SHINE®

SPARX DOUBLE AIR PAPR UNIT MANUAL

SparX Double Air PAPR Unit
For continuous filtered air

WARNING **Read and Understand All Instructions Before Using the Equipment.**

SAFETY WARNINGS

Before each use, inspect the respirator system for damage and verify it operates properly. Before using the respirator system, test air flow to verify it is providing an adequate volume of air. Always wear the respirator system and do not remove the head top or turn off the air filter unit until outside the contaminated area, otherwise, there is a risk of high concentration of CO2 and oxygen level in the head top will fall, thus little or no protection is given. If you are not sure about the concentration of pollution, or about equipment performance, ask the industrial safety engineer.

The manufacturer is not responsible for injury due to the following incorrect use or incorrect choice of equipment.

- This respirator devices should be used with well trained persons and qualified persons only.
- Before using the devices ensure you have understood that at very high work rates the pressure in the device may become negative at peak inhalation flow.
- Before and during using the devices, attention shall be drawn to possible incorrect use and, where appropriate, the possibility of looped hoses and/or cables becoming caught up.
- Before or during using the device, if the devices is in power-off state, little or no respirator protection is to be expected, which is considered to be an abnormal situation.
- Please remove the headgear when the device is in power-off state since a rapid build-up of carbon dioxide and depletion of oxygen within the hood may occur.
- The filters shall only be fitted to the turbo unit and not directly to the helmet/hood.
- The user should not confuse the markings on a filter relating to any standard other than EN 12941 with the classification of this device when used with this filter.

- DO NOT use SparX Air with the blower unit switched off.
- DO NOT use SparX Air in an atmosphere2that is immediately hazardous to user hygiene or health and/or has oxygen content of less than 19.5% or contains unknown substances.
- DO NOT use SparX Air in an explosive atmosphere.
- DO NOT use SparX Air in confined spaces or areas of poor ventilation
- DO NOT use SparX Air in high winds.
- DO NOT alter or modify in any way.
- DO NOT touch any of the moving parts.
- DO NOT allow water or other liquids to enter the impeller chamber, the filter or battery compartment.

CONTENTS

1. INTRODUCTION

Respirator system is intended to be used to provide protection when the user working in the contamination environment. The equipment is able to filter the contaminate air via the filter build in to the blower and then supply fresh air from breathing tube to the welding faceshield, so that the user can continually working in contamination environment. It is a combined face and breathing protection device for increased safety and comfort during welding. Please read these instructions carefully before unpacking. For proper use, see user instructions or contact manufacturers for help.

2. APPROVALS

The system complies with the requirements of PPE Regulation 2016/425 and European Standard EN 12941: 1998+A2:2008 class TH3 P R S L .

The respirator system is designed to provide a supply of filtered air via a breathing tube to a welding headpiece.

- The equipment can be used in environment that requires a class TH3P breathing protection device.
- It protects against articulate contamination.
- All components used in respirator system must be manufacturer approved parts, and must be used in accordance

with the instructions in this manual.

Notified Body:Vyzkumny ustav bezpecnosti prace, v. v.i., Jeruzalemska 9 ,116 52 PRAHA 1,Country : Czech Republic (Notified body number 1024)

Note
1. The approval is not valid if the product is incorrectly used together with non-approved parts or components.
2. Only the particle filter and pre-filter can be used together with this system. Filters from other manufacturers should under no circumstances be used.

3. UNPACKING

Check that correct number of components has been supplied, as in figure 1. Check that the apparatus is complete, undamaged and correctly assembled. Any damaged or defective parts must be replaced before use.

The package must include:
1. The helmet with airduct
2. The respirator protection system (turbo unit + filter + waist belt)
3. Li-ion rechargeable battery
4. The tube with anti-fire cloth and both end fittings
5. The shoulder harness
6. The air flow tester
7. The lithium-ion battery charger
8. The carrying bag

If any of the above components are not included in your kit, please contact the supplier immediately.

