

DMS Challenger II

58 M - 4000 BHP - Multi-Purpose Supply Vessel

Vessel Specifications

TOPAZ
MARINE



Vessel Specifications

Dimensions

Length overall	57.50 m
Breadth moulded	13.80 m
Depth moulded	5.50 m
Draft	4.50 m
Deadweight	1350 m / t
Registered tonnage	GRT 1387 / NRT 416

Machinery

Main engines	4000 bhp - 2 x 2000 bhp@1600 rpm, Caterpillar 3516B
Propulsion	Fixed pitch 360 deg Azimuths, SRP 1212FP, SCHOTTEL / GmbH
Bow thrusters	1 x Schottel STT330LK CPP, electric motor drive, 343 kw
Main generator	3 x Caterpillar 3408, 315 kw each 415 V / 50 Hz / 3 Ph
Emergency generator	1 x Stamford type UC M274E2, 70 kw, 415 V / 3 Ph / 50 Hz
Oily water separator	1.0 m ³ / hr with 15 ppm alarm, make: Hamworthy
Sewage treatment plant	1 x 50 person capacity, make: Hamworthy ST-4A

Capacities

Fuel oil	451 m ³
Fresh water	199 m ³
Drill / ballast water	374 m ³
Liquid mud	162 m ³
Dry bulk	187 m ³ (4 x 1650 cu ft)
Lubricant oil	5.3 m ³
Dispersant / foam	13.5 m ³ each
Freezer and chiller	15 m ³ and 8 m ³ each
Clear deck area	376 m ²
Deck cargo capacity	500 t @ 7 t / m ²

Navigation and communication

Inmarsat C	1 x Nera World Phone
GMDSS	Furuno, Area A3, Furuno FM 8500
X band radars	1 x Furuno FR 2125, 1 x Furuno FR 1510 Mark 3
GPS Navigator	2 x Furuno GP-90
AIS	1 x Furuno
Autopilot	1 x Anschutz
Navtex receiver	1 x Furuno NX-500
Gyro compass	1 x Raytheon Standard 22
Magnetic compass	1 x Classen & Plath
Communications: data / fax / phone	1 x Sailor Mini M TT3034B
MF / HF SSB Radio	1 x Furuno FS-1503
Echo sounder	1 x Furuno FE 700
MF / HF transceiver	1 x Furuno
2-way VHF radio	3 x Furuno FM 8500
Portable VHF	4 x Motorola GP 340
SART	2 x Jotron Tront Sart
Doppler log (port & starboard)	1 x Furuno DS-80, 1 x Furuno DS-830
Weather facsimile receiver	1 x Furuno Fax 207
Anemometer	1 x Obsermet
EPIRB	1 x Saracom EB 10
Joystick Control	1 x Kongsberg Cjoy
VSAT System	1 x Astra

Registration

Year built / builder	2005 / Fujian Mawei Shipbuilding Ltd, China
Flag / port of registry	Marshall Islands / Majuro
Class	ABS, +A1, fire fighting vessel class 1, offshore support vessel, E, AMS
Managers	Topaz Marine

Vessel Specifications

Towing / anchor handling / mooring

Anchor windlass	1 x electro hydraulic with 2 cable lifters and 2 warping drums make: South China Marine
Anchor chain	1 x 192.5 m & 1 x 220 m x 34 mm diameter, grade U2 stud link chains
Anchor	2 x 1590 kg high-holding power
Tugger winch	5 t @ 15 m / min electro hydraulic, drum capacity 100 m x 20.5 m wire
Capstan	2 x 5 t @ 15 m / min electro hydraulic

Performance

Maximum speed	12 knots
Service speed	10 knots

Transfer rates

Fuel oil	1 x 150 m ³ / hr @ 75 m head
Fresh water	1 x 100 m ³ / hr @ 75 m head
Drill water	1 x 100 m ³ / hr @ 75 m head
Liquid mud	2 x 75 m ³ / hr @ 75 m head
Cement system / bulk	2 x 13 m ³ / min, 5.6 kg / cm ² (80 psi) working pressure

Deck Crane

Crane	Port Side M460/4S, SWL 20 tonnes @ 12 meters and 4.5 Tons @ 36.5 m Make: Sormec Marine Crane (Certified for Manriding)
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Firefighting equipment and antipollution equipment

