

**MODEL PA 36/28-S
SURFACE MOUNT**

SPECIFICATIONS

HEAVY DUTY PARALLELOGRAM TYPE LIFT

1.0 SCOPE

- 1.1 This specification sets forth the requirements for the purchase of heavy-duty Parallelogram type platform lift(s) to permit lifting vehicles having wheelbase dimensions up to 300 inches when measured from the front-most wheel hub to the centerline of the rear-most wheel hub. Installation of this equipment shall require no in-ground posts. Above ground scissors, post, or column type lifts are not acceptable.
 - 1.1.1. Equipment shall be new, furnished with all specified materials for installation when delivered. Used or reconditioned equipment will not be accepted.
 - 1.1.2. Equipment shall comply with all applicable Federal, State and local safety regulations and codes, and OSHA, ETL, UL, AWS, NEC and ANSI/ALI ATCTV 1998 standards.
- 1.2 All material thickness and structural dimensions are minimums. Dimensional tolerances, unless noted, are as follows: +/-0.25 inch for dimensions less than ten (10) inches; +/-1.0 inch for dimensions from ten (10) to five (5) feet inclusive, +/- 3.0 inch for dimensions greater than five (5) feet.

2.0 EQUIPMENT

- 2.1 Complete assembly shall consist of an electro-hydraulic lift unit, a control console and any accessories as specified herein. Required lengths of seamless stainless steel hydraulic lines shall connect the control console or steel reinforced hydraulic hose, nylon compressed air line and electrical cable approved for use in the lift unit's eventual installed location.

- 2.1.1 Sufficient lengths of hydraulic lines or hose, air line and electrical cable shall be supplied with the lift to permit locating the control console ten (10) feet (minimum) from the connections on the lift.
- 2.1.2 Hydraulic interconnections shall have standard JIC fittings throughout.
- 2.2 Lifting capacity: 18 tons (36,000 lbs.) per lift unit, minimum.
- 2.3. Minimum lifting height from finished floor level to bottom of tires: 63 inches, minimum. Lifting unit shall permit lifting of vehicle to any height to this full amount with a minimum of 10 locking positions distributed throughout the lifts travel.
 - 2.3.1. First lock position shall be 18 inches minimum to allow comfortable and safe brake/tire work at this height.
- 2.4 Lifting speed: 60 seconds to full height.
- 2.5 Platform dimensions.
 - 2.5.1 Platform length: 336 inches
 - 2.5.2 Platform width: 32 inches
 - 2.5.3 Spacing between platforms: 45 inches
 - 2.5.4 Overall width: 109.5 inches.
 - 2.5.5 Retracted height 13 inches to floor level.
- 2.6 Lift unit shall conform to ANSI/ALI ALCTV 1998 for Automotive Lifts Safety Requirements for the construction, care, use and UL201.
 - 2.6.1 Support leg joints shall be provided with composite bushings at the cylinder to leg connection and the leg to platform connection, where stresses are at maximum, for extended lift life and easy repair.

- 2.6.2 Each platform shall be constructed of 0.375 inch thick steel plate supported by (2) 4 x 8 x 0.250 inch wall ASTM A-500 Grade B structural steel tubing and a structural steel channel 8" @ 11.5 lb/ft.
- 2.6.3 Each platform shall have tubular steel wheel stops mounted to the front and .375 inch thick steel plates mounted at the rear to prevent a vehicle from rolling off the front or rear of the lift when raised more than 12 inches.
 - 2.6.3.1 Rear wheel stops shall automatically swing into position as the lift is raised and automatically recede when lowered.
 - 2.6.3.2 Chocks shall not reduce the effective length of lifting platforms by more than six (6) inches.
 - 2.6.3.3 Wheel chocks shall be interchangeable.
 - 2.6.4.4 Chocks shall be securely pinned to platform to prevent casual removal by shop personnel.
 - 2.6.4.5 Chock design shall provide for a minimum of 2 inches upward movement to prevent injury to personnel or damage to lift unit in the event of obstruction between lift unit and wheel chock.
- 2.7 Leveling/Anchoring provisions.
 - 2.7.3 The base of each lifting member shall provide for a minimum of 1-inch vertical adjustment. The adjustment of one lifting member shall be independent of adjustment of a different member to accommodate uneven slab shifting/settling.
 - 2.7.4 The base of each lifting member shall be pre-drilled to accept anchoring bolts adequately sized for the loads imposed during lift operation.
 - 2.7.3.1 The concrete flooring requirements must require ***no more than 2000-PSI*** compressive strength.
- 2.8 There shall be no fixed obstructions between lifting platforms.

