THEORY OF MACHINES

MECHANISMS
GENERAL DESCRIPTION

Each mechanism below is designed with appropriate proportions for studying simple relative motion between two or more links of the mechanism with all motions in horizontal planes. For accurate relative motion, ball bearings are used for most rotating pairs. Scales are provided for measurement of crank and end member motion.

The mechanism is supplied with an instruction manual showing a skeleton outline, relative motion and test procedures for each mechanism. The typical tests relative motion data and sample graphs of relative motion, velocity and acceleration by graphical differentiation are also provided.

Optional accessories for computer interface of the motion are available (see MM200)

MM 211H SLIDER CRANK

This mechanism demonstrates relative motion between a crank rotation in degrees and a slider translation in millimeters.
Net dimensions WxLxH : 15x30x9 cm
Net weight : Approx. 1.0 kg

MM 212H FOUR BAR LINKAGE

This mechanism demonstrates relative motion between a crank rotation in degrees and another link oscillation (swinging) also in degrees.
Net dimensions WxLxH : 20x30x9 cm
Net weight : Approx 1.2 kg

MM 213H SLOTTED LINK

This mechanism demonstrates relative motion between a crank rotation in degrees and a slider translation in millimeters through another oscillating link resulting in quick return for slider motions.
Net dimensions WxLxH : 20x40x9 cm
Net weight : Approx. 1.5 kg

MM 214H WHITWORTH QUICK RETURN

This mechanism demonstrates relative motion between a crank rotation in degrees and a slider translation in millimeters through another offset rotating member resulting in quick return for slider motion.
Net dimensions WxLxH : 20x40x10 cm
Net weight : Approx 1.5 kg

MM 215H SCOTCH YOKE

This mechanism demonstrates relative motion between a crank rotation in degrees and a yoke translation in millimeters.
Net dimensions WxLxH : 15x30x9 cm
Net weight : Approx. 1.2 kg

MM 216H OLDHAM COUPLING

This mechanism demonstrates relative angular motion in degrees between two shafts with parallel but displaced axes.
Net dimensions WxLxH : 15x27x9 cm
Net weight : Approx 1.1 kg

MM 217 HOOKE'S UNIVERSAL JOINT

This mechanism demonstrates relative angular motion in degrees between two intersecting shafts through a cross-member such as ound the rear drive shaft of an automobile. The angle between input and output shafts is adjustable and indicated on an angular scale.
Optional: Double Hooke's Universal Joint.
Net dimensions WxLxH : 16x32x20 cm
Net weight : Approx. 5 kg

MM 218 CONSTANT VELOCITY JOINT

This mechanism demonstrates relative angular motion in degrees between two intersecting shafts through shifting balls such as found in front drive shaft of an automobile.
The angle between input and output shafts is adjustable and indicated on an angular scale.
Net dimensions WxLxH : 16x32x22 cm
Net weight : Approx 5 kg

ESSOM CO., LTD. 508 Soi Taksin 22/1 Taksin Rd. Bukkalo Thonburi Bangkok 10600 Thailand
Tel. +66 2476 0034 Fax. +66 2476 1500 E-mail : essom@essom.com,http://www.essom.com

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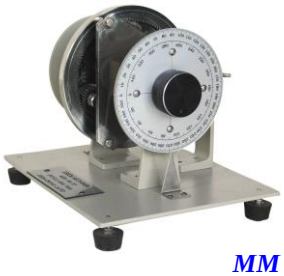
MM 219H GENEVA STOP

This mechanism demonstrates relative angular motion in degrees between two parallel shafts – one with continuous rotation, the other with intermittent rotation.
Net dimensions WxLxH : 15x27x9 cm
Net weight : Approx. 0.9 kg

MM 220H CAM AND FOLLOWER

This mechanism demonstrates relative motion between a rotating eccentric member (cam) in degrees and a sliding member (follower) translation in millimeters such as found in internal combustion engine. The follower can be flat face or roller type.
Net dimensions WxLxH: 15x30x9 cm
Net weight : Approx 1.1 kg



MM 221 EPICYCLIC GEAR TRAIN

This mechanism demonstrates relative angular motion in degrees between two shafts with common axis using sun and planetary gears to produce a forward speed.
Net dimensions WxLxH : 22x30x20 cm
Net weight : Approx. 6 kg

MM 222 DOUBLE EPICYCLIC GEAR TRAIN

This mechanism demonstrates relative angular motion in degrees between three shafts with common axis using two epicyclic trains to produce two forward speeds or a forward and a reverse.
Net dimensions WxLxH : 25x42x25 cm
Net weight : Approx 11 kg

MM 223 TRIPLE EPICYCLIC GEAR TRAIN

This mechanism demonstrates relative angular motion in degrees between four shafts with common axis using three epicyclic trains to produce two forward speeds and a reverse.
Net dimensions WxLxH : 26x42x25 cm
Net weight : Approx. 15 kg

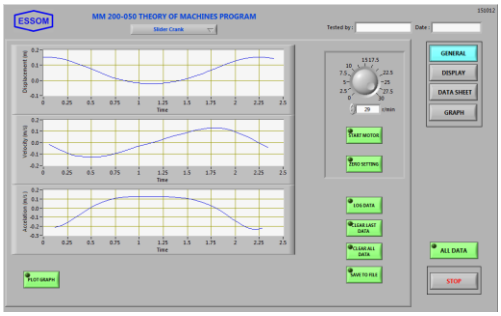
MM 312 TORSIONAL OSCILLATIONS APPARATUS

This mechanism demonstrates torsional oscillations of single or multi-rotor and /or geared systems with low natural frequencies.
Net dimensions WxLxH : 35x82x30
Net weight : Approx 32 kg

OPTIONAL ACCESSORIES FOR COMPUTER INTERFACE OF THE MOTION

. MM 200-050 Computer Interface
This includes sensors, motor, computer interface unit and software for data display of mechanism motion on computer (separately supplied)

. MM 200-060 Computer Control
This includes control motor, sensors, a computer interface unit and software for data display of mechanism motion on computer (separately supplied)



ESSOM ISO 9001
ESSOM CO., LTD. 508 Soi Taksin 22/1 Taksin Rd. Bukkalo Thonburi Bangkok 10600 Thailand
Tel. +66 2476 0034 Fax. +66 2476 1500 E-mail : essom@essom.com,http://www.essom.com