Operating instructions

SR 700

Powered Air-Purifying respirator

PAPR

Introduction

The User Instructions for the SR 700 should be read before use. DO NOT USE the respirator until you completely read and understand the instruction manual.

The SR 700 is a battery powered fan unit that, together with filters/cartridge and an approved respirator inlet covering (facepiece or headgear) is a NIOSH 42CFR84 approved powered air-purifying respirator (PAPR).

The SR 700 is NIOSH Loose and Tight Fit approved with certain components.
Available head tops for the SR 700 are listed in the User Instructions.

When selecting an air-purifying respirator the following are some of the factors that must be considered:

- Possible occurrence of explosive atmosphere.
- Types of pollutants.
- Concentrations.
- Work intensity.
- Protection requirements in addition to respiratory protective device.

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

IMPORTANT

THIS RESPIRATOR IS INTENDED TO BE USED ONLY IN CONJUNCTION WITH AN ORGANIZED RESPIRATORY PROTECTION PROGRAM WHICH COMPLIES WITH THE REQUIREMENTS OF “PRACTICES FOR RESPIRATORY PROTECTION”, Z88.2-2015 AVAILABLE FROM AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), 11 WEST 42ND STREET, NEW YORK, N.Y. 10036, OR WITH THE REQUIREMENTS OF OSHA STANDARD 29 CFR 1910.134 AVAILABLE FROM THE US DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND/OR OTHER PERTINENT NATIONALLY RECOGNIZED STANDARDS.

Unpacking the SR 700

Packing list:

- Fan unit SR 700
- Battery SR 702 HD
- Battery charger type 3546
- Belt SR 508
- Particulate filter P100/HE, 2x
- Filter adapters SR 711, 2x
- Pre-filter holders SR 511, 2x
- Flow meter SR 356
- User instruction
- Cleaning Wipe SR 5226
- Plug kit, 3pcs

1. Assembly, battery

1.1 Attach the plug to the AC adapter.

1.2 Remove and charge the battery.

The charger carries out charging automatically in three stages.

1. Yellow LED
2. Yellow flash LED
3. Green LED

1.3 Check that the gasket round the charge contact in the fan unit is in place and is in good condition.

1.4 Push the battery back into the battery compartment.

2. Assembly belt

2.1 Assemble the belt by pressing together the two halves of the buckle.

2.2 The belt should be mounted so that the belt is pointing upwards.
Insert the three tongues of the belt half into the slot in the fan.
Begin to insert the upper tongue and then turn the belt into the fan.

2.3 Press down the three lips locking the belt half.

2.4 Correctly mounted belt.

3. Particulate filter

The fan unit may be used with only particulate filters, model number SR 510 with filter adapter or SR 710, which provides protection against all types of particulates, both solid and liquid.

Read carefully the user instructions accompanying the filters.

Note!

When filters are changed, both filters must be changed at the same time.

3.1 Check that the gaskets in the filter mounting of the fan unit are in place and are in good condition.

3.2 If particulate filter SR 510 are used, snap it on the filter adapter without pressing onto the center of the filter.

3.3 Screw the filter into the filter mounting so far that the adapter will be in contact with the gasket. Then turn it about 1/8 of a turn further in order to ensure a good seal

3.4 Press the pre-filter holder onto the particulate filter

3.5 Correctly mounted pre-filter holder with particulate filter.

4. Operation/Performance

4.1 Start the fan by pressing the control button.

4.2 The symbols on the display will light up and the sound signal will sound. The fan starts in normal operating status. 6.2 CFM (175 l/min).

4.3 If the button is pressed again, the flow will increase to 7.9 CFM (225 l/min), and this is indicated by the large fan symbol lighting up.
If the control button is pressed again, the fan flow rate will revert to 6.2 CFM (175 l/min) and the small fan symbol will again light up.

5. Warning system/alarm signals

5.1 In the event of air flow obstructions
A pulsating sound signal will be heard.
The red warning triangle of the display will flash.
Action: Immediately interrupt the work, leave the area, and inspect the equipment.

