

# Topaz Installer

88 M – 5935 kW - DP2 - Cable Lay Vessel

## Vessel Specifications



Shallow draft, highly maneuverable cable laying vessel with proven track record





# 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	ABS - Cable Laying Vessel, A1, AMS, DPS-2, CRC(I)
Call sign / IMO No.	V7EN3 / 9199854
Owners	Team IV Ltd.
Managers	P&O Maritime Logistics

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## Dimensions

Length overall	88.2 m (92.1 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 / NRT: 1472

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## Machinery

Propulsion system	Diesel-electric propulsion system with DEIF PPM-3 PMS
Main propulsion	2 x Schottel SRP 1212 FP azimuth thrusters, 1200 kW each
Bow thrusters	1 x Schottel SRP 1212 ZSV retractable azimuth thruster, 1200 kW 1 x Schottel STT 1010 LK FP tunnel thruster, 1100 kW 1 x Schottel STT 4 CP tunnel thruster, 1044 kW
Bollard pull thrust (v=0kn)	2 x 23.7 mt BP SRP 1212 FP + 1x 23.7 mt BP SRP 1212 ZSV
Generators	4 x Caterpillar 3512 B engines, 1424 kW, 480 V 3ph 60 Hz each
Emergency generator	1 x Scania DS-9 95 175 kW, 480V 3ph 60 Hz

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## DP equipment

DP Class	DP Class-II
DP System	Converteam DPS21 Duplex DP with remote Joystick fwd and aft control
Reference Systems	DGPS- 1 x Fugro Seastar 8200HP 1 x Fugro Seastar 9200G2 1 x Fugro Seastar 9205NSS USBL- 1 x HPR Sonardyne Ranger 2 VRU- 1 x TSS DMS-525RP (0.25° RMS - surface unit) 1 x TSS DMS3-RP25 (0.25° RMS - 3000 m subsea unit) PRS- 1 x Radarscan

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## Capacities

Fuel oil	649 m <sup>3</sup>
Fresh / drill water	793 m <sup>3</sup>
Ballast tanks	2476 m <sup>3</sup>
Chiller	1 x 20 m <sup>3</sup> + 1 x 15 m <sup>3</sup>
Freezer	2 x 20 m <sup>3</sup>
Clear deck area	931 m <sup>2</sup> total 1 x 350 m <sup>2</sup> main deck @ 10t / m <sup>2</sup> 1 x 100 m <sup>2</sup> tensioner deck 1 x 54 m <sup>2</sup> ROV platform 1 x 27 m <sup>2</sup> ROV control platform 1 x 400 m <sup>2</sup> carousel

# Vessel Specifications

## Performance

Max speed	11 knots
Service speed	8 knots

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## Provision crane

Make	B.S. Hydraulic;
Type	Articulating crane
Model	BS 096 M
Lifting capacity	4,8 tonnes @ 1.92 m 0.9 tonnes @ 9.92 m

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## Offshore subsea crane

Make	TTS, model GPOKAC 2000-70-30
Type	Knuckle boom active heave compensation (AHC) crane
Maximum water depth	300 m
Personnel lift	1.5 tonnes
Lifting capacity - Main	SWL 35 tonnes @ 5-30 m single fall SWL 70 tonnes @ 5-14 m double fall
Lifting capacity - Aux	SWL 5 tonnes @ 30 m
Hoisting speed	Main: 0-24 m per min Aux: 0-50 m per min
Slewing	360 degrees continuous
Operational limits	Maximum wind velocity: 24 m / s Maximum trim: 2 deg Maximum heel: 5 deg

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## Cable handling equipment

Turntable / carousel	Maximum capacity 3560 t (4000 t optional*) Inside diameter 8 m Outside diameter 24 m Height of carousel 4 m + 1.7 m Volume of ring 1608 m <sup>3</sup> + 603 m <sup>3</sup> Surface ring 379 m <sup>2</sup> Turntable speed 2 rpm max Main- and secondary loading arm installed Max product diameter 350 mm Max product weight 150 kg / m Cable divider + cable scooter available
Hoisting winches	2 x Electric planetary hoist winch with CT mode
Fiber optic drum	Fiber optic cable bin and loading arm available Inside diameter 3 m Outside diameter 7 m Height of drum 1.8 m
Cable splice area	100 m <sup>2</sup> tensioner deck
Trenching winch (optional)	150 te – 1000 m
Flexible pipe laying (optional)	Max product diameter 350 mm

