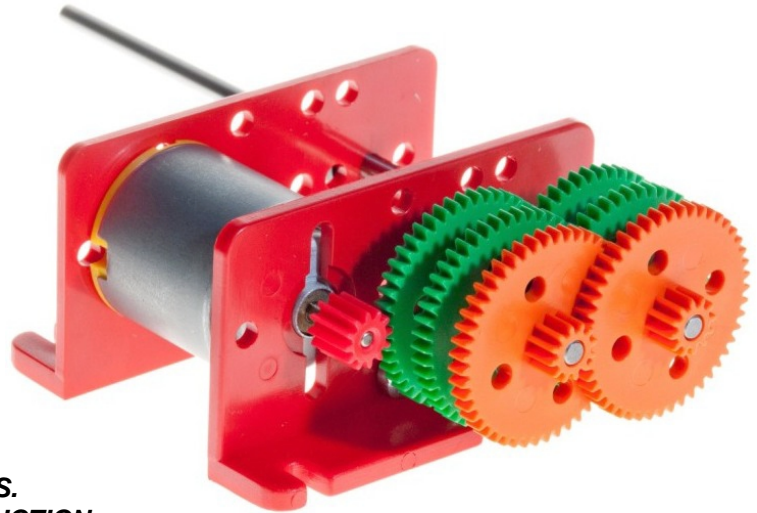


MULTI RATIO GEARBOX. IDEAL FOR CDT (CRAFT, DESIGN AND TECHNOLOGY)



KIT FORM

917D (RE-140 MOTOR)
920D (RE-280 MOTOR)
927D (RE-280/1 MOTOR)
932D (RE-140/1 MOTOR)

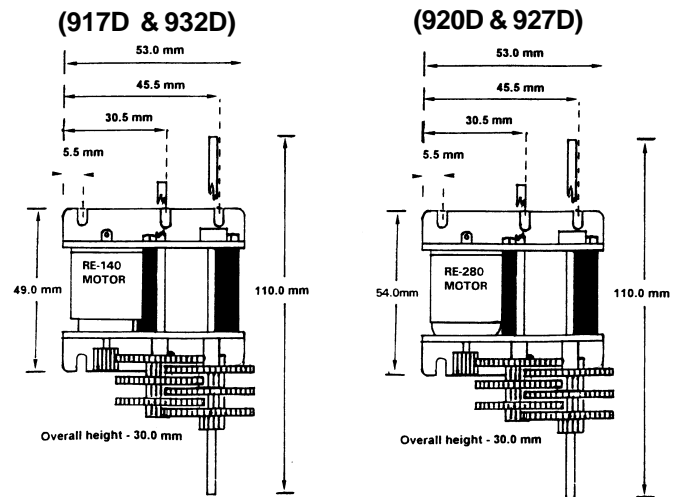
ASSEMBLED VERSION

917D/A (RE-140 MOTOR)
920D/A (RE-280 MOTOR)
927D/A (RE-280/1 MOTOR)
932D/A (RE-140/1 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.

GEARBOX DIMENSIONS.



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

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 R.P.M.	CURRENT A	SPEED R.P.M.	CURRENT A	TORQUE oz-in	TORQUE g-cm	OUTPUT W	EFF %	TORQUE oz-in	TORQUE g-cm
RE-140 (917D)	1.5 - 3	3v Constant	14800	0.300	11500	1.05	0.152	10.92	1.29	41.03	0.68	49.0
RE-140/1 (932D)	6 - 9	6v Constant	9200	0.066	7071	0.219	0.11	8.1	0.589	44.79	0.48	35.1
RE-280 (920D)	1.5 - 3	1.5v Constant	4600	0.120	3750	0.53	0.160	11.53	0.44	56.20	0.86	62.0
RE-280 (920D)	1.5 - 3	3v Constant	9200	0.155	7800	0.85	0.278	20.00	1.60	62.30	1.81	130.0
RE-280/1 (927D)	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	3v
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	3v
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	9v
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

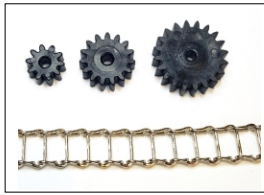
IMPORTANT NOTICE

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).

