

START MARINE SOLUTIONS

Offshore Equipment Handling Manual

Safe Handling Procedures for Marine
& Offshore Safety Equipment

2026 Edition

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1. Introduction & Safety Overview

Purpose: This manual provides comprehensive guidance on the safe handling, storage, and maintenance of marine and offshore safety equipment. Proper handling ensures equipment remains serviceable and protects personnel from injury.

1.1 General Safety Principles

- Always inspect equipment before handling or use
- Use appropriate PPE when handling safety equipment
- Follow manufacturer's instructions at all times
- Report any damage or defects immediately
- Never exceed equipment weight limits or capacities
- Ensure adequate training before handling specialized equipment

Warning: Improper handling of safety equipment can result in equipment damage, personal injury, or equipment failure during emergencies. Always follow established procedures.

1.2 Risk Assessment

Before handling any safety equipment, conduct a brief risk assessment considering:

Hazard Category	Examples	Control Measures
Manual Handling	Heavy cylinders, suits	Use lifting aids, team lift
Pressurized Equipment	SCBA, CO2 systems	Check gauges, secure storage

Chemical Hazards	Foam concentrate, batteries	Wear gloves, eye protection
Sharp Edges	Brackets, metal containers	Wear work gloves

2. Personal Protective Equipment Handling

2.1 Immersion Suits

Immersion suits require careful handling to maintain their integrity and thermal protection capabilities.

Storage Requirements

- Store in dedicated lockers away from direct sunlight
- Hang on proper hangers - never fold
- Keep zippers slightly open to prevent compression
- Maintain temperature between 5°C and 30°C
- Store away from heat sources and chemicals

Handling Procedure

1 Remove suit from storage using both hands

2 Lay flat on clean surface for inspection

3 Check seams, zippers, and reflective tape

4 Inflate oral tube to check for leaks

5 Return to proper storage position after use

2.2 Safety Helmets & Hard Hats

- Inspect shell for cracks, dents, or UV damage before each use

- Check harness suspension for wear or deterioration
- Replace if dropped from height or after any impact
- Clean with mild soap and water only
- Do not store in direct sunlight or extreme temperatures

2.3 Safety Footwear

Safety boots should be inspected for sole integrity, steel toe cap exposure, and general wear. Replace boots showing signs of significant wear or damage to protective features.

3. Life Saving Appliances Handling

3.1 Inflatable Life Rafts

Caution: Life rafts contain high-pressure CO2 inflation cylinders. Handle with care to avoid accidental activation.

Handling Guidelines

- Never drop or drag life raft containers
- Ensure painter line is secure but not entangled
- Check hydrostatic release unit expiry date
- Use proper lifting techniques or equipment
- Protect from sharp objects and abrasion

Movement Procedure

Raft Capacity	Weight (approx)	Handling Method
6 Person	45-55 kg	Two-person lift
12 Person	75-90 kg	Four-person or mechanical
20 Person	120-150 kg	Mechanical handling only
25 Person	150-180 kg	Mechanical handling only

3.2 Lifejackets

Inflatable Lifejackets

- Check CO2 cylinder is properly fitted and not discharged
- Verify automatic inflation mechanism status

- Inspect oral inflation tube and whistle
- Store unfolded in designated locations
- Keep away from heat and sharp objects

Inherently Buoyant Lifejackets

- Check fabric and stitching for deterioration
- Ensure buoyancy material is not waterlogged
- Verify straps and buckles function correctly
- Store in dry, ventilated location

3.3 Lifebuoys

- Ensure mounting brackets allow quick release
- Check self-igniting lights are functional
- Verify self-activating smoke signals are within date
- Keep buoyant lifelines attached and ready
- Replace if showing UV degradation or damage

4. Fire Fighting Equipment Handling

4.1 Portable Fire Extinguishers

Safe Handling

1 Always carry by handle, not by hose or nozzle

2 Check pressure gauge before moving

3 Ensure safety pin is in place

4 Avoid dropping or impact damage

5 Return to bracket immediately after inspection

Extinguisher Weights

Type	Size	Full Weight	Handling
CO2	2 kg	6-7 kg	Single hand
CO2	5 kg	13-15 kg	Two hands
Dry Powder	6 kg	9-10 kg	Two hands
Dry Powder	9 kg	14-16 kg	Two hands
Foam	9 L	14-15 kg	Two hands
Wheeled	50 kg	80+ kg	Wheeled only

4.2 Fire Hoses & Nozzles

- Never drag hoses over sharp edges or hot surfaces
- Coil properly after use - avoid kinks
- Dry thoroughly before storage
- Protect coupling threads from damage
- Store on proper racks or in cabinets

5. Breathing Apparatus Procedures

5.1 Self-Contained Breathing Apparatus (SCBA)

Critical: SCBA cylinders are under high pressure (typically 200-300 bar).
Handle with extreme care to prevent valve damage or cylinder drops.

Pre-Use Handling

- Check cylinder pressure gauge reading
- Inspect backplate harness and connections
- Verify face mask seal and lens condition
- Test demand valve and bypass function
- Check whistle/alarm function

Cylinder Handling

- Always support cylinder from bottom when carrying
- Never roll cylinders on deck
- Use cylinder trolleys for transport
- Secure upright in storage racks
- Protect valve from impact

5.2 Emergency Escape Breathing Devices (EEBD)

- Check that seal is intact before storage
- Verify service date is current
- Do not open unless for emergency use
- Store in easily accessible locations
- Replace immediately if seal is broken

6. Lifting & Rigging Safety

6.1 Safe Lifting Practices

When manually lifting safety equipment:

- Plan the lift - know the weight and destination
- Clear the path of obstacles
- Use proper lifting posture - bend knees, keep back straight
- Get help for loads over 25 kg
- Use mechanical aids when available

6.2 Using Lifting Equipment

Best Practice: Always use certified lifting equipment with valid inspection certificates. Check Safe Working Load (SWL) before each use.

7. Storage & Maintenance Guidelines

7.1 Environmental Conditions

Equipment	Temperature	Humidity	Special Requirements
Immersion Suits	5-30°C	Low-Medium	Away from UV
Life Rafts	-30 to +65°C	Any	Weatherproof container
SCBA	5-35°C	Low	Upright, secured
Fire Extinguishers	-20 to +60°C	Any	Bracketed, accessible

7.2 Cleaning Procedures

- Use only approved cleaning agents
- Rinse thoroughly after salt water exposure
- Dry completely before storage
- Never use solvents on rubber components

8. Emergency Procedures

8.1 Accidental Discharge

If fire extinguisher or life raft accidentally activates:

- Clear area of personnel immediately
- Ventilate space if CO2 discharge
- Do not attempt to stop pressurized discharge
- Report incident to safety officer
- Arrange for equipment replacement/service

8.2 Equipment Damage

Any damaged safety equipment must be immediately tagged "OUT OF SERVICE" and reported for replacement. Never return damaged equipment to service positions.

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