



# MineARC Training Chambers

## The MineSAFE Training Chamber Range

Designed to facilitate clients in the training of their staff in the emergency operation and regular servicing of MineARC Refuge Chambers.



mineSAFE



MS-TC-SD-SIV

MineARC Systems - Built for Safety.

[www.minearc.com](http://www.minearc.com)



# Company Profile

MineARC Systems is the global leader in the manufacture and supply of emergency safe refuge solutions for the mining, tunnelling, chemical processing and disaster relief industries.

With over 20 years' experience, our dedication to ongoing research and development is driven by our key focus to continually offer the best and most advanced safety solutions on the market.

Our team of qualified engineers, electrical designers and technical experts form a global network across several international locations including;

- Perth, Western Australia
- Johannesburg, South Africa
- Dallas, Texas
- Santiago, Chile
- León, Mexico
- Beijing, China
- Reading, UK

This allows MineARC to provide 24 hour service and engineering support to our expanding list of clients in over 65 countries across the globe.

All MineARC Refuge Chambers and Safe Havens comply with the highest international regulations and recognised 'world's best practice' industry guidelines. Our key focus on quality control and product advancement has meant that MineARC Refuge Chambers have successfully saved lives in multiple real life industrial emergencies around the globe.

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Bureau Veritas ISO 9001:2008 Quality Management Systems



MineARC HRM Refuge Live Risk Assessment Testing



Australian C-Tick Standards: AS4100-1998, AS3570.1-18, AS2208, AS3000, AS1716-15



Canadian Standards Association (CSA)



United States National Electrical Code (NEC) 2013/14



European CE Certified to Machinery Norms

# MineARC Training & Certification



MineARC Systems manufactures and supplies refuge chambers to mining and heavy industry. As with most life support and lifesaving equipment, it is vital that the equipment is maintained and serviced by trained and certified personnel on a regular basis.

It is also vital to ensure all on-site personnel are appropriately trained in the emergency use of MineARC refuge chambers in the unlikely event of an emergency situation.

To this end, MineARC Systems has developed a comprehensive training package, designed to facilitate clients in the training of their staff in the emergency operation and regular servicing of MineARC Refuge Chambers. This includes a series of specially designed training chambers and various training programs, available either at MineARC's global offices or on-site.

# MineSAFE Training Chambers

MineARC has developed a series of specially designed training chambers, designed to assist sites in the training and development of staff.

The training chambers are available in three configurations - Standard Design with Series IV Scrubber, Standard Design with Series III Scrubber and Compact Design with ELVP Scrubber. They have been engineered to allow for convenient service, maintenance and operational training in an above-ground environment.

MineARC Training Chambers feature all of the major life-supporting features of a standard refuge chamber, including a scrubbing system, external mine air filter kit, battery bank and internal/external lighting and sirens. This allows sites to conduct comprehensive training in both the service and operation of all the vital componentry of a real-life MineARC Refuge Chamber.



## Features

- Refuge chamber control and scrubbing system (Series IV, Series III or ELVP)
- Chemical cartridge simulation props
- External mine air filter kit
- Oxygen candle kit (Standard Design models only)
- Aura-FX Digital Gas Monitoring System
- Air conditioning and dehumidifying system
- Four-battery bank to power control system
- Internal lighting
- External warning siren and strobe lights
- Communications system
- 4-6 person seating
- Training manuals and video
- Optional: Guardian Remote Monitoring & System Diagnostics

### What Set-Up is Required from Site?

Like any standard refuge chamber, MineARC Training Chambers require a few on-site resources to be fully functional for operation and service training. This includes:

- Connection of the external mine air filter kit to a compressed airline
- Connection to a mains power supply

# MineSAFE Training Chambers

## MineSAFE SD-SIV Training Chamber MS-TC-SD-SIV



The MineSAFE SD-SIV Training Chamber is engineered based on the MineARC's Standard Design refuge model and features the flagship Series IV controller and scrubbing system; the most advanced safe-refuge technology in the world. The system features improvements on the older Series III model, including:

- i.V.A.N (Intelligent Voice Audio Navigation); an on-board navigation assistant that guides occupants through operational procedures
- MARCISORB pre-packaged chemical cartridges
- Improved data logging capabilities
- Compressed Air Management System (CAMS)

## MineSAFE CD-ELVP Training Chamber MS-TC-CD-ELVP



The MineSAFE CD-ELVP Training Chamber is engineered based on MineARC's Compact Design refuge model and features an ELVP (extra-low-voltage-portable) control system.

The CD-ELVP chamber also features the new Compressed Air Management System (CAMS), MineARC's latest innovation in providing external, breathable air to the refuge chamber.

## MineSAFE HRM-SIII Training Chamber MS-TC-HRM-SIII



The MineSAFE HRM-SIII Training Chamber is engineered based on the HRM Series III refuge chamber model, which was on the market between the years of 2009 and 2013. The chamber features the Series III electrical control system and free-pour scrubber chemicals, which are no longer offered by MineARC Systems but are still supported and in use by many sites across the globe.

The HRM-SIII chamber also features the original MineARC three-stage mine air filter pack; a method of providing external breathable air to the refuge chamber prior to the introduction of CAMS.

## MineSAFE SD-SIV Hinged Training Chamber MS-TCH-SD-SIV



The MineSAFE SD-SIV Hinged Training Chamber offers the same advanced features as the MS-TC-SD-SIV, with the added benefit of a fully sealing, oversized door.

This chamber is designed so that the entire face of the unit can hinge outwards; providing the ability to train a large group, whilst also showcasing the effects of a positive pressure environment.

# MineARC Training Programs

MineARC offers a team of qualified service technicians, trained to provide comprehensive certified courses on MineARC Refuge Chamber service and also 'Train the Trainer' Operational Procedure Courses.

These courses are available at MineARC's facilities or, when required, can be provided on-site for specific refuge chamber types.

## Certificate of Service Training

The Certificate of Service Training is aimed at client representatives who are responsible for the service and maintenance of on-site MineARC Refuge Chambers. The comprehensive Service School course takes personnel through the complete servicing procedure of a specific chamber type and model, based on their particular site's fleet. The course also provides troubleshooting and responses to FAQ's.

This certificate is valid for two years upon completion of the one day course and assessment or until upgrades and product changes come in to place which require recertification.



## Operator Training Presenter Certificate

The Operator Training Presenter Certificate is aimed at Health and Safety Representatives who are responsible for the training of all on-site staff in the operation of a MineARC Refuge Chamber. Upon completion of this course, client representatives will be supplied with the 'Certificate of Operator Training'.

This certificate is valid for two years upon completion of the one day course and assessment or until upgrades and product changes come in to place which require recertification.

### Client Focus: OceanaGold Site Skills Training Centre

The Site Skills Training Centre, located in the northern Philippines island of Luzon, is a 30,000m<sup>2</sup> training facility that can cater for several thousand people at any one time. Developed as a joint venture with multinational gold and copper producer OceanaGold, the 'underground' simulation area of the centre is fabricated from a series of above-ground buildings; the interior shotcreted to give the realistic appearance of a real-life underground mine.

A replica MineARC Refuge Chamber is a key feature of the underground facility and is regularly utilised to conduct emergency response training. In addition, MineARC has donated samples of various safety products to facilitate the training program including MARCISORB chemical cartridges and manual gas detection equipment.





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