Operating instructions

SR 90 Airline

General information

Instructions for use for SR 90 Airline should be read before use.

The Sundström SR 90 Airline is a breathing apparatus which provides a constant air flow in accordance with EN 14594:2005, 3A. Available in two sizes, S/M and M/L.

When selecting equipment for SR 90 Airline some of the factors that should be considered are as follows:

- Type of pollutant
- Concentrations
- Work intensity
- Protection requirements in addition to respiratory protective advice.

Risk analysis should be carried by a person who has suitable training and experience in the area.

Breathable air

Breathable air shall meet at least the following purity requirements:

• the pollutants shall be maintained at a minimum and must never exceed the hygienic limit value.

• the content of mineral oil in the air must be so low that the air will have no oil smell (the threshold of smell is around 0.3 mg/m3).

• the air shall have a sufficiently low dew point to avoid internal freezing of the equipment.

In the event of uncertainty as to whether the above demands have been met, a filter such as the Sundström type SR 99-1 compressed air filter should be connected.

Unpacking SR 90 Airline

Packing list:

- Facepiece with breathing hose
- Control valve threaded onto a belt
- Sealing cover
- Pre-filter holder
- Flow meter
- User instructions

1. Check before use

Check that the mask is complete, correctly assembled, thoroughly cleaned and undamaged. Check particularly carefully the inhalation and exhalation membranes and their seats.

1.1 The membranes are consumables and must be replaced if there are any signs of damage or ageing.

1.2 Check the condition of the harness.

The head harness is a consumable item and should be replaced if there are any signs of wear or reduced elasticity.

1.3 Carefully check that the internal groove of the mask is clean and undamaged.

2. Functional check

2.1 Check that the air flow - measured through the mask - is at least 150 l/min.

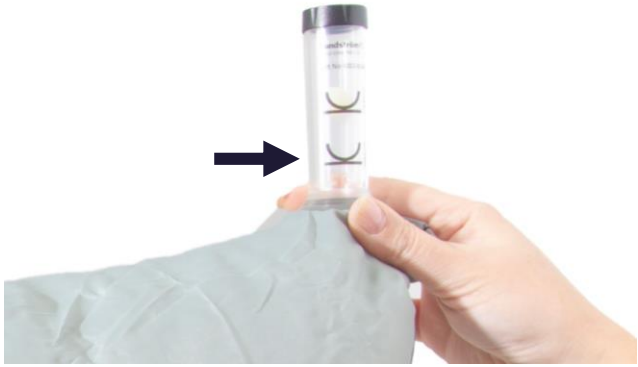
Connect the breathing hose of the mask to the control valve.

2.2 Connect the compressed air supply tube to the control valve.

2.3 Turn the control valve knob anti-clockwise as far as it will go, in order to throttle the air flow rate to a minimum.

2. Functional check

2.4 Place the facepiece in the bag and grip the opening of the bag so that it seals around the breathing hose. Grip the flow meter with the other hand and hold it so that it points vertically up from the bag.



2.5 Read the position of the ball in the tube. It should float level with or just above the marking on the tube.

If the flow rate is below the minimum value, check that

- The flow meter is vertical.
- The float can move freely.
- The air supply is not restricted by kinks or other restrictions in the hoses.

3. Filter

3.1 In environments in which both gases and particles occur, such as in spray painting, gas and particle filters must be combined.

3.3 Check that you have selected the right filter and that the use-by date has not been passed. (Specified on the filter and is valid provided that the filter packaging is unopened.)

3.2 Place the particle filter on top of the cartridge. Grasp both protective elements. Squeeze hard until you hear the particle filter snap onto the gas filter.

3.4 To separate a combined filter, place a coin it in the space between the lower lip of the particle filter and the small tab molded into the side of the gas filter. Push firmly and twist the coin until the filter pops off.

3.5 Fit a suitable filter in the filter attachment

Mount the filter into the mask. Make sure the arrow marking points towards the face part of the mask. Carefully check that the edge of the filter is in the internal groove of the mask.

3.6 Mount pre-filter SR 221 in the pre-filter holder and attach this to the filter.

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4. Putting the facepiece on

4.1 Put the belt on and adjust the length.

Arrange the control valve in a way that allows easy adjustment of the flow rate and a strict watch over the breathing hose, i. e. it must not be placed on the back of the waist

4.2 The orange retainment clip on the breathing hose is ideal for fastening the hose close to the body.

Filter

4.3 Fit a suitable filter in the filter attachment.

4.4 Adjust the harness so that the face piece is held firmly but comfortably in place.

5. Fit check

Check the fit of the mask if you intend to use a back-up filter.

If any leakage is detected, check the inhalation and exhalation valves or adjust the straps of head harness. Repeat the fit check until there is no leakage.

Leakage may occur in cases such as if you wear a beard or sideboards or if your face is unshaven or deeply wrinkled, if you wear glasses, or if the exhalation valves are defective or dirty.

5.1 Blank off the filter by using the sealing cover.

5.2 Draw a deep breath and hold your breath for ten seconds.

If the fit is good, the mask will be pressed against your face.

6. Breathing hose/compressed air hose.

6.1 Unroll the compressed air hose and make sure that it is not twisted.

Connect the hose to the control valve inlet.

