



Operating Manual

AutoMaXX-ASE

Positive Pressure Lung Governed Demand Valve

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Order No.: 10153024/00

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Contents

| | | |
|-----------|---|-----------|
| 1. | Safety Regulations | 4 |
| 1.1. | Correct Use | 4 |
| 1.2. | Liability Information | 5 |
| 1.3. | Safety and Precautionary Measures | 5 |
| 1.4. | Series | 5 |
| 2. | Description | 6 |
| 3. | Operation | 7 |
| 3.1. | Preparing the device | 7 |
| 3.2. | Connecting | 7 |
| 3.3. | Putting the AutoMaXX into operation | 8 |
| 3.4. | Switching off the AutoMaXX | 8 |
| 3.5. | Removing the AutoMaXX | 8 |
| 4. | Care and maintenance | 9 |
| 4.1. | Maintenance Instructions | 9 |
| 4.2. | Maintenance intervals | 9 |
| 4.3. | Cleaning / Disinfection | 10 |
| 4.4. | Testing and replacing the diaphragm | 12 |
| 4.5. | Visual and function check | 13 |
| 4.6. | Tightness check | 13 |
| 4.7. | Checking the closing pressure | 14 |
| 4.8. | Overhaul | 14 |
| 4.9. | Storage | 14 |
| 4.10. | Malfunction | 14 |
| 5. | Technical data | 15 |
| 6. | Approved system components | 15 |
| 7. | Ordering Information | 16 |
| 7.1. | Positive pressure lung governed demand valves | 16 |
| 7.2. | Accessories | 16 |

1. Safety Regulations

1.1. Correct Use

The AutoMaXX-ASE, referred to as AutoMaXX in this manual, is a lung governed demand valve for a compressed air breathing apparatus or compressed airline breathing apparatus. It is connected between compressed air supply and full-face mask and controls the inhaled air.

The lung governed demand valve series are only permitted for specific system components (exact allocation → Chap. 6)



Warning!

The AutoMaXX-ASE is not an independent breathing apparatus. It must be used exclusively mounted on a full-face mask.

The AutoMaXX-ASE is not suitable for underwater diving.

It is imperative that this operating manual be read and observed when using the AutoMaXX-ASE. In particular, the safety instructions, as well as the information for the use and operation of the apparatus, 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.

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



Danger!

This product supports 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.

1.2. Liability Information

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

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

1.3. Safety and Precautionary Measures

For details regarding use in explosive atmospheres, see PremAire Escape Operating Manual.

1.4. Series

This manual applies to the following lung governed demand valves from the AutoMaXX series:

| | Medium pressure line | Special feature |
|---|-----------------------------|--|
| AutoMaXX-ASE-G, rubber line* | Rubber line 900 | Long line, fixed connection to pressure reducer valve |
| AutoMaXX-ASE-G, Y-FF rubber line, Y-Piece* | Rubber line | fixed connection to pressure reducer valve with Y-piece with non-return nipple with flush function for second medium pressure connection |

*If AutoMaXX-ASE has to be connected to the full face mask 3S-PF-IH Basic, the AutoMaXX handwheel has to be used

Explanations on model designation

| | |
|-----|--|
| ASE | Positive pressure, plug-in connection with securing clamp, suitable for PremAire Mask-Hood handwheel connector |
| G: | Rubber medium pressure line |

2. Description

Positive pressure lung governed demand valve (LGDV)