FIGURE 1

4. FILTER REPLACEMENT

If the filter is wet or heavily loaded with particles or damaged, it should be replaced. Never attempt to clean the filter by any means , it can damage the filter media easily. The pre-filter (if used) should be intact without any tears or cuts. Please replace the prefilter once it's wet or heavily loaded with particulate.

1

Remove the filter cover by pressing in the latch of the filter cover.

2

The filter cover is released.

3

Remove the used filter by lifting it out from the filter cover.

4

5

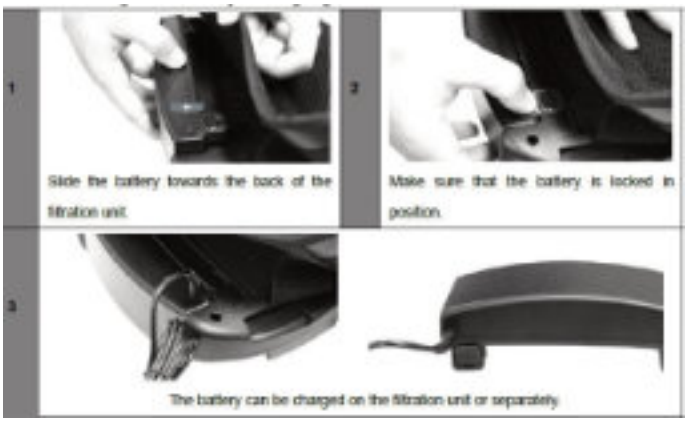
Remove the pre-filter.

6

Clean the spark arrestor if necessary.

5. INSTALLING THE BATTERY/CHARGING

Installing the battery:



- The battery is partially charged when delivered. It must be charged at a 100% (4 bars) before the first use.
- It is recommended to charge the batteries at a 100% before each use.
- The charger must not be used for anything else than it was designed for.
- Do not charge the battery in a potentially explosive area.
- The charger must only be used indoors.
- The charger regulates the charge automatically, once the battery is fully charged, it will maintain it at a 100% (floating charge).
- The charge time is 3 to 4 hours.
- The battery will discharge itself after long storage periods.
- Always charge the battery if the device was stored for more than 15 days. When the battery is new or has been stored for more than 3 months, charge it and discharge it at least twice in a row to reach the nominal/rated charge capacity.

Battery charge:

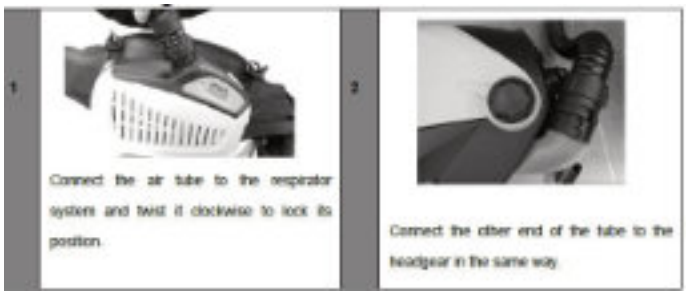
- Connect the battery to the charger. The connector is above the battery.
- Connect the charger to the mains.
- The state of charge is displayed via a red LED on the mains charger.
- Once the charge is finished, the floating charge becomes active: the red LED switches off and a green LED switches on.
- Disconnect the charger from the mains (do not keep the charger plugged to the mains if it's not in use).

6. INSTALLING THE PAPR ON THE BELT

Make sure the belt is securely fastened

7. CONNECTING THE TUBE

Check that the respiratory tube is strongly connected. If the tube is broken, replace it.

