



Features

- Visualization of the effect of centrifugal force
- How various centrifugal systems work
- Determination of characteristic curves and setting curves of different centrifugal governors

Centrifugal governors use the properties of centrifugal force to regulate the speed of a machine. Due to centrifugal force, a rotating flyweight mass has the tendency to move away from the axis of rotation and is prevented by counteracting mechanisms. These mechanisms are differentiated into those governors that use weights and those that use springs. Corresponding kinematics cause a deflection proportional to the rotational speed to occur on the governor. Via an actuator, this affects the energy supplied to the machine, thereby regulating the machine's speed. Tesca Centrifugal Governor Apparatus experimental unit presents centrifugal systems that demonstrate the different principles of operation of both weight and spring-based governors.

The housing holds the drive with electronically controlled motor. The speed is infinitely variable with a 10-turn potentiometer and displayed digitally. The governors are inserted into a chuck

on the drive. Centrifugal masses, sleeve forces and spring preload can be varied using the accessories supplied, depending on the governor. The stroke can be read on markings on the governor shaft. A transparent protective cover above the rotating centrifugal governor ensures safety: operation is only possible when the protective cover is properly attached. The well-structured instructional material sets out the fundamentals and provides a step-by-step guide through the experiments.

Specifications

- How centrifugal systems work
- Three different centrifugal governors: Porter, Proell and Hartnell governors
- Versatile range of variations on the governors: adjustment of the centrifugal mass, the sleeve force and the spring preload
- Stepless adjustment of speed via a potentiometer
- Drive with DC motor
- Digital speed indicator
- Protective cover with electronic coupling to the drive ensures safe operation

Technical Specifications

- DC motor:
 - Max. power 35W
 - Max. speed 6000min⁻¹
- Speed regulation 60...400min⁻¹
- Proell governor:
 - Sleeve mass 3x 100g
 - Centrifugal mass 2x 150g
- Porter governor:
 - Sleeve mass 3x 100g
 - Centrifugal mass 2x 400g
- Hartnell governor:
 - Centrifugal mass 2x 400g

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tescaglobal.com

- 2 compression springs, adjustable spring preload
- Measuring range
 - Speed: 0...600min⁻¹

Experiments

- kinetics and kinematics of the following centrifugal systems
 - Porter governor
 - Proell governor
 - Hartnell governor
- Adjustment of centrifugal governors
- Recording the governor characteristic curves and setting curves
- Calculation of the structural design and adjustment of different governors

Scope of Delivery

- 1 experimental unit
- 3 centrifugal governors
- 1 set of tools and weights
- 1 set of instructional materials

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tescaglobal.com