# Vessel Specifications

## Tensioner

Make	Parkburn
Type	Electric 2 Trade multi product
Maximum tension	20 tonnes
Grip force	50 kn / m - 300 kn / m
Maximum product diameter	50 mm - 350 mm

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## Winches & 4 point mooring system

Mooring winch	4 x Kraaijeveld electric self-tensioning winches 8 knots Pull: 2 x 60 t FWD + 2 x 30 t AFT Hold: 2 x 150 t FWD + 2 x 60 t AFT Drum capacity: 1000 m FWD, 950 m AFT
Anchors	Delta flipper HHP anchors FWD: 2 x 3.5 t, AFT: 2 x 5 t, Spare: 1 x 2.5 t
Windlass	1 x Kraaijeveld electric windlass; Type KA-5E
Capstans	2 x 5 tonnes electro hydraulic

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## ROV

ROV	3000 m rated, TMS 150HP work-class ROV currently onboard
ROV LARS	A-Frame LARS
ROV platform	1 x 54 m <sup>2</sup> ROV platform
ROV control platform	1 x 27 m <sup>2</sup> ROV control platform
Communications	Equipped with DP traffic light system + ClearCom + fiber optic network
CCTV	17 x CCTV camera (fixed + PTZ)

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## Navigation equipment

Inmarsat C	1 x Furuno -Felcom 15
GMDSS	2 x Sailor 6110 system, A1 + A2 + A3
V Sat system	1 x Orange Sailor 900 VSAT
Radars (ARPA)	1 x Furuno RDP 115 A, 1 x Furuno RCU-014
GPS	1 x Garmin GPS 128, 1 x Furuno GP-150, 1 x Furuno GP-170
ECDIS	2 x PC Maritime C-Map
AIS	1 x Furuno FA-150
Autopilot	1 x Anschutz Pilotstar D
Navtex receiver	1 x Furuno NX500
Gyro compass	2 x C-Plath SR 180 MK-1, 1 x Sperry Navigat MK-1
Gyro repeaters	2 x Classens Plath
Magnetic compass	1 x Classens Plath
Communications: data / fax/ phone	1 x Nera Mini M, Nera S
MF / HF Radio	1 x Furuno FS2575C
SSB	1 x Furuno FS2575C
VHF	2 x Furuno (DSC) FM-8500, 1 x Sailor RT2048 + 3 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-70
SART	2 x Jotron
EPIRB	1 x McMurdo E3 Pains Wessex

# Vessel Specifications

## 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
Fire pump	1 x 90 m <sup>3</sup> per hr
Emergency fire pump	1 x 50 m <sup>3</sup> per hr
Fixed CO <sup>2</sup>	Fixed flooding system in the generator room and paint locker

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## Accommodation

Berths	10 x 1 berth cabins = 10 berths 30 x 2 berth cabins = 60 berths
Facilities	1 x Hospital 3 x Client office 1 x Conference room 1 x Client survey area bridge (15 m <sup>2</sup> )
Certification	SPS certification for 50 SPS personnel
Max.POB	72 pax

