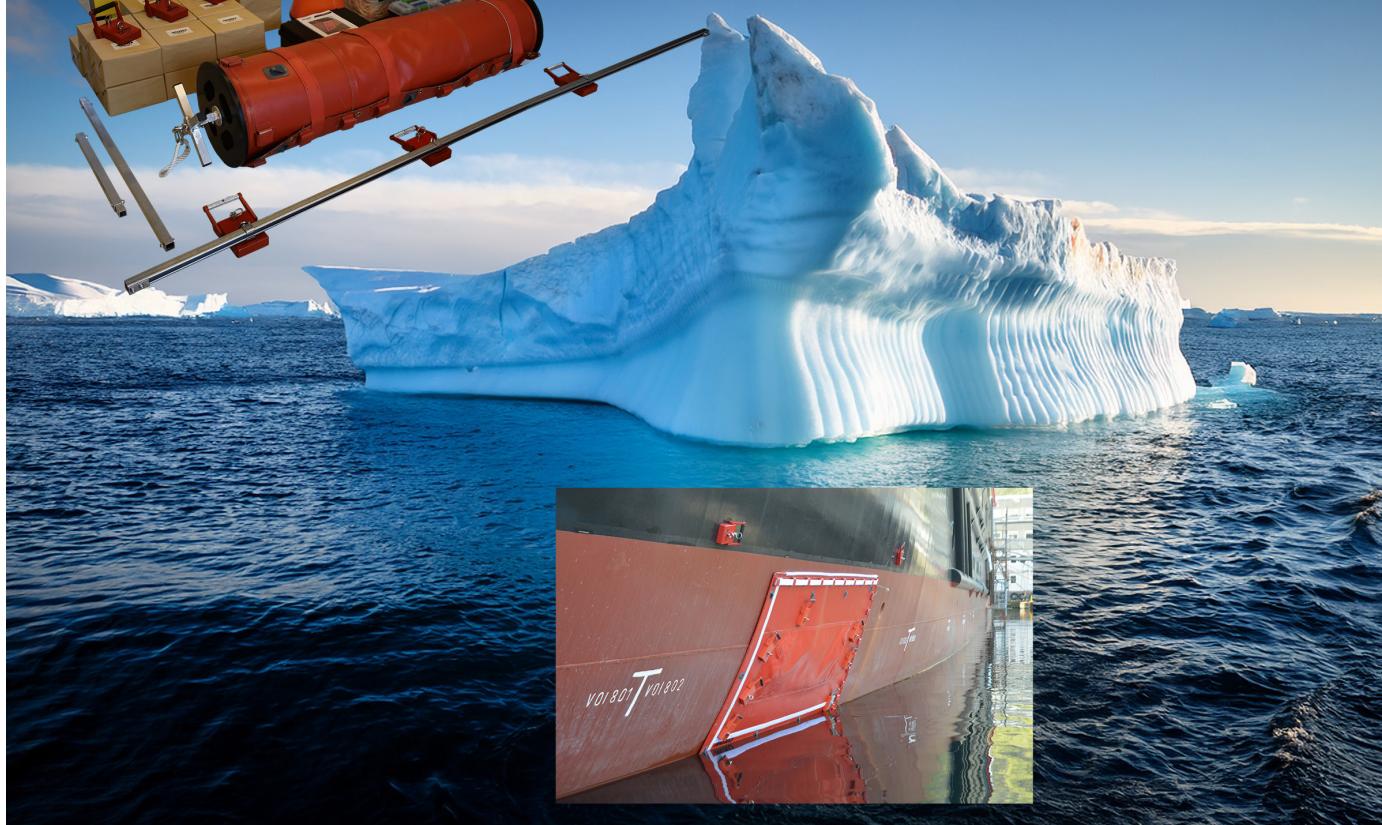


Miko Marine Polar Kit



Miko Marine Norway Miko Polar Kit *

Collisions with ice in the polar regions may lead to hull puncture and water ingress. For this reason Miko Marine AS has developed the Miko Plaster® Polar Kit.

Based on earlier experience, and in compliance with the Polar Code requirements of being more independent of help from outside, Miko Marine with the operational guidance of Capt. Benny Didriksen, has developed a kit to potentially keep your vessel afloat and prevent it from sinking. The kit consists of the well known patented and DNV qualified Magnetic Patches, Miko Plaster® and adequate flexible handling- and installation tools enabling subsea installation without divers or ROV's.

* In compliance with the Polar code Emergency Response Requirements (chapter 2).