FIFI system	FIFI Class 1 with water curtain all round
FIFI monitors	2 x 1200 m ³ / hr @ 12 bar 1 x monitor driven by starboard main engine 1 x monitor driven by independent diesel drive (CAT 3412) 1 x monitor fitted with double barrel for foam discharge
FIFI pumps	2 x 1500 m ³ / hr @ 14 bar
Fire pumps	2 x 75 m ³ / hr
Emergency fire pump	1 x 25 m ³ / hr
Fireman outfits	6 sets
Fire extinguishers	Fire hydrants and fire extinguishers as per class requirements

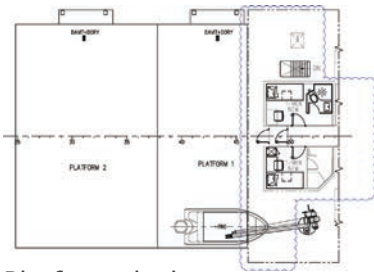
Safety equipment

Rescue boat	1 x 6 person diesel powered rescue boat
Life rafts	4 x 25 person inflatable life rafts
Life buoys / life jackets	8 nos. / 62 nos.
MOB	2 x light smoke signal
Parachute distress signals	12 nos.
Handflare distress & smoke signals	12 nos. each
First aid kit	1 no.
Immersion suits	3 nos.
Floodlights / searchlights	5 x 1000 w / 2 x 2000 w
Air horn / electric horn	1 no. each
Accommodation (52 bunks)	6 x 1 person cabins = 6 berths 11 x 2 person cabins = 22 berths 6 x 4 person cabins = 24 berths 1 x hospital with 1 bed

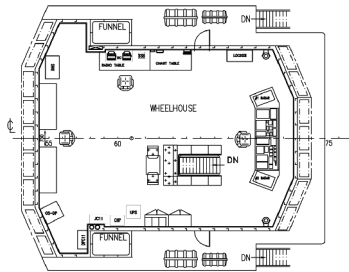
Tank Capacities

	SG	Fuel oil 0.850	Pot water 1.000	Drill water 1.000	Ballast water 1.025	Liquid mud 2.500	Brine 2.500	Base oil 0.830	Glycol 1.120	Dry bulk 2.40	Oil recovery 1.00
F.W. Wing Tank Port	60.02		60.02								
F.W. Wing Tank Stbd	60.02		60.02								
F.W. DB Tank Centre	79.51		79.51								
DW/WB FP TK (C)	53.67			53.67							
No. 1 DW/WB TK Stbd	22.76			22.76							
No. 1 DW/WB TK Port	22.76			22.76							
No. 2 DW/WB TK Port	36.80			36.80							
No. 2 DW/WB TK Stbd	37.96			37.96							
No. 3 DW/WB TK Port	51.42			51.42							
No. 3 DW/WB TK Stbd	51.42			51.42							
No. 4 DW/WB TK Center	57.67			57.67							
No. 5 DW/WB TK Stbd	19.96			19.96							
No. 5 DW/WB TK Port	19.96			19.96							
No. 1 FO DB TK Stbd	47.43	40.32									
No. 1 FO DB TK Port	45.96	39.07									
No. 2 FO DB TK Stbd	47.65	40.50									
No. 2 FO DB TK Port	49.27	41.88									
No. 1 FO Wing Stbd	34.66	29.46									
No. 1 FO Wing Port	34.66	29.46									
No. 2 FO Wing Stbd	86.33	73.38									
No. 2 FO Wing Port	86.33	73.38									
FO Day Tank Stbd	9.37	7.96									
FO Day Tank Port	9.37	7.96									
Liquid Mud Tank # 1	94.98					237.45					
Liquid Mud Tank # 2	67.03					167.57					
Lube Oil Tank	5.30										
Foam Tank	13.45										
Detergent Tank	13.45										
Bilge Holding	6.92										
Dirty Oil Tank	6.92										
Dry Bulk # 1	46.72									112.13	
Dry Bulk # 2	46.72									112.13	
Dry Bulk # 3	46.72									112.13	
Dry Bulk # 4	46.72									112.13	
Total weight in tons		383.38	199.55	374.38		405.03				448.51	
Total volume in m³		451.03	199.55	374.38		162.01				186.88	

