## **INB-08 GEARMOTORS**

Brushless DC Permanent Magnet Planetary Gearmotors

# EN-1030



#### Dimensions

torque rating: Up to 300 oz. in. maximum continuous torque

weight: 6 to 8 ounces depending on ratio

- **gears:** Planetary gearing system. All gears are heat treated for consistently reliable performance and long life
- shaft: Precision-ground No. 416 stainless steel. Options: length, smaller diameter, flats, pinions, gears, holes (through or tapped), threaded ends and tapers. Shaft material may change depending upon options selected
- **backlash:** Varies with reduction but average unit will have less than  $3^\circ$

gear inertia: 1.8 x 10<sup>-6</sup> oz. in. sec.<sup>2</sup> @ input max

**bearings:** Ball bearings are double shielded, life-lubricated

cables/leads: 8" #26 AWG leads, Typ 8 places

housing: Aluminum

mounting flange: No. 303 stainless steel per ASTM A582

gear train housing: Stress-proof steel

options available:

Alternate windings



NOTE: Consult factory prior to preparing spec control prints. Dimensions are for reference only

## **Standard Part Numbers and Data**

SPEED REDUCTION RATIO	MAXIMUM CONTINUOUS TORQUE (oz. in.)		STANDARD PART NUMBER PREFIX*			
		TORQUE MULTIPLIER RATIO	dimension "A" max (in.)	dimension "L" max (in.)	part no. prefix*	
3.82:1 5.77:1	1.0 1.5	3.1 4.6	.993	3.006	547A100 547A101	
14.58:1 22.03:1 33.28:1	3.0 4.5 7.0	9.3 14.0 21.0	1.211	3.224	547A102 547A103 547A104	
55.66:1 84.11:1 127.1:1 192:1	10.0 14.0 21.0 30.0	28.0 43.0 65.0 93.0	1.380	3.393	547A105 547A106 547A107 547A107 547A108	
321:1 485:1 733:1 1,108:1	45.0 70.0 100.0 150.0	130.0 200.0 300.0 450.0	1.549	3.562	547A109 547A110 547A111 547A111 547A112	
1,853:1 2,799:1 4,230:1 6,391:1	200.0 300.0 300.0 300.0	600.0 900.0 1,400 2,100	1.718	3.731	547A113 547A114 547A115 547A116	
10,689:1 16,150:1 24,403:1 36,873:1	300.0 300.0 300.0 300.0 300.0	2,800 4,200 6,400 9,700	1.887	3.900	547A117 547A118 547A119 547A120	

Max Cont. Torque: The values in this column are based upon gear train strength and capability for 1,000 hrs. minimum life. Max rated torque of motor selected x torque multiplier ratio must not exceed maximum continuous torque of gearbox

Max Intermittent Torque = 2 x Max Cont. Torque

Momentary Stall Torque = 5 x Max Cont. Torque (1,000 oz. in. max)

Mininum Gearbox Efficiency = Torque Multiplier Ratio divided by Speed Reduction Ratio x 100

#### \*When You Order

Basic motor winding data is shown on chart below. To order, state gear train standard part number, plus a motor winding dash number. EXAMPLE: 547A100-1. Alternate windings are available. Contact the factory for additional information

### Winding Characteristics

		TORQUE		CURRENT			CONSTANTS		
VOLTAGE (VDC)	SPEED no load (rpm)	max rated (oz. in.)	** theoretical stall (oz. in.)	max no load (amps)	max rated load (amps)	** theoretical stall (amps)	K <sub>⊤</sub> (oz. in./ amp)	R (ohms)	STANDARD PART NUMBERS*
24	24,000	1.5	8.75	.21	1.45	6.63	1.32	3.62	545A100-1

\*\*Because of motor losses and the variable types of commutation/drive electronics, stall currents and torques will not always be attainable

NOTE: See bulletin sheet EN-1000 for schematics and additional motor information