



LION[®]

> CONTAINER SYSTEMS

OUR MISSION

EACH AND EVERY
DAY, WE FULFILL THE
PERSONAL SAFETY,
READINESS AND
IDENTITY NEEDS OF
OUR CUSTOMERS
WORLDWIDE.

TABLE OF CONTENTS

GENERAL INFORMATION

PAGE 2

**AN INTRODUCTION
TO LION**

PAGE 4

**FIRE
TECHNOLOGIES**

PAGE 12

**LION SMOKE
GENERATION**

PAGE 14

**LION SAFETY
SYSTEMS**

PAGE 18

**LION CONTROL
SYSTEMS**

PAGE 20

**AFTERBURNER
TECHNOLOGY**

CONTAINER SYSTEMS

PAGE 24

**LION TrainingReady DFT
TRAINING UNIT**

PAGE 26

**LION TrainingReady BAT
TRAINING UNIT**

PAGE 28

**LION CustomDesign GFT Elementary
TRAINING UNIT**

PAGE 30

**LION CustomDesign GFT Multi-Purpose
TRAINING UNIT**

PAGE 32

**LION TrainingReady HMT
TRAINING UNIT**

PAGE 34

**LION CustomDesign GFT Multi-Level
TRAINING UNIT**

PAGE 36

**LION CustomDesign GFT Naval
TRAINING UNIT**

PAGE 38

**LION CustomDesign GFT Marine
TRAINING UNIT**

PAGE 40

**LION CustomDesign DCT
TRAINING UNIT**

PAGE 42

**LION TrainingReady CFT
TRAINING UNIT**

PAGE 44

**LION TrainingReady CFT Hybrid
TRAINING UNIT**

PAGE 46

**LION CustomDesign CFT Multi-Level Hybrid
TRAINING UNIT**



“ Designed for fire professionals, by fire professionals

AN INTRODUCTION TO

LION

At LION, we understand the importance of training and we are committed to properly preparing trainees for the real thing. We understand that realism during training exercises helps prepare trainees for when it really matters.



Since the development of our first industrial grade smoke generator, we have committed ourselves to utilising smart technology and high quality, durable construction in product design and implementation. This passion has led us to develop the world's most advanced and sophisticated fire safety and emergency training units.

We are the world's largest provider of fire and safety training products and full-scale, multidisciplinary firefighter training complexes. We offer the most complete array of highly differentiated products and services to ensure that first responders are truly ready for action.

Our primary driver is the passion our customers have for the critical roles they play in keeping citizens, workers, and firefighters safe through training. We share this passion and have made it our mission to provide the best training tools possible to help our customers achieve their training goals.

LION provides hands-on training solutions for any high-risk industry. We serve a wide range of industries requiring fire and safety training, including airline, military, fire departments, oil and gas organisations, petrochemical companies, and training academies.

Team LION



**“ Three fire technologies
designed to fit every
training need**

FIRE TECHNOLOGIES

Our core goals of realism and safety are built into every aspect of our training structures to give your trainees the best and most comprehensive training. Throughout the years, LION developed three fire technologies to ensure diversity in training possibilities, making them as safe as possible for your trainees as well as your environment.

DIGITAL FIRE TECHNOLOGY™



LION's patented Digital Fire Technology™ provides comprehensive hands-on training using self-generating digital flames that respond directly to the trainees' actions. The integrated sensors detect water application to which the flames and smoke respond automatically.

GAS-BASED FIRE TECHNOLOGY



Gas-Based Fire Technology is an integral element in LION's fire and safety training simulators. Gas-based fire is an ideal training resource for any fire brigade, training centre and industry and can be used to accurately simulate nearly any fire behaviour.

CARBONACEOUS FIRE TECHNOLOGY



For fire training requiring wood, LION provides two different solutions: the traditional wood-based training system or our LION hybrid fire technology using wood and gas to power your fire training with assisted gas ignition and a water deluge system.



DIGITAL FIRE TECHNOLOGY™

LION's patented Digital Fire Technology™ combines digital flames, sound and smoke to create challenging emergency situations for all skill levels. Unique about our Digital Fire Training Systems is that they are a 100% watertight and tough enough to handle any hose line in your training arsenal.

FOR APPLICATION, CHECK OUT OUR TRAINING UNIT ON [PAGE 24](#)



TECHNOLOGY ADVANTAGES

The integrated sensors detect water application to which the flames and smoke respond automatically. To make training sessions even more realistic, we included LION's Steam Conversion Technology™. This technology recreates the low visibility conditions present when water is first applied to an actual fire.

Whether you are training new firefighters or more seasoned firefighters, you control the intensity of their training: flames can diminish, grow gradually or reignite at the push of a button.

“ **Train anywhere and anytime without impacting your environment** ”

TRAINING OPPORTUNITIES

Our Digital Fire Technology™ can be used for fire academy training, fire department training drills and large-scale training sessions. Simulations can start and stop almost immediately, making it easy to run countless initial fire attack, search and rescue, fire hose handling and advancement training sessions.





GAS-BASED FIRE TECHNOLOGY

LION's Gas-Based Fire Technology is versatile, realistic, safe and highly repeatable. Our technology combines real fire, real heat and safe smoke that can be turned on and off by the push of a button. This makes our gas-based units the perfect training ground for countless evolutions every single day.

FOR APPLICATION, CHECK OUT OUR TRAINING UNITS ON [PAGE 28, 30, 32, 34, 36 AND 38](#)

TECHNOLOGY ADVANTAGES

At LION, we want our units to be as safe as possible. This not only applies to instructors and trainees, but also to your community and environment. Our gas-based solution does not emit toxic black smoke, instead it uses our special designed smoke technology (read more about it on page 12). To further ensure the safety of instructors and trainees, we use gas detection systems to monitor the entire training unit. Ventilation systems, lighting and intercom systems are also integrated.



“ Intense
firefighting
training at
any location

TRAINING OPPORTUNITIES

Our Gas-Based Technology registers the extinguishing performances of trainees and adjusts the fire behaviour accordingly. If a fire is not knocked down correctly, our technology will let it rekindle or grow. This allows instructors to correct trainees during the drill and to teach proper attack and extinguishing techniques.





CARBONACEOUS FIRE TECHNOLOGY

For firefighters, heat and smoke are the real enemies. Therefore, when training with wood-based fire it is critical to be well-prepared. Our wood-based fire training units give off real heat and heavy smoke that most realistically simulates an actual fire incident.

FOR APPLICATION, CHECK OUT OUR TRAINING UNITS ON [PAGE 42, 44 AND 46](#)



TECHNOLOGY ADVANTAGES

Our Carbonaceous Fire Technology features dual combustion technology to create fire using both gas and wood. You can easily control when the fire is being ignited and when it is turned off. It can be relit several times after training sessions without having to load more wood into the burner – depending on how wet the fire crib is. The built-in water suppression systems and smart controls keep firefighters safe, even in the toughest training conditions.

For an optimal experience with our carbonaceous fire training units we suggest our LION AfterBurner system as an option. The goal of this system is to extract and purify smokes produced during trainings before releasing them safely into the environment. Read more about our AfterBurner system on page 20.

“ **Realistic, intense training in a safe and controlled environment**

TRAINING OPPORTUNITIES

Your firefighters need to be ready for anything. This means they need to practice situations resembling real-life. With our Carbonaceous Fire Technology, you can train firefighters on smoke and fire dynamics in a realistic setting.

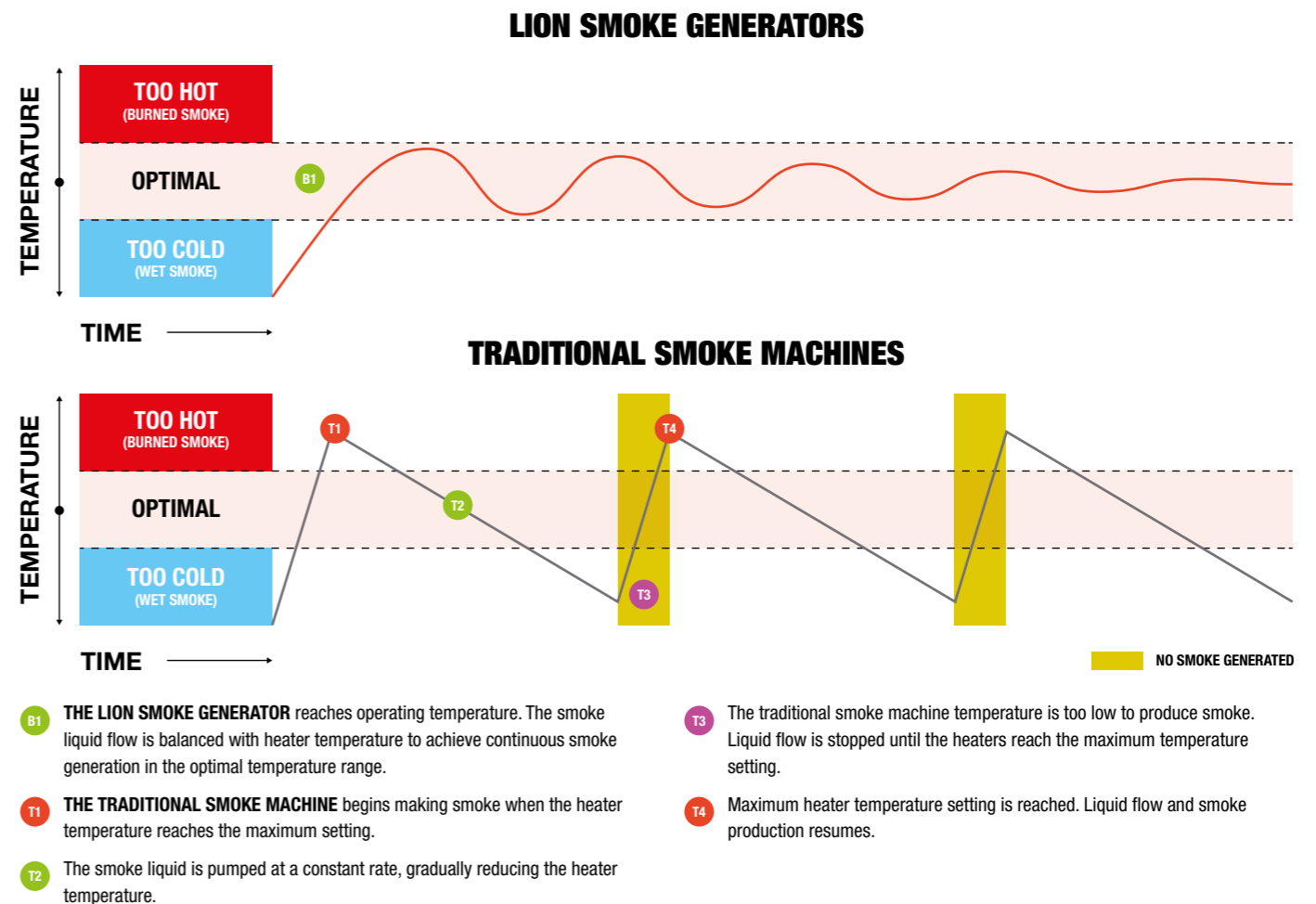


LION SMOKE GENERATION

SMOKE GENERATION AT LION

LION Smoke Generators, the SG4000™ and Tambora, used in our container systems work with smart controls to continuously produce the best smoke possible for fire and emergency services training. Built on a steel chassis with all metal structural components, these smoke generators are made to handle the toughest training demands.

To create the most realistic smoke training, our generators use LION Smoke Liquid. Our smoke liquid is developed with the safety of trainees in mind, ensuring that even during your most demanding training sessions your trainees will not be exposed to dangerous chemicals.





