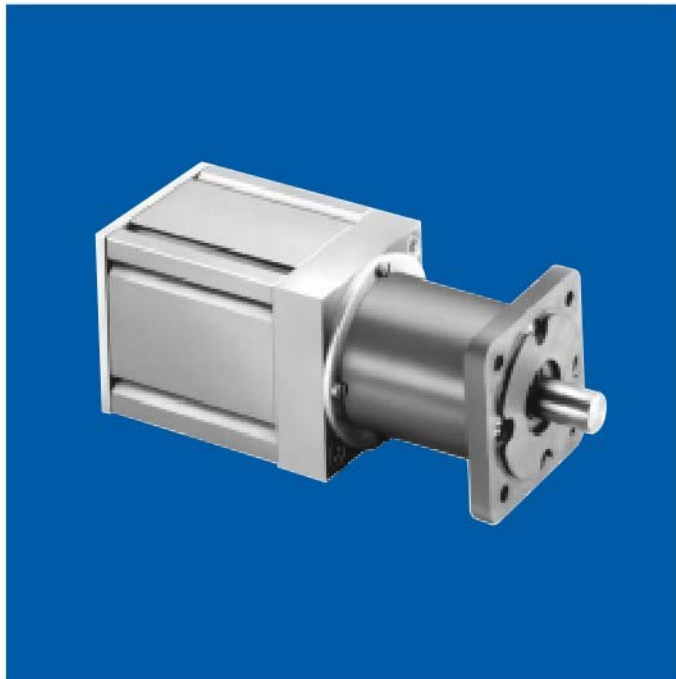


INB-15 WITH 1 1/4" GEAR TRAIN

Brushless DC Gearmotors



torque rating: Up to 1,250 oz. in.

weight: 14 to 20 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 nitrided 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 backlash is less than 3°

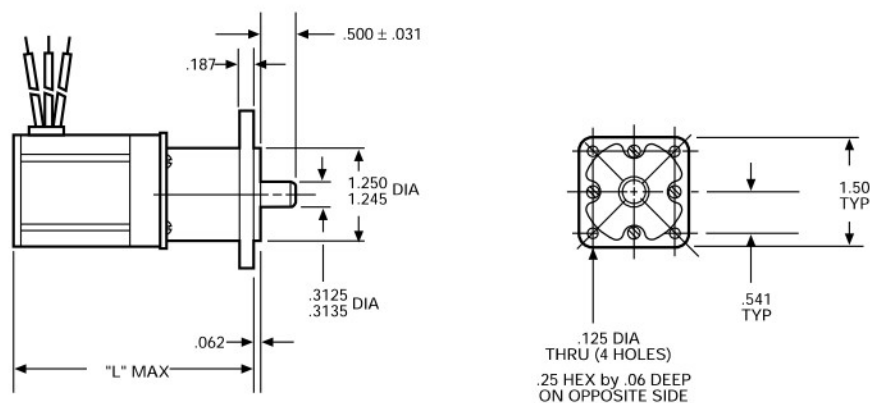
gear inertia: 1.2×10^{-6} oz. in. sec.² @ input max

bearings: Motor output shaft is supported by life-lubricated ball bearings; gear train output shaft is supported by life-lubricated sleeve bearing

cables/leads: 8 lead wires, 18" minimum

mounting flange: Die-cast zinc

Dimensions



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EN-2430

Standard Part Numbers and Data

| RATIO | TORQUE MULTIPLIER | MAX CONTINUOUS TORQUE (oz. in.) | "L" MAX (in.) | STANDARD PART NUMBER PREFIX* | |
|-------|-------------------|---------------------------------|---------------|------------------------------|---------|
| 4 | 3.0 | 13 | 3.367 | 511A100 | |
| 5 | 3.8 | 17 | | 511A101 | |
| 6 | 4.5 | 20 | | 511A102 | |
| 16 | 10.0 | 45 | 3.606 | 511A103 | |
| 20 | 13.0 | 58 | | 511A104 | |
| 24 | 15.0 | 68 | | 511A105 | |
| 25 | 16.0 | 72 | | 511A106 | |
| 30 | 19.0 | 86 | | 511A107 | |
| 36 | 23.0 | 102 | | 511A108 | |
| 64 | 33.0 | 115 | | 3.839 | 511A109 |
| 80 | 41.0 | 150 | | | 511A110 |
| 96 | 49.0 | 185 | 511A111 | | |
| 100 | 51.0 | 220 | 511A112 | | |
| 120 | 61.0 | 230 | 511A113 | | |
| 125 | 64.0 | 275 | 511A114 | | |
| 144 | 74.0 | 290 | 511A115 | | |
| 150 | 77.0 | 335 | 511A116 | | |
| 180 | 92.0 | 345 | 511A117 | | |
| 216 | 110.0 | 415 | 511A118 | | |
| 256 | 105.0 | 495 | 4.072 | | 511A119 |
| 320 | 130.0 | 475 | | | 511A120 |
| 384 | 157.0 | 585 | | | 511A121 |
| 400 | 164.0 | 705 | | | 511A122 |
| 480 | 197.0 | 740 | | | 511A123 |
| 500 | 205.0 | 885 | | | 511A124 |
| 576 | 235.0 | 925 | | | 511A125 |
| 600 | 246.0 | 1,050 | | | 511A126 |
| 625 | 256.0 | 1,110 | | 511A127 | |
| 720 | 295.0 | 1,150 | | 511A128 | |
| 750 | 306.0 | 1,250 | | 511A129 | |
| 864 | 352.0 | 1,250 | | 511A130 | |
| 900 | 370.0 | 1,250 | | 511A131 | |
| 1,024 | 334.0 | 1,250 | | 4.305 | 511A132 |
| 1,080 | 442.0 | 1,250 | | 4.072 | 511A133 |
| 1,280 | 416.0 | 1,250 | | 4.305 | 511A134 |
| 1,296 | 530.0 | 1,250 | | 4.072 | 511A135 |
| 1,536 | 500.0 | 1,250 | 4.305 | 511A136 | |
| 1,600 | 522.0 | 1,250 | | 511A137 | |
| 1,920 | 625.0 | 1,250 | | 511A138 | |
| 2,000 | 652.0 | 1,250 | | 511A139 | |
| 2,304 | 750.0 | 1,250 | | 511A140 | |
| 2,400 | 780.0 | 1,250 | | 511A141 | |

