

Self-contained Open-circuit Positive Pressure Air Breathing

Apparatus (SCBA)



The self-contained positive pressure air breathing apparatus, which is a kind of isolated protective breathing equipment, provides respiratory protection for users working in oxygen-deficient environment or the environment with toxic and harmful gas. Under normal conditions, the pressure in the respirator mask is a little higher than the pressure in external environment, which can effectively prevent external toxic and harmful gas from intruding into the mask, and guarantee the safety of users.

The product can widely apply to such industries as fire fighting, petroleum, chemistry, metallurgy, power, shipping, military and army, public security, etc.

The air cylinder can be 3L/4.7L/6.8L/9L/12L-carbon fiber composite air cylinder or 3L/6L/6.8L/12L-steel cylinder (for ship use).

A complete set contain with parts as following:

Technical Specifications Data

Item:	Description	
SCBA SET (self-contained air breathing apparatus)	Cylinder Material	Carbon fiber composites
	Service Life of Cylinder	15 years
	Hydrostatic pressure(Mpa)	50
	Working pressure(Mpa)	30
	Filled Content	Compressed air
	Cylinder volume (L)	2L,3L,4.7L,6.8L,9L
	Max flow(L/min)	≥1000
	Inhalation resistance(Pa)	≤500
	Exhalation resistance(Pa)	≤1000
	Alarm pressure(Mpa)	5.5±0.5
	Alarm(dB)	≥90
	Screw Thread	M18*1.5

Carbon Fiber Composite Cylinder

Part No.	Volume (L)	OD (mm)	L (mm)	Gas Capacity (L)	Wall Thickness (mm)	Complete Set N.W (KG)
C1-88-2.0-30-T	2	96	433	544	≥2.0mm	1.5
C2-105-3.0-30-T	3	114	446	817	≥2.0mm	2.1
C3-125-4.7-30-T	4.7	137	492	1275	≥2.0mm	3
C4-144-6.8-30-T	6.8	157	528	1835	≥1.8mm	3.8
C5-162-9.0-30-T	9	174	550	2530	≥2.0mm	4.9

Gross Weight:14KGS/set Volume:0.12CMS/set Size:76*28*52cm/set

Package: package carton

Sets/ctn : 1set/ctn

CE certification for SCBA

SAI GLOBAL EU TYPE EXAMINATION CERTIFICATE

SAI Global Assurance Services Limited ("SAI Global") (Notified Body No: **NB2056**) has examined the product and the related technical documentation as presented and certifies that the product complies with the Regulation(s), the applicable Health and Safety Requirements and Standard or Specification as below and on the appendices included with the certificate. This certificate is only valid when there is a valid Module C2 or Module D Conformity assessment program in place.

Product Description: Respiratory Protective Devices (Category III)

Examined for compliance with: PPE Regulation (EU) 2016/425 – Module B

Relevant Standard(s)/Technical Specification:

EN 136:1998 Respiratory protective devices. Full face masks. Requirements, testing, marking

EN 137:2006 Respiratory protective devices. Self-contained open-circuit compressed air breathing apparatus with full face mask. Requirements, testing, marking

Original certification date: 8th April 2019

Date of issue: 10th April 2019

Expiry date: 7th April 2024

Certificate No: CEC40344

Kevin Goodwin
General Manager Technical Services
SAI Global Assurance
Authorised Signatory

This certificate remains the property of SAI Global and has been issued in accordance with the CE Scheme Conditions and Procedures of SAI Global Assurance Services Ltd, Paris House, Ground Floor, Davy Avenue, Knowlhill, Milton Keynes, MK5 8HJ, United Kingdom.
Notified Body: 2056

THIS CERTIFICATE DOES NOT ENTITLE THE HOLDER TO USE ANY OF THE CERTIFICATION TRADEMARKS ISSUED BY SAI GLOBAL PTY LIMITED OR OTHERWISE.



APPENDIX 1

SAI Global Assurance Services Limited ("SAI Global") (Notified Body No: NB2056) has examined the product and the related technical documentation as presented and certifies that the product complies with the Regulation(s) and Standard or Specification as below.

