



# ReadyMoor Series



## ReadyMoor Quick Release Hooks and Capstans

Trelleborg Marine Systems has developed a standardized series of Quick Release Hooks (QRHs) to meet a range of applications requiring streamlined solutions, such as in commercial ports and harbors.

Thanks to this 'ready-made' approach, the ReadyMoor range represents a cost effective and fast lead time solution for commercial applications, where bespoke engineering is not required

The ReadyMoor range is available in double and triple hook units configurations with a Safe Working Load (SWL) from 50 tonnes to 150 tonnes. Models with an SWL of 60 tonnes and higher are also available with integral capstans, if required.

### ReadyMoor 50



## Key features and benefits of ReadyMoor Quick Release Hooks

Choosing the ReadyMoor series of Quick Release Hooks for commercial port applications offers a number of benefits, including:

- Improved safety & efficiency: designed to release the lines up to full safe working load. QRH units require minimal line handling, thus reducing mooring crew's exposure to risk while improving operational efficiency.
- Improved price points: the new standardized range provides a solution that offers the safety and operational benefits of QRHs, whilst passing on commercial benefits to the customer.

READYMOOR SERIES	SWL (Tonnes)	Integral Capstan
ReadyMoor 50	50	N/A
ReadyMoor 60	60	Available
ReadyMoor 75	75	Available
ReadyMoor 100	100	Available
ReadyMoor 125	125	Available
ReadyMoor 150	150	Available

Field proven since 1972 and installed in over 500 mooring facilities worldwide, Trelleborg's quick release hooks are the foundation for today's modern mooring.

