



Planetary Gearboxes for NEMA Motors

SureGear® Planetary Gear Reducers for NEMA Motors – Overview

The SureGear PGCN series is a great gearbox (gear reducer) value for servo, stepper, and other motion control applications requiring a NEMA size input/output interface. It offers the best quality available for the price point.



Features

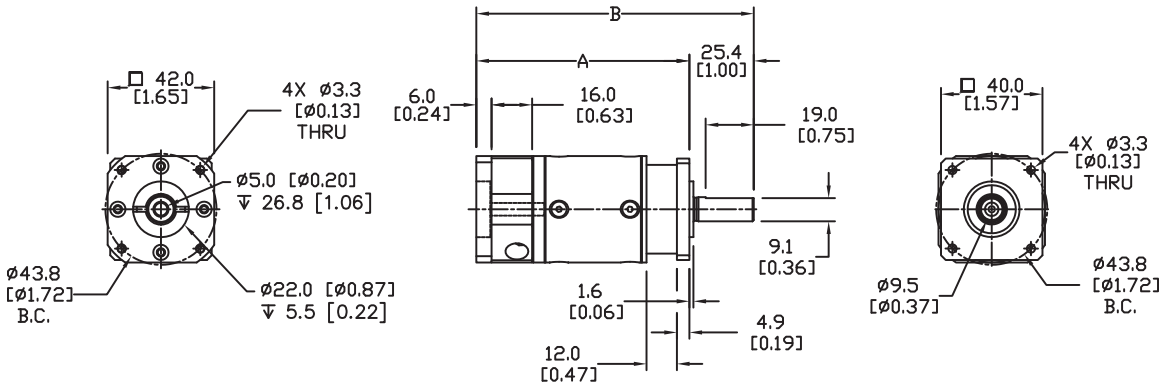
- Wide range of ratios (5, 10, 25, 50, and 100:1)
- Low backlash of 30 arc-min or less
- 20,000 hour service life
- Maintenance free; requires no additional lubrication
- NEMA sizes 17, 23, and 34
- Includes hardware for mounting to SureStep stepper motors
- Optional shaft bushings available for mounting to other motors

Applications

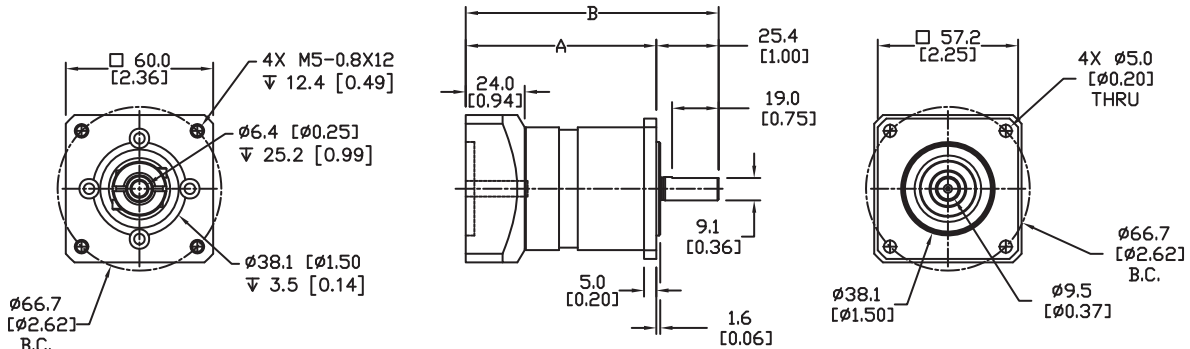
- Material handling
- Pick and place
- Automation
- Packaging
- Other motion control applications requiring a NEMA input/output

