

# INNOVATIVE TOWING SYSTEMS



QUICK RELEASE TOWING HOOKS • DYNAMIC OVAL TOWING SYSTEMS

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# FOR OVER A CENTURY THE WORLD'S LEADING EXPERT IN TOWING SYSTEMS

Mampaey Offshore Industries, established in 1904 and still privately owned and managed by the fourth Mampaey generation, is the global market leader in the design & engineering, manufacturing and commissioning of innovative towing, berthing and mooring systems.

## TRACK RECORD OF INNOVATIVE STANDARDS

Over the years our dedication to serve our customers has resulted in several maritime innovations that have become the new standards in towing and mooring applications. All of them are still in use by global customers.

## PROVEN QUALITY

All our products are designed and manufactured to safely withstand the toughest mechanical and environmental conditions, anywhere, day in day out.

## LONGER LIFESPAN AND LOW MAINTENANCE

Mampaey's products are manufactured of materials meeting the highest standards therefore guaranteeing low maintenance and minimum amount of spares. Adding these features result in an unrivalled long lifespan.

Mampaey's track record of the highest quality safe and innovative products offer the most economical solution to your specific maritime needs.

The low, total costs of ownership turn every Mampaey solution into a solid investment.

Gerard and Frank Mampaey



*“The low, total costs of ownership turn every Mampaey solution into a smart investment”*



# THE INTERNATIONAL STANDARD FOR DECADES: MAMPAEY'S QUICK RELEASE TOWING (QRT) HOOKS



Sixty years ago, we designed and engineered a towing standard that is still leading and fully functional in today's shipping. Appreciated by shipyard and tugboat crews all over the world the Mampaey disc type QRT hook can be used with steel, nylon and polypropylene ropes. Safe operation is granted by the disc rotating freely until all rotation energy is discharged. In the standard versions the QRT hooks are able to safely handle workloads from 5 up to 100 metric tons or higher.

## INCREASED SAFETY AND VERSATILTY

- Small fairlead for the guidance of the manual release wire to the bridge/wheelhouse
- Horizontal brackets for welding to towing bit or towing winch
- Foundation for bolted or welded mounting of the towing hook onto the deck
- Choice of electric-pneumatic or electric-hydraulic remote control system
- Spring shock absorber
- Radial arm and fixed radial constructions
- Continuous towing load monitoring system
- Anti-slip rope device (keepers)

## SOLID PACKAGE OF QRT BENEFITS

- Safe handling, releasing requires a manual effort of less than  $\pm 15$  kg at full SWL
- Proven lifespan of at least 25 years
- Minimal maintenance requirements
- No spare parts required for QRT hooks fitted without remote control
- Free swivelling eliminates the need for sliding and gliding plates

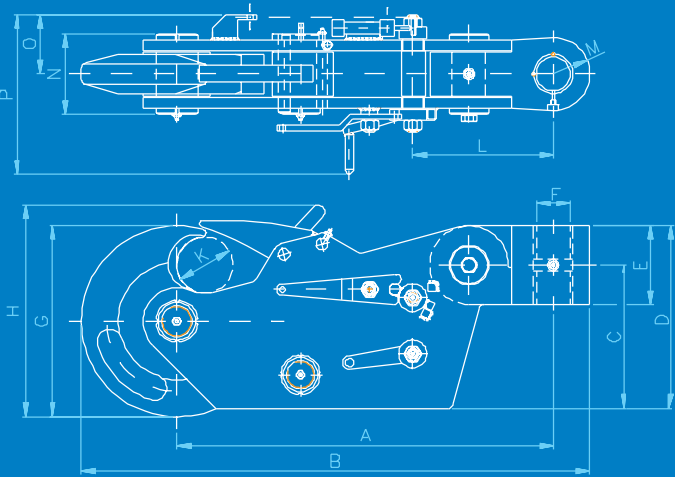
## BENEFITS OF QRT DISC TYPE TOWING HOOK

