



RESPIRATORY PROTECTION



R01001 / R01002

R01001 / R01002**Optipro 1 / 1V Disposable Masks**

- Lightweight (2g), folding, single use respirator.
- Protects against solid and liquid particles including oil based mists.
- Offers a protection factor of 4 x APF / 4 x NPF
- Multi layered filter medium with electrostatic charge.
- Ergonomically shaped for comfort, ease of use and a high level of protection.
- Extremely low breathing resistance.
- Adjustable head straps to provide individual fit.
- Adjustable nose clip to ensure a good seal.
- Non-allergenic and Individually sealed in hygienic pack.
- Optipro 1v (R01002) comes with exhalation valve for easier breathing and the reduction of heat and condensation build up.

STANDARD: EN149 2001 FFP1**UOM:** 1 / Box of 20 (Optipro 1); 1 / Box 10 (Optipro 1V).**SHIPS FROM STOCK**

R02001 / R02002

**R02001 / R02002****Optipro 2 / 2V Disposable Masks**

- Lightweight (3g), folding, single use respirator.
- Protects against solid and liquid particles including oil based mists.
- Offers a protection factor of 10 x APF / 12.5 x NPF.
- Multi layered filter medium with electrostatic charge.
- Ergonomically shaped for comfort, ease of use and a high level of protection.
- Extremely low breathing resistance.
- Adjustable head straps to provide individual fit.
- Adjustable nose clip to ensure a good seal.
- Non-allergenic and individually sealed in hygienic pack.
- Optipro 2v (R02002) comes with exhalation valve for easier breathing and the reduction of heat and condensation build up.

STANDARD: EN149 2001 FFP2**UOM:** 1 / Box of 20 (Optipro 2); 1 / Box 10 (Optipro 2V).**SHIPS FROM STOCK****R03001****Optipro 3V Disposable Mask**

- Lightweight (4g), folding, single use respirator.
- Protects against solid and liquid particles including oil based mists.
- Offers a protection factor of 20 x APF / 50 x NPF.
- Multi layered filter medium with electrostatic charge.
- Ergonomically shaped for comfort, ease of use and a high level of protection.
- Extremely low breathing resistance.
- Adjustable head straps to provide individual fit.
- Adjustable nose clip to ensure a good seal.
- Non-allergenic and individually sealed in hygienic pack.
- Exhalation valve for easier breathing and the reduction of heat and condensation build up.

STANDARD: EN149 2001 FFP3**UOM:** 1 / Box of 10**SHIPS FROM STOCK**

R03001

R02003**Optipro Odorair 2 Valved Disposable Mask**

- Lightweight (3.5g), folding, single use, nuisance odour respirator.
- Protects against odours and nuisance levels of organic vapours, adhesives and some solvent based chemicals.
- Offers a protection factor of 10 x APF / 12.5 x NPF.
- Multi layered filter medium combining electrostatic charge and layer of activated charcoal.
- Ergonomically shaped for comfort, ease of use and a high level of protection.
- Extremely low breathing resistance.
- Adjustable head straps to provide individual fit.
- Adjustable nose clip to ensure a good seal.
- Non-allergenic and individually sealed in hygienic pack.
- Exhalation valve for easier breathing and the reduction of heat and condensation build up.

STANDARD: EN149 2001 FFP2

UOM: 1 / Box of 10

SHIPS FROM STOCK

R02003**R01003****Optipro 1 Cupped Disposable Mask**

- Cupped, disposable, single use respirator with valve.
- Protects against fine, non-toxic dusts, fibres, fumes and mists.
- Offers a protection factor of 4 x APF / 4 x NPF.
- Adjustable nose clip to ensure a good seal.
- Twin head strap design.
- Valve reduces heat and humidity within the mask.
- Individually sealed in hygienic pack.

STANDARD: EN149 2001 FFP1

UOM: 1 / Box of 10.

SHIPS FROM STOCK

R01003**R02004****Optipro 2 Cupped Disposable Mask**

- Cupped, disposable, single use respirator with valve.
- Protects against fine, non-toxic dusts, fibres, fumes and mists.
- Offers a protection factor of 10 x APF / 12.5 x NPF.
- Adjustable nose clip to ensure a good seal.
- Twin head strap design.
- Valve reduces heat and humidity within the mask.
- Individually sealed in hygienic pack.

STANDARD: EN149 2001 FFP2

UOM: 1 / Box of 10.

SHIPS FROM STOCK

R02004



R03002

R03002

Optipro 3 Cupped Disposable Mask

- ▲ Cupped, disposable, single use respirator with valve.
- ▲ Protects against toxic dusts, light radioactive dust, bacteria and viruses.
- ▲ Offers assigned protection factor of 20 x APF / 50 x NPF.
- ▲ Adjustable nose clip to ensure a good seal.
- ▲ Twin head strap design.
- ▲ Valve reduces heat and humidity within the mask.
- ▲ Individually sealed in hygienic pack.

STANDARD: EN149 2001 FFP3

UOM: 1 / Box of 10.

SHIPS FROM STOCK

R01004



R01004

3M 8710 Cupped Dust Mask

- ▲ Cup shaped, disposable mask with Electret filter.
- ▲ Protects against fine dusts, oil and water based mists.
- ▲ Protection Factor of 4 x APF / 4 x NPF.
- ▲ Nose clip and twin strap design.
- ▲ Collapse resistant inner shell.

STANDARD: EN149 2001 FFP1

UOM: 1 / Box of 20.

SHIPS FROM STOCK

R01005



R01005

3M 9310 Foldable Dust Mask

- ▲ Convenient, foldable, disposable mask.
- ▲ Protects against fine dusts, oil and water based mists.
- ▲ Protection Factor of 4 x APF / 4 x NPF.
- ▲ Headband material that maintains a near constant tension reducing strap pressure and ensuring a secure fit.
- ▲ Individually packed.

STANDARD: EN149 2001 FFP1

UOM: 1 / Box of 20.

SHIPS FROM STOCK

R02005



R02005

3M 8822 Valved Mask

- ▲ Lightweight, effective, respiratory protection.
- ▲ Protects against fine dusts, oil and water based mists.
- ▲ Protection Factor of 10 x APF / 12.5 x NPF.
- ▲ Convex shape and 3M Cool Flow valve reduces heat build up.
- ▲ Foam nose seal and steel nose clip ensure a good face seal.

STANDARD: EN149 2001 FFP2

UOM: 1 / Box of 10.

SHIPS FROM STOCK

R02006**3M 9322 Valved Mask**

- Lightweight, effective, hygienic respiratory protection.
- Protects against fine dusts, oil and water based mists.
- Protection Factor of 10 x APF / 12.5 x NPF.
- 3M Cool Flow valve reduces heat build.
- Soft cover web for increased comfort and fit.

STANDARD: EN149 2001 FFP2

UOM: 1 / Box of 10.

SHIPS FROM STOCK

R02006

**R02007****3M 8825 Valved Mask**

- Comfortable, effective respiratory protection.
- Protects against fine dusts, water based and non-volatile mists, and metal fumes.
- Protection Factor of 10 x APF / 12.5 x NPF.
- 3M Cool Flow valve, soft sealing ring and adjustable buckle straps for comfortable fit.
- Large surface area provides maximum filtration but minimises the build-up of hot air.
- 4-point, adjustable straps and adjustable nose clip.

STANDARD: EN149 2001 FFP2D

UOM: 1 / Box of 5.

SHIPS FROM STOCK

R02007

**R03003****3M 8835 Valved Mask**

- Comfortable, effective respiratory protection.
- Protects against fine dusts, oil and water based mists, and metal fumes.
- Protection Factor of 20 x APF / 50 x NPF.
- 3M Cool Flow valve, soft sealing ring and adjustable buckle straps for a comfortable fit.
- Large surface area provides maximum filtration but minimises the build-up of hot air.
- 4-point, adjustable straps and adjustable nose clip.

STANDARD: EN149 2001 FFP3D

UOM: 1 / Box of 5.

SHIPS FROM STOCK

R03003



DISPOSABLE & REUSEABLE RESPIRATORS

SALES HOTLINE
1850 303 304



R03004

R03004**3M 9332 Foldable Valved Mask**

- ▲ Foldable valved mask.
- ▲ Protects against fine dusts, oil and water based mists.
- ▲ Protection Factor of 20 x APF / 50 x NPF.
- ▲ 3M Cool Flow valve reduces heat build up.
- ▲ Headband material maintains a near constant tension reducing strap pressure and ensuring a secure fit.
- ▲ Individually packed.

STANDARD: EN149 2001 FFP3

UOM: 1 / Box of 10.

SHIPS FROM STOCK



R02009

R02009**Triosyn Disposable Mask**

- ▲ Consistent and exceptional performance against airborne diseases and viral threats.
- ▲ Antimicrobial protection maintains the integrity of the filtration media and prevents microbial migration and strikethrough over an extended period of time.
- ▲ Protects during an 8-hour shift.
- ▲ Fluid-resistant to protect against splashes and sprays of blood and other bodily fluids as well as wet environmental contaminants.
- ▲ Activated carbon layer for relief from organic vapours and nuisance odours.
- ▲ Adjustable head straps and adjustable nose piece for a secure, comfortable fit.
- ▲ Cup-shaped design with full surround cushioned gasket allows for tighter fit with reduced potential for air leakage.
- ▲ One-way exhalation valve reduces breathing resistance during strenuous activity.
- ▲ Guaranteed performance for 5 years from date of manufacture.
- ▲ Hermetically-sealed individual packages.

STANDARD: EN149 2001 FFP3



R02008

R02008**3M 9925 Welding Mask**

- ▲ Specifically designed for welding applications.
- ▲ Protects against fine dusts, oil and water based mists, metal fumes and ozone.
- ▲ Assigned Protection Factor of 10 x APF / 12.5 x NPF.
- ▲ Efficient particulate filter resists clogging for extended use against welding fume.
- ▲ Activated carbon layer filters out ozone generated by MIG, TIG and ARC welding operations.
- ▲ 3 panel flat fold design for easy storage.
- ▲ 3M Cool Flow valve reduces heat and moisture build up.

STANDARD: EN149 2001 FFP2

UOM: 1 / Box of 10.

SHIPS FROM STOCK

R04004**3M 4279 Half Mask**

- Lightweight, maintenance free, reusable half mask.
- Protects against fine dusts, oil and water based mists, organic gases or vapours with good warning properties and boiling point above 65°C, inorganic gases, acid gases and ammonia.
- Protection factor 10 x APF / 12.5 x NPF (gases and vapours), 20 x APF / 50 x NPF (particulates).
- 2 large bonded filters for low breathing resistance.
- Low resistance valve to reduce heat build up.
- Soft, non-allergenic face piece material.
- Cradle head harness and neck strap.

STANDARD: EN405 2002

UOM: 1 / Box of 10.

