

www.triplex.no

TRIPLEX
by MacGregor

Deck equipment for MPSV offshore vessels



MACGREGOR

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MDH SEAFASTENING AND ALARM PANEL



TRIPLEX, a MacGregor company, is a major supplier of cranes and handling equipment to Offshore-, Fishery and Research vessels. Quality and an excellent reputation have resulted in that Triplex products are sold worldwide.

Multi deck handler 22
Cargo rail cranes
Deck cranes
ROV hangar crane
Rescue and work-boat Davits
Shark jaws & Guide pins
Towing winches
Anchor mooring winches
Tugger winches
Capstans





Triples MDH PSV

For cargo handling operations in port and offshore

- 20t total lifting capacity
- 12t winch under the trolley
- Telescopic 75tm crane
- Floodlights and cameras
- Operators Cabin

MDHs are Patent protected
NO325335 / GB2398062
NO324632 / GB2403706

Triples MDHs are especially designed to improve the deck cargo efficiency offshore and for the loading- and unloading operations in ports. The system can also perform tandem lifts of heavy and large items like pipes and subsea templates.

MDH-22 Reference list

“ECO TBN 1”
“ECO TBN 2”
“ECO TBN 3”



TRIPLEX MDH 22

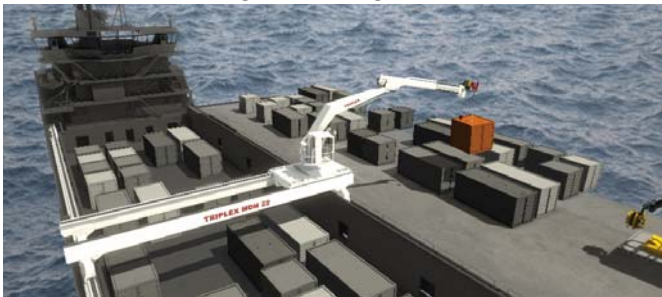


MDH-22 for supply vessel

Large economic and operational savings for the operator,
increased safety for the crew members,
and reduced risk for accidents offshore.

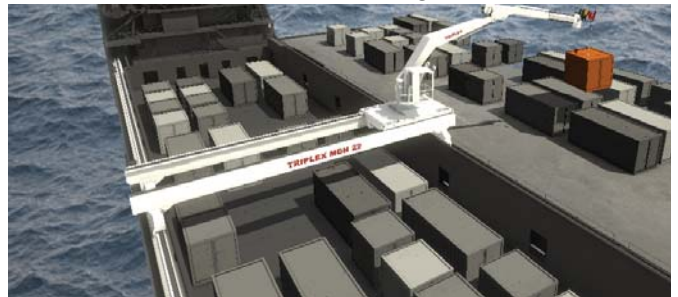
INCREASED SAFETY DISTANCE OFFSHORE - AUTOMATIC CARGO HANDLING WITH REMOTE CONTROL - LARGE TIME SAVINGS ONSHORE & OFFSHORE - DEICE C FUNCTIONALITY - REDUCED «WAITING FOR WEATHER» DELAYS RESCUE FUNCTIONALITIES - OPERATORS CABIN - CAN CARRY AND LAUNCH UP TO 2 ROV'S - RESCUE DROP ZONE - OIL RECOVERY EQUIPMENT (TRANSREC 150 AND OIL BOOM) - TANDEM LIFT (PIPES, SUBSEA EQUIPMENT, ETC.) - HANDLING BULK HOSES ONSHORE & OFFSHORE

