

PERSONAL SURVIVAL TECHNIQUES



IMO International Maritime Organization

The mission of the International Maritime Organization (IMO) as a United Nations specialized agency is to promote safe, secure, environmentally sound, efficient and sustainable shipping through cooperation. This will be accomplished by adopting the highest practicable standards of maritime safety and security, efficiency of navigation and prevention and control of pollution from ships, as well as through consideration of the related legal matters and effective implementation of IMO's instruments with a view to their universal and uniform application."





International Maritime Organization

- **Safety**

- SOLAS (International Convention for the Safety of Life at Sea)

- **Marine Environment**

- MARPOL (International Convention for the Prevention of Pollution from Ships)

- **Satellite Distress and Safety Communications**

- GMDSS (The Global Maritime Distress and Safety System)

- **Safety Management and Training**

- ISM (International Safety Management Code)
- [STCW, 2010 \(International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978\)](#)

- **Maritime Security**

- ISPS (International Ship and Port Facility Security)

wanna be a SEAMAN ?



1. Basic Safety Training Course

- Fire Prevention and Fire Fighting
- Elementary First Aids
- Personal Survival Techniques
- Personal Safety and Social Responsibilities



2. Medical Fitness Certification



3. Seaman Book & Passport

Emergency Situations Onboard





Emergency Alarm

Emergency alarm



- General Alarm
 - 7 Shot + 1 Long
- Fire Alarm
 - Continuous ringing
- Man Overboard
 - 3 Long
- Abandon Ship
 - 7 Short + 1 Long + Master's Verbal Order