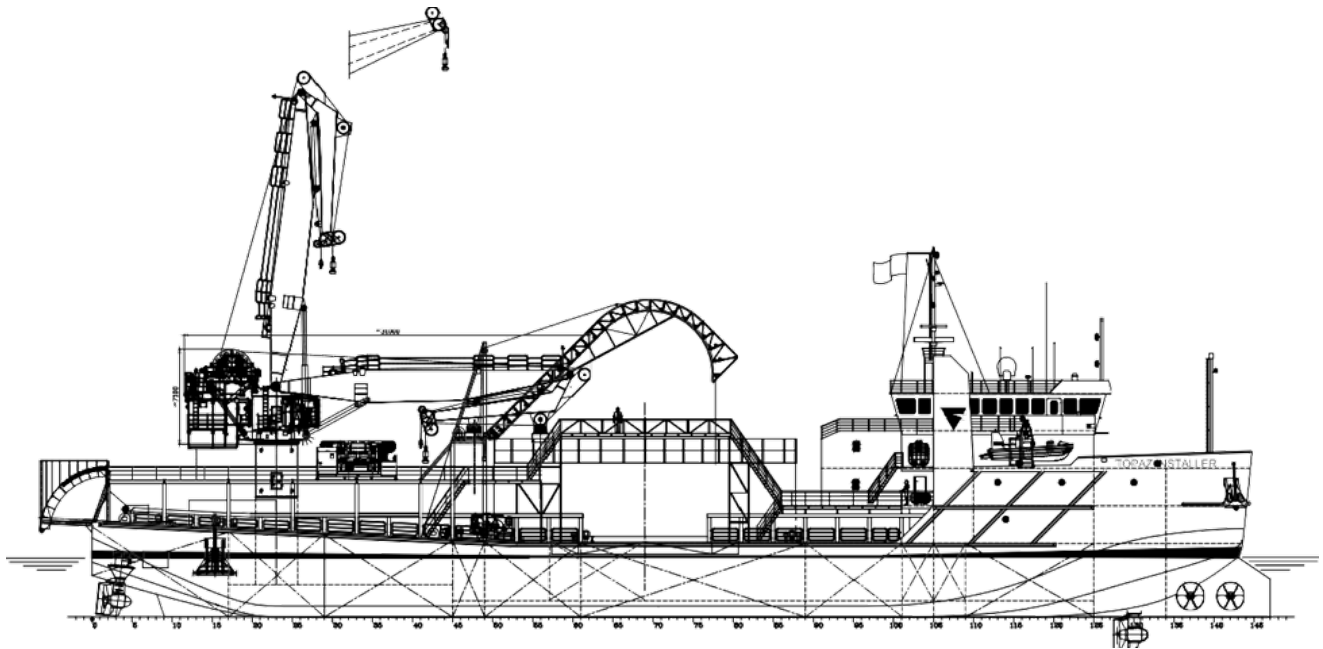
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## Features

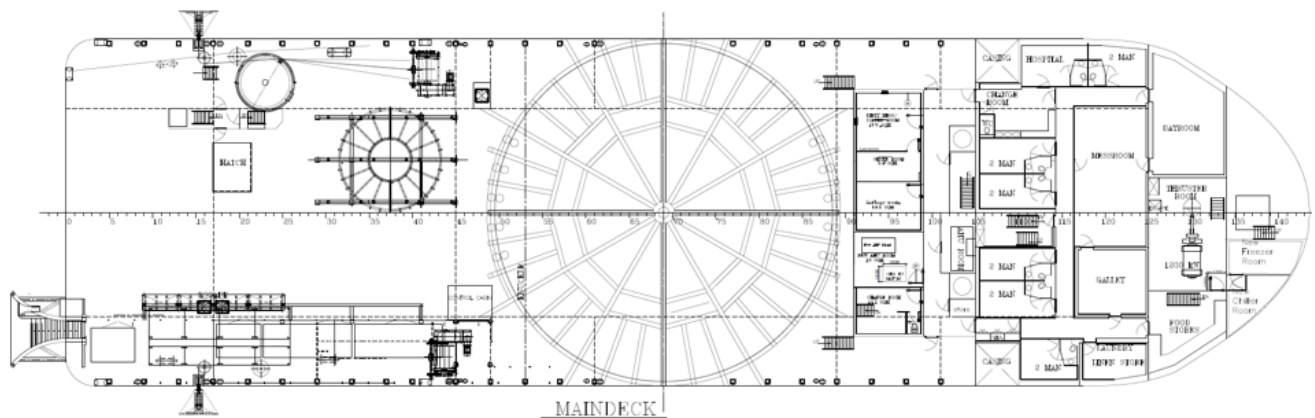
Boat landing	Transfer boat docking station available
Anti-heeling system	Framo; 1300 m <sup>3</sup> / hr – 9 m head
Engineered grounding capability	Designed for engineered grounding operations
Rotating converter container	50 Hz to 60 Hz converter 3*400 V, 50 Hz (max 570A)