Cargo handling in port



30-50% more back-load

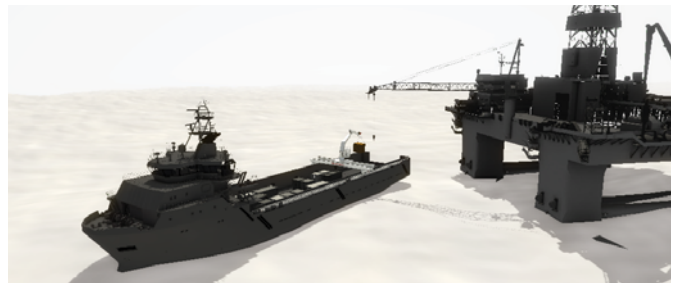
Hose handling



100% use of deck area



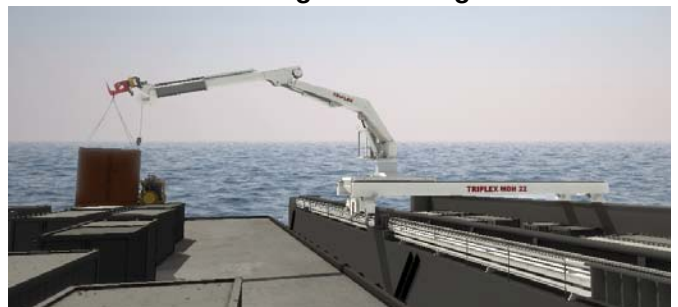
No need for onshore cranes



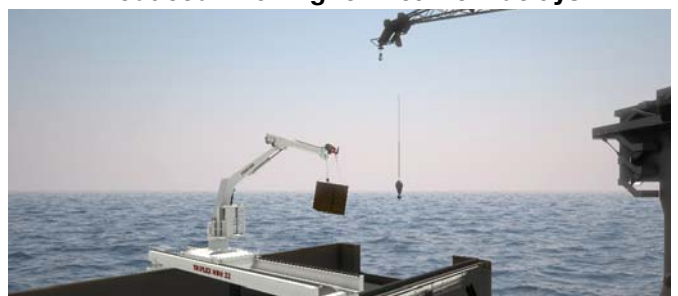
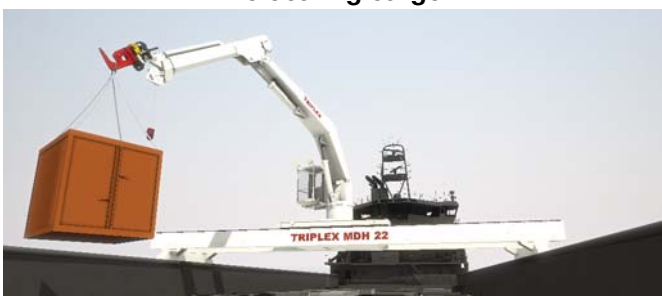
Loading & unloading



