



Operating Manual
Bag for Rapid Intervention Team



Order No. 10103748/02



The Safety Company

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1 Safety Regulations

1.1 Correct Use

The MSA Bag for Rapid Intervention Team - referred to hereafter as device - is a self-contained breathing apparatus operating independent of the ambient air.

The Bag for Rapid Intervention Team is delivered with a pneumatic system. To ensure a safe use, this pneumatic system must be completed with other components.

The device must be used in conjunction with the components listed in chapters 7.2 and 7.3.

In combination with a certified facepiece (full face mask) and lung governed demand valve or a certified escape hood the device protects the wearer against inhalation of hazardous substances and mixtures, harmful biological agents and oxygen deficiency.

Breathable air according to EN 12021 is supplied to the user from a compressed air cylinder via a pressure reducer, a demand controlled dosage assembly [→ Operating Manual for the Lung Governed Demand Valve], a facepiece [→ Operating Manual for the Facepiece] and the rescue hood Respihood [→ Operating Manual]. The exhalation air is released directly into the ambient atmosphere.

**Danger!**

This pneumatic unit is a pure gas protection device. It is not suitable for underwater diving.

It is imperative that this operating manual be read and observed when using the device. In particular, the safety instructions, as well as the information for the use and operation of the device, must be carefully read and observed. Furthermore, the national regulations applicable in the user's country must be taken into account for a safe use.

**Danger!**

This product is supporting life and health. Inappropriate use, maintenance or servicing may affect the function of the device and thereby seriously compromise the user's life.

Before use the product operability must be verified. The product must not be used if the function test is unsuccessful, it is damaged, a competent servicing/maintenance has not been made, genuine MSA spare parts have not been used.

Alternative use, or use outside this specification will be considered as non-compliance. This also applies especially to unauthorised alterations to the product and to commissioning work that has not been carried out by MSA or authorised persons.

1.2 Liability Information

MSA accepts no liability in cases where the device has been used inappropriately or not as intended. The selection and use of the device are the exclusive responsibility of the individual operator.

Product liability claims, warranties and guarantees made by MSA with respect to the device are voided, if it is not used, serviced or maintained in accordance with the instructions in this manual.

2 Description

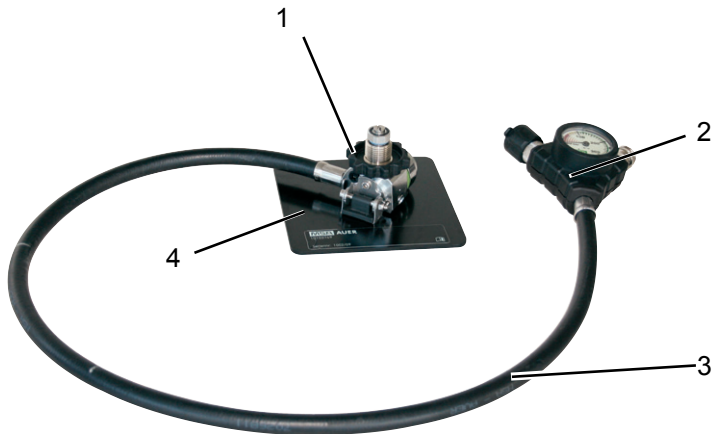


Fig. 1 Interior of Bag for Rapid Intervention Team

- | | | | |
|---|-------------------------|---|------------|
| 1 | Pressure reducer | 3 | SingleLine |
| 2 | Pressure gauge manifold | 4 | Base |

The Bag for Rapid Intervention Team consists of a bag with SingleLine pneumatics mounted on a holding plate. The bag is designed to take one 200 or 300 bar compressed air steel or composite cylinder with a max. diameter of 174 mm.

A snap-hook is stored on the bottom of the bag e.g. for use together with band slings.

2.1 Pneumatic System

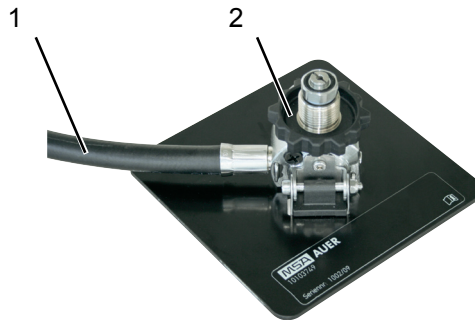


Fig. 2 Pressure reducer

- 1 *Single line*
- 2 *Cylinder connection*

The pressure reducer is mounted on the base [→ Fig. 1]. It is delivered in a SingleLine pneumatic version.

