

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



Work  
in a World of

Comfort





## DEDICATED TO WORKER PROTECTION

3M has a long history of applying its innovative materials to the challenges of worker protection. In 1972, 3M introduced the world's first approved filtering facepiece respirator. Today, as one of the world's leading suppliers of respiratory protection,

our goal is to ensure that we satisfy your needs through exceptional leadership, expertise, quality and service.



### Innovation

3M is fundamentally a science-based company. We have approximately 7000 researchers worldwide, with laboratories in over 30 countries. Our success begins with our ability to apply our technologies – often in combination – to an endless array of real-world customer needs, such as worker protection systems.

### Credibility & Leadership

3M produces thousands of imaginative products, and we are a leader in scores of markets, including the global respiratory protection industry.

### Global Competence

With \$25 billion in sales in nearly 200 countries, 3M has 76,000 employees worldwide. Our specialized distribution networks can help your workforce in the careful selection of, and training in, respiratory equipment.

### Proven Solutions

Workers want respiratory protection equipment that is comfortable, lightweight and convenient. 3M delivers protection products that are high quality, high comfort, professional grade equipment, developed from years of research and development, customer feedback, and customer success.

### And Now: 3M™ Versaflo™ Modular Range

The new 3M™ Versaflo™ Range represents an enormous effort by 3M to accomplish three major goals: simplify the equipment selection process, increase system versatility, and improve user comfort every step of the way.



## Modular Means Versatile

### INTRODUCING A HIGHLY VERSATILE RANGE OF RESPIRATORY PROTECTION SYSTEMS

The 3M™ Versaflo™ Range is a comprehensive approach to worker protection systems based on comfortable-to-wear modules. Each system has three easy-to-select modules—a headtop, an air delivery unit and a breathing tube—that can be combined into dozens of system configurations. It is the ultimate in flexibility for handling changing user environments, needs, and comfort preferences.

All 3M™ Versaflo™ Headtops, Air Delivery Units and Breathing Tubes are compatible with one another. Users can mix and match modules as they move from one environment to another, or from one application to the next. This provides plug-and-play adaptability for the continually-evolving demands of your workplace.





## New Levels of Comfort & Versatility

Many users of half and full facepiece respirators are taking a second look at powered and supplied air systems for reasons that go beyond mere compliance:

### All-Day Comfort

3M™ Versaflo™ Headtops can be comfortably worn with prescription eyewear, safety glasses, and facial hair (that does not come between the face and respirator face seal). With Versaflo Systems, pressure on the face, breathing resistance, and heat build-up are all greatly reduced when compared to non-powered and supplied air tight-fitting facepieces, creating all-day comfort for the user.

The 3M™ Versaflo™ Range helps to maximize user comfort at every point of contact:

- soft face seals
- refreshing airflows distributed to where the user wants
- multiple fitting adjustment options
- excellent peripheral and downward vision
- and—most importantly—lightweight, compact, and well-balanced designs.

The cumulative effect: respiratory protective systems that can be worn comfortably for the entire workday.

## PROTECTION FOR COMBINED HAZARDS

Safety managers can configure 3M™ Versaflo™ modules and accessories to help protect users from a variety of combined hazards.

Respiratory Protection



Eye and Face Protection



Head protection, Neck and Shoulder Coverage



### Easier To Breathe

With 3M™ Versaflo™ Powered and Supplied Air Respirators, flowing air is provided to the user, reducing the additional breathing effort required for half and full facepiece respirators. This increases user comfort at all times, but is especially important during periods of strenuous labour.

### Excellent Airflow

Versaflo headtops direct a comfortable stream of flowing air to where workers need it most: the head and face. The moving

airflow can make hot environments more tolerable while greatly reducing visor fogging. And, when using the appropriate 3M™ Versaflo™ Supplied Air Regulator, the airflow can also be made cooler or warmer when working in hot or cold environments.

### Easy x Three

Easy-to-select. Easy-to-use. Easy-to-maintain. For instance: most replacement parts can be installed by hand or with common tools (like a screwdriver) in a matter of moments.

