

# 970D SERIES 35mm SINGLE RATIO METAL GEARBOX (CENTRAL OUTPUT SHAFT)

(RE 540/1 MOTOR)



Metal Gearbox cover included with this series

**IMPORTANT NOTICE**  
Due to the wide range of applications for this product it is the users responsibility to establish the products suitability for their individual purpose(s).

RATIOS NOW AVAILABLE AS EX-STOCK ITEMS.

|           |              |                      |              |
|-----------|--------------|----------------------|--------------|
| 970D61    | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 6:1    |
| 970D161   | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 16:1   |
| 970D471   | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 47:1   |
| 970D1561  | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 156:1  |
| 970D7501  | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 750:1  |
| 970D28121 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 2812:1 |

Designed for heavy-duty industrial and model applications this robust unit boasts a powerful high quality, three pole motor with sintered bronze bearings. The metal gearbox incorporates sleeved bearings, enabling the high torque transfer from the motor to be transmitted through the gearbox. The unit is mounted on a 1mm thick plated steel bracket.

## MOTOR DATA. (RE-540/1)

| MODEL      | VOLTAGE         |                | NO LOAD |         | AT MAXIMUM EFFICIENCY |         |         |        |        |      | STALL TORQUE |        |
|------------|-----------------|----------------|---------|---------|-----------------------|---------|---------|--------|--------|------|--------------|--------|
|            | OPERATING RANGE | NOMINAL        | SPEED   | CURRENT | SPEED                 | CURRENT | TORQUE  |        | OUTPUT | EFF  |              |        |
|            |                 |                | R.P.M.  | A       | R.P.M.                | A       | oz - in | g - cm | W      | %    | oz - in      | g - cm |
| RE - 540/1 | 4.5 - 15.0      | 6.0v CONSTANT  | 7500    | 0.45    | 6180                  | 2.1     | 1.64    | 118.2  | 7.49   | 59.4 | 9.31         | 670    |
|            |                 | 12.0v CONSTANT | 15800   | 0.52    | 13360                 | 2.85    | 2.14    | 154.4  | 21.2   | 61.9 | 13.9         | 1000   |

Stall Current RE540/1 at 6v = 8.24A

## REDUCTION TABLE. R.P.M. (NO LOAD)

| SUPPLY VOLTAGE | 4.5v | 6.0v | 9.0v | 12.0v | 15.0v | Direction of rotation<br>Clockwise/<br>Anticlockwise |
|----------------|------|------|------|-------|-------|--|
| 970D61         | 800  | 1050 | 1700 | 2150  | 2900  | ACW  |
| 970D161        | 228  | 500  | 700  | 900   | 1250  | CW   |
| 970D471        | 106  | 144  | 216  | 350   | 450   | ACW  |
| 970D1561       | 32   | 44   | 68   | 94    | 124   | CW   |
| 970D7501       | 7    | 9    | 14   | 19    | 23    | CW   |
| 970D28121      | 2    | 3    | 4    | 5     | 7     | ACW  |

Note: Motor speeds may vary by (+) or (-) 12.5%

| WEIGHT    |      |
|-----------|------|
| 970D61    | 247g |
| 970D161   | 252g |
| 970D471   | 257g |
| 970D1561  | 261g |
| 970D7501  | 270g |
| 970D28121 | 271g |

## GEARED MOTOR TORQUE RATINGS AT MAX. EFFICIENCY.

| AT 12V<br>(g.cm) |      |
|------------------|------|
| 6:1              | 741  |
| 16:1             | 1803 |
| 47:1             | 3000 |
| 156:1            | 6000 |
| 750:1            | 6000 |
| 2812:1           | 6000 |

**IMPORTANT NOTICE**  
At very low ratios the torque produced by this geared motor combination may exceed the maximum permissible torque of the gearbox. In this situation the unit must not be allowed to stall as this may damage the gears.

24 volt versions are available for this range of motor-gearboxes. Performance data is similar to 12 volt versions. This version also has an extended 10mm rear shaft to accommodate motor encoders. When ordering please use 12v version part number suffixed with 24V. I.E. 919D111 will be 919D11124V

NOTE: To establish Torque Rating in Nm, divide g.cm by 10,197.0