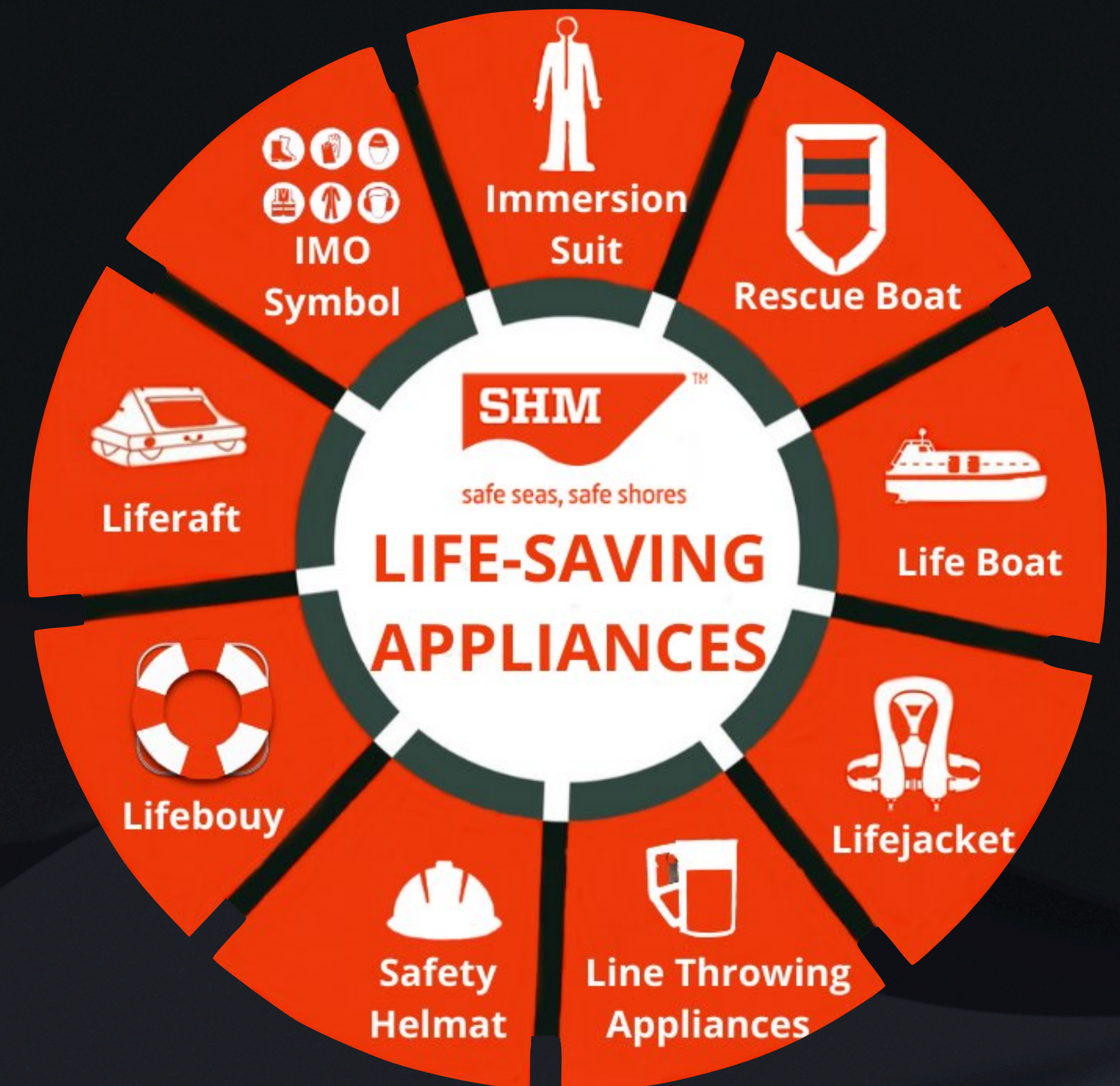
LSA

Life-Saving Appliances

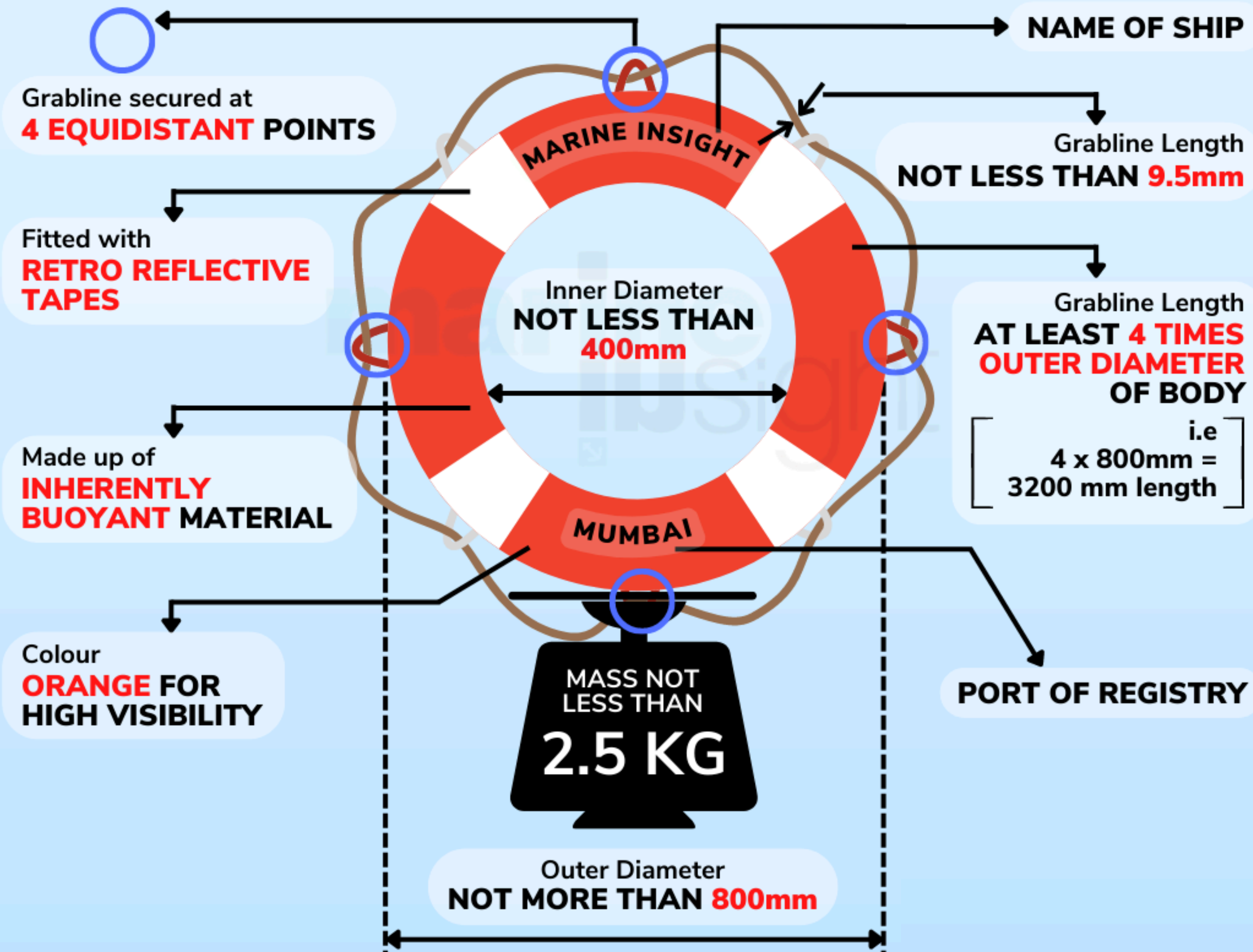
LSA

Life Saving Appliance

International requirements contained in the IMO instruments for the life-saving appliances cover personal life-saving appliances such as lifebuoys, lifejackets, immersion suits, anti-exposure suits and thermal protective aids; visual aids, such as parachute flares, hand flares and buoyant smoke signals; survival craft, such as liferafts and lifeboats; rescue boats; launching and embarkation appliances and marine evacuation systems line throwing appliances; and general alarm and public address systems.



Part of A SOLAS Lifebuoy



Q : How Many lifebuoy should be onboard ?

A : Up to by Length of ship.

