

Full face mask SR 200



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1. General information

The SR 200 full face mask can be used in three different configurations:

- Together with filters from the Sundström filter range in accordance with EN 136:1998.
- Together with fan unit SR 500 in accordance with EN 12942:1998, class TM3.
- Together with compressed air attachment SR 307 in accordance with EN 139:1994.

In addition, the SR 200 is available in a special version - the SR 200 Airline - that is designed for connection to compressed air, but is also provided with filter back-up.

1.1 Applications

Under certain conditions, the SR 200 equipped with an appropriate filter or a compressed air attachment protects the respiratory organs and eyes against airborne pollutants, such as particles, microorganisms, biochemical substances, gases/vapours and combinations of these substances. For further particulars, see sections 1.3, 2.3 and 2.4.

The SR 200 is made of materials that are not prone to giving rise to sparks when subjected to friction, and the SR 200 is therefore usable in explosive and flammable environments. See section 1.3.

1.2 Design and operation

The SR 200 consists of a silicone outer mask with a visor of polycarbonate or laminated glass that covers the face:

an integrated inner mask with inhalation and exhalation valves that covers the user's nose, mouth and chin, a head harness with 6 mounting points that holds the mask in place, and a filter adapter with standard thread used for connecting standard Sundström filters or the compressed air attachment.

If used together with fan unit SR 500, the full face mask is connected to the fan by means of hose SR 550 (accessory), which is screwed into the filter mounting of the mask.

The inhaled air flows through a filter (compressed air attachment) and inhalation membrane into the inner mask. Part of the air flows past the inside of the visor in order to prevent misting. The exhaled air is discharged from the mask through two exhalation valves.

1.3 Limitations/Warnings

The limitations/warnings follow the current Swedish regulation. Note that there can be national differences in the regulations for use of respiratory protective equipment. The equipment must not be used

- If you cannot make the mask a tight fit during the fitting test.
- If the ambient air does not have a normal oxygen content.
- If the pollutants are unknown.
- In environments that are Immediately Dangerous to Life and Health (IDLH).
- With oxygen or oxygen-enriched air.
- If the concentration of gas or vapour is higher than 0.5% by volume, class 2 or 0,1% class 1.
- If you find that breathing is difficult.
- If you experience dizziness, nausea or other discomfort.
- If you can smell or taste the pollutants.
- If the temperature is outside the range of -10 °C to +50 °C.
- If you wear a beard or sideboards, you cannot expect the mask to seal well. In such cases, use a compressed air attachment.
- Spectacle earpieces may also give rise to leakage. Instead of using your ordinary spectacles, have your prescription lenses fitted into the special Sundström spectacle frame.
- In explosive or flammable environments, follow the regulations that may be in force for such conditions.

If in doubt about the selection and care of the equipment, seek the advice of your work supervisor or get in touch with the outlet from which you purchased the equipment. You are obviously also welcome to get in touch with Sundström Safety AB.

2. Use

2.1 Unpacking

Check that the equipment is complete in accordance with the packing list, and that no transport damage has occurred.

2.2 Packing list

- Full face mask
- Prefilter holder
- User instructions
- Filter adapter
- Cleaning tissues
- Test disc

2.3 Filter selection

Note. A particle filter provides protection only against particles. A gas filter provides protection only against gases/vapours.

Particle filter

Class P3 (includes P2 and P1) provides protection against all types of particles, both solid and liquid.

Gas filters

Type A (brown colour code) protects against organic gases and vapours, such as solvents, with boiling points above +65°C.

Type B (grey colour code) protects against inorganic gases and vapours, such as chlorine, hydrogen sulphide and hydrogen cyanide.

Type E (yellow colour code) protects against acid gases and vapours, such as sulphur dioxide and hydrogen fluoride.

Type K (green colour code) protects against ammonia and certain amines, such as ethylene diamine.

Type Hg (red colour code) protects against mercury vapour.

Combined filters

In environments in which both gases and particles occur, such as in spray painting, gas and particle filters must be combined. Press the filters together so that the arrows on the particle filter point towards the gas filter.

Prefilter

Protects the main filter against premature clogging. The prefilter holder provides protection against handling damage.

N.B. The prefilter is only a prefilter and can never replace a particle filter.

To fit the filter in a mask

1. 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.)
2. Fit the filter/combined filter in the mask so that the arrows on the filter point towards the user's face. Carefully check that the edge of the filter is in the internal groove of the filter mounting all round.
3. Fit pre-filter SR 221 in the pre-filter holder and press it into place on the filter.

