3M Science. Applied to Life.™

3M™ Proflow SC160 PAPR Vision Ready-Pak

Technical Data Sheet

Description

The 3M™ PAPR Ready-Pak consists of a Proflow SC160 powered air respirator, Vision PAPR Full Face Respirator and two PAPR Pro2000 PF10 particulate filters.

Proflow SC160 incorporates a waist-mounted blower unit supplying filtered air to the facepiece through an 80cm Ethylene Propylene Rubber (EPDM) breathing hose. A NiMH battery is encased in a polyurethane casing with a micro-processor controlled charger for charging.

The blower unit features a DC motor powered radial fan. A microprocessor calculates the power required to maintain the set flow rate and automatically adjusts the fan speed to maintain the required air supply. If the airflow rate falls below the minimum 160l/min, an audible warning sounds.

A fully charged battery has an operation time of around 6-7 hours. The NiMH battery takes 6 hours to charge from flat. Recharging should always take place at a room temperature of about 20°C. A fully charged battery can stay connected to the charging device without damage occurring. The charger features internal over current and temperature protection electronics.

The RFF4000 Vision is a side mounted, single filter full face respirator featuring a unique semi-spherical visor design that offers unrestricted, optically sound vision. The visor is moulded in polycarbonate and hard coated to offer excellent solvent and scratch resistance. The inner mask is moulded in non-dermatitic Thermoplastic Elastomer (TPE) with a matt finish which prevents reflective glare on the inside of the visor. The Vision full face respirator provides low breathing resistance, uninhibited speech transmission and the lightweight construction minimises wearer fatigue. The face piece is available in 2 sizes: Medium/Large and Small The Vision PAPR respirator features a side fit hose connection with a 90 degree elbow fitting, enabling the user to wear the respirator with little or no intrusion from blower hoses.

The 3M Pro2000 PAPR PF10 particulate filter has a 40mm thread connection. The filter protects against solid & liquid, radioactive and toxic particles and microorganisms like bacteria, viruses and enzymes.

Standards

An approved PAPR unit always consists of a blower + facepiece + filters. The Proflow SC160 Vision Ready-Pak combination is certified to AS/NZS 1716:2012 and EN 12942. CE 0121.

PAPR	Headtop	Pro2000 Filter	PAPR Classification
Proflow SC160	Vision Full Face Respirator	PF10 PAPR P3	PAPR P3

Storage

The Proflow SC160 Vision Ready-Pak should be protected from direct sunlight, grease and oil. The store should be dry and cool.

Storage of the respirator: -10°C to +50°C, and relative humidity (RH) under 75%.

Storage of the Blower Unit: -10°C to +30°C, and at less than 75% RH. An opened filter must be sealed tightly if they are to be reused and must be replaced within 6 months after opening at the latest, as per AS/NZS 1716:2012.

Storage and maintenance of a filter: The filters are sealed in plastic bags by the manufacturer. Store the filters unopened in a clean place at an even temperature. Most appropriate is 0°C to +30°C with relative humidity below 75%. Sealed filters tolerate conditions of -10°C to +50°C and below 95% RH. The storage period (month and year) for filters is marked on the filter tape. Do not try to regenerate the filters. Never clean the filters with compressed air or pressurised water. After use, the filters are contaminated waste. See below for advice on filter disposal.

