3M Science. Applied to Life.™

NEW

NEW
3M™ COOL FLOW™
COMFORT VALVE

Making great things possible. Comfortably.

Safety and comfort are a top priority at 3M. The third generation of Aura™ respirator brings a number of improvements, combining impressive new technology with ergonomic design. The new Cool Flow™ Comfort Valve opens easier to help reduce heat inside the respirator, delivering a more comfortable wearer experience.

3M™ Aura™ 9300+Gen3
Third generation respirator.

Introducing the third generation design

“As long as people have reasons not to want to wear a respirator, we will continue our work to overcome them”

Chris Henderson, 3M Divisional Scientist and one of the inventors behind the 3 generations of Aura™ respirator

The 3M™ Aura™ Particulate Respirator 9300+Gen3 Series is now the third generation.

In 1996 3M launched the first ever 3-panel, flat-fold design disposable respirator.

In 2011, the Aura™ 9300+ Series built upon this with a new, improved filter media and upper panel features engineered to improve eyewear compatibility and reduce eyewear fogging.

“I’m working towards the day when our respirators are so comfortable that people forget they even have them on”

Dr. Philip Eitzman, 3M Scientist and developer of the 3M™ Cool Flow™ Comfort Valve

At 3M we recognise the importance of the confidence in protection gained by a respirator wear. As such, the 9300+Gen3 retains all of the valued features of its predecessor and enhances it with a new 3M™ Cool Flow™ Comfort Valve, more durable braided headbands, and tabs on the upper and lower panels for added convenience of use.

Clear vision

Embossed top panel

- Helps re-direct exhaled air, reducing fogging of eyewear

Curved, low profile design

- Conforms well to nose and eye contours – helps provide a good field of vision
- Designed to be compatible with safety eyewear from 3M

Ease of positioning

NEW upper and lower tabs

- Along with the new 'grip' feature on the valve, enable an easier opening of the respirator to simplify the positioning and adjustment on the face
- Integrated noseclip for personal customisation

3M Original design

3-panel flat-fold design

- Designed to fit wide range of face shapes and sizes

Product Materials

- Large soft nose foam material and smooth inner cover
- These products do not contain components made from:
  - Natural rubber latex
  - PVC

Easier to put on*

2017

Cooler breathing*

Cooler breathing

NEW Cool Flow™ Comfort Valve

- Opens 37% easier*
- Allows more than 36% extra air flow through the valve*
- Provides a cooler breathing experience

3M™ Advanced Electret (Filter) Media (AEM)

- High charge on filter fibres attracts particles from a wider capture area, enabling less filter media to be needed
- Low initial breathing resistance

More durable*

Convenience of use

Individual packaging

- Hygienic individual packaging helps protect the respirator from contamination before use
- Allows practical storage and dispensing in the workplace

Engineered for comfort

NEW braided headbands

- Enhanced durability without compromising comfort
- Colour coded for easy identification (yellow for FFP1, blue for FFP2, red for FFP3)

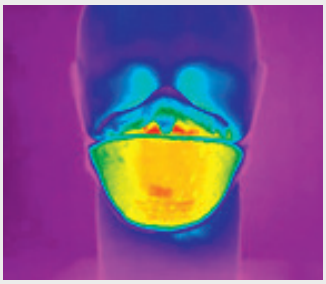
*Versus previous 3M™ Aura™ 9300+ Series

NEW Cool Flow™ Comfort Valve

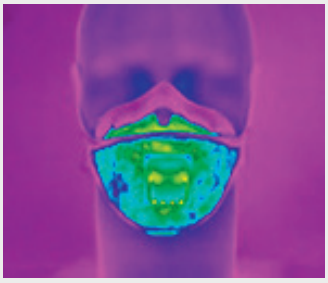
More airflow, less heat inside the respirator

Inhalation: Unvalved 9320+Gen3

Inhalation: Valved 9322+Gen3



Exhalation: Unvalved 9320+Gen3



Exhalation: Valved 9322+Gen3

Testing was conducted using a breathing simulator at 85 litres per minute with exhaled breath conditions of 36°C and 90% relative humidity.

One of the biggest problems during work with a respirator is the heat buildup inside. The warm air, exhaled by the user, can stay inside the respirator and contribute to fatigue. The 3M™ Aura™ 9300+Gen3 Respirators are equipped with two unique features that help to reduce the temperature inside the respirator.

Inhalation is the cooler part of the cycle; **3M's Advanced Electret (Filter) Media (AEM)** allows easy inhalation of the cooler external air through the respirator.