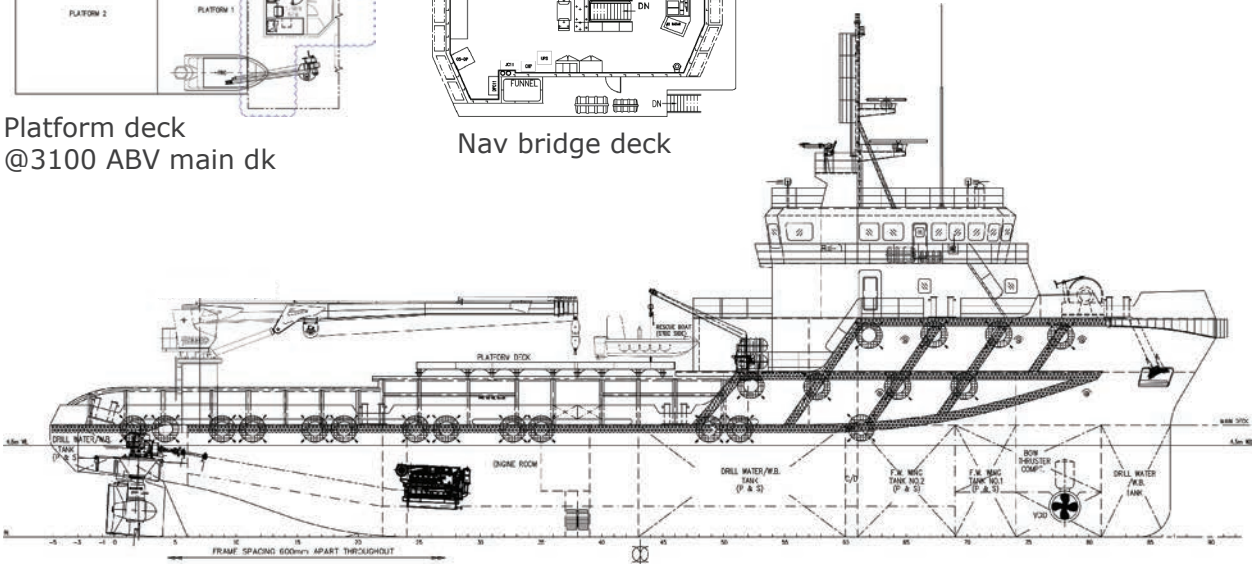
GA Specifications



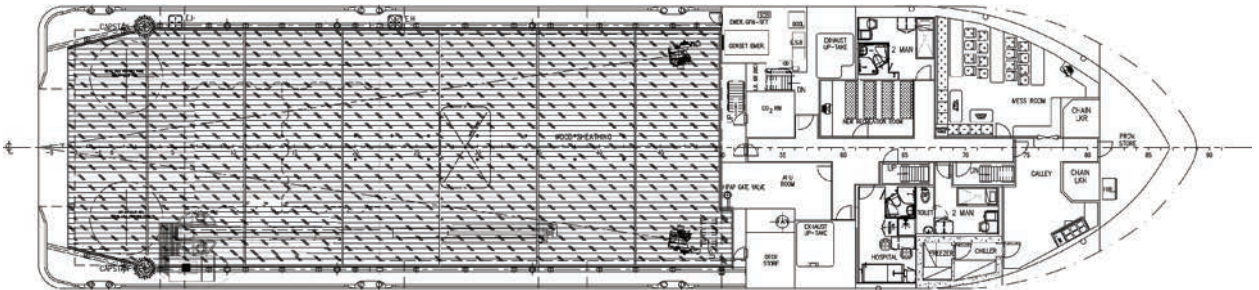
Platform deck
@3100 ABV main dk



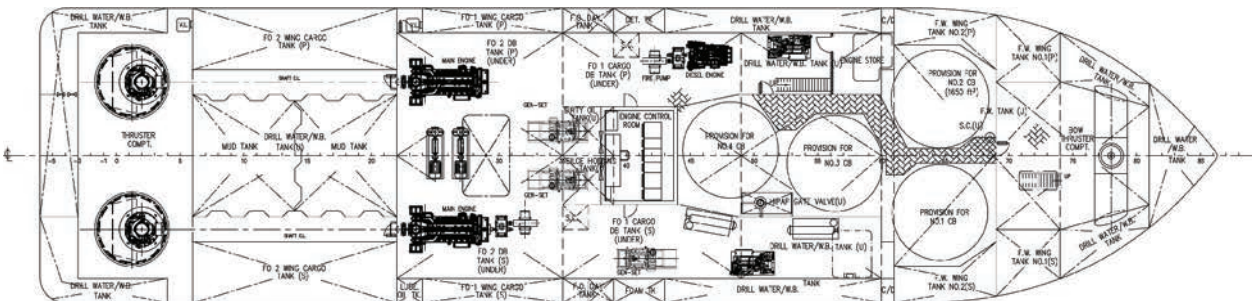
Nav bridge deck



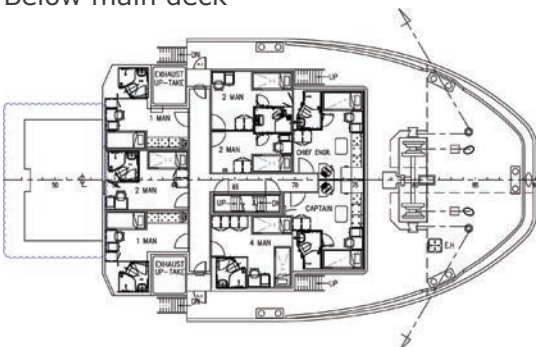
Outboard profile



Main deck



Below main deck



Upper forecastle deck



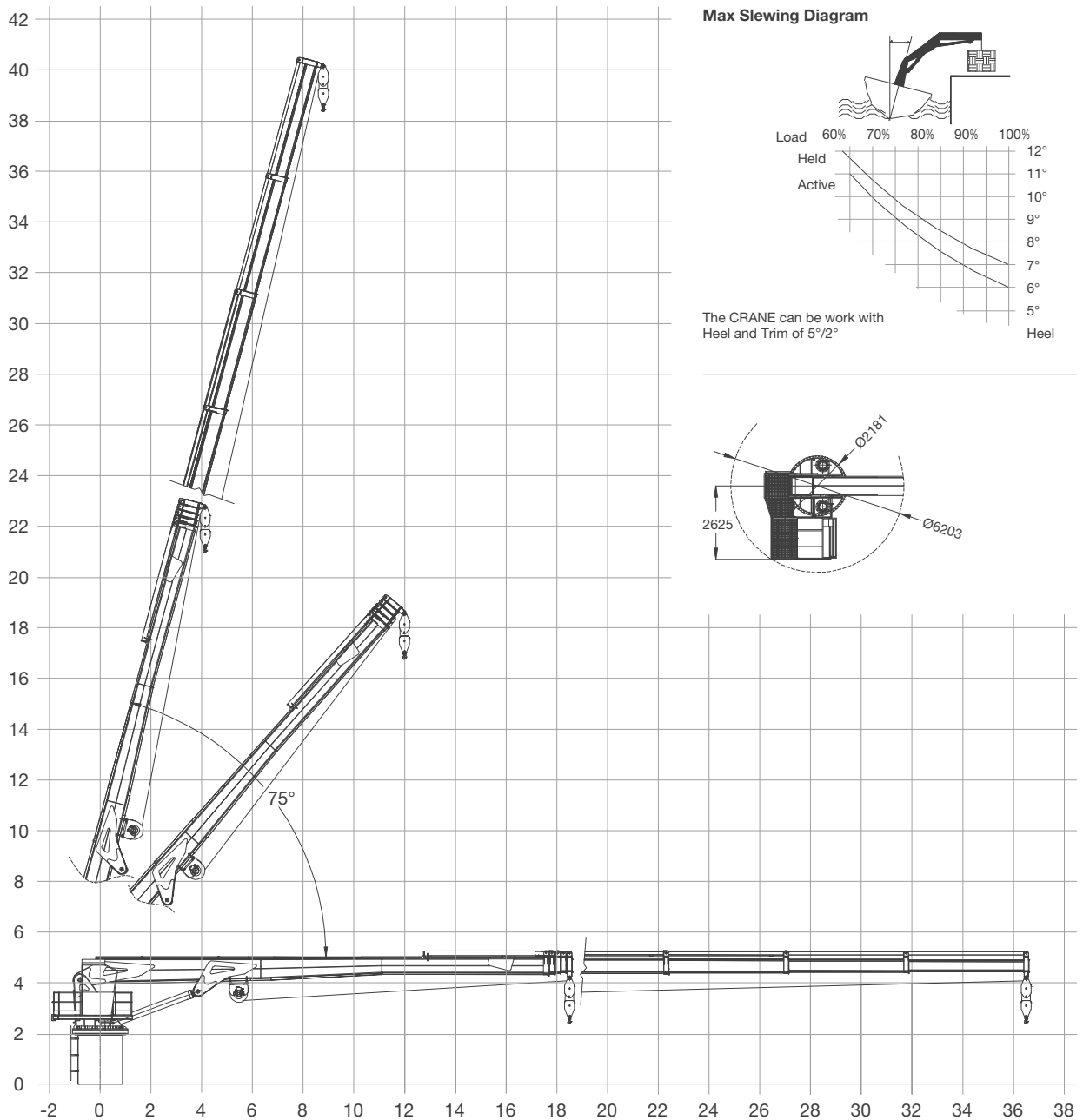
Forecastle deck

SORMEC Marine Crane - M460/4S

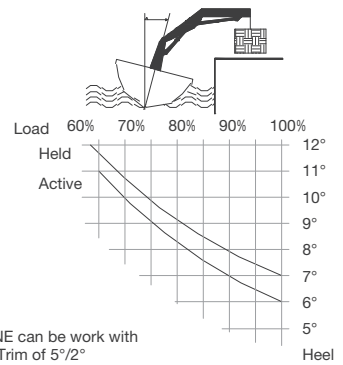
Technical Data

Max. Outreach	(m)	36.5
Min. Outreach	(m)	4.15
Slewing angle		Continuous
Rotating velocity	(Rpm)	0.6
Max. working pressure	(bar)	280
Recommended pump delivery	(l/min)	230
Oil tank capacity	(l)	1200

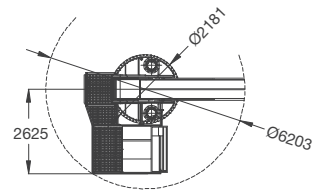
