

NG-3500X  
CANTILEVER & MULTIPURPOSE JACK-UPS

**SAFE, STABLE  
& SOLID**



**GustoMSC**

The NG-3500X is a solution for maintaining and making interventions in the large number of mature fields and infrastructure in the Middle East and South East Asia. The conditions of these fields are characterized by deeper water and larger expected penetrations. Until now this was the domain of classic drilling jack-ups and work barges with associated rates and operational restrictions.

# NG-3500X

## BRIDGING THE GAP

The NG-3500X is the latest design in GustoMSC's successful series of self-propelled jack-up designs – the NG series. It is based on the proven and seasoned NG-2500X and NG-1800X designs, of which already quite a fleet of units are in operation. It essentially serves as a safe, stable and solid platform that can be operated as an autonomous, fast moving jack-up platform in a (rough) offshore environment. The NG-3500X can operate in a water depth of up to 80 m (262 ft).

### Key features

As with all NG series designs, one of the key features of the NG-3500X is that it is designed with survival capability in mind. It means that the unit can remain offshore when adverse weather conditions occur. The unit does not have to travel back to port. The ability to stay on location results in more workable days, optimum efficiency and a minimum of non-productive hours during operational charters.

In order to carry out the various types of work, the NG-3500X comes in two distinct setups. One type is a multipurpose platform with various crane options for any type of service for the oil and gas industry, from simple maintenance jobs, accommodation and support to light well intervention. The other type is a dedicated unit for heavy well intervention and light drilling. It is fitted out with an X-Y cantilever and derrick.

### High utilization

The multipurpose unit will ensure high utilization as it can be used for various missions and tasks such as a (temporary) accommodation unit, for any type of maintenance and construction work offshore, as well as light well intervention. The large free main deck (approx. 1,200 m<sup>2</sup>) allows for flexible use, transporting equipment and materials to and from offshore locations, placing an additional accommodation block on it, accommodating a modular well-intervention spread, etc.

### Cantilever jack-up

The cantilever unit truly bridges the gap between the successful shallow to mid-water service units and the full-fledged drilling rigs for the Middle Eastern and (South East) Asian markets. The cantilever unit is equipped with a cantilever featuring the X-Y skidding system. This system provides a large drilling envelope of 15.2 m x 7.3 m (50 ft x 24 ft) and much

appreciated additional deck space as it raises the entire cantilever and drill-floor structure above the main deck by approximately 3.5 m (12 ft). This allows for improved material handling as forklifts can drive underneath, and thus reduces crane lifts from the PS to the SB side and vice versa. It also provides additional container storage space and, crucially, provides additional means to handle mud return, cuttings and SWARF waste. The 7.3 m (24 ft) transverse reach with full combined cantilever load enables more flexibility for the operator to perform drilling operations. Because of the independency of the transverse position, it allows for no hook load capacity limitations that the traditional drilling rigs have at the outer transverse position of the cantilever reach.

### VSD-controlled jacking system

Additional safety, control and reliability are introduced by the Variable Frequency Drive (VSD)-controlled jacking system.

This is a proven jacking system that allows the jack-master to get the unit on site in a safe, smooth and fully controlled process. The system is fully redundant and each pinion is torque-controlled with stepless speed-setting ability. The controlled ramp up and down, with brakes still engaged, results in a significant reduction of peak loads on the system and reduces the wear and tear of the leg rack, pinions, gears and brakes. Furthermore, it enables the jack-master to accurately control the leg loads during preloading. The system also monitors RPD values on the fly. All this improves the safety, speed and accuracy of the complex process of getting a jack-up on and off location.

### Propulsion and Dynamic Positioning (DP)

The NG series of self-propelled jack-ups is equipped with an efficient propulsion system for fast transit (up to 8 knots) to and from offshore locations and for positioning on site. For the NG-3500X

this system consists in principle of four azimuthing thrusters that ensure optimal transfer of power, both in transit and while positioning.

The unit can be designed with a DP system for safe, fast and precise positioning. DP systems enhance the overall safety and uptime when approaching or leaving any job site, especially when the weather or wind direction changes.

### Fast on and off location

Four-legged jack-ups, like the NG-3500X, achieve preload by alternatively loading diagonally opposed legs, utilizing the jacking systems. This is a much faster and safer operation than taking on water ballast, as the traditional three-legged jack-ups do and it significantly reduces the overall pre-load time. Therefore, the unit can be operational faster at the new location, resulting in more uptime.

