



MARINE CRANES

ENGLISH
JULY 2017



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OUR MISSION

OFFERING YOU OUR BEST
TO INCREASE YOUR VALUE

Clients, dealers, partners and suppliers are the leading players in Effer's world, and you're part of this world too.

We share the same goals and the choice to aim for the top, and we are committed to offering **the best performance in every detail.**

Working together we will increase your value and overcome any obstacles.

We beat time and wear, with models able to resist against greatest stress.

We beat standardization, ensuring our products are highly customized.

We beat the global market, expanding our international network year after year.

We beat our own records, raising the quality standards we have already achieved.



An excellent product along with extraordinary quality are not enough for us. We strive to increase your value because we want you to realize your full potential and go beyond.

OUR HISTORY:
MORE THAN 50 YEARS, METER BY METER

SINCE 1965
ON YOUR SIDE FOR
YOUR SUCCESS



Presentation of the first crane in the world with a **lifting moment of 40 txm, entirely made/built with T1-A steel**, an absolute innovation at the time.

NOVEMBER 9th, 1965

Effer was born from a winning team combining excellence, technological research, and international vocation.

1969

1977

Creation of one of the **first 110 txm** truck cranes equipped with remote control, an exclusive Effer concept designed for the Russian market.

1986

Creation of the Marine Division.

After a few months from conception, we received an order from Holland for three cranes of **400 Txm**, with a **hydraulic outreach of 30 metres** with a **maximum capacity at full reach of 7500 kg**.

1998

At the Saie Exhibition in Bologna we presented the largest truck mounted crane ever built, the Effer 2200 with a **lifting capacity of 200 Txm**.

2001

Introduction of **cataphoresis process** for the protection from the corrosion of steel structures of marine cranes.

2005

JOINING THE BIGGEST.
Effer becomes part of the CTE group, leader in the production and sales of aerial working platforms and ladders.

2011

EFFER SALES CONFIGURATOR IS BORN.

An innovative tool that allows the clients to choose their own crane configurations, for quick and accurate quotations. An innovative tool to **get closer to the client** and improve the effectiveness and efficiency of the process of choosing, quoting and issuing Effer crane orders.

2013

RAISE THE VALUE IS BORN.

A revolution in the relationship between Effer and its Partners, a universe of opportunities for our partners to grow, a new successful model.

OUR SALES and SERVICE NETWORK

THE WORLDWIDE NETWORK:
GETTING ANYWHERE IS NOT JUST A MATTER OF HEIGHT

EFFER REACHES EVERY CORNER OF THE WORLD THANKS TO A NETWORK OF OVER **120 DEALERS IN 60 COUNTRIES.**

WHEREVER THE BEST IS REQUIRED, WE BRING EXCELLENCE.

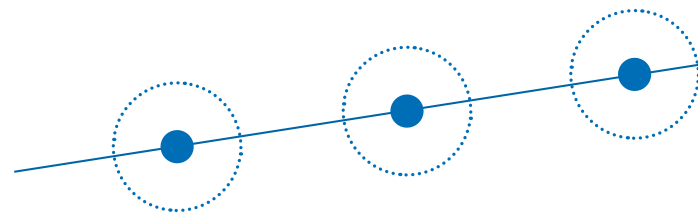
MARINE CRANES

ARGENTINA
AUSTRALIA
BAHRAIN
BELGIUM
CANADA
CHILE
CHINA
COLOMBIA
CYPRUS
DENMARK
ECUADOR

FAROE ISLANDS
FRANCE
FINLAND
GERMANY
GREECE
HONG KONG
INDIA
INDONESIA
IRELAND
ISRAEL
ITALY

MALAYSIA
MEXICO
NORWAY
NEW ZEALAND
NETHERLANDS
PERU
PHILIPPINES
RUSSIA
SINGAPORE
SPAIN
SWEDEN

THAILAND
TRINIDAD AND TOBAGO
TURKEY
UNITED KINGDOM
UNITED STATES OF AMERICA
UNITED ARAB EMIRATES
URUGUAY
VENEZUELA

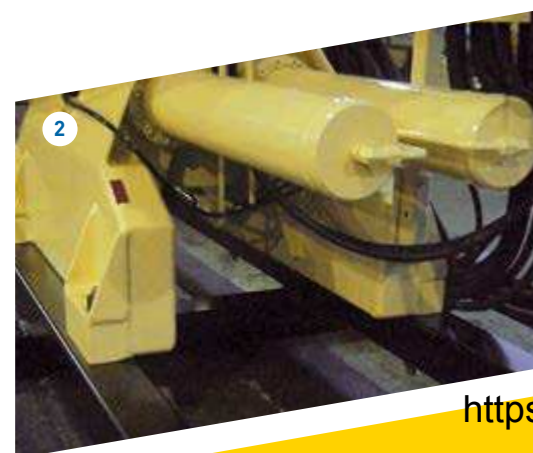


STANDARD SUPPLY

1. Proportional control bank with supplementary control for winch.
2. Rotation by slewing ring and hydraulic motor reduction gears or by racks and pinion.
3. Emergency stop button.
4. Load moment limit device.
5. Extension cylinders with sequence valves
Microfissure chrome plating
 Through the electrolytic action, the cylinders stems are coated with several layers of chrome to obtain a thickness of 100 microns which guarantees resistance in saline fog up to 260 hours (in accordance with ASTM B537) and extreme surface hardness.
6. Cylinder rods with marine double chromium plating and Nikrom
Nickel+Chrome (Nikrom)
 For heavier applications, nickel and chrome are used for the surface treatment of the stems. Thanks to these elements the process guarantees at least 300 hours of resistance in saline fog (ASTM B537).
7. Support plate for winch on 2nd boom.
8. Pins protected with Geomet plating.

9. Pipes and relevant fittings in stainless steel AISI 316L.
10. High Ozone and weather resistance hoses.
11. Hoses with galvanized fittings protected with heat shrunk shroud.
12. Other fittings galvanized and painted.
13. Bolts and screws are either in stainless steel or protected with Geomet plating
Geomet plating
 Many fixing components (screws and bolts) are protected from atmospheric agents and rust through a water-based liquid coating containing inorganic metals (zinc and aluminium), named Geomet. The process conforms to RoHS directive and guarantees resistance to oxidation in saline fog for over 500 hours. Thanks to this process, components are protected on all sides from corrosion and the presence of zinc and aluminium allows self regeneration of damaged areas at a microscopic level. All fixing components which must guarantee high mechanical resistance, are treated with Geomet 321, in that the absence of hydrogen avoids weakening, critical for applications in aggressive environments.

14. Marine painting cycle with cataphoresis or zinc primer (RAL 1014)
Cataphoresis
 Cataphoresis is a surface treatment able to give crane steel components considerable corrosion resistance. It is an electrolytic process involving complete immersion of the piece: it allows uniform surface covering with the resin. All parts of the treated piece are covered, providing high protection against chemical agents and rust, reaching an oxidation resistance equivalent to 500 hours in saline fog. The process is completed with a coat of paint according to client's needs.
Coating treatment
 All parts of the crane are further protected from rust by a 3-layer coat (organic zinc primer, intermediate epoxy polyamidic, polyacrylic varnish) for a total thickness of 270 microns. The main result is a crane which is always protected by a colour which lasts.
15. Hook.
16. Design in accordance EN 13001.
17. Fixing kit.



ACCESSORIES



STANDING CONTROLS

The control valve block is supplied with stand-alone controls for free installation close to the crane.



SCANRECO REMOTE CONTROL

Our cranes can be provided with high quality remote control systems, either available as cable remote or radio remote control systems.



CABIN

In case of harsh environmental conditions, a cabin with crane's controls inside is available. There are many options to equip the cabin (air conditioned, heaters, external protection, etc.).



CONTROLS ON PLATFORM WITH SEAT

Column side crane controls are available on some of our models. For these cranes we propose the continuous slewing system.