Ship Length (m.)	Number of Buoy
$L < 100$	8
$100 > L < 150$	10
$150 > L < 200$	12
$L > 200$	14

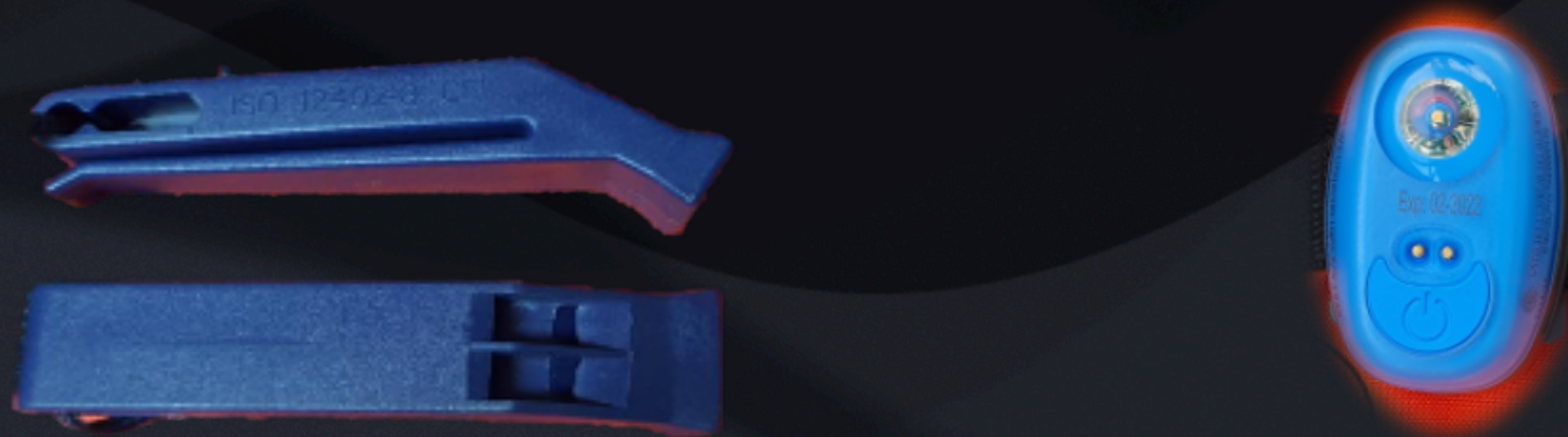
Type of Lifebuoy

- Lifebuoy with line.
 - At least 1 of each side with line 30 m..
- Lifebuoy with light.
 - Self igniting light at least 2 hours.
- Lifebuoy with light and line.
- Lifebuoy with light and smoke.
 - Emitting a smoke for at least 15 min.
 - AKA : Man Overboard Buoy



Lifejacket

- Lift the mouth of person not less than 120 mm. Clear of the water.
- Turn the body of an unconscious person in the water from any position to where the mouth clear of the water in not more than 5 sec.
- Jumped from a height of at least 4.5 m. Into the water no injury and dislodging or damaging the lifejacket.
- The buoyancy is not reduced by more than 5% after 24 hours.
- Shall be fitted with whistle and light with white color luminous not less than 0.75 candles for at least 8 hours by flash rate not less than 50 flashes and not over 70 flashes per min.





Thermal Protective Aids (TPA)



- The TPA shall reduce the convective and evaporative heat loss from the wearer's body.
- TPAs should function in air temperatures between -30 to +20 degrees.
- The wearer shall be able to remove the TPA in water within 2 minutes if it impairs the wearer's ability to swim.
- It covers everything but the face.
- The TPAs should be such that they are unpacked and easily donned without assistance in a survival craft or a rescue boat.

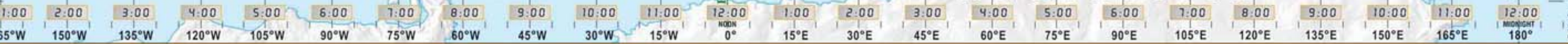
Immersion suit





Immersion suit

- Each person on the ship must have an immersion suit.
- Made of waterproof material.
- The immersion suit should be unpacked and donned within 2 minutes without any external help or assistance.
- The individual must jump from a height of at least 4.5 meters into the water without injury to life or damage to the immersion suit.
- The suit does not allow the body temperature to drop by more than 2 degrees when immersed for 6 hours when the water temperature is between 0 and 2 degrees.
- The wearer of the suit, with or without the lifejacket, shall be able to turn from a face-down position to a face-up position in less than 5 seconds.
- If a lifejacket is required along with the immersion suit, it should be worn over it without assistance.



