New, all-in-one, state-of-the-art installer

Safety, versatility and redundancy are the three key concepts to have driven the design of SBM Offshore installation vessels.

The newly built SBM Installer (SI) raises the bar in higher standards for the new generation of Dive Support & Construction vessels. Her design is in response to a call from clients for increased versatility in capacity and a ‘do-it-all’ vessel in order to eliminate the need for separate elements such as a diving support and a crane, which normally have to accompany an installer. SBM engineers drew on 40 years of experience in offshore installation, diving works and construction activities worldwide in all kind of water depths. The construction of the installer has taken place in the Keppel Singmarine shipyard in Singapore.

What differentiates the SBM Installer (SI) from the competition is her exclusive combination of a fully integrated saturation diving system with strong construction and chain handling capabilities in a Dynamic Positioning (DP) class III vessel - with the higher class of redundancy - giving her unrivalled versatility and efficiency within a safe working environment.

The key components

The 111-metre vessel is equipped to carry out offshore construction and installation work in water depth of up to 1,700 metres with a 275t SWL (Safe Working Load) knuckle boom crane and an active heave compensated 150t SWL winch. To handle and store safely long lengths of mooring legs, she is also equipped with a 200t SWL double-drum winch and four large storage areas called chain lockers of 135m³ each.

The patented double-deck concept, already tested and proven on the Normand Installer, provides a large storage and construction area on the upper deck while keeping the conventional main deck unobstructed to run chains or wires over the stern under tension.
Diving systems

Two types of diving systems are possible:

• a conventional air diving system, operated over the starboard side of the vessel

• a saturation diving system which allows work up to 300m

The SBM Installer system has a 12-man capacity, even if one of the three chambers is undergoing maintenance. Each chamber can be pressurised independently allowing several teams to work at different water depths.

In case of an emergency, a specific hyperbaric lifeboat will safely evacuate the divers, while maintaining the pressurised environment.
General specifications

Classification
DNV +1A1 - SSC - SF - E0 - Dynpos AUTRO - DK(+) - HELDK-SH - COMF-V(3) - Clean Design - DSV-SAT - DSV Surface - CRANE - TMON - BIS - NAUT OSV - BWM-T - SPS

Flag
Bahamas

Port of Registry
Nassau

Naval Architect
Marin Teknikk

Build Location
Keppel Singmarine - Singapore

Main particulars

Length overall
111.20 m

Breadth moulded
25.00 m

Depth at Main Deck
10.20 m

Min / Max draft
5.50 / 7.70 m

Engine power & propulsion

Main Generators
6 Main Engines
2 x 2,810 ekW + 4 x 1,870 ekW

Emergency Generator
1 x 910 kW

Bow Thrusters
2 x 1,500 kW Tunnel Thrusters
1 x 1,200 kW Tunnel Thruster

Stern Propulsion
2 x 3,000 kW Propellers + Rudders
2 x 1,200 kW Tunnel Thrusters

Tank capacities (100%)

Bunker Capacity
1,600 m³

Fresh Water Capacity
1,050 m³ + fresh water makers

Ballast Water
5,750 m³

Anti-heeling
675 m³

Dynamic positioning systems

DP Class
Class III (AUTRO)

Station keeping
ERN 99.99.97

Cargo deck

Upper Deck
810 m² - deck strength of 10t/m²

Main Deck
440 m² - deck strength of 5t/m²

Anchor Handling Area
140 m² - deck strength of 15t/m²

Deck cranes

Main Offshore Crane
275 t in 4 falls
minimum radius: 8.5 m
maximum radius: 40 m

Auxiliary Deck Cranes
2 of (folding type)
2t at15m radius
Main deck equipment

Main winch
- Double Drum winch
- Pull force 1st layer: 200 t
- Storage Capacity of each drum: 1,700 m of 76 mm wire

Under Deck AHC system
- Pull force all layers: 150 t
- Storage Capacity: 1,800 m of 72 mm wire
- Linear AHC System

Auxiliary Winches
- 3 of 10 t Tugger Winches
- 1 of 20 t Tugger Winch
- 1 of 5 t ‘Fast Frame’ Winch

Anchor & Chain Handling
- 2 x Karmforks
- 3 m Diameter Stern Roller
- 4 x 135 m Chain Lockers

ROV systems
- Work-Class ROV
  - 2 of Rated for 3,000 m water depth

Dive system

Saturation Diving Spread
- 12 man System
  - 3 x Living Chambers
  - 1 x 3 person Diving Bell
  - 18,000 m³ Gas Storage
  - 1 x 18 person Hyperbaric Lifeboat

Air Diving Spread
- 1 Air Dive Chamber
- 2 Independent Launch and Recovery Systems

Accommodation

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>100</td>
</tr>
<tr>
<td>Single Cabins</td>
<td>34</td>
</tr>
<tr>
<td>Double Cabins</td>
<td>33</td>
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<tr>
<td>Hospital</td>
<td>1</td>
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<tr>
<td>Messroom</td>
<td>60 seating capacity</td>
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</tbody>
</table>

Helideck

Helideck
- 22.2 m diameter
ROV
Operations will be supported by two heavy work-class Remotely Operated Vehicles (ROVs). Both ROVs can carry out observation and intervention works to a water depth of 3,000m.

The double-deck concept
This allows preparation for future operations while deploying the subsea equipment. However, this benefit can mostly be quantified in terms of safety, with an excellent safety record clocked up on the Normand Installer as proof. Of note is the firing line located on the lower deck where no personnel are allowed during subsea deployment operations.

The vessel’s many advantages: being an Anchor Handling Vessel (AHV), a Diving Support Vessel (DSV), a construction vessel, and having a large
deck (thanks to the flat upper deck to easily store, mobilise, and demobilise all kind of equipment) gives the vessel great versatility. The combination of all these features means she can perform complex and diversified tasks eliminating the need to mobilise other vessels. The main crane can be used to place equipment overboard, to install and then to transfer the load to one of the deepwater winches. The heave compensated winch is utilised if slow motion is required during the landing phase; or the double drum winch is used if the landing speed is not that critical for the operation in hand.

Redundancy of equipment is fundamental to both keeping the vessel operational in the case of equipment failure but also in allowing the combination of functions to save time and increase efficiency.

The SBM Installer’s transit speed and reduced consumption will optimise her fast redeployment all over the world, including Brazil, North Sea, Middle East, South East Asia and the Gulf of Mexico.

Versatility, redundancy and safety achieving an increase in efficiency are the main benefits of the SBM Installer: these enable her to outpace all other vessels in her category and allow in most cases for the mobilisation of only one vessel rather than several to execute the complete scope of work.
The sole intention of this brochure is to share general information.

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