The operation is also safer as soil settlement can be corrected in a more controlled manner than is the case for a unit with three legs, especially when making use of a VSD jacking system. This simple and fast preloading together with the excellent maneuverability and good transit speeds are the main benefits of the GustoMSC NG series.

### MAIN CHARACTERISTICS

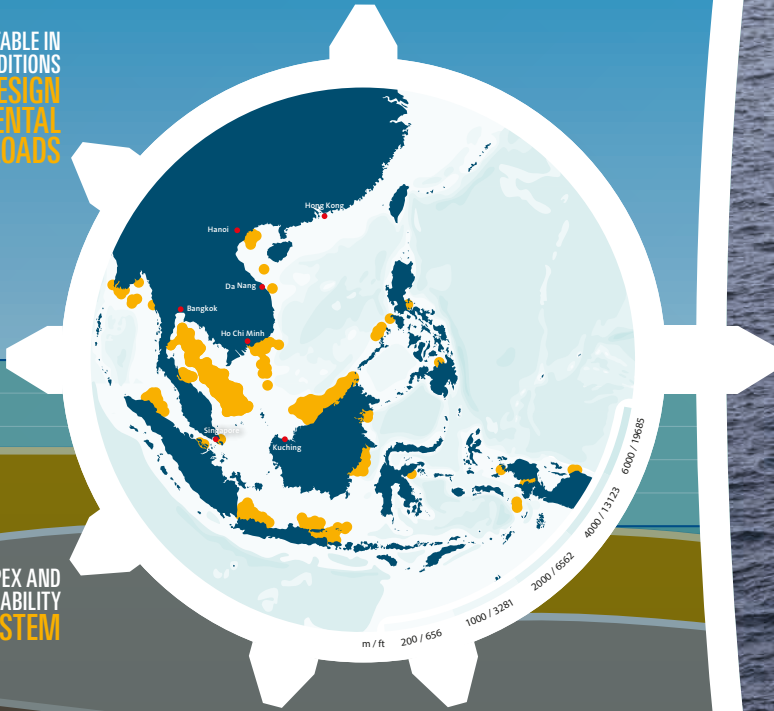
Hull length	71 m	(233 ft)
Hull width	40 m	(131.2 ft)
Hull depth	6.5 m	(21.3 ft)
Accommodation	up to 150 persons	
<b>Legs</b>		
Type	Triangular open truss, X-braced	
Leg chord spacing	6 m	
Overall length	101 m (max. 112 m)	
Footing area	55 m <sup>2</sup> (max. 80 m <sup>2</sup> )	
<b>Power Plant</b>		
Main power	4 x 1,600 kW + 2 x 1,200 kW	
Emergency power	1 x 480 kW	
<b>Propulsion (for DP2)</b>		
Thruster type	azimuthing thrusters	
Thruster power	4 x 1,800 kW	
Transit speed	approx. 8 knots	
<b>Crane Unit</b>		
Main crane capacity	up to 400 t at 20 m	
Aux. crane capacity	up to 50 t at 10 m	
Free deck area	approx. 1,200 m <sup>2</sup>	
<b>Cantilever Unit</b>		
<i>Maximum cantilever reaches</i>		
Longitudinal	15.2 m (50 ft)	
Transverse	7.3 m (24 ft)	
Combined load	227 t (500 kips) at full transverse reach	