See also the user instructions for the relevant filter.

2.4 Compressed air attachment/fan unit

When the SR 200 with compressed air attachment/fan unit is used, the user instructions for the relevant equipment must be followed.

2.5 Inspection points 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. The membranes are consumables and must be replaced if there are any signs of damage or ageing.
- Check that the seal at the bottom of the filter connection is in good condition.
- Check the condition of the head harness. The head harness is a consumable item and should be replaced if there are any signs of wear or reduced elasticity.

2.6 Putting the mask on

- Fit the filter or the compressed air attachment.
- Slacken the four elastic straps by moving the strap holders forward, at the same time pulling the straps. Fig. 2.
- Slacken the upper two inelastic straps by opening the buckles. Fig. 3.
- Move the head harness upwards, place your chin in the facepiece chin support and pull the head harness over your head. Fig. 4.
- Tension the elastic straps in pairs by pulling the free strap ends towards the rear.
- Adjust the fit of the mask on your face, so that it fits firmly but comfortably.
- Adjust the lengths of the upper pair of straps and fix by means of the buckles.

2.6.1 Leakage test

Use the airtight test disc No. 322 supplied to check whether the mask is tight.

- Place the disc in the prefilter holder and fit the holder to the filter.
- Put the mask on.
- Take a deep breath and hold your breath for about 10 s.

If the mask is tight, it will be pressed against your face.

N.B. Don't forget to remove the disc after the test.

N.B. No leakage test need be done if a compressed air attachment is used.

2.7 Taking the mask off

- Slacken the four elastic straps in pairs by moving the strap holders forward. The two inelastic straps need not be released. Fig. 5.
- Pull the head harness forward over your head and remove the mask.

3. Technical specification

- Nominal protection factor 2000 as per EN 136:1998, Class 3. See also CR 529:1993, sections 3.1.1.2 and 3.2.3.1.
- Protection factor 100 as per AS/NZS 1715, section 6, selection of respirators.
- Standard Rd 40 x 1/7" thread as per EN 148-1:1999 in the mask and filter adapter.
- Weight without filter: 500 gram.
- Faceblank made entirely of silicone.
- Membrane of silicone.
- Components marked with recycling symbol.
- The material and pigment in the faceblank are FDA and BGA approved for food, which minimizes the risk of contact allergies.

4. Maintenance

4.1 Cleaning

Sundström cleaning tissues (5226) which clean and disinfect 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. Proceed as follows:

- Remove the adapter/filter
- Remove the covers for the exhalation valves and remove the membranes (two)
- Remove the inhalation membranes (three)
- Remove the head harness
- If necessary, remove the visor. See section 4.4.1.
- Clean as described above. Critical areas are the exhalation membranes and the valve seats which must have clean and undamaged contact surfaces.
- Inspect all parts and replace with new parts as necessary.
- Leave the mask to dry, and then assemble it.
- Carry out leakage testing as described in 2.6.1

N.B. Never use solvent for cleaning

4.1.2 Disinfection

See section 4.3 for disinfection intervals.

- After cleaning in accordance with 4.1, 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 leakage testing as described in 2.6.1

4.2 Storage

After cleaning, store the equipment in a dry and clean place at room temperature. Keep it away from direct sunlight.

4.3 Maintenance schedule

The schedule below shows the minimum requirements on maintenance routines, so that you will be certain that the equipment will always be in usable condition.

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

1) If the equipment is not for your personal use

4.4 Spare parts

Use only genuine Sundström parts. Don't modify the equipment. The use of 'pirate parts' or any modifications may reduce the protective function and will compromise the approvals granted to the product.

4.4.1 To change the visor

The visor is mounted in a groove running around the visor opening of the outer mask and is held in place by one upper and one lower frame half.

- Use a 2.5 mm Allen key to remove the two screws holding the frame halves together. Fig. 6.
- Carefully remove the upper frame half. Fig. 7.
- Carefully prise the top part of the mask off the visor, and remove the visor from the lower groove. Take this opportunity to clean the groove, if necessary. Fig. 8, 9.
- Markings are made to show the centres of the visor, frame halves and mask. Press the new visor into the groove, making sure that the centre markings are in line. To make assembly easier, coat the slot with a soap solution or similar liquid.
- Carefully prise the top half of the mask over the visor, and make sure that the visor is in the groove in the mask.
- Prise the upper frame half, making sure that the centre markings are in line. Fig. 10.
- Fit the screws and tighten them alternately until the two halves of the frame are firmly in contact. Fig.
- Carry out leakage testing in accordance with section 2.6.1

4.4.2 To change the inhalation membranes (three)

One membrane is in the centre of the inner mask on a fixed dowel.

