

Precision Servo Gearboxes

SureGear® Servo Gearbox Overview

PGA In-line Series

The SureGear PGA series of high-precision servo gear reducers is an excellent choice for applications that require good accuracy and reliability at an exceptional value. This in-line planetary gear reducer has a thread-in mounting style, along with a level of precision and torque capacity that is best in its class. Offered in a concentric shaft design with a maximum seven arc-min backlash rating, the SureGear PGA series is an accurate, high-performance, and cost effective solution for any OEM.

The machining quality of the SureGear PGA helical planetary gears provides a very quiet and more efficient reducer than other competitive products that are similarly priced. The SureGear PGA series easily mates to SureServo motors, and is the perfect solution for applications such as gantries, injection-molding machines, pick-and-place automation, and linear slides.

PGB Right-angle Series

The SureGear PGB series of high-precision right-angle servo gear reducers is an excellent choice for applications that require a more compact footprint.

The PGB right-angle planetary gear reducers offer similar technical specifications to the PGA series in-line gear reducers, and provides the customer with an excellent solution when space and clearance requirements are limited.

Offered with a six arc-min backlash rating for 2-stage and nine arc-min backlash for 3-stage, the SureGear PGB series performs to OEMs' demanding expectations.

PGD Hub Style In-line Series

The SureGear PGD series sets a new standard in applications requiring extremely high-torque ratings and rigidity. The compact design and hub-style output is ideal for equipment that requires high-speed, high-precision indexing movement. The remarkable torsion stiffness and the low backlash of the planetary gearing combine to provide outstanding positioning accuracy.

With a backlash rating less than 3 arc-minutes and exceptional torque handling capabilities, the PGD series offers a high performance robust planetary solution for OEM customers. The PGD reducer is often used for larger indexing applications and dial tables commonly found in packaging and filling equipment and assembly automation systems.

Features

- Thread-in mounting style
- Best-in-class backlash
- Four gear ratios available (5:1, 10:1, 15:1, 25:1), Two additional for PGD models (35:1 and 50:1)
- Mounting hardware included for attaching to SureServo motors
- Helical-cut planetary gears for quiet operation and reduced vibration
- Right-angle reducer utilizes a spiral bevel gear; motor can be located at a 90° position from the reducer, providing a more compact footprint
- Uncaged needle roller bearings for high rigidity and torque
- Adapter bushing connection for simple and effective attachment to most servo motors
- High-viscosity, anti-separation grease does not migrate away from the gears; no leakage through the seal
- Maintenance free: No need to replace the grease for the life of the unit
- At nominal speed, service life is 20,000 hours
- Can be positioned in any orientation
- IP55 environmental rating
- 5-year warranty



**SureGear
PGA Gearbox**



SureGear PGB Gearbox



**SureGear
Hub Style PGD Gearbox**



**SureGear
2-Stage Cutaway View**

Applications

- Gantries
- Injection-molding machines
- Pick-and-place automation
- Linear slides
- Packaging machines
- Conveyors



Precision Servo Gearboxes

SureGear® Servo Gearbox Selection													
Servo Motor	Gear Ratio	SureGear Gearbox	Frame Size (mm)	Motor Nominal Output Torque		Combo Nominal Output Torque		Nominal Output Speed (rpm)	Max Output Speed (rpm)	Available Load Inertia @ 5:1 Mismatch *			
				N-m	lb-in	N-m	lb-in			kg-cm2	lb-in-s2		
SV2L-201(x) APMC-FAL01xxx	5:1	PGD047-05A1	47	0.32	2.83	1.52	13.44	600	1200.00	6.76	0.006		
		PGA050-05A1	50							6.94	0.006		
		PGA070-05A1	70							5.91	0.005		
		PGB070-05A1	70							1.59**	0.001**		
	10:1	PGD047-10A1	47			3.04	26.89			300	600.00	28.15	0.025
		PGA050-10A1	50									28.35	0.025
		PGA070-10A1	70									25.75	0.023
		PGB070-10A1	70									2.98	26.32
	15:1	PGA050-15A1	50			4.32	38.21	200	400.00	62.66	0.055		
		PGA070-15A1	70							58.16	0.051		
		PGB070-15A1	70							4.22	37.36	54.11	0.048
	25:1	PGD047-25A1	47			7.20	63.68			120	240.00	174.69	0.155
		PGA050-25A1	50									174.69	0.155
		PGA070-25A1	70									162.81	0.144
		PGB070-25A1	70					7.04	62.26			151.56	0.134
	50:1	PGD064-50A1	64			14.40	127.35	60	120.00	661.25	0.585		
SV2L-202(x)	5:1	PGD064-05A2	64	0.64	5.7	3.04	27.08	600	1200.00	28.75	0.025		
		PGA070-05A2	70							29.33	0.026		
		PGB070-05A2	70							2.98	26.51	25.00	0.022
	10:1	PGD064-10A2	64			6.08	54.15			300	600.00	118.80	0.105
		PGA070-10A2	70									119.40	0.106
		PGB070-10A2	70									5.95	53.01
	15:1	PGA070-15A2	70			8.64	76.95	200	400.00	268.88	0.238		
		PGB070-15A2	70							8.45	75.24	264.83	0.234
		PGB090-15A2	90							204.75	0.181		
	25:1	PGD064-25A2	64			14.40	128.25	120	240.00	747.50	0.662		
		PGA070-25A2	70							748.13	0.662		
		PGB070-25A2	70							14.08	125.40	736.88	0.652
		PGB090-25A2	90							581.25	0.514		
		PGD090-25A2	90							14.40	128.25	700.00	0.620
	50:1	PGD090-50A2	90			28.80	256.50	60	120.00	2875.00	2.544		
		PGD110-50A2	110							2125.00	1.881		
SV2L-204(x)	5:1	PGD064-05A2	64	1.27	11.2	6.03	53.20	600	1200.00	53.75	0.048		
		PGA070-05A2	70							54.33	0.048		
		PGB070-05A2	70							5.91	52.08	50.00	0.044
	10:1	PGD064-10A2	64			12.07	106.40			300	600.00	218.80	0.194
		PGA070-10A2	70									219.40	0.194
		PGB070-10A2	70									11.81	104.16
	15:1	PGA070-15A2	70			17.15	151.20	200	400.00	493.88	0.437		
		PGB070-15A2	70							16.76	147.84	489.83	0.433
		PGB090-15A2	90							429.75	0.380		
	25:1	PGD064-25A2	64			28.58	252.00	120	240.00	1372.50	1.215		
		PGA070-25A2	70							1373.13	1.215		
		PGB070-25A2	70							27.94	246.40	1361.88	1.205
		PGB090-25A2	90							1206.25	1.068		
	50:1	PGD090-25A2	90			28.58	252.00	120	240.00	1325.00	1.173		
		PGD090-50A2	90							57.15	504.00	60	120.00
		PGD110-50A2	110										

* Available load inertia is calculated based on servo motor inertia using the formula: Available Inertia = (5 x Motor Inertia – Gearbox Inertia) x (Gear Ratio)2 A 5:1 inertia mismatch is a good target for design purposes. Systems with lower or higher mismatch may be possible, depending on operating conditions.

** This gearbox is NOT a suitable choice at a 5:1 mismatch. If inertia balancing is a selection criteria for your end use, please use a mismatch of 8:1 to 10:1.



