



# The MSA Compressed Air Breathing Apparatus System BD 96

[ High Comfort and Innovative Technology ]



# The New Apparatus Series BD 96 – A Compressed Air Breathing Apparatus Generation With Perfect Technology That Points Towards the Future



*The battle to ensure the safety for man, the environment and installations often can only be won with self-contained respiratory protection. Especially fire fighting demands the utmost from man and material.*



*The international airports with their millions of passengers are sites of numerous dangers – through accidents, attacks and carelessness. One can rely on MSA compressed air breathing apparatus – whenever they must be used.*



*In many industrial countries chemical and petrochemical installations as well as gas suppliers have established a remarkable safety standard. The best equipment helps to keep accidents under control which occur nonetheless.*



*During maintenance work in underground installations, tunnels and shafts with toxic gases and vapors as well as oxygen deficiency, compressed air breathing apparatus from MSA ease the work and the weight load of the worker.*

In case of oxygen deficiency and in toxic atmospheres, at work, rescue or inspections, MSA compressed air breathing apparatus are indispensable. As positive pressure and negative pressure systems they are successfully used worldwide wherever self-contained respiratory protection is of vital necessity, for example in fire fighting, in the presence of toxic gases and vapors, and when aiding and rescuing persons after accidents.

Thanks to an intensive interchange of experience and constant cooperation with fire brigades and industry, safety and reliability have reached the highest level in history. The entire logistics of compressed air breathing apparatus now is even more field orientated. You choose your apparatus exactly according to your requirements – 200 bar or 300 bar technology – as initial supply or to supplement your existing equipment. You yourself decide on separate signal line, second connection and Quick-Fill system. But however you decide, you are sure to get the BD 96 basic apparatus – with its proven carrying plate that till today has been imitated by so many.



*The MSA compressed air breathing system BD 96 is in accordance with European standard EN 137.*



# With Signal Line, Second Connection and Quick-Fill New Benefits Are Realized On the Million-Times Proven Ergonomic MSA Carrying



Ten years ago the BD 88 with the totally new lung governed demand valve LA 88 set a milestone. At the same time a logistic system was developed that is still valid today: it can be integrated into existing equipment according to individual requirements.



The BD 96 basic apparatus is available with different options: signal line (S), second connection (Z) and Quick-Fill system (Q). With the warning whistle near the ear, the BD 96-S with the independent signal line provides highest safety.



The BD 96-Z is equipped with a second connection. This permits coupling of a second lung governed demand valve directly to the medium pressure line to provide help. Thus, injured or persons in distress can be led to safety.



The BD 96-Q is equipped with a Quick-Fill adapter. With this technology – which was developed for space exploration – 300 bar cylinders can be recharged directly on the person – a great advantage when removing the apparatus would take too much time.

The warning signal was newly developed. It works without an injector and is insulated to prevent freezing-up under all circumstances.



The medium pressure dosing assures an evenly loud warning that cannot be overheard until the pressure is exhausted.



*All types of compressed air cylinders can be connected through different T-pieces – 200 bar or 300 bar technology. They all have non-canting*

*handwheels that enable a firm grip and make cylinder connecting a child's play. The jolt protector is integrated and activates automatically.*



# After the Introduction of Innovative Technologies Now Optimization in Detail: The Compressed Air Breathing Apparatus System BD 96



*The still further improved carrying harness provides highest comfort. It assures a secure seat, is easy to maintain and of nonflammable Nomex Aramid fibers. The wedge-shaped shoulder pads gently distribute the weight and dynamic forces.*



*The padded hip belt permits wearing the apparatus in hip-carrying mode. The snap buckle opens and closes quickly and simply. Line holders can be fitted anywhere on the harness to keep them in position.*



*The cylinder retaining strap – also of nonflammable Aramid fibers – is closed with a large clamp with arrest device. Loosening or inadvertent opening of the fastener during work is nearly impossible – another safety feature.*



*Even if the clamp is opened manually, the holding strap remains closed – the cylinder cannot tilt away from the backplate. Another advantage: the holding strap does not need to be readjusted when changing cylinders of the same size.*

While the predecessor system BD 88 applied really new methods – with innovative lung governed demand valve for positive pressure and negative pressure, with the application of state-of-the-art materials, with higher performance at smaller dimensions and lower weight – the series BD 96 from MSA represents a further state of perfection.

