

SKIPPERS

SAILING, EQUIPMENT
ELECTRONICS

Magazin

INNOVATION, TIPS & ADVICE
RIGHT, BOOKS



Without a climbing aid the side of the boat becomes an insurmountable obstacle

BACK ON BOARD

*Even the best MOB manoeuvre doesn't get a crew member who's fallen overboard back on the boat. We've tested **NEW RESCUE SYSTEMS** which make rescue possible even for 2-person crews.*

THREE METHODS

Often it happens in a split second – just when your fellow crew member is reaching for the reefing line, the yacht heels

over. He's left grasping at thin air and trying to steady himself before gravity takes its course and he disappears overboard. Now you've got to keep an eye on the MOB and stop the boat, and then you may have to reef the sail before manoeuvring back to him. No mean feat, especially for a small crew – and the greatest challenge is still to come: you've got to get the person back on board. Just how difficult that is even when you have a large enough crew is illustrated by events such as the "Special One" accident off Heiligenhafen when the crew failed to get their supposedly rescued co-skipper back onto the boat (see YACHT 21/2012).

It was this type of situation that the developers of two novel rescue systems had in mind: Martin Schührer of MS Safety with the "Catch and Lift" system, and Matthias Gölitz of GRM Safety with the "Pelikan" device. Each brought the system that he had developed to a major test held off Mallorca. The reference system was a conventional rescue net with rescue tackle manufactured by the Walden company which is based in Lübeck. The test boat used was an Oceanis 34 yacht provided by 1. Klasse Yachten. The side of this yacht is well over a metre high, which means that it can't be scaled without assistance.

In order to make the trials as realistic as possible, the test crew consisted of a YACHT magazine volunteer weighing about 85 kg and his athletic but petite girlfriend who was going to operate the systems and rescue him all on her own. The man overboard manoeuvre was carried out using the yacht's engine in the case of all three systems, which is advisable anyway with a crew of two people. This is because the person left on board becomes a single-handed skipper and can't cope with operating the sails while carrying out a rescue.

PARACHUTE, SLING AND MOTOR

The plan of undertaking major voyages as a 2-person crew was the idea which led to MS Safety's "Catch and Lift" rescue system. The originators of the system, Martin Schührer and his sister, put their respective experience as a parachute jumper and as a manufacturer of medical and military equipment to good use. This is because instead of relying on having a big crew, the system relies on a special

braking parachute and engine power.

The idea is as simple as it is attractive: in an emergency, just as with a conventional rescue sling, a line is passed to the person who has fallen overboard which consists of a throw line and a rescue sling. It runs through a pulley block which is fastened to the upper shroud. Instead of being fixed on board the boat, the end of it is tied to the braking parachute. Once the line is grabbed, the parachute is deployed and the yacht carries on moving. The chute acts as a drift anchor and generates so much resistance that the person is dragged towards the yacht and heaved out of the water – without the rescuer having to leave the helm.

In order to make sure that the engine and propeller can actually provide the necessary tractive power to lift 300 kilograms out of the water as is claimed, the manufacturer recommends testing the system out. The equipment that is needed for doing this can be hired from MS Safety. Our Oceanis 34's three-cylinder Yanmar engine provided the necessary bollard pull, even at three-quarters of full power.

The Catch and Lift sailed through the tests because it was really easy to use and had a 100% rescue success rate. The person who has fallen overboard only has to be circled around and not steered directly towards, which avoids him being run over in heavy seas. However, things get tricky if he is no longer able to hook onto the line. If the crew is big enough, someone can get into the water and fasten him to the incapacitated person, and the chute will then drag both of them on board. Otherwise a conventional MOB manoeuvre is needed with the line being hooked on from the boarding platform. Martin Schührer counters the objection that the rescue is not carried out in a horizontal position by pointing out just how quick the manoeuvre is: if the crew member gets back on board quickly he won't suffer hypothermia.

FISHED OUT

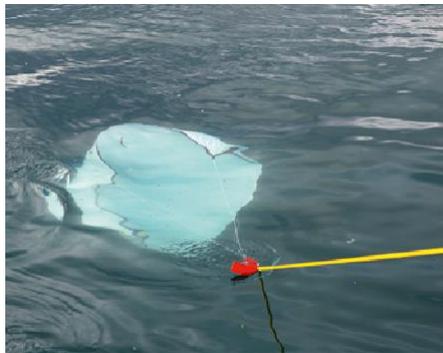
The "Pelikan" system produced by GRM Safety consists of a net which folds out sideways on aboom. The person in the water is then caught in the net and secured to the hull. If he is unable to climb aboard unaided, a spinnaker halyard can be used to raise the net and get the person onto the deck. Major advantage compared to the other procedures: the person who's fallen overboard doesn't have to do anything.

PELIKAN



The system relies on the shrimp boat principle: the system has to be installed and correctly adjusted before the boat puts to sea

CATCH AND LIFT



The power of a drogue (braking) parachute pulls the overboard sailor back on board. First a test must be carried out to see if the engine is powerful enough

RESCUE NET



The Walden system is only secured to the boat's handrail once there is an emergency; no preparation is needed before putting to sea

PELIKAN

The operation of the GRM Safety system is based on the net systems of shrimp boats.

This rescue system is designed for rescuing even people who are unable to move, and getting them safely back on board



Assembly is simple: a webbing strap is used to fasten the device to the railing stanchions. It should be unfolded once in port in order to adjust the immersion depth of the net.

