



training



Sundström 

SR500ex

Intrinsically Safe
Powered Air Purifying
Respirator (PAPR)



HOW TO...

 **HOW TO...****...prepare the SR500ex PAPR for first use****BEFORE YOU START:**

Check that the equipment is complete in accordance with the packing list and has not been damaged in transit.

Packing list (on top):

- User instructions
- Pre-filter holders EX, 2x
- Particle filters, 2x

**Packing list (underneath):**

- Fan unit EX
- Battery EX
- Belt EX
- Filter adapters, 2x
- Pre-filter, 10x
- Flow meter
- Battery charger EX
- Cleaning tissue

**Complete contents:**



HOW TO...

...prepare the battery

New batteries must be charged before they are used for the first time. On delivery, the battery fitted in the fan unit is provided with protective tape over the terminals. Remove the battery and remove the tape.



Check that the gasket which is situated around the contact plate opening underneath the battery is intact.



Connect the battery to the battery charger. Connect the charger plug to a wall socket.

N.B.! Main voltage 100-240 V

The charger carries out charging in four stages.

1. **Yellow** LED. Battery analysis and initiation.
2. **Orange** LED. The battery is being charged at maximum charging current.
3. **Green – Yellow** Intermittent flashing LED. Top of charging mode.
4. **Green** LED. Charging completed. Switches to maintenance charging mode.

When charging has been completed, pull the plug out of the socket before separating the battery from charger.





HOW TO...

...know the filters

FROM LEFT TO RIGHT:

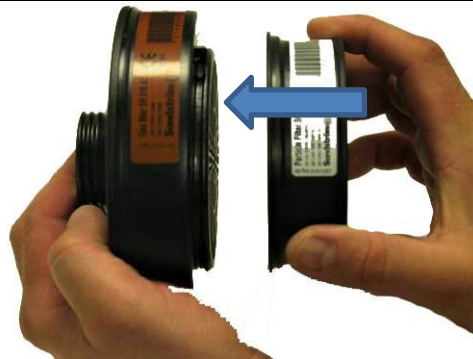
- Particle filter SR 710 P3 R
- Particle filter SR 510 P3 R
- Gasfilter SR 518 A2
- Gasfilter SR 515 ABE1
- Gasfilter SR 597 A1BE2K1
- Combined filter SR 599 A1BE2K1-Hg-P3



The choice of filters/combined filters depends on factors such as the type and concentration of pollutant. The fan unit may be used with only particle filters SR 510 / SR 710 or with a combination of particle filters and gas filters or with a combination filter SR 599. SR 710 is only a particle filter and can't be combined with a gas filter.

The filters used must be of the same type, i.e. two SR 510 P3 or two SR 518 A2/SR 510 P3, etc. When filters are changed, both filters/combined filters must be changed at the same time. The particle filter must always be used – either separately or in combination with gas filter.

The gas filters must always be combined with particle filters P3 R. Press the filters together so that the arrows on the particle filter point towards gas filter.



A click confirms that the filters are fully together. This now works as a combined filter.





HOW TO...

...assemble the battery

On delivery, the battery fitted in the fan unit is provided with protective tape over the terminals. The battery cover locks the battery. Raise the cover a few centimetres, push with the thumb resting on the battery and withdraw the battery.



Remove the tape and charge the battery.



Push the battery back into the battery compartment. Check that the battery has been pushed in as far as it will go and that its lock is operative.



HOW TO...

...assemble the waist belt

Place the fan upside down. 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.



All three tongues are now in place.



Press down the three lips locking the belt half.



Correctly mounted belt.



HOW TO...

...fit a particle filter

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



Snap the filter onto the filter adapter.