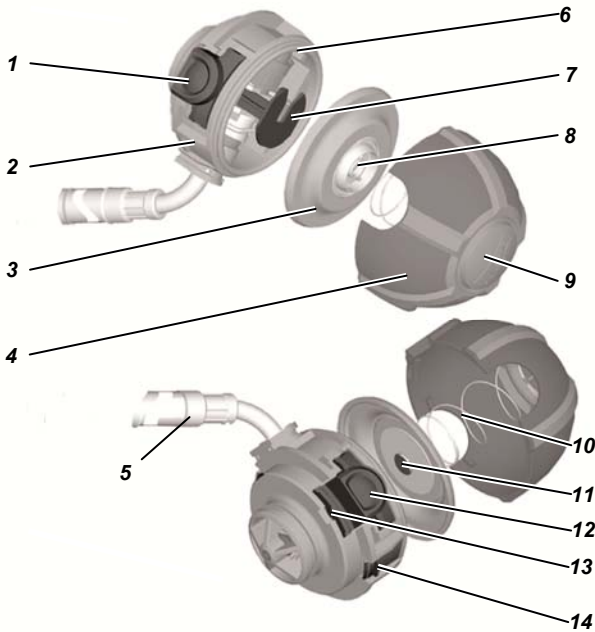


Fig. 1 Exploded view – Positive pressure lung governed demand valve

- | | |
|------------------------|----------------------------------|
| 1 Red operating button | 8 Marking: Year of manufacturing |
| 2 Housing | 9 Flush button |
| 3 Diaphragm | 10 Positive pressure spring |
| 4 Protective cap | 11 Diaphragm mushroom |
| 5 Medium pressure line | 12 Black operating button |
| 6 Diaphragm groove | 13 Securing clamp |
| 7 Diaphragm fork | 14 Snap-on hook |

3. Operation

3.1. Preparing the device



Warning!

The lung governed demand valve 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 lung governed demand valve under any circumstances.

Get the apparatus checked and repaired by an authorised service centre.

Switching off the device

Before connecting the device to medium pressure, in order to prevent accidental air delivery, push the red operating button to switch off the AutoMaXX.

3.2. Connecting

- (1) Press in securing clamp with a screw driver.



Fig. 2 Housing

1 *Securing clamp*

- (2) Mask-hood:
 Insert AutoMaXX into the handwheel connector or the handwheel of the PremAire Mask-Hood until it distinctly snaps into place.
 Full face mask:
 Screw AutoMaXX with handwheel into the full face mask.
- (3) Don mask-hood/full face mask and carry out leak test (see operating manual for PremAire Escape).

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Support during donning

The AutoMaXX must be attached to the mask and inspected by a second person.

3.3. Putting the AutoMaXX into operation

To activate, inhale once forcefully or push flush button.



Warning!

When using the flush button, the compressed air consumption increases.



Warning!

If the device is used in a hazardous area it is recommended to activate the LGDV by pushing the flush button for 2 seconds before starting breathing. With this procedure poisoned air could be flushed out of the mask-hood/full face mask.

3.4. Switching off the AutoMaXX

To switch off, push red operating button until stopper.

3.5. Removing the AutoMaXX

- (1) Switch off AutoMaXX-ASE by pushing the red operating button.
- (2) Unscrew handwheel and separate AutoMaXX from the mask-hood/full face mask.

4. Care and maintenance

4.1. Maintenance Instructions

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

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

Rubber parts are subject to ageing and must be inspected and replaced at regular intervals.

Do not use organic solvents like thinner, alcohol, white spirit or petrol.

4.2. Maintenance intervals



MSA recommends the following maintenance intervals. If needed and by 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.

| Component | Work to be Performed | After use | Annually | Every 3 years | Every 10 years ¹⁾ |
|-----------|-------------------------------------|-----------------|----------|---------------|------------------------------|
| AutoMaXX | Cleaning and Disinfection | X | | X | |
| | Sight, function and tightness check | X ²⁾ | X | | |
| | Diaphragm replacement | | | X | |
| | Overhaul | | | | X |

1) For compressed air breathing apparatus that are frequently used, we recommend a complete overhaul after approx. 540 hours. (This corresponds to 1080 uses with a usage duration of 30 minutes.)

2) Visual test of diaphragm only after use in aggressive media or under extreme conditions, function and tightness test always.

4.3. Cleaning / Disinfection



Warning!

While cleaning make sure that no fluids penetrate the AutoMaXX through the medium pressure line. Fluids can damage the components on the inside.

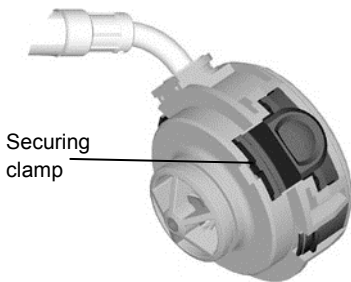
- (1) Switch off AutoMaXX.
- (2) Lock medium pressure line with seal cap or connect to the medium pressure.