Last revision November 2019

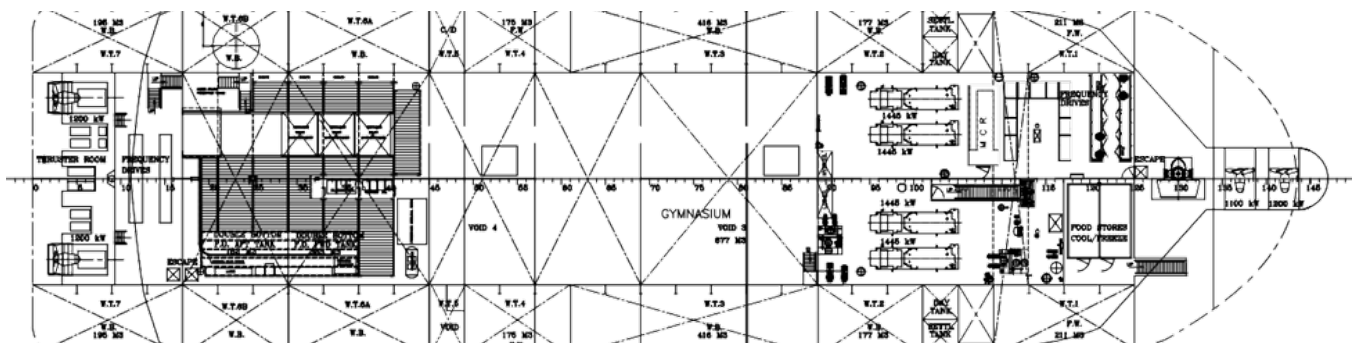
# GA Specifications



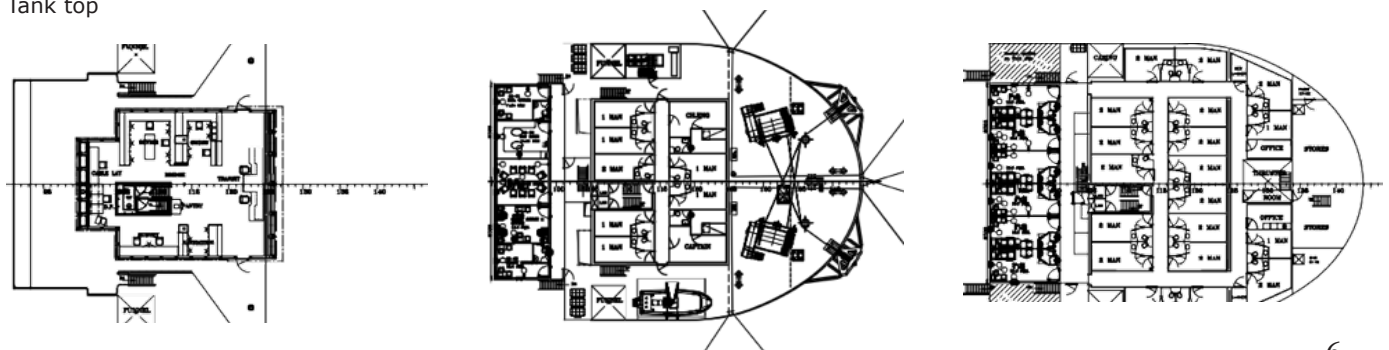
Profile



Main deck



Tank top



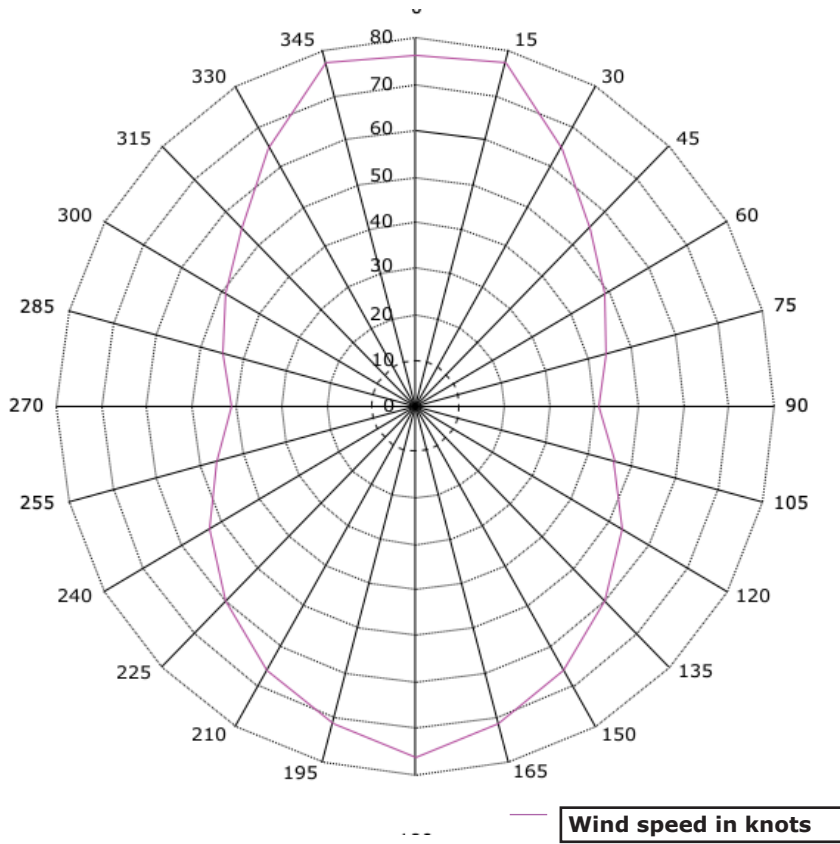
Bridge deck

Boat deck

Forecastle deck

# Capability Plots

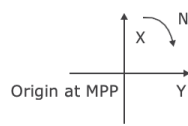
Capability plot varying wind. 2 tunnel thrusters, 2 azimuth thrusters, 2 tunnels on the bow, 1.5 knot current stepped



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.

