

# LIVE FIRE TRAINING

Design, Manufacture, Install, Commission, Service, Life Cycle





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MONTANA TECH COMPONENTS AG is an industrial company that focuses on key technologies in markets of the future. Alpine Metal Tech Group belongs to the business division Montana Aerospace AG, which develops forward-looking technologies for the aerospace of tomorrow. Alpine Metal Tech is a world market leader in the field of special purpose machinery for the steel and automotive industry. The group provides a whole platform for Engineering, Manufacturing, Sales and Services respectively operates globally in four business areas (Steel, Automotive, Aerospace and Life Cycle Business) under eight leading brands (NUMTEC, GEGA, KNORR, MAKRA, AMAKON, MAGNEMAG, SIMULATION and INTERMATO).

SIMULATION is a world leader in the provision of live fire training facilities. The brand is specialized in the supply of live fire training simulators of Aircrafts, Structures, Oil and Gas, and Special Applications. Our goal is to design, and build customized simulators that are developed through a partnership arrangement to ensure an optimum solution for the training of personnel at the customer's facility. SIMULATION's dedicated, qualified and experienced team accomplishes turnkey solutions through a close collaboration with our customers. We turn innovative concepts into reality and provide outstanding quality of products and services.



## APPLICATION AREAS

- » Aircraft simulators  
Our custom-built aircraft simulators range from the largest wide body aircraft to the smallest general aviation aeroplanes. Customers can decide the complexity level and the training scenarios.
- » Structural fire simulators  
Structural fire trainers provide the means for firefighters to train in an environment that replicates the challenges and complexities of a structural fire, but in a safe, durable, and repeatable manner. From a single flashover trainer to a multi storied complex.
- » Oil and gas fire simulators  
Our full scale or reduced scale props and trainers include simulators for every aspect of the industry including drilling rigs, storage, transport, refining, pumping and distribution.
- » Special applications  
Our custom products include fire simulator props for all types of vehicles, fuel spills, household and commercial fires. Also, many non-fire related simulators are available for hazmat, confined space, and many types of specialized rescue scenarios. Unique and cutting-edge solutions are also available for the forestry service that replicate the unique challenges faced by wildland fire fighters.

# AIRCRAFT SIMULATORS

## Large frame wide-body aircraft simulators

SIMULATION provides realistic live fire training for wide body aircraft such as Boeing 747, 777, 787, 767, MD-11, Airbus A380, A330, A340 and A350. Immersed into this realistic environment are the options for a multitude of different live fire scenarios both internally and externally, providing the most realistic training for firefighters and rescue crews.

### Your advantages

- » Completely customizable with an endless list of options
- » Hybrid designs possible replicating multiple aircraft
- » Unparalleled realism of engines, doors, and components



## Small general aviation simulators

The small general aviation fire simulators provide realistic live fire training for smaller private aircraft in both the piston and jet categories. A limitless list of models are available for manufacture including popular choices from Cessna, Piper, Beechcraft, and Lear. Each simulator is customizable to each customer's requirements and budget. Simulators in this category are also available as a fixed installation or mobile on a trailer.

### Your advantages

- » Choice of fire locations and cabin set-up
- » Lightweight trailering possible on mobile units
- » Ideal for smaller airports or limited budgets



## Mid size - narrow body aircraft simulators

SIMULATION's narrow body aircraft fire simulators provide realistic live fire training for mid-size aircraft such as Boeing 737, 757, or Airbus A320. This model is the most popular choice as it is found operating at most commercial airports. In addition, hybrid designs are a common option where a single simulator is a blend of two or more types. It is even possible to add single components from smaller commuter aircrafts.

### Your advantages

- » Completely customizable with an endless list of options
- » Realistic dimensions of simulator and components
- » Dual fuel option for ultra-real burn or clean burn



## Helicopter simulators

The helicopter simulators provide realistic live fire training for both civil and military applications. Each simulator is customizable to each customer's requirements and budget. Exacting engineering and design elements replicate the sizes and dimensions of the real aircraft, which enable firefighting and rescue crews to be trained to the highest level possible. Simulators in this category are also available as a fixed installation or mobile on a trailer.

### Your advantages

- » Realistic dimensions of simulator and components
- » Heavy gauge steel construction for long life
- » Mobile lighter weight options for trailering



## Small regional aircraft simulators

Our regional aircraft models provide realistic live fire training for smaller commercial aircraft such as ATR72 / DHC Dash 8/Q400, CRJ Series or Embraer models. An endless list of options and combinations exist to make each simulator customizable to each customer's requirements and budget. Besides having the regional aircraft in a fixed position, we also offer simulators of this size in a mobile version, which is ideal for training across multiple jurisdictions.