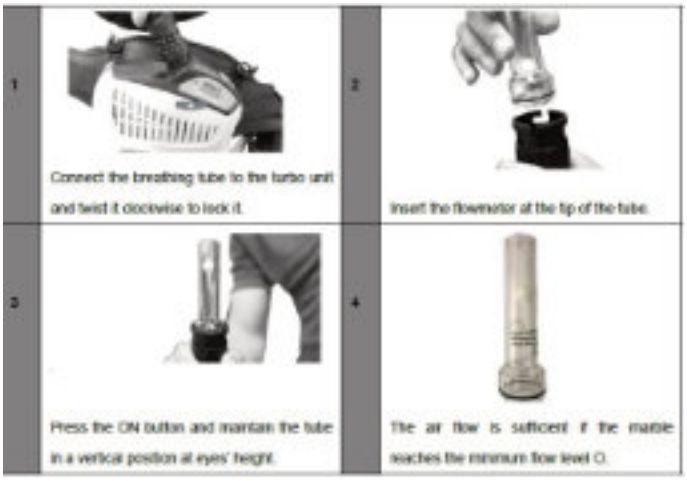


ATTENTION **All components must be installed/used in accordance with this manual if the equipment is to offer the specified protection. If any component is missing, or if anything is not clear, contact the supplier.**

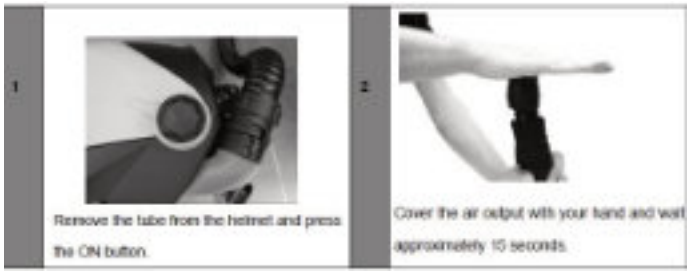
8. AIR FLOW TEST AND ALARM TEST

The airflow must be tested before using. If the marble can't reach the minimum flow level, don't use the system. Change the filter or the battery and retest the air flow.

Air flow test:



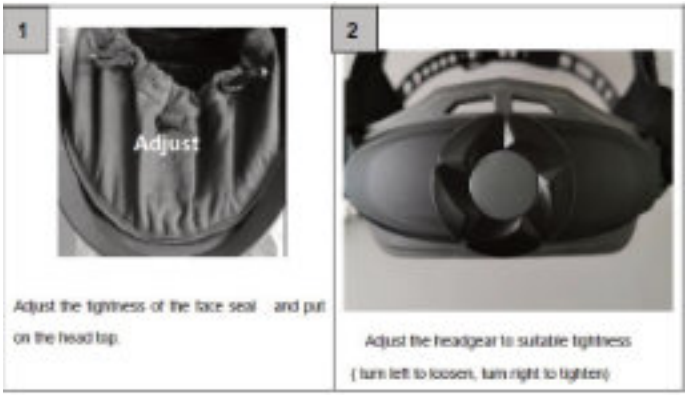
Air flow alarm test:



If the alarm does not work, please repair or change respirator system.

9. FITTING

Make sure the face seal is positioned properly, otherwise, you can't get sufficient sealing needed to offer the correct protection factor.



10. LCD AND OPERATION

There is a LCD display screen on SparX Air unit to show the SparX Air working condition (FIGURE 3).

The parts on the LCD display screen
1. The data of current air flow.
2. The level of the airflow.
3. The filter condition.
4. The battery.
5. The temperature of the battery.

Any of them will flash if there are SparX Air disfunctions.

