

Product Name :
Astra Scientific Computerized Cam Analysis Apparatus

Product Code :
DynamicsLab0003



Description :

Astra Scientific Computerized Cam Analysis Apparatus

Technical Specification :

The experimental Computerized Cam Analysis unit allows the dynamic investigation of a cam mechanism at various speeds. Four typical cams with corresponding engaging members are compared in terms of their motion behavior. The valve is simulated with a mass and a spring.

A recorder synchronized with the cam member records the actual elevation curve of the cam mechanism. A speed-controlled drive motor with a large flywheel generates a speed as constant as possible. The open design means that the motion is clearly visible in every detail.

A transparent protective cover ensures safe operation. The experimental unit is intended for demonstration in engineering education. It is not suitable to be used as a test bench in the field of endurance testing/tribology.

FEATURES:

- Record elevation curves of cam mechanisms
- Four different cam members, two different engaging members

- Influence of spring stiffness and mass on the dynamic behavior
- Determine the limit speed and compare with theory
- Influence of moving mass on the motion of cam member/plunger
- Influence of return-spring stiffness and preload on the motion of cam member/plunger
- Comparison of the elevation curves of different cam-member shapes
- Comparison of elevation curves with theory

SPECIFICATION:

- Cam-shaped cam members: tangent cam, hollow cam, 2 circular arm cams with different head radius
- 2 different engaging members: flat receiver with plunger or rolling receiver with plunger
- 3 interchangeable return springs and spring preload Oscillating mass can be increased with 5 additional weights
- Optical speed sensor
- Transparent protective cover for safe operation
- Drive motor

DC asynchronous motor with frequency converter

Power: 250W

Speed: 60...670min⁻¹

- Cam-shaped cam member

Stroke, each: 15mm

Opening angle, each: 140°

- Spring stiffness

Hard: 5,026N/m

Medium: 2,601N/m

Soft: 613N/m

- Masses

Additional masses supplied with different weights

- Recorder: toothed belt drive
- Power required for operation

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase



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