



B&J DIVING CENTRE SDN. BHD.

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DSAT Courses

Summary & Schedule for 10 days

1. Course Objectives & Summary:

The DSAT TecRec courses are split in two levels, the Tec Deep Diver Level One (or Tec1) and the Tec Deep Diver (or Tec2). There is also an option for a one day introductory into technical diving:

Discover Tec is not a course but a one day introduction into the use of technical diving equipment and techniques. It includes one beach dive in full tech-gear.

The DSAT Tec Diver Level One (5 day program) is qualified to make gas-switch extended no-stop dives to 40 meters, using air and enriched air nitrox with up to 60% oxygen and to use technical diving equipment and procedures. It is the equivalent of the Decompression Theory and Advanced Nitrox courses offered by other training agencies.

As a Tec1 student, you must successfully meet all the performance requirements for Knowledge Development and Practical Applications One through Four, Final Exam One and Training Dives One through Seven.

The Tec Deep Diver (10 day program) is qualified to make gas-switch extended no-stop dives, decompression stop dives and accelerated decompression stop dives to 50 meters, using air, enriched air nitrox and pure oxygen and to use technical diving equipment and procedures. This course is equivalent to Technical Diver / Extended Range offered by other training agencies.

Mastery of the technical diver rig brings all dive sites in the 50 meter range within your capabilities. The use of decompression techniques within this depth range allows for multi-hour bottom time dives to be planned allowing for serious exploration of shipwrecks or unvisited deep coral reefs without the 'deco' indicator of your computer beeping at you to ascend just as the exploration becomes interesting!

The complete course includes 12 dives (including 4 decompression dives) using air, enriched air nitrox and pure oxygen for decompression to a maximum depth of 50 meters.

The 10 day course may be split into two 5 day periods for divers unable to study the entire course at one time.

The courses are physically and mentally challenging, requiring a full commitment of time and energy during course days. A technical diving rig can weight up to 100 Kg. It requires a good physical fitness and mental attitude to deal with its particular requirements. The course is serious fun!

Tec Trimix Diver (4 to 5 day program):

For the extreme diver ready to further explore the world of technical deep diving, the gas of choice is trimix. The DSAT Tec Trimix Diver course takes you to the outer edges of technical deep diving, opening the door to pristine dive sites few divers – if any – ever see.

The DSAT Tec Trimix Diver course is intended to extend the depth range available to technical divers trained and qualified to use air, enriched air and oxygen for technical decompression dives beyond 50 metres/165 feet in open water. The DSAT Tec Trimix Diver course is intended for technical divers certified as DSAT Tec Deep Divers (or qualifying certification from another training organization). The course extends their depth range capabilities by training them in the use of trimix (helium, oxygen and nitrogen).

Prerequisites for TecTrimix diver: Certified as a PADI Rescue Diver or have a qualifying certification in diver rescue and accident management from another organization including CPR and First Aid training. Certified as a DSAT Tec Deep Diver or have a qualifying certification in deep decompression diving using air/enriched air from another organization. Students who qualify through a qualifying certification other than DSAT Tec Deep Diver must read the entire DSAT Tec Deep Diver Manual and complete the Knowledge Reviews prior to beginning the Tec Trimix Diver course.

During the course you will do up to 8 trimix dives, using up to 4 stage tanks to a maximum depth of 75 meters.

With a combination of independent study and training skill sessions, you'll find the Tec Trimix diver course intense, pushing you to meet the demands of deep Trimix diving. It's not for every diver, nor can every diver rise to the challenge. Can you?

B&J Diving Centre Sdn. Bhd. is the only Tec facility in Malaysia qualified to teach this program!

2. DSAT TecRec technical diving courses prerequisites:

2.1. Tec Diver Level 1 prerequisites:

Students must meet the following prerequisites **before** starting the course:

- Minimum age: 18 years
- Certified as a PADI Advanced Open Water Diver or equivalent
- Certified as a PADI Enriched Air Nitrox Diver or equivalent
- Certified as a PADI Deep Diver or equivalent
- Minimum of 50 logged dives of which at least 10 dives were made on nitrox, 12 dives deeper than 18 meters and 6 dives deeper than 30 meters
- Medical statement using the DSAT/PADI Medical Form

2.2. Tec Deep Diver prerequisites:

Students must meet the following prerequisites **before** starting the course:

- Minimum age: 18 years
- Certified as a PADI Advanced Open Water Diver or equivalent
- Certified as a PADI Rescue Diver or equivalent
- Certified as an Emergency First Responder or equivalent with proof of training in CPR/First Aid
- Certified as a PADI Enriched Air Nitrox Diver or equivalent
- Certified as a PADI Deep Diver or equivalent
- Minimum of 100 logged dives of which at least 20 dives were made on nitrox, 25 dives deeper than 18 meters and 15 dives deeper than 30 meters
- Medical statement using the DSAT/PADI Medical Form

