

# Respiratory Protection

## *Self-Contained Breathing Apparatus*

The self-contained breathing apparatus (SCBA) is a supplied-air respirator with the air supply contained in a tank you carry on your back. It is the respirator of choice for extremely hazardous environments in which physically dangerous or unknown conditions exist.

### A Portable Air Supply

The SCBA consists of an air tank, usually carried on the back, connected by a hose to a regulator that delivers the air to your face mask. It typically has a full-face mask; it may also be provided with a hood or worn with a sealed protective suit. The tanks are rated to supply you with 30–60 minutes of air at a resting rate of breathing; however, since it's not likely that you will be resting when you use this respirator, you can expect to use up the air faster. SCBAs used in situations that are defined as "immediately dangerous to life and health" (IDLH) always provide positive pressure—that is, air will flow continuously into your face mask whether you are inhaling or not. This is the highest level of respiratory protection because even if your mask's seal fails, air pressure will keep most of the contaminants out of your mask.

### When to Use the SCBA

The SCBA may be used in any situation requiring supplied air: oxygen-deficient or highly contaminated environments or situations involving extreme temperatures or containing

unknown hazards. They are preferred over air-line respirators when you are working in small spaces or need a great deal of mobility, or in areas

exerting yourself and breathing heavily. And SCBAs can be heavy and bulky, increasing your exertion even more.



where falling objects or poor visibility could endanger your air line. SCBAs are often used for first entry into an unknown disaster situation.

### Keep Track of Time

While the SCBA gives you greater mobility than the air-line respirator does, the tradeoff is that your work time is limited to 30–60 minutes at a time and can be much less if you are

### Take Care of It

Because you are working in extremely hazardous conditions when you use this apparatus, your very life depends on its proper maintenance and fit. Each time you use it, inspect your respirator for stuck or worn valves, crumbling hoses, and wear in the mask or hood. Before entering a hazardous environment with your SCBA, use both positive and negative pressure tests to check the mask's fit.

### Plan Ahead

Before entering an unsafe area, make sure you can get out quickly if you need to. Your respirator will sound an alarm when the air supply is low, which means you have about five minutes of air left. Leave the area *immediately!* Running out of air because you stayed to do one last task can be frightening at best and, at worst, can cause you to black out.

Always work with a buddy in conditions that require you to wear your SCBA. And whether your alarm sounds or not, leave the area immediately if you feel dizzy, faint or sick. Your respirator may not be working properly. When working with a self-contained breathing apparatus, safety and common sense can be matters of life and death. 