# 3M™ Versaflo™ Modular Approach

## Truly Modular

All 3M™ Versaflo™ Headtops will connect to all 3M™ Modular Air Delivery Units via the new 3M™ Versaflo™ BT-Series Breathing Tubes. This modular approach greatly simplifies the equipment selection process. Versaflo BT-Series breathing tubes all feature

the innovative 3M™ Quick Release Swivel (QRS) breathing tube connection. The QRS connects quickly and swivels to minimise loops and kinks in the breathing tube and enables one-handed connection and release.

### 3M™ Versaflo™ S-Series Headtops



S-133 Headcover



S-333G Headcover



S-433 Hood



S-533 Hood



S-655 Hood



S-657 Hood



S-757 Hood



S-855E Hood

Available Spring 2010

### 3M™ Versaflo™ M-Series Headtops

Available Spring/Summer 2010



M-106/M-107 Series Faceshields



M-306/M-307 Series Helmets



M-Series Helmets with Shrouds

### 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 a self-adjusting length for improve fit for all wearers and reduce risk of catching and snagging.



#### 3M™ Versaflo™ BT-40 Heavy Duty Breathing Tube

The Versaflo BT-40 is robust with and high durability for heavy industrial application and/or applications where hot particles may be present

Available Spring/Summer 2010

Available Spring/Summer 2010

### 3M™ Air Delivery Units



3M™ Versaflo™ TR-300 Powered Air Turbo



3M™ Jupiter™ Powered Air Turbo



3M™ Versaflo™ V-500 Regulator



3M™ Versaflo™ V-100E Air Cooling Unit

Available Spring/Summer 2010

Available Spring/Summer 2010

Available Spring/Summer 2010

\* all products available now unless stated otherwise

All 3M™ Versaflo™ headtops and breathing tubes are fully compatible with the existing 3M™ Jupiter™ Powered Air Turbo. Furthermore, many Versaflo™ products will be approved for use with 3M's existing modular powered and supplied air range—contact your local 3M office for details.



## FOUR STEPS TO THE RIGHT RESPIRATOR

- 1 Identify the Hazards – dusts, metal fumes, gases, vapours, impacts, noise, etc.**
- 2 Assess the Risk – assess the hazard levels against safety standards and consider additional protection, such as neck or shoulder coverage**
- 3 Select the right Respirator – Powered or Supplied Air\***

### 3.1 Choose your Headtop

From lightweight hoods to industrial helmets that provide not only respiratory protection, but also can provide eye and face protection, head protection, and hearing protection.

### 3.2 Choose your Air Delivery Unit

To handle the contaminant situation at your particular workplace, you have the choice between two powered air turbos and three supplied air regulators.\*

### 3.3 Choose your Breathing Tube

The breathing tube reliably connects the headtop to the air delivery unit, ensuring a constant flow of breathing air. To meet the high respiratory performance requirements, the 3M™ Versaflo™ headtops connect to their air delivery units via the new BT-Series breathing tubes.

### 3.4 Choose accessories (if required)

3M offers a comprehensive range of modular system accessories to make it easier to customise the system to suit individual needs. When using powered air turbos, users must also choose the right filters for the contaminant(s). For supplied air regulators an additional regulator panel is needed.

- 4 Train in fitting and use—to optimise your respiratory protection**

\*This 4 step selection process can be made even easier by choosing 3M's air delivery unit starter kits which includes everything apart from your headtop.

Available Spring/Summer 2010



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



## ALL-NEW BENEFITS FOR SOFT HEADTOP USERS

### Comfortably Worn By More Users

Based on a computer modeling of a worldwide sampling of head sizes, the new 3M™ Versaflo™ S-Series suspensions, through their sizing and adjustment options, will comfortably fit more users than previous models. Their loose-fitting designs mean more comfort for the entire shift when compared to tight-fitting alternatives.