SureGear® NEMA Planetary Gearboxes														
Model-Specific Specifications														
Part Number	Price	Ratio	NEMA Frame Size	Nominal Output Torque (N·m [lb·in.])	Maximum Acceleration Torque (N·m [lb·in.])	Emergency Stop Torque (N·m [lb·in.])	Standard Output Backlash (arc-min)	Allowable Radial Load (N [lb])	Allowable Axial Load (N [lb])	Torsional Stiffness (N·m/arc-min [lb·in./arc-min.])	Mass Moment of Inertia (kg·cm ² [lb·in. ²])	Efficiency (%)	Approx Weight (kg [lb])	Fits SureStep Stepper Motor
PGCN17-055M	<-->	5:1	17	6.5 [58]	13 [115]	26 [230]	<25	361 [81]	298 [67]	0.8 [7.5]	0.0096 [0.003]	94	0.45 [1.0]	STP-MTR-170xx(D)
PGCN17-105M	<-->	10:1		5.0 [44]	10 [89]	20 [177]	<25			0.5 [4.4]	0.0078 [0.003]	94	0.45 [1.0]	
PGCN17-255M	<-->	25:1		16 [142]	20 [177]	32 [283]	<30			0.8 [7.5]	0.0096 [0.003]	92	0.55 [1.2]	
PGCN17-505M	<-->	50:1		16 [142]	20 [177]	32 [283]	<30			0.8 [7.5]	0.0078 [0.003]	92	0.55 [1.2]	
PGCN17-1005M	<-->	100:1		5.0 [44]	10 [89]	20 [177]	<30			0.5 [4.4]	0.0078 [0.003]	92	0.55 [1.2]	
PGCN23-0525	<-->	5:1	23	6.5 [58]	13 [115]	26 [230]	<20	476 [107]	425 [96]	0.9 [8.0]	0.04 [0.014]	94	0.45 [1.0]	STP-MTR(H)-230xx(D)
PGCN23-1025	<-->	10:1		5.0 [44]	10 [89]	20 [177]	<20			0.6 [5.3]		94	0.45 [1.0]	
PGCN23-2525	<-->	25:1		16 [142]	20 [177]	32 [283]	<25			0.9 [8.0]		92	0.55 [1.2]	
PGCN23-5025	<-->	50:1		16 [142]	20 [177]	32 [283]	<25			0.9 [8.0]		92	0.55 [1.2]	
PGCN23-10025	<-->	100:1		5.0 [44]	10 [89]	20 [177]	<25			0.6 [5.3]		92	0.55 [1.2]	
PGCN34-0550	<-->	5:1	34	26 [230]	44 [389]	84 [743]	<15	476 [107]	425 [96]	2.4 [21.2]	0.36 [0.123]	94	1.1 [2.4]	STP-MTR(H)-34xxx(D)
PGCN34-1050	<-->	10:1		16 [142]	24 [212]	62 [549]	<15			1.3 [11.5]	0.34 [0.116]	94	1.1 [2.4]	
PGCN34-2550	<-->	25:1		42 [372]	52 [460]	84 [743]	<20			2.4 [21.2]	0.36 [0.123]	92	1.4 [3.1]	
PGCN34-5050	<-->	50:1		42 [372]	52 [460]	84 [743]	<20			2.4 [21.2]	0.34 [0.116]	92	1.4 [3.1]	
PGCN34-10050	<-->	100:1		16 [142]	24 [212]	62 [549]	<20			1.3 [11.5]	0.34 [0.116]	92	1.4 [3.1]	
Specifications Applicable to All PGCN Gearboxes														
Nominal Speed (rpm)	3500													
Maximum Input Speed (rpm)	6000													
Mounting Orientation	can be mounted in any orientation													
Environmental Rating	IP64													
Operating Temperature	-20 to 90 °C [-4 to 194 °F]													
Lubrication	Mineral Grease EPO													
Service Life (hrs)	>20,000													
NOTE: SureGear PGCN gearboxes (gear reducers) are <u>not</u> designed for back driving.														

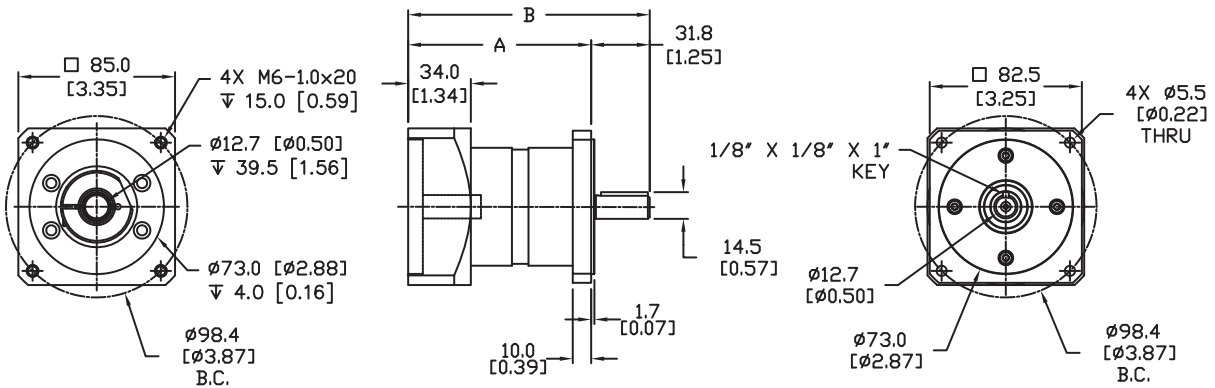
Dimensions (dimensions = mm [in])