THE SMOKE DOESN'T STOP UNTIL YOUR TRAINING IS DONE

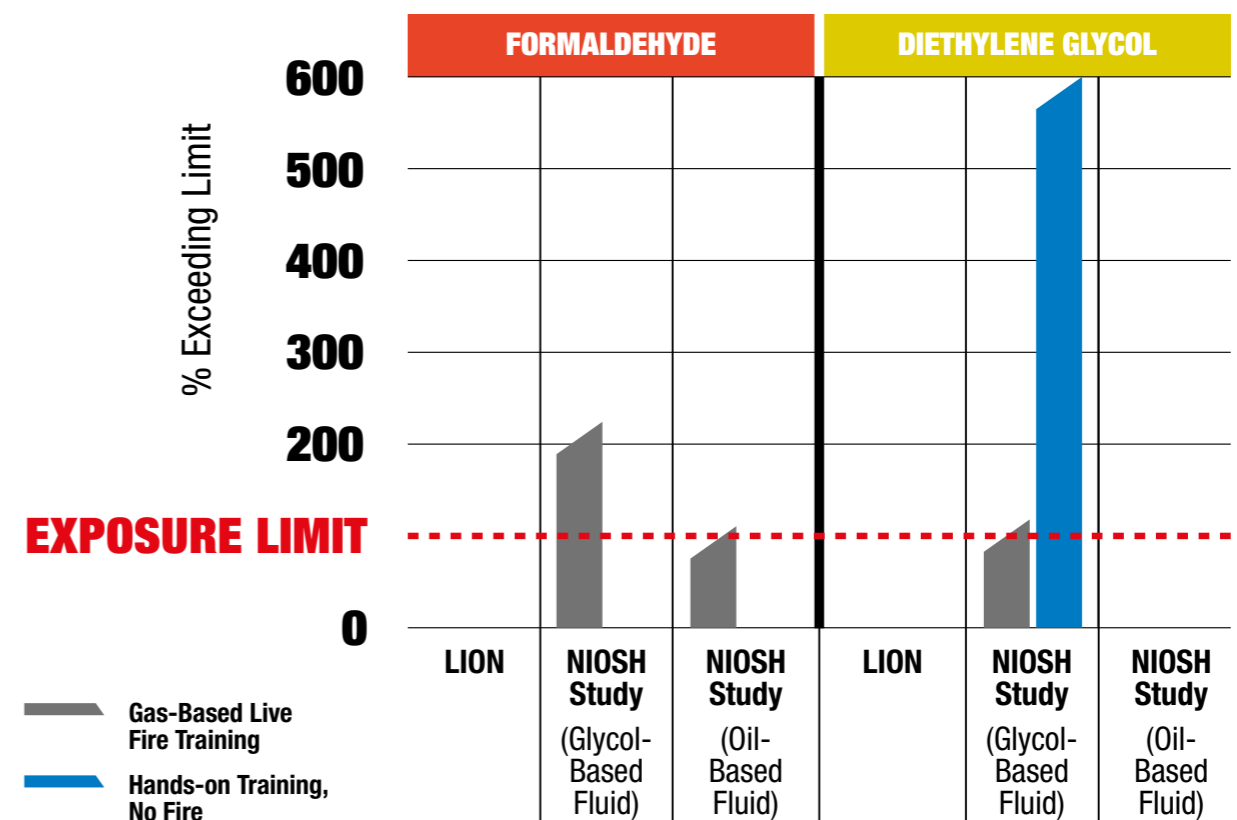
Our generators and smoke liquid work together to produce smoke that does not leave a residue or gunk up the generator, so you can train all day without worrying about extensive clean up.

Thanks to the dual core heater, our generators can create endless amounts of smoke so thick and dense you'll swear there's a real fire in the building. Continuous smoke production means your training area gets smoked out, and stays smoked out, until you're worn out.

KEEP THEM SAFE WHEN TRAINING

Our mission is to keep firefighters and instructors safe and healthy during training. To do this, we specially designed our Smoke Liquid and Smoke Generators so that it produces virtually no traces of toxins or harmful chemicals. You and your trainees can get the most out of your training without being exposed to health risks.

Smoke Liquid Exposure Limits Comparison



* Validated through independent study conducted by Industrial Hygienist.
 ! LION recommends using respiratory protection when using Smoke Generators for firefighter training and in heavy smoke conditions.

LION SAFETY SYSTEMS

SAFETY SYSTEMS AT LION

LION Safety Systems aim to deliver your team the most challenging training possible while keeping you safe. These systems are designed in compliance with the most relevant standards such as DIN14097-2 or NFPA1402.



THE LION SAFETY SYSTEMS CONSIST OF

- > Temperature sensors
- > Emergency buttons
- > Gas sensors
- > Ventilation system
- > A non-slip floor and access plates
- > Safety Evacuation lights
- > Audio and visual alarm



TEMPERATURE SENSORS

Calibrated to provide a challenging yet safe environment.

- > The Temperature Monitoring System ensures that no life-threatening temperatures are reached within the hot training room. It is continuously monitoring the temperature at 3 different heights within the space:
 - >> **Sensor 1**
Positioned at 0.3 meter above the floor;
Maximum typical temperature threshold 50°C;
 - >> **Sensor 2 and 3**
Positioned at 1 meter above the floor;
Maximum typical temperature threshold 150°C;
Can trigger an emergency stop
 - >> **Sensor 4**
Positioned below ceiling;
Maximum typical temperature threshold 350°C;

Before reaching such temperatures, the ventilation will be increased within the training room to fight against the temperature rise.



EMERGENCY BUTTONS

Enabling an immediate and complete stop of the simulators, as well as an increased ventilation of the training space to decrease temperature and clear away smoke to provide complete visibility. Lights will be turned on and a warning sound and light will be emitted.

GAS SENSORS

Detects unburnt gas and stops the gas flow to prevent uncontrolled fire or explosions. The gas detection sensors continuously monitor the gas usage into the container. When the unburnt gas concentration reaches one of the 3 thresholds (exceeding 10/ 20/ 35% of the Lower Explosion Limit (LEL)), several safety actions will happen to make sure that the situation remains safe and under control. There are several types of safety precautions that occur, including: The fire is turned to its lowest intensity and ventilation is pushed to its maximum; audible and optical warning signals will start, possibly followed by an emergency shutdown. To make sure the training environment is getting back to a safe mode our safety systems will switch off all the main gas valves and appliances, shutdown switching voltages will be closed, stop smoke production and even disengage manual control of lights, cool air ventilators and the central exhaust system when necessary.

- The gas detection system, depending on the room size and applicable standards, generally consists in:
 - **1 gas sensor** installed in the **gas storage technical room**
 - **1 gas sensor** installed in the **main technical room**
 - **2 gas detection sensors** installed per the training room



VENTILATION SYSTEM (by means of an extraction fan)

Provides a safe environment for evacuation in a matter of seconds. If the ventilation isn't performing as expected, the system will go to a safe stage – an emergency shutdown will be performed.

“ Luck runs out but safety is good for life





SAFETY EVACUATION LIGHTS

Illuminates the training area and the evacuation route in case of emergency. For this reason this system is connected to the emergency stop system.

AUDIO AND VISUAL ALARM

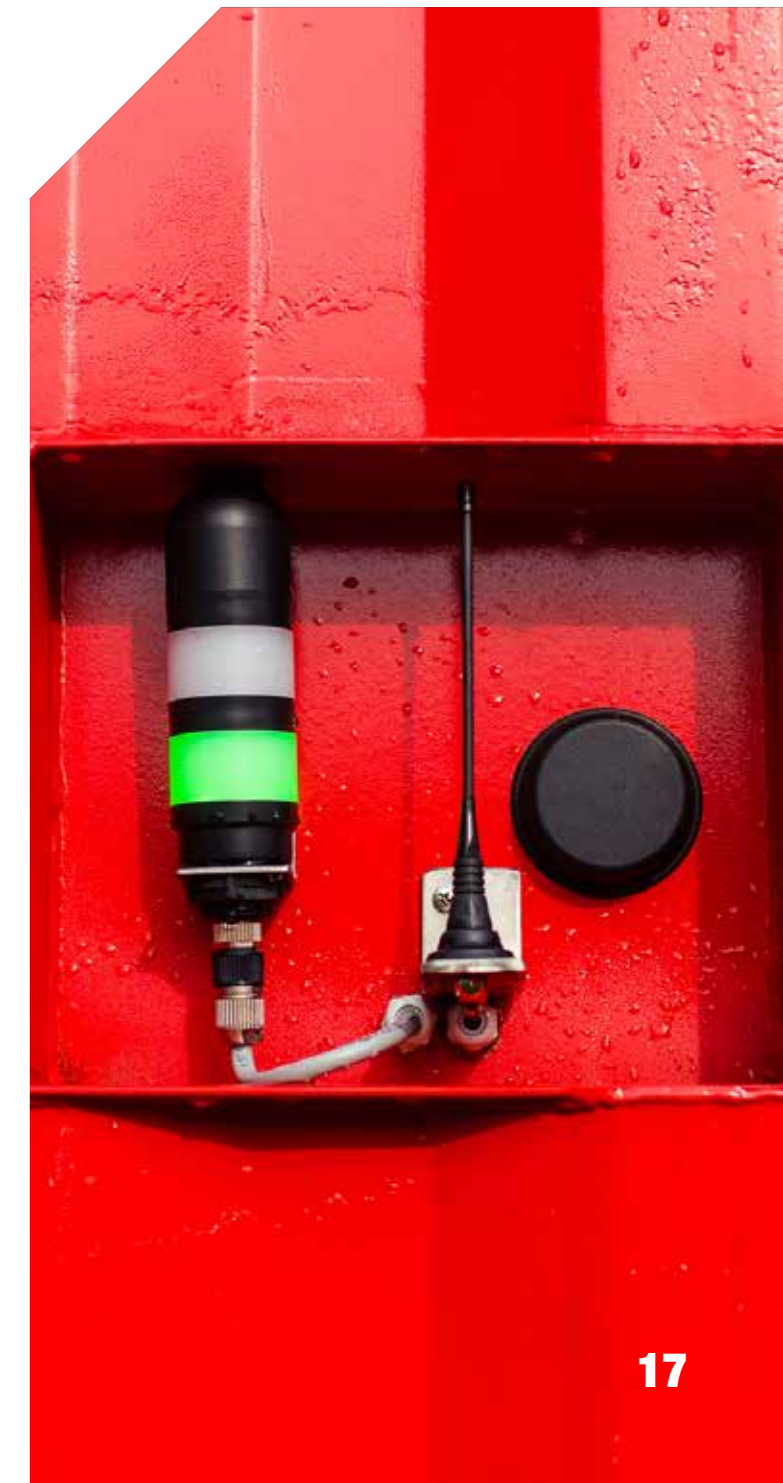
Emits a visual (green or orange colour) and audible warning in case of an emergency. They are installed on the outer wall of the training unit.

“ Safety doesn’t happen by accident



A NON-SLIP FLOOR AND ACCESS PLATES

Enables a safer training area. This is especially important during training sessions since water is being used within the training area. To avoid accidents, we build our training units with checker plates.



LION CONTROL SYSTEMS

CONTROL SYSTEMS AT LION

The LION Control Systems provide two possible configurations and consists of:

LION ESSENTIAL CONTROL SYSTEM

- > Remote System
- > Control Panel

LION ADVANCED CONTROL SYSTEM

- > Remote System
- > Control Panel
- > Supervisory Screen System

WHY?

- > Provides and guarantees realistic – and above all – safe training sessions
- > Self-monitored systems
- > Compliant with international safety standards
- > Shutdown in case of emergency



SUPERVISORY SCREEN SYSTEM

Supervisory screen system - and data acquisition (SCADA) system – is made of a touch screen where training information is displayed. You can record training sessions and add details like name of the trainee, the training duration, and more. Additionally, we can propose a camera system of two thermal cameras. This enables the trainer to follow the evolution of the trainee everywhere, even with no visibility.

REMOTE SYSTEM

Remote System consists of a wireless radio-controlled unit to control the fire simulators and is fitted with an emergency shutdown button.



