



Precision Servo Gearboxes

SureGear® Servo Gearbox Selection														
SureServoMotor (SV and SV2)	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)	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			1.49	13.16			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			2.98	26.32			25.75	0.023			
		PGB070-10A1	70							8.35**	0.007**			
	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							7.04	62.26		162.81	0.144
		PGB070-25A1	70										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							5.95	53.01		119.40	0.106
		PGB070-10A2	70										102.00	0.090
	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							11.81	104.16		219.40	0.194
		PGB070-10A2	70										202.00	0.179
	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			
		PGD090-25A2	90							28.58	252.00		1325.00	1.173
	50:1	PGD090-50A2	90			57.15	504.00	60	120.00	5375.00	4.757			
		PGD110-50A2	110							4625.00	4.093			

* 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.



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SureGear® Servo Gearbox Selection											
Sure 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
		PGA090-25A3	90			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	60	120.00	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	60	100.00	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	57.14	85.71	50653.75	44.829

* 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.



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SureGear® Servo Gearbox Selection											
Sure 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			33.29	294.68			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			66.59	589.35			5154.00	4.561
	15:1	PGA120-15A5	120			96.66	855.51	133.33	200.00	12503.25	11.065
		PGB120-15A5	120			94.51	836.50			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			157.52	1394.17			33637.50	29.769
		PGD110-35A5	110			225.54	1996.20			57.14	85.71
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			44.41	393.04			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			88.82	786.08			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			37597.50	33.274
	25:1	PGA155-25A6	155			214.88	1901.80	80.00	120.00	107750.00	95.359
		PGB155-25A6	155			210.10	1859.54			104593.75	92.565
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			81.61	722.31			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			163.22	1444.62			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			60435.00	53.485
	25:1	PGA155-25A6	155			394.88	3494.98	68.00	120.00	171187.50	151.501
		PGB155-25A6	155			386.10	3417.27			168031.25	148.708

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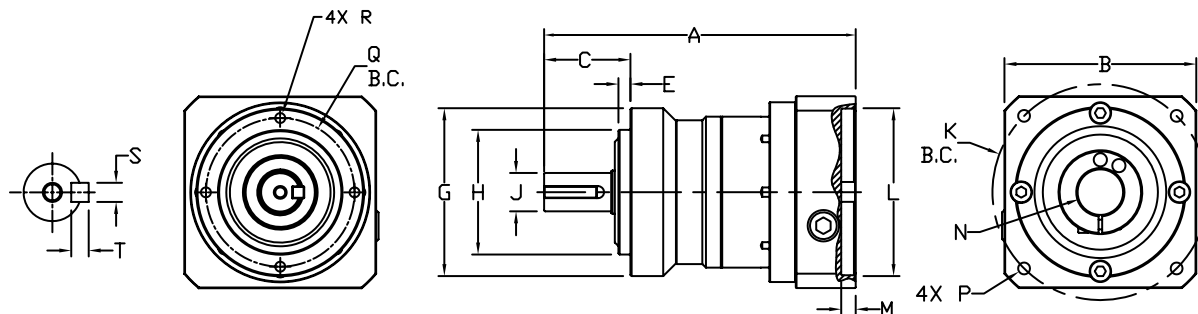
Precision Servo Gearboxes