WINCH KIT

Installation of different types of winch, offering lifting capabilities and speeds according to client and Classification Societies requirements. Effer can provide cargo winch and man riding winch.



POWER PACK

All our models can be fitted with Hydraulic Power Packs engineered to withstand the most aggressive marine environments and can be equipped with a variety of accessories, including oil heaters, oil coolers, pump-in-load sensing execution.



HEAD PULLEY WITH MULTIPLE LINES

Each application requires different solutions to lift loads. We supply the winch kit with different types of pulleys at the end of the boom according to our client's real needs.



LOAD CELL AND DISPLAY

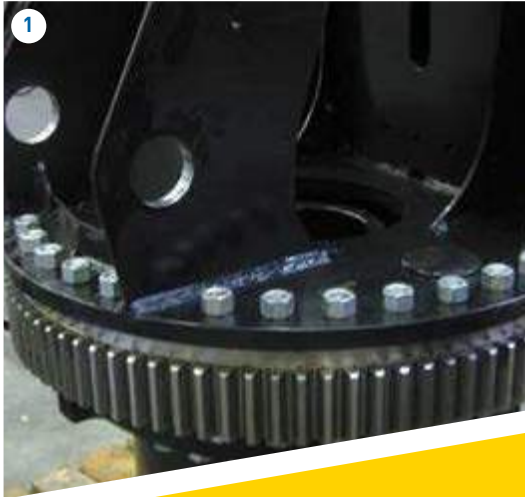
A shackle with load cell and transmitter is an important option available upon request. The value of the load is directly displayed both on remote control display and electric console on the station.



LONG LASTING

TOP PERFORMANCE REQUIRES CRANES TO BE MADE WITH EFFICIENT PRODUCTION PROCESSES

1. All steel components are **shot-blasted and protected with a full marine protection cycle** that includes, in our models up to 80 txm, a fully automated cataphoresis process so even the least accessible points of the structures are protected.

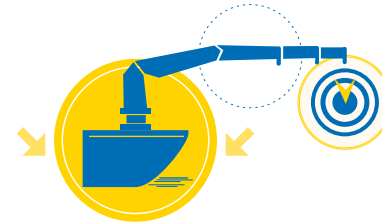
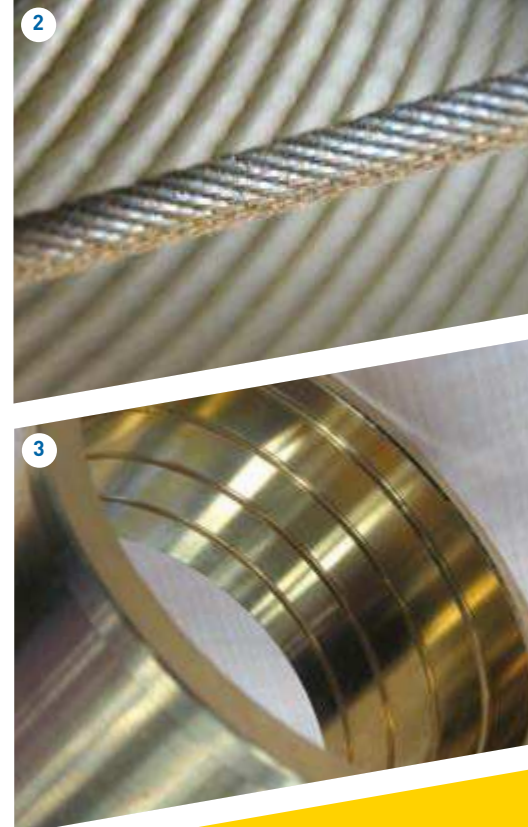


STRONG CABLES

2. Effer uses **anti-twist galvanized and greased steel cables**. This ensures maximum performance under all working conditions, and **long lasting cranes**.

PIN BUSHES

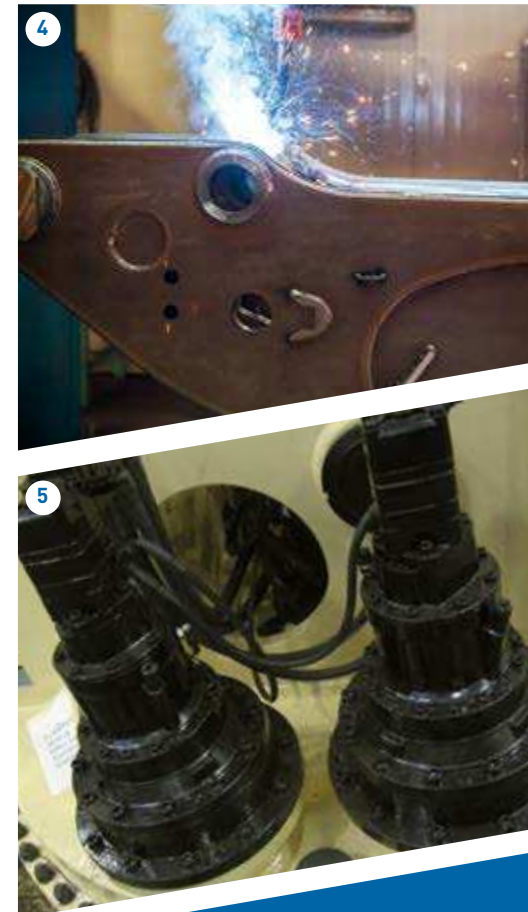
3. All our pins are designed for a long life. Made in **bronze** they **resist** heavy stress and wear.



NO LIMITS

MADE IN ITALY MANUFACTURING PROCESS

4. Effer uses **PRO-ENGINEERING** and **ANSYS** software FEM (Finite Elements Method) optimizing its design process. Effer's **50-year know-how** in the **high strength and material welding sector enables us** to carry out very complex processing - even in the production of light and medium-range cranes.

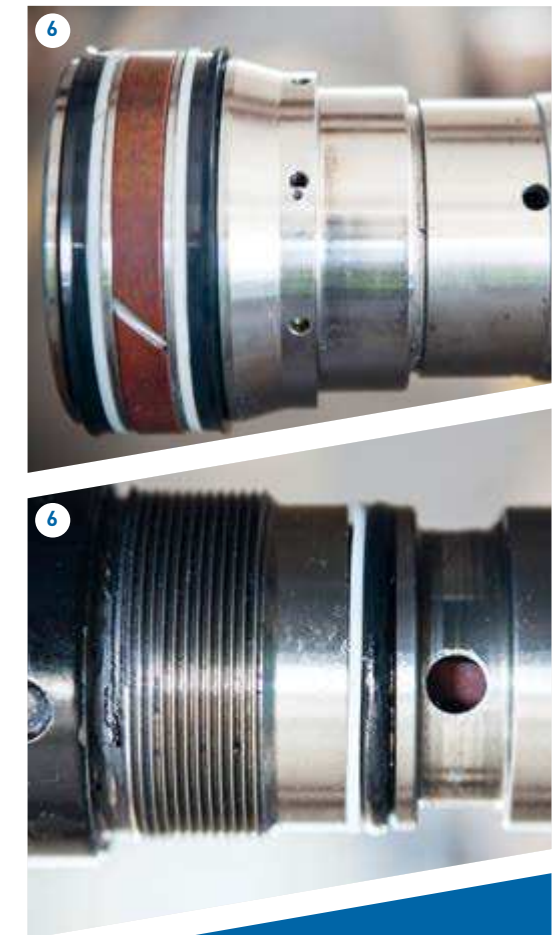


ROTATION SYSTEM

5. Powerful and precise slewing using **either rack and pinion or slewing ring systems**. All our models offer the possibility to double the slewing system in order to increase efficiency under heavy working conditions.

THE BEST HYDRAULIC SEALS ON THE MARKET

6. Effer only uses **the best** hydraulic seals in the category for its cranes.





EASY WORK

CENTRALIZED GREASING SYSTEM

7. Effer cranes have **greasing points to keep them efficiently operating and to preserve moving parts** over the years. A central greasing system is available as an option to simplify maintenance operations, granting sure oversight of the whole crane.



