

Description:

The 3M Adflo Powered Air Respirator is a breathing protection device, for increased comfort and safety during welding and allied processes when used as a system in combination with approved headtops.
3M Adflo Powered Air Respirator is equipped with a particle filter, spark arrestor, pre filter and a particle filter indicator that indicates particle filter clogging. A range of gas filters (optional) give additional protection against certain gaseous contaminations.
3M Adflo Odour Filter (optional) reduces unpleasant odour.
3M Adflo Powered Air Respirator incorporates an automatic airflow control that ensures a constant supply of air during use. An electronic control unit provides an audible and visible warning of low battery and/or low air flow into the headtop.
The 3M Adflo Powered Air Respirator version for high altidudes has intergrated automatic altitude compensation to adjust for changes in air density
3M Adflo Powered Air Respirator offers a standard and a heavy-duty (optional) battery.
The airflow creates a slight positive pressure which together with the sealing to the face prevents particles and other contaminants from entering the head top.
The Adflo unit has a three bar battery indicator. When all bars are illuminated the battery has full capacity.
In addition the Adflo unit also has a five step particle filter indicator. The figure illustrates the expected runtime versus particle filter clogging. The standard battery runtime is shown on the left axis and the heavyduty battery runtime is shown on the right axis.
On the horizontal axis, green and red LEDs shows the particle filter clogging.
NOTE! The start point is different when a gas-filter is added. See figure.
NOTE! The unit must not be used with other than approved headtops and filters.

Applications:

The Adflo Powered Air Respirator is designed to provide a supply of filtered air from the Adflo unit, via a breathing tube, to a head top. The equipment can be used in environments which require a class TH2 and TH3 P R SL, TH2 A1B1E1 P or TH2 A2 P breathing protection device. The choice of breathing equipment is governed by the concentration and type of contamination found in the ambient air. The complete system protects against particulate contamination and if the gas filter is used, against certain gaseous contamination.

Approvals:

These products meet the requirements of the European Community Directive 89/686/EEC (Personal Protective Equipment Directive) and are thus CE marked. The products comply with the harmonized standard EN 12941 (Respiratory protective devices – Powered filtering devices incorporating a helmet or hood). Certification under Article 10, EC type examination and Article 11, EC Quality Control has been issued by INSPEC International Ltd (Notified body number 0194 for systems incorporating this product.). The product is in conformity with the provisions of European Directive 2004/108/EC (EMC – Electromagnetic Compatibility), and the European standards EN 61000-6-3 (EMC - Emission - Residential) and EN 61000-6-2 (EMC - Immunity - Industrial) have been applied.

Equipment Marking:

3M Adflo Powered Air Respirator and Filters are marked to EN 12941. TH2 and TH3 – The class designation for complete device P R SL – re-usable Particle Filter A1B1E1 and A2 Gas filter class designation (“A”, “B” and “E” indicate that the filter provides protection against organic, inorganic and acid gases as defined by the standard and the number describes the filter capacity)
The 3M Adflo Powered Air Respirator is marked with the date of manufacture
Markings on the equipment.


= Read the instructions before use.


= Shall be disposed of as electronic waste.


= Recycle

= Expiry date year/month


= Do not allow contact with water. Protect against moisture


= Do not expose to fire


= Do not store outside recommended temperature range


= For indoor use only

Operating instructions:

Switch on 3M Adflo Powered Air Respirator by pressing the ON button once (nominal airflow), twice (airflow plus). Pressing the ON button a third time will make 3M Adflo Powered Air Respirator return to nominal airflow.
One green indicator = nominal airflow (see technical specification)
Two green indicators = airflow plus (see technical specification)
To switch 3M Adflo Powered Air Respirator off, press the OFF button for at least 1 second. If the red light illuminates together with an audible warning, this indicates that the airflow is too low (less than manufacturer’s minimum design flow rate). If the low flow alarm is active for more than two minutes, 3M Adflo Powered Air Respirator will automatically turn off. 3M Adflo Powered Air Respirator has a three bar battery indicator showing remaining capacity. When the last bar starts flashing and an audible warning is heard, less than 5% battery capacity is remaining. The warning sound will change noticeable after a while and 3M Adflo Powered Air Respirator will turn off automatically. See below table for details.