2.3. Tec Trimix Diver prerequisites:

Students must meet the following prerequisites **before** starting the course:

- Minimum age: 18 years
 - Certified as a PADI Rescue Diver or equivalent
 - Certified as an Emergency First Responder or equivalent with proof of training in CPR/First Aid
 - Certified as a DSAT Tec Deep Diver
 - Minimum of 150 logged dives
 - Medical statement using the DSAT/PADI Medical Form
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3. Equipment:

During the course you will use the following technical diving equipment:

- Basic dive equipment (wetsuit, fin, mask)
- Wing type BCD with dual bladder
- 2 dive computers / depth gauges and bottom timers
(mixed gas computer or computer that can be set into gauge mode preferred)
- Dive slates (wrist slates highly recommended)
- Twin tanks with isolator manifold
- Two regulator first and second stages for twin tanks, one with long hose (min. length 1.5m)
- Up to two decompression / stage tanks
- Two oxygen clean regulators for decompression / stage tanks
- Primary reel (minimum line length 70m)
- Liftbag (minimum lifting capacity 50lbs)
- 2 Knife / cutting devices
- Jon line (for drift decompression, if applicable)

The proper equipment rigging (set up) is covered in the practical application sessions

4. Academic parts for Tec Diver Level 1 and Tec Deep Diver:

Compared with recreational diving, technical diving requires student divers to master significantly more procedural knowledge and applied theory.

The academic part of the course is demanding and time intensive. For this reason it is required that all students purchase the student training pack in advance, study the student manual at home and complete all six knowledge reviews before starting the course.

The theory part of the course consists of modules regarding technical diving risks & responsibilities, technical diving equipment, technical diving physics and physiology, oxygen, dive / gas planning, team diving, techniques & procedures, emergency procedures and mission planning. Next to this we will also include presentation / usage of different widely used decompression software for dive planning and gas calculations.

Up to 5 knowledge development review classroom sessions might be necessary to satisfy these teaching requirements.

DSAT TecRec courses include two final exams, where the Tec1 student has to pass the first one and the Tec2 student has to pass both exams to get certified. TecRec courses are designed to be taught 'prescriptively', whence students who can pass the two final exams do not have to attend formal academic sessions, except for the knowledge development sessions. However, it is our intention to give you all necessary information from the Tec Deep Diver program as well as from our own experience and expertise to help you become a very competent technical diver.

Please enquire directly for more information on the Tec Trimix Diver course to ben@divetioman.com

5. Practical Application Sessions (PAS) for Tec Diver

The practical application sessions are run in conjunction with the knowledge development review classes. As a Tec1 student you will go through the practical application sessions one through four, as a Tec2 student you will go through all eight PAS.

- PAS1: Review of proper technical dive equipment configuration
Students set up their rig independently (for dive 1)
Problem/solution analysis for dive 1
- PAS2: Plan a dive, gas consumption calculations, equipment setup (for dives 2 and 3)
Introduction to different decompression software
Problem/solution analysis for dives 2 and 3
- PAS3: Plan dives, equipment setup (for dives 4 and 5)
Problem/solution analysis for dives 4 and 5
- PAS4: Plan dives, equipment setup (for dives 6 and 7)
Problem/solution analysis for dive 6 and 7
Final Exam 1
- PAS5: Plan a 50m, 45 minutes accelerated decompression dive
- PAS6: Plan dives, equipment setup (for dives 8 and 9)
Problem/solution analysis for dives 8 and 9
- PAS7: Plan dives, equipment setup (for dives 10 and 11)
Problem/solution analysis for dives 10 and 11
- PAS8: Plan dive, equipment setup (for dive 12)
Problem/solution analysis for dive 12
Final Exam 2

6. Training Dives for Tec Diver:

To be certified as a DSAT Tec Diver Level One, the student must successfully meet all performance requirements for training dives One through Seven. To be certified as a DSAT Tec Deep Diver, the student must successfully meet all performance requirements for training dives One through Twelve.

The 12 training dives of the DSAT Tec Deep diver course include but are not limited to:

