Information About Respirator Selection and Classification

Use with Chapter 296-842 WAC, Respirators

This tool provides guidance about respirator selection and classification for users who aren’t familiar with these topics.

When do respiratory hazards occur?
Respiratory hazards that require use of respirators can occur during:

- Routine tasks
- Tasks that occur infrequently such as monthly cleaning of a reactor vessel or chemical storage tank
- Emergencies such as rescue, response to a chemical spill, or circumstances where employees must escape from toxic atmospheres.

Am I qualified to select respirators?
To determine this, you’ll need to consider:

- The complexity of your employees’ exposures to respiratory hazards and respirator use circumstances.
- If you have a suitable level of technical knowledge and experience with respirators to address respiratory hazards and use circumstances.
  
  For example, individuals selecting respirators solely for wood dust exposure wouldn’t need as high a level of knowledge and experience as individuals selecting respirators for multiple contaminants or for highly hazardous circumstances such as emergencies.

What types of respirators are available?
All respirator types can be sorted into 2 main categories as shown. Examples are provided to represent basic types available. Some respirator models aren’t shown, such as models that combine features from both categories.

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Category 1: Air-purifying respirator (APRs)

APRs use filters, cartridges, or a canister to remove specific contaminants such as particles, gases, or vapors, from air.

Negative-pressure APRs rely on suction (negative pressure) created during inhalation and a tight seal in order to draw air through the cartridges, canister, or filters.

Powered air-purifying respirators (PAPRs) rely on a blower, powered by a battery or other power source, to draw air through the cartridges, canister, or filters. Some models rely on a tight facepiece seal to work effectively.

Battery-powered PAPR with a tight-fitting facepiece

-Mouth/shoulder clamp APR for escape-only use

Half- and full-facepiece cartridge APRs

Filtering-facepiece APR

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Where can I find more information about respirators and selection?

Resources include:

- NIOSH’s 1987 Decision Logic. - Visit [www.cdc.gov/niosh](http://www.cdc.gov/niosh)
- The Centers for Disease Control and Prevention (CDC).- Visit [www.cdc.gov](http://www.cdc.gov) to find information on biological agents such as TB, hanta virus, psittacosis, avian flu, and anthrax
- Respirator manufacturers’ on-line selection guides and other information. – Visit [www.lni.wa.gov/wisha](http://www.lni.wa.gov/wisha) and select the Respiratory Protection topic page to find a list of respirator manufacturers and website links
- The American National Standard for Respiratory Protection, ANSI Z88.2-1992, or most recent edition. - Visit [www.ansi.org](http://www.ansi.org) to find out how to obtain a copy or contact your local librarian for access.
- WISHA. Visit [www.lni.wa.gov/wisha/consultation](http://www.lni.wa.gov/wisha/consultation) for a list of WISHA consultants available for assistance.
- Experienced respirator distributors, and private industrial hygiene consulting services listed in your local phone book.