



Operating Manual

MSA SSR 30/100 TR / MSA SSR 30/100 B TR

Demonstration and Training Device



Order No. D1123135/08



The Safety Company

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Contents

1	Safety Regulations	4
1.1	Correct Use	4
1.2	Liability Information	4
2	Description	5
2.1	Overview	5
2.2	Function	6
2.3	Differentiating Features with regard to the Emergency Use Device	6
2.4	Marking	6
3	Use	7
3.1	Carrying the Device	7
3.2	Donning the Device	8
3.3	Multiple Use	11
4	Maintenance and Service	12
4.1	General	12
4.2	Disassembly	12
4.3	Cleaning and Disinfection	14
4.4	Tightness Test of the Connection Piece	15
4.5	Assembly SSR 30/100 TR	16
4.6	Assembly SSR 30/100 B TR	19
5	Ordering Information	22

1 Safety Regulations

1.1 Correct Use

The SSR 30/100 TR respectively the SSR 30/100 B TR demonstration and training device is only intended for training and education purposes.

The demonstration and training device is used to practise donning and breathing in emergency situations. The demonstration and training device is NOT a respiratory protection device and must NOT be used in dangerous atmospheres.

It is the training unit for the chemical oxygen [KO₂] self-rescuer according to EN 13794.

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.



WARNING

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

2.1 Overview

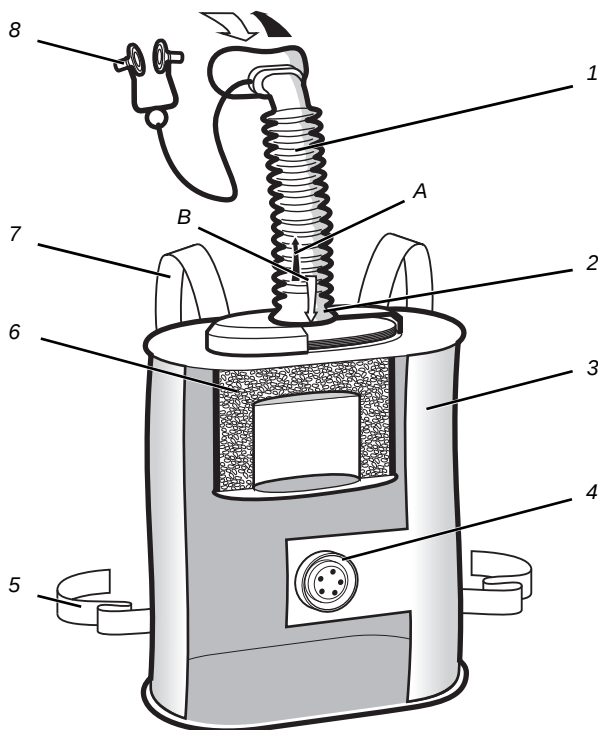


Fig. 1 Design of the device

A	Inhalation	4	Pressure relief valve
B	Exhalation	5	Waist belt
1	Breathing tube with mouthpiece	6	Canister
2	Connecting piece with check valve	7	Neck strap
3	Breathing bag	8	Nose clip

The device is contained in an enclosed and sealed sturdy stainless steel container.

SSR 30/100 TR

The device is worn continuously on the belt.

SSR 30/100 B TR

The device is worn in front of the chest with a special chest harness.

2.2 Function

The demonstration and training device is comparable in size, weight, external construction, handling and breathing resistance to the emergency use devices.

Main components of the training device are not identical with the respective components of the emergency device. To differentiate it from the emergency device, the demonstration and training device has a blue label on the cover, a blue breathing bag and a blue canister bag. The unit designation on the front of the container is: SSR 30/100 TR or SSR 30/100 B TR.

The inhalation air is taken from the ambient atmosphere via an inhalation valve into the breathing tube. The exhalation air is passed via a connecting piece with check valve through the canister into the breathing bag and then expelled via an exhalation valve to the ambient atmosphere.

If another person has to do the training with the same device it is only necessary to screw in a new or disinfected breathing tube with a connecting piece.