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

# DISC TYPE QRT FOR ALL SORTS OF ROPE

## DCX 5/7 AND 8/15

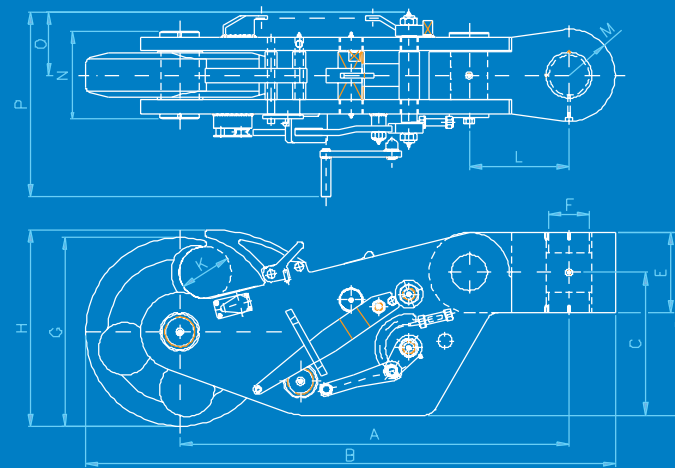
The disc type Quick Release Towing hooks are designed for towing with nylon, polypropylene as well as steel wire ropes.



\*Dimensions in mm

Type	S.W.L.	T.L.	R.L.	Wt.	A	B	C	D	E	F	G	H	K	L	M	N	O	P
DCX 5/7	70	140	70	66	512	712	185	235	100	45	280	291	65	125	60	112	97	260
DCX 8/15	150	300	150	145	670	905	255	325	140	60	340	377	100	250	65	144	106	284