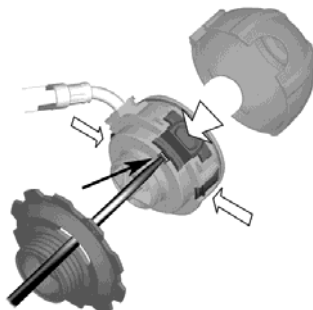
Warning!

Existing medium pressure line (without coupling) must be exchanged with standard medium pressure line for pressurised cleaning/ disinfection and/or testing on test unit: (→ Section 7.2).

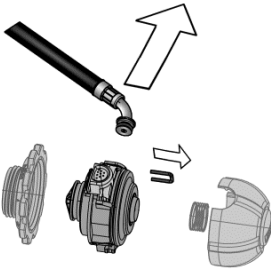
- (3) Turn handwheel until the securing clamp below the black operating button is visible through the handwheel opening.



- (4) Push in securing clamp with a screwdriver, simultaneously push both operating buttons and pull off handwheel.

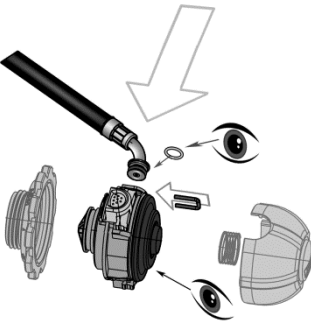


- (5) Screw hand wheel back into mask-hood opening
- (6) With one hand push and hold down both operating buttons, with the other hand push together both snap-on hooks and push off the protective cap.



- (7) With the protective cap disassembled, pull the silver coloured clamp (U-clip) out of the housing.

- (8) Pull medium pressure line out of the housing.
- (9) Push standard medium pressure line into housing till stop
- (10) Push U-clip **from the diaphragm side** (→ arrow) into holes of housing till stops. The medium pressure line is secured.



Attention!

Make sure that the diaphragm is not detached or twisted.



- (6) Slide on protective cap:
- Push both operating buttons simultaneously and slide on protective cap until it audibly and visibly snaps into place on the snap-on hooks.



Attention!

Observe the right seat of positive pressure spring in the guide of the diaphragm.

- (3) Pre-cleaning
 - Clean device on the outside. Ensure that no dirt penetrates the inside.
- (4) Cleaning
 - Clean AutoMaXX in the wash basin and rinse with plenty of water.
- (5) Use disinfectant as specified in the operating manual.
 - Disinfect device and rinse with lots of clean water.

After cleaning / disinfection

- (1) Connect switched off AutoMaXX to the medium pressure.
- (2) Push flush button, fully blow out the moisture for at least 20 s.
- (3) Uncouple from medium pressure.
 - Switch on with flush button
- (4) Dry apparatus completely in a drying cabinet at max. 60 °C.

4.4. Testing and replacing the diaphragm

Disassembly

- (1) Uncouple AutoMaXX from the medium pressure line.
- (2) Pull off AutoMaXX protective cap as follows:
 - With one hand push and hold down both operating buttons, with the other hand push together both snap-on hooks and push off the protective cap.
- (3) Remove diaphragm edge from the diaphragm groove in the housing.
- (4) Roll up diaphragm until the slot in the diaphragm fork is visible.
- (5) Pull out the diaphragm from the diaphragm fork in slot direction.
- (6) Slightly stretch diaphragm surface and check against light for damage such as tears; if needed, replace.

Assembly

- (1) Slide diaphragm mushroom of diaphragm into the slot of the diaphragm fork.
- (2) Fit diaphragm edge into the diaphragm groove.
- (3) Slide on protective cap as follows:
 - Push both operating buttons simultaneously and slide on protective cap until it audibly and visibly snaps into place on the snap-on hooks.
- (4) Place AutoMaXX in the handwheel of mask-hood as follows:
 - Push in securing clamp and simultaneously push and hold down both operating buttons.
 - Slide on handwheel until stopper.
- (5) Perform tightness check and check closing pressure.

