



CONFINED SPACE SAFETY AND RESCUE TRAINING COURSES



AIR MONITORING

About Rescue 3 Europe

Rescue 3 Europe develops state of the art technical rescue courses, providing internationally recognised accreditation for organisations and individuals operating in high risk environments.

As an international accrediting body, Rescue 3 provide up to date best practice guidance that is constantly evolving in line with new research and testing. All changes and developments of Rescue 3 courses go through a process of peer review and oversight by a steering committee made up of industry experts from all over the world.

Rescue 3 training providers deliver courses worldwide, in multiple disciplines, including: rope, water, boat, ice and confined space rescue. Our large suite of courses have been adopted by mountain rescue teams, wind turbine operators, fire and rescue services, ambulance teams, utilities providers, and military personnel.

Within each discipline, Rescue 3 accredited courses cover every level of operations, whether this is at an awareness level, avoiding risks and applying simple safe systems of work; or at more advanced levels where practitioners must acquire high levels of personal skills and understanding to access and navigate difficult environments.

For over four decades Rescue 3 has provided the standard for technical rescue training, offering guidance and support for maintaining best practice.





The course learning outcomes are provided as pre- and post-course reference for people involved in the delivery of Rescue 3 courses (eg Rescue 3 training providers, instructors and students). They are not to be used for any other purpose without the express written permission of Rescue 3 Europe.

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AIR MONITORING

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Air Monitoring Foundation (AMF)

Course overview and target audience

This course covers the what, how and why of gas detection. Attention will be paid to various types of gases, oxygen levels, explosion levels and safe working values. In addition, different types of gas detection equipment are discussed together with the practical advantages and disadvantages.

Contact hours 6 hours (1 day)	Prerequisites Minimum age: 18
Qualification valid for 3 years	Accredited by Rescue 3 Europe

Taught by

- Air Monitoring Instructor (AMI)

Assessment

The assessed elements of this course are:

- Foundation knowledge



Air Monitoring Foundation (AMF) skill sheet contents

Theory	
1. Rescue 3 philosophy	
2. Rules, regulations and standards	
3. Confined space definitions	
4. Generic confined space hazards	
5. Atmospheric hazards	
6. Worker safety and survival	
7. Oxygen-deficient and oxygen-enriched atmospheres	
8. LEL, UEL, flammability range, relative response curves	
9. Flashpoint, vapour pressure, vapour density	
10. Toxic gases	
11. Medical considerations with ammonia, carbon monoxide and hydrogen sulphide	
12. Gas monitoring principles and equipment	
13. Ventilation principles	
14. Introduction to ATEX and inert atmospheres	
15. Maintenance of gas monitoring equipment	
Practical	
16. Reading safety datasheets	
17. Measuring oxygen levels with electrochemical oxygen sensors	
18. Measuring explosion levels with catalytic hot bead combustible sensors	
19. Measuring toxic levels with electrochemical toxic sensors	
20. Fresh air calibration and bump testing	
21. Types of hoses, leak testing, flushing hoses	
22. Expectations, strategy and measuring in confined spaces	
23. Interpretation and registration of monitoring data	



Air Monitoring (AM)

Course overview and target audience

This course builds upon the content in the Air Monitoring Foundation (AMF) course, adding additional practical skills in the second day. It covers the what, how and why of gas detection. Attention will be paid to various types of gases, oxygen levels, explosion levels and safe working values. In addition, different types of gas detection equipment are discussed together with the practical advantages and disadvantages.

Contact hours 12 hours (2 days)	Prerequisites Minimum age: 18
Qualification valid for 3 years	Accredited by Rescue 3 Europe

Taught by

- Air Monitoring Instructor (AMI)

Assessment

The assessed elements of this course are:

- Foundation knowledge



Air Monitoring (AM) skill sheet contents

Theory	
1. Rescue 3 philosophy	
2. Rules, regulations and standards	
3. Confined space definitions	
4. Generic confined space hazards	
5. Atmospheric hazards	
6. Worker safety and survival	
7. Oxygen-deficient and oxygen-enriched atmospheres	
8. LEL, UEL, flammability range, relative response curves	
9. Flashpoint, vapour pressure, vapour density	
10. Toxic gases	
11. Medical considerations with ammonia, carbon monoxide and hydrogen sulphide	
12. Gas monitoring principles and equipment	
13. Ventilation principles	
14. Introduction to ATEX and inert atmospheres	
15. Maintenance of gas monitoring equipment	
Practical	
16. Reading safety datasheets	
17. Measuring oxygen levels with electrochemical oxygen sensors	
18. Measuring explosion levels with catalytic hot bead combustible sensors	
19. Measuring toxic levels with electrochemical toxic sensors	
20. Fresh air calibration and bump testing	
21. Types of hoses, leak testing, flushing hoses	
22. Expectations, strategy and measuring in confined spaces	
23. Interpretation and registration of monitoring data	
24. Use of measuring tubes	
25. Use of photo ionisation detectors (PID)	
26. Introduction to infrared (IR) measuring techniques	





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