## DCX 18/25 UP TO 70/100

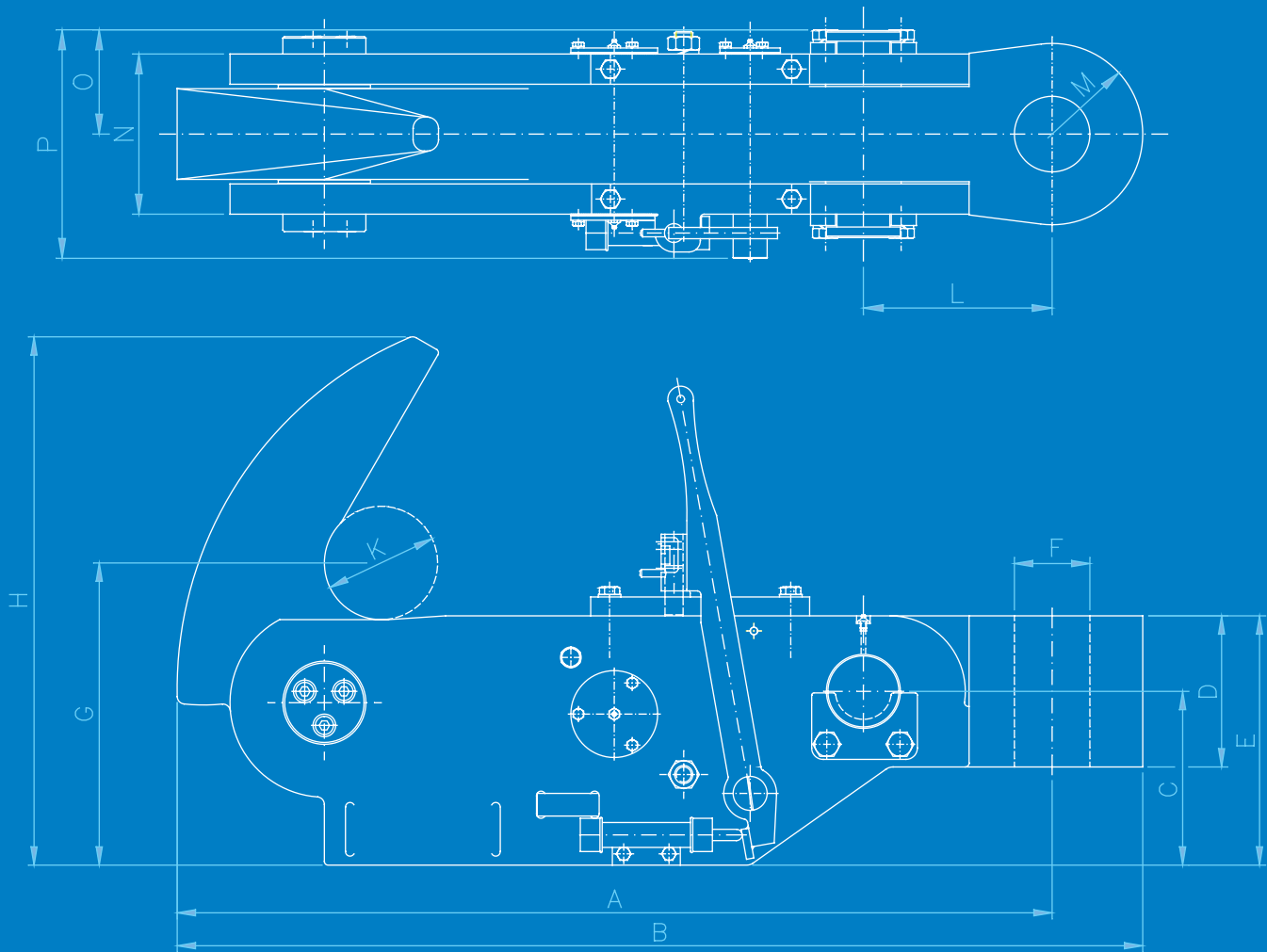


\*Dimensions in mm

Type	S.W.L.	T.L.	R.L.	Wt.	A	B	C	D	E	F	G	H	K	L	M	N	O	P
DCX 18/25	250	500	250	345	923	1238	355	445	180	80	470	491	130	200	81	186	124	427
DCX 30/45	450	900	450	445	973	1323	355	455	200	100	470	490	130	200	115	218	158	462
DCX 50/65	650	1300	650	765	1173	1598	454	464	220	110	600	608	162	250	125	256	173	487
DCX 70/100	1000	1500	1000	1068	1290	1750	492	632	280	135	650	668	176	290	135	288	182	530

# HARBOUR TYPE QRT FOR STEEL WIRE ROPES

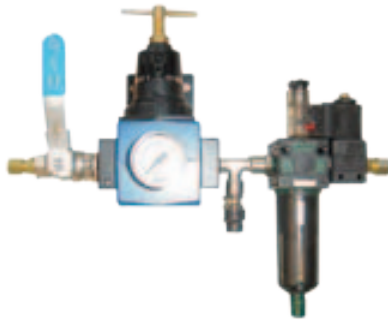
The harbour type Quick Release Towing hooks are designed for towing with steel wire ropes.



Type	S.W.L.	T.L.	R.L.	Wt.	A	B	C	D	E	F	G	H	K	L	M	N	O	P
MXX 015	150	300	150	47	521	571	100	100	150	40	174	316	65	110	50	100	67	150
MXX 030	300	600	300	130	788	868	160	130	225	60	268	461	96	180	80	125	86	207
MXX 060	450	900	450	262	1023	1123	200	160	260	80	350	616	130	210	100	148	100	224
MXX 075	562	1125	562	320	1073	1183	200	180	290	90	350	616	130	250	110	170	110	245
MXX 100	1000	1500	1000	478	1159	1279	230	200	330	100	400	700	150	250	120	212	138	303

# QUICK RELEASE BY ELECTRIC- PNEUMATIC REMOTE CONTROL

Local and remote release control of the QRT hook can be made possible using Mampaey’s electrical-pneumatic system. Operated by normal pushbuttons on the bridge (or watertight versions on deck) the signal activates a solenoid using the vessels compressed air system.



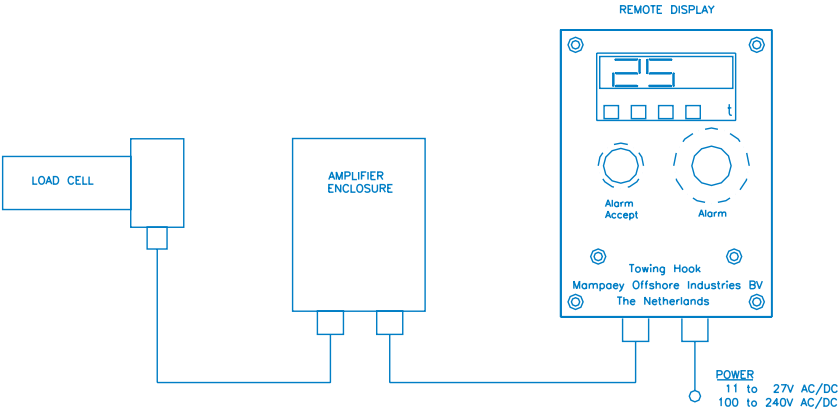
# QUICK RELEASE BY ELECTRIC- HYDRAULIC REMOTE CONTROL

Local and remote control can also be provided on the bases of a hydraulic release cylinder. Mampaey offers a complete hydraulic power pack or a ready to fit package for the vessels own hydraulic system.



