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## 5. Sidemount Diver

### 5.1 Introduction

This course is designed to teach certified divers how to safely utilize side-mounted primary cylinders as an alternative to the traditional back-mounted configuration. This course can be combined with other TDI courses such as: Decompression Procedures, Extended Range, Trimix, Advanced Trimix and Advanced Wreck. If combined the standards for both courses must be met.

### 5.2 Qualifications of Graduates

Upon successful completion of this course, graduates may engage in sidemount diving activities without direct supervision so long as the following limits are adhered to

1. Safety and decompression stops as appropriate or necessary.
2. Planned dives do not exceed diver's current certification level.

### 5.3 Who May Teach

1. This course may be taught by any active TDI Sidemount Diving Instructor.

### 5.4 Student to Instructor Ratio

#### Academic

1. Unlimited, so long as adequate facility, supplies and time are provided to ensure comprehensive and complete training of subject matter.

#### Confined Water (swimming pool-like conditions)

1. N/A

#### Open Water Dives

1. A maximum of 4 students per instructor is allowed

### 5.5 Student Prerequisites

1. Minimum age 18
2. Minimum certification; SDI Open Water Scuba Diver or the equivalent

### 5.6 Course Structure and Duration

#### Water execution

1. Three dives are required with a minimum accumulated bottom time of 90 minutes

## **Course Structure**

1. TDI allows instructors to structure courses according to the number of students participating and their skill level

## **Duration**

1. The suggested number of classroom and briefing hours is 4
2. Course must be taught over a minimum of 2 days

## **5.7 Administrative Requirements**

### **Administrative Tasks:**

1. Collect the course fees from all the students
2. Ensure that the students have the required equipment
3. Communicate the schedule to the students
4. Have the students complete the:
  - a. *TDI Liability Release and Express Assumption of Risk Form*
  - b. *TDI Medical Statement Form*

### **Upon successful completion of the course the instructor must:**

1. Issue the appropriate TDI certification by submitting the TDI Diver Registration Form to TDI Headquarters or registering the students online through member's area of the TDI website

## **5.8 Required Equipment**

### **The following equipment is required for each student:**

1. Dual cylinders, volume appropriate for planned dive, and student gas consumption
2. Two independent first and second stage regulators each with a submersible pressure gauge
3. Buoyancy compensator device (BCD) with power inflator appropriate for sidemount configuration
4. Exposure suit adequate for diving environment
5. Mask and fins
6. Dive computer and a additional depth and timing device; backup computer recommended

**Instructor must wear full sidemount diving equipment during all water exercises**

## **5.9 Required Subject Areas**

**Instructors may use any text or materials that they feel help present these topics.**

### **Optional Materials:**

1. *TDI Sidemount Cue Cards*
2. *TDI Sidemount Evaluation Slate*

### **The following topics must be covered during this course:**

1. Gas matching procedures to include dissimilar volumes
2. Gas management utilizing independent cylinders



3. Psychological considerations
4. Equipment considerations
  - a. Cylinder options
  - b. Regulator options
  - c. Buoyancy compensator / harness options
  - d. Proper weighting
  - e. Equipment configurations
5. Communication
  - a. Hand signals
  - b. Light signals
6. Problem solving
  - a. Gas-sharing
  - b. Gas hemorrhages
  - c. Light failure
  - d. Loss of visibility
  - e. Entanglement
  - f. Self rescue
7. Tight spaces
8. Conservation
9. Difficult water entries
10. S-Drills; specific to sidemount

## **5.10 Required Skill Performance and Graduation Requirements**

**The following land drills must be covered during this course:**

1. Land drills may be performed at the instructor's discretion

### **Pre-dive drills:**

1. Use START before every dive \*START is an acronym for S-drill (Out of Gas drill and Bubble Check), Team (buddy equipment checks), Air (gas matching), Route (entry/exit and planned path underwater, Tables (depth, duration, waypoints and schedule)
2. Stress analysis and mitigation

**The student must perform the following in-water skills during dives:**

1. Demonstrate various propulsion techniques: frog kick, modified frog kick, modified flutter kick, backwards kick, helicopter turns, and hand pulling if appropriate for the environment
2. Demonstrate adequate buoyancy control; ability to hover at fixed position in water column without moving hands or feet
3. Demonstrate adequate trim; ability to maintain proper position during the descent, bottom and ascent portion of the dive
4. Demonstrate the ability to perform the following exercises while maintaining trim and buoyancy in the water column:



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- a. Unclipping and attaching sidemount cylinders
  - b. Perform gas switches with and without a mask
  5. Demonstrate the ability to safely manage gas in independent cylinders
  6. Demonstrate conservation, awareness, and back referencing techniques
  7. Deploy lift bag
  8. Carry additional cylinder(s); optional

**In order to complete this course, students must:**

1. Perform all land drills and dive requirements safely and efficiently
2. Demonstrate mature, sound judgment concerning dive planning and execution
3. Maintain an appropriate level of awareness and respect for the environment
4. Log all dives

**5.11 To qualify to teach the TDI Sidemount Diver Course an Instructor must:**

1. Be certified as a sidemount diver
2. Be an active TDI Instructor
3. Provide proof of 25 logged sidemount technical dives \*

OR

1. Be certified as a sidemount diver
2. Provide proof of 10 technical sidemount dives\*
3. Complete the course with an active TDI Sidemount IT

**\* Technical Dive; Any dive involving decompression, additional cylinders, overhead environments such as wrecks, caves or mines.**