

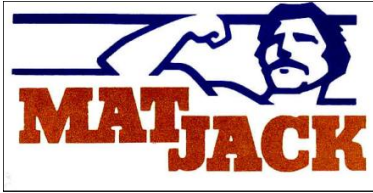
**INDIANAPOLIS INDUSTRIAL PRODUCTS, INC.**



**MATJACK**

**LOW PRESSURE AIR LIFTING CUSHION  
OPERATION AND INSTRUCTION MANUAL**

# INDIANAPOLIS INDUSTRIAL PRODUCTS, INC.



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[www.matjack.com](http://www.matjack.com)

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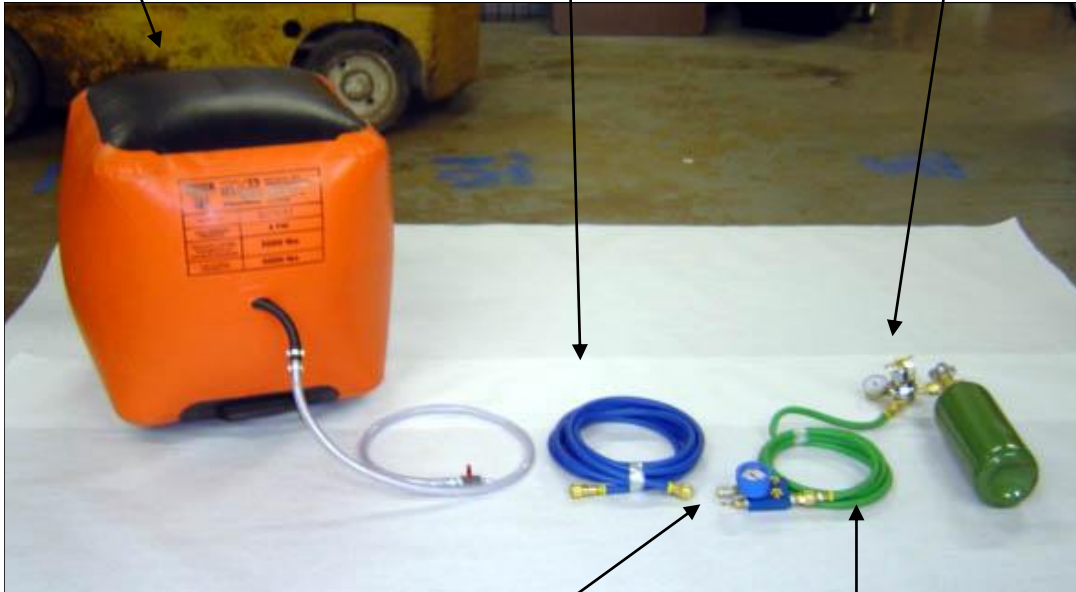


