

Chapter Two Structure and technical description of breathing apparatus

1. Structure of breathing apparatus (See Fig. 1)



Figure 1 Structure of breathing apparatus

1- Cylinder 2- Cylinder valve 3- Pressure reducer 4- Back support 5- Pressure display and alarm device 6- Air supply valve 7- Full face mask 8- Medium pressure hose

2. Technical description (See Fig. 1)

2.1 Cylinder

The cylinder is used for storing of the compressed air for respiration, its specified storing pressure is 30 MPa, there are many specifications steel cylinders or carbon fibre compound material cylinders for option, Carbon fiber composite cylinder is processed by intertwining high polymer materials and high-strength fibers such as carbon fiber and glass fiber and the aluminum alloy inner container is process through advanced equipment and technology. It is featured by light weight, high strength, corrosion resistance, and long service life.

Attention: During using or charging the cylinder, please handle with care and avoid strong collision. Prompt release of high pressure compressed air, so please handle with care.

2.2 Cylinder valve

The cylinder valve is a important part that has zwei structure, the one has a output thread of w21.8 x 1/14 which connected with a pressure reduce valve, the other one has a inner thread of M 22 x 1.5 or G5/8" which connected with the pressure reduce valve. The current thread is G5/8"(14 teeth/inch) screw thread, which is marked on the cylinder valve. A high pressure safety membrane is used in the cylinder valve, when the air pressure in a cylinder exceeds 25% of the specified pressure, it lead to damage of the safety membrane and the air goes quickly out.

Attention: If a safety membrane is damaged, the air of the cylinder lets empty out, the user must checking the reason and change a new specified membrane in time, no use other ersatz.