CONTROL VALVE

8. All our cranes take advantage of a control valve with internal compensation. With this solution, it is possible to **carry out simultaneous movements**. For this purpose we benefit from the cooperation of worldwide producers (Hawe and Danfoss).

SLIPPING SOFTLY

9. Effer cranes rotation bearing is equipped with a **leaktight seal between the rotary rings**, to prevent water and dust entering the tracks. All Effer rotation bearings are fastened by means of **high resistance screws tightened with a dynamometric wrench**. Effer rotation bearing uses **two circles of ball bearings** to reduce the rotation friction to a minimum.



RANGE OF APPLICATION

Our cranes have been designed for a wide range of applications including deck operations, shipboard, offshore platforms, **fishing and sea farming industry** and more.

Our cranes are also perfect for many different installations such as:

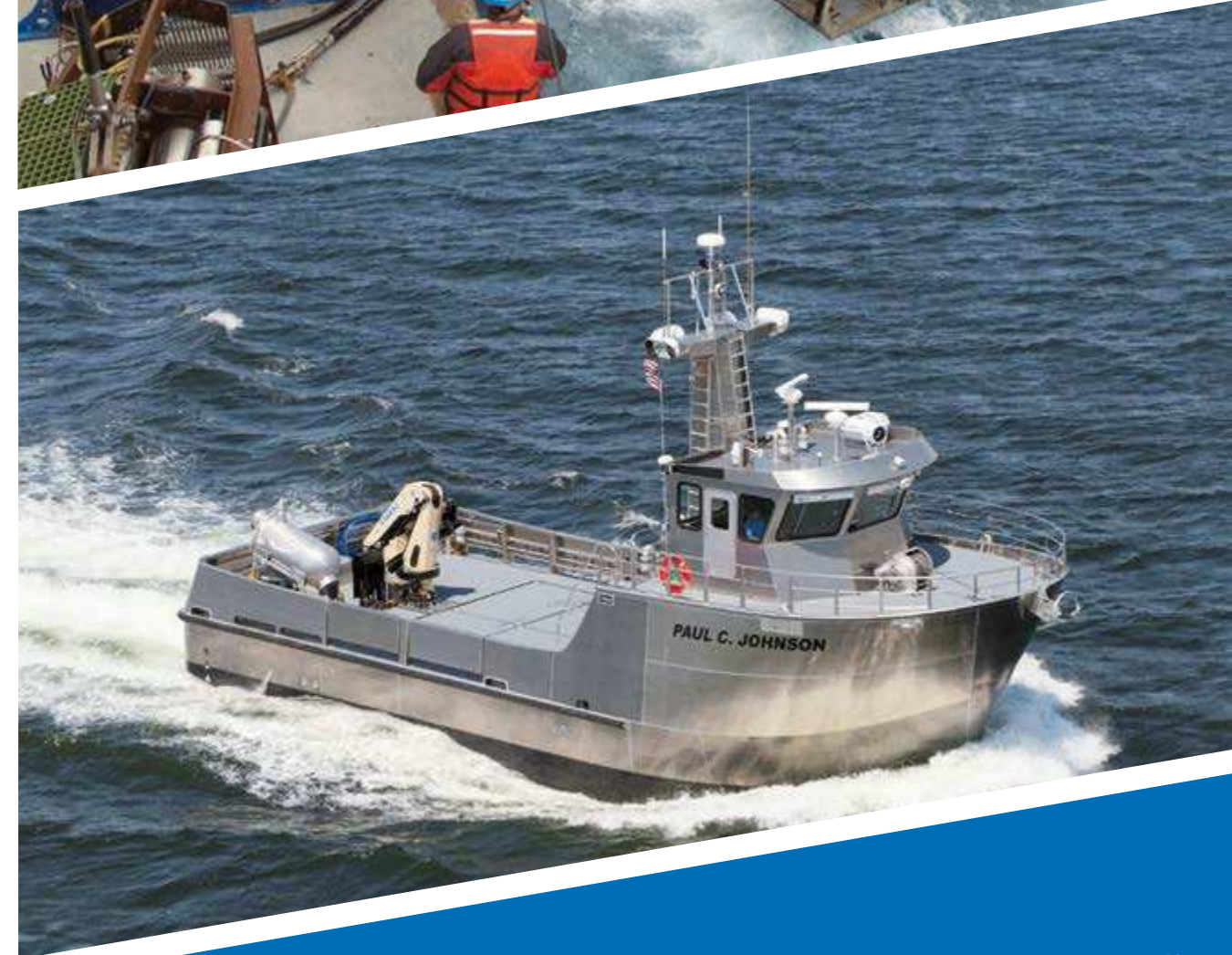
- Supply and naval vessels
- Dredgers
- Docks
- Research ships
- Navy vessels

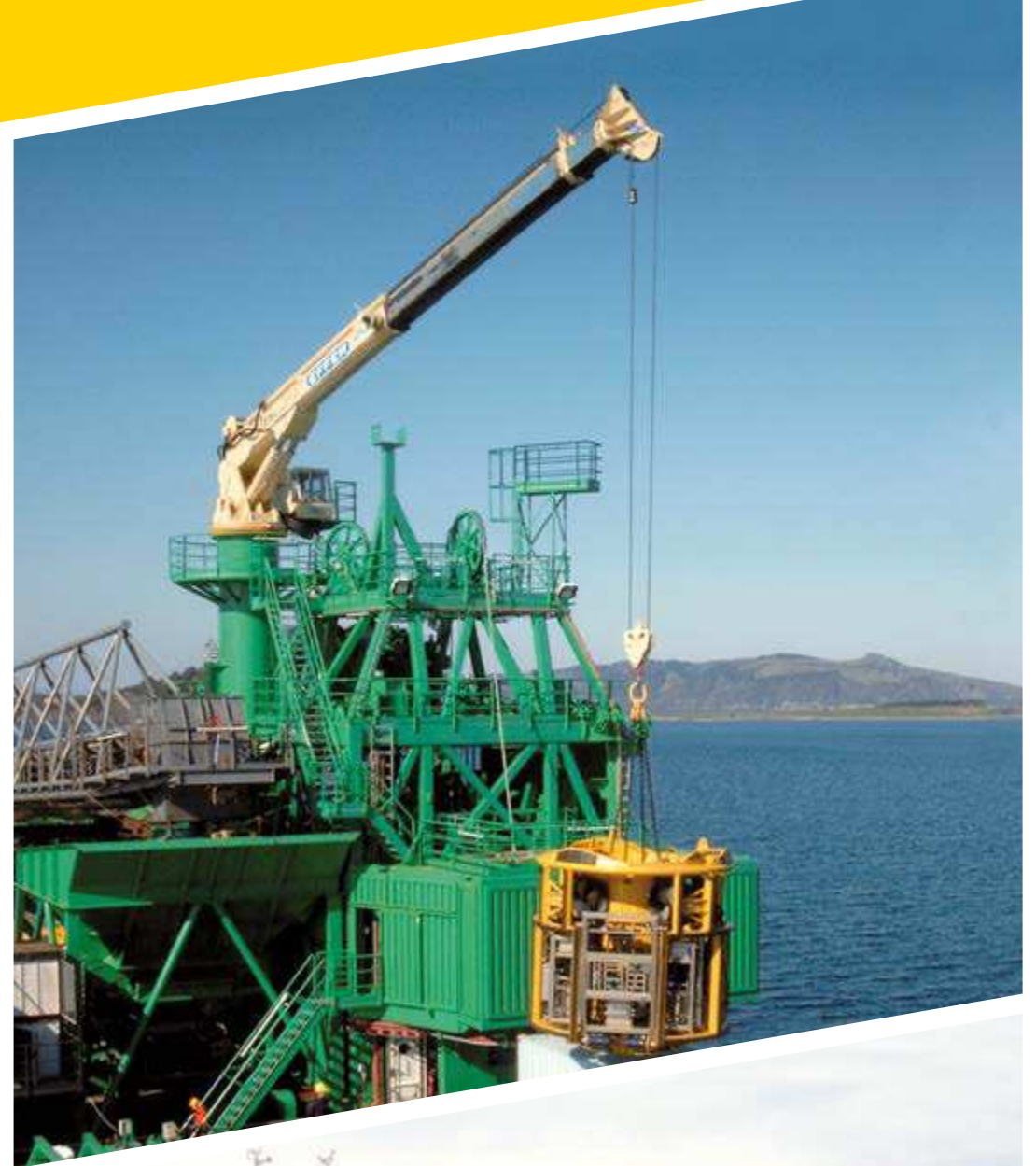
For **offshore applications**, Effer can provide all the tools you need for your operations far away from the coastline.