On the pressure reducer is a safety valve and the single line for connecting the manifold [→ Fig. 1]. The pressure reducer reduces the cylinder pressure to approx. 7 bar and the safety valve activates on non-permitted pressure rise to prevent damage insuring the continued supply of breathable air.

SingleLine Pneumatics

The SingleLine pneumatics combines up to five hoses in one. This incorporates the lines for the lung governed demand valve, the pressure gauge, warning signal and second connection in a single line.

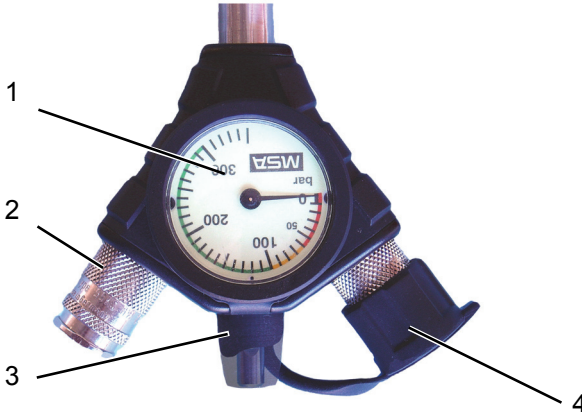


Fig. 3 Manifold

- | | | | |
|---|-------------------------------------|---|---------------------------------|
| 1 | Pressure gauge | 3 | Warning signal [signal whistle] |
| 2 | Lung governed demand valve coupling | 4 | Second connection |

In SingleLine Pneumatics, the end of the single line is connected to manifold. It consists of the pressure gauge itself, the coupling for the lung governed demand valve as well as an acoustic warning device [signal whistle]. It triggers a continuous warning signal when the cylinder pressure drops below 55 ± 5 bar.

The second connection connects a second lung governed demand valve [e.g. rescue set].

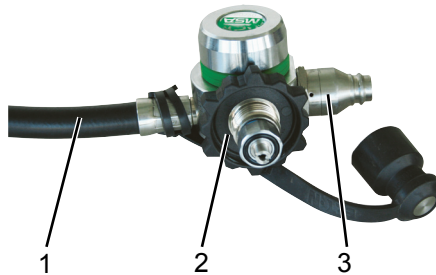
Option –Q – with Quick-Fill Coupling

Fig. 4 Pressure reducer SingleLine

- 1 *Single line*
- 2 *Cylinder connection*
- 3 *Quick-Fill coupling*

The Quick-Fill coupling is a high-pressure safety coupling which is fitted directly on the pressure reducer [→ Fig. 4].

It is then possible to fill 300 bar compressed air cylinder whilst the pneumatic unit is still donned.



For further information please observe the separate Operation Manual for the Quick-Fill System [Part No. D4075049].

3 Use

**Warning!**

The device may only be put into use in a fully maintained and tested condition. If malfunctions or defects are noticed prior to use, do not use the device under any circumstances.

Get the device checked and repaired by an MSA authorised service centre.

3.1 Preparing the Device for Use

- (1) Empty the bag completely.
- (2) Choose a compressed air cylinder [→ chapter 7.3].
- (3) Connect the pressure reducer.
- (4) Put first the compressed air cylinder into the bag.
- (5) Place holding plate with pneumatics in such a way that the SingleLine with pressure gauge manifold points to the opening side of the bag.



Fig. 5 *Placing the holding gate*

- (6) Retighten the handwheel of the pressure reducer.
- (7) Check the
 - ▷ Lung governed demand valve and/or
 - ▷ RespiHood

- (8) Connect the lung governed demand valve to the manifold.
- (9) Carry out a function test.
- (10) Close the cylinder valve and depressurise the system.
- (11) Disconnect lung governed demand valve if you want to store it on another place.
- (12) Make sure the bag is ready for use and close the bag.