Relocating cargo



Reduced "Waiting for weather" delays

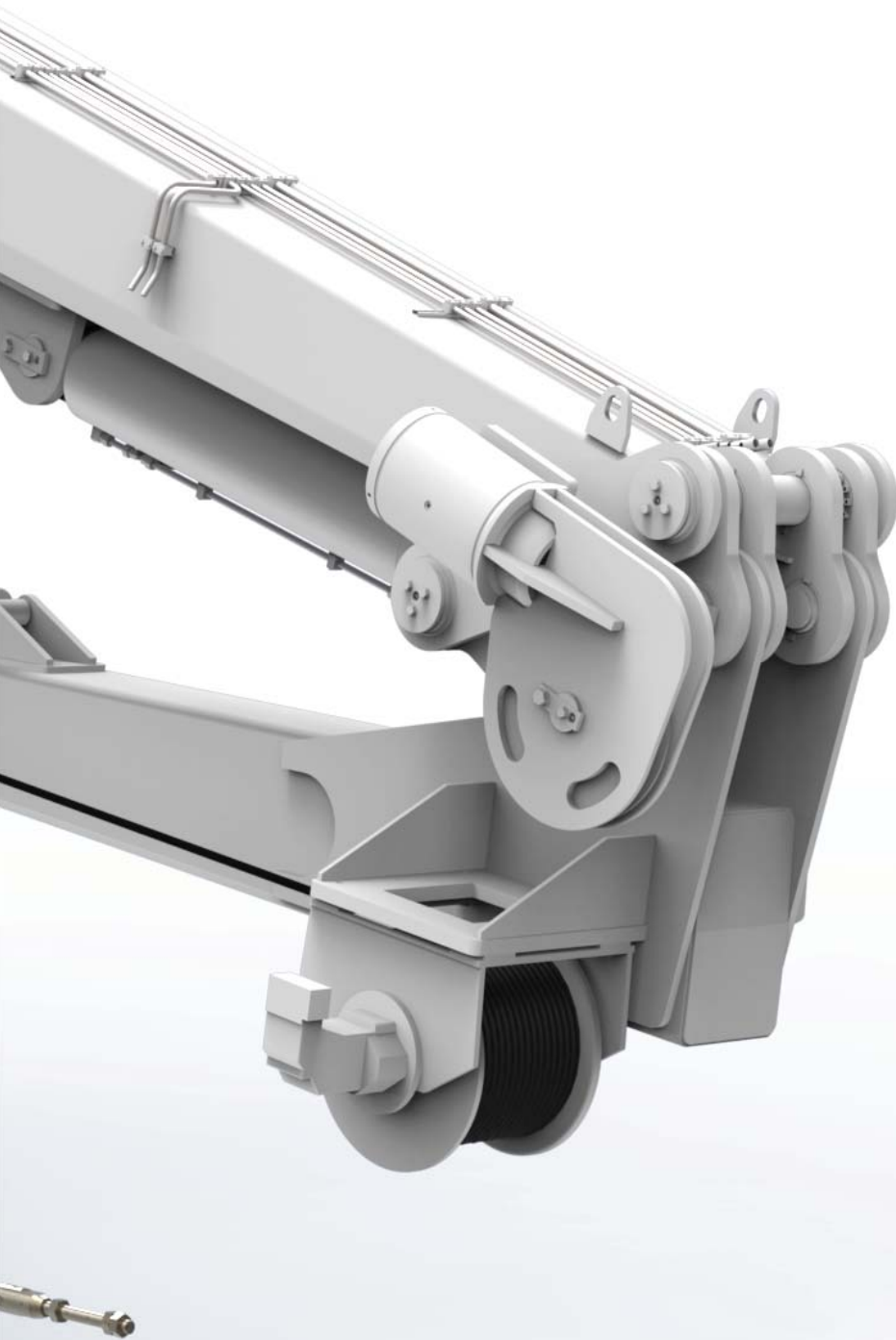




KNCM 100 Cargo rail cranes

Reliable and safe technology for cargo handling operations

Cranes are mounted on a trolley system, enabling them to travel along the cargo rail covering the entire length of the aft deck on offshore vessels. Powerful and accurate, these cranes can also be fitted with various remote-controlled tools and manipulators for specific deck operations.



- 100TM total lifting capacity
- Operators cabin
- Floodlights and cameras
- Two individual winches

KNCM Reference list

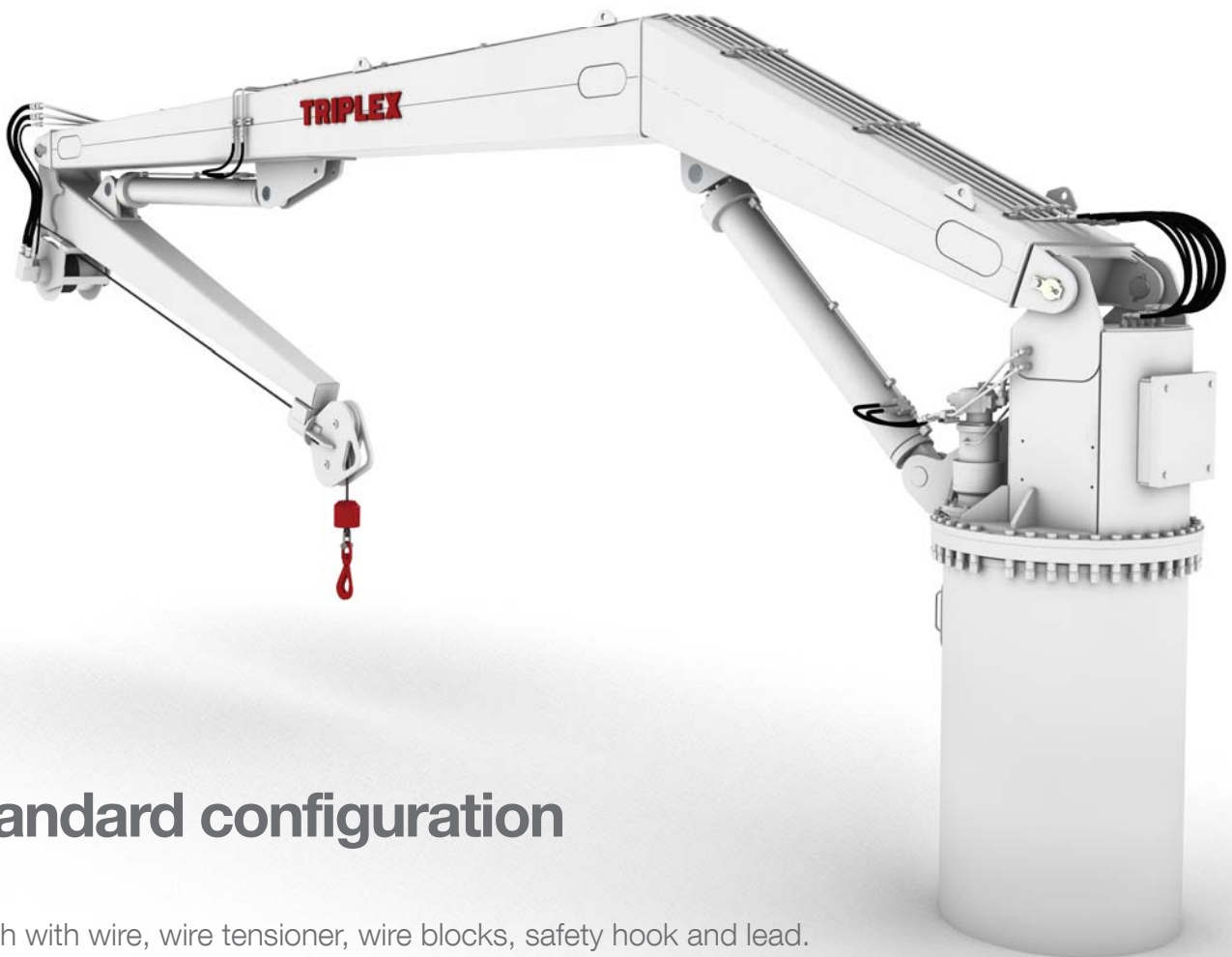
- “Oceana TBN 1 x 2 cranes”
- “Oceana TBN 2 x 2 cranes”
- “Oceana TBN 3 x 2 cranes”



