TECHNICAL SPECIFICATION
ADK25

DECK CRANE

Document number:	**TS-ADK25-01**
Revision:	**00**
Date:	**13.10.2021**
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Document History

Revision	Description of Change
00	First Edition

References

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1		
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1 GENERAL DESCRIPTION

Our cranes are designed for safe, flexible, and efficient load handling. The cranes are designed for long time operation in tough and corrosive marine/offshore environments.

2 CRANE STEEL STRUCTURE

The crane is constructed from mainly steel plates of 355-quality.
All shafts are made of stainless steel.
All materials used in the steel construction of the crane, are certified in accordance with classification rules.
Reinforced link between tower and main boom.
The sheave house on the boom tip is of a revolving type to prevent damage to the wire if the line pull is slightly askew.

3 WINCH

The winch consists of a steel drum with a flanged on planetary gearbox driven by an axial piston hydraulic motor. The hydraulic motor is fitted with a flanged-on load holding valve.
The brakes are designed to take the full load plus any additional dynamic forces acting on the winch. In case of a hose or pipe failure, the brake stops the load immediately.

4 WIRE ROPE AND END HOOK

The crane is equipped with a steel wire. The wire is galvanized and rotation resistant.

5 HYDRAULIC SYSTEM

The hydraulic power unit is fully integrated in the crane, with only power being feed from the vessel. (External HPU can be offered as an option).
The hydraulic pump is installed submerged in the oil tank in the crane tower. The pump is of a high-pressure, low noise design. The electric motor driving the pump is mounted vertically in the crane pedestal. A flexible coupling is installed between the pump and motor shafts.
Hydraulic oil filtration is done by the pressure and return filters which is mounted fully covered in the rear of the tower.
Oil cleanliness, NAS Class 6

6 ELECTRIC MOTOR STARTER CABINET

An electric motor starter cabinet for the power pack electric motor is included in the delivery. The cabinet contains thermal overload relay, control power transformer and all other required equipment. A start/stop button with indication lamp is installed on the front panel of the cabinet. The motor starter is delivered as a separate unit, and must be installed by the shipyard.

7 SAFETY SYSTEM

The crane is fitted with the following safety systems:

7.1 Spring-centered control levers

All control levers are spring centred. In order to operate the davit, the relevant control lever must be pushed in the required direction to cause the desired movement. Once the lever is released it will return to the neutral position and the activated motion will stop immediately.

7.2 Overload protection

All crane motions are protected against overload by hydraulic safety valves. If an operation is attempted which exceeds the design load of the davit, the safety valve will feed the hydraulic oil back into the oil reservoir.

7.3 Fail-safe brakes

The winch and drive gears are fitted with hydraulic operated, oil submerged, fail-safe multi disc brakes. In the case of hydraulic pressure loss due to hose/pipe failure, the brake will be automatically applied and will stop the relevant motion.

7.4 Emergency stop

The crane is equipped with an emergency stop system.

8 SURFACE TREATMENT

Standard surface treatment as per Aukra Maritime paint specification system 2 (metallized).
Top coat color: as per client demands. Additional paint specification may be supplied as per contact agreement.

9 USER MANUAL

The davit is supplied with 3 sets of user manuals in English text.
The manual contains all required information for installation, start-up, operation, and maintenance.
A set of arrangement drawings, diagrams and part drawings are included.

10 APPROVALS AND CERTIFICATES

- Certificate of conformity
- Wire rope certificate
- Lifting hook certificate

Copies of the relevant approvals and certificates are included in the user manual.

11 TECHNICAL DATA

Operational data for harbour use during sea state 0 conditions					
Lifting with hook	**SWL**		**Outreach**		**Comments**
Lifting capacities:	2000	Kg	10.0	m	
	3500	kg	5.5	m	Top Layer of winch
Wire length	40	m			Compact, non-rotating
Winch speed	53	m/min			Top Layer of winch
Weight of crane without load, approximate:	3500	kg			

Notes:

1. The stated lifting capacities are valid for operation under the stated heel + trim conditions.
2. The crane can slew and hoist simultaneously with full load under the stated heel + trim conditions.

Crane data			
Main boom speed	20	sec	From inner to outer position
Knuckle boom speed	20	sec	From inner to outer position
Slewing speed	1.3	rpm	
Slewing gear(s):	1	pcs	
Slewing sector:	360	deg	continuous
Slewing limit switch:	no		
Hydraulic oil pressure, maximum working:	250	bar	
Power supply, required:	24V DC 10A	For remote control system	
Peak power consumption	55kW	S6-40% , 440V, 60Hz	
Zone classification	Safe Zone		

Design data		
Designed according to:	DNV 2.22 and EN 13001	
Dynamic factor	1.3	
Heel + trim conditions:	5° + 2°	
Design temperature	-10	°C

Crane base interface data				
Overall height:	1040	mm		
Lower flange, thickness:	35	mm		
Bolt hole diameter:	1020	mm		
Number of bolts / size / quality:	40	pcs	M20 X 100 mm	minimum class: 10.9

Notes:

1. The nuts and bolts for installation of the base on its pedestal foundation are included
2. The specified bolt length is based on the counter flange being of the same thickness as the lower flange of the base.

12 DIMENSIONS