

**919D1481****35.5mm Motor/gearbox  
(RE540/1 motor)****Conrad Best No. 222366**

Unit has a powerful high quality, three pole motor with sintered bronze bearings. The metal gearbox has sleeved bearings. Includes 1mm thick mounting plate.

Operating range 4.5v - 15v.

Ratio 148:1.

(At 12v) 106 rpm. Rated tolerance torque 6000 g.cm. Current 2.85 A. 212w

**Gearbox  
Single Ratio 148:1  
Part No. 919D1481  
Best Nr. 222366**

**REDUCTION TABLE R.P.M: 919D2.51 (2.5:1) 919D61(6:1), 919D111(11:1), 919D501(50:1), 919D1001 (100:1), 919D1481 (148:1), 919D5001 (500:1), 919D8101 (810:1) AND 919D30001 (3000:1)**

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

ACCESSORIES AVAILABLE FOR 919D, SERIES. Please see our website  
[www.mfacomodrills.com](http://www.mfacomodrills.com)

**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	STALL TORQUE	
			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

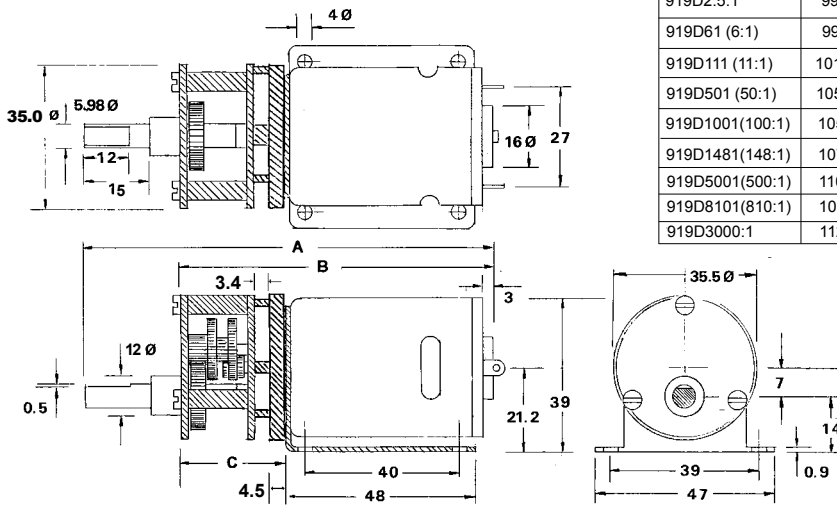
NOTE: To establish Torque Rating in nM, divide g.cm by 10,197.0



**919D SERIES 35mm SINGLE RATIO METAL GEARBOX**

**(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

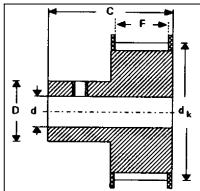


**Part No. 1071.**  
M3 Anti vibration mount.  
**Part No. 1072**  
M4 Anti vibration mount.



**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.

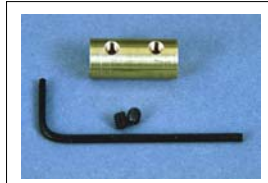
Pt. No.	No. of teeth	d	dk	F	C	D
919D7/10	10	3	15.05	12	21.0	10
919D7/12	12	3	18.25	12	21.0	12
919D7	14	4	21.45	12	21.0	12
919D8	16	4	24.60	12	21.0	15
919D9	20	4	31.00	12	21.0	15
919D10	25	4	39.00	12	21.0	15
919D11	30	4	46.95	12	21.0	15
919D12	35	4	54.85	12	21.0	15
919D13	40	4	62.85	12	21.0	15
919D14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

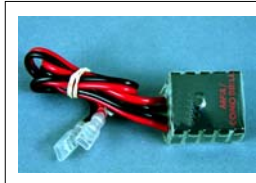
Pt. No.	Length (Circum)	Width
919D15	165	9.8
919D16	185	9.8
919D17	200	9.8
919D18	305	9.8
919D19	390	9.8
919D20	455	9.8
919D21	545	9.8
919D22	630	9.8
919D23	840	9.8



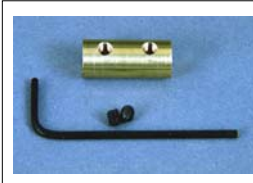
**Part No. 919D26**  
Stainless Steel shaft 5mmOD x 150mm  
**Part No. 919D26/1**  
Stainless Steel Shaft 6mmOD x 150mm  
**Part No. 919D26/2**  
Stainless Steel Shaft 8mmOD x 150mm



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



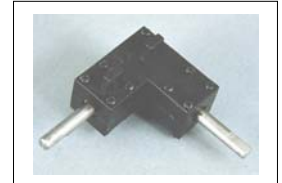
**Pt No. 919D2.** Voltage Regulator.(6-15v DC Input. 4v-12v output). 26mm x 31mm x 15.5mm



**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