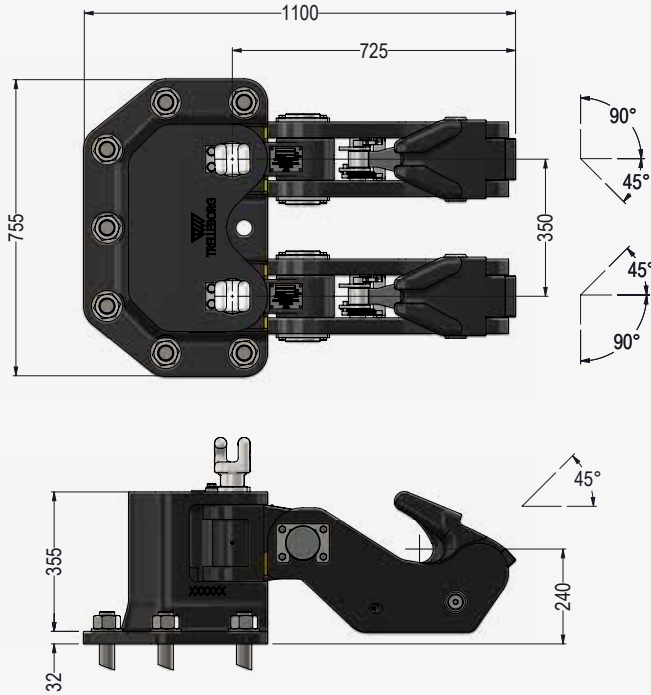
### ReadyMoor 60-150



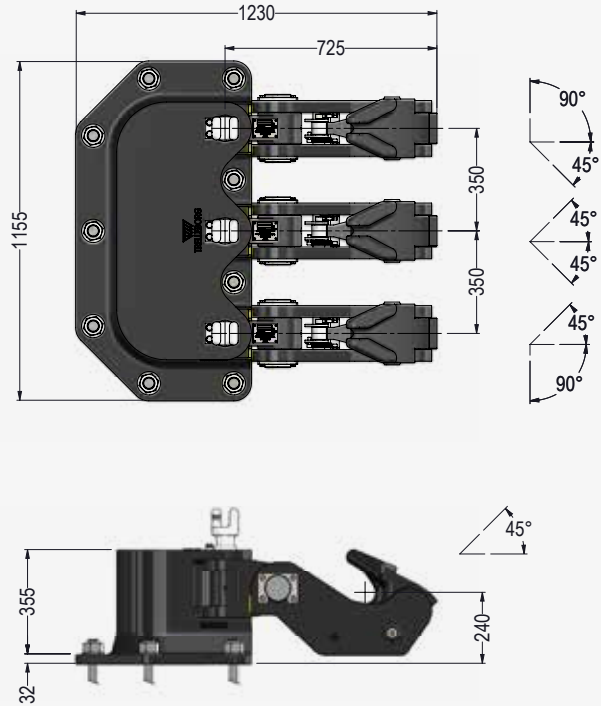
# ReadyMoor 50

## Typical dimensions

### DOUBLE HOOK



### TRIPLE HOOK



## Key features and benefits

The ReadyMoor 50 QRH combines the knowledge of Trelleborg's experienced engineering team with the benefits of FEA analysis software, to develop an optimized solution for compact mooring applications.

- Reduces the overturning moment on the hook base and subsequently the stresses on the hook base and the hook base foundations.
- Hook profile shaped to guide the messenger line during retrieval so that the eye of the mooring line is positioned over the hook nose. This minimizes line handling requirements, reducing the mooring crew's exposure to risk.
- Single stage locking mechanism: fewer moving parts reduce maintenance requirements and improve reliability
- Compact design: small installation footprint, minimizing the amount of deck space consumed
- Sold without integral capstan. Can be used with a Free Standing capstan where required.

**Note 1:** Dimensions are in mm

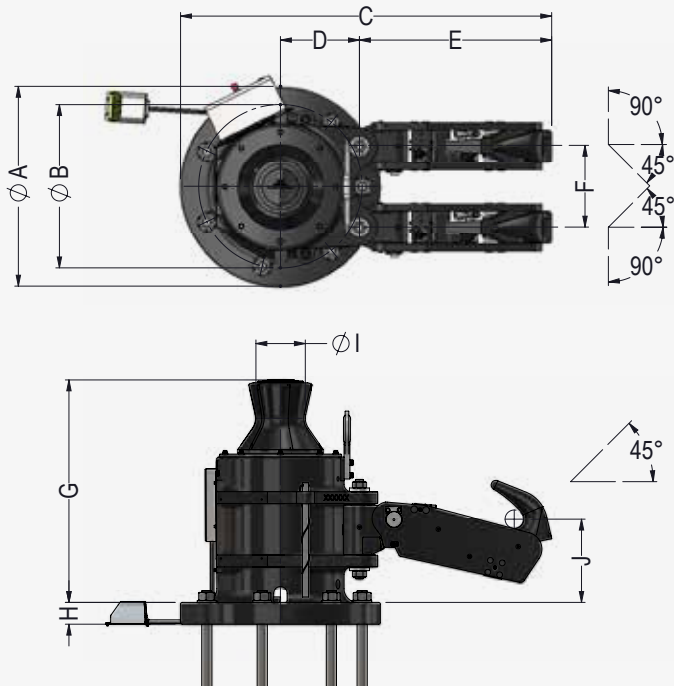
**Note 2:** Dimensions are typical. Always request a certified hook/base drawing before starting construction.

**Note 3:** Any variations to the ReadyMoor series required due to project specification or resulting in involvement of Trelleborg's project management and/or engineering teams will be dealt with as a SmartMoor product.

