

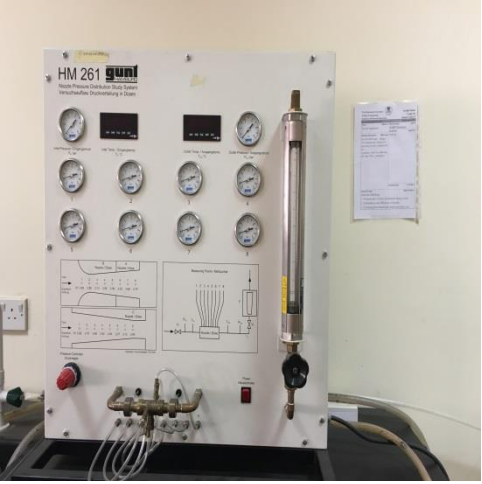


Laboratory Name	Thermal science Lab 1
Lab. Supervisor	Eng. Ola Hatem
Lab. Location	Mechanical Engineering Department

	Device Name: Marcet Boiler
	Used For: To study the relation between saturated pressure and saturated temperature
	Experiment associated with it: Marcet boiler
	Courses associated with it: thermodynamics

	Device Name: Boy's gas fuel calorimeter
	Used For: To measure the gas calorific value
	Experiment associated with it: gas calorific value
	Courses associated with it: thermodynamics

	Device Name: nozzle test apparatus
	Used For: 1. To study the change in air properties through a nozzle (temperature, pressure, density and velocity) 2. calculate the nozzle efficiency 3. study the chock phenomena
	Experiment associated with it: Nozzle test
	Courses associated with it: thermodynamics



Device Name: two stage piston type air compressor apparatus

Used For: 1. To study the isothermal efficiency of two stage compression unit
2. find the values of polytropic index through a compression process

Experiment associated with it: two stage compressor

Courses associated with it: thermodynamics



Device Name: Air conditioning study unit and reversing cycle heat pump with double evaporator.

Used For: To measure the coefficient of performance for refrigeration cycle and heat pump.

Experiment associated with it: Refrigeration cycle

Courses associated with it: thermodynamics



Device Name: The thermal conductivity of building and insulating materials unit

Used For: determine the thermal resistance of multilayer insulation materials.

Experiment associated with it: Thermal Resistance of Multilayer Insulation Material

Courses associated with it: heat transfer



Device Name: double – pipe, water to water heat exchanger

Used For: To study the performance and the characteristics of double pipe, water to water, concentric tube heat exchanger in both parallel and counter flow

Experiment associated with it: double pipe heat exchanger

Courses associated with it: heat transfer



Device Name: Cross flow heat exchanger apparatus

Used For: to study the heat transfer in cross flow heat exchanger for single and bundle arrangements

Experiment associated with it: cross flow heat exchanger

Courses associated with it: heat transfer



Device Name: combined convection and radiation apparatus

Used For: to study the combined (convection and radiation) heat transfer for natural and forced flow

Experiment associated with it: 1.natural combined convection and radiation
2. forced combined convection and radiation

Courses associated with it: heat transfer