- Prise off the membrane and fit a new membrane. Fig. 11

Two membranes are fitted, i.e. one on each inside of the inner mask. The dowels for these membranes are removable and should be changed whenever the membrane is changed.

- Prise off the membranes and dowels.
- Prise the new membranes onto the new dowels.
- The membrane should rest on the larger flange, i.e. thread the dowel with the membrane from the inside of the mask, through the valve seat, with the smaller flange first. Fig. 12, 13.

4.4.3 To change the exhalation membranes (two)

The exhalation membranes are mounted on a fixed dowel on the inside of the valve covers on each side of the outer mask. The covers should be changed whenever the membranes are changed.

- Snap the valve covers off the valve seats. Fig. 14
- Prise off the membrane. Fig. 15
- Press the new membranes onto the dowels. Carefully check that the membranes are in contact with the valve seats all round.
- Press the valve covers into place. A clicking sound indicates that the cover has snapped into place.
- Carry out leakage testing as described in 2.6.1

4.4.4 To change the head harness

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. Fig. 16, 17.
- Check that the straps are not twisted and fit the new head harness.

5. List of parts

The item numbers below refer to Fig. 1 at the end of these instructions.

Item No.	Part	Ordering No.
1.	Polycarbonate visor	R01-1201
2.	Upper frame half with screws	R01-1202
3.	Head harness, fabric	R01-1203
4.	Set of membranes	R01-1204
	a) Exhalation membranes, two	
	b) Valve covers, two	
	c) Inhalation membranes, three	
	d) Dowels, two	
5.	Prefilter holder	R01-0604
6.	Filter adapter (280-3)	H09-0212
7.	Seal for filter connection	R01-1205
	Carrier strap	R01-1206
	Test disc (322)	R01-0303
	Cleaning tissues (5226)	H09-0401
	Spectacle frame for corrective lenses, fig. 18	T01-1201
	Test adapter	T01-1202
	Visor, laminated glass	T01-1203
	Name label	T01-1206
	Welding Cassette, fig 19	T01-1212
	Head harness, rubber	T01-1215
	Peel-offs, plastic visor SR 343	T01-1204
	Peel-offs, glass visor SR 353	T01-1205
	Storage box SR 344	T01-1214
	Breathing hose SR 550	T01-1216
	Microphone, fig. 20	T01-1213

6. Key to symbols



See user instructions



Year and month marking



Recycling symbol



CE approved by INSPEC Certification Ltd.

7. Approvals

EC/EN

The SR 200 with polycarbonate visor is type-approved in accordance with EN 136:1998, class 3 and AS/NZS 1716.

The SR 200 with glass visor is type-approved in accordance with EN 136:1998, class 2 and AS/NZS 1716.

The SR 200 in combination with fan unit SR 500 is type-approved in accordance with EN 12942:1998, class TM3.

The plastic visor has been tested against EN 166:1995, class B.

The EC type approval certificate has been issued by Notified Body 0194. For the address, see the reverse side of the user instructions.

Australian StandardsMark

The full face mask SR 200 is tested and certified to comply to AS/NZS 1716:2003.

The StandardsMark is issued under licence by SAI Global Pty Limited (ACN 108 716 669) ("SAI Global").

Maschera integrale SR 200

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1. Generalità

La maschera integrale SR 200 può essere usata in tre diverse configurazioni:

- Insieme ad un filtro della gamma Sundströms secondo EN 136:1998.
- Insieme alla ventola SR 500 secondo EN 12942:1998, classe TM3.
- Insieme all'accessorio per aria compressa SR 307 secondo EN 139:1994.

SR 200 è inoltre disponibile in una versione speciale, SR 200 Airline, che viene collegata ad aria compressa ma è anche munita di un filtro di riserva.

1.1 Campi di impiego

SR 200 dotata di filtri adeguati o di alimentazione continua ad aria compressa, protegge gli organi della respirazione e gli occhi, entro certi limiti, da inquinanti volatili