

919D SERIES 35mm SINGLE RATIO METAL GEARBOX

(RE 540/1 MOTOR)



RATIOS NOW AVAILABLE AS EX-STOCK ITEMS.

| | | | |
|-----------|--------------|----------------------|--------------|
| 919D2.51 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 2.5:1 |
| 919D61 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 6:1 |
| 919D111 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 11:1 |
| 919D501 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 50:1 |
| 919D1001 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 100:1 |
| 919D1481 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 148:1 |
| 919D5001 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 500:1 |
| 919D8101 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 810:1 |
| 919D30001 | (4.5v - 15v) | WITH RE 540/1 MOTOR. | RATIO 3000:1 |

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).

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 | oz - in | g - cm |
| | | | 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 = 8.24Stall
Current RE280 at 1.5v = 2.41AA

REDUCTION TABLE. R.P.M.

| SUPPLY VOLTAGE | 4.5v | 6.0v | 9.0v | 12.0v | 15.0v |
|----------------|------|------|------|-------|-------|
| 919D2.51 | 2250 | 3000 | 4500 | 6300 | 7900 |
| 919D61 | 990 | 1316 | 1975 | 2633 | 3295 |
| 919D111 | 540 | 718 | 1077 | 1436 | 1800 |
| 919D501 | 120 | 158 | 237 | 316 | 395 |
| 919D1001 | 59 | 79 | 119 | 158 | 198 |
| 919D1481 | 40 | 53 | 80 | 106 | 132 |
| 919D5001 | 9.75 | 14 | 21.5 | 30 | 37.5 |
| 919D8101 | 8 | 10 | 15 | 20 | 25 |
| 919D30001 | 1.5 | 2 | 3 | 5 | 6 |

| WEIGHT | |
|-----------|------|
| 919D2.51 | 240g |
| 919D61 | 234g |
| 919D111 | 238g |
| 919D501 | 246g |
| 919D1481 | 255g |
| 919D5001 | 260g |
| 919D8101 | 255g |
| 919D30001 | 262g |

GEARBOX RATINGS

| | RATED TOLERANCE TORQUE (g.cm) | MAX. MOMENTARY TOLERANCE TORQUE |
|--------|-------------------------------|---------------------------------|
| 2.5:1 | 2000 | 6000 |
| 6:1 | 3000 | 9000 |
| 11:1 | 3000 | 9000 |
| 50:1 | 3000 | 9000 |
| 100:1 | 6000 | 18000 |
| 148:1 | 6000 | 18000 |
| 500:1 | 6000 | 18000 |
| 810:1 | 6000 | 18000 |
| 3000:1 | 6000 | 18000 |

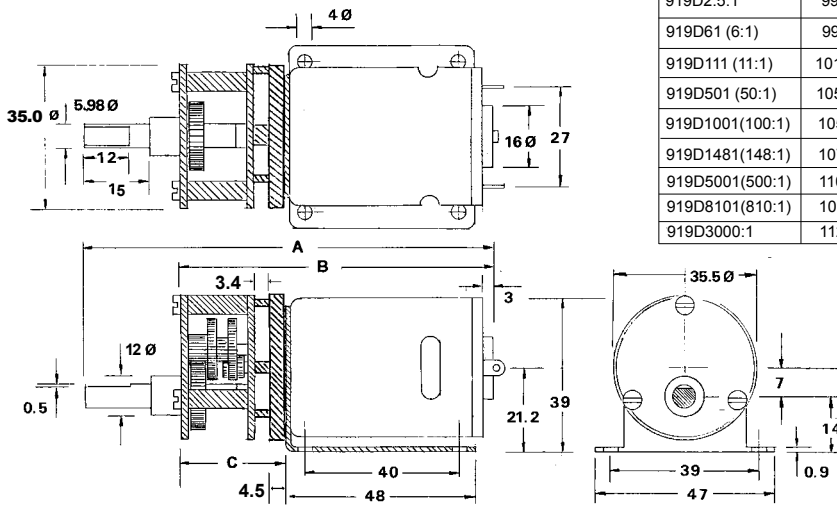
24 volt versions are available for this range of motor-gearboxes. Performance data is similar to 12 volt versions. This version also has an extended 10mm rear shaft to accommodate motor encoders. When ordering please use 12v version part number suffixed with 24V. I.E. 919D111 will be 919D11124V

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

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(RE 540/1 MOTOR)

GEARBOX DIMENSIONS



| GEARBOX REF. | A | B | C |
|-----------------|-----|----|----|
| 919D2.5:1 | 99 | 73 | 20 |
| 919D61 (6:1) | 99 | 73 | 20 |
| 919D111 (11:1) | 101 | 76 | 22 |
| 919D501 (50:1) | 105 | 80 | 26 |
| 919D1001(100:1) | 105 | 80 | 26 |
| 919D1481(148:1) | 107 | 82 | 28 |
| 919D5001(500:1) | 110 | 85 | 31 |
| 919D8101(810:1) | 109 | 94 | 30 |
| 919D3000:1 | 112 | 97 | 33 |

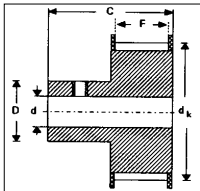


Part No. 1071.
M3 Anti vibration mount.
Part No. 1072
M4 Anti vibration mount.



Part No. 919D30
Bearing Blocks. 5mm I.D.
(19.06 x 19.0mm x 10mm)
Part No. 919D30/1
Bearing Blocks. 6mm I.D.
(15.87 x 19.0mm x 12.5mm)
Part No. 919D30/2
Bearing Blocks. 8mm I.D.
(19.0 x 19.0mm x 13.0mm)

TIMING PULLEYS



TIMING BELTS



Part No. 919D29
Double ended motor mount.

