

### 附件三、Topaz Installer 船舶規格文件



# Topaz Installer

88 M - 7800 BHP - DP2 - Cable Lay Vessel

Vessel Specifications

**TOPAZ**  
MARINE



# Vessel Specifications

## Registration

Year built / builder	1999 / De Hoop B.V. Lobith, The Netherlands
Year upgraded / builder	2012 / Astander Shipyard, Spain
Flag	Marshall Islands
Class	DNV-GL +1A1 Cable Laying Vessel, DYNPOS-AUTR
Call sign / IMO No.	V7EN3 / 9199854
Owners	TEAM IV Limited
Managers	Topaz Marine

## Dimensions

Length overall	88.2 m (including the stern chute)
Breadth moulded	24 m
Depth moulded	5.5 m
Maximum draft	4.5 m
Deadweight	Around 4677 mt
Registered tonnage	GRT: 4904 t / NRT: 1472 t

## Machinery

Main propulsion	2 x Schottel SRP 1212 FP, electric driven azimuth thrusters with fixed pitched propeller, 1200 kW each
Generators	4 x Caterpillar 3512 B engines each of 1424 kW, 480V 3ph 60Hz
Bow thrusters	1 x Schottel - STT 1010 electric driven tunnel thruster, 1100 kW -FPP 1 x Schottel- STT 4CP, electric driven tunnel thruster, 1044 kW -CPP 1 x Schottel- SPR 1212 ZSV retractable azimuth thruster with fixed pitched propeller, 1200 kW
Emergency generator	1 x Scania DS-9 95 175 kW, 480V 3ph 60Hz
Sewage treatment plant	1 x 60 person capacity, make: Aquamar Bio-Unit Mod. MSP III 1 x 20 person capacity, make: RWO-WWT 2 LC Biopur
Fresh water maker	1 x 25 tonnes per day, make: Aquamar, AQE 25D
Oily water separator	1 m³ per hr with 15 ppm alarm, make: DVZ-250 VC

## DP equipment

	DP Class-II, Converteam DPS21
	Duplex DP with remote Converteam DPS21 Joystick forward and aft control
Reference System	DGPS 1 x Fugro Seastar 8200 HP 1 x Fugro Seastar 8300 HP 1 x Fugro Seastar 9200 HIPAP - 1 x HPR Sonardyne System VRU - 2 x TSS, model RP-25 x 2 1 x Radarscan

## Capacities

Fuel oil	649 m³
Fresh / drill water	793 m³
Ballast tanks	2476 m³
Chiller	1 x 20 m³, 1 x 15 m³
Freezer	2 x 20 m³
Clear deck area (Aft of carousel)	400 m² @ 10 t / m²

## Offshore subsea crane

Make	TTS, model GPOKAC 2000-35-30
Type	Knuckle boom active heave compensation (AHC) crane
Maximum water depth	300 m
Personnel lift	1.5 tonnes
Lifting capacity - Main	Crane: SWL 35 tonnes @ 5-30 m Auxiliary: 5 tonnes @ 30 m
Minimum working radius	5.7 m
Hoisting speed	Main: 0-24 m per min Aux: 0-50 m per min
Slewing	360 degrees continuous



# Vessel Specifications

## Cable handling equipment

Turntable / carousel	Maximum capacity 3600 tonnes
Inside diameter	8 m
Outside diameter	24 m
Height of carousel	4 m
Surface ring	379 m <sup>2</sup>
Volume of ring	1516 m <sup>3</sup>
Turntable speed	2 rpm max



## Tensioners

Make: Parkburn  
Type: Electric 2 Trade Multi Product  
Maximum tension: 20 tonnes  
Grip force: 50 kn / m - 300 kn / m  
Cable size: 50 mm - 350 mm

## Winches & 4 pt. mooring system

Mooring winch	4 x Kraaijeveld electric self-tensioning winches, Forward type: 2 x 60 t, Aft type: 2 x 48 t
Anchors	Delta flipper HHP anchors, 2 x 3.5 tonnes, 2 x 2.5 tonnes
Capstans	2 x 5 tonnes electro hydraulic

