



## 3M™ Versaflo™ M-Series headgear

Powered & Supplied Air Respiratory Protection systems



## Comfort

Well designed personal protection equipment (PPE) must be comfortable and ergonomic to encourage users to wear it. Therefore providing high levels of comfort is an essential requirement of this market. The new Versaflo™ M-Series™ headgear have been developed to provide a range of lightweight, compact and balanced faceshields, hard hats and helmets that allow users to work in comfort for longer periods.

## Protection

Once comfort has broken down the barriers to usage, PPE's fundamental function is to protect the user. The M-Series range provides closely integrated respiratory, eye and face protection, with some models adding head protection to meet users' protection needs in a wide range of operating environments. The headgear also interfaces seamlessly with 3M's ear protection or fabric protective shrouds to provide an integrated protection system.

## Professional

The visual styling, materials selection and functional features incorporated in the M-Series range project a high quality professional persona. This not only reinforces the self image of users operating in challenging environments, it also visibly reflects the value that the employer places on their safety and well-being.



## Innovation

Lightweight, compact and balanced design.

Customized airflow achieved by easy adjustment of the internal deflector mounted behind the visor, allowing the user to control the distribution of air over their face for maximum comfort.

New fully adjustable head harness that includes textile straps to improve fit, weight distribution and comfort.

Careful face seal design and selection of materials that help reduce airflow or whistling past the ears, which is a common problem with this type of equipment. This provides a quieter system that is less distracting and fatiguing to wear for prolonged periods.

A low profile flexible seal across the top of the visor helps minimize dust collection and therefore limits the potential for dust falling into the user's eyes when lifted.

Visor viewing window is quick and easy to replace if damaged.

Visor frame profiled to provide compatibility with selected 3M™ protective hearing muffs.



## Functionality

The M-Series headgear range includes options that meet the highest performance requirements of global regulatory standards for this type of product.

For example, some M-Series models have a Nominal Protection Factor of 500 which is achieved through a TH3 classification to EN12941 (European Respiratory Standard for Powered Air Respiratory Devices). This is the highest performance category.

All visors comply with EN166 1:B:3 Eye Protection standard.

Models offering head protection comply with the protective helmets for industry standard EN397.

The new range is modular, sharing many key components between the 3 products. This reduces the total number of production tools and component stock levels.



Available in both European and US system configurations

## Ergonomics

Improving comfort is a key factor in increasing user acceptance and pride in their equipment, increasing usage and prolonging activity periods.

The M-Series is a global product. Designed to accommodate approximately 95% of the head sizes in the global workforce and to meet the most demanding international regulations. It thereby avoids the need for regional or size variants.

The head harness is fully adjustable and includes textile straps to improve fit, weight distribution and subsequently comfort.

The profile of the visor has been carefully developed to provide excellent visibility, minimizing restrictions to the user's field of view.

The face seal materials have been selected and stitched to maximise comfort without compromising its sealing function.

Air supply connection is designed for rapid, single-handed connection and release.

The breathing tube connection has been carefully positioned to work in conjunction with a new self-adjusting breathing tube and minimize the impact on the user's freedom of movement.





## Self explanatory quality

The method to make adjustments to the head harness are straightforward and intuitive.

Air flow adjustment is self-evident, as the user can quickly feel the impact of the adjustment they make to the deflector immediately behind the visor.

Care and maintenance are straightforward. Many user interaction points are highlighted in blue and can be serviced by hand.

Replaceable parts are quick and easy to attach. For example, visors easily slide into place and are quickly secured.

The position and attachment method for the breathing tube is clear.

Accessories such as ear protection or fabric protective shrouds are easy and intuitive to attach.



Formal quality



Styled to reflect 3M's current visual brand language, the Versaflo™ M-Series™ products perfectly encapsulate 3M's core values of comfort, protection and quality. The products clearly delineate between the strong, protective exterior and the soft, comfortable user contact surfaces. The strong grey band feature frames and wraps the users head and face clearly signifying the area of protection.



## Durability & Ecological compatibility

Products in this segment have long product life cycles. Therefore, all Versaflo™ M-Series™ products are designed to be serviced and maintained over a prolonged life span.

All wear parts, such as forehead comfort/sweat pads, face seals, head harnesses and visors can be easily interchanged.

Robust and durable materials are used throughout the Versaflo™ M-Series™ headgear to prolong product life, reducing waste. This is particularly true of the external headtop shells, which are non-serviceable and need to provide extended use, frequently in aggressive industrial environments.

Further extensions to product life in challenging work environments can be achieved by fitting flame resistant headcovers.

The M-Series products share a number of common components across the range. This modularity allows reduced stocking levels of interchangeable spares to be held.



## Product periphery

Powered Air Purifying Respirators (PAPR) systems help provide respiratory protection for workers in many industries operating in a broad range of applications and environments. They consist of three modules:

- Headgear
- Breathing tubes
- Air delivery respirator

The Versaflo™ M-Series™ headgear are part of a new integrated range of respiratory protection equipment. They are designed to co-ordinate visually and functionally with a range of PAPR units and supplied air valves to create a series of NIOSH and CEN approved personal protection systems.



Available in both European and US system configurations

## Symbolic and Emotional content

Our over-riding aim was to design a new range of headgear that removed emotional and functional barriers to use. The M-Series range has been developed to make users feel professional and valued when wearing this equipment. The exterior styling shouts protection, whilst inside surfaces and features speak of comfort.

It is also important that the system is considered as a whole, therefore styling cues have been matched to the TR-300 air delivery unit, showing the user that their protective equipment has been considered and developed as an integrated system.