FOR FURTHER DETAILS SEE PAGE. 20

Part No. 919D7 - 14. Timing Pulleys.

Part No. 919D15 - 23. Timing Belts.

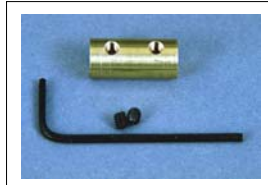
| Pt. No. | No. of teeth | d | dk | F | C | D |
|----------|--------------|---|-------|----|------|----|
| 919D7/10 | 10 | 3 | 15.05 | 12 | 21.0 | 10 |
| 919D7/12 | 12 | 3 | 18.25 | 12 | 21.0 | 12 |
| 919D7 | 14 | 4 | 21.45 | 12 | 21.0 | 12 |
| 919D8 | 16 | 4 | 24.60 | 12 | 21.0 | 15 |
| 919D9 | 20 | 4 | 31.00 | 12 | 21.0 | 15 |
| 919D10 | 25 | 4 | 39.00 | 12 | 21.0 | 15 |
| 919D11 | 30 | 4 | 46.95 | 12 | 21.0 | 15 |
| 919D12 | 35 | 4 | 54.85 | 12 | 21.0 | 15 |
| 919D13 | 40 | 4 | 62.85 | 12 | 21.0 | 15 |
| 919D14 | 44 | 4 | 69.20 | 12 | 21.0 | 15 |

Please note.
Dimension 'd' is
an industry
standard 4mm
pilot hole. You will
need to enlarge
this to the size
you require.

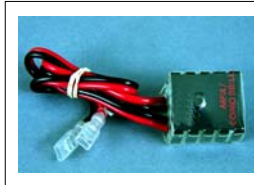
| Pt. No. | Length (Circum) | Width |
|---------|--------------------|-------|
| 919D15 | 165 | 9.8 |
| 919D16 | 185 | 9.8 |
| 919D17 | 200 | 9.8 |
| 919D18 | 305 | 9.8 |
| 919D19 | 390 | 9.8 |
| 919D20 | 455 | 9.8 |
| 919D21 | 545 | 9.8 |
| 919D22 | 630 | 9.8 |
| 919D23 | 840 | 9.8 |



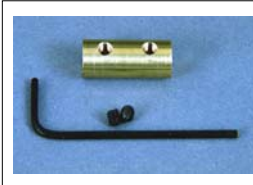
Part No. 919D26
Stainless Steel shaft 5mmOD x 150mm
Part No. 919D26/1
Stainless Steel Shaft 6mmOD x 150mm
Part No. 919D26/2
Stainless Steel Shaft 8mmOD x 150mm



Pt No. 919D1. In-Line Coupling. 6mm - 6mm.(Dia. 12.67mm x 24.8mm)



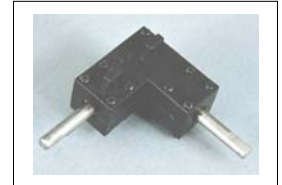
Pt No. 919D2. Voltage Regulator.(6-15v DC Input. 4v-12v output). 26mm x 31mm x 15.5mm



Pt No. 919D1/2. In-line Coupling.6mm-8sw (Meccano) Dia. 12.67mm x 24.8mm



Pt No. 919D4. Pulley 25mm dia. (Aluminium)



Pt.No.919D24. Bevel Gearbox. (Right Angle)



Pt No. 919D5. Pulley 16mm dia. (Aluminium)



Universal Couplings. 12.5mm dia. 44mm length.Pt No. 1105/60. 6mm - 6mm.Pt.No. 1105/56 (6mm-5mm) Pt. No. 1105/53 (6mm-4mm)



Pt No. 917D2515. "O" Ring 70mm x 5mm Dia.



Pt No. 919D27. Gear Adapter. 6mm bore. M10 thread.



Pt No. 919D25. Nylon Bevel Gears 1:1. OD30.7mm ID 6mm

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 10:1 WITH 540/1 MOTOR
- GEARBOX 60:1 WITH 540/1 MOTOR
- GEARBOX 90:1 WITH 540/1 MOTOR
- GEARBOX 180:1 WITH 540/1 MOTOR
- GEARBOX 300:1 WITH 540/1 MOTOR
- GEARBOX 450:1 WITH 540/1 MOTOR
- GEARBOX 700:1 WITH 540/1 MOTOR
- GEARBOX 1000:1 WITH 540/1 MOTOR

- GEARBOX 18:1 WITH 540/1 MOTOR.
- GEARBOX 70:1 WITH 540/1 MOTOR.
- GEARBOX 100:1 WITH 540/1 MOTOR
- GEARBOX 200:1 WITH 540/1 MOTOR
- GEARBOX 350:1 WITH 540/1 MOTOR
- GEARBOX 500:1 WITH 540/1 MOTOR
- GEARBOX 750:1 WITH 540/1 MOTOR
- GEARBOX 1500:1 WITH 540/1 MOTOR

- GEARBOX 30:1 WITH 540/1 MOTOR.
- GEARBOX 75:1 WITH 540/1 MOTOR.
- GEARBOX 120:1 WITH 540/1 MOTOR
- GEARBOX 250:1 WITH 540/1 MOTOR
- GEARBOX 400:1 WITH 540/1 MOTOR
- GEARBOX 600:1 WITH 540/1 MOTOR
- GEARBOX 900:1 WITH 540/1 MOTOR