

Product Name :
Forces In Reciprocating Engines

Product Code :
TN110



Description :

Forces In Reciprocating Engines

Technical Specification :

Forces In Reciprocating Engines The unit is perform the following experiments and investigations: Learning Objectives / Experiments: Effect of mass forces Mass forces in dependence on the speed Mass forces in dependence on the piston mass First and second order mass forces Comparison of different crank drives 4-cylinder, symmetrical, 180° angle between cranks 4-cylinder, non-symmetrical, 90° angle between cranks 2-cylinder, 180° angle between cranks Single cylinder Specification: Experimental unit to investigate oscillating and rotating mass forces and moments of a reciprocating engine with up to 4 cylinders Simulation of single, 2- or 4-cylinder engines Electronically commutated and speed-controlled drive motor with digital speed display Continuous adjustment of the angle between cranks Force sensors to measure forces and moments Vibration isolation using rubber elements and suitable tuning Software for data acquisition via usb under windows 7, 8.1, 10 Including PC1 Computer-System with 21" TFT-Monitor Win 10 engl. Technical Data: Engine Number of cylinders: 4 Piston mass: 40g Additional mass: 41g Crank drive Mass of connecting rod: 18g Centre distance of cylinders: 35mm Crank radius: 15mm Length of connecting rod: 70mm Measuring ranges Speed: 100...3000rpm Force: 0...500n 230V, 50Hz, 1 phase 230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase Dimensions and Weight Length x Width x Height: 420x370x350mm Weight: 40kg Length x Width x Height: 230x230x80mm (display and control unit) Weight: 1kg

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