

**3M Personal Safety**

3M™ Versaflo™ Powered & Supplied Air Respiratory Protective Systems



A fresh  
approach

The Power to Protect Your World.™





## The 3M Range of Powered and Supplied Air Respirators

**3M™ Versaflo™ Respiratory Protective Systems** are designed to protect workers in many industries and a broad range of applications within those industries. They supply air to the wearers' breathing zone allowing them to work safely and comfortably for long periods of time.

Two types of 3M™ Versaflo™ Respiratory Systems are available:

### 3M™ Versaflo™ Powered Air Turbo units

These use a battery powered fan and motor to draw contaminated air through a filter. The filter captures certain contaminants and clean air is fed to the wearer.



- ✓ Suitable for use over long shifts - no increase in breathing resistance
- ✓ Can offer integrated head, eye and face protection
- ✓ Allows the wearer to walk freely around the workshop without any trailing tubes
- ✗ Cannot be used to protect against substances with poor warning properties (taste/smell)
- ✗ Must not be used in conditions that are oxygen deficient or immediately dangerous to life or health (IDLH)

### 3M™ Versaflo™ Supplied Air Regulators

These use breathable quality air supplied from a compressor via a tube. The compressed air is regulated to a gentle flow and fed to the wearer.



- ✓ Can be used to protect against substances with poor warning properties (taste/smell)
- ✓ Can offer integrated head, eye and face protection
- ✓ Suitable for use over long shifts - no increase in breathing resistance
- ✗ Must not be used in conditions that are oxygen deficient or immediately dangerous to life or health (IDLH)

## Compatibility

Both types of system deliver air to the wearer through a headtop. The headtops are designed to deliver respiratory protection and offer the wearer other protection and features to suit their environment and work. The features incorporated into headtops solve many of the common pitfalls associated with providing personal protective equipment (PPE) to workers. For example, headtops with combined eye protection immediately take away the need to carefully assess the influence of a respirator on eye protection and vice versa.



### Headcovers and Hoods

- ✓ Respiratory Protection
- ✓ Face & Eye Protection (Low energy impact)
- ✓ Optional neck & shoulder coverage



### Visors

- ✓ Respiratory Protection
- ✓ Face & Eye Protection (medium energy impact)



### Helmets

- ✓ Respiratory Protection
- ✓ Face & Eye Protection (medium energy impact)
- ✓ Head Protection



### Welding headtops

- ✓ Respiratory Protection
- ✓ Face & Eye Protection (medium energy impact)
- ✓ Welding applications

## Long term comfort



PPE only protects workers if it is worn properly. Through decades of experience in designing PPE and in depth research we know that it will only be worn continuously if it is comfortable. In addition to high levels of protection, the 3M™ Versaflo™ Powered and Supplied Air Systems have been designed with comfort in mind. Many comfort features have been built into the turbos, regulators and headtops. The Versaflo systems provide protection without the increase in breathing resistance associated with other forms of respiratory protective equipment. This means that normal breathing effort is required which greatly improves long term comfort.

Many other features are used to enhance comfort. For example, the ability to adjust the distribution of air flow into headtops allows wearers to improve the comfort depending on their environment and personal preference. Weight, balance, adjustability, size and pressure on the head and face have all been carefully considered throughout the design process.

## Ease of use

The Versaflo systems are simple and intuitive to use thanks to the use of colour coded parts to guide the wearer. Functional and adjustable parts are moulded in blue as are the catches that secure some replaceable items e.g. the visors of helmets.

## Protect your investment

The Versaflo powered and supplied air systems are intended to last for a long time. It is important that they are well looked after to protect both the health of the wearer and the investment in the equipment. Care and maintenance is straightforward and broadly breaks down into daily cleaning and inspection, the replacement of consumable parts as required e.g. filters and more thorough monthly inspections combined with the replacement of worn or damaged parts. 3M have developed care and maintenance packs including posters and record cards to help you.