## Performance

Max speed	10 knots
Service speed	8 knots

## Navigation equipment

Inmarsat C	Furuno -Felcom 15
GMDSS	Sailor 6110 system, A1 + A2 + A3
V Sat system	Caprock Seatel Sea Access
Radars (ARPA)	1 x Furuno RDP 115 A, 1 x Furuno RDP 124
GPS	1 x Leica MK10, 2 x Furuno GP-150
ECDIS	2 x C-Map
AIS	1 x Furuno FA-150
Autopilot	1 x Anschutz Pilotstar D
Navtex receiver	1 x Furuno NX500
Gyro compass	3 x Sperry SR 180 MK-1
Gyro repeaters	2 x Classens Plath
Magnetic compass	1 x Classens Plath
Communications: data / fax/ phone	Nera Mini M, Nera Satcom B
MF / HF Radio	1 x Furuno DSC-6A
SSB	1 x Furuno FS-1562-25
VHF	2 x Furuno (DSC) FM-8500, 1 x Sailor RT2048 + 5 x GMDSS sets (handheld)
Echo sounder	1 x Furuno FE-700, 1 x Navisound -210
Depth indicator	1 x Furuno ED-222
Doppler speed log	1 x Doppler Sonar DS-60
SART	2 x Jotron
EPIRB	1 x McMurdo E3 Pains Wessex

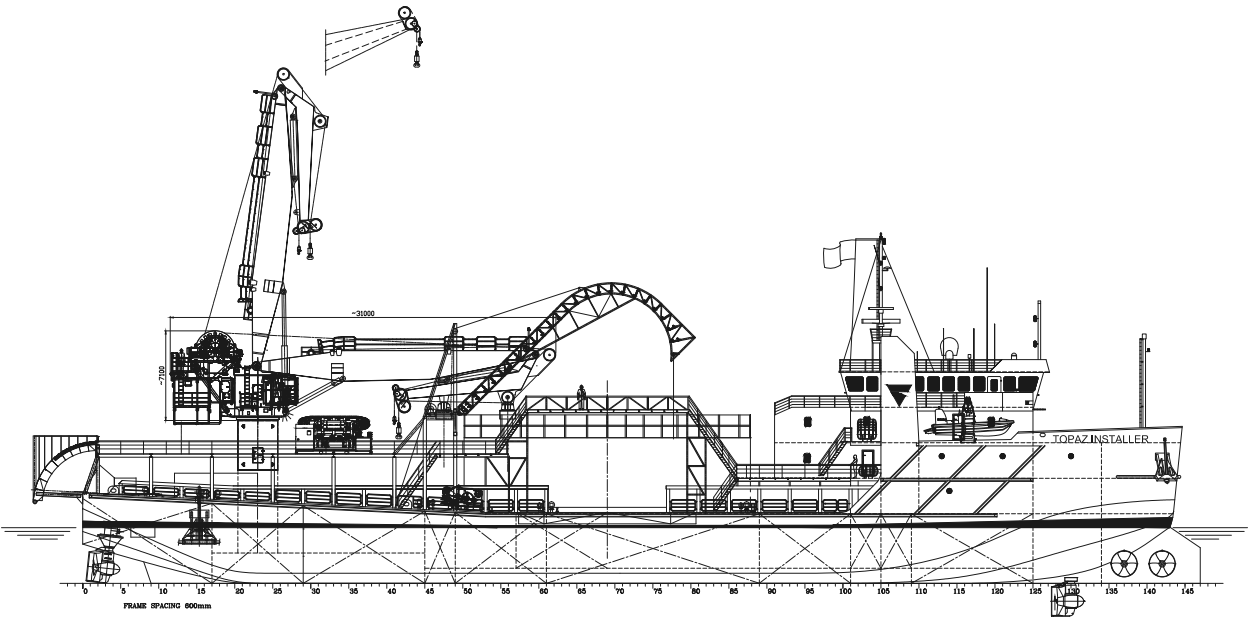
## Fire-fighting and safety equipment

Life rafts	As per class requirements
Fast rescue boat / davit	1 x 15 men Noreq-FRB 650
Fire extinguishers	As per class requirements
Emergency fire pump	1 x 50 m <sup>3</sup> per hr
Fixed CO <sub>2</sub>	Fixed flooding system in the generator room and paint locker

