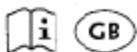
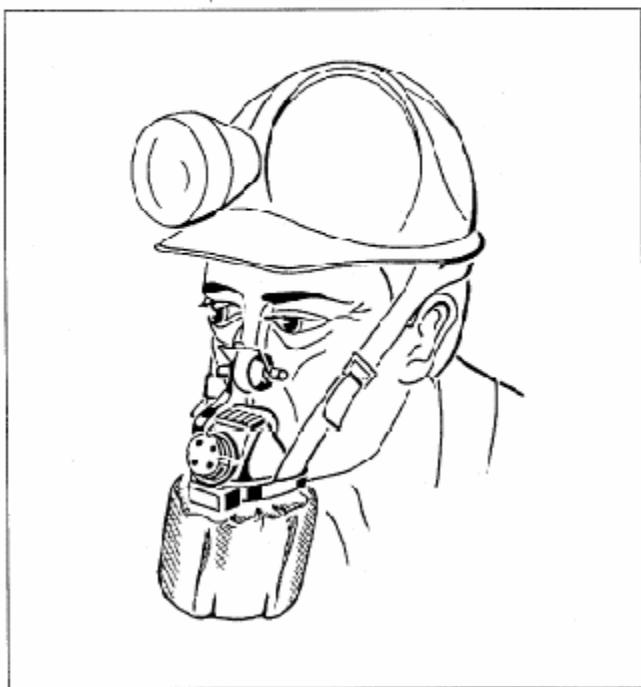


MSA AUER FSR W65-2
Filter Self-Rescuer



EN 404





Safety Advice

The Filter-Self-Rescuer is a Product, supporting life and health!

- This manual must be carefully read, understood and followed by all individuals who have or will have responsibility for selecting, servicing or maintaining this product.
- This manual contains instructions for the optimal use of the product as well as important safety information.
- Before use, the acting persons have to decide in accordance with this manual, whether the product is suitable for the intended application.



Liability information

- The liability of MSA is excluded if the product is not used appropriately and for the intended purpose. Choice and use are in the sole responsibility of the acting persons.
- 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.
- The above corresponds to the terms and conditions of sale regarding the warranty and liability of MSA. It does not alter them.

The Filter-Self-Rescuer (FSR) described in this manual is a FSR of class 4 BR in accordance with EN 404, 1993.

In addition the FSR is also in accordance with EN 404, 2005 a FSR of class 4 AR.



Maintenance Advice

- **This product must be inspected and maintained in regular intervals by trained specialists, records are to be kept. For service and repairs original MSA spare must be used only. Inspections and maintenance must be made exclusively by authorised service shops or MSA. The authorised service shops are responsible for procurement of valid technical information for the product, components thereof and maintenance instructions. Modifications to the product or components thereof are not permissible and violate the approvals.**

The liability of MSA extends exclusively to service and maintenance made by MSA.

Explanation:

a) According to European standard EN 404, 1993, class FSR - 4 BR has the following meaning:

Digit "4":	Service time longer than 120 min
Letter "B":	Performance test at 35 l/min
Letter "R":	Suitable for rough conditions (assured by "concrete mixer test")

b) According to European standard EN 404, 2005, class FSR – 4 AR has the following meaning:

Digit "4":	Service time longer than 120 min
Letter "A":	Performance test at 30 l/min
Letter "R":	Suitable for rough conditions (assured by "concrete mixer test")

1 Application

The MSA AUER filter self-rescuer FSR W 65-2 is an escape device for self-rescue, e.g. for the underground miner. The FSR W 65-2 protects against carbon monoxide (CO) and other hazardous gases that can occur from mine fires and fire damp explosions among others.

The FSR is designed for one-time use only. It does not protect against oxygen deficiency (e.g. "black damp").

2 Design and Functioning

The FSR W 65-2 consists of a filtering device which is carried along in a tightly closed stainless steel case. The filtering device consists mainly of a filter, mouthpiece, nose-clip and exhalation valve. The inhalation air flows through a coarse particle filter (protection against dust, soot, flakes, etc.) as well as through a dryer and a catalyst (impregnated charcoal and hopcalite). The catalyst layer converts CO into CO₂ and also retains other hazardous gases. The inhalation air then passes through the heat exchanger to the user. The exhalation air passes through the heat exchanger and the exhalation valve to the ambient atmosphere.

3 Technical Data

Dimensions (case)

Height:	approx. 160 mm
Width:	approx. 100 mm
Depth:	approx. 80 mm

Weight

with case:	approx. 1200 g (carried along)
without case:	approx. 800 g (ready for use)

Service time:	according to FSR-4BR-EN 404, 1993 or FSR-4 AR; EN 404, 2005 at least 120 min.
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4 Stand-By

FSR which are kept on stand-by must be undamaged on the outside and properly sealed. FSR must be easily accessible in case of an emergency and be able to be donned quickly. Therefore the FSR is always carried along (carrying bag or carrying strap) and is not taken off at the workplace.