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·cm2)	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			0.8 [1.8]		
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]	510 [115]	390 [88]	0.077	95	1.5 [3.3]						
PGA070-10A1	\$490.00		10:1	single	18 [159]	35 [310]	80 [708]	640 [144]	530 [119]	0.056		90	1.7 [3.7]					
PGA070-15A1	\$672.00		15:1	double	18 [159]	35 [310]	80 [708]	740 [166]	630 [142]	0.055			95	1.5 [3.3]				
PGA070-25A1	\$672.00		25:1	double	27 [239]	50 [443]	100 [885]	870 [196]	790 [178]	0.053				90		1.7 [3.7]		
PGA070-05A2	\$508.00		5:1	single	27 [239]	50 [443]	100 [885]	510 [115]	390 [88]	0.160	95					1.5 [3.3]		
PGA070-10A2	\$508.00		10:1	single	18 [159]	35 [310]	80 [708]	640 [144]	530 [119]	0.140		90				1.7 [3.7]		
PGA070-15A2	\$696.00		15:1	double	18 [159]	35 [310]	80 [708]	740 [166]	630 [142]	0.140			95			1.5 [3.3]		
PGA070-25A2	\$696.00		25:1	double	27 [239]	50 [443]	100 [885]	870 [196]	790 [178]	0.130				90		3.5 [7.7]		
PGA070-05A3	\$508.00		5:1	single	27 [239]	50 [443]	100 [885]	510 [115]	390 [88]	0.360	95					4.0 [8.8]		
PGA090-10A3	\$601.00		10:1	single	50 [443]	80 [708]	200 [1770]	1200 [270]	1600 [360]	0.750		90				3.5 [7.7]		
PGA090-15A3	\$794.00		15:1	double	50 [443]	80 [708]	200 [1770]	1400 [315]	1900 [427]	0.720								
PGA090-25A3	\$794.00		25:1	double	75 [664]	125 [1106]	250 [2213]	1600 [360]	2200 [495]	0.710								
PGA090-05A4	\$600.00	5:1	single	75 [664]	125 [1106]	250 [2213]	960 [216]	1200 [270]	2.900	95	3.5 [7.7]							
PGA090-10A4	\$600.00	90	10:1	single	50 [443]	80 [708]	200 [1770]	1200 [270]	1600 [360]		2.800	90	8.7 [19.2]					
PGA090-05A5	\$600.00		5:1	single	75 [664]	125 [1106]	250 [2213]	960 [216]	1200 [270]		2.900		95	7.8 [17.2]				
PGA090-10A5	\$600.00	10:1	single	50 [443]	80 [708]	200 [1770]	1200 [270]	1600 [360]	2.800		90	8.7 [19.2]		SV(2)M-220(B) SV(2)M-230(B)				
PGA120-15A4	\$997.00	120	15:1	double	120 [1062]	225 [1991]	500 [4425]	2300 [517]	3000 [674]	2.800		95	16 [35.3]					
PGA120-25A4	\$997.00		25:1	double	180 [1593]	330 [2921]	625 [5532]	2700 [607]	3700 [832]	2.800			90		18 [40.0]			
PGA120-15A5	\$997.00		15:1	double	120 [1062]	225 [1991]	500 [4425]	2300 [517]	3000 [674]	2.800					95			
PGA120-25A5	\$997.00		25:1	double	180 [1593]	330 [2921]	625 [5532]	2700 [607]	3700 [832]	2.800								
PGA120-05A6	\$795.00		155	5:1	single	180 [1593]	330 [2921]	625 [5532]	1600 [360]	1900 [427]	11.000	95						
PGA120-10A6	\$795.00			10:1	single	120 [1062]	225 [1991]	500 [4425]	2000 [450]	2500 [562]	11.000		90					
PGA155-10A6	\$982.00			10:1	single	240 [2124]	470 [4160]	1000 [8851]	4700 [1057]	4100 [922]	11.000			95				
PGA155-15A6	\$1,336.00			15:1	double	240 [2124]	470 [4160]	1000 [8851]	5400 [1214]	4900 [1102]	11.000				90			
PGA155-25A6	\$1,336.00	25:1	double	360 [3186]	700 [6196]	1250 [11063]	6400 [1439]	6100 [1371]	11.000									

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]
PGA070-25A1	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
PGA070-25A2	[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
PGA090-10A5	[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
PGA155-15A6	[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]
PGA155-25A6	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.