Rescue Boat

- Can have a rigid, inflatable or mixed construction.
- A length not less than 3.8 m. And not greater than 8.5 m.
- Capacity at least 5 persons and 1 laying down.
- Recovery time shall not be greater than 5 min.
- Maneuvering at speeds up to 6 knots for a period of at least 4 hours.
- Can tow the largest life raft carried on the ship when loaded with its full complement of persons and equipment or its equivalent at a speed of at least 2 knots.
- Cargo ships shall carry at least one rescue boat



Life Boat

Gravity davit launching

Free-Fall launching



Life Boat

Gravity davit launching



*Launching of
Lifeboat thru
Gravity Davit*

Life Boat

Free-Fall launching



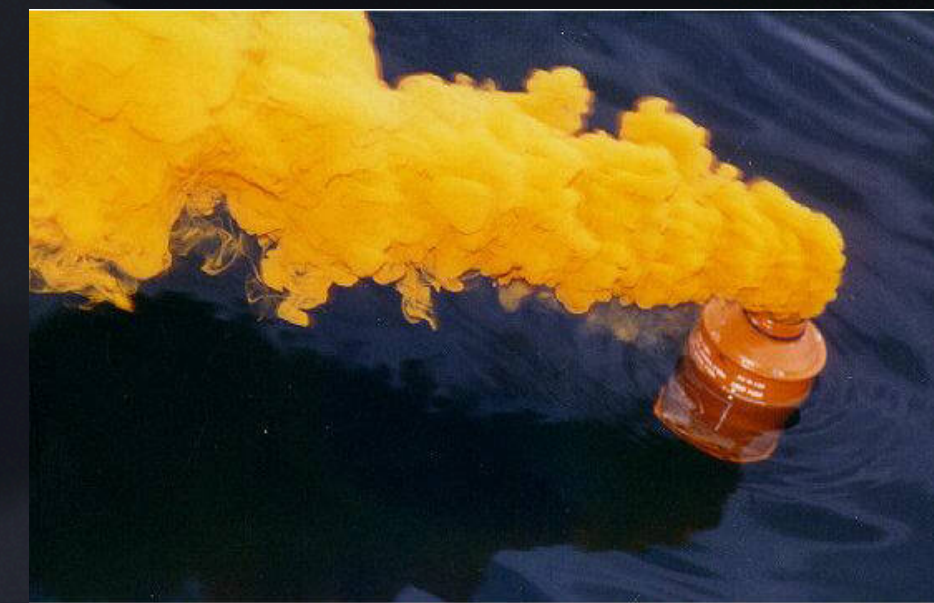
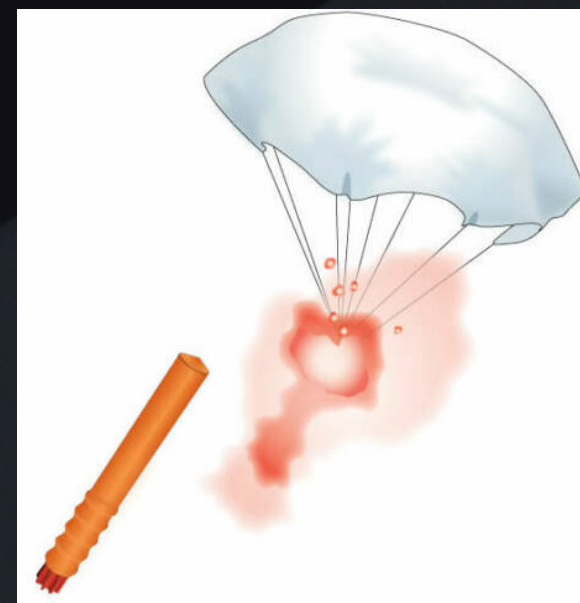
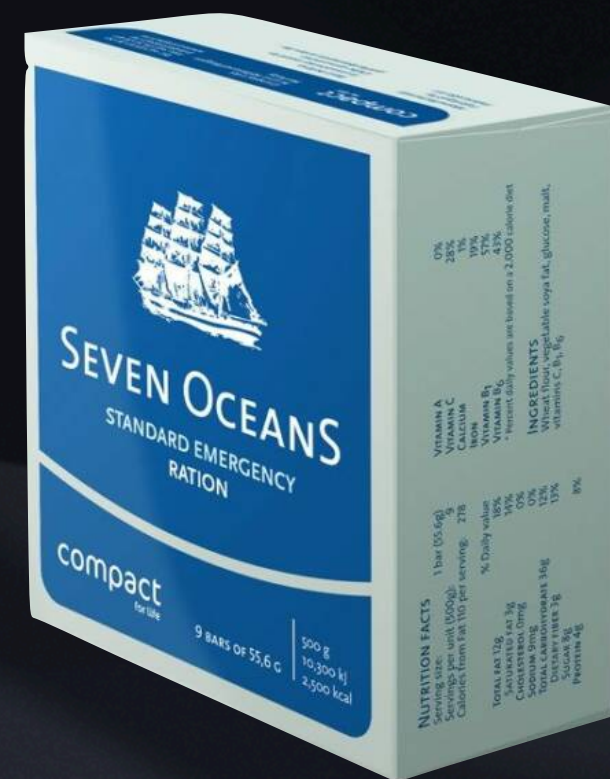
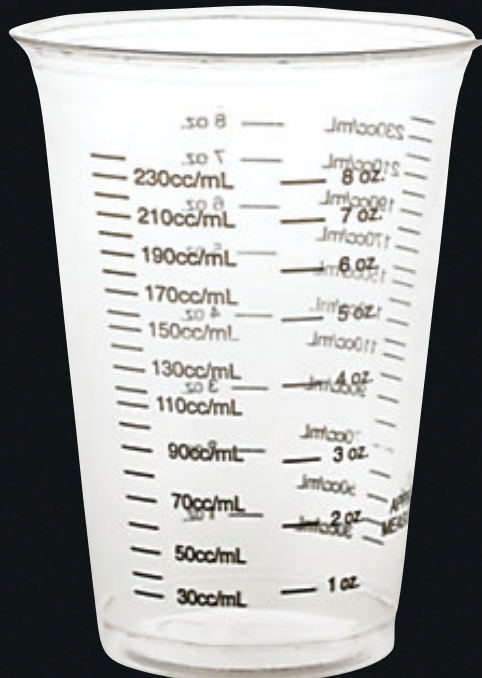
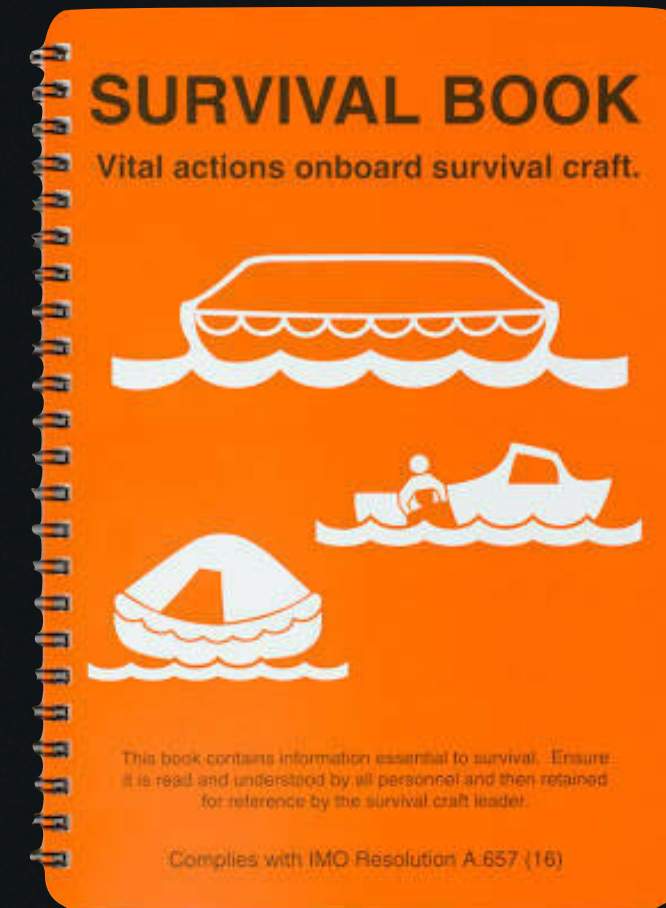
Life Boat