2.3 Differentiating Features with regard to the Emergency Use Device

Several components of the demonstration and training device are not identical to the corresponding components of the emergency use device and are therefore marked blue or structurally modified in such a way as to highlight differences or to prevent one being confused with the other:

- Container cover with blue label
- Breathing bag made of blue material
- Canister is shorter and marked with blue label
- Protective cover is shortened
- Breathing tube with mouthpiece and nose clip has holes on the upper side and is screwed into the canister with a connecting piece and thus is easily removable

2.4 Marking

The devices are classified according to EN 13794 and marked with the type [code letter] and nominal duration [minutes]. The type, nominal duration and referenced standard are marked on the device.

The device are marked as follows:

Device	Marking	
	upper side	bottom side
MSA SSR 30/100 TR	MSA AUER	Date of manufacture SSR 30/100 TR
MSA SSR 30/100 B TR	MSA AUER	Date of manufacture SSR 30/100 B TR

3 Use

3.1 Carrying the Device

Carrying the SSR 30/100 TR

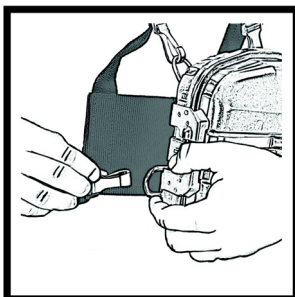
- (1) Pull the waist belt through the belt loops.
- (2) Close the belt.

Carrying the SSR 30/100 B TR



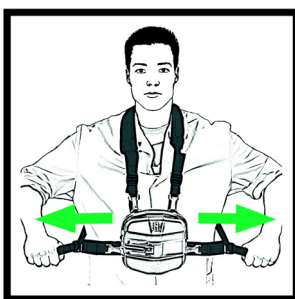
Donning the Carrying Harness

- (1) Extend waist belt [front] and suspenders [rear] to full length.
- (2) Pull harness over the head.



Donning the Device

- (3) Attach device to snap hooks of harness.
- (4) Observe correct position of the device.
 - ▷ Container marking 'oben' [top] must be visible.
 - ▷ Locking latch faces to right.



Adjusting the Carrying Harness

- (5) Hook the suspenders at the rear into the waist belt.
- (6) Tighten the suspenders.
- (7) Tighten the waist belt.

3.2 Donning the Device

Donning the SSR 30/100 TR



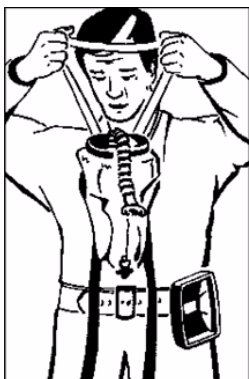
Opening the Container

- (1) Pull the locking lever in the direction of the arrow until the seal breaks and locking device falls off.



Pulling out

- (2) Grasp container cover with one hand.
- (3) Pull out the rescuer by the neck strap with the other hand.
 - ▷ If the cover falls away with the locking device, the rescuer will automatically unfold and be suspended by the mouthpiece plug.
- (4) Detach device from mouthpiece plug.



Fitting the Neck Strap

- (5) Take off the protective helmet, if used.
- (6) Place the neck strap around the neck.

**Inserting Mouthpiece**

- (7) Place mouthpiece into mouth with flange of mouthpiece between teeth and lips.
- (8) Bite down on the two lugs.
- (9) Inhale through the nose.
- (10) Exhale into the device.
 - ▷ So the breathing bag is inflated.

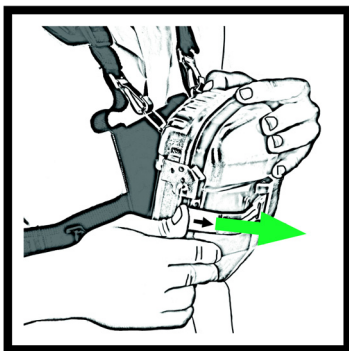
**Fit Nose Clip**

- (11) Grasp nose clip by rubber nipples, pull nose pads apart and fit them unto nose.

