





#### **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 first US government 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. 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. With 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, advanced over years of research and development, customer feedback, and customer success.

# And Now: 3M™ Versaflo™ respirator systems

The new 3M Versaflo respirator systems represents an enormous effort by 3M to accomplish three major goals:

- simplify the equipment selection process
- increase system versatility
- improve user comfort every step of the way





#### INTRODUCING A HIGHLY VERSATILE RANGE OF RESPIRATOR SYSTEMS

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.

3M<sup>™</sup> Versaflo<sup>™</sup> Respirator Systems are a comprehensive approach to worker protection systems based on comfortable-to-wear modules.



# **Integrated Protection**

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

# **Flexibility**

Each system has three easy-to-select modules – an air delivery unit, a headtop 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-Day Comfort**

With 3M Versaflo Respirator 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.

#### **Easier To Breathe**

With 3M Versaflo 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**

3M<sup>™</sup> Versaflo<sup>™</sup> 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<sup>™</sup> Versaflo<sup>™</sup> 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.

# **New Levels of Simplicity**

- Easy to select compatible modules.
- The 3M<sup>™</sup> Versaflo<sup>™</sup> TR-300 turbo unit is equipped with automatic flow control, low battery alarm, and low flow alarm.
- Most user interface/adjustmentpoints highlighted in blue for conveniencce.
- QRS (Quick Release Swivel) breathing tubes allow fast and easy connection.
- Easily removable parts allow simple cleaning, maintenance and replacement.
- Many common parts across the range.
- Accessories and options to suit different applications.



#### New Levels of Comfort

- Lightweight, compact and well-balanced designs.
- Breathable air is provided to the wearer; reducing the additional breathing effort required.
- Adjustable airflow feature distributes airflow where the user wants.
- Quiet system with reduced motor noise and air whistling.
- Soft faceseals and inner collars.
- Multiple size adjustment options allow for a comfortable fit.
- Provides excellent peripheral and downward vision.

# PROTECTION AGAINST MULTIPLE HAZARDS

# **Respiratory Protection Eye and Face Protection**





#### 3M™ VERSAFLO™ RESPIRATOR SYSTEMS ARE EASY TO SELECT

#### 3M™ Versaflo™ S-Series Headtops



3M<sup>™</sup> Versaflo<sup>™</sup> S-133/333G Integrated Headcover



3M<sup>™</sup> Versaflo<sup>™</sup> S-433/533 Integrated Hoods



3M™ Versaflo™ S655/657/757/855E Reusable Suspension Hoods

#### 3M™ Versaflo™ M-Series Headtops



3M<sup>™</sup> Versaflo<sup>™</sup> M-106/107 Faceshields



3M™ Versaflo™ M-306/307 Helmets



3M<sup>™</sup> Versaflo<sup>™</sup> M-406/407 Helmets with Shrouds

#### 3M™ Versaflo™ BT-Series Breathing Tubes



3M" Versaflo" BT-20S Breathing Tube Lightweight breathing tube that

Lightweight breathing tube that comes in two lengths and is easy to wipe down.

Material: Polyurethane. Length: 735 mm.



3M™ Versaflo™ BT-30 Breathing Tube

Self-adjusting length for improved fit for all wearers and reduce risk of catching and snagging.

Material: Polyurethane. Length: 525 - 850 mm.



3M<sup>™</sup> Versaflo<sup>™</sup> BT-40 Breathing Tube Heavy-duty breathing tube.

Material: Neoprene. Length: 840 mm.



**Accessories** 

BT-922: Disposable breathing tube cover.

BT-926: Flame resistant breathing tube cover

#### 3M™ Powered Air Respirators



3M™ Versaflo™TR-300 Powered Air Respirator



3M<sup>™</sup> Jupiter<sup>™</sup> Powered Air Respirator

# 3M™ Versaflo™ Supplied Air Regulators



3M<sup>™</sup> Cooling Vortex Assembly V-100



3M<sup>™</sup> Heating Vortex Assembly V-200



3M<sup>™</sup> Versaflo<sup>™</sup> V-500E Regulator

# Four Steps to the Right Respirator:

1. Choose your Headtop

2. Choose the appropriate Breathing Tube

3. Choose your Air Delivery Unit

4. Choose your options and accessories

# 3M™ Powered and Supplied Air Delivery Units

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

The all-new, lightweight 3M<sup>™</sup> Versaflo<sup>™</sup> TR-300 Powered Air Respirator is the key to an easy-to-use, versatile, respirator system for environments with hazardous particles.

