



SAVIOUR SELF-CONTAINED-BREATHING APPARATUS(SCBA) CLASS 2

Model No.: RSSAV-SCBA

Saviour Self-Contained Breathing Apparatus (SCBA)

Class 2

A Self-Contained Breathing Apparatus (SCBA) is a portable, life-support device providing clean, pressurized air from its own tank, allowing users to breathe safely in immediately dangerous environments like fires, toxic spills, or oxygen-deficient confined spaces, commonly used by firefighters, rescue workers, and industrial personnel. It consists of a facepiece, a high-pressure air cylinder, a regulator to control airflow, a body harness, and gauges, with exhaled air vented to environment(open-circuit).



TECHNICAL SPECIFICATION

Class 2 Breathing Apparatus

- Self-contained open-circuit breathing apparatus intended for firefighting applications.
- Differentiated from Class 1 (industrial use) by additional requirements like flame/radiant heat resistance.

PRESSURE & VALVE REQUIREMENTS

Cylinder Outlet & Pressure Control

- Outlet valves are designed to prevent accidental closure or wrong pressure connections (e.g., apparatus with lower rated pressure not be connected to higher pressure source).
- Valve operation requires minimum two turns of hand wheel or lockable open position.

DESIGN & CONSTRUCTION REQUIREMENTS

General Design

- Robust construction to withstand rough usage.
- No protrusions or sharp edges that could catch or injure the wearer.
- Components readily separable for cleaning/inspection.
- Total mass ready for use (with fully charged cylinders and full-face mask) not exceed 18 kg.

Materials

- Materials have adequate mechanical strength and resist deterioration due to heat and handling.
- Exposed parts not be made of metals that can cause sparks (e.g., magnesium/titanium/aluminium alloys with high spark propensity).

CLASS-2 SPECIFIC PERFORMANCE CRITERIA

Heat & Flame Resistance

- Apparatus exposed to radiant heat at 8 kW/m² for 5 min at 105 L/min flow continue to meet breathing resistance requirements through the test period (although deformation is allowed).
- After radiant heat exposure, breathing performance meet required limits.

Flame Engulfment

- Class 2 apparatus are subjected to flame engulfment tests.
- No after-flame continue for more than 5s.
- All components securing the apparatus or cylinder(s) not separate in a manner that jeopardizes wearer safety.

ENVIRONMENTAL & DURABILITY TESTS

Water Immersion

- Apparatus continue functioning satisfactorily after immersion in water.
- Performance assessed before and after immersion with breathing resistance tests.

Leak Tightness & Hose Resistance

- Assemblies passed leak tests at prescribed low and high pressures.
- Breathing hoses demonstrate resistance to collapse under specified conditions.

BREATHING PERFORMANCE SPECIFICATIONS

Breathing Resistance

Apparatus with positive pressure:

- Positive pressure maintained in mask cavity adjacent to face seal.
- Exhalation resistance limits vary based on flow conditions.

WARNING DEVICES & INDICATORS

Pressure Indicator

- Have blow-out protection and non-splintering window.
- Tactile or electronic indicators show pressure.
- Warning device operate at a cylinder pressure of 55 bar \pm 5 bar.
- Audible warning \geq 90 dB(A) at the ear proximity and continue at least 15 s at 90 dB for continuous tone (longer for intermittent).

Warning Devices

- Pneumatic or electronic warning devices function in 0 °C to 10 °C at 90 % RH.
- Average air loss from warning signal not exceed 5 L/min.

TEMPERATURE & ENVIRONMENTAL CONDITIONING

- Pre-conditioning cycles at high (70 \pm 3 °C dry/wet) and low (-30 \pm 3 °C) temperatures are prescribed before several tests.
- Breathing performance meet requirements after conditioning

KEY FEATURES

- With positive pressure face mask.
- Secondary attachment for two user
- Operating temperature range -30°C to 60°C
- With pressure reducer relief valve for wearer safety
- With automatically activated auditable warning device.
- Digital pressure gauge with motion sense alarm
- Push to talk(PTT) for communication
- Available with glow light for enhanced visibility
- Quick detachable facemask using QRC
- Flame proof back plate with padding and harness and hose
- Heat resistance face mask
- Suitable for industrial firefighting
- Water proof and heat proof electronic warning device.

MARKING & DOCUMENTATION

Manufacturer supply:

- Manufacturer name
- Model/serial number
- Face mask size(s)
- Operating instructions and maintenance instructions
- Month/Year of manufacturing
- License and certification

CERTIFICATION

- IS 10245:2023 Part 2 Class 2
- IS 14166:2024
- PESO-Approved cylinder
- PESO-Approved valves
- Conforms EN 137

IS 10245 Part 2:2023



CM/L:7200167211

IS 14116:2024



CM/L:7300127004

APPLICATIONS

- Chemical and petrochemical industries
- Emergency response and rescue
- Hazardous material handling
- Industrial fire fighting
- Mining

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