Fault	Probable Cause	Action
Continuous short tones Red indicator lights	1. Breathing tube blocked 2. Filter clogged 3. Filter Cover blocked	Check and remove blockage or obstruction Check air inlet to filter and remove obstruction, change filter
Continuous short tones Battery indicator	Low battery voltage	Charge the battery

flashes		Install a charged battery
The respirator shuts off after 20 seconds	Low battery voltage	Charge the battery Install a charged battery
No flow, no alarm	1. Battery contact damaged 2. Battery completely flat	Check battery contact Charge battery

Limitations of use:

⚠ Only use with original 3M Speedglas brand spare parts and accessories listed in the reference leaflet and within the usage conditions given in the Technical Specifications.

⚠ The use of substitute components or modifications not specified in these user instructions might seriously impair protection and may invalidate claims under the warranty or cause the product to be noncompliant with protection classifications and approvals.

⚠ 3M Adflo Powered Air Respirator must not be used in the power OFF state since a rapid build-up of carbon dioxide and depletion of oxygen within the headtop may occur.

⚠ Do not remove the headtop or turn off 3M Adflo Powered Air Respirator until you have vacated the contaminated area. In the power OFF state little or no respiratory protection is expected.

⚠ 3M™ Adflo™ Powered Air Respiratory System must not be used if 3M Adflo Powered Air Respirator does not supply enough air(low flow alarm).

⚠ 3M Adflo Powered Air Respiratory System must not be used in flammable or explosive environments.

⚠ Note that the breathing tube might make a loop and get caught up by something in the surrounding area.

⚠ If you are not sure about the concentration of pollution, or about equipment performance, ask an industrial safety engineer. The manufacturer is not responsible for injury following incorrect use or incorrect choice of equipment.

⚠ Always correctly use and maintain the product according to these instructions. Failure to do so may cause fire or explosion or could adversely affect respirator performance and result in injury, sickness or death.

⚠ Do not open, crush, disassemble, dispose of in fire, heat above 60°C or incinerate.

⚠ To avoid damage to the equipment do not use solvents for cleaning. Do not immerse in water or spray directly with liquids. Do not whipe the electrical contacts.

⚠ The particle filter indicator reflects particle clogging only. The service life of the optional organic vapour/acid gas cartridge, when used, must be estimated independently in accordance with a change out schedule. Failure to do so may result in sickness or death.

Spare parts and accessories:

Part no.	Description
53 35 05	Adapter for non-QRS breathing tubes when using Speedglas 9100 Series welding shields
50 35 06	Adapter for QRS breathing tubes when using Speedglas 9000 Series welding shields
79 01 01	Product carry bag
83 31 01	Battery charger NiMH
83 31 11	Battery charger Li-ion
83 32 06	6-station battery charger NiMH
83 40 00	Breathing tube, lightweight, non-QRS
83 40 05	Breathing tube, heavy-duty rubber, non-QRS
73 40 08	Breathing tube with silencer, non-QRS
83 40 10	Breathing tube, lightweight, 25 cm longer, non-QRS
83 40 12	Breathing tube, double length, non-QRS
83 40 13	Breathing tube, lightweight, triple length, non-QRS
83 40 16	Breathing tube, self-adjusting (52,5 to 85 cm), with QRS connection
83 40 17	Breathing tube, heavy-duty rubber with QRS connection
83 40 18	Flame resistant breathing tube cover
83 45 00	Gasket for non-QRS breathing tubes
83 50 00	Belt
83 50 05	Front part, belt
83 50 10	Quick connection for belt
83 50 20	Braces
83 60 00	Spark arrestor
83 60 10	Prefilter, pkg of 5
83 60 80	Prefilter , pkg of 80
83 70 00	Storage bag
83 70 10	Particle filter P SL
83 70 20	Particle filter P SL, pkg of 20
83 70 80	Particle filter P SL, pkg of 80
83 71 10	Odour filter
83 71 20	Odour filter pad
83 72 42	Gas filter A1B1E1
83 73 00	Gas filter kit: A1B1E1 filter and Heavy-Duty battery
83 75 42	Gas filter A2
83 76 20	Battery (standard) NiMH
83 76 21	Battery Heavy-Duty NiMH
83 76 30	Battery (standard) Li-ion
83 76 31	Battery Heavy-Duty Li-ion
83 80 20	Airflow indicator
83 80 31	Filter cover

Technical specification	
Weight 3M Adflo Powered Air Respirator (inkl. P-filter, excl battery)	690 g
Manufacturers minimum design flow rate Nominal airflow Airflow Plus	160 l/m App. 170 l/min App. 200 l/min
Belt size	75-127 cm
Operating temperature	-5ºC to +55ºC
Battery life	App. 500 charges