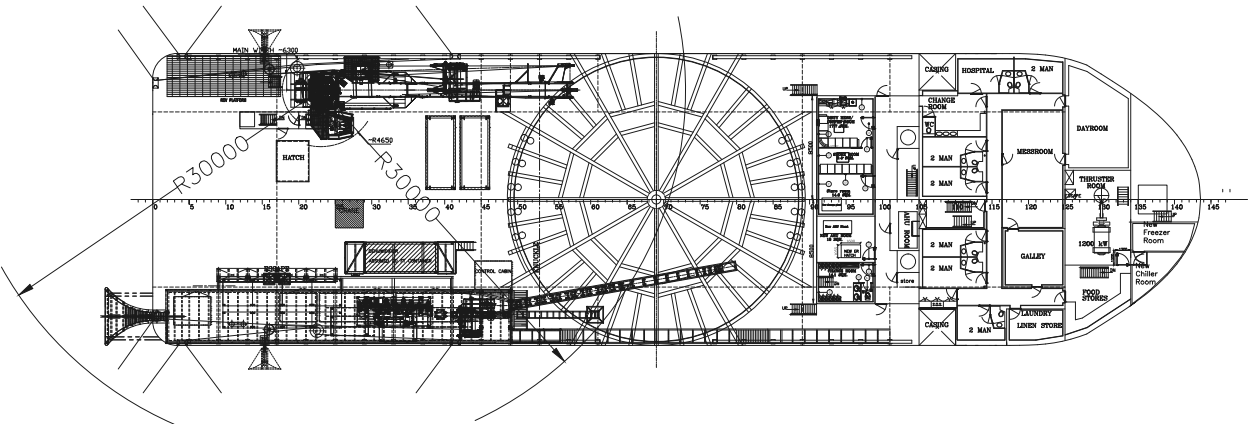
## Accommodation (70 bunks)