Product Description: Respiratory Protective Devices (Category III)

Description
Self-contained positive pressure breathing apparatus, type II, comprising Rubber & PC full face mask (class 3,) demand valve, body harness with PC & Flame retardant cotton back plate assembly, pressure regulator assembly, Max rate 6.8L Cylinder (filling pressure 30Mpa) and cylinder valve

Examined for compliance with: PPE Regulation (EU) 2016/425 – Module B

Relevant Standard(s)/Technical Specification:

EN 136:1998 Respiratory protective devices. Full face masks. Requirements, testing, marking

EN 137:2006 Respiratory protective devices. Self-contained open-circuit compressed air breathing apparatus with full face mask. Requirements, testing, marking

Technical file Reference No: CEC40344 – CR34486

Original date of issue: 10th April 2019

Date of issue: 10th April 2019

Certificate No: CEC40344A1

Kevin Goodwin
General Manager Technical Services
SAI Global Assurance
Authorised Signatory

This certificate remains the property of SAI Global and has been issued in accordance with the CE Scheme Conditions and Procedures of SAI Global Assurance Services Ltd, Paris House, Ground Floor, Davy Avenue, Knowlhill, Milton Keynes, MK5 8HJ, United Kingdom.
Notified Body: 2056

THIS CERTIFICATE DOES NOT ENTITLE THE HOLDER TO USE ANY OF THE CERTIFICATION TRADEMARKS ISSUED BY SAI GLOBAL PTY LIMITED OR OTHERWISE.



Module D Certificate PPE Regulation (EU) 2016/425

SAI Global Assurance Services Limited ("SAI Global") (Notified Body No: **NB2056**) confirm that the Quality Control System for the final product complies with the requirements of Module D of PPE Regulation (EU) 2016/425.

Scope: Manufacturing processes - Personal Protective Equipment
Respiratory Protective Devices

Relevant Standard(s):

EN 136:1998 Respiratory protective devices. Full face masks. Requirements, testing, marking

EN 137:2006 Respiratory protective devices. Self-contained open-circuit compressed air breathing apparatus with full face mask. Requirements, testing, marking

Technical file Reference No: CEC40344 – CR34486

Original certification date: 8th April 2019

Date of issue: 10th April 2019

Expiry date: 7th April 2024

Certificate No: CEC40344/D

Kevin Goodwin
General Manager Technical Services
SAI Global Assurance
Authorised Signatory

This certificate remains the property of SAI Global and has been issued in accordance with the CE Scheme Conditions and Procedures of SAI Global Assurance Services Ltd, Paris House, Ground Floor, Davy Avenue, Knowlhill, Milton Keynes, MK5 8HJ, United Kingdom.
Notified Body: 2056

THIS CERTIFICATE DOES NOT ENTITLE THE HOLDER TO USE ANY OF THE CERTIFICATION TRADEMARKS ISSUED BY SAI GLOBAL PTY LIMITED OR OTHERWISE.

- Adopt high-intensity sound transmission diaphragm.
- Oronasal guard suitable for wearers, decrease the inhalation carbon dioxide content.

2. Audible warning device and pressure gauge



- The pressure gauge is specified by scale ranged between(0-40)MPa, it is connected with the Reducer through a high pressure hose. The dial plate is made of fluorescent material, which enables user to read the figure in darkness.
- The gauge surface is made of shock resistant material, protected by rubber cover, and is waterproof, quake-proof, and dust-proof.
- The alarming device is designed on the high pressure hose close to the pressure indicator. When cylinder pressure is below (5.5 ± 0.5) M Pa, the alarming whistle will sound alarming at above 90d B(A).

3. Back plate assembly



Lightweight, easy to use, comfortable. Lumbar pad for added back support. No tools required for easy maintenance.

Backplate assembly consists of back plate, shoulder strap, waist belt, buckle, pressure reducer holder and cylinder fastener. Back plate is designed according to ergonomics, complying with the

back shape of human body, making wearer more comfortable with a larger interface. It is injection moulded by flame resistant engineering plastics and carbon fiber, it is of high intensity and shock-resistance to protect from being damaged, while weight is only 0.68kg. Shoulder straps and belt are made of Nomex or KEVLAR, tear-resistant and flame-retardant. And they together distribute the weight of the apparatus effectively. Pressure reducer which is fixed by drift bolt on back plate can be replaced easily.

4. Demand valve



- Demand valve, with small size, can be inserted mask in 360° promptly. Gas supply is above 500L/min.
- Streamlined and elegant design, do not obstruct view
- Manual close valve has small resistance for opening

- Small breathing resistance to make respiration comfortable
- Easy operation and use
- Ensure safe air supply by using manual force air supply button
- Outer shell uses flame resistance high intensity engineering plastics

5. Pressure reducer



The pressure reducer core adopts advanced technology with a design life of 15 years. The unique maximum gas supply is above 1000L/min, ensuring the user's enough respiratory volume.

