Dräger

Live Fire Training Solutions

Firefighter training that could save your life

Dräger. Technology for Life®

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The best way to learn how to fight a fire is by fighting real fires. However, with today's improved fire prevention methods and public education, there are fewer fires to fight – which means less opportunity for real-life experiences.

At Dräger, we offer an unmatched range of operations equipment, personal protective equipment (PPE), and proven firefighter training systems. Our Class A live fire training units, gas-fueled training systems, and SCBA mazes enable you to teach skills that are essential to many NFPA standards, including 1001 firefighter qualifications – in a safe and repeatable environment.

As a result, you can continually build the abilities and confidence of firefighters.

Class A
Dräger Swede Survival:
Real Smoke, Real Heat, Real Fire

OUR WOOD-FUELED SWEDE SURVIVAL SYSTEMS PROVIDE BOTH EQUIPMENT AND TRAINING, ENABLING YOU TO:

- **Develop a progressive live firefighter training curriculum**
  This system enables firefighters to incrementally develop knowledge of fire behavior and skills for fire control/ suppression as they advance through six available skill centers – Phase 1 though Phase 6.

- **Minimize risk**
  These systems combine purpose-built training units with Dräger-certified instructional programs that train the trainers on the safe operation of the unit – including proper fuel loading, ignition, ventilation control, and delivery of the training.

- **Replicate real-world scenarios**
  This comprehensive solution enables you to deliver extremely realistic, hands-on training. By selecting one or more Phases, you can address most of the requisite skills for structural firefighting as per NFPA 1001-Standard for Fire Fighter Professional Qualifications and NFPA 1403-Standard on Live Fire Training Evolutions.

- **Control training costs**
  Compared to the high cost of architectural concrete or steel burn buildings, Dräger Swede Survival systems are extremely cost effective. Training units can be placed almost anywhere, can be moved from one location to another, and require minimal maintenance.

UNMATCHED TRAINING

All live fire training is inherently dangerous. That's why Dräger is committed to developing and offering the most comprehensive training programs in North America.

Dräger Swede Survival systems and Dräger-certified instructional training programs have been designed and delivered in accordance with training methods developed by the Swedish Rescue Services Agency through the Swedish Rescue Training Center (SRTC).

GENUINE SWEDE SURVIVAL SYSTEM

After two Swedish firefighters lost their lives to flashover in 1986, the Swedish government asked the country’s Rescue Service to develop a full burn behavior program that included flashover training. The intent of the program was to help firefighters recognize extreme fire behavior and avoid injuries and death.

Dräger brought this live fire training program to North America in 1990 and has delivered more than 300 systems in the US and Canada to fire departments, fire academies, airports, military agencies, and more.

Dräger Swede Survival Systems

Today's building materials and furnishings produce fires that burn faster and hotter than ever before. In fact, modern homes reach flashover significantly faster than homes did 50 years ago*.

PHASE 1: BURN BEHAVIOR AND FLASHOVER DEVELOPMENT OBSERVATION

Demonstrates fire behavior, progression, flashover indicators, and prevention techniques

In a safe and controlled setting 3 feet below the burn chamber, trainees closely observe typical fire behavior in a room-and-contents fire. They witness ignition, the phases of fire development, and the signs that lead to a flashover – including heavy smoke, heat, thermal layering, and rollover. Trainees can also witness the impact of ventilation and learn about ventilation-limited and fuel-limited fires.

By experiencing these conditions, trainees learn to recognize warning signs and develop nozzle skills that can delay flashover and permit a rapid escape from this dangerous phenomenon.

* UL. Modern Residential Fires. Retrieved August 14, 2014 from http://newscience.ul.com/articles/modern-residential-fires

PHASE 2: INTERIOR ATTACK

Expands on fire behavior lessons from Phase 1 and progresses to attacking the fire

In a 40-foot container, training now takes place on the same level as the fire. Trainees enter the unit, identify the level of fire development, and use proper nozzle techniques to control the fire. If trainees recognize the development of flashover, they must use the nozzle techniques to delay the onset of flashover and retreat from the unit.

Instructors maintain control of the scenario through proper operation of the ventilation chimney. The Phase 2 can also be used to address other requisite skills required in a typical single-story building fire.

