Product leaflet

Product	Model No.	Ordering No.
Half mask	SR 100 S/M	H01-2112
	SR 100 M/L	H01-2012
	SR 100 L/XL	H01-2812

Product Description

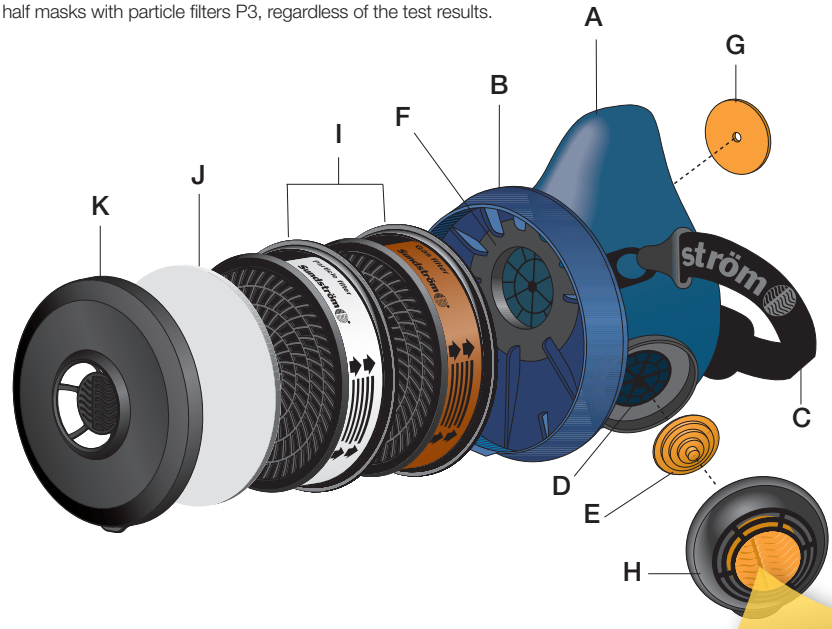
The SR 100 half mask is made of silicone in three sizes, i.e. S/M, M/L and L/XL. The mask is equipped with two exhalation valves, which ensures very low exhalation resistance. The valve covers with partitions effectively protect the exhalation membrane against dust and paint mist. The material and pigment of the mask body are approved by FDA and BGA for foods, which minimizes the risk of contact allergies. The easily adjustable elastic head harness straps of the mask are designed as a V-shaped loop and have a large dished crown plate, which contributes towards a comfortable and safe fit. The mask is used either as a filtering device in combination with filters from the Sundström range, or in combination with the SR 307 compressed air attachment which then serves as a breathing apparatus with continuous flow for connection to a compressed air supply.
A pre-filter holder is supplied. Best stored in box SR 230 or storage case SR 339.

Technical specification

	SR 100	EN 140:1998
Inhalation resistance at 30 l/min	≈ 3 Pa	≤ 50 Pa
Exhalation resistance at 160 l/min	≈ 70 Pa	≤ 300 Pa
Service temperature	-10 – +55 °C, < 90 % RH	-
Storage temperature	-20 – +40 °C, < 90 % RH	-
Weight	≈ 179 g	-
Assigned Protection Factor[1]	20 (P3) 10 (GasX) 10 (GasX P3)	- - -
Nominal Protection Factor[2]	48 (P3) 50 (GasX) 48 (GasX P3)	- - -
Approval	EN 140:1998	

1) Specified in BS 4275, and applies generally to all half masks with particle filters P3, regardless of the test results.
2) According to EN 529:2005.

A. Mask body
B. Filter attachment
C. Head harness straps
D. Exhalation valve seat
E. Exhalation membrane
F. Inhalation valve seat
G. Inhalation membrane
H. Protective cap
I. Filters (not included)
J. Pre-filter
K. Pre-filter holder



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Half Masks SR 100, SR 90-3 and SR 90-2

1. Introduction

The masks are used either as filtering devices in combination with filters from the Sundström range, or in combination with the SR 307 compressed air attachment which then serves as a breathing apparatus with continuous flow for connection to a compressed air supply.
The Sundström half masks provide respiratory protection against airborne pollutants, such as particles, micro-organisms, biochemical substances, gases/vapours and combinations of these substances to a user.
The respirators consist of a mask body made of silicone (SR 100) or TPE, Thermo Plastic Elastomer (SR 90-2, SR 90-3), that covers the user's nose, mouth and chin. It is equipped with inhalation and exhalation valves, an easily adjustable elastic head harness designed as a V-shaped loop that holds the respirator in place and a filter attachment for connecting standard Sundström filters.
The inhaled air flows through a filter and inhalation membrane into the mask. The exhaled air is discharged from the face piece through two exhalation valves. A wide range of accessories are available. See section 6, List of parts.

