



Damen Marine Services

DAMEN

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Dear reader,

Damen Marine Services would like to present a selection of the services and products that we have to offer. At Damen Marine Services, it is our aim to provide you with a reliable maritime solution. This can be either a state-of-the-art vessel on its own via a Bareboat Charter, a Hire to Purchase contract, or we can provide a complete Maritime Time Charter solution, including the vessel, crew and a vast range of services.

We offer our vessels and services globally and can tailor both the fleet and our services to fit your project requirements. Our highly-skilled crew has extensive experience in the following: anchor handling, towing, off-and nearshore (construction) support, dredging support, dive support and much more.

If there are any questions, please do not hesitate to contact us.

Chartering-dms@damen.com



Our chartering activities

Damen Marine Services B.V. (DMS) is the chartering company within the Damen Shipyards Group. DMS operates a fleet of Damen-built vessels and is involved in the sale and purchase of used vessels. DMS offers its clients Damen vessels, both from our proven, renowned designs, as well as new designs incorporating new technologies.

Chartering out workboats is a Damen activity which dates back to the early sixties when it became a service for clients awaiting a new vessel under construction at the shipyard. Then in 1974, the Marine Service Division was officially formed.

DMS is active in chartering workboats, pontoons and crewboats, together with a full crew or on a bareboat basis. DMS presently operates a modern fleet of multi-functional towing- and workboats, survey vessels and high-speed craft. Through the Sale and Purchase

Department, DMS offers brokerage services for used vessels and trade-in possibilities for newbuild Damen vessels, which is handled by Damen Trading.

DMS promotes the exchange of practical knowledge between the company and its clients and the product development departments of the Damen Shipyards Group, continually aiming to improve vessel performance and, thereby, customer satisfaction. The company's office is situated in the Damen headquarters in Gorinchem in the Netherlands.





Multi Cat 2409



Shoalbuster 2208



Shoalbuster 3209



Fast Crew Supplier 2610

**Damen Marine Services
can assist, just let us know
what is needed...**



Damen Marine Services Fleet







Shoalbuster 2609



Shoalbuster 3511



Stan Pontoon 6020



Damen Marine Services Portfolio

» Workboats & Pontoons

The Damen Marine services fleet consists of several workboats and tugs. These ships were developed with the dredging and offshore industries in mind and combine a shallow draught with ample bollard pull. The Damen Shoalbusters are able to perform a wide range of tasks, including towing, anchor handling, pipe laying support and dredging support. The success of these services is demonstrated by the satisfaction of our long-term clients, who regularly return to DMS.

The Damen Marine Services Multi Cats are renowned in the dredging, construction and diving industry for their performance and reliability. Their shallow draught, in combination with a limited free board, make them very suitable for all works on floating pipelines and buoys, and for the repair of floating equipment, as well as many other tasks where quick results count.

» Crewboats

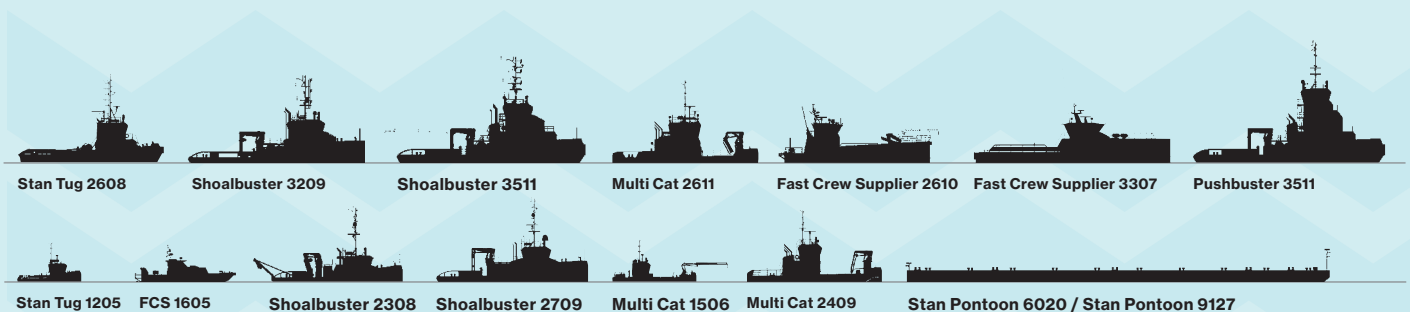
Our crewboats are regularly deployed in the offshore wind sector as support vessels for transferring technicians and for handling smaller equipment. In Western European waters and the North Sea particularly, the offshore wind industry has grown considerably in recent years and these versatile vessels are well known for their efficiency, speed and comfort.

The Damen Twin Axe can operate for longer periods of time due to its excellent seakeeping behaviour in high sea states, which is due to the revolutionary bow design. Damen Marine Services has offered this type of ship as a frontrunner for existing contracts, as well as for tryouts for new clients.

» Charters

Damen Marine Services' charters can be fully manned for short or long periods, and the time charters on our vessels are executed by our own crews to the full satisfaction of our clients worldwide.

Bareboat Charters are also possible. We are proud to say that our role in the market, as a provider of both vessels and services, can be fulfilled in existing markets with new technology, or new markets with existing technology, offering you endless possibilities. The sale and purchase of your second-hand vessels in order to make room in your fleet for newbuild vessels is also part of the Damen Trading service.



Shoalbuster 3511

DMS STORK



GENERAL

Yard number	2013
Classification	Bureau Veritas I 3/3 *HULL *MACH Tug Unrestricted Navigation AUT-UMS
Flag	Dutch

DIMENSIONS

Length o.a.	35.25 m
Beam moulded	11.60 m
Depth	5.25 m
Draft max. amidship	3.64 m
Tonnage	600GT / 180 NT

TANK CAPACITIES

Fuel oil	374.4 m ³
Fresh water	42.0 m ³
Hydr. oil	3.7 m ³
Lub. oil	4.4 m ³
Bilge water	2.2 m ³
Dirty oil	4.4 m ³
Sewage	23.6 m ³
Gear oil	2.2 m ³

PERFORMANCES

Bollard pull	70 tons
Speed	11.6 knots

PROPULSION SYSTEM

Main engines	2x Caterpillar 3516 B TA
Total power	3840 kW (5150 hp) at 1600 rpm
Propulsion	2x fixed pitch propellers in nozzles
Diameter	2700 mm
Gearbox	Reintjes WAF 873 / 7.455 : 1
Bowthruster	294 kW (400 hp), hydraulically driven

AUXILIARY EQUIPMENT

Auxiliary engines	2x Caterpillar C-9 TA
Generator	Leroy Somer, LSAM 46.2 M5
Output	2x 150 kVA, 50 Hz, 230/400 V
Hydraulic set	Caterpillar C18 TA, 500 kW at 2100 rpm
Fuel separator	Alfa Laval type MAB 104, 1950 ltr/hr
Internal fifi system	CO2 in the engine room
Transfer pumps	Fuel 50 m ³ /hr at 4.8 bar Fresh water 50 m ³ /hr at 4.8 bar

DECK LAY-OUT

Anchor	2x 375 kg Pool (H.H.P.)
Deck crane	Heila 170-4S-L, remote controlled, capacity: 18,2 tons at 8,03 m 7,9 tons at 15,93 m
Anchor winch	Ridderinkhof, CAW-H-152, capacity 5 tons at 10 m/min.
AH towing winch	Ridderinkhof AHW-H-1000, capacity: P= 50 tons at 10 m/min P= 100 tons at 5 m/min B= 100 tons
Tugger winch	Brevini, 8 tons at 4.5 m/min.
Towing pins	Karm Fork, 160 tons SWL
Fifi pump	1200 m ³ /hr
Fifi monitor	2x monitor Albach EL 377
Stern roller	5000 mm x 980 mm, 100 tons SWL
Spark arrestors	fitted (external)

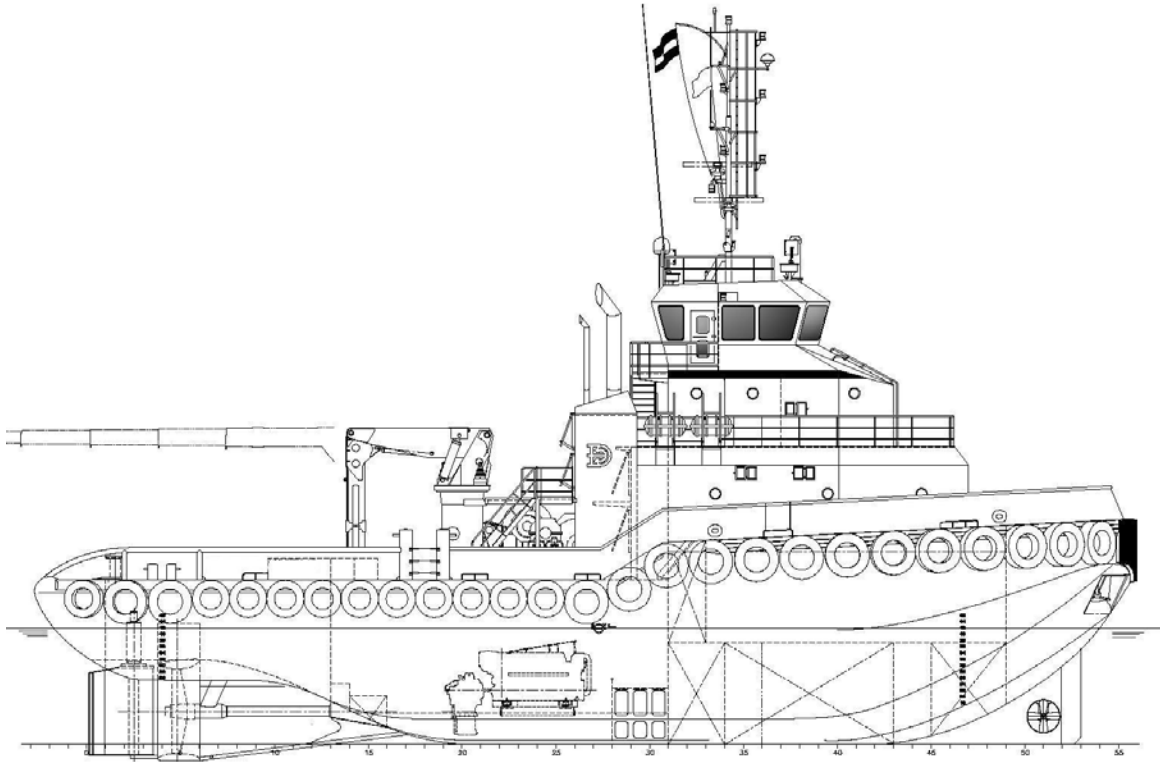
ACCOMMODATION

Heated and air-conditioned living spaces for 11 persons, consisting three single crew cabins and four double crew cabins, a galley, a mess room and sanitary facilities.

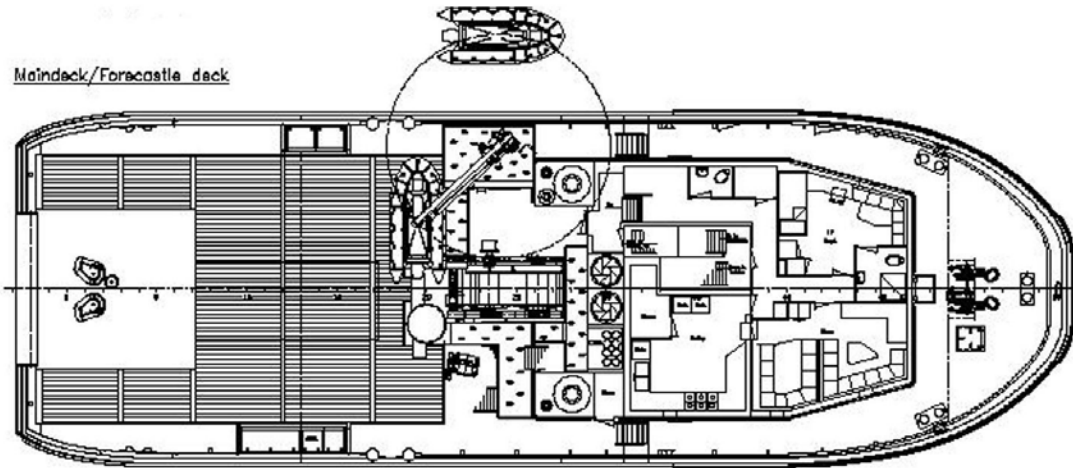
NAUTICAL AND COMMUNICATION EQUIPMENT

All systems and equipment according to GMDSS Area 3.

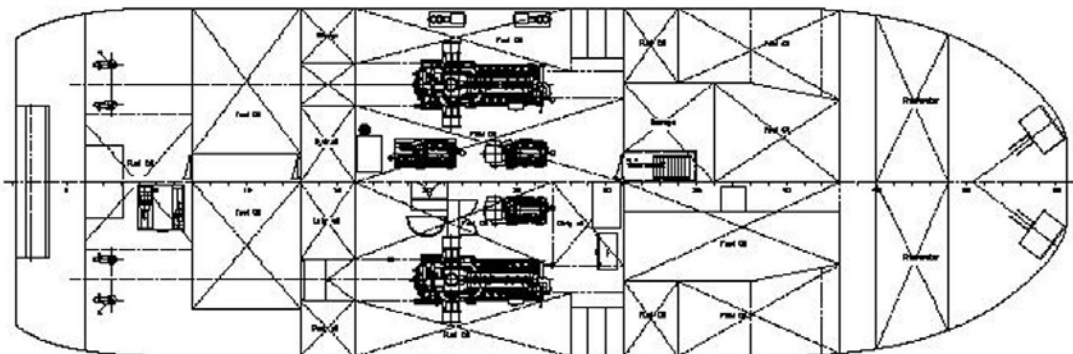
Searchlight	2x 1000 W
Navigation equipment	Magnetic compass, gyro compass, 2x radar, GPS, autopilot, echo sounder, speedlog, watch alarm, chart plotter.
Communication	3x VHF, 2x handheld VHF, Navtex, Inmarsat-C, SSB, Iridium, intercom, PA-system, LRIT, AIS, SSAS.
Additional equipment	TV antenna satellite system.



Maindeck/Forecastle deck



Below maindeck



Shoalbuster 3209

DMS PARROT



GENERAL

Yard number	571697
Building year	2013
IMO number	9688661
Basic functions	Towing, mooring, pushing, anchor handling, dredging support
Classification	Bureau Veritas I ✱ Hull • MACH Tug Unrestricted Navigation AUT-UMS
Flag	Dutch

DIMENSIONS

Length overall	32.08 m
Beam overall	9.10 m
Depth at sides	4.40 m
Draught aft	3.20 m
Gross Tonnage (approx.)	327GT

TANK CAPACITIES

Fuel Oil	220.00 m ³
Fresh Water	40.0 m ³
Lubrication Oil	7.30 m ³
Hydraulic Oil	3.00 m ³
Dirty Oil	4.30 m ³
Bilge Water	4.30 m ³
Sewage	3.30 m ³

PERFORMANCES

Bollard pull ahead average	46.9 tons (m)
Bollard pull ahead max	47.3 tons (m)
Speed max	11.5Knots

PROPULSION SYSTEM

Main engines	2 x Caterpillar Type 3512C-TA
Total Power	2610 bkW (3498 bhp) @ 1600 rpm
Gearboxes	2 x Reintjes WAF 773/6.44:1
Propulsion	2 x Fixed pitch propellor in Optima nozzles, 2250 mm
Bowthruster	350 bhp, hydraulically driven

AUXILIARY EQUIPMENT

Main Generator sets	2 x Caterpillar C4.4 TA
Capacity	2 x 107.5 kVA, 50 Hz, 230/400V AC
Hydraulic	1 x Caterpillar C18 TA-B
Capacity	357 kW @ 1800 rpm
Transfer pumps	For fresh water: VWSI 8020, 50 m ³ /h @ 4.8 bar
Fuel Oil Separator	Westfalia, OCT 2 Fuel Oil Separator

DECK LAY-OUT

Anchor	2 x 360 kg Pool (HHP)
Chain	19 mm stud-link anchor chain 220 m
Anchor winch	DMT, hydraulically driven AW 200-H19Q2
Deck Crane	Heila HLRM 170-4SL, 7.9 ton(m) @ 15.93 DMT, WATW-H 1000 kN
Towing Winch	50 tons (m) @ 12 m/min pull, 100 tons (m) @ 6 m/min (anchor) 150 tons (m) holding power Dromec HPV12000 12 ton (m) @ 5m/min WK-Triple pin type WK-Hydraulics SWL 75 Ton
Tuggerwinch	
Towing pins	
Chain Stopper	

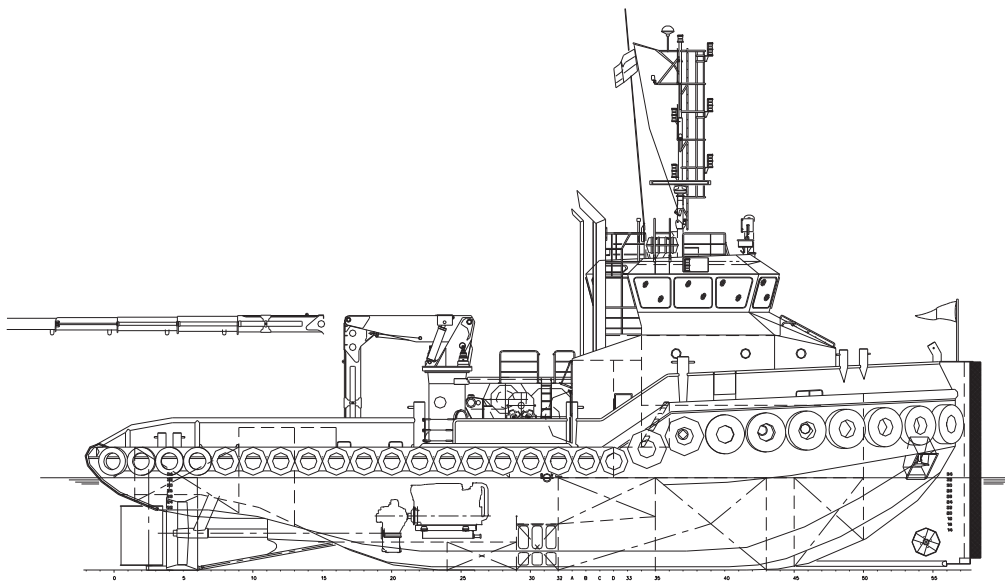
ACCOMMODATION

Heated and air-conditioned living spaces for 7 persons, consisting of a captain's cabin, two double crew cabins, two single officers cabins.
A combined galley and mess and sanitary facilities are provided.