Deck cranes

TRIPLEX KN-SERIES

Triplex deck cranes can have both reach and lifting capacity custom made to suit each individual vessel.



Standard configuration

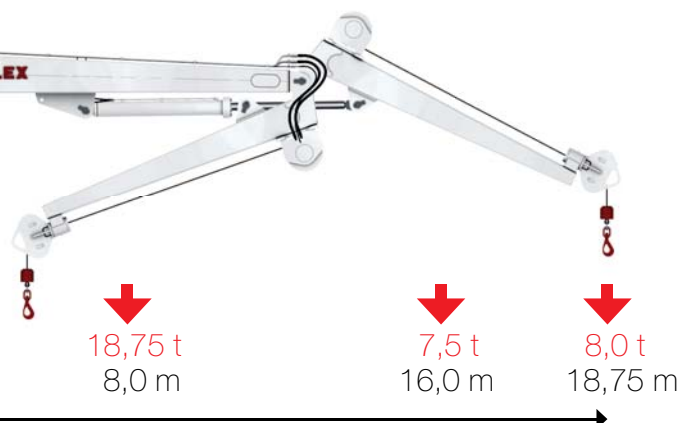
Winch with wire, wire tensioner, wire blocks, safety hook and lead.
Radio Control type HBC for portable wireless control of all crane and trolley functions.

Cylinder piston rods, bolts and high pressure pipes in seawater resistance stainless steel.
Crane, pedestal and trolley delivered sandblasted, primed and epoxy painted.
Metallizing is optional.



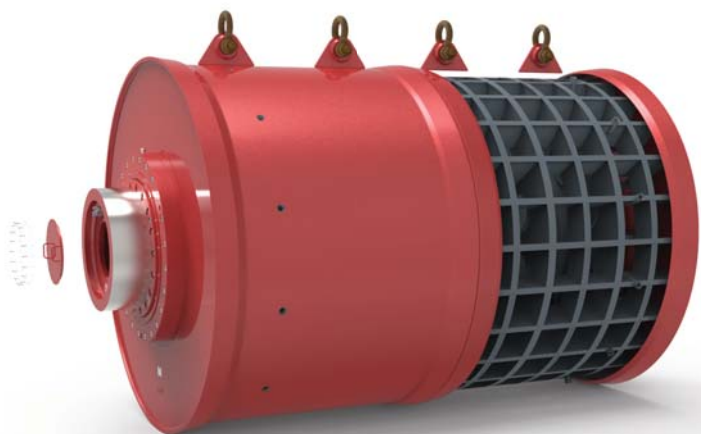
| DECK CRANES | Lifting capacity /tons | Reaching lenght /meters |
|------------------|---------------------------|----------------------------|
| KN 30 TM | 3,0 | 10 |
| KN 50 TM | 4,0 | 12 |
| KN 60 TM | 4,0 | 15 |
| KN 75 TM | 5,0 | 15 |
| KN 100 TM | 6,5 | 15,5 |
| KN 120 TM | 7,5 | 16 |
| KN 150 TM | 8,0 | 18,75 |
| KN 180 TM | 18 | 10 |

Lifting capacity/Length ratio can be customized according to customer needs.