**R04004****R04005****3M 4277 Half Mask**

- Reusable half mask, protects against fine dusts, oil and water based mists, organic gases or vapours with good warning properties and boiling point above 65°C, inorganic gases and acid gases.
- Protection factor 10 x APF / 12.5 x NPF (gases and vapours), 20 x APF / 50 x NPF (particulates).
- Twin inhalation valves to reduce breathing resistance.
- Bonded carbon filters allows the gas/vapour filter to be moulded around the face to improve vision and balance.
- Low resistance valve to reduce heat build up.

STANDARD: EN405 2002

UOM: 1

**R04005****R04006****3M 4251 Half Mask**

- Reusable half mask, protects against fine dusts, oil and water based mists, and organic vapours.
- Protection factor 20 x APF / 50 x NPF.
- Bonded carbon filters allows the gas/vapour filter to be moulded around the face to improve vision and balance.
- Low resistance valve to reduce heat build up.

STANDARD: EN405 2002

UOM: 1

**R04006****R04001****Scott Profile² Half Mask**

- Advanced twin filter mask that combines comfort and protection with low breathing resistance.
- Accepts Scott Pro2 gas, particulate and combined filters to provide protection in a wide variety of applications.
- Protection factor 20 x APF / 50 x NPF (particulates) 10 x APF / 50 x NPF (gas / vapours).
- Filters supplied separately.
- Large diameter valves create low breathing resistance.
- Soft TPE face piece provides flexibility and comfort.
- Head harness and neck buckle provide even weight distribution.
- Latex and silicone free.
- Low profile and swept back filters provide unobstructed field of vision and compatibility with other PPE.
- Spark, splash and contaminant guards for filters and exhalation valve.
- Choice of 3 sizes.

STANDARD: EN140, EN14387, EN143

SIZES: S, M/L, L.

SHIPS FROM STOCK IN SIZES S, M/L.

R04001

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R04002

R04002

Scott Profile 60 Silicone Half Mask

- Twin filter half mask that accepts Scott Pro² gas, particulate and combined filters to provide protection in a wide variety of applications.
- Protection factor 20 x APF / 50 x NPF (particulates) 10 x APF / 50 x NPF (gas / vapours).
- Soft TPE face piece provides flexibility and comfort.
- Head cradle and through-lock neck buckle.
- Low profile and swept back filters provide an unobstructed field of vision and compatibility with other PPE.
- Easy-fit, bayonet filter mechanism.
- Spark, splash and contaminant guards for filters and exhalve valve.
- Twin bellows face piece design prevents head movement from affecting the integrity of the seal.
- Choice of 2 sizes.

STANDARD: EN140

SIZES: S/M, M/L



R04003

R04003

3M 7500 Series Half Mask

- Durable, half face, air purifying, reusable respirator.
- Protection factor with P3 dust filter of 20 x APF / 50 x NPF.
- Advanced silicone material provides a softer feel on the face.
- 3M Cool valve provides easy breathing while reducing heat and moisture build up.
- Unique adjustment design helps reduce tension and pressure points on the face.
- Head harness and yoke design provide increased stability making the mask easy to wear with PPE such as welding and grinding shields.
- Utilises all existing 3M 2000, 5000 and 6000 series filter and cartridges.
- Extremely pliable face seal to improve fit.
- Available in Small, Medium, Large.

STANDARD: EN140

SHIPS FROM STOCK



R05001

R05001

Scott Sari NR Full Face Mask

- Reliable, full face mask.
- Wide sealing edge for comfort and excellent fit.
- Adjustable, five-point head harness.
- Large, distortion free visor.
- Anatomic chin cup.
- Speech diaphragm for communication.
- Can be used with Pro 2000 filters, and with Scott Autoflow and Proflow PAPR powered units as well as with a constant flow compressed airline.
- Offers a nominal protection factor of 1000 x OEL with particle filters and 2000 x OEL with gas filters.

R05002 / R05003**Scott Promask Full Face Mask**

- ▲ New generation full face, single filter respirator.
- ▲ Low profile, wide visor for broad field of vision.
- ▲ Wide T-bar sealing edge for universal, comfortable adjustment with minimum pressure on the face.
- ▲ Constructed from Procomp® - a durable, highly chemical resistant elastomer (R05002) or from silicone (R05003).
- ▲ Side fitting thread for filters or air supply hose affords minimal inconvenience in normal wear.
- ▲ Highly efficient speech diaphragm for communication.
- ▲ Simple to maintain with colour coded valves to facilitate checking and replacement of vital components.
- ▲ Offers nominal protection factor of 1000 x OEL with particle filters and 2000 x OEL with gas filters.
- ▲ Suitable for CBRN applications.

STANDARD: EN136 Class 3

COLOURS: Black (Procomp) Yellow (Silicone)

SIZES: S, M-L

SHIPS FROM STOCK IN PROCOMP® IN M-L

**R05002****R05003****R05004****Scott Vision Full Face Mask**

- ▲ Lightweight (600g), high performance, negative pressure full face mask.
- ▲ Unique visor design affords almost totally unrestricted (98%), optically perfect vision.
- ▲ Moulded in polycarbonate the visor provides eye and face protection and is hard coated to offer solvent and scratch resistance for a long service life.
- ▲ Liquid silicone rubber face seal remains soft against the skin and is highly flexible.
- ▲ 5-point, adjustable harness and anatomic face seal design for excellent fit.
- ▲ Front thread (40mm) filter fitting.
- ▲ Accepts Scott Pro 2000 range of canister filters.
- ▲ Available in 3 sizes.

STANDARD: EN136 Class 3.

SIZES: S, M, M/L

**R05004****R05005****3M 7907S Full Face Mask**

- ▲ Comfortable, reliable, durable protection for more aggressive applications.
- ▲ Soft, hypo-allergenic face piece.
- ▲ Double face-sealing gasket and 6 strap harness for comfortable, secure fit.
- ▲ Textured face seal for a comfortable fit.
- ▲ Easy to use 3M bayonet fitting system.

STANDARD: EN136 Class 2

UOM: 1

**R05005**

SALES HOTLINE
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R07001



R07001

Scott P3 Pro² Filter

- Designed for use with Scott's Profile2 and Profile 60 half masks and the Promask2 full face mask.
- Provides protection against solid and liquid hazardous and radioactive particles and micro organisms (e.g. bacteria and viruses).
- Safety bayonet locking mechanism and unique protective covers with recessed inlet grilles for protection from splashes, sparks and contaminants.
- Inlet grilles are positioned to the rear for balance and an unobstructed field of vision.

STANDARD: EN143

UOM: Pair

SHIPS FROM STOCK

R07002



R07002

Scott ABE1P3 Pro² Filter

- Designed for use with Scott's Profile2 and Profile 60 half masks and the Promask2 full face mask.
- Provides protection against organic, inorganic and acid gases, vapours and solid and liquid hazardous particles.
- Safety bayonet locking mechanism and unique protective covers with recessed inlet grilles for protection from splashes, sparks and contaminants.
- Inlet grilles are positioned to the rear for balance and an unobstructed field of vision.

STANDARD: EN14387

UOM: Pair

R07003



R07003

Scott ABEK1P3 Pro² Filter

- Designed for use with Scott's Profile2 and Profile 60 half masks and the Promask2 full face mask.
- Provides protection against organic, inorganic and acid gases, vapours, ammonia, and solid and liquid hazardous particles.
- Safety bayonet locking mechanism and protective covers with recessed inlet grilles for protection from splashes, sparks and contaminants.
- Inlet grilles are positioned to the rear for good balance and an unobstructed field of vision.

STANDARD: EN14387

UOM: Pair

SHIPS FROM STOCK

R07004



R07004

3M ABE1 Filter

- Provides protection against organic vapours and acid gases.
- Suitable for use with 3M 7500 series respirators and 79075 full face mask.

STANDARD: EN141

UOM: Pair

SHIPS FROM STOCK

R07005**3M ABEK1 Filter**

- Provides protection against organic and inorganic vapours, acid gases and ammonia.
- If particulate protection is also required, select an appropriate 5000 series filter and use a 501 retainer to clamp together.
- For use in concentrations of organic and inorganic vapours, acid gases and ammonia up to 10 x APF or 1000 ppm (whichever is the lower) when fitted to a 3M half mask or up to 20 x APF or 1000 ppm (whichever is the lower) when fitted to a 3M full face mask.
- Suitable for use with 3M 7500 series respirator and 79075 full face mask.

STANDARD: EN141

UOM: Pair

R07005**R07006****3M 2135 Particulate Filter**

- Provides particulate protection only.
- For use in concentrations of particulates up to 20 x APF when fitted to a 3M half mask or up to 40 x APF when fitted to a 3M full face mask.
- Suitable for use with 3M 7500 series respirator and 79075 full face mask.

STANDARD: EN143

UOM: Pair

SHIPS FROM STOCK

R07006**R07007****3M 5935 P3 Particulate Filter Cartridges**

- Particulate pre-filter cartridges used for particulate protection.
- For use in concentrations of particles up to 20 x APF when fitted to a 3M half mask or up to 40 x APF when fitted to a 3M full face mask.
- Suitable for use with 3M ABEI filter and 3M ABEK1 filter.
- 3M 501 retainer covers are required.

STANDARD: EN143

UOM: 1 / Box of 20

SHIPS FROM STOCK

R07007**R07008****R07008****3M 501 Filter Retainer**

- Designed to attach particulate pre-filter for 3M respirators.
- Retainer ring snaps onto 3M 5000, 6000 and 7500 series respirators with bayonet cartridges.

UOM: 1 / Box of 20

SHIPS FROM STOCK



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R07009

R07009

Scott P3 Pro 2000 Filter

- Particle filter for Sari, Promask and Vision full face masks and Scott powered respirators.
- Offers protection against solid and liquid particles, radioactive and toxic particles, plus micro organisms (e.g. bacteria and viruses).
- Compatible with all full face masks that accept a standard 40mm filter fitting.

STANDARD: EN143 P3

UOM: 1 / Box of 20

SHIPS FROM STOCK



R07010

R07010

Scott AX Pro 2000 Filter

- Single shift filter for Sari, Promask and Vision full face masks and Scott powered respirators.
- Offers protection against organic gases and vapours (with boiling point < 65°C).
- Compatible with Scott Proflow and Scott full face masks and with all full face masks that accept a standard 40mm filter fitting.

STANDARD: EN14387

UOM: 1 / Box of 20

SHIPS FROM STOCK



R07011

R07011

Scott AXP3 Pro 2000 Filter

- Single shift filter for Sari, Promask and Vision full face masks and Scott powered respirators.
- Offers protection against organic gases and vapours (with boiling point < 65°C), solid and liquid particles, radioactive and toxic particles and micro organisms (e.g. bacteria and viruses).
- Compatible with Scott Proflow and Scott full face masks and with all full face masks that accept a standard 40mm filter fitting.