6.2 Connect the breathing hose to the control valve outlet.

7. Airflow rate

7.1 Use the control valve knob to set the air flow rate to suit your current work intensity.

In the fully closed position (turn the knob anti-clockwise), the flow is about 150 l/min, and in the fully open position (turn the knob clockwise), it is about 320 l/min.

8. Taking the facepiece off

8.1 When back-upfilter is used:

Remove the sealing cover, if fitted.

8.2 Disconnect the compressed air hose from the control valve.

Leave the polluted work area and take the equipment off.

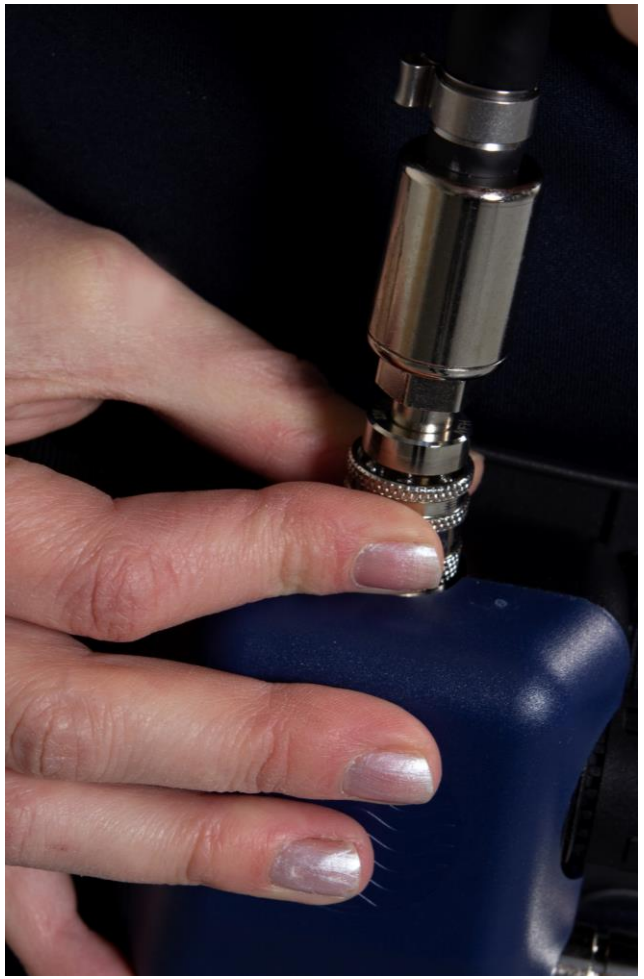
8.3 When sealing cover is used:

Leave the polluted work area and then take the equipment off

9. Releasing the hoses

9.1 Both couplings are of safety type and are released in two stages.

Push the coupling towards the nipple.



9.2 Pull the locking ring back.

10. Change the exhalation membranes

10.1 The exhalation membranes are mounted on a fixed dowel on the inside of the valve covers. The covers should be changed whenever the membranes are changed. Snap the valve covers off the valve seats.

10.2 Prise off the membrane.

10.3 Press the new membranes onto the dowels. Carefully check that the membranes are in contact with the valve seats all round.

10.4 Press the valve covers into place. A clicking sound indicates that the cover has snapped into place.

Fit check the equipment.

11. Change the head harness

11.1 The head harness can be ordered as a spare part only as a complete harness.

Snap the strap holders of the head harness off the mask strap mountings.

11.2 Check that the straps are not twisted and fit the new head harness.

12. Change the breathing hose

12.1 Cut off the hose clip with a pair of pincers and pull the hose off.

12.2 Thread the hose clip and retaining clip onto the new hose. Connect to the mask and use a pair of pincers to nip the hose clip.

12.3 Apply a load to the hose to check that it is firmly secured to the mask.

13. Cleaning

Sundström cleaning tissues SR 5226 are recommended for daily care.

If the mask is heavily soiled, use a warm (up to +40 °C), mild soap solution and a soft brush, followed by rinsing with clean water and drying in air at room temperature.

If necessary, spray the product with 70 % ethanol or isopropanol solution for disinfection.

NOTE! Never use solvent for cleaning.

13.1 Remove the filter.

- Remove the covers for the exhalation valves and remove the membranes.
- Remove the inhalation membrane.
- Remove the head harness.
- Clean as described above.

13.2 Critical areas are the exhalation membranes and the valve seats, which must have clean and undamaged contact surfaces.

13.3 Inspect all parts and replace with new parts, as necessary.

Leave the mask to dry, and then assemble it.

Carry out a fit check.

14. Maintenance schedule

	Before use	After use	Annually
Visual inspection	•		
Functional check	•		
Disinfection		•1)	•
Cleaning		•	
Membrane change			•
Head harness change			•

1) If the equipment is not for your personal use

The schedule shows the minimum requirements on maintenance routines to assure the user that the equipment will always be in usable condition.

Disinfection

See section 14 for disinfection intervals.

- After cleaning in accordance with section 13 immerse the parts in a suitable disinfectant for about 5 minutes.
- Rinse with clean water and allow to dry in air at room temperature.
- Leave the mask to dry, and then assemble it.
- Carry out a fit check.