



UNITED STATES DEPARTMENT OF DEFENSE

HUMANITARIAN DEMINING R&D PROGRAM

Air-Spade

A safer alternative to manual digging and vegetation removal in mine and UXO laden areas

The CEG Air-Spade creates a supersonic airstream to rapidly excavate soil in and around hazardous objects while providing the operator with greater safety than conventional digging methods. The Air-Spade exerts less than two (2) pounds of force on smooth, solid objects and is incapable of triggering most ordinary fuzed mines. There are three different platforms available for the Air-Spade. The smallest configuration is two wheeled, cart-mounted and can power one air tool at a time. This unit is man portable and can be pushed manually in most terrain. The second configuration is vehicle-mounted. This unit is fitted to a small utility, all-terrain vehicle and can



STATUS

The Air-Spade system is currently undergoing operational field evaluations in **Thailand, Chile and Angola**. The Air-Spade has also completed an operational field evaluation in **Afghanistan**.

power one air-tool at a time. The vehicle-mounted unit has an integrated vacuum system for removing loose dirt from deep holes. The third system is the skid-mounted unit, which can be fork lifted onto a truck or stored in a trailer. This unit has a larger compressor and can power two air-tools simultaneously. In addition, the skid-mounted unit has a small water jet for cutting extremely hard surface crust. All of the platforms come with three (3) air-powered vegetation removal tools in addition to the demining excavation tool.

FEATURES

- Additional operator safety due to standoff distance and no physical contact with ground
- Collapsible hoses that are easier to handle and store than conventional hoses



APPLICATIONS

- Air-Spade increases excavation rates in difficult soil conditions
- Multi-tool platform includes air-jet, water-jet, vacuum, and vegetation tools

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SPECIFICATIONS

CART-MOUNTED UNIT

Air Capacity	30 SCFM*
Length	36 in
Width	30 in
Height	28 in
Fuel Capacity	7.5 qt
Fuel Capacity	7.5 qt



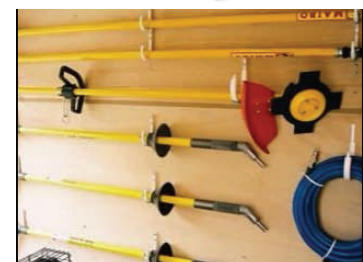
VEHICLE-MOUNTED UNIT

Air Capacity	30 SCFM*
Vacuum Dia.	2.5 in
Length	113 in
Width	74 in
Ground Clearance	7.2 in
Weight-Equipment	850 lbs
Weight-with Vehicle	2000 lbs
Fuel Capacity Equip	6 gal
Prime Mover	Kawasaki Mule 3000



SKID-MOUNTED UNIT (IN TRAILER)

Air Capacity	60 SCFM*
Water Reservoir	25 gal
Length	10 ft
Width	6 ft
Height	6 ft
Weight-Equipment	500 lbs
Weight-with Trailer	1700 lbs
Fuel Capacity	6 gal
Prime Mover	Wells Cargo Trailer



* Air excavation tool requires 30 SCFM for normal operation.