CONTROL PANEL

Control Panel is placed in the control room, which is equipped with a main switch to start up and shut down the system, various status indicators, controls for the smoke generator and lighting as well as an emergency stop.



AFTERBURNER TECHNOLOGY

The smoke produced by burning carbonaceous materials contains high concentrated carbon monoxide and particles of soot which can be harmful to the environment. Our LION AfterBurner System actively treats and destroys these gases and particles, resulting in clean emissions being released into the air. During and after an evolution, smoke is captured or extracted by a ventilation system and treated with an optional AfterBurner system; it is then burned a second time with propane or natural gas, resulting in air that is 99.5% clean at the end.



LION

- ✓ Compartment Fire Behaviour (CFBT) trainings need realistic environment with smoke
- ✓ For CFBT training in Urban areas
- ✓ Train anywhere thanks to our smoke treatment system
- ✓ Features dual combustion technology to create fire using both gas and wood.



CARBONACEOUS BLACK HEAVY, HOT SMOKE



CLEAN AIR AFTERBURNER

To address the emission issues of traditional carbonaceous fire, a unique AfterBurner has been designed to extract and clean the smoke as it is emitted.



99.5% Clean Air





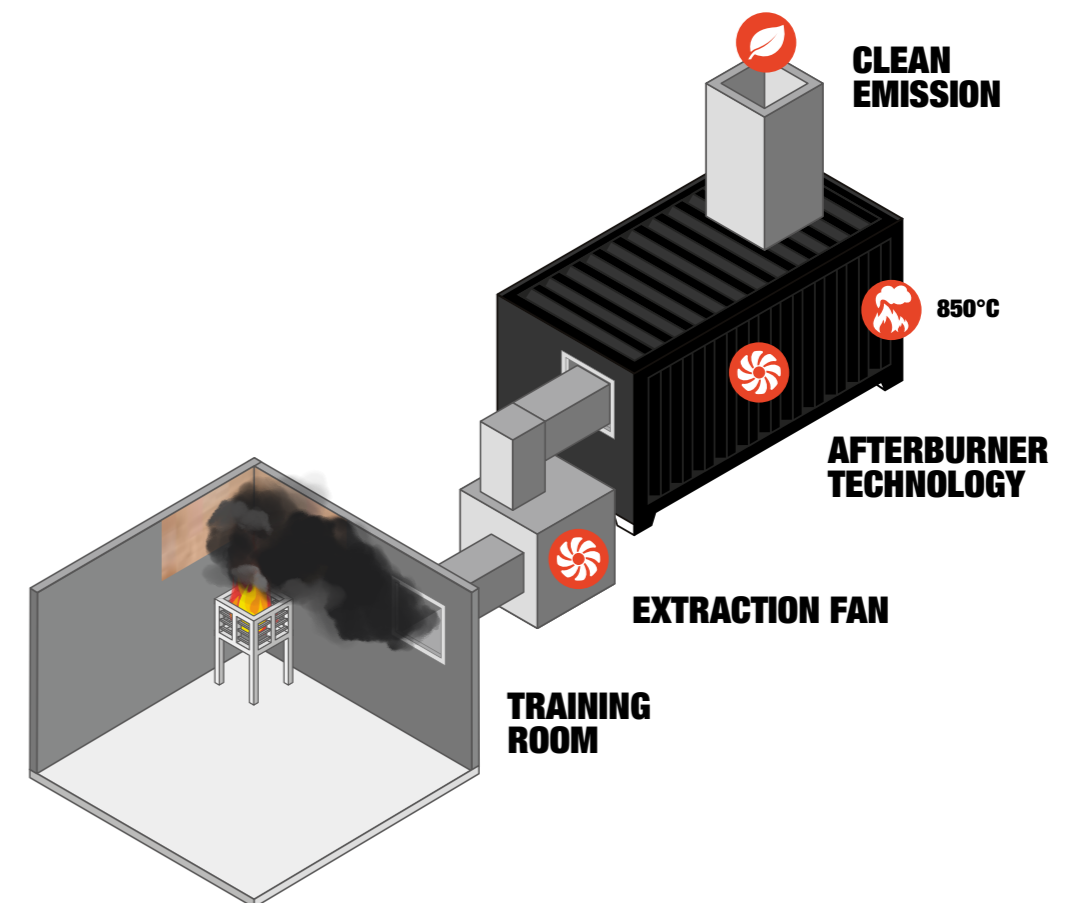
TECHNOLOGY ADVANTAGES

The unique LION smoke purifying solution allows you to bring carbonaceous fire training to almost any location, without having to worry about environmental constraints. Some of our Carbonaceous Fire Training Systems are located in urban areas, in the heart of the communities that need to be protected by their fire departments.

“ Clean emissions,
training after training

TRAINING OPPORTUNITIES

Exposing trainees to carbonaceous fires is crucial to them experiencing real heat and black smoke in a controlled and safe environment. The LION AfterBurner is designed to allow instructors to influence the thickness and height of the smoke layer, air flow and intensity of the combustion by adjusting the fan speed and smoke extraction valves. AfterBurner systems can be designed as forced draft installations as well as natural draft installations.





“ Training container systems built to endure the toughest demands

LION TRAINING UNITS SELECTION

This next section is a selection of the training solutions we can offer.
Contact us for our complete LION portfolio overview.

CHECK THE GLOSSARY ON **PAGE 49**



SPECIAL FEATURES

- ✓ ALL FIRE SIMULATORS USED ARE DIGITAL
- ✓ LION'S TRAINING SMOKE PROVIDES REALISTIC SMOKE DYNAMICS
- ✓ OUR UNIT ALLOWS YOU TO TRAIN WITH WATER NOZZLES AND LASER NOZZLES
- ✓ YOU CAN TRAIN PROCEDURAL ACTIONS REPEATEDLY
- ✓ WITH THE ADDITIONAL HOOK LIFT, THIS COMPACT UNIT IS HIGHLY MOVABLE

TRAINING APPLICATIONS

- ✓ HOT DOOR
- ✓ BREATHING APPARATUS (BA) BASIC TRAINING
- ✓ READING THE SMOKE
- ✓ FIRE HOSE HANDLING AND ADVANCEMENT TECHNIQUES
- ✓ FIRE GAS COOLING
- ✓ NOZZLE HANDLING
- ✓ SOFA FIRE
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ NATURAL DRAFT VENTILATION
- ✓ SEARCH & RESCUE
- ✓ FORCED DRAFT VENTILATION
- ✓ PROCEDURE TRAINING
- ✓ HYDRAULIC VENTILATION
- ✓ DIGITAL HANDHELD EXTINGUISHER TRAINING
- ✓ DOOR ENTRY PROCEDURES

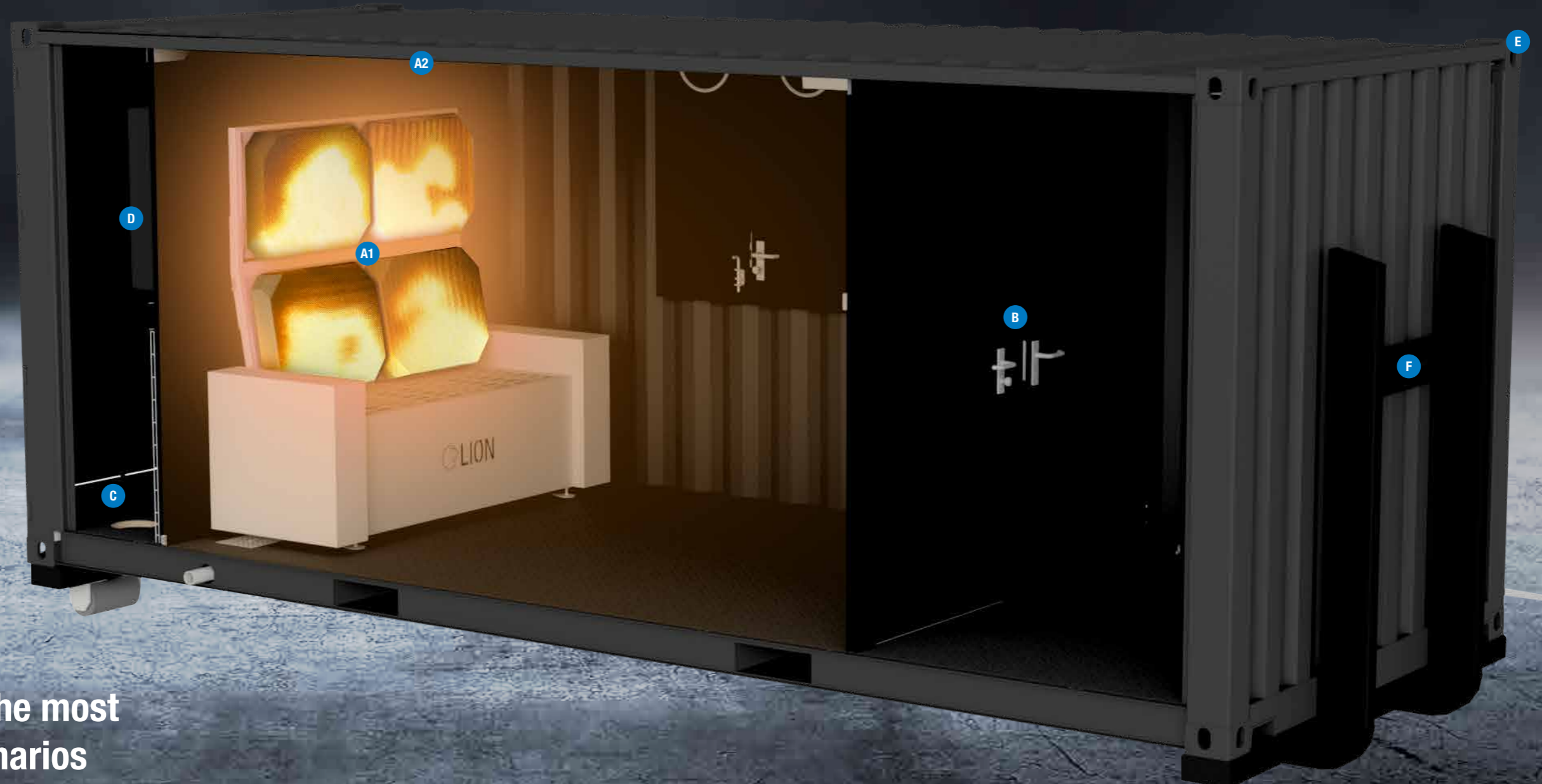
AND MANY MORE

LION TrainingReady DFT TRAINING UNIT

The best way to train on procedures, fire hose advancement techniques, firefighting manoeuvres and breathing apparatus confidence is to train in a safe, controlled area without the stress of a real fire. The combination of digital fire simulation, smoke and hot doors is the perfect environment to teach firefighters to rely on their skills. All scenarios can be repeated as often as necessary without exposing instructors and students to heat or toxic smoke.

