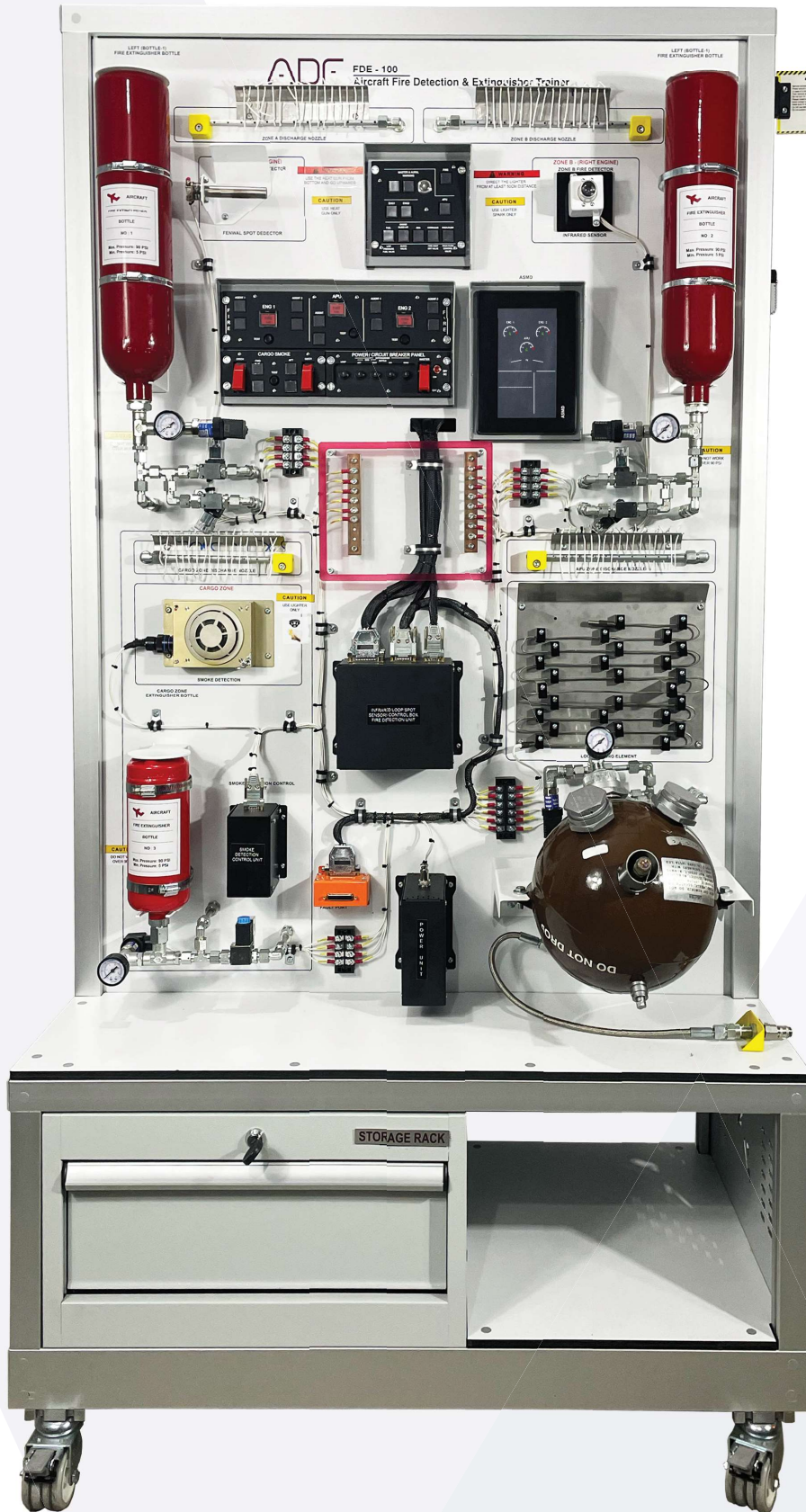




# Triple Fire Detection & Extinguisher Trainer

Model FDE-100V



FDE-100V training set simulates a functional Airbus fire detection and extinguishing system. It incorporates the continuous loop and spot detectors with controls, indication and test circuits.

The extinguisher discharges shop air when the system is activated. The instructor can induce faults for the trainees to troubleshoot, providing hands-on experience in troubleshooting.

The trainer is installed on a movable frame, it can be positioned as needed. This set simulates the system with two fire extinguisher container.