**Coordinates**



**Ship Direction**

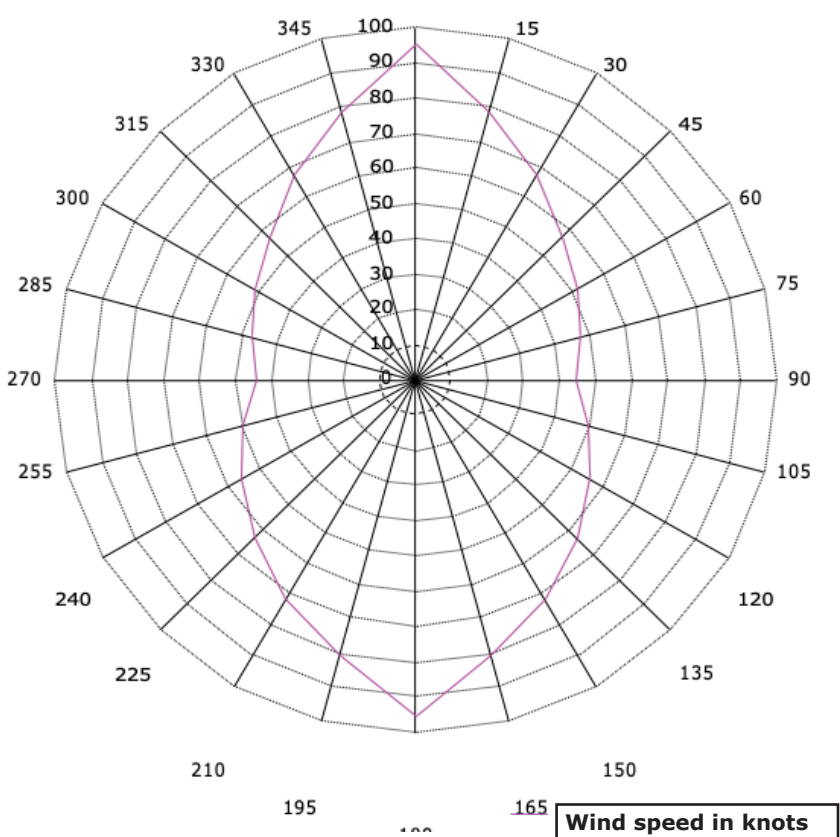


**Weather Direction**

Wind 0 degrees  
Current at 90 degrees  
waves



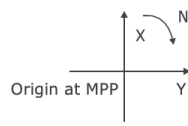
Capability plot varying wind. 1 tunnel thruster, 3 azimuth thrusters, 1 tunnel and 1 azimuth thruster on the bow, 1.5 knot current stepped



Wind angle is stepped from 0 to 360 deg.  
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**Ship Direction**

