

EQUIPMENT SHEET

BOKA TOPAZMULTI-ROLE DIVING SUPPORT VESSEL



| CONSTRUCTION / CLASSIFICATION | |
|-------------------------------|--------------------------------------------------------------------------------------------|
| Vessel built by | Fosen Mekaniske Verksteder AS, Norway |
| Delivered | 2007 |
| Classification | DNV ± 1A1 SF, COMF-V(3)C(3), HELDK-SH, EO DYNPOS-AUTR, CLEAN, DSV-SAT, DSV-SURFACE |
| Flag | Norway |
| Port of registry | Fosnavåg |

| FEATURES | |
|--------------------------------------------|--|
| Saturation & air diving support | |
| Structure installation | |
| Flexible flowline & umbilical installation | |
| Inspection, repair & maintenance | |
| Well abandonment | |
| Riser installation | |
| Spoolpiece installation | |

| MAIN DATA | |
|----------------|----------|
| Gross tonnage | 8,009 GT |
| Net tonnage | 2,403 NT |
| Length overall | 106.60 m |
| Beam | 22.00 m |
| Depth | 9.60 m |
| Draught | 7.30 m |
| Deadweight | 5,337 t |

| ENGINE | POWER | & | PROPULSION |
|--------|--------------|----|-------------------|
| ENGINE | P○\\/FR | ጸ. | PROPI II SIONI |

| Main engines: 4 x Wärtsilä 6L32B2 diesel engines (Marine gas oil, MGO) | Rated power each 2,880 kW@720 rpm each total: 11,520 kW NOx emissions value: 11.7 g/kWh MGO consumption@100% load: 186 g/kWh Coupled with 4x Marelli MJR 710 LB 10 Alternators each rated at 3,420 kVA |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Harbour engine | Mitsubishi S12A2, 803 kW/1,800 rpm driving Newage Stamford HCM634K2, 963 kVA alternator |
| Emergency generator | Mitsubishi MHI S6Bk, 276 kW@1,800 rpm driving Stamford HCM434E1, 325 kVA alternator |



BOKA TOPAZ

MULTI-ROLE DIVING SUPPORT VESSEL

| PROPULSION | |
|-------------------------------------|----------------------------------------------------------------|
| Main Azimuth thrusters | 2 x Wärtsilä type CS2510/2500 WN each rated at 3,000 kW |
| Retractable Azimuth thrusters | 2x Wärtsilä type CS1510-350/1530 MNR each rated at 2,200 kW |
| Tunnel thrusters (1 fwd & 1 aft) | 2x Wärtsilä type CT275Z-D each rated at 2,000 kW |

| DYNAMIC POSITIONING SYSTEMS | |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------|
| DP system | Kongsberg K-POS DP 31 |
| DP classification | AUTR DP II |
| Reference systems | 2x DGPS, Kongsberg 200&132 2x HIPAP, Kongsberg 500 2x Light Taut wire; Bandak Mk2 1x RadaScan, V115 1x Cyscan AS |

DP OPERATIONS

DSV operations with port and starboard moon pools and twin diving bells

ROV operations

Subsea installation works (manifolds, plets, plems etc.)

Spoolpiece tie ins

Umbilical and flexible flowline installation

Geotechnical and worksite survey

Module handling

Subsea crane operations

| APPROXIMATE FUEL CONSUMPTIONS | |
|-------------------------------|----------------------------------------------------|
| Transit speed | 24 m³/24 h (11 knot - economical transit speed) |
| Full speed | 36 m³/24 h (12.5 kn - full speed) |
| DP rough | 18 m³/24 h |
| DP moderate | 17 m³/24 h |
| DP calm | 16 m³/24 h |
| Harbour | 8 m³/24 h (incl. main crane operations) |

| TANK CAPACITIES (100%) | | |
|------------------------|------------|--|
| Fuel oil | 2,240 m³ | |
| Ballast water | 2,400 m³ | |
| Anti rolling tank | 4 x 843 m³ | |
| Portable water | 551 m³ | |
| Lubricating oil | 81 m³ | |

| CARGO DECK | |
|-------------------|------------------------------------------------------------------------------------------------------|
| Deck area | 860 m ² |
| Deck strength | 5.0 - 10.0 t/m ² |
| Maximum deck load | ~2,000 t depending on loading conditions and operations |
| Main moonpool | $7.2~{\rm m} \times 7.2~{\rm m}$, situated on the centre line, main deck, 15.6 m aft from amidships |

| DECK CRANES | |
|-------------------------|------------------------------------------------------------------------------|
| Main crane | Hydramarine crane, active heave compensated (AHC) 150 t (@10 m radius) |
| Auxiliary deck crane I | Dreggen crane 10 t (@1s8 m radius) |
| Auxiliary deck crane II | Provision crane 1.05 t (@14.7 m radius) |