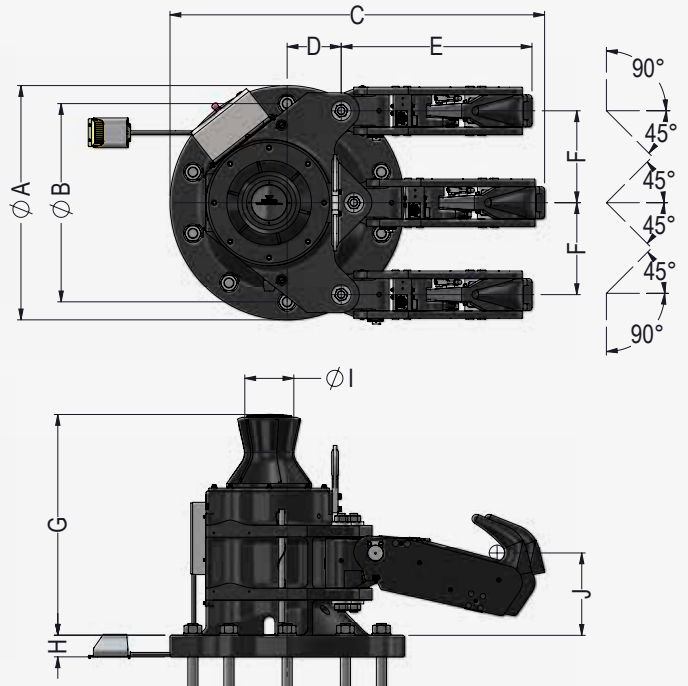
# ReadyMoor 60-150

## Typical dimensions

### DOUBLE HOOK



### TRIPLE HOOK



MODEL NUMBER	QTY QRH	A	B	C	D	E	F	G	H	I	J	HD BOLT QTY
<b>RM-60 SERIES (SAFE WORKING LOAD = 60 TONNES) &amp; RM75 SERIES (SAFE WORKING LOAD = 75 TONNES)</b>												
<b>RM-60-02</b> <b>RM-75-02</b>	Double	1100	900	1905	435	920	450	1215	120	305	435	5
<b>RM-60-03</b> <b>RM-75-03</b>	Triple	1300	1100	1940	300	920	510	1215	120	305	435	6
<b>RM-100 SERIES (SAFE WORKING LOAD = 100 TONNES) &amp; RM125 SERIES (SAFE WORKING LOAD = 125 TONNES)</b>												
<b>RM-100-02</b> <b>RM-125-02</b>	Double	1100	900	1905	435	920	450	1215	120	305	435	5
<b>RM-100-03</b> <b>RM-125-03</b>	Triple	1300	1100	1940	300	920	510	1215	120	305	435	6
<b>RM-150 SERIES (SAFE WORKING LOAD = 150 TONNES)</b>												
<b>RM-150-02</b>	Double	1300	1100	2045	370	1025	590	1265	120	305	485	10
<b>RM-150-03</b>	Triple	1500	1300	2275	500	1025	590	1265	160	305	480	14

**Note 1:** Dimensions are in mm

**Note 2:** Dimensions are typical. Always request a certified hook/base drawing before starting construction.

**Note 3:** Any variations to the ReadyMoor series required due to project specification or resulting in involvement of Trelleborg's project management and/or engineering teams will be dealt with as a SmartMoor product.

## ReadyMoor 60-150



### Key features and benefits

- Cast bases and hooks: superior corrosion resistance and higher strength.
- Cast hooks are designed with optimal throat size to minimize rope wear
- Compact and strong cast hook design: double the yield strength of forged mild steel hooks by others
- Unobtrusive release mechanism: no protruding components outside the hook body which could act as rope catching points
- Enclosed capstan design: increased protection from environmental and mechanical damage during operation, maximizing service life
- Industry best protective coating: offered by high quality three-coat paint specification

# ReadyMoor – Specifications

## 1. QRH GENERAL SPECIFICATIONS

1.1	Base Capacity	Hook SWL multiplied by the number of hooks. E.g. double hook of 75 tonnes SWL = 150 tonnes; triple hook = 225 tonnes		
1.2	Standard Hook Base Construction	Spheroidal graphite cast iron 400-12 to AS1831, equivalent to ASTM A536 65-45-12 (standard cast hook base).		
1.3	Temperature Range	Operating: -15°C to +60° C (5° F to 140° F) Storage: -40° C to +70° C (-40° F to 158° F)		
1.4	Foundation Design Requirements	Designed in accordance with AS 4100-1998. Suitable for concrete or steel foundations.		
1.5	Hold Down Bolts (anchors)	Supplied with base as standard. ISO 898-1:1999 (E) Property Class 8.8 Finish: Hot-dip galvanizing to ISO 10684: 2004 (E)		
1.6	Anchor Template	One mild steel template supplied per base design.		
1.7	Removable Release Lever	One per QRH unit hook included as standard.		
1.8	Hook Construction	Frame (side plates): Carbon Steel to Australian Standard AS 3678 Grade 350, equivalent to ASTM A572 Grade 50.		
		Hook body, main pivot block, primary release block: High strength alloy steel to AS 2074, equivalent to ASTM A148.		
		Main shafts: high tensile alloy steel grade ASTM A29 4140.		
1.9	Spark Prevention	The hook assembly is fitted with three elastomeric impact blocks for energy absorption. Material: polypropylene.		
1.10	QRH Line Sizes (Ø mm)	RM-50	RM-60/ RM-75	RM-100/ RM-125/ RM-150
		Max 70	Max 100	Max 110
		One line per hook		

