

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

(RE540/1 Motor)



Metal gearbox cover & bracket included with this series.

RATIOS NOW AVAILABLE AS EX-STOCK ITEMS.

Fitted with RE540/1 (4.5v - 15v) Motor:

| | | |
|-----------|-------|--------|
| 970D61 | Ratio | 6:1 |
| 970D161 | Ratio | 16:1 |
| 970D471 | Ratio | 47:1 |
| 970D1561 | Ratio | 156:1 |
| 970D7501 | Ratio | 750:1 |
| 970D28131 | Ratio | 2813:1 |

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. (RE540/1)

| MODEL | VOLTAGE | | NO LOAD | | AT MAXIMUM EFFICIENCY | | | | | STALL TORQUE | | |
|---------|-----------------|--------------|---------|---------|-----------------------|---------|--------|------|--------|--------------|--------|------|
| | OPERATING RANGE | NOMINAL | SPEED | CURRENT | SPEED | CURRENT | TORQUE | | OUTPUT | EFF | TORQUE | |
| | | | R.P.M. | A | R.P.M. | A | oz-in | g-cm | W | % | oz-in | g-cm |
| RE540/1 | 4.5 - 15 | 12v Constant | 14500 | 0.7 | 12048 | 2.81 | 2.22 | 160 | 19.8 | 62.71 | 14.29 | 1029 |

Stall Current: RE540/1 at 6v = 8.24A

GEARBOX DATA.

| PART NO | RATIO | REDUCTION TABLE RPM (No Load) ^o | | | | | WEIGHT | TORQUE RATING AT: 12v (g.cm) [^] |
|-----------|--------|--|------|------|------|------|--------|--|
| | | 4.5v | 6v | 9v | 12v | 15v | | |
| 970D61 | 6:1 | 906 | 1209 | 1813 | 2417 | 3021 | 274g | 778 |
| 970D161 | 16:1 | 340 | 453 | 680 | 906 | 1133 | 278g | 1869 |
| 970D471 | 47:1 | 116 | 155 | 232 | 309 | 386 | 285g | 3000 |
| 970D1561 | 156:1 | 35 | 47 | 70 | 93 | 116 | 293g | 3000 |
| 970D7501 | 750:1 | 7 | 10 | 14 | 19 | 24 | 304g | 3000 |
| 970D28131 | 2813:1 | 2 | 3 | 4 | 5 | 6 | 305g | 3000 |

NOTES:^o Motor speeds may vary by + or - 12.5%

[^] Geared Motor Torque Ratings at Maximum Efficiency. To establish Torque Rating in Nm, divide g.cm by 10197.0

| 970D SERIES | |
|---------------------------------------|------------|
| No Load Backlash | Max 2 deg. |
| Max Radial Load (10mm from flange) | 1000gf. |
| Shaft Axial Load | 700gf. |

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. ie: 970D161 will be 970D16124V

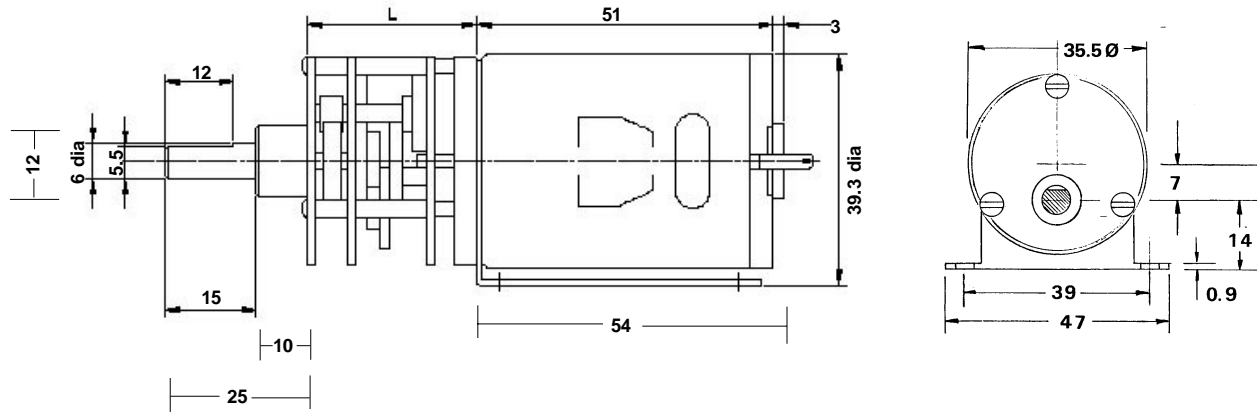
IMPORTANT NOTICES:

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. 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).

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(RE540/1 Motor)

970D SERIES TECHNICAL DRAWING



| RATIO | L |
|--------|------|
| 6:1 | 26.0 |
| 16:1 | 28.5 |
| 47:1 | 31.5 |
| 156:1 | 34.0 |
| 750:1 | 39.0 |
| 2813:1 | 41.5 |

NOTE: all diameters in mm

FOR ACCESSORIES TO FIT THIS SERIES GEARBOX, REFER TO 919D SERIES.

Subject to minimum order quantities of 250 units, the following ratios are also available with a six week lead-time. The physical dimensions of these other gearboxes may vary from the data as illustrated above. Details of individual gearboxes are available upon request.

GEARBOX 19:1 with 540/1 motor
 GEARBOX 21:1 with 540/1 motor
 GEARBOX 31:1 with 540/1 motor
 GEARBOX 38:1 with 540/1 motor
 GEARBOX 56:1 with 540/1 motor
 GEARBOX 63:1 with 540/1 motor
 GEARBOX 69:1 with 540/1 motor
 GEARBOX 75:1 with 540/1 motor

GEARBOX 94:1 with 540/1 motor
 GEARBOX 104:1 with 540/1 motor
 GEARBOX 113:1 with 540/1 motor
 GEARBOX 125:1 with 540/1 motor
 GEARBOX 169:1 with 540/1 motor
 GEARBOX 188:1 with 540/1 motor
 GEARBOX 219:1 with 540/1 motor
 GEARBOX 234:1 with 540/1 motor

GEARBOX 250:1 with 540/1 motor
 GEARBOX 281:1 with 540/1 motor
 GEARBOX 312:1 with 540/1 motor
 GEARBOX 375:1 with 540/1 motor
 GEARBOX 422:1 with 540/1 motor
 GEARBOX 438:1 with 540/1 motor
 GEARBOX 469:1 with 540/1 motor
 GEARBOX 563:1 with 540/1 motor

GEARBOX 625:1 with 540/1 motor
 GEARBOX 938:1 with 540/1 motor
 GEARBOX 1250:1 with 540/1 motor
 GEARBOX 1875:1 with 540/1 motor
 GEARBOX 3750:1 with 540/1 motor
 GEARBOX 5625:1 with 540/1 motor