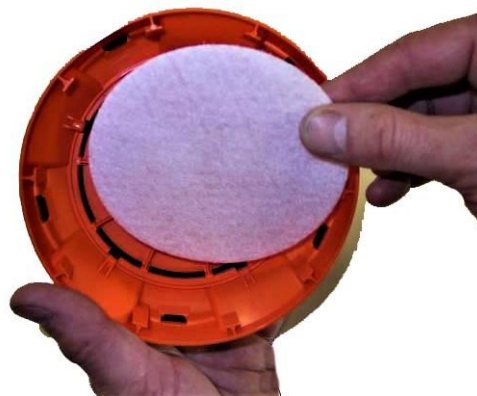
Do not press onto the centre of the filter – it might damage the filter paper.



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



Fit one pre-filter into the filter holder.



Press the filter holder onto the particle filter.



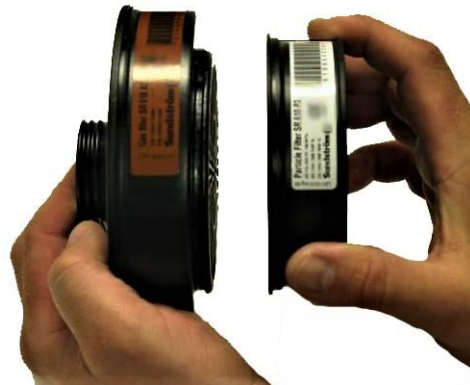
Correctly mounted pre-filter holder with particle filter.



HOW TO...

...combine gas & particle filters

Snap the particle filter onto the gas filter. The arrows on the particle filter must point towards the gas filter.



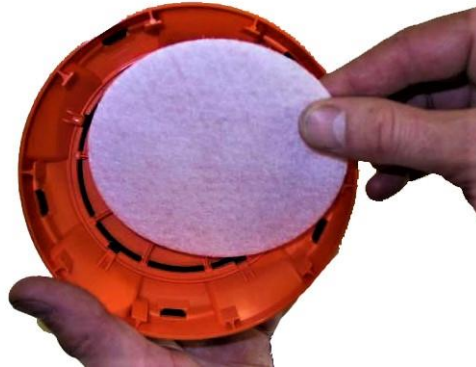
Do not press onto the centre of the filter, as it might damage the filter paper.



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



Fit one pre-filter into the filter holder.



Press the filter holder onto the particle filter. The filters used must be of the same type, i.e. two SR 510 P3 or two SR 518 A2/SR510 P3, etc. When filters are changed, both filters/combined filters must be changed at the same time.



Correctly mounted pre-filter holder.





HOW TO...

...operate the fan unit

Start the fan by pressing the control button.



After the button has been pressed, a programmed test will be run on the fan unit, during which the symbols on the display will light up and the sound signal will sound twice.



After the internal test, all symbols will be extinguished except the small green fan symbol. This indicates normal operating status with a flow of at least 175 l/min.



If the button is pressed again, boosted operating status will be activated, with a flow of at least 225 l/min. This is indicated by the larger green fan symbol lighting up. To revert to normal operation, press the control button once again.



To switch off the fan unit, keep the control button depressed for about two seconds.



HOW TO...

...perform a flow check

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



Connect any of the head-tops to the fan unit.

- Face shield SR 540 EX, hood SR 520, hood SR 530, hood SR 561, hood SR 562 or full face mask SR 200.



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



Turn the flow meter bag inside out and the flow meter appears.

Tip: When flow meter bag is turned inside out with the flow meter turned in the bag can be used as a storage bag.



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

Grip the lower part of the bag to seal around the breathing hose.

Grip the flow meter tube with the other hand so that the tube points vertically upwards from the bag.

Read the position of the ball in the tube. This should hover at a level with or slightly above the upper marking on the tube.

If minimum flow is not achieved, check that:

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



The equipment is designed to provide a warning if the air flow is obstructed. This alarm function should be checked in conjunction with the flow check before the equipment is used.

Cause an air flow stoppage by gripping the top part of the bag or by shutting off the flow meter outlet.



The fan unit should then initiate alarms by sound and light signals.