3.2 Condensed Check Prior to Use

For Lung Governed Demand Valves

- (1) Ensure that lung governed demand valve is closed.
- (2) Open cylinder valve and check pressure on the pressure gauge.
 - ▷ The pressure values must read:

for 200 bar cylinders:	minimum 180 bar
for 300 bar cylinders:	minimum 270 bar
- (3) Close cylinder valve and check pressure gauge.
 - ▷ The pressure must not drop more than 10 bar in 60 seconds.
- (4) Carefully activate flushing mode of lung governed demand valve, closing exit port as much as possible.
- (5) Observe the pressure gauge.
 - ▷ The warning signal must sound at 55±5 bar.

For RespiHood

- (1) Ensure that RespiHood is not connected.
- (2) Open cylinder valve[s] and check pressure on the pressure gauge.
 - ▷ The pressure values must read:

for 200 bar cylinders:	minimum 180 bar
for 300 bar cylinders:	minimum 270 bar
- (3) Observe the pressure gauge.
 - ▷ The warning signal must sound at 55±5 bar.
- (4) Connect the male coupling of the RespiHood.
 - ▷ To depressurise the system.

3.3 Donning the Mask

- (1) Don full face mask [→ Operating Manual for mask] and carry out palm test.
- (2) Open cylinder valve fully.
- (3) Connect lung governed demand valve to full face mask [→ Operating Manual for lung governed demand valve].
- (4) The device is ready for use.

3.4 Donning the Respihood

- (1) Don Respihood [→ Operating Manual for Respihood].
- (2) Couple plug nipple of Respihood.
- (3) Open cylinder valve fully.
- (4) Pull hood over the head of the person to be rescued.
- (5) Pull sealing cord by the cord stopper closely around neck and throat to attain a tight fit.

3.5 During Use

- (1) Regularly check tight fit of full mask and lung governed demand valve or the correct fit of the RespiHood [if applicable] and retighten if necessary, as well as the air supply on the pressure gauge.
- (2) Leave area immediately if the warning signal sounds.



Independently of the warning signal an earlier retreat may be required whilst in the case of a longer retreat route the moment chosen is based on the reading of the pressure gauge.



Warning!

The warning signal sounds when the air supply in the compressed air cylinders is reduced.

In such cases, immediately leave the area, there is danger of air deficiency.

3.6 Use of Additional Connections for Medium Pressure

- (1) Remove protection cap from the coupling of the additional connection for medium pressure.
- (2) Connect medium pressure line of lung governed demand valve of second user until the coupling audibly catches.



Warning!

When rescuing persons with the rescue set via the second connection, more air is consumed.

Hence, the service time is considerably reduced. Always keep this in mind when using your apparatus.

3.7 Handling the Warning Device

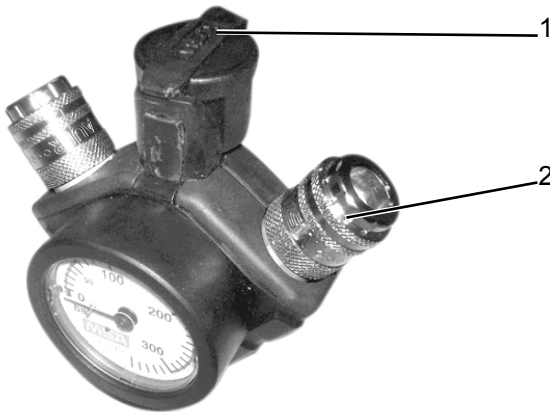


Fig. 6 Manifold

- 1 Warning signal with protective cap
- 2 Second connection

After using, it is possible to reduce the volume of the warning device during the decontamination process. This is done by removing the protective cap from the second connection on the manifold and pushing it onto the warning device.

**Warning!**

During duty, damping down the warning signal tone is not permitted. Remove the protective cap from the warning device again and push it onto the second connection after the SCBA basic device has been removed.

3.8 Filling with Quick-Fill

- (1) Open the bag.
- (2) Open the buckles which hold the cylinder inside the bag.
- (3) Pull cylinder with pneumatic out of the bag.
- (4) Connect Quick-Fill filling line to Quick-Fill coupling and compressed air reservoir.
- (5) Refill cylinder.
- (6) Repack cylinder and pneumatic into the bag in reverse order.

