

Towing





**Difficult makes
us happy**

Safeguarding operations through proven engineering excellence.

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Driving innovation through combined expertise

For over 120 years, Trelleborg Dordrecht (formerly Mampaey Offshore Industries) has been a trusted leader in advanced marine systems, specializing in innovative berthing, mooring, and towing solutions. Now, as part of the Trelleborg Group, we are building on that legacy to deliver even greater value, expertise and innovation to our customers worldwide. Trelleborg's global reach, advanced research and development capabilities, expanded engineering resources and global network enhances our ability to deliver seamless, reliable solutions tailored to your unique needs. Our expanded engineering resources, global network, and advanced research and development capabilities means a broader range of products, enhanced global support, and strengthened site service capabilities for every project.

As the global market leader in the design, engineering, manufacturing, and commissioning of marine systems, we pride ourselves on delivering solutions that ensure safety, reliability, and performance in the most challenging conditions. Our commitment to innovation has driven new standards in the towing, mooring, Ship-to-Shore, and Ship-to-Ship Safety Links industries, earning the trust of an ever-growing global customer base.

With our combined capabilities, you can count on expertise, innovation, and a commitment to delivering solutions that keep your operations safe and efficient.



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WE PROVIDE STATE-OF-THE ART TOWING, MOORING AND BERTHING AND INTEGRATED INFORMATION SYSTEMS TO ENHANCE THE SAFETY AND EFFICIENCY OF THE PORT, MARITIME AND OFFSHORE INDUSTRY.

Quality control & customer service

PROJECT MANAGEMENT

From the moment you place a purchase order with us, our professional project management team will be your point of contact. This concerns the processes of engineering, development, calculations, manufacturing, assembly, certification, documentation, testing, delivery and commissioning.

We have a dedicated team of technical sales engineers, project managers and electrical and mechanical engineers who are all specialized in mooring equipment processes and technology to assist all projects with the accurate know-how from beginning to end.

CUSTOM SOLUTIONS

All products of Trelleborg Dordrecht can be custom designed. With our products we can meet all your demands, such as low temperatures, Coal and Iron Ore Applications and revamping and upgrading of existing jetties.

For example: Materials could behave differently at room temperatures (and higher) compared to subzero temperatures. We are able to manufacture the Quick Release Towing Hooks for conditions with temperatures below zero degree Celsius, even down to -50°C (-58°F).

TESTING & CERTIFICATION

Trelleborg Dordrecht provides tests before delivery of all products, assuring that the product complies with the applicable specifications and standards. All tests are performed in close cooperation with our customers and witnessed by a third party surveyor if requested.

- Factory Acceptance Test (FAT)
- Certified Production Process
- Load Witness Test

Trelleborg Dordrecht is ISO 9001 and 14001 quality approved.



WE ASSURE THAT THE PRODUCT COMPLIES WITH THE APPLICABLE SPECIFICATIONS AND STANDARDS

Quick Release Towing Hook

The Quick Release Towing Hook is the leading standard in today's maritime industry. Shipyard and tugboat crews all over the world appreciate our towing hook as self-evident piece of equipment. Over a hundred years ago, we designed and engineered the first Quick Release Towing Hook - an innovation that continues to set the standard in modern shipping today. Globally a clear majority of renowned tugboat operators utilizes our standard range of towing hooks.

FEATURES OF THE QUICK RELEASE TOWING HOOK

- Towing with nylon, steel or polypropylene ropes
- Anti-slip rope device (keepers)
- Small fairlead for the guidance of the manual release wire to the bridge/wheelhouse
- Vertical Pin
- Horizontal brackets for mounting to towing bit or towing winch
- Foundation for mounting of the towing hook onto the deck
- Spring shock absorber
- Radial arm and fixed radial constructions
- Optional of electric-pneumatic or electric-hydraulic remote control system
- Continuous Towing Load Monitoring System

BENEFITS

Safe handling, releasing requires a manual effort of less than ± 15 kg at full SWL. The towing hooks have a proven lifespan of at least 30 years and has minimal maintenance requirements. No spare parts required for towing hooks fitted without remote control. The free swivelling eliminates the need for sliding and gliding plates.



Disc Type Towing Hook

The Quick Release Disc Type Towing Hook is specifically designed for towing with polyprop ropes. Safe handling and releasing is possible with only a minimal manual effort of 15KG at full Safe Working Load.

Trelleborg Dordrecht designed the Quick Release Towing Hooks specifically so towing lines can be released manually or remote controlled by means of pneumatic or hydraulic assistance.

Our standard range of towing hooks is able to safely handle workloads from 5 up to 150 metric tons. The towing hooks can be equipped with an electric-pneumatic or electric-hydraulic remote control systems for towing hook release by means of a push button.

