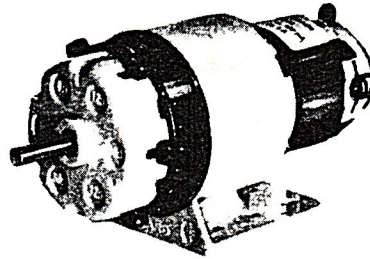


# MECCANO®

## ELECTRIC MOTOR WITH 6-RATIO GEARBOX

ADDITIONAL NOTES ON THE USE OF  
THIS POWER UNIT



## DATA SHEET N°1

A series of leaflets by **M.W. MODELS**  
designed to help the MECCANO Enthusiast

### SUPPLY

The motor can be operated from any 3 - 12 volt D.C. source, such as dry batteries (eg. in the MECCANO Battery Box), the MECCANO Hand Generator, or most model railway controllers. The motor will not operate on A.C. current, so an unrectified transformer is not a suitable power source.

### GEARBOX

The lower ratios (3:1, 6:1, 12:1) are suitable for operating most working models made from MECCANO Sets 3 - 8

The higher ratios (16:1, 32:1, 60:1) are used where a model is required to work at a very slow speed (such as a Fairground Big Wheel). The torque (power) achieved on these ratios, especially on the full 12 volts, is very high, so some method of protection for the gearbox is essential to avoid damage if the model should suddenly jam for some reason.

The normal Driving Band will slip if overloaded, but when driving through Gears, etc., it is wise to leave the Grub Screw in the first Gear Wheel a little slack to allow a similar slip in an emergency.

Heavy models made from Sets 8, 9, and even 10 can also be driven by using the LOWER ratios and gearing well down with additional MECCANO metal Gears. Where a particularly powerful drive is required, it is best not to use Worm gearing, as though ideal for speed reduction, it involves too much friction to transmit sufficient torque.

### TRANSMISSION

Simpler models can be driven, via the 6" or 10" Driving Band supplied, from the  $\frac{1}{2}$ " Pulley on the motor shaft to a larger Pulley on the model. The Band should be stretched just tight enough to drive the model without slip in normal conditions, excessive stretching puts an unnecessary load on the motor.

Direct drive can be taken from the output shaft of the motor through a Flexible Coupling Unit (Part 175), Universal Couplings (Part 140), or the Universal Coupling Unit if handy. Light models can be driven through a Rod Connector (Part 213).

Gear Drives. Sprocket-&-Chain drives are more positive than Driving Bands, though they can normally only be used vertically. When using Gears with the motor it is most important that the motor frame be rigidly fixed to the model, where this is not possible, the initial drive should be taken through a pair of Multi-Purpose Gears (Part 27f) which have a greater depth of mesh.

The normal Driving Band will slip if overloaded, but when driving through Gears, etc., it is wise to leave the Grub Screw in the first Gear Wheel a little slack to allow a similar slip in an emergency.

Where necessary, we operate a repairs service for this unit and spare parts (including brushes) are normally kept in stock.