Our machines are designed, made and certified to resist under typical hard working conditions in the offshore environment (wear and tear, saline fog, extreme temperatures...)

Our marine cranes for the offshore sector are suitable **both for basic operations, and for the most sophisticated uses on vessels, platforms, ships etc.**

Offshore applications can apply to **safeguarding, drill ships, military uses, dredgers, tankers, oil & gas field, and many more:** in Effer we have staff dedicated to collecting and satisfying all client's needs concerning crane features and certifications, so enabling us to provide the right tools for working easily and in safety.







FOLDABLE KNUCKLE BOOM

The data written in all the following diagrams refer to cranes used with hook (no winch) and under harbour working conditions:

The attached diagrams are according to EN13001 (*) HC2-HD4-S1 5°Heel - 2°Trim Max wind speed: 14 m/s
 (*) EN13001-1; EN13001-2; EN13001-3-1

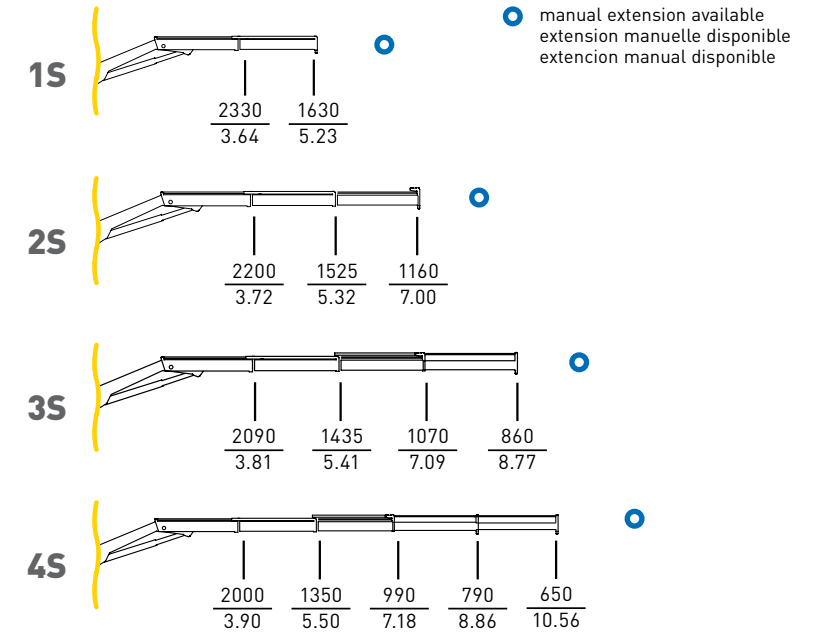
+30° is the max working angle to use the technical parameters indicated in the load diagram.

Above +30° there is the DERATED AREA/ANGLE: permitted area with reduced loads (derating).

The loads will be calculated also according to the wind speed.

