information please consult the specific "Heila Cranes Anti-Corrosion Program" brochure).



Worldwide service

Cranes must be able to operate efficiently under the most diverse sea conditions. Wherever our customers may be, we ensure that their cranes remain operational.

Heila Cranes Netherlands is responsible for Heila's field services worldwide. We provide customers with technical support, on-site repairs, installation, commissioning and the complete refurbishment of their cranes. Furthermore, critical spare parts, such as cylinders, seal kits, air brakes and electrical components for standard cranes are held in stock in the Netherlands. When you buy a new Heila crane, we are available to provide you with information about our standard spare parts packages.

To support your business, we also have a wide range of cranes in stock, ranging in capacity from 2 tm to 280 tm.

Refurbishment

The HEILA refurbishment program offers several types of refurbishment, ranging from component repairs, and the refurbishment of slewing gearboxes, control valve blocks, cylinders and winches to full crane refurbishments.

Benefits of refurbishment:

- Reduced downtime
- New warranty period
- Extended product life
- New anti-corrosion treatment



Rental Crane Program

An easy and economical solution

Heila Group has developed a rental program for foldable knuckle boom cranes. You can rent a crane for the duration of your project. This could also be when your own crane is being refurbished by Heila. This means 100% availability of your vessel.

The rental cranes are built according to international standards. They are covered by an OEM warranty during the rental period. We have Heila cranes available for rent* in stock in the range of 80 tm – 230 tm. However, if there is no appropriate crane listed below, please feel free to enquire. We will search for a suitable solution.

- HLRM 80-3S
- HLRM 140-4SLK
- HLRM 170-4S
- HLRM 230-4SLK

Features:

- Available where you want
- Available when you want
- Continuous availability of your vessel while your crane is being refurbished

* depending on availability

Cranes applications in the Marine and Offshore Industry



Tugs & Workboats

Fishing & Aquaculture



Yacht
Support
Vessels



Cranes applications in the Marine and Offshore Industry

Oceanographic Research Vessels



Offshore
Oil & Gas
and Wind



Navy & Coast Guard



Complete range of Heila cranes

The HLM and HLRM series cranes described in this catalogue are the core products of the Heila Group. However, Heila has a highly skilled team of engineers that are able to design complex, state-of-the-art cranes. These are referred to as Heila Special Projects, custom engineered, highly complex and often high-capacity cranes.

HEILA SPECIAL PROJECTS

Heila can provide numerous references for such projects, please contact our Sales Managers or contact your local Heila representative for more information.

When Heila is contracted to supply a special crane, a dedicated Project Manager is assigned to the project. The Project Manager is responsible for the detailed planning, reporting and progress monitoring. In addition to the Project Manager, a Project Engineering Team and a Lead Engineer are assigned who are responsible for the crane's engineering. A weekly Design Review Meeting is held to monitor the project's progress.

ENGINEERING CAPABILITY

Heila has significant experience in designing and building all of the cranes mentioned below. Heila also has highly specialised knowledge and experience in designing and building cranes suitable for Arctic conditions and ATEX environments, as well as specialised dredging cranes (DRG) that are able to operate at extreme heel and trim angles.

Heila has in-house the capability to build customised crane safety & control systems, and is able to develop PLC software. It is therefore able to support and maintain the crane's safety & control system throughout the crane's life.



Stiff



Telescopic



Knuckle



Fully foldable



Jib



Customised



Lattice boom

Stiff boom cranes - HMR-F
10 tm - > 4,500 tm

Characteristics:

- Marine crane
- Continuous slewing
- Crane boom not extendable
- Low maintenance
- Easy to adapt for ATEX environments

Telescopic cranes - HMR-S
3 tm - > 1,000 tm

Characteristics:

- Marine crane
- Continuous slewing
- Crane boom is extendable, which enlarges the working area

Telescopic knuckle boom cranes - HLRM
60 tm - > 1,000tm

Characteristics:

- Marine crane
- Continuous slewing
- Crane boom is both knuckled and extendable, enlarging the working area
- High manoeuvrability
- Compact storage configuration
- Possibility to use a fixed hook
- Maximum capacity at short outreach

Fully foldable telescopic cranes - HLM, HLRM
3 tm - 90 tm

Characteristics:

- Marine crane
- Crane boom is knuckled, foldable and extendable, which enlarges the maximum working area
- High manoeuvrability
- Compact storage configuration
- Possibility to use a fixed hook
- Maximum capacity at short outreach

Jib cranes - HR-2BJ
20 tm - > 4,500 tm

Characteristics:

- Marine crane
- Knuckle boom
- Maximum capacity at a wide range of outreaches, large working area
- Easy to adapt for ATEX environments
- Low maintenance

Customised cranes

Capacity per customer requirement

Characteristics:

- Marine crane
- Completely customised design
- Adapted to any dimensional constraints
- Adapted to any other special requirement

Lattice boom crane - HLBC

Capacity per customer requirement

Characteristics:

- Marine crane
- Continuous slewing
- High lifting capacity to weight ratio
- Modularised for easy transport



Custom Built Marine & Offshore Cranes

REPRESENTATIVE



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