

Patent Pending

SD# 15251

Technology Readiness Level: 8

Deliverable Qualified Through Test & Demonstration

An integrated tool with the ability to lift, rotate, and lock a suspended work piece at any angle – eliminating the need for manual operators or additional custom fixtures to accomplish the same

Sandia researchers have developed a Locking Side Pull Hoist Ring which presents a significant improvement on commonly used lifting hardware by eliminating the need for an operator to manually hold a work piece in position and for additional custom rotation-locking fixtures. This new hoist ring is easily integrated into existing rigging configurations and is specifically designed for applications where the lift point must be mounted to the side of a work piece that needs to be re-oriented and then locked into position while suspended.

The Locking Side Pull Hoist Ring provides added flexibility and safety when handling suspended work pieces. If two units are mounted on opposite sides of a work piece, it can freely swivel and rotate around the axis while suspended. Additionally, there is an option to lock the work piece rotation, fixing it at any angle from 0 to 360 degrees. A quick release pin passes through the side pull body and into the work piece to lock its rotation. It can also be adapted based on need to use other mechanisms for locking the work-piece rotation, such as a friction lock, captive fasteners, and mechanical stops.



TECHNICAL BENEFITS

- Full swivel and rotation increase options, flexibility, and safety for hoisting and positioning work pieces
- Locking feature allows 0 to 360 degrees of secure positioning while suspended
- Scalable to various sizes and load ratings
- Robust and inexpensive, with minimal maintenance required

INDUSTRIES & APPLICATIONS

- Manufacturing and engineering
- Industrial tools and supplies
- Rigging, lifting, and material handling