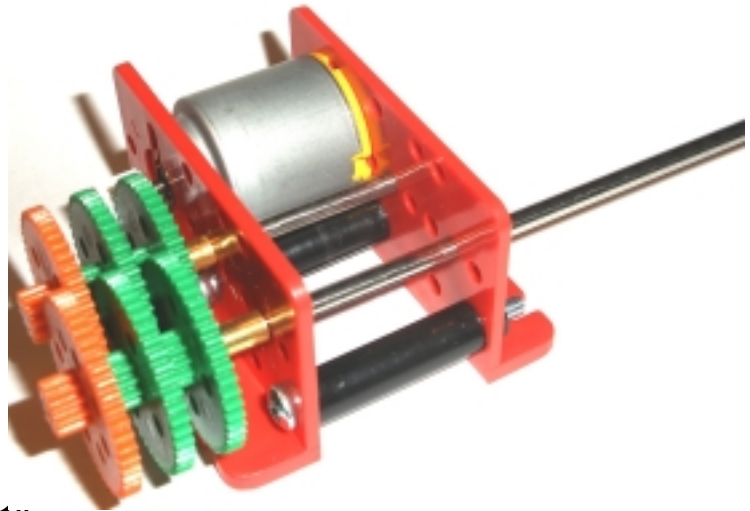


MULTI RATIO GEARBOX - DESIGNED FOR EDUCATIONAL USE

**MULTI RATIO GEARBOX.
IDEAL FOR CDT
(CRAFT, DESIGN AND
TECHNOLOGY)**



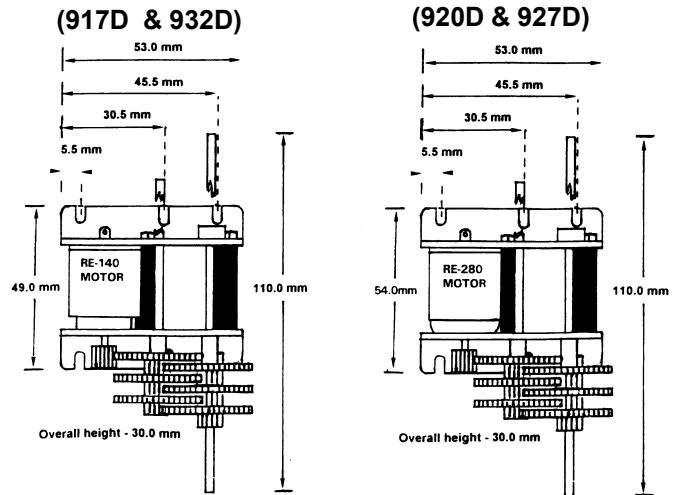
- 917D KIT FORM (RE 140 MOTOR)
- 917D/A ASSEMBLED VERSION (RE 140 MOTOR)
- 920D KIT FORM (RE 280 MOTOR)
- 920D/A ASSEMBLED VERSION (RE 280 MOTOR)
- 927D KIT FORM (RE 280/1 MOTOR)
- 927D/A ASSEMBLED VERSION (RE 280/1 MOTOR)
- 932D KIT FORM (RE140/1 MOTOR)
- 932D/A ASSEMBLED VERSION (RE140/1 MOTOR)

*** PROVIDES 6 DIFFERENT RATIOS AND 18 SPEEDS.* RUGGED AND COMPACT DESIGN AND CONSTRUCTION.* IDEAL FOR MODELS, CDT (CRAFT,DESIGN AND TECHNOLOGY) PROJECTS.* OPERATES FROM 1.5 - 3v (RE140 &, WITH THE HIGHER TORQUE MOTOR,RE280),6 - 9v RE140/1, AND 12 - 24v (RE280/1) D.C.SUPPLIES. * EXTENSIVE RANGE OF ACCESSORIES AVAILABLE.**

The unit operates on 1.5 - 3v (917D & 917D/A, also with higher torque motor 920D & 920D/A), with 6 - 9v (932D & 932D/A), or 12-24v (927D & 927D/A) D.C. power sources, either battery or suitable transformer. Its simple versatile design and sturdy construction make it suitable for a host of uses from powering models and robots to teaching the principles of mechanics. Current consumption depends on eventual load but is within the range 0.2 to 0.8n amps. The output shaft is 3mm diameter.

WEIGHT	
917D	54g
920D	76g
927D	76g
932D	54g

GEARBOX DIMENSIONS.



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).