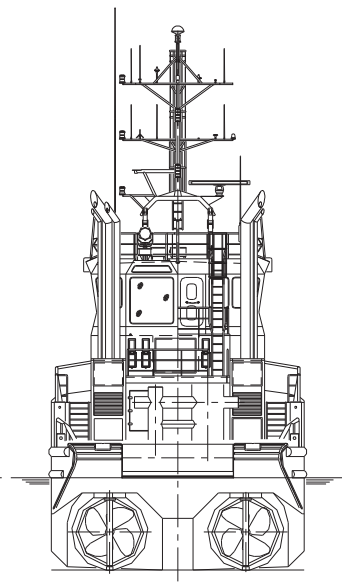
NAUTICAL AND COMMUNICATION EQUIPMENT

All systems and equipment according to GMDSS Area 3.

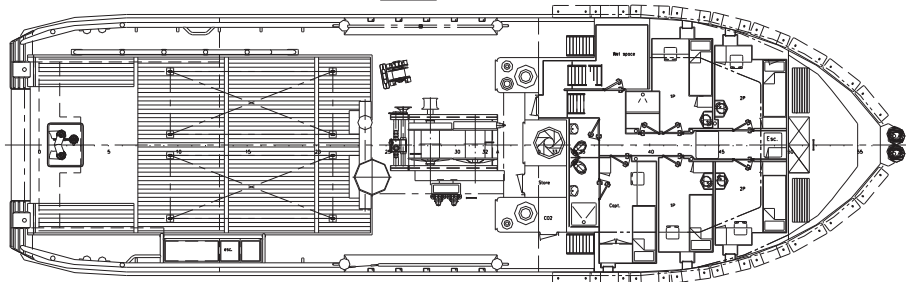
Searchlights	2x Pesch 2000W
Magnetic Compass	1x Cassens & Plat, Reflecta 1
Gyro Compass	1x Anschuetz 22
Watch Alarm	1 Marble 421
Radar	1x Furuno, FAR-2117
GPS	1x Furuno GP-150
AIS	1x Furuno, FA-150
Autopilot	1x Radio Zeeland, Seapilot 75
Echosounder	1x Furuno, FE-700
Speedlog	1x Furuno, DS-80
VHF Radio Telephone	2x Sailor, RT6222
Handheld VHF	2x Jotron, TR20
Navtex	1x Furuno, NX-700
SSB	1x Furuno, FS-1570
Inmarsat-C	2x Sailor 6110
Intercom	1x Sigma 700
Sat phone	1x Iridium SC-4000A
Chart Plotter	1x Furuno, Navnet



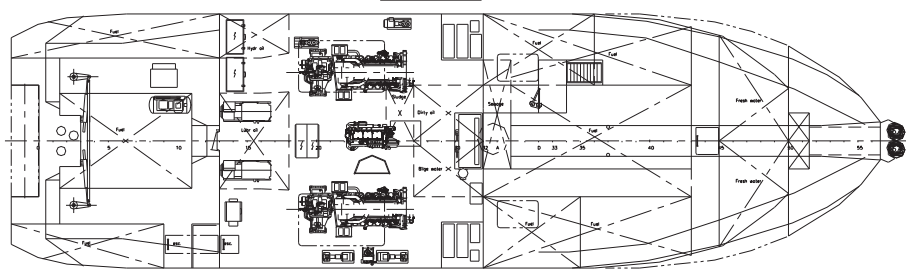
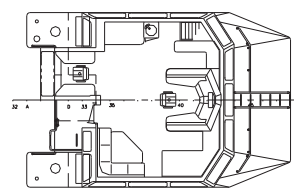
Moindeck



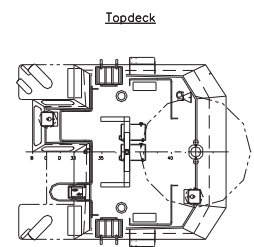
Wheelhousedeck



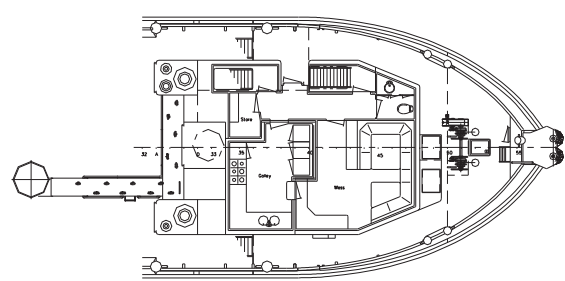
Below moindeck



Forecastledeck



Topdeck



PRINCIPLE CHARACTERISTICS	
LENGTH oa	32.27 mtr.
LENGTH mid	31.88 mtr.
LENGTH loadline	30.52 mtr.
BEAM mid	9.10 mtr.
DEPTH 1/2L	4.40 mtr.
DRAFT	3.30 mtr.

Shoalbuster 3209

DMS KITE



GENERAL

Yard number	571809
Building year	2020
IMO number	9901465
Basic functions	Towing, mooring, pushing, anchor handling, dredging support
Classification	Bureau Veritas: I * Hull • MACH Tug (design bollard pull=50.3t); Firefighting 1 - water spraying; Anchor handling Unrestricted Navigation • AUT-UMS
Regulations	Dutch Shipping Inspectorate (ILT), unrestricted service
Flag	Saint Vincent and the Grenadines

DIMENSIONS

Length overall	32.27 m
Beam molded	9.10 m
Beam overall (Incl. fender)	9.35 m
Depth molded (at ½ L)	4.40 m
Max. Draught	3.30 m
Deadweight @ max. draught	200 m ²
Deck area	80 GT

TANK CAPACITIES

Fuel Oil	218.0 m ³
Fresh Water	40.8 m ³
Lubrication Oil	7.3 m ³
Hydraulic Oil	3.0 m ³
Dirty Oil	3.7 m ³
Bilge Water	4.3 m ³
Sewage	6.4 m ³

PERFORMANCES

Bollard approx.	51 tons (m)
Speed approx.	12.3Knots

PROPULSION SYSTEM

Main engines	2x Caterpillar Type 3512C TTA/HD
Total Power	2610 bkW (3500 bhp) @ 1600 rpm
Gearboxes	2x Reintjes WAF 773/6.44:1
Propulsion	2x Promarin fixed pitch propellers
Diameter	2x 2250 mm v.d. Giessen optima nozzles
Bowthruster	257 kW (350 bhp), hydraulically driven

AUXILIARY EQUIPMENT

Main generator sets	2x Caterpillar C4.4 TA
Capacity	2x 86 ekW, 107.5 kVA, 50 Hz, 230/400VAC
Hydraulic	1x Caterpillar C18 TA
Capacity	1x 372 bkW @ 1800 rpm
Fire-fighting 1 with water spray pre-wetting	Caterpillar C32 ACERT 970 bkW @ 1800 rpm with FFS pump, capacity 2800 m ³ /hr
FiFi monitor	2x FFS electrical controlled from the wheelhouse. Throw length / height: 120m /45m

DECK LAY-OUT

Anchor	2x 337 kg HHP
Chain	2x 220m, 19 mm stud-link, U2
Anchor winch	1x Kraaijeveld, KAB-1-H-19D/19D
Deck crane	1x Heila HLRM 170-4SL 7.9 ton @ 15.93 m, 18.2 ton @ 8.03 m
Deck crane winch	5 ton, 45m drum wire capacity
Towing/Anchor handling winch	Kraaijeveld KAW-30-H-TR/TR Towing pull 50 ton @ 12.5 m/min @ 1 st layer, Wire cap. 1x 800m Ø44mm, holding force: 150 ton Anchor handling pull 100 ton @ 7 m/min @ 1 st layer Wire cap. 1x720m Ø44mm, holding force: 150 ton 1x Dromec HPV-12000, 12 ton @ 20 m/min @ 1 st layer 1x WK-Hydraulics 50T-2F-1CS Towing pins 50 ton SWL, chain stopper 75 ton SWL
Tugger winch	
Towing pins	1x WK-Hydraulics 50T-2F-1CS Towing pins 50 ton SWL, chain stopper 75 ton SWL
Stern Roller	Ø980 mm, 100 ton SWL

ACCOMMODATION

Heated and air-conditioned living spaces for 9 (+2 extra) persons, consisting of a captain's cabin, three double crew cabins, two single officers cabins with each one extra bunk. A combined galley and mess and sanitary facilities are provided.

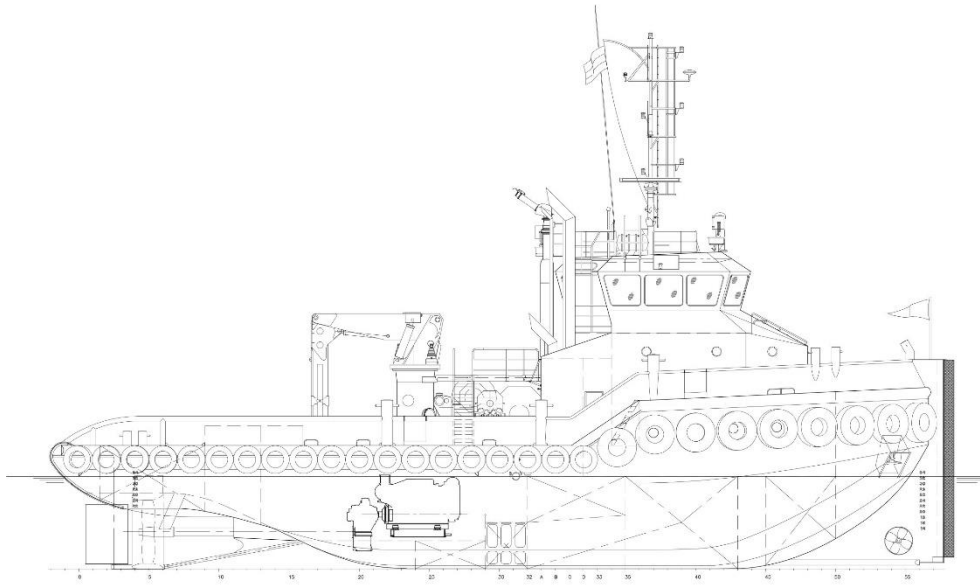
SECONDARY SHIP SYSTEMS

Transfer pumps	2x VWSI 8020, 50m ³ /hr @ 4.8 bar, 1x FW, 1x FO
Fuel oil separator	1x Alfa Laval, MIB 303, 760 l/h @4.8 bar
Bilge water separator	1x FACET CPS-2.5MKIII, 500 l/hr
Compressor	1x ABAC B-4900B, 39.2 m ³ /h at 11 bar, 500L tank

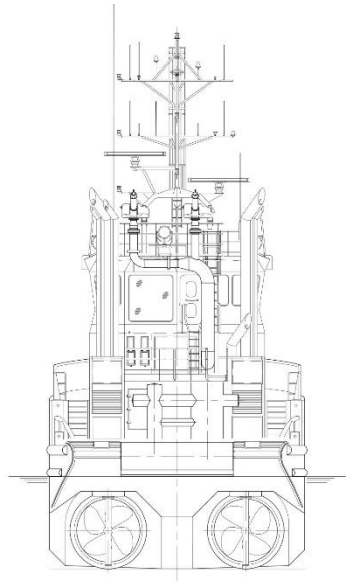
NAUTICAL AND COMMUNICATION EQUIPMENT

All systems and equipment according to GMDSS Area 3.

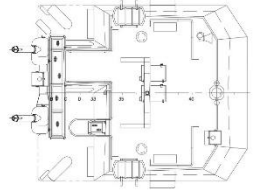
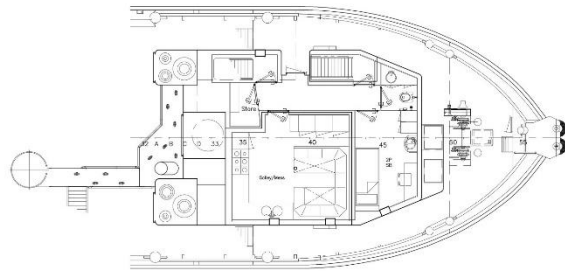
Searchlight	2x Pesch 2000W
Radar	2x Furuno, FAR-2117
Magnetic compass	1x Cassens & Plat, Reflecta 7
Autopilot	1x Simrad, AP 70
Gyro compass	1x Anschutz STD-22
DGPS	1x Furuno, GP-170
Dual ECDIS	1x FMD-3100
Echo sounder	1x Furuno, FE-800
Speed log	1x Furuno, DS-80
Intercom	1x Phonetech CIS 3101
Watch alarm	1x Furuno BR-500
VHF radio telephone	2x Sailor, RT6222 with DSC
SSB	1x Sailor 6310
NAVTEX	1x Furuno, NX-700
Handheld VHF	2x Jotron, TR30
Inmarsat-C	2x Sailor 6110
AIS	1x Furuno, FA-170
V-SAT	1x Cobham Sailor 800
Wind indicator	1x Obsermet OMC115
TV system	1x Seas-6000



Forecabindeck

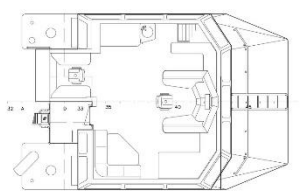
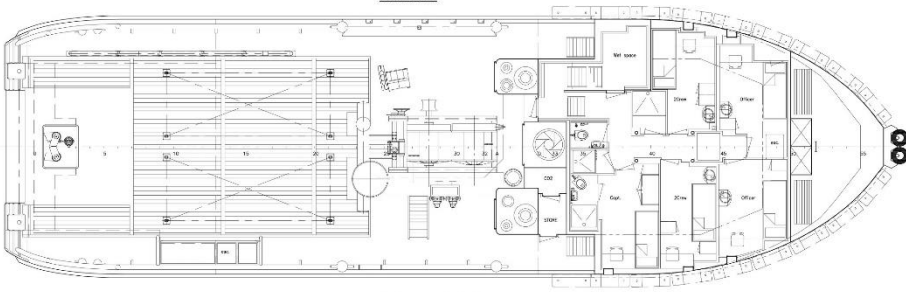


Topdeck

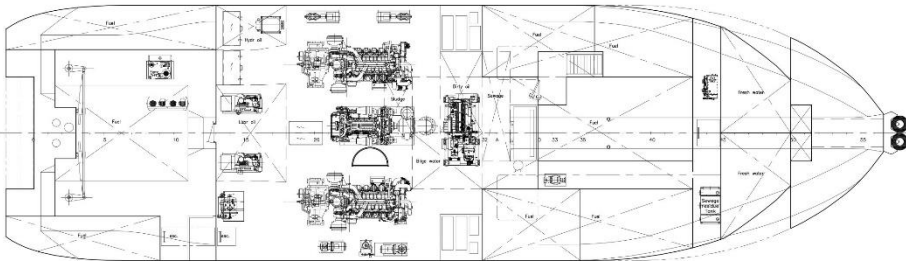


Maindeck

Wheelhousedeck



Below maindeck



Shoalbuster 2308

DMS TOUCAN



GENERAL

Yard number	571623
Building year	2013
IMO number	9569372
Basic functions	Towing, mooring, pushing, anchor
Classification	Bureau Veritas I HULL MACH Tug Unrestricted Navigation, AUT-UMS
Flag	Coastal waters upto 200 nm from shore Dutch
Tonnage	123 GT/ 37 NT

DIMENSIONS

Length overall	23.35 m
Beam molded	8.00 m
Depth	2.99 m
Max. Draught	2.10 m

TANK CAPACITIES

Fuel Oil	45.5 m ³
Fresh Water	13.9 m ³
Hydraulic Oil	0.9 m ³
Lubrication Oil	1.9 m ³
Bilge Water	0.9 m ³
Dirty Oil	3.5 m ³
Sewage	1.9 m ³
Gear oil	0.6 m ³

PERFORMANCES

Bollard pull max.	± 24 tons
Speed	± 11.1Knots

PROPULSION SYSTEM

Main engines	2x Caterpillar 3412D TTA
Total Power	1264 bkW (1696 bhp) at 1800 rpm
Gearboxes	2x Reintjes WAF 464L / 5.042:1
Propulsion	2x fixed pitch propellers in nozzles
Diameter	1606 mm
Bowthruster	88 kW (120 hp), hydraulically driven

AUXILIARY EQUIPMENT

Auxiliary engines	2x Caterpillar C4.4NA
Generator	Leroy Somer LSAM
Output	2x 43,75 kVA, 50 Hz, 230/400V AC
Fuel separator	Facet, MV-11-AG
Hydraulic set	Caterpillar C-9 TA, 189 kW at 1800 rpm
Transfer pumps	Fuel 25 m ³ /h at 2.7 bar Fresh water 25 m ³ /h at 2.7 bar

DECK LAY-OUT

Anchor	1x 240 kg Pool (H.H.P.) + 1 spare
Deck crane	Heila HLRM 80-3 S, capacity: 5.3 tons at 12.04 m 11.6 tons at 6.27 m
AH towing winch	Ridderinkhof, hydraulically driven, capacity: P=30 tons at 6 m/min. (1st layer) B=55 tons (1st layer)
Tugger winch	Brevini, BWC-080, capacity: 8.0 tons at 4.5 m/min.
Towing pins	WK Hydraulics, three in a row, 35 tons SWL
A-frame	25 tons SWL
Stern roller	3775 mm x 800 mm, 30 tons SWL
Moonpool	Fitted at fore deck
Spark arrestors	Fitted

