



## SWEDISH ARMED FORCES DIVING AND NAVAL MEDICINE CENTRE



Photo: Johan Swahn, Håkan Jonsson among others.



## SWEDISH ARMED FORCES DIVING AND NAVAL MEDICINE CENTRE (SwAF DNC)

Details of courses and registration for SwAF diving operations can be found on the Internet via [www.forsvarsmakten.se](http://www.forsvarsmakten.se) and "IN ENGLISH" search for SwAF DNC.

SwAF DNC is involved in several international networks. The most important are NNDF (Nordic Naval Diving Forum) Nato UDWG (Underwater Diving Working Group as a PFP member) and IDSA (International Diving School Association).

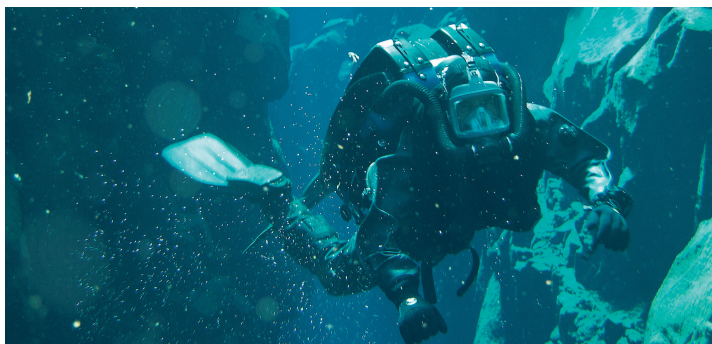


SWEDISH ARMED FORCES

Försvarsmaktens Dykeri och Navalmedicinska Centrum Box 527 371 23 Karlskrona  
Phone: 0455-85 000 Fax: 0455-86 524 E-mail: [dnc@mil.se](mailto:dnc@mil.se) [www.forsvarsmakten.se](http://www.forsvarsmakten.se)



SWEDISH ARMED FORCES



Mine-clearance diver wearing rebreather equipment.

# SWAF DNC

## The SwAF Diving and Naval Medicine centre

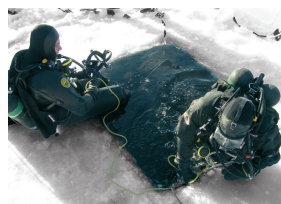
is responsible for the development and training of divers for the SwAF diving operations. The centre provides diver training, equipment development and management/correction of equipment defects. The centre has also delegated responsibility for diving medicine.

The SwAF DNC is located in Karlskrona. The centre has three sections with an overall Manager and three support staff covering:

- » Research and Development Section
- » Diving Medicine Section
- » Diving School



Submarine escape training facility, depth 21 meters.



Ice-diving with open-circuit underwater breathing apparatus.

## THE FOLLOWING DIVING EQUIPMENT IS CURRENTLY USED BY THE SwAF DNC:

- » SCUBA with optional surface supported SCUBA.
- » Surface supported demand or free-flow Diving Helmets (Hard Hat).
- » Semi-closed circuit rebreathers.
- » Oxygen rebreathers.

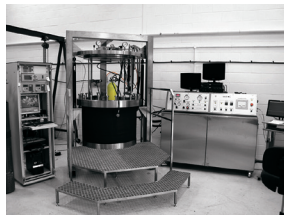
Future diving capabilities will include closed circuit rebreather, additional breathing gases and increased depths.

# THE R&D SECTION

## The Research and Development Section

is cooperating with the SwAF units, the Royal Institute of Technology, Blekinge Institute of Technology and the Defence Materiel Administration to ensure that the operational units receive safe and appropriate equipment.

The centre investigates military and civilian diving accidents and monitors in service diving equipment from delivery to disposal. The centres resources are available to other government authorities, and in special circum-



Test Equipment for breathing apparatus to a depth of 200 meters and a water temperature between 0 - + 40° C.