Specifications

Proflow SC160 PAPR Vision Ready-Pak

	5564593 / XP100231594
Blower Body	Polyurethane (PU) - good chemical & impact resistance
Motor Body	Polyamide (PA 12) - good resistance to abrasion & impact
Body Tensioner	Thermoplastic Elastomer (Hytrel) - good chemical & temperature resistance
Inhalation Valve Body	Polyamide (PA)
Breathing Hose	Fitted with 90 degree elbow connector for improved freedom of movement Ethylene Propylene Rubber (EPDM) - good weather & radiance resistance, good chemical and temperature resistance, resistant to abrasion
Air flow	The blower automatically compensates for flow resistance caused by partial filter blockage or higher filter resistance Minimum 160 l/min
Belt	Fully adjustable, washable PVC for easy decontamination
Operating Time	6 - 7 hours from a single charge
Battery	NiMH rechargeable, 9.6V standard Internal over current and temperature protection Size 134 × 34 × 34mm. Weight 448g
Battery Life	About 400 charging cycles (@ 4h daily running time)
Charger	6 hours recharging time from flat - automatic trickle charging Mains operated: Primary: 230 V ~ 50 Hz, Secondary: 4.8 – 12 V= max. 700 mA Size: 105 × 65 × 47mm. Weight: 660 g
Recharging Temperature	Recommended >20°C and <30°C
Power Pack Status Indication	Visual display of battery status (A) Filter Blockage (P) Audible warning of low battery and filter status
Sound Level	<70dB(A)
Operating Temperature	-10°C to +50°C
Operating Humidity	<95%
Ingress Protection	IP 54
Warranty	Proflow SC160: 36 months or 1800 hours (excluding battery) Battery: 12 months **Warranty runs from the date of purchase by the end user and is only valid if serviced and maintained according to the manufacturers recommendations.**

Vision Respirator

	RFF4000 / XP100544962
Facepiece	Liquid Silicone Rubber (LSR)
Inner Mask	Thermoplastic Elastomer (TPE)
Visor	Polycarbonate (PC) & optional PC HC (hard coated on both sides for scratch & solvent resistance)
Head Harness	EPDM
Valve Discs	Silicone

Vision Respirator Material Properties

Combination	
Mechanical Durability	Good
Chemical Resistance	Acids Excellent Hydrocarbons Average
Temperature Range	Excellent (-60°C to +250°C)
Steam Resistance	Good
Leak-tightness (gas & vapour impermability)	Excellent
Ozone Resistance	Excellent
Light Resistance	Good
Resistance to wear & tear	Good

Vision Respirator Visor Properties

Visor Features	Visor Polycarbonate (PC)
Impact Resistance	Excellent
Scratch Resistance	Good
Maximum Heat Resistance	140°C
Chemical Resistance (Hydrocarbons)	Average

Pro2000 PAPR PF10 Particulate Filter

Feature	PF10 Particulate	AS/NZS 1716:2012 Requirement
Weight	99g	max 500g with full face respirator
Breathing Resistance		
30 l/min	0.4 mbar	max 1.2 mbar
95 l/min	1.2 mbar	max 4.2 mbar
Filtering efficiency (maximum permitted filter penetration of test aerosols at 95 l/min)		
Sodium Chloride NaCl (S)	<0.001%	max 0.05%
Paraffin oil (L)	<0.005%	max 0.05%
Dimensions		
Height	59mm	
Diameter	110mm	
Thread	40mm	
Other data		
Casing material	Polypropylene, reinforced	
Storage time	10 years (factory sealed)	
Storage temperature	-10°C to +50°C (factory sealed)	
See limitations of use instructions of use for Pro2000 filters		

Particle Size Efficiency

In addition to AS/NZS 1716:2012 certification, 3M's filter material has been independently tested using a series of aerosols with a very narrow size distribution. This measures efficiency against specific particle sizes. The average efficiency for each test is as follows:

Droplet Size	Efficiency
0.09 micron	99.9993%
0.12 micron	99.9963%
0.18 micron	99.9936%
0.22 micron	99.9948%
0.32 micron	99.9981%

Protection Factors

Class designation according to AS/NZS 1716:2012 is PAPR P 3 for particulates.

Combination	Required Minimum Protection Factor AS/NZS 1715*
Particulate Filters	100+

* Refer AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.

Maintenance/Cleaning

Maintenance: The blower device shall be serviced at least once a year by a 3M Service Centre. After use the respirator and breathing hose must be checked for damage, cleaned and disinfected. Replace damaged parts. Replace worn out filters. Always replace all filters at the same time. Use only original spare parts. Please also refer to the AS/NZS 1715:2009, Use & Maintenance of Respiratory Products for additional guidance.