Visit the care and maintenance pages at [www.3M.co.uk/safety](http://www.3M.co.uk/safety).



## Versatility

The 3M™ Versaflo™ Respiratory Protective Systems are designed as modular systems where parts can be mixed and matched as needs and preferences change. For example, if a user of a 3M Versaflo TR-300 Turbo and 3M Versaflo S-533 Hood now requires impact protection for their head they can simply replace the hood with a helmet. If a process changes introducing a hazard that cannot be filtered the system may be converted from powered air to supplied air by replacing the turbo unit with a 3M Versaflo V-500 Regulator.

This versatility allows users to adapt to changes in hazards, work practices and their personal preference.

### 3M™ Versaflo™ S-Series Headtops



### 3M™ Versaflo™ M-Series Headtops



### Welding Headtops



### Breathing tubes

### Air filtering



### Non-filtering supplied air



## 3M™ Versaflo™ TR-300 Powered Air Respirator

The 3M™ Versaflo™ TR-300 system combines performance, protection and functionality with modern, stylish, lightweight design and unrivalled comfort.

- ✓ **Highly Efficient** filter captures hazardous dust, mist and fume plus options for nuisance level gases and vapours
- ✓ **Light and Small** - Extremely slim, lightweight, balanced design for outstanding comfort
- ✓ **Intelligent** lithium ion battery quickly charges, has no memory effect and incorporates useful charge indicator
- ✓ Electronic **audible and visual alarm** in case of low battery and/or low air flow

Approved to EN12941 class TH2 or TH3 dependent on headtop

- ✓ Assigned Protection Factor (APF) of 40 with 3M Versaflo S-Series, M-300 & M-400 Headtops, APF of 20 with all others



Available either as a starter kit or as individual items



### 3M™ Versaflo™ TR-315UK Powered Air Starter Kit

This Starter Kit includes the TR-302E Turbo Unit, Particulate Filter, Pre-filter, Standard Belt, High Capacity Battery, Battery Charger Kit, Self-adjusting Breathing Tube and Air Flow Indicator.

Now choose your headtop from pages 11-14

If you have specific system requirements you can make up your own system with the following components:

#### Turbo Unit

##### 3M™ Versaflo™ TR-302E Powered Air Turbo Unit

The lightweight turbo unit is the key to an easy-to-use, versatile respiratory protective system for environments with hazardous particles. This unit comes with an Air Flow Indicator only.

#### Batteries

TR-330 Standard Battery Pack

TR-332 High Capacity Battery Pack (longer life)

#### Chargers

TR-341UK Single Station Battery Charger Kit

TR-344UK 4-Station Battery Charger Kit

#### Filters

TR-3600 Pre-filter

TR-3710E Particulate Filter (P)

TR-3800E P+Nuisance Level Organic Vapour Filter

TR-3820E P+Hydrogen Fluoride +Nuisance Level Acid Gas Filter

#### Breathing Tubes

BT-30 Length Adjusting Breathing Tube

BT-40 Heavy Duty Rubber Breathing Tube

BT-20S Short Lightweight Breathing Tube

BT-20L Long Lightweight Breathing Tube

#### Belts

TR-325 Standard Belt

TR-327 Easy-Clean Belt

TR-326 Leather Belt

BK-01 Backpack



# 3M™ Jupiter Powered Air Respirator

The Jupiter Powered Air Respirator is comfortable, easy-to-use and provides protection against particulates, gases or vapours, or against a combination of these contaminants depending on the type of filters used.