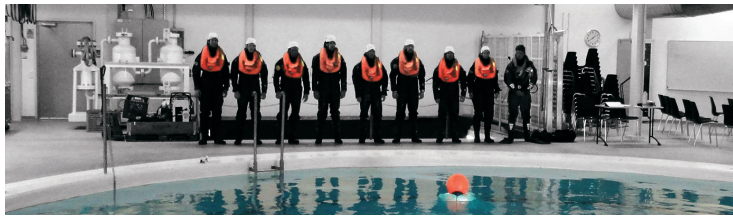
Flume pool with up to 4 knots current in a temperature between +2 - + 40° C. (photomontage).

# THE DIVING SCHOOL

*The Diving school* trains divers, diving supervisors and pressure chamber operators. In addition, SwAF units are trained in the use of emergency air-supply equipment. The course participants are mainly from the SwAF but personnel from the Coast Guard, the Rescue Service and civilian organisations also participate.

Divers and submarine crews undergo training in the 21 meters deep, submarine escape training facility. The facility was originally built in 1944 and is located within the Naval Base at Karlskrona. The submarine escape training facility has developed an international reputation for excellence and countries worldwide send their submarine crews for escape training.

In addition to the above, the centre trains and validates civilian divers for professional diving certificates to the levels shown below.



Students at the indoor pool.



Submarine personnel during free ascent training.



Hard-hat diver (SLT 60).

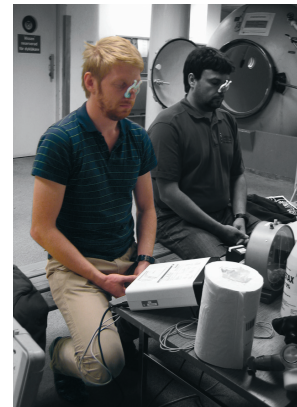


Outdoor pool for dive training.

# THE DIVING MEDICINE SECTION

*The Diving Medicine Section* is responsible for diving related issues within the SwAF and works with diving from a medical perspective through courses, research, accident investigations and trials of new equipment.

The SwAF DNC runs a pressure chamber for emergency use. Diving physicians are trained in cooperation with Sahlgrenska University Hospital in Gothenburg and the Royal Institute of Technology. The training is in accordance with the standards of the European Diving Technology Committee (EDTC) and the European Committee for Hyperbaric Medicine (ECHM).



Experiments during basic diving medicine training.



Compression to 50 meters in pressure chamber.



Examination of injured diver.

## SwAF DNC R&D CAPABILITIES:

- » Manned diving to a depth of 160 meters in a dry/wet diving chamber with additional environmental control to simulate Arctic to Tropical climates.
- » Unmanned testing to a depth of 200 meters in the ANSTI Life Support Test Facility with programmable breathing simulator and environmental control from 0° C to + 40° C.
- » Environmental Test Cabinet for air tests from -70 - +180° C. and humidity 10 - 98% RH.
- » Flume pool with water flow simulating currents up to 4 knots and a temperature of +2 - + 40° C, indoor training pool with a depth of 6 meters and outdoor pools 2.5 meter.
- » Accredited test laboratory according to ISO/IEC 17025.

## SwAF DNC DIVING SCHOOL TRAINING AND VALIDATION LEVELS:

- » S 30, SCUBA diving to a depth of 30 meters.
- » A 40, SCUBA diving to a depth of 40 meters.
- » H 30, Hard hat diving to a depth of 30 meters.
- » B 50, Hard hat diving to depths greater than 30 meters.
- » IDSA Level 1-3.
- » Diving Supervisor certificate for all of the above.

## THE FOLLOWING MEDICAL COURSES ARE HELD AT THE SwAF DNC:

- » Basic diving medicine training and hyperbaric oxygen therapy for physicians and specialist nurses.
- » Applied training in diving medicine for medical personnel and diving supervisors.
- » Introductory dive training for diving physicians.