

**975D SERIES 42mm (45mm motor) PLANETRY (EPICYCLIC) METAL GEARBOX**

**(RE 975 MOTOR)**



**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).

**RATIOS NOW AVAILABLE AS EX-STOCK ITEMS.**

975D41	(4.5v - 15v)	RATIO 4:1
975D491	(4.5v - 15v)	RATIO 49:1
975D1041	(4.5v - 15v)	RATIO 104:1
975D2121	(4.5v - 15v)	RATIO 212:1
975D5041	(4.5v - 15v)	RATIO 504:1

Designed for heavy-duty industrial and model applications this robust unit boasts a powerful high quality 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.

**MOTOR DATA.**

MODEL	VOLTAGE		NO LOAD		MAX EFFICIENCY					STALL TORQUE	
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE		OUTPUT	EFF	g - cm
			R.P.M.	A	R.P.M.	A	oz - in	g - cm	W	%	
RE975	6.0 - 12.0	12v CONSTANT	7000	0.9	5700	5.5		700	41.3	63	4290

**REDUCTION TABLE. R.P.M. (NO LOAD)**

SUPPLY VOLTAGE	6.0v	9.0v	12.0v
975D41	850	1275	1750
975D491	73	110	147
975D1041	35	51	67
975D2121	10	17.5	27
975D5041	6.5	10	14

WEIGHT	
975D41	541g
975D491	625g
975D1041	632g
975D2121	669g
975D5041	683g

Note: Motor speeds may vary by (+) or (-) 12.5%

**GEARED MOTOR TORQUE RATINGS AT MAX. EFFICIENCY.**

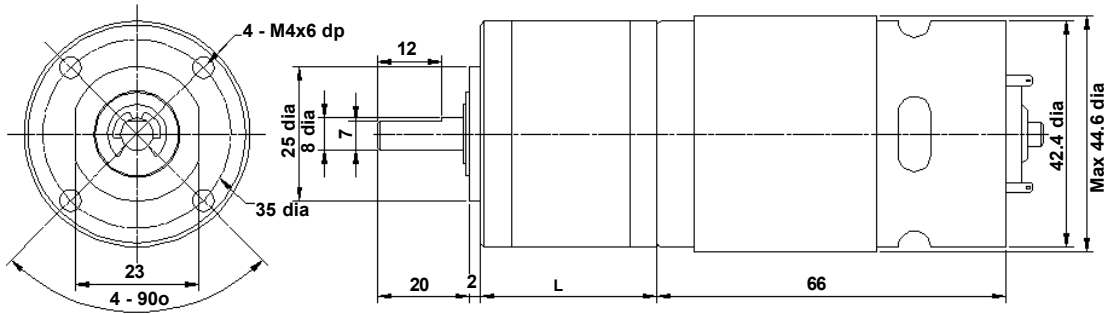
At 12V (g.cm)	
4:1	2240
49:1	18000
104:1	20000
212:1	25000
504:1	30000

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

**IMPORTANT NOTICE**  
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.

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**GEARBOX DIMENSION:**



	Rated Tolerance Torque, g.cm	Max momentary Tolerance Torque g.cm	Efficiency %
975D41 (4:1)	5,000	15,000	80
975D1041 (104:1)	20,000	60,000	61
975D5041 (504:1)	30,000	90,000	52

GEARBOX REF.	L
975D41 (4:1)	32.5
975D491 (49:1)	45.9
975D1041 (104:1)	45.9
975D2121 (212:1)	52.6
975D5041 (504:1)	52.6

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

<b>ADVANTAGES OF PLANETARY GEARBOXES.</b>	
<b>EFFICIENCY:</b>	Efficiencies of planetary gearboxes can be above 90% while some other types of transmission can be 50% or less. This allows the use of smaller motors.
<b>SIZE:</b>	Planetary gearboxes can be half the size of conventional boxes.
<b>WEIGHT:</b>	Weight savings can be as high as 60%, allowing smaller, lighter support structures.
<b>MAINTENANCE:</b>	Other than routine oil changes, no maintenance is required, eliminating the need to hold spares.
<b>REVERSIBLE:</b>	Planetary gears can be equally efficient in either direction. This is an advantage for use in running machinery in both clockwise and anti-clockwise directions.
<b>COAXIAL:</b>	The coaxial configuration of input and output shafts allows planetary gears to be installed in line with a motor and a machine.

Subject to minimum order quantities of 100 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 14:1 with 975 motor   | Gearbox 17:1 with 975 motor   | Gearbox 24:1 with 975 motor   |
| Gearbox 49:1 with 975 motor   | Gearbox 61:1 with 975 motor   | Gearbox 84:1 with 975 motor   |
| Gearbox 144:1 with 975 motor  | Gearbox 212:1 with 975 motor  | Gearbox 294:1 with 975 motor  |
| Gearbox 624:1 with 975 motor  | Gearbox 720:1 with 975 motor  | Gearbox 864:1 with 975 motor  |
| Gearbox 1062:1 with 975 motor | Gearbox 1470:1 with 975 motor | Gearbox 2500:1 with 975 motor |
| Gearbox 3000:1 with 975 motor | Gearbox 3600:1 with 975 motor |                               |