- ✓ Modern, ergonomic design
- ✓ Suitable for shower decontamination
- ✓ High comfort decontamination belt
- ✓ Electronic **audible and visual alarm** in case of low battery and/or low air flow
- ✓ “Intrinsically Safe” (IS) kit available for use in potentially explosive atmospheres

Approved to EN12941 class TH2 or TH3 dependent on headtop

- ✓ Assigned Protection Factor (APF) of 40 with 3M Versaflo S-Series & M-400 Headtops, APF of 20 with all others



## Available either as a starter kit or as individual items

### 3M™ Jupiter™ Powered Air Starter Kit

This Starter Kit includes a standard 3M™ Jupiter™ Powered Air Turbo including Decontamination Belt and Clip, Filter Gaskets, Air Flow Indicator and Calibration Tube as well as a pair of Organic Vapour and Particulate (A2P) Filters, Pre-filters, Length-adjusting Breathing Tube, 8 hour Rechargeable Battery (NiMH) and a Battery Charger.

**Now choose your headtop from pages 11-14**

If you have specific system requirements you can make up your own system with the following components:

Turbo Unit	
<b>3M™ Jupiter™ Turbo Unit</b> Includes Decontamination Belt, Air Flow Indicator and Calibration Tube	(085-00-10P)

Filters	
P Filter	(450-00-25P2)
A2P Filter	(453-00-25P2)
A2BEK1P Filter	(453-09-25P2)
ABE1P Filter	(456-18-25P2)
Pre-filter Pack	(461-00-02P24)

Batteries (NiMH)	
Battery Pack - 8 hour	(007-00-64P)
Battery Pack - 4 hour	(007-00-63P)
Battery Pack - 4 hour (intrinsically safe with pouch kit)	(085-12-00P)

**Note:** A Jupiter™ Turbo Unit that has been used in a dust environment without an intrinsically safe pouch fitted, should never be used for intrinsically safe applications.

Charger	
10 Station Charger	(003-00-59P)
Intelligent Battery Charger	(CHG-02)

Breathing Tubes	
Length Adjusting Breathing Tube	BT-30
Heavy Duty Rubber Breathing Tube	BT-40
Short Lightweight Breathing Tube	BT-20S
Long Lightweight Breathing Tube	BT-20L











# 3M™ Versaflo™ Supplied Air Systems

The modular range of Supplied Air Respirators lets you choose how you want your system built, with the flexibility to change it in the future.

3M Versaflo Supplied Air Respirators offer protection against dusts, mists, fumes, gases or vapours and combination hazards e.g. paint spray.

Supplied Air Respirators do not offer protection in confined spaces, oxygen deficient atmospheres or for asbestos stripping.

## Six stage selection process

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
1. Select your Belt Unit	2. Select your Belt Unit Coupling*	3. Select your Hose	4. Select your Hose Coupling Set*	5. Select your Breathing Tube	6. Select your Headtop
					

\*Please note: Keep your choice for stage 2 the same as for stage 4. For example, if you select a Rectus belt coupling you must also select a Rectus hose coupling set.

## Stage 1: Choose your Belt Unit

### 3M™ Versaflo™ V-500E Supplied Air Regulator

Balanced regulator specifically designed for respirator use, the Versaflo V-500 Regulator ensures smooth airflow, optimum safety and comfort.

- ✓ Low-pressure warning whistle
- ✓ Replaceable charcoal filter
- ✓ Easy airflow adjustment
- ✓ Spray gun or compressed air tool port
- ✓ Approved to EN14594 with all featured headtops
- ✓ Assigned Protection Factor (APF) of 40 with 3M Versaflo S-Series, M-300 & M-400 Headtops, APF of 20 with all others



### 3M™ Versaflo™ V-100 Air Cooling Unit

A good choice for workers who are exposed to uncomfortably high temperatures, in addition to their exposure to high concentrations of airborne contaminants.



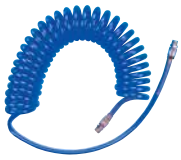
### 3M™ Versaflo™ V-200 Air Heating Unit

A good choice for workers who are exposed to uncomfortably low temperatures, in addition to their exposure to high concentrations of airborne contaminants.

## Stage 2: 3M™ Compressed Air Supply Tubes (CASTs)

### Choose from 4 lengths

- ✓ Both ends of 3M™ CASTs have a 3/8" BSP male thread
- ✓ 3M CASTs form an integral part of the system approval process.



