

# CASE STUDY

## INDUSTRIAL MANIPULATOR

Client: Heil Trailers  
Location: Athens, TN  
Date: 5-7-15

Image of load



### Application Analysis:

Load-	aluminum bulkhead
Load material make up-	aluminum plate with shallow curve
Weight-	75-150-lbs
Load size-	58" to 95" diameter (material thickness- 1.98" to .250")
Lifting point-	from out of weld fixture (in the horizontal position) at 30" above floor level
Distance of travel-	up to 15' to 20'
Place point-	on to cart (in horizontal position) up to 36" above floor level
2 <sup>nd</sup> place point-	from cart on to stiffener prep station at 48" above floor level
Load rotate-	no, not needed
Ceiling height-	20'+
Overhead obstructions-	yes, bridge crane at 15'
Environment-	indoor ambient temperature
Cycle time-	2 per hour
Available air-	100-psi
Special ability-	no, nothing out of the ordinary

### Handling Cycle Description:

Grip bulkhead in horizontal position from welding station dome size down at 30" above floor level, lift bulkhead and move approximately 20' and place on to 1. Mobile cart at 36" above floor level, bulkhead still in horizontal position or 2. Place bulkhead on to stiffener prep station at 48" above floor level, bulkhead still in horizontal position.

### Handling Solution:

**Mirus 100 with vacuum cup tooling**



Technical Characters:

Supply :	compressed air
Transmission of motion:	through a parallelogram and terminal arm
Available	- column mounted fixed to the floor
Configuration:	- column mounted on transportable base plate - fixed overhead mounted - overhead mounted on rails
Capacity:	175-lbs (80 Kg) * (2450 mm radius)
Radius Max:	11.3' (3400 mm)* (range 180 kg)
Radius Min:	1.3" (400 mm)
Vertical lift:	78" (2,000 mm)
Air pressure:	from 0.5 to 0.8 MPa of clean, dry and oil free compressed air
Column axis:	360° continuous rotation
Intermediate axis:	max 300° rotation
Noise level:	<70 dB

Price range for this application \$18,800.00

End