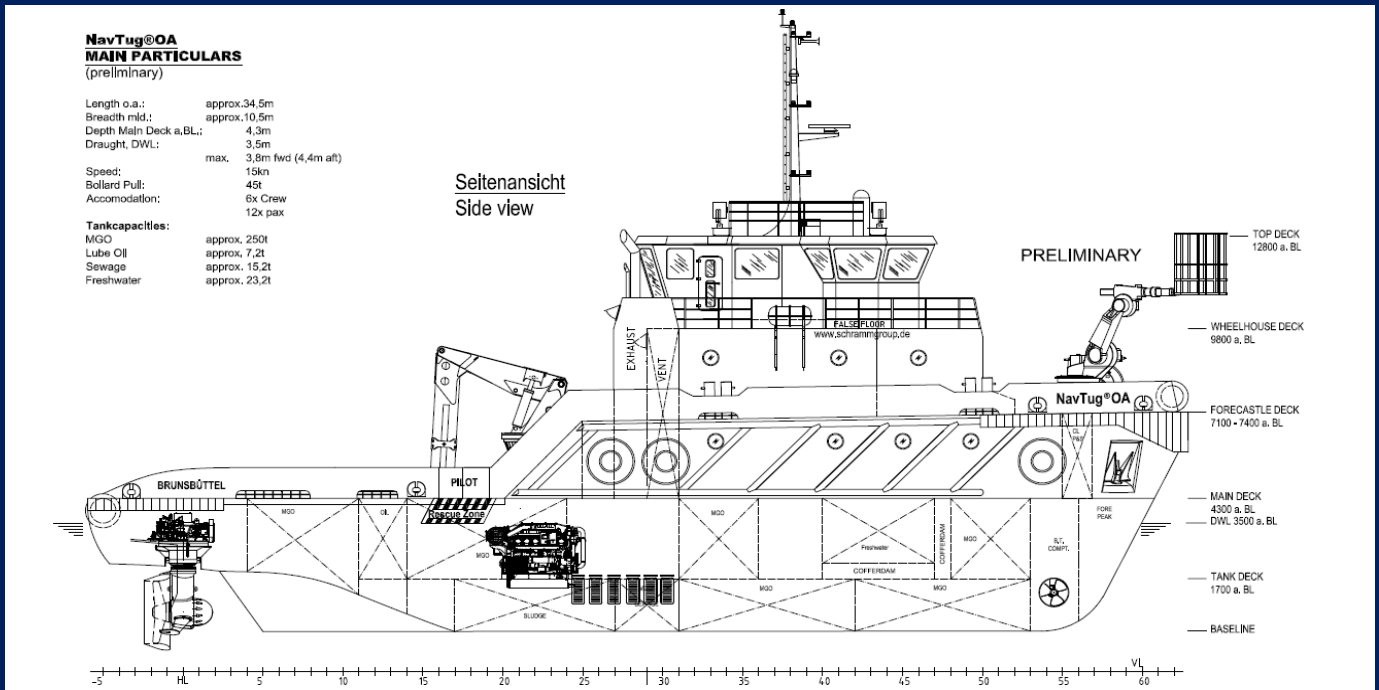


The NavTug®OA is a multipurpose powerful handy sized anchor handling tug with enlarged accommodation space for 12 passengers. It's main scope of service is the assistance in any offshore and nearshore construction sites as well as cable-laying assistance and survey works.



BASIC DATA

MAIN PARTICULARS

BOLLARD PULL:	Approx. 45 t
SPEED:	Approx. 15 kn
ENDURANCE:	30 days
TONNAGE:	< 500 GT
CLASSIFICATION:	GL X100 A5 E Tug IW X MC E AUT
FLAG:	Germany
FREE DECK AREA:	approx. 11 x 8 m
DECK LOAD:	7 t / m ²
MAIN DIMENSIONS	
LENGTH, o.a.:	approx. 34,5 m
LENGTH WL:	approx. 32,5 m
BEAM, moulded	10,5 m
BEAM, o.a.:	approx. 10,8 m
T BL, DWL:	3,50 m
T BL, max. LoadLine:	3,80 m fwd (4,40 m aft)
DEPTH Main Deck aft:	4,30 m
DEPTH Main Deck fore:	5,80 m
HEIGHT Top Deck. BL:	approx. 12,8 m
AIRDRAUGHT @DWL	approx. 20 m

CAPACITIES

FUEL OIL MGO BUNKER:	approx. 220 m ³
FUEL OIL MGO DAY:	approx. 30 m ³
FRESH WATER:	approx. 23 m ³
FRESH WATER MAKER:	5 m ³ /day
SEWAGE:	approx. 23 m ³
LUBE OIL:	approx. 7 m ³
SLUDGE:	approx. 16 m ³
HYDRAULIC OIL:	approx. 2 m ³

ACCOMMODATION:

ON MAIN DECK

- "Dirty" Change Room with toilet and showers
- Galley and messroom with seats for 12 persons
- 2 Cabins with 4 Persons, shared toilet
- 2 Cabins with 2 Persons, shared toilet, one cabin with hospital equipment
- 1 public toilet

ON FORECASTLE DECK

- 4 single cabins for crew with 2 x shared toilet and shower, one cabin with pull-down extra bed
- 1 cabin for crew with 2 persons with toilet and shower
- HVAC-room

GALLEY EQUIPMENT

- 1x 4-hotplate electric cooker ceran field type
- 1 x 2-hotplate electric cooker ceran field type
- Vent hoods
- 1x supersized stove
- 1x microwave with grill function
- 1x double bowl stainless steel sink, hot&cold freshwater supply