7.5m COILED CAST



10m CAST



30m CAST



10m CAST Antistatic

## Stage 3: Belt Unit Couplings

### Choose from CEJN or Rectus plug

- ✓ 1/4" BSP male thread



CEJN



Rectus

## Stage 4: CAST Couplings

### Choose from CEJN or Rectus plug and socket sets

- ✓ 3/8" BSP female thread



CEJN



Rectus

## Stage 5: 3M™ Versaflo™ BT-Series Breathing Tubes



**3M™ Versaflo™ BT-20 S&L Breathing Tube**  
A lightweight breathing tube that comes in two lengths and is easy to wipe down.



**3M™ Versaflo™ BT-30 Length Adjusting Breathing Tube**  
The Versaflo BT-30 breathing tube has an adjusting length to improve fit for all wearers and reduce risk of catching and snagging.



**3M™ Versaflo™ BT-40 Heavy Duty Breathing Tube**  
The Versaflo BT-40 breathing tube is robust with high durability for heavy industrial application and/or applications where hot particles may be present.

### Air quality

When using 3M Versaflo Supplied Air Regulators it is important that the purity of the air from the compressor is tested to ensure it is of breathable quality. In the UK the Control of Substances Hazardous to Health regulations (COSHH) require that the air is tested at least every 3 months. The 3M™ Air Quality Test Service can carry out this testing for you.

Contact 0845 6013457 for a quote.

### Filtration unit designed to filter compressed air supplied to the 3M range of Airfed Respirators

- ✓ Removes oil mist, particulate, water and nuisance level organic vapours
- ✓ If you intend to use the Aircare with the airfed CAST range (see stage 2), it is advised to purchase another set of CAST couplings (see stage 4)
- ✓ Available wall or floor mounted



## Stage 6: 3M™ Versaflo™ Headtops (choose from pages 11-14)

### 3M™ Versaflo™ S-Series Headcovers and Hoods

Amongst the newest additions to the 3M™ Powered & Supplied Air Modular Range, the Versaflo S-Series Head Covers and Hoods have been designed using the latest computer modelling techniques resulting in our most comfortable range of headtops ever!

#### Comfortably worn by more users

The 3M™ S-Series Head harnesses, through their sizing and adjustment options, will comfortably fit a broad range of head sizes.

#### Convenience of a hanging loop

#### Protection

The Versaflo S-Series Headcovers and Hoods meet the highest respiratory performance requirements (TH3) for this type of product when used with 3M™ Air Delivery Units. In addition they also provide eye and face protection to EN166 – liquid splash and low energy impact!

#### Improved visibility

Visors have an excellent field of vision particularly downwards, with reduced curvature for decreased reflections and glare.

#### Range of 4 fabrics

To suit more applications and needs.

#### Excellent airflow

All wearers benefit from excellent airflow distribution for improved comfort and lower noise.



Choose between the integrated suspension head covers fully assembled and ready to use straight out of the box and the premium maintainable hoods.

### 3M™ Versaflo™ S-Series Headcovers

Integrated suspension models offer the advantages of being fully assembled and ready to use straight out of the box. They can be suitable for applications that require frequent replacement of the entire headtop assembly, such as pharmaceutical manufacturing, or in situations where there is less soiling of the outer fabric. For disposal, the suspension assembly and air inlet components can be quickly removed and separated for segregated waste streams, where facilities are available. Available in two adjustable sizes to comfortably fit more wearers: S/M and M/L.



**3M™ Headcover S-133**  
Provides head and face coverage.  
General purpose, cost-effective fabric.



**3M™ Headcover S-333G**  
Similar to S-133 but with a more durable, soft, quiet, low-linting fabric.



**3M™ Headcover S-433**  
Head, face, neck and shoulder coverage.  
General purpose, cost-effective fabric.



**3M™ Headcover S-533**  
Similar to S-433 but with a more durable, soft, quiet, low-linting fabric that more readily drapes comfortably over the wearer.