The main parts that connected with the reducer:

- Single or double cylinder
- The medium pressure hose whose function is to supply air to the demand valve
- The high pressure hose connected with the pressure indicator

6. Cylinder valve



Y shape design, with safe self lock device to prevent inadvertent close due to hard knock or incorrect operation. Unscrew the switch hand-wheel by rotating in the counterclockwise direction, it is regarded as the open condition and close vice versa. There is safety diaphragm set in cylinder valve, with explosion pressure at (37-45)MPa to prevent the deformation and explosion of cylinder due to inner high pressure.

7. Multifunctional quick-release buckle



Stainless steel, strong and durable. Traceless design, safe and reliable.

8. Composite cylinder will be 2L/3L/4.7L/6.8L/9L



Carbon fibre cylinder has the advantages of high strength, light weight, corrosion-resistant and anti-shocking.

Carbon fibre composite cylinder, inter layer is made of high intensity aluminum alloy fully wrapped with carbon fiber composite. The glass fiber surface screw is M18*1.5.

● Technical Specification

Vol.	W.P of air cylinder	Max. air supply flow	Respiratory resistance		Alarm pressure	Net Weight	Service time for ref.
			Exhalation	Inhalation			
2.0L	≤30MPa	≥1000L/min	≤1000Pa	≤500Pa	5.5±0.5M Pa	1.5KG	15min
3.0L	≤30MPa	≥1000L/min	≤1000Pa	≤500Pa	5.5±0.5M Pa	2.1KG	25min
4.7L	≤30MPa	≥1000L/min	≤1000Pa	≤500Pa	5.5±0.5M Pa	3.0KG	45min

6.8L	≤30MPa	≥1000L/min	≤1000Pa	≤500Pa	5.5±0.5M Pa	3.8KG	60min
9.0L	≤30MPa	≥1000L/min	≤1000Pa	≤500Pa	5.5±0.5M Pa	4.9KG	90min
12L	≤30MPa	≥1000L/min	≤1000Pa	≤500Pa	5.5±0.5M Pa	7.4KG	125min

- **Note: The service time is calculated based on medium work intensity (respiratory capacity: 30 L/min)**

Configurable with Added Options

9. The intelligent electronic pressure gauge device



- Power supply: 2pcs AAA battery
- standby time: more than 1 year(remove the battery when unused for long period)
- service time: continuously work for 30hours
- Continuous alarm time: more than 2hours
- Operating temperature: - 30 °C ~ + 70°C
- Dust-proof, waterproof, drop-proof, explosion-proof
- Explosion-proof grade: Exd II CT4
- Dimension:94x62x36mm

10.Head-up /HUD pressure display device

- Power supply:CR2 lithium battery
- standby time: more than 1 year(remove the battery when unused for long period)
- service time: continuously work for more than 200 hours
- Operating temperature: - 30 °C ~ + 70°C
- Grade of Protection:IP67
- Explosion-proof grade: Exd II CT4
- Weight:40g

11.HBCS skull communication system



Clear and audible communication for noisy environments. Includes voice amp and hard wired radio systems.

- It comprises microphone, horn, loudspeaker, talk-listen button, connecting wire and receiver
- The sending/receiving communication system and horn are installed inside the helmet; the transceiver is installed at the top of the helmet and the horn is installed at ear position.

- When it is used, the head will have small vibration when talking. The requirements of interphone dialog for loudness can be met through amplification and filtration, and the communication effect can be guaranteed even under a complex environment.
- Flame retardant and high temperature resistant ally material is used, which ensure good impact resistance and that it can be used safely under various sever environments.
- It can be used with interphones of different types. The operation is simple and it is unnecessary for training

12.Sound Beacon



The sound beacon is an immobility detector of the worker must contain the following characteristics:

- Body of the beacon is robust thanks to a rubber protection;
- The beacon has a water-dust protection rating: IP67
- Alarm sound level: 90 and 100 dB
- Have a light signal thanks to highly visible LEDs
- The beacon can activate automatically after the ARI carrier has been stationary for 35 seconds or less, and must be equipped with a manual trigger.
- The beacon is Explosionproof approved.

13. Self-Contained Breathing Apparatus with double cylinders

Equipped with two 6.8 carbon fiber composite gas cylinders, with large gas storage capacity and long supply, it is especially suitable for emergency rescue and other occasions.

You can also choose the 6.8 dual-bottle with other rescue interface configuration, and the dual-bottle can be quickly converted into a single bottle: if there is no 6.8L spare gas at the disaster site, you can manually remove the three-way connector on the pressure reducing valve and use a single bottle The respirator can be configured as a 9L cylinders.