Comfort and handling of the harness were markedly improved. Warning signal and pressure gauge function independently from each other and thus increase the safety of the user, as does the whistle near the ear with the sound remaining constant and no possibility of icing up.

Also the newly designed, dirt-protected pressure reducer and the cylinder retainer that cannot tilt away greatly contribute to the safety of the user during work.

And the composite cylinders make the apparatus much lighter – they reduce the cylinder weight by up to 50%. The second connection can be a life saver providing air to a person in need of help.



*The pivotable pressure gauge can be viewed in any position and reliably shows the remaining air supply. The intensive luminescence of the dial assures good recognition in darkness.*

## When Speed Is of the Essence: With Quick-Fill the Cylinder Is Recharged Directly on the Person in One Minute – Without Removing the Apparatus



*The Quick-Fill system permits recharging of compressed air cylinders via a 300 bar high pressure coupling without need to remove the compressed air breathing apparatus. A Quick-Fill connection on the supply cylinder is*

*coupled via a filling line to the connector on the compressed air breathing apparatus within seconds. In less than one minute the cylinder is recharged and work can continue.*

# The Choice Is Yours: Either the Most Successful Respiratory Protective Mask of All – the MSA 3S – Here as Helmet-Mask Combination...



The MSA compressed air breathing apparatus system BD 96 offers you exactly those apparatus that meet your requirements. You decide whether you want signal line, second connection or Quick-Fill adapter – and, of course, you can combine those options with one another. The basic apparatus are supplemented

with the desired lung governed demand valve and full face mask. With 200 bar or 300 bar pressure, as single or twin cylinder apparatus for standard applications or for long-duration applications with a 6.8 liter/300 bar twin composite cylinder apparatus.

*The extremely small and light lung governed demand valves from MSA – here the LA 96-N for normal pressure – are connected at the most distant point of the mask and do not obstruct the field of vision.*



*Of highly efficient materials, with servo-controlled air supply and pivoting, extremely flexible medium pressure line, the new lung governed demand valves point towards the future.*

## ...or the MSA Ultra Elite With Even Further Improved Comfort, Field of Vision and Facepiece-to-Face Fit – One of the Best Masks in the World!



In addition to the particularly compact and light lung governed demand valve LA 98-N for normal pressure and the LA 96-AE/AS for positive pressure, the proven LA 83 with metal housing continues to be available. The facepiece is certified to EN 136: either the full face mask MSA 35 – with two million units the most

successful mask in the world – or the innovative Ultra Elite with large, distortion-free field of vision, exemplary comfort and perfect fit. In each case you get one of the most modern and comprehensive respiratory protection systems available.

*The lung governed demand valves LA 96-AE and LA 96-AS automatically switch to safe positive pressure with the first breath. This MSA development is characterized by breathing comfort, reliability and little maintenance requirements.*



*The big advantage here is not a specially high positive pressure, but a low, accurately dosed positive pressure – this increases the breathing comfort, improves the performance of the user and increases the safety.*



**Basic Apparatus BD96**

certified to EN 137  
standard equipment  
designed for additional options  
Part No. 4075-700



**Basic Apparatus BD96-S**

certified to EN 137  
with independent signal line (S)  
Part No. 4075-701



**Basic Apparatus BD96-Q**

certified to EN 137  
with Quick-Fill adapter (Q)  
Part No. 4075-705



**Normal Pressure Lung Governed Demand Valve LA 83**

with standard thread connection  
certified to EN 148-1  
Part No. 4074-808



**Normal Pressure Lung Governed Demand Valve LA 96-N**

with standard thread connection  
certified to EN 148-1  
Part No. 4075-852



**Full Face Mask 3S**

according to EN 136  
class 3 with standard  
thread connection  
certified to EN 148-1  
Part No. 2055-000