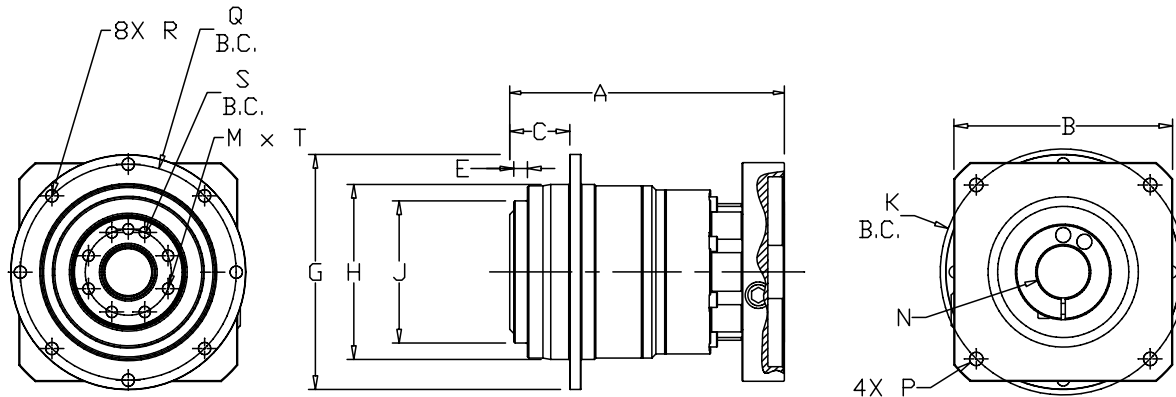
Precision Servo Gearboxes

Pricing & Specifications – 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	95		1.4 [3.1]		
PGD064-10A2	\$1,090.00		10:1	single	18 [159]	35 [310]	80 [708]				500 [112]	530 [119]	0.062	95		1.4 [3.1]		
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	90 °C [194 °F]	4 [8.8]	IP54	SV(2)L-207(B) SV(2)L-210(B)
PGD090-50A2	\$1,464.00		50:1	double	75 [664]	125 [1106]	250 [2213]				1700 [382]	1700 [382]	0.099	90		4 [8.8]		
PGD090-05A3	\$1,277.00		5:1	single	75 [664]	125 [1106]	250 [2213]				780 [175]	680 [153]	0.580	95		3.6 [7.9]		
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		3.6 [7.9]		
PGD090-10A4	\$1,277.00		10:1	single	50 [443]	80 [708]	200 [1770]				980 [220]	920 [207]	0.330	95		3.6 [7.9]		
PGD090-05A5	\$1,277.00		5:1	single	75 [664]	125 [1106]	250 [2213]				780 [175]	680 [153]	0.580	95		3.6 [7.9]		
PGD110-50A2	\$1,868.00		110	50:1	double	180 [1593]	330 [2921]				625 [5532]					10000 [2248]		

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]			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]	65.0 [2.56]																Ø14.0 [Ø0.55]		
2	PGD064-25A2	103.0 [4.055]																		Ø14.0 [Ø0.55]	
2	PGD090-25A2 PGD090-50A2	122.0 [4.803]		30.0 [1.1811]		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]		Ø50.0 [Ø1.9685]						
1	PGD090-05A3 PGD090-10A3	110.0 [4.33]	80.0 [3.15]																Ø19.0 [Ø0.75]		
1	PGD090-05A4 PGD090-10A4	127.0 [5.0]	100.0 [3.94]						Ø115.0 ±0.2 [Ø4.528]	Ø28.0 [Ø1.102]	M8- 1.25x17										
1	PGD090-05A5		130.0 [5.12]									Ø145.0 ±0.2 [Ø5.709]									
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
2	PGD110-25A3 PGD110-50A3	169.5 [6.673]	80.0 [3.15]	Ø90.0 [Ø3.543]	Ø19.0 [Ø0.75]	M6- 1.0x13															
2	PGD110-25A4 PGD110-50A4	186.5 [7.3425]	100.0 [3.94]	Ø115.0 ±0.2 [Ø4.528]	Ø28.0 [Ø1.102]	M8- 1.25x17															
1	PGD110-10A5	159.0 [6.26]	130.0 [5.12]	Ø145.0 ±0.2 [Ø5.709]																	
2	PGD110-25A5 PGD110-35A5	186.5 [7.3425]			Ø200.0 ±0.2 [Ø7.874]	Ø38.0 [Ø1.45]	M12- 1.75x25														
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.