- 2.9 Hydraulic system.
- 2.9.1 All hydraulic system components shall comply with section 1.1.2 above.
- 2.9.2 Each hydraulic cylinder shall incorporate a flow check integrally mounted to prevent inadvertent retraction in the event of a major fluid leak.
- 2.9.3 Hydraulic cylinders shall be mounted to the underside of the lifting platforms away from sources of dirt, grime and damage from falling objects.
- 2.9.4 All hydraulic hoses shall be of steel reinforced construction and have standard JIC fittings throughout.
- 2.9.5 The lift shall be driven by a hydraulic pump of U.S. manufacture, capable of supplying the appropriate PSI and GPM to operate the lift.
- 2.9.6 In the event of a power failure, the lift shall be able to be lowered from any raised position by operation of a manual pump and valving.
- 2.10 Safety locks
- 2.10.1 Steel safety locks with a safety factor of not less than 3:1 shall be mounted one set to each lifting cylinder and shall allow the lift to be locked at a minimum of six (6) different levels. These locks shall ensure a minimum amount of travel in the event of a hydraulic fluid leak and shall maintain the height of the lift in that situation.
- 2.10.2 The safety locks shall automatically disengage when the lift “lower” control is operated, and automatically re-engage when the lift “lower” control is released. The safety locks shall be automatically engaged as the lift ascends. This will ensure positive lock engagement when raising the lift in the event of hydraulic failure.
- 2.11 The lift shall have full-length continuous safety tapeswitches mounted to the lower surface of the main lifting platform. Safety tapeswitches will be located on the inside and the outside of both platforms.
- 2.12 Control console shall house the following equipment.

- 2.12.1 Oil reservoir, suction strainer, low-pressure return filter, hydraulic Hi/Lo gear pump and manual pump.
- 2.12.2 Electric motor; 208/230/460 volt, 3 phase, 60 Hz TEFC of U.S. manufacture, 10 HP minimum. Motor shall not require rework for replacement.
- 2.12.3 Electrical enclosures for control components shall be NEMA 12 rated (minimum) and have the following controls mounted on them while still maintaining their sealing ability.
 - System disconnect
 - “Power-on” pilot lamp
 - “Raise” and “Lower” controls and “Press to lock lift” control
 - “Operator Lock-out” pilot lamp
 - An alphanumeric LED display to identify safe and unsafe operating conditions and assist in trouble shooting problems
- 2.12.4 The control system shall be tested and approved by the Nationally Recognized Testing Laboratory as established by OSHA to UL 210.
- 2.13 The control system shall be operated by a Programmable Logic Control (PLC) and lock-out all operations of lift controls if an unsafe condition exists due to insufficient air pressure to operate safety locks; displace safety tapeswitch or uneven platform heights. This lock-out shall not be able to be reset unless the unsafe condition has been corrected.
- 2.13.1 The control system shall ensure that lifting platforms differ in height by no more than two (2) inches. If platforms become uneven by a greater amount, the lift shall stop and prohibit further operation until the condition is corrected.
- 2.13.2 Control system shall be able to be programmed to stop lift a specific height in order to load or unload any accessory jack or stop at a specific height to accommodate individual technicians or low ceiling height.
- 2.13.3 Control system shall be able to allow PLC assisted lowering of unit in case of power failure by use of a 12-volt battery.
- 2.14 Warranty:
 - lift – 2 years parts and labor
 - Motor and pump – 1 year parts and labor

- 2.15 Optional equipment
 - 2.15.1 Air over hydraulic jacking beam
 - 2.15.2 Track lighting system
 - 2.15.3 Oil drain pan

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