**Full Face Mask 3S-Silicone**

according to EN 136  
class 3 with standard  
thread connection  
certified to EN 148-1  
Part No. 2055-718



**Full Face Mask 3S-EZ**

according to EN 136  
class 3 with quick-  
donning harness  
thread connection  
certified to EN 148-1  
Part No. 2055-767



**Full Face Mask Ultra Elite**

according to EN 136  
class 3 with standard  
thread connection  
certified to EN 148-1  
Part No. 2056-700



**Full Face Mask Ultra Elite Silicone**

according to EN 136  
class 3 with standard  
thread connection  
certified to EN 148-1  
Part No. 2056-718



**Mask-Helmet-Combination 3S-H-F200**

consisting of helmet  
F200 and full face mask  
3S-H with standard  
thread connection  
certified to EN 148-1  
Part No. 6125-770



**Cylinder Retaining Strap in Universal Length**

(part of basic apparatus)  
for one 300 bar  
compressed air cylinder



**Steel Compressed Air Cylinder 6 l/300 bar**

with cylindrical thread, weight  
approx. 10.9 – 11.7 kg,  
Ø 140 mm, length 530 mm  
Part No. 5103-967



**Steel Compressed Air Cylinder 6 l/300 bar super light**

with cylindrical thread,  
weight approx. 9.1 kg,  
Ø 140 mm, length 520 mm  
Part No. 5103-968



**Composite Compressed Air Cylinder 6.8 l/300 bar**

with cylindrical thread, weight  
approx. 6.9 kg, Ø 156 mm,

length 570 mm  
Part No. 5103-971  
length 518 mm  
Part No. 5103-962



**Basic Apparatus BD 96-S-Q**

certified to EN 137  
with signal line (S)  
and Quick-Fill adapter  
Part No. 4075-706



**Basic Apparatus BD 96-Z**

certified to EN 137  
with second connection (Z)  
Part No. 4075-702



**Positive Pressure  
Lung Governed Demand  
Valve LA 96-AE**

with thread connection M 45 x 3  
certified to EN 148-3  
Part No. 4075-851



**Full Face Mask 3S-PF**

certified to EN 136  
class 3 with thread  
connection M 45 x 3  
according to EN 148-3  
Part No. 2055-741



**Full Face Mask  
3S-PF-Silicone**

certified to EN 136  
class 3 with thread  
connection M 45 x 3  
according to EN 148-3  
Part No. 2055-763



**Full Face Mask  
Ultra Elite PF**

certified to EN 136  
class 3 with thread  
connection M 45 x 3  
according to EN 148-3  
Part No. 2056-741



**Full Face Mask  
Ultra Elite PF-Silicone**

certified to EN 136  
class 3 with thread  
connection M 45 x 3  
according to EN 148-3  
Part No. 2056-763



**Helmet-Mask Combination  
3S-H-PF-F200**

consisting of helmet F200  
and full face mask 3S-H-PF,  
with thread connection  
M 45 x 3 according to EN 148-3  
Part No. 6125-761



**Cylinder Retaining Strap in  
Universal Length**

(part of basic apparatus)  
for two 300 bar  
compressed air cylinders



**T-piece 156/300 bar**

T-piece for two 300 bar  
composite cylinders  
(Ø 56 mm)  
Part No. 4075-818



**Composite Compressed Air  
Cylinders 6,8 l/300 bar**

with cylindrical thread,  
weight approx. 6,9 kg, Ø 156 mm  
Part No. 2 x 5103-971  
Part No. 2 x 5103-962



**Basic Apparatus BD 96-S-Z**

certified to EN 137  
with signal line (S)  
and second connection (Z)  
Part No. 4075-703



**Basic Apparatus BD 96-Z-Q**

certified to EN 137  
with second connection (Z)  
and Quick-Fill adapter (Q)  
Part No. 4075-707