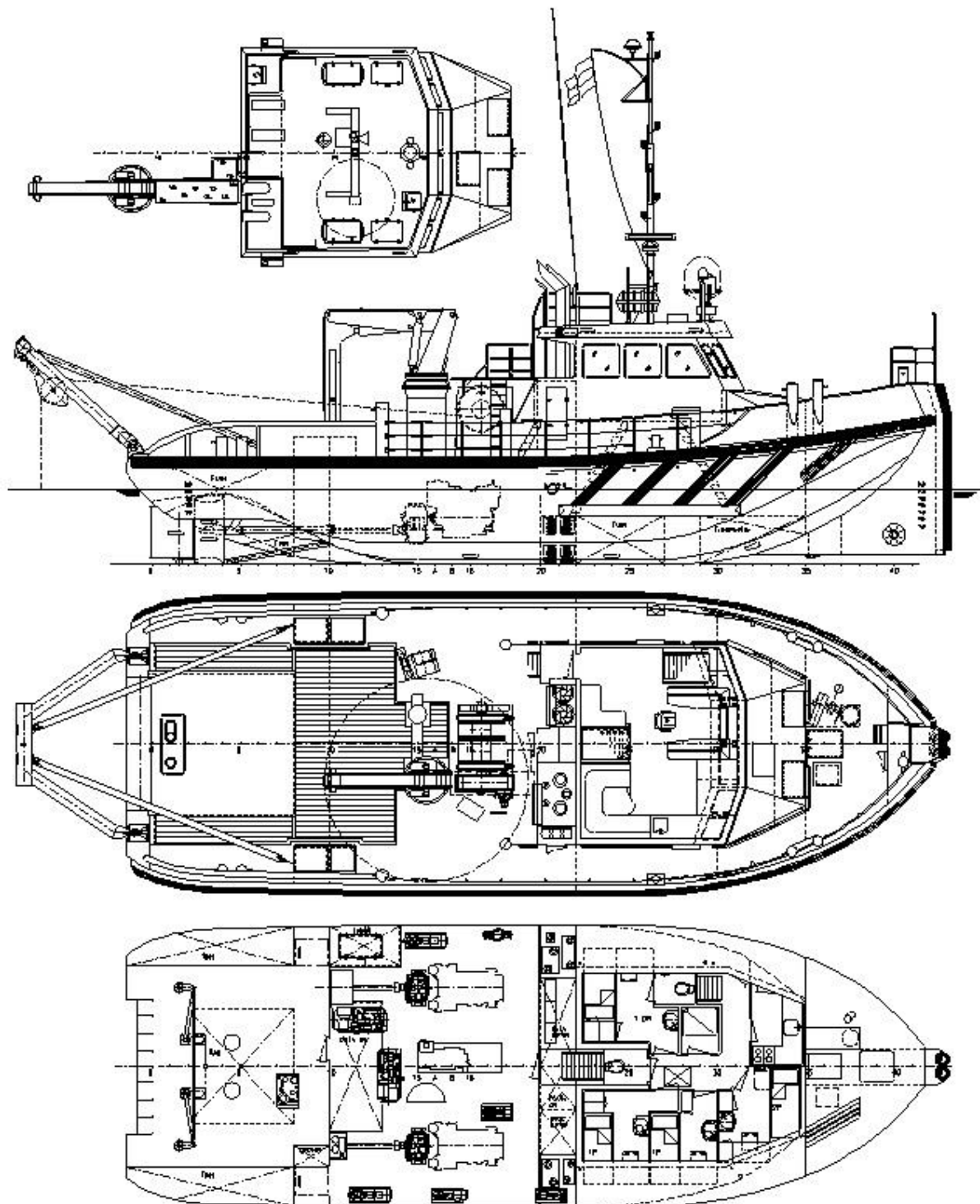
ACCOMMODATION

Heated and air-conditioned living spaces for 5 persons, consisting of a captain's cabin, an chief engineers cabin, one single cabin and one double crew cabin, a galley and sanitary facilities.

NAUTICAL AND COMMUNICATION EQUIPMENT

All systems and equipment according to GMDSS Area 2.

Searchlights	2x 2000 W
Navigation equipment	Magnetic compass, gyro compass, radar, GPS, autopilot, echo sounder, speedlog, bridge watch alarm.
Communication	2x VHF, 2x handheld VHF, Navtex, SSB, Inmarsat-C, AIS, intercom.



Shoalbuster 2208

DMS RAVEN



GENERAL

Yardnumber	1549
Building year	2003
IMO number	9280469
Basic functions	Towing, mooring, dredge support.
Classification	Bureau Veritas I HULL •MACH Tug Coastal Waters upto 30 nm from shore
Flag	Dutch
Tonnage	119 GT/35 NT

DIMENSIONS

Length overall	22.35 m
Beam overall	8.00 m
Depth moulded	2.99 m
Draught	2.05 m

TANK CAPACITIES

Fuel Oil	46.0 m ³
Fresh Water	13.9 m ³
Hydraulic Oil	0.9 m ³
Lubrication Oil	1.0 m ³
Bilge Water	0.6 m ³
Dirty Oil	4.0 m ³
Sewage	1.9 m ³
Gear Oil	0.4 m ³

PERFORMANCES

Bollard pull max.	± 20 tons
Speed	± 10.9Knots

PROPULSION SYSTEM

Main engines	2x Caterpillar 3412E B DI-TA
Total Power	1074 kW (1460 hp) at 1800 rpm
Gearboxes	Reintjes WAF 364L / 4,92:1
Propulsion	2x fixed pitch propellers in nozzles
Diameter	1500 mm
Bowthruster	73 kW (100 hp), hydraulically driven

ELECTRICAL EQUIPMENT

Auxiliary engines	1x John Deere 6068 TF 258
Generator	Stamford
Output	60kVA / 30 kVA, 50 Hz, 220/380V
Transfer pumps	Fuel 25 m ³ /hr at 1,5 bar Fresh water 25 m ³ /hr at 2,0 bar
Fuel separator	Facet MV-11-AG
hydraulic pump	fitted on John Deere generator

DECK LAY-OUT

Anchor	200 kg Pool (H.H.P.)
Chain	19 mm – 137,5 m shortlink
Deck crane	Heila HLRM 65-3S, capacity: 5.4 tons at 10.46 m 13.5 tons at 4.68 m Two parts / one shaft 600 mtrs / 28 mm 300 mtrs / 32 mm P=30 tons at 6 m/min. 1st layer B=40 tons at 1st layer
AH towing winch	Mampaey, SWL 160 kN / 16 tonf
Towing hook	4 tons at PS pole of towing bitt
Capstan	3800 mm x 610 mm, 30 tons SWL
Stern roller	25 tons SWL
A-frame	

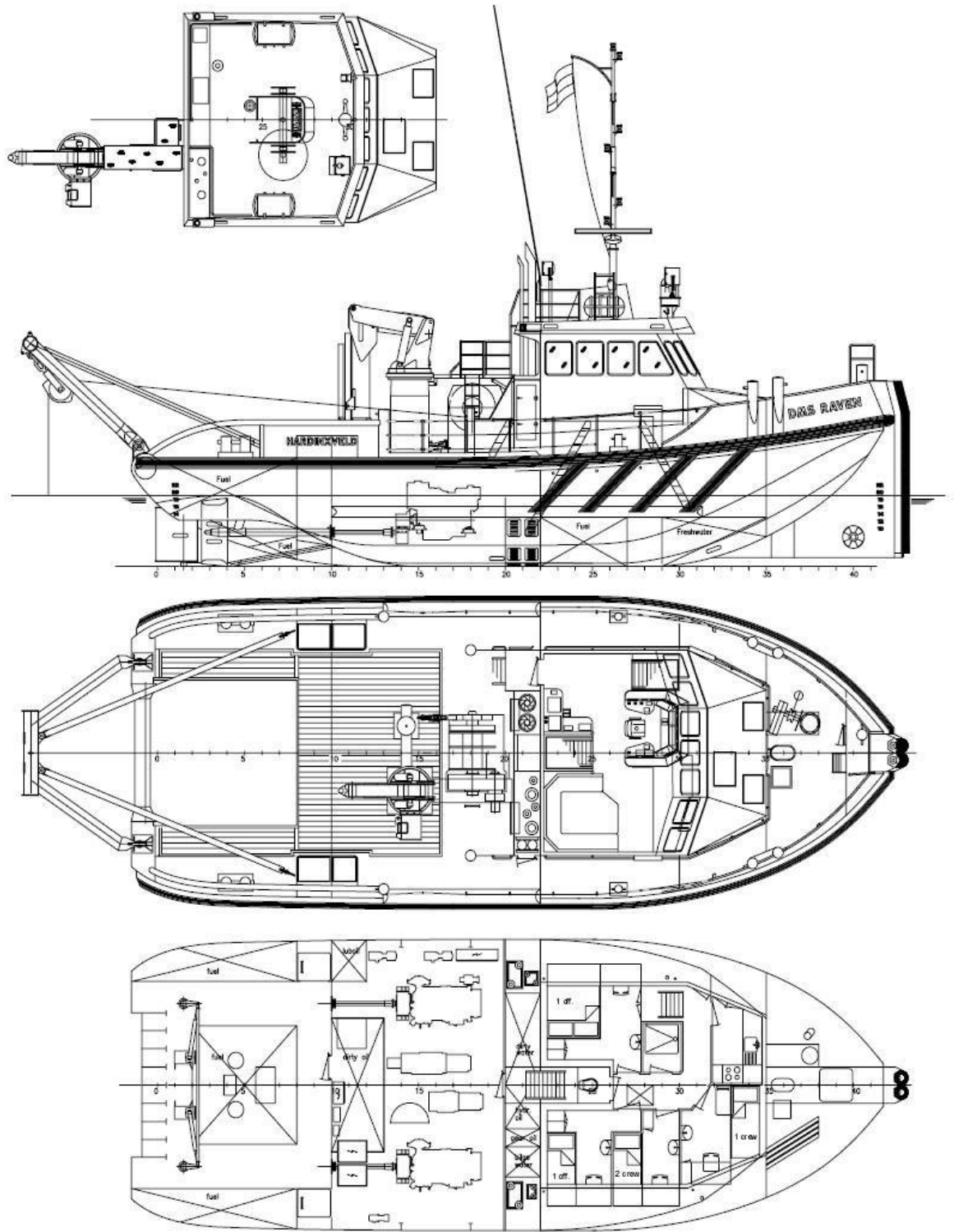
ACCOMMODATION

Heated and air-conditioned spaces for 5 persons, consisting of a captain's cabin, 1 chief engineer cabin, one single cabin, one double cabin, a galley and sanitary facilities.

NAUTICAL AND COMMUNICATION EQUIPMENT

All systems and equipment according to GMDSS Area 3.

Searchlights	1x 500 W, 1x 2000 W
Navigation equipment	Magnetic compass, gyro compass, radar, GPS, autopilot, echo sounder.
Communication	2x VHF, Navtex, Inmarsat-C, SSB, phone/fax.



Stan Tug 2006

MESSALO



GENERAL

Yard number	503318
Delivery date	September 2019
Basic functions	Workboat for inland water, harbour and coastal services
Classification	Bureau Veritas * 100 A1 Tug LMC UMS (without cross)
Regulations	SAMSA Class VIII
Flag	South Africa
Yard	Damen Shipyards Cape Town
Country	South Africa

DIMENSIONS

Length o.a.	20.80 m
Breadth moulded.	6.04 m
Depth moulded	2.70 m
Draught	2.40 m
Displacement approx	120 t

TANK CAPACITIES

Fuel oil	23.3 m ³
Fresh water	2.3 m ³
Sewage	0.7 m ³
Dirty oil	0.5 m ³
Bilge water	1.7 m ³

PERFORMANCES

Bollard pull (minimal)	17.6 t
Speed (minimal)	11.5 kn

PROPULSION SYSTEM

Main engines	2x Cummins KTA 19M4
Total power	1044 bkW (1400 bhp) at 2100 rpm
Reduction gearbox	Reintjes
Main engines	1500 mm

AUXILIARY EQUIPMENT

Generator sets	2x Onan/Stamford, 380 V, 35 kW, 50 Hz
Bilge pumps	2x Stork KGE 16-6, 33 m ³ /hr at 30m
Fuel oil transfer pump	1x Stork SRT 40 R/V, 5m ³ /hr
Fuel oil purifier	1x Alfa Laval, MIB 303
Fuel oil filters	2x Duplex water separator filters
Cooling system	Closed system for main and aux engine.

DECK LAY-OUT

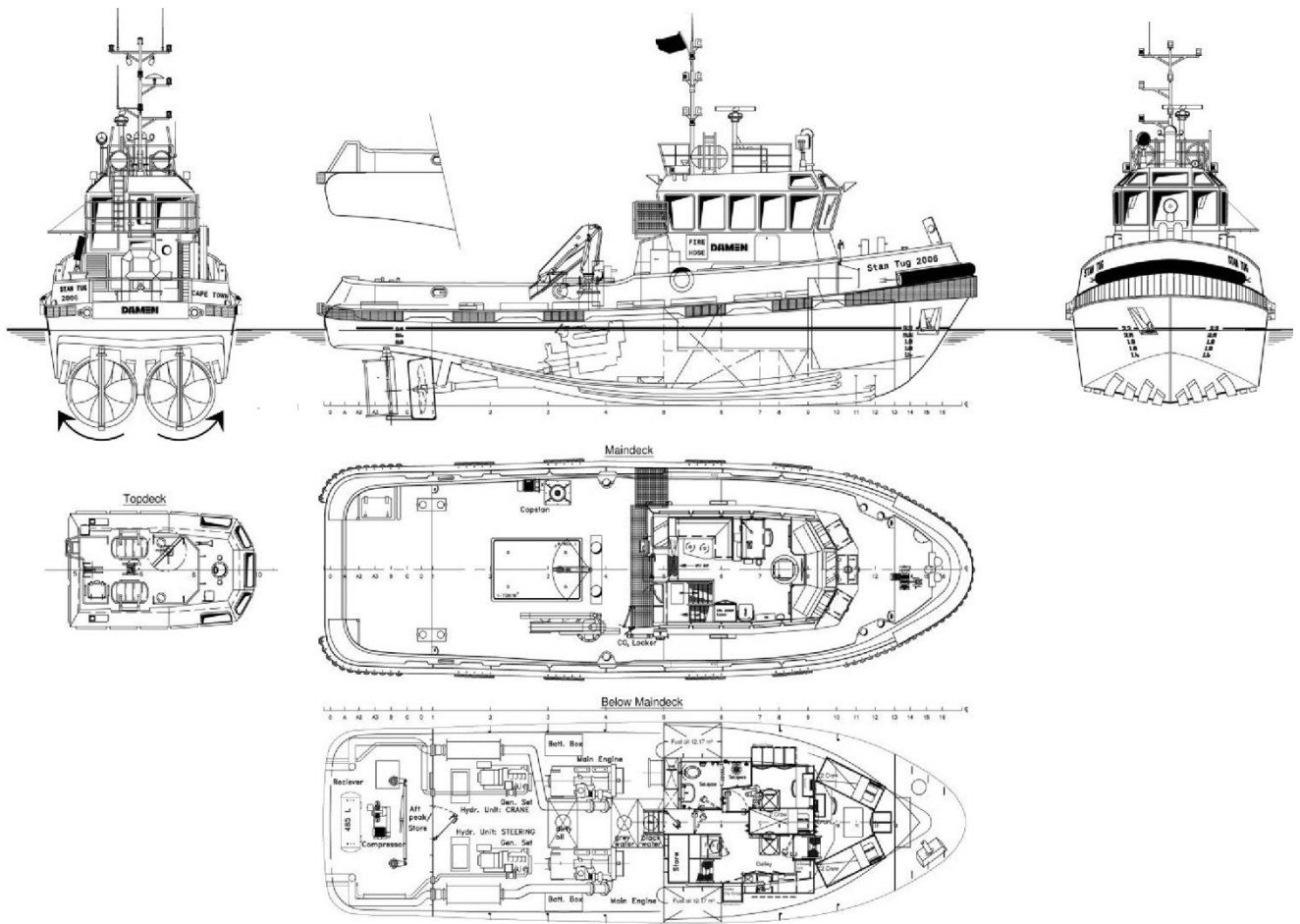
Anchor	100Kg U2/K2 (Class)
Anchor winch	Kraaijeveld, Electric 14,5 m/min
Crane	Palfinger PK 11001M, hydraulically driven 1.65 ton
Capstan	3 ton @10m/min, 7.6 ton brake hold.
Towing hook	Mampaey, 25.5 ton
Fendering	Cylindrical bow fender, tyre fenders, round vertical (removable) side fenders.