As the wearer inhales, air is pulled through the respirator and the surface temperature decreases. The valve's plastic cover retains some of the heat due to the composition of the material.
As the wearer exhales the respirator is filled with warm, moist air.

Exhalation; 3M's **Cool Flow™ Comfort Valve** opens 37% easier than the original Cool Flow™ valve, allowing 36% more air, together with its natural heat, to be expelled more rapidly. As the hot exhaled air exits through the valve, the rest of the respirator remains cooler and more comfortable. Thermographic imaging enables us to see the cooling effect of the valve on the surface of the product.

The colours in the thermal images show the change in surface temperature during inhalation and exhalation.

Opens 37% easier*

>36% more air flow*

3M's Advanced Electret Media (AEM)

Filtering the air with the help of electrostatic charges

Using a unique manufacturing process, each fibre in the 3M AEM structure is endowed with a very high electrostatic charge. This high level of charge enables each AEM fibre in your 3M filter to attract particles from a wider capture area, efficiently drawing them in and securing them to itself.

The strong 3M AEM charge means less fibres are needed to efficiently capture particles. This enables 3M to construct an effective filter with a much more open structure than conventional electret filters, freeing up the passage of air.

Cooler inside the respirator

78% of the workers surveyed, said the new Aura™ 9300+Gen3 valved models are more comfortable than the previous model.

*Versus previous 3M™ Aura™ 9300+ Series

The importance of fit

Disposable respirators are only effective when there is a good seal between the edges of the respirator and your face. The instant this seal is broken, protection is compromised as contaminated air can leak in through any gaps.

With new tabs on the upper and lower panels of the respirator, and in combination with the 'grip' feature on the valve, the 9300+Gen3 is engineered to be easier to put on, re-position and take-off.

These fitting instructions must be followed each time a 3M™ Aura™ Particulate Respirator 9300+Gen3 Series is worn.

Make sure that your face is clean shaven. Respirators should not be worn with stubble, beards or other facial hair under the area of the face seal as these can prevent a good seal to the face.

1. With reverse side up and using tabs, separate top and bottom panels.

2. Pull chin and nose panel tabs until the noseclip bends so that the respirator forms a cup shape. Ensure both panels are fully unfolded.

3. Whilst still holding the tabs, hold the respirator with open side towards face and bring respirator to face.

4a) VALVED respirator – with one hand, hold the sides of the valve to hold respirator position on face.

4b) UNVALVED respirator – cup respirator in one hand with open side towards face.

5. With other hand, take each strap in turn and pull each strap over your head.

6. Locate the upper strap across the crown of the head and the lower strap below the ears. Straps must not be twisted. Adjust top and bottom panels, using tabs, for a comfortable fit. Ensure that panels are not folded and that tabs are folded flat.

7. Using both hands, mould noseclip to the shape of the nose to ensure a close fit and good seal. Pinching the noseclip using only one hand may result in less effective respirator performance.

8. The seal of the respirator on the face should be fit-checked before entering the workplace.

Fit check procedure

1. Cover the front of the respirator with both hands being careful not to disturb the fit of the respirator.

2a. UNVALVED respirator – EXHALE sharply.

2b. VALVED respirator – INHALE sharply.

3. If air leaks around the nose, re-adjust the noseclip to eliminate leakage. Repeat he above fit check.

4. If air leaks at the respirator edges, work the straps back along the sides of the head to eliminate leakage. Repeat the fit check.

If you CANNOT achieve a proper fit DO NOT enter the hazardous area. See your supervisor.

At 3M, helping improve worker safety is our priority

Metalworking | Pharmaceutical | Woodworking | Construction | Automotive

3M™ Aura™ Particulate Respirator 9300+Gen3 Series option

Unvalved			Valved		
3M™ Aura™ 9310+Gen3	3M™ Aura™ 9320+Gen3	3M™ Aura™ 9330+Gen3	3M™ Aura™ 9312+Gen3	3M™ Aura™ 9322+Gen3	3M™ Aura™ 9332+Gen3
FFP1 NR D	FFP2 NR D	FFP3 NR D	FFP1 NR D	FFP2 NR D	FFP3 NR D
					

NEW

3M Safe Guard™ Product Authentication Process

NEW 3M™ Safe Guard™ Product Authentication Process

- Check online that your product is a genuine 3M manufactured product
- Visit 3M.com/SafeGuard for more information.

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For respiratory training and advice please contact your local 3M™ representative.

Warning: Selection of the most appropriate respiratory protective equipment (RPE) will depend on the particular situation and should be made only by a competent person knowledgeable of the actual working conditions and the limitations of RPE.

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. Specific country legislation must be observed.

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