TECHNICAL SPECIFICATIONS

- A** 5 Digital panels;
1 - 4 Panels forming a sofa,
2 - 1 Panel attached to the ceiling
- B** 2 Hot doors
- C** SG4000™ Smoke Generator
- D** LION Advanced Control System
- E** 20 ft ISO Freight Container
- F** Mounted on a hook lift frame (optional)



“ Experience the most realistic scenarios



SPECIAL FEATURES

- ✓ YOU CAN CREATE ENDLESS TRAINING ROUTES DUE TO THE INTERCHANGEABLE TRAINING GALLERIES
- ✓ WITH THE HMI SYSTEM INSTRUCTORS CAN FOLLOW TRAINEES GRAPHICALLY
- ✓ THE EASY CAGE LOCKING SYSTEM GIVES YOU QUICK ACCESS TO TRAINEES IN CASE OF AN EMERGENCY
- ✓ BECAUSE THE SMOKE USED IS CLEAN, THE UNIT CAN BE PLACED IN NEARLY ANY LOCATION
- ✓ THE SET-UP CAN BE INSTALLED ON A TRAILER

TRAINING APPLICATIONS

- ✓ BREATHING APPARATUS (BA) BASIC TRAINING
- ✓ BA DONNING AND DOFFING
- ✓ BA HABITUATION
- ✓ BA RELIANCE IN STRESSFUL ENVIRONMENT
- ✓ BA COORDINATION TRAINING
- ✓ BA BREATHING CRISIS AWARENESS
- ✓ BA VICTIM SEARCH AND RESCUE
- ✓ BA USE IN CONFINED SPACE
- ✓ MAN DOWN

AND MANY MORE

LION TrainingReady BAT TRAINING UNIT

Due to its well-thought-out design, this unit is a valuable tool to train firefighters on using their breathing apparatus in confined spaces. The interchangeable training galleries make it easy to upscale or downscale the intensity. Doing so you can create challenging scenarios for both new and seasoned trainees. To add to the experience, the unit uses a combination of smoke, light effects and hot spots creating difficult and realistic training scenarios.

TECHNICAL SPECIFICATIONS

- A** 44 SCBA crawling galleries
- B** 16 Obstacles
- C** SG4000™ Smoke Generator
- D** Floor sensors
- E** 2 Thermal cameras
- F** 2 Heating elements
- G** 2 Special effects lights and sound
- H** Roof access
- I** Interphone
- J** LION Safety System
- K** LION Advanced Control System
- L** 40 ft ISO Freight Container



“ Be proficient with your Breathing Apparatus



SPECIAL FEATURES

- ✓ THE LOOK AND FEEL OF THE UNIT CAN BE MODIFIED BY USING THE INTERNAL BUILT-IN MOVABLE WALLS
- ✓ ALL FIXED FIRE SIMULATORS ARE GAS-BASED, ENABLING STARTING AND STOPPING FIRES AT A PUSH OF A BUTTON
- ✓ OTHER FIRE UNITS ARE AVAILABLE TO PREVENT TRAINING FATIGUE
- ✓ THIS UNIT USES A MIX OF SMALL AND LARGE FIRES FOR REALISTIC AND DIVERSE SESSIONS
- ✓ YOU CAN TRAIN GAS COOLING WITH THE FLASHOVER SIMULATOR

TRAINING APPLICATIONS

- ✓ ELEMENTARY FIREFIGHTER TRAINING
- ✓ FIRST RESPONDER TRAINING
- ✓ SMALL DOMESTIC FIRES
- ✓ FIXED FIRE HOSE REEL
- ✓ HANDHELD FIRE EXTINGUISHER TRAINING
- ✓ FIRE HOSE HANDLING AND ADVANCEMENT TECHNIQUES
- ✓ BREATHING APPARATUS (BA) BASIC TRAINING
- ✓ HOT DOOR
- ✓ HORIZONTAL ENTRY
- ✓ ATTACK PROCEDURE TRAINING
- ✓ OFFENSIVE INSIDE ATTACK
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ TEAM LEADER TRAINING
- ✓ MAN DOWN
- ✓ NOZZLE TRAINING

AND MANY MORE

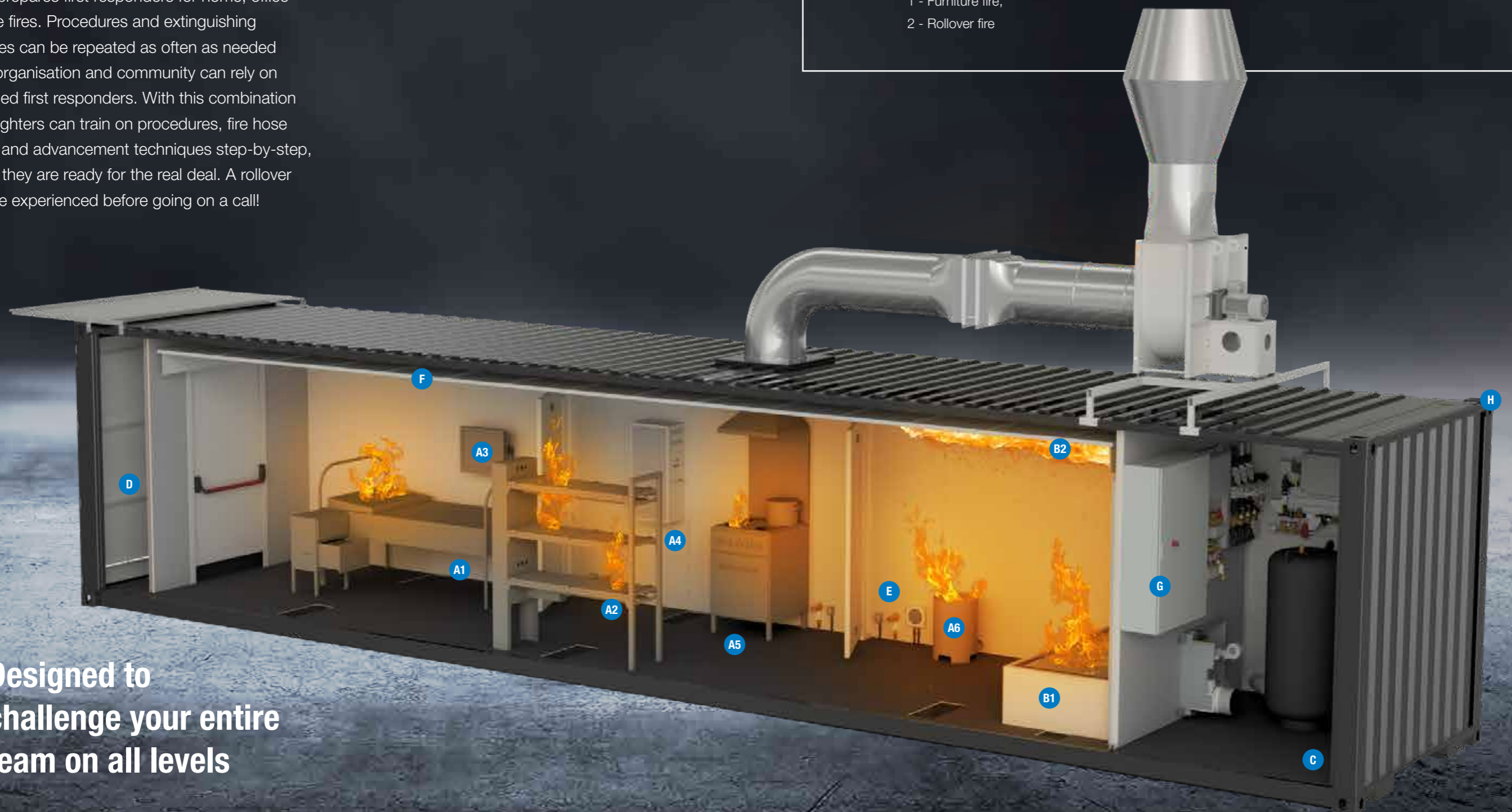
LION CustomDesign GFT Elementary TRAINING UNIT

The training unit is specifically designed to train first responders and new firefighter recruits. As gas-heated fires resemble most common calamities, this unit prepares first responders for home, office and store fires. Procedures and extinguishing techniques can be repeated as often as needed so your organisation and community can rely on well-trained first responders. With this combination unit, firefighters can train on procedures, fire hose handling and advancement techniques step-by-step, ensuring they are ready for the real deal. A rollover should be experienced before going on a call!

TECHNICAL SPECIFICATIONS

- A** 6 First responder simulators;
 - 1 - Bed simulator,
 - 2 - Shelf simulator,
 - 3 - Flat screen simulator,
 - 4 - Electrical cabinet simulator,
 - 5 - Kitchen simulator,
 - 6 - Trash Can simulator
- B** 2 Firefighter simulators;
 - 1 - Furniture fire,
 - 2 - Rollover fire
- C** SG4000™ Smoke Generator
- D** Fixed Fire Hose reel
- E** LION Safety System
- F** LION High Temperature Protection System
- G** LION Advanced Control System
- H** 40 ft ISO Freight Container

“ Designed to challenge your entire team on all levels





SPECIAL FEATURES

- ✓ ALL FIRE SIMULATORS ARE GAS-BASED
- ✓ QUICKLY CHANGE BETWEEN EMERGENCY SCENARIOS
- ✓ ALLOWS YOU TO TRAIN ALL ENTRY LEVELS
- ✓ AS INSTRUCTOR YOU CAN CHANGE FLAME HEIGHTS AND THE AMOUNT OF SMOKE PRESENT
- ✓ SO DIVERSE YOU CAN TRAIN WITH FIRE HOSES AND EXTINGUISHERS

TRAINING APPLICATIONS

- ✓ EVACUATION TRAINING
- ✓ WASTE BIN/TOILET UNIT FIRE
- ✓ HANDHELD EXTINGUISHER TRAINING
- ✓ HANDLED HOSE REEL TRAINING
- ✓ PROCEDURE TRAINING
- ✓ FIRE HOSE HANDLING AND ADVANCEMENT TECHNIQUES
- ✓ GALLEY FIRE
- ✓ SEARCH & RESCUE
- ✓ OVERHEAD LOCKER FIRE
- ✓ VICTIM HANDLING
- ✓ PASSENGER SEAT FIRE

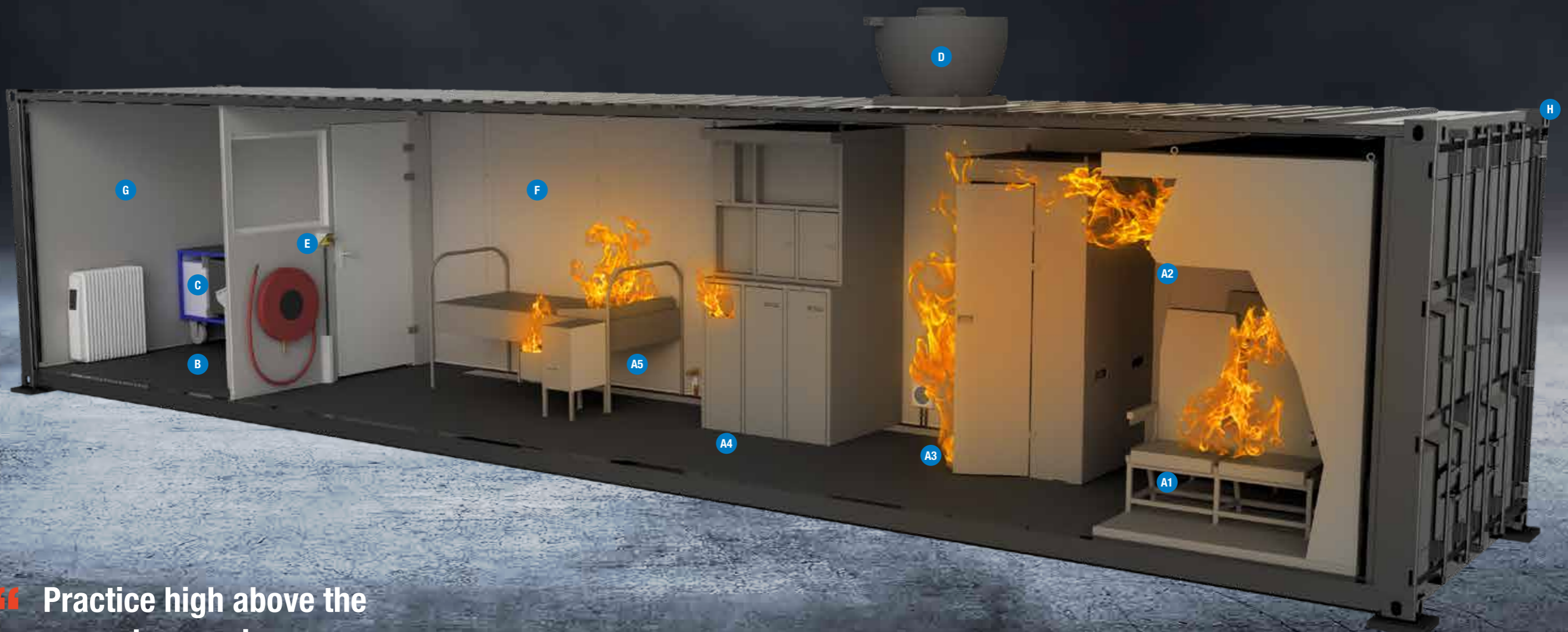
AND MANY MORE

LION CustomDesign GFT Multi-Purpose TRAINING UNIT

In case of household or flight emergencies, it is important for first responders to act as fast as possible to extinguish before the fire grows into an uncontrollable situation. From bed to nightstand fires, galley to seat fires, this challenging multipurpose unit helps first responders and flight crew members to be quick on their feet in case of a real emergency.