Component	Work To Be Done	Use		Storage
		Before	After	Every 6 years
Mask, Complete	Cleaning	•#	•	
	Disinfection		•	
	Test for function & leak-tightness		• ^	•
	Pre-use check done by the user	•		
	Replace visor, head harness, buckles, inner mask, valve discs and other parts when needed		•	
Speech Diaphragm	Check and replace when needed		•	•

^ if components have been replaced

in case of a mask stored unused for a longer period

Cleaning: Use lukewarm water and mild detergent (neutral pH 6-8). Do not use solvents (like turpentine, acetone), hot water or bleaching agents (like Perborate, Percarbonate). After cleaning, disinfect the inside/faceseal with a disinfectant solution.

Service/Training

Users need to be trained in the safe operation of this equipment. Routine checks must be carried out in accordance with the user instructions. Cleaning should also only be carried out as specified in the user instructions.

For training requirements please contact 3M Training Department on Phone: 1800 445 867 or Email: anzfallprotectiontraining@mmm.com

All servicing must be carried out by trained personnel who have been trained and are deemed competent by the manufacturer and hold a current 3M Scott Safety technician's certificate.

For Annual Servicing requirements please contact 3M|Scott fire & Safety Service department on Phone: 131 772 or Email: scbaservice@mmm.com

Disposal

If the product is to be disposed of, it should be disassembled and disposed of as solid waste. Please see local authority regulations for disposal advice and locations. Discarded batteries are hazardous waste. Make sure they are disposed of according to correct regulations.

After use the filters are contaminated waste. Please make sure that they are disposed of according to the filtered substance contaminant in accordance with current waste treatment regulations. Please see local authority regulations for disposal advise and locations.

Ordering Information

5564593 / XP100231594 Ready-Pak consists of

3M Code	Model #	Description
XP100544624	064580	Proflow SC160 PAPR
XP100544962	RFF4000	Vision PAPR Full Face Respirator
XP100544541	063799	80cm Angle Breathing Hose to connect to Proflow SC160
XP100544418	052670	Pro2000 PAPR PF10 2 x Pro2000 PAPR PF10 Particulate Filters
XP100213188	5000803	Large PAPR storage tub with Lid
XP100124740	2015897	Face Mask storage tub with Lid

Also certified to be used with but not included in Ready-Pak

3M Code	Model #	Description
XP100544343	042799	Pro2000 B1E1K1P3 - Inorganic and acid gases/ vapours, ammonia + solid & liquid particulates
The Ready-Pak is stored in a re-sealable, stackable storage tub and includes a second smaller stackable storage box for the Vision full face respirator		

Spare Parts

3M Code	Model #	Description
AT010700220	PF251	Pro2000 Particulate PAPR P3 Filter
XP100544442	052693	Pro2000 Filter Covers Orange Polythylene
XP100218930	5052694	Filter Shower Cover
XP100544418	052670	Pro2000 PAPR PF10 2 X Pro2000 PAPR PF10 Particulate Filters

Important Notice

To the extent permitted by law, 3M shall not be liable for any loss or damage including any loss of business, loss of profits, or for any indirect, special, incidental or consequential loss or damage arising from reliance upon any information herein provided by 3M. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence.

3M Australia Pty Ltd
Personal Safety Division
Bldg A, 1 Rivett Road
North Ryde NSW 2113
TechAssist Helpline: 1800 024 464
Customer Service: 1300 363 565
Email: techassist@mmm.com
Web: www.3M.com/au/ppesafety

3M New Zealand Ltd
Personal Safety Division
94 Apollo Drive, Rosedale
Auckland 0632
TechAssist Helpline: 0800 364 357
Customer Service: 0800 252 627
Email: techassist@mmm.com
Web: www.3M.com/nz/ppesafety

AV011474663