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P.O. Number	Package title
NA	Crane, Hydraulic HLRM 25-3S

Customer	Date/Sign
	(For project use only)
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Document title
MECHANICAL DATA SHEET FOR HLRM 25-3S

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MECHANICAL DATA SHEET FOR HLRM 25-3S

1 General

1.1	Type of equipment	Hydraulic knuckleboom marine crane
1.2	Owner	Kolos Lifting AS, Skvadronveien 29, 4050 SOLA
1.3	Supplier	Kolos Lifting AS, Skvadronveien 29, 4050 SOLA
1.4	Manufacturer	Heila
1.5	Model number	HLRM 25-3S
1.6	Number ea.	1
1.7	Year of manufacture	2025
1.8	Codes	Can be BV og DNV Certified if necessary
1.9	Manning	Manned under operation
1.10	Certificates	ILO Form 2
1.11	Ambient conditions Temperature Atmosphere Inertia Hazardous area	-20 to + 45 °C Offshore, saliferous, 100% humidity +/- 0.1 g horizontal, any direction, +/- 0.2 g vertical None
1.13	Hook weight	Yes
1.14	Flood lights	
1.16	Central grease system	
1.17	Sea sate	HS=0

2 Mechanical

2.1	Reach	mtr	10,58
2.2	Tonn meter	Tm	25
2.3	Extensions		3 4 940kg @ 4,81mtr 3 470kg @ 6,76mtr 2 660kg @ 8,73mtr 2 220kg @ 10,58mtr
2.4	Slewing	*	400* not continuous
2.6	Size	LxWxH mm	2860x3150x1875
2.7	Weight		3170kg

3 Hydraulical

3.1	Supply Pressure Flow	Barg l/min	240 50
3.2	Oil type		ISO VG 46
3.3	Connections Load sense Drain Rapid Return Main Return Pressure	LS D RR MR P	TBA 3/8"-EN857-2SC 1/2"-EN857-2SC 3/4"-EN857-2SC 1/2"-EN857-2SC

4 Electrical

4.1	Power supply	tba
4.2	Radio Controll	Yes

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5 Winch

5.1	Type		Brevini
5.2	SWL		400kg
5.3	Wire rope Ø	mm	10mm
5.4	Wire rope length	m	300m
5.5	Wire spooling		

General Description

Sturdy crane base for direct mounting on ship's counter foundation.

Column connected to the base by means of double-acting slewing cylinders. The slewing mechanism of the crane can be sea-fastened by means of a rotation locking device.

Main boom connected to the column and luffing activated by means of one (1) hydraulic topping cylinder.

Second boom (knuckle boom) connected to the main boom by means of one (1) hydraulic knuckle cylinder.

Three (3) hydraulic extension booms activated by means of one hydraulic telescopic cylinder that is mounted on top of the second boom.

Crane control from a dismountable position on crane base, approx. 900 mm below or above its mounting base.

Capacities / Outreaches :

See 2.3

- Above mentioned capacities are based on a combined heel/trim of the ship with full load of resp. max. 5/2 degrees, in harbor condition.
- For the crane use with fixed a D-shackle (12Ton) and Swivel hook (11,5Ton) will be delivered with the crane.

Winch Installation

- A hydraulic hoisting winch installation will be installed suitable for single line use, complete with hoisting rope, swiveling pulley-block and swivel hook.
The winch consist of a drum with planetary gearing, internal automatic multi-disc spring applied/hydraulic released safety brake.
The last 3-winding switch will be a stainless steel proximity switch.
- The hoist-end switch device will be a stainless steel proximity switch.
- Beside the knuckleboom an electrical cable reel will be fitted for the hoist-end switch signal.

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Limit Device winch line pull (overload protection)

A limiting device WINCH LINE PULL will be installed to protect the winch against overload. This situation can occur when the operator try to hoist with the cylinders a heavier load than the permitted line pull of the winch.

Radio Remote Control

The crane will be controlled by a radio remote control system that is consisting of the following components:

An independent proportional control valve block, electric activating modules built at the crane column for the following movements:

1. slewing
2. topping
3. knuckling
4. extension
5. winch (if applicable)

Selector switch to select manual control in case of radio remote control failure.

Remote control box (transmitter) complete with joysticks, operators belt and emergency stop button. Radio receiver built at the crane column. Radio installation will be delivered with a back-up cable. Complete system in according with the European normative.

This radio system is executed with speed control that can give a speed reduction to all movements separately by means of a toggle switch. This toggle switch can be used to reduce the operating speed in three (3) steps from 100% to 50% and 25% speed by limiting the hydraulic steering. The regulation of the function's speed is still made over the entire lever stroke and with retained resolution.

Movement of the switch to the left will result in 25% speed.

Movement of the switch to the central position will result in 50% speed.

Movement of the switch to the right will result in 100% speed.

Flood lights (option)

A swiveling floodlight from the operator control side will be fitted at the tip of the last extension boom.

The floodlight swivel construction will be made of stainless steel 316.

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The model floodlight is a 40W-24V LED, narrow or wide beam on request.
An ON/OFF switch will be implemented in the main control panel and remote control (if applicable).

Safety device

All functions are adjusted to permit pressures by means of overflow valves.
The hydraulic cylinders are provided with a cylinder brake valve.

Limit Device Load Moment

A limiting device LOAD MOMENT shall be fitted in such a way that all crane functions stops at the time of crane overload. At this moment of overload, the crane can only be used again after resetting by the retraction movement of the extension cylinder.

Design of Crane

This marine crane is mechanically designed and built according to Bureau Veritas NR526 rules -Shipboard cranes "with "allowable stress design" class H1 /B3

Design temperature -20°C up to +45°C for complete crane including mechanic and hydraulic systems.

Painting

All steel plates are carefully stress-relieved and shot blasted SA 2,5 in order to remove all rust and impurities before painting, according to the Swedish Standards. The blast grit is Garnet type, 20/40 size, red color, shot high speed by a compressed dry air, free of water and oil.

Before painting the crane and all components are thoroughly washed to clean all surfaces from oil and dust, guaranteeing maximum paint adhesion.

The paint system is in accordance with the C5-M High durability standard (ISO 12944-5):

This painting system is the result of severe tests and guarantee full protection of the crane against corrosion in a maritime environment.

Main structure in RAL 1005 (HONEY YELLOW).

Column + Gearbox/Gear motor, Hydraulic motor, Operator seat

Main boom

Second boom

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Standard Crane Parts to be painted RAL 7021 (Black Grey)

Extensions

Hydraulic Components: Valves, Manifold, Control Valve Block, Hydraulic Hand Pump.

Main components: All Cylinders, Cylinder Connections,

Steel Structure: Extension booms, tie-rod + rod-strut (bielle tirante+biella puntone), Pins, Pulley Head

Inspection:

The crane will be delivered with a workshop test certificate.

(This procedure isn't enough for the crane registration into the Cargo Gear Record book by Class)

If the crane must be fully certified according to any Class society, this quotation should be reviewed.

Commissioning date can be confirmed to our Service department (sales@kolos.no).For planning purposes the commissioning date should be planned one month upfront.

Accessories

Winch

Hook

Pulley block

Pulley