

NORMAND CLIPPER

Subsea Construction Vessel

GENERAL DESCRIPTION:

Owner:	Solstad Offshore ASA
Year of Build:	2001
Year of Conversion:	2005 (to subsea construction vessel)
Type:	VS 4125 CLV
Area of Operation:	Worldwide



General Description

Class: Det norske Veritas + 1A1, Dynpos AUTR, E0, HELDK, DK(+), TMON

Flag: Norwegian

The Normand Clipper is a high capability subsea field construction vessel. Capability ranges from installation of subsea facilities for single wellhead fields to large-scale, deepwater floating production in remote regions.

Inherent within the vessel are:

- High strength deck, specifically designed to support large capacity carousels or lay equipment.
- 250t AHC deepwater craneage amidships.
- Handling craneage to stern.
- A-frame for trenching support.
- 40t deepwater heave compensated lowering winch for deployment of structures to 4000m.
- Modern diesel-electric power management and dynamic positioning.
- 5.6m x 6.6m moon pool with damping.
- In-built ROV hangar and two strengthened deck-mountings for additional ROVs.
- Internal storage for FPSO mooring chain.

Additional project installation equipment can be fitted on deck.

Main Dimensions

Length overall	:	127.50 m
Length between p.p.	:	112.93 m
Breadth moulded	:	27.00 m
Depth to 1st deck	:	12.00 m
Design draught midship	:	7.20 m
Deadweight at maximum draught 8.4m	:	10,640 t
Moon pool	:	5.6 x 6.6 m
Helideck diameter	:	19.5 m

Accommodation

Accommodation for 102 extendible to 114 in single and double cabins. State cabins contain a bedroom and dayroom. All cabins have separate toilet/shower. Air conditioning suitable for all global regions.

Cabins	:	9 state cabins
	:	23 x 1 man cabins
	:	35 x 2 man cabins

Performance

Speed (maximum)	:	~16.0 knots
Speed (economical)	:	~13.0 knots
Bollard pull at 75% MCR	:	120.0 t

Capacities

Gross tonnage, international	:	12,291 GRT
Deck area	:	~1,600 m ²
Deck strength	:	10 t/m ²
Water ballast	:	4,300 m ³
Fresh water	:	748 m ³
Fuel oil	:	3,375 m ³

Propulsion and Generating Machinery

Diesel Electric Machinery and Propulsion

- Two main generator engines, each of 3,840 kW / 4,800 kVA
- Two main generator engines, each of 4,320 kW / 5,400 kVA
- Two electric propulsion motors, each of 3,900 kW
- 12-pulse frequency converter system
- Two reduction gears, each of 3,900 kW
- Two CP main propellers in nozzles, diameter 4.0m

Electrical Power Plant (6600 Volt AC – 60 Hz)

Main generators	:	2 x 4,800 kVA
Main generators	:	2 x 5,400 kVA
Harbour generator	:	1,138 kVA
Emergency generator	:	238 kVA
Clean power plant / UPS systems		

Thrusters

Tunnel thrusters forward	:	2 x 1,500 kW
Retractable azimuth thruster	:	1,500 kW
Tunnel thrusters aft	:	2 x 1,200 kW
Main propulsion	:	2 x 3,900 kW

Cranes / Lifting

Main Crane (amidships port side)

Offshore single-fall knuckle boom crane with active heave compensation

- SWL 250t @ 13m (1.3 DAF)
- SWL using auto-heave comp. is 230t @ 13m
- SWL at maximum subsea reach of 2500m (all wire out) is 190t
- Slewing: unrestricted 360 degree
- Wire: 96mm diameter

Stern Crane (starboard)

Offshore single fall knuckle boom crane

- SWL 25t – 15m, 12t – 26m knuckle jib
- Slewing: unrestricted 360 degree

A-frame (stern)

- SWL 60t
- Traction type towing/lowering winch SWL 140t with passive heave compensation
- Storage winch 4000m of 54mm wire

Two Deck Handling Cranes

- SWL 2t – 12m, knuckle jib

Anti-Heeling System

Anti-heel tanks x 2, midship, each side

Anti-heel pumps	:	2 x 1,500 m ³ /h
Roll reduction tanks	:	3

Deck and Rescue Equipment

Two combined Windlasses / Mooring Winches, 58 mm K3 chain

Mooring winches aft, pull	:	2 x 15 t
Tugger winches aft, pull	:	2 x 9.5 t
Tugger winches 1st deck, pull:		2 x 3 t
Load securing winches, pull	:	2 x 9 t with constant tension
Enclosed lifeboats with davits:		2 x 102 persons
Life rafts, each side	:	2 x 20 persons
	:	3 x 25 persons

Two davits for rafts

MOB boat with one-armed davit

DP System

- Dynamic positioning system IMO class II
- DGPS, HPR, HIPAP – Kongsberg/Simrad DPS 100/200 Hipap 500 (Simrad)
- Joystick with four positions in wheelhouse and one aft deck – Simrad DT
- Auto track facility for catenary laying of pipe / cable / chain

Navigation / Communication

- 10cm and 3cm ARPA radars
- Electronic chart system (ECDIS)
- Survey Echo Sounder with three transducers
- Radio installation according to GMDSS – area A3
- Inmarsat C, Inmarsat B
- VSAT high bandwidth phone & data system
- VHF, Portable VHF
- Digital automatic telephone system with analogue and digital extension ports
- VDR
- Worldwide TV satellite system

ROV Equipment

Permanent locations:

- ROV garage facing port side
- Work deck fr. facing port side
- Work deck fr. facing starboard side