PHASE 2+: ADVANCED ATTACK (MOBILE)

Combines the training of Phase 2 with the benefits of a multipurpose skill facility

You can conduct numerous dynamic scenarios in this 48-foot mobile unit by using the unit's additional training devices in conjunction with its live fire capability. There's a moveable wall system to change the approach path and for search and rescue; a fold-up roof railing with second-story window frame for laddering, bailout, and rescue; a confined space entry hatch through the roof; a vertical ventilation prop; and first-story windows and doors for mechanical, horizontal ventilation.

Dräger Swede Survival Systems

PHASE 3: BACKDRAFT

Demonstrates the warning signs of backdraft and the intensity of an explosion

If warning signs go unnoticed, a firefighter can cause a backdraft by opening a door or breaking a window to reach a compartment fire. For exterior observation only, the Phase 3 is a laboratory that gives trainees the opportunity to learn about the conditions that can cause and occur during a backdraft condition.

The fire in the ventilation-limited compartment produces a significant amount of smoke and fire gases, which are heated beyond ignition temperature. When the compartment door is opened and oxygen is introduced, a large explosion results from the rapid combustion of the gases.

PHASE 4: GARAGE

Simulates an entry room with heat and smoke leading to a large live fire room, providing additional fire attack scenarios

This trainer is configured with two 40-foot containers side-by-side and a 20-foot container installed perpendicularly at the entry point of the burn chamber. This layout forms a hallway entry into a double-wide burn room for more advanced and dynamic scenarios. The additional width lets you train two nozzle teams entering from opposite sides of the structure.

PHASE 5: MULTI-STORY, MULTI-FIRE

Simulates a multi-story, single-family dwelling structure fire
This flexible unit leverages the lessons learned from Phases 1–4: size up, breach, ventilate, enter, search and rescue, attack, and overhaul. It enables fire attack at grade, below grade, and above grade, covering applicable NFPA 1001 requirements – at a fraction of the cost of similar architectural burn buildings.

The Phase 5 is the ideal complement to other Phases, but is also a cost-effective standalone training facility.

PHASE 6: CENTER HALLWAY

Simulates a hotel or apartment building fire
With a 80-foot central hallway and 20-foot containers as burn rooms, this system lets you train for fire attack, smoke conditions, search and rescue, and hose handling through the main corridor. The design offers various scenarios due to the length of the central hallway and the number of potential burn rooms.

Gas-Fueled
Fire Training Systems

Dräger's gas-fueled Fire Training Systems (FTS) enable you to develop and reinforce fundamental fire control skills. These live firefighter training units are highly reliable, extremely safe, easy to use, and are built to last.

You can quickly perform multiple, repeatable, training evolutions – in real time. There is virtually no cleanup following training evolutions. These systems meet specifications recommended by NFPA 1402 and/or the local authority having jurisdiction.

DRÄGER FIXED INTERIOR LIVE FIRE TRAINING SYSTEMS

Simulates fires for training offensive fire attack within a structure

Built for permanent installation in new training towers, retrofit of existing Class A training towers, mobile training units or container facilities, these systems provide the realism, safety, and repeatability required for training firefighters on offensive attack techniques within a structure.

A variety of props – including kitchens, beds, couches, industrial lockers or racks, and a multi-prop – let you configure the type of room and its contents. These systems let you train on a base fire and offer optional features where flames spread across the prop or throughout the room to simulate fire growth. Controllable features include: wall fires, rollovers, counter/cabinet extensions, and spill fires.

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Repeatable, realistic, and easy to use

DRÄGER PORTABLE EXTERIOR LIVE FIRE TRAINING SYSTEM

Makes live fire training mobile and affordable

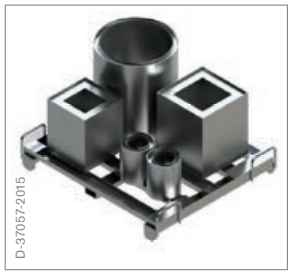
Designed to fit inside a truck box, van, or small trailer, and be set up in under 30 minutes, this flexible exterior live fire trainer lets you conduct training scenarios virtually anywhere. With a 6 × 4-foot, liquid propane fueled burn pan and a variety of available, interchangeable props, the System 64 can address many exterior live fire training requirements for NFPA 1001.

Scenarios include vehicle fires, flammable gas cylinders, material fires in exterior containers, and flammable liquids simulations. Additional residential, industrial, and customized props are available.