# NG-3500X SELF-PROPELLED JACK-UP

# MULTIPURPOSE WORKHORSE

DEEPER WATER  
& LARGER  
PENETRATIONS

SAFE AND STABLE IN  
SURVIVAL CONDITIONS  
MODERN DESIGN  
HIGH ENVIRONMENTAL  
LOADS

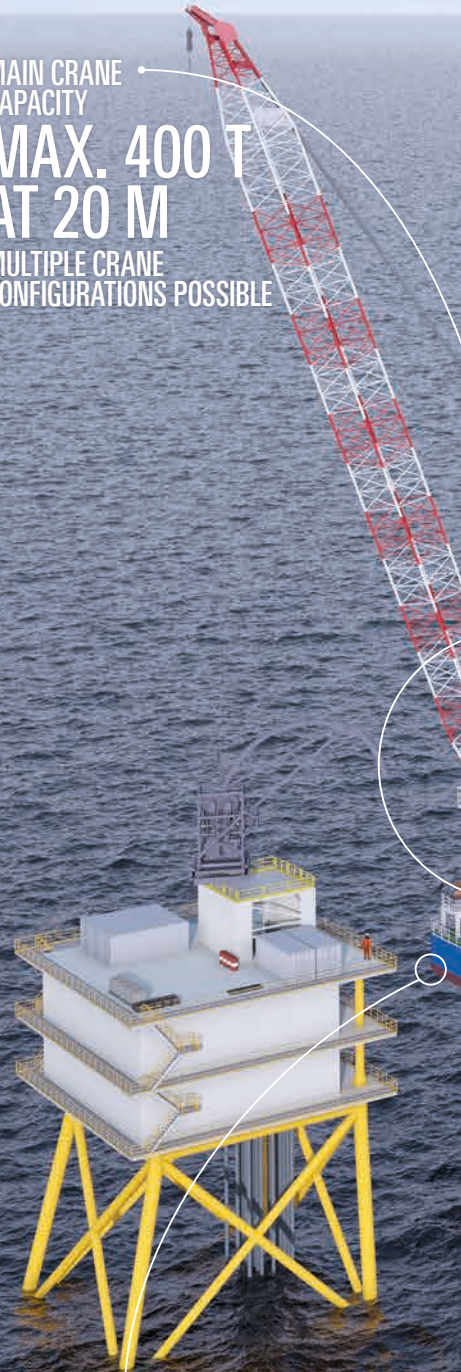


LOWER OPEX AND  
INCREASED RELIABILITY  
VSD JACKING SYSTEM

HIGH UTILIZATION  
MULTIPURPOSE,  
LARGE CRANE  
CAPACITY,  
LARGE DECK SPACE

AUTONOMOUS AND  
FAST ON/OFF LOCATION  
FOUR-LEGGED AND  
SELF-PROPELLED,  
DYNAMIC POSITIONING

MAIN CRANE  
CAPACITY  
MAX. 400 T  
AT 20 M  
MULTIPLE CRANE  
CONFIGURATIONS POSSIBLE



VARIABLE  
LOAD MAX  
2,000 T

FREE DECK SPACE  
APPROXIMATELY  
**1,200 M<sup>2</sup>**  
12,920 SQFT

AUXILIARY CRANE CAPACITY  
**50 T**  
AT 10 M

FREE DECK SPACE  
FOR MISSION EQUIPMENT  
APPROXIMATELY  
**1,000 M<sup>2</sup>**  
10,750 SQFT

CANTILEVER  
REACH  
**15.2 X**  
50 X 24 FT



HIGH NUMBER  
OF JACKING CYCLES  
**≥1,000**  
TRANSFERS

PRELOAD CAPACITY  
SUFFICIENT FOR HARSH  
WEATHER AND CRANE  
OPERATIONS  
**3,500 T**

DAYLIGHT CABINS  
FOR UP TO  
**150 POB**

MAXIMUM  
WATER DEPTH  
**80 M**  
262 FT

# NG-3500X SELF-PROPELLED CANTILEVER JACK-UP DRILLING & WELL INTERVENTION

R  
X 7.3 M

COMBINED LOAD  
**227 T**  
500 KIPS AT FULL  
TRANSVERSE REACH



FAST & AUTONOMOUS  
POSITIONING  
