

Lifting Offshore Wind



State-of-the-art Jack-up Installation Vessels Brave Tern and Bold Tern

Classification and Rules

Vessel type: Gusto MSC NG-9000C-HPE
Class: DNV +1A1, CLEAN DESIGN NAUT-OSV(A)
OPP-F DYNPOS-AUTR EO HELDK
Delivery: 2012 / 2013
Yard: Lamprell PLC, Dubai
Flag: Republic of Malta

Principal Dimensions

Hull length o.a. [m]: 132
Hull breadth mid [m]: 39
Hull depth [m]: 9
Min draft (light) [m]: 4.25 (+0.8 to spud can tip)
Draft at max variable payload (m): 5.6 at elevated 19.200t (+0.8 to spud can tip)

Cargo Capacity

Max variable load (t): 7600
Deck area [m²]: 3200
Uniform deck loading [t/m²]: 5 - 10
WTG capacity (typical): 8x3.6 MW / 4x8.0MW
Foundation capacity: 3-4 monopiles

Propulsion, Manoeuvring and Positioning

Aft propulsion: 3 x 3800 kW Voith Schneider propellers
Fwd manoeuvring: 3 x 1750kW Wärtsilä Lips tunnel thrusters
Max speed (knots): 12
Positioning: DP2

Operational Limitations

All year survival water depth range¹: 7.5-55m
Operation water depth range¹: 5.5-60m
Transit fully loaded: up to wave 3.5m Hs
Jacking: up to wave 1.8m Hs

Main Crane

Type and location: Gusto GLC-800-ED-S around aft port leg
Main hook:
Long mode: 640t at 30m outreach,
(max height 120m at min radius)
Short mode: 800t at 26m outreach,
(max height 102m at min radius)
Auxiliary hook: 50t (certified for man-riding)
Mean wind limit (m/s): 16

Deck Cranes

2 cranes of type 20t SWL, 27m max radius
Certified for man-riding
1 crane of type 6t SWL, 24m max radius

Power generation

4 diesel electric Wärtsilä generators:
1 x 12v32 5760kW, 1 x 6L32 2880kW, 2 x 9L32 4230kW
Harbor (emergency) generator. CAT 3512B 1400kW
Output range: 60 Hz, 230-690V
50Hz on-deck power supply

Jacking System

Type: MSC continuous hydraulic double-acting system
Effective jacking capacity per leg (t): 5300
Pre-loading capacity per leg [t]: 9560
Holding capacity per leg [t]: 9000
Jack-up lifting / lowering speed [m/min]: 0.4 / 0.5
Leg handling speed [m/min]: 0.6

Legs and Spudcans

Number & type: 4 cylindrical
Diameter [m]: 4.5
Length [m]: 92.4
Max leg length below ship baseline [m]: 70.5
Spudcan area [m²]: 106

Safety Systems

Fire and safety systems: Compliant with DNV Offshore Standards, IMO MODU Code and SOLAS/SPS Code, North Sea Standard
Fire & Gas detection: Shipwide integrated system
Fire extinguishing: Fire ring main, Ultra Fog water mist system
Life saving: 2x100% complement fully enclosed lifeboats and inflatable rafts
MOB: high speed rescue boat + CrewFinder system

Access

Helicopter deck D22m, 12.8t (CAP437)
Hydraulic gangway to foundation or quay
Man-riding cranes
Hydraulic boat landing for CTV

Accommodation and Facilities

Total complement: 80 persons in 56 cabins
Cabins equipped with en suite bathroom, Sat TV/video
Client offices and workshop, fitness room, laundry, TV room, etc.

Leg retrieval system (jetting)

Capacity: 50m³/h @ 30bar per pump
Capacity: 150m³/h @ 10bar per pump

Fuel consumption

Transit speed of 10 knots [t/24h]: 45
Elevated, standby [t/24h]: 5-6
Elevated, crane work [t/24h]: 6-8

¹ Depending on site conditions.