Free-Fall launching



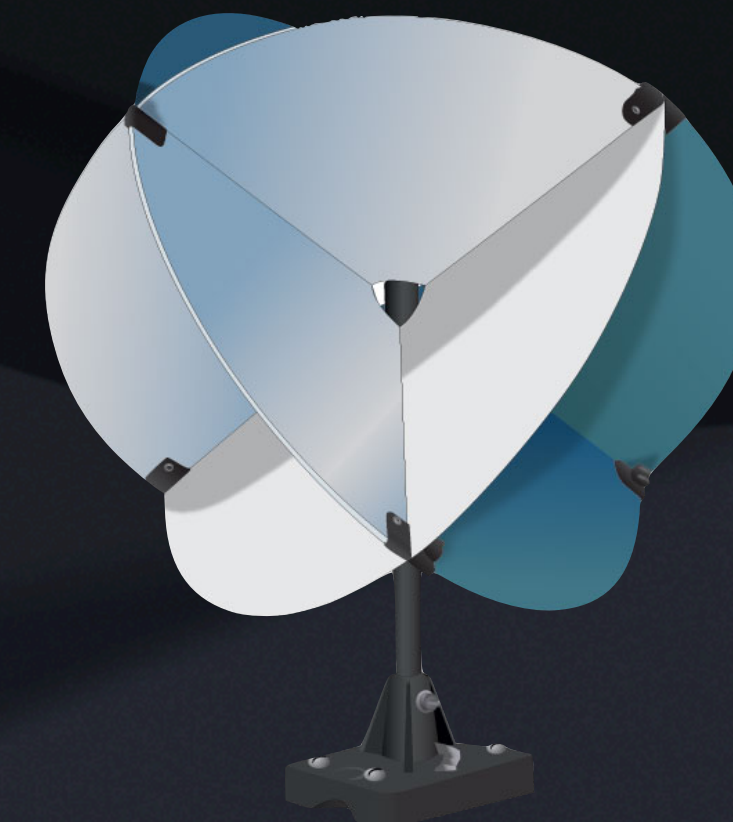
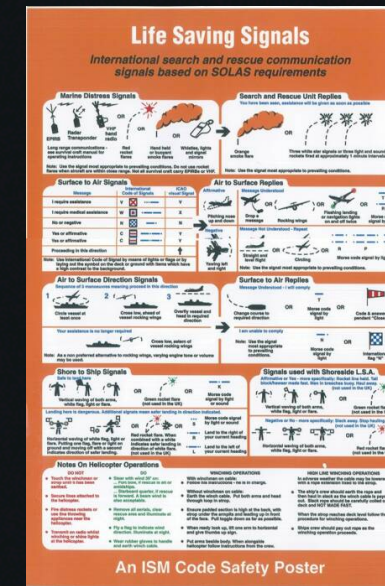
Life Boat Equipment