## PART IDENTIFICATION FOR SINGLE AIR LIFTING CUSHION OPERATION

**MATJACK  
LOW PRESSURE  
AIR CUSHION**

20' / 6m SUPPLY HOSE

TWO STAGE REGULATOR  
2216 psi / 200 bar OR  
4500 psi / 300 bar



SINGLE DEADMAN CONTROL  
WITH SAFETY RELIEF

10' / 3m REGULATOR HOSE

**MATJACK  
QUICK LIFT  
AIR CUSHION**

TWO STAGE MANUAL  
AIR PUMP





**PART IDENTIFICATION  
FOR SINGLE AND DUAL AIR LIFTING CUSHION OPERATION**

**MATJACK  
LOW PRESSURE  
AIR CUSHION**      **SINGLE AIR CUSHION**



30' / 9m SUPPLY HOSE

SINGLE BALL VALVE  
CONTROL WITH RELIEF

**MATJACK  
LOW PRESSURE  
AIR CUSHION**

**DUAL AIR CUSHION**

**DUAL BALL VALVE  
CONTROL WITH RELIEF**



30' / 9m SUPPLY HOSE

30' / 9m SUPPLY HOSE



# PART IDENTIFICATION FOR MATJACK LOW PRESSURE AIR LIFTING CUSHION

GRIP SURFACE



AIR INLET VALVE FITTING

CARRY HANDLES



# PART IDENTIFICATION FOR MATJACK LOW PRESSURE TURBO AIR LIFTING CUSHION

GRIP SURFACE CARRY HANDLES



ADJUSTING  
HANDLE

TURBO AIR INLET VALVE  
/ CAMLOCK FITTING

GRIP SURFACE

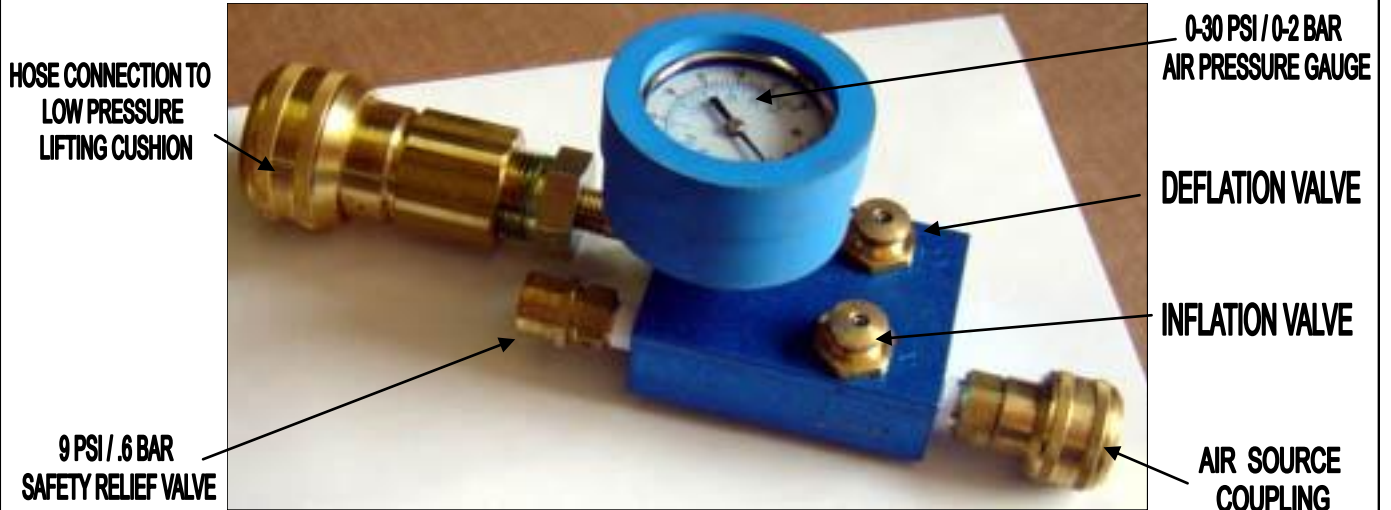
CARRY HANDLES



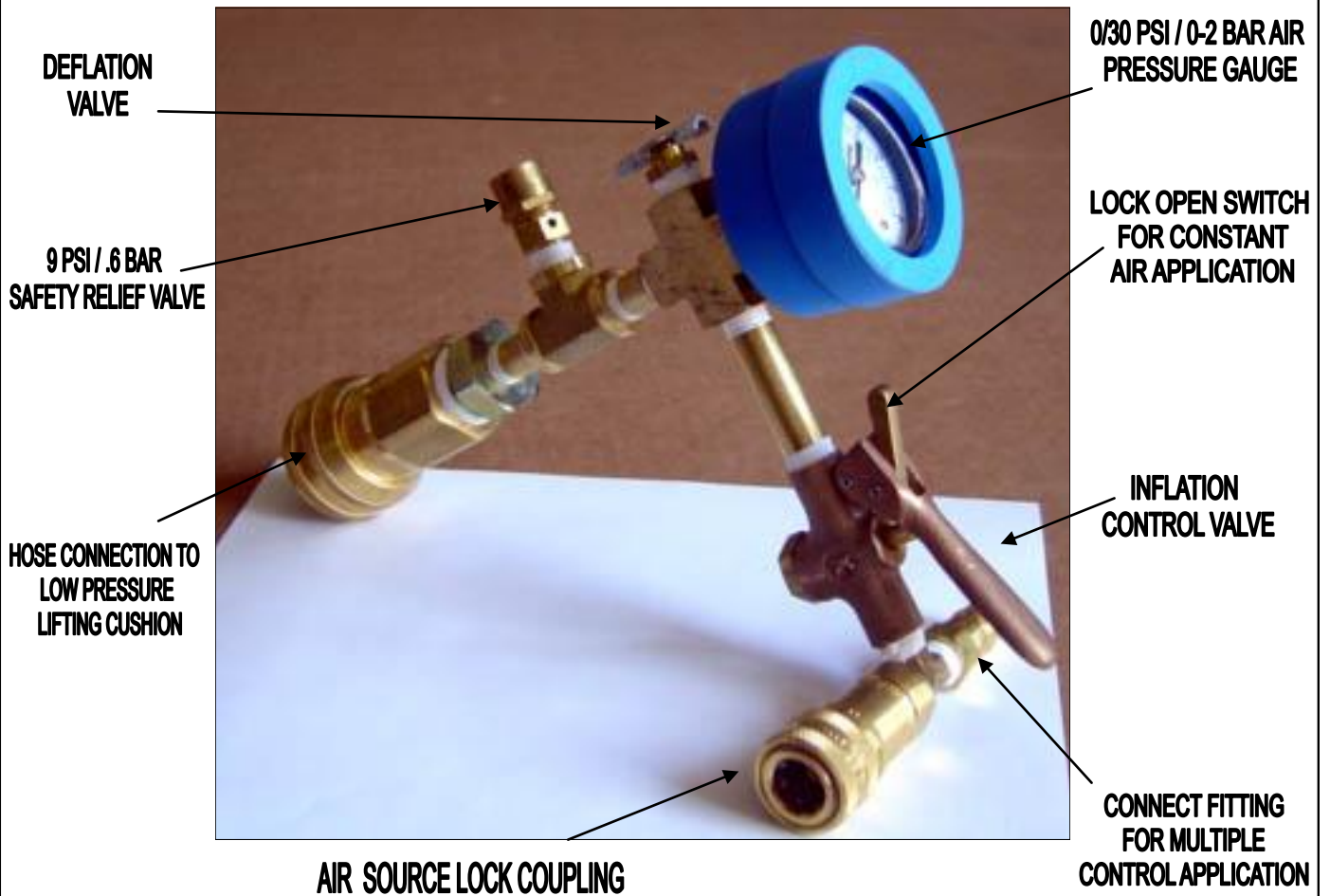
# PART IDENTIFICATION FOR MATJACK LOW PRESSURE AIR CUSHION EQUIPMENT

## LOW PRESSURE

### SINGLE DEADMAN PUSH BUTTON CONTROL VALVE W/ SAFETY RELIEF

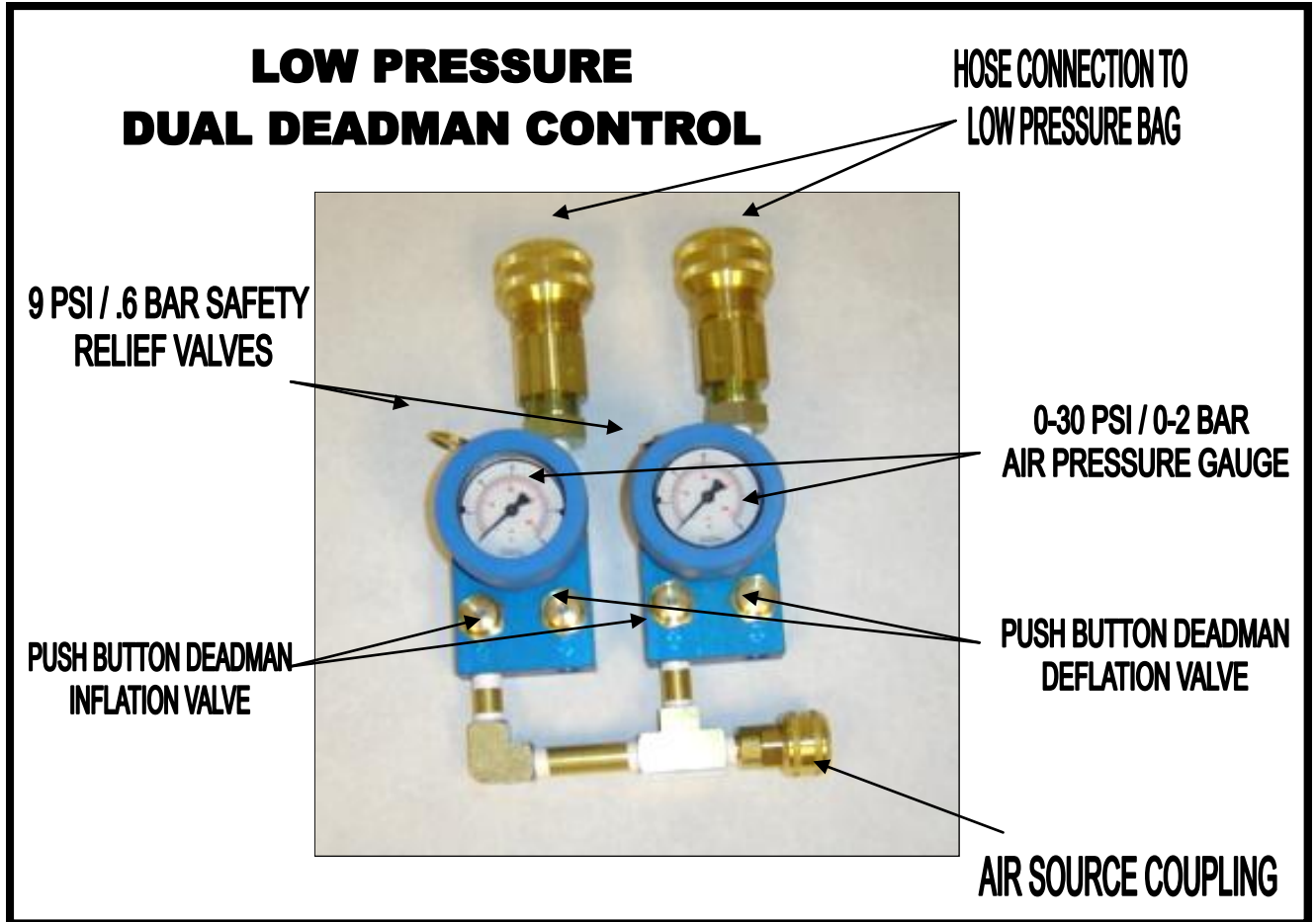