SORMEC Marine Crane is designed according to the German Crane Code DIN 15018.



Max Slewing Diagram



The CRANE can be work with Heel and Trim of 5°/2°



HARBOUR	mm 12000	mm 18500	mm 23000	mm 27500	mm 32000	mm 36500
	kg 20000	kg 12000	kg 8800	kg 6500	kg 5200	kg 4500
SEA STATE 2-3	mm 12000	mm 18500	mm 23000	mm 27500	mm 32000	mm 36500
	kg 13000	kg 7800	kg 5720	kg 4225	kg 3380	kg 2925

Technical Data for Crane

SORMEC Model	M460/4S
Lifting capacity SWL (Harbour)	4.500 Kg @ 36.500 mm radius 5.200 Kg @ 32.000 mm radius 6.500 Kg @ 27.500 mm radius 8.800 Kg @ 23.000 mm radius 12.000 Kg @ 18.500 mm radius 20.000 Kg @ 12.000 mm radius
Lifting capacity SWL (Sea State 2 - 3)	2.925 Kg @ 36.500 mm radius 3.380 Kg @ 32.000 mm radius 4.225 Kg @ 27.500 mm radius 5.720 Kg @ 23.000 mm radius 7.800 Kg @ 18.500 mm radius 13.000 Kg @ 12.000 mm radius
Working Condition	Harbour
Heel and Trim	Harbour - 5°/2° // Sea State 2-3 - 6°/3°
Maximum outreach	36.5 mt
Minimum outreach	4.5 mt
Slewing	Two Motor reduction gear
Slewing angle / Rotation	Continuous
Slewing speed	0 – 1 RPM Stepless variable
Power supply	415V / 50Hz / 3 Phase
Structure working temperature	-10° C to + 50° C
Working pressure	250 bar
Operator position	Operator's Cabin
Pedestal	Standard basement 2 meters height
Crane colour	Grey International Marine Coatings

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