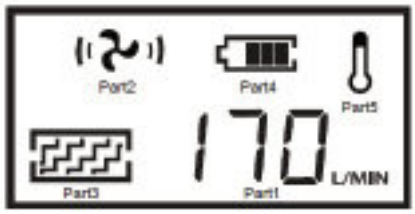
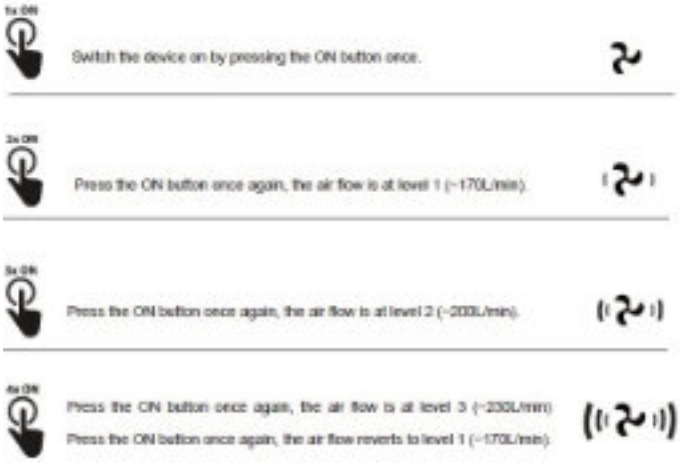


FIGURE 3

Operation
- The respirator system will turn off the turbo unit if long press the OFF button more than 3 seconds.
- The respirator system will cut off the entire circuit and switch to sleep mode if the turbo unit has turned off for more than 30 minutes. Pressing the ON button can activate the system.
- The respirator system must be operated in the temperature range of -5°C to +55°C and relative humidity less than 90%RH.



11. MAINTENANCE & STORAGE

Inspect the equipment daily and always check it if any sign of malfunction occurs.

Maintenance

- The respirator system unit must be checked regularly and must be changed if it is damaged and cause leakage.
- The filter must be changed if it is broken, or it is blocked and does not give enough airflow.
- The breathing tube must be changed if it is broken or has crevasse.
- The battery must be charged when the low battery alarm rings.
- Use a soft cloth to wipe the external surfaces. Don't use water!
- Disinfect the equipment with disinfectant not having any adverse effect on the PPE or the user. Dettol disinfectant is recommended. Dilute the disinfectant and water in a ratio of 1:99.
- Wipe the surface of the equipment with a clean lint-free tissue or cloth that takes the solvent. Then wipe the surface of the equipment with another clean lint-free tissue or cloth that takes water.
- The filter should be replaced together with the pre-filter.

Storage

- The respirator system must be stored in a dry, clean area, in the temperature range of -10°C to +55°C and relative humidity less than 90%RH.
- If the equipment is stored at temperature below 0°C, the battery must be allowed to warm up to achieve full battery capacity.
- The equipment must be protected from dust, particles and other contamination.
- If the equipment is not used for a long time, the battery should be fully charged, removed from the respirator system unit and stored separately.
- Transport the equipment with original packaging box and away from direct sunlight.

12. TROUBLE SHOOTING

Problem	Probable cause	Action
Fault code «E01» and blinks	1. Motor is stuck 2. Motor is damaged 3. Blower structure failure caused by outer force 4. Circuit failure	Check and remove physical failure and restart the system. Return to dealer if LCD still shows E01
Fault code «E02» and blinks	1. Motor is damaged 2. Motor impeller rubs blower shell 3. Circuit has excessive current.	Check and remove physical failure and restart the system. Return to dealer if LCD still shows E02
blinks, blinks and alarm sounds	Low battery	Charge the battery
blinks, blinks and alarm sounds	1. Filter blocked 2. Tube blocked	Remove obstruction, change the filter and clean tube
blinks and alarm sounds	Battery high temperature	Stop working and rest
No air flow, no alarm	1. No power 2. Battery contact damaged	Charge the battery and check battery contact
Battery run time is too short	1. Battery is not fully charged 2. Filter is blocked 3. Battery is damaged	Charge the battery, remove obstruction, change filter and/or change battery
Air supply to hood smells unusual	1. Filter broken 2. Tube broken 3. ADF helmet broken	Leave current area immediately. 1. Change filter 2. Change tube 3. Change ADF helmet
Supply insufficient air to hood	1. Breathing tube broken off 2. Breathing tube broken 3. Filter is blocked	1. Check tube connection to hood and respirator system unit 2. Change breathing tube 3.Remove obstruction, change filter