### LOW PRESSURE LEVER CONTROL VALVE





# PART IDENTIFICATION FOR MATJACK LOW PRESSURE AIR CUSHION EQUIPMENT



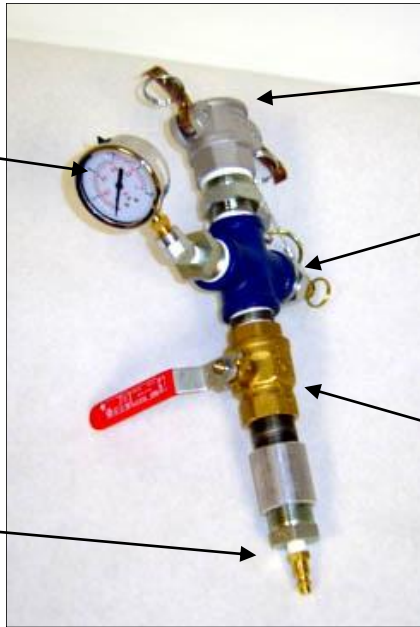




# PART IDENTIFICATION FOR MATJACK LOW PRESSURE AIR CUSHION EQUIPMENT

## BALL VALVE STYLE SINGLE CONTROL WITH RELIEF

0-15 PSI / 0-1 BAR  
AIR PRESSURE GAUGE



AIR HOSE TO  
CUSHION CONNECTION

DEFLATION AND  
SAFETY RELIEF VALVE

INFLATION BALL VALVE

AIR SOURCE COUPLING

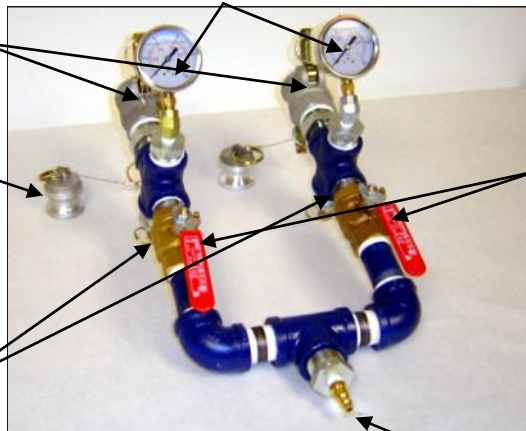
## BALL VALVE STYLE DUAL CONTROL WITH RELIEF

0-15 PSI / 0-1 BAR  
AIR PRESSURE GAUGE

AIR HOSE TO  
CUSHION CONNECTION