STANDARD: EN143

UOM: 1 / Box of 20

SHIPS FROM STOCK



R07012

R07012

Scott A2B2E2K2P3 Filter

- Combined filter for Sari, Promask and Vision full face masks and Scott powered respirators.
- Offers protection against organic gases and vapours (with boiling point > 65°C), inorganic and acid gases and vapours, ammonia and organic ammonia derivatives, solid and liquid particles, radioactive and toxic particles, and micro organisms (e.g. bacteria and viruses).
- Compatible with Scott Proflow and Scott full face masks and with all full face masks that accept a standard 40mm filter fitting.

STANDARD: EN14387

UOM: 1 / Box of 20

SHIPS FROM STOCK

R07013**3M AXP3 Filter**

- Single shift filter for use with 3M 7000 series full face masks - including 7907S.
- Offers combined gas/vapour with boiling point < 65°C and particulate protection.

STANDARD: EN141

UOM: Pair

**R07013****R07017****Protector A2B2E2K2HgPSL Filter**

- Provides protection from organic gases and vapours with a boiling point >65°C, inorganic gases and vapours (e.g. chlorine and hydrogen sulphide), acid gases (including sulphur dioxide and hydrogen chloride), ammonia and organic ammonia derivatives, mercury and solid and liquid particulates (dusts, fibres, mists, fumes), as well as bacteria and viruses.
- For use with Protector Tornado system (R06003).

STANDARD: EN12941/2

R07017**R07018****Protector A1B1E1P3 Filter**

- Provides protection from organic gases and vapours with a boiling point >65°C, inorganic gases and vapours (e.g. chlorine and hydrogen sulphide), acid gases (including sulphur dioxide and hydrogen chloride), and solid and liquid particulates (dusts, fibres, mists, fumes).
- For use with Protector Tornado system (R06003).

STANDARD: EN12941/2

SHIPS FROM STOCK

**R07018****R06001 / R06002****Scott Proflow Powered Air Respirator**

- Available in SC (R06001) and EX (R06002) versions.
- Lightweight and compact with an ergonomic design that incorporates a curved back plate for user comfort.
- Reliable and robust with a 3 year / 1800 hour blower warranty.
- Electronic control of the air supply maintains a comfortable airflow, automatically compensating for changes in filter resistance.
- On board data logging records usage to provide reliable and downloadable maintenance information.
- Comprehensive alarm system for safety.
- Continuous visible monitor of battery status and filter blockage with audible warning of need to recharge battery / replace filters.
- Typical 7-15 hours use from a single charge (depending on filter and face piece combination).
- Lightweight NiMH battery with fast recharge.
- Smart charger indicates charging status and reverts to trickle charge, allowing a fully charged battery to remain plugged-in on standby.
- Shielded on/off button eliminates the risk of accidental shut-off.
- Extensive range of headtops and filters to meet a wide range of applications.

STANDARD: EN12941, EN12942 (TH1/TH2/TH3/TM3).

SHIPS FROM STOCK

**R06001****R06002**

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R06003**R06003**

Protector Tornado System

- ▲ Modular, versatile, powered air purifying respiratory protection system.
- ▲ Intrinsically safe.
- ▲ Comprehensive range of optional headtops.
- ▲ Lightweight, waist mounted, and compact.
- ▲ Simple to configure for changes in application using Tor/Adapt filter holders.
- ▲ Extensive range of filters available for a wide range of applications.
- ▲ Electronic flow control maintains the correct airflow as the working environment changes.
- ▲ Clear audible and visual warnings of filter clogging and low battery charge.
- ▲ Instantly recognises headtop type, monitors and optimises airflow accordingly.
- ▲ Battery and battery charger supplied separately.
- ▲ Reliable with low through life costs.
- ▲ Spares and accessories include:
 - NiMh 8 hour intrinsically safe battery (R06004)
 - Smart charger (R06005)
 - Filter adapters, pair (R06009)
 - Tornado holdall (R06006)
- ▲ Compatible with Protector ABEK2HgPSL Filter (R07017) and ABEP3 filter (R07018)

STANDARD: EN12941/2

SHIPS FROM STOCK

R05009 / R05029**R05009 / R05029**

Scott Procap Headtop

- ▲ For use with the Scott Proflow powered air respirator (R05009) or Scott Tornado System (R05029).
- ▲ Combines respiratory, head, eye, face and optional hearing protection.
- ▲ Sturdy, heat-resistant, polyamide shell.
- ▲ Adjustable head harness.
- ▲ Comfortable face seal.
- ▲ Parallel-rail guided visor frame.
- ▲ Choice of visors for protection against impact, glare, heat and infrared radiation.
- ▲ The breathing hose is swivel-jointed to provide freedom of movement.

STANDARD: EN12941 TH2, EN397, EN166/169, EN352-3

R05010**R05010**

Scott Automask Headtop

- ▲ For use with the Scott Proflow powered air respirator.
- ▲ Lightweight, comfortable, multi-purpose face shield.
- ▲ Durable, polyethylene frame.
- ▲ Anti-mist, acetate visor.
- ▲ Replaceable, washable foam face seal.

STANDARD: EN12941 TH2

SHIPS FROM STOCK

R05011 / R05030**Scott Flowhood 5
/ T-5 Headtop**

- For use with the Scott Proflow powered air respirator (R05011) or Tornado System (R05030).
- Combines respiratory, head and face protection.
- Lightweight, well-balanced ABS helmet.
- Choice of polycarbonate or acetate visor with PU-coated nylon face seal.

STANDARD: EN12941 TH2, EN397, EN166 1B9

R05011 / R05030

**R05012 / R05025****Scott Flowhood 3
/ T-3 Headtop**

- For use with the Scott Proflow powered air respirator (R05012) or Tornado System (R05025).
- Combines respiratory with face protection.
- Lightweight with broad face seal.
- Replaceable, flip-up visor (polycarbonate or acetate).

STANDARD: EN12941 TH2

R05012 / R05025

**R05013 / R05023****Scott Flowhood 1
/ T1 Headtop**

- For use with the Scott Proflow powered air respirator. (R05013) or Tornado System (R05023).
- Ultra-lightweight semi-hood for applications where impact protection is not required.
- Manufactured from durable PU-coated nylon material.
- Flexible, acetate visor.
- Choice of 2 sizes.

STANDARD: EN12941 TH2

SIZES: S-M, M-L

R05013 / R05023

**R05014****Scott Provizor Headtop**

- For use with the Scott Proflow powered air respirator.
- Combines respiratory with face protection.
- Lightweight face shield with silicone seal.
- Replaceable, anti-mist, acetate visor is impact resistant to class 3-B.
- Silicone headband.
- Hose with angled connector available.

STANDARD: EN12941 TH2, EN166 1B9

SHIPS FROM STOCK

R05014



SALES HOTLINE
1850 303 304



R05015 / R05026

R05015 / R05026**Scott Flowhood 25 /
T25 Headtop**

- For use with the Scott Proflow powered air respirator (R05015) or Tornado System (R05026).
- For the most demanding, high risk environments - provides the highest level of PAPR protection.
- Hypalon hood provides chemical splash resistance.
- Utilises proven Protector safety helmet with ratchet system.

STANDARD: EN12941 TH3, EN397, EN166 1B9



R05016 / R05017

R05016**Scott Flowhood 25/CS
Headtop**

- For use with the Scott Proflow powered air respirator.
- For the most demanding, high risk environments - provides the highest level of PAPR protection.
- Bonded Butyl-Viton hood for increased chemical splash resistance.
- Protector safety helmet with ratchet system.

STANDARD: EN12941 TH3, EN397, EN166 1B9

R05017**Scott Flowhood 25/AS
Headtop**

- Anti-static hood for use with the Scott Proflow powered air respirator.
- For the most demanding, high risk environments - provides the highest level of PAPR protection.
- Hypalon hood provides chemical splash resistance.
- Protector safety helmet with ratchet system.

STANDARD: EN12941 TH3, EN397, EN166 1B9



R05018 / R05024

R05018 / R05024**Scott Flowhood 2
/ T2 Headtop**

- For use with the Scott Proflow powered air respirator (R05018) or Tornado System (R05024).
- Lightweight, durable full hood manufactured from PU coated nylon - providing the highest level of PAPR protection.
- Flexible acetate visor.
- Simple, drawstring neck seal.

STANDARD: EN12941 TH3.

R05019 / R05034**Scott Flowhood 2/AS
/ T-2/AS Headtop**

- Antistatic hood for use with the Scott Proflow powered air respirator (R05019) or Tornado System (R05034).
- Lightweight, durable full hood with anti-static, polyurethane coating - providing the highest level of PAPR protection.
- Taped seams prevent liquid ingress.
- Flexible acetate visor.
- Simple, drawstring neck seal.

STANDARD: EN12941 TH3.

SHIPS FROM STOCK

R05019 / R05034**R05020****Scott Flowhood 2/SU
Headtop**

- Disposable / single-use hood for use with the Scott Proflow powered air respirator.
- White, non woven material.
- Lightweight, full hood providing the highest level of PAPR protection.
- Flexible acetate visor.

STANDARD: EN12941 TH3.

R05020**R05022****Scott Automask Litehood
Headtop**

- For use with the Scott Proflow powered air respirator.
- Lightweight, comfortable, multi-purpose face shield with PVC hood.
- Durable, polyethylene frame and anti-mist, acetate visor.
- Washable, foam face seal.
- Offers full head and neck cover and facial impact protection.
- Provides the highest level of PAPR protection.

STANDARD: EN12941 TH3

SHIPS FROM STOCK

R05022**R05027****Scott T-4 Headtop**

- Suitable for use with Protector Tornado system.
- Designed for welding and accommodates a range of welding visors.
- Directional airflow and broad face seal.
- Smooth action, flip-up visor.
- Full range of accessories.
- Choice of passive or electronic lenses (supplied separately).

STANDARD: EN12941 TH2, EN175

R05027

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R05028

**R05028**

Protector Procap Weld Headtop

- ▲ Suitable for use with Protector Tornado system.
- ▲ Rugged construction for demanding environments.
- ▲ Flip front or fully retractable welding shield with secondary impact visor.
- ▲ Efficient weight distribution for optimum fit.
- ▲ Optional ear-defenders.
- ▲ Choice of passive or electronic lenses (supplied separately).

STANDARD: EN12941 TH2, EN397, EN175

R05031

Protector T-7-Vision Full Face Mask

- ▲ Suitable for use with Protector Tornado system.
- ▲ Full face mask providing the highest levels of respiratory protection.
- ▲ Comfortable, silicone face seal.
- ▲ 98% field of vision.
- ▲ Scratch and solvent resistant visor.
- ▲ Provides impact protection allowing use in environments where both respiratory and face protection is required.
- ▲ High efficiency speech diaphragm.

STANDARD: EN12942 TM3.

SIZES: S, M, M/L

R05031

**R05032**

Protector T-8 Half Mask

- ▲ Suitable for use with Protector Tornado system.
- ▲ Designed for use with existing PPE (welding shields, ear defenders, helmets, goggles).
- ▲ Comfortable, soft silicone face piece.
- ▲ Unobtrusive side hose fitting.
- ▲ Choice of 2 sizes.