# LOAD MONITORING SYSTEM KEEPS A STEADY EYE

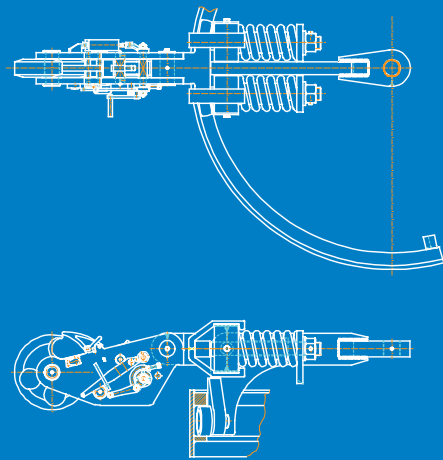
The system consists of a load cell, an amplifier and a remote display providing a constant view on the applied towing load. A high load alarm is generated at an adjustable level.





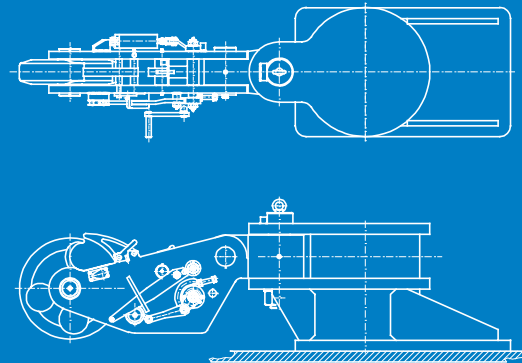
## DRV

Towing hook with radial, rail track and (spring) shock absorbers.



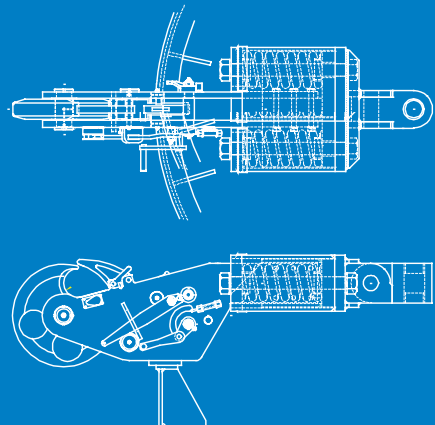
## DBX

Towing hook with mounting support for welding direct on a tug.



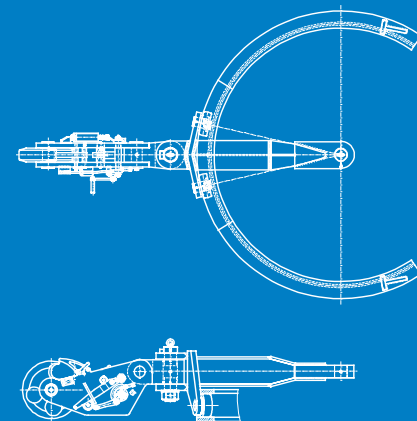
## DBV

Towing hook with radial and shock absorbers (springs) running on a sliding plate.

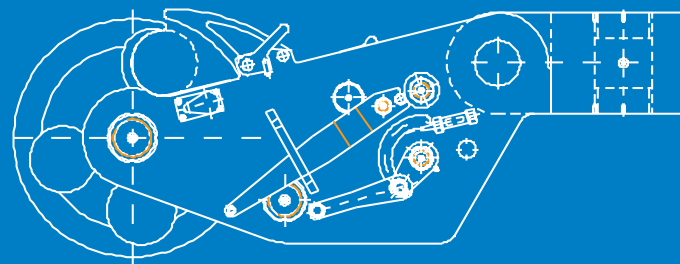


## DRS

Towing hook with radial and rail-track.



## OPTIONAL ITEMS



- Load cell
- Mounting support
- Horizontal brackets
- Vertical pin
- Pneumatic or hydraulic cylinder

# MAMPAEY'S AWARD WINNING DOT® 360° SYSTEM TAKES TOWING TO A NEW LEVEL

With the introduction of a revolutionary, 360° Dynamic Oval Towing System, Mampaey has set another standard in safer and more economic towing equipment. DOT improves flexibility, controllability and safety of all towing activities.