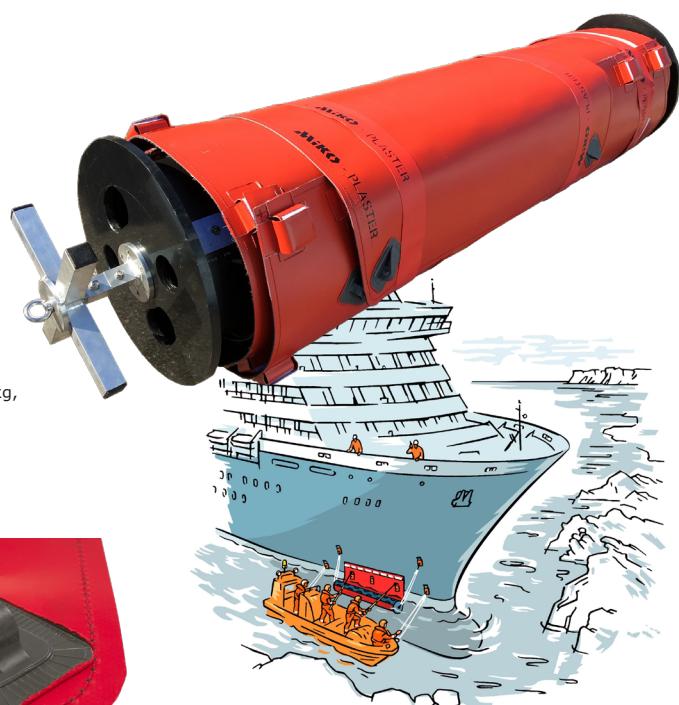
Contents:

- 1 pcs 900 x 1250 mm Magnetic Miko Plaster®
- 1 pcs 1500 x 3000 mm Magnetic Miko Plaster®
- 20 pcs MAM-003 Miko Anchor Magnets
- 20 pcs MPM-001 CS Miko Permanent Magnets
- 2 pcs Telescopic Handling Poles 1,75 x 5,00 m
- 1 Guide Rail (Horizontal installation) 1.80 & 1.60 m
- 2 pcs Carrying Handle with Pelican Hook
- 2 pcs Mooring Ropes 6 m for MOB Boat
- 2 pcs Magnet Release Tool
- 1 pcs Subsea Camera
- 1 pcs Video Monitor in Peli Case
- 2 pcs Plastic T-tool
- 1 pcs Tool box
- 2 pcs Block and Tackle
- 1 pcs Installation, Operation & Maintenance Manual
- 1 pcs Installation / Storage Drum & Extension Rods
- 1 pcs DNV-GL Technical Report No. 530 10221/98 Qualification of Miko Plaster

Shipping and storage:

The kit is shipped in a tool box measuring 192x70x70 cm with gross weight of 380 kg, for safe shipping and storage.

Article No.	Description
75MIK51000	Miko Marine Polar Kit





Miko Marine Norway Miko Polar Kit Installation Principle

The Miko Polar Kit is a versatile tool which can be used for many different applications. The operating instructions in this chapter provide a typical step-by-step installation guide. Additions and/or deviations may be required for individual cases.

Based on the curvature of the hull at point of damage, decide if the plaster should be installed vertically, horizontally (short drum) or if the small Miko Plaster is sufficient.

Work Sequence:

1. Mount the rail onto the hull of vessel with magnets, adjust height with a rubber hammer.
2. Connect lifting tackle with ropes to the rail.
3. Connect drum with plaster to lifting tackle, make sure that the row of MPM magnets are facing away from hull.
4. Hoist drum to max height against rail, fasten pullout rope to bottom attachment point on drum, lower the drum vertically to suited height for plaster to cover the damage.
5. Turn the drum until the vertical row of MPMs click onto the hull, and the plaster is secured.
6. Start the application of the plaster by turning the drum and pulling the pullout rope, adjust height of the drum if necessary.
7. Inspect underwater during the horizontal application of the plaster, use the T-tool on the telescopic pole smoothening the plaster onto the hull as required.
8. Roll the plaster drum until the plaster is rolled out in full length and fastened to the hull.
9. Inspect the plaster, use the T-tool to smoothen out any pockets of air or water between plaster and hull.
10. Secure the plaster using extra MAM-003 magnets.



Picture show example of Crew training on board to make them familiar with the Miko Marine Polar kit Installation principle.

Why having a Miko Polar Kit on board:

Most vessel sailing in Ice-conditions are designed with the ice-strengthening of the vessel for one-year (soft) ice and not for multi-year ice which is as hard as a rock.

The specifically for this conditions developed Miko Marine Polar Kit is the right tool to have on board in case of a hull-puncture in this remote areas.

With the Polar Kit the crew can seal hull damages down to 2 m below the waterline without the use of divers. The kit is a combination of Miko Marine's Magnetic Patch and a Kevlar reinforced PVC matting which is secured by powerful underwater magnets on different curvatures.