### Improved Visibility

3M™ Versaflo™ S-Series Visors have an excellent field of view, particularly downwards, with reduced curvature for decreased reflections and glare. Their new design, plus their more protective shipping cartons, minimise the potential for visor creasing and visual distortion.



### Improved Shape

The new designs of the Versaflo S-Series Headcovers and Hoods more closely profile the user's head for improved appearance compared to other designs that tend to "peak."

### Excellent Airflow

All Versaflo S-Series users benefit from excellent airflow distribution for improved comfort, lower noise and reduced fogging.

### Added Protection

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

## Integrated Suspension Headcovers and Hoods

Ready to use straight out of the box. Limited eye and face splash protection to EN166. Permit fast replacement of soiled hoods.



**3M™ Versaflo™ S-133 Headcover**  
General purpose.



**3M™ Versaflo™ S-333G Headcover**  
Soft, quiet, more durable, low-linting fabric.



**3M™ Versaflo™ S-433 Hood**  
Includes neck and shoulder coverage.



**3M™ Versaflo™ S-533 Hood**  
Neck and shoulder coverage with soft, more durable, low-linting fabric that readily drapes over user.

## Premium Reusable Suspension Hoods

Can be highly cost-effective for some high disposal rate environments e.g. pharmaceutical. User control of airflow location. Limited eye and face splash protection to EN166.



**3M™ Versaflo™ S-655 Hood**  
General purpose, with inner collar respiratory seal.



**3M™ Versaflo™ S-657 Hood**  
Features double-shroud respiratory seal.

Available Spring 2010



**3M™ Versaflo™ S-757E Hood**  
Special fabric helps capture paint overspray.



**3M™ Versaflo™ S-855E Hood**  
For liquid chemical splash environments.\*

\*Regulatory submissions pending.



# 3M™ Versaflo™ M-Series Faceshields and Helmets



## HIGHLY VERSATILE RIGID HEADTOPS

Available Spring/Summer 2010

The all-new 3M™ Versaflo™ M-Series Faceshields and Helmets feature lightweight, compact and well-balanced faceshields, helmets, and helmets with shrouds that can offer protection from a range of respiratory, impact and splash hazards.



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

Specific products will be available for typical applications such as: paint spraying/chemical processing and metalworking/other applications where hot particles may be present.



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

These products will be suitable for numerous applications such as: metalworking, construction, foundries and confined spaces.



### 3M™ Versaflo™ M-400 Series Helmets with Shrouds—for respiratory, eye, face and head protection with additional neck and shoulder coverage

These products will be suitable for typical applications such as construction, demolition, and smelting.

## Integrated Protection for Multiple Hazards

3M™ Versaflo™ M-Series Headtops provide protection from specific respiratory, head, and eye hazards, with offerings for hearing protection and neck and shoulder coverage. Submission pending.

## Modern, Well Balanced Design

Versaflo M-Series Headtops are lightweight, with excellent balance. Their fully-adjustable suspension includes six-point (four-point for 3M™ Versaflo™ M-100 Faceshield) textile straps for optimal fit and weight distribution. A deflector allows users to direct the airflow inside the headtop for increased control and comfort.

## Easy To Maintain

Versaflo M-Series Headtops are considerably easier to maintain than previous 3M™ Rigid Headtops. Many parts are common to all 3M™ Versaflo™ M-Series Headtops, meaning reduced inventories and downtime. Spare parts and accessories are quick and easy to replace; for example, visors easily slide into place and are secured with a quick snap of a button.

## New Visor

A new visor design combines excellent peripheral and downward vision with good optical clarity. Coated lenses provide added chemical and scratch resistance.

## Versatility

To suit a wide range of needs, industries and applications, the Versaflo M-Series Headtops offer faceseals, covers and shrouds in various designs and fabrics. Accessories include ear-muffs, peel-offs, and a chin strap.



Regulatory submissions pending.