#### Lighter & Smaller

- The turbo has a slim profile designed for use in tight spaces.
- The weight of the turbo is only 1 095 g (including particulate filter, high-capacity battery and standard belt). The curved design of the TR-300 means that it can be worn close to the user's back, reducing the leverage effect that can cause turbos to feel heavier.
- The compact shape and air inlet design helps make sitting possible without compromising the airflow intake.

#### **Controlled Airflow**

• Sophisticated electronics keep the factory-calibrated airflow at a nominal 190 l/min, 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.







# Simple Yet Comprehensive Controls

- An audible and LED alarm both signal to the user when there is either low battery charge or low airflow for example, due to a fully-loaded particle filter.
- LED lights on the battery itself indicate its charge status.

# Intelligent Power

- The **high-capacity battery** runs for at least 10-12 hours (with new filter and fully charged battery). Recharging time is less than 3.5 hours.
- 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 fourbattery stations.

# 3M™ Powered and Supplied Air Delivery Units

#### Straightfoward, Minimal 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 facilitating fast wipe downs for easier cleaning.
- IP53 rating. Suitable for use in decontamination shower.
- A window on the turbo allows instant identification of the installed filter.
- Durable brushless motor for superior reliability.





**Options For Diverse Environments** 

- Filters:
  - Pre filter
  - PAPR-P3 Particulate filter
  - PAPR-P3 Particulate filter that also reduces nuisance-level organic vapours.\*
  - PAPR-P3 Particulate filter that also provides protection against hydrogen fluoride with performance up to 10 x the Exposure Standard value as well as offering nuisance-level acid gas performance\*.
- For welding and grinding applications, a spark arrestor reduces the risk that sparks and other hot materials will come in contact with the filter and motor.
- Belts:
  - Standard webbing belt
  - Coated, easy-clean belt
  - Spark-resistant, leather belt for heavy-duty applications
  - Braces and a backpack are also available.
- High-Capacity battery.
- Single Charger and 4-Station Battery Charger kit.





The 3M Versaflo TR-302E Turbo Unit comes with a filter cover and an airflow indicator only.



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

#### 3M™Versaflo™ TR-315A Starter Kit

This 3M Versaflo TR-315A Starter Kit (photo) includes the TR-300 turbo unit, particulate filter, pre-filter, standard belt, high capacity battery pack, battery charger kit (not shown), self-adjusting breathing tube and airflow indicator.

# 3M™ Powered and Supplied Air Delivery Units

#### 3M™ JUPITER™ POWERED AIR RESPIRATOR

# Protection from particulates and/or gases and vapours

The existing 3M<sup>™</sup> Jupiter<sup>™</sup> Powered Air Respirator is fully compatible with all 3M<sup>™</sup> Versaflo<sup>™</sup> Headtops and Breathing Tubes. The 3M Jupiter Respirator provides repiratory protection against particulate and gaseous contaminants (particulate only and combined particulate/gas and vapour filters are available).

Ergonomically designed to sit at the base of the user's back, the unit's low weight is carried mostly on the user's hips via the wide decontamination belt. As a result, the 3M Jupiter Respirator is comfortable enough to wear for entire work shift. Includes decontamination belt, airflow indicator and calibration tube.





#### User benefits:

- · Modern, ergonomic design
- 3 filters for wide range of applications
- Decontamination belt for improved fitting and easy cleaning.
- IP53 rating. Can be worn during shower decontamination.
- 3M™ Jupiter™ Intrinsically Safe Kit option. IS Rating: EN50020 EEx ib IIB T3
- Optional braces
- Audible and visual alarms
- Intelligent battery charger. Economy (4 hours) or High-Capacity (8 hours) batteries.
- Meets the performance standards of AS/NZS1716



# 3M<sup>™</sup>Jupiter<sup>™</sup> Powered Air Turbo Unit

3M Jupiter Starter Kit (see photo) includes a standard 3M Jupiter turbo including decontamination belt and clip, air flow indicator, calibration tube and Nickel Metal Hydride (NiMH) battery pack.

#### **3M™ Powered And Supplied Air Delivery Units**

# 3M™ VERSAFLO™ V-SERIES SUPPLIED AIR REGULATORS

# 3M™ Versaflo™ V-500E Regulator

3M Veraflo V-500E Regulator ensures an individually-adjustable, consistently-controlled airflow. The regulator requires a working pressure of 3.5-8 bar and is extremely quiet due to the integrated silencer (<65 dBA). An integrated warning whistle warns the user of low airflow into the headtop.

- Spray gun or compressed air tool port
- Replaceable carbon filter
- Complies with performance standard AS/NZS 1716:2003
- Airflow: 170-305 l/min
- Weight: 550 g



3M V-100 and V-200 air regulators allow wearers to either cool (V-100) or heat (V-200) the air by as much as  $28^{\circ}$ C, making them a good choice for workers exposed to either uncomfortably hot or cold temperatures.

