

Reliable, Safe & Easy-To-Use!



Place MatJacks under a load and inflate. Our hand-held controls have two positions: inflation and deflation. It's that easy! No more hand jacking or complex hydraulic valve systems.

MatJacks go anywhere you have one inch clearance and work in rain, snow and the coldest weather. Covered with five layers of Neoprene rubber (Butyl rubber available upon request) with a raised, conical, interlocking surface, MatJacks are designed to "grip" the load.

The purpose of this bulletin is to provide information regarding the lifting and height capabilities of Matjack Lifting Bags.

Mechanical or hydraulic jacks concentrate their energy into a small contact surface area while lifting bags distribute forces equally over the entire surface area of the bag.

Matjack Lifting Bags work on a simple yet proven law of physics. For each pound (psi) of air pumped into the lifting bags, that force is multiplied over the bag's entire surface area, creating tons of force.

Both jacks and air bags have their specific merits. Matjack Lifting Bags have a 1" maximum thickness and this singular difference permits access to lift areas where no known conventional lifting devices can be used.

MAXIMUM LIFTING CAPACITIES AND HEIGHTS AS SHOWN IN OUR LITERATURE ARE BASED ON:

1. Full surface contact of the bag to the load and support area.
2. Maximum lifting height the bags can achieve at nominal-not listed maximum tonnages as shown.

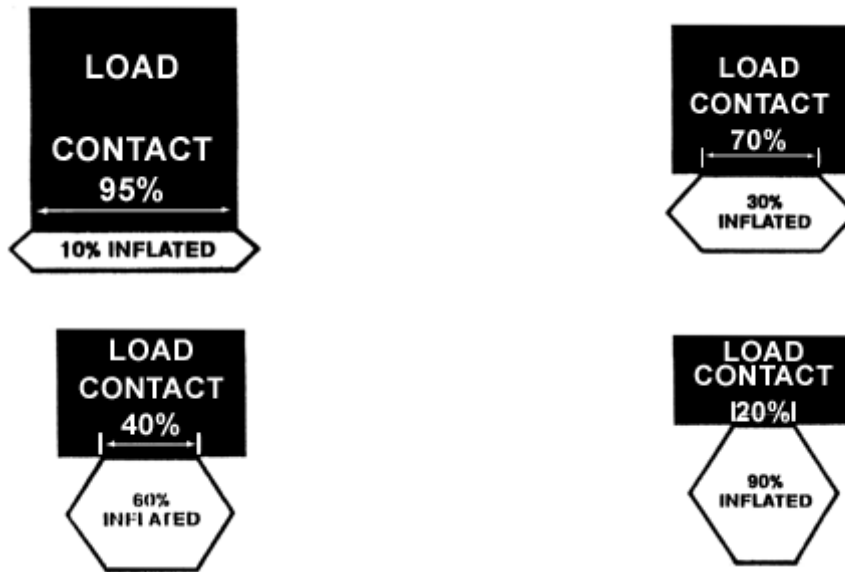
MAXIMUM LIFTING HEIGHT AND MAXIMUM LIFTING FORCE CANNOT BE ACHIEVED SIMULTANEOUSLY.

Matjack Lifting Bags are either square or rectangular. The 1" deflated profile begins to oval, as shown in the illustrations. With each additional pound of air pressure introduced, the arcing effect of the bag reduces surface contact and a loss of lifting power and height is in evidence. The same phenomenon occurs if the load being listed (i.e. beams or similar items) are smaller than the bag itself. In these cases, a shim/block equal in size to the lifting bags is used to transfer the energy from the non-contact bag surface area to the lifted object. In addition on partially-contacted loads, the internal steel cord construction aids in transferring lifting power to the point of lift.

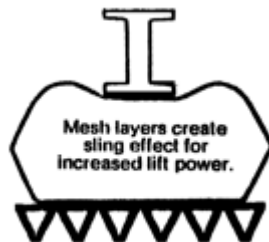
Because of the infinite number of variables in weights, arc and contact areas Matjack Systems or its representatives should be contacted prior to lifting bag selection on critical weight/height requirements. The surest way to resolve any doubt is with a field demonstration on your specific application. Should Matjack Lifting Bags not meet with your complete satisfaction for any reason,

they will be replaced to comply with customer need and satisfaction.

Effect of surface contact as bags are inflated is variable in accordance with different load weights.

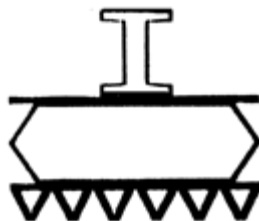


When only partial surface area of bags contact the load-lifting capacity varies in relation to load weight and bag arc.



NOT RECOMMENDED

Maximum lifting power cannot be achieved when only partial contact with top of bag is achieved (as illustrated).



RECOMMENDED

For partial contact loads, use steel plate (or equal) to place under load increasing load distribution over more bag surface area.

Illustrations above are for reference only and are not to be used as examples of the actual performance capabilities of the bags.