Stern rollers

Easy for shipyard to install



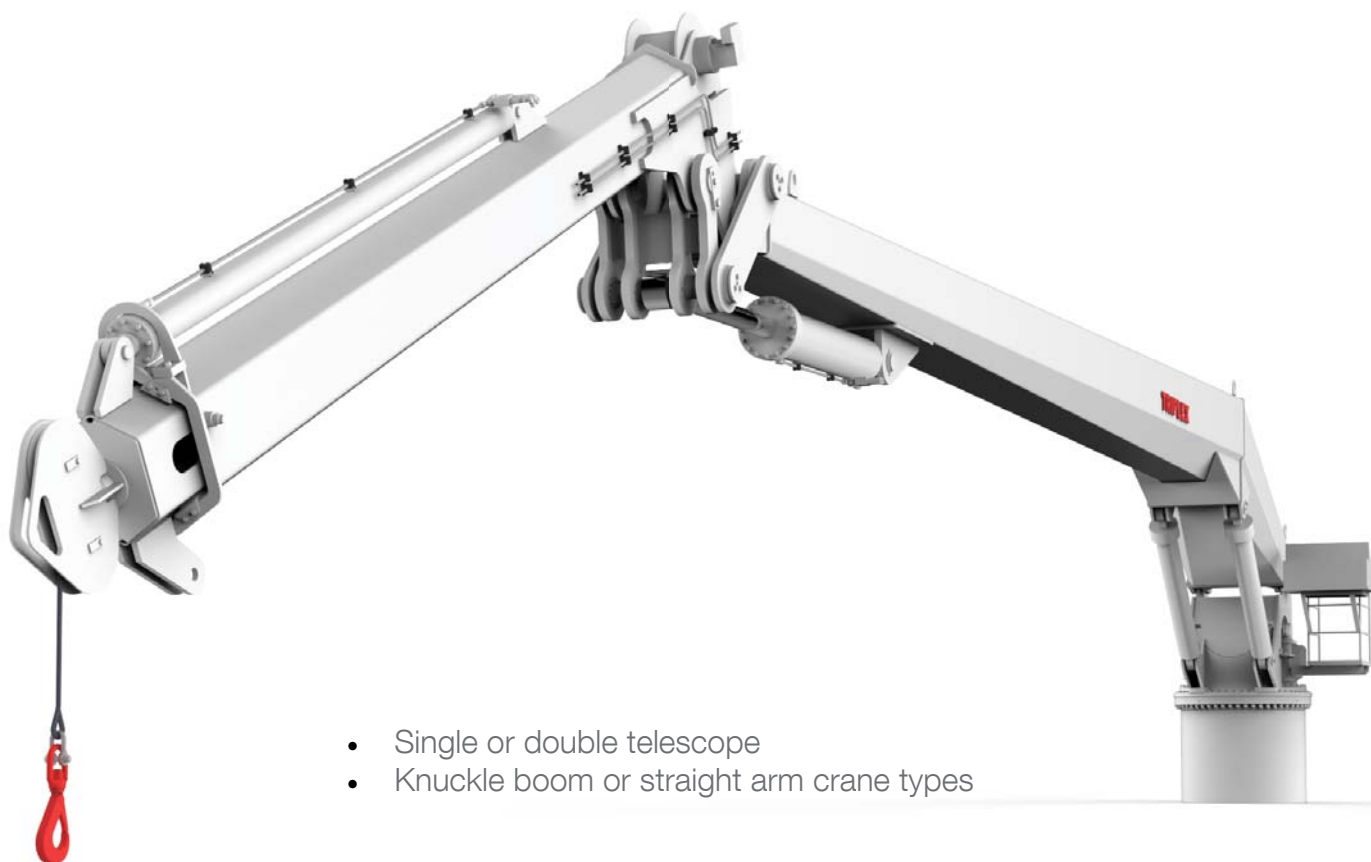
Up to 1250 T

| | |
|----------|-----------------|
| Diameter | 2500 to 5000 mm |
| Lenght | 1000 to 9000 mm |

Synthetic layers and water lubricification.
Brass layer with gease lubricification.
Brass layer with pressure oil lubricification.

Telescopic deck cranes

TRIPLEX TK & TKN-SERIES



- Single or double telescope
- Knuckle boom or straight arm crane types

Up to 120tm (Example: 8t@15m)



