Solid and fluid mechanics set, straight ramp, multichronometer (Bluetooth), 14 functions, sensor

EQ005BT

Function

Intended for experimental study, physics laboratory and carrying out physics experiments on: Kinematics, range, uncertainty and speed in a horizontal launch, measuring range, dynamics, the simple machine called a fixed pulley, the simple machine called a movable pulley, the mechanical advantage of the movable pulley, building the simple two-element exponential hoist machine with a fixed pulley, the mechanical advantage of the exponential hoist, building the simple three-element exponential hoist machine with a fixed pulley, the movable pulley, building the simple parallel hoist machine, the golden law of mechanics, the characteristic curve of the elongation of a helical spring and a rubber belt, elastic hysteresis, Hookes law in a helical spring, the restoring force of the spring and Newtons third law, association of springs helical springs in series, elastic deformation and plastic deformation, constant of elasticity resulting in helical springs in series, association of helical springs in parallel, the constant of elasticity resulting in helical springs in parallel, static, stable, unstable and indifferent static equilibrium conditions, force diagram, equilibrium conditions of a suspended rigid body, polyhedron geometric solid, non-polyhedron geometric solid, homogeneous body, regular and irregular body, equilibrium conditions of an extended body, barycenter (center of gravity), conservation of mechanical energy, work and mechanical energy in a system of mass and helical spring, mechanical work, work done by the force along the central axis of the spring, elastic potential energy and kinetic energy (energy of movement), principle of conservation of mechanical energy in a system of mass

and helical spring, determining the values ¿¿of potential energy, kinetic energy and speed at a given position on the trajectory, horizontal launch, range, uncertainty and quantity of horizontal movement, decomposition of the two-dimensional movement into two rectilinear one-dimensional movements, impulsion, quantity of movement, measurement inaccuracy, measurement deviation, range measurement uncertainty, average range value, measuring fall height and determining the time interval that the projectile is in the air (time of flight), the horizontal component of velocity, quantity of horizontal motion, conservation of horizontal momentum, hydrostatics, the buoyant force acting on a body immersed in a liquid, correction of the volume difference in an Archimedes cylinder, the weight of the body, the apparent weight of the body within the liquid, the force called buoyancy, Archimedes principle, fluid, principle of impenetrability of matter, the value of the buoyancy depends on the weight of the volume of fluid displaced, the buoyancy depends on the specific weight of the fluid in which the body is submerged, the density (absolute density) and the specific mass, specific weight, measuring the value of buoyancy on a body submerged in drinking water, measuring the value of buoyancy on a body submerged in salt water, the force called buoyancy, determining the absolute density of the solid, using buoyancy , wave, the simple pendulum and its laws, ideal simple pendulum, elongation and amplitude in the movement of the simple pendulum, period and frequency as a function of the amplitude of the simple pendulum for the same length, building tables and graphs, law of isochronism of the pendulum , law of masses and pendular substances, law of simple pendulum lengths, observing the oscillating movement of the mass in a mass and helical spring system, mass-spring system and simple harmonic motion (MHS), dynamic determination of the elastic constant in a system mass oscillator and helical spring (MHS), measuring weight and calculating mass, measuring the period of MHS, etc.

Knowledge areas

Physics

Key Experiments