DUST CAP TO PROTECT  
AIR HOSE CONNECTION  
WHEN NOT IN USE

DEFLATION AND 9PSI / .6 BAR  
SAFETY RELIEF VALVE



INFLATION BALL VALVE

AIR SOURCE COUPLING



**PART IDENTIFICATION  
FOR MATJACK LOW PRESSURE  
AIR CUSHION EQUIPMENT**

**30' / 9m INDUSTRIAL  
1.25" / 3.13cm HOSE W/ EITHER CLAW  
OR CAMLOCK FITTINGS**



**25' / 7.6m X 3/4" / 1.9cm HOSE  
W/ QUICK DISCONNECT FITTINGS**





**PART IDENTIFICATION  
FOR MATJACK LOW PRESSURE  
AIR CUSHION EQUIPMENT**

**DUAL ACTING / TWO WAY MANUAL  
AIR PUMP CAPABLE OF 8 PSI / .56 BAR**

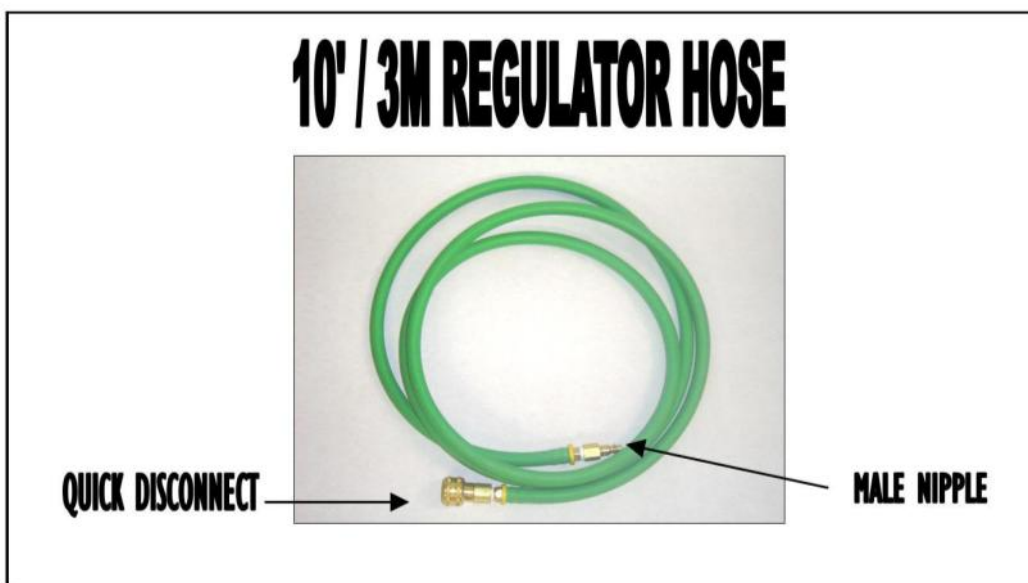
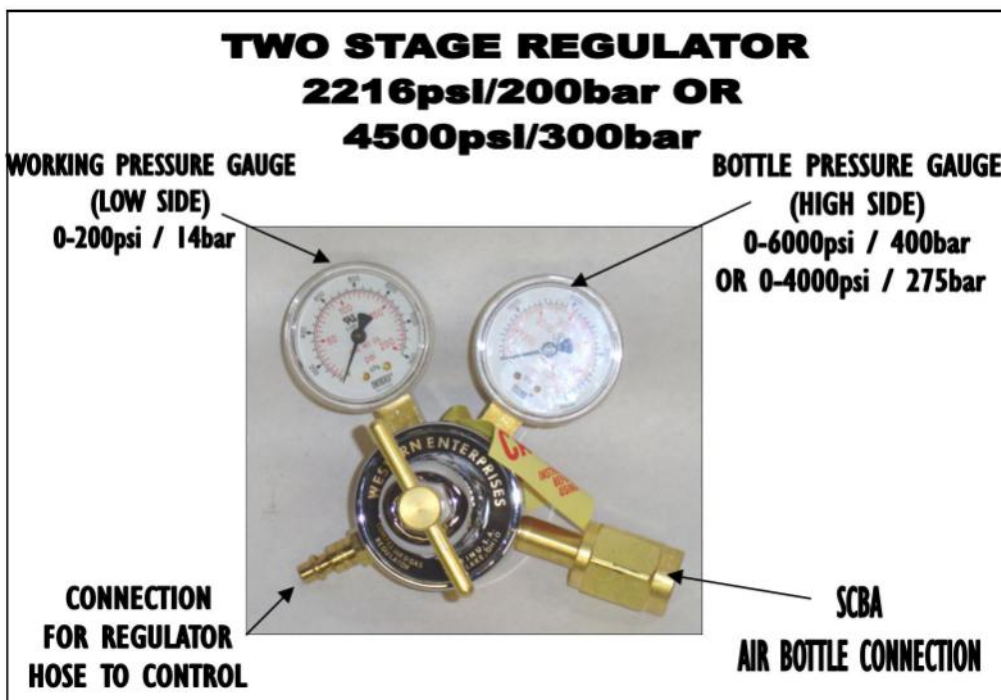