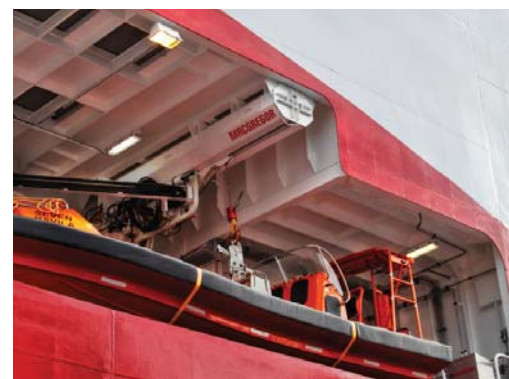
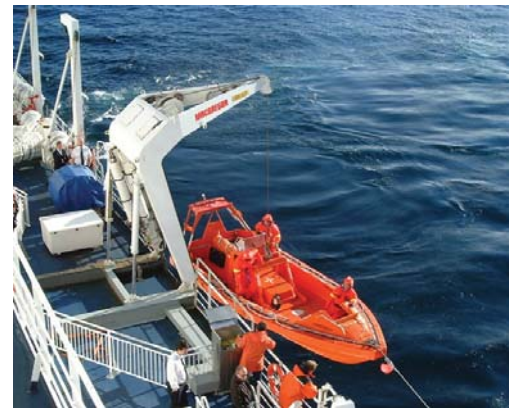
Rescue and work-boat Davits

A-Davit | G-Davit | T-Davit

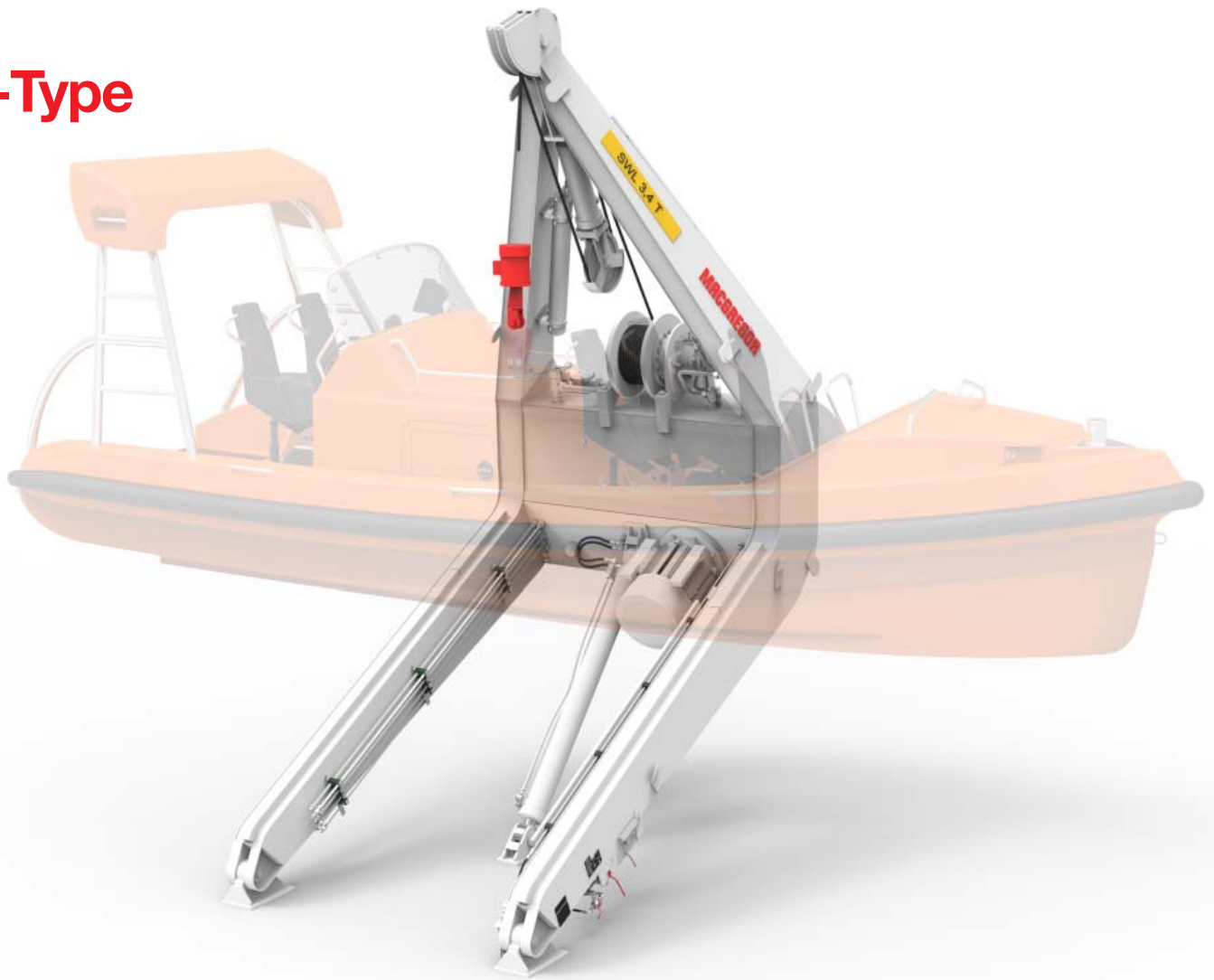
Rescue and work-boat davits including pivoting and telescoping types are available for handling small or large daughter craft including MOB and other rescue boats. SOLAS approved davits incorporate emergency backup power systems for guaranteed operation even during dead-ship conditions. Davits can make use of optional shock absorbers, heave compensation and/or constant tension features for safer handling in severe weather conditions and for heavy boats. An associated towing boom (slewing, luffing or telescoping) with optional jigger winch keeps the boat under control during launch and recovery.