ACCOMMODATION

Accommodation for 6 persons completely insulated and finished with modern linings, sound absorbing ceiling in the wheelhouse. Air-conditioned and heated wheelhouse and accommodation.
Accommodation below main deck with officers and crew cabins, mess/dayroom and sanitary spaces.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlights	1x Seematz 500 W
Radar system	1x Furuno M1715
Compass	Lilley & Gillie Mk2002
Vhf radio telephone	Sailor 6248
Vhf handheld	2x VHF handheld, GMDSS approved
Gps	Furuno GP-32
Echosounder	Furuno LS-4100
Anemometer	Furuno FI50



MultiCat 2611

DMS SKUA



GENERAL

YARD NUMBER	571664 (Damen Shipyards Hardinxveld)
BUILDING YEAR	2013
BASIC FUNCTIONS	Anchor handling, dredger service, supply, towing, hose handling and survey
CLASSIFICATION	Bureau Veritas I ✱ Hull • MACH Tug Unrestricted navigation, • AUT-UMS
FLAG	St. Vincent Flag
OWNER	Damen Marine Services

DIMENSIONS

LENGTH O.A.	26.00m
BEAM O.A.	11.50m
DEPTH AT SIDES	3.50m
DRAUGHT	± 2.50m
DISPLACEMENT	542ton(m)
GROSS TONNAGE	255GT

TANK CAPACITIES

FUEL OIL	109.0 m ³
BLACK/GREY WATER	9.2 m ³
FRESH WATER	49.0 m ³
DIRTY OIL	2.0 m ³
HYDR OIL	1.2 m ³
LUB OIL	1.8 m ³
BILGE WATER	1.8 m ³
BALLAST WATER	25.5 m ³

PERFORMANCES

APPROX BOLLARD PULL (AVERAGE)	34.4 Ton(m)
APPROX. BOLLARD PULL (MAXIMUM)	35.3 Ton(m)
APPROX. SPEED	10.3knots

PROPULSION SYSTEM

Main engines	3x Cat C32 TTA
Total Power	1902 bkW at 1800 rpm
Gearboxes	3x Reintjes WAF 464 5.591 : 1
Propulsion	3x fixed pitch propellers in Optima nozzles, 1700 mm
Diameter	Hydraulically driven 200 kW, 360°
Bowthruster	3x Cat C32 TTA

AUXILIARY EQUIPMENT

GENERATOR SETS	2x Cat. C 04.4, 107,5 kVA each
HYDRAULIC POWER	Cat C18 TA, 357 kW 1800rpm
FUEL OIL SEPERATOR	OTC-2, 1150 ltr/hr

DECK LAY-OUT

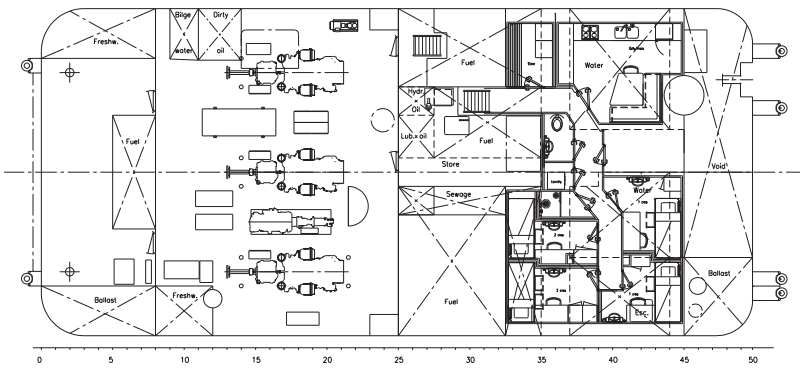
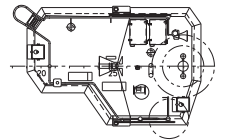
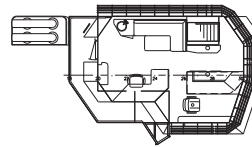
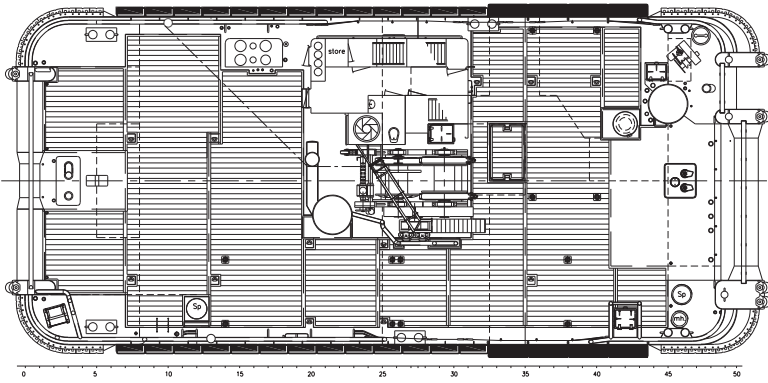
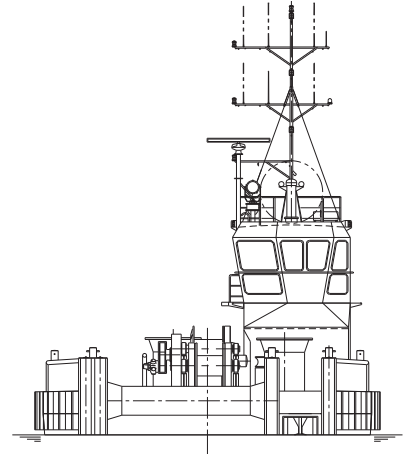
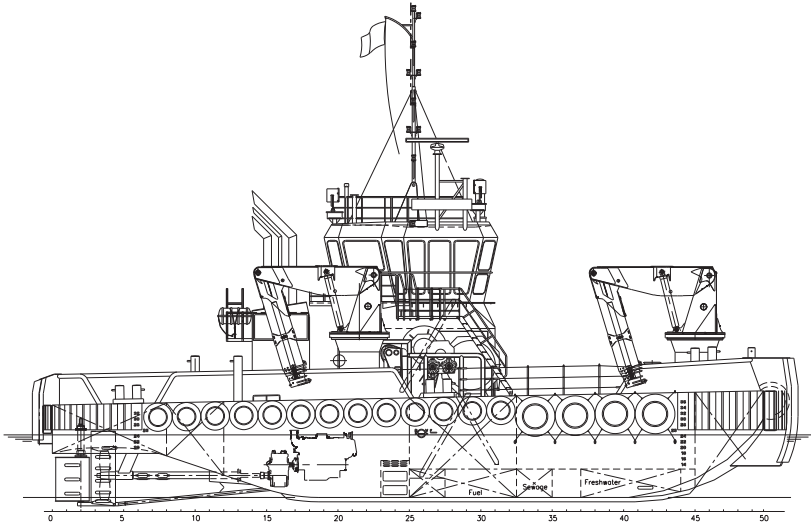
ANCHOR	2x 270 kg Pool TW HHP(1x connected)
ANCHOR WINCH	1x Hydraulically driven R-AWC-H-17,5
DECK CRANE	1x Heila HLRM 230-4SLK 9.8T @ 16.5m
ANCHOR HANDLING / TOWING WINCH CAPACITY	1x Heila HLRM 230-4SLK 9.8T @ 16.5m 1x Ridderinkhof R-AHW-H-1000/500 double drum in waterfall execution Towing 50 ton at 10 m/min pulling force (1 st layer) Towing 96 ton brake holding force (1 st layer) Anchor 100 ton at 5 m/min pulling force (1 st layer) Anchor 110 ton brake holding force (1 st layer)
TOWING PINS	1x triple pin type, 1x three in a row
TUGGER WINCH	1x 8 ton Brevini @ 15m/ min
CAPSTAN	1x 5 ton at 30 m/min

ACCOMMODATION

Comfortable heated and air-conditioned accommodation for 6 persons in 4 cabins, galley, sanitary facilities, etc.

NAUTICAL AND COMMUNICATION EQUIPMENT

SEARCH LIGHTS	2x Pesch 2000 W
RADAR SYSTEM	1x Furuno, FAR 2117
RADAR SYSTEM (OPTIONAL)	1x Furuno, FAR 8062
COMPASS	1x Cassens & Plat, Reflecta 1
GYRO COMPASS	1x Anshuetz, Standard 22
AUTOPILOT	1x Sea pilot 75
GPS	1x Furuno, GP-150 D
ECHOSOUNDER	1x Furuno, FE-700
SPEEDLOG	1x Furuno, DS-80
AIS	1x Furuno, FA-150
INTERCOM	1x Sigma-700
VHF	2x Sailor, RT6222, with DSC
HANDHELD VHF	2x TR-20
SSB	1x Furuno, FS-1575
INMARSAT - C	2x Sailor 6110/20
NAVTEX	1x Furuno, NX-700
WATCH ALARM	1x Marble, 421
TV/FM/AM	1x Aerial mark-32 ALC



Modular MultiCat 2210

TELESTO



GENERAL

Yard number	523043
Basic functions	The Damen Modular Multi Cat (MMuC) 2210 is a multipurpose vessel for coastal, sheltered/inland water services, built in steel derived from standard design
Description	The entire hull of the Vessel consists of modules, some of these as container sized units. These modules are called Damen Modular Barges and can be coupled together with a class approved coupling system, the Damen Link. Because of this modular system, the entire Vessel can be transported by ship, truck or train to her final place of destination and assembled locally.
Classification	Bureau Veritas/St. Vincent flag Class I • Hull • Mach, Special Service / Workboat / Caspian Sea / Coastal area outside Caspian Sea /AUT-UMS

DIMENSIONS

Length o.a.	22.50 m
Length pontoon	20.70 m
Beam o.a.	10.10 m
Depth at sides	1.80 m
Draught (empty)	0.85 t
Draught (shallow operation)	1.00 t

TANK CAPACITIES

Fuel	8.70 m ³
Fresh water	1.00 m ³
Sewage	2.00 m ³
Max. deck load	6.80 m ³
Cargo deck area (approx.)	46 m ²
Max. cargo capacity	20 t

PERFORMANCES

Speed (deep water)	7 kn
Speed (shallow operation)	3 tkn
Bollard pull (deep water)	6 t
Bollard pull (shallow operation)	3 t

PROPULSION AND STEERING SYSTEM

Propulsion type	2 x diesel driven deck mounted hydraulically driven rudder propeller
Main Engine	2x Volvo Penta D7C7A – 265hp
Total power	390bkW
Steering capability	2x 65° fore and aft

PRIMARY SHIP SYSTEMS

Deckwash / fifi pump	2x (1 fixed/1 portable)
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ELECTRICAL SYSTEM

Network	24 V / 230 V / 400 V
Main generator set	1 x 32 KVA

DECK LAY-OUT

Heila Deck crane	1x HLRM 65-3S
Hydraulic main winch	1 x 30 t
Anchor	2x 180 kg
Anchor winch	1x
Bollard (double)	4x

LIFE SAVING EQUIPMENT

Life buoy	2x
Life jacket	4x
Fire extinguisher	7x
First-aid kit	1x
Life rafts (6 pax)	2x

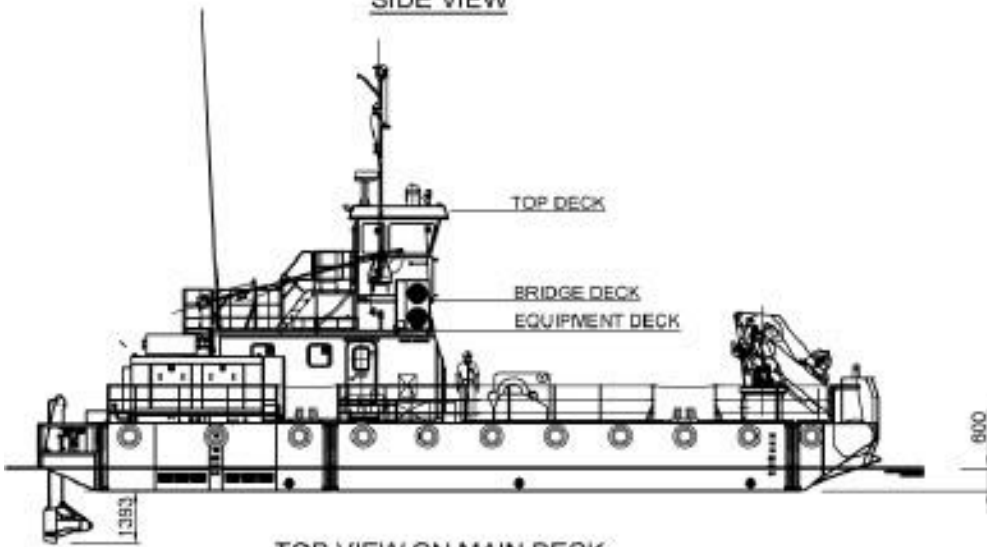
SUPERSTRUCTURE

Accommodation as per mlc2006	2 pax
Toilet	1x
Shower	1x
Wheelhouse	Efficient layout, unobstructed view in all directions, good overview vessel.
Fan coil air-conditioning unit with heating unit inside	4x

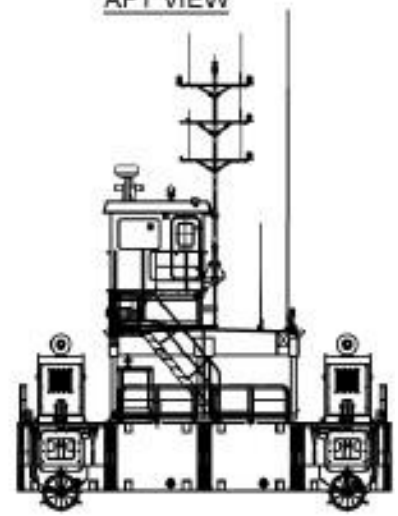
NAUTICAL AND COMMUNICATION EQUIPMENT

Navigation lights	All necessary navigations lights are installed
GMDSS A2 unit	1x
Search light	1x
Horn	1x
Radar	1x
GPS	1x
Compass	1x
Echosounder	1x
Barometer	1x
Thermometer	1x

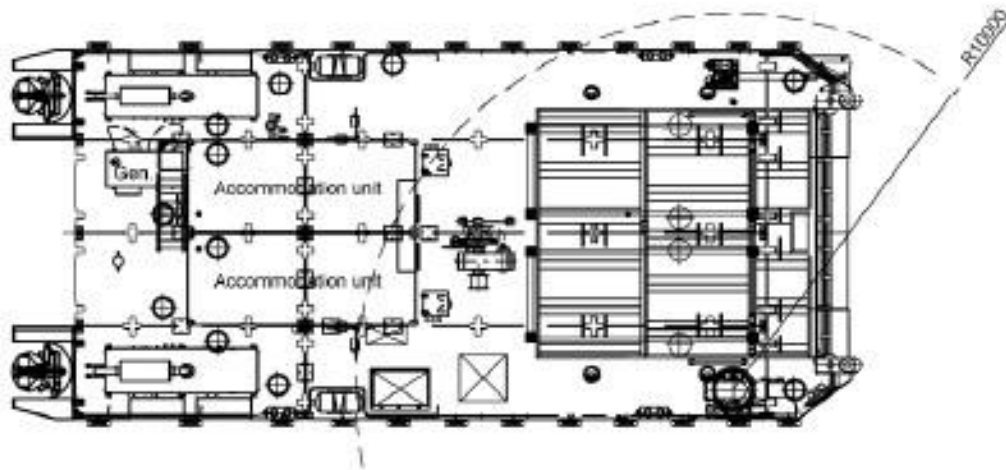
SIDE VIEW



AFT VIEW



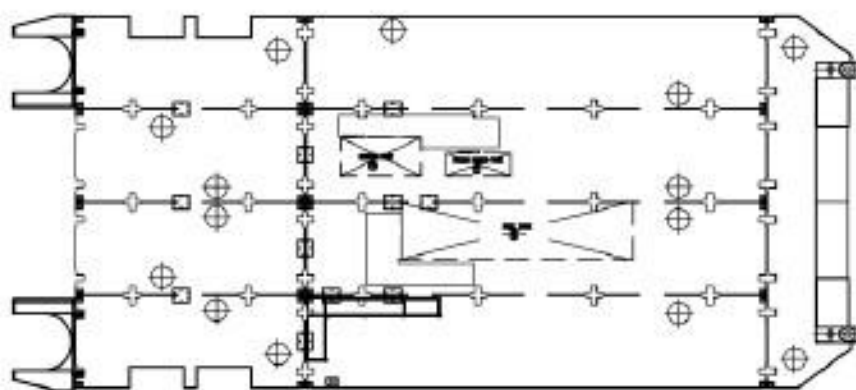
TOP VIEW ON MAIN DECK



ACCOMMODATION



TOP VIEW BELOW MAINDECK



EQUIPMENT DECK



BRIDGE DECK



TOP DECK



Azimuth Stern Drive Tug 2312

STANDARD



PICTURE OF SIMILAR VESSEL

GENERAL

Basic functions	Towing, mooring, Ø oil pollution control and Ø fire-fighting operations
Classification	Bureau Veritas 1 ✳ HULL • MACH Tug (Bollard pull = 70 t) Unrestricted Navigatoin AUT UMS Inwater Survey COMF-NOISE 3, COMF-VIB 3
Ø Classification	Bureau Veritas 1 ✳ HULL • MACH Escort Tug (Bollard pull = 70 t) (maximum steering force = 55 t, maximum braking force = 50 t, maximum escort speed = 10 kn) Unrestricted Navigation AUT UMS Inwater Survey COMF-NOISE 3, COMF-VIB 3 Ø Fire Fighting Ship 1 Ø Fire Fighting Ship 1 with water spray Ø Clean Ship Ø Green passport EU Epoxy paint system
Painting	Epoxy paint system

DIMENSIONS

Length overall	22.80 m
Beam overall	12.03 m
Depth at sites	4.40 m
Draught aft	5.50 m
Displacement (98% consumables)	485 t
Scantlings	Hull 10 mm, sheerstrake 15 mm

TANK CAPACITIES

Fuel oil (incl. long range tanks)	78.4 m ³
Fuel oil	54.6 m ³
Fresh water	7.8 m ³
Sewage	5.1 m ³
Dirty oil	1.5 m ³
Lubrication oil	1.5 m ³
Bilge water	3.0 m ³
Ø Foam	6.1 m ³
Ø Dispersant	3.0 m ³
Ø Urea	3.0 m ³

PERFORMANCES

Bollard pull ahead	70.0 t
Bollard pull astern	65.0 t
Speed	13.0 kn

PROPULSION SYSTEM

Main engines	2x Caterpillar 3512C TA HD/D
Total power	3804 kW (5102 bhp) at 1800 rpm
Azimuth thrusters	Kongsberg Maritime US 205S or equal
Clutches (on-off type)	Kongsberg Maritime 'built in' type or equal
Propeller diameter	2800 mm
Forced ventilation	60.000 m ³ /h
Ø Exhaust emission	IMO Tier III certified

