

## FUEL BURNER SIMULATION TRAINER



---

---

### Experimental capabilities

---

---

- Study of the burner and understanding of electrical diagrams
- Electrical wiring of the burner and measures
- Burner settings (baffle position, air damper, pressure and flow measurements)
- Commissioning, observation of operation and analysis of parameters
- Burner maintenance (diagnosis and troubleshooting)

## Operating principle

The SIM060 bench allows the study of a fuel burner for a floor boiler. It is designed to teach students the installation of a burner (nozzle assembly, wiring ..), commissioning (pressure settings, deflector ..) and troubleshooting (fault simulation).

The operation of the burner is fully simulated, there is no firing. The fuel is replaced by a mixture of water and oil. The flame is simulated with lamps.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises. The manufacture of this equipment complies with the European standard for machinery manufacturing.

## Technical details

The bench includes at least the following elements:

1. An oil burner for floor-standing boiler from Cuenod
2. A burner holder with secure attachment and a box to simulate the boiler. The chamber contains a 10-liter tank for the simulation fluid.
3. A box with the burner terminals shown. Wiring is done via double-well cords
4. A box with the boiler terminals shown. The box is equipped with a control thermostat and a safety thermostat
5. A power supply box comprising:
  - Electrical protection (30mA circuit breaker and thermal circuit breaker)
  - An emergency stop button
  - A general power supply disconnect switch
  - One switch-off button
  - A voltage indicator light
6. A flow meter to measure the flow rate
7. A pressure control case for oil burner (0-40bar pressure gauge + vacuum gauge)
8. A purlin box allowing the simulation of 7 purlins:
  - Failure 1: Burner power phase fault
  - Failure 2: Burner power neutral fault
  - Failure 3: Safety thermostat fault
  - Fault 4: Control thermostat fault
  - Failure 5: Ignition electrode fault
  - Fault 6: Flame detection fault
  - Failure 7: Oil solenoid valve fault

## Services required

- Electrical supply : 230 Vac – 50 Hz – 10 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 800 x 1200 x 1200
- weight (Kg): 80

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

## Documentation

- User's manual
- Technical documentation of the components
- Lab exercises
- Wiring diagram
- Certificate of conformity CE