

HAMPDEN EDUCATIONAL ROTATING MACHINE SYSTEM

Hampden Educational Rotating Machine System MODEL H-REM-1ACM-MP

Purpose

In just one console, the Hampden **H-REM-1ACM-MP** provides all conventional modes for operation of DC and AC motors, generators and alternators. The DC Machine has a nominal rating of 3.0 hp as a motor and 2.5kW as a generator. Rigidly coupled to it is an AC Machine having a nominal rating of 3.0 hp as a motor and 2.5kW as an alternator. These machines are ideal for use at the secondary through post-secondary level. The comprehensive machine console includes all controls, power supplies, and resistance loads necessary to operate the machines in all modes. The compact arrangement saves a great deal of time in setting up and performing experiments. Full complement of ammeters, voltmeters, and wattmeters, shall be included as an integral part of this console.

The versatility of these machines results in savings both in space and the cost of multiple machines. Further, the fact that these machines operate in various modes dramatically demonstrates the electromagnetic principles common to all rotating electrical machines. Maximum benefits are derived when two (or more) **H-REM-1ACM-MP** are available per lab.

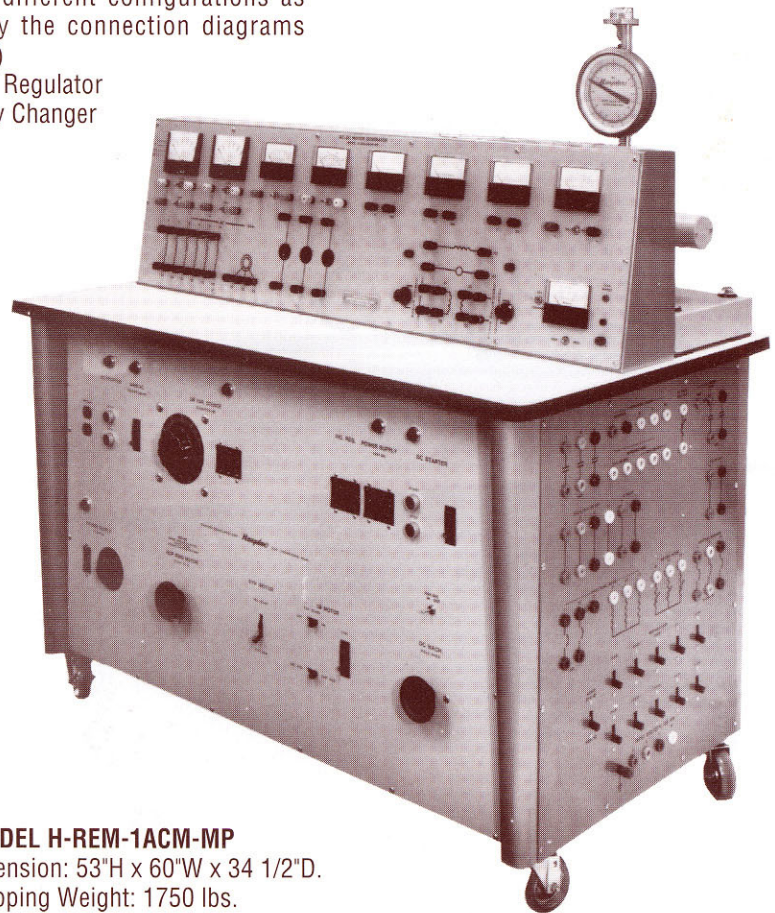
Modes of Operation

AC Machine

1. Single-Phase Induction Motor
 - a. Capacitor-Start, Induction-Run
 - b. Capacitor-Start, Capacitor-Run
2. Three-Phase Induction Motor
3. Three-Phase Wound Rotor Motor
4. Three-Phase Synchronous Motor
5. Single-Phase Alternator
6. Three-Phase Alternator
7. Six-Phase Alternator
(NOTE: As a single, three, or six-phase alternator, the machine may be operated in many different configurations as shown by the connection diagrams provided.)
8. Induction Regulator
9. Frequency Changer

DC Machine

1. Shunt Motor
2. Series Motor
3. Compound Motor
4. Shunt Generator
5. Series Generator
6. Compound Generator
7. Dynamometer with Torque Scale



MODEL H-REM-1ACM-MP

Overall Dimension: 53"H x 60"W x 34 1/2"D.
Shipping Weight: 1750 lbs.