With the Quick-Fill function, the compressed air cylinder can be filled without removing the cylinder from the pressure reducer [→ Operating Manual for Quick-Fill].

3.9 Removing the Facepiece

- (1) Close cylinder valve.
- (2) When a lung governed demand valve is used:
Activate flushing mode of lung governed demand valve, releasing all air pressure.
- (3) Remove lung governed demand valve, or RespiHood.

**Danger!**

Do not throw off pneumatic unit. This could damage the valve and any remaining compressed air could escape suddenly.

This could cause fatal injury to you or to any bystanders.

- (4) Put bag with pneumatic unit aside.

3.10 Removing the Compressed Air Cylinder

- (1) Open the bag.
- (2) Make sure that the system is depressurized.
- (3) Disconnect the RespiHood or lung governed demand valve from the manifold.
- (4) Open the buckles inside the bag to release the cylinder.
- (5) Pull the compressed air cylinder out of the bag.
- (6) Disconnect the pressure reducer.
- (7) Empty the bag completely.

4 Maintenance and Cleaning

4.1 Maintenance Instructions

This device should be regularly checked and serviced by trained specialists. Inspection and service records must be maintained. Always use original parts from MSA.

Repairs and maintenance must be carried out only by authorised service centres or by MSA. Changes to devices or components are not permitted and will result in loss of approval.

MSA is liable only for maintenance and repairs carried out by MSA.

Do not use organic solvents such as alcohol, white spirit, petrol etc.

When drying/washing, do not exceed the maximum permissible temperature of 60 °C.



MSA recommends the following maintenance intervals. If necessary considering the usage, tasks may be at even shorter intervals than indicated.

Observe national laws and regulations!

If in any doubt, ask your local MSA contact person.

4.2 Maintenance Intervals

Test Intervals for all Countries [except Germany]

Component	Work to be Performed	Before use	After use	Annually	Every 3 years	Every 9 years ¹⁾
Pneumatic unit complete	Cleaning		X		X	
	Sight, function and tightness check		X	X		
	Check by user ²⁾	X				
Pneumatic unit without cylinder and lung governed demand valve	Overhaul					X
Compressed air cylinder with valve	Filling pressure check	X				
	Technical expert test		See Operating Manual for compressed air cylinder. Please observe national rules!			
Lung governed demand valve	See Operating Manuals for lung governed demand valve/ full face mask. Please observe national rules! ³⁾					

1) For SCBA apparatus that are frequently used, we recommend a complete overhaul after approx. 540 hours. For example, this corresponds to 1080 applications with a duration of 30 minutes.

2) The checks are performed with the respective lung governed demand valves and if required, with the respective full masks.

3) Rubber components are subject to ageing with varying rates according to local conditions and must be checked and replaced at regular intervals.

Test Intervals for Germany according to VfdB 0804 and BGR 190

Component	Work to be performed ¹⁾	Before use	After use	Every 6 months	Annual-ly	Every 6 years ¹⁾
Pneumatic unit complete	Cleaning		X		X	
	Sight, function and tightness check		X	X		
	Check by user ²⁾	X				
Pneumatic unit without cylinder and lung governed demand valve	Overhaul					X
Compressed air cylinder with valve	Filling pressure check	X				
	Technical expert test		See Operating Manual for compressed air cylinder. Please observe national rules!			
Lung governed demand valve	See Operating Manuals for lung governed demand valve/ full face mask. Please observe national rules! ³⁾					

1) Test intervals for Germany according to VfdB 0804 [German fire brigade] and BGR 190. For SCBA apparatus that are frequently used, we recommend to carry out the work sooner than stated above.

2) The checks are performed with the respective lung governed demand valves and if required, with the respective full masks.

3) Rubber components are subject to ageing with varying rates according to local conditions and must be checked and replaced at regular intervals.

4.3 Cleaning

Pre-cleaning

- (1) Remove the gas cylinder and the pneumatics from the bag.
- (2) Clean the bag and the pneumatic unit separately [see descriptions below].

Cleaning the bag

- (1) Clean the bag by hand with a mild detergent.

Cleaning the Pneumatic Unit, Light Soiling

- (1) Remove compressed air cylinder [→ chapter 3.10].
- (2) Clean pneumatic unit manually using a brush, damp cloth or similar.
- (3) Dry pneumatic unit completely in a drying cabinet at max. 60 °C.

