

Tesca Piston Pump Demonstrator enables the pump curve of a reciprocating pump to be measured. The trainer consists of the pump with an electric drive motor, the pipe system with a supply tank, and a container for volumetric flow measurement. Electronic sensors provide the delivery pressure and the pressure in the cylinder; a position sensor is used to determine the position of the connecting rod and thus the volumetric displacement. The pressure level in the system is maintained constant using a pressure retention valve.

The pulsating pressure characteristic of the pump can be damped with an air vessel. Optionally interfacing, data acquisition makes it possible to record measured values during experiments to process and store data on PC.



### Specifications:

1. Study the operation and working of the piston pump.
2. Determination of power requirement of the pump.
3. Determination of the hydraulic power output of the pump.
4. Investigation of the performance and characteristics of piston pump:
  - The effect of pump speed.
  - Head, discharge, speed, power, and efficiency curves.
  - Non-dimensional performance curves.
  - Determination of specific speed.
  - Determination of net positive suction head.

### Experiment Possibilities:

- The characteristic curve of a reciprocating pump
- Influence of pulsation attenuation
- Pressure characteristic of delivery pressure and cylinder pressure
- Preparation of p-V diagram (In case of DAQ computerized only)
- Determination of efficiencies using an external power meter.

### Services required:

- Mains Power Supply: 220-240V, 50Hz, 1Ph.

Note: Specifications are subject to change.

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