



# Scooter Diver III (Tec, cave)



## Diver's Profile:

At this entry level, the typical Scooter Diver is a recreational diver on advanced training level who has the intention to enlarge his/her diving perimeter with the aid of an underwater diver propulsion device. The focus is on shallow water scooter dives in vicinity of or around a reef. The device allows the diver to cover more area underwater, and/or to stay longer due to a remarkably reduced gas consumption rate.

## Aims & Objectives of the course:

Advanced scooter diver course for use in any type of natural or artificial overhead environment (caverns, caves, wrecks, mines, submerged buildings, under ice), including mixed gases and with class 3 rated scooters only.

The main objectives of the Scooter Diver III course compared to the Scooter Diver II course are:

- to refresh and reinforce knowledge and skills learned in the Scooter Diver I and II courses and improving them to a higher level of proficiency
- getting familiar with the technique of Class 3 scooters
- to correctly and safely use Class 3 scooters in overhead environment (cave, wreck)
- to be able to execute complex gas-management tasks when using scooters in overhead environment
- to learn all necessary skills to master emergency situations in overhead environment (cave, wreck)

## Course Classification

The Scooter Diver III Course is an ADVANCED and TOP LEVEL diving specialty course

## Course Prerequisites and Requirements

### a. Prerequisites for students (for course admission)

Age:	18 years
OW-certificate:	CMAS 3star Diver or equivalent (fulfilling EN14153-3)
Overhead diver certificate:	Cave Diver III (Full Cave Diver) OR Wreck Diver III (Penetration Wreck Diver) or any equivalent certification from accepted organizations giving advanced diving competence in overhead environment
Previous Scooter certificate:	SCD Scooter Diver II (TEC, OW) or equivalent
Other mandatory prerequisites:	<ul style="list-style-type: none"><li>- CMAS Buddy Rescue Course OR must show proof of mastering buddy rescue techniques AT BEGINNING of course (assessment)</li><li>- valid medical attest (fitness for diving), not older than SCD rules or national legislation require (1 year)</li></ul>
Number of previous dives (all types):	100 in total, of which 50 must have been made after CMAS 3star Diver or equivalent , of which 10 must have been made within 2 months prior to course
Number of previous logged cave / penetration wreck dives	20 since Cave Diver III / Wreck Diver III certification
Number of logged scooter-dives	20 since Scooter Diver II certification of which 10 must have been made within 2 months prior to course
Other mandatory certificates:	<ul style="list-style-type: none"><li>- all Specialties as required for SCD Cave Diver III (Full Cave Diver) OR SCD Wreck Diver III (Penetration Wreck Diver)</li><li>- Advanced Nitrox Diver or equivalent</li><li>- SCD Stage Tank Handling or equivalent</li></ul>
Further requirements:	<ul style="list-style-type: none"><li>- Must have own class 3 scooter for at least 6 months</li><li>- Equipment as requested under "Personal equipment"</li><li>- Private Liability Insurance with a minimum coverage of 3 Mio. Euros</li></ul>



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### b. Requirements for training scooters in use

All scooters used must fulfill at least all technical characteristics as defined in Part V "SCD CONSTRUCTION STANDARDS FOR UNDERWATER SCOOTERS" for Class 3 rated scooters.

### c. General Training limits

- Training limits for cave zone 3 (40m EAD; 50m absolute); ref. to document "SCD CAVE DIVING STANDARDS AND TRAINING SYSTEM"
- Within diver's certification limits
- Within scooter's operational limits (class 3; depth and range); ref. to manufacturer's "User Manual for Operation"

### d. Training Environment / Gases / Limitations

Environment for training:	any suitable overhead environment (caves with zones 1 to 3!
Max. depth:	according to certification level of participants; max. depths: CMAS 3star or equivalent: 40m EAD or 50m nominal (regardless of mixture)
Gas for training:	air or any suitable Ntx or Tmx mixture accord. to depth, if students are certified accordingly
Max. O2 partial pressure:	1.40bar for bottom / 1.60bar for deco
Stage decompression:	as required; appropriate EANx / Tmx / O2 mixtures to be used whenever possible; students must be properly certified for the use of such gases. Overall decompression stop time MUST NOT exceed 30min.

### Entry assessment (only if deemed necessary)

An entry assessment can be utilized to verify that candidates fulfill all prerequisites with regard to theoretical knowledge, practical skills and physical performance. Candidate must successfully pass all assessment requirements before being accepted to course.