AUXILIARY EQUIPMENT

Generator sets	2x Caterpillar C4.4 TA, 400 V, 100 kVA, 50 Hz
Ø Generator sets	2x Caterpillar C4.4 TA, 440 V, 116 kVA, 60 Hz
Bilge pump	Azcue CA-32/05 up to 10 m ³ /h
General service pumps	2x Azcue CA-50/3A up to 27 m ³ /h
Fuel oil pump	Azcue CA40-1B up to 12 m ³ /h
Fuel oil filters	2x Coalester filters incl. water separator
Fuel oil purifiers	2x CJC PTU3 27/81 MZ-E2PWZ, 1920 l/h each
Fresh water pressure set	Azcue MO-19/10
Ø Sewage treatment plant	Selmar Blue Sea Plus 2500
Cooling system	Box cooling and keel cooling + anti-growth system
Hydraulic system	Double main engine driven pumps
Ø Oil pollution control	Dispersant pumpset with 2 spraybooms
Ø Fifi set	Main engine driven pump 1200 m ³ /h or 2400 m ³ /h
Ø Fifi monitor	1x 1200 m ³ /h or 2x 1200 m ³ /h water/foam

DECK LAY-OUT

Anchor(s)	1x 360 kg Pool + Ø 1x 360 kg Pool (High Holding Power)
Anchor winch	10 m/min
Towing winch	Hydraulically driven double drum, pull up to 35 ton and speed up to 40 m/min on second layer, 175 ton brake
Ø Capstan	Electrically driven, 5 ton at 15 m/min or Ø 18 m/min
Ø Towing hook aft	Mampaey SWL 650 kN / 65 ton
Ø Crane	Heila HLM 10-3S 0.8 ton at 10.36 m or Heila HLM 20-3S 1.7 ton 10.56 m + winch 2000 kg
Fendering	D-fender at sides, cylindrical fender at transom corners, cylindrical and W-block bow fender and Ø tyre fendering

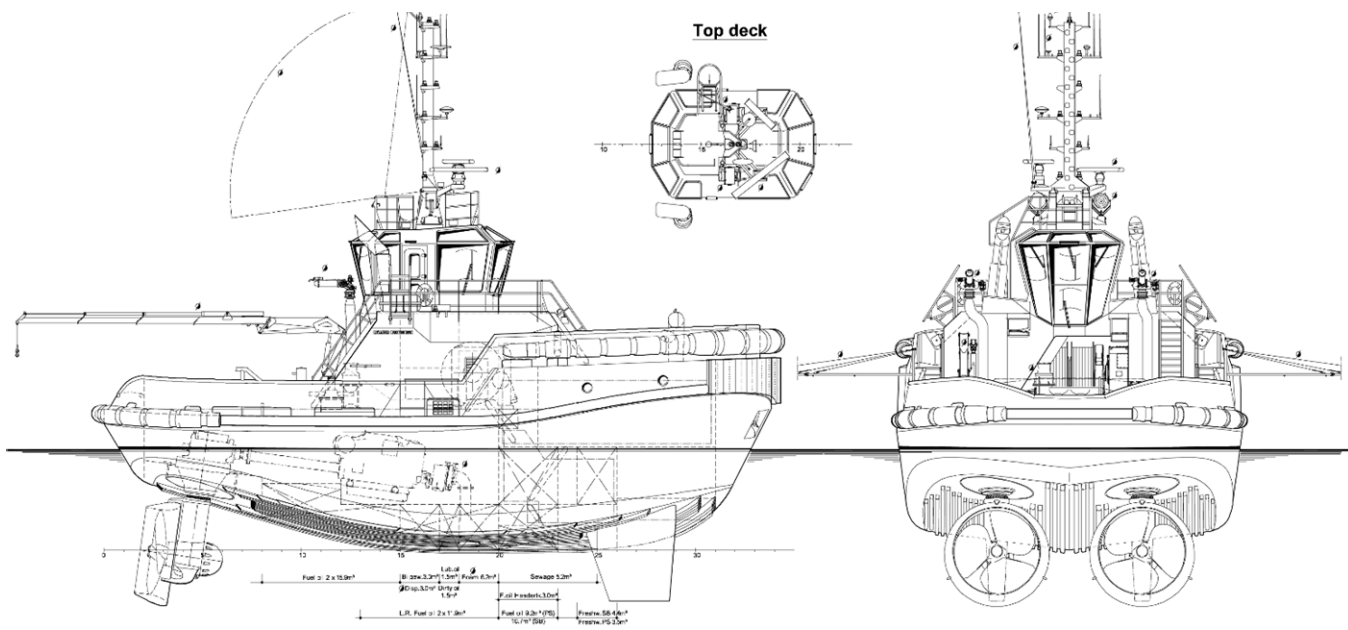
ACCOMMODATION

For 6 persons (MLC 2006 compliant), completely insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse and floating floors. Air-conditioned accommodation with four crew cabins and galley/ mess at accommodation deck. Switchboard room and sanitary facilities at lower deck.

NAUTICAL AND COMMUNICATION EQUIPMENT

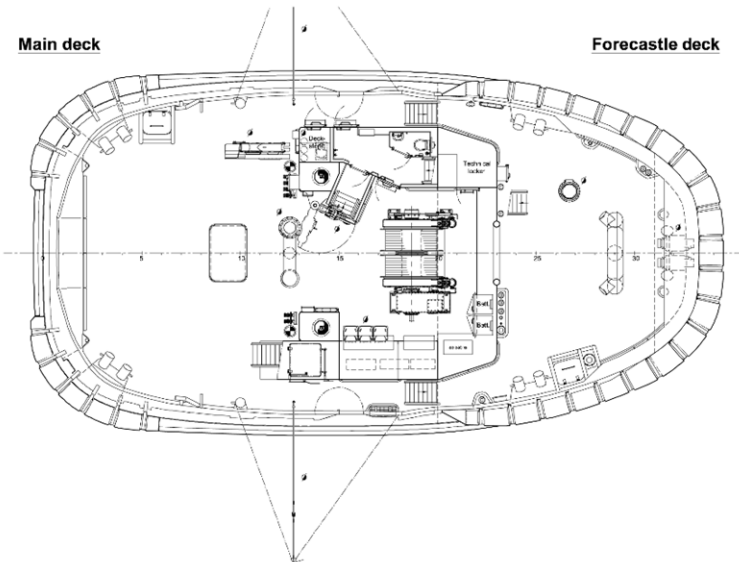
Searchlight(s)	1x Norselight SH470 2000 W + Ø 1x Norselight SH470 2000 W
Radar system(s)	1x Furuno FAR 1518-BB + Ø 1x Furuno FAR 1518-BB
ECS	MaxSea TX Professional
Compass	Cassens & Plath Reflecta 11
Satellite compass/GPS	Simrad GN70/HS80A
Ø Gyro compass	Anschutz Standard 22 Compact
Autopilot	Simrad AP-70
Echosounder	Skipper EMES60
VHF radio telephone	2x Cobham Sailor 6222, one with DSC + Ø 1x Cobham Sailor 6215
VHF hand-held	2x Jotron Tron TR-30
Ø UHF transceiver	Sailor 3965 UHF
Navtex	Furuno NX-700B
Ø SSB	Furuno FS-1575
Ø Inmarsat + Ø spare	Furuno Felcom 18
Ø ECDIS	Furuno FMD-3200
AIS	Furuno FA-170
EPIRB	Jotron Tron-60S
SART	Jotron Tronsart20
Remote monitoring	Ready for Damen Triton
Anemometer	Gill Instruments GMX 500

Ø = Optional equipment

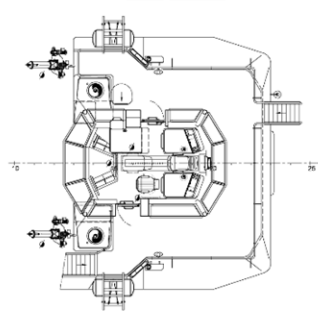


Main deck

Forecastle deck

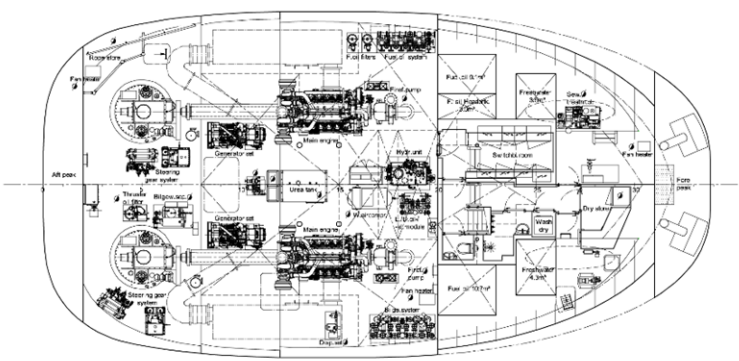


Bridge deck

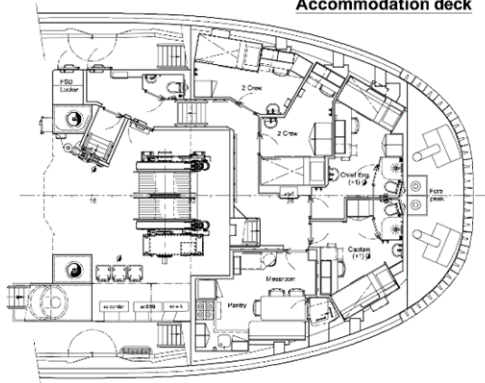


Below Main deck

Lower deck



Accommodation deck



Azimuth Stern Drive Tug 2811

PIONEER



GENERAL

Yard number	513204
Building year	2019
IMO number	9844368
Basic functions	Towing and mooring
Classification	Bureau Veritas
	1 ✕ HULL • MACH Escort Tug (Bollard pull = 65 t) (maximum steering force = 47 t, maximum braking force = 64 t, maximum escort speed = 10 kn)
	Unrestricted Service AUT UMS Inwater
	Survey COMF-NOISE 3, COMF-VIB 3
Flag	The Netherlands
Homeport	Gorinchem

DIMENSIONS

Length overall	28.57 m
Beam overall	11.43 m
Depth at sides	4.60 m
Draught aft	4.65 m
Displacement	550 t
Gross tonnage	299 t

TANK CAPACITIES

Fuel oil	67.8 m ³
Fresh water	14.0 m ³
Lubrication oil	2.3 m ³
Dirty oil	2.3 m ³
Sewage	7.4 m ³
Bilge water	4.9 m ³
Urea	3.0 m ³
Fuel oil	67.8 m ³
Fresh water	14.0 m ³
Lubrication oil	2.3 m ³

PERFORMANCES

Approx. Bollard pull ahead	60.3 t
Approx. Bollard pull astern	60.5 t
Approx. Speed ahead	13.7 kn
Approx. Speed astern	13.8 kn

PROPULSION SYSTEM

Main engines	2x Caterpillar 3512C TA HD / D
Total power	3806 bkW (5104 bhp) at 1800 rpm
Azimuth thrusters	2x Rolls Royce US 205
Propeller diameter	2500 mm
Forced ventilation	56.000 m ³ /h
Exhaust emission	IMO Tier III certified by Class

AUXILIARY EQUIPMENT

Generator sets	2x Caterpillar C4.4 TA, 230/400 V, 107 kVA, 50 Hz
General service pumps	2x Azcue CA-50/3A 20.0 m ³ /h
Bilge pump	Megator L125 V-DBP
Fuel transfer pump	Azcue BR-41-10 12.0 m ³ /h
Fuel oil purifiers	2x CJC PTU3 27/81 MZ-E2PWZ
Cooling system	Box cooling + anti-growth system
Hydraulic system	Two main engine driven pumps

DECK LAY-OUT

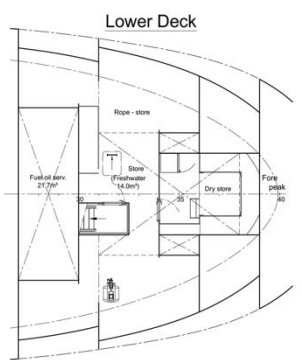
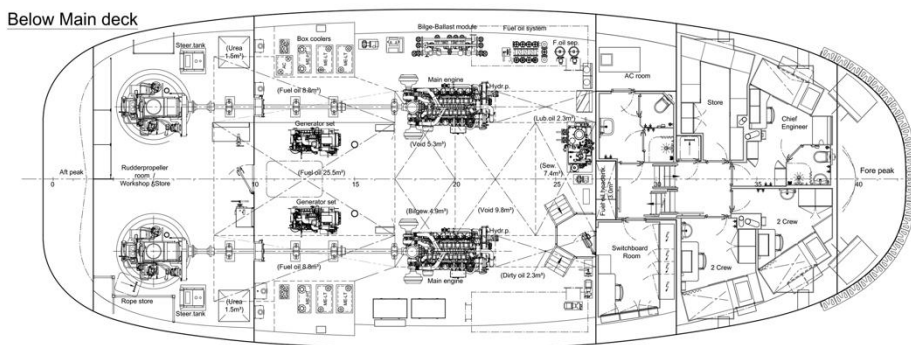
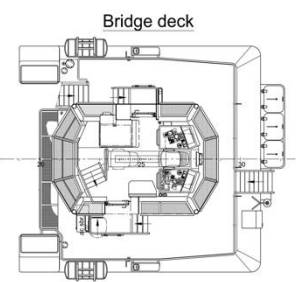
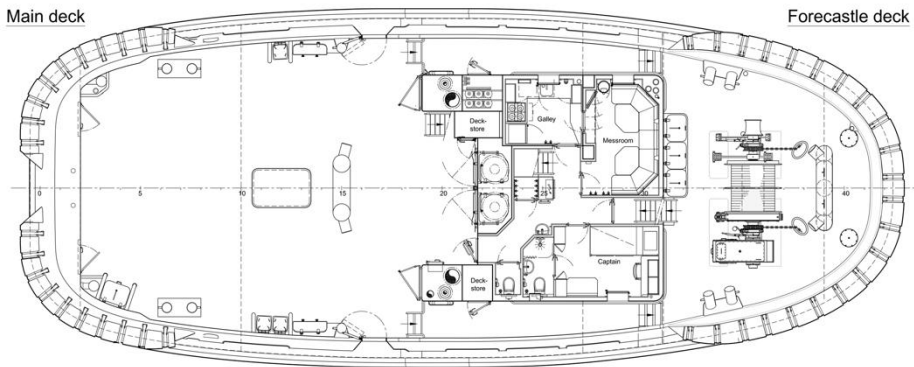
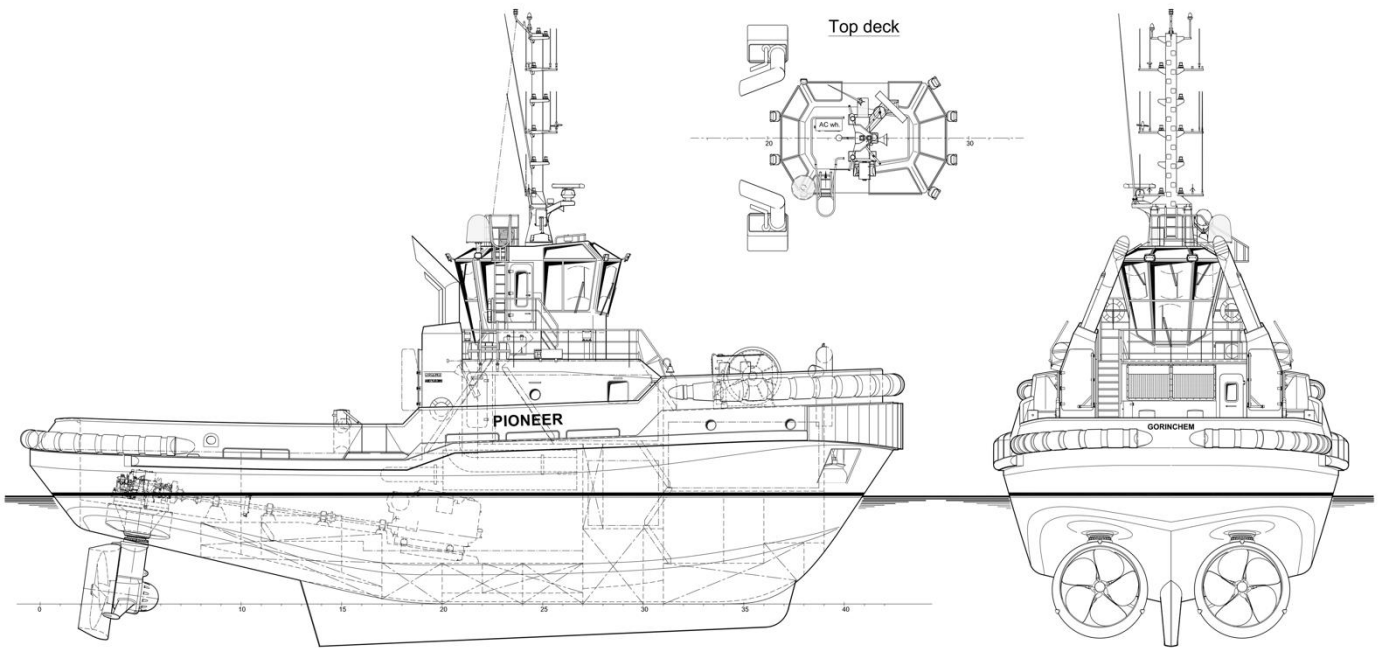
Anchors	2x 360 kg Pool (High Holding Power)
Anchor/towing winch	Hydraulically driven two speed winch with split drum and warping head, pull 31.5 ton at 9.5 m/min, slack rope speed up to 41 m/min, 150 ton brake
Towing hook aft	65 ton
Fendering	D-fender at sides, cylindrical fender at transom corners, cylindrical and W-block bow fender with water spray