**Basic Apparatus BD 96-S-Z-Q**

certified to EN 137  
with signal line (S) and  
second connection (Z)  
and Quick-Fill adapter (Q)  
Part No. 4075-708



**Positive Pressure  
Lung Governed Demand  
Valve LA 96-AS**

with MSA plug-in connection  
Part No. 4075-850



**Full Face Mask 3S-PS**

certified to EN 136  
class 3 with MSA  
plug-in connection  
Part No. 2055-751



**Full Face Mask  
3S-PS-Silicone**

certified to EN 136  
class 3 with MSA  
plug-in connection  
Part No. 2055-764



**Full Face Mask  
Ultra Elite PS**

certified to EN 136  
class 3 with MSA  
plug-in connection  
Part No. 2056-751



**Full Face Mask  
Ultra Elite PS-Silicone**

certified to EN 136  
class 3 with MSA  
plug-in connection  
Part No. 2056-764



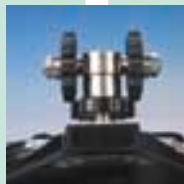
**Helmet-Mask Combination  
3S-H-PS-F200**

consisting of helmet F200  
and Full Face Mask 3-S-H-PS  
and MSA plug-in connection  
Part No. 6125-762



**Cylinder Retaining Strap in  
Universal Length**

(part of basic apparatus)  
for two 4 l/200 bar  
compressed air cylinders



**T-piece 115/200 bar**

T-piece for two 4 l/200 bar  
compressed air cylinders  
(Ø 115 mm)  
Part No. 4085-817



**Steel Compressed Air  
Cylinders 4 l/200 bar**

with cylindrical thread,  
weight approx. 5.4 kg  
Ø 115 mm, length 506 mm  
Part No. 2 x 5103-965

# The MSA Respiratory Protection Program Includes Training in Berlin or in the Field, Training Galleries and Maintenance Shops – Ready for Use



Perfect technology is not everything. Every technology is only as safe as the operator's knowledge on how to use it. This is why the modern equipped Information and Training Center MSA AUER – the ITC Berlin – also offers training courses for the use of

compressed air breathing apparatus. Custom-made training galleries for training on site as well as complete maintenance shops for respiratory protective equipment are part of the MSA concept for respiratory protection.

*MSA maintenance shops for respiratory protective equipment serve to keep your apparatus functioning properly and protect your investment over a long time.*

*For maintenance shops MSA not only sells complete installations, but also helps in the planning and design, as well as the assembly.*

*The MSA test bench Multicheck for breathing apparatus is a precise control system for all respiratory protection components – from mask to cylinder.*

*Various elements from the MSA training gallery program can be combined with each other to create "realistic" training conditions.*



*At the control desk of the ITC training gallery additional difficulties can be switched on, such as noise, heat and smoke to simulate strain for the trainees: infrared cameras monitor their safety.*

# For Your Safety We Go Through Fire and Water – in Research, Development, Production and Quality Assurance



Compressed air breathing apparatus are products for vital tasks – they must meet the highest requirements. As a leading supplier to fire brigades and industry, MSA has more than 100 years of experience in protecting man and the environment.

Today the far-reaching reliability of the products is guaranteed by knowledge, know-how and sense of responsibility of the employees, as well as worldwide recognized quality assurance systems, high manufacturing content and most modern processes.



*The firefighters of the Haneda airport in Tokyo, Japan, are equipped with MSA respiratory protective equipment.*



*In Mexico the safety of miners is protected with numerous MSA products – from respirators to cap lamps.*



*MSA breathing apparatus are being used on all continents – here in front of the opera house in Sydney, Australia.*



*The high German safety standards are recognized worldwide and often serve as models.*



*In the stereoscope inspection, parts from ongoing production are continually monitored and documented.*



*In quality assurance tests products are treated rougher than in the field – here a flame test for full face masks.*



*The ergonomics of products is being monitored in Development and Quality Assurance, empirically and scientifically.*



*With internal and external requirements MSA meets the foremost standard for quality assurance, DIN ISO 9001.*

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