

Prepared For :
Amentum

The logo for ASE systems is centered in the upper half of the page. It consists of the letters "ASE" in a large, white, sans-serif font, with the word "systems" in a smaller, white, lowercase sans-serif font directly below it. The text is set against a blue circular background that has a gradient from light blue at the top to a darker blue at the bottom. This circle is surrounded by a larger, teal-colored circular shape that also has a gradient, creating a layered effect.

ASE
systems

Case Study

LIFT AND ROTATE NITROGEN
CYLINDERS WEIGHING 175 LBS

Load Specifications

- Load Type: Nitrogen High Pressure Cylinders
- Weight- 175-lbs
- Size- 31" & 50" tall x 10" diameter



Handling Issues

A cylinder needs to be picked up from the cart in the horizontal position and moved to a pallet and stacked horizontally or moved to an adjacent area where it is placed vertical to be inspected for corrosion & resulting work if needed. When the cylinders are ready for use after refurbishing, they either get placed horizontal on a pallet or vertical in a shipping cage.

Application Analysis

- Load- nitrogen cylinders
- Weight- 175-lbs each
- Size- 31" & 50" tall
- Pick up point- from a cart
- Travel- up to 10'
- Place point- on a pallet or in a cage
- Tilt- yes 90°needed
- Ceiling height- 30'
- Cycle time- 1 every 1-2 minutes
- Air available- 120-psi in operating area

The Solution

ASE specified an Acer 150 wire rope articulated arm manipulator with vacuum grip tooling & 90°tilt function. The tooling is able to rotate the load 90° for ease of rotating the cylinders and movement from the pick-up point to the drop off point. The Acer manipulator is compressed air powered and is ideally suited for lifting loads in a balanced condition for weights up to 330-lbs. The boom movement is highly ergonomic allowing the operator to exert as little as one pound of force in order to move 100-lbs of load. Through its air cylinder actuated double rope lifting system that is built into the secondary arm of the articulated boom, the Acer 150 allows for flexible ergonomic movements in small working areas thanks to its low headroom & compact size. The Acer 150 includes many safety features including an "Anti Release Valve" that will not allow the operator to accidentally release the load until it is firmly supported from underneath. The pneumatic circuitry also includes a non-return valve which will not allow the load to drop in the event of a power loss.

Key Technologies

Acer Manipulator

<https://asesystems.com/industrial-manipulators/acer-manipulators/>