STANDARD: EN12942 TM3.

SIZES: S/M, M/L

R05032



R05033**Protector T-9 Headtop**

- Suitable for use with Protector Tornado system.
- Polyurethane material provides high resistance to a wide range of chemicals.
- Non-restrictive field of vision.
- Provides highest protection factor.

STANDARD: EN12941 TH3.

R05033**R06007****3M Jupiter Turbo Unit**

- Low profile, modular powered air turbo for use with 22 different 3M headtops that feature the unique quick release swivel connection system.
- Choice of 5 filter types (plus prefilter option) with unique half-turn attachment.
- Choice of 4 hour or 8 hour NiMH batteries.
- Intelligent charger.
- Padded comfort belt.
- Electronic flow control giving known safe level of clean air.
- Visual and audible alarm in case of low battery and/or low flow.
- Filter cover prevents dust or sparks entering the filter body and allows shower decontamination.
- Entire turbo comprises only 3 replaceable modules.
- Optimum performance maintained via simple motor calibration for an extended product life without time consuming maintenance.
- Spares and accessories for the Jupiter include:
 - 8 hour NiMH battery.
 - Jupiter battery charger.
 - 10 station battery charger.
- Compatible with 3M 100 series headtops; 3M Speedglas 9000 Headtop; 3M 701 Headtop; 3M 400 series Headtops.

STANDARD: EN12941

R06007**R06008****3M Dustmaster Turbo Unit**

- Belt-mounted turbo unit with enclosed motor fan.
- 8-hour battery and long-life filter.
- Provides protection against airborne particulates, nuisance odours and welding fumes.
- Charging socket - no need to remove battery for charging.
- Low cost protection and productivity benefits.
- Compatible with 3M Speedglas Headtop; 3M 701 Headtop; 3M 400 Series Headtops.

STANDARD: EN146

R06008

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R05035 (HT-101)

R05036 (HT-120)



R05037 (HT-152)



R05038 (HT-401)

R05039 (HT-402)



R05040



R05035 / R05036 / R05037

3M 100 Series Headtops

- Offers lung and head cover protection when connected to a powered or airfed belt unit.
- HT-101 is an exceptionally lightweight, disposable headtop offering maximum protection over long periods and an APF of 20 / 50 x NPF. Ideal for laboratories, pharmaceutical industries or sanding where lung protection and light head cover is required or anywhere users risk allergic sensitisation while working with animals.
- HT-120 lightweight headtop offers head, face and shoulder coverage making it suitable for pharmaceutical and agricultural applications. Offers an APF of 20 / 50 x NPF.
- HT-152 is a durable, reusable, clear hood with excellent field of vision which provides APF of 40 / 500 x NPF.
- For use with 3M Jupiter (R06007) and Dustmaster (R06008) units.

STANDARD: EN12941 TH2 (HT-101 & HT-120); EN12941 TH3 (HT-152).

SIZES: XS - XXXL

R05038 / R05039

3M 400 Series Headtops

- Offers lung and face/eye protection when connected to a powered or airfed belt unit.
- Lightweight headtops with clear all-round vision making them ideal for applications such as grinding, sanding, woodworking and work with glass fibre.
- Offer an APF of 20 / 50 x NPF.
- Features one piece head and face seal and a unique angled airduct which circulates air directly around the inside of the visor to aid demisting.
- HT-401 has an acetate visor providing protection against low energy impact and chemical splash.
- HT-402 has a polycarbonate visor providing protection against medium energy impact, chemical splash and molten metal.
- For use with 3M Jupiter (R06007) and Dustmaster (R06008) units.

STANDARD: EN166 2:F 3 (HT-401); EN166 2: B 3 9 (HT-402).

R05040

3M 701 Headtop

- Offers respiratory and head/eye protection when connected to a powered or airfed belt unit.
- Utilises "airstream" helmet shell for impact and respiratory protection in a single robust unit.
- Ideal for use in rugged conditions such as heavy industrial engineering, foundries, quarrying, construction and demolition.
- Offers an APF of 20 / 50 x NPF.
- For use with 3M Jupiter (R06007) and Dustmaster (R06008) units.

STANDARD: EN397, EN166 2:B 3, EN12941 (with Jupiter), EN146 (with Dustmaster)

R05041**3M Speedglas 9000
Welding Headtop**

- For use with 3M Jupiter and 3M Dustmaster respiratory systems.
- Provides face, eye and respiratory protection for increased comfort and safety in welding.
- Shield features shade 5 side windows.
- Includes shield and hose.
- Features 4 aerodynamic exhaust vents to remove exhaled air without letting in welding fumes.
- Close-to-face fit for optimum vision and reduced neck strain.
- Narrow width ideal for welding in tight spots.
- For use with 3M Jupiter (R06007) and Dustmaster (R06008) units.

STANDARD: EN12941 TH2 (with Jupiter);
EN12941 TH1 (with Dustmaster).

**R05041****R08002 / R08003****Scott AFU 600 / AFU 300
Airline Filtration Unit**

- Compressed airline filtration unit designed to offer an economical means of ensuring compressed air conforms to breathing quality requirements.
- AFU600 (R08002) is designed to supply at least 2 BA wearers.
- AFU300 (R08003) designed to supply a single BA wearer.
- Constituent parts:
 - Air supply.
 - Filter box.
 - Connecting hose from air to belt unit / with optional regulators.
 - Mask / facepiece / hood.
- AFU600 can filter in excess of 600 l/min air at inlet pressures over 4 bar.
- AFU300 can filter in excess of 300 l/min air at inlet pressures over 4 bar.
- Recommended temperature range 0-40°C.
- Effective two stage filtration of particulates including dust and oil droplets.
- Charcoal element for removal of organic vapours.
- Not suitable where there may be Carbon monoxide or Carbon dioxide in the air supply.
- Includes lightweight, robust carry frame, easily detachable for wall mounting.
- Pop-up indicator to warn of prefilter clogging.
- Autodrain to prevent build-up of oil.
- Easy filter element replacement without tools.

STANDARD: EN12012

SHIPS FROM STOCK (AFU600)

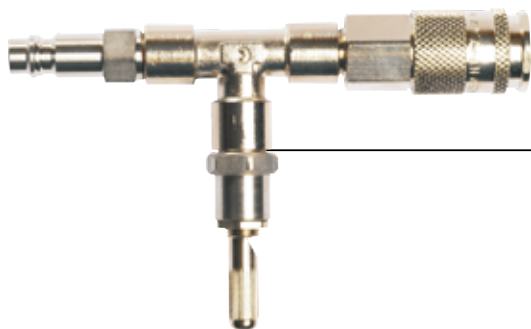
R08003**R08002****R08004****Scott Airline Supply Hose**

- Airline supply hose.
- CEN couplings
- Available in 10 and 20 metre lengths.

STANDARD: EN139.1

SHIPS FROM STOCK IN 10M

R08004



R08005

R08005

Scott Warning Whistle

- Medium pressure, inline warning whistle.
- CEN couplings.
- When placed in the airline system between the breathing hose and the user this device provides a safe, clear warning should the airline pressure drop below 4 bar.

R08008

Scott Kesaf Compressed Airline Connector

- Compressed airline, (for use with Scott Saviour Promask full face masks), equipped with a thread connector and a breathing tube to the belt mounted air regulator.
- For use with Scott AFU600 / AFU300 airline filtration unit.
- Ideal protection when contaminants are hazardous to the face and eyes and when a high protection factor is needed.
- Offers excellent protection against gases, vapours, dust, mists, particulates and fumes including isocyanates when part of an airline system.
- Constant flow from 120 l/min to 300 l/min offers a highly reliable supply of breathable air.
- Shown here with Sari full face mask.

STANDARD: EN139, EN136

SHIPS FROM STOCK



R08009



R08008

R08009

Scott Flow Control Value

- Compressed airline continuous flow device.
- Facilitates connection to the compressed air supply via the compressed air hose.
- Flow control valve with waist belt allows the user to regulate the airflow between 120 l/min to 300 l/min to ensure optimum comfort.
- Designed to work in conjunction with various Scott face and head pieces.

STANDARD: EN139

SHIPS FROM STOCK

R05007



R05007

Scott Silair Compressed Airline Half Face

- Continuous flow, compressed airline half mask.
- Includes a lightweight, comfortable half mask which is connected by breathing tube to the flow control valve.
- Airflow is controlled by a belt mounted regulator.
- The compact face piece means that the Silair can be worn with eye protection (e.g. a welding shield).
- Secure, adjustable head harness.
- Made from high quality silicone and resistant to chemicals, demanding climates and temperature conditions.
- Constant flow from 120 l/min to 300 l/min offers a highly reliable supply of breathable air.
- Compatible with Scott Flow Control Valve (R08009).

STANDARD: EN139, EN140

SHIPS FROM STOCK

R05008**Scott Automask Litehood CA**

- Compressed air hood, equipped with flow meter.
- Lightweight, multi-purpose face shield with PVC hood.
- Full head and neck cover and impact protection.
- Hollow polyethylene frame channels the airflow to the breathing zone.
- Replaceable and washable foam seal.

STANDARD: EN139, EN140

R08006**Bullard CC20E Airline Respirator System**

- Constant flow airline respirator system suitable for spray painting, chemical handling, and pharmaceutical manufacturing applications.
- Includes lightweight and comfortable Tychem® QC hood with inner bib that covers the entire head, face and neck to provide splash / overspray protection.
- Patented neck cuff design helps maintain positive pressure inside the hood to keep contaminants out.
- As air enters the hood, the inner collar inflates providing a snug, comfortable fit around the neck and continuous flow of air to the wearer's breathing zone.
- Visor provides a wide field of vision.
- Easy to clean and maintain.
- Does not require fit testing nor extensive record keeping.
- Easily accommodates beards, prescription eyewear or safety glasses.
- Includes 4-point, self-sizing headband suspension with replaceable brow pad, 2 vertical adjustment positions in front and rear and goggle strap retaining slots.
- System includes V39E breathing tube assembly with 6mm industrial interchange nipple (with threaded hose connector) and nylon belt.

STANDARD: EN270

SHIPS FROM STOCK

R11001**Bullard Tychem® QC Hood**

- Lightweight and comfortable Tychem® QC hood with inner bib that covers the entire head, face and neck to provide splash / overspray protection.
- For use with Bullard CC20E airline respirator system.
- Durable enough to reuse yet economical enough to discard.
- Patented neck cuff design helps maintain positive pressure inside the hood to keep contaminants out.
- As air enters the hood, the inner collar inflates providing a snug, comfortable fit around the neck and continuous flow of air to the wearer's breathing zone.
- Visor provides a wide field of vision.
- Easy to clean and maintain.
- Does not require fit testing nor extensive record keeping.
- Easily accommodates beards, prescription eyewear or safety glasses.
- Breathing tube assembly not included.
- Suspension harness not included.