- Lot of cupboards, plate racks and workbench
- coffee makers, water cooker, toaster
- dry provision store, freezer, refrigerator

FIRE PROTECTION AND FIGHTING

- Fire Detection system in all areas
- Fire extinguishing system type NOVEC in engine room
- Sufficient number of 6kg portable powder extinguishers
- Portable CO² extinguishers
- 2x EEBD escape set
- 2x fire men outfit
- Fire main and a number of hydrants and fire hoses
- 1x portable diesel driven fire-pump

LIFE SAVING EQUIPMENT

- 2x inflatable liferafts 20 persons
- 1x inflatable Zodiac rubber type MoB-boat for 6 persons
- 6x lifebuoys with self-igniting lights, lifelines and smoke signals
- 22x lifejackets with light and whistle
- 18x inflatable lifejackets with light and whistle
- 18x immersion suits
- 18x approved offshore overalls for personal transfer
- 18x thermal protection aids
- 2x Jason Cradle
- Pyrotechnics:
 - 3x line throwing apparatus
 - 12x parachute distress rockets
 - 2x orange smoke signals, 6x hand flares, stowed in a watertight drum in the wheelhouse

ANCHOR AND MOORING EQUIPMENT

- 1x hydraulic combined anchor handling, anchor - and mooring winch with
 - o 2x gipsy wheel
 - o 1x warping head SWL 3t@12-14m/min
 - o 1x anchor handling drum 30t SWL with 250m □32mm steel wire and brake
- 2x HHP anchor AC-14/ Pool/ D'Hone stowed in anchor pockets
- 2x chain cables K2 studlink, galvanized, with 2x additional shackle lengths
- 2x chain stopper
- 2x chain lashing device
- 2x chain locker with manhole access
- 2x chain quick release
- 4x 120m 40t SWL Polyprop/ Power Plait □52mm
- 4x 50m 40t SWL Polyprop/ Power Plait □52mm
- 4x 30m 40t SWL Polyprop/ Power Plait □52mm

TOWING EQUIPMENT

The towing equipment is designed according to Noble Denton Rules for a bollard pull of 50t.

- 1x hydraulic independent double drum towing winch
- 2x wire 750m, 46mm dia
- pull force 35t 3rd layer @10m/min
- one drum with spooling device
- Towing bollard (H-type)
- 1x Towing hook 50t SWL with hydraulic release
- 1x pair of Tow Pins hydraulic with shark jaw 150t SWL
- 1x vertical capstan 5t SWL@ 10m/min

ANCHOR HANDLING EQUIPMENT

- 2x Tugger Winch hydraulic 5t@10m/min with wire 100m, 22 mm dia
- 1x Tow Pin and Shark Jaw Unit accor. to brake load of the winch
- Stern roller 6,0m clear opening, 1,0m dia

DECK CRANES

One fully GL approved marine deck crane knuckle boom type is mounted on the aft deck area:

- SWL 12t@10,0m (maximum outreach 15m)
- winch operation
- local controls and radio remote control

MACHINERY

- | | |
|---------------|---|
| MAIN ENGINES: | 2x MTU/CAT approx.
1400kW@1800/1600 rpm, res. |
| GEARBOX: | 2x on cast resin (Reintjes/ZF) |
| SHAFT LINE: | 2x closed circuit water cooling with |
| PROPULSION: | 2x Azimut Stern Drive with FFP
(diameter 2,0m) |
| AUXILARY: | 2x250 kW MAN, each 120kW
hydraulic + 120kWe |
| PORT GENSET: | 1 x 80kWe |
| BOW THRUSTER: | 1x 300kW hydraulic |

ADDITIONAL EQUIPMENT

- Special Area for optional Offshore Access System (shown in this Design is the Momac Offshore Transfer System "MOTS")

NAUTICAL EQUIPMENT

- All of the following equipment is MED and BSH approved:
- 2x VHF DSC with handheld, gooseneck and footswitch, 3x secondary station (Sailor)
 - 1x VHF with handheld, gooseneck and footswitch (Sailor)
 - 2x Immarsat C (Sailor/ Thrane)
 - 1x Fleetcom 250
 - 1x MF/HF DSC (Sailor)
 - 1x MF/HF SSB Transceiver (Sailor)
 - 1x all wave receiver (Sailor)
 - 1x emergency receiver
 - 3x 2-way VHF radio telephone, battery type
 - 1x SP telephone, Zenitel or equivalent
 - PA intercom, Zenitel or equivalent
 - 2x DGPS (Furuno)
 - 1x DGPS Navigator
 - 1x AIS with pilot plug (Furuno)
 - 2x Radar ARPA with AIS/ ECDIS overlay (Furuno/ JRC)
 - 1x NavTex digital (McMurdo/ Furuno)
 - 1x magnetic compass with spare and bearing diopter (Cassens&Plath)
 - 3x portable VHF emergency life raft radio(Sailor/ Simrad) certified
 - 3x portable VHF non-certified with spiral cable microphone
 - 1x SART
 - 1x EPIRB
 - 1x Weather station digital
 - 2x ECDIS
 - 1x Auto-Pilot
 - 1x Satellite Compass
 - 1x Gyro-Compass
 - 2x Echo sounder 250/125Hz (Furuno)
 - 1x Speed-Log (STW)
 - 1x Rate of turn indicator
 - 1x Air horn with hand operated mechanical plunger fog horn with signal automat
 - 1x Aldis type signalling lamp (morse lamp)
 - 1x complete set of international code flag
 - 1x national ensign
 - 1x international code manual
 - 3 searchlights (2 fwd, 1 aft), remote controlled