Phone: +91-8860605265
Email : info@astrascientific.com

Product Name : Astra Scientific Steam Nozzle Performance Apparatus with Compressor	**Product Code :** ThermalLab0027

Description :

Astra Scientific Steam Nozzle Performance Apparatus with Compressor

Technical Specification :

The experimental unit allows the students to study the performance on a nozzle as either a kinetic energy or thrust producer and also enables to study the effect of inlet and outlet pressure ratio on the mass flow and pressure distribution in nozzle. Compressed air is supplied to the unit from laboratory source. Convergent and convergent divergent nozzles are available that can be changed rapidly. These nozzles are designed to operate at different theoretical expansion ratios. Each nozzle is equipped with axial pressure tapping's that can be connected to the 8 panel mounted pressure gauges. The unit Nozzle Performance is fully instrumented to measure pressure, mass flow, temperature, thrust and impact force. The operating conditions can be quickly varied to produce results over a wide range of pressure ratios.

FEATURES:

- Visual demonstration of nozzle choking.
- Determination of the effect of inlet and backpressure on mass flow rate through nozzles.
- Comparison of mass flow rate with theoretical values.

- Measurement of the velocity of a jet issuing from a nozzle operating at a variety of inlet and pressure.
- Calculation of nozzle efficiencies.
- Determination of jet reaction and specific thrust at a range of inlet and backpressures.

SPECIFICATIONS:

- A series of convergent and convergent-divergent nozzles may be installed in one of two locations in a high pressure-measuring chamber. A pressure regulator, throttle valve and backpressure valve allow the airflow rate, inlet and discharge (or back) pressure to be varied.
- Standard unit includes convergent – divergent ducts designed to produce at the throat and supersonic velocities downstream.
- Inlet and outlet air pressures, temperatures and airflow rate are recorded by a combination of instrumentation on the Compressible Flow
- 230V, 50Hz, 1 phase

230V, 60Hz, 1 phase

120V, 60Hz, 1 phase

Astra Scientific

Astra Scientific

www.astrascientific.com, **Email:** info@astrascientific.com

Address: K-88, 20th Street, Annanagar, Chennai, India – 600040 **Phone:** +91-8860605265