

# Loading and Unloading Area: **Shipyards**

Located near the sea or tidal rivers for easy access, a shipyard is a place where ships are built and repaired including yachts, military vessels, cruise liners, and other cargo or passenger ships. Many specialized cranes are used in large shipyards for lifting – mostly ship lifting and ship transport. These cranes may also be used in dry docks, slipways, dust-free warehouses, painting facilities, and extremely large areas for ship fabrication.

A shiplift is used to dry dock and launch ships. It consists of a structural platform that is lifted and lowered vertically by a number of hoists. First, the platform is lowered underwater, then the ship is floated above the support, and finally the platform and ship are lifted and the ship is brought to the level of the quay. A ship transport is the main way to move the ship into the dry dock, by wheel or rail trolleys and mobile boatlift.

## Ship-Lift System



## Winch



## Ship Transport System



### Brevini® Industrial Planetary Gearboxes

- Trolley ship transport dedicate GB
- Complete hydraulic gearmotor solution
- Special output sealing
- Marine painting cycle
- Driving flange/pinion included
- Subsea execution up to 13 m below sea level



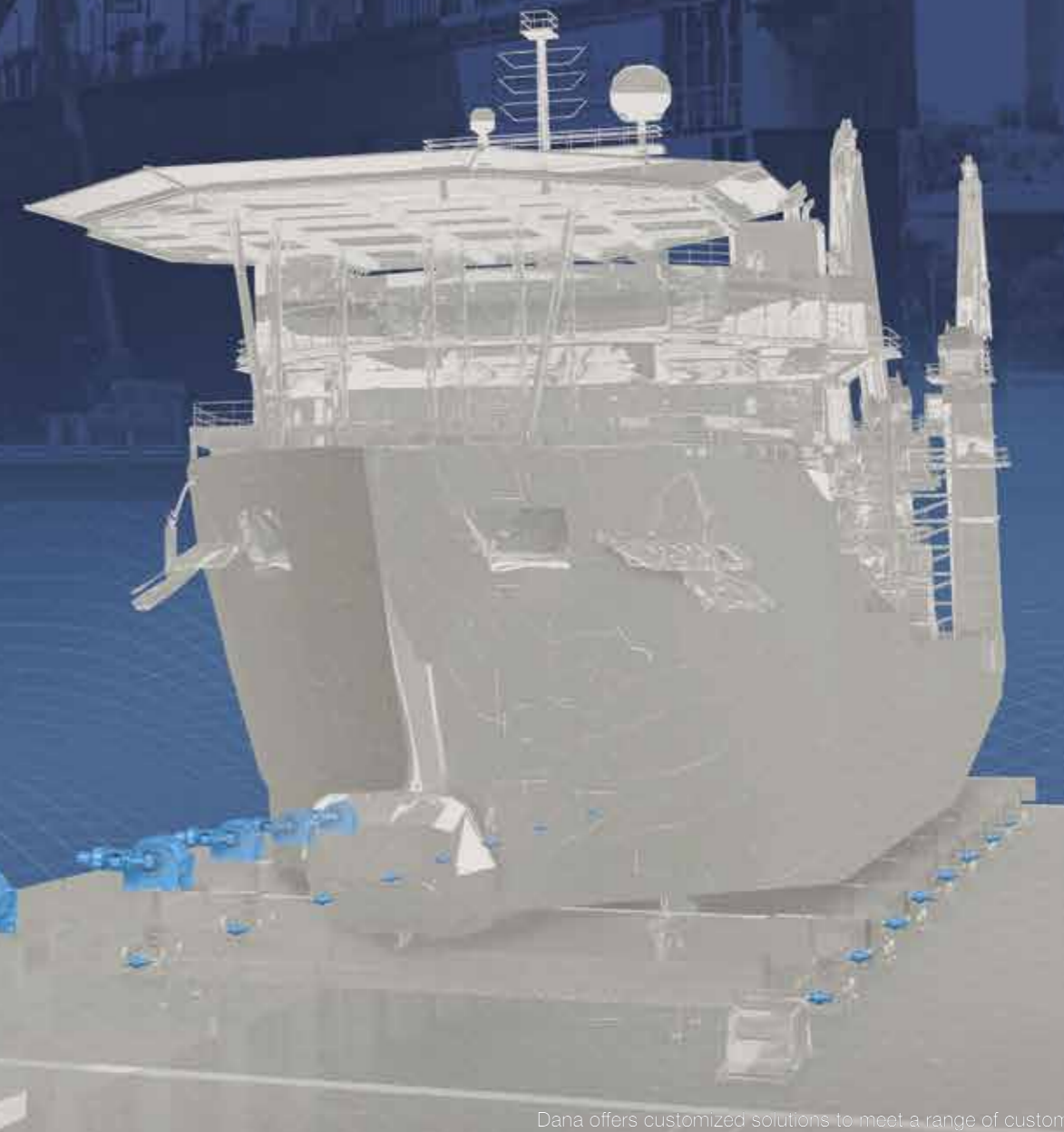
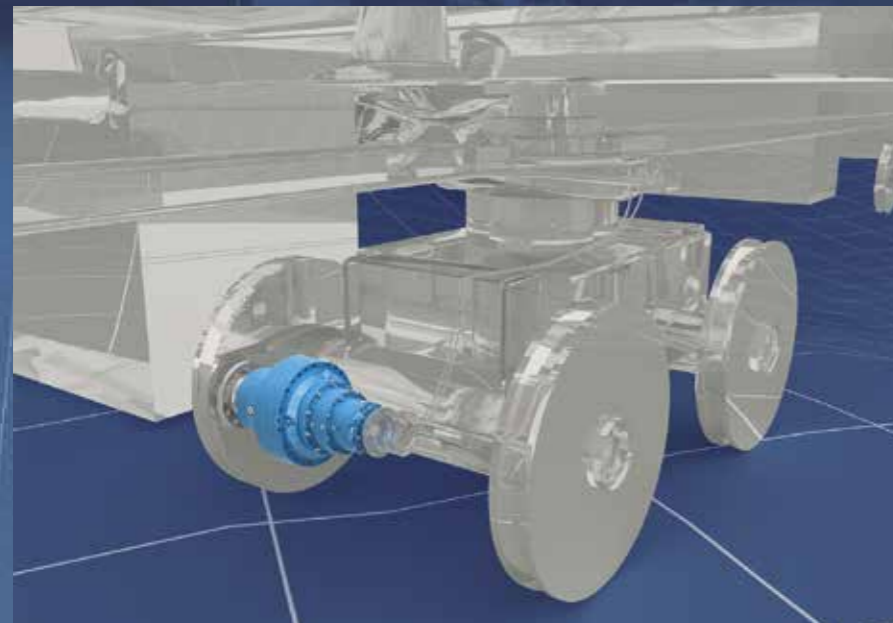
### Brevini® Winches

- Technical and application support up to commissioning on site
- Customized for ship-lifts
- Dimensions and layout can be designed to meet any requirements
- Pull line up to 50 tons to meet specific customer needs
- Third-parties marine certification available



### Brevini® Winch Drives

- Designed with dedicated gearboxes for large ship-lift installations
- Ratio range up to 6.000:1
- Maximum torque up to 850 kNm
- Third-parties marine certification available
- Inline and right angle configurations
- Electric motor connection available
- ATEX certification
- Integrated hydraulic failsafe negative brake and electromagnetic brake available
- Safety devices available as back stop, torque limiter, and sensors



Dana offers customized solutions to meet a range of customer needs, including modular designs and add-on accessories.