13. SPECIFICATIONS

Size (blower assembly)	9-2/5 x 6-1/2 x 2-3/4 in. (240 x 165 x 70 mm)
Weight	2.4KG
Particle Filter	1*TH3 P R SL
Air Flow	Manufacturer minimum design flow rate: 165L/min Nominal airflow : Level 1: 170L/min Level 2: 200L/min Level 3: 230L/min
Noise Level	Max 75dB
Operate Temperature	23°F to 131°F (-5°C~55°C)
Storage temperature	14°F to 131°F (-10°C~55°C)

Battery Type	Standard Battery Rechargeable Li-ION 4400mAh Optional: Heavy Duty Battery Rechargeable Li-ION 6800mAh
Expected Battery Operation Time	Standard battery/Heavy Duty battery Level 1 > 10h Level 1 > 15h Level 2 > 8h Level 2 > 12h Level 3 > 6h Level 3 > 10h
Battery Charging Time	3.5 Hours 5 hours
Battery Life	500 Charges Run Time Dependent On Air Flow Rate and Filter Load.
LCD Display	Air flow level and data Battery capacity Filter status
Belt Size	35-2/5 x 51-2/5 in. (900mm to 1300mm)

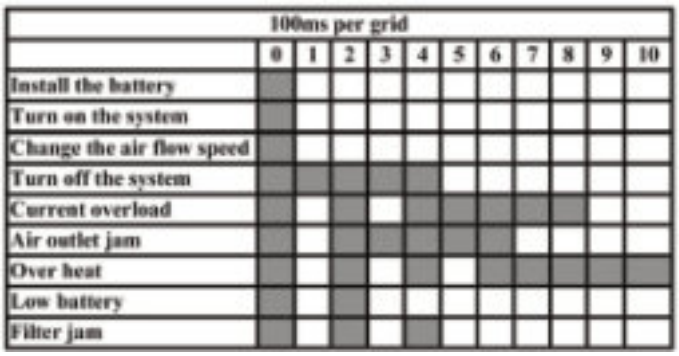
14. MARKING EXPLANATION

Powered filtering device:

- EN 12941:1998 respirator protective devices:
  - Powered filtering devices incorporating a helmet or hood
  - Requirements:
    a. Testing
    b. Marking
- TH3 P R (SL) classification of the unit
  - "TH3" defines the level of protection
  - "P R" indicates the filter type ("P"= Particle filter, "R"= Reusable type of particle filters)
  - "SL" reflects the filter has been tested against particles of liquid and solid matter

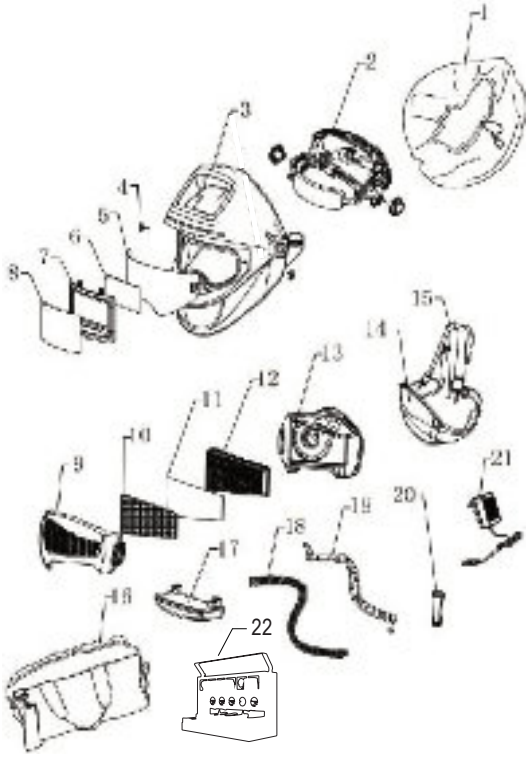
Warning indication

- This SparX Air PAPR has sound and vibration alarm function.
  - Each grid stands for a period of 100ms.
  - Gray is the beep sound and blank grid is a quiet period.
  - If several continued grids are in gray then there's a continuous beep sound.
- For example, when the current is overloaded, the system sounds like beep~beep~beep~~~~~.



