Jack-up barges operate in the most demanding marine environments.

Heavy seas, strong current, and large tidal ranges can make marine projects dangerous, if not impossible, from a conventional floating platform.

For TITAN and its clients, the KARLISSA A and KARLISSA B jack-up barges have overcome these challenges and provided real solutions in harsh conditions worldwide. TITAN’s jack-ups have a combined total of 1,880 meters of clear deck space and the ability to jack in depths of up to 50 meters. From the treacherous wreck removal of the NEW CARISSA located in the surf zone outside of Coos Bay, Oregon to the historic lifting of the H.L. HUNLEY -- TITAN overcame the hurdles.

Proven Track Record, Versatility

BOWSTRING – 49 meter survey vessel, sunk in the St. Johns River in Jacksonville, Florida. KARLISSA A under contract by the USCG utilized two TITAN pullers, skid frames and chain fairleads off of her bow.

HUNLEY – Confederate submarine sank in 1864, off the exposed coast of South Carolina. KARLISSA B installed suction piles and custom built truss before raising the HUNLEY and the remains of her crew from the sea bed where she had been for over 136 years.

Jack-Up Barge Advantages

- World-wide mobility via wet or dry delivery
- 272-metric ton capacity platform ringer crane (KARLISSA B)
- Upwards of 1,350-metric ton of vertical lift or 130-metric ton of lateral pull utilizing TITAN pullers
- Deck loads over 900-metric tons
- Pneumatic, environmentally friendly jacking system
- Multiple configurations for the most customized of needs
The Karlissa A and Karlissa B
The KARLISSA A features approximately 1,000 square meters of clear deck space and her number two deck provides an added 280 square meters of multi-purpose deck space which can be used for portable accommodation modules, cranes up to 300 metric tonnes capacity, coring equipment, etc. The KARLISSA B features 600 square meters of clear deck space and is equipped with a pedestal mounted 60-foot platform ringer crane. With boom length configurations to 60 meters, she can be rigged to provide various crane operations.

Payload
Each jack has a jacking capacity of 453 tonnes, equating to an allowable payload while jacking of 1,814-mt for the KARLISSA A. The capacity of the KARLISSA B is 816-mt because of the added weight of her 998-mt ringer crane. Static payloads are doubled for each barge.

DeLong D-6-6 Jacks
DeLong jacks utilize pneumatic grippers and lifting cylinders operating at up to 24 bar. DeLong D-6-6 jacks offer three unique characteristics.

- Environmentally Friendly – No form of hydrocarbon based products are required in the jacking process making them often times, the only jacking system acceptable in environmentally sensitive areas.
- Jacking Conditions – The pneumatic lifting cylinders act as shock absorbers. Therefore, they can jack on seabeds comprised of rock in sea conditions with swells in excess of one meter. This would be unthinkable with rack and pinion jacking systems or systems involving hydraulic lifting cylinders.
- Positioning – All six legs have the capability to “free fall” to the seabed at the push of a button where they can be jacked in unison or independently.

Jacking Speed
Jacking speed is variable depending on the weight of the barge together with payload. However, the jacking speed ranges between 6.5 meters per hour in light condition and 3 meters per hour in loaded condition.

Legs
Made of capped steel pipe measuring 1,829mm by 38mm wall thickness. Their construction is intentionally simplified to allow customers to extend them in order to accommodate depth or increased air gap or shorten them to reduce operating restrictions from deck. The barges may operate in water depths of as little as 1 meter to depths in excess of 50 meters (subject to current and other weather criteria).