



**mfcSurvival**

by RESPIREX

innovation in SAFETY + SURVIVAL

# Airlift Cushions Series A-D

0.5 Bar

Product **Manual**



Technical data / Capacity Parts	3
Parts List	4
Materials list	5
Operational instructions	6
Packing	9
Storage	9
Maintenance & test procedures	10
Repairs	11

**WARNING: Carefully read this manual before operating**

**NOTICE: The manufacturer takes no responsibility for the consequences of actions not complying with the instructions given in this manual.**



TYPE	A	B	C	D
<b>Diameter (cm)</b>	61	76	91	122
<b>Lift at Max. Pressure (kg)</b>	1488	2325	3347	5951
<b>Max. Pressure (bar)</b>	0.5	0.5	0.5	0.5
<b>Height Inflated (cm)</b>	43	59	61	100
<b>Height Deflated (cm)</b>	5	5	5	10
<b>Air Requirement (ltr)</b>	222	450	673	1900
<b>Weight packed (twin set) (Kg)</b>	30	34	45	50

## MATERIALS

<b>Working Surfaces</b>	3 ply neoprene coated belting. 5mm normal thickness.
<b>Inflation Port</b>	Moulded neoprene Flange/Tube fitted with quick release safety lock coupling.
<b>Restraint webs</b>	Terylene web 25mm wide.
<b>Side wall</b>	Heavy duty neoprene fabric (coated both sides)
<b>Relief Valve</b>	Pre set to 0.5 bar

## MFC SERIES A-D DELIVERY HOSE

10mm I/D (16mm O/D), Reinforced PVC Hose. (Alt. Rubber covered hose can be supplied if specified).

Max Working Pressure: 16 Bar

Standard length supplied: 10 metres

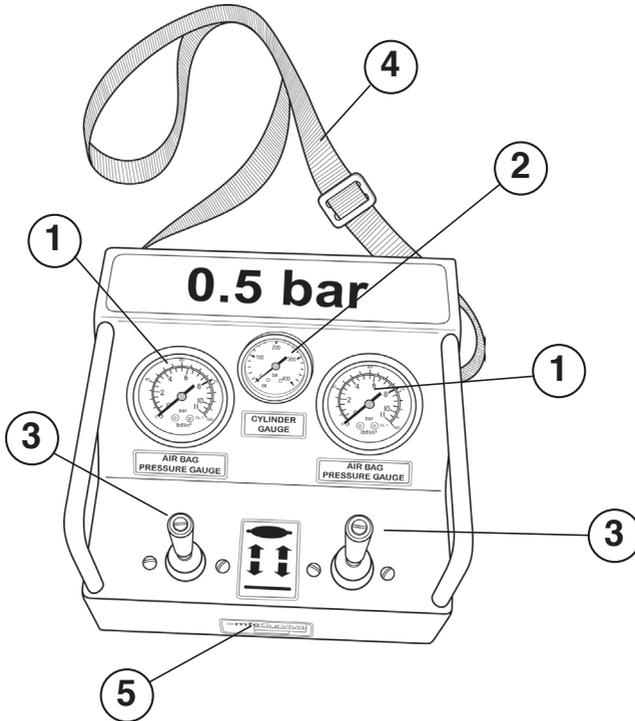
Standard issue supplied as separate item with couplings each end.

Extension hose lengths can be supplied to customers requirements complete with couplings

# Parts List

The Type 530/646 Combined Controller regulates pressure output and gives independent control to each cushion.

The lever actuated control valves are three positional providing for inflation or deflation. They are supplied with spring loaded “deadman” automatic return to off control. The Relief Valve is spring loaded with nitrile rubber seals, re-seating within -10% of pre-set pressure.



1	0.5 Bar Panel Mount Gauge. Lum. Ctd. Dial (Airbag pressure).	
2	0-400 Bar Panel Mounted Gauge (Cylinder pressure).	
3	Lever actuated spool valve.	
4	Nylon web adjustable carrying/handling shoulder strap.	
5	MFC Prod/Serial No. Label.	
W 22.3 x D 20 x H 15.5 cms		Weight: 5.54kgs (12lbs).