If the particle filters are clogged
A continuous sound signal will be heard for five seconds. The red warning triangle in the display will flash. The warning triangle will flash continuously, whereas the sound signal will be repeated at intervals of 80 seconds.
Action: Immediately interrupt the work, leave the area and change the filter.

5.2 If the battery capacity is lower than 5 %
A sound signal will be repeated twice at intervals of two seconds.
The yellow battery symbol of the display will flash. The battery symbol will flash continuously, whereas the other signals are repeated at intervals of 30 seconds until about one minute remains before the battery would be fully discharged. The sound signal then changes to an intermittent signal.
Action: Immediately interrupt the work, leave the area and change/charge the battery.

6. Performance check, minimum flow

6.1 Check that the fan unit is complete, correctly mounted, thoroughly cleaned and undamaged

Connect the hose from the head top to the fan and turn it about 1/8 of a turn clockwise.

6.2 Turn the flow meter bag inside out so that the transparent measuring tube is on the outside.

Note. If the bag is turned with the measuring tube inwards, it can be used as a storage bag.

6.3 Place the head top in the flow meter bag and start the fan unit.

Grip the lower part of the bag in order to seal around the hose.
Grip around the measuring tube and hold the tube vertical.

The ball should now float level with or just over the 175 l/min marking.

If the minimum flow is not achieved, check that:

-The flow meter is vertical
-The ball moves freely
-The bag seals well around the hose.

7. Performance check, alarms

The equipment is designed to provide a warning if the air flow is obstructed, and this should be checked in conjunction with the flow. Check before the equipment is taken into use.

N.B. If the minimum flow is not achieved or if the alarm signals do not operate as intended, the fan must not be used.

7.1 Cause a flow stoppage by still holding tightly the joint between the hose and the flow meter bag and then blocking off the flow meter outlet.

7.2 The fan will now initiate an alarm by audible and visual signals.

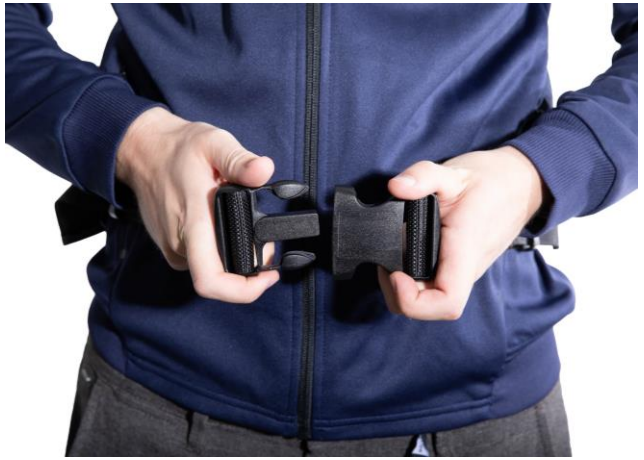
7.3 If the flow meter outlet is now unblocked and the air is allowed to flow freely, the alarm signals will cease within 10 – 15 seconds.

Switch off the fan and remove the head top from the flow meter bag.

8. Putting the equipment on

Before putting the equipment on, read carefully the user instructions for the head top.

After the filter has been fitted, a performance check has been carried out and the head top has been connected, the equipment can be put on.