**INFLATION / DEFLATION HOSE  
FOR USE W/ DUAL ACTING HAND PUMP  
AND QUICKLIFT CUSHION**





# PART IDENTIFICATION FOR MATJACK LOW PRESSURE AIR CUSHION EQUIPMENT





# LOW PRESSURE CUSHION

## GENERAL INSPECTION AND ASSEMBLY

After unpacking, lay out system for general familiarization. Inspect for any shipping damage, check hoses, regulator, pressure control unit, bag and accessories.

### Air Lifting Cushion

- Inspect them and look for any obvious shipping damage. These bags are made to be durable. If there is any damage, please report this immediately to your dealer or our service department through our toll free number 800-827-3755 or 317-359-3078



### High / Low Pressure 2 stage regulator

- Regulator must be used whenever you use a high pressure air source, such as, a breathing air cylinder. Check for damaged gauge lenses, dented surfaces, bad threads, etc. before each use. If any exist contact your dealer or our service department.
- The gauge closest to the air intake will give the operator a reading of the pressure of his air source. The second gauge indicates the working pressure operating range of the air bag.



**CAUTION**

Working Pressure not to exceed 10 PSI / .7 BAR



# LOW PRESSURE CUSHION ASSEMBLY INSTRUCTIONS



- 1. Connect regulator to air source.**
- 2. Loosen pressure adjusting handle on the regulator.**
- 3. Connect the regulator hose quick disconnect fitting to the regulator.**
- 4. Connect the regulator hose male nipple to the inlet on the control valve.**
- 5. Connect the cushion supply hose to the control valve outlet.**
- 6. Connect the other end of the supply hose to the male nipple on the Matjack air lifting cushion. Depending on fittings this may require different actions to complete connection**

## OPTIONAL EQUIPMENT

Your specific order may vary with equipment shown above, (air source, controls or fittings, etc.). For assembly and operation instructions look for separate instruction sheet or contact Matjack or your local dealer.