# 3M™ VersaFlo™ Premium Maintainable Hoods

The rigid ducting of the head harness provides a consistent air path. It also has an externally-adjustable airflow control that allows wearers to modify the airflow distribution to suit personal comfort needs.

The external cover lets wearers control the location of the airflow.



Premium maintainable hoods can be a highly cost-effective choice for some high disposal rate environments: Just the soiled hood fabric is replaced, while the head harness and air ducting can be reused.



**3M™ Hood S-655**  
Provides head, face, neck and shoulder coverage, as well as eye and face protection to EN166 - liquid splash and low energy impact. Its respiratory seal is a comfortable, knitted inner collar. General purpose, cost-effective fabric.



**3M™ Hood S-657**  
The S-657 uses a double-shroud design for its respiratory seal. The wearer tucks the inner shroud into a shirt or protective coverall, which allows excess air to be channelled over the body, providing additional comfort.



**3M™ Hood S-757**  
Similar to the S-657 but with a fabric specifically intended to help capture paint overspray, minimizing the potential for paint to flake off the wearer and onto the work piece. The fabric also has an internal film barrier to help prevent paint contact with skin or clothes.



**3M™ Hood S-855E**  
As with the S-655 hood, its respiratory seal is a comfortable, knitted inner collar. The S-855E hood is manufactured using a chemical-resistant fabric - grey multi-layer barrier film extrusion laminated to polypropylene spun bound.

**3M™ S-SERIES HEADCOVERS AND HOODS REPLACEMENT PARTS**

**PART NUMBER**  
S-605

**DESCRIPTION**  
Replacement fabric for S-655

**3M™ S-SERIES HEADCOVERS AND HOODS REPLACEMENT PARTS**

**PART NUMBER**  
S-607

**DESCRIPTION**  
Replacement fabric for S-657

**3M™ S-SERIES HEADCOVERS AND HOODS REPLACEMENT PARTS**

**PART NUMBER**  
S-707

**DESCRIPTION**  
Replacement fabric for S-757

**3M™ S-SERIES HEADCOVERS AND HOODS REPLACEMENT PARTS**

**PART NUMBER**  
S-805E

**DESCRIPTION**  
Replacement fabric for S-855E

## 3M™ Versaflo™ M-Series Headtops



### Integrated Protection for Multiple Hazards

- ✓ Provides protection from specific respiratory, head and eye hazards
- ✓ Optional hearing protection

### Modern, Well Balanced Design

- ✓ Lightweight with excellent balance
- ✓ Fully-adjustable head suspension
- ✓ A deflector allows users to direct the airflow inside the headtop for increased control and comfort

### Straightforward Care and Maintenance

- ✓ Spare parts and accessories are quick, easy and intuitive to replace

### Visor Design

- ✓ Visor design combines excellent peripheral and downward vision with good optical clarity
- ✓ Lenses provide chemical and scratch resistance

Optional accessories, including helmet mounted ear defenders are available.



### 3M™ Versaflo™ M-100 Series Faceshields - for respiratory, eye and face protection

#### Two options for different applications:

M-106 features a general purpose face seal for dusts, spraying and chemical processing.

M-107 features a flame resistant face seal for applications with hot particles.



### 3M™ Versaflo™ M-300 Series Helmets - for respiratory, eye, face and head protection

#### Two options for different applications:

M-306 features a general purpose face seal for construction, chemical applications and heavy industry.

M-307 features a flame resistant face seal for applications with hot particles.



### 3M™ Versaflo™ M-400 Series Helmets - for respiratory, eye, face and head protection

#### Two options for different applications:

M-406 features a general purpose shroud for construction, demolition and heavy industries.

M-407 features a flame resistant shroud for applications with hot particles.

# 3M™ Welding Headtops

3M™ Welding Headtops, used in conjunction with the TR-300, Jupiter and V-500 Respiratory Systems, provide comfortable protection for welding applications.