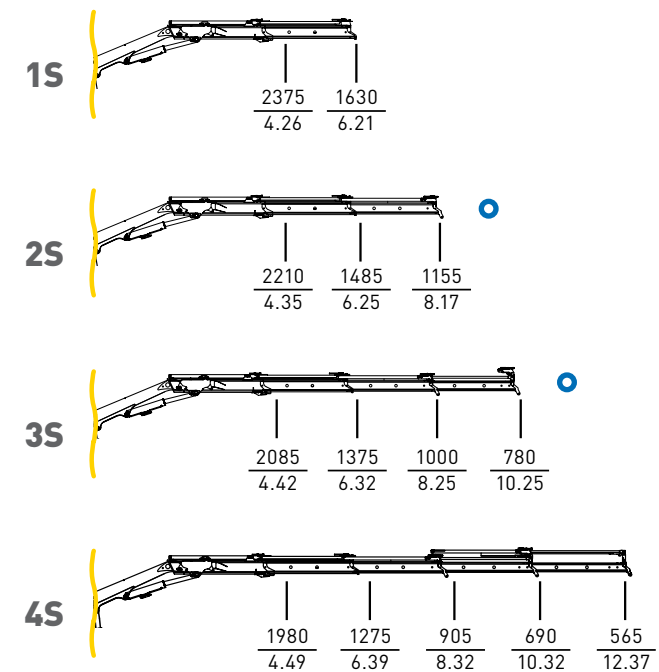


85M



kg
m

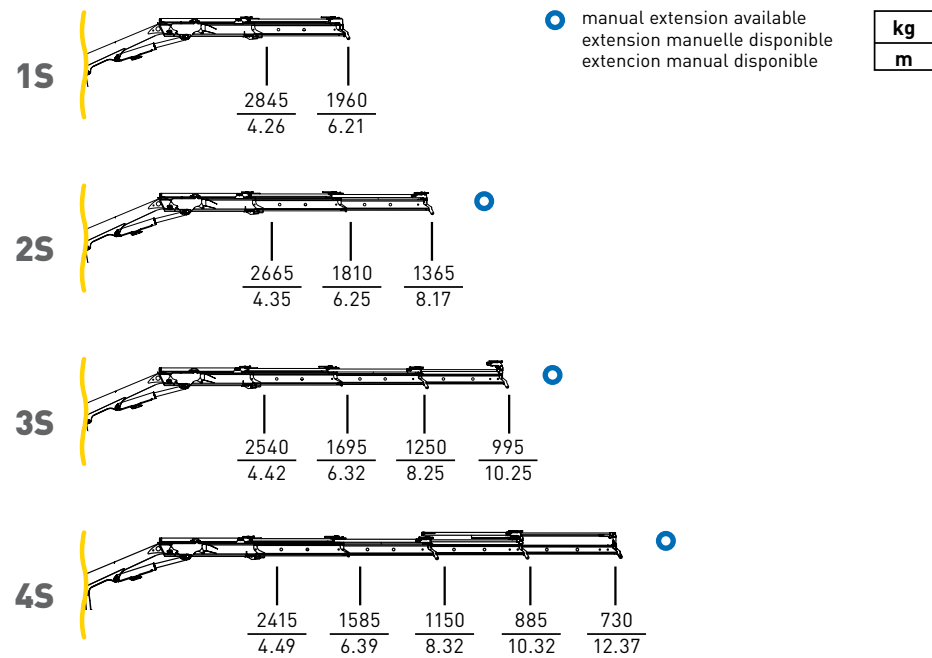
110M



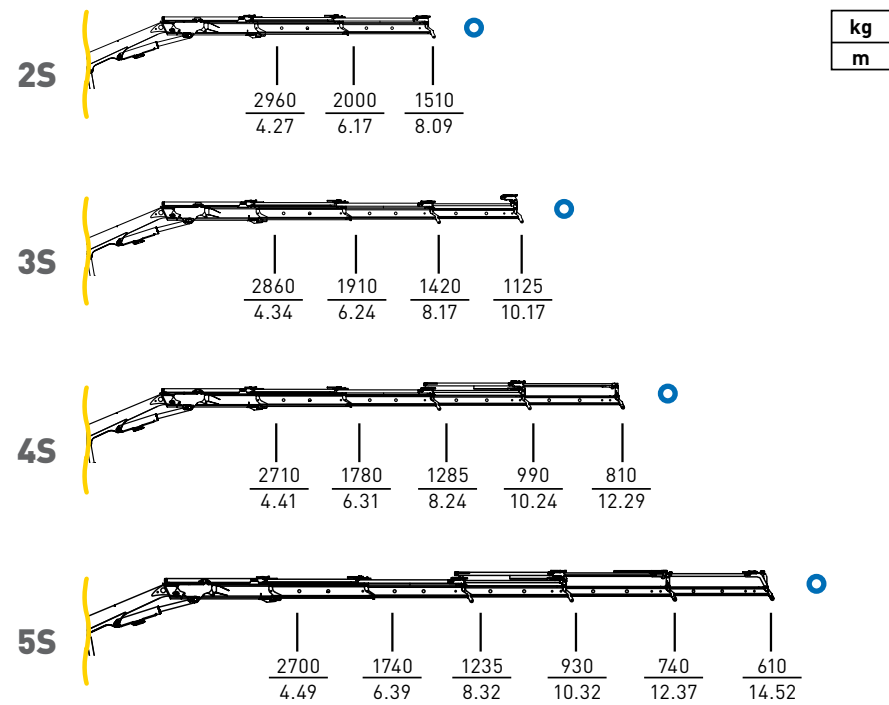
kg
m

FOLDABLE KNUCKLE BOOM

130M

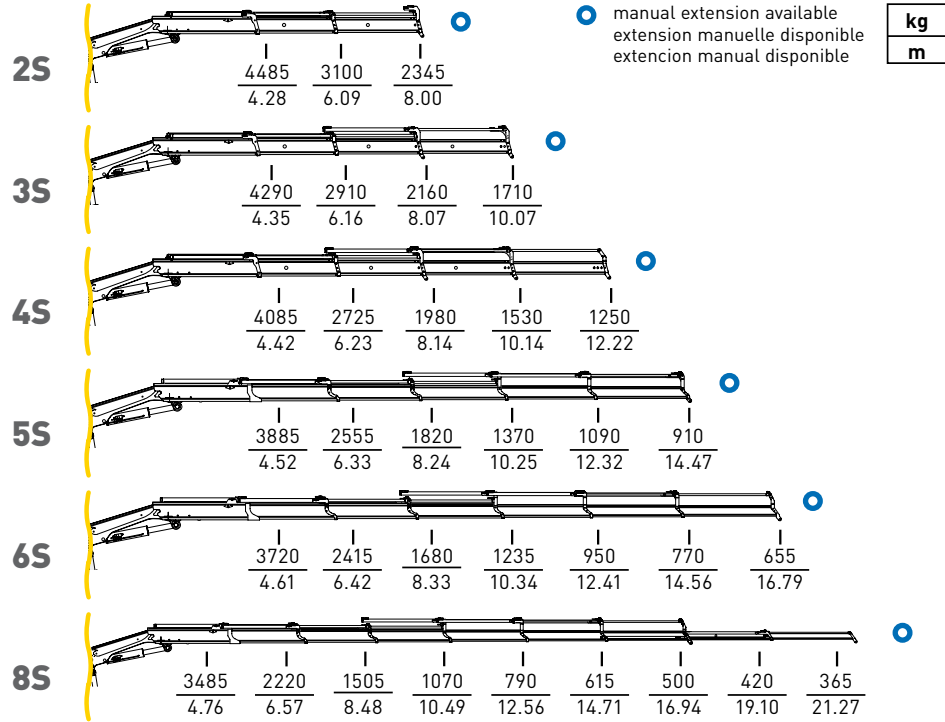


155M

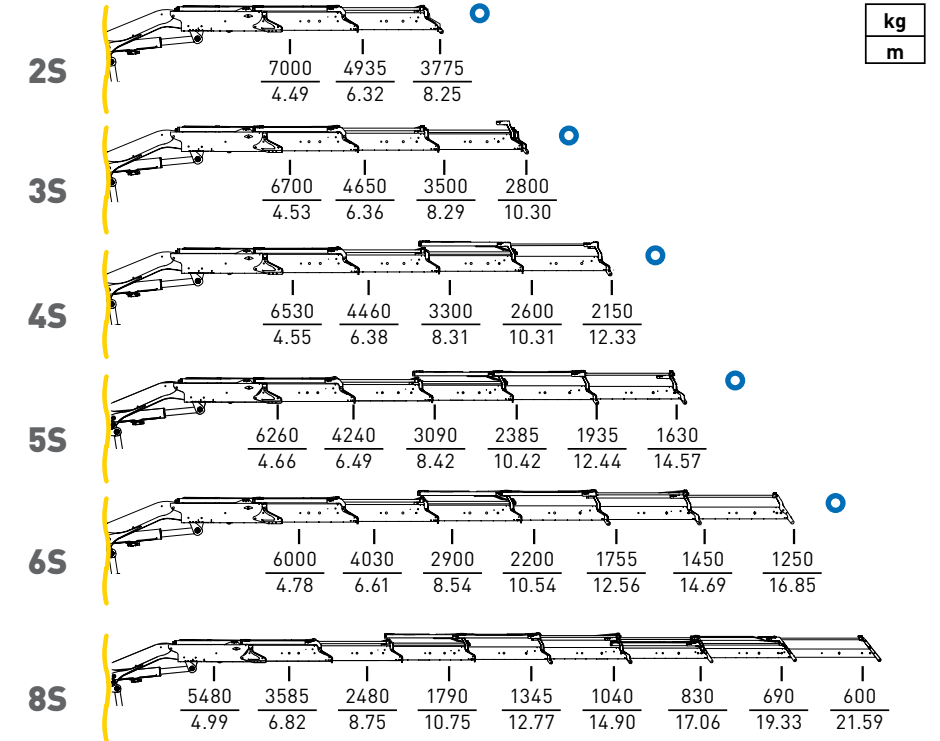


FOLDABLE KNUCKLE BOOM

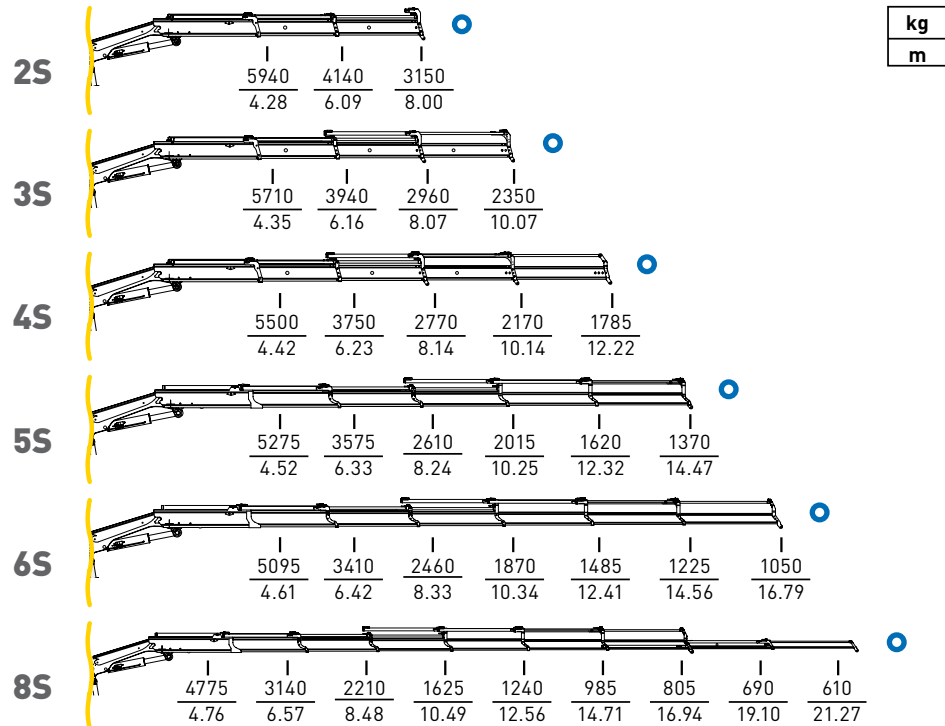
220M



