



DESCRIPTION: The apparatus is a self-contained unit operated on close circuit basis containing a sump tank. The setup is consisting of a centrifugal pump coupled with a AC motor. Power input to the AC motor is varied by means of thyristor-controlled AC drive to vary the RPM of motor. A RPM indicator with proximity sensor indicates the RPM of pump. Flow of water has measured by using measuring tank and stop watch. Vacuum gauge is fitted on suction line and pressure gauge fitted on delivery line to measure the pressure. Sensors for data acquisition is provided. Rpm sensor for speed measurement, flow sensor for discharge measurement, pressure sensor for discharge and vacuum, energy meter with output for energy measurement. Software is provided for data analysis using usb connection to PC.

Technical Details:

- Pump:- Kirloskar make 1Hp, Speed 2800 RPM (max), Head: 12 mtr,
- Medium Flow:- Water
- Drive:- 1HP AC motor with Variable frequency drive
- Sump Tank:-70 Ltr , Materia: SS 304
- Measuring tank :36 Liters, SS 304
- Stop Watch:- Electronic
- Pressure gauge:- bourdon type
- Water Circulation:- centrifugal pump 1 hp
- RPM Measurement:- Digital RPM indicator with proximity sensor
- Flow Measurement:- Using Measuring Tank with piezometer, capacity 70 ltr
- Energy measurement:- Electronic energy meter
- Tank is Made up of Stainless Steel (304 Grade)
- Sensors for data acquisition
- Flow sensor: 0 to 50 LPM
- Pressure sensor: 0 to 6 bar and 0 to -1 bar
- RPM sensor: 0 to 9999
- Energy meter with output

Experiment:

- To determine total head, pump output, overall efficiency and pump efficiency of the centrifugal pump.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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- To plot head vs discharge, pump efficiency vs discharge , pump output vs discharge
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Utilities Required:

- Water Supply (Initial Fill).
- Floor Drain Required.
- Floor Area Required: 1.5 m x 1 m.



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