



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



3M™ Reusable Respirators



Respirators for Your Workplace





3M™ Ultimate FX Full Facepiece Reusable Respirator FF-400 Series

FF 401 (Small)
FF 402 (Medium)
FF 403 (Large)

Comfortable, durable protection for demanding, X-treme conditions

The lightweight Ultimate FX FF-400 was developed to provide maximum comfort and durability with unique features that make it the optimal choice for a variety of industrial applications:

Large Lens Featuring Scotchgard™ Protector

- Paint and stain-resistant lens—3M's exclusive Scotchgard™ coating causes some paints and stains to bead up on the surface so they can be wiped off easily
- Helps lens stay clearer during some spray applications
- Provides a wide field of view

Passive Speaking Diaphragm

- Optimally positioned for clearer and easier communications

Bonded Silicone Gaskets

- Eliminates loose gaskets that can be lost

Easy to Use

- Respirator attachments twist on and off easily for quick assembly and disassembly

Durable, Long-lasting Head Harness

- Features a six-strap configuration for a secure fit
- Harness straps pulled over one million times in development durability testing

Comfort Cradle

- Positions the respirator more comfortably on the head

Soft, Silicone Nose Cup and Faceseal

- Engineered for maximum durability, comfort and resilience
- Three sizes help the respirator fit a broad range of face shapes and sizes

Cool Flow™ Valve

- Allows for easier breathing
- Reduces heat and moisture buildup for cool, dry comfort

3M Reusable Respirators Technology Innovations Over the Years



3M offers the first reusable "Maintenance-Free" Half Facepiece Respirator

1977



3M designs and develops the "bayonet-style" cartridge connection

1989



3M develops first disc filters with loaded web filter media—the first non-woven, non-fiberglass filters

1992

3M manufactures a "swept-back" designed cartridge for its 5000 Series Facepiece for better peripheral vision and weight distribution



1987

3M develops and incorporates a new integral filter technology in its 4000 Series Facepiece, creating a lighter weight respirator



1991

3M launches its 6000 Series Full Facepiece Respirator offering best-in-class field of view and lightweight characteristics



1996

3M™ Full Facepiece Reusable Respirator 6000 Series

6700 (Small)
6800 (Medium)
6900 (Large)



Reliable, convenient, compatible protection

- Unique center adapter directs exhaled breath and moisture downward, and helps reduce debris from depositing in the valve. Smooth surface allows for quick and easy cleaning
- Large lens provides wide field of view and excellent visibility
- 3M™ Cool Flow™ Valve helps provide cool, dry comfort
- Meets requirements of ANSI Z87.1-2010 for high impact (Z87+)
- Lightweight, well-balanced design with silicone face seal for enhanced comfort and durability
- Available in air purifying respirator (APR), supplied air and powered air purifying respirator (PAPR) modes



3M™ Full Facepiece Reusable Respirator 7800S Series

7800S-S (Small)
7800S-M (Medium)
7800S-L (Large)

Designed for durability and protection

- Silicone facepiece enhances fit and improves durability
- Double-flange face seal and six adjustable straps help provide a secure fit
- Can be used with a passive or electronic clip-on welding lens
- Available in air purifying respirator (APR), supplied air and powered air purifying respirator (PAPR) modes
- FR-7800B (First Responder) version available
 - Butyl rubber seal to minimize permeation
 - CBRN approved with FR-15-CBRN



2002 3M develops first rectangular filter with unique seal-check capabilities



2007 3M develops first HF P100 nuisance OV filter. Offers lowest breathing resistance on the market



2010 3M develops first Full Facepiece Respirator with Scotchgard™ coating, overmolded gaskets, and comfort head cradle

2002

2002

2007

2009

2010

2013

3M introduces Cool Flow™ Valve for reduced heat and moisture in the 7500 Half Facepiece Respirator



3M develops easier breathing, longer lasting 2000 Series disc filters



3M introduces the 6500 Half Facepiece Respirator, our lightest silicone half facepiece





3M™ Half Facepiece Reusable Respirator 7500 Series

7501 (Small)
7502 (Medium)
7503 (Large)

Easy breathing, comfort and durability

Soft Seal Design

- Advanced silicone material provides a softer feel on the face
- Unique adjustment design helps reduce tension and pressure points on the face for unsurpassed comfort