MOTOR DATA. (RE-140 & RE-140/1, RE-280 & RE-280/1)

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 - 140	1.5 - 3.0	3.0v CONSTANT	14800	0.300	11500	1.05	0.152	10.92	1.29	41.03	0.68	49.0
RE - 140/1	6 - 9	6V CONSTANT	9200	0.066	7071	0.219	0.11	8.1	0.589	44.79	0.48	35.1
RE - 280	1.5 - 3.0	1.5v CONSTANT	4600	0.120	3750	0.53	0.160	11.53	0.44	56.20	0.86	62.0
RE - 280	1.5 - 3.0	3.0v CONSTANT	9200	0.155	7800	0.85	0.278	20.00	1.60	62.30	1.81	130.0
RE - 280/1	12 - 24	12V CONSTANT	8400	0.100	6300	0.30	0.347	25.00	1.62	44.87	1.389	100.0

REDUCTION TABLE R.P.M. (917D)

	1.5V	3.0V
4:1	1850	3700
16:1	462	925
64:1	115	231
256:1	29	57
1024:1	7	14
4096:1	2	4

REDUCTION TABLE R.P.M. (920D)

	1.5V	3.0V
4:1	1150	2300
16:1	287	575
64:1	72	144
256:1	18	36
1024:1	4	9
4096:1	1	2

REDUCTION TABLE R.P.M. (927D)

	12V	15V	18V	24V
4:1	2100	2625	3150	4199
16:1	525	656	787	1050
64:1	131	164	196	261
256:1	33	42	50	67
1024:1	8	10	12	16
4096:1	2	2	3	4

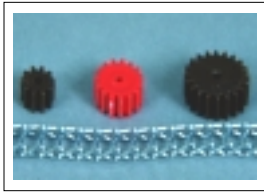
REDUCTION TABLE R.P.M. (932D)

	6V	9.0V
4:1	2300	3067
16:1	575	767
64:1	144	192
256:1	36	48
1024:1	9	12
4096:1	2	2.67

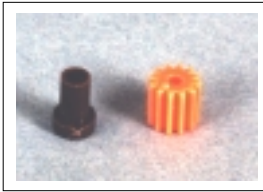
MULTI RATIO GEARBOX

MULTI RATIO GEARBOX ACCESSORIES.

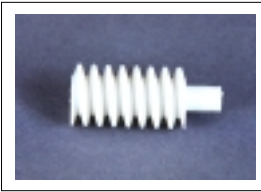
(917D, 917D/A, 920D, 920D/A, 927D, 927D/A, 932D, 932D/A.)



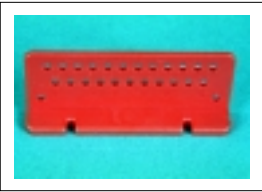
Pt.No.917D2401,2402,2403
2404,2449/1



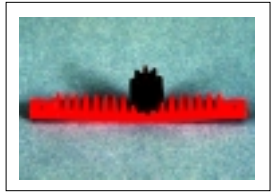
Pt.No.917D2417,2458



Pt.No.917D2420



Pt.No. 917D2425



Pt.No. 917D2401
Pt.No. 917D2430
(Set: 917D/1)



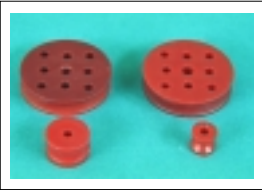
Pt.No. 917D2440



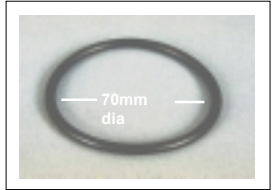
Pt.No.917D2445,2446,2449



Pt.No.917D2452,2456



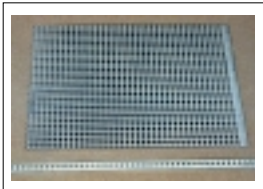
Pt.No.917D2460,2461,2462,2463



Pt.No.917D2515



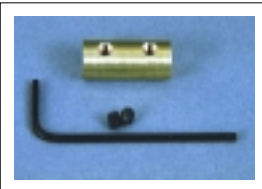
Pt.No.917D2501,2502,2504,
2505,2506,2507,2509, 2513



Pt.No.917D2531,2540



Pt.No.917D2551,2553



Pt.No. 917D8



Pt.No.917D9,D10,D11

Part No. 917D8.
Part No. 917D9.

Inline Coupling. 3mm - 3mm. (7.9mm x 20mm)
Voltage regulator. 6-15v DC Input.3v1.5amp output.
(31mm x 26mm x 15.5mm)

Part No. 917D2452.
OD6.72mm)(pkt 10
Part No. 917D2456.
OD6.72mm)(pkt 10

Double Gear. 48/12. 2.9mm bore. (OD24.57mm/

Part No. 917D10.

Voltage regulator.6-15v DC Input. 1.5v,1.5amp output.
(31mm x 26mm x 15.5mm)

Part No. 917D2458.
(OD6.92mm)(pkt 10)
Part No. 917D2460.
Part No. 917D2461.

Double Gear. 48/12. 3.1mm bore. (OD24.57mm/

Part No. 917D11.

Voltage regulator. 6-15v DC Input. 4.5v,1.5amp output.
(31mm x 26mm x 15.5mm)

Part No. 917D2462.
sleeve.(pkt 10)
Part No. 917D2463.
Part No. 917D2501.

Pinion. 12 tooth (for motor) 1.9mm Bore.