STANDARD: EN270

UOM: Pack of 10

SHIPS FROM STOCK

R05008**R08006****R11001**

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R08007



R08007

Bullard Airline Respirator System with Hard Hat

- Constant flow airline respirator system with hard hat suitable for spray painting, chemical handling, and pharmaceutical manufacturing applications.
- Includes lightweight and comfortable Tychem® QC hood with inner bib that covers the entire head, face and neck to provide splash / overspray protection.
- Patented neck cuff design helps maintain positive pressure inside the hood to keep contaminants out.
- As air enters the hood, the inner collar inflates providing a snug, comfortable fit around the neck and continuous flow of air to the wearer's breathing zone.
- Visor provides a wide field of vision.
- Does not require fit testing nor extensive record keeping. It easily accommodates beards, prescription eyewear or safety glasses.
- Easy to clean and maintain.
- System includes V39E breathing tube assembly with 6mm industrial interchange nipple (with a threaded hose connector) and nylon belt.

STANDARD: EN270

R11002

Bullard Tychem® QC Hood (Hard Hat)

- Lightweight and comfortable Tychem® QC hood with inner bib that covers the entire head, face and neck to provide splash / overspray protection.
- For use with Bullard airline respirator system with hard hat (R04012).
- Durable enough to reuse yet economical enough to discard.
- Patented neck cuff design helps maintain positive pressure inside the hood to keep contaminants out.
- As air enters the hood, the inner collar inflates providing a snug, comfortable fit around the neck and continuous flow of air to the wearer's breathing zone.
- Visor provides a wide field of vision.
- Easy to clean and maintain.
- Does not require fit testing nor extensive record keeping.
- Easily accommodates beards, prescription eyewear or safety glasses.
- Breathing tube assembly not included.
- Compatible with hard hat (sold separately).

STANDARD: EN270

UOM: Pack of 5

SHIPS FROM STOCK

R11002



R08001

Aero-Top Air Distribution Harness

- Suitable for use with the Kombi Mars suit.
- Incoming air distributed to head, hands and feet.
- Can be fitted with cooler, safety coupling, swivel or warning whistle.
- Adjustable head ventilation nozzles.
- Velcro fastening for wrists and ankles.
- Adjustable belt with quick fasteners.

STANDARD: EN1073-1 IL class 5

SIZES: S - XL.

C19002**Kombi Mars Suit**

- Light, ventilated, disposable suit worn with air distribution system (Aero-Top or Colt-Collar).
- Provides protection from hazardous substances (active substances, aggressive dusts, radioactive particles).
- Cold resistant.
- Integrated feet facilitate safety shoes to size 46.
- Integrated gloves
- Horizontal rear access zip.
- Integrated quick-nipple for connecting Aero-Top cooler exhaust air hose coupling.

STANDARD: EN1073-1 IL class 5

FABRIC: Suit - soft PVC film (0.15mm); Hood - transparent PVC film at front (0.30mm), white PVC film at rear (0.30mm); Gloves - vinyl (0.50mm)..

COLOURS: White

SIZES: S - XL.

C19002 / R08001**R11003****Corona Suit**

- Lightweight, robust, single use suit with integrated air distribution system.
- Air is distributed to the head, hands and feet.
- Airflow is set with a control valve.
- Offers optimal protection against radioactive contamination, health damaging dust or foul smelling vapours.
- Integrated, splash protected, hybrid valves.
- Integrated gloves and reinforced elbows.
- Integrated, elasticated feet.
- Safety tear strip in the hood.
- Noise level reduced via silencer.
- Inspection window on left side of the chest for Dosimeter.
- Connections for intercom system cables.
- Horizontal, rear access zip.

STANDARD: EN1073-1 IL class 5

FABRIC: Suit - soft EVA film (0.20mm); Hood - transparent PVC film at front (0.25mm) with white EVA film at rear.

COLOURS: White

SIZES: L - XL.

R11004**R11003****R11004****Overshoes**

- For use with either the Kombi Mars or Corona breathing air suits.
- 100% cotton upper with integrated elastic.
- Antislip, rubber sole.
- Washable at 95°C (boilfast).
- Can be provided in antistatic on request (EN1149)

FABRIC: 100% Cotton Upper; Natural-Synthetic Rubber Mix Sole.

COLOURS: White

(special order colours): Green, Blue, Red, Yellow

SIZES: 40 - 48. (36, 38, 50 special order).

R11004

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R09003 / R09004 / R09005

R09003

Semmco Head 6 Chemical Oxygen – Inspector Set

- ▲ Provides the wearer with up to 10 minutes of instant oxygen supply in a self contained hood.
- ▲ Suitable for light duty, inspection use in areas of smoke, toxic contamination and Oxygen deficiency.
- ▲ Quick and easy to don.
- ▲ Automatically activated when removed from packaging.
- ▲ Can be supplied in a carry case or wall mount case.
- ▲ The carry case version can be used in potentially explosive atmospheres.
- ▲ Built-in alarm.
- ▲ Exceptional head protection.
- ▲ Clear visor for excellent field of vision.
- ▲ Clear voice communication.
- ▲ Storage integrity indicator for constant visual awareness of the unit's condition.
- ▲ Storage system allows the unit to be stored, with no maintenance costs, for an initial 6 years, and a further 3 years following a satisfactory validation test. If the set is used it can be returned to Semmco for reworking.
- ▲ Nil through life service costs and no support equipment required.
- ▲ Training equipment and course available.

STANDARD: EN13794, DIN 58639, DIN 58652-1

SIZES: One Size

R09004

Semmco Head 10 Chemical Oxygen – Escape Set

- ▲ Lightweight, 10 minute, hooded chemical oxygen set offering the user a simple, effective and safe means of escape.
- ▲ Designed to provide maximum wearer protection against areas of smoke, toxic contamination and Oxygen deficiency.
- ▲ Quick and easy to don.
- ▲ Excellent face seal.
- ▲ Can be supplied in a carry case or wall mount case.
- ▲ The carry case version can be used in potentially explosive atmospheres.
- ▲ Built in, 2 stage audible and visual alarm.
- ▲ Internal cooling mechanism provides necessary cooling for the breathing circuit while diffusing the air supply and reducing the operational temperature.
- ▲ Exceptional head protection.
- ▲ Clear visor for excellent field of vision.
- ▲ Clear voice communication
- ▲ Storage integrity indicator for constant visual awareness of the unit's condition.
- ▲ Storage system allows the unit to be stored, with no maintenance costs, for an initial 6 years, and a further 3 years following a satisfactory validation test. If the set is used it can be returned to Semmco for reworking.
- ▲ Nil through life service costs and no support equipment required.
- ▲ Training equipment and course available.

STANDARD: EN13794, DIN 58639, DIN 58652-1

SIZES: One Size

R09005

Semmco Head 15 Chemical Oxygen – Working / Rescue Set

- ▲ Lightweight, 15 minute, hooded chemical oxygen set offering for working / rescue activities in areas of smoke, toxic contamination and Oxygen deficiency.
- ▲ Can be used in potentially explosive atmospheres.
- ▲ Quick and easy to don.
- ▲ Excellent face seal.
- ▲ Built in, 2 stage audible and visual alarm.
- ▲ Internal cooling mechanism provides necessary cooling for the breathing circuit while diffusing the air supply and reducing the operational temperature.
- ▲ Exceptional head protection.
- ▲ Clear visor for excellent field of vision.
- ▲ Clear voice communication.
- ▲ Storage integrity indicator for constant visual awareness of the unit's condition.
- ▲ Storage system allows the unit to be stored, with no maintenance costs, for an initial 6 years, and a further 3 years following a satisfactory validation test. If the set is used it can be returned to Semmco for reworking.
- ▲ Supplied in a carry case.
- ▲ Training equipment and course available.

STANDARD: EN13794, EN145, EN1146

SIZES: One Size

R09002**Avon EH20 Escape Hood**

- Compact, portable hood which can be quickly and easily donned in the event of a chemical hazard incident.
- In less than 30 seconds it provides protection for at least 20 minutes from principal airborne chemical and biological agents and also potential splashes.
- Clear, polyurethane hood gives a wide and clear field of vision and allows for instant identification of personnel in an incident.
- Twin, low profile filters are extremely thin and manufactured from the latest membrane technology for high efficiency particle removal to P3 level.
- The double outlet valve, combined with the silicone nose cup ensure breathing resistance and breathe-back of contaminants is reduced.
- Internal fogging and re-breathed Carbon Dioxide are also minimised.
- Silicone elastomer gives the nose cup flexibility and a high degree of comfort, ensuring an excellent fit for a wide range of face sizes.
- Compact and can be carried on a utility belt or in a briefcase.
- Usable with spectacles.
- Foil packed for 10 year shelf life.
- High protection factor.

STANDARD: EN401

SIZES: One Size

R09002**R09001****Scott ELSA Escape Set**

- Constant airflow escape set designed for rapid escape from hazardous industrial and marine environments.
- Automatic, quick-fire activation.
- Comfortable PVC coated, cubic hood can be detached for cleaning and replacement.
- Ozone resistant, elastomeric neck seal for easy donning and correct fit.
- Large visor area provides excellent peripheral vision.
- Inner mask prevents misting and minimises carbon dioxide dead-space.
- Available in standard hi-vis or black antistatic bag.
- Rechargeable aluminium cylinder with pressure gauge.
- Available in 10 or 15 minute versions with either standard or antistatic bag.

STANDARD: EN1146.

R09001

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RESPIRATORY PROTECTION ACCESSORIES

Mask Face Seal Cleaner	R11005
3M 106 Half Mask Carry Case	R11006
Scott 30545 Belt with Pouch	R11007
Scott Face Mask Storage Box	R11008
Scott Full Face Mask Shoulder / Belt Bag	R11009
Scott Sari Mask Visor Cover	R11010
Scott Promask Visor Cover	R11011
Scott Vision Mask Visor Cover	R11012
Scott Spectacle Inserts (Sari, Promask & Vision Masks)	R11013

R11014

TSI Portacount® Pro Fit Tester

- Computes respirator fit factor using microscopic particles in ambient air.
- Fast set-up and easy to use.
- Use with an external computer to generate reports and print fit test cards.
- Measures fit factors greater than 10,000.
- Standalone operation.
- Colour touch screen.
- Optional mask sampling adapters allow fit-testing with employee's own mask.
- Automates fit testing with FitPro™ fit test software.
- Easy to upgrade to model with built-in N95 technology.
- Optional card printer allows you to print employee fit test cards.
- Provided with carrying case, AC adapter, FitPro™ fit test software, USB computer interface cable, operation and service manual, alcohol supply (for approximately 240 hours of operation).