### Your advantages

- » Hybrid design based on multiple aircraft types
- » Heavy gauge steel for long life
- » Mobile option available for trailer transport



## Military aircraft simulators

The military aircraft simulators provide realistic live fire training for any fixed wing or rotor craft model utilized by militaries throughout the world. From fighter jets to transport planes, from attack helicopters to tilt rotors, our exacting engineering and design elements replicate the sizes and dimensions of the real aircraft. Weapons and munitions can also be integrated into the simulator in order to train on emergencies simulating live ordinance.

### Your advantages

- » Mobile option for smaller aircraft models
- » Hybrid designs based on multiple aircraft types
- » Special integration of weapons and haz-mat



# STRUCTURAL FIRE SIMULATORS

## H-Block simulator

The Simulation H-Block fire trainer is recognized as being the ultimate single-story fire training unit. Designed to exacting engineering and performance standards, the H-Block was developed to allow multiple aspects of fire training to occur in a single, yet compact unit, such as flashovers, backdrafts, single/multiple fire suppression, ventilation, mazes, search/rescue or confined space. All of the fire evolutions are conducted with Class "A" burn materials.

### Your advantages

- » Heavy duty construction of proprietary design
- » Safe and real demonstration of backdraft
- » Temperature monitor system for safety of occupants



## Fire training house

Our customized fire training houses can be constructed to simulate residential structure fire scenarios. Working with our customers, we can design the structure to replicate the type of housing predominant in your fire district. Multiple construction methods can be utilized which are best suited to your needs and an endless array of interior props can be integrated dependent on the required level of realism.

### Your advantages

- » Customized to the type of dwellings in your area
- » Class A or B fuelling options
- » Ventilation, mazes, confined space options



## Flashover simulator

Flashovers are a common and deadly occurrence in the growth phase of a structure fire, yet they are difficult to detect without the correct training. Learning the tell-tale signs and the techniques to prevent a flashover are critical skills. Using a proprietary system of baffles, vents and louvres, the intensity of the Class "A" fire inside the unit can be modified so that the firefighters can witness the different fire phases in a controlled manner.

### Your advantages

- » Standard, heavy-duty or mobile version available
- » Engineered for performance and longevity
- » Easy loading doors for Class A burn materials in burn box



## Multi level training complex

SIMULATION designs and builds customized multi-level fire and rescue training facilities to realistically simulate the challenges present in larger dwellings, commercial or industrial buildings, and high rises. These larger simulators enable more complex evolutions where the officers and firefighters can be challenged with multiple fires, fire extension through multiple floors, high angle rescue, and complex ventilation scenarios. Unique hazards in your community can be integrated into the unit for training specific to your environment. Class A and B options available.

### Your advantages

- » Customizable for the hazards in your area
- » Internal and external high angle challenges
- » Reconfigurable confined space and maze options

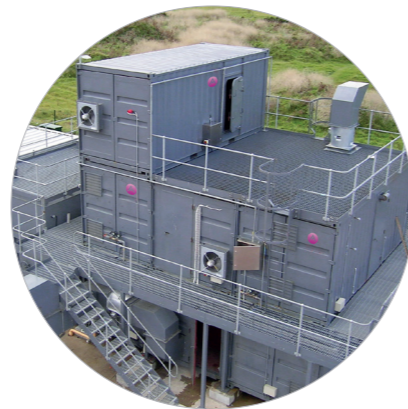


## Maritime fire training units

Simulation designs and builds maritime fire training units that replicate the unique challenges posed with fighting fires in a ship. Special areas include bridge and engine rooms, as well as pump rooms and berthing. Dimensionally correct hallways, passageways, stairways and doors unique to a ship present additional challenges to firefighter access and mobility. Class A or B fueling systems are available.

### Your advantages

- » Realistic doors, hatches and interior dimensions
- » Confined space and haz mat integration
- » Heavy duty burn areas for long life



## Mobile compartment fire training unit

Simulation designs and builds customised 20ft and 40ft ISO container mobile fire and rescue training units. The units are designed to realistically simulate a variety of internal layouts such as domestic, industrial and maritime.