HT-629 Welding Headtop



HT-639 Welding Headtop

### Comfort

- ✓ Easily fitted faceseal in a knitted, breathable, elasticised material
- ✓ No seams next to face - feels much cooler

### Filters

- ✓ Hinge on filter holder for easy access
- ✓ Able to hold conventional glass or auto-darkening filters
- ✓ Incorporates clear visor to enable the welder to inspect the weld comfortably without losing respiratory protection (HT-629 includes a wide-view, clear visor)
- ✓ A 3M BT-40 breathing tube must be used with the HT-639

### Assigned Protection Factor (APF)

- ✓ When used with TR-300, Jupiter or V-500 - APF 20



### HT-749 Welding Headtop

This helmet provides integrated head, eye, welding and respiratory protection.

- ✓ UK-sized aperture (31/4" x 41/4" - 108 x 82mm)
- ✓ Independent welding and clear-view visors allow grinding and respiratory protection with welding visor up
- ✓ Supplied with polycarbonate visors with medium energy eye impact and molten metal protection (EN 166:B-9)
- ✓ Assigned Protection Factor (APF): when used with TR-300, Jupiter or V-500 - APF 20



### Speedglas™ Welding Headtop

The Speedglas 9000 welding headtop is a face, eye and respiratory protective system for increased comfort and safety in welding.

- ✓ Headtop features shade 5 side windows
- ✓ Combine with a Speedglas Auto-darkening Filter (see right)
- ✓ Includes headtop and hose
- ✓ Assigned Protection Factor (APF): when used with TR-300 or Jupiter - APF 20



### Speedglas™ 9002 Auto-darkening Welding Filters (for use with the Speedglas™ Welding Headtop)

The 9002 range offers a choice of three auto-darkening filters with variable shades, normal or large viewing areas plus sensitivity and delay adjustments.

- ✓ Constant protection from ultraviolet and infrared radiation
- ✓ Consistent auto-switching from clear to dark and back again in just the way the welder wants
- ✓ Eliminates neck strain of 'shield flipping' while greatly increasing the accuracy of electrode placement

**Speedglas 9002X** - Variable shades 9-13 (larger view)

**Speedglas 9002V** - Variable shades 9-13

**Speedglas 9002D** - Dual shades 9/11

# 3M™ Versaflo™ Respiratory Protection and Approval

	S-Series		M-100		M-300		M-400		HT-629/ HT-639/ HT-749	Speedglas 460500		
	Standard and class	APF*	Standard and class	APF*	Standard and class	APF*	Standard and class	APF*	Standard and class	APF*	Standard and class	APF*
3M™ Versaflo™ TR-300	EN12941 TH3	40	EN12941 TH2	20	EN12941 TH3	40	EN12941 TH3	40	EN12941 TH2	20	EN12941 TH2	20
3M™ Jupiter™	EN12941 TH3	40	EN12941 TH2	20	EN12941 TH2	20	EN12941 TH3	40	EN12941 TH2	20	EN12941 TH2	20
3M™ Versaflo™ V-100E/200E/500E	EN14594 3A	40	EN14594 2B	20	EN14594 3B	40	EN14594 3B	40	EN14594 2B	20	Not approved	-

\*Assigned Protection Factor

## Diverse range of personal protective equipment

The combined portfolio of 3M™, Peltor™ and E-A-R™ products includes high-quality, innovative solutions to protect people at work.

### Here are some examples:

#### Respiratory protection



#### Hearing protection



#### Eye protection



#### Head protection



#### Welding protection



#### Protective coveralls



For more information about our products and services visit our website at

[www.3M.co.uk/safety](http://www.3M.co.uk/safety)

 @3M\_UK\_Safety

For more information on all our products, call 3M Personal Safety Division  
on **0870 60 800 60 (UK)** and **1800 320 500 (Ireland)**  
or visit [www.3M.co.uk/safety](http://www.3M.co.uk/safety)



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