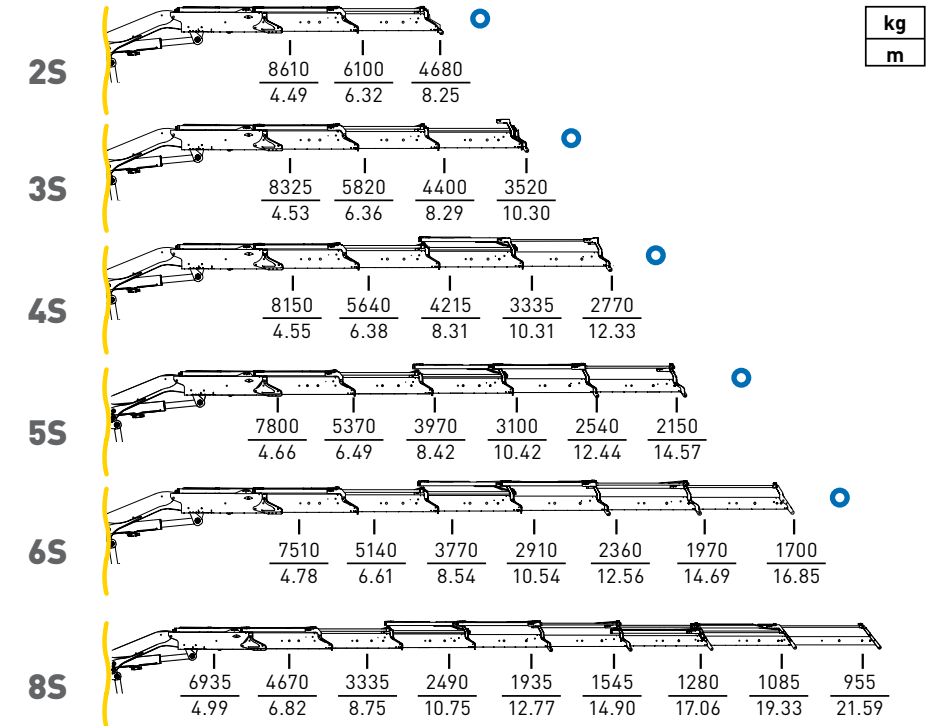
340M



275M



440M



KNUCKLE BOOM

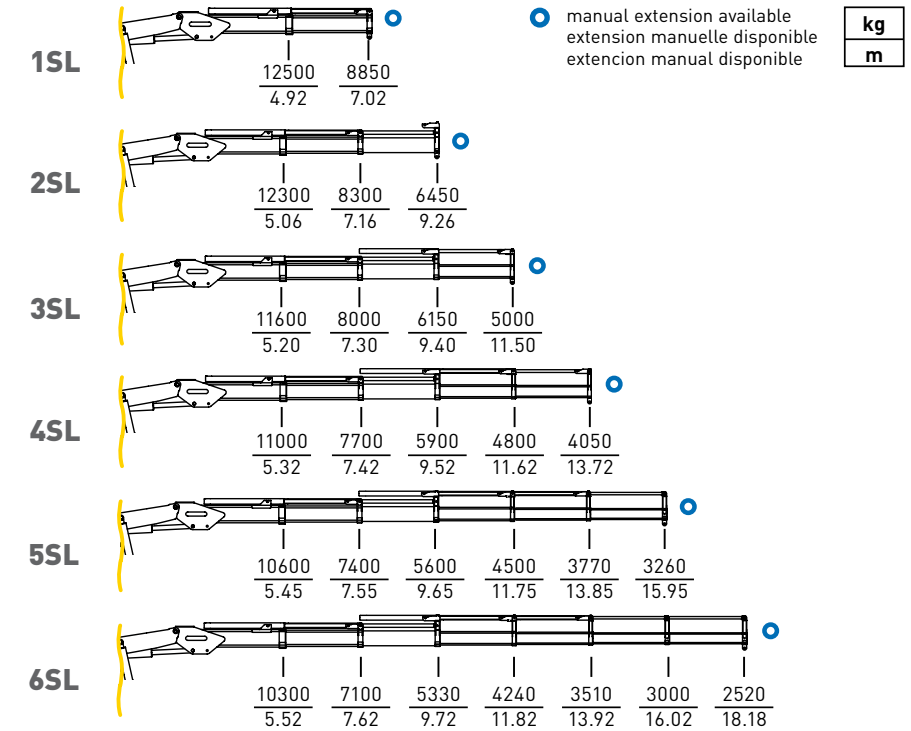
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 (*) EN13001-1; EN13001-2; EN13001-3-1

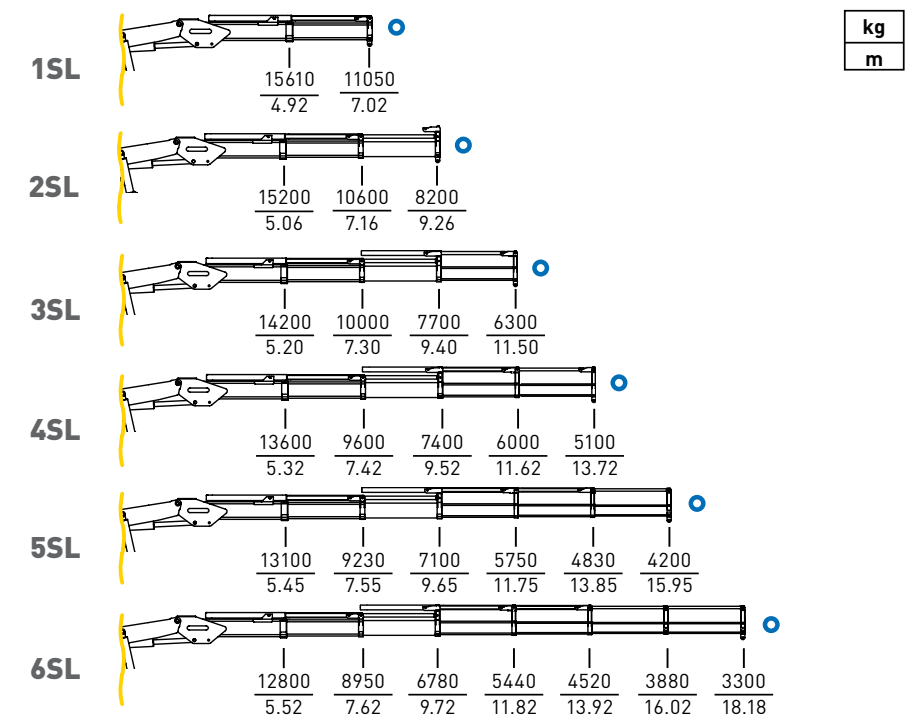
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 The loads will be calculated also according to the wind speed.