The benefit of the Disc Type Towing Hook is designed for a minimal total cost of ownership and with a long economic life cycle (more than 30 years). Minimum maintenance is needed and the hooks are free swivelling.

TECHNICAL DESIGN DATA

TYPE	SAFE WORKING LOAD	TEST LOAD	RELEASE LOAD	WEIGHT
DCX 5/7	70 kN	140 kN	70 kN	66 kg
DCX 8/15	150 kN	300 kN	150 kN	145 kg

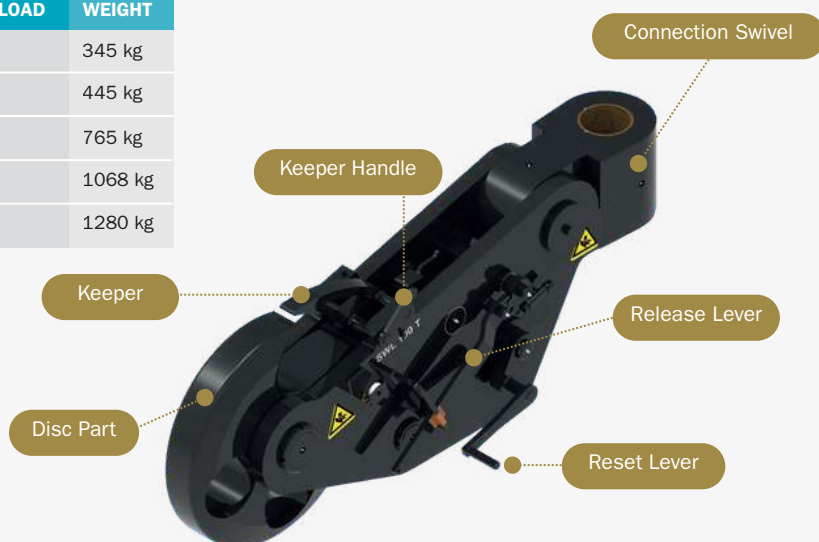
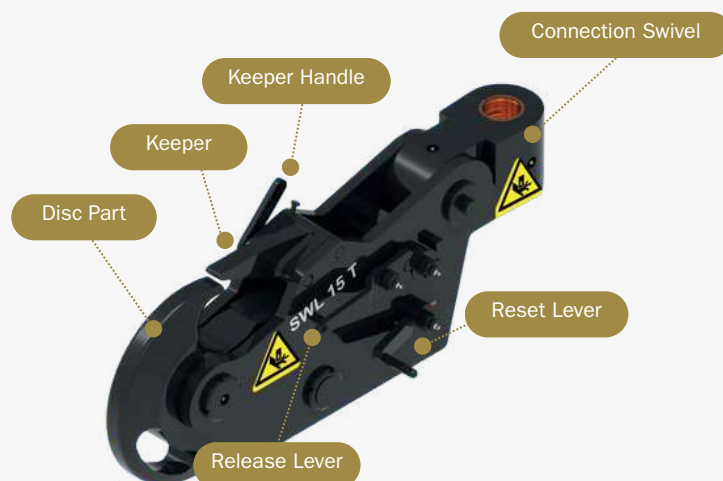
TYPE	SAFE WORKING LOAD	TEST LOAD	RELEASE LOAD	WEIGHT
DCX 18/30	300 kN	600 kN	300 kN	345 kg
DCX 30/55	550 kN	1100 kN	550 kN	445 kg
DCX 50/75	750 kN	1500 kN	750 kN	765 kg
DCX 70/85	1000 kN	1500 kN	1000 kN	1068 kg
DCX 100/150	1500 kN	2000 kN	1500 kN	1280 kg

Load values can be different per classification society.

BENEFITS

- No high release impact on the hook and foundation because of the free rotating disc system.
- Towing with nylon and/or other polypropylene ropes as well as steel wire ropes.

ESPECIALLY DESIGNED FOR TOWING WITH POLYPROP ROPES



Harbour Type Towing Hook

The Quick Release Harbour Type Towing Hook is especially designed for towing with steel wire. The standard range Harbour Type Towing Hook is available from 15 up to 150 metric tons Safe Working Load.

We designed the Harbour Type Towing Hooks specifically so towing lines can be released manually or remote controlled by means of pneumatic or hydraulic assistance.

