

Product Name :
Power Consumption in Agitated Vessel**Product Code :**
ALABS-A104-383**Description :****Power Consumption in Agitated Vessel**

Many processing operations depend for their success on the effective agitation and mixing of fluids. Hence it is of great importance to study these agitated vessels. Liquids are most often agitated in some kind of tank or vessel usually cylindrical in form and with a vertical axis. Tank bottom is rounded to eliminate regions into which the fluid currents would not penetrate. In the present set-up agitation is done with the help of stirrer. A DC motor is coupled 10 SS Impeller and SS Shaft. Digital Voltmeter and Digital Ammeter can vary the speed of agitators with the help of Thyristor controlled and power consumption is measured. Four replaceable baffles are provided to prevent swirling. One propeller and one turbine are provided which are interchangeable. Drain valve is also provided at the bottom. The whole set-up is mounted on a rigid MS frame structure.

Range of Experiments:

- To plot Power number Vs Reynolds number for the given set of impeller with baffled/ unbaffled mixing.

Utilities Required:

- Electricity 500 Watts, 220V, 1 Phase
- Water Supply.
- Drain

Technical Specifications:

Material Stainless Steel. Dia. 300mm, Depth 450mm
 Stainless Steel Impeller with Stainless Steel Shaft coupled to FHP
 DC Motor and Thyristor controlled DC Drive.
 Stainless Steel shaft & impellers (i.e. one propeller & one turbine)
 Material Stainless Steel, 4 Nos. 50mm width. (detachable).
 Control Panel Comprises of:
 Digital RPM Indicator, Non Contact type with Proximity sensor.
 Digital Wattmeter
 On/Off Switch.
 Standard make on/off switch, mains indicator etc.
 Instruction Manual
 An English instruction manual will be provided along with the Apparatus
 A good quality painted rigid MS Structure is provided to support all the parts



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