ACCOMMODATION

For max. 6 persons (MLC 2006 compliant), insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse, floating floors and air-conditioned. Captain's cabin, chief engineer's cabin, two double crew cabins, galley, mess/dayroom, dry store and sanitary facilities.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight	Norselight 2000 W
Radar system	Furuno FAR 1518-BB
ECDIS	Furuno FMD-3200
Compass	Cassens & Plath Reflecta 11
Autopilot	Simrad AP-70
Satellite compass / GPS	Simrad GN70/HS80A
Echosounder	Furuno FE-800
VHF radio telephone	2x Sailor 6222 (one with DSC)
VHF hand-held	2x Jotron Tron TR-20
UHF	Motorola DM4400
Navtex	Furuno NX-700B
AIS	Furuno FA-170
SSB	Furuno FS-1575
EPIRB	Jotron Tron-60S
Sart	Jotron Tron Sart20
VSAT system	Intellian V60G
Anemometer	Gill Instruments GMX500



Azimuth Stern Drive Tug 2810

PHOENIX



GENERAL

Yard number	513504
Delivery date	January 2018
Basic functions	Towing and mooring operations
Classification	Bureau Veritas I ✱ HULL • MACH Tug Unrestricted Navigation AUT UMS IWS
Flag	The Netherlands
Owner	Damen Marine Services

DIMENSIONS

Length overall	28.67 m
Beam overall	10.43 m
Depth at sides	4.60 m
Draught aft	4.62 m
Displacement	515 t

TANK CAPACITIES

Fuel oil	72.3 m ³
Fresh water	16.6 m ³
Lubrication oil	9.0 m ³
Dirty oil	3.2 m ³
Hydraulic oil	0.36 m ³
Sewage	2.2 m ³
Sludge	3.1 m ³
Bilge water	5.1 m ³

PERFORMANCES

Bollard pull ahead approx.	61.4 t
Bollard pull astern approx.	57.4 t
Speed ahead approx.	13.8 kn
Speed astern approx.	13.9 kn

PROPULSION SYSTEM

Main engines	2x Caterpillar 3516C TA HD/C
Total power	3730 bkW (5000 bhp) at 1600 rpm
Azimuth thrusters	2x Rolls Royce US 205
Propeller diameter	2400 mm
Forced ventilation	55.000 m ³ /h

AUXILIARY EQUIPMENT

Generator sets	2x Caterpillar C4.4 TA, 230/400 V, 107 kVA, 50 Hz
General service pumps	2x Sterling AKHA 5101 each 20 m ³ /h
Fuel pumps	Sterling AKHA 4101 and AOHA 3101
Fuel oil purifier	Westfalia OTC 2-02-137
Cooling system	Box cooling + anti-growth system
Fresh water pressure set	Sterling HBK 111 / AOHA 1202
Hydraulic system	Two main engine driven pumps

DECK LAY-OUT

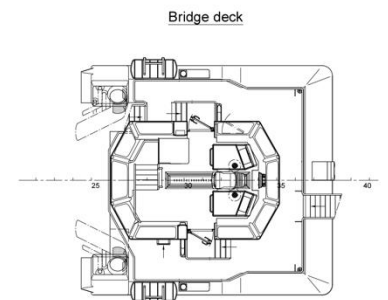
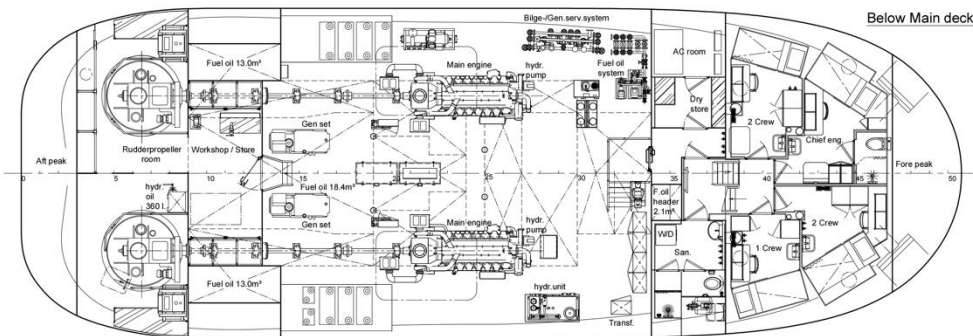
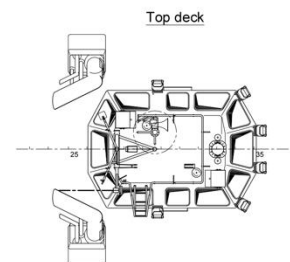
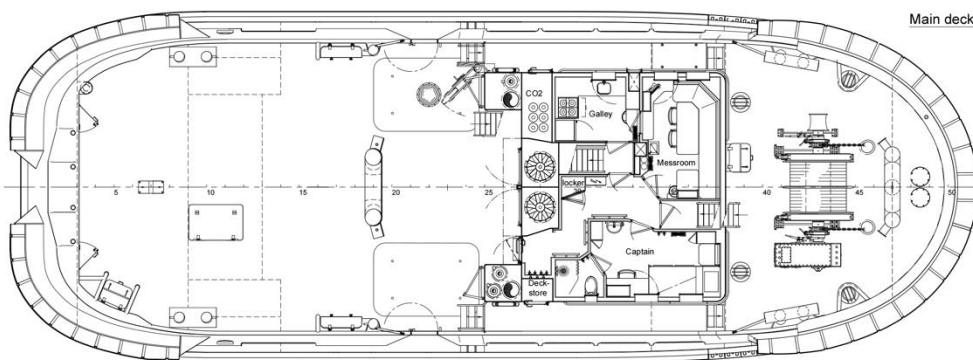
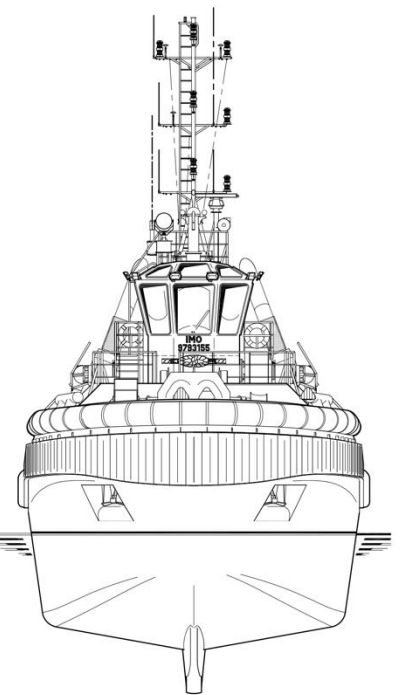
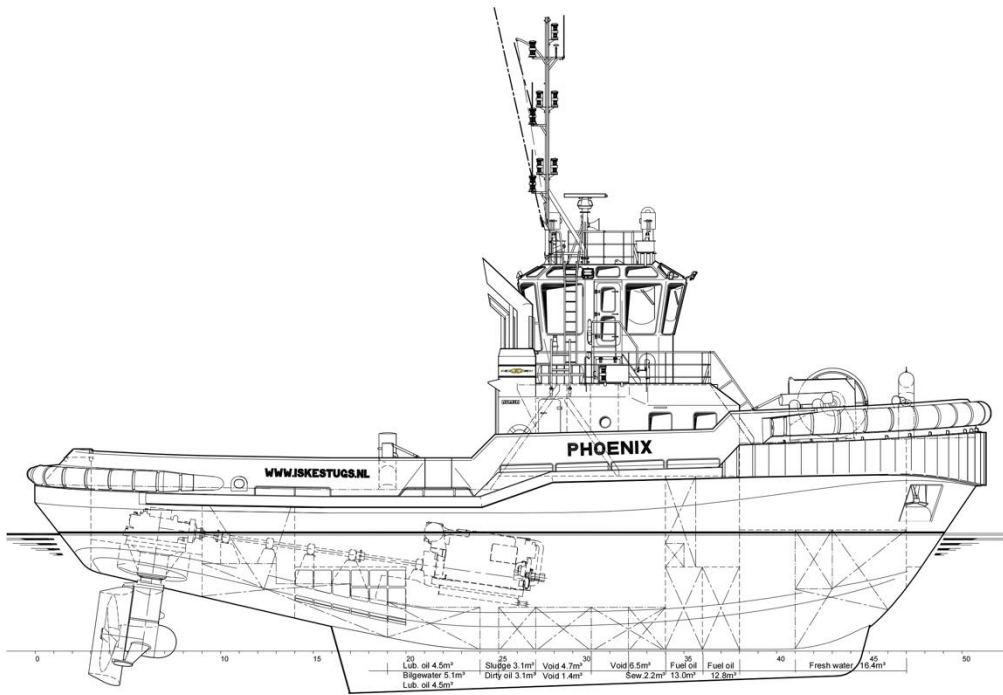
Anchor	2x 360 kg Pool (High Holding Power)
Forward towing winch	Hydraulically driven two speed winch with split drum and warping head, pull 35 ton at 9.2 m/min, slack rope speed up to 28 m/min, 150 ton brake
Capstan	Electrically driven, 5 ton at 15 m/min
Towing hook aft	SWL 65 ton
Fendering	D-fender at sides, cylinder fender at transom corners, cylinder and W-block bow fender with water spray

ACCOMMODATION

For 7 persons, insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse, floating floors and air-conditioned. Captain's cabin, chief engineer's cabin, one single and two double crew cabins, galley, mess/dayroom, dry store and sanitary facilities.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlights	2x Pesch 1000 W
Radar system	Furuno FAR 2117 with 19 inch screen + chart plotter
Compass	Cassens & Plath, type Kotter
Autopilot	Simrad AP-70
GPS	Furuno GP-170
Echosounder	Furuno FE-800
VHF radio telephone	2x Sailor Compact 6222 (one with DSC)
VHF hand-held	2x Jotron Tron TR-20
UHF radio telephone	1x Motorola GM360 + 2x Motorola DP4401 EX
Navtex	Furuno NX-700A
AIS	Furuno FA-150
SSB	Furuno FS-1575
EPIRB	Jotron Tron-60S
Sart	Jotron Tronsart20



Reversed Stern Drive Tug 2513

INNOVATION



GENERAL

Yard number	515001
Building year	2018
basic functions	Towing and Mooring
Classifications	Bureau Veritas
Flag	The Netherlands

DIMENSIONS

Length o.a.	24.73 m
Beam o.a.	13.13 m
Bepth	4.95 m
Draught aft	5.50 m
Tonnage	327 GT 98 NT
Length o.a.	

TANK CAPACITIES

Fuel oil	77.3 m ³
Fresh water	10.2 m ³
Bilge water	6.0 m ³
Sewage	6.0 m ³
Dirty oil	2.5 m ³
Lubrication oil	2.5 m ³

PERFORMANCES (Trials)

Bollard pull ahead	73.3 t
Bollard pull astern	71.2 t
Speed ahead	13.0 kn
Speed astern	12.8 kn

PROPULSION SYSTEM

Main engines	2 x MTU 16V 4000 M63L
Total power	4480 bkW (6008 bhp) at 1800 rpm
Thrusters	Rolls Royce US255
Propellor diameter	2700 mm
Forced ventilation	60.000 m ³ /h

AUXILIARY EQUIPMENT

Generator set	2x caterpillar c4.4 ta 81 kva 400/230 v, 50 hz
General service pumps	2x azcuc ca 50/3a 20m3 / h at 2.35 bar
Bilge pump	Azcuc CA 32/0.5 3.6 m3 /h at 1.1 bar
Fuel pump	Azcuc br-41-10 12 m3 /h at 1 bar
Fuel oil purifier	2x cjc, ptu3 3x fa/bla 27/27, 1920l/h each
Cooling system	Closed box cooling system
Fresh water pressure set	Sterling aoha hbk 111
Hydraulic system	Main engine driven pumps

DECK LAY-OUT

Anchor	1x 360 kg pool (high holding power)
Anchor winch	Electric 10 m/min
Towing winch	Hydraulically driven split drum 31 ton pull up to 11 m/min, reduced pull up to 38 m/min, 175 ton brake
	Cylinder + block bow fender d-fender side/aft

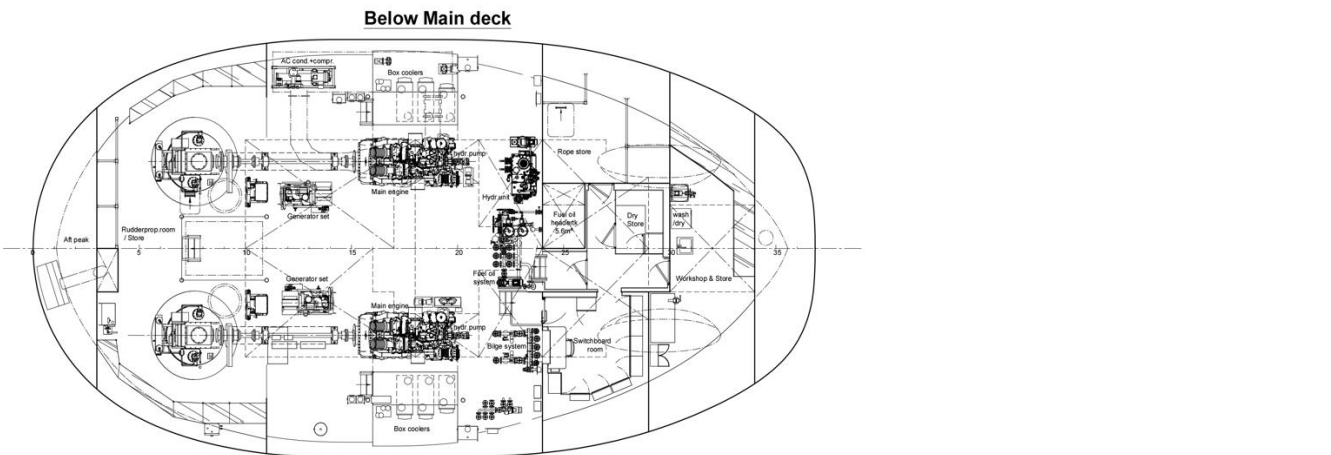
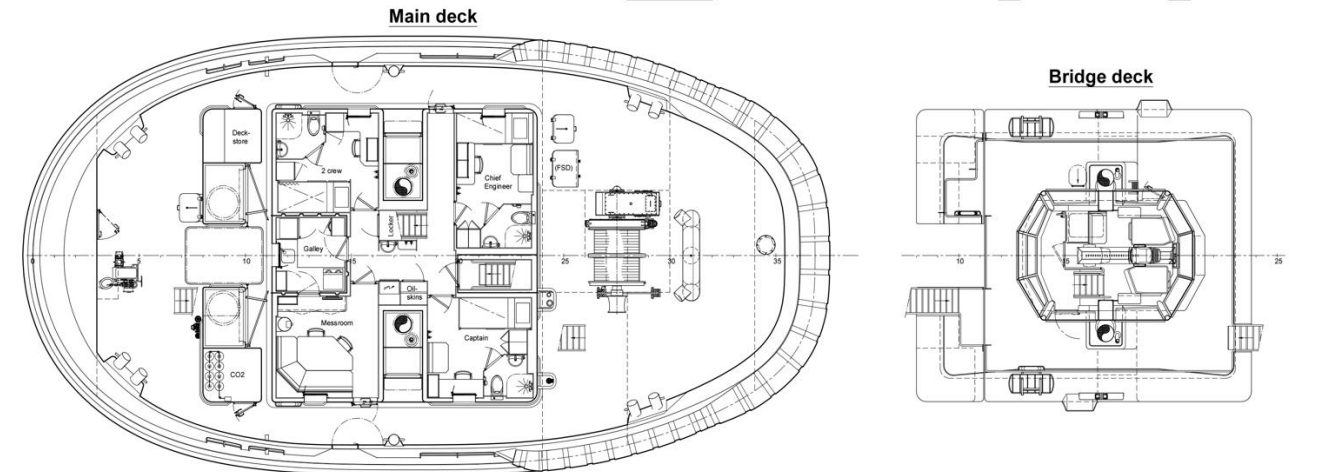
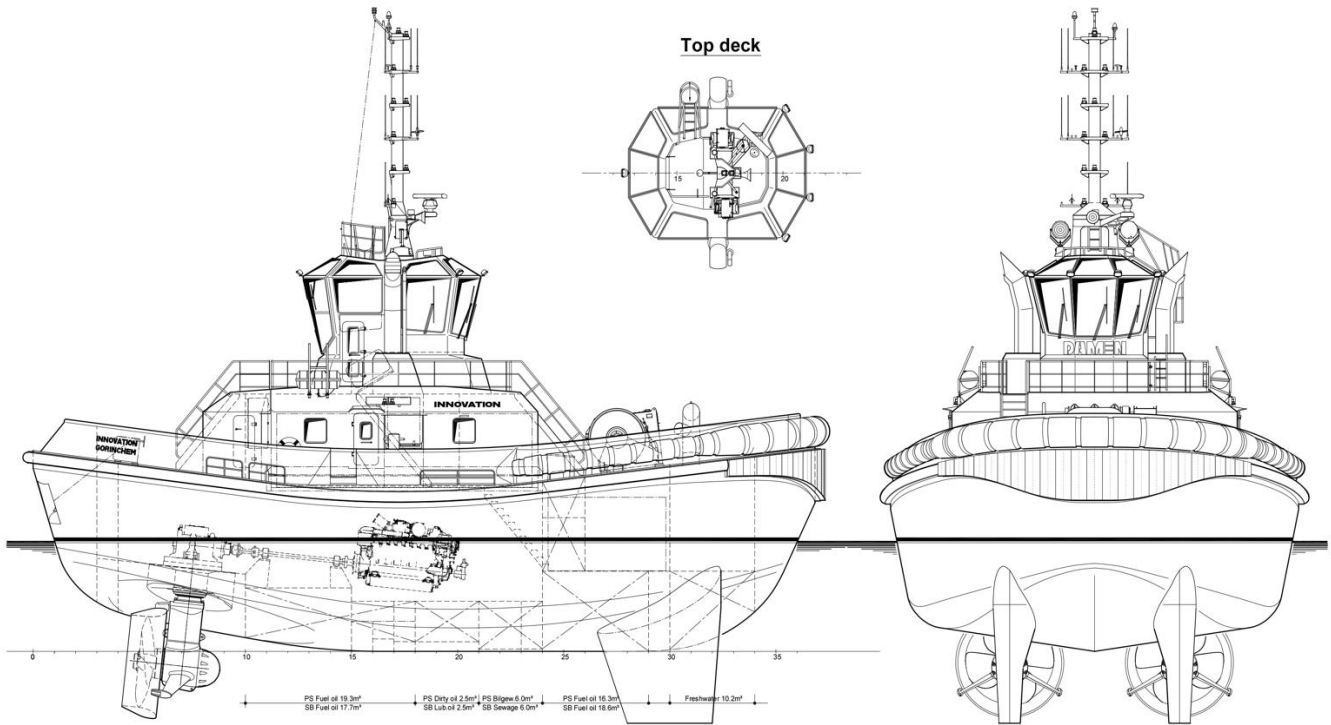
Eendering