1.2 Warnings/ Limitations

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 or lack adequate warning properties.
- In environments that are Immediately Dangerous to Life and Health (IDLH).
- With oxygen or oxygen-enriched air.
- If you find that breathing is difficult.
- If you experience dizziness, nausea or other discomfort.
- If you smell or taste the pollutants.
- If you experience any other noticeable physical effect.
- If you have any hair growth between the skin and facepiece sealing surface such as stubble, beard growth, beard, moustache, or sideburns which cross the respirator surface.
- If scars or other physical characteristics may interfere with a proper fit of the respirator.
- Caution must be taken when using the equipment in explosive atmospheres.

If you feel uncertain about the selection and care of the equipment, consult your work supervisor or get in touch with the sales outlet. You are also welcome to get in touch with the Technical Service Department at Sundström Safety AB. Use of a respirator must be part of a respiratory protection program. For advice see EN 529:2005 or AS/NZS 1715:2009.
The guidance contained in these standards highlights important aspects of a respiratory protective device program but does not replace national or local regulations.

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

- Half mask
- Pre-filter holder
- Test disc
- Cleaning tissue
- ID-tag
- User instructions

2.3 Filter selection

You can identify various filters by the colour and protection designation of the filter label. Note. A particle filter provides protection only against particles. A gas filter provides protection only against gases/vapours. A combined filter protects against both gases/vapours and particles.

2.3.1 Particle filters

All Sundström particulate filters trap and hold particles in the filtering media. As the amount of the captured contaminant in the media increases, breathing resistance also increases. Replace the filter after 2 – 4 weeks or earlier if the change in breathing resistance becomes noticeable. Filters are consumables with a limited service life. A filter exposed to strong press or impact or with visible damage must immediately be scrapped.

2.3.2 Gas filters

Each gas filter is designed to provide respiratory protection against specific contaminants. A gas filter absorbs and/or adsorbs specific vapours and gases from a contaminated atmosphere. This process continues until the absorbent becomes saturated and allows the contaminant to break through.

2.3.3 Combined filters

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

- 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. Fig. 1a.
- Place a pre-filter into the pre-filter holder.
- Snap the pre-filter holder on the filter or cartridge.

Note. The particle filter will always be snapped on the gas filter, but the gas filter will not snap onto the particle filter. The gas filter will always be inserted into the respirator.

To separate the combined gas and particle filter

- Place a coin it in the space between the lower lip of the particle filter and the small tab moulded into the side of the gas filter.
- Push firmly and twist the coin until the filter pops off. Fig 1b.

2.3.4 Pre-filter SR 221

The Sundström pre-filter SR 221 is not a protective element and can never be used as primary protection or as a substitute for a particle filter. It is designed to prevent nuisance particulates from reaching the protective elements. This increases the life span of the primary filter. The pre-filter holder protects the main filter against handling damage.

2.3.5 Compressed air attachment

When the half mask is used with compressed air attachment SR 307 the user instructions for the relevant equipment must be followed.

3. Donning/Doffing

3.1 To fit the filter in a mask

- 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.)
- 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 around.
- 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.

3.2 Inspection before use

- Check that the mask is the correct size.
- Check that the mask is complete, correctly assembled and thoroughly cleaned.
- Check the mask body, membranes, membrane seats and harness for wear, cuts, cracks, missing parts, and other defects.
- Check that the appropriate filter is intact and installed properly.

3.3 Putting the mask on, fig. 2

- Remove any hood, glasses or ear protection from head.
- Holding the mask in one hand, grab the strap buckle and pull on the head strap until the pad is tight against the mask.
- Take out any twists or tangles.
- Holding the strap buckle, pull the strap over your head and put it around your neck.

- Let the mask hang on your chest.
- Grab the pad with one hand and the filter with the other.
- Hold the mask against your face.
- Pull the pad over your head and place it on the crown of the head.

3.4 Adjusting the harness

- Reach behind your neck and grab the free end of the harness strap.
- Pull the free end away from the neck until buckle pops open.
- Pull on the free end of the strap until the respirator seats comfortably on your face.
- Use your thumb and forefinger to squeeze the buckle shut.
- Wiggle the respirator until it seats comfortably.

3.5 Fit check

Use the airtight test disc SR 322 supplied to check whether the mask is tight.

- Place the disc in the pre-filter 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.

The test disc is intended for use only for facial fit testing under test conditions. It must not be used under real work conditions.

3.6 Taking the mask off

Do not take off the mask until clear of the hazardous area

- Grasp the filter with one hand and the head pad with the other. Pull it forward over your head.
- Pull down the respirator until it rests on your chest.
- Reach behind your neck, grab the strap buckle and pull the head harness forward over your head and remove the mask.
- Clean and store the mask as required.

4. Maintenance

4.1 Cleaning

Sundström cleaning tissues SR 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 filter, the covers for the exhalation valves and the membranes, the inhalation membrane and the head harness. (Optional – The harness can be washed, but takes extra time to dry.)
- Clean as described above. Critical areas are the exhalation membranes and the membrane 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.
N.B. Never use solvents for cleaning.

4.2 Storage

The best way to store the mask, clean and dry, is in the Sundstrom storage box SR 230 or storage bag SR 339. Keep it away from direct sunlight or other sources of heat.

