

Prepared For :  
**AIS Inc.**

The logo for ASE systems is centered in the upper half of the page. It features 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 circular blue gradient background that transitions from a lighter 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

PICK AND PLACE PARTICLE  
BOARDS UP TO 220 LBS

# Load Specifications

Sheets of particle board and MDF.



## Handling Issues

AIS personnel were tasked with handling full sheets of particle & MDF board. Two operators were required to grab a sheet from a pallet stack and place it onto a large table saw & had to maintain a high cycle rate. The manual handling procedure was causing lower back, shoulder and other related Musculo- skeletal pain and degeneration resulting in increased medical costs & “it was hard to find people who were willing to perform this laborious task”.

## Application Analysis

Lift particle boards & MDS weighing up to 220 LBS from a roller conveyor at 18"-3.5' and place on a cutting machine 3.5' high every 3 min.

- Load- Particle Board & MDS
- Weight- up to 220-lbs.
- Sizes- 2' x 3' - 4' x 8' - 5' x 8'
- Thickness- ½" – 1-1/16" thick
- Pick point- from a roller conveyor at 18" – 3.5'
- Area of coverage- 4'
- Place point- on a machine to be cut. Machine at 3.5' high
- Cycle time- 1 every 3 min. give or take
- Ceiling height, unobstructed 12'
- Environment: indoor ambient temperature, dusty

## The Solution

ASE Systems specified a Vacuum Tube (VT) lifting system consisting of an ergonomic workstation jib crane from which the VT lifter would be supported from. The VT lifter also included 4 vacuum cups on an adjustable frame, a control handle assembly for up/down & attach/release functions, a large 30-gallon filtration system and a high-volume vacuum pump in order to grip the semi-porous sheets. The enclosed track jib crane provided the overhead support and the ergonomic ease of movement while the vacuum tube system provided the handling action that AIS had desired with only one operator needed to perform the work and eliminating the repeated lifting injuries. Vacuum Tube systems are ideally suited for lifting semi-porous and porous loads such as wood, corrugated boxes, bags and also for palletizing operations that require a rapid cycle time. The Vacuum Tube Lifting System is a versatile lift assist device that can be configured to lift a multitude of different loads and is one of the most economical lift assist devices on the market today.

## Key Technologies

Vacuum Tube (VT) Lifting System

<https://asesystems.com/vacuum-lifters/vacuum-tube-lifter/>

Workstation Jib Crane

<https://asesystems.com/workstation-cranes/jib-cranes/>

