

<b>TTS Marine ASA</b>	Technical Specification No.: 12537-2B	
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## TECHNICAL SPECIFICATION AND SCOPE OF SUPPLY

### GENERAL INFORMATION

CRANE TYPE : GP 115-5-12  
DRIVE SYSTEM : ELECTRO HYDRAULIC  
APPLICATION : Service Crane

### DESIGN REQUIREMENTS

DESIGN RULES :  
FLAG STATE :  
TEMP. RANGE : AMBIENT TEMP. -9,9°C TO + 45°C  
DESIGN TEMP. -9,9°C  
DUTY FACTOR : 1,05  
DYNAMIC FACTOR : 1,15  
HAZARDOUS AREA : NOT APPLICABLE  
DESIGN STANDARDS : Norwegian Maritime Directorate: Rules for  
Passenger- and Cargo-vessels, etc.  
Federation Europeenne de la Manutention  
(FEM)."Rules for the design of Hoisting  
Appliances"

CUSTOMER REQUIREMENTS : NONE

### CERTIFICATES

PEDESTAL : ABS  
COMPLETE CRANE : -MAKER'S CERTIFICATE, ILO FORMAT, ON THE  
FOLLOWING COMPONENTS:  
- WIRE ROPE, SHACKLE, AND HOOK (LOAD  
BLOCK)

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**MAIN DATA:**

MAX LIFTING CAPACITY	:	5	T
MAX OUTREACH,	:	12	M
MIN OUTREACH	:	~2,5	M
HOOK TRAVEL, MAX	:	30	M
HOOK SPEED	:		
Fully loaded hook / Light load	:	0-20 / 0-20	M/MIN
SLEWING SECTOR.	:	360	DEGR
SLEWING SPEED	:	1,2	RPM
LUFFING TIME (Main jib only) Average up/down	:	65	SEC
HEEL/TRIM	:	5/2	DEGR
PEDESTAL HEIGHT	:	1,3	M
PEDESTAL DIAMETER	:	1339	MM
WEIGHT OF CRANE	:	~8	TON

**ELECTRIC DATA:**

SHIP POWER SUPPLY	MAIN	440V-60Hz
	AUX	3X220V/60Hz ~30 kW
POWER COMSUMPTION	Type	MARINE TYPE
MOTOR DATA	Duty class	S6-40% ID
	Rating	37,4 kW
	Enclosure	IP 55, Eexde IIB T4
	Insulation class	F
	Type starter	DOL

NOTE: Steel Weights and operation speeds may vary within  $\pm 10\%$

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## 1. CRANE CONTROL

- 1.1 The crane is provided with an open control platform on the side of the crane house.  
The control station consists of 3 joysticks levers (hoist-slewing-luffing main jib).  
All motions have step less speed control from 0 to max.  
Two motions may be operated at the same time with full capacity, but with reduced speed.  
Start/stop of pump motor is done from push button box on the crane pedestal.

## 2. SAFETY SYSTEMS

- 2.1 Load Limiting system  
The main hydraulic circuit is protected by relief valves.
- 2.2 Hook stop  
The hook movement will be automatically stopped in top position by hydraulic operated limit switch.
- 2.3 Luffing stop  
The luffing cylinder is designed for safe buffering in the extreme positions.
- 2.4 Fail Safe Brakes  
Both winch gear and slewing gears are provided with fail-safe disc brakes. The brakes are spring operated and pressure released.
- 2.5 Load holding valves  
Winch motor, hydraulic cylinder and slewing motor are all provided with load holding valves which will freeze the movement in case of hose rupture or other failure causing pressure drop.
- 2.6 Emergency stop  
An emergency stop is located close to the operator.
- 2.7 Control levers  
Control levers of "spring-centred" type.
- 2.8 Safety railing  
A safety railing is located around the operator platform.