**DP2**

DEEPER WATER  
& LARGER  
PENETRATIONS

OPTIMAL  
OPERATION  
X-Y CANTILEVER AND  
LARGE OPERATIONAL  
CAPABILITIES



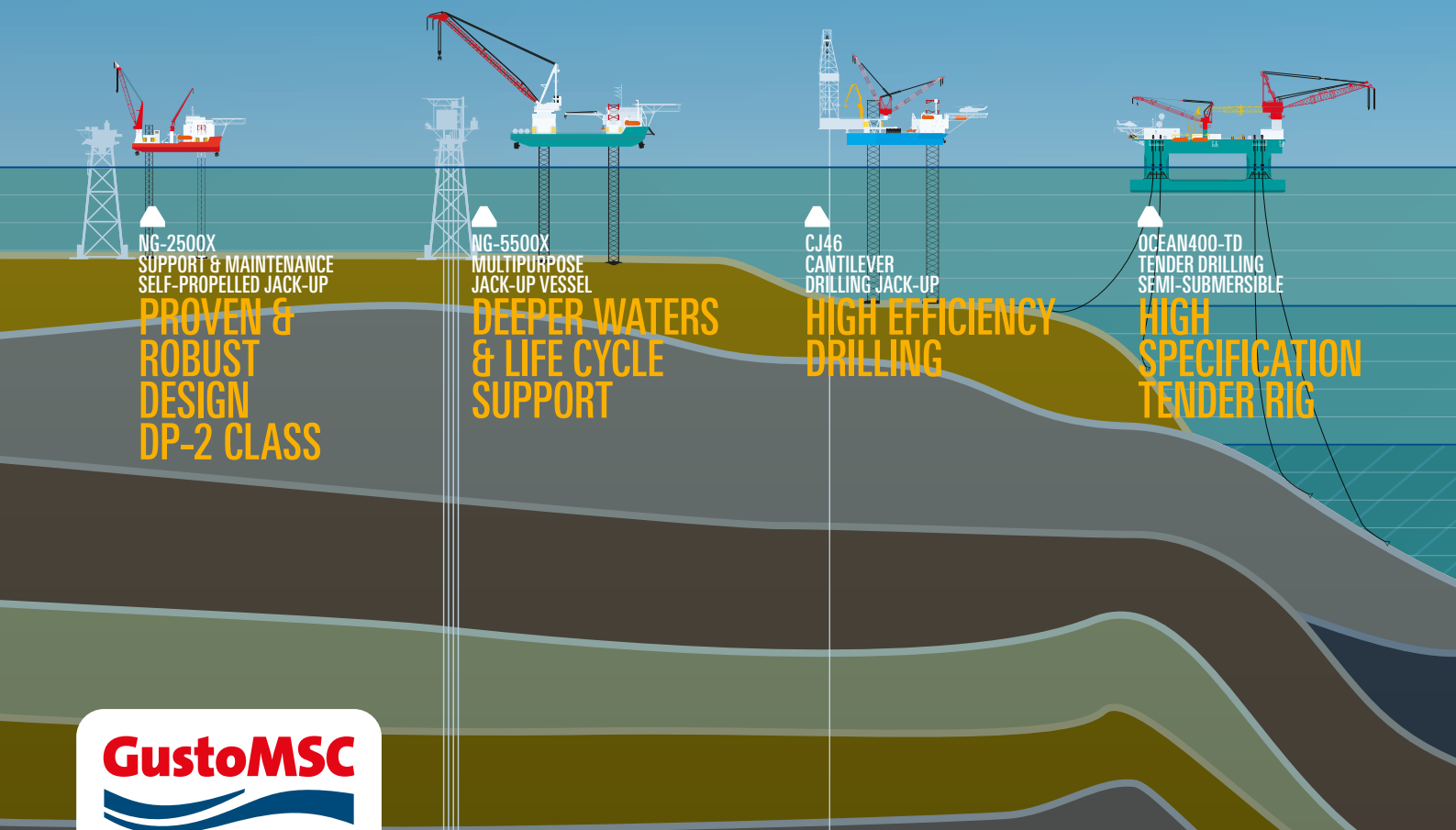
SAFE AND STABLE IN  
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MODERN DESIGN  
HIGH ENVIRONMENTAL  
LOADS

AUTONOMOUS AND  
FAST ON/OFF LOCATION  
FOUR-LEGGED AND  
SELF-PROPELLED,  
DYNAMIC POSITIONING

LOWER OPEX AND  
INCREASED SAFETY  
VSD JACKING SYSTEM  
EQUIPMENT IN  
ENCLOSED AREAS



# THE PIONEERS OF OFFSHORE ENGINEERING



NG-2500X  
SUPPORT & MAINTENANCE  
SELF-PROPELLED JACK-UP

**PROVEN &  
ROBUST  
DESIGN  
DP-2 CLASS**

NG-5500X  
MULTIPURPOSE  
JACK-UP VESSEL

**DEEPER WATERS  
& LIFE CYCLE  
SUPPORT**

C.J46  
CANTILEVER  
DRILLING JACK-UP

**HIGH EFFICIENCY  
DRILLING**

OCEAN400-TD  
TENDER DRILLING  
SEMI-SUBMERSIBLE

**HIGH  
SPECIFICATION  
TENDER RIG**

**GustoMSC**

GustoMSC is an independent, world renowned and leading design and engineering company, thanks to the vast knowledge and expertise of our dedicated professionals and our close relationships with the most influential players in the offshore energy market. We serve the offshore industry by providing best-in-class solutions for mobile offshore units.

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