# 3M™ Powered Air Delivery Units

## INTRODUCING 3M™ VERSAFLO™ TR-300 POWERED AIR TURBO

Available Spring/Summer 2010

### Protection from Particles

The new, lightweight 3M™ Versaflo™ TR-300 Powered Air Turbo is the key to easy-to-use, versatile, respiratory protection systems for particle-filled environments. With its

compact, well balanced, slim design, the Versaflo TR-300 Unit answers the respiratory protection needs for a vast number of users.



### Lighter & Smaller

To start, the 3M™ Versaflo™ TR-300 is significantly lighter and thinner than 3M's existing belt mounted turbo units. It also keeps its light weight close to the user's back, reducing the leverage effect that can cause turbos to feel heavier. The slim profile is designed for use in tight spaces, while its smooth, contoured surfaces are less prone to snagging on nearby objects.

### Consistent Airflow

Sophisticated electronics keep the factory-calibrated airflow at a nominal 180 lpm, eliminating the need for regular calibration by the user. Even as the battery discharges, or the filter becomes loaded with particulates, the unit delivers a steady flow of air. The air inlet design helps make sitting possible without compromising the airflow intake.





## Simple Yet Comprehensive Controls

An audible and an LED alarm both signal to the user when there is either low battery charge or low airflow – for example,

a fully-loaded particle filter. LED lights on the battery itself indicate its charge status.



## Intelligent Power

The lightweight lithium ion battery quickly charges and has no memory effect or heavy metals. It can be easily removed for charging. Intelligent chargers help maintain the optimum battery performance and are available in single-

battery or four-battery stations. The standard battery runs continuously for at least 4 hours, while the high-capacity battery runs for at least 8 hours (with new filter and new fully charged battery in both cases).



## Straightforward Maintenance

All maintenance can be done by hand. The battery, filter and pre-filter can all be changed quickly and easily by hand. The belt and turbo unit have smooth surfaces with minimal nooks and crannies, facilitating fast wipe downs for easier cleaning.

A window on the turbo allows instant identification of the installed filter.



## Options For Diverse Environments

The 3M™ Versaflo™ TR-300 Unit offers protection in particulate environments. Users can also select a particulate filter that also reduces nuisance-level organic vapours.\* Alternatively, the user may select a particulate filter that also provides protection against hydrogen fluoride with performance up to 10 x Threshold Limit Value (TLV) as well as offering nuisance-level acid gas performance.

For welding and grinding applications, a spark arrestor reduces the risk of sparks and other hot materials from coming in contact with the filter and motor. Three belt options include standard webbing; a coated, easy-clean model; and a highly-durable, spark-resistant, leather model for heavy-duty applications and environments with flame hazards.



\*"Nuisance level" refers to concentrations below the occupational exposure limit (OEL). Regulatory submissions pending.

# 3M™ Powered And Supplied Air Delivery Units



## POWERED AIR TURBO

### Protection from particulates and/or gases and vapours.

The existing 3M™ Jupiter™ Powered Air Turbo is fully compatible with all 3M™ Versaflo™ headtops and breathing tubes. The Jupiter™ unit is a comfortable, easy-to-use powered turbo unit that provides protection against particulates, gases or vapours, or against a combination of these contaminants depending on the types of filters used.

User benefits:

- Modern, ergo design
- 5 filters for wide range of applications
- Shower decontamination
- Intrinsically Safe kit option
- Acoustic and visual alarms
- Intelligent battery charger
- Meets requirements of EN12941 TH3 (Nominal Protection 500) with S-Series headtops \*



## Supplied Air Regulators



The **3M™ Versaflo™ V-500E Regulator** can be combined with any 3M™ Versaflo™ headtop to ensure an individually-adjustable, constantly-controlled airflow. Its integrated silencer makes operation extremely quiet. The V-500E regulator requires a working pressure of 3,5 bar (working pressure tbc).



The **3M™ Versaflo™ V-100E Air Cooling Unit** is 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-200E Air Heating Unit** is a good choice for workers who are exposed to uncomfortably low temperatures, in addition to their exposure to high concentrations of airborne contaminants.

For full details see our full range catalogue, or contact your local 3M representative

\*All other systems shown in this brochure have Regulatory Submissions Pending.



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