1. Oars with crutches
2. 2 Boot Hooks
3. 1 Buoyant bailer and 2 buckets
4. Survival Manual
5. Fixed compass
6. Sea Anchor with hawser
7. 2 Painters
8. 2 Hatchet
9. 3L of drinking water per person
10. 1 Rustproof dipper with lanyard
11. 1 Rustproof graduated drinking vessel
12. Food rating of 10,000 Kj /person,
lifeboat is permitted to carry
13. 4 Rockst parachute
14. 6 Hand flare
15. 2 Buoyant Smoke Signal



Life Boat Equipment

16. 1 Waterproof torch with spare bulb and batteries
17. 1 Day light signaling mirror.
18. Lifesaving signal poster
19. 1 whistle
20. first aid kit
21. Anti-Seasickness tablet and Sea Sickness bag
22. 1 Jack knife
23. 3 tin opener
24. 2 buoyant rescue quoits
25. Manual pump for bailing
26. 1 set of fishing tackle
27. Toolbox
28. Portable fire extinguisher
29. 1 Search light
30. Radar Reflector
31. TPA (10% of lifeboat capacity)



Life Raft

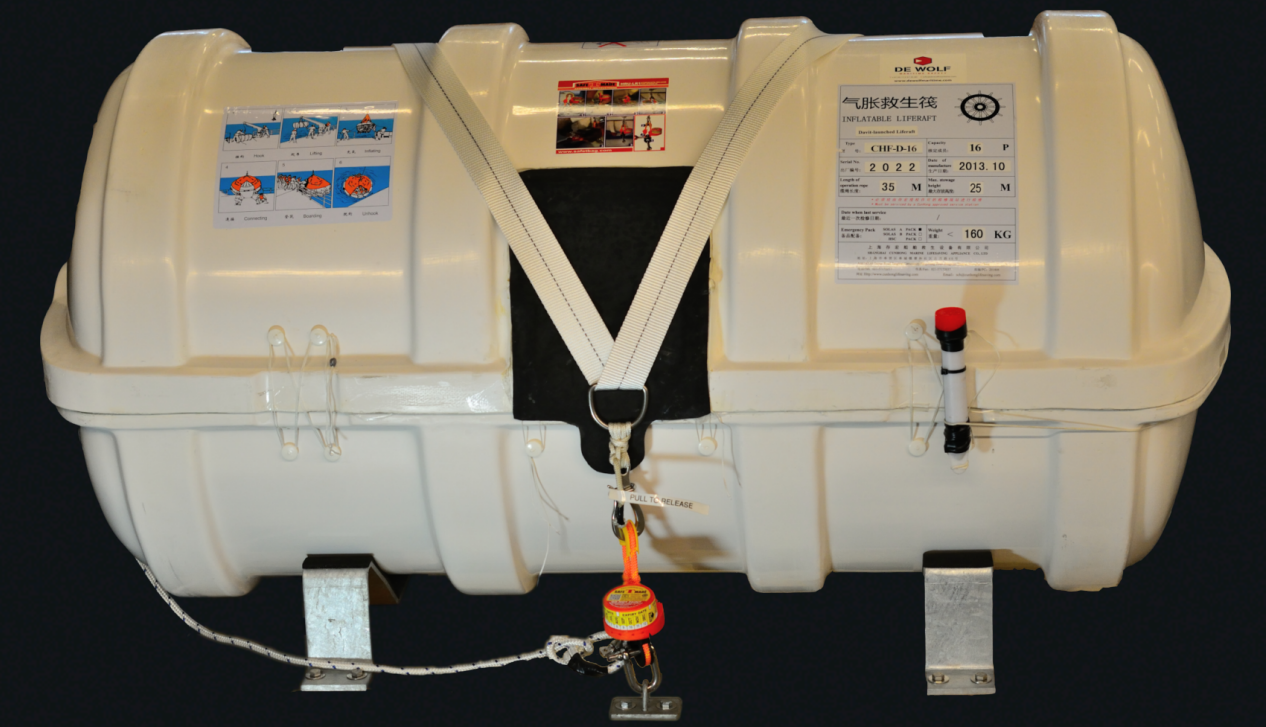
Life rafts are survival equipment provided as a life-saving appliance on every seagoing merchant or passenger ship, in addition to the lifeboats.

