DEZEGA
SCSRs & SCBAs

MineARC Systems - Built for Safety.  www.minearc.com
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 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
- Beijing, China
- Barcelona, Spain
- Guanajuato, Mexico

This allows MineARC to provide 24 hour service and engineering support to our expanding list of clients in over 60 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.

www.minearc.com

DEZEGA is one of the world’s largest developers and suppliers of mine rescue equipment. They specialise in the design and manufacture of closed circuit breathing equipment, engineered for use by:

- mine rescue teams
- escape of miners and workers from irrespirable atmospheres that pose an Immediate Danger to Life and Health (IDLH)
- escape of civilians in the case of fire and smoke

DEZEGA products are utilised in more than 50 countries across the globe, with over 500,000 self-rescuers standing by, ready to protect miners worldwide.

DEZEGA consists of:

- Management company
- Production facilities, located in Europe and Asia
- Modern Research and Development Center (R&D Center)
- Representative offices in 5 regions worldwide

They design, produce, distribute and service their products with the sole purpose of protecting users in situations when nothing else can help them survive.

www.dezega.com

Explore DEZEGA’s market-leading range of SCSRs and SCBAs; designed for that moment, sold & serviced by MineARC Systems.
DEZEGA’s range of portable waist and shoulder-worn self-rescuers are designed for escape from irrespirable atmospheres over long, medium and short-haul routes.

DEZEGA SCSRs contain a cartridge with chemically bound oxygen (KO₂). As oxygen is released, the active cartridge substance simultaneously absorbs carbon dioxide, and thus the self-rescuer completely isolates the user’s respiratory organs from the irrespirable atmosphere.

**Ci-30 KS**
- 30 minute minimum duration
- EN and AU certified
- Compact design at 2.5kg weight
- Automatic starter device - begins when the lid is detached
- Moisture indication
- Rugged construction with abrasion resistant case

**CARBO-70**
- 70 minute minimum duration
- GOST certified
- Compact design at 2.78kg weight
- Automatic starter device - begins when lid is removed
- Optional moisture indication
- Rugged construction with abrasion resistant case

**DEZEGA Ci-30 KS SCSR**

The DEZEGA Ci-30 KS is a closed-circuit breathing apparatus, ensuring the user does not inhale outside gases after donning. The device provides the user with both an oxygen source and a carbon dioxide neutraliser (scrubber).

Chemically bound oxygen reacts with the carbon dioxide exhaled by the user, ultimately absorbing the CO₂ and allowing breathable air to circulate within the device.

The Ci-30 KS features an automatic starter, in which oxygen generation begins automatically when the self-rescuer is donned and exhalation is detected.

**Nominal rated duration in accordance with EN 13794:2002 and AS/NZS 1716:2012**
- Escape (35 l/min) 30 min
- Waiting for rescue (10 l/min) 90 min

**Temperature of inhaled gas**
- 50°C

**Maximum breathing resistance**
- 15 Pa

**Average CO₂ content**
- 1.5%

**Weight carried**
- 2.5 kg

**Shelf life**
- 10 years

Should the indicator change colour from blue to pink, this is a sign that moisture has infiltrated the capsule; resulting in a risk of case leakage and untimely cartridge activation. The self-rescuer must then be checked with a DEZEGA testing unit.

This 30-minute waist belt-worn self-rescuer is made for markets that accept the European and Australian Standards.

In case of dense smoke or irritating gas emissions, it is important to protect the eyes. As such, the Ci-30 KS self-rescuer comes equipped with protective goggles with an anti-fogging coating to improve vision during an escape.

**DEZEGA’s range of portable waist and shoulder-worn self-rescuers are designed for escape from irrespirable atmospheres over long, medium and short-haul routes.**
The DEZEGA CARBO-70 is a closed-circuit breathing apparatus, ensuring the user does not inhale outside gases after donning. The device provides the user with both an oxygen source and a carbon dioxide neutraliser (scrubber). Chemically bound oxygen reacts with the carbon dioxide exhaled by the user; ultimately absorbing the CO₂ and allowing breathable air to circulate within the device.

The CARBO-70 features an automatic starter, in which oxygen generation begins automatically when the device is opened.

The moisture indicator is a transparent capsule with hydrophobic material, installed in the self-rescuer casing on the top of the unit. Should the indicator change colour from blue to pink, this is a sign that moisture has infiltrated the capsule; resulting in a risk of case leakage and untimely cartridge activation. The self-rescuer must then be checked with a DEZEGA testing unit.

This 70-minute waist or shoulder-worn self-rescuer is made for markets that accept the GOST standards.

In case of dense smoke or irritating gas emissions, it is important to protect the eyes. As such, the CARBO-70 self-rescuer comes equipped with protective goggles with an anti-fogging coating to improve vision during an escape.

