

Item Description: Mobile Column Lifts

Quantity: 4

Mobile Column Lift Specifications:

NASA has a requirement for a set of mobile column lifts to support the GTA heat shield integration.

1. Specifications:

- 1.1. Each column shall be able to lift 18,000lb. A four column system shall have a capacity of at least 72,000lbs (minimum factor of safety: 3).
- 1.2. Each column lift shall communicate with each other via 24 volts DC, Wireless module secure, uninterrupted wireless signal, ALI/ETL certified.
- 1.3. The system shall allow for control from any of the columns or from a wired pendant.
- 1.4. Pendant shall be UL Approved and have a minimum length cable of 20 feet long.
- 1.5. Each column shall have a real time display to monitor operations and display faults.
- 1.6. Each column shall have two, deep cycle batteries.
- 1.7. System shall have the capability to link up at least 4 individual columns and the ability to control individually or in pairs.
- 1.8. System shall have the capability to keep the column lifts in sync with each other so that if one starts lagging the others slow to allow the slow lift to catch up. If any column gets over 3" off, the system will shut down and there shall be a method to re-sync the columns.
- 1.9. Lifting columns shall be able to lift payload to at least 72".
- 1.10. Lifting time for full lift stroke maximum shall not exceed 300 seconds.
- 1.11. Each column shall be able to display lift readings either in centimeters or inches.
- 1.12. System shall have the ability to stop at a programmed set limit within a 1 centimeter (~3/8" inch) window.
- 1.13. Each Mobile column lift shall be movable by one person.
- 1.14. Each column shall have a weight indication system.
- 1.15. The system shall have a slow speed setting to allow for better alignment control. This setting to be at least a 30% reduction of the normal speed and be available for both up and down movement.
- 1.16. Noise level: Max 80 db(A).
- 1.17. Each lift shall have adjustable forks that have at least an 8-14" width capability.
- 1.18. Each column shall have a flat lifting surface adapter kit.

2. Safety:

- 2.1. Each column shall have an independent positive mechanical locking system to prevent unintentional lowering. Maximum allowable drop 1 1/2". ACME screw and ball screw systems without secondary mechanical locks are not acceptable.
- 2.2. Each connected system shall have a micoprocessor-controlled synchronization method. Synchronization between columns to start at a minimum of 5/8".

- 2.3. Each column shall have an automatic weight capacity overload protection and thermal protection.
- 2.4. Each column shall have a hose burst safety device.
- 2.5. Each hydraulic system shall be tested under maximum load before leaving factory.
- 2.6. Each column shall have an ANSI/ALI-ALCTV certification.
- 2.7. Each column shall have a low voltage control panel.
- 2.8. Each system shall have dead man's operation. (When the control panel or pendant are not being touched the system cannot move.)
- 2.9. Each column shall have an emergency stop button.
- 2.10. Each column shall have a minimum of a NEMA4 electrical system and control box.
- 2.11. Each column shall have a battery charger built inside the column.

3. Other:

- 3.1. System shall include Delivery, Installation and Training.
- 3.2. System shall include a five year parts and labor warranty to begin at start of use period.
- 3.3. System shall include proof loading certificates.

4. Additional:

- 4.1. Shall be delivered to NASA Langley Research Center, Bldg 1262, no later than **February 15, 2015**. (Note: lead time is approximately **6 months**)