R11015

TSI Portacount® Pro+ Fit Tester

- Quantitatively fits tests all types of respirators - gas masks, SCBAs, respiratory and even disposable masks.
- Eliminates the guesswork associated with tedious and error-prone qualitative fit test methods.
- Standalone operation or use with an external computer to generate reports and print fit test cards.
- Built-in N95 Companion™ technology.
- Reduced need for an external particle generator.
- Able to perform N96 fit testing with much lower ambient particle concentrations.
- Colour touch screen.
- Measures fit factors greater than 10,000.
- Switch between different respirator types in less than a minute.
- Automates fit testing with FitPro™ fit test software.
- Optional card printer allows you to print individual fit test cards.
- Provided with carrying case, AC adapter, FitPro™ fit test software, USB computer interface cable, operation and service manual, alcohol supply (for approximately 240 hours of operation).



R11014

R11015

COMPREHENSIVE FIT TESTING SERVICE AVAILABLE FROM ANDERCO SAFETY

Respiratory Protection Standards Overview

What is respirator fit testing?

Respirator fit testing is performed to check that a tight fitting face piece (full-face mask, half-face mask, or disposable mask) matches the wearer's facial features and seals adequately to the wearer's face so that it reduces exposure to hazard as low as is reasonably practicable and to an acceptable level (below any applicable Occupational Exposure Limits or Control Limits).

Why is respirator fit testing necessary?

Respirator fit testing is mandatory under current legislation. It is vital that selected respiratory protective equipment (RPE) is adequate and suitable for the purpose. The performance of tight fitting face pieces relies heavily on the quality of fit to the wearer's face - on achieving a good contact between the wearer's skin and the face seal of the face piece. An inadequate fit will significantly reduce the protection provided to the wearer. Any reduction in protection can endanger the wearer's life or lead to immediate or long-term ill health.

Whilst fit testing has a key role to play, it must not be forgotten that this is only one small part of a respiratory protection programme. For adequate respiratory protection to be achieved in the workplace, a comprehensive and effective respiratory protection programme must be in place.

When should a fit test be carried out?

A fit test should be carried out:

- As part of the initial selection of RPE.
- Where an untested face piece is already in place.
- In the course of respirator fit training.

A repeat fit test should be conducted:

- As required by an effective RPE programme (it is recommended that repeat tests are conducted at least annually).
- If the wearer experiences significant weight gain or loss.
- If the wearer undergoes substantial dental work.
- If the wearer develops any facial changes (scars, moles etc) around the face seal area.

Fit test records should be stored indefinitely by the employer. These records must be kept available for inspection on request and a copy given to the employee.

How is fit testing carried out?

Fit testing can be administered using qualitative or quantitative fit test protocols and employees must be tested with the same make, model, style and size of respirator that will be used on-site.

Qualitative Fit Testing

Qualitative fit testing is a simple pass/fail test based on the wearer's subjective assessment of the leakage, via the face seal region, of a test agent, usually a sprayed solution of a sweet or bitter tasting substance. These tests are relatively simple to perform and are suitable for half masks and filtering face pieces. They are not suitable for full face masks.

Quantitative Fit Testing

These tests give an objective measure of face fit. They require specialised equipment and are more complicated to carry out than qualitative methods. Quantitative fit testing provides a numerical measure of the fit that is called a fit factor (FF). The fit factor is a measure of how well a particular face piece seals against the wearer's face.

A higher fit factor means the face piece achieved good contact between the face seal and the face during the test. The recommended minimum fit factor that should be achieved to pass a fit test will depend on the type of face piece being tested.

How can Anderco Help?

Anderco Safety can provide your company with an economical and convenient on-site respirator fit testing service designed to cause minimal disruption to operational needs. Our trained fit test consultants can provide a full fit testing service at your facility at a time convenient to you:

- Qualitative and Quantitative Fit Testing: with the technical knowledge and equipment available to provide an on-site fit testing service nationwide.
- Experienced Fit Test Professionals: We can provide trained and experienced fit test professionals to conduct fit testing at your facility in full accordance with manufacturer's documented instructions and Approved Codes of Practice (AcoPs) supporting the Control of Substances Hazardous to Health Regulations 2002 (COSHH) HSE UK operational circular OC 282/88.
- Certification: Upon completion, Anderco issues a fit test report for each test conducted.
- Training: To reinforce your respiratory policy and ensure your employees are properly protected, Anderco can provide training on the correct fitting and care of respirators in use on-site.

For full details of Anderco's respiratory fit testing and training services, contact your Anderco Safety representative.

RESPIRATORY PROTECTION STANDARDS

Respiratory Protection Standards Overview

Respirators are normally defined as filtering Respiratory Protective Devices (RPD's) which remove contaminants from an otherwise breathable atmosphere. Breathing Apparatus is equipment that supplies the wearer with breathable air from a controlled source, usually from self-contained bottles or cylinders, or via airlines.

A sub class of RPD that is becoming important is Light Duty Airline

equipment. This is similar to airline Breathing Apparatus but much lighter in construction and used for general industrial applications.

Because of the diversity of applications, there are many different types of RPD in service, ranging from simple disposable filtering face pieces, to fully self-contained breathing apparatus. This diversity is reflected in the many European and International product standards to which these devices are designed.

Basic Standards

EN132	Respiratory protective devices, definition of terms and pictograms.	EN372	Filters against specific named compounds.
EN133	Respiratory protective devices, classification.	EN400	Self contained, close circuit compressed oxygen escape apparatus for self rescue.
EN134	Respiratory protective devices, nomenclature of components.	EN401	Self contained, close circuit compressed chemical oxygen apparatus for self rescue.
EN135	Respiratory protective devices, list of equivalent terms.	EN402	Self contained, close circuit compressed air with full face mask or mouthpiece assembly.
EN136	Full face pieces.	EN403	Filtering devices with hoods for self rescue from fire.
EN137	Self contained open circuit compressed air breathing apparatus.	EN404	Self rescue filter requirements.
EN138	Fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece assembly.	EN405	Valved filtering half mask respirators for gases and particulates.
EN139	Compressed airline breathing apparatus for use with full face mask, half mask or mouthpiece assembly.	EN1061	Self contained close circuit breathing apparatus – chemical oxygen self rescue escape apparatus.
EN140	Half mask face pieces.	EN1146	Self contained open circuit breathing apparatus incorporating a hood (compressed air escape apparatus with hood).
EN141	Gas and vapour filters.	EN1827	Half masks without inhalation valves and with separate filters to protect against gases/particulates.
EN142	Mouthpiece assemblies.	EN1835	Light duty supplied air.
EN143	Particulate filters.	EN12021	Compressed air for breathing apparatus.
EN144	Gas cylinder valves – thread connections for insert connector.	EN12083	Filters with breathing hoses.
EN145	Self contained closed circuit breathing apparatus, compressed oxygen or oxygen nitrogen.	EN12419	Light duty construction compressed airline breathing apparatus, (incorporating full face mask, half mask or quarter mask).
EN148	Threads for face pieces.	EN12941	Powered respirators – hoods and helmets.
EN149	Disposable filtering face piece particulate respirators.	EN12942	Powered respirator full face masks.
EN269	Powered fresh air hose breathing apparatus, incorporating hood.	EN13274	Determination of inward leakage and total inward leakage.
EN270	Compressed airline apparatus incorporating hood.		
EN271	Compressed airline powered fresh air hose breathing apparatus, incorporating a hood for abrasive blasting.		
EN371	Gas and/or combined filters for use against low boiling point organic compounds.		

Important Respiratory Protection Standards Explained

EN149 - Disposable filtering face piece particulate respirators

These devices are for the most part constructed from the filter media itself, which is often an electro statically charged material, and are disposable. There are three protection classes in this standard: FFP1, FFP2 and FFP3. These devices cover only the nose, mouth and chin.

EN405 - Valved filtering half mask respirators for gases and particulates

Disposable half mask respirators which incorporate a gas filtering element as well as a particulate filtering element. These cover the nose, mouth and chin and usually have an adjustable head harness. These devices are re-usable although the complete mask must be replaced when the filters are exhausted. There are several classifications of device in this standard depending on the particulate filtration efficiency and gas filtration capacity (life before saturation).

EN140 - Half mask face pieces

Half or quarter masks which cover the nose, mouth and chin, or just the nose and mouth. The face piece is generally a flexible rubber or silicone rubber material, and can usually be fitted with a range of replaceable filters which conform to the separate standards EN141, 143, 371, 372. The maximum weight of filters to be fitted to half masks is 300 gms, since heavy filters are liable to disturb the face seal and prove uncomfortable. Half masks may be fitted with the EN148/1 standard thread fitting.

EN136 - Full face pieces

Full facemasks that cover the whole face. These have a flexible rubber or silicone rubber face seal and are fitted with a transparent visor. Full facemasks are usually fitted with replaceable filters conforming to the separate standards EN141, 143, 371, 372. The maximum weight of filters to be fitted directly to full facemasks is 500 gms. Full facemasks commonly have the EN148-1 standard thread to take the full range of standard filter canisters allowing compatibility with face pieces from a range of manufacturers. However, the use of twin filter full facemasks with dedicated filter fittings is becoming more common, since standard thread filters tend to be heavy with high breathing resistance.

Within EN136 there are 3 Classes (all 3 classes provide the same level of respiratory protection):

- **Class 1** - a light duty full facemask which is maintenance free and cannot be fitted with standard canisters.
- **Class 2** - a fully maintainable general duty Respirator.
- **Class 3** - a fire fighting mask which has passed a radiant heat test.

Full facemasks are frequently components of other RPD's such as power assisted respirators, or self contained / airline supplied breathing apparatus. These systems are generally approved as a complete set against the relevant standard- e.g. EN12942, EN137, EN139.

EN143 - Particulate filters

Particulate filters which are effective against all dusts and fibres. Most are also effective against metal (e.g. welding) fume, liquid mists, bacteria and virus, although this should always be checked with the supplier of any individual filter. This standard describes only those filters to be fitted to EN140 half face pieces and EN136 full face pieces. There are three classes of particulate filter, P1 low efficiency, P2 medium efficiency and P3 high efficiency. It is very important that the correct filter class is chosen for any given application.

EN141 - Gas and vapour filters

Gas and vapour or combination filters. A combination filter is one that combines a gas filtering element with a particulate filtering element conforming to EN143 above. Gas /vapour filters are classified according to type and class. It is vital that the correct filter is used for any given substance.

Type	Colour Code	Application
A	Brown	Organic compounds with a boiling point above 65°C as specified by the manufacturer.
B	Grey	Inorganic substance e.g. Chlorine (excluding Carbon Monoxide).
E	Yellow	Acid gases and vapours e.g. Sulphur Dioxide.
K	Green	Ammonia and organic ammonia derivatives.
NoxP3	Blue/White	Oxides of Nitrogen (single use only).
HgP3	Red/White	Mercury and compounds.

EN141 also classifies filters by capacity with classes 1 to 3 being low, medium and high capacity respectively.