65000

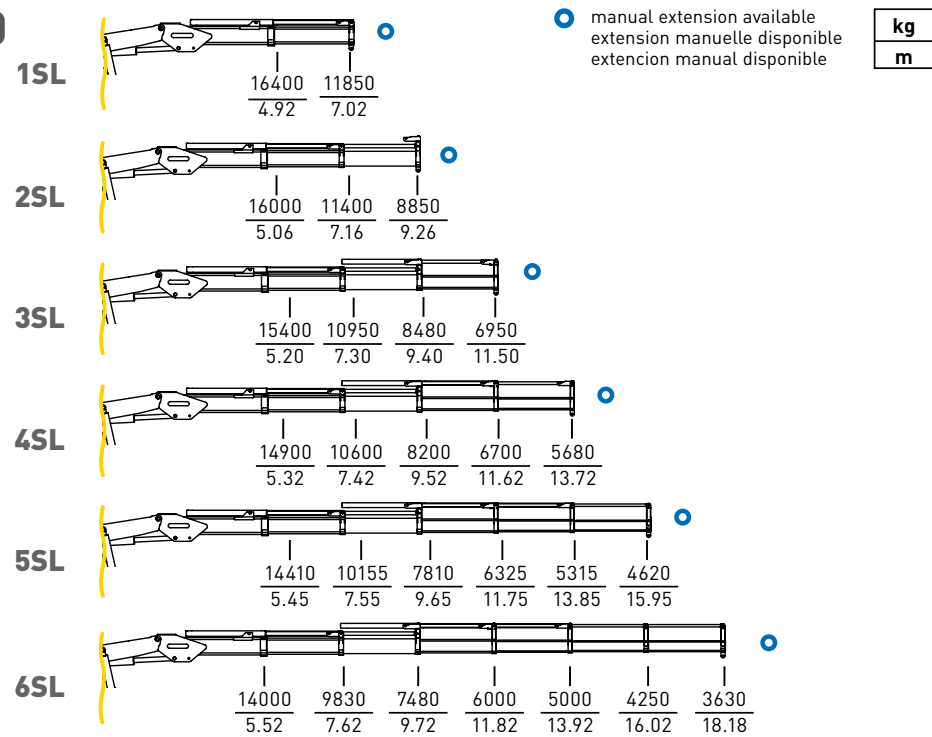


80000

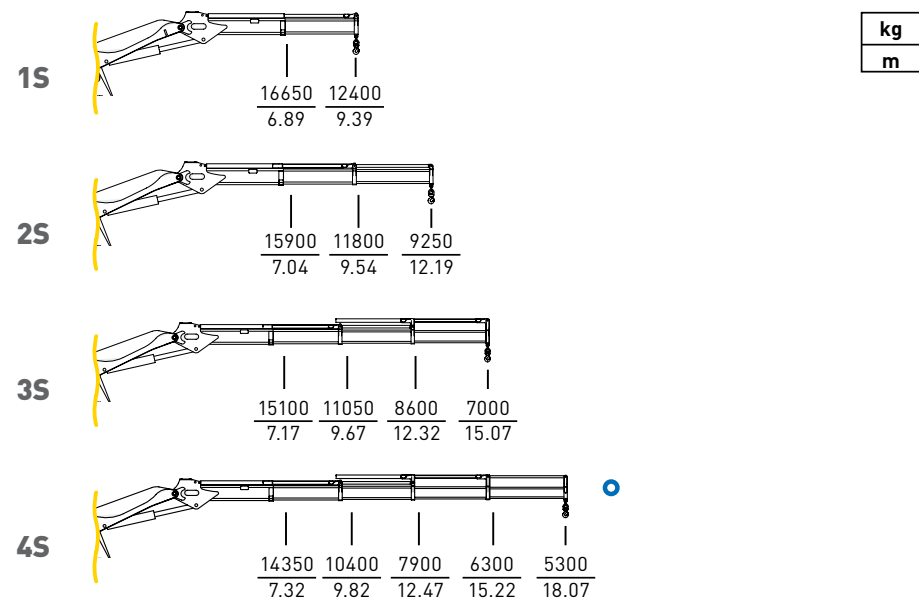


KNUCKLE BOOM

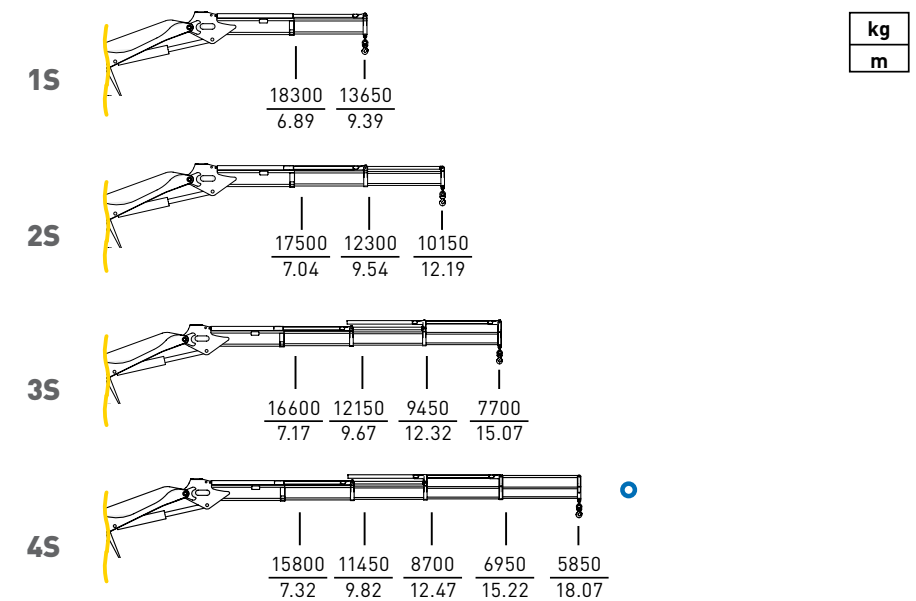
100000



125000

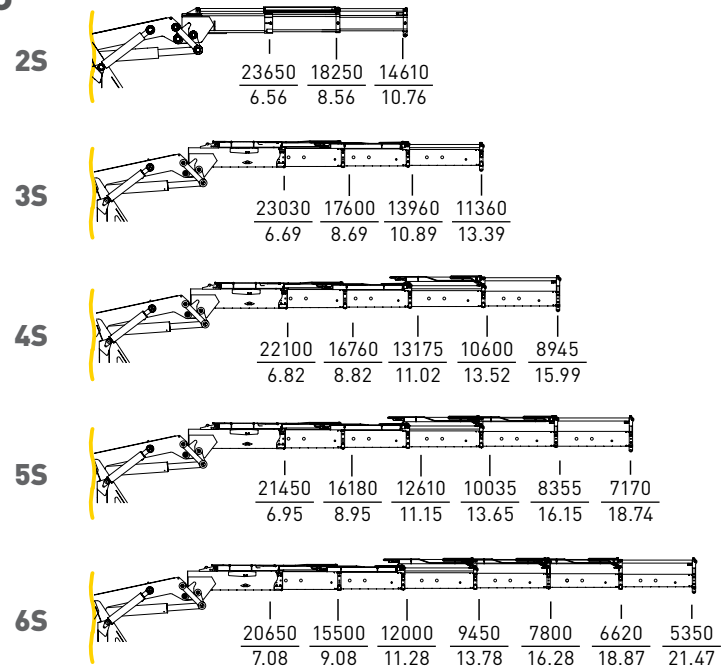


145000



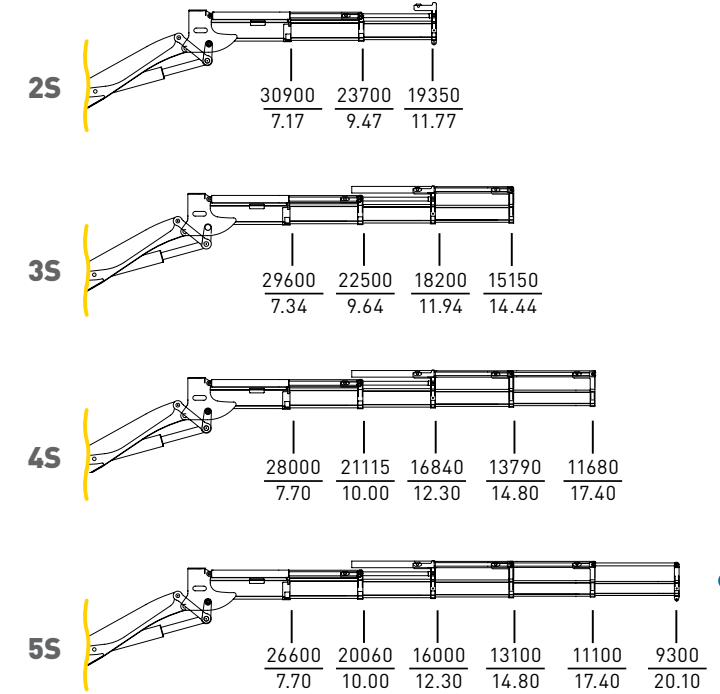
KNUCKLE BOOM

175000



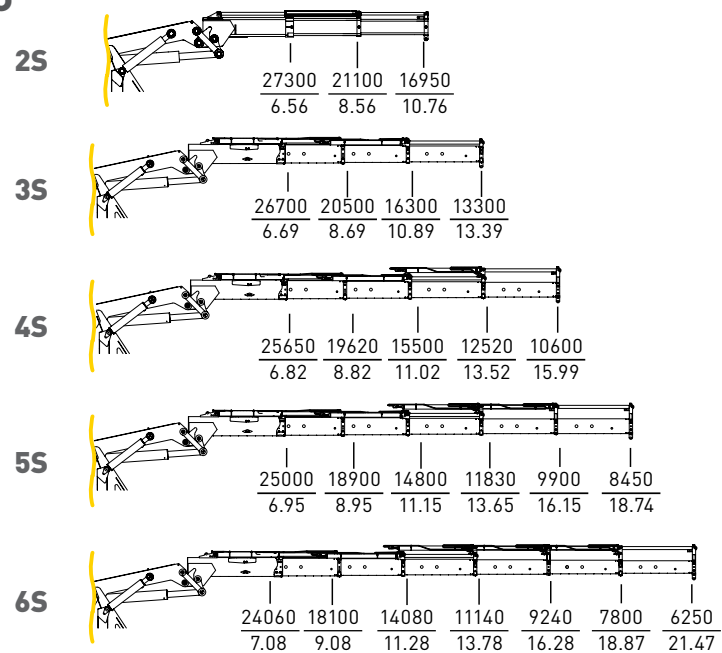
kg
m

245000



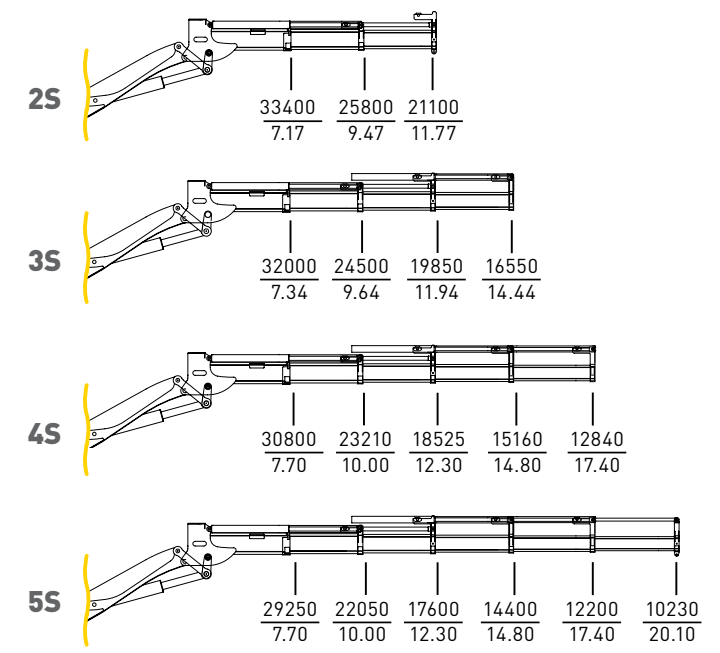
kg
m

200000



kg
m

275000



kg
m

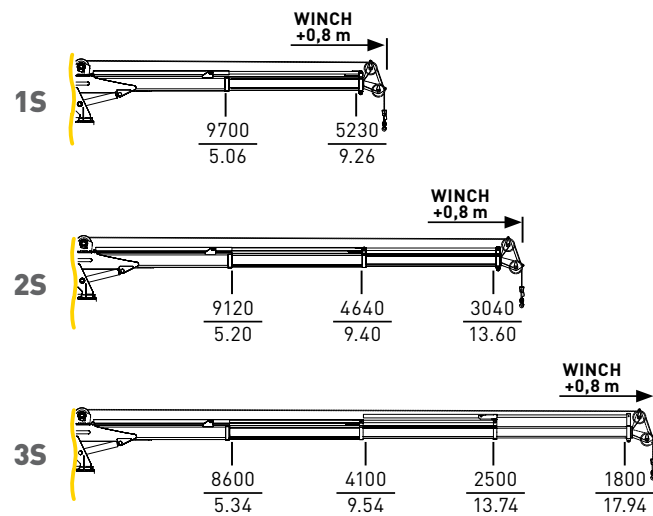
TELESCOPIC BOOM

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 (*) EN13001-1; EN13001-2; EN13001-3-1

