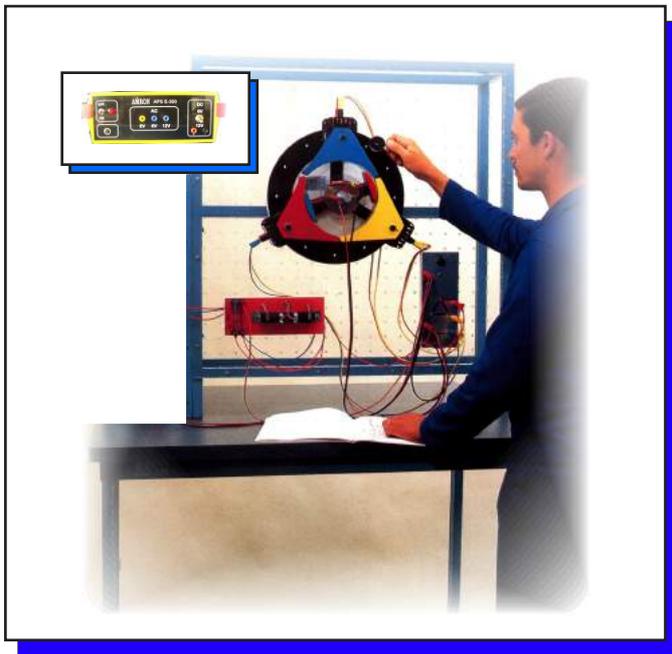


See Rotating Electro-Magnetic Fields in Action!



Rotating magnetic field for:
Single and 3-phase cage rotor
Synchronous motor
2 pole DC motor
2 pole DC generator
2 pole AC generator
Single pole generator

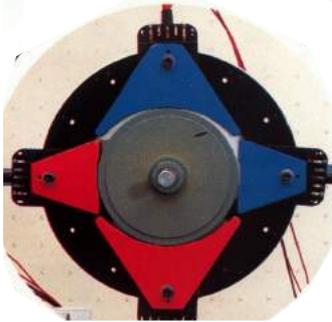
Outstanding Features of the EM-600 Trainer

- Ø High quality construction of all components
- Ø Low operational speeds clearly demonstrate electromagnetic principles
- Ø Non-hazardous operating voltages (a maximum 32 volts ensures operator safety)
- Ø Components are correctly colour-coded for ease of assembly
- Ø Comprehensive instruction manual with detailed experiments

Seeing is Believing!

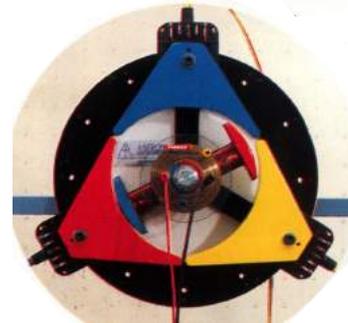
At low operation speeds and safe working voltages, the EM-600 enables the student to visualise the action of rotating electromagnetic fields

Rotating Magnetic Field Synchronous Motor



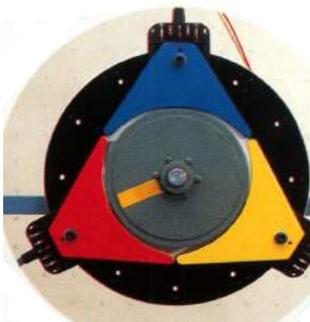
A rotating electro-magnetic field is demonstrated using a 3 phase generator, field coils and pole pieces. A voltage is fed to the two pole rotor via sliprings, creating a rotary magnet. Interaction between the rotor and field coils causes the rotor to step in synchronism with the rotating field. The speed of rotation can be varied by adjusting the frequency of the 3 phase generator. The principle of a synchronous motor is demonstrated.

Single Phase Cage Motor



The rotor is positioned within a single phase rotating field. The electromagnetic field is generated by a main winding and a start winding which is phase shifted from the main winding by a capacitor. Changing connections to either field coils will cause the rotor to reverse direction of rotation.

3 Phase Cage Motor



This configuration demonstrates the principle of the induction motor. A typical squirrel cage rotor (laminated with shorting rings) is positioned within a 3 phase rotating field. The rotating field induces a current into the conductor bars of the rotor. This sets up a magnetic field in the rotor, which interacts with the rotating field, causing the rotor to turn. Rotor speed can be varied by adjusting the frequency. The direction of the rotor can be changed. Slip is clearly demonstrated.

Single Pole Generator



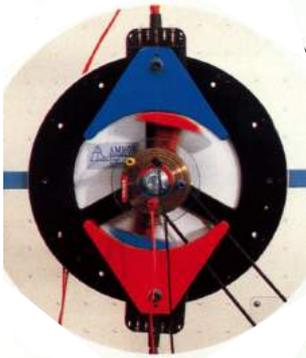
A two pole rotor is energised from DC supply via a pair of sliprings. A galvanometer connected to the field coil indicates the current induced in the coil during manual rotation of the rotor.