We can supply a robust G-type davit, especially suited for operations in rough conditions. Our T-type davit has a compact design which allows for installation in hangar with limited height and/or depth. The space-saving design of this telescoping davit leaves the vessel deck and bulkhead clear, supporting the davit only by the overhead ship's structure.

MacGregor A-type davit is a cost-efficient alternative that offers proven performance and reliability.



A-Type



MacGregor A-type davit is a cost-efficient alternative that offers proven performance and reliability

A-type davits are designed to operate with a safe working load between 1.5 to 8.2 tons. The davit is delivered as a selfcontained, hydraulically-operated unit designed for long-time operation and efficient handling and stowing of a boat in a tough and corrosive marine/offshore environment on deck of any vessel.

- “Dead-ship” launching system
- Safe and gentle handling of the rescue craft
- Safe and easy installation, maintenance and repair
- Minor structural impact to the vessel
- Efficient space utilization

**Triplex Shark Jaws require no extra locking device.
"Quick Release" - performed in less than 2 sec.
Automatic positioning of chain and wire.**



Shark jaws & Guide pins

Invented by Triplex in 1983

Guide Pins technical specifications

Triples Guide Pins are of simple and strong construction.

They have no extra locking system which might fail.

When both Guide Pins are raised, they close completely together at the top.

V-Type



| V-TYPE | SWL/tons |
|--------------|----------|
| V-200 | 200 |

S-Type



| S-TYPE | SWL/tons |
|--------------|----------|
| S-65 | 65 |
| S-115 | 115 |

Types approved by ABS and DNV.
 In accordance with Norwegian Maritime Directorate*.

Shark Jaws technical specifications

Each jaw can be raised and locked independently.

Type approved by ABS and DNV *.

Both wire and chain can be locked in the same jaws.

Double security, link joints pass over 180 degrees, hydraulic cylinders maintain pressure.

The Triples Shark Jaw has an unique QUICK RELEASE SYSTEM (less than 2 seconds).

Large catch and grip area; positions wire & chains - without using tuggers.

When open (not in use), the "jaws" lies in level with deck.

No extra cover is needed.

Grips and locks wire & chains without any other interaction.

Rotates the chain links automatically - carrying out safe locking.

No extra "positioning device"!

The "easy positioning" makes it fast and easy to operate.

Can be operated even with "dead ship condition".

Prevents damage to buoys and other deck equipment.

Special inserts for fiber ropes.



| SHARK JAWS | SWL /tons | Chain max./inches |
|--------------|-----------|-------------------|
| H-100 | 100 | 2" |
| H-200 | 200 | 3" |

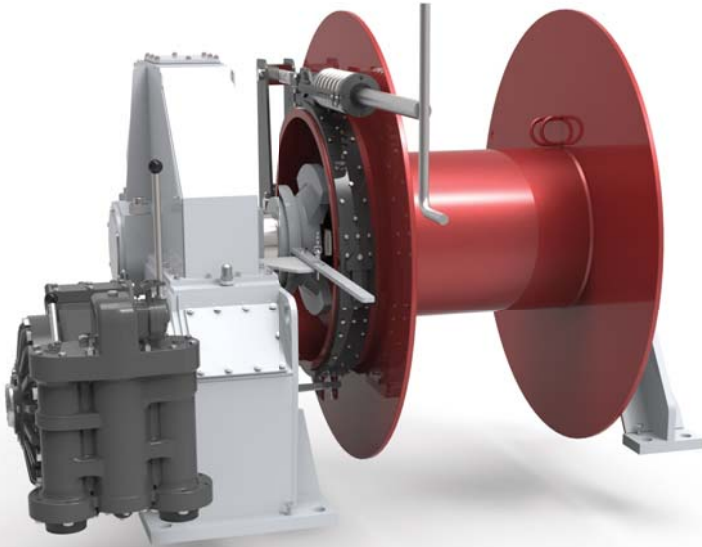
* "... Emergency release on chain and wire stoppers, shall be performed automatically from the bridge - without any manual interference on the stoppers".
 NMD § 48 (2003)