Adjustable Head Cradle

- Allows wearer to adjust for optimum fit and comfort

Dual-mode Head Harness

- Adjusts easily so user has the option of wearing respirator in either traditional or drop-down mode

Cool Flow™ Valve

- Valve design helps make breathing easier
- Helps reduce heat and moisture buildup for cool, dry comfort

Unique Exhalation Valve Cover

- Directs exhaled breath and moisture downward
- Smooth surface allows for quick and easy cleaning
- Helps reduce debris from depositing in valve area



3M™ Rugged Comfort Half Facepiece Reusable Respirator 6500 Series

6501 (Small)
6502 (Medium)
6503 (Large)

Rugged comfort, durability, and slim profile design

6501QL (Small)
6502QL (Medium)
6503QL (Large)



Adjustable Head Harness Assembly

- Optimum fit and comfort with three-size adjustable head cradle
- Long-lasting polyester/spandex straps

Silicone Face Seal

- Provides comfort and stability with a soft but firm face seal
- Extended product life due to resilient silicone material
- Our lightest silicone facepiece
- Keeps its shape in high-heat environments

3M™ Bayonet Connection

- Compatible with all 3M™ bayonet-style cartridges and filters

Quick Latch Drop-Down Mechanism*

- Easy on and off as you move in and out of contaminated areas
- No need to remove your hard hat or faceshield when lowering or raising your respirator

Valve Cover Design

- Directs exhaled breath and moisture downward
- Easy positive pressure seal check

Cool Flow™ Valve

- Enhanced comfort by reducing heat and moisture
- Easier breathing with unique valve design



3M™ Half Facepiece Reusable Respirator 6000 Series

Compatible, convenient respiratory protection

- Facepiece is made from soft, lightweight material
- Available with a standard or drop-down head harness option. Drop-down model allows wearers to lower the respirator without removing hard hat or faceshield
- Head harness assembly and spare parts are available



Standard

- 6100 (Small)
- 6200 (Medium)
- 6300 (Large)



Drop-down

- 6100DD (Small)
- 6200DD (Medium)
- 6300DD (Large)



3M™ Half Facepiece Disposable Respirator 5000 Series

Balanced design, disposable convenience

- Easy to use and convenient
- Pre-assembled with permanently attached cartridges; no maintenance necessary
- Facepiece is made from soft, lightweight material
- Ideally suited for:
 - Intermittent respirator use
 - Plant shutdowns and turnarounds
 - Dirty applications where respirators wear out or become difficult to clean in a short time



- 5101 Organic Vapor Respirator (Small)
- 5201 Organic Vapor Respirator (Medium)
- 5301 Organic Vapor Respirator (Large)

- 5103 Organic Vapor/Acid Gas Respirator (Small)
- 5203 Organic Vapor/Acid Gas Respirator (Medium)
- 5303 Organic Vapor/Acid Gas Respirator (Large)

- 51P71 P95 Paint Spray/Pesticide Assembly (Small)
- 52P71 P95 Paint Spray/Pesticide Assembly (Medium)
- 53P71 P95 Paint Spray/Pesticide Assembly (Large)



Identify the Hazards

Applications and Industries	Potential Hazards	Cartridge/Filter Options*
Spray Painting, Varnishing, Staining & Coating	Solvent-based	OV/P95
	Water-based Latex	Nuisance OV**/P95
Sanding & Grinding	Particulate	N95
Welding	Weld Fume	N95
	Stainless Steel & Galvanized	Nuisance OV**/P95
Abatement	Lead & Asbestos	P100
	Mold	N95 - P100/ Nuisance OV**
Cement Work	Silica/Dust	N95
Cleaning & Janitorial	Bleach	AG/P95
	Ammonia	AM/MA/P95
	General Cleaning Products	OV/P95
Agriculture	Pesticides & Insecticides	OV/AG/P95 - P100
Construction	Particulate	N95
Manufacturing	Solvents	OV
	Particulate	N95
Pharmaceutical Manufacturing	Particulate	N95/P100
Chemical Manufacturing	Sulfur Dioxide, Chlorine	AG/P95
	Ammonia	AM/MA/P95

*Respirator facepiece or system must be chosen based on the contaminant, airborne concentration and the necessary assigned protection factor.