Precision Servo Gearboxes

SureGear® Servo Gearbox Selection											
Servo Motor	Gear Ratio	SureGear Gearbox	Frame Size (mm)	Motor Nominal Output Torque		Combo Nominal Output Torque		Nominal Output Speed (rpm)	Max Output Speed (rpm)	Available Load Inertia @ 5:1 Mismatch *	
				N-m	lb-in	N-m	lb-in			kg-cm2	lb-in-s2
SV2L-207(x)	5:1	PGA070-05A3	70	2.39	21.2	11.35	100.70	600	1200.00	186.83	0.165
		PGB090-05A3	90			11.11	98.58			143.75	0.127
		PGD090-05A3	90			11.35	100.70			174.25	0.154
	10:1	PGA090-10A3	90			22.71	201.40	300	600.00	726.00	0.643
		PGB090-10A3	90			22.23	197.16			586.00	0.519
		PGD090-10A3	90			22.71	201.40			722.00	0.639
	15:1	PGA090-15A3	90			32.27	286.20	200	400.00	1669.50	1.478
		PGB090-15A3	90			31.55	279.84			1622.25	1.436
		PGD110-25A3	110			53.78	477.00			4643.75	4.110
	25:1	PGB090-25A3	90			52.58	466.40	120	240.00	4518.75	3.999
		PGD110-25A3	110			53.78	477.00			4281.25	3.789
		PGD110-50A3	110			107.55	954.00			17875.00	15.819
SV2L-210(x)	5:1	PGA090-05A4	90	3.18	28.15	15.11	133.69	600	1000.00	321.25	0.284
		PGB090-05A4	90			14.79	130.88			286.25	0.253
		PGD090-05A4	90			15.11	133.69			319.25	0.283
	10:1	PGA090-10A4	90			30.21	267.38	300	500.00	1296.00	1.147
		PGB090-10A4	90			29.57	261.75			1156.00	1.023
		PGD090-10A4	90			30.21	267.38			1292.00	1.143
	15:1	PGA120-15A4	120			42.93	379.96	200	333.33	2884.50	2.553
		PGB120-15A4	120			41.98	371.52			2475.00	2.190
		PGD110-25A4	110			71.55	633.27			7843.75	6.942
	25:1	PGA120-25A4	120			69.96	619.20	120	200.00	8043.75	7.119
		PGB120-25A4	120			69.96	619.20			6918.75	6.123
		PGD110-50A4	110			143.10	1266.54			32125.00	28.431
SV2M-210(x)	5:1	PGA090-05A5	90	4.77	42.22	22.66	200.54	400.00	600.00	1041.25	0.922
		PGD090-05A5	90			22.18	196.31			1039.25	0.920
		PGB120-05A5	120			22.18	196.31			925.75	0.819
	10:1	PGA090-10A5	90			45.32	401.07	200.00	300.00	4176.00	3.696
		PGD110-10A5	110			44.36	392.63			4172.00	3.692
		PGB120-10A5	120			44.36	392.63			3759.00	3.327
	15:1	PGA120-15A5	120			64.40	569.94	133.33	200.00	9364.50	8.288
		PGB120-15A5	120			62.96	557.28			8955.00	7.925
		PGD110-25A5	110			107.33	949.91			25843.75	22.872
	25:1	PGA120-25A5	120			104.94	928.80	80.00	120.00	26043.75	23.049
		PGB120-25A5	120			104.94	928.80			24918.75	22.053
		PGD110-35A5	110			150.26	1329.87			50653.75	44.829

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Servo Motor	Gear Ratio	SureGear Gearbox	Frame Size (mm)	Motor Nominal Output Torque		Combo Nominal Output Torque		Nominal Output Speed (rpm)	Max Output Speed (rpm)	Available Load Inertia @ 5:1 Mismatch *	
				N-m	lb-in	N-m	lb-in			kg-cm2	lb-in-s2
SV2M-215(x)	5:1	PGA090-05A5	90	7.16	63.37	34.01	301.01	400.00	600.00	1390.00	1.230
		PGD090-05A5	90							1388.00	1.228
		PGB120-05A5	120							1274.50	1.128
	10:1	PGA090-10A5	90			68.02	602.03	200.00	300.00	5571.00	4.930
		PGD110-10A5	110							5567.00	4.927
		PGB120-10A5	120							5154.00	4.561
	15:1	PGA120-15A5	120			96.66	855.51	133.33	200.00	12503.25	11.065
		PGB120-15A5	120							12093.75	10.703
		PGD110-25A5	110							34562.50	30.588
	25:1	PGA120-25A5	120			161.10	1425.86	80.00	120.00	34762.50	30.765
		PGB120-25A5	120							33637.50	29.769
		PGD110-35A5	110							225.54	1996.20
SV2M-220(x)	5:1	PGD110-05A6	110	9.55	84.52	45.36	401.49	400.00	600.00	4280.00	3.788
		PGA120-05A6	120							4297.50	3.803
		PGB120-05A6	120							4212.00	3.728
		PGB155-05A6	155							3914.75	3.465
	10:1	PGD110-10A6	110			90.73	802.98	200.00	300.00	17240.00	15.257
		PGA120-10A6	120							17255.00	15.271
		PGB120-10A6	120							16904.00	14.960
		PGB155-10A6	155							15884.00	14.057
	15:1	PGA155-15A6	155			128.93	1141.08	133.33	200.00	38745.00	34.289
		PGB155-15A6	155							126.06	1115.73
	25:1	PGA155-25A6	155			214.88	1901.80	80.00	120.00	107750.00	95.359
		PGB155-25A6	155							210.10	1859.54
SV2M-230(x)	5:1	PGD110-05A6	110	17.55	155.33	83.36	737.80	340.00	600.00	6817.50	6.033
		PGA120-05A6	120							6835.00	6.049
		PGB120-05A6	120							6749.50	5.973
		PGB155-05A6	155							6452.25	5.710
	10:1	PGD110-10A6	110			166.73	1475.68	170.00	300.00	27390.00	24.240
		PGA120-10A6	120							27405.00	24.253
		PGB120-10A6	120							27054.00	23.943
		PGB155-10A6	155							26034.00	23.040
	15:1	PGA155-15A6	155			236.93	2097.01	113.33	200.00	61582.50	54.501
		PGB155-15A6	155							231.66	2050.36
	25:1	PGA155-25A6	155			394.88	3494.98	68.00	120.00	171187.50	151.501
		PGB155-25A6	155							386.10	3417.27

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Precision Servo Gearboxes

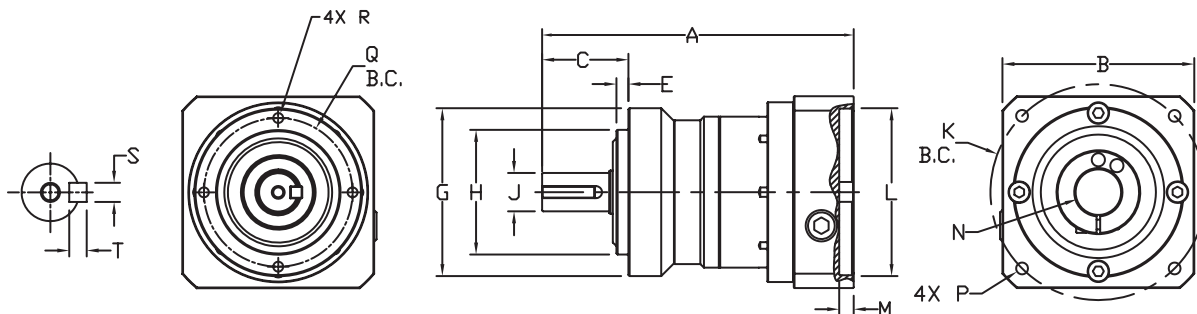
Pricing & Specifications – In-Line Shaft PGA Series