5 Rules for an Emergency

The official emergency rules apply.

The following can indicate a fire explosion in mining:

- Clouds of smoke
- Smell of combustion gas
- Headache or nausea
- Sudden raising of dust

In such a case the FSR must be donned immediately and the specified escape route must be started. Do not speak while escaping but communicate with hand signs!

At higher carbon monoxide concentrations in the ambient air, the filtering device and the inhalation air will get warm. This warming-up indicates proper functioning, and therefore the filter self-rescuer under no circumstances must be removed until ambient air is reached which definitely contains no hazards.

The FSR is an escape device for self-rescue (escape or waiting for rescue). It must not be used as a work device, e.g. inspection tours or service operations.

6 Donning



Fig 1:
Push sealed opening lever upwards till seal breaks; pull locking assembly off case.



Fig 2:
Lift off case cover and discard.

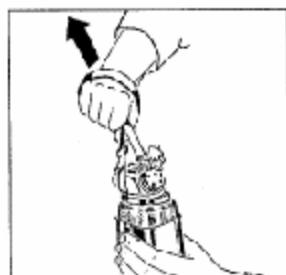


Fig 3:
Grasp filtering device by head strap and pull out of case.



Fig 4:
Bend up nose clip and insert mouthpiece (rubber flange between lips and teeth). Bite down on the two lugs.



Fig 5:
Fit nose clip tightly.



Fig 6:
Position head strap and
shorten if necessary.



Fig 7:
Put on helmet.



Fig 8:
In case the FSR cannot
be pulled out of its case
(if, e.g. the case is badly
dented), the FSR can still
be used with the case
bottom, however, with
increased inhalation
resistance.

7 Maintenance

FSR that are factory closed and properly stored or carried along, are maintenance free. However, the user and the maintenance technician through regular inspections must assure that the FSR will function properly.

7.1 Daily Inspections

Prior to each shift the FSR are inspected to assure they are intact outside and – if necessary – cleaned outside. Badly dented or open devices (seal!) must be sorted out. These devices cannot be reconditioned.

7.2 Checking the Tightness

The FSR W 65-2 can be checked by weighing. A repeated weight increase shows a leak by the uptake of moisture.

It is recommended to check the weight every three month. In German mining FSR are sorted out if the weight increase reaches max. 12 g.

7.3 Reconditioning

The FSR is designed for one-time use and is not reconditioned thereafter.

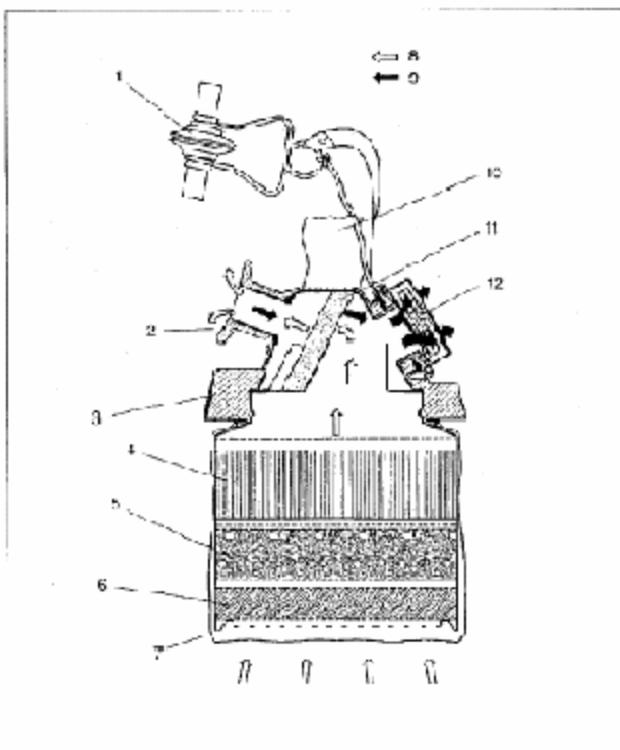
7.4 Life Expectancy

FSR are checked by random sample tests and the continued serviceability of the specific lot is extended based on the test results. According to experience thus far, MSA AUER FSR have a life expectancy of not more than 10 years.

8 Apparatus, Accessories

No.	Description	Part No.
1	MSA AUER FSR W 65-2	D1035701
2	MSA AUER W 65 TR	D1038940

MSA AUER Filter Self-Rescuer W 65-2 (schematic design)



- 1 nose clip
- 2 mouthpiece (gum)
- 3 chin support
- 4 CO catalyst (hopcalite)
- 5 dryer (impregnated charcoal)
- 6 dust filter
- 7 coarse-dust filter bag
- 8 inhalation air
- 9 exhalation air
- 10 head strap
- 11 heat exchanger
- 12 exhalation valve

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