- Dive 1: Depth 2.5 – 10 meters – Twin tank
Hovering, valve shutdowns, long hose use / out of air (S-drill), get used to equipment
- Dive 2: Depth 2.5 – 10 meters – Twin tank plus one stage/deco cylinder
Bubble/descent check, S-drill, stage tank removal and replacements (R&R), gas switches, valve shutdown drills, deploy lift bag, SAC (air consumption) swim
- Dive 3: Depth 2.5 – 10 meters – Twin tank plus two stage/deco cylinders
Don stage 2 tanks on surface, Bubble/descent check, S-drill, stage/deco tank R&R, gas switches, Hovering, stage/deco tank R&R swimming, stage/deco tank R&R without mask, gas drills, SAC swim, unresponsive diver tow, SAC simulated deco stop
- Dive 4: Depth 12 – 24 meters – Twin tank plus one stage/deco cylinder
Bubble/descent check, stage cylinder R&R, long hose drill, SAC swim, deploy lift bag, valve shutdown drill, SAC simulated deco stops with gas switch, remove tanks on surface
- Dive 5: Depth 15 – 24 meters – Twin tank plus two stage/deco cylinders
Don cylinders at surface, bubble/descent check, cylinder R&R, no mask long hose drill, SAC fast swim, valve shutdown drills, deploy lift bag, switch to first deco gas, SAC simulated deco stops, switch to second deco gas, SAC deco stops, remove deco cylinders on surface
- Dive 6: Depth 24 – 30 meters – Twin tank plus one stage/deco cylinder
Don stage cylinder at surface, bubble/descent check, long hose drill, to stage tank, BCD failure drill, Deploy liftbag, simulated decompression stop with air break, valve shutdown drills hovering, stage removal on surface
- Dive 7: Depth 24 – 33 meters – Twin tank plus two stage/deco cylinders (multilevel dive)
Don stage cylinder at surface, bubble/descent check, stage deco cylinder at deco, stage tank R&R swimming, gas switch to stage tank, computer failure drill, deploy liftbag, retrieve deco tank, gas switch to deco tank, simulated decompression stops, valve shutdown drills hovering
- Dive 8: Depth 27 – 40 meters – Twin tank plus one or two stage/deco cylinders (multilevel)
Don stage cylinder at surface, bubble/descent check, free descent, stage cylinders, unresponsive diver tow, valve shutdown drills, retrieve cylinders, deploy liftbag, gas switch, simulated decompression stops, valve shutdown drills, hovering
- Dive 9: Depth 27 – 43 meters – Twin tank plus one stage/deco cylinder
Don stage cylinder at surface, bubble/descent check, gas shutdown drill, timed task, gas switch, decompression according to table/computer
- Dive 10: Depth 36 – 46 meters – Twin tank plus one or two stage/deco cylinders
Don stage cylinder at surface, bubble/descent check, dive mission/objective, surprise drills, gas switch, decompression according to table/computer
- Dive 11*: Depth 40 – 50 meters – Twin tank plus one or two stage/deco cylinders
Don stage cylinder at surface, bubble/descent check, dive mission/objective, surprise drills, gas switch, decompression according to table/computer
- Dive 12*: Depth 44 – 50 meters – Twin tank plus one or two stage/deco cylinders
Don stage cylinder at surface, bubble/descent check, dive mission/objective, surprise drills, gas switch, decompression according to table/computer

* Option available to do the last 2 dives on a WW II Wreck! See point 10 for more information.

7. Course Schedule (example) for Tec Diver:

- Day 1: Classroom - Introduction, course paperwork, medicals, PAS 1 & PAS 2
- Day 2: Beach – Dives 1 & 2
Classroom – Knowledge development (KND) 1 & 2, PAS 3
- Day 3: Beach - Dives 3 & 4
Classroom – PAS 4, KND 3
- Day 4: Boat – Dives 5 & 6
Classroom – PAS 5, KND 4, Final Exam 1
- Day 5: Boat – Dives 7 & 8
Classroom – Review of Exam 1
- **Day 6: HOLIDAY (or self study / practice sessions for slower learners)**
- Day 7: Classroom – KND 5 & 6, PAS 6 & 7, academic catch up, Final Exam 2
- Day 8: Boat – Decompression dives 9 & 10
Classroom – PAS 8
- Day 9: Boat – Decompression dive 11
Classroom – Dive planning and preparation for dive 12
- Day 10: Boat – Decompression dive 12
Classroom – certification and log books
Evening: Course Party!

8. Insurance

An insurance to participate in this course is not required but highly recommended. Technical diving involves more risks for dive accidents like decompression illness (DCI) than recreational diving, therefore an insurance coverage to the maximum depth of the training / future diving including decompression diving should be considered.

Divers Alert Network (DAN) as well as PADI offer such diving insurances with worldwide coverage.

9. Prices

All prices for technical diver courses are in USD, except for student training materials. The prices listed are valid from 1st February 2009 until 31st December 2009. Prices are subject to changes.

Upon booking of a DSAT Tec Diver Level One or Tec Deep Diver course a deposit of 30% of the course fees has to be paid via bank transfer or credit card. Once a course starting date is fixed, the deposit is non-refundable but can be credited towards a later course starting date in the following circumstances:

- Cancellation of the course is done 1 month or more prior to course starting date full credit
- Cancellation of the course is done 21 to 30 days prior to course starting date: 75% credit
- Cancellation of the course is done 14 to 20 days prior to course starting date: 50% credit
- Cancellation of the course is done 13 or less days prior to course starting date: no credit

The balance is due to be paid upon start of the course.

