Frequently Asked Questions

3M™ Versaflo™ Powered Air Purifying Respirators (PAPRs)

Q: When respiratory protection is necessary for helping to control silica exposures, how should employers go about selecting the right one?

A: The OSHA silica standard (29 CFR 1926.1153) requires employers to limit worker exposures to respirable crystalline silica and to take other steps to protect workers. Employers can either use a control method laid out in Table 1 of the construction standard, or they can measure workers’ exposure to silica and independently decide which dust controls work best to limit exposures in their workplaces to the permissible exposure limit (PEL).

In a scenario where a respirator with an APF of 10 is required, a 3M disposable respirator, such as the 3M™ Particulate Respirator 8511, N95 (APF 10) or Reusable Respirator (APF of either 10 or 50 depending on the facepiece type and fit test method used) may suffice. In situations where multiple PPE are being used, (e.g., hard hat, disposable respirator, safety eyewear, etc), powered air purifying respirators (PAPRs) may be an attractive option.

Q: What is the main difference between 3M filters and cartridges?

A: Filters use media for capturing particulates only – such as dusts, mists and fumes. For the TR-300 and TR-300+ PAPR systems, the filter is the TR-3712N and for the TR-600 and TR-800 PAPR systems, the filter is the TR-6710N. The TR-300 and TR-300+ PAPR systems are used for particulates only.

OSHA defines a canister or cartridge as “a container with a filter, sorbent, or catalyst, or combination of these two items, which removes specific contaminants from the air passed through the container.” See here for website. Cartridges use media to help protect against certain gases and vapors. For the TR-600 and TR-800 systems, these cartridges are combined with particulate media to become a combination cartridge. 3M currently offers 7 variations of filters and cartridges for the TR-600 and TR-800 series PAPR.

Q: When should users change out their 3M filter in a Versaflo™ PAPR?

A: As directed in the User instructions, the TR-970 air flow indicator must be used to confirm air flow levels of the TR-300 series PAPR prior to entering the contaminated area. While conducting the airflow-check, the bottom of the floating ball must rest at, or above the minimum flow mark. If the airflow indicator ball fails to rise above the minimum flow mark, change out your filter on the unit and reconduct the airflow test.

The TR-971 air flow indicator must be used to confirm air flow levels of the TR-300+, TR-600 and TR-800 series PAPR prior to entering the contaminated area. The TR-971 is designed to enable testing at various elevations and temperatures within the operational range of the PAPR system. Actual service life depends on your environment. While conducting the airflow test, the bottom of the floating ball must rest at, or above the minimum flow mark. If the airflow indicator ball fails to rise above the minimum flow mark, change out your filter on the unit and reconduct the airflow test.

As a secondary or backup indicator, the TR-300+, TR-600 and TR-800 motor blowers have filter loading indicators and alarms that are designed to notify users when your filter is loaded and it is time to exit the area and replace the filter.

Q: When should I change out my 3M cartridge in a Versaflo™ PAPR?

A: The user must determine a service life period based on their specific work conditions. Please visit our Service Life Software and use the table for surrogates for the TR-600 and TR-800 PAPR System cartridges. Cartridges must be changed earlier if contaminant taste, odor or irritation is detected by the user, or system alarms indicate filter loading.

Q: Are the TR-300+ and TR-600 PAPR systems intrinsically safe (IS)?

A: No. However, 3M commercialized an IS version of the Versaflo™ product line in Q1 2018, the TR-800. The motor/blower on the TR-800 PAPR is certified to UL/IEC 60079 (2013). 3M also offers an intrinsically safe PAPR in our GVP Series.

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3M™ Versaflo™ Respirators

Q: What headgear is compatible with the TR-300+, TR-600 and TR-800 Series PAPRs?
A: The TR-300, TR-300+ and TR-600 are approved for use with 3M M-Series Faceshields, Hard Hats and Helmets, 3M S-Series Hoods and headcovers, 3M Speedglas™ 9100 Series welding helmets, 3M L-Series helmets and 3M H-Series hoods. BE Series head tops (BE-10 and BE-12), formerly used with the Air-Mate™ PAPR, are also approved for use with TR-300, TR-300+ and TR-600 PAPR systems.
At launch, the TR-800 is only approved for use with 3M S-Series and M-Series headtops. 3M expects to seek approval for additional headgear in the months following launch.

Q: How do I clean my TR-300 and TR-300+?
A: See User Instructions, as well as Inspection, Cleaning and Storage Procedures for 3M TR-300 PAPR Assemblies – Tech Data Bulletin #198. Please note, the TR-300+ will follow the same cleaning procedures outlined for the TR-300.
TR-300 User Instructions
TR-300+ User Instructions
Tech Data Bulletin #198

Q: How do I clean my TR-600 and TR-800 Series PAPRs?
A: See User Instructions, as well as Cleaning, Inspection and Storage of the 3M Versaflo PAPR TR-600 – Tech Data Bulletin #222. Please note, the TR-800 will follow the same cleaning procedures outlined for the TR-600. Please see below for additional resources.
TR-600 User Instructions
TR-653 Cleaning and Storage Kit use with TR-600
TR-800 User Instructions
TR-653 Cleaning and Storage Kit use with TR-800
Tech Data Bulletin #222

Q: How do I select a 3M cartridge suitable for my environment?
A: Visit our 3M Respirator Selection Guide to help determine the appropriate filter or cartridge for the environment. If you have questions, please contact 3M Technical Service at 1-800-243-4630.

Q: Are the TR-300, TR-300+ or TR-600 PAPR systems approved for use in a hospital operating room?
A: No. 3M PAPRs have not been designed, cleared, or intended to be used as medical devices in healthcare surgical settings. One key issue is that, although 3M PAPRs are designed to help protect the wearer from certain airborne hazards in the surrounding environment, they are not designed to protect the surrounding environment from the PAPR wearer. Indeed, 3M PAPRs are approved by NIOSH but are not approved or cleared by the Food and Drug Administration (FDA).

Q: What are the elevation limits for the TR-300, TR-300+ and TR-600?
A: TR-300 – the recommended operating altitude range is approximately sea level to 2600 feet (800 meters).
TR-300+ – the recommended operating altitude range is approximately -328 feet (-100 meters) to 14107 feet (4300 meters).
TR-600 – The recommended operating altitude range is approximately -328 feet (-100 meters) to 16404 feet (5000 meters).

Q: What is the replacement part for the TR-3710N HE Filter for TR-300 and TR-300+ PAPR systems?
A: TR-3712N is the HE Filter for TR-300 and TR-300+ Series PAPR systems.

Q: Can I attach my Speedglas welding helmet to the TR-600?
A: 3M™ Speedglas™ Welding Headgear 9100 Series are NIOSH-approved for use with the 3M™ Versaflo™ Powered Air Purifying Respirator TR-600 series. See announcement or more information.

If you have additional questions regarding 3M™ Versaflo PAPRs, please refer to your User Instructions, or contact 3M Technical Service at 1-800-243-4630.