



## How To Order

Use the specifications on pages I-7 through I-14 to choose the right gearmotor for your application.

Example	Description
<i>G23PI-B23-0030</i>	<i>Size 23, Performance Planetary Inline, 3:1, mounted to B23 brushless servo motor</i>

1 Size	2 Type	3 IDC Motor		4 Gear Ratio		5 Options
<input type="text"/>	<input type="text"/>	—	<input type="text"/>	—	<input type="text"/>	<input type="text"/>
G17 G23 G34 G42	PI Performance Planetary In-Line PC Performance Planetary Right-Angle	<b>Step Motors</b> S12 S21 S22 S23 S32 S33 P21 P22 P31 P32 P33 P41 P42 K42	<b>Servo Motors</b> BN21 BN23 BN31 BN32 B12 B23 B23H B32 B33 B40 B41 B42	<b>0030</b> <b>0040</b> <b>0055</b> <b>0070</b> <b>0100</b> <b>0160</b> <b>0220</b> <b>0280</b> <b>0400</b> <b>0490</b> <b>0550</b> <b>0700</b> <b>1000</b> <b>1600</b> <b>2800</b> <b>4000</b> <b>7000</b>	3:1 4:1 5.5:1 7:1 10:1 16:1 22:1 28:1 40:1 49:1 55:1 70:1 100:1 160:1 280:1 400:1 700:1	<b>LB</b> Low Backlash  <b>V</b> Vertical  See the motor's How to Order page for additional options (G-1 or H-1).

### -V Vertical Option

The gearhead is filled with additional lubricant to prevent slumping to the bottom when operated in a vertical orientation. Only necessary when motor is mounted below gearhead.

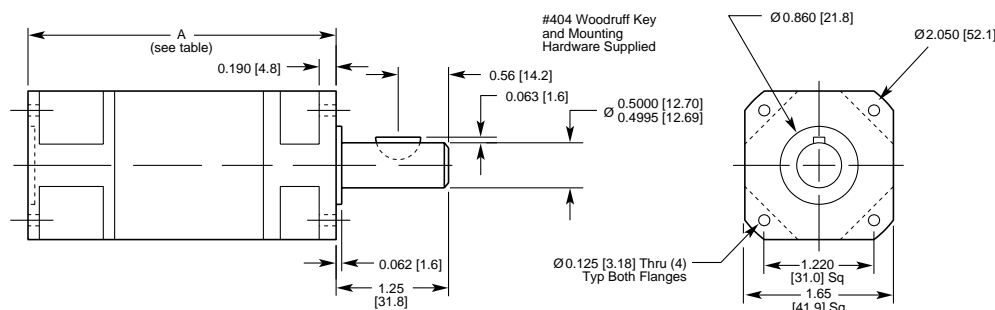
### Two Year Warranty

IDC warrants its Value Planetary gearheads to be free of defects in material and workmanship for a period of two years when operated within specified operating conditions.

**Note: All value planetary gearmotors come with the IDC motor and gearhead pre-assembled.**



**Dimensions** in [mm]



<b>Max Input Speed</b>	6,500 rpm
<b>Operating Temp</b>	-65°F to 350°F [-54° to 177°C]
<b>Pinion Inertia</b>	1.32 x 10 <sup>-4</sup> oz-in-sec <sup>2</sup> [9.32 x 10 <sup>-7</sup> kg-m <sup>2</sup> ] for NEMA 17 motor shaft. Clamp on pinion inertia varies with motor shaft diameter. Add to inertia in table below to get the total unloaded gearhead inertia reflected to the motor shaft.
<b>Shaft Loading</b>	
Axial max	400 lb [1,779 N]
Radial max	400 lb [1,779 N], 0.75" from gearhead face
<b>Construction</b>	
Flanges	6061-T6 aluminum, black anodized. NEMA standard front flange
Housing/Ring Gear	Hardened stainless (17-4 PH) steel
Gears	True planetary, precision-grade, high-strength steel, heat treated and case hardened, one-piece construction
Output Shaft	Heat treated stainless steel, precision, sealed, preloaded ball bearings
<b>Lubrication</b>	Extreme pressure rated, 100% synthetic grease
<b>Sealing</b>	Viton O-rings at all joints, washdown rated (NEMA 4, IP65)

**Specifications by Ratio**

Gear Ratio	Max Rated Cont Output Torque in-lb [N-m]	Max Rated Momentary Output Torque in-lb [N-m]	Inertia reflected to motor pinion oz-in-s <sup>2</sup> [kg-m <sup>2</sup> ]	Efficiency min (%)	Backlash Max arc-min Std/-LB	Length Dim A in [mm]	Weight lb [kg]
3	130 [14.7]	200 [22.6]	1.71 x 10 <sup>-4</sup> [1.21 x 10 <sup>-6</sup> ]	90	6/3	2.63 [66.8]	1.0 [0.45]
4	140 [15.7]	210 [23.5]	1.23 x 10 <sup>-4</sup> [8.69 x 10 <sup>-7</sup> ]	90	6/3	2.63 [66.8]	1.0 [0.45]
5.5	155 [17.4]	240 [26.9]	7.67 x 10 <sup>-5</sup> [5.42 x 10 <sup>-7</sup> ]	90	6/3	2.63 [66.8]	1.0 [0.45]
7	160 [17.9]	250 [28.0]	5.13 x 10 <sup>-5</sup> [3.62 x 10 <sup>-7</sup> ]	90	6/3	2.63 [66.8]	1.0 [0.45]
10	130 [14.7]	200 [22.6]	2.72 x 10 <sup>-5</sup> [1.92 x 10 <sup>-7</sup> ]	90	6/3	2.63 [66.8]	1.0 [0.45]
16	610 [68.3]	960 [107.5]	1.17 x 10 <sup>-4</sup> [8.26 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
22	750 [84.0]	1,175 [131.6]	1.13 x 10 <sup>-4</sup> [7.98 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
28	875 [98.0]	1,350 [151.2]	1.11 x 10 <sup>-4</sup> [7.84 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
40	775 [86.8]	1,200 [134.4]	2.45 x 10 <sup>-5</sup> [1.73 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
49	575 [65.0]	900 [101.7]	4.48 x 10 <sup>-5</sup> [3.16 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
55	665 [75.1]	1040 [117.5]	2.38 x 10 <sup>-5</sup> [1.68 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
70	600 [67.2]	925 [103.6]	2.35 x 10 <sup>-5</sup> [1.66 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
100	400 [44.8]	625 [70.0]	2.33 x 10 <sup>-5</sup> [1.65 x 10 <sup>-7</sup> ]	85	10/5	3.16 [80.3]	1.6 [0.73]
160	900 [100.8]	1150 [128.8]	1.03 x 10 <sup>-5</sup> [7.27 x 10 <sup>-8</sup> ]	78	14/7	3.77 [95.8]	2.2 [1]
280	1300 [145.6]	1680 [188.2]	9.44 x 10 <sup>-6</sup> [6.67 x 10 <sup>-8</sup> ]	78	14/7	3.77 [95.8]	2.2 [1]
400	1160 [129.9]	1500 [168.0]	9.21 x 10 <sup>-6</sup> [6.50 x 10 <sup>-8</sup> ]	78	14/7	3.77 [95.8]	2.2 [1]
700	900 [100.8]	1150 [128.8]	9.20 x 10 <sup>-6</sup> [6.50 x 10 <sup>-8</sup> ]	78	14/7	3.77 [95.8]	2.2 [1]

When used within specified ratings your IDC Performance Planetary gearhead is warranted for 2 years. See page I-6 for ordering and warranty information.