THE SCIENCE BEHIND SCBAs

Old rescue tales tell stories of firefighters growing long beards, which they would wet and clench between their teeth to act as a filter from the smoke and debris.

Fortunately, breathing equipment has evolved significantly, with Dräger launching its first self-contained breathing apparatus (SCBA), the Dräger Modell 10, in 1941.

SCBAs provide breathable air in "Immediately Dangerous to Life or Health" (IDLH) atmospheres:



- OXYGEN DEFICIENT ENVIRONMENTS
- ELEVATED TEMPERATURES
- SMOKE
- TOXIC GASES AND VAPORS

From routine training activities, firefighting missions and overhaul operations, these IDLH atmospheres can lead to potential dangers, including:

Malignant Melanoma

Basal Cell Carcinoma
Liver Cancer Haemateopoetic

Squamous Cell Carcinoma Hodgkins Lymphoma
Prostate
Cancer of Cance

Proper use of SCBAs helps dramatically reduce these risks, and it's important to understand the extra burden being placed on your body. A good rule of thumb is: as much protection as necessary and as little weight as possible.

TO FULLY REAP THE SAFETY BENEFITS, DISCOVER THE SCIENCE BEHIND THE SCBA AND HOW IT TRULY KEEPS FIREFIGHTERS SAFE.

FACE MASK/ REGULATOR*

A tight seal around the face maintains a higher air pressure inside the mask than the surrounding air pressure. Toxic substances outside of the mask will not seep into an area with higher air pressure, thus preventing any harmful particles from entering the wearer's breathing tract.

BODYGUARD 1500*

PASS (Personal
Alert Safety System)
device that automatically
gives audible and visual
alarms in case a firefighter
is not moving due to
being trapped or
unconscious.

HARNESS

Ultra-lightweight, yet high-strength material provides thermal, impact and chemical resistance properties.

FRICTION BUCKLES

Designed to hold the SCBA in the individual's preferred position, but still allow fast donning and doffing in any position.



LUNG DEMAND VALVE*

During inhalation a diaphragm inside the LDV is pulled toward the facemask allowing air to flow into it.

Upon exhalation, the diaphragm is pushed in the opposite direction, stopping the airflow, while maintaining a positive pressure inside the mask.

A durable silicone rubber cover on the outside provides extra protection from impact, flame and chemicals.



TX GAUGE*

Analog display of cylinder pressure. Automatically activates the Bodyguard 1500 when the air cylinder is open.

Lit with an LED backlight to show the wearer's position, even in low lighting.

Flashes when air pressure inside the cylinder reaches below a specific point.



AIR CYLINDER

Made of steel, aluminum or carbon fiber composites, its low weight contributes to a lower overall SCBA weight. Less weight reduces wearer fatigue, meaning lower breathing rates. It's also extremely resistant to shocks, chemicals and abrasion.

For example, a 6.8 litre 300 bar cylinder has a working duration of 46 minutes. At 154 mm in diameter and a 4.3 kg shell weight, it's built to last 30 years.

A variety of cylinder sizes and types are available to meet your needs.



AIR SUPPLY AND GAUGE HOSES

Integrated into the backplate to reduce snagging and the risk of entanglement—key for working in confined spaces.

Easily re-routable and replaceable for maximum comfort and ease of maintenance.

*Indicates additional features

AT THE END OF THE DAY IT BOILS DOWN TO YOUR:



SAFETY

We use quality material that not only protects your most valuable asset, your life, but also promotes hygienic procedures to help to keep you safe for your loved ones.



READINESS

Our SCBAs are fast to don and easy to maintain and clean due to liquid-repellent material, which makes sure your focus is on the job at hand and not battling the unseen buildup of toxins on your equipment.



COMFORT

Features ergonomic design to improve your comfort and decrease your physical and mental stress.