| RATIO | TORQUE MULTIPLIER | MAX CONTINUOUS TORQUE (oz. in.) | "L" MAX (in.) | STANDARD PART NUMBER PREFIX* |
|--------|-------------------|---------------------------------|---------------|------------------------------|
| 2,500 | 815.0 | 1,250 | 4.305 | 511A142 |
| 2,880 | 940.0 | 1,250 | | 511A143 |
| 3,000 | 980.0 | 1,250 | | 511A144 |
| 3,125 | 1,020 | 1,250 | | 511A145 |
| 3,456 | 1,130 | 1,250 | | 511A146 |
| 3,600 | 1,170 | 1,250 | | 511A147 |
| 3,750 | 1,220 | 1,250 | | 511A148 |
| 4,096 | 1,070 | 1,250 | | 4.538 |
| 4,320 | 1,410 | 1,250 | 4.305 | 511A150 |
| 4,500 | 1,470 | 1,250 | | 511A151 |
| 5,120 | 1,340 | 1,250 | 4.538 | 511A152 |
| 5,184 | 1,690 | 1,250 | 4.305 | 511A153 |
| 5,400 | 1,760 | 1,250 | | 511A154 |
| 6,144 | 1,610 | 1,250 | 4.538 | 511A155 |
| 6,400 | 1,680 | 1,250 | | 511A156 |
| 6,480 | 2,110 | 1,250 | 4.305 | 511A157 |
| 7,680 | 2,010 | 1,250 | 4.538 | 511A158 |
| 7,776 | 2,530 | 1,250 | 4.305 | 511A159 |
| 8,000 | 2,100 | 1,250 | | 511A160 |
| 9,216 | 2,390 | 1,250 | 4.538 | 511A161 |
| 9,600 | 2,520 | 1,250 | | 511A162 |
| 10,000 | 2,620 | 1,250 | | 511A163 |
| 11,520 | 3,010 | 1,250 | | 511A164 |
| 12,000 | 3,140 | 1,250 | | 511A165 |
| 12,500 | 3,280 | 1,250 | | 511A166 |
| 13,824 | 3,620 | 1,250 | | 511A167 |
| 14,400 | 3,780 | 1,250 | | 511A168 |
| 15,000 | 3,940 | 1,250 | | 511A169 |
| 15,625 | 4,100 | 1,250 | | 511A170 |
| 17,280 | 4,520 | 1,250 | | 511A171 |
| 18,000 | 4,710 | 1,250 | | 511A172 |
| 18,750 | 4,910 | 1,250 | | 511A173 |
| 20,736 | 5,430 | 1,250 | | 511A174 |
| 21,600 | 5,660 | 1,250 | | 511A175 |
| 22,500 | 5,900 | 1,250 | | 511A176 |
| 25,920 | 6,790 | 1,250 | | 511A177 |
| 27,000 | 7,070 | 1,250 | 511A178 | |
| 31,104 | 8,150 | 1,250 | 511A179 | |
| 32,400 | 8,500 | 1,250 | 511A180 | |
| 38,880 | 10,200 | 1,250 | 511A181 | |
| 46,656 | 12,200 | 1,250 | 511A182 | |

Maximum continuous rated torque values are based upon motor temperature rise considerations. Starting or impact loads greater than 10 times the rated maximum continuous torque (1,500 oz. in. maximum) could result in gear or shaft damage

Winding Characteristics (alternate windings available)

| VOLTAGE (VDC) | SPEED no load (rpm) | TORQUE | | CURRENT | | | CONSTANTS | | STANDARD PART NUMBERS* |
|---------------|---------------------|---------------------|--------------------------------|--------------------|-----------------------|-----------------------------|------------------------------|----------|------------------------|
| | | max rated (oz. in.) | ** theoretical stall (oz. in.) | max no load (amps) | max rated load (amps) | ** theoretical stall (amps) | K _T (oz. in./amp) | R (ohms) | |
| 27 | 10,500 | 12.50 | 74.00 | .35 | 3.9 | 22.00 | 3.36 | 1.23 | 509A100-1 |
| 27 | 7,500 | 13.25 | 60.00 | .30 | 2.9 | 13.00 | 4.59 | 2.13 | 509A100-2 |

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

NOTE: Alternate windings (voltage, speed) are available

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