## **ASSEMBLY INSTRUCTIONS FOR QUICKLIFT AND LOW PRESSURE CUSHIONS BEING USED W/ DUAL ACTING HANDPUMP**



- 1. Connect inflation / deflation hose to dual acting hand pump on inflation port.**
- 2. Connect quick disconnect end of inflation/ deflation hose to hose connection on cushion.**
- 3. Open shut off valve on inlet hose attached to cushion.**
- 4. Ready to inflate.**

**\* If inflating with push button deadman control follow general assembly instructions for low pressure cushions.**

### **OPTIONAL EQUIPMENT**

**Your specific order may vary with equipment shown above, (air source, controls or fittings, etc.). For assembly and operation instructions look for separate instruction sheet or contact Matjack or your local dealer.**

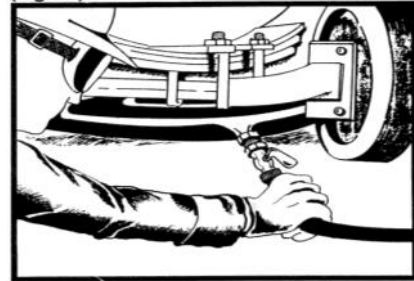


# RULES FOR SAFE OPERATION

**CAUTION**

**READ RULES FOR SAFE OPERATION BEFORE OPERATING THE AIR CUSHION**

- Before putting the air lifting cushion system into operation, the operator and personnel in the working area must be properly suited to the environment in which they will be working. Safety equipment is of the utmost importance. Hard hat, gloves, protective clothing and footwear **MUST** be worn to prevent injuries.
- Because air lifting cushions may be used in so many different environments, operators must be aware of the many **HAZARDS** to which they may be exposed to and should possess protective equipment accordingly.
- Before raising an object, careful evaluation should be made to predetermine desired height or load movement. This allows you to obtain, in advance, all necessary blocks and/or shoring before you commit the air lifting cushions.
- Always maximize the contact area of the air lifting cushion. The upper outside edge of the air cushion should be lined up with the outside edge of the load to be lifted to maximize lifting capacity.
- As the bag is being inflated stand to one side and clear all other personnel from the vicinity. **DO NOT** stand in front of the opening where the air lifting cushion has been placed, as there is a possibility of the air lifting cushion being pushed out by the load shifting.
- Air cushions should be watched as inflation takes place to make sure placement is correct as contact is made with surface to be lifted.
- The entire surface of the cushion needs to be under the load to prevent the cushion from potentially pushing out from under the load. Even though Matjack air cushions come available with grip surfaces these cautions are necessary to assure a good, safe lift.
- Always make sure the top and bottom surface are directly aligned.
- As the load is being moved or lifted, always block and/or shore the load.
  - A. Always lift an inch / cm then crib and inch / cm.
  - B. When blocking, have the operator stop the lift. After blocking, resume the lift.
  - C. Use blocks and shoring that will be able to assume the load. Remember, although the air lifting cushion does not need a smooth surface, blocks and shoring do.
  - D. **NEVER** work under a load supported by only the air lifting cushion.







# RULES FOR SAFE OPERATION

**CAUTION**

**READ RULES FOR SAFE OPERATION BEFORE OPERATING THE AIR CUSHION**

- **NEVER** inflate cushion against sharp objects or on a heated surface over 170 degrees Fahrenheit. When it is necessary thick rubber belting and or asbestos blanket can be placed between a hot or sharp surface to protect the cushion.



- When using the air lifting cushion, always inflate at a slow rate.
- **NEVER** operate air lifting cushions, hoses, valves, regulators, etc. that are damaged or improperly assembled.





# OPERATING INSTRUCTIONS

1. After assembly is completed make sure pressure adjusting handle on the regulator is loosened.

**CAUTION**  
Always open the high pressure air source slowly.  
Failure to do so may damage the regulator. 

2. Open air source slowly. Observe the high pressure gauge. The gauge should reflect the air supply pressure.

3. The outlet valve on the regulator can now be opened, allowing air flow to the controller by adjusting working pressure on the regulator to 10 psi / .6 bar by turning the handle clockwise.

4. The operation of the controller is simple. On the deadman push button control the inflation valve is simply depressed allowing air to flow to the cushion.

5. To deflate the air bag the deflation valve is depressed. Make sure the air exhaust outlet is clear of debris.

**CAUTION**  
Due to tremendous forces exerted on the air lifting cushion, inflation should not exceed 1 psi / .07 bar while the air lifting cushion is unrestrained.  
Always have the air lifting cushion connected prior to placing the cushion under or between the load to minimize the operator's exposure to the load area and eliminate the possibility of the operator placing the air lifting cushion with the air inlet under the load.