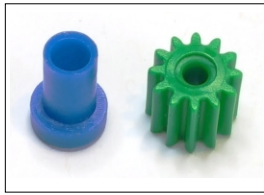
MULTI RATIO GEARBOX

MULTI RATIO GEARBOX ACCESSORIES.

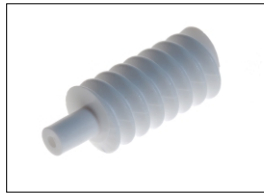
(917D, 917D/A, 920D, 920D/A, 927D, 927D/A, 932D, 932D/A.)



Part No.917D2401,2402, 2403,2404,2435



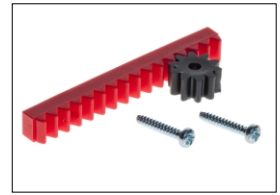
Part No. 917D2417,2458



Part No.917D2420



Part No. 917D2425



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



Part No. 917D2440



Part No.917D2445,2446,2449



Part No.917D2452,2456



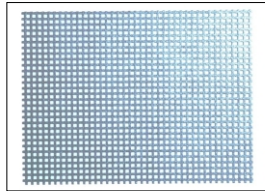
Part No.917D2461,2462,2463



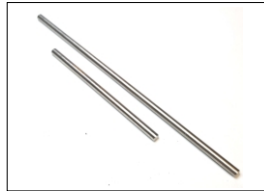
Part No.917D2515



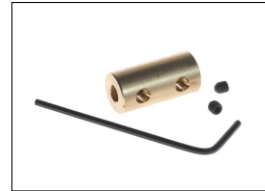
Part No.917D2501,2502,2504, 2505,2506,2507,2509, 2513



Part No.917D2531,2540



Part No.917D2551,2553



Part No. 917D8



Part No. 917D331107 (3.1mm)
Part No. 917D331117 (2.9mm)
Module 1.0



Part No. 1105/69

Universal Coupling. 3mm - 3mm.
See Page 63 for full range of combinations



GEARED MOTOR KIT.
Part No.917D14.
700g.

- Part No. 917D8 Inline Coupling. 3mm - 3mm. (7.9mm x 20mm). 8g
- Part No. 917D2401 Gear. 10 tooth. 2.9mm bore. (Dia. 11.2mm x 5.8mm)(pkt 10). 3g
- Part No. 917D2402 Gear. 15 tooth. 2.9mm bore. (Dia. 16.2mm x 5.8mm)(pkt 10). 8g
- Part No. 917D2403 Gear. 20 tooth. 2.9mm bore. (Dia. 22mm x 6.3mm)(pkt 10). 16g
- Part No. 917D2404 Gear. 40 tooth. 2.9mm bore. (Dia. 41.3mm x 6.3mm)(pkt 10). 60g
- Part No. 917D2415 Stop Rings.(pkt 10). 2g
- Part No. 917D2417 Micro-Switch operating pins. (Dia. 3.9mm/5.7mm x 8mm)(pkt 10).1g
- Part No. 917D2420 Worm Drive. (Dia. 11.94mm x 32mm)(pkt 10). 16g
- Part No. 917D2425 Custom gearbox bracket. (69.8mm x 27.9mm x 2.0mm)(pkt 2). 12g
- Part No. 917D2426 Gearbox Brackets. (52.8mm x 30.0mm x 2.0mm)(pkt 2). 9g
- Part No. 917D2430 Rack. (50.5mm x 4.7mm x 5.13mm)(pkt 10). 12g
- Part No. 917D2440 Crown Gear. (OD 16.4mm x 6.9mm high)(pkt 10). 4g
- Part No. 917D2445 Chain Sprocket. 8 tooth 2.9mm bore. (OD 13.9mm)(pkt 10). 4g
- Part No. 917D2446 Chain Sprocket.16 tooth 2.9mm bore. (OD 26.7mm)(pkt 10). 12g
- Part No. 917D2449 Chain in 1m length approx. (7.1mm wide) . 30g
For gears 917D2445, 2446.
- Part No. 917D2435 Chain in 1m length approx. (10.8mm Wide). 31g
For gears 917D2401,2402, 2403 & 2404.
- Part No. 917D2452 Double Gear. 48/12. 2.9mm bore. (OD24.57mm/OD6.72mm)(pkt 10). 14g
- Part No. 917D2456 Double Gear. 48/12. 3.1mm bore. (OD24.57mm/OD6.72mm)(pkt 10). 14g
- Part No. 917D2458 Pinion. 12 tooth (for motor) 1.9mm Bore. (OD6.92mm)(pkt 10) . 3g