BENEFITS

- Designed for a minimal total cost of ownership and with a long economic life cycle (more than 30 years)
- Minimal maintenance is needed
- Free-swivelling hooks
- Safe handling and releasing is possible with only a minimal manual effort at full Safe Working Load of 15 kg

ESPECIALLY DESIGNED FOR TOWING WITH STEEL WIRE

TECHNICAL DESIGN DATA

TYPE	SAFE WORKING LOAD	TEST LOAD	RELEASE LOAD	WEIGHT
MXX 015	150 kN	300 kN	150 kN	47 kg
MXX 030	300 kN	600 kN	300 kN	130 kg
MXX 060	450 kN	900 kN	450 kN	262 kg
MXX 075	562 kN	1125 kN	562 kN	320 kg
MXX 100	1000 kN	1500 kN	1000 kN	478 kg
MXX 125	1250 kN	1875 kN	1250 kN	551 kg
MXX 150	1500 kN	2250 kN	1500 kN	661 kg

Load values can be different per classification society.



Optional items

REMOTE CONTROL SYSTEMS

The Quick Release Towing Hooks can be connected with a release wire from the wheelhouse to be able to release manually. It can also be operated from the bridge and/or deck area with (a) push button(s) connected to a pneumatic or hydraulic system.

ELECTRIC-PNEUMATIC

This system enables local and remote release of the hook. The system can be operated by normal push buttons on the bridge or watertight versions on deck. The signal activates a solenoid using the vessels compressed air system.

ELECTRIC-HYDRAULIC

A hydraulic release cylinder can also be used for local and remote control. We offer a complete hydraulic power pack or a ready to fit package for the vessel's own hydraulic system.

LOAD MONITORING SYSTEM

With the Load Monitoring System, a close and constant watch on the forces on the towing lines is kept. The system consists of a load cell, an amplifier and a remote display providing the real-time load information.

You can take immediate action in potential slack or overload situations. Alarms can be present upon Safe Working Load requirements. The Load Measuring Pins are full bridged strain gauge-based shear pins designed to provide a signal output directly proportional to the applied load. The load cells are typically installed into the rear horizontal swivel joint of the Quick Release Towing Hook.

With the information of all load cells the Load Monitoring System provides the following information:

- Real Time Load
- High Load Alarms (Hi and Hi-Hi)
- Low Load Alarms (Slack Line)

The load cells have many proven applications in the marine environment. They need minimal maintenance and have an excellent long-term stability. The loadcells are supplied pre-installed and calibrated into new Quick Release Hook assemblies.

ANTI-HEELING DEVICE

The Anti-Heeling Device is designed to measure the heel of the vessel and gives a release signal to the electric-pneumatic remote control all predefined angle.



Dynamic Oval Towing 360°

The Dynamic Oval Towing 360° (DOT® 360°) system adds safety, controllability and flexibility to the performance of tugs. It enables the tugs to rotate in all directions in a safe and controlled manner. The rotation is irrespective of the heading of the assisted vessel. In exposed conditions this capability allows the tug to meet waves safely with its bow forward. In confined spaces assisting vessels is much safer: the 360° all round towing system makes the tug's full power available in any direction.

The oval shape of the Dynamic Oval Towing 360° bridges the distance between the towing points for sailing ahead or astern. There are towline forces above and hydrodynamic forces below the water. With just one integrated system, the towing direction can easily be changed between bow and stern.

BENEFITS

- Safe and controlled at low and higher speeds
- Optimal manoeuvrability
- Possibility to use on new build or retrofitting's on existing tugs
- Width, length and specific curve can be customized to meet the owner's requirements

DOT® BENEFITS PROVEN

In 2008, the first vessel was built for the Peterhead Port Authority (Scotland) and many more Tugs have been equipped with the advanced DOT® 360° system. The DOT® 360° system makes towing at low and higher speeds safe and controlled.

Trelleborg Dordrecht received the prestigious award 'Most innovative Dutch company in 2007' for the DOT® 360° system.



DISCLAIMER

Trelleborg AB has made every effort to ensure that the technical specifications and product descriptions in this brochure are correct.

The responsibility or liability for errors and omissions cannot be accepted for any reason whatsoever. Customers are advised to request a detailed specification and certified drawing prior to construction and manufacture. In the interests of improving the quality and performance of our products and systems, we reserve the right to make specification changes without prior notice. All dimensions, material properties and performance values quoted are subject to normal production and testing tolerances.

This brochure supersedes the information provided in all previous editions. If in doubt, please check with Trelleborg Marine and Infrastructure.

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Sustainability by design

At Trelleborg, sustainability isn't an afterthought - it's the foundation upon which we build our success and the promise we make to every customer and our environment. Through advanced solutions, we actively support the maritime industry's transition to a low-carbon future - reducing emissions, improving efficiency, and creating lasting value for our customers.

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Trelleborg is a world leader in engineered polymer solutions that seal, damp, and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way.

Trelleborg Marine and Infrastructure is a leading provider of premium solutions for critical marine, port, and built infrastructure applications. Its innovative polymer and smart technology solutions enhance operational efficiency, safety, and sustainability.

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