



The Danish MCM vessel, HDMS Makrelen, recently took part in a NATO operation to locate and destroy bombs, dropped earlier in the Adriatic Sea. Besides the Danish ship, MCM vessels from six other NATO navies were involved in the operation. Makrelen achieved the best result in this operation. The ship located and destroyed 25 bombs using its Double Eagle MCM system.

## SAAB UNDERWATER SYSTEMS AB

Saab Underwater Systems is a business unit within Saab AB, one of the world's leading high technology companies.

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The company focus on development and production of underwater systems for gathering and processing data, detecting and neutralising sea mines and naval targets.

### Mine Disposal

In Mine Disposal configuration the *Double Eagle* is fitted with relocation sonar and a disposal charge. The precise manoeuvring allows the ROV to place a medium sized charge within a few cm's of a mine. The charge is remotely detonated, causing a sympathetic detonation of the mine.

### Mine Hunting

The combination of a mine hunting sonar mounted on a powerful MCM ROV, *Double Eagle* MKII or MKIII, running ahead of the ship at a distance of some hundreds of meters is the new

concept for mine hunting (PVDS). This configuration not only increases vessel and crew safety, but also increases the performance of the sonar as it is possible to vary the operational depth.

### Container System

To optimize flexibility in MCM operations, *Double Eagle* MKII or MKIII, its tether winch, ROV control and sonar equipment can be fitted and transported in a standard container, which can easily be lifted from ship to ship or be transported by road or by air. The system can be carried and operated from any craft of opportunity, COOP, for example a fishing vessel or from a quay side.

### ROV and AUV operations

The *Double Eagle* MKII or MKIII can be launched and operated

either as a tethered ROV or as un-tethered AUV. In addition the vehicle can be launched as a ROV and then when necessary or by decision un-dock from its tether and operate as an AUV. After having completed its mission, the vehicle will return to a platform and again dock to its tether still in the water. The platform can be a surface vessel, a submarine or an air plan.

This allows for a number of improved operation tasks, e.g. within the mine hunting scenario, such as extended vehicle envelope, covered operations, an un-tied platform ready for alternative missions and enabling re-charge of the vehicles batteries during simultaneous operation. The endurance of the vehicle will be virtually unlimited.



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