TECHNICAL SPECIFICATIONS

- A** 5 First responder/cabin crew simulators;
 - 1 - Seat fire simulator,
 - 2 - Overhead simulator,
 - 3 - Toilet simulator,
 - 4 - Kitchen simulator,
 - 5 - Bed simulator
- B** SG4000™ Smoke Generator
- C** Extinguisher Filling Station
- D** Ventilation system
- E** LION Safety System
- F** LION Essential Temperature Protection System
- G** LION Essential Control System
- H** 40 ft ISO Freight Container



“ Practice high above the ground scenarios



SPECIAL FEATURES

- ✓ GAS FIRE SIMULATORS AND LEAKAGES TO TRAIN HAZMAT SITUATIONS
- ✓ THIS COMPACT UNIT IS HIGHLY MOVABLE DUE TO ITS HOOK LIFT
- ✓ BY ADDING LION COLOURED LIQUID, YOU CAN CREATE EVEN MORE LIFE-LIKE SCENARIOS
- ✓ YOU ARE ABLE TO CLIMB OVER AND STAND ON TOP OF THE UNIT
- ✓ THIS UNIT CAN BE PLACED ON NEARLY ANY LOCATION

TRAINING APPLICATIONS

- ✓ HAZMAT PPE TRAINING
- ✓ HAZMAT APPROACH
- ✓ HAZMAT DAMAGE CONTROL
- ✓ SPILL FIRE
- ✓ PIPE LEAKAGE
- ✓ FLANGE FIRE
- ✓ TANK LEAKAGE
- ✓ PRESSURE RELIEF VALVE
- ✓ FLANGE LEAKAGE
- ✓ PROCEDURE TRAINING
- ✓ TACTICAL PROCEDURE TRAINING
- ✓ ATTACK PROCEDURE TRAINING
- ✓ MEASURING TRAINING

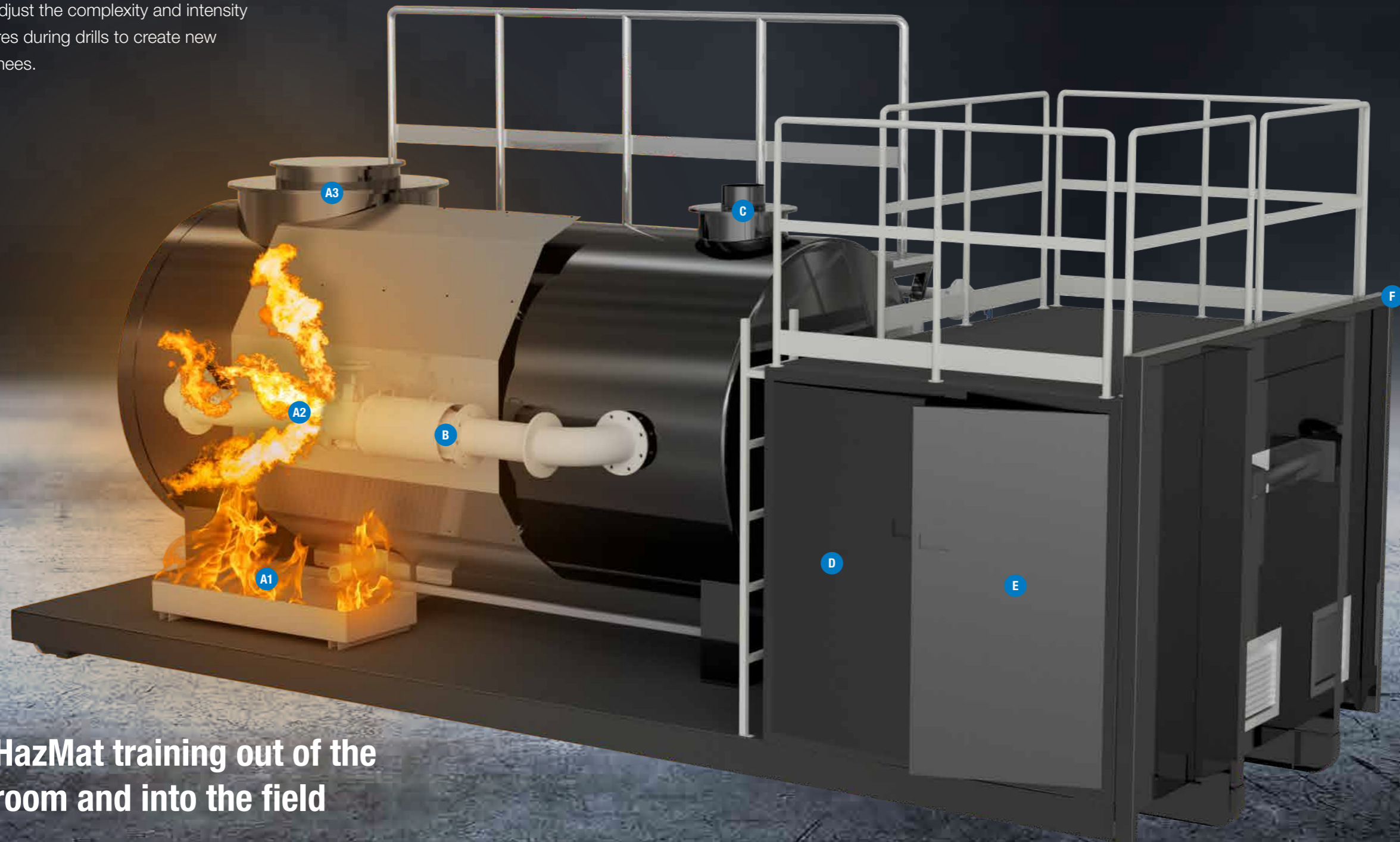
AND MANY MORE

LION TrainingReady HMT TRAINING UNIT

Our mobile LION TrainingReady HMT Training Unit provides a variety of hands-on and repeatable chemical and industrial emergency response training exercises. Hazardous chemical spills, leaks of liquids and vapours, and flange fires can be trained in nearly any location. Instructors can select training scenarios and dynamically adjust the complexity and intensity of the leaks and fires during drills to create new challenges for trainees.

TECHNICAL SPECIFICATIONS

- A** 3 Fixed firefighter simulators;
 - 1 - Spill fire,
 - 2 - Flange fire,
 - 3 - Pressure relief fire
- B** 4 Water leakages
- C** 2 Vapour (smoke) leakages
- D** LION Safety System
- E** LION Essential Control System
- F** 20 ft long frame with simulated tank



“ Take HazMat training out of the classroom and into the field



SPECIAL FEATURES

- ✓ THE UNIT HAS A WALKABLE ANGLED ROOF
- ✓ THE WOOD CUTTING PANELS HELP YOU TRAIN FORCIBLE ENTRY
- ✓ OUR UNIT CONTAINS FIXED FIRE SIMULATORS AS WELL A MOVABLE MAGNUM SIMULATOR SYSTEM
- ✓ SMOKE DIVE IN HIGH TEMPERATURE ROOMS
- ✓ ALL FIRE SIMULATORS ARE GAS-BASED

TRAINING APPLICATIONS

- ✓ BREATHING APPARATUS (BA) TRAINING
- ✓ NOZZLE TRAINING
- ✓ FIRE HOSE HANDLING AND ADVANCEMENT TECHNIQUES
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ CONFINED FIRE BEHAVIOUR TRAINING (CFBT)
- ✓ HEAT HABITUATION
- ✓ BASEMENT FIRE TOP DOWN ENTRY
- ✓ WORKSHOP FIRE
- ✓ SOLAR PANEL FIRE
- ✓ OFFENSIVE/DEFENSIVE INSIDE/OUTSIDE ATTACK
- ✓ TEAM LEADER TRAINING
- ✓ VENTILATION TRAINING
- ✓ FORCIBLE ENTRY
- ✓ VENTILATION TRAINING
- ✓ MAN DOWN
- ✓ SEARCH AND RESCUE

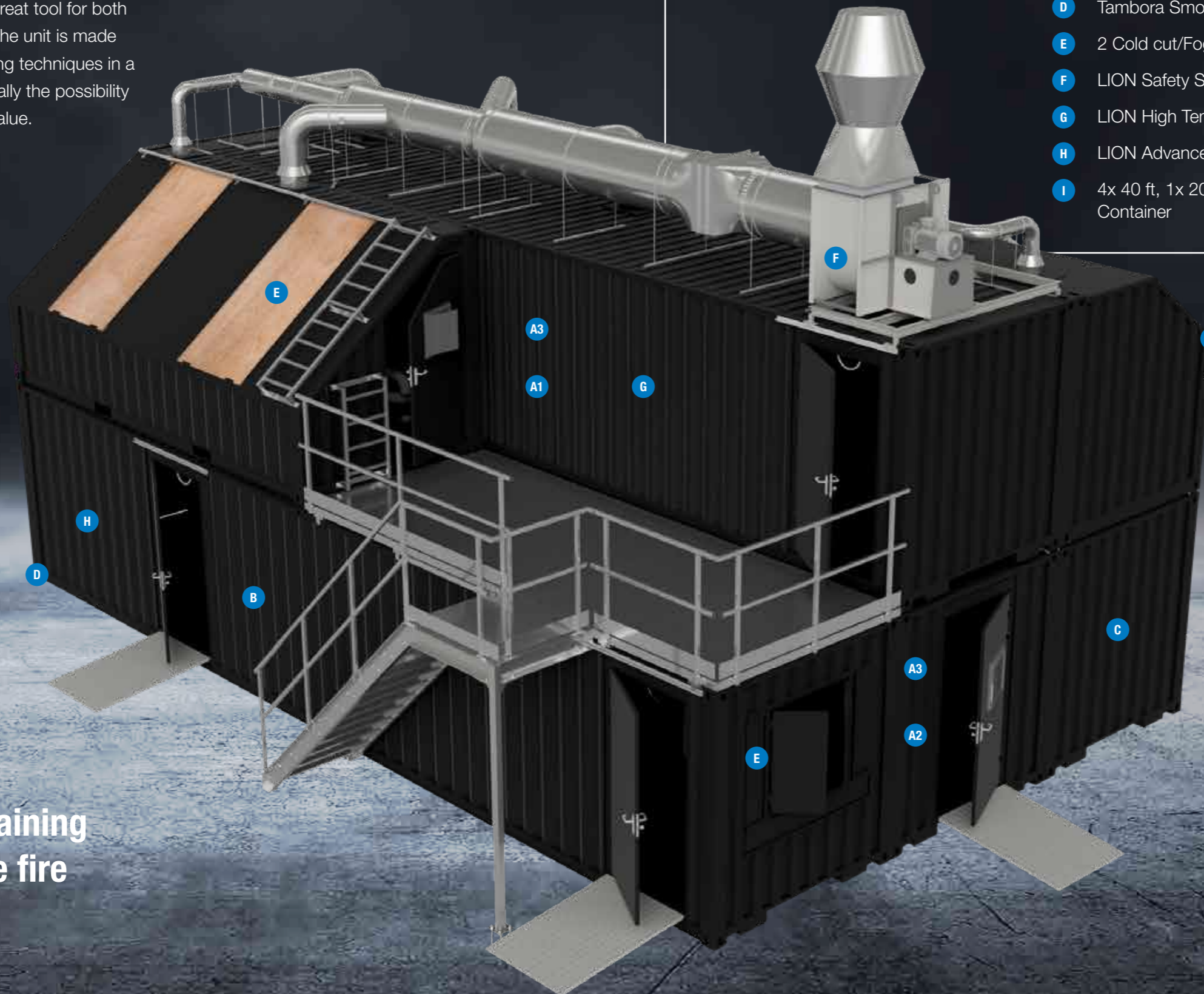
AND MANY MORE

LION CustomDesign GFT Multi-Level TRAINING UNIT

This Gas-Based Training Unit is a great tool for both new and experienced firefighters. The unit is made to train all procedures and firefighting techniques in a basic or elementary set-up. Especially the possibility of training in scenarios is of great value.