ROV SYSTEMS

Permanently installed garaged Observation class ROV, Seaeye Lynx 48, supplied with Techsafe Mk2 zoned LARS. Lynx 48 is depth rated to 1,500 m and carries 200 m of tether. With a fibre optic mux and 2 cameras permanently installed there is additional capability to carry survey sensors plus manip skid and water jetting skids are supplied as standard. Control room is integrated into vessel adjacent to dive control and full stocked stores room and workshop is located on main deck adjacent to ROV LARS.

| DIVE SYSTEM | |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Saturation System | Drägger 18 persons |
| Max. operating depth | 300 m |
| Single lock main living chambers | 2x 6 persons living chambers (25.7 m³) |
| Triple lock de-compression chamber | 1 x 6 person living chamber (29.2 m³) |
| Twin lock transfer chamber | 21.5 m³ |
| SPHL evacuation system | 1 x 18 person (10.5 m³) Ocean wide hyperbaric lifeboat |
| Port bell | 1 x 3 person (5.7 m³) |
| Starboard bell | 1 x 3 person (5.7 m³) |
| Gas storage | 23 x 2.0 m ³ & 23 x 2.4 m ³ tubes, (total capacity 20,240 m ³ @ 200 bar) |
| HP Gas transfer compressor | 2x Compair H 5437.1 HP Heliox compressors |
| LP air | 1 x Boge SD40-2 screw compressor |
| HP air | 1 x Bauer V5-HP V150-11-5 compressor |
| Diver gas reclaim | 2x Divex gasmizer gas reclaim compressors |







BOKA TOPAZ

MULTI-ROLE DIVING SUPPORT VESSEL

| Air diving | 1 x Air dive chamber, twin basket deployment skid |
|-------------------------------------|----------------------------------------------------------------------------------------------|
| Dive moonpool | 2 x Moonpool (port/starboard) |
| Dive system classified to: | DNV |
| COMMUNICATION SYS | TEMS |
| V Sat and Starlink with W | ViFi and LAN access points |
| GMDSS area | A3 |
| ACCOMMODATION | |
| Total | 105 + 18 divers in SAT |
| Single cabins | 20 |
| Double cabins | 39 |
| 4 Bed cabins | 2 |
| Hospital | 1 + examination table |
| Messroom | Seats 66 |
| Recreation room | TV lounge, seats 16 |
| Recreation room | Internet lounge, seats 17, TV, 2x internet workstations |
| Smokers lounge | TV, seats 12 |
| Gymnasium | Equipped |
| Client office 1 | 4x workstations |
| Client office 2 | 5 x workstations |
| Photo copier room | Photocopier, filing cabinets |
| Project office | 6 x workstations, photocopier, survey desk |
| Ships office | 2 x workstations |
| Offshore project managers office | Workstation |
| Field engineers office | Workstation |
| Heliport reception | Reception desk and seating area |
| Dive technicians office | 3 x workstations |
| Conference room | Wall mounted TV connected to workstation with remote keyboard and mouse, seats 14 |
| Dive control (port/starboard) | Dive control centre, dive coordinators office + 2x workstations stbd/ ROV control port |

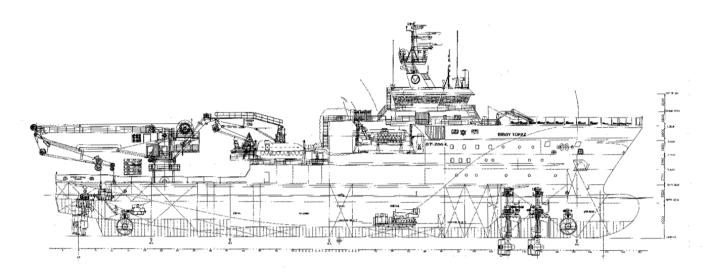
| SATURATION CONTRO |)L |
|------------------------------|----------------------------------------------------------------------------|
| Saturation control kitchen | Kitchen for diver's needs + washing machine and dryer |
| Dive technicians workshop | Bench, vice, pillar drill, compressed air, tools etc |
| Engine room workshop | Bench, vice, pillar drill, lathe, bench grinder, compressed air, tools etc |

| HELIDECK | |
|--------------------------------------------------------------|--|
| Sikorsky S92 | |
| Maximum "D" value 20.88 m | |
| Maximum take-off weight 12.8 te | |
| DNV classed and complies with the requirements of CAA CAP437 | |
| Heli-beacon tele supply A.S., type TS-20B | |
| Daylight only helideck operations | |
| T | |

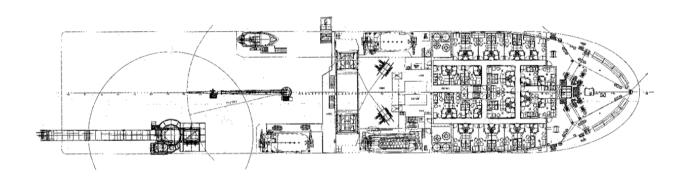


BOKA TOPAZ

MULTI-ROLE DIVING SUPPORT VESSEL



SIDE VIEW



TOP VIEW DECK LEVEL

Boskalis

PO Box 43 3350 AA Papendrecht The Netherlands T +31 78 69 69 000 offshore.energy@boskalis.com