SureGear® Precision Servo Gearboxes – In-Line Shaft PGA Series																		
Part Number	Price	Frame Size (mm)	Ratio	Reduction	Nominal Output Torque (N·m [lb-in])	Max. Acceleration Torque (N·m [lb-in])	Emergency Stop Torque (N·m [lb-in])	Backlash (arc-min)	Nominal Input Speed (rpm)	Max. Input Speed (rpm)	Allowable Radial Load (N [lb])	Allowable Thrust Load (N [lb])	Moment of Inertia (kg·cm ²)	Efficiency (%)	Max. Housing Temperature	Approx Weight (kg [lb])	Environmental Rating	Fits SureServo Servo Motor (SV & SV2)
PGA050-05A1	\$465.00	50	5:1	single	9 [80]	18 [159]	35 [310]	5	4000	8000	290 [65]	330 [74]	0.036	95	90 °C [194 °F]	0.7 [1.5]	IP55	SV(2)L-201(B)
PGA050-10A1	\$490.00		10:1	single	6 [53]	12 [106]	30 [266]				360 [81]	450 [101]	0.030					
PGA050-15A1	\$672.00		15:1	double	6 [53]	12 [106]	30 [266]				410 [92]	540 [121]	0.035					
PGA050-25A1	\$672.00		25:1	double	9 [80]	18 [159]	35 [310]				490 [110]	640 [144]	0.034					
PGA070-05A1	\$465.00	70	5:1	single	27 [239]	50 [443]	100 [885]	5	3000	6000	510 [115]	390 [88]	0.077	95	90 °C [194 °F]	1.5 [3.3]	IP55	SV(2)L-201(B)
PGA070-10A1	\$490.00		10:1	single	18 [159]	35 [310]	80 [708]				640 [144]	530 [119]	0.056					
PGA070-15A1	\$672.00		15:1	double	18 [159]	35 [310]	80 [708]				740 [166]	630 [142]	0.055					
PGA070-25A1	\$672.00		25:1	double	27 [239]	50 [443]	100 [885]				870 [196]	790 [178]	0.053					
PGA070-05A2	\$508.00	70	5:1	single	27 [239]	50 [443]	100 [885]	5	3000	6000	510 [115]	390 [88]	0.160	95	90 °C [194 °F]	1.5 [3.3]	IP55	SV(2)L-202(B)
PGA070-10A2	\$508.00		10:1	single	18 [159]	35 [310]	80 [708]				640 [144]	530 [119]	0.140					SV(2)L-204(B)
PGA070-15A2	\$696.00		15:1	double	18 [159]	35 [310]	80 [708]				740 [166]	630 [142]	0.140					
PGA070-25A2	\$696.00		25:1	double	27 [239]	50 [443]	100 [885]				870 [196]	790 [178]	0.130					
PGA070-05A3	\$508.00	70	5:1	single	27 [239]	50 [443]	100 [885]	5	3000	6000	510 [115]	390 [88]	0.360	95	90 °C [194 °F]	1.5 [3.3]	IP55	SV(2)L-207(B)
PGA090-10A3	\$601.00		10:1	single	50 [443]	80 [708]	200 [1770]				1200 [270]	1600 [360]	0.750					3.5 [7.7]
PGA090-15A3	\$794.00		15:1	double	50 [443]	80 [708]	200 [1770]				1400 [315]	1900 [427]	0.720					4.0 [8.8]
PGA090-25A3	\$794.00		25:1	double	75 [664]	125 [1106]	250 [2213]				1600 [360]	2200 [495]	0.710					
PGA090-05A4	\$600.00	90	5:1	single	75 [664]	125 [1106]	250 [2213]	5	3000	6000	960 [216]	1200 [270]	2.900	95	90 °C [194 °F]	3.5 [7.7]	IP55	SV(2)L-210(B)
PGA090-10A4	\$600.00		10:1	single	50 [443]	80 [708]	200 [1770]				1200 [270]	1600 [360]	2.800					3.5 [7.7]
PGA090-05A5	\$600.00		5:1	single	75 [664]	125 [1106]	250 [2213]				960 [216]	1200 [270]	2.900					3.5 [7.7]
PGA090-10A5	\$600.00		10:1	single	50 [443]	80 [708]	200 [1770]				1200 [270]	1600 [360]	2.800					
PGA120-15A4	\$997.00	120	15:1	double	120 [1062]	225 [1991]	500 [4425]	5	2000	4000	2300 [517]	3000 [674]	2.800	90	8.7 [19.2]	IP55	SV(2)L-210(B)	
PGA120-25A4	\$997.00		25:1	double	180 [1593]	330 [2921]	625 [5532]				2700 [607]	3700 [832]	2.800					
PGA120-15A5	\$997.00		15:1	double	120 [1062]	225 [1991]	500 [4425]				2300 [517]	3000 [674]	2.800					
PGA120-25A5	\$997.00		25:1	double	180 [1593]	330 [2921]	625 [5532]				2700 [607]	3700 [832]	2.800					
PGA120-05A6	\$795.00	120	5:1	single	180 [1593]	330 [2921]	625 [5532]	5	2000	4000	1600 [360]	1900 [427]	11.000	95	7.8 [17.2]	IP55	SV(2)M-220(B)	
PGA120-10A6	\$795.00		10:1	single	120 [1062]	225 [1991]	500 [4425]				2000 [450]	2500 [562]	11.000				SV(2)M-230(B)	
PGA155-10A6	\$982.00		10:1	single	240 [2124]	470 [4160]	1000 [8851]				4700 [1057]	4100 [922]	11.000					
PGA155-15A6	\$1,336.00		15:1	double	240 [2124]	470 [4160]	1000 [8851]				5400 [1214]	4900 [1102]	11.000					
PGA155-25A6	\$1,336.00	155	25:1	double	360 [3186]	700 [6196]	1250 [11063]	5	2000	4000	6400 [1439]	6100 [1371]	11.000	90	18 [40.0]	IP55	SV(2)M-220(B)	



Precision Servo Gearboxes

Dimensions – In-Line Shaft PGA Series



SureGear PGA Series In-Line Shaft Gearboxes Dimension Drawing

SureGear® Precision Servo Gearbox Dimensions – In-Line Shaft PGA Series (dimensions = mm [in])