Cleaning the Pneumatic Unit, Heavy Soiling

- (1) Remove compressed air cylinder [→ chapter 3.10].
- (2) Disconnect lung governed demand valve from medium pressure line.
- (3) Clean lines, pressure reducer and pressure gauge preferable by hand.

If you want to clean under water: pressurise the pressure reducer and seal the warning signal [e.g. with a flexible tube]

**Attention!**

The pressure reducer must be pressurised if submerged in water.

Make sure that no water penetrates high and medium pressure cavities.

- (4) Shake out humidity from pressure reducer.
- (5) Completely dry all pneumatic unit components in a drying cabinet at max. 60 °C.
- (6) Put compressed air cylinder with pneumatics back into bag.

Visual, Function and Tightness Check

- (1) Visually check the high pressure gasket [→ chapter 4.5].
- (2) Connect compressed air cylinder to the pressure reducer [→ chapter 3.1].
- (3) Check all parts of the pneumatic unit for visible defects or malfunctions, such as loose compressed air cylinder, incorrectly fitted lines, etc.
- (4) Open cylinder valve and check operating pressure on pressure gauge.
 - ▷ The pressure values must read:

for 200 bar cylinders:	minimum 180 bar
for 300 bar cylinders:	minimum 270 bar
- (5) Close cylinder valve.
 - ▷ After 60 seconds the pressure drop in the pressure gauge must not exceed 10 bar.
- (6) Check warning device [signal whistle] [→ chapter 4.4].

4.4 Checking the Warning Device

- (1) Connect lung governed demand valve to medium pressure line.
- (2) Open cylinder valve.
 - The pressure on the pressure gauge must be at least 120 bar.
- (3) Close cylinder valve.
- (4) Carefully activate flushing mode of lung governed demand valve [→ Operating Manual for lung governed demand valve].
- (5) Observe the pressure gauge.
 - The warning signal must sound at 55 ± 5 bar.

4.5 Checking the High Pressure Gasket

Visually check the sealing ring of the cylinder connector in the pressure reducer. Damaged sealing ring must be replaced.

4.6 Overhaul

The overhaul of the pressure reducer may only be performed by MSA or an authorised service centre.

**Attention!**

Pressure reducers are completed with a lead seal. Where the lead seal is missing or damaged, it can not be guaranteed that they are ready for use or that they correspond to the approval status.

Optimal use of the pneumatic unit is not assured in this case.

4.7 Storage

Store in a dry place, free from dust and dirt, at approx. 20 °C. Protect device against direct sunlight.

Secure against tilting, falling down and rolling away. Also take into consideration the instructions in the Operating Manual for the compressed air cylinders.

4.8 Malfunctions

In case of malfunctions of the pneumatic unit, it must be checked and repaired by a person or service centre authorised by MSA.

5 Accessories

5.1 Compressed Air Cylinders

**Danger!**

When handling compressed air cylinders, observe the relevant Operating Manual and the safety instructions specified in it.

Improper handling of compressed air cylinders can have fatal consequences for you and others.

Compressed Air Cylinders

The pneumatic unit is compatible with a large number of different compressed air cylinders [→ chapter 7.3]. The MSA compressed air cylinders are made of steel or carbon fibre compound [composite]. They are type approved and in accordance with the respective standards.

Applicable national regulations must be observed.

The cylinder must be ordered separately [→ chapter 7.3].

Valves

The cylinder valves that thread into the cylinders are type approved according to EN 144. The handwheels are protected against impacts. They must be fully open for use. The fail safe cylinder valve can be closed only by also pulling the handwheel. This prevents it from closing accidentally.

5.2 Lung Governed Demand Valves / Full Face Masks

The device is provided for use with various MSA lung governed demand valves and full face masks. A list of compatible devices is given under chapter 7.

6 Technical Specifications/Certifications

High pressure	:	300 bar
Medium pressure	:	5 bar to 9 bar
Operating temperature	:	-30 °C to +60 °C
Weight [approx.]	:	4,4 kg [only bag and pneumatic system]
Dimensions [approx.]	:	Length 750 mm
		Width 180 mm
		Height 300 mm
Approvals	:	The pneumatic unit conforms to the Directive 89/686 EEC or Regulation (EU) 2016/425, respectively.