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	•		
Functional check	•		
Cleaning		•	
Membrane change			•
Head harness change			•

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 inhalation membrane

- Reach inside the respirator and gently pull out the inhalation membrane. Fig. 1/7.
- Check the edge of the inhalation valve. Gently stretch the flap until it slips over the stud.

4.4.2 To change the exhalation membranes

The exhalation membranes are mounted on a dowel on the inside of the valve covers on each side of the mask body. Fig. 1/5. The covers should be changed whenever the membranes are changed.

- Snap the valve covers off the membrane seats. Fig. 1/6
- Prise off the membranes.
- Press the new membranes onto the dowels. Carefully check that the membranes are in contact with the membrane seats all round.
- Press the valve covers into place. A clicking sound indicates that the cover has snapped into place.

4.4.3 To change the head harness

- Detach the head harness by pushing the two connection points towards the filter attachment.
- Check that the straps are not twisted and snap on the new harness by putting each plastic swivel into the contoured slot and pulling it until it snaps in.

For product/equipment certified to AS/NZS1716:2012; for advice, see also AS/NZS1715:2009 Use and Maintenance of Respiratory Equipment.

5. Technical specification

Inhalation resistance
≈ 3 Pa, at 30 l/min.

Exhalation resistance
≈ 70 Pa, at 160 l/min.

Materials
The material and pigments of the SR 100 mask body are approved for exposure to provisions, which minimizes the risk of contact allergies. All plastic parts are marked with material codes and recycling symbols.

Shelf life
The half mask SR 100 have a shelf life of 10 years and SR 90-2, SR 90-3, 5 years from the date of manufacture which can be established by examining the date wheel in the filter attachment of the mask.

Size
Manufactured in two sizes, small/medium (S/M), and medium/large (M/L).

Temperature range
Storage temperature: from -20 to +40 °C at a relative humidity (RH) below 90 %.
Service temperature: from -10 to +55 °C at a relative humidity (RH) below 90 %.

Weight
Small/medium: ≈ 165 g.
Medium/large: ≈ 175 g.

6. List of parts

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

Item	Part No.	Ordering No.
	Half mask SR 100 S/M	H01-2112
	Half mask SR 100 M/L	H01-2012
	Half mask SR 90-2 S/M	H01-2312
	Half mask SR 90-2 M/L	H01-2212
	Half mask SR 90-3 S/M	H01-2712
	Half mask SR 90-3 M/L	H01-2612
1.	Mask body	-
2.	Filter attachment	-
3.	Head harness SR 363, single strap	R01-2001
3.	Head harness SR 362, cradle strap	R01-2002
4.	Membrane seat	-
5.	Exhalation membrane	-
6.	Protective cap	-
7.	Inhalation membrane	-
8.	Pre-filter holder SR 5153	R01-0604
9.	Test disc SR 322	R01-0303
10.	Pre-filter SR 221	H02-0312
11.	Particle filter P3 R, SR 510	H02-1312
12.	Gas filter A1, SR 217	H02-2512
12.	Gas filter A2, SR 218	H02-2112
12.	Gas filter AX, SR 298	H02-2412
12.	Gas filter ABE1, SR 315	H02-3212
12.	Gas filter ABE2, SR 294	H02-3312
12.	Gas filter K1, SR 316	H02-4212
12.	Gas filter K2, SR 295	H02-4312
12.	Gas filter ABEK1, SR 297	H02-5312
	Combined filter filter ABEK1-Hg-P3 R, SR 299-2	H02-6512
	Membrane kit SR 369 for SR 100, SR 90-3, fig. 3	R01-2004
	Membrane kit SR 371 for SR 90-2	R01-2201
	Inhalation membrane	-
	Exhalation membranes	-
	Protective caps	-
	Service kit SR 100, SR 90-3, fig. 4	R01-2005
	Service kit SR 90-2	R01-2202
	Head harness	-
	Membrane kit	-
	Pre-filter holder	-
	Protective hood SR 64, fig. 5	H09-0301
	Protective hood SR 345, fig. 6	H09-1012
	Protective hood SR 346, fig. 7	H09-1112

Storage box SR 230, fig. 8	H09-3012
Storage bag SR 339, fig. 9	H09-0112
Dynamic microphone SR 342, fig. 10	T01-1213
Voice amplifier SR 324, fig. 11	T01-1217
Test adapter SR 328, fig. 12 (SR 100, SR 90-3)	T01-1202
Test adapter SR 309 (SR 90-2)	H09-1503
ID-tag SR 368	R09-0101
Cleaning tissues SR 5226, box of 50, fig. 13	H09-0401

7. Key to symbols


See user instructions


Date wheel


Recycling symbol

CE 0194 CE approved by INSPEC Certification Ltd

8. Approvals

CE/EN
The half masks SR 100, SR 90-3 and SR 90-2 are approved in accordance with EN 140:1998.

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 half masks SR 100, SR 90-3 and SR 90-2 are tested and certified to comply to AS/NZS 1716:2012. The StandardsMark is issued under licence by SAI Global Pty Limited Lic No.766 (ACN 108 716 669) ("SAI Global").