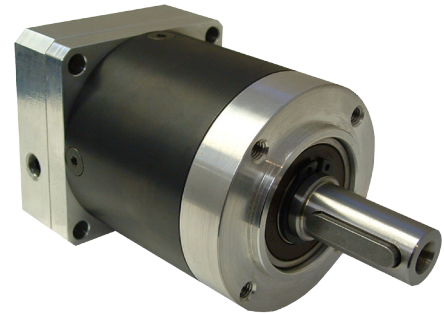


# GBPN-060 Series - Planetary Gearboxes



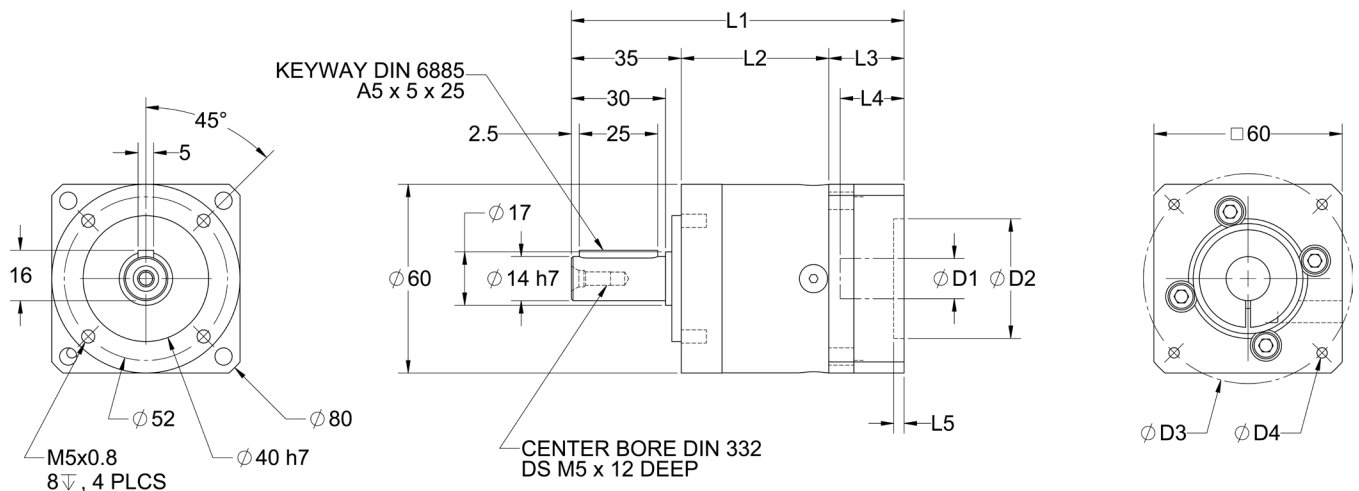
## FEATURES

- **Compatible with NEMA Size 23 Motors**
- **Backlash as Low as 15 arc-min**
- **Gear Ratios from 3:1 to 512:1**
- **Long Design Life, Over 30,000 Hours**
- **Up to 97% Efficiency**
- **Peak Input Speeds of Up to 13,000 RPM**
- **Lifetime Lubrication, High Durability**



## DESCRIPTION

Planetary Gearboxes for NEMA 23 Stepper motors, dc motors, or servo motors. The GBPN-060 Series Planetary Gears were designed to be high quality and reliable in-line planetary gears. They are available many sizes with gear ratios ranging from 3:1 to 512:1. These planetary gearboxes come in a one-piece housing that produce consistent low backlash with permissible peak input speeds up to 13,000 RPM.



## DIMENSIONS

ITEM	DESCRIPTION	MOTOR INTERFACE			
		AA231-250	BLK24-551	EMJ60-551	SMH60-551
D1	Input Shaft Diameter	6.35	14	14	14
L4	Max Shaft Length	23	30	30	30
D2	Pilot Diameter	38.1	50	50	50
L5	Pilot Depth	3.3	5	5	5
D3	Mounting Bolt Hole Circle	66.7	70	70	70
D4	Bolt Hole Size	M5X10	M5X12	M5X12	M5X12
L1	Overall Length (1-Stage)	106	113	113	113
L1	Overall Length (2-Stage)	118	125	125	125
L1	Overall Length (3-Stage)	131	138	138	138

Units in mm

**\*1-Stage Models:** Gear Ratios 3-8

**\*2-Stage Models:** Gear Ratios 9-40,64

**\*3-Stage Models:** Gear Ratios 60,8-512

Note: Custom gearboxes are available. If the above dimensions do not match your motor interface, please refer to the Gearbox Mounting Form below and provide information on the motor you would like this gearbox to be mounted to and send it to [applications@anaheimautomation.com](mailto:applications@anaheimautomation.com) or fax it to (714) 992-0471.