**Nuisance level refers to concentrations below the Occupational Exposure Limit (OEL) or other applicable government regulations, whichever is lower.

If you are uncertain of the concentration levels of contaminants or recommended levels of respiratory protection, contact the 3M Technical Service Helpline at 1-800-243-4630.

This guide is only an outline. It should not be used as the only means for selecting a respirator. Details regarding performance and limitations are set out on the respirator package and *User Instructions*. Before using any of these respirators, the wearer must read and understand the User Instructions for each product.



Select the Right Respirator

	5000	6000 HF	6500	7500	6000 FF	FF-400	7800S
Enhanced Durability			●	●		●	●
Maintenance Free	●						
Enhanced Comfort			●	●	●	●	
Drop-down Feature		●*	●**	●			
3M™ Cool Flow™ Valve			●	●	●	●	
Compatible with 3M™ Supplied Air System		●	●	●	●	●	●
Compatible with 3M™ PAPR Systems					●	●	●
Eye Protection					●	●	●
Speaking Diaphragm						●	●
Accessories					●	●	●
Spare Parts		●	●	●	●	●	●
Six-point Head Harness						●	●
Silicone Faceseal			●	●	●	●	●
Compatible with Welding Shield		●	●				
Clip-on Welding Shield							●

*6000DD Version.

**6500QL Version.

Find a Combination that Works Best for You



6000 Series



6500 Series



7500 Series



6000 Series



Ultimate FX
FF-400



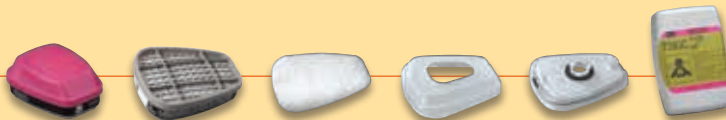
7800 Series



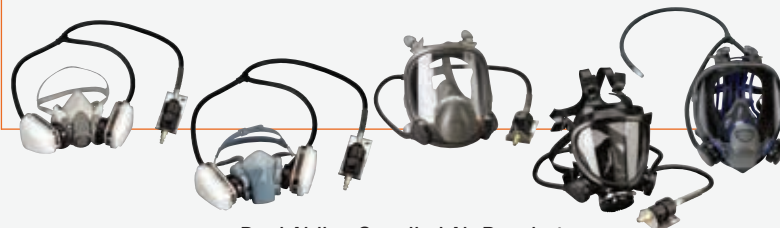
Particulate Protection



Gas and Vapor Protection



Combines Particulate
and Gas and Vapor
Protection



Dual Airline Supplied Air Respirator

For all 6000, 7000
and FF-400 Series
Respirators



Face-mounted PAPR[†]
(available for 6000 FF only)

Belt-mounted PAPR[†]

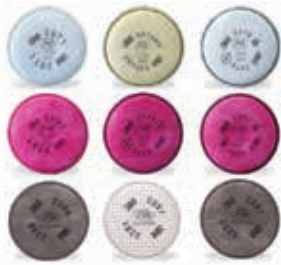
For 6000 and 7000*
Series Full Facepiece
Respirators

[†]Powered Air Purifying Respirator
*Belt-mounted PAPR only

3M™ Particulate Filters and Gas/Vapor Cartridges

All 3M Particulate Filters and Gas/Vapor Cartridges can be used interchangeably with 3M™ Reusable Respirators 6000, 6500, 7000 and FF-400 Series.

3M™ Particulate Filters 2000 Series



- Lightweight and easy to breathe through
- Assortment of filters available for a wide range of applications
- Easier breathing through new 3-layer advanced Electret Filter Media in 2200 Series Filters

Part Number	Description
2071	Particulate Filter, P95
2076HF	Particulate Filter, Hydrogen Fluoride/P95, with Nuisance Level Acid Gas Relief*
2078	Particulate Filter, P95, with Nuisance Level Organic Vapor/Acid Gas Relief*
2091	Particulate Filter, P100
2096	Particulate Filter, P100, with Nuisance Level Acid Gas Relief*
2097	Particulate Filter, P100, with Nuisance Level Organic Vapor Relief*
2291	Advanced Particulate Filter, P100
2296	Advanced Particulate Filter, P100, with Nuisance Level Acid Gas Relief*
2297	Advanced Particulate Filter, P100, with Nuisance Level Organic Vapor Relief*