10 x 1 berth cabins = 10 berths  
30 x 2 berth cabins = 60 berths  
1 x hospital

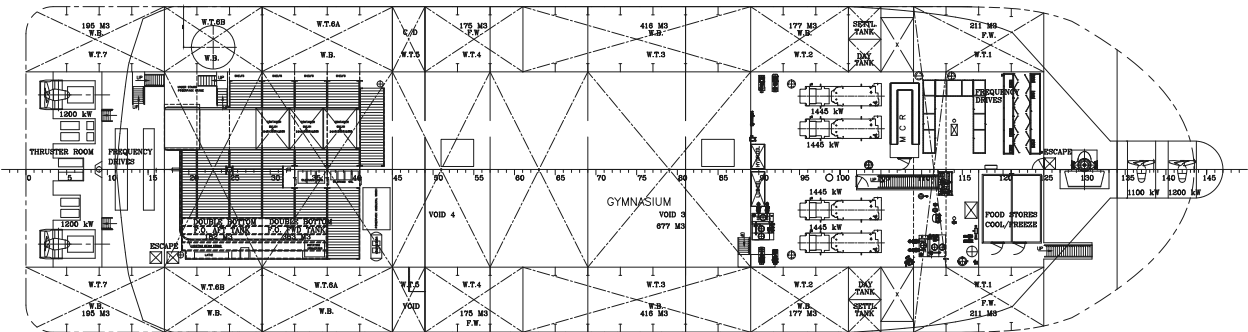
# GA Specifications



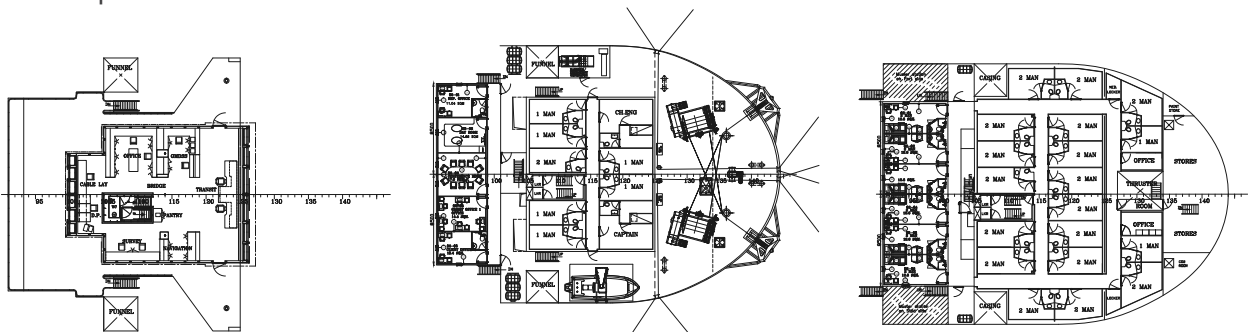
Profile



Main deck



Tank top



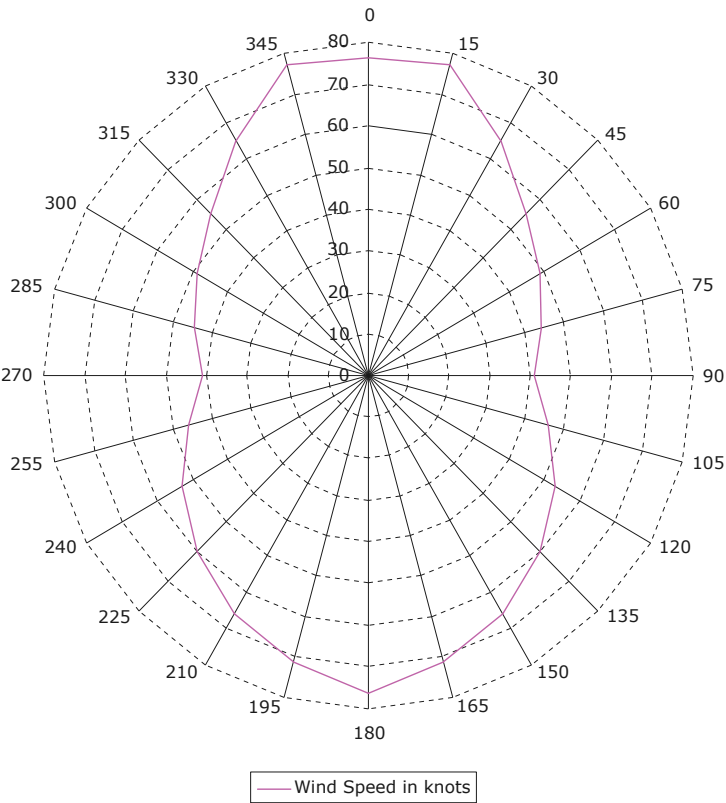
Bridge deck

Boat deck

Forecastle deck

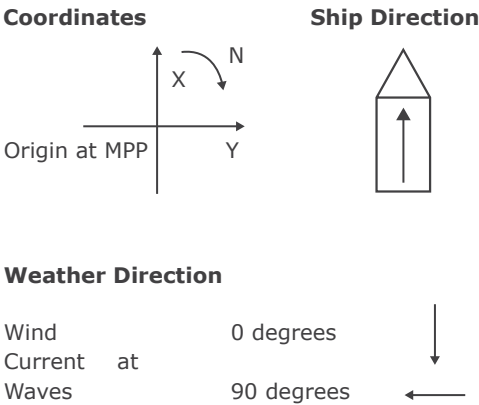
# Capability Plots

Capability plot varying wind. 2 tunnel thrusters, 2 azimuth thrusters, 2 tunnels on the bow, 1.5 knot current stepped

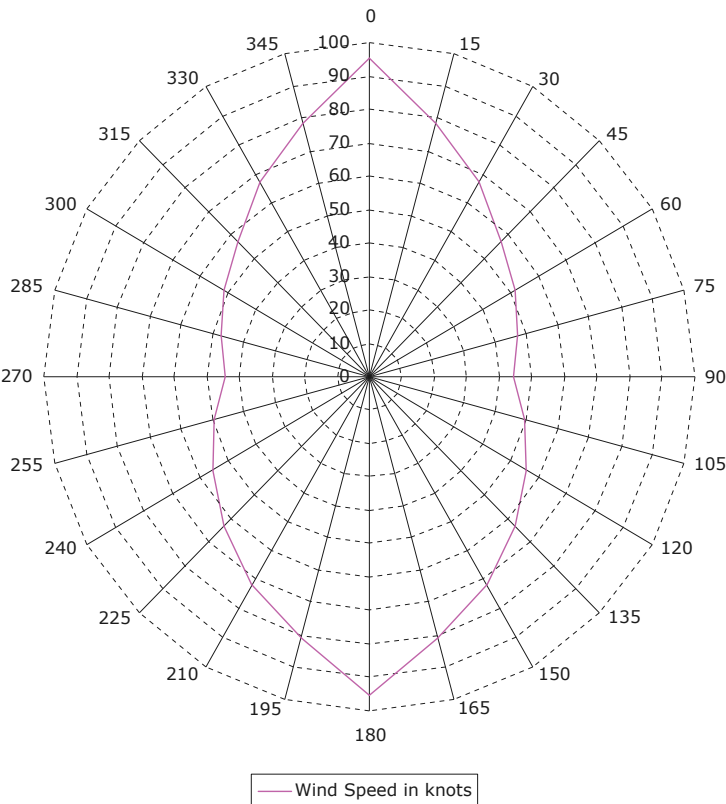


Wind angle is stepped from 0 to 360 deg.  
Wave angle is stepped from 0 to 360 deg.  
Current angle is stepped from 0 to 360 deg.