The development and execution of the DOT system has made a significant contribution to the receiving of the prestigious award "Most innovative Dutch company in 2007".



## DOT® SYSTEM BRIDGES THE DISTANCE BETWEEN TOWING AHEAD OR ASTERN

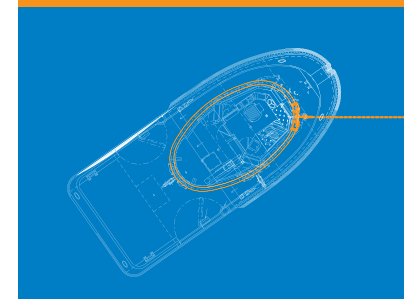
DOT's oval shape bridges the distance between the towing points for sailing ahead or astern.

The close match of towline forces above and the hydrodynamic forces below the water create safe and optimal manoeuvrability with full control even at higher speeds. With just one integrated system, the towing direction can easily be changed between bow and stern. Thus flexible, 360° towing is provided keeping a solid connection to the tow at all times.

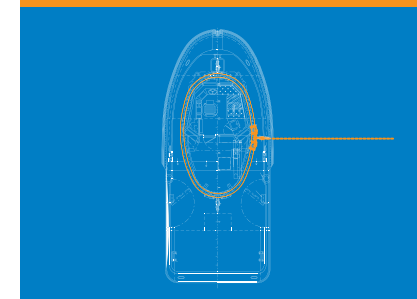


**MKB INNOVATION TOP 100**  
AN INITIATIVE OF BIZZ AND SYNTENS

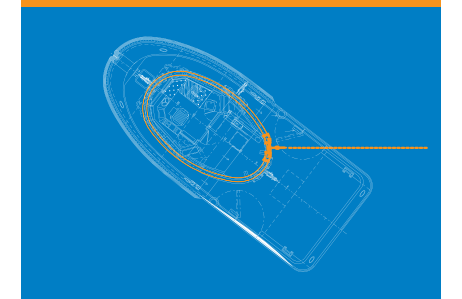
### AHEAD



### SIDEWAYS



### ASTERN



## ROBUST CONSTRUCTION GUARANTEES A LONG AND SAFE LIFESPAN

The DOT® system consists of a heavy oval rail, mounted on the deck as an integral part of the ship's structure. On this rail the DOT carriages with a disc type towing hook are fitted and the towline force are equally distributed by means of the spreader bar, two carriages and the rollers into the rail and ship's deck structure.

## DOT® ENSURES SAFE DECK OPERATIONS

The oval shape offers a range of flexible parameters to meet most tug designs, thus allowing the width, length and specific curve to be chosen to meet the owner's requirements. This flexibility provides advantages not only for newbuilds but also for retrofitting on existing tugs. Due to its shape the DOT system allows full accommodation within the oval rail.