A. C. Generator



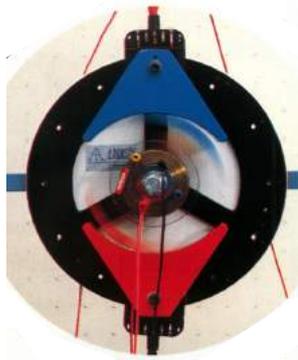
A D.C. voltage is applied to the field coils and a galvanometer is connected to a pair of sliprings on the brushgear assembly. The rotor is manually driven and the galvanometer shows the magnitude and direction of the alternating current induced in the rotor.

D. C. Generator



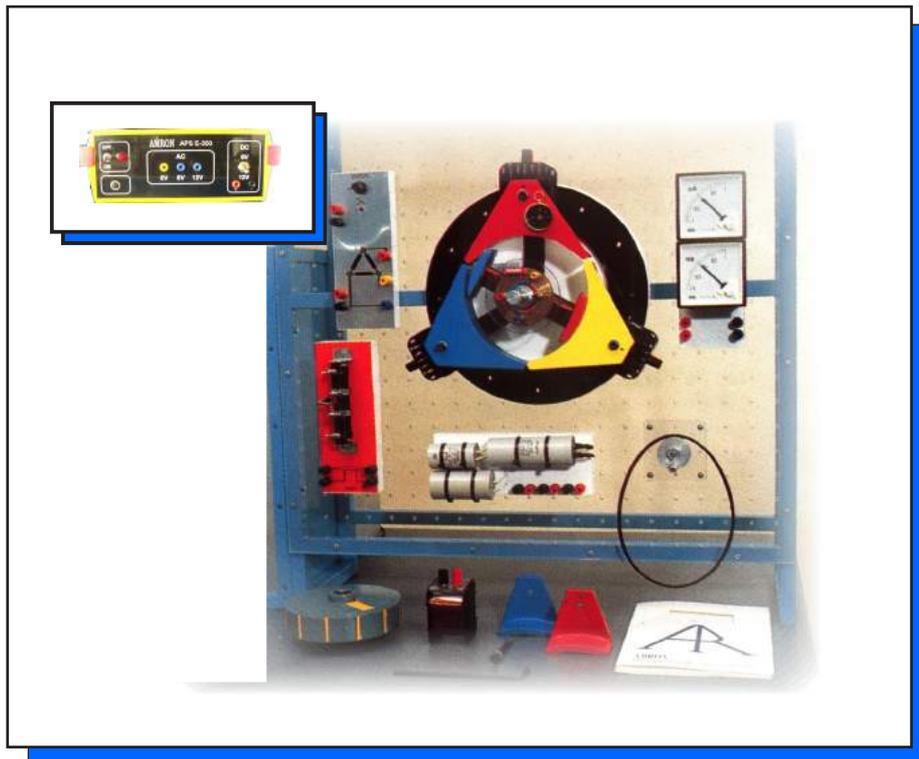
A DC voltage is applied to a pair of field coils and a galvanometer is connected to the commutator via the adjustable brush gear. The rotor is manually driven and the galvanometer shows the magnitude and direction of the direct current induced in the rotor.

D.C. Motor



A DC voltage is applied to a pair of field coils and a two pole rotor via the commutator. The brushgear can be adjusted to show commutation and armature reaction. The motor may be configured as a series or shunt wound machine. The direction of rotation is changed by reversing the connections to the armature or the field.

SYSTEM COMPONENTS



- ⚙️ The EM-600 is the easiest, most flexible trainer you can buy.
- ⚙️ Our rigid quality control system ensures that the highest levels of reliability are met.



ROTATING ELECTROMAGNETICS TRAINER

EM-600

STANDARD SET

DESCRIPTION	QTY	DESCRIPTION	QTY
Motor support frame with mounting pins	01	Resistor module	01
Large pole pieces	03	Capacitor module	01
Small pole pieces	02	Double galvanometer module	01
Coils with laminated cores	04	High tensile mounting bolts	04
2 Pole Wound Rotor with commutator & sliprings	01	Rotor retaining nut	01
Laminated cage rotor	01	Allen key	01
AC/DC brush holder assembly with brushes	01	Operation & experiment manual	01
Manual drive unit & belt	01	Amron steel framed mounting matrix (800 x 400 x 6mm)	01
3 phase variable frequency generator module	01	Inter-connecting 4mm banana cables	08
Optional: Low voltage power supply: 3- 32v @5 amp			

MASS	50KG					
DIMENSIONS	L	39cm	B	28cm	D	45cm

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Distributor :

AMRON reserves the right to amend these specification in the interest of product improvement