Part Number	A	B	C	E	G	H	J	K	L	M	N	P	Q	R	S	T
PGA050-05A1	88.5	42.0	24.5	4.0	Ø50.0	Ø35.0	Ø12.0	Ø46.0	Ø30.0	5.0	Ø8.0	M4-	Ø44.0	M4-	4.0	4.0
PGA050-10A1	[3.48]	[1.65]	[0.96]	[0.16]	[Ø1.97]	[Ø1.38]	[Ø0.47]	[Ø1.81]	[Ø1.18]	[0.20]	[Ø0.31]	0.7x9	[Ø1.73]	0.7x8	[0.16]	[0.16]
PGA050-15A1	105.0	42.0	24.5	4.0	Ø50.0	Ø35.0	Ø12.0	Ø46.0	Ø30.0	5.0	Ø8.0	M4-	Ø44.0	M4-	4.0	4.0
PGA050-25A1	[4.13]	[1.65]	[0.96]	[0.16]	[Ø1.97]	[Ø1.38]	[Ø0.47]	[Ø1.81]	[Ø1.18]	[0.20]	[Ø0.31]	0.7x9	[Ø1.73]	0.7x8	[0.16]	[0.16]
PGA070-05A1	112.0	52.0	36.0	5.0	Ø70.0	Ø52.0	Ø16.0	Ø46.0	Ø30.0	5.0	Ø8.0	M4-	Ø62.0	M5-	5.0	5.0
PGA070-10A1	[4.41]	[2.05]	[1.42]	[0.20]	[Ø2.76]	[Ø2.05]	[Ø0.63]	[Ø1.81]	[Ø1.18]	[0.20]	[Ø0.31]	0.7x9	[Ø2.44]	0.8x10	[0.20]	[0.20]
PGA070-05A2	115.0	65.0	36.0	5.0	Ø70.0	Ø52.0	Ø16.0	Ø70.0	Ø50.0	5.0	Ø14.0	M5-	Ø62.0	M5-	5.0	5.0
PGA070-10A2	[4.53]	[2.56]	[1.42]	[0.20]	[Ø2.76]	[Ø2.05]	[Ø0.63]	[Ø2.76]	[Ø1.97]	[0.20]	[Ø0.55]	0.8x11	[Ø2.44]	0.8x10	[0.20]	[0.20]
PGA070-05A3	130.0	80.0	36.0	5.0	Ø70.0	Ø52.0	Ø16.0	Ø90.0	Ø70.0	6.0	Ø19.0	M6-	Ø62.0	M5-	5.0	5.0
PGA070-15A1	[5.12]	[3.15]	[1.42]	[0.20]	[Ø2.76]	[Ø2.05]	[Ø0.63]	[Ø3.54]	[Ø2.76]	[0.24]	[Ø0.75]	1.0x13	[Ø2.44]	0.8x10	[0.20]	[0.20]
PGA070-15A2	131.0	52.0	36.0	5.0	Ø70.0	Ø52.0	Ø16.0	Ø46.0	Ø30.0	5.0	Ø8.0	M4-	Ø62.0	M5-	5.0	5.0
PGA070-25A1	[5.16]	[2.05]	[1.42]	[0.20]	[Ø2.76]	[Ø2.05]	[Ø0.63]	[Ø1.81]	[Ø1.18]	[0.20]	[Ø0.31]	0.7x9	[Ø2.44]	0.8x10	[0.20]	[0.20]
PGA070-15A2	136.0	65.0	36.0	5.0	Ø70.0	Ø52.0	Ø16.0	Ø70.0	Ø50.0	5.0	Ø14.0	M5-	Ø62.0	M5-	5.0	5.0
PGA070-25A2	[5.35]	[2.56]	[1.42]	[0.20]	[Ø2.76]	[Ø2.05]	[Ø0.63]	[Ø2.76]	[Ø1.97]	[0.20]	[Ø0.55]	0.8x11	[Ø2.44]	0.8x10	[0.20]	[0.20]
PGA090-10A3	153.0	80.0	46.0	7.0	Ø90.0	Ø68.0	Ø22.0	Ø90.0	Ø70.0	6.0	Ø19.0	M6-	Ø80.0	M6-	6.0	6.0
PGA090-05A4	[6.02]	[3.15]	[1.81]	[0.28]	[Ø3.54]	[Ø2.68]	[Ø0.87]	[Ø3.54]	[Ø2.76]	[0.24]	[Ø0.75]	1.0x13	[Ø3.15]	1.0x12	[0.24]	[0.24]
PGA090-10A4	170.0	100.0	46.0	7.0	Ø90.0	Ø68.0	Ø22.0	Ø115.0	Ø95.0	8.0	Ø22.0 *	M8-	Ø80.0	M6-	6.0	6.0
PGA090-10A4	[6.69]	[3.94]	[1.81]	[0.28]	[Ø3.54]	[Ø2.68]	[Ø0.87]	[Ø4.53]	[Ø3.74]	[0.31]	[Ø0.87]	1.25x17	[Ø3.15]	1.0x12	[0.24]	[0.24]
PGA090-05A5	165.0	130.0	46.0	7.0	Ø90.0	Ø68.0	Ø22.0	Ø145.0	Ø110.0	8.0	Ø22.0 *	M8-	Ø80.0	M6-	6.0	6.0
PGA090-10A5	[6.50]	[5.12]	[1.81]	[0.28]	[Ø3.54]	[Ø2.68]	[Ø0.87]	[Ø5.71]	[Ø4.33]	[0.31]	[Ø0.87]	1.25x17	[Ø3.15]	1.0x12	[0.24]	[0.24]
PGA090-15A3	175.0	80.0	46.0	7.0	Ø90.0	Ø68.0	Ø22.0	Ø90.0	Ø70.0	6.0	Ø19.0	M6-	Ø80.0	M6-	6.0	6.0
PGA090-25A3	[6.89]	[3.15]	[1.81]	[0.28]	[Ø3.54]	[Ø2.68]	[Ø0.87]	[Ø3.54]	[Ø2.76]	[0.24]	[Ø0.75]	1.0x13	[Ø3.15]	1.0x12	[0.24]	[0.24]
PGA120-05A6	225.0	180.0	70.0	9.0	Ø120.0	Ø90.0	Ø32.0	Ø200.0	Ø114.0	8.0	Ø35.0 *	M12-	Ø108.0	M8-	10.0	8.0
PGA120-10A6	[8.86]	[7.09]	[2.76]	[0.35]	[Ø4.72]	[Ø3.54]	[Ø1.26]	[Ø7.87]	[Ø4.49]	[0.31]	[Ø1.38]	1.75x25	[Ø4.25]	1.25x16	[0.39]	[0.31]
PGA120-15A4	231.5	100.0	70.0	9.0	Ø120.0	Ø90.0	Ø32.0	Ø115.0	Ø95.0	8.0	Ø22.0 *	M8-	Ø108.0	M8-	10.0	8.0
PGA120-25A4	[9.11]	[3.94]	[2.76]	[0.35]	[Ø4.72]	[Ø3.54]	[Ø1.26]	[Ø4.53]	[Ø3.74]	[0.31]	[Ø0.87]	1.25x17	[Ø4.25]	1.25x16	[0.39]	[0.31]
PGA120-15A5	231.5	130.0	70.0	9.0	Ø120.0	Ø90.0	Ø32.0	Ø145.0	Ø110.0	8.0	Ø22.0 *	M8-	Ø108.0	M8-	10.0	8.0
PGA120-25A5	[9.11]	[5.12]	[2.76]	[0.35]	[Ø4.72]	[Ø3.54]	[Ø1.26]	[Ø5.71]	[Ø4.33]	[0.31]	[Ø0.87]	1.25x17	[Ø4.25]	1.25x16	[0.39]	[0.31]
PGA155-10A6	264.0	180.0	97.0	12.0	Ø155.0	Ø120.0	Ø40.0	Ø200.0	Ø114.0	8.0	Ø35.0 *	M12-	Ø140.0	M10-	12.0	8.0
PGA155-10A6	[10.39]	[7.09]	[3.82]	[0.47]	[Ø6.10]	[Ø4.72]	[Ø1.57]	[Ø7.87]	[Ø4.49]	[0.31]	[Ø1.38]	1.75x25	[Ø5.51]	1.50x28	[0.47]	[0.31]
PGA155-15A6	298.5	180.0	97.0	12.0	Ø155.0	Ø120.0	Ø40.0	Ø200.0	Ø114.0	8.0	Ø35.0 *	M12-	Ø140.0	M10-	12.0	8.0
PGA155-25A6	[11.75]	[7.09]	[3.82]	[0.47]	[Ø6.10]	[Ø4.72]	[Ø1.57]	[Ø7.87]	[Ø4.49]	[0.31]	[Ø1.38]	1.75x25	[Ø5.51]	1.50x28	[0.47]	[0.31]

* Dimension with supplied bushing

NOTE: See our website: www.AutomationDirect.com for complete engineering drawings.