## 2 QUALITY AND TESTING

2.1	NDT	ASTM E1444-05		
2.2	Welding	ASTM D1.1 or AS 1554		
2.3	Testing	All hooks individually load tested using equipment calibrated by a third party certified body.		
		Each QRH standard Proof Load = 125%		
		Each QRH is individually load tested to Proof Load and manually released at the rated Standard Working Load (SWL).		

## 3 QRH & HOOK BASE SURFACE TREATMENT

3.1	Surface Treatment	1st Coat: epoxy zinc-rich primer 2nd Coat: two-part epoxy, containing MIO 3rd Coat: re-coatable two-part polyurethane. Colour: gloss black Surface preparation and application in accordance with the paint manufacturers system and application method (International, Jotun or Dulux).		
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# Capstan – Specifications

## 1. CAPSTAN GENERAL SPECIFICATIONS

<b>1.1</b>	Capstan Capacity	Line Pull: 1.5 tonnes Starting Pull: 3 tonnes Note1: Starting pull is defined as 2 x running pull “static overhung load capacity”
<b>1.2</b>	Capstan Type	Reversible Holding capacity when motor off > 150% of motor torque
<b>1.3</b>	Line Speed	Nominal 25 meters/minute
<b>1.4</b>	Ingress Protection	IP65 minimum
<b>1.5</b>	Motor Control	Direct On Line (DOL) motor starter
<b>1.6</b>	Motor Starter Enclosure Material	Stainless steel
<b>1.7</b>	Capstan Electrical Controls	Selector Switch: Counter clockwise / OFF / clockwise Emergency Stop Footswitch: Depress to operate
<b>1.8</b>	Motor Type/ Insulation	Insulation Class F
<b>1.9</b>	Motor Electrical Parameters	3Ø 380 to 415 VAC 50 Hz, 440-480 60 Hz
<b>1.10</b>	Incoming 3Ø Power Connections	32 mm diameter entry Maximum cable termination size=Solid or Stranded 10 mm <sup>2</sup> – 35 mm <sup>2</sup> , AWG:8 – 2

## Free standing



## Electric Capstan

The Trelleborg Marine Systems electric capstan motor is housed within a protective structure (typically the QRH base). The capstan motor is factory run-in and mated with a gearbox, which is oil-filled for life. The capstan motor Direct On Line (DOL) motor starter allows the operator to control motor operation through a footswitch, Emergency Stop Switch (E-Stop) and direction selector switch. Ribbed capstan head and rope guide are fitted as standard.

## Integrated with ReadyMoor 60-150





Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative engineered solutions accelerate performance for customers in a sustainable way. The Trelleborg Group has annual sales of about SEK 21 billion (EUR 2.3 billion, USD 3.2 billion) in over 40 countries. The Group comprises five business areas: Trelleborg Coated Systems, Trelleborg Industrial Solutions, Trelleborg Offshore & Construction, Trelleborg Sealing Solutions and Trelleborg Wheel Systems. In addition, Trelleborg owns 50 percent of TrelleborgVibracoustic, a global leader within antivibration solutions for light and heavy vehicles, with annual sales of approximately SEK 15 billion (EUR 1.7 billion, USD 2.3 billion) in about 20 countries. The Trelleborg share has been listed on the Stock Exchange since 1964 and is listed on NASDAQ OMX Stockholm.

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