Wind speed is set automatically.  
Wave height is derived from Wind Speed.  
Current Speed is 1.5 knots.

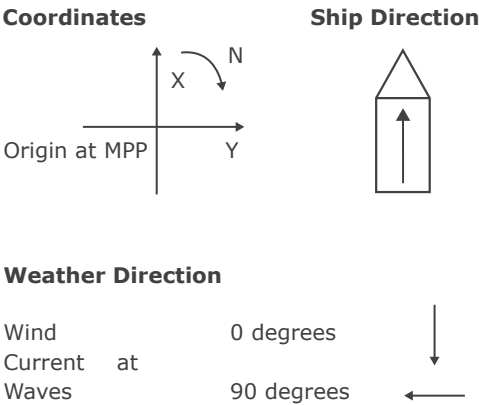


Capability plot varying wind. 1 tunnel thruster, 3 azimuth thrusters, 1 tunnel and 1 azimuth thruster on the bow, 1.5 knot current stepped

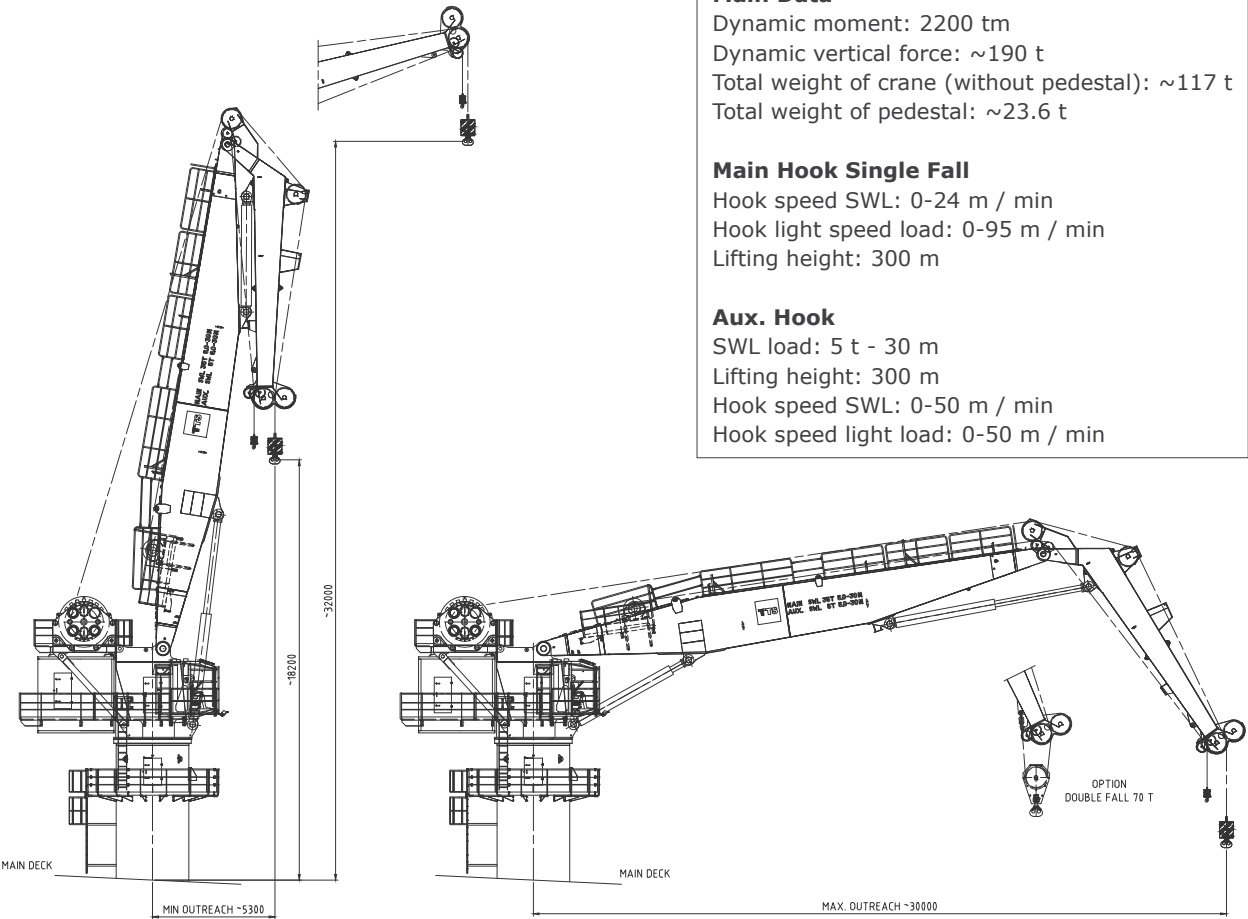


Wind angle is stepped from 0 to 360 deg.  
Wave angle is stepped from 0 to 360 deg.  
Current angle is stepped from 0 to 360 deg.

Wind speed is set automatically.  
Wave height is derived from Wind Speed.  
Current Speed is 1.5 knots.