In an emergency the helmsman has to leave the cockpit and open the velcro fastener on the casing by tugging the red webbing strap. Another tug activates the Pelikan and the net unfolds. Then it's back to the helm to carry out the MOB manoeuvre. If the boat is moving too fast, the person in.

the net is pushed down into the water. The built-in ladder on the prototypes was difficult to climb because the webbing strap swivelled sideways. If the MOB can't get himself back on board, a line is used to pull the boom to the side of the boat where the spinnaker halyard is hooked up. When the net is winched up, the tube segments separate and the Pelikan turns into a rescue net. However, it doesn't work if there is a sideways drift.

Pros and Cons:

- + Easy to assemble
- + Even injured people can be got back on board
- + Packs up after use, so the system is ready for use again
- + Horizontal rescue position
- Mechanism sometimes got snagged
- Pulling the MOB on deck under the railing is very difficult
- Doesn't work if there is sideways drift

STEP BY STEP RESCUE



1. ACTIVATION

A strong tug on the webbing strap opens the casing and the net unfolds.



2. RECOVERY

The boat is steered towards the MOB. Important: maintain constant visual contact and proceed slowly



3. GETTING BACK ON BOARD

The MOB uses the rope ladder to climb back on board. If that isn't possible ...



4. SECURING

... guest ropes are used to haul the net tight and hook it up to the spinnaker halyard



5. LIFTING

If the net is hauled up with a halyard, the tubes come apart automatically



6. RELEASING FROM THE NET

Pull MOB to safety through the gap under the railing. You first need to deflate his life jacket

The system is clamped to the pushpit or a railing stanchion with two bolts and pulled taut at the front. The pushpit couldn't be used on the test boat because it was further towards the stern. So we mounted the system further forward on the railing. The manufacturer recommends getting used to using it in either place.

In the test, the Pelikan system showed that it can be a great help in an emergency. However, operating it correctly is a tricky business: when steering towards the MOB the helmsman's view is restricted by the side of the boat so there is a danger of running him over. If the boat is moving too fast, the person in the net also gets inundated with water. During hauling up, the boom didn't always immediately separate from the system. And once the rescued person is at deck level, his life jacket has to be deflated so he can fit under the railing.

NETTED

Hansenautic provided the Waiden rescue net and tackle for us to test. The system works well, but the MOB has to actively help with the rescue. It is difficult to rescue a helpless person with it, so a crew member has to get into the water to help him. The manufacturer also provides a rescue sling on the support stay for guiding someone who is in the water into the net. The rescue tackle is stored in a tube made of spinnaker cloth to prevent it from getting twisted. Unfortunately it was slightly too short, which meant the windlass had to be used anyway. This can't be done while keeping an eye on the person in the net.

THE WINNER IS ...

We liked the Catch and Lift best in the test: small pack size, ease of use and speed of getting someone back on board were the main pluses. The MS Safety also has the edge in terms of price at 630 euros including accessories. What's more, the manufacturer offers a free replacement if in an emergency the braking chute has been cut off after the rescue manoeuvre. This requires the submission of a log book entry as evidence.

This is where the Pelikan comes out on top: following use in an emergency or a practice, the system is simply packed up and ready to use again.

**MICHAEL RINCK AND
HAUKE SCHMIDT**

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GARMIN

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CATCH AND LIFT

The **MS-SAFETY** rescue system relies on the power of a braking parachute linked to a pulley block to drag the MOB back on board in a lifesling. In the manoeuvre the engine is used to control the speed at which the MOB is hauled in.



The main components of the Catch and Lift are stored in a handy yellow case. This is suspended from the pushpit in a special holder. A sturdy attachment point has to be prepared before setting out to sea: the manufacturer provides a bronze clamp for this purpose which is designed to be permanently mounted on the upper shroud. In an emergency, just open the case, and you'll find the pulley block on top. This is hooked onto the shroud. Then deploy the lifelines and the boat is sailed around the

MOB. Once he has clipped himself on, the braking parachute is thrown into the water. A cellulose wrapping stops it getting twisted, and it unfolds in the water in a matter of seconds. Now the helmsman just has to steer away from the parachute and the person is hauled in. This shouldn't be done too quickly because otherwise he will be drenched in water. More pulling power is needed to haul him on board. Once the person is safely on the boat, the parachute is cut free.

Pros and Cons:

- + Small and light
- + When the rescue sling is used, the boat doesn't have to be manoeuvred right up to the person in the water
- + The MOB is hoisted directly onto the deck
- + The Rescue is very
- + Inexpensive
- The MOB has to clip him/herself on
- The drift anchor must be replaced after use

PARACHUTE GETS MOB BACK ON BOARD QUICKLY



1. HOOK UP THE PULLEY BLOCK
Open case, take out carabiner marked '1' and clip it in place



2. DEPLOYING LIFESLING
Throw out the packet marked '2'. The line runs out as the canopy exerts a braking effect



3. GRABBING THE LINE
Circle round the person who is in the water so he/she can grab the lifelines



4. BRAKING PARACHUTE
Once the MOB is securely attached, throw the package marked '3' overboard. The canopy opens automatically



5. GO EASY ON THE THROTTLE
The braking parachute drags the person back to the boat. Use the throttle to control the speed



6. BACK ON DECK
You need to increase the throttle a bit to haul the person out of the water