TECHNICAL SPECIFICATIONS

- A** 4 Fixed firefighter simulators;
 - 1 - Kitchen simulator,
 - 2 - Interchangeable simulator,
 - 3 - 2x Rollover simulator
- B** 1 movable MAGNUM firefighter simulator;
 - 3 internal connection point
 - 1 external connection point
- C** 4 Hot smoke rooms
- D** Tambora Smoke Generator
- E** 2 Cold cut/Fog Nail Training points
- F** LION Safety System
- G** LION High Temperature Protection System
- H** LION Advanced Control System
- I** 4x 40 ft, 1x 20 ft, 1x 10 ft ISO Freight Container



“ The optimal training before real-life fire incidents



SPECIAL FEATURES

- ✓ THIS UNIT HAS REALISTIC SHIP DOORS
- ✓ THE UNIT IS EQUIPPED WITH A DIVERSITY OF FIRE SIMULATORS
- ✓ OUR UNIT ACCOMMODATES TOP-DOWN ENTRY
- ✓ BECAUSE OF THE VERSATILITY OF THIS UNIT, YOU CAN TRAIN CREWS AS WELL AS FIREFIGHTERS
- ✓ SUITABLE FOR REALISTIC ON-BOARD TRAINING SCENARIOS

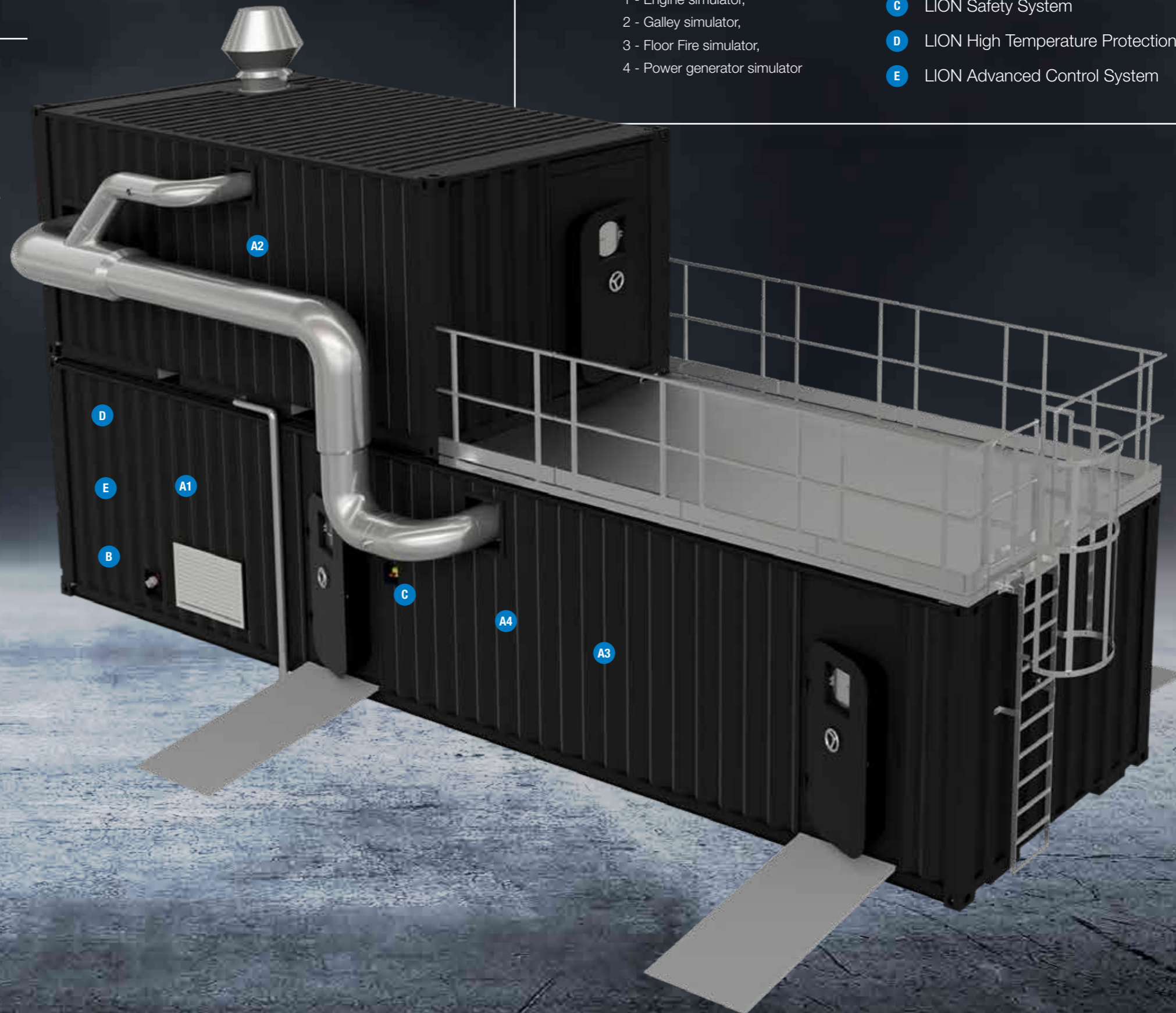
TRAINING APPLICATIONS

- ✓ FIRE GAS COOLING
- ✓ FIRE HOSE HANDLING AND ADVANCEMENT TECHNIQUES
- ✓ TOP-DOWN ENTRY
- ✓ BOUNDARY COOLING
- ✓ SEARCH AND RESCUE
- ✓ SHIP DOOR/HATCH OPENING PROCEDURES
- ✓ (STCW) BASIC & ADVANCED FIREFIGHTER TRAINING
- ✓ NOZZLE TRAINING
- ✓ VENTILATION TRAINING
- ✓ ENGINE ROOM FIRE (USE OF FOAM)
- ✓ TACTICAL PROCEDURE TRAINING
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ OFFENSIVE/DEFENSIVE INSIDE/OUTSIDE+ ATTACK
- ✓ STABILITY OF THE SHIP
- ✓ FIRE SPREAD HORIZONTAL/VERTICAL
- ✓ SALVAGE PREPARATIONS

AND MANY MORE

LION CustomDesign GFT Naval TRAINING UNIT

Fighting fires on a ship requires special tactics that are often different than common structural firefighting. Phenomena like fatigue, radiation heat and HazMat on ships – in harbours or on open seas – make ship firefighting a profession of its own. Therefore, firefighters and crew members must be trained in this specific profession on top of their current education. With the LION CustomDesign GFT Naval Training Unit crews can be trained to become certified (for example: STCW legislation). Firefighters can be trained to be an onshore-based organisation and to become ERT members.



TECHNICAL SPECIFICATIONS

- A** 4 Fixed firefighter simulators;
 - 1 - Engine simulator,
 - 2 - Galley simulator,
 - 3 - Floor Fire simulator,
 - 4 - Power generator simulator
- B** Tambora Smoke Generator
- C** LION Safety System
- D** LION High Temperature Protection System
- E** LION Advanced Control System

“ Prepare them for
the worst in a safe
environment



SPECIAL FEATURES

- ✓ THIS UNIT HAS REALISTIC SHIP DOORS
- ✓ PROVIDES TRAINING SCENARIO DIVERSITY
- ✓ CREW TRAINING FROM CAPTAIN TO BOATSWAIN COMPARING TO APPLICABLE STANDARDS
- ✓ SUITABLE FOR ONSHORE APPROACH TRAINING BY FIRE BRIGADES
- ✓ ALSO DESIGNED TO TRAIN FIRE TEAMS ONBOARD
- ✓ CAN BE EXPANDED TO MEET SPECIFIC TRAINING NEEDS

TRAINING APPLICATIONS

- ✓ FIRE GAS COOLING
- ✓ BOUNDARY/STRUCTURE COOLING
- ✓ COMPLEX SHIP/BUILDING FIRE TRAINING
- ✓ RECONNAISSANCE
- ✓ SEARCH AND RESCUE
- ✓ SHIP DOOR/ HATCH
- ✓ STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING (STCW) BASIC & ADVANCED FIREFIGHTER TRAINING
- ✓ TOP DOWN ENTRY
- ✓ SALVAGE PREPARATIONS
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ TACTICAL PROCEDURE TRAINING
- ✓ EVACUATION DRILLS
- ✓ ATTACK PROCEDURE
- ✓ VENTILATION TRAINING
- ✓ OFFENSIVE/DEFENSIVE INSIDE/OUTSIDE ATTACK
- ✓ FOAM TRAINING

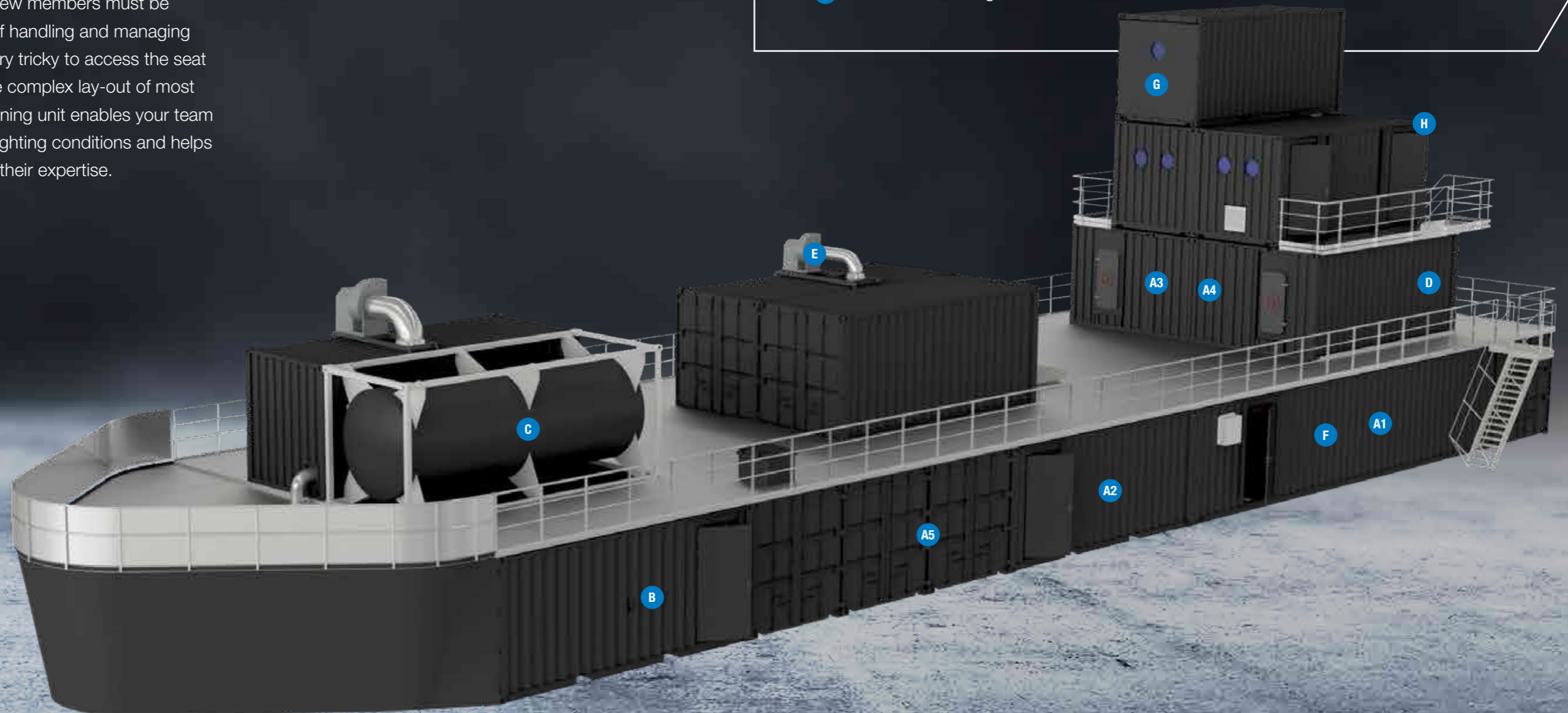
AND MANY MORE

LION CustomDesign GFT Marine TRAINING UNIT

In-depth knowledge of firefighting operations and preventive measures is required to be able to accurately and efficiently manage risks of fires on ships. Firefighters and crew members must be trained on the difficulty of handling and managing marine fires. It can be very tricky to access the seat of the fire because of the complex lay-out of most ships. Therefore, this training unit enables your team to train with realistic firefighting conditions and helps them to further broaden their expertise.