4.5. Visual and function check

- Check for visible faults or defects, e.g. components mounted incorrectly.
- Check all operating functions, e.g. mechanical function test of flush button.

4.6. Tightness check



Check that the AutoMaXX is tight both without medium pressure and with medium pressure.

Without medium pressure

- (1) Switch off AutoMaXX with red operating button.
- (2) Connect AutoMaXX to test device.
 - Use a connecting adapter.
- (3) Generate positive pressure of +7.5 mbar on test device and hold for 60 s.
 - The pressure change must not exceed 1 mbar in 60 seconds.

With medium pressure

- (1) Switch off AutoMaXX with red operating button.
- (2) Connect medium pressure line to a pressure reducer and open cylinder valve.
- (3) Connect AutoMaXX to test device.
 - Use a connecting adapter.
- (4) Observe pressure change.
 - The pressure change must not exceed 1 mbar in 60 seconds.

4.7. Checking the closing pressure

- (1) Switch off AutoMaXX with red operating button and connect to medium pressure.
- (2) Connect to test equipment directly or via test adapter line. Close all lines of the test equipment.



Warning!

Use a test adapter line to prevent damage to test equipment not protected against positive pressure. Close the connection between AutoMaXX and test equipment.

- (3) Switch on AutoMaXX by pushing the flush button.
- (4) If used, open test adapter line. Release a volume flow of 5 l /min through test equipment vent.
- (5) Close vent, thereby the static pressure must be less than 3.9 mbar.

4.8. Overhaul

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

4.9. Storage

Always store positive pressure lung governed demand valves when switched on. To do this, push flush button.

Store the AutoMaXX with protective cap attached (→ Chap. 7) in a dry, dust-free room at approx. 20 °C.

4.10. Malfunction

In case of malfunctions, the AutoMaXX must be inspected by MSA or trained service personnel.

5. Technical data

- Operating pressure : 4 – 8,5 bar dynamic
 Operating temperature : -40°C to +60°C
 Approvals : The AutoMaXX complies with the 89/686/EEC Directive.

Lung governed demand valves of the AutoMaXX series are approved as components of a compressed air breathing apparatus according to Section 6 in compliance with EN 137, EN 402 and ISO 23269-1.



DEKRA EXAM GmbH, Dinnendahlstr. 9,
 44809 Bochum, Germany,
 Notified Body number: 0158



- I M2
 II 2G IIA T6 -40 °C ≤ Ta ≤ +60 °C
 II 3G IIB T6 -40 °C ≤ Ta ≤ +60 °C
 II 1D

6. Approved system components

AutoMaXX-ASE

| Compressed air breathing apparatus - Series | Full face mask - Series |
|---|-------------------------|
| PremAire Escape | PremAire Mask-Hood |
| PremAire Escape | 3S-PF-IH Basic* |

*If AutoMaXX-ASE has to be connected to the full face mask 3S-PF-IH Basic, the AutoMaXX handwheel (10032070) has to be used. The handwheel always has to be ordered separately.

7. Ordering Information

7.1. Positive pressure lung governed demand valves

| Description | Part No. |
|-----------------------|-------------|
| AutoMaXX-ASE-G* | 10147639-SP |
| AutoMaXX-ASE-G, Y-FF* | 10159835-SP |

*If AutoMaXX-ASE has to be connected to the full face mask 3S-PF-IH Basic, the AutoMaXX handwheel (10032070) has to be used. The handwheel always has to be ordered separately.

7.2. Accessories

| Description | Part No. |
|---|----------|
| AutoMaXX handwheel | 10032070 |
| Diaphragm, spare AutoMaXX (5pcs.) | 10100484 |
| Seal cap (protective sleeve for plug-in nipple) (pack of 10) | D4080871 |
| Protective cap for AS series | 10027738 |
| Protective cap for AE series | D0012961 |
| Disinfectant 90, 2 l | D2055765 |
| Disinfectant 90, 6 l | D2055766 |
| Connecting adapter for AS series (for test equipment with round thread connection) | 10031901 |
| Test adapter line | 10034364 |
| Standard medium pressure line | 10020783 |

For local MSA contacts please go to our web site www.MSAafety.com .