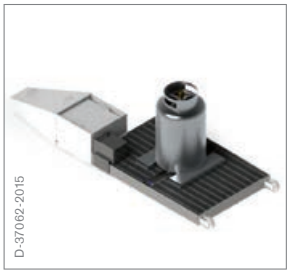
Dumpster prop

BBQ prop

Horizontal Tank prop on base unit



Pallet prop



Cylinder prop on base unit

Flange prop

Christmas tree prop

System 64 with open trailer for transport

DRÄGER FIXED EXTERIOR CAR FIRE TRAINING SYSTEM

Simulates a variety of different car fires

Intended for frequent use, this permanently installed system lets you create three independently controlled fires (engine, passenger area and trunk). Using a wireless pendant, you can control the intensity of the fire and allow it to spread throughout the vehicle as you choose. Accessible from all sides, the car simulates a two-door model on the driver's side and a four-door model on the passenger side.

DRÄGER QUAD MULTI-FUNCTION FIRE TRAINING SYSTEM

Provides four separately controlled burn areas

Four burn areas, each with two levels of fire, generate intense, challenging fires with flame heights up to 30 feet or more. The QUAD has optional interchangeable props that connect to the platform to vary the evolution type, and can simulate the burning of spilled flammable liquids or ignited gases. The 100-square foot burn area meets the NFPA requirements for fuel spill extinguishment and foam application.

DRÄGER MOBILE LIVE FIRE TRAINING UNIT (MLFTU)

Lets you take Dräger interior live fire training technology on the road

Up to four interior fire training simulators can be integrated in the burn areas of this one or two story, 53-foot highway trailer. All equipment is provided with the trailer – making it a completely self-sufficient live fire training facility. Options such as movable walls, doors, mazes, roof hatches, and roof props let you train additional skills from NFPA 1001 – vertical ventilation, horizontal mechanical ventilation, forcible entry, firefighter survival and self-rescue, and rapid intervention team (RIT) drills.

DRÄGER CONTAINERIZED SYSTEM

Simulates interior fires in a cost effective, modular facility

One or more FTS interior training systems can be integrated into modular facilities that can be configured as a single container, two-stack, or a Phase 5-style multi-story, multi-fire facility with a variety of gas-fired props – at a cost lower than concrete or steel training buildings. All training devices available for the Dräger Mobile Live Fire Training Unit can be added to this system. The modular design enables future expansion or relocation.

THE TUTOR

Lets you teach the proper selection and use of real fire extinguishers

This self-sufficient unit includes a water-bath burn pan, equipment cart with battery, charger, and propane supply. Props include a stove, HAZMAT locker, electric motor and wastebasket. The device is ideal for public education, OH&S training, and addressing NFPA 1001 Fire Fighter 1 requirements for portable extinguishers.

ARFF SYSTEM

Simulates fires on aircraft for airport rescue firefighters

Aircraft fires represent a special firefighting challenge. Dräger can build the size and configuration of aircraft to meet your requirements, full size or to scale. Different types of aircraft fuselage sizes or wing configurations can be included in one structure.

Search and rescue efforts can be executed within the fuselage, with or without the use of interior live fire systems. Interior fires can be installed in the cockpit, cargo hold, galley, luggage compartments, or around the seats. Typical exterior fires include large scale fuel spills, turbine engine fires, APU fires, or at the wheels or brakes.

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DRÄGER TRAINING GALLERY MAZE SYSTEMS

Trains firefighters to understand their equipment, physical, and psychological limitations while using an SCBA
Dräger Training Gallery Maze Systems are designed to build the confidence and agility of firefighters while wearing full PPE, including SCBA. Trainees learn air management and discover how far they can go on a limited air supply.

By moving through the confined spaces and obstacles of the maze, firefighters become comfortable with the added mental stress of breathing while wearing a mask. You can quickly rescue a trainee in distress by removing sections of the modular system.

You can increase the difficulty of the training by changing crawl paths, adding obstacles, and creating a smoke filled, dark, or hot environment. The maze can also be used for more advanced training, including confined space rescue, self-rescue, entanglement, or RIT training.

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4 × 4 Maze

Why Dräger?

For more than 100 years, Dräger has worked with the municipal and industrial fire industry. Dräger is the only fire services vendor that designs and manufactures both operations equipment and live fire training systems.

We can support you in all phases of firefighting:

- **Pre-incident:** engineered training systems, training curriculums, and maintenance solutions
- **During the incident:** respiratory and personal protection equipment, gas detection, and tools to aid in rescue and tactical decision making
- **Post-incident:** thermal imagers for overhaul; testing, calibration, and cleaning tools to efficiently return the gear to service

To learn more about Dräger Live Fire Training Systems, go to **www.draeger.com/firetraining**

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