MFC International
by RESPIREX
ENGINEERED INFLATABLE PRODUCT SOLUTIONS

# RSW Rescue Sled

## Product Manual

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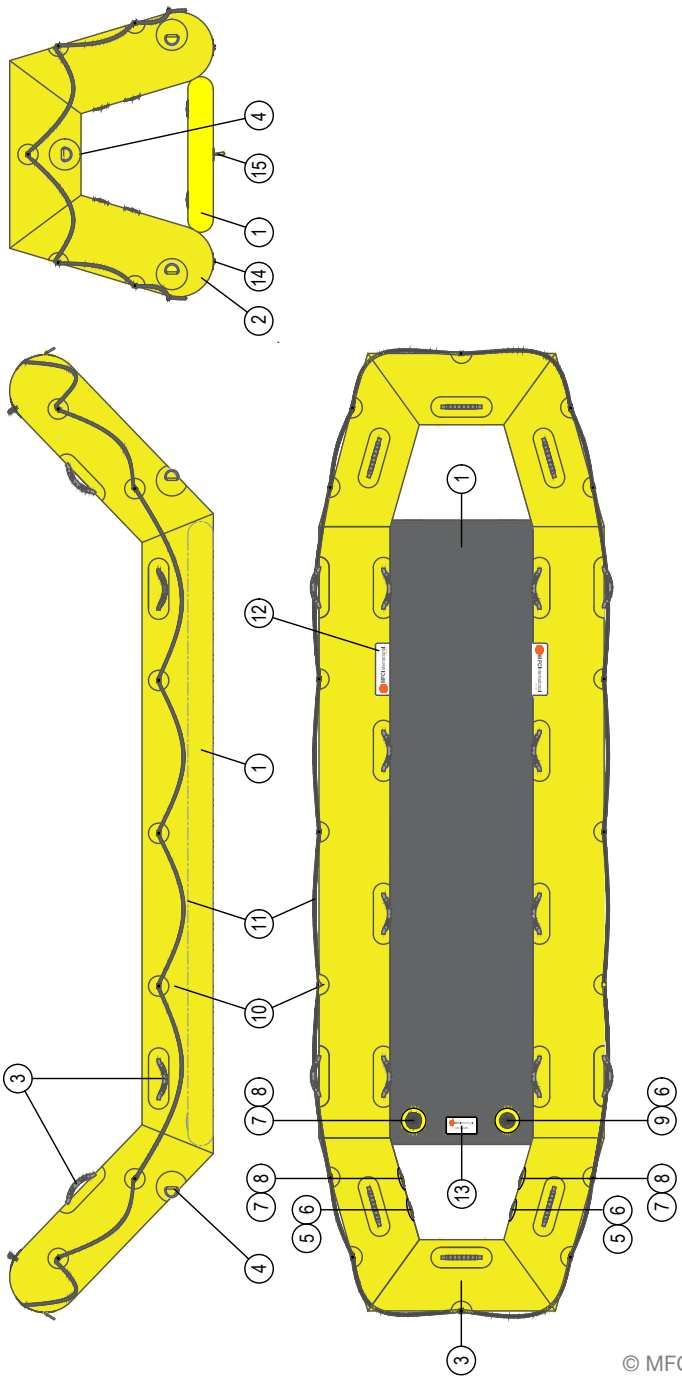
**WARNING: Carefully read this manual before operating the RSW Rescue Sled.**

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

| Technical Data | |
|---|---|
| **Length (cm)** | 500 |
| **Width (cm)** | 120 |
| **Internal width (cm)** | 75 |
| **Floor height (cm)** | 15 |
| **Tube diameter (cm) - Ends** | 23 |
| **- Sides** | 45 |
| **Working pressure - Buoyancy** | 3.25 psi |
| **- Floor** | 6 psi |
| **Air requirement (litres)** | 2000 ltr |
| **Packed size (cm)** | 80L x 40W x 35H |
| **Packed weight (kg)** | 31.5kg |

| Capacity | |
|---|---|
| **Load (max)** | 850kg |
| **No. of persons** | 5 + 1 |

# Parts List



# Materials List

| | Item | Description |
|---|---|---|
| 1 | Inflatable floor | Neoprene coated drop thread - Black |
| 2 | Buoyancy tube | Hypalon coated polyester - Yellow |
| 3 | Carrying handle | Hypalon coated polyester, webbing strap/rubber handle |
| 4 | 'D' Ring patch | Hypalon coated polyester, 316 s/s 'D' Ring |
| 5 | Relief valve | Leafield A6 - Black acetal - 3.25 psi |
| 6 | Relief valve label | White vinyl digitally printed |
| 7 | Inflate/deflate valve | Leafield D7 - Black acetal |
| 8 | Inflate/deflate label | White vinyl digitally printed |
| 9 | Relief valve | Leafield A6 - Black acetal - 6 psi |
| 10 | Life line patch | Hypalon coated polyester, 316 s/s 'D' Ring |
| 11 | Life line | 10mm diameter 3 strand rope - Black |
| 12 | MFC logo label | White vinyl digitally printed |
| 13 | MFC data label | White vinyl digitally printed |
| 14 | Rubstrake | Nitrile/PVC - 70mm wide black |
| 15 | Righting strap | Hypalon coated polyester |
| 16 | Repair kit (not shown) | 70ml Neoprene adhesive, Hypalon patches x4 |
| | Optional | |
| 17 | Stowage pocket | Hypalon coated polyester - Yellow |

# Operational Instructions

## 1. Inflation

1.1 At deployment point, select the best possible flat debris-free site.

1.2 Unpack the Rescue Sled from its valise and unroll

1.3 Prepare for inflation:-

a) Fix regulator to cylinder and connect delivery hose to the regulator.

b) Remove dust cap from inflate/deflate valve in inflatable floor and ends of buoyancy tube. Ensure the central valve diaphragm is closed; i.e. the internal spindle is raised. (push and turn to release)

c) Open the two air transfer valves fitted to the inside of the buoyancy tube at the side baffles. (red knob, pull and turn 90° to open).