If the air is again allowed to flow, the alarms will automatically cease after 10-15 seconds. Switch off the fan unit and remove the flow meter.

N.B. The fan unit should not be used if minimum flow is not achieved or if the alarm signals don't work.



If the battery capacity has dropped to about 5 % of the original charge, this is indicated as follows:

- 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 sound signal is repeated as 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. You should now immediately interrupt the work, leave the area and change/charge the battery.



HOW TO...

...put on the SR500ex

After the filters have been fitted, a performance check has been carried out and the head top has been connected, the equipment can be put on. Before putting it on, read the user instructions for the head-top.

Grip the right part of the belt with your right hand.



Then grip the left belt with your left hand.



Pull the belt in front of you. Grip the plastic connections on each side of the belt.



Put the connections together.



Adjust the belt so that the fan unit is firmly and comfortably secured at your lower back.



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



HOW TO...

...clean and disinfect

Sundström cleaning and disinfection tissues SR 5226 are recommended for daily care. Clean the outside of the fan unit.



If the equipment is more heavily soiled, use a soft brush or sponge moistened with a solution of water and dishwashing detergent or the like. Rinse the equipment and leave it to dry.



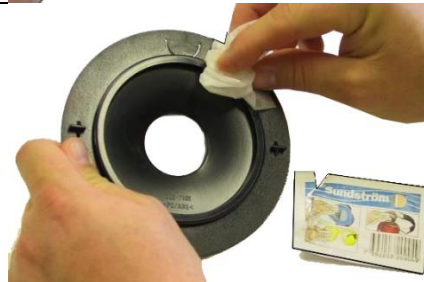
Clean the belt and belt plates.



Clean pre-filter holders inside and out.



Clean the filter adapter.
Check that all surface are clean.



Clean the battery gasket.

N.B. Check that the gasket which is situated around the contact plate opening underneath the battery is intact. If not, change battery.





HOW TO...

...schedule maintenance

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

	Before use	After use	Annually
Inspection of battery gasket	•		
Visual inspection	•	•	
Performance check	•		•
Cleaning		•	
Change of fan gaskets			•



HOW TO...

...change filters

Change the particle filter by bending the pre-filter holder from the filter adapter.



Grip the filter with one hand. Place the thumb of the other hand on the underside of the adapter at the semicircular gap. Then prise out the filter.



Grip the filter with one hand. Place the thumb of the other hand on the underside of the adapter at the semicircular gap. Then prise out the filter.



Change pre filter by pressing it in the middle and then removing it.





HOW TO...

...change the gaskets

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



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





Problem	Possible cause	Action
Fan unit does not start.	Battery is discharged.	Recharge battery
Fan unit does not start.	Contact problem between fan and battery.	Bend/ adjust/ clean contact plates. Check that there are 2 contact plates. Clean the contacts on the fan unit.
Fan unit does not start.	Battery defect.	New battery, test another battery, measure the battery voltage. It should be 13-17 V.
Fan unit does not start.	Battery does not recharge. Faulty battery charger.	Do a visual check and make sure the contacts on the battery and the charger are clean. Replace battery charger.
Fan unit does not start.	Fan motor defect. Electronic fault.	Send unit for repairs.
Flashing yellow battery symbol.	Battery discharged.	Recharge battery.
Red triangle flash in display. Fan unit signals and vibrates.	Clogged filters.	Replace pre-filter. Replace particle filter.
Red triangle flash in display. Fan unit signals and vibrates.	Damaged hose.	Check that there is a full flow through the hose and that it is not damaged.
Red triangle flash in display. Fan unit signals and vibrates.	Missing valves.	Check that there are exhalation valves with membranes mounted in your head top.
Irregular air flow.	Filter clogged. Incorrect filter combination. No filter mounted.	Check that there are filters in the fan unit and that they are of the same type, e.g. SR 518 A2 + SR 510 P3