**Adjust Neck Strap and Tie Waist Belt**

- (12) Adjust neck strap.
 - ▷ Ensure that the head is able to move freely.
- (13) Tie waist belt and tighten with knot.
- (14) Put the protective helmet on, if used.

Donning the SSR 30/100 B TR

**Opening the Container**

- (1) Pull the locking lever in the direction of the arrow until the seal breaks and locking device falls off.

**Inserting Mouthpiece**

- (2) Place mouthpiece into mouth with flange of mouthpiece between teeth and lips.
- (3) Bite down on the two lugs.
- (4) Inhale through the nose.
- (5) Inflate breathing bag with exhalation air.

**Fit Nose Clip**

- (6) Grasp nose clip by rubber nipples, pull nose pads apart and fit them unto nose.

3.3 Multiple Use

The demonstration and training device is equipped with a replaceable breathing tube so that several persons can use the same device after each other during one training session.

For this a new or cleaned and disinfected breathing tube with connecting piece has to be used (→ chapter 4.3). In addition, before another person uses the device again, it must be determined whether other components must be cleaned and disinfected.

Before reusing, the following tasks must always be carried out:

- (1) Unscrew breathing tube from canister.
- (2) Screw in new or disinfected breathing tube with connecting piece.
- (3) Extend neck strap to full length.
- (4) Put training device back into container, if donning is part of the training procedure.

4 Maintenance and Service

4.1 General

At the end of an exercise the demonstration and training device must be cleaned, disinfected, dried, repacked and sealed with leads. This requires the following tasks to be carried out:

4.2 Disassembly



Removing the breathing tube

- (1) Unscrew breathing tube with connecting piece from canister.



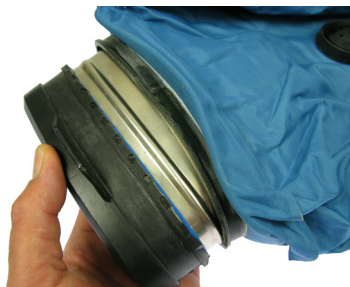
Removing connecting piece

- (2) Remove connecting piece from breathing tube.
- (3) If necessary, press out check valve from inside.
 - ▷ Use suitable tool, but not a screw driver.
- (4) If necessary, fit new valve.
 - ▷ Place check valve at the outside.



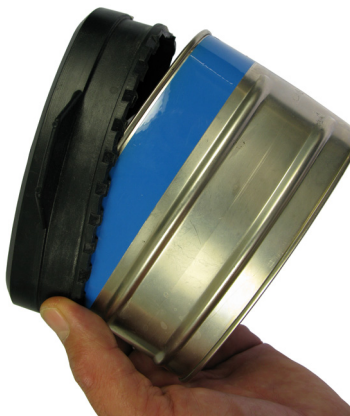
Remove clamp

- (5) Open clamp at breathing bag.
- (6) Remove clamp from the breathing bag.
 - ▷ Only SSR 30/100 B TR:
The clamp is located on the lower part of the container.



Remove protective cover

- (7) Pull out protective cover with canister from breathing bag.



- (8) Place canister in palm of the hand.
- (9) Pull off protective cover from canister.

4.3 Cleaning and Disinfection

All components which have come into contact with the user's exhalation air must be cleaned and disinfected.



Clean the device before disinfecting.

- Disinfect the device.
- Breathing bag
- Breathing tube
- Canister
- Exhalation valve
- Connecting piece with check valve
- Protective cover

All other components need only be cleaned if necessary. For the wet cleaning it is recommended to use a disinfectant according to instructions for use.

- Dry the disinfected and rinsed components [inside and outside with clean air at max. 60 °C].
- Just clean canister bag by brushing [dry off if required].
- Clean case only if necessary.
- Apply a little talcum powder to the following parts after drying and prior to assembly:
 - Breathing bag [inside]
 - Breathing tube [outside]
 - protective cover



Attention!

Thoroughly shake off excess powder!
No talcum powder inside the breathing tube!