### Your advantages

- » Customizable for the hazards in your area
- » Fast track solution for fire and rescue training – quick set up time, no infrastructure requirements



# OIL AND GAS FIRE SIMULATORS

## Pipe gantry

SIMULATION's identically replicated pipe gantries found in most refining and distribution plants, give the firefighters a realistic extinguishment challenge with these unique structures. The elevated position of the fire along with the horizontal spread aspect presents a level of unparalleled realism. The Class B computer controlled fire enables the instructor to challenge the trainees in multiple aspects of extinguishment.

### Your advantages

- » Customizable gantry size and height
- » Heavy duty steel construction for long life
- » Advanced PLC control for safe yet real training



## Storage tank training facility

SIMULATION manufactures oil and fuel storage tank fire training simulators that offer the most intensive and realistic tank fire scenarios available. From full scale mock ups through smaller scale units, the computer-controlled fire loads will test the students and trainees. Advanced foam application techniques and fire-fighting tactics will be challenged in an extremely realistic environment.

### Your advantages

- » Actual or smaller scale tanks
- » Multiple fire scenarios
- » Advance computer controlled fire spread



## Petrochemical fire training rig

Our customizable petrochemical fire training rig can be customizable to the type of infrastructure found in any particular refinery plant. The included components, height, floors, size, number of fires, location of fires, and intensity of fires are limitless. The computer controlled system enables realistic fire spread. Multiple fires can be engaged as the fire intensifies, giving the trainees exposure to the heat and fire load experienced in an actual refinery fire.

### Your advantages

- » Limitlessly custom structure and components
- » Pre-programmed or custom fire scenarios
- » Extreme heavy duty construction for fire loads



## Pressure vessel

Pressure vessel fire potential exists not only in a refinery environment but are commonplace in residential and commercial settings. Larger tanks containing propane or other pressurized fuel present significant risk of BLEVE during fire impingement. SIMULATION's replicated pressure vessels with variable intensity fire loads train the firefighters to safely cool and extinguish the fires and teach awareness of BLEVE threat.

### Your advantages

- » Variable sized vessels for individual needs
- » Excellent BLEVE risk training
- » Computer controlled fire intensity



## Wellhead unit

Wellhead simulators are constructed of the same piping and flange components found in actual wells. Working with the customer we manufacture heads that are of the same size and diameter found on their specific sites. In addition, design elements for fire size/intensity are integrated to account for specific pressures and volumes that may be experienced at a particular site.

### Your advantages

- » Actual wellhead size and dimensions
- » Variable fire intensity/volume
- » Heavy duty realistic construction



# SPECIAL APPLICATIONS

## Vehicle fire trainers

SIMULATION designs and manufactures a wide range of vehicle fire simulators including cars, trucks, buses, or any other vehicle upon request. The heavy duty constructed simulators closely replicate the actual vehicle being modeled and are designed for long life and safe operation. Stainless steel options are also available for extra longevity and strength.

### Your advantages

- » Safety systems and remote controlled operation
- » Options for transportable units
- » Extrication component options



## Hazmat and confined space training

Hazardous materials incidents and confined space rescue require very specialized training equipment to address the exceptional risks involved. Simulation designs and constructs custom trainers and simulators that challenge rescuers skills and abilities while maintaining a safe environment. Many of these units can be either fixed or transportable dependent on the fire department's needs.

### Your advantages

- » Fixed or transportable simulators
- » Variable complexity scenarios
- » Heavy duty construction for long life



## Domestic and commercial fire props

Fire simulation props are available for integration into any of our fire training or structures or as standalone simulators for firefighter training. While SIMULATION will customize any requested solution, some of our most popular prop requests include beds, kitchens, couches, dumpsters, gas meters, BBQ grills, garbage cans, and spill fires. These units are controlled utilizing our remote control system and LPG fuel supply. Many of the props are portable and mobile and can be transported via a customized trailer with integrated hoses and LPG fuel system for easy set-up.

### Your advantages

- » Wide range of realistic dimensioned props
- » Optional trailer with integrated fuel/hoses/power
- » Custom props upon request



## Forest and wildland fires

SIMULATION is the only company in the world to offer a realistic and intensive live fire simulator solution for forest fires and wildfires. Our proprietary system integrates a high level of technology and specialized props to enable training of ground, vehicle and aerial forces. Each system can be designed for multiple vegetation, tree and growth patterns with countless scenarios to continually challenge even seasoned firefighters. More information upon request.

### Your advantages

- » The only realistic forest and wild fire simulators
- » Completely customizable for any district
- » Ground, vehicle, and aerial fire training



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