Precision Servo Gearboxes

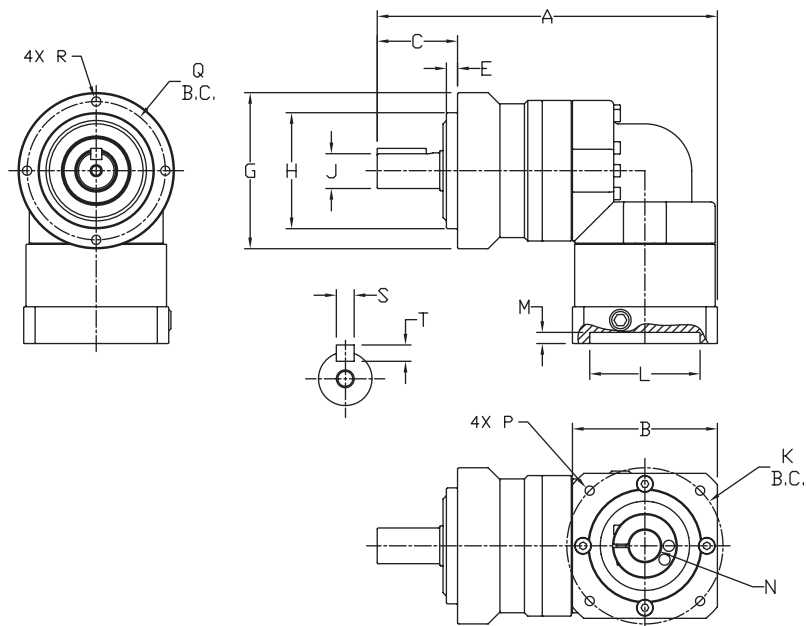
Pricing & Specifications – Right-Angle Shaft PGB Series

SureGear® Precision Servo Gearboxes – Right-Angle Shaft PGB Series																		
Part Number	Price	Frame Size (mm)	Ratio	Reduction	Nominal Output Torque (N·m [lb-in])	Max. Acceleration Torque (N·m [lb-in])	Emergency Stop Torque (N·m [lb-in])	Backlash (arc-min)	Nominal Input Speed (rpm)	Max. Input Speed (rpm)	Allowable Radial Load (N [lb])	Allowable Thrust Load (N [lb])	Moment of Inertia (kg-cm ²)	Efficiency (%)	Max. Housing Temperature	Approx Weight (kg [lb])	Environmental Rating	Fits SureServo Servo Motor (SV & SV2)
PGB070-05A1	\$788.00	70	5:1	double	22 [195]	40 [354]	80 [708]	6	3000	6000	510 [115]	390 [88]	0.250	90 °C [194 °F]	1.9 [4.2]	IP55	SV(2)L-201(B)	
PGB070-10A1	\$788.00		10:1	double	16 [142]	32 [283]	65 [575]				9	640 [144]	530 [119]					0.230
PGB070-15A1	\$997.00		15:1	triple	16 [142]	32 [283]	65 [575]	6				740 [166]	630 [142]					0.073
PGB070-25A1	\$997.00		25:1	triple	24 [212]	45 [398]	90 [797]				9	870 [196]	790 [178]					0.071
PGB070-05A2	\$788.00		5:1	double	22 [195]	40 [354]	80 [708]	6				510 [115]	390 [88]					0.320
PGB070-10A2	\$788.00		10:1	double	16 [142]	32 [283]	65 [575]				9	640 [144]	530 [119]					0.300
PGB070-15A2	\$997.00		15:1	triple	16 [142]	32 [283]	65 [575]	6				740 [166]	630 [142]					0.118
PGB070-25A2	\$997.00		25:1	triple	24 [212]	45 [398]	90 [797]				9	870 [196]	790 [178]					0.115
PGB090-15A2	\$1,217.00	90	15:1	triple	45 [398]	65 [575]	170 [1505]	9	1400 [314]	1900 [427]		0.410	90 °C [194 °F]	4.3 [9.5]	IP55	SV(2)L-202(B) SV(2)L-204(B)		
PGB090-25A2	\$1,217.00		25:1	triple	65 [575]	110 [974]	220 [1947]		6	1600 [360]	2200 [495]	0.400						
PGB090-05A3	\$932.00		5:1	double	65 [575]	90 [797]	220 [1947]	9		960 [216]	1200 [270]	2.130						
PGB090-10A3	\$932.00		10:1	double	45 [398]	65 [575]	170 [1505]		6	1200 [270]	1600 [360]	2.020						
PGB090-15A3	\$1,217.00		15:1	triple	45 [398]	65 [575]	170 [1505]	9		1400 [314]	1900 [427]	0.600						
PGB090-25A3	\$1,217.00		25:1	triple	65 [575]	110 [974]	220 [1947]		6	1600 [360]	2200 [495]	0.590						
PGB090-05A4	\$932.00		5:1	double	65 [575]	90 [797]	220 [1947]	9		960 [216]	1200 [270]	4.260						
PGB090-10A4	\$932.00		10:1	double	45 [398]	65 [575]	170 [1505]		6	1200 [270]	1600 [360]	4.150						
PGB120-15A4	\$1,512.00	120	15:1	triple	110 [974]	200 [1770]	450 [3983]	9		2300 [517]	3000 [674]	4.700	90 °C [194 °F]	10 [22]	IP55	SV(2)L-210(B)		
PGB120-25A4	\$1,512.00		25:1	triple	150 [1328]	300 [2655]	550 [4868]		6	2700 [607]	3700 [832]	4.640						
PGB120-05A5	\$1,217.00		5:1	double	120 [1062]	240 [2124]	500 [4425]	9		1600 [360]	1900 [427]	6.610						
PGB120-10A5	\$1,217.00		10:1	double	110 [974]	200 [1770]	450 [3983]		6	2000 [450]	2500 [562]	6.050						
PGB120-15A5	\$1,512.00		15:1	triple	110 [974]	200 [1770]	450 [3983]	9		2300 [517]	3000 [674]	4.700						
PGB120-25A5	\$1,512.00		25:1	triple	150 [1328]	300 [2655]	550 [4868]		6	2700 [607]	3700 [832]	4.640						
PGB120-05A6	\$1,217.00		5:1	double	120 [1062]	240 [2124]	500 [4425]	9		1600 [360]	1900 [427]	13.690						
PGB120-10A6	\$1,217.00		10:1	double	110 [974]	200 [1770]	450 [3983]		6	2000 [450]	2500 [562]	13.120						
PGB155-15A6	\$1,770.00	155	15:1	triple	200 [1770]	400 [3540]	750 [6638]	9		5400 [1214]	4900 [1102]	15.070	90 °C [194 °F]	20.4 [45.0]	IP55	SV(2)M-220(B)		
PGB155-25A6	\$1,770.00		25:1	triple	300 [2655]	600 [5310]	1100 [9736]		6	6400 [1439]	6100 [1371]	14.820						
PGB155-05A6	\$1,401.00		5:1	double	200 [1770]	400 [3540]	1100 [9736]	9		3800 [854]	3000 [674]	21.280						
PGB155-10A6	\$1,401.00		10:1	double	200 [1770]	400 [3540]	750 [6638]		6	4700 [1057]	4100 [922]	19.030						