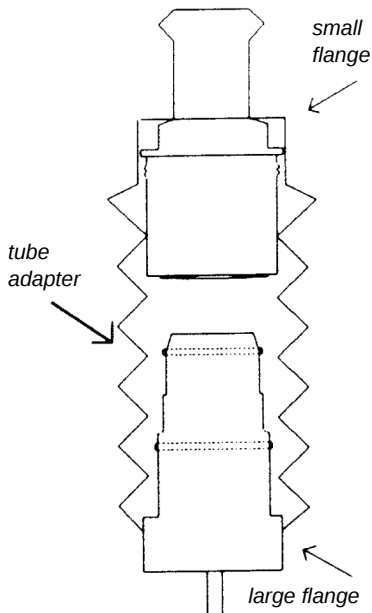
Component check

All components must be checked for damage and defects prior to assembly of the device. If required, faulty or damaged components must be replaced or supplemented. Only genuine MSA spare parts may be used.

4.4 Tightness Test of the Connection Piece

The tightness of the connecting piece is tested with the leaktester [→ chapter 5].

Test the moistened connection piece with the following procedure:



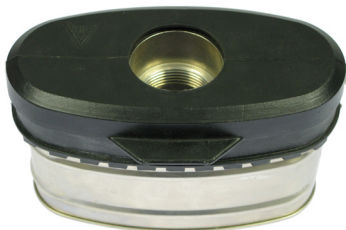
- (1) Fill in a kind of water into the connecting piece.
- (2) Remove the water by discharging.
- (3) Fix the connecting piece of the leaktester vertically.
 - ▷ Adjust check valve downwards.
- (4) Connect leaktester with adapter from bottom side to the connection piece.
- (5) Built up a positive pressure of 7 mbar at the leaktester.
 - ▷ Use the bellows of leaktester.
- (6) Close the valve and observe pressure drop.

The maximum permitted pressure drop is in 1 min: 1 mbar.

4.5 Assembly SSR 30/100 TR



The procedure for SSR 30/100 TR and SSR 30/100 B TR is partly different. Observe the right device.



Assembling protective cover

- (1) Push canister into protective cover till the end.



Insert connecting piece

- (2) Perform a tightness test according to chapter 4.4.
- (3) Insert connecting piece into the first fold of the breathing tube.



Connecting canister and breathing bag

- (4) Connect canister and protective cover.
- (5) Assemble both into breathing bag.
▷ Observe proper position.
- (6) Place the fixing clamp over the breathing bag.
- (7) Tighten fixing clamp
▷ Observe proper position of clamp lock and neck strap.



Connecting breathing tube to canister

- (8) Screw breathing tube with connecting piece onto the canister.
- (9) Adjust mouthpiece to body side.
- (10) Adjust neck strap to the maximum length, if required.



Connecting canister and breathing bag

- (11) Fix seal strap.
 - ▷ Only necessary if the unit is to be sealed!



Folding breathing bag

- (12) Fold left and right side of breathing bag over the valve.
- (13) Fold lower side of breathing bag twice from bottom to top.
 - ▷ The valve is located under bottom of canister.



Placing the device into the container

- (14) Hold folded breathing bag.
- (15) Wrap long end of waist belt once around the device.
- (16) Tighten the belt.



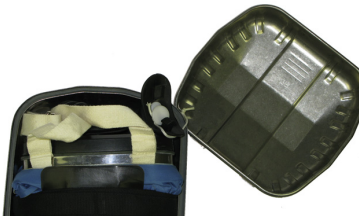
- (17) Lay down upper case with pressure compensation opening to the left.
- (18) Put device into upper case.
 - ▷ The heat protector is facing up.
 - ▷ The clamp lock is put into the slot.
- (19) Carefully press down device as low as possible.



- (20) Push breathing tube together.
- (21) Place breathing tube partly into the free space between device and case.
 - ▷ Do not buckle the breathing tube between mouthpiece and the first fold.
- (22) Place nose clip next to the breathing tube with wire facing up.



- (23) Insert mouthpiece plug into mouthpiece.
- (24) Place mouthpiece into free space next to nose clip at case.



