

System for calibrating, testing, and verifying gas meters and flow meters consists of a piping system with units for generating a gas flow, a set of parallel-mounted reference gas meters, the gas meter under test installed in series with the reference meters, temperature and pressure transducers, and a system for collecting, transmitting, and processing information. The reference meters are installed in four parallel reference lines, proportional to the increase in flow rate, capable of simultaneous and independent operation, and mechanically isolated from the gas flow generation units and the gas meter under test by means of vibration isolators. The flow control system is multi-stage and includes flow generation units with frequency controllers and flow controllers with position control. The system is equipped with two test sections for high and low flow rates, depending on the diameter of the meter under test. The system additionally includes a data transmission unit, a measurement unit, and a control unit, which utilize specialized software for automated control of the measurement process, diagnostics, and the creation of a database for meter verification and calibration.