Precision Servo Gearboxes

Dimensions – Right-Angle Shaft PGB Series



SureGear PGB Series Right-Angle Shaft Gearboxes Dimension Drawing

SureGear® Precision Servo Gearbox Dimensions – Right-Angle Shaft PGA Series (dimensions = mm [in])																
Part Number	A	B	C	E	G	H	J	K	L	M	N	P	Q	R	S	T
PGB070-05A1	151.5 [5.96]	52.0 [2.05]	36.0 [1.42]	5.0 [0.20]	Ø70.0 [Ø2.76]	Ø52.0 [Ø2.05]	Ø16.0 [Ø0.63]	Ø46.0 [Ø1.81]	Ø30.0 [Ø1.18]	5.0 [0.20]	Ø8.0 [Ø0.31]	M4-0.7x9	Ø62.0 [Ø2.44]	M5-0.8x10	5.0 [0.20]	5.0 [0.20]
PGB070-10A1		65.0 [2.56]						Ø70.0 [Ø2.76]	Ø50.0 [Ø1.97]		Ø14.0 [Ø0.55]	M5-0.8x11				
PGB070-05A2	158.0 [6.22]	52.0 [2.05]	36.0 [1.42]	5.0 [0.20]	Ø70.0 [Ø2.76]	Ø52.0 [Ø2.05]	Ø16.0 [Ø0.63]	Ø46.0 [Ø1.81]	Ø30.0 [Ø1.18]	5.0 [0.20]	Ø8.0 [Ø0.31]	M4-0.7x9	Ø62.0 [Ø2.44]	M5-0.8x10	5.0 [0.20]	5.0 [0.20]
PGB070-10A2		65.0 [2.56]						Ø70.0 [Ø2.76]	Ø50.0 [Ø1.97]		Ø14.0 [Ø0.55]	M5-0.8x11				
PGB070-15A1	163.5 [6.44]	52.0 [2.05]	36.0 [1.42]	5.0 [0.20]	Ø70.0 [Ø2.76]	Ø52.0 [Ø2.05]	Ø16.0 [Ø0.63]	Ø46.0 [Ø1.81]	Ø30.0 [Ø1.18]	5.0 [0.20]	Ø8.0 [Ø0.31]	M4-0.7x9	Ø62.0 [Ø2.44]	M5-0.8x10	5.0 [0.20]	5.0 [0.20]
PGB070-25A1		65.0 [2.56]						Ø70.0 [Ø2.76]	Ø50.0 [Ø1.97]		Ø14.0 [Ø0.55]	M5-0.8x11				
PGB070-15A2	204.5 [8.05]	65.0 [2.56]	36.0 [1.42]	5.0 [0.20]	Ø70.0 [Ø2.76]	Ø52.0 [Ø2.05]	Ø16.0 [Ø0.63]	Ø70.0 [Ø2.76]	Ø50.0 [Ø1.97]	6.0 [0.24]	Ø19.0 [Ø0.75]	M6-1.0x13	Ø80.0 [Ø3.15]	M6-1.0x12	6.0 [0.24]	6.0 [0.24]
PGB070-25A2		80.0 [3.15]						Ø90.0 [Ø3.54]	Ø68.0 [Ø2.68]		Ø22.0 [Ø0.87]	Ø90.0 [Ø3.54]				
PGB090-15A2	205.5 [8.09]	80.0 [3.15]	36.0 [1.42]	7.0 [0.28]	Ø90.0 [Ø3.54]	Ø68.0 [Ø2.68]	Ø22.0 [Ø0.87]	Ø90.0 [Ø3.54]	Ø70.0 [Ø2.76]	6.0 [0.24]	Ø19.0 [Ø0.75]	M6-1.0x13	Ø80.0 [Ø3.15]	M6-1.0x12	6.0 [0.24]	6.0 [0.24]
PGB090-25A2		100.0 [3.94]						Ø115.0 [Ø4.53]	Ø95.0 [Ø3.74]		Ø19.0 [Ø0.75]	M6-1.0x13				
PGB090-05A3	210.5 [8.29]	80.0 [3.15]	36.0 [1.42]	7.0 [0.28]	Ø90.0 [Ø3.54]	Ø68.0 [Ø2.68]	Ø22.0 [Ø0.87]	Ø90.0 [Ø3.54]	Ø70.0 [Ø2.76]	8.0 [0.31]	Ø22.0 * [Ø0.87]	M8-1.25x17	Ø108.0 [Ø4.25]	M8-1.25x16	10.0 [0.39]	8.0 [0.31]
PGB090-10A3		100.0 [3.94]						Ø115.0 [Ø4.53]	Ø95.0 [Ø3.74]		Ø22.0 * [Ø0.87]	M8-1.25x17				
PGB090-15A3	210.5 [8.29]	80.0 [3.15]	36.0 [1.42]	7.0 [0.28]	Ø90.0 [Ø3.54]	Ø68.0 [Ø2.68]	Ø22.0 [Ø0.87]	Ø90.0 [Ø3.54]	Ø70.0 [Ø2.76]	8.0 [0.31]	Ø22.0 * [Ø0.87]	M8-1.25x17	Ø108.0 [Ø4.25]	M8-1.25x16	10.0 [0.39]	8.0 [0.31]
PGB090-25A3		100.0 [3.94]						Ø115.0 [Ø4.53]	Ø95.0 [Ø3.74]		Ø22.0 * [Ø0.87]	M8-1.25x17				
PGB090-05A4	226.0 [8.90]	80.0 [3.15]	36.0 [1.42]	7.0 [0.28]	Ø90.0 [Ø3.54]	Ø68.0 [Ø2.68]	Ø22.0 [Ø0.87]	Ø90.0 [Ø3.54]	Ø70.0 [Ø2.76]	8.0 [0.31]	Ø22.0 * [Ø0.87]	M8-1.25x17	Ø108.0 [Ø4.25]	M8-1.25x16	10.0 [0.39]	8.0 [0.31]
PGB090-10A4		100.0 [3.94]						Ø115.0 [Ø4.53]	Ø95.0 [Ø3.74]		Ø22.0 * [Ø0.87]	M8-1.25x17				
PGB120-15A4	272.0 [10.71]	130.0 [5.12]	36.0 [1.42]	9.0 [0.35]	Ø120.0 [Ø4.72]	Ø90.0 [Ø3.54]	Ø32.0 [Ø1.26]	Ø145.0 [Ø5.71]	Ø110.0 [Ø4.33]	8.0 [0.31]	Ø35.0 * [Ø1.38]	M12-1.75x25	Ø140.0 [Ø5.51]	M10-1.5x20	12.0 [0.47]	8.0 [0.31]
PGB120-25A4		180.0 [7.09]						Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]		Ø35.0 * [Ø1.38]	M12-1.75x25				
PGB120-05A5	272.0 [10.71]	130.0 [5.12]	36.0 [1.42]	9.0 [0.35]	Ø120.0 [Ø4.72]	Ø90.0 [Ø3.54]	Ø32.0 [Ø1.26]	Ø145.0 [Ø5.71]	Ø110.0 [Ø4.33]	8.0 [0.31]	Ø35.0 * [Ø1.38]	M12-1.75x25	Ø140.0 [Ø5.51]	M10-1.5x20	12.0 [0.47]	8.0 [0.31]
PGB120-10A5		180.0 [7.09]						Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]		Ø35.0 * [Ø1.38]	M12-1.75x25				
PGB120-15A5	268.5 [10.57]	130.0 [5.12]	36.0 [1.42]	9.0 [0.35]	Ø120.0 [Ø4.72]	Ø90.0 [Ø3.54]	Ø32.0 [Ø1.26]	Ø145.0 [Ø5.71]	Ø110.0 [Ø4.33]	8.0 [0.31]	Ø35.0 * [Ø1.38]	M12-1.75x25	Ø140.0 [Ø5.51]	M10-1.5x20	12.0 [0.47]	8.0 [0.31]
PGB120-25A5		180.0 [7.09]						Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]		Ø35.0 * [Ø1.38]	M12-1.75x25				
PGB120-05A6	341.0 [13.43]	180.0 [7.09]	36.0 [1.42]	12.0 [0.47]	Ø155.0 [Ø6.10]	Ø120.0 [Ø4.72]	Ø40.0 [Ø1.57]	Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]	8.0 [0.31]	Ø35.0 * [Ø1.38]	M12-1.75x25	Ø140.0 [Ø5.51]	M10-1.5x20	12.0 [0.47]	8.0 [0.31]
PGB120-10A6		180.0 [7.09]						Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]		Ø35.0 * [Ø1.38]	M12-1.75x25				
PGB155-05A6	364.0 [14.33]	180.0 [7.09]	36.0 [1.42]	12.0 [0.47]	Ø155.0 [Ø6.10]	Ø120.0 [Ø4.72]	Ø40.0 [Ø1.57]	Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]	8.0 [0.31]	Ø35.0 * [Ø1.38]	M12-1.75x25	Ø140.0 [Ø5.51]	M10-1.5x20	12.0 [0.47]	8.0 [0.31]
PGB155-10A6		180.0 [7.09]						Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]		Ø35.0 * [Ø1.38]	M12-1.75x25				
PGB155-15A6	364.0 [14.33]	180.0 [7.09]	36.0 [1.42]	12.0 [0.47]	Ø155.0 [Ø6.10]	Ø120.0 [Ø4.72]	Ø40.0 [Ø1.57]	Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]	8.0 [0.31]	Ø35.0 * [Ø1.38]	M12-1.75x25	Ø140.0 [Ø5.51]	M10-1.5x20	12.0 [0.47]	8.0 [0.31]
PGB155-25A6		180.0 [7.09]						Ø200.0 [Ø7.87]	Ø114.0 [Ø4.50]		Ø35.0 * [Ø1.38]	M12-1.75x25				

