

# MOBILE SCISSOR LIFT



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## NEED

Production fabrication of heavy steel plate materials involves repetitive motions of bending, lifting and loading of materials; requiring awkward postures. This creates lower back and other musculo-skeletal injuries. A device to improve the ergonomics of these motions that can be easily relocated to different machines, and retain good work clearance and shortened reach lengths to the raw materials was needed.

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## SOLUTION

The solution is a mobile scissor lift with 10,000 lb load capacity. The unit has a 360 degree powered rotation of the lift platform. A steel framework with retractable rear wheels and removable front wheels provides mobility and prevents movement after positioning in the work location. The lift platform is 48" square with a height adjustment range of 18" to 54" vertically. A push button hand held control pendant powers height adjustments and indexing functions. A rechargeable, battery operated push device with hand controls is used to move and locate the lift as needed. A custom fabricated dolly couples the push device to the lift for transportation and movement in confined spaces.

Once a forklift places a pallet of parts on the lift, the operator changes the height to an appropriate level using the hand control. As the operator progresses and parts are removed from the pallet, he rotates the platform and adjusts the height so the parts are as close as possible for unloading.

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## BENEFIT

The ergonomic analysis using NIOSH work practices determined an estimated 32 to 55% potential reduction in risk of employee injury through use of the lift when compared to the original work practice of unloading from a fixed height elevated pallet. This is a direct result of reduction of forces and loads from improved manual lifting, plus reduction in awkward body postures. Other operational efficiencies were found including elimination of the wait time for a forklift operator to move and position the lift, and reduced breakdowns of overweight pallets for use on lower capacity scissor lifts.

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