Model #	Gear Ratio	Compatible NEMA Frame Size	Rated Output Torque (in-lbs)	Peak Input Speed (RPM)	Backlash (arcmin)	Efficiency (%)	Running Noise (dB)	L2 Length (mm)	Weight (lbs)
GBPN-0601-003-xxxx-yyy	3	23	248	13000	<10	96	58	47	2.0
GBPN-0601-004-xxxx-yyy	4	23	336	13000	<10	96	58	47	2.0
GBPN-0601-005-xxxx-yyy	5	23	354	13000	<10	96	58	47	2.0
GBPN-0601-008-xxxx-yyy	8	23	159	13000	<10	96	58	47	2.0
GBPN-0602-009-xxxx-yyy	9	23	389	13000	<12	94	58	59	2.4
GBPN-0602-012-xxxx-yyy	12	23	389	13000	<12	94	58	59	2.4
GBPN-0602-015-xxxx-yyy	15	23	389	13000	<12	94	58	59	2.4
GBPN-0602-016-xxxx-yyy	16	23	389	13000	<12	94	58	59	2.4
GBPN-0602-020-xxxx-yyy	20	23	389	13000	<12	94	58	59	2.4
GBPN-0602-025-xxxx-yyy	25	23	354	13000	<12	94	58	59	2.4
GBPN-0602-032-xxxx-yyy	32	23	389	13000	<12	94	58	59	2.4
GBPN-0602-040-xxxx-yyy	40	23	354	13000	<12	94	58	59	2.4
GBPN-0602-064-xxxx-yyy	64	23	159	13000	<12	94	58	59	2.4
GBPN-0603-060-xxxx-yyy	60	23	389	13000	<15	90	58	72	2.9
GBPN-0603-080-xxxx-yyy	80	23	389	13000	<15	90	58	72	2.9
GBPN-0603-100-xxxx-yyy	100	23	389	13000	<15	90	58	72	2.9
GBPN-0603-110-xxxx-yyy	120	23	389	13000	<15	90	58	72	2.9
GBPN-0603-160-xxxx-yyy	160	23	389	13000	<15	90	58	72	2.9
GBPN-0603-200-xxxx-yyy	200	23	354	13000	<15	90	58	72	2.9
GBPN-0603-256-xxxx-yyy	256	23	389	13000	<15	90	58	72	2.9
GBPN-0603-320-xxxx-yyy	320	23	354	13000	<15	90	58	72	2.9
GBPN-0603-512-xxxx-yyy	512	23	159	13000	<15	90	58	72	2.9

Part numbers are based on the specifications of the motor being matched to the gearbox.

-xxxxx denotes motor pilot, -yyy denotes input shaft diameter.

For more information contact an Anaheim Automation Applications Engineer for assistance.

*Radial Load for 20,000 hr lifetime:	96 lbs-force (400N)	*Axial Load for 20,000 hr lifetime:	112 lbs-force (500N)
*Radial Load for 30,000 hr lifetime:	76 lbs-force (340N)	*Axial Load for 30,000 hr lifetime:	101 lbs-force (450N)
Operating Temperature:	-25° to 90°C	Running Noise:	58 dB
Torsional Stiffness:	1 Stage: 20 in-lb/arc-min; 2 and 3 Stage: 22 in-lb/arc-min	IP Rating:	IP54
Mounting Position:	Any	Lubrication:	Lifetime

\* Values reference output shaft speed  $n_2 = 100\text{RPM}$ , 100% duty cycle, application factor of 1, and  $T = 30^\circ\text{C}$  (86F) ambient temperature. Measured at the middle of the shaft.