8.1 Snap the two ends of the belt together.

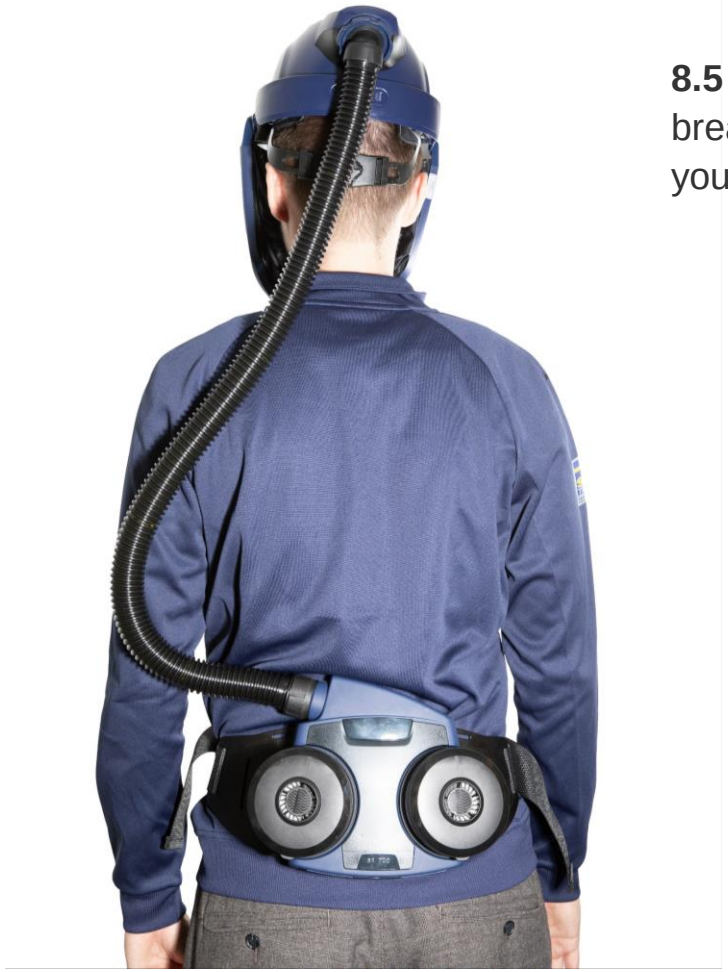
After the buckles have been connected, tighten the belt so that it is comfortable.

8.2 The fan should be firmly in contact with the wearer's back in order to ensure optimum comfort and ergonomic benefits.

8.3 Put the belt ends in the clips on each side of the belt.

Start the fan.

Put the head top on.



8.5 Make sure that the breathing hose runs along your back and is not twisted.

8.6 Note that when a full-face mask SR 200 is used, the hose should run along your waist and up along the chest.

9. To change the particulate filters

9.1 Unscrew the filters. Release the filter holders.

Bear in mind that both filters must be changed at the same time.

9.2 Remove the filter adapter from SR 510.

Place a screwdriver between the filter and the filter adapter.

Then press out the filter.

9.3. Fit new filters.

9.4 Fit the pre-filter holders.

10. Cleaning/Disinfection

10.1 The plug kit is used for cleaning or decontamination of the fan unit and prevents dirt and water from entering the fan housing.

Disconnect the breathing hose and the filters and install the plugs.

10.2 In the event of heavy fouling, a soft brush or sponge wetted with a solution of water and dishwashing detergent can be used.

10.3 A SR 5226 cleaning wipe should be used for daily cleaning.

Wipe the outside of the fan.

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

Cleaning/Disinfection

10.4 Clean the pre-filter holders inside and out.

10.5 Wipe the filter adapter clean.

Check that the sealing ridge for the particle filter is undamaged.

10.6 Wipe the belt clean.

11. Maintenance schedule

	Before use	After use	Annualy
Visual inspection	●	●	
Performance check	●		●
Cleaning		●	
Change of fan gaskets			●

The schedule represents the recommended minimum requirements for maintenance routines in order to ensure that the equipment will always be in functional condition.

11.1 The gasket has a groove all round and is fitted on a flange below the threads in the filter mounting.

Remove the old gasket.

11.2 Fit the new gasket onto the flange. Check that the gasket is in place all round.

Troubleshooting schedule

Fault	Reason	Action
The fan unit fails to start	Battery discharged	Recharge battery
	Fan-battery contact problems	Clean the contact on the battery and fan unit.
	Battery faulty	New battery, test another battery Measure the voltage which should be 13 – 17 V
	Charger faulty, fails to charge the battery.	Make a visual check and make sure that there is no dirt on the contacts to the charger or battery. A new battery charger.
	Fan motor/electronic fault	Send the fan unit for repair
Yellow battery symbol flashes	Battery discharged	Recharge the battery

Troubleshooting schedule

Fault	Reason	Action
Red triangle flashes on the display and the fan sounds	Filters clogged	Change the pre-filters Change the particulate filters
	Hose damaged	Check that the air flows freely through the hose and that the hose is in good condition
	Valves	Check that the exhalation valves with membranes are fitted to your head top.
Irregular air flow	Filter clogged No filters mounted	Check that there are filters in the fan unit