- Regulator requires a working pressure of 4-5 bar.
- Complies with performance standard AS/NZS 1716:2003
- Airflow: 170-500 1/min
- Weight: 605 g(V-100), 499 g (V-200)









V-500E Air Regulator

V-200 Heating Vortex

Please see the data on the headtop used with the unit for information on protection factors.



### Comfortably Worn By More Users

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

#### Improved Visibility

The visors have an excellent field of view, particularly downwards, with reduced curvature for decreased reflections and glare.

Their new design minimises the potential for visor creasing and visual distortion.



# Improved Shape

The new designs of 3M Versaflo S-Series Headcovers and Hoods more closely profile the user's head for improved appearance compared to some designs that tend to "peak."

#### **Excellent Airflow**

All 3M<sup>™</sup> Versaflo<sup>™</sup> S-Series Headtop users benefit from excellent airflow distribution for improved comfort, lower noise and reduced fogging.

#### Added Protection

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

# Integrated Suspension Headcovers and Hoods

Ready to use straight out of the box. Permits fast replacement of soiled hoods Available in two adjustable sizes: Small (S) and Large (L)



**3M™ Versaflo™ S-133 Headcover** General purpose, cost-effective fabric.

Fabric material: Polypropylene coated non-woven polypropylene. Visor material: PETG.



3M™ Versaflo™ S-333G Headcover

Soft, quiet, more durable lowlinting fabric.

Fabric material: Polyurethane coated knitted polyamide.
Visor material: Coated polycarbonate, for increased chemical and scratch resistance.



3M<sup>™</sup> Versaflo<sup>™</sup>S-433 Hood Includes neck and shoulder coverage.

Fabric material: Polypropylene coated non-woven polypropylene.

Visor material: PETG.



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

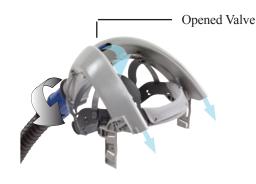
Fabric material: Polyurethane coated knitted polyamide.
Visor material: Coated polycarbonate for increased chemical and scratch resistance.

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



# INNOVATIVE SUSPENSION WITH ADJUSTABLE AIRFLOW

\* The externally adjustable collar allows wearers to control direction of airflow for personal comfort.





\* Reusable suspension hoods only.

#### Respiratory protection standards - Versaflo S-Series Hoods & Headcovers

3M <sup>™</sup> Air Delivery Unit	Standard	RMPF **
TR-300	AS/NZS1716	50 (Particles)
Jupiter	AS/NZS1716	50 (Particles) 10 (Gas/Vapour)
V Series	AS/NZS1716	100 (Particles) 100+ (Gas/Vapour)



# Premium Hoods with Reusable Suspensions

Cost effective choice for some high disposal rate environments. Just the soiled hood fabric is replaced, while the suspension and air ducting can be reused. User control of airflow location and suspension adjustments for best comfort and custom fit.



#### 3M™ Versaflo™ S-655 Hood

General purpose, with knitted inner collar that is shorter and thinner than previous models.

Fabric material:
Polypropylene coated
non-woven polypropylene.
Visor material: PETG.



#### 3M™ Versaflo™ S-657 Hood

Features a double-shroud design for its respiratory seal. Comes with inner shroud, providing additional coverage and comfort (by allowing excess air to be channelled over the body).

Fabric material: Polypropylene coated non-woven polypropylene. Visor material: PETG.



#### 3M™ Versaflo™ S-757 Painters Hood

Fabric specifically intended to help capture paint overspray and minimise flaking. The fabric also has an internal film barrier to help prevent paint contact with skin and clothes. Comes with inner shroud, providing additional coverage and comfort (by allowing excess air to be channelled over the body).

Fabric material: Polypropylene coated non-woven polypropylene.

Visor material: PETG.



3M™ Versaflo™ S-855E Hood

Sealed seam hood for liquid chemical splash environments. Fabric material: Zytron® 200. Visor material: Coated polycarbonate.

Zytron° is a registered trademark of Kappler.

<sup>\*\*</sup> Required Minimum Protection Factor

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

#### HIGHLY VERSATILE RIGID HEADTOPS

- All-new 3M<sup>™</sup> Versaflo<sup>™</sup> M-Series Headtops feature lightweight, compact
  and well-balanced faceshields and helmets that can offer integrated
  protection from a range of respiratory, head, eye and face hazards, with
  offerings for neck and shoulder coverage.
- The M-100 Faceshield and M-300 & M-400 Helmets, meet the highest standard of respiratory protection for this type of solution when integrated with the relevant 3M Air Respirator system.