DEKRA EXAM GmbH,
Dinnendahlstr. 9, 44809 Bochum
(Germany), Notified body number: 0158

The Declaration of Conformity can be found under the following link:
<https://MSAsafety.com/DoC>

7 Ordering Information

7.1 Pneumatic Unit

Description	Part No.
Bag for Rapid Intervention Team	10103749
Bag for Rapid Intervention Team with Quick-Fill	10104598
Bag for Rapid Intervention Team with long SingleLine	10104597

7.2 Lung Governed Demand Valve

Description	Part No.
Normal Pressure	
AutoMaXX N [for full face masks from the 3S, Ultra Elite series]	10023686
Positive Pressure Standard Thread Connection M45X3	
AutoMaXX AE [for full face masks from the 3S-PF, Ultra Elite-PF series]	10023687
Positive Pressure Plug-in Connection AutoMaXX	
AutoMaXX AS [for full face masks from the 3S-PS-MaXX, Ultra Elite-PS-MaXX series]	10023688
Positive Pressure Plug-in Connection ESA [for full face masks from the 3S-PF-ESA and Ultra Elite-PF-ESA series]	
AutoMaXX-ESA	10043464



Excerpt only. For full overview please refer to SCBA leaflets.

7.3 Compressed Air Cylinders

Description	Part No.
Compressed Air Cylinders, Steel	
4 litre/200 bar, filled	D5103965
4 litre/200 bar, empty	D5103985
6 litre/300 bar, filled	D5103967
6 litre/300 bar, empty	D5103986
6 litre/300 bar, filled, with flow restrictor	10015960
6 litre/300 bar, filled, with ratchet valve	10024010
6 litre/300 bar, empty with flow restrictor	10084896
Compressed Air Cylinders; Composite	
6 litre/300 bar, filled	D5103947
6 litre/300 bar, empty	D5103976
6.8 litre/300 bar, filled	D5103962
6.8 litre/300 bar, empty	D5103979
6.8 litre/300 bar, filled, with flow restrictor	10015961
6.8 litre/300 bar, filled, with ratchet valve	D5103973
6.8 litre/300 bar, empty, with ratchet valve	D5103980
6.8 litre/300 bar, BTIC, empty, yellow, with ratched valve, blast protection	10112740
6.8 litre/300 bar, BTIC, yellow, empty, with ratched valve	10111447
6.8 litre/300 bar, BTIC, blank, empty, with ratched valve, blast protection	10111448
6.8 litre/300 bar, BTIC, blank, empty	10112739
6.8 litre/300 bar, BTIC, blank, empty, with ratched valve	10112738
6.9 litre/300 bar, filled	10055167
6.9 litre/300 bar, empty	10055168
6.9 litre/300 bar, filled, with ratchet valve	10055169
6.9 litre/300 bar, empty, with ratchet valve	10055170
6.9 litre/300 bar, filled, with flow restrictor	10072889
6.9 litre/300 bar, empty, with flow restrictor	10072888
9.0 litre/300 bar, empty	D5103982

7.4 Accessories

Description	Part No.
Quick-Fill line, 1 metre	D4075929
Quick-Fill cylinder adapter	D4075971
Rescue kit with AutoMaXX-N in bag	10040152
RespiHood, rescue hood	10045764

7.5 Work Shop Accessories

Description	Part No.
Control pressure gauge up to 400 bar cylinder pressure	D4080929
Control pressure gauge [class 1.0] for pressure gauge check [400 bar]	D5175825
Control pressure gauge [class 0.6] for pressure gauge check [400 bar]	D5175867
Control pressure gauge [class 1.6] medium pressure [10 bar]	D5175860
Control pressure gauge [class 0.6] medium pressure [16 bar]	D5175866
Test case Multitest ND	10073519

7.6 Spare Parts

Description	Part No.
Bag, empty, spare	10104599
Pneumatic SL, spare	10105149
Pneumatic SL long, spare	10105150
Pneumatic SL-Q, spare	10105151
Strap with snap-hook	10104600

For local MSA contacts, please visit us at MSAsafety.com

*Because every life has a **purpose**...*