# OPERATING INSTRUCTIONS

**6. Place the air lifting cushion under the load with the air inlet protruding. Always place the bag as close to the load as possible. This will maximize the contact area between the air lifting cushion and the load and make for a much more efficient lift.**

**7 When operating the controller with (2) air lifting cushion connected, practice operating the bags simultaneously and alternately, inflating and deflating. As you can see, the operation of the air cushion system is simple.**

**8. Whether using the push button deadman control, the manual hand pump, low pressure lever control or the ball valve control (pic. 1,2,3) make sure you practice and understand the operation of the control system you have purchased prior to putting the air cushions and equipment into the field for everyday usage.**



## Ball valve control

1. Ball valve closed—no air flow to cushion



2. Ball valve opened—allow air flow to cushion



3. Deflate and safety relief—pull ring to allow air to escape.

 **CAUTION**  
Always inflate the air lifting cushions slowly to minimize chance of the load shifting.

# CARE AND MAINTENANCE

## Matjack air lifting cushion



- Inspect after each use.
- Remove any foreign objects that may be on the cushion surface, such as, broken glass and debris.
- Wash cushion in soap and water. Avoid getting water in the cushion. If water does get in, allow the cushion to thoroughly dry before the next use.
- Leak test the by pressurizing to .5 psi / 1.05 bar for 30 minutes. If a loss of pressure has occurred, immerse in water of soap solution. The appearance of small air bubbles around the connection pipe/air inlet or any surface should be repaired and / or patched before using cushion.
- After repair recheck for leaks.
- Check for damage on the air inlet nipple, if present contact manufacturer or local dealer for replacement.
- Always field test your air lifting cushion annually to check for potential problems, (see field test procedures).
- All other questions contact Matjack or local authorized dealer.

## Extension Hoses



- Keep couplings clean and dry.
- Broken hose must be replaced.
- Inspect for cracks or nicks.
- Check for seals missing or damaged.

## Control Valves & safety relief



- Keep couplings clean and dry.
- Replace broken gauge or fittings.
- Check for damaged or missing seals (where applicable)

## Two stage regulator assembly



- Keep clean and dry.
- **Do not** lubricate.
- Operator should limit repairs to lens or gauge replacement and / or fittings.
- If any other repairs are necessary contact an authorized dealer or return to:  
Indianapolis Industrial Products, Inc.







# **MATJACK LOW PRESSURE WARRANTY**

**INDIANAPOLIS INDUSTRIAL PRODUCTS, INC  
STATEMENT OF WARRANTY FOR LOW PRESSURE AIR LIFTING CUSHION**

**Seller warrants to the original purchaser that its product shall be free of defects in material and workmanship for a period not exceeding 2 years: under normal use and service for which it is intended if, but only if, it has been properly operated pursuant to instructions supplied by seller. Seller's obligation under this warranty is limited to replacing or repairing free of charge during the first year any defective products manufactured by seller which are returned to seller's factory within 45 days after the defect is discovered. During the second year after delivery seller shall warranty parts required to repair product pursuant to the same conditions described earlier regarding service and use during the first year. All labor will be covered under warranty in the first year, but will be the responsibility of the customer in the second year. Freight charges will be the responsibility of the buyer.**

**THE WARRANTY PROVIDED IN THIS ARTICLE AND THE OBLIGATIONS AND LIABILITIES OF SELLER THEREUNDER ARE EXCLUSIVE AND IN LIEU OF AND BUYER HEREBY WAIVES ALL OTHER REMEDIES, WARRANTIES, GUARANTIES OR LIABILITIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE (INCLUDING WITHOUT LIMITATION ANY OBLIGATIONS OF THE SELLER WITH RESPECT TO FITNESS, MERCHANTABILITY AND CONSEQUENTIAL DAMAGES) OR WHETHER OR NOT OCCASIONED BY SELLER'S NEGLIGENCE. THIS WARRANTY SHALL NOT BE EXTENDED, ALTERED OR VARIED EXCEPT BY A WRITTEN INSTRUMENT SIGNED**



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