EN371 - Gas and/or combined filters for use against low boiling point organic compounds

Filters for use against certain low boiling point organic vapours as specified by the manufacturer. Organic vapours with boiling points below 65°C are volatile, and less readily absorbed by filter charcoals. Once absorbed, there is a tendency for the contaminant to seep back into the air stream whilst the filter is being used. Therefore, these filters are single use only and must be replaced after each shift. The filters are marked AX and have a brown label.

EN372 - Filters against specific named compounds

EN372 allows a filter to be approved to provide protection against a specific substance. The filters are marked SX and have a violet label, and will be marked with the substance of application. These filters are not common, as most applications are adequately covered by the other standards.

EN146 - Powered respirators (hoods and helmets)

Powered hoods and helmets for protection against particulates only. 3 levels of protection are available: THP1, THP2 and THP3, the latter being the highest. This standard has now been superseded by EN12941.

EN12941 - Powered respirators (hoods and helmets)

Powered hoods and helmets providing protection against both particulates and gases/vapours. There are 3 protection classes: TH1, TH2, TH3, the latter being the highest. These devices rely for their protection on a constant flow of filtered air provided by a battery powered fan. The filter types and combinations available for these devices are: P (particulate), A, B, E, K, AX, SX, Nox, HgP. The particulate filter efficiency is required to match the total protection of the system, so filters are marked TH1 P, TH2 P, TH3 P etc depending on which level of device they are approved for use with.

EN12942 - Powered assisted face mask respirators

Power assisted face mask respirators, providing protection against both particulates and gases/vapours. 3 levels of protection are available: TM1, TM2 and TM3, the latter being the highest. These devices, which may include half masks or full facemasks, are termed power assisted since they will still offer protection equivalent to a standard negative pressure respirator if the power fails. The filter types and combinations available for these devices are: P (particulate), A, B, E, K, AX, SX, Nox, HgP. The particulate filter efficiency is required to match the total protection of the system, so filters are marked TM1 P, TM2 P, TM3 P etc depending on which level of device they are approved for use with.

EN138 - Fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece assembly

Fresh Air Breathing Apparatus, often referred to as FABA consists of a long breathing air hose, secured in a clean air area and connected to face mask via the wearers' belt and a short breathing hose. This device is suitable for situations where there is fresh air close at hand. Normally the wearer will have to breathe against the resistance of the hose, although power assisted versions are becoming more prevalent.

EN1835 - Light duty supplied air

Light duty compressed airline hoods, helmets and visors. 3 levels of protection are available: LDH1, LDH2, LDH3, the latter being the highest. The approval covers the complete device including the compressed airline, which must be fed clean breathing quality compressed air, usually at 3 - 10 bar (depending on the device). These are not suitable for use in confined spaces or lethal atmospheres. The maximum length of airline permitted is 10 metres and a low flow warning facility is required for the higher classes.

EN12419 - Light duty construction compressed airline breathing apparatus, (incorporating full face mask, half mask or quarter mask)

Light duty compressed airline half and full face masks. 3 levels of protection are available: LDM1, LDM2 and LDM3, the latter being the highest. These are not suitable for use in confined spaces or lethal atmospheres, and the maximum airline length permitted is 10 metres.

EN270 - Compressed airline apparatus incorporating hood

Compressed airline Breathing Apparatus incorporating a hood or helmet. These devices have a heavy-duty airline feeding the hood or helmet via a belt and low pressure breathing hose. There is a single level of protection. A low flow warning facility is provided.

EN139 - Compressed airline breathing apparatus for use with full face mask, half mask or mouthpiece assembly

Compressed airline breathing apparatus incorporating a full or half mask. These may be constant flow, negative pressure demand, or positive pressure demand. Positive pressure demand is the most common, due to the enhanced comfort, economy and protection afforded. These are generally regarded as high protection devices when fitted to full face masks and may be suitable for use in confined spaces. An auxiliary air bottle may be incorporated as part of the system to facilitate escape from irrespirable atmospheres should the airline air supply fail. This equipment is provided with a heavy-duty airline which is approved as part of the system.

EN137 - Self contained open circuit compressed air breathing apparatus

Self contained open circuit Breathing Apparatus, this can be positive or negative pressure demand, although positive pressure demand is now almost universally used. Air is contained in one or more cylinders on the wearer's back and supplied via a high-pressure regulator and a demand valve to the wearer's mask. Exhaled air passes directly out of the mask through a biased exhale valve. In positive pressure sets, pressure inside the mask is maintained slightly above ambient at all times regardless of the wearer's demand for enhanced comfort and protection levels. These devices are designed for use in the most hazardous environments and are generally used for fire-fighting and other high-risk respiratory environments.

EN145 - Self contained closed circuit breathing apparatus, compressed oxygen or oxygen nitrogen

Self-contained closed circuit Breathing Apparatus is specialised and long duration for rescue applications etc. The wearer has a backpack containing a cylinder of oxygen and a CO2 absorber. When the wearer exhales the CO2 is absorbed, and an equivalent amount of oxygen is added back into the air stream.

SELECTING & USING RESPIRATORY PROTECTION

Options such as removing the source of hazard from the work area or applying engineering controls should always be implemented before resorting to a respiratory protection device.

The selection of the correct respiratory protection follows a basic 4-step method:

1. Identify the hazards (particulates, gas, vapour).
2. Quantify the hazards (measure airborne contamination levels and compare these with acceptable limits).
3. Select the appropriate respirator and filter combination (disposable, half mask, full face mask, powered, airline).
4. Train wearers in the fitting, use, care and maintenance of RPE provided to optimise the protection afforded.

Respiratory Hazards

Respiratory hazards come in many forms.

Particulates – including dusts (finely divided solid materials including fibres, usually associated with grinding, sanding and drilling), mists (liquid droplets and aerosols, associated with e.g. spraying operations), metal fumes (thermally generated solid particles generated in extreme high heat process such as welding, combustion, smelting, brazing and chemical processes), micro-organisms (such as bacteria, virus, spores). The smaller the particle size is the more dangerous substances are as they enter down into the alveoli of the lungs.

Gases and Vapours – materials in the atmosphere in a molecular state.

Vapour is the gaseous state of substances that are liquids or solids at room temperature. Vapours are formed when substances evaporate. Gases are airborne at room temperature and are capable of diffusing or spreading freely. Various gases have various effects:

- Airways inflammation (e.g. toxic fumes).
- Irritation (e.g. tear gas).
- Suffocation (e.g. chlorine, phosgene).
- Anaesthetic (e.g. solvents).
- Blood poisoning (e.g. hydrogen cyanide HCN, phosphine).
- Corrosion (e.g. mustard gas, ozone).

The effects are dependent on levels of concentration in the inhaled air, exposure time and work rate.

Calculating the Level of Protection Required

To afford adequate protection, a respiratory protective device must provide a sufficient level of protection to reduce the exposure of the wearer to an acceptable level. To determine this, it is necessary to know the expected concentration of contaminant in the workplace, and calculate the minimum factor by which it must be reduced to reach an acceptable level - well below any applicable Exposure Limit, for example OES (occupational exposure standard), OEL (occupational exposure limit), MEL (maximum exposure limit), STEL (short term exposure limit), MAK (maximum workplace concentration), TLV (threshold limit value).

Protection Factors for Common Respirator Types

STANDARD	DESCRIPTION	CLASS OR FILTER	NOMINAL PF	ASSIGNED PF*
EN149	Filtering facepieces for particulates	FFP1 FFP2 FFP3	4 12.5 50	4 10 20
EN405	Filtering half masks for gases or particulates	FFGASxP1(*) FFGASxP2 (*) FFGASxP3 (*) (* for particulates) All, for gases	4 12.5 50 50	4 10 20 10
EN140	Half mask	P1 P2 P3 GAS	4 12.5 50 50	4 10 20 10
EN136	Full facemask (all classes)	P2 P3 GAS	17 1000 2000	10 40 20
EN12941	Powered hoods or helmets	TH1 TH2 TH3	10 50 500	10 20 40
EN12942	Power assisted masks	TM1 TM2 TM3	20 200 2000	10 20 40
EN1835	Light duty airline hood or helmet	LDH1 LDH2 LDH3	10 50 200	10 2 40
EN12419	Light duty airline, full or half mask	LDM1 LDM2 LDM3	20 200 2000	20 20 40
EN139	Compressed airline, full or half mask	(a) C/w half mask (b) C/w full mask i) Constant Flow ii) Negative pressure demand iii) Positive pressure demand	50 2000 2000 2000	20 40 40 2000
EN270	Compressed airline breathing apparatus, c/w hood		200	40
	Compressed airline suit			200
EN138/269	Fresh air hose breathing apparatus, c/w full facemask or hood			40
EN137	Self contained open circuit breathing apparatus	a) Negative pressure demand b) Positive pressure demand	2000 2000	40 2000

* According to BS4275 : 1997 and Revisions

This minimum factor defines the minimum required Protection Factor of the respiratory protection device (RPD):

$$PF = \frac{\text{Contaminant Concentration Outside The Mask}}{\text{Contaminant Concentration Inside The Mask}}$$

The Protection Factor of any given device is very much dependent on the level of leakage. Leakage can vary greatly depending on fit, flow rate (if applicable), training and motivation of wearer, temperature and humidity, application and many other influences. Historically a *Nominal Protection Factor (NPF)* has been quoted for a given class of respirator, this being based on the minimum acceptable performance in laboratory tests.

More recently however, a new system has been adopted whereby safer *Assigned Protection Factors (APF)* have been set to allow safety professionals to make a much safer assumption about the level of protection offered by a respirator.

To decide if a given respirator is adequate:

$$\text{Minimum required APF} = \frac{\text{Workplace Concentration}}{\text{Maximum Acceptable Exposure Concentration}}$$

Special Considerations for Respiratory Protection

Some applications, by their nature, require special consideration in terms of respiratory protection selection:

Bacteria and Virus – Safe exposure standards have not been established for bacteria and virus and this gives rise to difficulty in deciding what level of protection is required. In general, high efficiency particle filters are required and these should be of a type approved for liquid aerosols. To decide on the appropriate protection, it is necessary to at least consider the following:

- ▲ Proximity to contamination source.
- ▲ Level of ventilation/ dilution.
- ▲ Risk of contamination (e.g. by splash, from coughing etc).
- ▲ Infectious dose of the organism, for example TB is very infectious, whereas HIV virus is much more difficult to transfer.

If risk from all of these factors is low, it is likely that an FFP3SL disposable or half mask with P3 filter would be adequate. For progressively higher risks, higher levels of protection are required. If the level of risk cannot be identified at least qualitatively, it would be unwise to consider using anything less than TH3 or TM3 powered respirators against bacteria and virus.

Asbestos and Asbestos Removal - Asbestos exposure potentially affects workers in the construction and maintenance industries. Use of respiratory protective equipment fitted with effective particle filters is essential when working with asbestos and even is inadequate unless full measures for controlling dust at source are implemented with appropriate work enclosures and decontamination procedures. Where work which is likely to give rise to asbestos dust is contemplated, at a minimum a TM3 power assisted respirator or EN139 positive pressure demand breathing apparatus should be worn.