## DOT'S BENEFITS UNMISTAKEABLY PROVEN

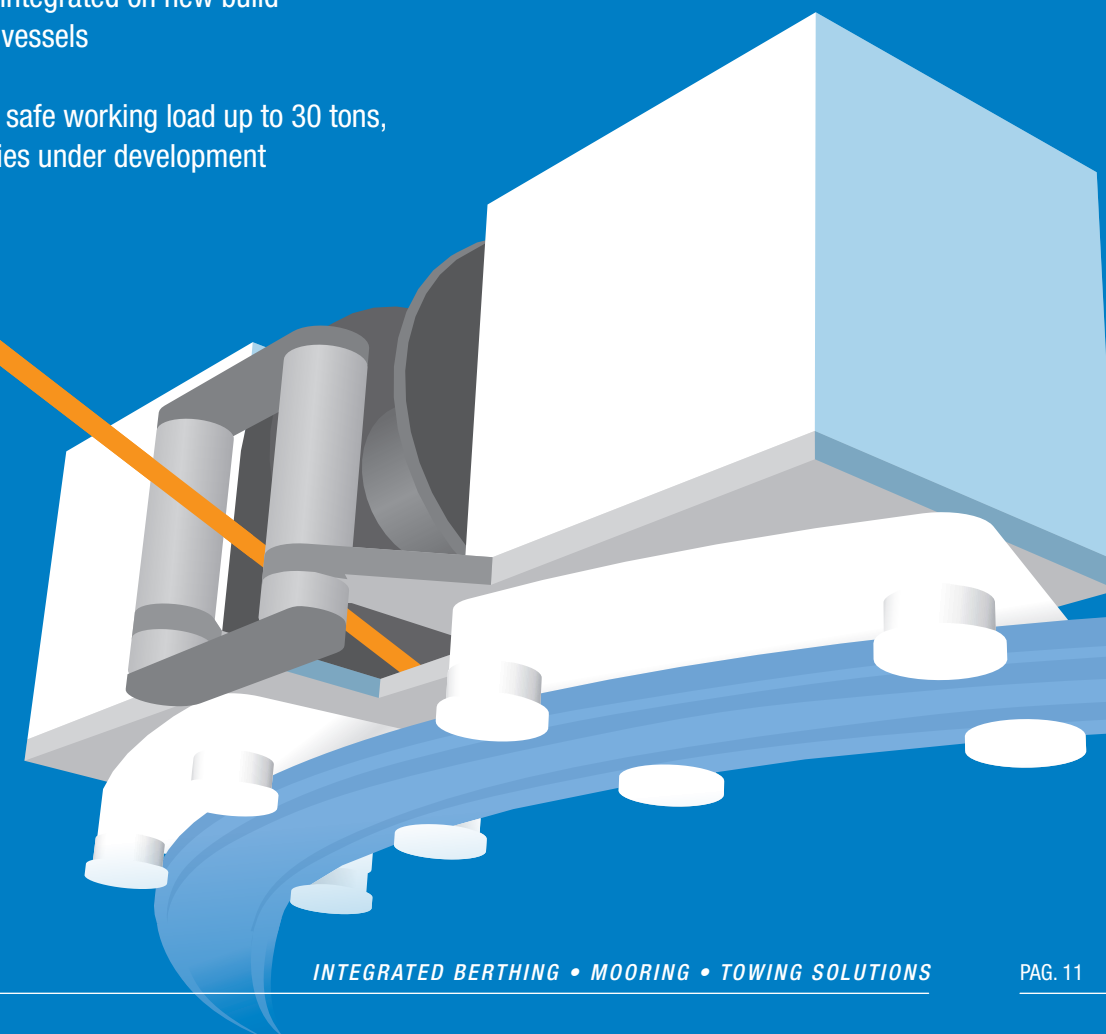
To meet with the companies own high standards, the DOT® system has been thoroughly tested over a long period which also involved testing in cooperation with MARIN. The results proved clearly that the design requirements were easily met. The Ugie Runner, built by MacDuff Shipyards for the port authority of Peterhead (Scotland), has proven in real life the advantages of the DOT® system. DOT® fittings on several large(r) tugs.



## NEW INTEGRATED SAFEWINCH (15, 30 OR 50 TONS)

This new patented design, eliminates both peak loads and slack wires. When the load is higher than a preset value, the winch will automatically pay out. When the load is too low, the winch will directly retrieve the wire and thereby prevent a slack wire.

- Full control in all directions
- Capsizing danger minimised by radial support of towline attachment
- Dynamic braking & steering from all sides at low and high speeds (up to 10 knots)
- Use of hydrodynamic forces increases the indirect towing capacity and saves fuel
- Optimum towing assistance in confined areas
- Can easily be integrated on new build or on existing vessels
- Available with safe working load up to 30 tons, larger capacities under development



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**OTHER PRODUCTS  
FROM MAMPAEY  
OFFSHORE  
INDUSTRIES**

i-Moor



Mooring Hooks



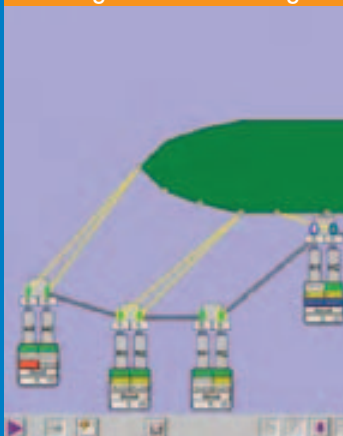
Offshore Hooks



Mooring Buoys



Mooring Load Monitoring



INTEGRATED BERTHING • MOORING • TOWING SOLUTIONS