Life rafts are much easier to launch than lifeboats. In emergencies, evacuation from the ship can be done without manually launching any of them, as the life rafts are designed with an auto-inflatable system.



Launching life raft

Hydrostatic Release Unit (HRU)

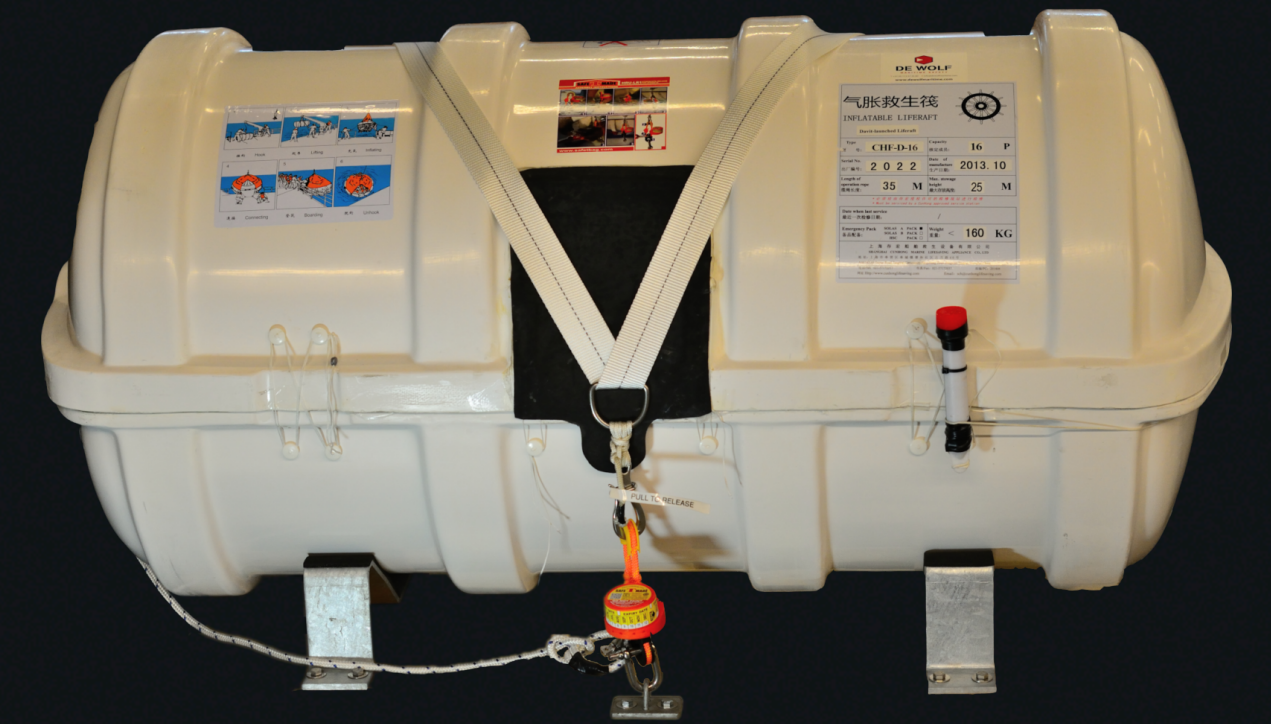


How does a Hammar Hydrostatic Release work?

A Hydrostatic Release Unit (HRU) is connected to the raft container and ship, which releases the raft even after the vessel sinks in water.