Hampden® ENGINEERING CORPORATION

P.O.Box 563, East Longmeadow, MA 01028

Phone: 413-525-3981 • 800-253-2133

Fax: 413-525-4741 • E-mail: sales@hampden.com

HAMPDEN EDUCATIONAL ROTATING MACHINE SYSTEM

Hampden Educational Rotating Machine System MODEL H-REM-1ACM-MP

Accessories

The **H-REM-1ACM-MP** is self-contained, however, the following accessories are available:

H-REM-LC-D	Load-cell with Digital indicator and analog output
HPT-100A	Digital Photo Tachometer with analog output
H-REM-C	Cover
HMCL-4.2	4.2 KVA Capacitance 1 ϕ and 3 ϕ Load-Mobile
HMIL-4.2	4.2 KVA Inductance 1 ϕ and 3 ϕ Load-Mobile

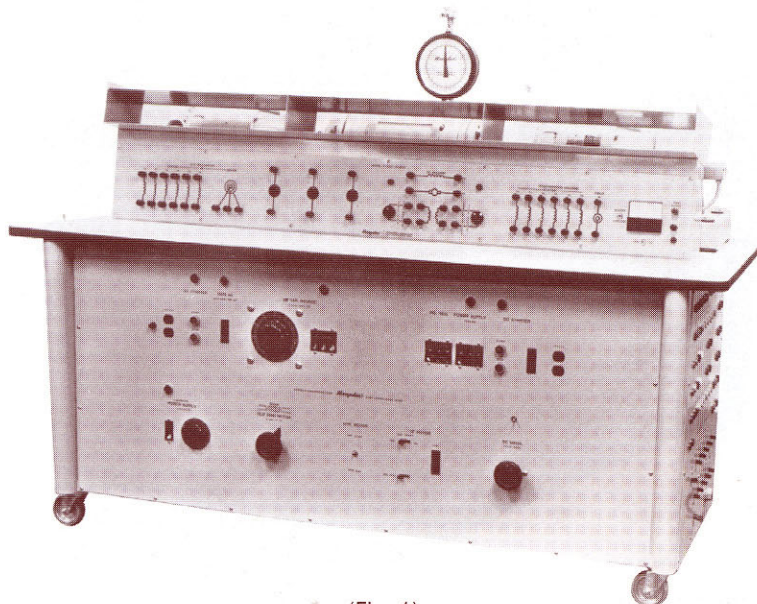
Modifications

Hampden Engineering Corporation can modify the **H-REM-1ACM-MP** to meet your specific requirements. A typical modification is shown with third rotating unit added as well as an instrument pocket structure for customers portable instruments.

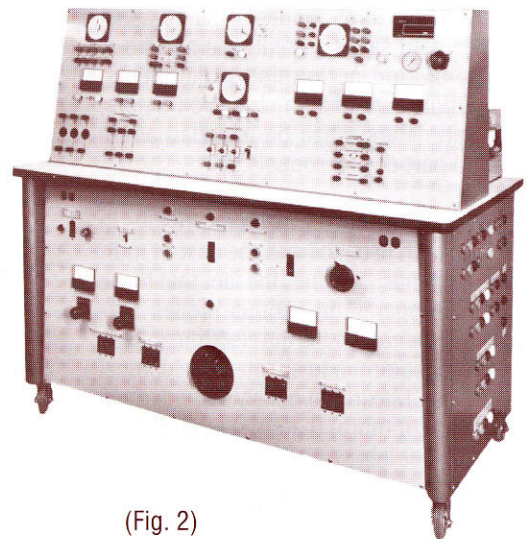
(Fig. 1)

This **H-REM-1ACM-MP** was modified to include special instrumentation and a variable hydraulic motor loading system.

(Fig. 2)



(Fig. 1)



(Fig. 2)

Hampden® ENGINEERING CORPORATION

P.O.Box 563, East Longmeadow, MA 01028

Phone: 413-525-3981 • 800-253-2133

Fax: 413-525-4741 • E-mail: sales@hampden.com