PGCN17-xxxx SureGear Dimension Drawing



PGCN23-xxxx SureGear Dimension Drawing



PGCN34-xxxx SureGear Dimension Drawing

SureGear® NEMA Planetary Gearbox Dimensions (dimensions = mm [in])					
NEMA-17 Part Number	PGCN17-055M	PGCN17-105M	PGCN17-255M	PGCN17-505M	PGCN17-1005M
<i>dimension A</i>	84.0 [3.31]			99.8 [3.93]	
<i>dimension B</i>	109.4 [4.31]			125.2 [4.93]	
NEMA-23 Part Number	PGCN23-0525	PGCN23-1025	PGCN23-2525	PGCN23-5025	PGCN23-10025
<i>dimension A</i>	77.6 [3.06]			95.2 [3.75]	
<i>dimension B</i>	103.0 [4.06]			120.6 [4.75]	
NEMA-34 Part Number	PGCN34-0550	PGCN34-1050	PGCN34-2550	PGCN34-5050	PGCN34-10050
<i>dimension A</i>	99.3 [3.91]			121.3 [4.78]	
<i>dimension B</i>	131.1 [5.16]			153.0 [6.02]	

Accessories



Typical PGCN Accessory Bushings



Typical PGCN Accessory Screws

SureGear® NEMA Planetary Gearbox Accessories			
Part Number	Price	Description	Fits SureGear NEMA Planetary Gearbox
PGCN17-SK	<--->	Mounting screws, replacement, for SureGear NEMA size 17 gearboxes (Package of 4)	PGCN17-xxxx
PGCN17-BSH5M	<--->	Motor shaft bushing for SureGear NEMA size 17 gearboxes, fits 5mm diameter motor shaft	
PGCN17-BSH8M	<--->	Motor shaft bushing for SureGear NEMA size 17 gearboxes, fits 8mm diameter motor shaft	
PGCN17-BSH9M	<--->	Motor shaft bushing for SureGear NEMA size 17 gearboxes, fits 9mm diameter motor shaft	
PGCN17-BSH25	<--->	Motor shaft bushing for SureGear NEMA size 17 gearboxes, fits 1/4 inch diameter motor shaft	
PGCN23-SK	<--->	Mounting screws, replacement, for SureGear NEMA size 23 gearboxes (Package of 4)	PGCN23-xxxx
PGCN23-BSH8M	<--->	Motor shaft bushing for SureGear NEMA size 23 gearboxes, fits 8mm diameter motor shaft	
PGCN23-BSH9M	<--->	Motor shaft bushing for SureGear NEMA size 23 gearboxes, fits 9mm diameter motor shaft	
PGCN23-BSH25	<--->	Motor shaft bushing for SureGear NEMA size 23 gearboxes, fits 1/4 inch diameter motor shaft	
PGCN23-BSH37	<--->	Motor shaft bushing for SureGear NEMA size 23 gearboxes, fits 3/8 inch diameter motor shaft	
PGCN34-SK	<--->	Mounting screws, replacement, for SureGear NEMA size 34 gearboxes (Package of 4)	PGCN34-xxxx
PGCN34-BSH9M	<--->	Motor shaft bushing for SureGear NEMA size 34 gearboxes, fits 9mm diameter motor shaft	
PGCN34-BSH11M	<--->	Motor shaft bushing for SureGear NEMA size 34 gearboxes, fits 11mm diameter motor shaft	
PGCN34-BSH37	<--->	Motor shaft bushing for SureGear NEMA size 34 gearboxes, fits 3/8 inch diameter motor shaft	
PGCN34-BSH50	<--->	Motor shaft bushing for SureGear NEMA size 34 gearboxes, fits 1/2 inch diameter motor shaft	