ACCOMMODATION

For 4 persons, completely insulated and finished with durable modern linings, sound absorbing ceiling in the wheelhouse and floating floors. Air-co wheelhouse, accommodation and switchboard room. Accommodation above main deck with a captain's cabin, chief engineer's cabin, one double crew cabin, pantry, mess/dayroom and sanitary facilities. The superstructure is mounted resiliently to reduce noise levels.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight	1x Norselight, 2000 W
Radar system	1x furuno far-1518-bb
Compass	Cassens & plath reflecta 11
Autopilot	Simrad ap-70
Satellite compass / GPS	Simrad GN70/HS80A
Echosounder	Furuno FE-800
Speed log	Furuno ds-80
Vhf	2x sailor 6222
VHF hand-held	Jotron TR-20
Navtex	Furuno nx-700
Ais	Furuno fa-170
Epirb	Jotron tron-60s
Sart	Jotron tronsart20
Anemometer	Gill instruments GMX 500
Vsat	Intellian v60g
Searchlight	1x Norselight, 2000 W
Radar system	1x furuno far-1518-bb
Compass	Cassens & plath reflecta 11
Autopilot	Simrad ap-70



Stan Pilot 1505

KINGSTON 1



GENERAL

Yardnumber	541810
Hull material	Aluminium
Superstructure	Aluminium
Basic functions	Transportation of personnel, Pilot duties
Classification	Bureau Veritas I * Hull • MACH Light ship / Pilot boatSea Area 2
Owner	Port Authority of Jamaica
Delivery date	December 2017

DIMENSIONS

Length overall	15.4 m
Beam overall	5.0 m
Depth at side	2.2 m
Draught max	1.3 m
Crew	2 t
Pilots	4 t

TANK CAPACITIES

Fuel oil	2.6 m ³
Fresh water	0.1 m ³
Sewage	0.1 m ³

PERFORMANCES (Trials)

Speed	25.7 t
Range at max speed	200-250 nm

PROPULSION SYSTEM

Main engines	2x Volvo D16-MH
Total Power	956 bkW
Gearboxes	2x ZF 665
Propulsion	2x fixed pitch propellers

DECK LAY-OUT

Anchor equipment	1x Fortress
Fendering	Two layers Rubber "D" type

SHIP SYSTEMS

General service pump	1x electrically driven
Engine room ventilation	6.750 m ³ /hr
Fire extinguishing	Hand operated fire extinguishers. Fixed fire-fighting system in engine room (Novec 1230)

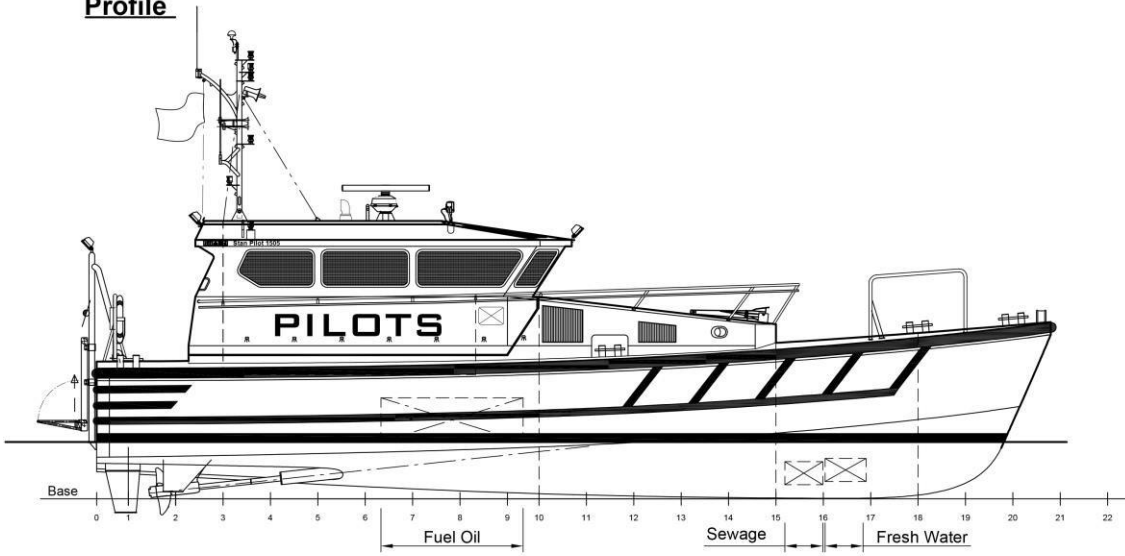
ACCOMMODATION

Main deck	Seats for pilots and lockers
Air conditioning	Up to 27.500 BTU/hr

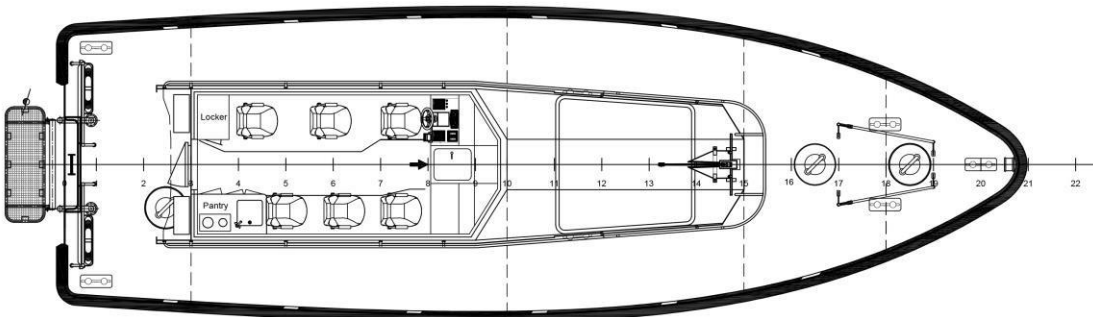
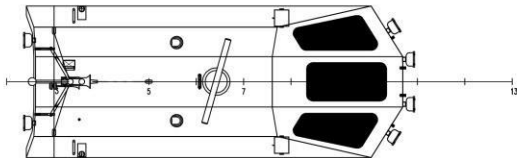
NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight	2x
Radar	1x
GPS	1x
AIS	1x
Compass	1x Magnetic
Echo sounder	1x
Internal communication	Loudhailer
VHF	2x
VHF hand held	2x
EPIRB	1x
SART	1x
Wind measuring system	1x

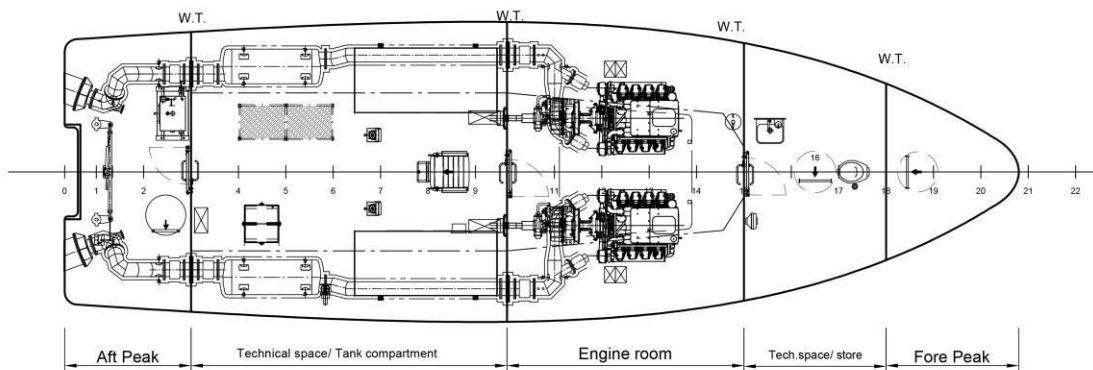
Profile



Topdeck



Maindeck



Below maindeck

Fast Crew Supplier 2610

TWINAXE



PICTURE OF SIMILAR VESSEL

GENERAL

Yard number	532516
Owner	Damen Charter International 2 B.V.
Date of delivery	June 2013
Hull material	Aluminium
Superstructure	Aluminium
Basic functions	Crew / cargo transport/ support
Classification	Bureau Veritas
Flag	1 ⚓ Hull ● MACH, Light Ship / Fast Utility Vessel, Sea Area 3 UK flag

DIMENSIONS

Length o.a.	25.75 m
Beam o.a.	10.40 m
Depth at sides	2.90 m
Draught	2.20 m

CAPACITIES

Fuel oil (total capacity)	26.00 m ³
Fresh water	1.80 m ³
Waste water	0.50 m ³
Cargo deck area	90.00 m ²
Max deck load	1.50 ton/m ²
Deck cargo	15.0 ton
Crew	4 persons
Industrial personnel	24 persons

PERFORMANCES (Trial)

Speed max.	25.0 kn
Max. Range	700 nm

PROPULSION SYSTEM

Main engines	2x Caterpillar C32 TTA B
Total power	Up to 1790 kW (2400 bhp)
Gearboxes	Reintjes ZWVS 440/1 (two speed)
Propellers	Fixed-pitch propellers
Bow thrusters	2x 52 kW

ELECTRICAL EQUIPMENT

Network	24v d.c., 230/400v – 50 hz
Generator sets	2x caterpillar c2.2 t

DECK LAY-OUT

Anchor equipment	1x 150 kg hhp with chain and line
Fendering	Rubber "d" type and heavy duty foam filled bow fender
Deck crane	Heila 20-2s
Anchor equipment	1x 150 kg hhp with chain and line

LIFE SAVING EQUIPMENT

Life buoys	2
Life jackets/suits	28
Life rafts	2x for a minimum of 28 persons
Fire extinguisher	Hand operated fire extinguishers fixed fi-fi system in engine rooms (aerosol)

AUXILIARY EQUIPMENT

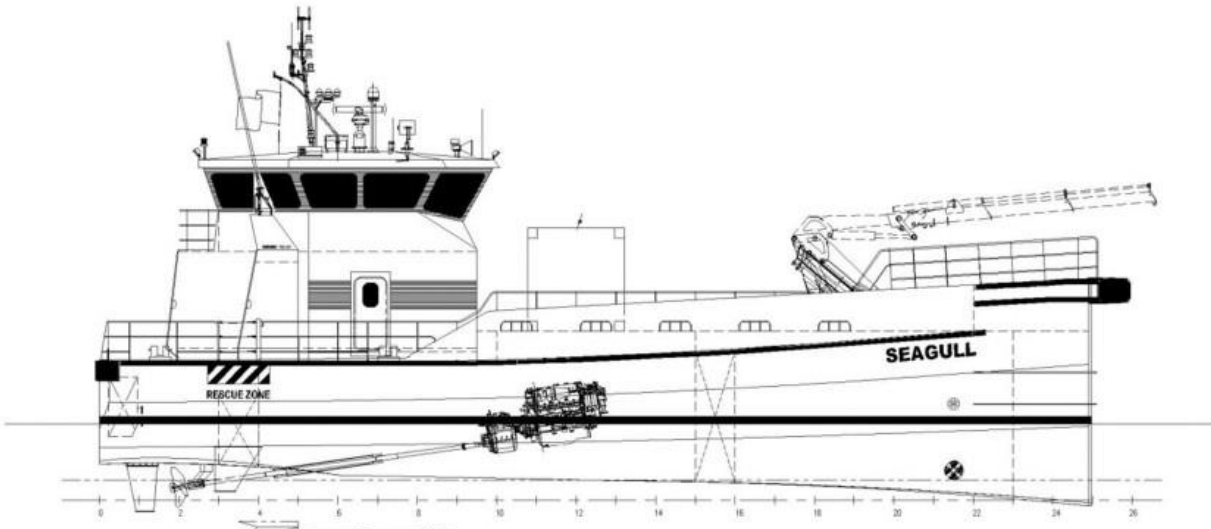
Engine room ventilation	12.000 m ³ /hr in each engine room
General service pumps	Electrically driven, 400v, azcve ca50

ACCOMMODATION

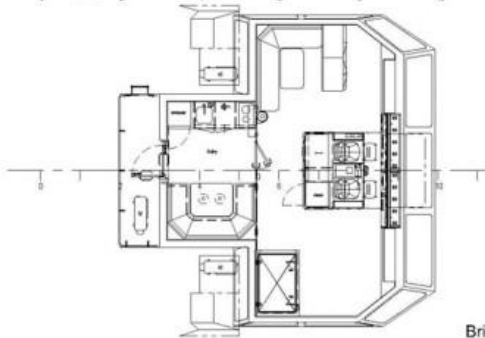
Wheelhouse	24 motion damping seats, settee & technical office.
Main deck & below main deck	Mess room/ day room, pantry, 2x2p cabins, laundry facility and store.
Heating and cooling	70.000 btu/hr

NAUTICAL AND COMMUNICATION EQUIPMENT

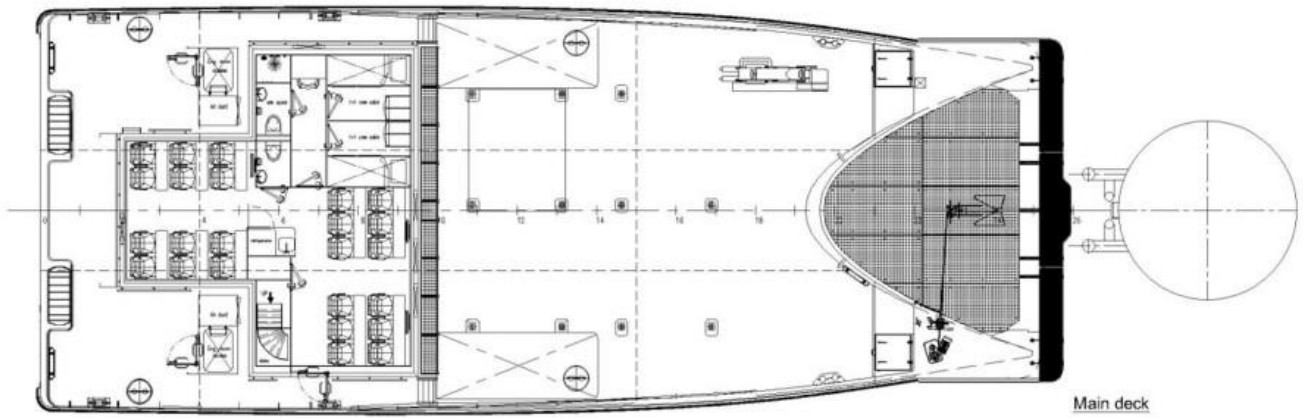
SEARCHLIGHT	1x Pesch 1000W 230V, electrical operated
COMPASS	Cassens & Plath, Reflecta
ECHO SOUNDER	JRC, JFE-380
VHF'S + VHF'S HANDHELD	1x Sailor RT6022, 1x Sailor RT6210, 2x SP3520
RADAR	1x JRC, JMA 5212-4 MK2
AIS	JRC, JRL-20
AUTOPILOT	Alphatron Seapilot MFC
MF/ HF	Sailor, 6000 series
CCTV	6 camera deck system incl. hard disk recorder
SAR FINDER	Sea Marshall, SARfinder 1003
ENTERTAINMENT SYSTEM	LCD TV's, DVD player + Internet/ WIFI
FLEET BROADBAND	Sailor, 500 Fleet Broadband integrated navigation system with conning screens



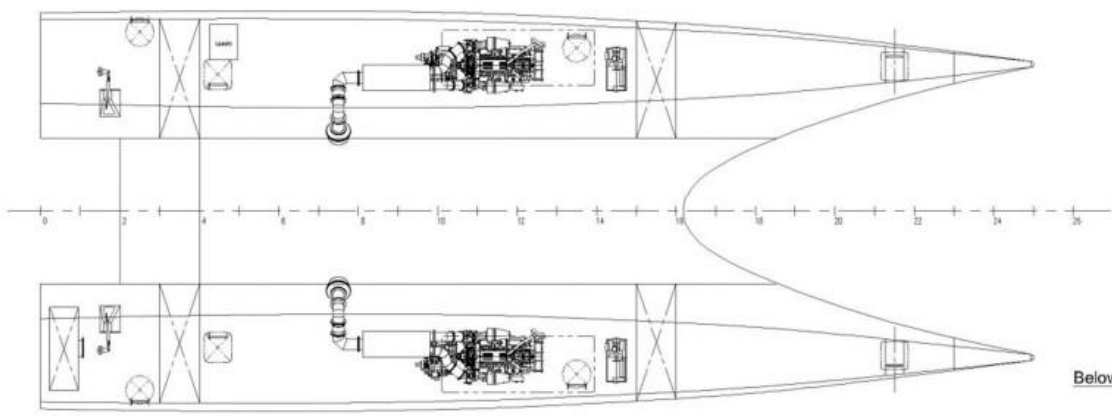
Profile



Bridge deck



Main deck



Below maindeck

Fast Crew Supplier 3307 - Patrol

OSAMEDE



GENERAL

Yard number	544841
Delivery date	March 2016
Owner	Damen Marine Services
Flag	St Vincent
Hull material	Aluminium
Superstructure	Aluminium
Basic functions	Fast supplier, crew boat, securing economical waters
Classification	Bureau Veritas I X Hull I MACH Special Service / Fast Patrol boat Sea Area 3

