

M1022-A1 Dolly Set Mobilizer



connected to a shelter, the dolly set can be coupled together as a 4-wheel trailer (in tandem if desired) for transport by road, rail, ship or air.

The M1022-A1 system includes a 6.2 hp diesel engine powered hydraulic system with four cylinders on each half to provide the power required for all connection and lift sequences.



The unique patented design also provides for a balanced 3-Wheel handling position for each dolly for ease of unloaded movement and positioning.

The M1022-A1 system was certified by the US Army to meet all specified United States road regulations including the Federal Motor Vehicle Safety Standards (FMVSS) and the Federal Motor Carrier Safety Regulations (FMCSR).

Although designated as a 7.5 ton system, the M1022-A1 Dolly Set has a built-in 10-ton "Overload Capacity" for transport over highways or generally level or improved cross country terrain.

With the advent of increased awareness within US Military agencies for enhanced mobility and rapid deployment, the M1022-A1 Dolly Set Mobilizer has become the US Military's standard system to lift, load and transport ISO Tactical Shelters. More than 800 M1022-A1 systems have been fielded with US Military agencies since 1996.

The M1022-A1 is especially valuable when used as both a shelter handling device (for lifting, handling, truck or aircraft loading), and as a shelter transport device (for highway

or rough terrain travel). The self-loading Dolly Set can be used to lift and load ISO Containers or Shelters, transport them over the road or on rough terrain, and unload and position them at their final destination. It facilitates the intermodal transport of ISO Shelters and Containers in forward operating areas where more expensive assets such as cranes, forklifts, RTCHs, PLS systems, trailers, and K-Loaders may not be available.

The Dolly Set is also capable of roll-on/roll-off loading of 8-ft. or 8.5-ft. tall ISO shelters and containers to/from C130

aircraft. Up to two shelters can be loaded per aircraft with the auxiliary C130 Loading Kit.

Each M1022-A1 system consists of a front steerable dolly and a rear trailer dolly along with interconnecting brake and electrical lines to connect to the tow vehicle. After connection to each end of a shelter by means of four twistlock bolts, the Dolly Set raises the shelter to ride height in just a few seconds with its on-board diesel-powered hydraulic system. The M1022-A1 can be towed at highway speeds up to 55 mph (90 kph) or on rough terrain at reduced speeds. When not



Dolly Set in 4-Wheel Mode (Unloaded)



M1022-A1 Dolly Set Loading Shelter onto C130 Aircraft



M1022-A1 Dolly Set with Optional Side Lift Kit Installed.



Dolly Set being Maneuvered in 3-Wheel Handling mode



CDK Mobile Systems Inc.
P.O.Box 7631
Wilmington, DE 19803-0631

USA
Tel. 302-475-6696
Fax: 302-475-6618

company@cdkmobile.com
www.cdkmobile.com

M1022-A1 Dolly Set Mobilizer - Data sheet



Rear Dolly Permits Full Opening of 3-4 ft Wide Access Doors. Dolly Set Loaded into C130 Aircraft with 8-ft. x 20ft ISO Container.

US Army Test & Certification

The M1022-A1 Dolly Set was operationally tested by the US Army at Aberdeen Proving Ground to meet all specified design requirements. A total of 12,000 miles (20,000 km) of testing was performed on two

dolly sets over paved highways, gravel roads, cross country terrain, Belgian Block and Vibration courses, and both longitudinal inclines (30% grade) and side slopes (20% grade).

At the completion of all tests, the reliability and maintain-

ability of the M1022-A1 system was scored by the US Army as follows:

- Mean Miles Between Mission Failure - 12,000 miles (20,000 km)
- Mean Cycles Between Mission Failure - 55 cycles
- Total Scheduled Maintenance Per Semi-Annual Service - 1.2 hours
- Total Unscheduled Maintenance (over 12,000 miles) - 11.6 hours
- Maintenance Ratio (Hours per Operating Mile) - .003
- Mean Time to Repair - .25 hours

- **Side Lift Kit** (NSN 3950-01-418-0930) - Provides new high lift cylinders and all frames and lift chains to permit side loading of ISO Shelters and Containers. This feature permits loading and unloading of Shelters to or from other trucks, trailers and rail cars.
- **Redundant Power Kit** (NSN 1730-01-406-2585) - Provides hydraulic lines and accessory parts to permit the hydraulic system on one dolly half to power the other dolly in the event of an engine/pump malfunction.
- **Cold Start Kit** (NSN 6110-01-466-6395) - Provides an electrical enclosure with associated hardware and connectors to permit fail-safe 12V/24V jumping of the dolly set system direct from the tow vehicle for operation below -25F (-32C).

The dolly set was also successfully operated in a cold chamber at temperatures down to -25F (-32C) unaided, and at temperatures down to -50F (-46C) with the assistance of an auxiliary cold start kit.

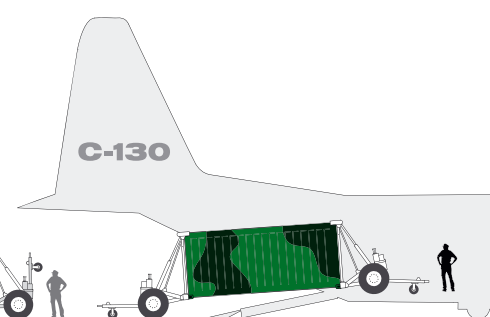
Special Purpose Kits

Various Special Purpose Kits have been tested and approved by the US Army and are available for the M1022-A1 system:

Additional product upgrades (S-280 Shelter Adapters, improved toolboxes, cylinders, engine covers) and auxiliary systems (C130 Loading Kits, Complexing Dollies) are also available and are detailed in separate publications. ■

Leading Particulars:

Designation	M1022-A1 Dolly Set Mobilizer
NSN	2330-01-378-9997
Weight (Empty)	2,795 kg (6,150 lbs) Standard 3,455 kg (7,600 lbs) w/Side Lift Kit Installed
Lift Capacity (Container Weight)	9,090 kg (20,000 lbs)
Transport Capacity	6,818 kg @ 90 kph (15,000 lbs @ 55 mph) 9,090 kg @ 83 kph (20,000 lbs @ 50 mph)
Max. Lift Height	1.27 m (50 in) Standard 1.57 m (62 in) with Side Lift Kit
Width	2.44 m (96 in)
Length (with 20ft. shelter)	10.97m (36 ft.)
Ground Clearance (typical)	35.5 cm (14 in)
Height	Adjustable
Diesel Engine	6.2 hp Kubota, One Cylinder, Electric Start
Hydraulic Pump	2 GPM Gear Pump, 2,000 psi Pressure
Lift Cylinders	4 ea: 3.5 in. Bore, 51.75 in. Stroke
Positioning Cylinders	4 ea: 1.5 in. Bore, 48 in. Stroke
Tires	12R x 22.5
Suspension	Air Spring-Max 1.5 hz Undamped Ride Frequency
Brakes	4-wheel Full Air Wedge Type
Towbar Lunette Eye	MS 51336
Air Line Connectors	MS35746 Compatible
Electrical system	12V with 24V Adaptation
Electrical Connectors	12-Pin NATO MS75021-1 (& 7-Pin SAE J560)
Sling/Tiedown Provisions	MIL-STD-209
Corrosion Treatment & Paint	Galvanized w/CARC Finish per MIL-C-46168
Patent No.	5,006,031



CDK Mobile Systems Inc.
P.O.Box 7631
Wilmington, DE 19803-0631

USA
Tel. 302-475-6696
Fax: 302-475-6618

company@cdkmobile.com
www.cdkmobile.com