**Note:** The buoyancy tube is now two chambers and is inflated from both stern ends

1.4 Connect cylinder to floor, **Hold** delivery hose **tight to inflation valve** and inflate until relief valve activates. Close cylinder valve. **Do not release hose during inflation.**

1.5 Connect cylinder to buoyancy tube at one stern end using the inflation hose. **Hold** delivery hose **tight into inflation valve** and inflate until both relief valves activate. Close cylinder valve. Repeat for remaining side of buoyancy tube. **Do not release hose during inflation.**

**Warning:** Failure to do so may result in personal injury

**Caution:** The inflation rate must be regulated to prevent the buoyancy chamber nearest the inflation point becoming over pressurised. This could cause the buoyancy tube to burst.

**Note:** Relief valves are fitted to prevent over inflation.

1.6 Ensure dust caps are replaced to prevent ingress of dirt and water.

1.7 Close two transfer valves to isolate each of the 2 chambers in the buoyancy tube. (red knob, turn 90° and push to close.)

## 2. Deployment and Use

The following points are operational recommendations established by deploying the rescue sled at many different training and demonstration events. MFC acknowledge that almost every operational scenario will have different hazards and risks, which can only be properly assessed at, and during, an operational rescue/recovery.

**Warning:** During use on water, mud and suspect surfaces, personnel should wear a 'lifejacket' or similar buoyancy aid, and be linked to the Rescue Sled via a safety line. Failure to do this may result in personal injury or death.

2.1 Towing - The Rescue Sled may be towed behind a parent craft at a maximum speed of 5mph. The Rescue Sled must be towed with the tow line attached to the towing patches on the bow. The length of the tow lines should be adjusted to suit the conditions.

2.2 Stability - wherever possible evenly distribute the weight of persons on the Rescue Sled (maximum 5 + 1 persons / 850kg) to avoid instability that may lead to capsize.

2.3 Boarding - Grab handles are fitted to the stern floor area to aid survivors climbing onto the sled. On board rescue personnel should assist less able survivors.

2.4 Lifelines are fitted externally for survivors to hold onto.

2.5 Survivors should be seated facing each other across the inflatable floor holding onto the internals lifelines for security.

**Warning:** Survivors should not be seated on the buoyancy tubes as they may fall back into the water and drown.

2.6 Manoeuvring - The Rescue Sled can be manoeuvred in calm conditions by two-four persons using paddles. It can also be manoeuvred in shallow water by persons walking alongside holding the carrying handles.

**Caution:** Avoid contact with sharp or abrasive objects as they may puncture the fabric causing a loss of buoyancy.

2.7 Carrying handles - The Rescue Sled should only be carried by the moulded handles provided, do not use life lines. The Rescue Sled can in an emergency be used to carry (max.) one debilitated person.

**Caution:** Do not drag the Rescue Sled, as this may puncture the fabric, causing a loss of buoyancy.

**Warning:** The Rescue sled is not designed for any type of motorised propulsion. The fitting of any type of motor, or any other modification of the Rescue Sled is not permitted without prior written approval from MFC International Ltd. Any non-approved modification will invalidate the warranty and may result in personal injury or death.

## Packing

1. After every use, especially on mudflats, the Rescue Sled should be hosed down in its inflated state, to remove as much debris as possible.

2. Allow the Rescue Sled to become as dry as possible before packing.

3. Lay the Rescue sled on a clean, debris free area.

4. Deflate the Rescue Sled. This is achieved by depressing the central spindle in all the inflation/deflation valves, (push and turn to lock open). Open the two transfer air valves fitted to the inside of the buoyancy tube at the side baffles. (red knob, pull and turn to open.)

5. Roll Rescue Sled from opposite side of inflate/deflate valves 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 Sled to expel the air.

6. Un-roll the Rescue Sled to its full length once again. Fold each side of the buoyancy tube/inflatable floor. (use carrying valise for guide to pack width).

7. Roll the Rescue Sled again, taking care to maintain the width of the roll.

> **Caution:** Ensure that internal lifeline is kept away from air transfer valves to prevent possible damage during inflation.

8. Lay the valise on the ground as an ‘open box’ and place the Rescue Sled into the valise. Close valise and secure straps.

## Storage

1. On return to base the Rescue Sled should be unpacked, inflated and left to dry.

2. When the Rescue Sled 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 Sled should be stored on the floor of the locker/ appliance, ensuring no damage can be caused by it’s proximity to other items of equipment.

# Maintenance & Test Procedures

## 1. GENERAL

It should be noted that, due to the type of fabrics used in its construction, when the Rescue Sled is wet, there may sometimes be visual evidence of miniscule 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 Sled 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 Sled should still be firm.

2.7. If the Rescue Sled 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.

## 3. RECOMMENDATIONS

3.1. Rescue Sleds should undergo an annual test carried out by the manufacturer, or people certified by MFC International Ltd. If in doubt contact the MFC service department on +44 (0) 1443 433075.

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

a) Repairs that are manageable at the base workshops will be minor punctures to any area of the Rescue Sled. 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 sidewalls 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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