* Dimension with supplied bushing

NOTE: See our website: www.AutomationDirect.com for complete engineering drawings.



Precision Servo Gearboxes

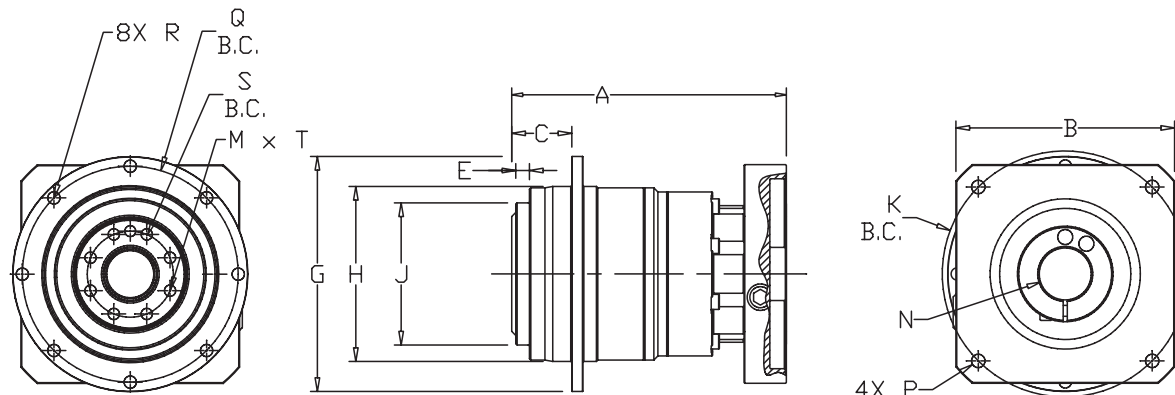
Pricing & Specifications – Hub Style In-Line PGD Series

SureGear® Precision Servo Gearboxes – Hub Style In-Line PGD Series																		
Part Number	Price	Frame Size (mm)	Ratio	Reduction	Nominal Output Torque (N·m [lb-in])	Max. Acceleration Torque (N·m [lb-in])	Emergency Stop Torque (N·m [lb-in])	Backlash (arc-min)	Nominal Input Speed (rpm)	Max. Input Speed (rpm)	Allowable Radial Load (N [lb])	Allowable Thrust Load (N [lb])	Moment of Inertia (kg-cm ²)	Efficiency (%)	Max. Housing Temperature	Approx Weight (kg [lb])	Ingress Protection (IP) Rating	Fits SureServo Servo Motor
PGD047-05A1	\$843.00	47	5:1	single	9 [80]	18 [159]	35 [310]	≤ 3	4000	8000	300 [67]	330 [74]	0.043	95		0.7 [1.5]		SV(2)L-201(B)
PGD047-10A1	\$843.00		10:1	single	6 [53]	12 [106]	30 [266]				370 [83]	450 [101]	0.032					
PGD047-25A1	\$1,056.00		25:1	double	9 [80]	18 [159]	35 [310]				510 [115]	550 [124]	0.034					
PGD064-50A1	\$1,277.00	64	50:1	double	27 [239]	50 [443]	100 [885]				850 [191]	750 [169]	0.049	90		1.6 [3.5]		SV(2)L-202(B) SV(2)L-204(B)
PGD064-05A2	\$1,090.00		5:1	single	27 [239]	50 [443]	100 [885]				400 [90]	390 [88]	0.1					
PGD064-10A2	\$1,090.00		10:1	single	18 [159]	35 [310]	80 [708]				500 [112]	530 [119]	0.062					
PGD064-25A2	\$1,277.00		25:1	double	27 [239]	50 [443]	100 [885]				680 [153]	750 [169]	0.054	90		1.6 [3.5]		
PGD090-25A2	\$1,464.00	90	25:1	double	75 [664]	125 [1106]	250 [2213]				1300 [292]	1400 [315]	0.130	90		4 [8.8]		SV(2)L-207(B)
PGD090-50A2	\$1,464.00		50:1	double	75 [664]	125 [1106]	250 [2213]				1700 [382]	1700 [382]	0.099					
PGD090-05A3	\$1,277.00		5:1	single	75 [664]	125 [1106]	250 [2213]				780 [175]	680 [153]	0.580					
PGD090-10A3	\$1,277.00		10:1	single	50 [443]	80 [708]	200 [1770]				980 [220]	920 [207]	0.330	95		3.6 [7.9]		
PGD090-05A4	\$1,277.00		5:1	single	75 [664]	125 [1106]	250 [2213]				780 [175]	680 [153]	0.580	95	90 °C [194 °F]	3.6 [7.9]	IP54	SV(2)L-210(B)
PGD090-10A4	\$1,277.00	10:1	single	50 [443]	80 [708]	200 [1770]	980 [220]	920 [207]	0.330									
PGD090-05A5	\$1,277.00	5:1	single	75 [664]	125 [1106]	250 [2213]	780 [175]	680 [153]	0.580									
PGD110-50A2	\$1,868.00	110	50:1	double	180 [1593]	330 [2921]	625 [5532]	≤ 3	3000	6000	10000 [2248]	6800 [1529]	0.400	90		8.6 [19]		SV(2)L-202(B) SV(2)L-204(B)
PGD110-25A3	\$1,868.00		25:1	double	180 [1593]	330 [2921]	625 [5532]				8200 [1843]	5500 [1236]	0.700					
PGD110-50A3	\$1,868.00		50:1	double	180 [1593]	330 [2921]	625 [5532]				10000 [2248]	6800 [1529]	0.400					
PGD110-25A4	\$1,868.00		25:1	double	180 [1593]	330 [2921]	625 [5532]				8200 [1843]	5500 [1236]	0.700	90		8.6 [19]		SV(2)L-207(B)
PGD110-50A4	\$1,868.00		50:1	double	180 [1593]	330 [2921]	625 [5532]				10000 [2248]	6800 [1529]	0.400	90		8.6 [19]		SV(2)L-210(B)
PGD110-10A5	\$1,588.00		10:1	single	120 [1062]	225 [1991]	500 [4425]				6200 [1394]	4200 [944]	1.100	95		7.8 [17.2]		SV(2)L-210(B)
PGD110-25A5	\$1,868.00		25:1	double	180 [1593]	330 [2921]	625 [5532]				8200 [1843]	5500 [1236]	0.700	90		8.6 [19]		SV(2)M-210(B)
PGD110-35A5	\$1,868.00		35:1	double	180 [1593]	330 [2921]	625 [5532]				9000 [2023]	6100 [1371]	0.700	90		8.6 [19]		SV(2)L-210(B)
PGD110-05A6	\$1,588.00		5:1	single	180 [1593]	330 [2921]	625 [5532]				5000 [1124]	3400 [427]	2.300	95		7.8 [17.2]		SV(2)M-220(B) SV(2)M-230(B)
PGD110-10A6	\$1,588.00		10:1	single	120 [1062]	225 [1991]	500 [4425]				6200 [1394]	4200 [944]	1.100	95		7.8 [17.2]		