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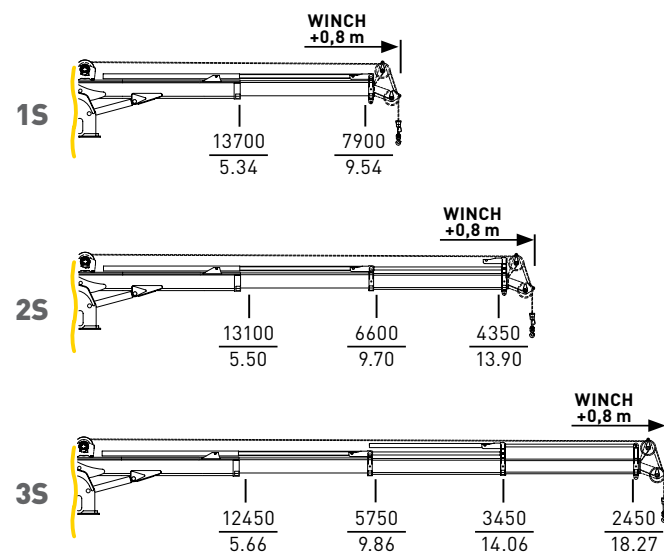
DECO 44



kg
m



DECO 80



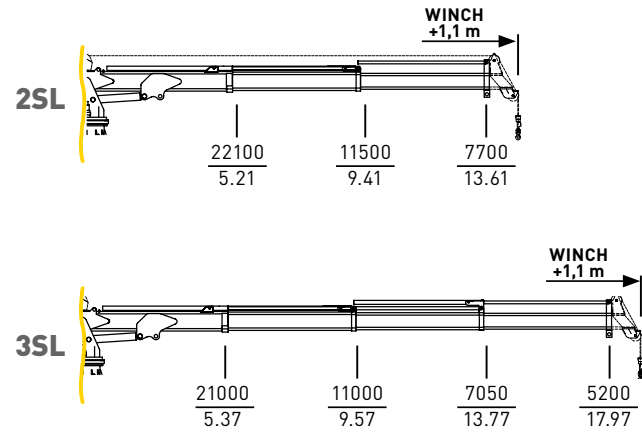
kg
m



TELESCOPIC BOOM

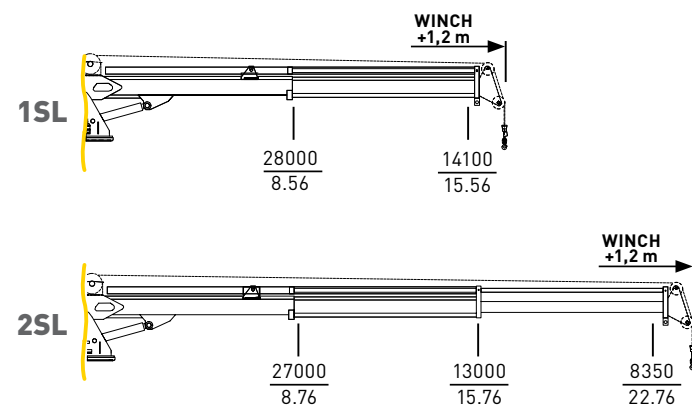
DECO 120

kg
m



DECO 240

kg
m





INTERNATIONAL RULES AND CERTIFICATIONS

All Effer cranes are designed according to EN 13001 standards. Our cranes can be verified according to the rules of any IACS member for shipboard or off-shore applications.



NOTES

A series of horizontal dotted lines for taking notes, spanning the left side of the page.



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