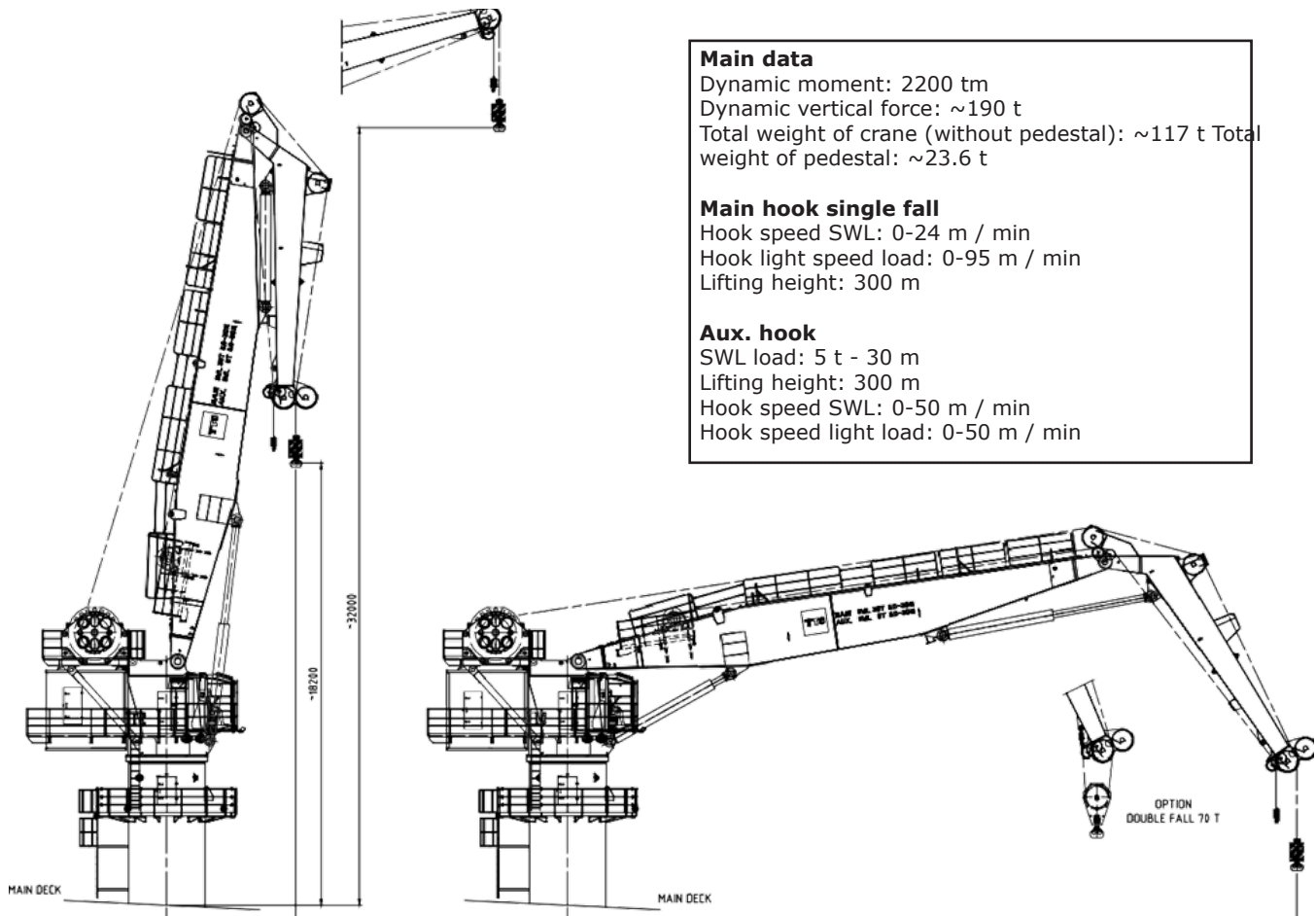


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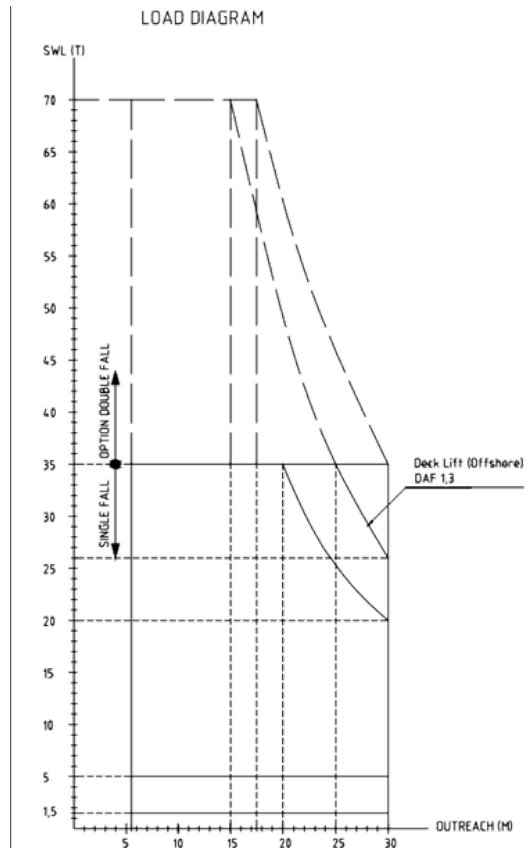
