

Product Name :
Astra Scientific Cam Analysis Machine

Product Code :
Theory0001



Description :

Astra Scientific Cam Analysis Machine

Technical Specification :

Description:

This lab experimentation setup by lab cart is a motorized unit comprising of a camshaft driven by a variable speed motor. Cam can be easily mounted on the free end of the camshaft.

Follower in the cam analysis machine is properly guided in gunmetal bushes and the type of follower can be easily replaced in accordance to the cam under experiment. Follower displacement for the angle of cam rotation is measured using dial gauge fitted on the follower shaft and graduated circular protractor is fitted co-axial with the shaft. A spring arrangement is also used to manage the controlling force to the follower system. Weights on the follower shaft can be adjusted as per the requirement of experiment. A control unit is provided to regulate

the speed. The apparatus has been successfully tested for verifying the cam performance for jump phenomenon during operation and also observing the effect of change in inertia forces on jump action of cam-follower during operation. Three sets of cams and followers are supplied with the equipment. These are made pre-hardened to reduce the wear and tear.

Scope of Study:

With the help of combination of provided cams and followers following experiments can be conducted:

- To plot the Follower displacement Vs Angle of rotation curves for different cam follower pairs. The follower bounce can be observed by using a stroboscope (Optional) & effect of follower weight on bounce can be studied.
- To study the effect of follower weight on bounce.
- To study the effect of spring compression on bounce.

TECHNICAL DETAILS:

Cam Shaft : Material Stainless Steel

Cams : Tangent, Eccentric, Circular Arc, made of hardened alloy – steel.

Followers : Roller, Knife edge, Mushroom, made of hardened alloy – steel.

Compression Spring : Material spring steel

Weights : 500 gm, 300 gm, 200 gm & 100 gm (1 each)

Drive : Variable speed FHP DC Motor with speed controlling unit.

Dial Gauge : Baker & Mercer/Standard Make

Components mounted on the control panel are:

RPM measurement : Digital RPM indicator with proximity sensor (non contact type) Variac, Standard make on-off switch, mains indicator & fuse etc.



Astra Scientific

www.astrascientific.com, **Email:** info@astrascientific.com

Address: K-88, 20th Street, Annanagar, Chennai, India – 600040 **Phone:** +91-8860605265