Isocyanates - There are several organic chemicals within the Isocyanates family and they are found in many industrial applications where two liquid components react to form a solid material (e.g. insulation materials, polyurethanes and various coatings). Most of these materials are toxic and can provoke severe allergic reaction in sensitised individuals. For this reason Isocyanates have a very low exposure limit, and it is vital that exposures are kept as far below this limit as possible. The filtering respirators suitable for protection against Isocyanates are full facemasks with A2P3 canisters and should only be used either for short term escape from a limited spillage or leak, or for short periods where the contaminant concentration is known to be less than 10 x the Exposure Limit. For general exposures less than 10 x the Exposure Limit, suitable air fed equipment with an APF of at least 40 is recommended. For general exposures greater than this, positive pressure demand breathing apparatus should be used, possibly with an auxiliary A2P3 filter to allow transit to the airline connection point (if applicable). Disposable filtering face pieces, half mask respirators and powered respirator systems are not ideally suited for the control of Isocyanate exposure, and should not be used unless exposure levels have already been controlled at source to well below the control limit.

Solvents – Some solvents are relatively innocuous, others are toxic, with the potential to cause permanent organ damage or cancer. Many are relatively volatile organic liquids which can be filtered with A type filters, however there are several commonly found substances, e.g. Acetone, Dichloromethane, Diethyl Ether, which are so volatile that they may require either an AX type single use filter, or may not be filterable at all. For this reason, it is vital that the airborne concentrations of all solvents in any mix is determined, and the filter types are individually checked.

Because solvents are usually physically absorbed by charcoal filters rather than chemically absorbed, the volatility has a major effect on the filter performance. Also, being volatile, solvents can often be found in surprisingly high concentrations in a work area, meaning that filter life will be correspondingly short.

Materials with no set Exposure Limit - There may be substances for which there is not a statutory exposure limit. In these cases, it is usually necessary to set an internal control level – the lowest detectable concentration using modern detection equipment – and select the highest protection respiratory protection device compatible with the task and the wearer. Generally, carcinogenic substances should be controlled to achieve low levels at source with respiratory protection equipment used solely as the last resort.

Selecting and Using Filters

To select a suitable filter for protection against workplace respiratory hazards:

1. Fully identify the prevailing workplace hazards, checking the scientific names of the chemicals. Ensure that the state of the substance is known - is it a gas, vapour or particle, or a mixture of these. Special attention is required where there are several substances present that may interact chemically or have synergistic adverse health effects.
2. Estimate the likely atmospheric concentration. This is best done by measurement. If the substance has long term health effects it is recommended that a workplace survey is carried out. Where measurement is not possible, an estimate should be made of the maximum likely concentration.
3. Select the appropriate filter.

Particulate Filters

1. Choose a particle filter to protect against particulate hazards.
2. Ensure that the filter selected has the correct efficiency for the application and that it is correctly marked for the respirator (powered systems).
3. Ensure that the filter is new and undamaged.
4. Check that the filter selected is suitable for liquid / mists /bacteria / virus / metal fume, as applicable.
5. Mark date and time of first use on the filter label or record this separately.
6. Replace the filter when breathing resistance becomes noticeably burdensome or when a powered respirator fails the flow test.
7. If the filter has been used against toxic dusts, bacteria or virus, it is usual to dispose of it as controlled waste after each use.
8. Always replace a particulate filter after 6 months of use regardless of any of the above.

Gas / Vapour Filters

1. Choose the correct filter for the hazard encountered.
2. Ensure that it is new and undamaged and not time expired.
3. Mark date and time of first use on the filter label or record separately.
4. Check usage duration with the manufacturer. This will require the atmospheric concentration to be known. Bear in mind that mixtures of substances can severely reduce filter life. Concentrations of all substances in the mix must be known.
5. Replace filters when calculated usage duration is reached.
6. If the usage duration is not known extreme caution should be exercised.
7. If the substance is tasted or smelled, the filter must be replaced immediately. Subsequent filters should be used for no more than half the duration of the initial filter.

SELECTING & USING RESPIRATORY PROTECTION

8. Taste/Smell must not generally be used as an end of life indication
9. If the substance has poor warning properties (taste/smell) and the concentration is not known, then gas filters should not be used. Instead, consider using air supplied equipment.
10. Do not use a gas filter which has been stored out of its packaging for more than six months, regardless of any of the above.
11. Always replace a gas filter after six months.

Care & Maintenance of RPE

Daily checks are required to ensure the correct functioning of a respiratory protection device. These should be carried out in accordance with the manufacturer's instructions. For most devices, the user should conduct a pre-use visual inspection to check the face piece for holes, cuts, cracks or distortion. Powered respirators will require a daily flow check, before and after each use, to ensure the flow is maintained throughout the working shift.

A documented monthly check is recommended for all RPE, and this should cover all items in the daily checks. A record of each device should be maintained to show the results of checks and a note of all replacement parts. Air flow rate and quality for air-fed devices should also be checked monthly. This needs to be carried out for each working point in the compressed air system.

Periodically, it is advisable to have a thorough test conducted on high performance devices, including full face masks and powered respirators. This should be performed by the manufacturer or the manufacturer's agent who can issue a certificate showing that the device tested still meets specification. It is important to note that such checks need to precisely follow the manufacturer's guidelines.

Employee Training

The following, as a minimum should be covered as part of employee training on respiratory protection:

- The workplace hazards, possible health effects and the control measures in place.
- How to recognise faults in their respiratory protection equipment, where to report them and how to obtain spares (as necessary).
- How to maintain their respiratory protection equipment.
- How to perform pre-use checks.
- How to use the device correctly.
- Any limitations associated with use of the device.
- How to clean and store the device correctly.

Training should be revised regularly to ensure employees remain proficient and retraining may be necessary where audits indicate incorrect practices.

HOW CAN ANDERCO HELP?

To reinforce your company's respiratory protection policy and ensure your employees are properly protected, Anderco can provide a customised programme of education to raise awareness of the specific workplace hazards as well as on the correct fitting and care of respirators in use on-site. Anderco will train your

personnel on on-site hazards, the use, storage and maintenance of respiratory protection equipment, their specific requirements for respiratory protection where it is prescribed by the regulations or your company's work procedures, and the role of the individual in contributing to your company's risk management policies.

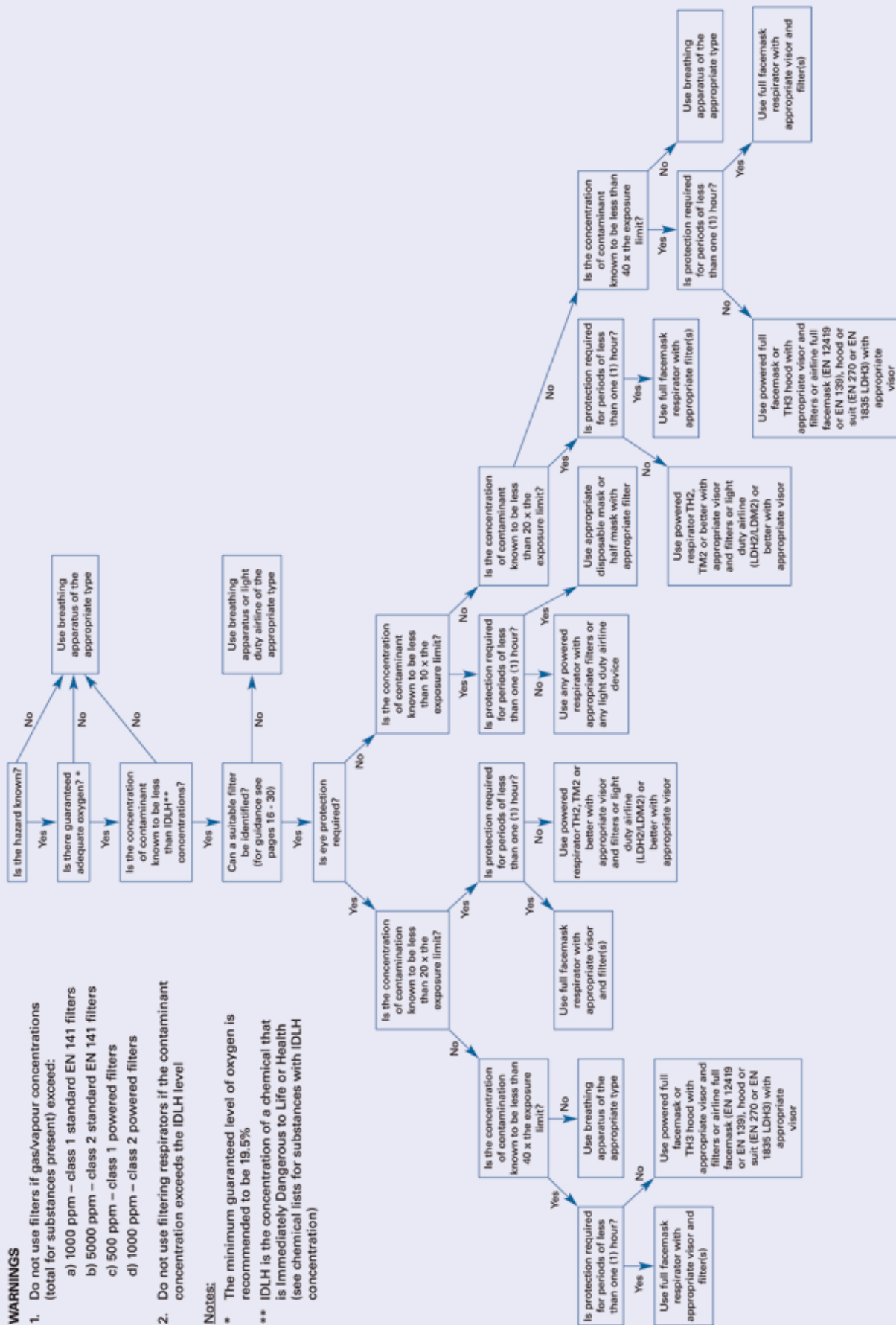
For full details of the training and consultancy services available in the area of respiratory protection, contact your Anderco Safety representative.

WARNINGS

- Do not use filters if gas/vapour concentrations (total for substances present) exceed:
 - 1000 ppm – class 1 standard EN 141 filters
 - 5000 ppm – class 2 standard EN 141 filters
 - 500 ppm – class 1 powered filters
 - 1000 ppm – class 2 powered filters
- Do not use filtering respirators if the contaminant concentration exceeds the IDLH level

Notes:

- * The minimum guaranteed level of oxygen is recommended to be 19.5%
- ** IDLH is the concentration of a chemical that is Immediately Dangerous to Life or Health (see chemical lists for substances with IDLH concentration)



This is a suggested decision logic only. Special circumstances arising from individual risk assessments may lead to different selection decisions being made.