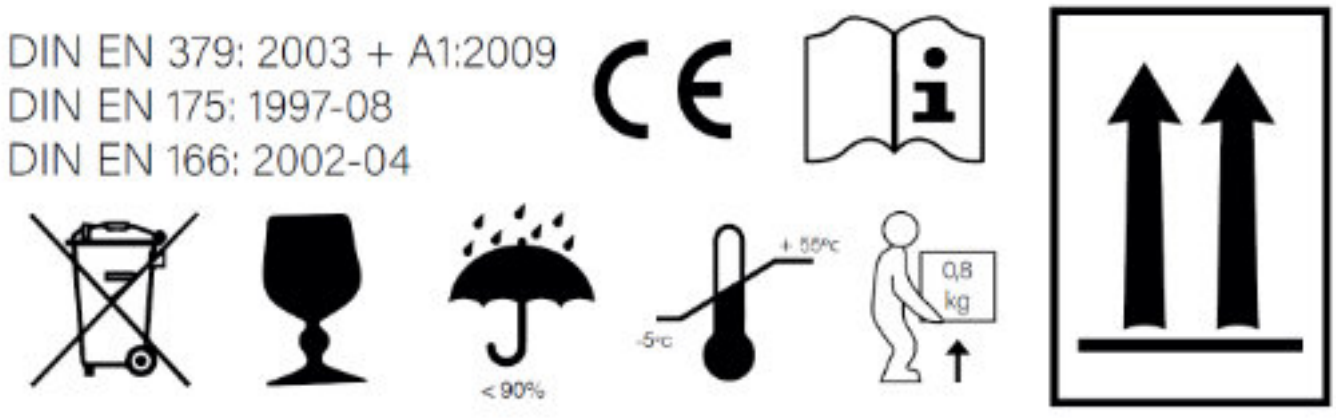
15. PART LIST

Drawing no.	Description	Article number:
1	Face seal	13.02.201
2	Headgear	13.01.011
3	Sweatband	13.02.212
4	Lock sliders	13.01.043
5	Large inner visor	13.02.411
6	Inner protection lens	13.01.117
7	Auto-Darkening Filter (ADF)	13.06.100
8	Outer protection lens 118x97x1mm	13.01.013
9	Filter cover	13.03.101
10	Spark arrestor	13.03.104
11	Pre-filter	13.03.103
12	P3 filter	13.03.102
13	Turbo unit	13.03.105
14 + 15	Waist belt + Shoulder harness	13.03.108
16	Carrying bag	13.03.111
17	Rechargeable battery	13.03.106
17	Heavy duty rechargeable battery	13.03.114
18	Breathing tube	13.03.116
19	Flame retardant tube cover	13.03.113
20	Air flow tester	13.03.109
21	Battery charger	13.03.110
22	Battery charger organizing stand	13.03.112



16. WARRANTY

- The SparX Air Blower unit is guaranteed for a period of 12 months from date of purchase against mechanical or electrical defects.
- The SparX Air battery is guaranteed for a period of 6 months from the date of purchase.
- The company undertakes to exchange or repair without charge, any part found to be defective within this guaranteed period alternatively and at its discretion.
- The Company may replace.
- This guarantee is subject to:
  - The SparX Air unit has been used solely for the purpose for which it is intended.
  - The SparX Air unit has not been subject to misuse, accident, modification or repair.
- In the event of a claim, contact the retailer from which the SparX Air unit was purchased.
- The guarantee does not cover normal wear and tear.



ATTENTION **if any of these conditions is not kept or followed, the warranty is automatically invalid.**