# Modern, Well Balanced Comfortable Design

- Lightweight, with excellent balance.
- Fully-adjustable suspension that includes textile straps for optimal fit and weight distribution.
- A deflector allows users to direct the airflow inside the headtop for increased control and comfort.



#### **New Visor**

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

#### Easy To Maintain

- 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 by quickly snapping two buttons.

#### Versatility

- To suit a wide range of needs, industries and applications, 3M Versaflo
   M-Series headtops offer faceseals and shrouds in various fabrics.
- Accessories include ear-muffs, peel-off's, head covers and a chin strap.



**3M**<sup>™</sup> **Versaflo**<sup>™</sup> **M-100 Series Faceshields** for respiratory, eye and face protection:

**M-107** features a comfortable, versatile flame resistant faceseal which enables the faceshield to be used for a range of workplace tasks including, dusts, spraying, chemical processing as well as applications with hot particles.



**3M" Versaflo" M-300 Series Helmets** for respiratory eye, face and head protection:

**M-307** features a comfortable, versatile flame resistant faceseal which enables the helmet to be used for a range of jobs in construction, chemical processing and heavy industry work environment as well as applications with hot particles.



**3M" Versaflo" M-400 Series Helmets** with shrouds for respiratory, eye, face and head protection with additional neck and shoulder coverage:

**M-406** features a highly durable shroud for construction applications and heavy industry.

Fabric material: Cordura® nylon

**M-407** features a flame resistant shroud for applications with hot particles. Fabric material: flame resistant Nomex®

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

# **FEATURED ACCESSORIES**

Accessories	Part No.	Description	Accessories	Ordering No.	Description
	M-928	Peel-Off Visor Covers		M-958	Chin strap
	M-935 M-937	Standard faceseal (white) Flame resistant faceeal		M-972	Flame Resistant Headtop Cover
	M-447 M-448	Flame-resistant shroud High-durability shroud		M-976	Head, Neck and Shoulder Cover, for M-100 and M-300 headtops.

# **RESPIRATORY PROTECTION STANDARDS - 3M AIR DELIVERY UNITS**

3M Air Delivery Unit	Standard	M-100 RMPF	M-300 RMPF	M-400 RMPF **
TR-300	AS/NZS1716	50 (Particles)	50 (Particles)	50 (Particles)
Jupiter	AS/NZS1716	50 (Particles) 10 (Gas/Vapours)	50 (Particles) 10 (Gas/Vapours)	50 (Particles) 10 (Gas/Vapours)
Versaflo V Series	AS/NZS1716	100 (Particles) 100+ (Gas/Vapours)	100 (Particles) 100+ (Gas/Vapours)	100 (Particles) 100+ (Gas/Vapours)

<sup>\*\*</sup> Required Minimum Protection Factor

# IMPACT PROTECTION STANDARDS - VERSAFLO M-SERIES FACESHIELD & HELMETS

Versaflo M-Series Headtop	M-100	M-300	M-400
AS/NZS 1337.1 Personal eye protection - high impact	Yes	Yes	Yes
AS/NZS 1801 Type 1 Occupational protective helmets	N/A	Yes	Yes



#### TRAINING AND SUPPORT

3M's team of Technical Specialists are available nationally, to provide support and training that meet the needs of our customers.

Furthermore, our qualified and highly experienced team are able to assist customers by:

- Conducting initial and ongoing assessments of the workplace.
- Recommending appropriate respiratory, hearing, eye protection, communication and spill management solutions required to maintain a safe work environment
- Providing technical advice about the correct use and maintenance of the solution that has been selected
- Facilitate on-site fit testing for both respiratory and hearing protection solutions, as required

No matter how effective a piece of Personal Protective Equipment (PPE) is, it will offer little or no protection if it is not fitted and/or worn correctly. Proper inspection, cleaning and storage is vital for safety equipment that protects a worker's health and well-being.

That is why 3M offers training programs that explain the correct way to fit, inspect, clean and store the PPE designed and manufactured by our company.

#### 3M TechAssist

3M TechAssist is the ideal point of contact for your questions, especially when you require a prompt answer. Supported by trained staff, TechAssist is an immediate link to the worldwide resources of 3M.

Customers can contact TechAssist to answer questions on product information, technical advice, guidance with product selection, Australia/New Zealand Standards and other important information they need to know on a day-to-day basis.

See back cover for Technical Assistance contact details.

#### Nationwide Distributor Network

3M distributes our wide range of workplace safety products through a distributor and retail network throughout New Zealand.

For more information about 3M Safety products or solutions please contact your 3M representative or:

3M TechAssist Helpline 3M Customer Service Website 0800 364 357 0800 256 257 3m.com/nz/PPESafety



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