Deck machinery

All sizes and drives of towing-, anchor mooring-, tugger winches and capstans

- High pressure,
- Low pressure,
- Frequency controlled (electric)

Tugger winches



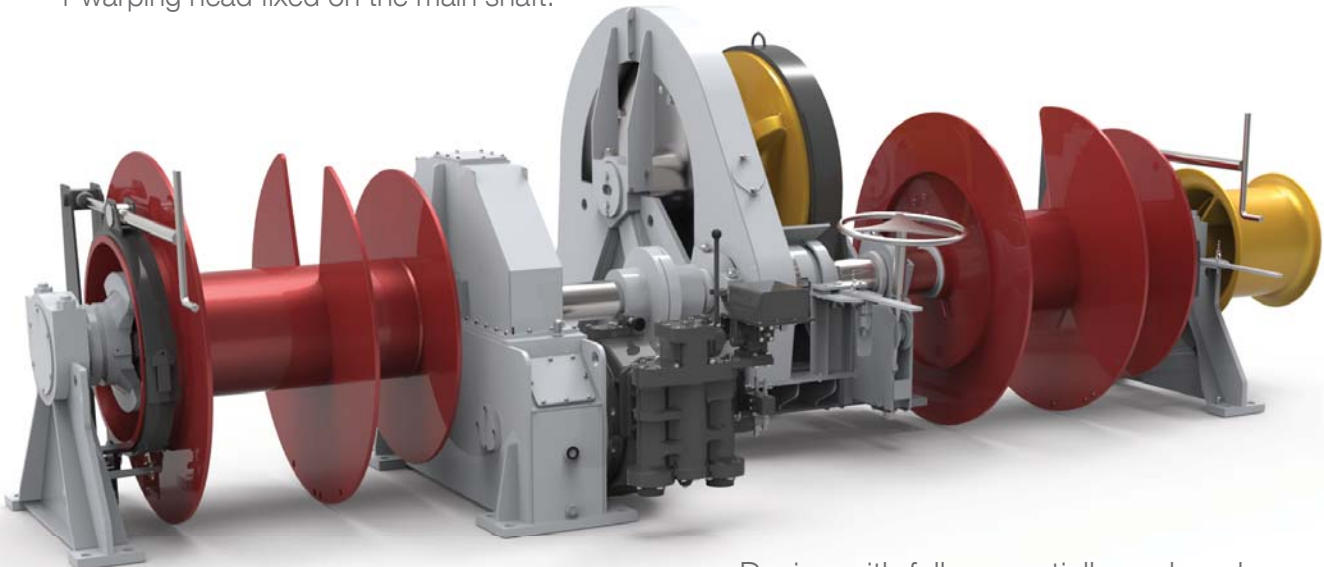
HATLAPA by Macgregor offers a wide range of tugger winches powered by electric or hydraulic drive.

Anchor mooring winches

For 40-122 mm stud link chains, pulls: 30-500 kN.

With or without auto-tension device, consisting of:

- 1 cable lifter, made of cast steel for stud link chains, declutchable and with spindle band brake for a static holding load corresponding to 45 % chain breaking load,
- 1 rope drum divided into working part and storage part, drum declutchable and with spindle band brake,
- 1 warping head fixed on the main shaft.



Design with fully or partially enclosed gear.

Capstans

For 22-78 mm stud link chains.

Consisting of a cable lifter, made of cast steel for stud link chains, declutchable and with spindle band brake for a static holding load corresponding to 45 % chain breaking load.

Design with fully enclosed gear, electric motor and gear hanging below upper deck, or standing under deck, with built-in slipping clutch



Towing winches

State of the art for MPSV vessels

HATLAPA by Macgregor offers deck machinery with:

- Low-pressure hydraulic drive
- Medium-pressure hydraulic drive
- High-pressure hydraulic drive
- A.C. electric drive (pole changing as well as frequency inverter driven)



Wherever needed, you can rely on our support.



MacGregor is the world's leading brand of engineering solutions and services for handling marine cargoes and offshore loads. MacGregor products serve the maritime transportation, offshore and naval logistics markets, in ports and terminals as well as on board ships. Our cargo flow solutions integrate cargo access, stowage, care and handling functions to suit a particular ship's cargo profile.

This benefits its productivity, environmental impact and profitable service lifetime. www.macgregor.com



MacGregor is part of Cargotec. Cargotec's class B shares are quoted on NASDAQ OMX Helsinki.

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For the roughest conditions

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