# Crane Load Chart



### Main Data

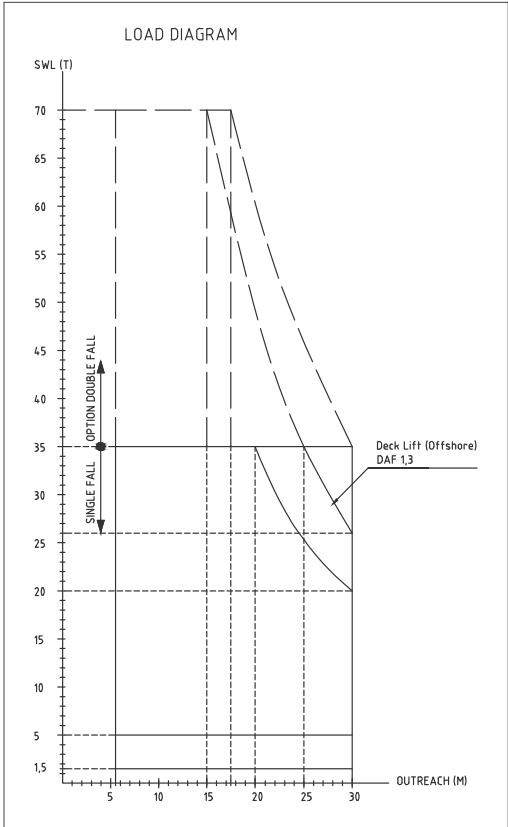
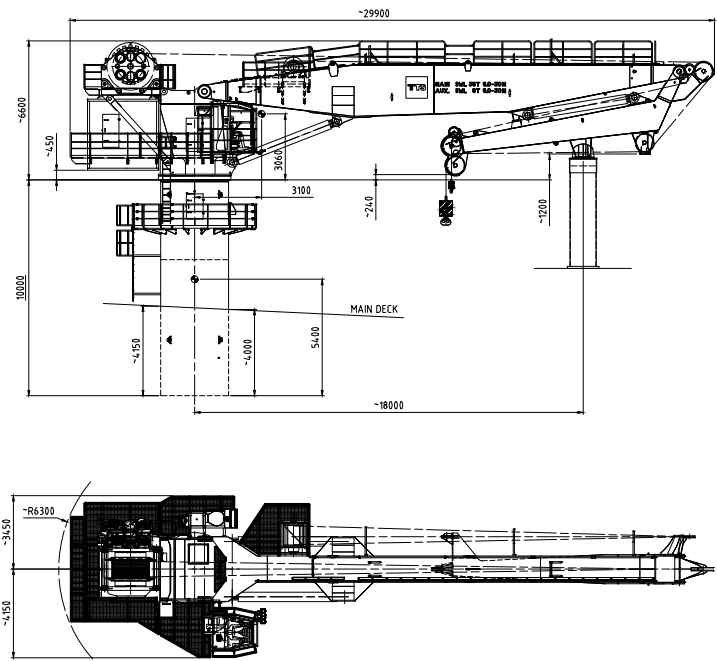
Dynamic moment: 2200 tm  
Dynamic vertical force: ~190 t  
Total weight of crane (without pedestal): ~117 t  
Total weight of pedestal: ~23.6 t

### Main Hook Single Fall

Hook speed SWL: 0-24 m / min  
Hook light speed load: 0-95 m / min  
Lifting height: 300 m

### Aux. Hook

SWL load: 5 t - 30 m  
Lifting height: 300 m  
Hook speed SWL: 0-50 m / min  
Hook speed light load: 0-50 m / min



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