

Diving Technology and Tool Design

At times, conventional rigging equipment and off-the-shelf underwater tools are insufficient or inadequate to solve complex underwater challenges. Phoenix engineers routinely design specialty tools and equipment to enable divers to perform underwater tasks more efficiently and safely.

Phoenix designed diver tooling and equipment are created from a true 'diver' perspective, applying the hands-on diving experience of our engineers. All equipment is designed to meet applicable standards including:

- NAVFAC P-307
- U.S. Navy Underwater Ship Husbandry Manual
- Naval Ships' Technical Manual Chapters
- Deep Diving General Overhaul Specification (DDGOS)
- American Bureau of Shipping (ABS), Lloyd's, and other commercial standards

Sea Chest Inspection System

Developed for the U.S. Navy to inspect the condition of sea chest waster sleeves, the system is inserted into the sea chest by a diver, holds itself in place, and automatically completes an ultrasonic and video inspection of the entire waster sleeve.

3-D Damage Assessment Tool (3-DAT)

A laser scanning system, developed by Phoenix engineers, that utilizes a portable Coordinate Measuring Machine (CMM) to develop point clouds of underwater ship damage.

Contact us to learn more

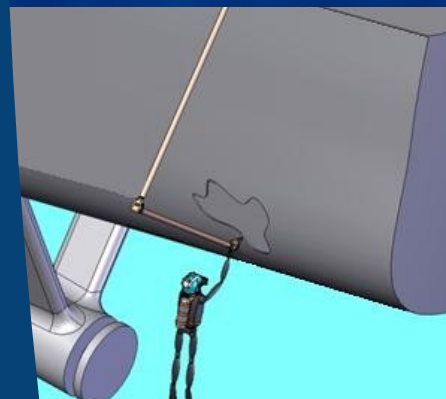
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Confined Space Rigging Equipment

The difficulty of manipulating heavy equipment within ballast tanks and other underwater confined spaces often requires special purpose rigging equipment that isn't found on the shelf. By designing and building special clamps and rigging fixtures, in-water time can be reduced, and job safety increased, benefiting both customer and diver.

Propeller Replacement Tools

This tool was designed by Phoenix engineers to replace a propeller on a ship that cannot be dry-docked or has insufficient clearance above the propeller to install overhead rigging. The device uses the replacement propeller as a counterweight, thus eliminating the need for motors or winches to move the propeller in line with the shaft.

Offshore Mooring Tools

Phoenix has experience in engineering and executing in-water repairs to Single Point Mooring (SPM) systems to include buoys, buoy mooring chains, floating hoses, and subsea hoses. In addition to the mooring system, Phoenix has completed SPM subsea hose stabilization and complete hydrostatic testing of SPM product systems.

Rigid Inflatable Overhead Habitat (RIOH)

The RIOH is a flexible, electromagnetically attached, fabric cofferdam designed, manufactured, assembled, and tested by Phoenix. The electromagnetic sealing ring, in conjunction with a marine fabric for the pressurized habitat walls, creates a lightweight, easily deployed habitat for use in underwater ship husbandry.



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