Launching life raft

Manual launching



Launching life raft

Davit launching system

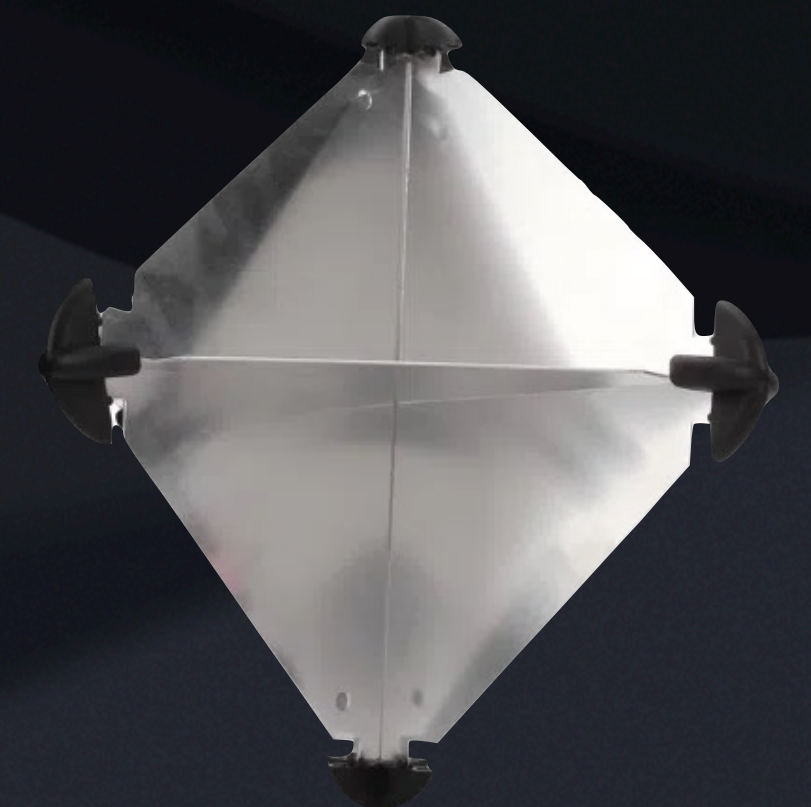
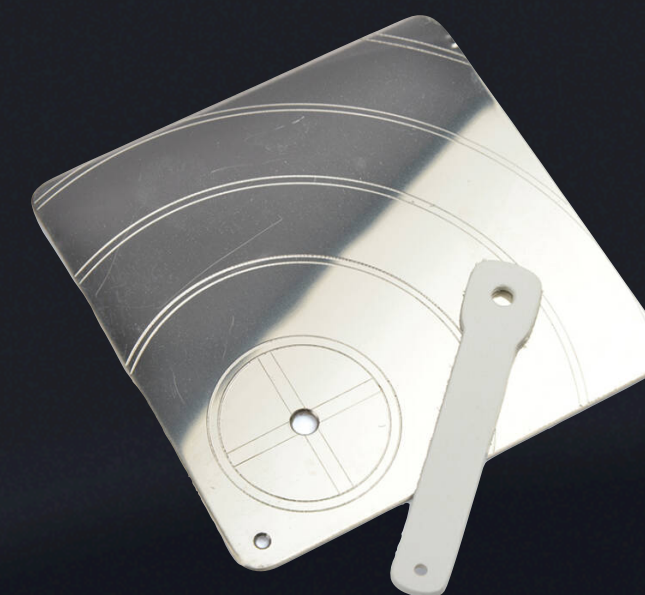
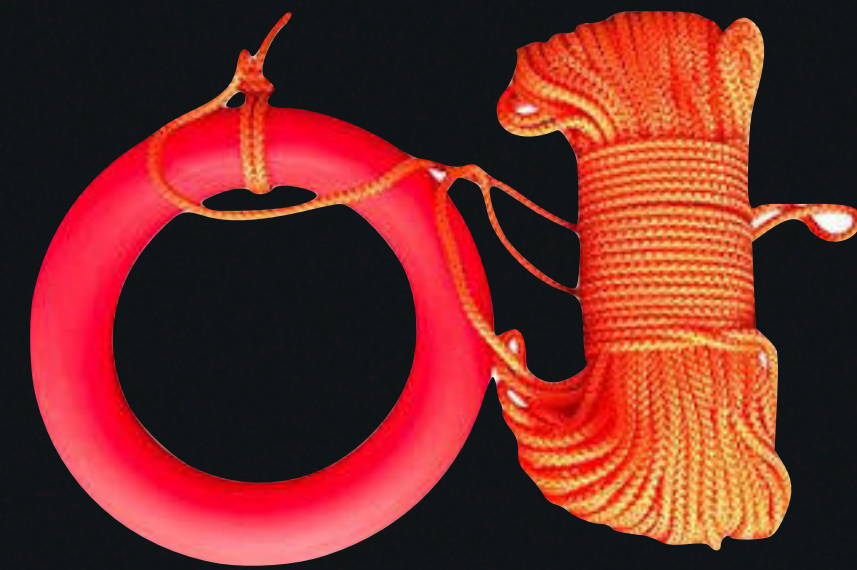


A davit launching system allows the crew to inflate and board the raft on the deck, avoiding the risk of seawater entering.

Life Raft

Equipment

1. Rescue quoits with minimum 30-metre lines
2. Non-folding knives with buoyant handles
3. For 12 persons or less, one bailer. For more than 13 persons, 2 bailers should be kept.
4. Two sponges
5. Two buoyant paddles
6. Three tin openers
7. Two sea anchors
8. One pair of scissors
9. One first-aid waterproof kit
10. One whistle
11. One waterproof torch for communicating Morse code with one spare set of batteries and a bulb
12. One signalling mirror/heliograph
13. One radar reflector



Life Raft Equipment

14. One life-saving signal waterproof card
15. One fishing tackle
16. Food ration totalling not less than 10000 kJ for each person
17. Water ration- 1.5 litres of fresh water for each person
18. One rustproof graduated drinking vessel
19. Six doses of anti sea-sickness medicine and one sea-sickness bag for each person the raft is permitted to accommodate.
20. Instructions on how to survive (Survival booklet)
21. Instructions on immediate action
22. TPA is sufficient for 10% of the number of persons or two, whichever is greater
23. 6 Hand Flares
24. 4 Rocket Parachute Flares
25. 2 Buoyant Smoke Signals
26. Repair kit