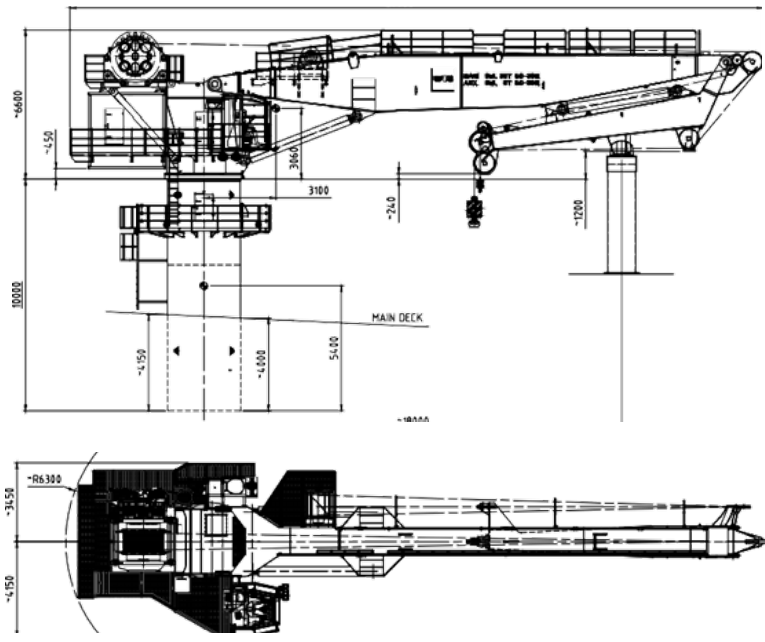
# Crane Load Chart



**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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