TECHNICAL SPECIFICATIONS

- A** 5 Fixed firefighter simulators;
 - 1 - Engine simulator,
 - 2 - Paint locker simulator,
 - 3 - Galley simulator,
 - 4 - Rollover simulator,
 - 5 - Hybrid wood /gas simulator
- B** 20 SCBA crawling galleries
- C** 1 HazMat Leaking tank
- D** 2x Tambora Smoke Generator
- E** LION Safety System
- F** LION High Temperature Protection System
- G** LION Advanced Control System
- H** 8x 40 ft, 18x 20 ft ISO Freight Container



“ Know what to do during dangerous situations you face at sea



SPECIAL FEATURES

- ✓ CAN BE INSTALLED ON A TRAILER
- ✓ INTERCHANGEABLE SIMULATORS TO PREVENT TRAINING FATIGUE
- ✓ SAFELY EVACUATE IN 30 SECONDS
- ✓ THE INSTRUCTOR CAN SEE EVERY MOVE AND GIVE LIVE FEEDBACK
- ✓ IS EQUIPPED WITH STRESS ENHANCING ELEMENTS, SUCH AS STROBE LIGHTS AND SOUND EFFECTS

TRAINING APPLICATIONS

- ✓ PUNCTURED HULL
- ✓ PIPE LEAK
- ✓ BREACHED DOOR
- ✓ DUAL FLANGE LEAKAGE
- ✓ FLOOR HATCH
- ✓ OVERFLOW 48"
- ✓ SEAM SPLIT (BOW BOX LEAK)
- ✓ OVERFLOW 60"
- ✓ LOCKING OFF THE DAMAGED AREA
- ✓ TOP DOWN ENTRY
- ✓ SMALL HOLES (STERN BOX LEAK)
- ✓ CENTRE LINE FLANGE
- ✓ PORT FLANGE
- ✓ OPEN SIMULATOR
- ✓ STRESS TRAINING

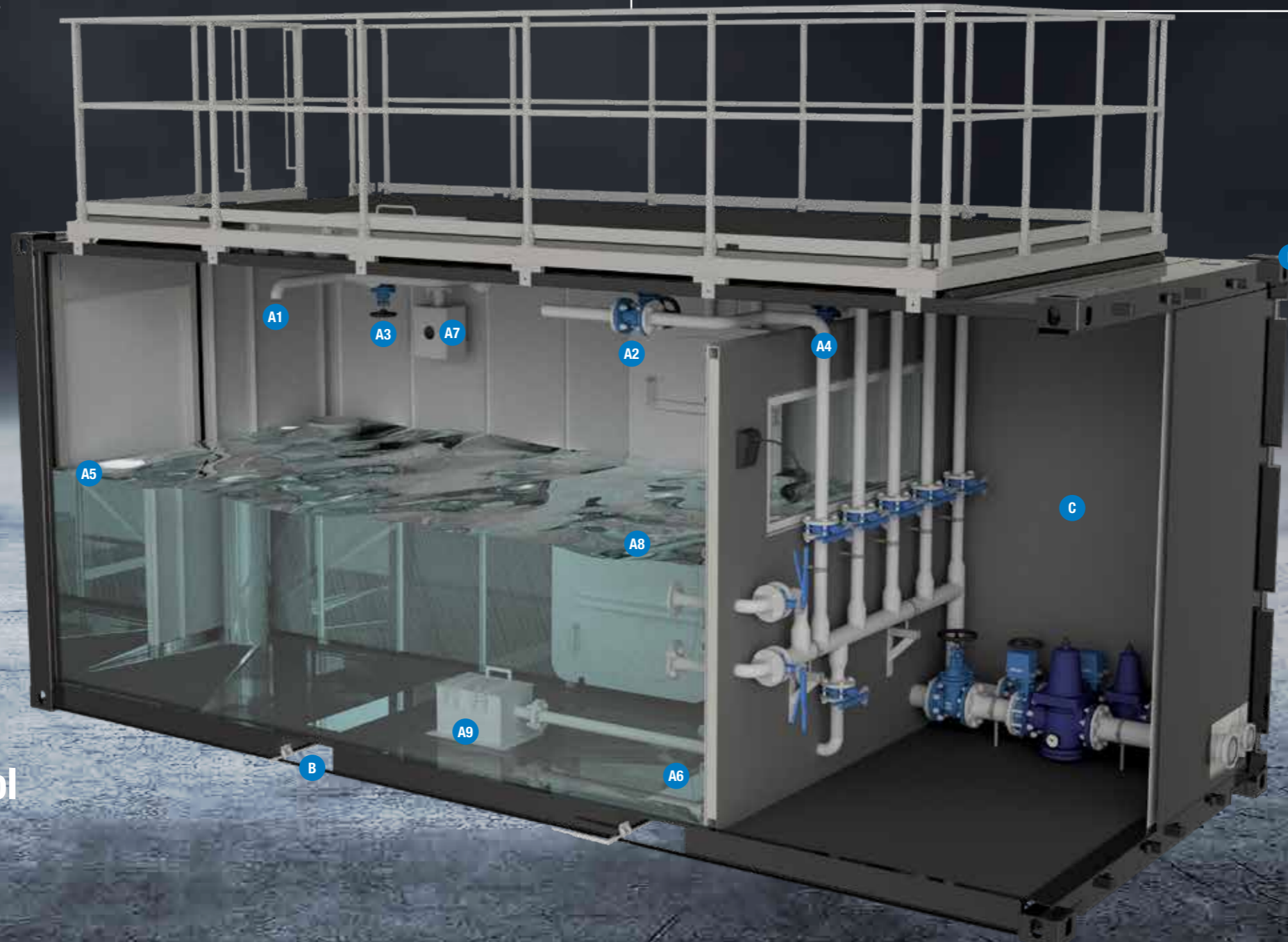
AND MANY MORE

LION CustomDesign DCT TRAINING UNIT

Assess, act, survive. Make sure your team is well-prepared and ready for action in the event of a damaged marine vessel. This LION CustomDesign Damage Control Technology Training Unit is equipped with several leakage simulators for intense, realistic yet completely safe training sessions. Trainees will learn to assess the danger of the situation, to locate sources and to act accordingly.

TECHNICAL SPECIFICATIONS

- A** 9 Leaking water pipes;
 - 1 - Weld simulator,
 - 2 - Seam split simulator,
 - 3 - Flange weld split simulator,
 - 4 - Loose Flange simulator,
 - 5 - Jagged plate tear simulator,
 - 6 - 10" simulator,
 - 7 - Round puncture simulator,
 - 8 - Breached door simulator,
 - 9 - Failed hatch simulator
- B** LION Safety System
- C** LION Essential Control System
- D** 40 ft ISO Freight Container



“ Will you keep your cool when you are elbow-deep in danger?”



SPECIAL FEATURES

- ✓ WOOD-BASED SIMULATOR
- ✓ DESIGNED TO TAKE POSSIBLE SMOKE TREATMENT INTO ACCOUNT
- ✓ FOR BOTH FIRE BEHAVIOUR DEMONSTRATIONS AND NORMAL FIRE DRILLS
- ✓ STABLE DOORS ARE ADDED IN TO CHANGE UP FLOW PATHS AND SUPPLY OF OXYGEN
- ✓ USES PRESSURE RELIEVE VALVES TO KEEP YOUR TRAINEES SAFE

TRAINING APPLICATIONS

- ✓ BREATHING APPARATUS (BA) BASIC TRAINING
- ✓ SEARCH AND RESCUE TRAINING
- ✓ BA REFRESHER TRAINING
- ✓ HOSE LINE MANAGEMENT
- ✓ BA ORIENTATION TRAINING
- ✓ TRANSITIONAL ATTACK TRAINING
- ✓ DOOR OPENING PROCEDURES
- ✓ CASUALTY TRAINING
- ✓ CONFINED FIRE BEHAVIOUR TRAINING (CFBT)
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ READING THE SMOKE BUILDING - SMOKE AIRTRACK HEAT FLAME (B-SAHF)
- ✓ VENTILATION TRAINING (NATURAL, MECHANIC AND HYDRAULIC)
- ✓ SMOKE STOPPER
- ✓ NOZZLE TRAINING
- ✓ FIRE DYNAMICS

AND MANY MORE

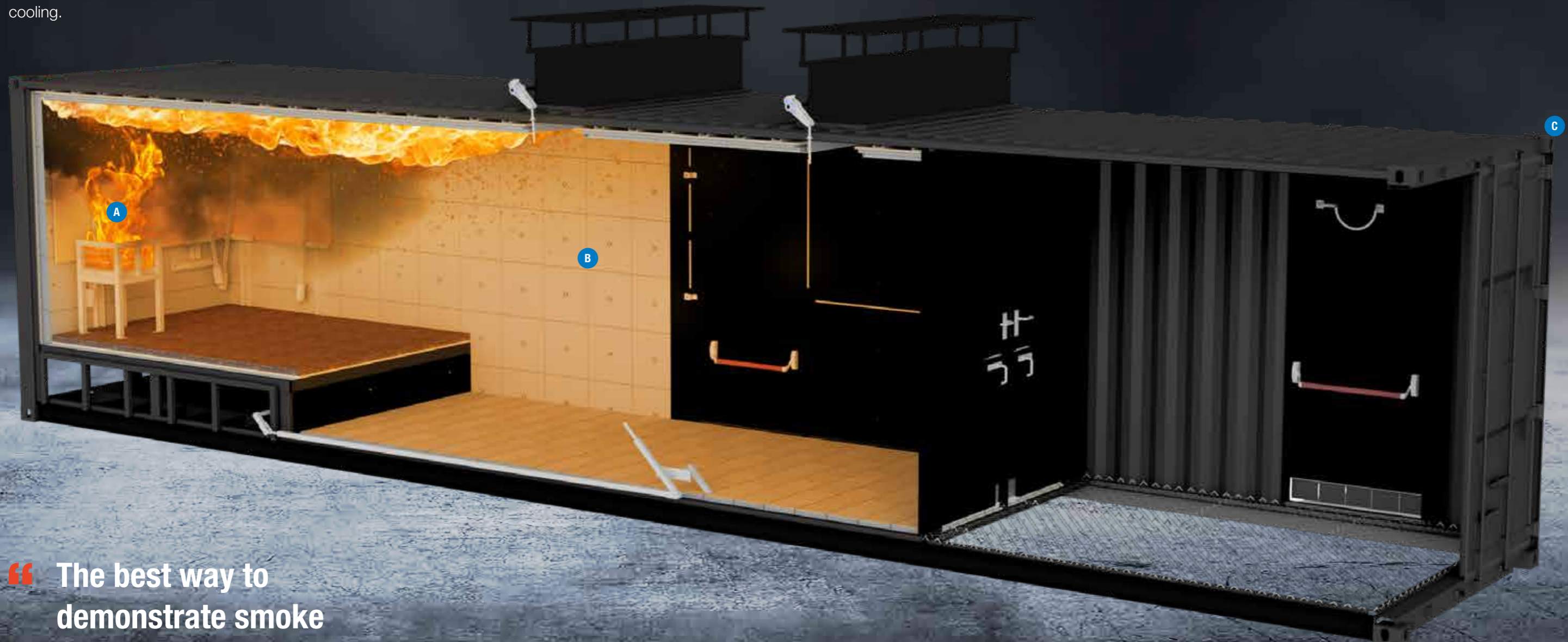
LION TrainingReady CFT

TRAINING UNIT

Fire behaviour is a part of the science every firefighter should be aware of. It is important to understand the curve of an evolving fire to a developed ventilated fire so they can react accordingly. This unit is specifically designed to allow trainees to experience and train with the phenomena that occur in a fire – such as rollover and burning fire gases. The layout of the unit is made to train on approaching fires, fire hose handling and advancement techniques and fire gas cooling.