**CAUTION:** Take all the normal precautions against the danger of outbreak of fire, such as laying out a charged line of hose or foam branch as appropriate.

1. Make a careful assessment of the operational scenario to determine different hazards and risks and select the best position for inserting airlift cushions.
2. Unpack Airlift Cushion(s) from the valise and ensure the side walls are folded inwards in regular fashion and that the upper working surface is “square” with the lower working surface by reference to the web loops placed at quadrant positions.

**CAUTIONS:**

- When placing airlift cushions in position, avoid contact with sharp or jagged surfaces, particularly on side walls as they may puncture the surface causing the cushion to fail.
- Hot exhausts should be covered with a folded fire and heat resistant blanket. Failure to do so may damage the surface of the cushion.

3. Position Airlift Cushions as far as possible under load.
4. Connect delivery hoses between the Airlift Cushions and controller. Ensure delivery hoses are well laid out and not ‘Kinked’, maintaining a clear line to respective Airlift Cushions.
5. Connect high-pressure hose from cylinder to centre port on rear of controller (Max. controller inlet pressure is 300 bar.)

**CAUTION:** Ensure controller levers are in ‘off’ position before opening air supply.

**WARNING:** Before inflations the Airlift Cushions, consider the effect of the lift stability. Remember a three point lift is the safest i.e. one side or end of a vehicle in contact with the ground and two Airlifts is the safest. MFC Acknowledge that almost every operational rescue/recovery will have a different scenario with differing risks and hazards.

6. When inflating two Airlift Cushions, commence inflation by operating both control levers. The operator should deliver the air flow to both cushions at approximately the same rate (adjust to suit), this will ensure a stable lift.
7. Pack and block the load as the lift proceeds, taking care to position blocks so that if necessary, they can support the load.
8. Web loops are provided to “hang” cushions between shuttering, collapsed trenches, vehicles or skips etc., which may be tight to walls.
9. Should a change of cylinder be required, close the cylinder valve. Disconnect by means of cylinder adaptor hand wheel and reconnect to charged cylinder.
10. After use, deflate by selecting relevant position of control lever. Deflation is the reverse of the inflate procedure.

## 1. GENERAL

MFC Series A-D Airlift Cushions are constructed to a standard which achieves a minimum burst pressure of three times working pressure.

It should be noted that, due to the type of fabrics used in its construction, when the Airlift cushions are wet, there may sometimes be visual evidence of minuscules white bubbles which form a line of froth at the seams of the units. This is recognised within the industry as 'Lateral Leakage' and is simply air that is trapped in the layer of nylon between the rubber coatings, forcing its way to the nearest available edge of the fabric. This type of leakage will not affect the performance of the product over the course of an operational procedure and can be safely ignored. However, if there is evidence of large transparent bubbles, this is clearly evidence of a leak that must be repaired at the earliest convenience.

## 2. LABEL

Each cushion will have a label placed prominently on the cushion giving the following information:

1. Maximum working pressure
2. Serial number
3. Series Identification
4. Date of manufacture
5. MFC Logo

**The following Maintenance and Test Procedures should only be carried out by properly qualified personnel.**

## 3. AFTER OPERATIONAL USE:

1. Following operational use and drills, Airlift Cushions should be inflated to Approximately 2 psi and thoroughly washed down with the warm soapy water and allowed to dry.
2. Check side walls thoroughly for evidence of scuffing by abrasion.
3. Wash down the valise, ensuring no grit or gravel adheres to inner surfaces.
4. Deflate Airlift Cushions and pack in a flat state with side walls folded in place and back into valise. Secure the closure points on valise.

#### **4. DELIVERY HOSES**

Periodically or after operational use, check for abrasion marks. Change hose to working pressure with hose disconnected from Airlift Cushions, use soapy water to check air holding integrity or connections. Tighten loose fittings where necessary.

