

TECHNICAL DATASHEET

SCBA

Self-contained Breathing Apparatus (SCBA)

Type: RHZK6

Certification: MED APPROVED BY RINA, CCS

The SCBA is designed for protecting:

- ◆ Toxic particles and aerial fog
- ◆ Toxic gases
- ◆ The oxygen concentration is less than 17%
- ◆ The smog caused by fire disaster

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1. Production diagram and technical parameters

1.1 Product diagram



NO.	Item	No.	Item
1	Gas cylinder	6	Pressure regulator
2	Strip	7	Full face mask
3	High-pressure pipelines	8	Air supply valve
4	Pressure gauge with whistle	9	Cylinder valve
5	Harness		

1.2 Technical parameters

1	Gas cylinder	Capacity	6L, steel
		Working pressure	30MPa
2	Pressure regulator	Air supply	>310L/min
		Output pressure	0.6~0.9MPa
3	Safety valve opening pressure		Open in 1~1.6MPa
4	Pressure with alarm whistle	Alarm pressure	5.5 ± 0.5MPa
		Sound level	90db
5	Respiratory resistance		<980Pa
6	Service time		30-45min
7	Package size		77*30*50cm
8	Weight (net)		15kg
	Weight (with plastic case and packing carton)		22.00kg

2. Harness and belt (FZB-1)



Completely in accordance with human body engineering design, shape the back curve of joint human body completely, contact area is bigger, wear comfortable. By straps can easily adjust the back contact height and position of joint human body back. Back frame made of lightweight polypropylene materials, impact resistance and corrosion. Overall injection, disinfection, convenient cleaning. The lateral parts without acute angle, will not cause harm to human anti-slip fabrics and woven belt, wearing more comfortable. Belts buckles made of durable nylon materials, convenient adjustment. Braces fabric for flame retardant material.

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3. Pressure gauge with alarming whistle (Type:FZBJQ-1)



Main performance

Pressure gage reading: 0-40MPa, with safety opening.

With fluorescence function, the area of 0-5MPa marked in red.

Working pressure: 30MPa

The thimble in the alarm whistle is fixed in the spring by the high pressure air, which is transported by pressure regulator and high-pressure pipelines, when opening the valve of gas cylinder. The thimble is for sealing, it can prevent the medium-pressure air into the alarm whistle and hence, the whistle won't alarm.

When the pressure in the gas cylinder is below 5.5 ± 0.5 MPa, the thimble detach the sealing position under the action of the string, the medium-pressure air enter into the alarm whistle at the speed of 5 L per minute. And then, the whistle alarms.

Work function

Work pressure of the alarm whistle: 5.5 ± 0.5 MPa

The whistle will alarm until the air exhaust.

Air consumption: 5 L/ minute

Sound level: 90db

Frequency: 3800HZ

4. Air supply valve (Type:FZG-1)



The air supply valve weights light, has compact structure and is made of the fire impact-resistant material. It can fast connect with the face mask through the string button and fast interface. The air supply valve connects with the pressure gauge through the medium-pressure pipeline. When it occurs the disordered breathing on the user, press the red “ON” button and the air supply valve will increase the amount of gas automatically to 450L per minute (the air supply valve will reach this gas amount within tenths of a second)

The maximum amount of gas : 450L/minute

5. Pressure regulator (Type:FZJ-1)



Whatever the change of air pressure in the gas cylinder and the user's breathing frequency, the pressure regulator can provide a stable output pressure. The black sealed cap guarantees the authorized maintenance of pressure regulator, it can't be removed privately, otherwise, the person who removes the cap should suffer the consequence.

Mainly parts connected with the pressure regulator:

- One or two gas cylinder
- Medium-pressure pipeline, transporting the air to the air supply valve
- High-pressure pipeline, connecting with the pressure gage
- Technical specification

The maximum input pressure: 30MPa

Output pressure: 0.7 ± 0.2 MPa

Opening pressure of the safety valve: 1.1 ± 0.2 MPa

Working temperature: $-30^{\circ}\text{C}—+60^{\circ}\text{C}$ (According to the standard of EN137)

Type: Dynamic balance

Warning: The pressure regulator only can be maintained by designated person, they are our company's specialist and the maintenance personnel, or the person who has the professional training and get the authorized by our company.

6. Full face mask (Type:FZM-1)



- Adjustable, comfortable to wear
- Wide view
- Connected with the air supply valve through the fast interface
- Novel one-way exhalation valve to reduce the breathing resistance
- There is tightening belt and quick clip, so the headband is easy to be adjusted
- With mouth and nose mask, to reduce the carbon dioxide content
- The mask is anti-fog

7. Gas cylinder (Type:RHZKFZJ)



It is composed of high-strength aluminum alloy liner and fully wrapped carbon fiber composite material, which is high strength, light weight.

Service time: It depends on the amount of compressed air and the air consumption of the user and the air consumption depends on the user's work nature.

Work nature	Air consumption (L/Min)
Rest	10-15
Mild activity	15-20
Light work	20-30
Intensity work	30-40
High-intensity work	45-55
Work for a long time	50-80
Vigorous activity(few minutes)	100

The amount of breathable air in the gas cylinder

The user can get the value by calculating the product of the volume of gas cylinder and working pressure.

For example: the working pressure of a 6L gas cylinder at 30MPa, the air volume is $6.0 \times 30 \times 10 = 1800L$

This calculation method doesn't consider the purity of air, so it needs add a 0.9 coefficient to correct. The actual air volume in the gas cylinder is: $1800 \times 0.9 = 1620L$. According to this calculation method, the actual use of time is 54 minutes (based on the air consumption: 30L/min). The user can roughly calculate the working time before or in the progress of using the gas cylinder.

8. Cylinder valve (Type:FZF-1)



Working pressure: 30Mpa

Outlet Connection: DIN G5'8

Inlet Connection: M18*1.5

One set in each plastic suit case

