



**Department of Mechanical
Engineering
Faculty of Industrial Technology
and Systems Engineering**

STANDARD OPERATING PROCEDURE

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Head of Laboratory

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Operation of Comparative Flow Measurement Apparatus

Laboratory : Fluid Mechanics and Machineries _____

HAZARD POTENTIALS	Fluid leaks will be dangerous if they come into contact with the eyes . Loose wires in the system can cause electric shock . The compressor uses a V belt
PERSONAL PROTECTIVE EQUIPMENT (PPE)	Eye protection (safety glasses, goggles, etc.). Wearpack (protective clothing). Hair protection (hair net or hat). Shoes and gloves. First aid kit.
BEFORE OPERATING THE MACHINE	Ensure that the practical equipment and work area are clean, and all personal protective equipment (PPE) is worn. Sleeves must be securely rolled up. Ensure there is no damage to the electrical installation. Check for any leaks in the practical equipment.
NEVER	Operate the equipment without wearing personal protective equipment (PPE). Ignore damaged or exposed electrical wiring. Allow fluid leaks to persist.
STEPS FOR USING THE EQUIPMENT	<ol style="list-style-type: none"> 1. Turn on the compressor. 2. Supply Pipes and Exhaust Piping System <ul style="list-style-type: none"> • Ensure that all air vent valves (13A – 15A), manometer valves (1M – 12M), and exhaust pipes (1D – 9D) are closed. • Connect the water supply pipe to the water flow input (W-1) and the exhaust pipe to the water outlet (W-2). 3. Adjust the flow rate using the discharge bypass valve, circulation pump, and flow outlet valve. 4. Use vent valves (13A – 15A), manometer valves (1M – 12M), and stop valves (5V – 2) to remove air from the manometer and piping system. 5. Control the air pressure in the upper manifold pipe using a pneumatic regulator. 6. Practicum is Ready to be Conducted
AFTER USE	<ul style="list-style-type: none"> • Turn off the compressor switch • Check and clean the equipment and work area