Sanjay Ghodawat University, Kolhapur

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Empowering Lives Globally !

DEPARTMENT OF AEROSPACE ENGINEERING

FLUID MECHANICS LABORATORY

S. No.	Equipment Name	Description	Equipment Photo
1	Orificemeter & Venturimeter	• **Pipe Diameter** – 20 mm and 25 mm. • **Throat Diameter** – 15 mm. • **Pressure Taps** – Measure differential pressure.	
2	Friction Factor	**Pipe Length:** 1m **Diameter:** 20 mm **Pipe Roughness** – Surface resistance.	
3	Gear Pump	**Gear Teeth** – Fluid displacement control. **Casing Size** – Housing for gears. **Inlet Port** – Fluid suction point. **Outlet Port** – Fluid discharge point. **Flow Rate** – Volume per cycle	

4	Reciprocating Pump	**Cylinder Bore** – Piston chamber size. **Stroke Length** – Piston movement range. (15 mm) **Discharge Valve** – Fluid exit control. **Suction Valve** – Fluid intake regulation. **Pump Speed** – RPM operation rate.	
5	Pelton Wheel	**Bucket Size** – Water impact area. **Jet Diameter** – Nozzle water jet size. **Runner Diameter** – Rotating wheel size. **Nozzle Angle** – Water jet direction. **Shaft Speed** – Rotation per minute.	
6	Francis Turbine	**Runner Blades** – Water flow deflection. **Guide Vanes** – Flow regulation mechanism. **Inlet Diameter** – Water entry point. **Outlet Diameter** – Water exit point. **Efficiency Curve** – Performance analysis.	

7	Kaplan Turbine	**Propeller Blades** – Adjustable for efficiency. **Hub Diameter** – Central rotating part. **Guide Vanes** – Flow control adjustment. **Runner Speed** – Operational RPM. **Water Head** – Input pressure level.	
8	Verification of Bernoulli's Theorem	• Bernoulli's Apparatus – A tube with varying diameters (inlet: 25 mm, throat: 15 mm, outlet: 20 mm). • U-Tube Manometer – A glass tube (10 mm diameter, 20 mm height) to measure pressure. • Measuring Tank – 300 mm × 300 mm × 500 mm	
9	Centrifugal Pump	• Impeller Diameter – 100 mm • Pipe Dimensions – Suction pipe: 100 mm diameter, Delivery pipe: 80 mm diameter. • Motor Power – Ranges from 50 HP	