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

EQ284BT

Function

Intended for experimental study, physics laboratory and carrying out physics experiments on: Kinematics. The range, uncertainty and speed of a horizontal launch. Measuring range. The range in a horizontal projectile launch based on its launch speed. Determining the initial launch velocity of the projectile. Determination of the impact speed, based on the measurement of the horizontal launch speed. Determining the range of the projectile and its uncertainty. Determining the projectile falling time. Determining the final velocity of the projectile. Dynamics. Knowing the fixed pulley, a simple machine. Knowing the movable pulley, a simple machine. The golden law of mechanics. The exponential hoist, a simple machine. The parallel notebook, a simple machine. The characteristic stretching curve of a helical spring and a rubber belt, elastic hysteresis. Hooke law in a helical spring. The association of helical springs in series. The association of helical springs in parallel. Static. The conditions of stable, unstable and indifferent static equilibrium for a supported spherical rigid body. Stable Balance. The force diagram. Indifferent balance. Unstable Balance. Equilibrium conditions for a suspended rigid body. Homogeneous body. Regular and irregular body. The equilibrium conditions of an extended body. The barycenter (center of gravity). Energy Conservation. Mechanical work and potential and kinetic energy in a mass and helical spring system. Elastic potential energy and kinetic energy, energy of movement. The principle of conservation of mechanical energy in a mass and helical spring system. The amount of horizontal movement of a sphere in a horizontal throw. The

horizontal launch of a projectile. The impulsion. The amount of movement. Hydrostatic. The hydrostatic buoyant force, a quantity with direction, direction and module (value). Scalar and vector quantities. Measuring forces. The mass of a body, a scalar quantity, does not change. Weight is a force, a vector quantity, it has a module (value), direction and sense. A body weight can change. The relationship between the “apparent decrease in the weight of a body immersed in a liquid” and the buoyancy. Determining the value, direction and direction of the buoyant hydrostatic force. Archimedes principle, buoyancy and its relationship with the volume and density of the displaced liquid. The principle of the impenetrability of matter. Determining the weight of the volume of liquid displaced. The relationship between buoyancy and the weight of the volume of liquid displaced. The relationship between buoyancy and volume, the density of the displaced liquid and the acceleration due to gravity. The relationship between buoyancy and the volume and specific weight of the liquid displaced. Wave. The simple pendulum and the laws of the simple pendulum. Period and frequency of the simple pendulum. The law of masses and pendular substances. The law of lengths of the simple pendulum. Observing the oscillating movement, MHS, in a mass and helical spring system. Dynamic determination of the elastic constant in an oscillating mass and helical spring system, MHS. Measuring the MHS period. The value of the elasticity constant, not considering the mass of the spring. Dynamic determination of the elastic constant considering the mass of the spring, etc.

Knowledge areas

Physics