- Part No. 917D2461 Pulley. 30/25mm dia. 2.9mm bore.(pkt 10). 44g
- Part No. 917D2462 Pulley. 30/25mm dia. 3.9mm bore with brass sleeve.(pkt 10). 47g
- Part No. 917D2463 Pulley. 8/5.5m dia. 2.9mm bore. (pkt 10). 3g
- Part No. 917D2501 Robotic Wheels - 24mm x 7mm. 1.6mm bore.(pkt 4). 9g
- Part No. 917D2502 Robotic Wheels - 35mm x 7mm. 2.6mm bore.(pkt 4). 21g
- Part No. 917D2504 Robotic Wheels - 51mm x 16mm. 2.6mm bore.(pkt 4). 51g
- Part No. 917D2505 Robotic Wheels - 79mm x 20mm. 3.5mm bore. 36g
- Part No. 917D2506 Robotic Wheels - 37mm x 16mm. 2.6mm bore.(pkt 4). 45g
- Part No. 917D2507 Robotic Wheels - 44mm x 16mm. 2.6mm bore.(pkt 4). 36g
- Part No. 917D2509 Robotic Wheels - 56mm x 16mm. 2.6mm bore.(pkt 4). 70g
- Part No. 917D2513 Robotic Wheels - 54mm x 30mm. 2.6mm bore. 15g
- Part No. 917D2515 'O' Ring (70mm Diameter x 5mm). 6g
- Part No. 917D2531 Perforated Metal Strip. (305mm x 8.75mm x 0.5mm)(pkt 5). 56g
- Part No. 917D2540 Perforated Metal Sheet. (200mm x 150mm x 0.6mm). 76g
- Part No. 917D2551 Shaft 3mm dia (long for output). (3mm x 110mm)(pkt 10). 62g
- Part No. 917D2553 Shaft 3mm dia (short for intermediate). (3mm x 60mm)(pkt 10). 32g
- Part No. 917D2671 Brass Spacers (5mm long). (pkt 10).
- Part No. 917D2672 Brass Spacers (8mm long). (pkt 10).
- Part No. 917D2682 Spacers (25mm).(pkt 10). 3g
- Part No. 917D2683 Spacers (30mm).(pkt 10). 3g
- Part No. 917D331107 Mitre Bevel Gear. 12 teeth (19mm dia) 3.1mm bore (pkt 2). 2g
- Part No. 917D331117 Mitre Bevel Gear. 12 teeth (19mm dia) 2.9mm bore (pkt 2). 2g

RACK & PINION SET. Part No. 917D/1.

Consisting of: 1 Rack (917D2430), 1 Pinion (917D2401) and Mounting Screws. 3g

CHAIN & SPROCKET SET. Part No. 917D/3.

Consisting of:2 Sprockets(917D2445),2 Sprockets(917D2446).
& 1m approx Chain (917D2449). 42g

CROWN WHEEL & PINION SET. Part No. 917D/5.

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

PULLEY SET. Part No. 917D/7.

Consisting of: 1 each of Pulley (917D2461, 917D2462, 917D2463)
Micro Switch operating Pin. (917D2417), & "O" Ring (917D2515). 26g

GEAR SET. Part No. 917D/2.

Consisting of:4 gears(917D2456),2 gears (917D2452) and 1 Pinion (917D2458). 8g

WORM DRIVE SET. Part No. 917D/4.

Consisting of:1 Worm drive(917D2420),& 1 Spur Gear(917D2404). 6g

SPUR GEAR SET. Part No. 917D/6.

Consisting of: 1 each Spur Gear (917D2403, 917D2401 & 917D2404). 8g