TECHNICAL SPECIFICATIONS

- A** 1 Fixed firefighter simulator;
Wood-based simulator
- B** LION Ultra-High Temperature Protection System
- C** 40 ft ISO Freight Container “high cube”



“ The best way to demonstrate smoke and fire behaviour



SPECIAL FEATURES

- ✓ BURNING WOOD WITH THE SAME SAFETY AS A GAS-BASED SYSTEM
- ✓ IT CAN BE DELIVERED AS A MOBILE SYSTEM ON A TRAILER
- ✓ YOU CAN TRAIN IN A SAFE AND CONTROLLED ENVIRONMENT
- ✓ FROM UNSAFE TO SAFE SITUATIONS WITHIN JUST 1 MINUTE
- ✓ CAN BE EXPANDED WITH A LION AFTERBURNER SYSTEM

TRAINING APPLICATIONS

- ✓ OFFENSIVE/DEFENSIVE INSIDE ATTACK
- ✓ VENTILATION CONTROLLED FIRE TRAINING
- ✓ CONFINED FIRE BEHAVIOUR TRAINING (CFBT)
- ✓ VENTILATION TECHNIQS
- ✓ FIRE GAS COOLING
- ✓ READING THE SMOKE BUILDING - SMOKE AIRTRACK HEAT FLAME (B-SAHF)
- ✓ ATTACK PROCEDURE TRAINING
- ✓ TRANSITIONAL ATTACK TRAINING
- ✓ HOT DOOR
- ✓ FLOW PATH TRAINING
- ✓ NOZZLE TRAINING
- ✓ DOOR OPENING PROCEDURES
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ HEAT HABITUATION
- ✓ FUEL CONTROLLED FIRE TRAINING
- ✓ MAN DOWN

AND MANY MORE

LION TrainingReady CFT Hybrid TRAINING UNIT

Our carbonaceous fire technology can feature combustion technology to create fire using both gas and wood. It is developed to allow firefighters to controllably burn real wood in their training scenarios without worrying about the environmental effects. Built-in water suppression systems and smart controls keep firefighters safe, even in the toughest training conditions.

TECHNICAL SPECIFICATIONS

- A** 1 Fixed firefighter simulator;
Hybrid gas/wood simulator
- B** LION Safety System
- C** LION Ultra-High Temperature
Protection System
- D** LION Essential Control System
- E** 40 ft ISO Freight Container



“ Get ready for action in a
safe training environment



SPECIAL FEATURES

- ✓ THE UNIT HAS A WALKABLE ANGLED ROOF
- ✓ THE WOOD CUTTING PANELS HELP YOU TRAIN FORCIBLE ENTRY
- ✓ OUR UNIT CONTAINS FIXED FIRE SIMULATORS AS WELL AS A MOVABLE MAGNUM SIMULATOR SYSTEM
- ✓ SMOKE DIVE IN HIGH TEMPERATURE ROOMS
- ✓ ALL FIRE SIMULATORS ARE GAS-BASED

TRAINING APPLICATIONS

- ✓ BREATHING APPARATUS (BA) TRAINING
- ✓ OFFENSIVE/DEFENSIVE INSIDE/OUTSIDE ATTACK
- ✓ FIRE HOSE HANDLING AND ADVANCEMENT TECHNIQUES
- ✓ FLOW PATH TRAINING
- ✓ FIRE GAS COOLING
- ✓ ATTACK PROCEDURE TRAINING
- ✓ HEAT HABITUATION
- ✓ VENTILATION TRAINING
- ✓ DOOR OPENING PROCEDURE TRAINING
- ✓ TRANSITIONAL ATTACK TRAINING
- ✓ NOZZLE TRAINING
- ✓ THERMAL IMAGING CAMERA (TIC) TRAINING
- ✓ FORCIBLE ENTRY
- ✓ SEARCH AND RESCUE
- ✓ TEAM LEADER TRAINING
- ✓ READING THE SMOKE WITH BUILDING SMOKE HEAT AIR TRACK FLAME (B-SAHF)

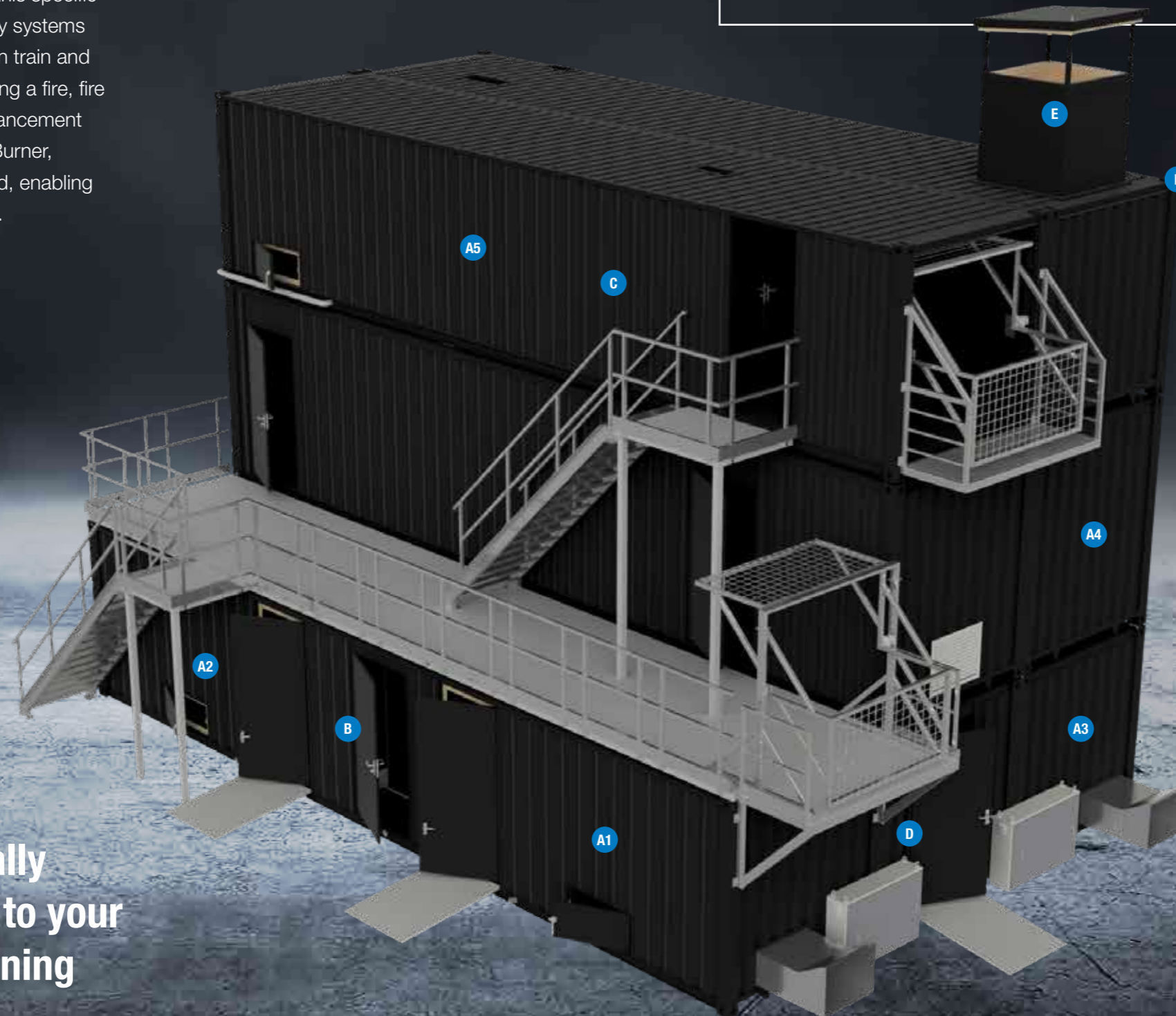
AND MANY MORE

LION CustomDesign CFT Multi-Level Hybrid TRAINING UNIT

To develop essential and fundamental firefighting skills it is necessary to train in realistic environments. We developed this multi-level unit to fit this specific training need. With fire simulators, safety systems and hot smoke rooms, your trainees can train and experience fire development, approaching a fire, fire gas cooling, fire hose handling and advancement techniques. Thanks to the added AfterBurner, pollution of the environment is prevented, enabling you to place this unit nearly everywhere.

TECHNICAL SPECIFICATIONS

- A** 5 Fixed firefighter simulators;
 - 1 - Hybrid gas/wood simulator,
 - 2 - Hybrid gas/wood simulator,
 - 3 - Hybrid gas/wood simulator,
 - 4 - Hybrid gas/wood simulator,
 - 5 - Hybrid gas/wood simulator
- B** LION Safety System
- C** LION High Temperature Protection System
- D** LION Advanced Control System
- E** Afterburner Technology
- F** 7x 40 ft ISO Freight Container



“ An environmentally friendly solution to your fundamental training



“ Don't train until you get it right. Train until you can't get it wrong

GLOSSARY

Title	Complete Name	Page
LION TrainingReady DFT TRAINING UNIT	LION TrainingReady Digital Fire Technology Training Unit	24
LION TrainingReady BAT TRAINING UNIT	LION TrainingReady Breathing Apparatus Training Unit	26
LION CustomDesign GFT Elementary TRAINING UNIT	LION Gas-Based Fire Technology Elementary Training Unit	28
LION CustomDesign GFT Multi-Purpose TRAINING UNIT	LION Gas-Based Fire Technology Multi-Purpose Training Unit	30
LION TrainingReady HMT TRAINING UNIT	LION TrainingReady Hazardous Material Training Unit	32
LION CustomDesign GFT Multi-Level TRAINING UNIT	LION Gas-Based Fire Technology Multi-Level Training Unit	34
LION CustomDesign GFT Naval TRAINING UNIT	LION Gas-Based Fire Technology Naval Training Unit	36
LION CustomDesign GFT Marine TRAINING UNIT	LION Gas-Based Fire Technology Marine Training Unit	38
LION CustomDesign DCT TRAINING UNIT	LION CustomDesign Damage Control Training Unit	40
LION TrainingReady CFT TRAINING UNIT	LION TrainingReady Carbonaceous Fire Technology Training Unit	42
LION TrainingReady CFT Hybrid TRAINING UNIT	LION TrainingReady Carbonaceous Fire Technology Hybrid Training Unit 40 ft 1 (basic)	44
LION CustomDesign CFT Multi-Level Hybrid TRAINING UNIT	LION Carbonaceous Fire Technology Multi-Level Hybrid Training Unit	46

READY FOR ACTION



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