## Specifications

### Features

- Understanding fundamentals of aircraft Fire Detection & Extinguishing system and its components.
- Aircraft real fire & smoke scenarios are simulated.
- Fire is simulated on the training set with any sensor.
- The trainer is designed with three zones allowing Engine-1, Engine-2, APU fire and Cargo Smoke system simulation.
- Trainer includes separate extinguishers for each zone on the training set.
- The trainer include an original, emptied, secure aircraft extinguisher bottle for maintenance practices and using APU extinguisher bottle.
- Extinguishing system work crossfeed mode.
- Extinguishing bottle disassembly / assembly task
- Fire Extinguishing system test procedure task
- Sensor test procedure task
- Circuit breaker lockout application
- Trainer set includes Engine1, Engine2, APU and forward cargo smoke system.
- Engine-1 fire warning is activated from fenwal detector.
- Engine-2 fire warning is activated from IR sensor.
- APU fire warning is activated from loop detector.
- Smoke warning is activated from smoke detector.
- Trainer set includes extinguisher bottle for all systems
- Extinguisher bottles have pressure gauge, pressure sensor and control valve.
- Some of Trainer Functions
  - Agent function
  - FIRE push button function

- Discharge function
- Cross feed function
- Pumps fault function
- ECAM functions
- Single chime functions
- Master caution functions
- Master warning functions
- Some of Trainer Processes
  - Fire system test process
  - Fire Extinguisher bottle removal process
  - APU automatic fire Extinguisher process
  - Engine 1 fire process
  - Engine 2 fire process
  - APU fire process
  - Cargo smoke process
- Some of Trainer Cases
  - Engine 1 fire
  - Engine 2 fire
  - APU fire in flight
  - APU fire in ground
  - Cross feed
- The trainer have discharge nozzles for each zone(4 discharge nozzles).
- Trainer includes three aluminum protection plates for heating sections on the loop sensor.
  - The complete loop sensor is mounted on the training set so that it could be clearly seen.
  - Trainer includes master warning, master caution and warning-horn system that could be reset.
    - Pressure sensors are for each bottle.
    - Wirings on the trainer are connected via terminals.
    - Wires should have clear identification labels for each wire.
    - All wires should be coded and labeled for troubleshooting.
    - Locked metal drawer for fault panel, document, heat gun and Instructor's panel for Fault Insertion
    - The system mounted on a metal/aluminum mobile stand.
    - Metal/aluminum frame with 4 wheels. 2 of 4 wheels are lockable.
    - Training video for teachers
    - Delivered fully assembled tested and ready to operate
    - Colored Ultraviolet printing method on aluminum composite panel

## Components

- 7 inch ECAM display
  - Engines RPM
  - Fire Status,
  - Caution Status
  - Warning Status
  - Fault Status
- Control Panel
  - Master power switch
  - Master power lamp
  - Aircraft circuit breaker panel
  - Press to test illuminated Master warning button
  - Press to test illuminated Master caution button
  - Aural warning horn
  - Fire status indicator
  - Engine 1, Engine 2, Apu engine running indicator
  - System Status indicator
    - Fuel,
    - Electric,
    - Hydraulic,
    - Bleed
- Engine 1 Fire Control
  - Guarded Engine-1 fire status lamp and button
  - Agent 1 button
  - Agent 2 button
  - Discharge 1 indicator
  - Discharge 2 indicator
  - System Test Button
- Engine 2 Fire Control
  - Guarded Engine-2 fire status lamp and button
  - Agent 1 button
  - Agent 2 button
  - Discharge 1 indicator
  - Discharge 2 indicator
  - System Test Button
- APU Fire Control
  - Guarded APU fire status lamp and button
  - Agent 1 button

- Discharge 1 indicator
- System Test Button
- Cargo Smoke Control
  - Guarded Forward cargo extinguisher bottle toggle switch
  - Guarded Aft cargo extinguisher bottle toggle switch
  - Agent 1 button
  - Agent 2 button
  - Discharge 1 indicator
  - Discharge 2 indicator
  - System Test Button
- Sensors
  - Continuous-Loop temperature sensor
  - Loop sensor is 900 mm or more in length.
  - Fenwall spot detector
  - IR(infrared) sensor
  - Smoke Detector
- Fire & Smoke System Control Computer
- Bottles
  - Apu simulated fire-extinguisher bottle(Original Airbus Fire Extinguisher bottle)
  - Engine1 simulated fire-extinguisher bottle
  - Engine2 simulated fire-extinguisher bottle
  - Cargo smoke simulated fire-extinguisher bottle
- Pressure Sensors
  - Apu fire-extinguisher bottle sensor
  - Engine1 fire-extinguisher bottle sensor
  - Engine2 fire-extinguisher bottle sensor
  - Cargo fire-extinguisher bottle sensor
- Gauges
  - Apu fire-extinguisher bottle gauge
  - Engine1 fire-extinguisher bottle gauge
  - Engine2 fire-extinguisher bottle gauge
  - Cargo fire-extinguisher bottle gauge
- Discharge nozzles
  - Apu Zone
  - Engine 1 Zone
  - Engine 2 Zone
  - Cargo Zone
  - Discharge nozzles are between 150 - 350 mm in length.

- 4 unit terminal
- 5 unit line control valve
- 2 unit original circuit breaker lockout and its label
- Heat-gun
- Filler Service point
- Instructor&Fault Port
- Power unit

## Documentation

- User's Manual
- Study Guide
- Instructor's Guide
- Flow Diagrams
- Components Diagrams

## Power Specs

- Lan connection point
- Electrical box
- Residual current device
- Emergency Button
- Energy Signal Lamp
- 110 VAC 60 Hz or 220-240 VAC 50 Hz