1. Visually inspect controller for damage.
2. Check mechanical operation of control levers.
3. Connect controller to air source by means of high-pressure hose from cylinder, or directly from compressor (maximum inlet pressure 300 bar).
4. With control levers in the 'OFF' position, turn on air supply. Check integrity of inlet supply connections.

Connect delivery hoses to controller **but not to air bags**.

1. After every use, especially on mudflats, the Rescue craft should be hosed down in its inflated state, to remove as much debris as possible.
2. Allow the Rescue craft to become as dry as possible before packing.
3. Lay the Rescue craft on a clean, debris free area.
4. Deflate the Rescue craft. This is achieved by depressing the central spindle in all the inflation/deflation valves, (push and turn to lock open).
5. Roll the craft from the bow to the stern to expel as much air as possible. Close inflation and deflation valves and replace dust caps.

**Caution:** To prevent possible damage, do not walk on the deflating Rescue craft to expel the air.

6. Un-roll the craft to its full length once again. Fold each side of the buoyancy tube towards the centre of the floor. Fold transom forward, flat onto floor. Check buoyancy tubes are tucked neatly under the transom.
7. Fold floor and ends of buoyancy tube on top of transom and roll towards the bow, taking care to maintain width of roll.
8. Lay the valise on the ground as an 'open box' and place the Rescue craft into the valise. Close valise and secure straps.
9. On return to base flush the motor through with clean fresh water in accordance with manufacturers instructions

1. On return to base the Rescue craft should be unpacked, inflated and left to dry.
2. When it is completely dry it should be checked for wear or damage. If none is found it should be repacked in the valise.
3. If any damage is found it should be repaired immediately in accordance with the Repair instructions.
4. Where possible the packed Rescue craft should be stored on the floor or suitable shelving, ensuring no damage can be caused by it's proximity to other items of equipment.

## 1. **GENERAL**

It should be noted that, due to the type of fabrics used in its construction, when the Rescue craft is wet, there may sometimes be visual evidence of minuscule white bubbles, which form a line of froth at the seams and joints of the unit. This is recognised within the industry as 'lateral leakage', and is simply air that is trapped in the layer of nylon between the rubber coatings, forcing its way to the nearest available edge of the fabric. This type of leakage will not affect the performance of any inflatable product over the course of an operational procedure, and can be safely ignored.

However, if there is evidence of large, transparent bubbles, this is clearly evidence of a leak that must be repaired at the earliest convenience.

The following is a recommended regime for maintenance & test.

## 2. **QUARTERLY**

- 2.1. Check control equipment as per relevant manual.
- 2.2. Inflate Rescue craft to working pressure.
- 2.3. Check audible relief valve operation.
- 2.4. Whilst inflation system is charged, check connections and valves using brush and soapy water.
- 2.5. When relief valve has operated, and the unit is at working pressure; it can be left to stand for a length of time that would be comparable to an operational situation (e.g. 2 to 3 hours.)
- 2.6. After this time, the Rescue craft should still be firm.
- 2.7. If the Rescue craft has become soft, the air-loss should be located by applying a soapy- water solution.
- 2.8. Any significant leaks (See 1 above) should be marked and repaired using the repair kit provided.

## **RECOMMENDATIONS**

1. Rescue crafts should undergo an annual test carried out by the manufacturer, or people certified by MFC Survival Ltd. If in doubt contact the service department.

As a general rule, punctures and other damage will need to be assessed in two categories:

a) that which is repairable at the base, or b) serious damage that will need to be repaired by MFC Survival Ltd.

- a) Repairs that are manageable at the base workshops will be minor punctures to any area of the Rescue craft. These can normally be repaired by the application of a small repair patch.
- b) Repairs that should be carried out by MFC will be the more serious kind, such as damaged valves, badly torn fabric (either on the side-walls or the flat surfaces) and the replacement of damaged fittings.

If in doubt as to the extent of the damage and the level of repairs necessary, please contact :-

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