3M™ Particulate Filter 7093, P100

- Unique, spring-loaded filter cover design simplifies negative pressure user seal checks
- Swept-back design provides enhanced field of view and greater comfort
- 7093C offers a lightweight, low profile design that combines P100 filtration with carbon-loaded features found in heavier combination cartridge products



7093	Particulate Filter, P100
7093B	Particulate Filter, P100, Bulk
7093C	Cartridge/Filter, Hydrogen Fluoride, P100 with Nuisance Level Organic Vapor and Acid Gas Relief*

3M™ Gas/Vapor Cartridges 6000 Series



- Low-profile design helps maintain good field of vision
- Full range of cartridges to meet your needs

6001	Cartridge, Organic Vapor
6002	Cartridge, Acid Gas**
6003	Cartridge, Organic Vapor/Acid Gas**
6004	Cartridge, Ammonia/Methylamine
6005	Cartridge, Formaldehyde/Organic Vapor
6006	Cartridge, Multi Gas/Vapor**
6009	Cartridge, Mercury Vapor or Chlorine

3M™ Combination Cartridges/P100 Particulate Filters 6000 Series



- Particulate filter is permanently attached to cartridge for easy, one-step assembly
- Unique design for enhanced comfort and visibility

60921	Cartridge/Filter, Organic Vapor/P100
60922	Cartridge/Filter, Acid Gas/P100**
60923	Cartridge/Filter, Organic Vapor/Acid Gas/P100**
60924	Cartridge/Filter, Ammonia/Methylamine/P100
60925	Cartridge/Filter, Formaldehyde/Organic Vapor/P100
60926	Cartridge/Filter, Multi-Gas/Vapor/P100**
60928	Cartridge/Filter, Organic Vapor/Acid Gas/P100**†
60929	Cartridge/Filter, Mercury Vapor/Chlorine Gas/P100

* 3M recommended for relief against nuisance levels of organic vapors and acid gases. Nuisance level organic vapor and acid gas refers to concentrations not exceeding OSHA PEL or applicable government occupational exposure limits, whichever is lower. Do not use for respiratory protection against acid gases or organic vapors (except hydrogen fluoride).

** Reminder: These cartridges are approved for respiratory protection from hydrogen sulfide gas up to 10 times the permissible exposure limit (PEL) with half facepiece respirators and full facepiece respirators when qualitatively fit tested, or up to less than 300 parts per million (ppm) with full facepiece respirators when quantitatively fit tested or according to specific OSHA standards or applicable government regulations, whichever is lower. 300 ppm is the concentration considered Immediately Dangerous to Life or Health (IDLH) for hydrogen sulfide.

† As recommended by the California Department of Pesticide Regulation No. 01-009-Methyl Bromide Field Fumigation. 3M recommended for use against radioiodine and methylbromide. Note: not NIOSH approved for methylbromide or radioiodine.

For More Information

In the United States, contact:

Technical Service
1-800-243-4630

Customer Service
1-800-328-1667

Internet
www.3M.com/PPESafety

In Canada, contact:

Technical Service
1-800-267-4414

3M Canada Customer Care
1-800-364-3577

Internet
www.3M.ca/safety

For other 3M products:

Technical Service
1-800-3M-HELPS



Personal Safety Division
3M Center, Building 235-2W-70
St. Paul, MN 55144-1000

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WARNING

These respirators help protect against certain airborne contaminants. **Misuse may result in sickness or death.**

For proper use, the wearer must read and understand *User Instructions* provided as a part of product packaging, see supervisor, or call 3M PSD Technical Service, 1-800-243-4630. Time use limitations may apply.

Important—Before using these respirators, you must determine the following:

1. The type of contaminant(s) for which the respirator is being selected.
2. The concentration level of contaminant(s).
3. Whether the respirator can be properly fitted on the wearer's face. All respirator instructions, warnings and use and time limitations must also be read and understood by the wearer before use. Before use of these respirators, a written respiratory protection program must be implemented, meeting all the requirements of OSHA 29 CFR 1910.134, including training and fit testing.