

Mobile Manipulator

A device for lifting and maneuvering loads up to 600 pounds

Intended Users: Maintenance personnel in a shop environment

CDC/NIOSH has developed a prototype device designed for one person to safely and effectively lift and maneuver loads up to 600 pounds for a variety of materials handling tasks in maintenance shops. CDC/NIOSH is also seeking a partner to refine development of this system and commercialize the final product under a licensing agreement. Preferred partners will have a strong market share and a demonstrated business network capable of effective dissemination and customer support for the final product.

For more information about the mobile manipulator or **to inquire about becoming involved in the manufacturing phase of development**, contact:

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Specifications

Vehicle

Weight	2500 lbs
Length	64 in
Width-tram	32 in
Width-operation	44 in
Height-tram	77 in
Height-operation	97 in
Speed Slow	1/2 mph
Speed Fast	2 mph
Drive System	hydraulic
Gradability	15%

Manipulator

Lifting Cap-hook	600 lbs
Vertical Reach	41 in
Horizontal Reach	50 in
Turret Rotation	360 deg
Operating System	pneumatic
Operating Pressure	90 psi

Design Features

- Mobile with multiple speeds for tramping and turning
- Compact and easy to stow or transport underground
- Full range of motion for ease of maneuvering objects
- Lifting pressure felt by operator limited to 10 pounds
- Operator positioned near lifting to control movement
- Leveling and stability provided by jacks
- Gripping attachments for specific tasks
- Power choices: on-board battery, compressed air, or 110-V cords
- Braking on lifting arm for load control