Precision Servo Gearboxes

Dimensions – Hub Style In-Line PGD Series



SureGear PGD Series Hub Style In-Line Gearboxes Dimension Drawing

SureGear® Precision Servo Gearbox Dimensions – Hub Style In-Line PGD Series (dimensions = mm [in])																
	Part Number	A*	B*	C	E	G	H	J	K	M	N**	P	Q	R	S	T
1	PGD047-05A1 PGD047-10A1	66.5 [2.62]	42.0 [1.65]	19.5 [0.7677]	3.0 [0.1181]	Ø72.0 [Ø2.83]	Ø47.0 [Ø1.85]	Ø28.0 [Ø1.102]	Ø46.0 [Ø1.811]	4	Ø8.0 [Ø0.31]	M4-0.7x9	Ø67.0 [Ø2.6378]	3.4 [0.13]	Ø20.0 [Ø0.7874]	M3-0.5x6.5
2	PGD047-25A1															
2	PGD064-50A1	98.0 [3.86]	52.0 [2.05]	19.5 [0.7677]	3.0 [0.1181]	Ø86.0 [Ø3.385]	Ø64.0 [Ø2.52]	Ø40.0 [Ø1.575]	Ø70.0 [Ø2.756]	8	Ø8.0 [Ø0.31]	M5-0.8x11	Ø79.0 [Ø3.11]	4.5 [0.18]	Ø31.5 [Ø1.24]	M5-0.8x10
1	PGD064-05A2 PGD064-10A2	82.0 [3.228]														
2	PGD064-25A2	103.0 [4.055]	65.0 [2.56]	19.5 [0.7677]	3.0 [0.1181]	Ø86.0 [Ø3.385]	Ø64.0 [Ø2.52]	Ø40.0 [Ø1.575]	Ø70.0 [Ø2.756]	8	Ø14.0 [Ø0.55]	M5-0.8x11	Ø79.0 [Ø3.11]	4.5 [0.18]	Ø31.5 [Ø1.24]	M5-0.8x10
1	PGD064-05A2 PGD064-10A2	82.0 [3.228]														
2	PGD090-25A2 PGD090-50A2	122.0 [4.803]		30.0 [1.1811]	6.0 [0.236]	Ø118.0 [Ø4.65]	Ø90.0 [Ø3.54]	Ø63.0 [Ø2.48]	Ø90.0 [Ø3.543]	8	Ø14.0 [Ø0.55]	M6-1.0x13	Ø109.0 [Ø4.30]	5.5 [0.22]	Ø50.0 [Ø1.9685]	M6-1.0x12
1	PGD090-05A3 PGD090-10A3	110.0 [4.33]	80.0 [3.15]													
1	PGD090-05A4 PGD090-10A4	127.0 [5.0]	100.0 [3.94]	30.0 [1.1811]	6.0 [0.236]	Ø118.0 [Ø4.65]	Ø90.0 [Ø3.54]	Ø63.0 [Ø2.48]	Ø115.0 ±0.2 [Ø4.528]	8	Ø28.0 [Ø1.102]	M8-1.25x17	Ø109.0 [Ø4.30]	5.5 [0.22]	Ø50.0 [Ø1.9685]	M6-1.0x12
1	PGD090-05A5		130.0 [5.12]													
2	PGD110-50A2	159.5 [6.28]	65.0 [2.56]	29.0 [1.142]	6.0 [0.236]	Ø145.0 [Ø5.70]	Ø110.0 [Ø4.33]	Ø80.0 [Ø3.15]	Ø70.0 [Ø2.756]	15	Ø14.0 [Ø0.55]	M5-0.8x11	Ø135.0 [Ø5.315]	5.5 [0.22]	Ø63.0 [Ø2.48]	M6-1.0x12
2	PGD110-25A3 PGD110-50A3	169.5 [6.673]	80.0 [3.15]													
2	PGD110-25A4 PGD110-50A4	186.5 [7.3425]	100.0 [3.94]	29.0 [1.142]	6.0 [0.236]	Ø145.0 [Ø5.70]	Ø110.0 [Ø4.33]	Ø80.0 [Ø3.15]	Ø115.0 ±0.2 [Ø4.528]	15	Ø28.0 [Ø1.102]	M8-1.25x17	Ø135.0 [Ø5.315]	5.5 [0.22]	Ø63.0 [Ø2.48]	M6-1.0x12
1	PGD110-10A5	159.0 [6.26]														
2	PGD110-25A5 PGD110-35A5	186.5 [7.3425]	130.0 [5.12]	29.0 [1.142]	6.0 [0.236]	Ø145.0 [Ø5.70]	Ø110.0 [Ø4.33]	Ø80.0 [Ø3.15]	Ø200.0 ±0.2 [Ø7.874]	15	Ø38.0 [Ø1.45]	M12-1.75x25	Ø135.0 [Ø5.315]	5.5 [0.22]	Ø63.0 [Ø2.48]	M6-1.0x12
1	PGD110-05A6 PGD110-10A6	180.0 [7.087]	180.0 [7.087]													

* Length will vary depending on motor

** Bushing will be inserted to adapt to motor shaft

NOTE: See our website: www.AutomationDirect.com for complete engineering drawings.



Precision Servo Gearboxes

SureGear® Servo Gearbox Replacement Parts



SureGear® Precision Servo Gearboxes – Replacement Parts		
Part Number	Price	Description
<u>PG050-KEY</u>	\$4.50	Output Shaft Key, replacement, 4 x 4 x 14 mm, for SureGear PGA050 series gearboxes.
<u>PG070-KEY</u>	\$4.50	Output Shaft Key, replacement, 5 x 5 x 22 mm, for SureGear PGA070 and PGB070 series gearboxes.
<u>PG090-KEY</u>	\$4.50	Output Shaft Key, replacement, 6 x 6 x 28 mm, for SureGear PGA090 and PGB090 series gearboxes.
<u>PG120-KEY</u>	\$4.50	Output Shaft Key, replacement, 10 x 8 x 45 mm, for SureGear PGA120 and PGB120 series gearboxes.
<u>PG155-KEY</u>	\$4.50	Output Shaft Key, replacement, 12 x 8 x 65 mm, for SureGear PGA155 and PGB155 series gearboxes.
<u>PGA4-A5-BUSH</u>	\$22.50	Input Shaft Bushing, replacement, 28 x 22 x 30.5 mm, for all SureGear gearboxes using SV(2)L-210(B) and SV(2)M-210(B) SureServo motors.
<u>PGA6-BUSH</u>	\$22.50	Input Shaft Bushing, replacement, 38 x 35 x 36 mm, for all SureGear gearboxes using SV(2)M-220(B) and SV(2)M-230(B) SureServo motors.