### Aims and priorities of the training

- To reinforce the understanding of the 3 different types of scooters, their relevant technical characteristics, their intended range of operation and their limitations, as defined in the "SCD CONSTRUCTION STANDARDS FOR UNDERWATER SCOOTERS".
- To provide a clear understanding of the basic functions of the scooter : mechanical, electrical and nautical (i.e. buoyancy in fresh and sea water, trim, torque, steering)
- To provide a clear understanding of the basic scooter's maintenance
- Proper equipment set-up for efficient scooter diving
- To provide a clear description of the scooter operation in different environment with advantages and limitations of the machine
- Scooter dive planning in the overhead environment: scooter's burn time and gas management planning
- Multiple scooters dive planning
- Pre-dive and post-dive operations
- Positioning in the water and recover of the scooter
- Correct trim and buoyancy while managing several scooters – diver's horizontal position -
- Proper use of the scooter during the descent, bottom time and ascent
- Correct finning technique with a deactivated scooter
- Team diving with scooters
- Emergency scenarios of all kind :
- Using the reel while scootering – placing a line
- Using the spools for jumps and gaps
- Gas switching; using stage tanks
- Scooter positioning during penetration. Recover on the way out.



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- s. Restriction negotiation
- t. Handling in silty environment
- u. Positioning during decompression
- v. Awareness of the environment

## Instructor : Student Ratio

Theory/classroom 1:8 (one instructor per max. 8 students)

Practical:

- in open water, confined area AND cave zone 1 / wreck zone 1 (or comparable zone): max. 4 students per 1 instructor or instructor candidate, under normal or better conditions; must be reduced to 1:2 if situation is considerably worse
- in cave zone 2 and 3 / wreck zones 2 and 3 (or comparable zones): max. 2 students per 1 instructor or instructor candidate under normal or better conditions; must be reduced to 1:1 if situation is considerably worse

## Requirements for instructors/assistants

- Responsible course director must be Scooter Diving Instructor III or Scooter Diving Instructor III CANDIDATE under supervision of a delegated supervising instructor from SCD.
- Assistants must be Overhead Environment Scooter Assistants or Overhead Environment Scooter Assistant CANDIDATES.
- Equipment as requested under "Personal Equipment" for all staff

## Personal Equipment

### Mandatory Equipment:

- All standard overhead environment diving equipment for dives at SCD Full Cave Diver level AND for cave zone 3 / wreck zone 3 or comparable zones respectively (incl. harness with the possibility of attaching max. 2 stage tanks, crotch-strap with front-strap D-ring)  
Just as a reminder:
- Each carry-on tank in use (whether mono or double) MUST carry a separate submersible pressure gauge
- One (1) primary long hose with a min. length of 2.10m and a max. length of **2.40m (7-8 feet)**
- Two (2) additional stage tanks per student with a min. volume of 7liters (recommended are 80cft aluminum tanks)
- Each student has to bring his own Class 3 rated scooter (tow-behind style only!)
- **a suitable helmet**

### Recommended (suggested) Equipment:

nothing special

## Final Knowledge (Theory) Evaluation

Theoretical knowledge will be evaluated with one single, written test, consisting of **10 MC questions + 10 Open Text questions + 3 complete diveplans (Calculations; with gas-management, deco, etc)** about the main topics as listed under "aims and priorities of the training".

In order to pass, the student must have a scoring of at least 80% of the maximum score.

## Final Skills Evaluation

Continuing and permanent evaluation based on standardized exercises. Min. passing score is C (on scale of A – E).

## Minimum Course Duration and Structure

- Minimum of 3.5 days
- Theory/Classroom: 4.0 hrs
- Dives: Minimum 6 dives; with a minimum of 270 min. total duration  
Min. 5 of the 6 dives must take place in true overhead environment  
Min. 2 of the overhead dives must be in cave/wreck zone 2 and min. 2 dives must be in cave/wreck zone 3 or comparable environments



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## Minimum Course Duration and Structure (cont'd.)

Training must take place in at least 2 different overhead environments  
Two (2) of the dives must include true decompression stops  
Not more than 2 dives per day are allowed; dives with max. depth of 9m or less do not account for

- Depth Limits: ref. to Course Prerequisites & requirements / d. Training Environment / Gases / Limitations
- Breathing Gases: ref. to Course Prerequisites & requirements / d. Training Environment / Gases / Limitations
- Decompression: ref. to Course Prerequisites & requirements / d. Training Environment / Gases / Limitations

## Course fees

Refer to the yearly training course schedule overview on the Swiss Cave Diving website.

## Course dates

By arrangement; course will be held with at least 2 participants.

All actual course dates: ref. to the yearly training course schedule overview on the Swiss Cave Diving website.

## Certification

- SCD double-sided C-card
- Wall certificate in A4 format

## Insurance

Is in the personal responsibility of each participant.

## Quality Control

Compliant with SCD Standards and the relevant procedures.



Additional information: [www.swiss-cave-diving.ch](http://www.swiss-cave-diving.ch) or Beat Müller: [btmueller@bluewin.ch](mailto:btmueller@bluewin.ch)