Part No. 917D2401.

Gear. 10 tooth. 2.9mm bore. (Dia. 11.2mm x 5.8mm)(pkt 10)

Part No. 917D2502.
Part No. 917D2504.
Part No. 917D2505.

Pulley. 14/10mm dia. 2.9mm bore.(pkt 10)

Part No. 917D2402.

Gear. 15 tooth. 2.9mm bore. (Dia. 16.2mm x 5.8mm)(pkt 10)

Part No. 917D2507.
Part No. 917D2509.
Part No. 917D2513.

Pulley. 30/25mm dia. 2.9mm bore.(pkt 10)

Part No. 917D2403.

Gear. 20 tooth. 2.9mm bore. (Dia. 22mm x 6.3mm)(pkt 10)

Part No. 917D2515.
Part No. 917D2531.
Part No. 917D2540.

Pulley. 30/25mm dia. 3.9mm bore with brass

Part No. 917D2404.

Gear. 40 tooth. 2.9mm bore. (Dia. 41.3mm x 6.3mm)(pkt 10)

Part No. 917D2551.
Part No. 917D2553.
Part No. 917D2682.

Pulley. 8/5.5m dia. 2.9mm bore. (pkt 10)

Part No. 917D2415.

Stop Rings.(pkt 10)

Part No. 917D2683.

Robotic Wheels - 25mm x 10mm. 2.6mm bore.(pkt 4)

Part No. 917D2417.

Micro-Switch operating pins. (Dia. 3.9mm/5.7mm x 8mm)(pkt 2)

Robotic Wheels - 35mm x 7mm. 2.6mm bore.(pkt 4)

Part No. 917D2420.

Worm Drive. (Dia. 11.94mm x 32mm)(pkt 10)

Robotic Wheels - 51mm x 16mm. 2.6mm bore.(pkt 4)

Part No. 917D2425.

Custom gearbox bracket. (69.8mm x 27.9mm x 2.0mm)(pkt 2)

Robotic Wheels - 79mm x 20mm. 3.5mm bore.

Part No. 917D2426.

Gearbox Brackets. (52.8mm x 30.0mm x 2.0mm)(pkt 2)

Robotic Wheels - 37mm x 16mm. 2.6mm bore.(pkt 4)

Part No. 917D2430.

Rack. (50. mm x 4.7mm x 5.13mm)(pkt 10)

Robotic Wheels - 44mm x 16mm. 2.6mm bore.(pkt 4)

Part No. 917D2440.

Crown Gear. (OD 16.4mm x 6.9mm high)(pkt 10)

Robotic Wheels - 56mm x 16mm. 2.6mm bore.(pkt 4)

Part No. 917D2445.

Chain Sprocket. 8 tooth 2.9mm bore. (OD 13.9mm)(pkt 10)

Robotic Wheels - 54mm x 30mm. 2.6mm bore.

Part No. 917D2446.

Chain Sprocket.16 tooth 2.9mm bore. (OD 26.7mm)(pkt 10)

'O' Ring (70mm Diameter x 5mm).

Part No. 917D2449.

Chain in 1m length approx. (7.1mm wide)

Perforated Metal Strip. (305mm x 8.75mm x 0.5mm)(pkt 5)

Part No. 917D2449/1

For gears 917D2445, 2446.

Perforated Metal Sheet. (200mm x 110mm x 0.6mm)

Chain in 1m length approx. (10.8mm Wide)

Shaft 3mm dia (long for output). (3mm x 110mm)(pkt 10)

For gears 917D2401,2402, 2403 & 2404.

Shaft 3mm dia (short for intermediate). (3mm x 60mm)(pkt 10)

Spacers (25mm).(pkt 10)

Spacers (30mm).(pkt 10)

RACK & PINION SET. PT.NO. 917D/1.

Consisting of: 1 Rack (917D2430), 1 Pinion (917D2401) and Mounting Screws.

GEAR SET. PT.NO. 917D/2.

Consisting of: 4 gears(917D2456), 2 gears (917D2452) and 1 Pinion (917D2458).

CHAIN & SPROCKET SET. PT.NO. 917D/3.

Consisting of: 2 Sprockets(917D2445), 2 Sprockets(917D2446) & 1m approx Chain(917D2449)

WORM DRIVE SET. PT.NO. 917D/4.

Consisting of: 1 Worm drive(917D2420), & 1 Spur Gear(917D2404).

CROWN WHEEL & PINION SET. PT.NO. 917D/5.

Consisting of: 1 Crown Wheel (917D2440) & 1 Pinion (917D2401). 917D2404).

SPUR GEAR SET. PT.NO. 917D/6.

Consisting of: 1 each Spur Gear (917D2403, 917D2401 &

PULLEY SET. PT. NO. 917D/7.

Consisting of: 1 each of Pulley (917D2460, 917D2461, 917D2462, 917D2463) Micro Switch operating Pin. (917D2417), & "O" Ring (917D2515).