



## TDI COMPRESSOR OPERATOR

### Course Objectives:

The course is designed to give participants with little or no prior knowledge or experience of high pressure gas systems instruction in filling diving cylinders from high pressure gas sources, including relevant safety knowledge.

Compressors find their way into the repair shop too often in a poor condition. Cylinders fail a VIP due to corrosion, closely related too high moisture content in the breathing air. Divers complain about poor breathing air. Once in a while, a compressor related accident or cylinder explosion sadly makes the news highlights.

Finally let's not forget that the breathing air compressor forms the heart of every dive operation and is a substantial investment that needs to be looked after.

A lot of the above mentioned can be prevented by a trained compressor operator with a sound knowledge who understand the operational and maintenance needs of the compressor, the legal implications and technicalities surrounding a cylinder fill station and who's well aware of the 'dangers' involved.

This is an entry-level course which teaches individuals to operate and conduct routine maintenance on a breathing air compressor used to fill SCUBA Cylinders. This course covers proper handling and operation, health and safety aspects and filter changing in addition to the filling of SCUBA cylinders. Training is strictly in conjunction with the manufacturer's operating manual for any equipment being used and also in accordance with local regulations governing the use of compressors.

Upon successful completion of this course, graduates may:

1. Operate breathing air compressors and engage in filling SCUBA cylinders.
2. Fill and utilize air bank systems.

\*Additional Blender training and certification is required when filling SCUBA cylinders with breathing gases other than air.

**Prerequisites:** 18 years old and be employed by or affiliated with a facility offering SCUBA Cylinder fills

**Duration:** 2 days

**Course fee:** See pricelist





## Course Outline:

History of Compressed Air

Hazards

- Loose clothing
- Burns, fire and explosions

Physics

- Chemical reactions
- Compression rates and heat

Mechanical Operation

- Starting and stopping
- Bleeding and pressure releases

Tech Related

- Oxygen clean air creation
- DIN valve use
- Air bank systems

Logging

- Pre operation checks
- Monitoring filter life

Remote

- Using petrol powered engines
- Planning compressor size based on needs
- Estimating output based on compressors

Common Mixing Procedures

- Partial pressure blending
- Continuous blending
- Membrane separation system

Skill Performance

- Start and Stop different compressors in a controlled manner
- Perform all pre run checks on each compressor
- Demonstrate correct use of a compressed air bank
- Demonstrate correct SCUBA tank logging and filling
- Complete at least 3 hours of actual running compressor/air bank operation
- Change a filter replacing the carbon and molecular sieve
- Identify the working parts and safety features of a compressor

In addition to the above 'mandatory subjects', additional topics will be covered:

- Compressor design
- Safe cylinder handling
- Daily and scheduled maintenance
- Prime movers and electricity (single and three phase starting method)
- Air quality testing
- Basic to intermediate trouble shooting
- Basic maintenance
- Designing your own system
- Proper handling of compressed gas cylinders
- An in-depth look into filtration