Course fees include tanks, weights, all gases and certification but not student training material and technical diving equipment.

9.1. DSAT course prices:

- Discover Tec USD 100.00
- Tec Diver Level One (Tec1) incl. certification USD 550.00
- Upgrade from Tec1 to Tec 2 incl. certification USD 500.00
- Tec Deep Diver (Tec2) incl. certification USD 1,000.00
- Upgrade from Tec 1 equivalent level of other agency to Tec 2 (e.g. IANTD Adv. Nitrox, TDI Adv. Nitrox/Decompression theory, DIR Fundamentals / Technical Diver 1) USD 750.00
- Tec Trimix Diver incl. certification USD 1,400.00

9.2. Student training material:

Since every student is required to own his personal manual, the DSAT Tec Deep Diver student Crewpack is included in the above prices (except for "Upgrade from Tec1 to Tec2). We do however strongly suggest that every student also purchases the other DSAT TecDeep materials as listed below:

- DSAT Tec Deep Diver Crewpack MYR 380.00
(included in course costs, incl. student manual, planning slate, checklist slate and decal)
- DSAT TecRec Equipment Set-Up and Key Skills DVD MYR 120.00
- DSAT TecRec Dive Planning Slate MYR 75.00
- DSAT TecRec Emergency Procedures Slate MYR 65.00
- DSAT TecRec Deep Stop Calculation Table, Metric MYR 65.00
- DSAT TecTrimix Diver Manual MYR 300.00

* These prices are subject to changes since they depend on the currency exchange rate to the Australian Dollar and pricing from DSAT.

9.3. Equipment rental:

For this level of diving we highly recommend that every student/diver should own at least the basic equipment required for technical diving. We are able to help you choose the proper technical diving equipment and sell all parts for the known cheap Asian prices.

9.3.1. Equipment rental for a 5 day course (Tec1, upgrade to Tec2)

- Wing BCD and Harness with dual bladder USD 70.00
- Bottom gas regulator (2 required), per regulator USD 50.00
- Long hose (7 feet) for bottom gas regulator must have own
- Oxygen clean regulator for deco tanks (2 required), per regulator USD 70.00
- Liftbag (1 required) must have own
- Primary Reel (1 required) must have own
- Wrist slate must have own
- Cutting device (2 required), per device must have own

9.3.2. Equipment rental for a 10 day course (Tec1 & Tec2)

- Wing BCD and Harness with dual bladder USD 120.00
- Bottom gas regulator (2 required), per regulator USD 90.00
- Long hose (7 feet) for bottom gas regulator must have own
- Oxygen clean regulator for stage tanks (2 required), per regulator USD 120.00
- Liftbag (1 required) must have own
- Primary Reel (1 required) must have own
- Wrist slate must have own
- Cutting device (2 required), per device must have own

10. Accommodation:

We do of course assist you with booking the appropriate accommodation. Costs there depend fully on what standards you are looking for. If you have a look at our homepage you see some pictures of the different resorts. Go to www.divetioman.com (there click on the "Tioman Island" button and afterwards on "Accommodation" in the top-linkbar).

Aircon-Bungalows go for about 60 - 150 RM/night/bungalow, nice fan bungalows (right at the beachfront) cost about 60 - 80 RM RM/night/bungalow, budget basic fan bungalows are available for 30 -45 RM/night/bungalow.

Let us know what you are looking for and we can arrange it for you.

11. Option to dive the WWII Wreck HMS Repulse

B&J Diving Centre is organizing regular trips to some of the most famous wrecks in the South China Sea. One of them is the HMS Repulse, a 270m long battleship which sunk in December 1941 together with it's sister ship the HMS Prince of Wales after an attack by Japanese torpedo and high level bombers.

The HMS Repulse lies some 46 nautical miles north of Tioman in a minimum depth of 38 meters and a maximum depth of 57 meters. You can find more information on this wreck on our homepage www.divetioman.com

We would have several options for you to dive this wreck as part of the DSAT Tec Deep course: A one day trip just to complete dives 11 and 12 or a several day live-a-board trip on the 100 foot MV Grace where we do the last two dives of your course on the first day at the wreck and then spend some more days there for fun diving. Depending on the live-a-board operator it might even be possible to do the dives 8 through 10 on another shipwreck before heading to the HMS Repulse for dives 11 and 12.

For these options, we must schedule the course together with the live-a-board operator so 1 to 2 months advanced booking is necessary. Costs depend on the kind of wreck trip and have to be quoted separately.

Tioman Island, Malaysia

B&J Diving Centre Sdn. Bhd.
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Zainal b. Rahman
Managing Director / DSAT Instructor



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