DIMENSIONS

Length overall	33.32 m
Beam overall	7.35 m
Depth at sites	3.30 m
Draught aft	2.50 m

CAPACITIES

Fuel oil	51.90 m ³
Fresh water	17.50 m ³
Waste water	2.40 m ³
Fresh water ballast	2.60 m ³
Cargo deck area	75.00 m ²
Max. deck load	2.50 ton/m ²
Crew	6 persons
(industrial) personel	12 persons

PERFORMANCES (Trials)

Approx. speed	30.7 knots
Range	1200 nm. At max. speed

PROPULSION SYSTEM

Main engines	3x Caterpillar x C32 TTA – D
Total power	3579 bkW
Gearboxes	3x Reintjes WVS 730/1
Propulsion	3x Fixed pitch propellers
Bowthrusters	1x 75 kW, Hydraulic

ELECTRICAL EQUIPMENT

Network	24v d.c. 240v/415v, 60 hz a.c.
Generator set(s)	2x caterpillar c4.4 t, 73.0 kva

DECK LAY-OUT

Anchor equipment	1x shhp pool tw
Fendering	Aluminum fender on deck level, heavy duty rubber fender and tyre fender
Daughter crafts	1x 6.5m rib, > 35 knots
Davit	1x a-frame davit

LIFE SAVING EQUIPMENT

Life buoys	4
Life jackets	18
Life rafts	2x 18 persons
Fire extinguishing	Fixed gas flooding system engine room Portable extinguishers according to class

AUXILIARY EQUIPMENT

Engine room ventilation	60.000 m3/hr
General service pumps	2x electrically driven
Watermaker	Aqua-matic 700-1 reverse osmosis

ACCOMODATION

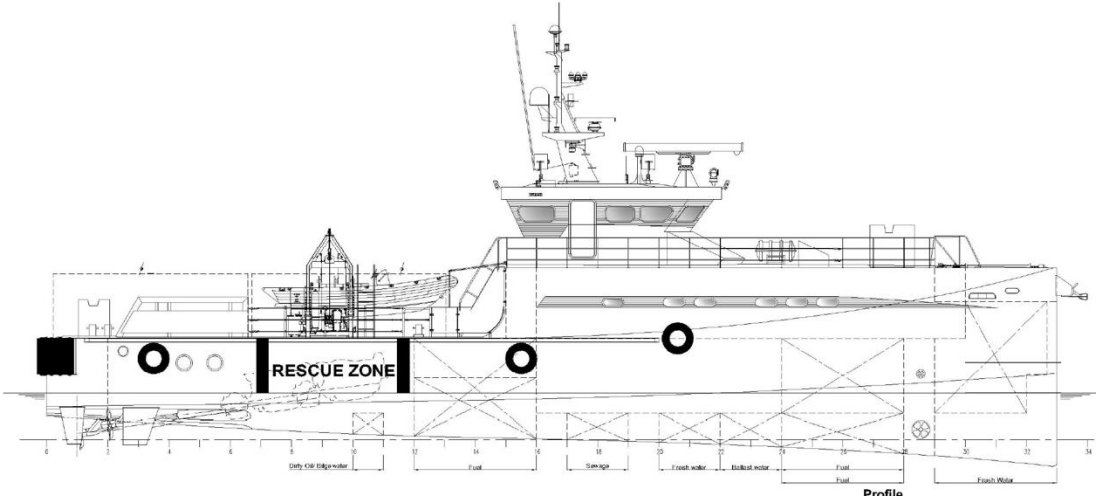
Below main deck	Pantry, mess, cabins, sanitary space
Main deck	Cabins, sanitary spaces, mess, store
Air-conditioning	144.000 btu

NAUTICAL AND COMMUNICATION EQUIPMENT

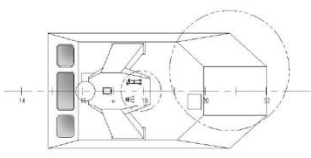
Searchlight	1x
Compass	1x Magnetic
Radar	1x jrc (x-band), 1x jrc (s-band)
Echo sounder	1x
Gps/ dgps	1x
Ais	2x
Internal communication	Intercom, loudhailer and cctv system
External communication	Gmdss a2
Vhf	2x
Vhf handheld	2x
Mf/hf	1x
Navtex	1x
Sart	1x
Epirb	1x
Inmarsat-f	1x fbb250
Night vision camera	Flir camera, voyager ii
Satellite telephone	1x iridium
Searchlight	1x
Compass	1x magnetic
Radar	1x jrc (x-band), 1x jrc (s-band)

VARIOUS

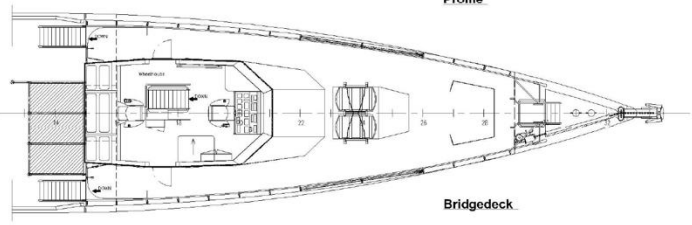
The vessel is ballistic and armoured protected and has ffi capabilities



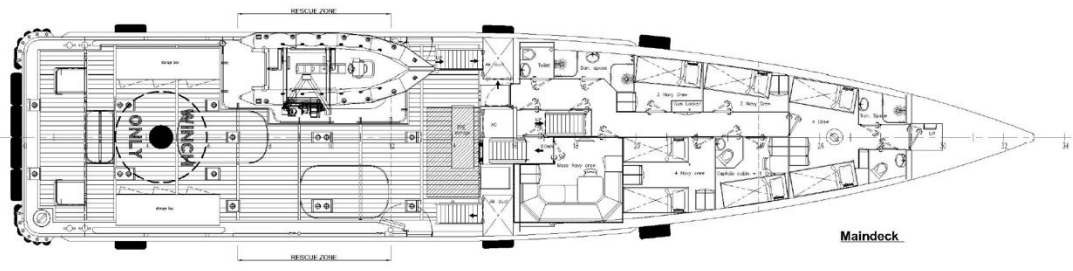
Profile



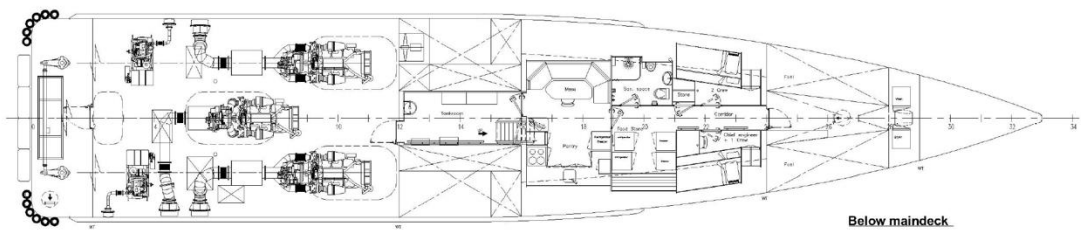
Top of wheelhouse



Bridgedeck



Maindeck



Below maindeck

Cutter Suction Dredger 450

KINGFISHER



PICTURE OF SIMILAR VESSEL

GENERAL

Type	CSD 450
Basic functions	Capital mining and maintenance dredging

DREDGING FEATURES

Max. dredging depth	-12 m
Swing width	34.0 m (at max. dredging depth)
Max. mixture capacity	3000 m ³ /h

DREDGE INSTALLATION

Dredge pump type	BP45-1100
Diameter suction/discharge pipe	450 mm
Spherical passage pump	210 mm
Cutter type	Crown model (with changeable chisels)
Cutter power	110 kW
Cutter diameter	1,500 mm

ENGINE INSTALLATION

Dredge pump diesel	Caterpillar C-32 TA
Continuous power rating	709 kW @ 1,600 rpm
Auxiliary diesel	Caterpillar C-09 TA
Prime power rating	232 kW @ 1,800 rpm
Hydraulic installation	Driving cutter, winches and cylinders
Electrical installation	24 V DC and 230/400 V AC, 35.4 kVA

PRINCIPAL DIMENSIONS

Length o.a. incl. ladder	33.15 m
Length over pontoons	22.60 m
Beam	6.95 m
Depth	1.80 m
Draught	1.05 m
Air draught	6.10 m
Total weight	115 ton

TANK CAPACITIES

Fuel oil approx.	18.10 m ³
Ballast water	6.25 m ³
Hydraulic oil	1.50 m ³

DECK MACHINERY

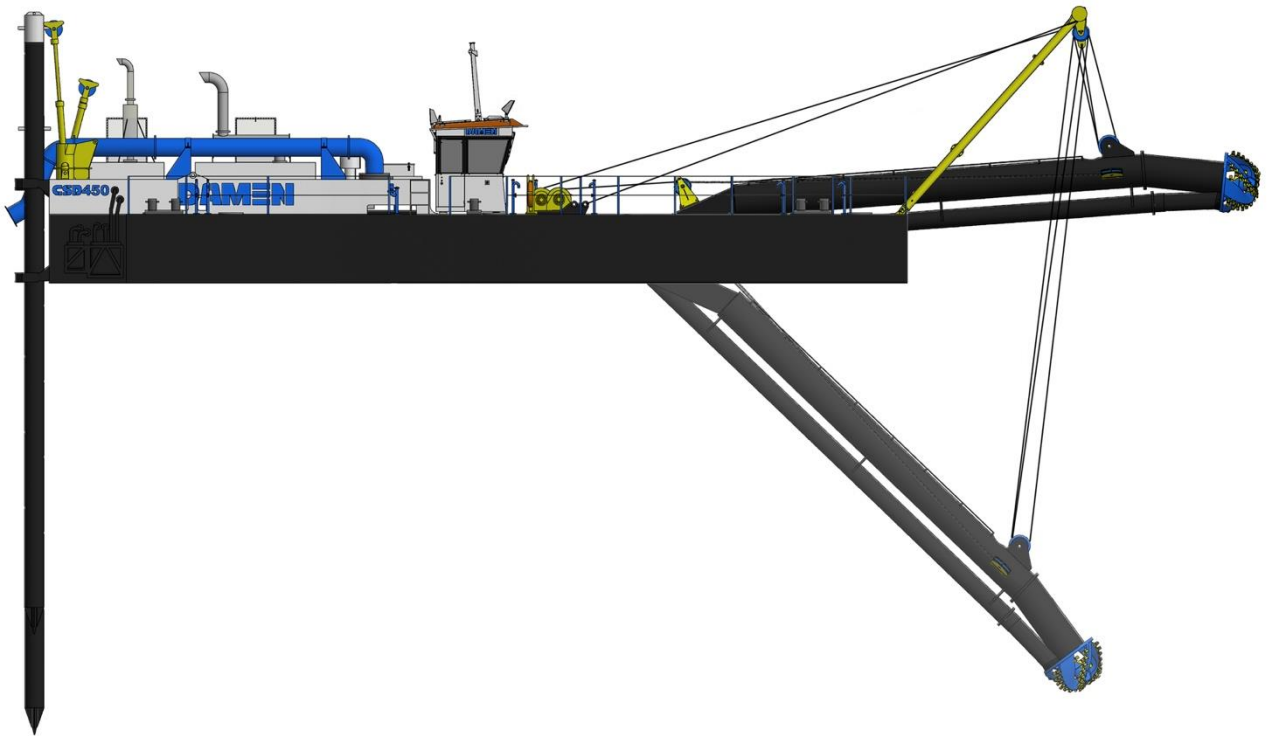
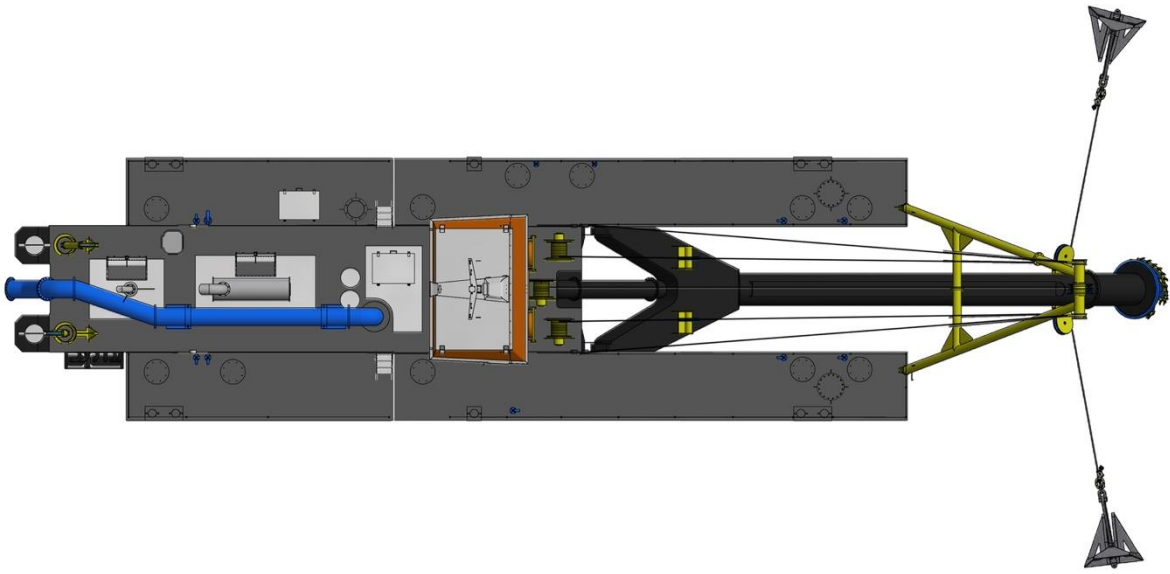
Ladder hoisting	Hydraulic winch 80 kN, 0-15 m/min
Side wire winches (2x)	Hydraulic, 80 kN, 0-15 m/min
Spuds (2x)	Ø 508 mm, length 16 m
Spud hosting (2x)	Hydraulic cylinder, stroke 1.5 m

INSTRUMENTATION

Dredging depth indicator	
Vacuum and pressure indication of dredge pump	

REMARKABLE FEATURES

- Dismountable design which allows transport by road
- Heavy duty robust design
- Simultaneous operation of all functions possible
- Spacious ergonomic designed control cabin and engine room
- One operator can control the entire dredger from the control cabin
- Operators cabin with air conditioning and heating
- Scantlings well in excess of class regulations
- Large range of standard options are available to customize the CSD



Dredging Plough



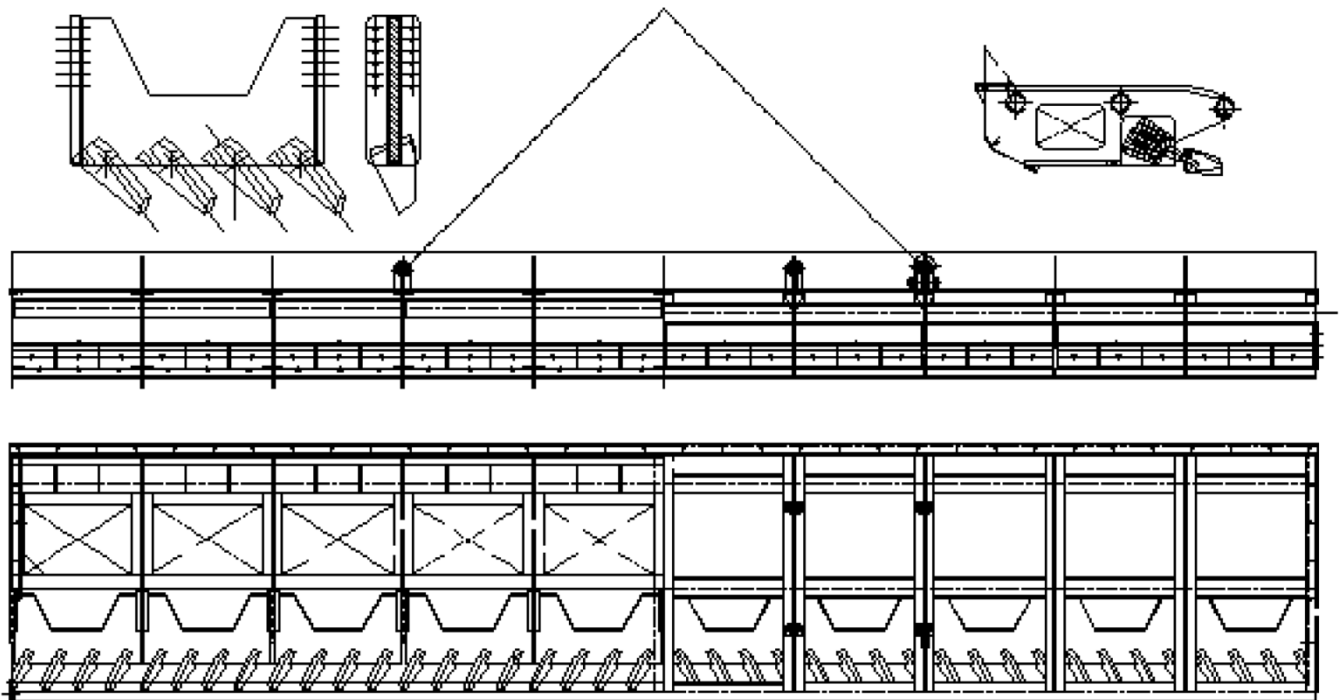
GENERAL

Type of product
Weight

Damen Dredging Plough
8,5 T

DIMENSIONS

Length overall	10,35 m
Beam overall	2,00 m
Depth at sites	1,00 m







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