- (25) Fold neck strap.
- (26) Place neck strap into free space next to breathing tube.

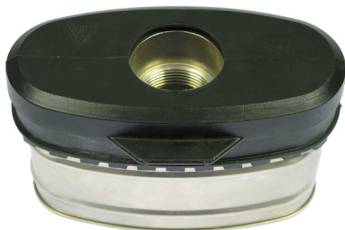


- (27) Put the cover on.
 - ▷ The belt loops of the container are on opposite side to the opening of pressure compensation.

4.6 Assembly SSR 30/100 B TR



The procedure for SSR 30/100 TR and SSR 30/100 B TR is partly different. Observe the right device.



Assembling protective cover

- (1) Push canister into protective cover till the end.



Insert connecting piece

- (2) Perform a tightness test according to chapter 4.4.
- (3) Insert connecting piece into the first fold of the breathing tube.



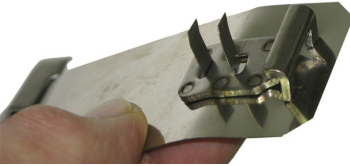
Connecting canister and breathing bag

- (4) Connect canister and protective cover.
- (5) Assemble both into breathing bag.
▷ Observe proper position.
- (6) Place the fixing clamp over the breathing bag.
- (7) Tighten fixing clamp
▷ Observe proper position of clamp lock and neck strap.



Connecting breathing tube to canister

- (8) Screw breathing tube with connecting piece onto the canister.
- (9) Adjust mouthpiece to body side.
- (10) Adjust neck strap to the maximum length, if required [SSR 30/100 TR].



Connecting canister and breathing bag

- (11) Fix seal strap.
 - ▷ Only necessary if the unit is to be sealed!



Folding breathing bag

- (12) Fold left and right side of breathing bag over the valve.
- (13) Fold lower side of breathing bag twice from bottom to top.
 - ▷ The valve is located under bottom of canister.



Placing the device into the container

- (14) Put device into lower case.
- (15) Carefully fold breathing tube.
- (16) Place breathing tube into the free space on top.



- (17) Place nose clip into mouthpiece.



- (18) Put the cover on.
 ▷ Compensation opening to the right.
 (19) Turn device to assure that no components are between the parts of case.



Closing locking clip

- (20) Check, if case is closed.
 (21) Rotate the device.
 (22) Close with locking hook and locking lever.
 ▷ The locking lever is on top of the pressure compensation opening.



Soldering lead seal strap

- (23) Solder lead seal strap.

5 Ordering Information

Description	Article No.
Emergency Use Device SSR 30/100	D1123701
Emergency Use Device SSR 30/100 B	D1123705
Demonstration and Training Device SSR 30/100 TR	D1123711
Demonstration and Training Device SSR 30/100 B TR	D1123712
Spare Parts SSR 30/100 TR / SSR 30/100 B TR	
Breathing Tube Assembly (3 pcs)	10144643
Neck Strap (5 pcs)	10111530
Breathing Bag TR with Exhalation Valve (2 pcs)	10144644
Canister TR	10144645
Container Cover SSR 30/100 TR (2 pcs)	10144646
Container Cover SSR 30/100 B TR (2 pcs)	10144647
Container Bottom SSR 30/100 TR (3 pcs)	10144648
Container Bottom SSR 30/100 B TR (3 pcs)	10144649
Sealing Ring (for Container Cover) (5 pcs)	10111528
Looking Hook and Looking Lever (5 pcs)	D1123934
Pictogramm TR (5 pcs)	10110642
Shoulder Strap for SSR 30/100 (1 pc)	10029099
Carrying Harness SSR 30/100 B (1 pc)	D1123940
Brass Seal Band (25 pcs)	10015364
Nose Clip Cushion (10 pcs)	D1035992
Connecting Piece TR (1 pc)	10144650
Screw Clamp (5 pcs)	10144651
Waist Belt (5 pcs)	10144652
Canister Cover TR (1 pc)	10144653
Leak Tester (Inside)	D1118829
Leak Tester (Container)	D1118845

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