Nominal rated duration in accordance with GOST 12.4.292-2015 and Technical Regulation of Customs Union 019/2011
- Escape (35 l/min) 70 min
- Waiting for rescue (10 l/min) 210 min

Temperature of inhaled gas 45˚C
Maximum breathing resistance 980 Pa
Average CO₂ content 1.5%
Weight carried 2.8 kg
Shelf life 7 years

Optional moisture indicator
The moisture indicator is a transparent capsule with hydrophobic material, installed in the self-rescuer casing on the top of the unit.

Should the indicator change colour from blue to pink, this is a sign that moisture has infiltrated the capsule; resulting in a risk of case leakage and untimely cartridge activation. The self-rescuer must then be checked with a DEZEGA testing unit.

This 70-minute waist or shoulder-worn self-rescuer is made for markets that accept the GOST standards.

In case of dense smoke or irritating gas emissions, it is important to protect the eyes. As such, the CARBO-70 self-rescuer comes equipped with protective goggles with an anti-fogging coating to improve vision during an escape.
The P-30EX SCBA is the ideal choice for prolonged rescue operations, maintenance and repair works conducted in atmospheres immediately dangerous to life and health.

- Nominal rated duration up to 4 hours
- Normal pressure within the breathing circuit
- Light in weight, compact in size
- Anti-static nonflammable materials, suitable for coal mines
- Reliable mechanical design with no electronic components
- Equipped with changable cooling elements
- Advanced harness system

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal rated duration</td>
<td>4 hours</td>
</tr>
<tr>
<td>Weight of apparatus (full oxygen cylinder) only</td>
<td>11.8 kg</td>
</tr>
<tr>
<td>Weight of apparatus (full oxygen cylinder), including ice and cooler cover</td>
<td>12.6 kg</td>
</tr>
<tr>
<td>Weight of full-face mask</td>
<td>0.7 kg</td>
</tr>
<tr>
<td>Weight of soda lime CO₂ absorber</td>
<td>2.3 kg</td>
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<tr>
<td>Oxygen volume</td>
<td>400 L</td>
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<tr>
<td>Cylinder pressure</td>
<td>20 MPa</td>
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<tr>
<td>Operating pressure of alarm signal</td>
<td>5.5 MPa</td>
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<tr>
<td>Continuous oxygen supply (±0.1)</td>
<td>1.4 l/min</td>
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<tr>
<td>Emergency oxygen supply</td>
<td>80 l/min</td>
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<tr>
<td>Pressure of lung demand valve</td>
<td>100-300 Pa</td>
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<tr>
<td>Overflow valve activation pressure</td>
<td>100-300 Pa</td>
</tr>
<tr>
<td>Usable capacity of breathing bag</td>
<td>5 L</td>
</tr>
<tr>
<td>Dimensions</td>
<td>450x375x165mm</td>
</tr>
</tbody>
</table>
**SCBA Spare Parts**

**D-VISION Face Mask**

Professional full-face mask, specifically designed to ensure optimum breathing conditions in any DEZEGA compressed oxygen SCBA. This mask provides maximum comfort and minimises user fatigue during wear.

Also fits other closed-circuit SCBAs with central bush with a thread 5/16” (standard connection)

- Rubber or silicone construction
- Shock and scratch-proof shield with wipe
- Easily adjustable harness
- Large diaphragm to enhance speech articulation
- Six size combinations available for the best seal possible
- Optional hydration system integration

**D-SORB Soda Lime Absorber**

During use, a mixture of gases including carbon dioxide is exhaled back into the SCBA. In a closed circuit apparatus this gas cannot be released into the atmosphere, and instead must be neutralised with a specific chemical agent, usually called an absorber or scrubber.

D-SORB granules are ideally shaped and fitted in a cartridge so as to absorb the maximum amount of carbon dioxide. Optimal formula and granulometrics ensure comfortable breathing.

- Allows for lower breathing resistance
- High absorbency
- Rubbing endurance

**CLEAR-VISION Anti-Fogging Solution**

CLEAR-VISION is a liquid spray, designed to clean and provide anti-fogging and antistatic effects to goggles and masks.

- Clean transparent parts of glasses, visors and full face masks
- Prevent glass from fogging
- Coat surfaces with antistatic properties

**SCBA Testing and Maintenance**

**DEZEGA CheckUp Breathing Apparatus Test Set**

The DEZEGA CheckUp Breathing Apparatus Test Set ensures that a closed-circuit SCBA is in workable condition, and each joint is accurately tuned. This testing set is compatible with any DEZEGA SCBA as well as closed or open circuit SCBAs by other manufacturers.

Checks the following elements of an assembled closed-circuit SCBA:

- Leak-tightness
- Continuous oxygen flow by positive and negative pressure
- Pressure to activate relief valve
- Pressure to activate demand valve
- Pressure when demand valve provides given oxygen flow rate
- Oxygen flow by emergency valve
- Leak-tightness of face mask

Checks the following closed-circuit SCBA joints:

- Continuous oxygen supply by emergency valve and demand valve
- Leak-tightness of regenerative cartridge and cooler
- Pressure to activate safety valve of the reducer
- Relief valve opening pressure

Sites can purchase their own SCBS CheckUp Test Set, or equipment can be tested and serviced by MineARC Systems team of technical experts.